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INTERVENTO

FONDO COMPLEMENTARE AL PIANO NAZIONALE DI RIPRESA E RESILIENZA
PROGRAMMA "SICURO, VERDE E SOCIALE: RIQUALIFICAZIONE DELL'EDILIZIA RESIDENZIALE PUBBLICA"

PROGETTO DI MANUTENZIONE STRAORDINARIA PER IL RESTAURO E RISANAMENTO CONSERVATIVO DI DUE CASAMENTI A CORTE SITI IN COMUNE DI BOLOGNA LOCALITA' CIRENAICA. VIA BENTIVOGLI CIV. 31÷59 PER COMPLESSIVI 56 ALLOGGI DI ERP CON RELATIVE PERTINENZE E PARTI COMUNI

LOTTO **3053/PN_1**

PROGETTO ESECUTIVO

TAV.	OGGETTO	DATA
TAB_12	TABULATI DI CALCOLO CIVICO 49-51 STATO DI PROGETTO	Settembre 2022
SCALA		N. DISEGNO

VERSIONE	DESCRIZIONE	DATA	REDATTO	VERIFICATO		APPROVATO
00	PRIMA EMISSIONE	Settembre 2022	F. DALMONTE	N. LEONE		N. LEONE
01						
02						
03						

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SIDEL
INGEGNERIA

TABULATI DI CALCOLO
CIVICI 49-51
STATO DI PROGETTO

Sommario

1 Risultati numerici

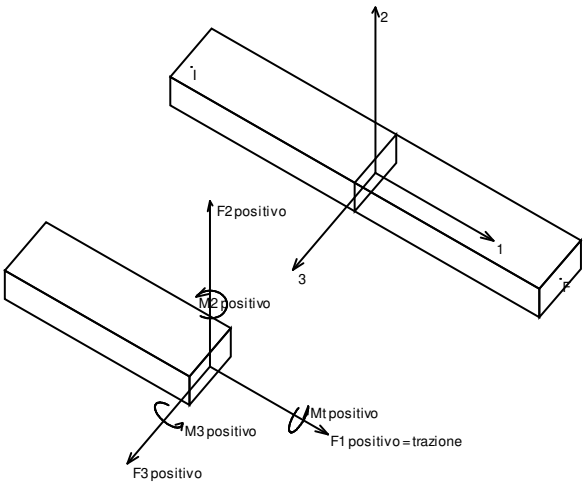
1.1 Sollecitazioni

1.1.1 Sollecitazioni aste

1.1.1.1 Convenzioni di segno aste

Le abbreviazioni relative alle sollecitazioni sugli elementi aste sono da intendersi:

- F1 (N): sforzo normale nell'asta;
- F2: sforzo di taglio agente nella direzione dell'asse locale 2;
- F3: sforzo di taglio agente nella direzione dell'asse locale 3;
- M1 (Mt): momento attorno all'asse locale 1; equivale al momento torcente;
- M2: momento attorno all'asse locale 2;
- M3: momento attorno all'asse locale 3.



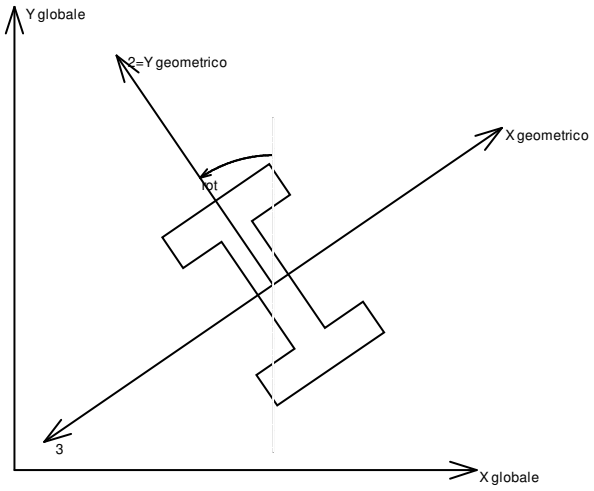
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando la sezione sinistra del punto in cui si è effettuato il taglio (sezione da cui esce il versore asse 1) i parametri di sollecitazione sono positivi se hanno verso e direzione concordi con il sistema di riferimento locale dell'asta 1, 2, 3 (per i momenti si adotta la regola della mano destra).

Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

- aste verticali ad esempio pilastri e colonne;
- aste non verticali non di c.a., ad esempio travi di acciaio o legno;
- aste non verticali in c.a.: travi in c.a. di piano, falda o a quota generica.

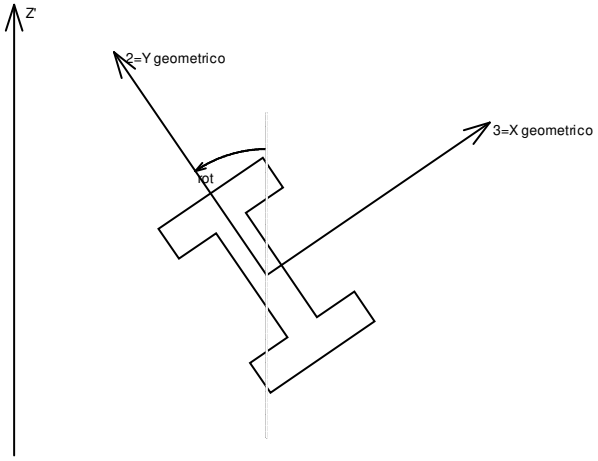
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



Nella figura si considera l'asse 1 uscente dal foglio (l'osservatore guarda in direzione opposta a quella dell'asse 1).

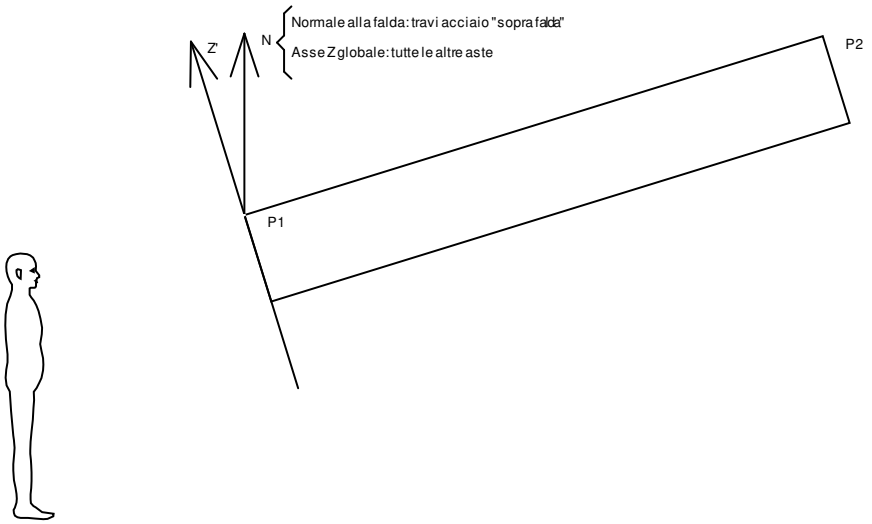
Sistema locale aste non verticali



Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1).

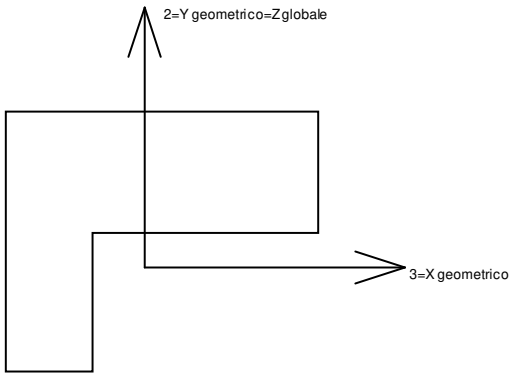
L'asse Z' è illustrato nella figura seguente dove:

- P1 è il punto di inserimento iniziale dell'asta;
- P2 è il punto di inserimento finale dell'asta;
- N è la normale al piano o falda di inserimento;



Z' è quindi l'intersezione tra il piano passante per P1, P2 contenente N e il piano della sezione iniziale dell'asta.

Sistema locale aste derivanti da travi in c.a.



Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli assi 2 e 3 non corrispondono agli assi principali della sezione.

1.1.1.2 Sollecitazioni estreme aste

Asta: *elemento asta a cui si riferiscono le sollecitazioni.*
Ind.: *indice dell'asta.*
Cont.: *contesto a cui si riferisce la sollecitazione*
N.br.: *nome breve della condizione o combinazione di carico.*
Pos.: *numero della sezione all'interno dell'asta (tra 1 e 31, dove 1 corrisponde alla sezione al nodo iniziale, 16 è la sezione in mezzeria, 31 corrisponde alla sezione al nodo finale).*
Posizione: *posizione a cui si riferisce la sollecitazione dell'asta.*
X: *componente X della posizione a cui si riferisce la sollecitazione dell'asta. [m]*
Y: *componente Y della posizione a cui si riferisce la sollecitazione dell'asta. [m]*
Z: *componente Z della posizione a cui si riferisce la sollecitazione dell'asta. [m]*
Soll.traslazionale: *componente traslazionale della sollecitazione dell'asta.*
F1: *componente F1 della sollecitazione dell'asta. [daN]*
F2: *componente F2 della sollecitazione dell'asta. [daN]*
F3: *componente F3 della sollecitazione dell'asta. [daN]*
Soll.rotazionale: *componente rotazionale della sollecitazione dell'asta.*
M1: *componente M1 della sollecitazione dell'asta. [daN*m]*
M2: *componente M2 della sollecitazione dell'asta. [daN*m]*
M3: *componente M3 della sollecitazione dell'asta. [daN*m]*

Sollecitazioni con sforzo normale (N) minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
119	SLV 5	31	-17.49	1.1	-1.98	-13276	2499	-1049	-0.17	-1141.67	-982.43
128	SLV 12	1	-14.62	1.1	-1.98	-12857	8299	-4265	1.63	-338.64	1760.62
165	SLV 7	31	-13.91	1.1	-1.98	-12548	-6768	4287	-1.51	-338.28	1707.03
118	SLV 5	31	-17.86	1.1	-1.98	-11598	2433	-1286	-0.43	-1034.61	-703.03
248	SLV 12	31	-17.86	1.6	-1.98	-10678	-2055	1185	6.14	-598.98	-207.54

Sollecitazioni con sforzo normale (N) massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
240	SLV 8	1	-14.27	1.6	-1.98	10113	6884	-4570	-5.7	1914.57	2163.3
239	SLV 7	31	-14.27	1.6	-1.98	9925	-5971	4497	5.42	1870.8	1965.73
119	SLV Y	31	-17.49	1.1	-1.98	9921	-195	975	-4.99	1022.33	-95.15
118	SLV Y	1	-18.23	1.1	-1.98	8620	-697	1427	4.69	434.19	-93.94
248	SLV 9	1	-17.49	1.6	-1.98	8156	2805	-1013	0.54	1114.6	277.86

Sollecitazioni con momento M2 minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
92	SLV 12	1	-17.49	-2.78	-1.98	487	2848	948	-36.01	-3143.87	2082.39
93	SLV 12	1	-17.86	-2.78	-1.98	1003	2247	1215	-23.32	-2938.34	1190.79
75	SLV 8	31	-11.41	-2.78	-1.98	244	-2893	-745	42.32	-2757.9	2073.68
74	SLV 7	31	-10.99	-2.78	-1.98	1003	-2182	-713	26.36	-2671.23	1079.85
94	SLV 12	1	-18.23	-2.78	-1.98	1499	1678	1505	-16.5	-2626.62	496.46

Sollecitazioni con momento M2 massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
92	SLV 5	1	-17.49	-2.78	-1.98	-6381	7184	-61	-126.51	3405.97	2882.66
83	SLV 11	31	-14.27	-2.78	-1.98	-825	-1452	2564	69.52	2715.83	-69.47
99	SLV 12	31	-20.47	-2.78	-1.98	2385	-846	3823	67.37	2698.17	-341.98
84	SLV 8	1	-14.27	-2.78	-1.98	-593	1667	-2320	-76.79	2622.04	192.11
93	SLV 5	1	-17.86	-2.78	-1.98	-4204	5839	-369	1.37	2592.27	820.67

Sollecitazioni con momento M3 minimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
120	SLV 8	1	-17.49	1.1	-1.98	992	-16759	770	11.53	169.15	-4017.78
30	SLV 11	4	-9.55	5.52	-1.98	-1767	70	-736	237.81	469.77	-3993.87
31	SLV 11	1	-9.21	5.52	-1.98	-1301	-980	-1088	310.1	35.49	-3982.4
228	SLU 81	1	-12.35	5.87	-1.98	282	-1548	125	-6.37	-143.59	-3957.78
4	SLV 8	30	-18.98	5.52	-1.98	-1484	-100	847	-268.38	349.49	-3928.56

Sollecitazioni con momento M3 massimo

Vengono mostrate le sole 5 aste più sollecitate.

Asta	Cont.	Pos.	Posizione			Soll.traslazionale			Soll.rotazionale		
Ind.	N.br.		X	Y	Z	F1	F2	F3	M1	M2	M3
211	SLV 8	31	-16.19	1.35	-1.98	-2271	-10240	-2100	5.51	-1773.85	7310.37
235	SLV 11	31	-12.35	1.35	-1.98	-1920	-9594	1633	-3.49	1487.35	6922.84
192	SLU 82	1	-20.25	1.35	-1.98	-3079	9381	53	-145.88	544.81	6755.44
42	SLU 81	31	-8.33	1.35	-1.98	-1399	-9081	162	74.35	508.24	6446.69
22	SLU 81	1	-12.6	5.52	-1.98	-6280	10180	105	-265.3	1645.67	6194.3

1.1.2 Sollecitazioni gusci

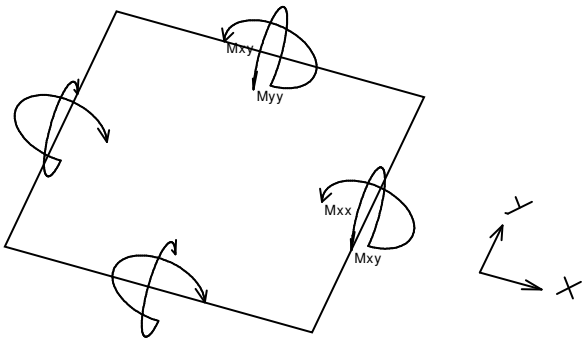
1.1.2.1 Convenzioni di segno gusci

Sono individuate distinte convenzioni di segno in relazione al tipo di elemento strutturale a cui il guscio si riferisce:

- convenzione per gusci non verticali, originati ad esempio da piastre e platee;
- convenzione per gusci verticali, originati ad esempio da pareti e muri.

Convenzione di segno per gusci non verticali

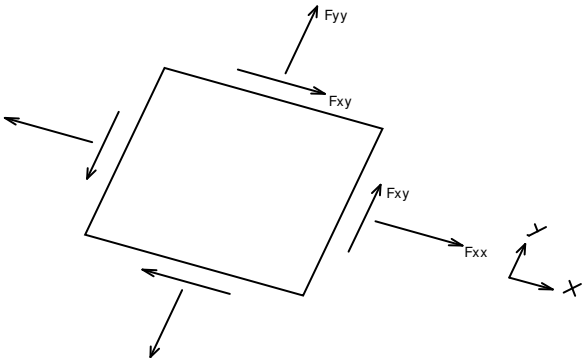
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione in pianta parallela ed equiversa all'asse globale X. Nel caso di piastre orizzontali (caso più comune) gli assi x, y e z locali all'elemento sono paralleli ed equiversi agli assi X, Y e Z globali. Si sottolinea che non ha alcun interesse collocare esattamente nel piano dell'elemento la posizione dell'origine in quanto i parametri di sollecitazione sono invarianti rispetto a tale posizione.
In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Mxx, Myy, Mxy.



Si definiscono:

- Mxx: momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Myy: momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale y (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Mxy: momento torcente [Forza*Lunghezza/Lunghezza] agente sui bordi (verso positivo indicato dalla freccia in figura).

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Fxx, Fyy, Fxy.



Si definiscono:

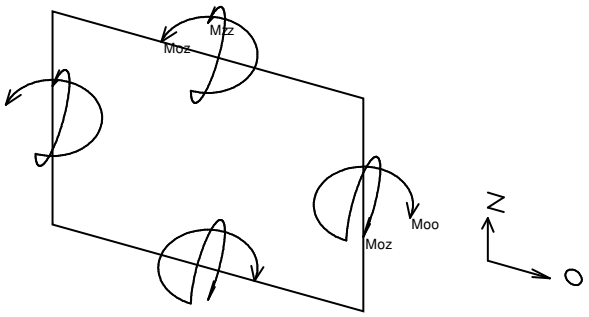
- Fxx: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fyy: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fxy: sforzo di taglio [Forza/Lunghezza] agente sui bordi (verso positivo indicato dalla freccia in figura).

Vengono riportati inoltre i tagli fuori dal piano dell'elemento guscio:

- Vx: taglio fuori piano [Forza/Lunghezza] applicato al bordo di normale parallela all'asse x;
- Vy: taglio fuori piano [Forza/Lunghezza] applicato al bordo di normale parallela all'asse y.

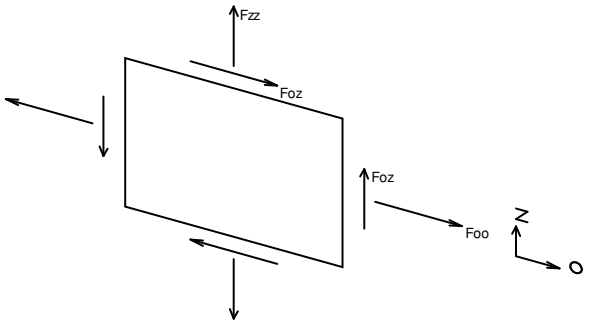
Convenzione di segno per gusci verticali

Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse O (ascisse) e z (ordinate) contenuti nel piano dell'elemento e terzo asse ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse O è orizzontale e l'asse z parallelo ed equiverso con l'asse Z globale. Si sottolinea che non ha alcun interesse collocare esattamente nel piano dell'elemento la posizione dell'origine in quanto i parametri di sollecitazione sono invarianti rispetto a tale posizione.In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Moo, Mzz, Moz.



- Moo: momento flettente distribuito [Forza*Lunghezza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Mzz: momento flettente distribuito [Forza*Lunghezza/Lunghezza] applicato al bordo di normale parallela all'asse z (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Moz: momento 'torcente' distribuito [Forza*Lunghezza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia in figura).

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell con indicato il sistema di riferimento i parametri di sollecitazione Foo, Fzz, Foz sono rispettivamente:



- Fzz: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse z (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foo: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foz: sforzo tagliante distribuito [Forza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia in figura).

Vengono riportati inoltre i tagli fuori dal piano dell'elemento guscio:

- Vo: taglio fuori piano applicato al bordo di normale parallela all'asse O;
- Vz: taglio fuori piano applicato al bordo di normale parallela all'asse z.

1.1.2.2 Sollecitazioni estreme gusci

Shell: elemento guscio a cui si riferiscono le sollecitazioni.
Ind: indice del guscio.
Cont.: contesto a cui si riferiscono le sollecitazioni.
N.br.: nome breve della condizione o combinazione di carico.
Nodo: nodo su cui si basa il guscio a cui si riferisce la sollecitazione.
Ind: indice del nodo.
Sollecitazione: valori della sollecitazione.
*M11: componente M11 della sollecitazione del guscio nel nodo indicato. [daN*m/m]*
*M12: componente M12 della sollecitazione del guscio nel nodo indicato. [daN*m/m]*
*M22: componente M22 della sollecitazione del guscio nel nodo indicato. [daN*m/m]*
F11: componente F11 della sollecitazione del guscio nel nodo indicato. [daN/m]
F12: componente F12 della sollecitazione del guscio nel nodo indicato. [daN/m]
F22: componente F22 della sollecitazione del guscio nel nodo indicato. [daN/m]
V13: componente V13 della sollecitazione del guscio nel nodo indicato. [daN/m]
V23: componente V23 della sollecitazione del guscio nel nodo indicato. [daN/m]

Sollecitazioni con momento M11 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
1474	SLV 9	3134	-268	97	-80	-2934	-1928	-1841	-667	-241
2778	SLV 2	2702	-240	3	-62	-121	-101	-1404	393	-31
2777	SLV 1	2702	-239	0	-58	-27	257	-1075	390	18
2994	SLV 4	2685	-238	3	-62	194	1553	-1481	401	-15
2993	SLV 4	2685	-237	1	-58	198	1615	-1625	385	44

Sollecitazioni con momento M11 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
1474	SLV 8	3134	261	-97	78	-2793	-1452	-1332	651	234
1586	SLV 11	3135	239	79	-1	-3211	2060	-2123	-598	114
2777	SLV 16	2702	238	0	61	-59	462	-1710	-391	-35
573	SLU 82	1513	238	-12	203	-232	-4013	-12851	739	-848
2778	SLV 15	2702	238	-2	58	78	760	-1504	-389	15

Sollecitazioni con momento M22 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
1568	SLV 5	1725	-216	14	-420	-982	297	-7186	33	-655
1391	SLV 10	1707	-209	10	-407	-1014	-223	-7180	57	-731
358	SLV 5	1724	-101	-19	-403	-1962	511	-7066	-106	982
1326	SLV 8	2652	-107	68	-392	-385	1226	-4735	445	-496
365	SLV 5	1724	-96	-64	-385	-1710	37	-6239	323	929

Sollecitazioni con momento M22 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
1160	SLV 8	1829	156	-169	622	-17065	-806	10348	6747	-36023
1568	SLV 12	1725	220	-14	425	-739	103	-4524	-33	670
1391	SLV 7	1707	215	-10	414	-843	10	-4818	-60	756
358	SLV 12	1724	103	18	412	-1160	-499	-4264	110	-1040
365	SLV 12	1724	98	67	392	-1112	-1288	-3572	-357	-970

Sollecitazioni con sforzo F11 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
1159	SLV 8	1695	41	-2	62	-31112	1027	-7945	92	-92
1212	SLV 7	1696	60	21	68	-27099	-1818	-6804	156	-138
1160	SLV 8	1826	-22	-185	-89	-22926	-7232	3302	7810	1419
1162	SLV 8	1692	-9	-36	6	-18294	-3078	-355	197	195
838	SLU 81	374	-33	-33	-131	-18198	20617	-7275	-79	-341

Sollecitazioni con sforzo F11 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
1160	SLV 8	1688	-56	-29	83	18166	1584	11673	956	640
838	SLU 81	532	72	-7	10	15731	-6675	-17934	-263	-253
780	SLV 6	1499	-26	2	-1	15648	-8590	5990	37	36
428	SLU 81	532	74	6	13	13836	5582	-18591	256	-298
642	SLU 81	531	72	-8	17	13369	-4120	-17810	-246	-282

Sollecitazioni con sforzo F22 minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
561	SLU 81	427	-27	-8	-108	-1681	17460	-42273	-17	-672
511	SLU 81	438	-25	7	-100	-1434	-18004	-42072	30	-631
504	SLU 81	438	-25	-13	-100	1345	23622	-41617	-20	-636
568	SLU 81	427	-27	12	-108	1216	-24205	-40872	30	-679
692	SLV 11	263	-5	-11	-19	-1491	8750	-38288	-26	-131

Sollecitazioni con sforzo F22 massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
1152	SLV 8	630	3	-1	-28	2781	-5604	22226	-18	-64
1205	SLV Y	631	3	-2	-27	2190	-4730	19642	-17	-70
3153	SLV Y	499	0	0	-2	1378	3097	18320	1	-8
3129	SLV Y	498	0	0	2	1331	2983	17558	-1	7
1160	SLV 9	1690	-7	-4	-14	-3851	1532	16000	-273	1556

1.1.2.3 Sollecitazioni estreme gusci non verticali

***Shell**: elemento guscio a cui si riferiscono le sollecitazioni.*

Ind: indice del guscio.
Cont.: contesto a cui si riferiscono le sollecitazioni.
N.br.: nome breve della condizione o combinazione di carico.
Nodo: nodo su cui si basa il guscio a cui si riferisce la sollecitazione.
Ind: indice del nodo.
Sollecitazione: valori della sollecitazione.
*Mxx: componente Mxx della sollecitazione del guscio nel nodo indicato. [daN*m/m]*
*Mxy: componente Mxy della sollecitazione del guscio nel nodo indicato. [daN*m/m]*
*Myy: componente Myy della sollecitazione del guscio nel nodo indicato. [daN*m/m]*
Fxx: componente Fxx della sollecitazione del guscio nel nodo indicato. [daN/m]
Fxy: componente Fxy della sollecitazione del guscio nel nodo indicato. [daN/m]
Fyy: componente Fyy della sollecitazione del guscio nel nodo indicato. [daN/m]
Vx: componente Vo della sollecitazione del guscio nel nodo indicato. [daN/m]
Vy: componente Vz della sollecitazione del guscio nel nodo indicato. [daN/m]

Sollecitazioni con momento Mxx minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
2429	SLV 2	2691	-77	14	-23	-4797	-1143	-2645	159	-46
2505	SLV 2	2853	-73	2	-35	-357	-1949	599	133	11
2418	SLV 2	2522	-72	1	-31	-1052	-1785	-2135	139	0
2378	SLV 4	2925	-72	10	-20	-1440	-1245	-1425	72	20
2468	SLV 14	2727	-72	-5	-31	-548	-46	-1991	73	-4

Sollecitazioni con momento Mxx massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
2388	SLV 2	2691	76	-13	41	-1443	-3145	93	-168	-13
2378	SLV 13	2925	74	-10	21	1798	-298	-1333	-97	-20
2468	SLV 3	2727	74	4	32	245	1612	-330	-72	3
2399	SLV 14	2727	68	11	20	-2484	-2493	-1989	-70	-24
2440	SLV 14	2889	68	17	24	-546	-2748	-2867	-94	-8

Sollecitazioni con momento Myy minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
2381	SLV 13	2586	3	-17	-65	-2742	-1673	-1048	-76	-189
2301	SLV 16	2557	-39	-25	-44	5280	578	-2833	91	82
2448	SLV 3	3244	-32	-9	-40	58	382	499	104	-18
2388	SLV 15	2691	-66	13	-36	1093	2557	-3021	136	2
2505	SLV 2	2853	-73	2	-35	-357	-1949	599	133	11

Sollecitazioni con momento Myy massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
2301	SLV 1	2557	42	27	47	-7612	1105	1704	-101	-95
2388	SLV 2	2691	76	-13	41	-1443	-3145	93	-168	-13
2448	SLV 14	3244	33	9	40	1285	-1363	-2226	-108	14
2381	SLV 4	2760	59	-29	40	-1456	11	731	-123	-44
2402	SLV 14	3072	65	6	32	864	-2472	-809	-107	27

Sollecitazioni con sforzo Fxx minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
2388	SLV 15	2804	-25	9	-13	-8048	153	-3481	136	2
2302	SLV 16	2729	22	-1	19	-7637	2094	-6050	-84	0
2301	SLV 1	2557	42	27	47	-7612	1105	1704	-101	-95
2410	SLV 7	2054	1	3	0	-7583	697	-5798	-18	13
2419	SLV 3	2016	2	-2	15	-5909	3705	-8614	-36	26

Sollecitazioni con sforzo Fxx massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
2388	SLV 2	2804	26	-7	14	9166	-49	1627	-168	-13
2302	SLV 1	2729	-25	1	-20	7957	-2132	4546	86	-10
2301	SLV X	2557	-34	-22	-39	5770	7	-1676	79	74
2387	SLV 1	2804	-27	9	8	4389	432	1954	122	-26
2410	SLV Y	2118	5	-4	10	4302	1344	1608	-10	32

Sollecitazioni con sforzo Fyy minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
2419	SLV 14	2183	-8	6	-24	-3552	-2621	-9036	39	-43
2386	SLV 1	2220	-28	0	-14	-702	-1879	-7605	43	33
2421	SLV 3	2183	-29	1	-12	-1034	398	-6639	43	-18
2410	SLV 3	2054	2	-1	10	-7281	-2042	-6057	-27	-22
2302	SLV 15	2729	22	-1	19	-7627	2084	-6051	-84	0

Sollecitazioni con sforzo Fyy massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Mxx	Mxy	Myy	Fxx	Fxy	Fyy	Vx	Vy
2419	SLV 3	2183	9	-6	26	1338	-437	7890	-36	26
2410	SLV 4	2220	4	0	19	-2817	-463	5033	-28	-22
2301	SLV 1	2726	43	25	39	-3149	1235	4800	-77	-70
2302	SLV 2	2729	-25	1	-20	7948	-2122	4547	85	-10
2421	SLV X	2183	21	-1	8	544	-817	4321	-27	25

1.1.2.4 Sollecitazioni estreme gusci verticali

Shell: elemento guscio a cui si riferiscono le sollecitazioni.
Ind: indice del guscio.
Cont.: contesto a cui si riferiscono le sollecitazioni.
N.br.: nome breve della condizione o combinazione di carico.
Nodo: nodo su cui si basa il guscio a cui si riferisce la sollecitazione.
Ind: indice del nodo.
Sollecitazione: valori della sollecitazione.
*Moo: componente Moo della sollecitazione del guscio nel nodo indicato. [daN*m/m]*
*Moz: componente Moz della sollecitazione del guscio nel nodo indicato. [daN*m/m]*
*Mzz: componente Mzz della sollecitazione del guscio nel nodo indicato. [daN*m/m]*
Foo: componente Foo della sollecitazione del guscio nel nodo indicato. [daN/m]
Foz: componente Foz della sollecitazione del guscio nel nodo indicato. [daN/m]
Fzz: componente Fzz della sollecitazione del guscio nel nodo indicato. [daN/m]
Vo: componente Vo della sollecitazione del guscio nel nodo indicato. [daN/m]
Vz: componente Vz della sollecitazione del guscio nel nodo indicato. [daN/m]

Sollecitazioni con momento Moo minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
1474	SLV 8	3134	-261	-97	-78	-2793	1452	-1332	651	-234
2778	SLV 2	2702	-240	3	-62	-121	-101	-1404	393	-31
2777	SLV 1	2702	-239	0	-58	-27	257	-1075	390	18
1586	SLV 11	3135	-239	79	1	-3211	-2060	-2123	-598	-114
2994	SLV 4	2685	-238	3	-62	194	1553	-1481	401	-15

Sollecitazioni con momento Moo massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
1474	SLV 9	3134	268	97	80	-2934	1928	-1841	-667	241
2777	SLV 16	2702	238	0	61	-59	462	-1710	-391	-35
2778	SLV 15	2702	238	-2	58	78	760	-1504	-389	15
1371	SLV 8	3130	234	-83	86	-1323	-1042	-1377	554	157
1586	SLV 6	3135	231	-79	-2	-2923	-2416	-2990	579	108

Sollecitazioni con momento Mzz minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
1160	SLV 8	1829	-156	-169	-622	-17065	806	10348	6747	36023
1568	SLV 12	1725	-220	-14	-425	-739	-103	-4524	-33	-670
1391	SLV 7	1707	-215	-10	-414	-843	-10	-4818	-60	-756
358	SLV 12	1724	-103	18	-412	-1160	499	-4264	110	1040
365	SLV 12	1724	-98	67	-392	-1112	1288	-3572	-357	970

Sollecitazioni con momento Mzz massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
1568	SLV 5	1725	216	14	420	-982	-297	-7186	33	655
1391	SLV 10	1707	209	10	407	-1014	223	-7180	57	731
358	SLV 5	1724	101	-19	403	-1962	-511	-7066	-106	-982
1326	SLV 8	2652	107	68	392	-385	-1226	-4735	445	496
365	SLV 5	1724	96	-64	385	-1710	-37	-6239	323	-929

Sollecitazioni con sforzo Foo minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
1159	SLV 8	1695	-41	-2	-62	-31112	-1027	-7945	92	92
1212	SLV 7	1696	-60	21	-68	-27099	1818	-6804	156	138
1160	SLV 8	1826	22	-185	89	-22926	7232	3302	7810	-1419
1162	SLV 8	1692	9	-36	-6	-18294	3078	-355	197	-195
838	SLU 81	374	-33	-33	-131	-18198	20617	-7275	-79	-341

Sollecitazioni con sforzo Foo massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
1160	SLV 8	1688	56	-29	-83	18166	-1584	11673	956	-640
838	SLU 81	532	72	-7	10	15731	-6675	-17934	-263	-253
780	SLV 6	1499	-26	2	-1	15648	-8590	5990	37	36
428	SLU 81	532	-74	6	-13	13836	-5582	-18591	256	298
642	SLU 81	531	-72	-8	-17	13369	4120	-17810	-246	282

Sollecitazioni con sforzo Fzz minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
561	SLU 81	427	27	-8	108	-1681	-17460	-42273	-17	672
511	SLU 81	438	25	7	100	-1434	18004	-42072	30	631
504	SLU 81	438	25	-13	100	1345	-23622	-41617	-20	636
568	SLU 81	427	27	12	108	1216	24205	-40872	30	679
692	SLV 11	263	-5	-11	-19	-1491	8750	-38288	-26	-131

Sollecitazioni con sforzo Fzz massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
1152	SLV 8	630	-3	-1	28	2781	5604	22226	-18	64
1205	SLV Y	631	-3	-2	27	2190	4730	19642	-17	70
3153	SLV Y	499	0	0	-2	1378	3097	18320	1	-8
3129	SLV Y	498	0	0	2	1331	2983	17558	-1	7
1160	SLV 9	1690	7	-4	14	-3851	-1532	16000	-273	-1556

1.1.3 Sollecitazioni gusci armati

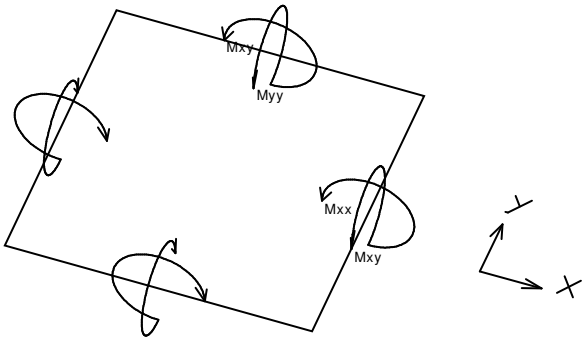
1.1.3.1 Convenzioni di segno gusci

Sono individuate distinte convenzioni di segno in relazione al tipo di elemento strutturale a cui il guscio si riferisce:

- convenzione per gusci non verticali, originati ad esempio da piastre e platee;
- convenzione per gusci verticali, originati ad esempio da pareti e muri.

Convenzione di segno per gusci non verticali

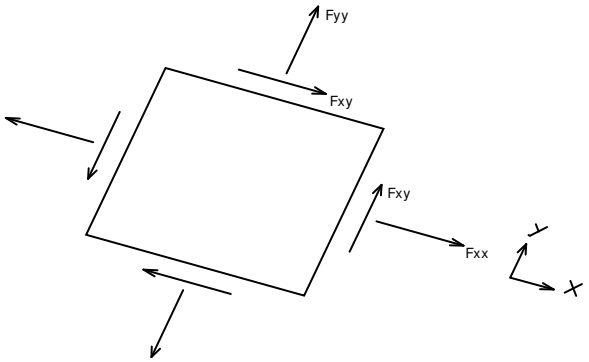
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione in pianta parallela ed equiversa all'asse globale X. Nel caso di piastre orizzontali (caso più comune) gli assi x, y e z locali all'elemento sono paralleli ed equiversi agli assi X, Y e Z globali. Si sottolinea che non ha alcun interesse collocare esattamente nel piano dell'elemento la posizione dell'origine in quanto i parametri di sollecitazione sono invarianti rispetto a tale posizione.
In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Mxx, Myy, Mxy.



Si definiscono:

- Mxx: momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Myy: momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale y (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Mxy: momento torcente [Forza*Lunghezza/Lunghezza] agente sui bordi (verso positivo indicato dalla freccia in figura).

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Fxx, Fyy, Fxy.



Si definiscono:

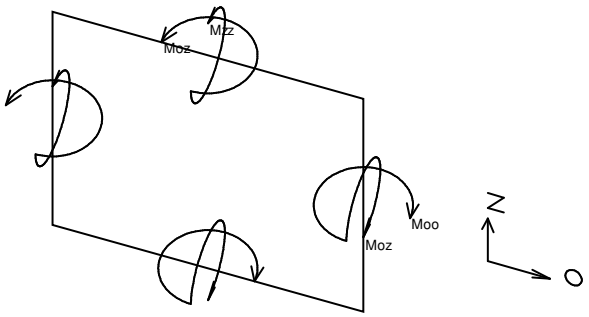
- Fxx: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fyy: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fxy: sforzo di taglio [Forza/Lunghezza] agente sui bordi (verso positivo indicato dalla freccia in figura).

Vengono riportati inoltre i tagli fuori dal piano dell'elemento guscio:

- Vx: taglio fuori piano [Forza/Lunghezza] applicato al bordo di normale parallela all'asse x;
- Vy: taglio fuori piano [Forza/Lunghezza] applicato al bordo di normale parallela all'asse y.

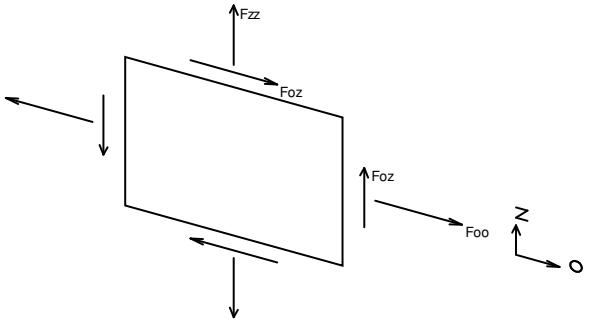
Convenzione di segno per gusci verticali

Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse O (ascisse) e z (ordinate) contenuti nel piano dell'elemento e terzo asse ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse O è orizzontale e l'asse z parallelo ed equiverso con l'asse Z globale. Si sottolinea che non ha alcun interesse collocare esattamente nel piano dell'elemento la posizione dell'origine in quanto i parametri di sollecitazione sono invarianti rispetto a tale posizione.In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Moo, Mzz, Moz.



- Moo: momento flettente distribuito [Forza*Lunghezza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Mzz: momento flettente distribuito [Forza*Lunghezza/Lunghezza] applicato al bordo di normale parallela all'asse z (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Moz: momento 'torcente' distribuito [Forza*Lunghezza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia in figura).

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell con indicato il sistema di riferimento i parametri di sollecitazione Foo, Fzz, Foz sono rispettivamente:



- Fzz: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse z (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foo: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foz: sforzo tagliante distribuito [Forza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia in figura).

Vengono riportati inoltre i tagli fuori dal piano dell'elemento guscio:

- Vo: taglio fuori piano applicato al bordo di normale parallela all'asse O;
- Vz: taglio fuori piano applicato al bordo di normale parallela all'asse z.

1.1.4 Sollecitazioni gusci muratura

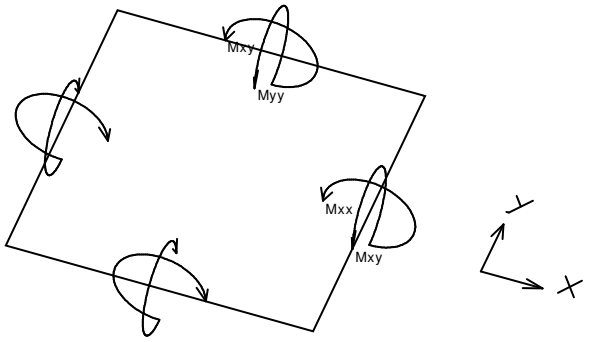
1.1.4.1 Convenzioni di segno gusci muratura

Sono individuate distinte convenzioni di segno in relazione al tipo di elemento strutturale a cui il guscio muratura si riferisce:

- convenzione per gusci non verticali, originati ad esempio da piastre e platee;
- convenzione per gusci verticali, originati ad esempio da pareti e muri.

Convenzione di segno per gusci non verticali

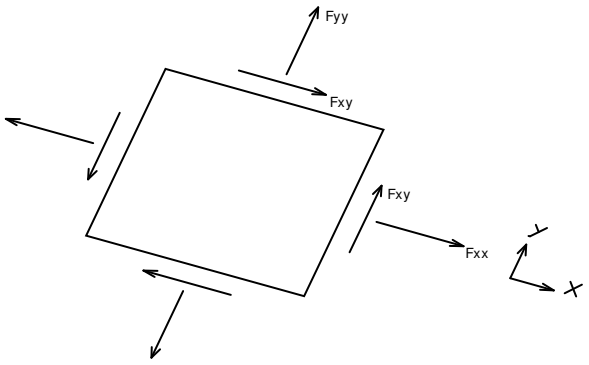
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione in pianta parallela ed equiversa all'asse globale X. Nel caso di piastre orizzontali (caso più comune) gli assi x, y e z locali all'elemento sono paralleli ed equiversi agli assi X, Y e Z globali. Si sottolinea che non ha alcun interesse collocare esattamente nel piano dell'elemento la posizione dell'origine in quanto i parametri di sollecitazione sono invarianti rispetto a tale posizione.
In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Mxx, Myy, Mxy.



Si definiscono:

- Mxx: momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Myy: momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale y (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Mxy: momento torcente [Forza*Lunghezza/Lunghezza] agente sui bordi (verso positivo indicato dalla freccia in figura).

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Fxx, Fyy, Fxy.

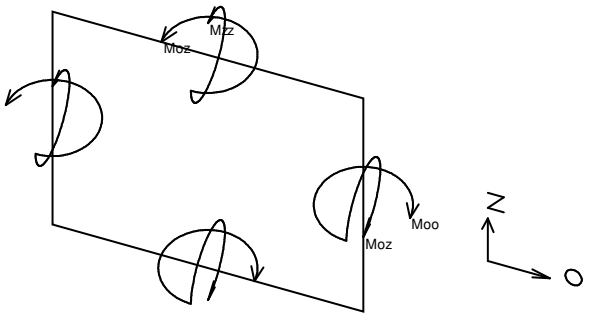


Si definiscono:

- Fxx: sforzo tensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fyy: sforzo tensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fxy: sforzo tagliante [Forza/Lunghezza] agente sui bordi (verso positivo indicato dalla freccia in figura).

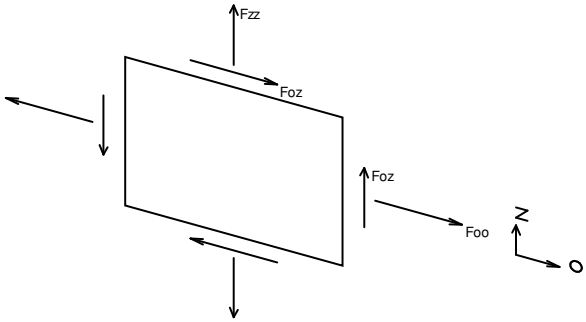
Convenzione di segno per gusci verticali

Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse O (ascisse) e z (ordinate) contenuti nel piano dell'elemento e terzo asse ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse O è orizzontale e l'asse z parallelo ed equiverso con l'asse Z globale. Si sottolinea che non ha alcun interesse collocare esattamente nel piano dell'elemento la posizione dell'origine in quanto i parametri di sollecitazione sono invarianti rispetto a tale posizione.In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Moo, Mzz, Moz.



- Moo: momento flettente distribuito [Forza*Lunghezza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Mzz: momento flettente distribuito [Forza*Lunghezza/Lunghezza] applicato al bordo di normale parallela all'asse z (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- Moz: momento 'torcente' distribuito [Forza*Lunghezza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia in figura).

Per quanto riguarda le sollecitazioni estensionali si faccia riferimento alla figura seguente dove per lo stesso elemento infinitesimo di shell con indicato il sistema di riferimento i parametri di sollecitazione Foo, Fzz, Foz sono rispettivamente:



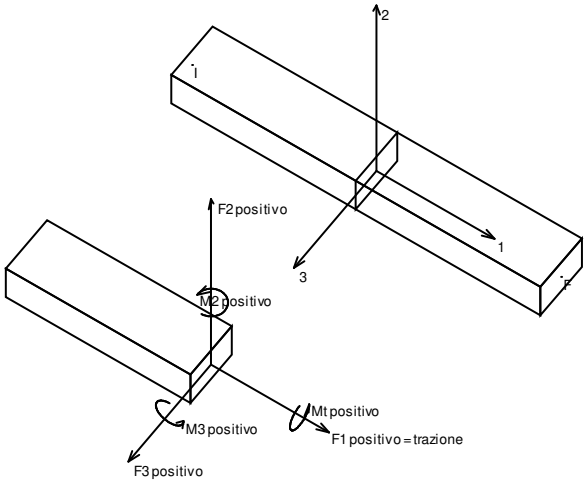
- Fzz: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse z (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foo: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foz: sforzo tagliante distribuito [Forza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia in figura).

1.1.5 Sollecitazioni aste in muratura

1.1.5.1 Convenzioni di segno aste

Le abbreviazioni relative alle sollecitazioni sugli elementi aste sono da intendersi:

- F1 (N): sforzo normale nell'asta;
- F2: sforzo di taglio agente nella direzione dell'asse locale 2;
- F3: sforzo di taglio agente nella direzione dell'asse locale 3;
- M1 (Mt): momento attorno all'asse locale 1; equivale al momento torcente;
- M2: momento attorno all'asse locale 2;
- M3: momento attorno all'asse locale 3.



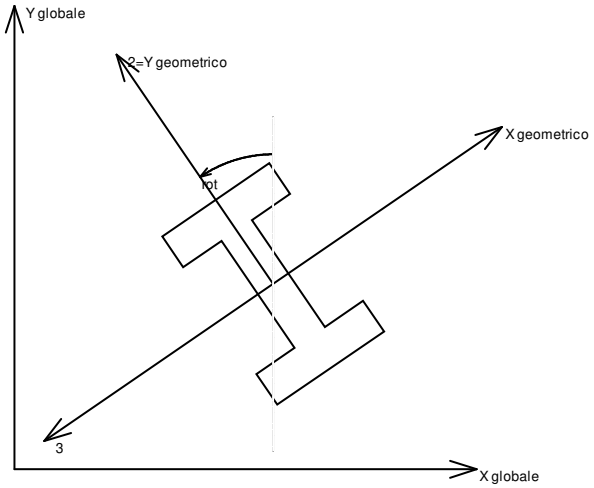
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando la sezione sinistra del punto in cui si è effettuato il taglio (sezione da cui esce il versore asse 1) i parametri di sollecitazione sono positivi se hanno verso e direzione concordi con il sistema di riferimento locale dell'asta 1, 2, 3 (per i momenti si adotta la regola della mano destra).

Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

- aste verticali ad esempio pilastri e colonne;
- aste non verticali non di c.a., ad esempio travi di acciaio o legno;
- aste non verticali in c.a.: travi in c.a. di piano, falda o a quota generica.

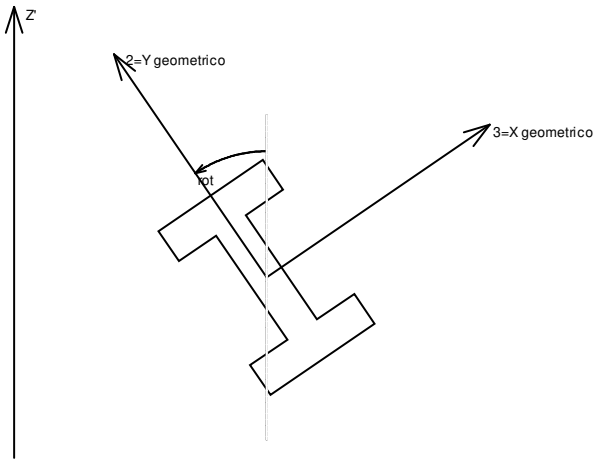
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



Nella figura si considera l'asse 1 uscente dal foglio (l'osservatore guarda in direzione opposta a quella dell'asse 1).

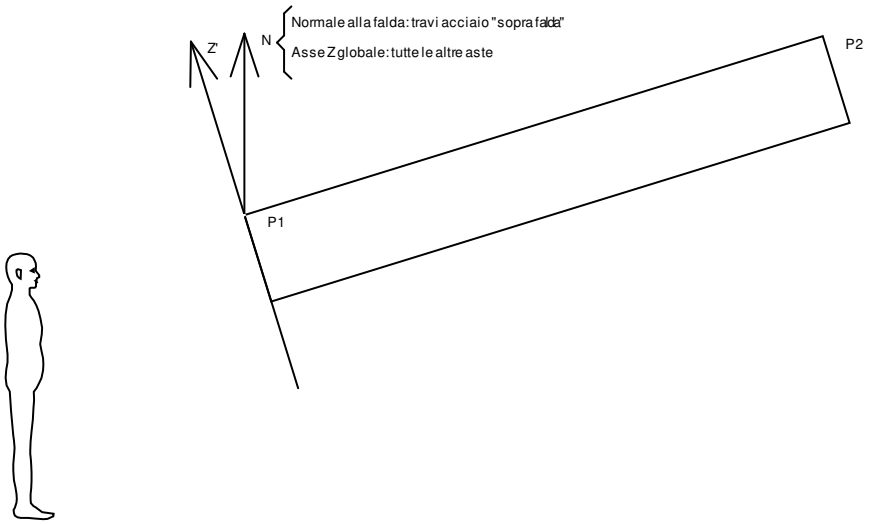
Sistema locale aste non verticali



Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1).

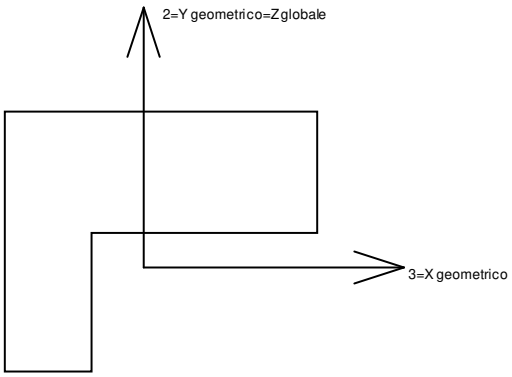
L'asse Z' è illustrato nella figura seguente dove:

- P1 è il punto di inserimento iniziale dell'asta;
- P2 è il punto di inserimento finale dell'asta;
- N è la normale al piano o falda di inserimento;



Z' è quindi l'intersezione tra il piano passante per P1, P2 contenente N e il piano della sezione iniziale dell'asta.

Sistema locale aste derivanti da travi in c.a.



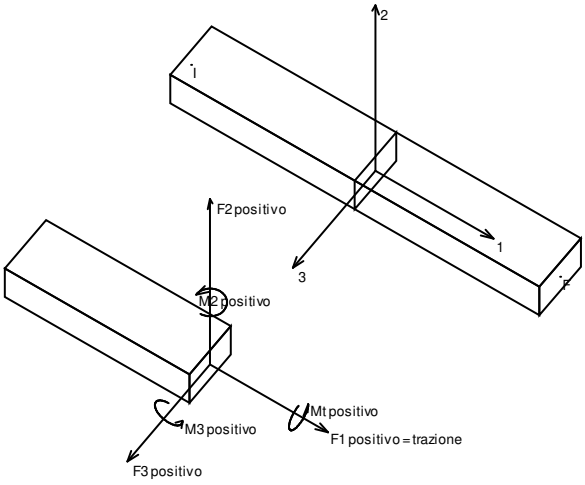
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli assi 2 e 3 non corrispondono agli assi principali della sezione.

1.1.6 Sollecitazioni aste in muratura FRCM

1.1.6.1 Convenzioni di segno aste

Le abbreviazioni relative alle sollecitazioni sugli elementi aste sono da intendersi:

- F1 (N): sforzo normale nell'asta;
- F2: sforzo di taglio agente nella direzione dell'asse locale 2;
- F3: sforzo di taglio agente nella direzione dell'asse locale 3;
- M1 (Mt): momento attorno all'asse locale 1; equivale al momento torcente;
- M2: momento attorno all'asse locale 2;
- M3: momento attorno all'asse locale 3.



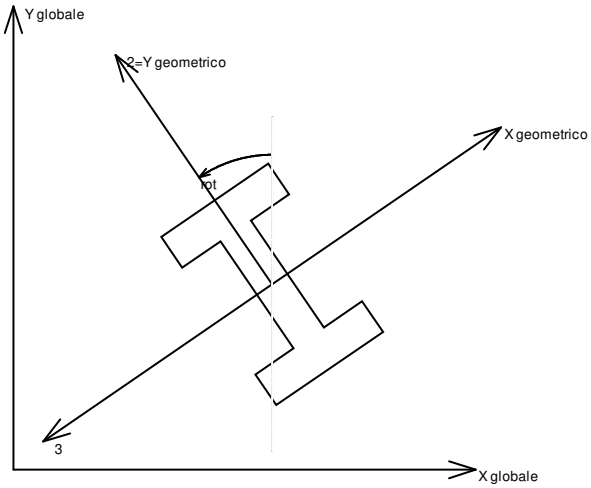
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando la sezione sinistra del punto in cui si è effettuato il taglio (sezione da cui esce il versore asse 1) i parametri di sollecitazione sono positivi se hanno verso e direzione concordi con il sistema di riferimento locale dell'asta 1, 2, 3 (per i momenti si adotta la regola della mano destra).

Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

- aste verticali ad esempio pilastri e colonne;
- aste non verticali non di c.a., ad esempio travi di acciaio o legno;
- aste non verticali in c.a.: travi in c.a. di piano, falda o a quota generica.

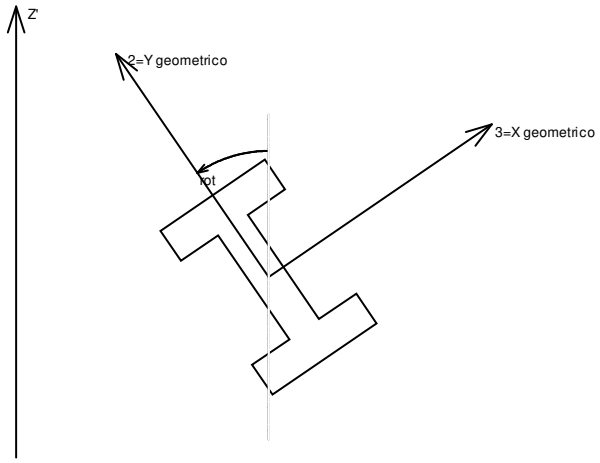
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



Nella figura si considera l'asse 1 uscente dal foglio (l'osservatore guarda in direzione opposta a quella dell'asse 1).

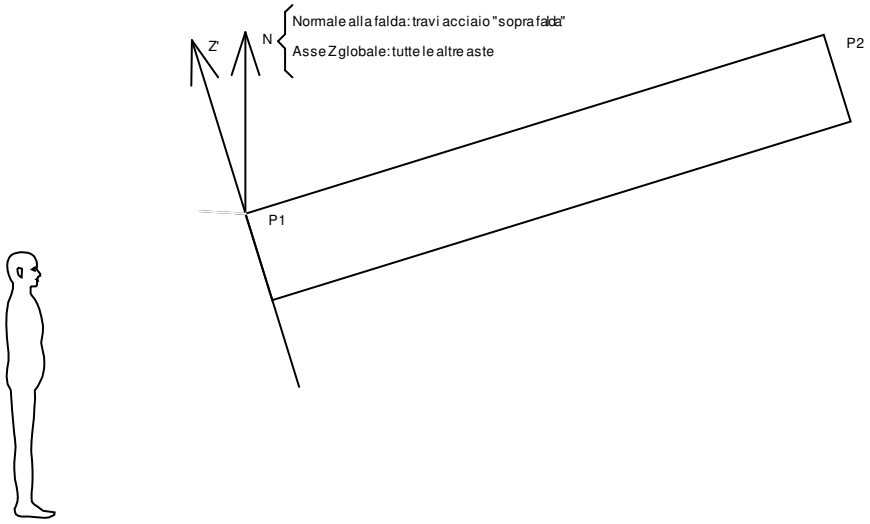
Sistema locale aste non verticali



Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1).

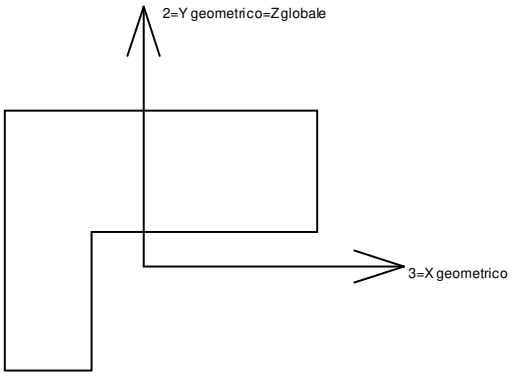
L'asse Z' è illustrato nella figura seguente dove:

- P1 è il punto di inserimento iniziale dell'asta;
- P2 è il punto di inserimento finale dell'asta;
- N è la normale al piano o falda di inserimento;



Z' è quindi l'intersezione tra il piano passante per P1, P2 contenente N e il piano della sezione iniziale dell'asta.

Sistema locale aste derivanti da travi in c.a.



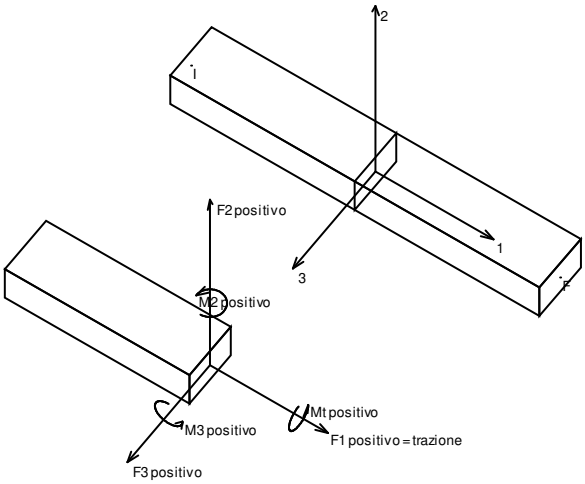
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli assi 2 e 3 non corrispondono agli assi principali della sezione.

1.1.7 Sollecitazioni aste in muratura armata

1.1.7.1 Convenzioni di segno aste

Le abbreviazioni relative alle sollecitazioni sugli elementi aste sono da intendersi:

- F1 (N): sforzo normale nell'asta;
- F2: sforzo di taglio agente nella direzione dell'asse locale 2;
- F3: sforzo di taglio agente nella direzione dell'asse locale 3;
- M1 (Mt): momento attorno all'asse locale 1; equivale al momento torcente;
- M2: momento attorno all'asse locale 2;
- M3: momento attorno all'asse locale 3.



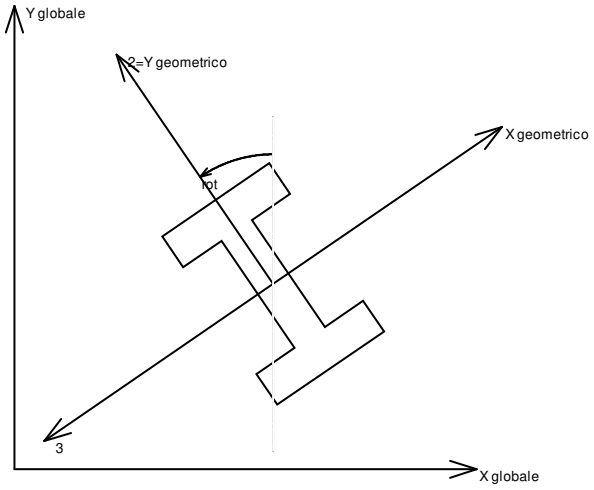
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando la sezione sinistra del punto in cui si è effettuato il taglio (sezione da cui esce il versore asse 1) i parametri di sollecitazione sono positivi se hanno verso e direzione concordi con il sistema di riferimento locale dell'asta 1, 2, 3 (per i momenti si adotta la regola della mano destra).

Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

- aste verticali ad esempio pilastri e colonne;
- aste non verticali non di c.a., ad esempio travi di acciaio o legno;
- aste non verticali in c.a.: travi in c.a. di piano, falda o a quota generica.

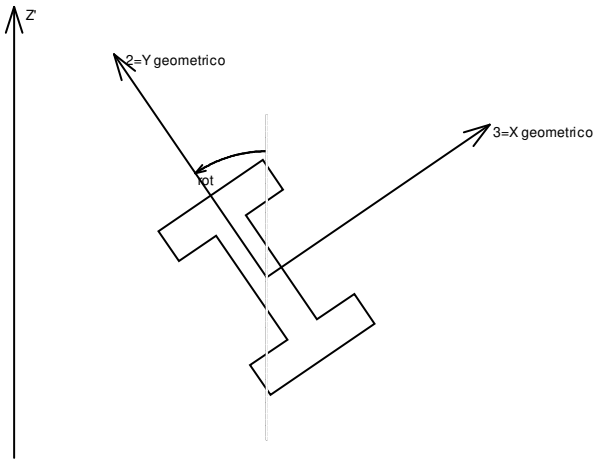
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

Sistema locale aste verticali



Nella figura si considera l'asse 1 uscente dal foglio (l'osservatore guarda in direzione opposta a quella dell'asse 1).

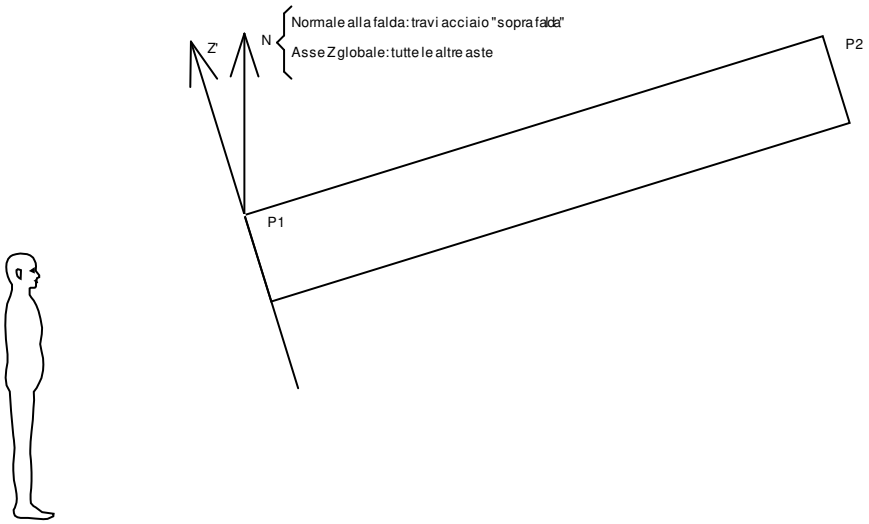
Sistema locale aste non verticali



Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1).

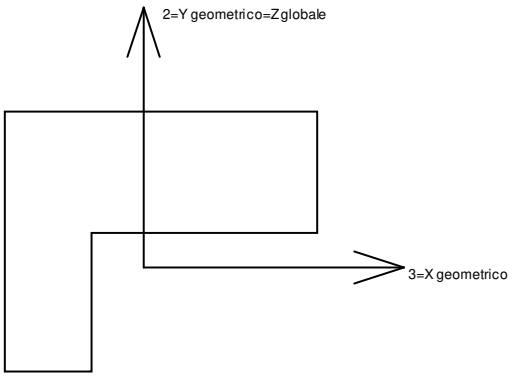
L'asse Z' è illustrato nella figura seguente dove:

- P1 è il punto di inserimento iniziale dell'asta;
- P2 è il punto di inserimento finale dell'asta;
- N è la normale al piano o falda di inserimento;



Z' è quindi l'intersezione tra il piano passante per P1, P2 contenente N e il piano della sezione iniziale dell'asta.

Sistema locale aste derivanti da travi in c.a.



Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli assi 2 e 3 non corrispondono agli assi principali della sezione.

1.2 Reazioni nodali

1.2.1 Reazioni nodali estreme

Nodo: Nodo sollecitato dalla reazione vincolare.
Ind.: indice del nodo.
Cont.: Contesto a cui si riferisce la reazione vincolare.
N.br.: nome breve della condizione o combinazione di carico.
Reazione a traslazione: reazione vincolare traslazionale del nodo.
x: componente X della reazione vincolare del nodo. [daN]
y: componente Y della reazione vincolare del nodo. [daN]
z: componente Z della reazione vincolare del nodo. [daN]
Reazione a rotazione: reazione vincolare rotazionale del nodo.
*x: componente X della reazione a rotazione del nodo. [daN*m]*
*y: componente Y della reazione a rotazione del nodo. [daN*m]*
*z: componente Z della reazione a rotazione del nodo. [daN*m]*

Reazioni Fx minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
110	SLV 13	-1614	450	7509	2997.31	-57.17	653.18
113	SLV 15	-1576	-403	8552	3496.09	-50.14	640.9
151	SLV 13	-1558	464	7412	-3001.58	-43.75	-644.24
154	SLV 15	-1548	-384	9226	-3664.03	-102.81	-645.07
309	SLV 16	-1102	-119	7145	-1613.11	-37.26	-242.03

Reazioni Fx massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
113	SLV 2	1679	406	7478	2980.58	60.94	-672.93
110	SLV 4	1608	-475	8701	3561.3	55.35	-646.51
154	SLV 2	1566	418	7340	-2975.42	41.57	656.19
151	SLV 4	1522	-457	9440	-3743.66	95.25	639.09
309	SLV 1	1115	271	6043	-1357.93	45.3	246.02

Reazioni Fy minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
110	SLV 12	-293	-1561	6016	2551.65	-14.44	131.91
151	SLV 12	-347	-1548	7224	-2815.02	11.6	-132.72
113	SLV 7	295	-1503	5963	2526.12	8.17	-125.55
154	SLV 7	308	-1490	7118	-2777.17	-19.37	117.01
262	SLV 7	310	-1412	5454	975.37	1058.26	218.22

Reazioni Fy massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
151	SLV 5	312	1555	9629	-3930.22	39.89	127.57
110	SLV 5	287	1537	10194	4006.95	12.61	-125.23
154	SLV 10	-289	1524	9448	-3862.28	-41.87	-105.89
113	SLV 10	-193	1505	10067	3950.56	2.63	93.52
262	SLV 10	-241	1221	5886	977.43	1127.85	-197.12

Reazioni Fz minime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
24	SLV Y	-32	-657	-1874	-386.25	-9.64	11.19
110	SLV Y	43	-1442	-1730	-582.5	4.12	-15.31
113	SLV Y	-89	-1394	-1712	-574.89	-13.89	34.77
14	SLV Y	18	-620	-1677	-324.36	7.41	-4.26
34	SLV Y	-50	-598	-1675	-322.77	7.04	7.35

Reazioni Fz massime

Vengono mostrati i soli 5 nodi più sollecitati.

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
151	SLU 82	-16	28	12709	-5080.92	35.64	-0.11
154	SLU 82	5	49	12507	-5006.04	-44.67	4.62
110	SLU 82	1	4	12182	4930.09	-4.06	2.38
113	SLU 82	68	24	12055	4872.22	10.87	-20.4
309	SLU 81	7	116	9930	-2241.37	6.25	2.34

1.2.2 Reazioni nodali in combinazioni di carico

Nodo: *Nodo sollecitato dalla reazione vincolare.*
Ind.: *indice del nodo.*
Cont.: *Contesto a cui si riferisce la reazione vincolare.*
N.br.: *nome breve della condizione o combinazione di carico.*
Reazione a traslazione: *reazione vincolare traslazionale del nodo.*
x: *componente X della reazione vincolare del nodo. [daN]*
y: *componente Y della reazione vincolare del nodo. [daN]*
z: *componente Z della reazione vincolare del nodo. [daN]*
Reazione a rotazione: *reazione vincolare rotazionale del nodo.*
x: *componente X della reazione a rotazione del nodo. [daN*m]*
y: *componente Y della reazione a rotazione del nodo. [daN*m]*
z: *componente Z della reazione a rotazione del nodo. [daN*m]*

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
4	SLU 1	2	-20	1993	457.45	-345.31	-3.85
4	SLU 2	1	-8	2019	462.74	-349.67	-1.56
4	SLU 3	2	-20	1993	457.45	-345.31	-3.85
4	SLU 4	2	-13	2009	460.62	-347.93	-2.48

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
4	SLU 5	1	-8	2019	462.74	-349.67	-1.56
4	SLU 6	2	-20	1993	457.45	-345.31	-3.85
4	SLU 7	2	-13	2009	460.62	-347.93	-2.48
4	SLU 8	2	-20	1993	457.45	-345.31	-3.85
4	SLU 9	2	-13	2009	460.62	-347.93	-2.48
4	SLU 10	3	-14	2347	536.78	-406.39	-3.04
4	SLU 11	4	-26	2321	531.49	-402.03	-5.32
4	SLU 12	3	-19	2337	534.66	-404.65	-3.95
4	SLU 13	3	-14	2347	536.78	-406.39	-3.04
4	SLU 14	4	-26	2321	531.49	-402.03	-5.32
4	SLU 15	3	-19	2337	534.66	-404.65	-3.95
4	SLU 16	4	-26	2321	531.49	-402.03	-5.32
4	SLU 17	3	-19	2337	534.66	-404.65	-3.95
4	SLU 18	4	-29	2462	563.22	-426.34	-5.96
4	SLU 19	4	-22	2477	566.39	-428.95	-4.58
4	SLU 20	4	-29	2462	563.22	-426.34	-5.96
4	SLU 21	4	-22	2477	566.39	-428.95	-4.58
4	SLU 22	3	-24	2239	513.04	-387.78	-4.86
4	SLU 23	2	-12	2265	518.33	-392.14	-2.57
4	SLU 24	3	-24	2239	513.04	-387.78	-4.86
4	SLU 25	3	-17	2255	516.21	-390.39	-3.48
4	SLU 26	2	-12	2265	518.33	-392.14	-2.57
4	SLU 27	3	-24	2239	513.04	-387.78	-4.86
4	SLU 28	3	-17	2255	516.21	-390.39	-3.48
4	SLU 29	3	-24	2239	513.04	-387.78	-4.86
4	SLU 30	3	-17	2255	516.21	-390.39	-3.48
4	SLU 31	4	-19	2593	592.37	-448.85	-4.04
4	SLU 32	5	-31	2567	587.08	-444.49	-6.33
4	SLU 33	4	-23	2582	590.25	-447.11	-4.96
4	SLU 34	4	-19	2593	592.37	-448.85	-4.04
4	SLU 35	5	-31	2567	587.08	-444.49	-6.33
4	SLU 36	4	-23	2582	590.25	-447.11	-4.96
4	SLU 37	5	-31	2567	587.08	-444.49	-6.33
4	SLU 38	4	-23	2582	590.25	-447.11	-4.96
4	SLU 39	5	-33	2708	618.81	-468.8	-6.96
4	SLU 40	5	-26	2723	621.98	-471.42	-5.59
4	SLU 41	5	-33	2708	618.81	-468.8	-6.96
4	SLU 42	5	-26	2723	621.98	-471.42	-5.59
4	SLU 43	2	-24	2507	575.63	-434.35	-4.66
4	SLU 44	1	-12	2533	580.91	-438.71	-2.37
4	SLU 45	2	-24	2507	575.63	-434.35	-4.66
4	SLU 46	2	-17	2523	578.8	-436.97	-3.29
4	SLU 47	1	-12	2533	580.91	-438.71	-2.37
4	SLU 48	2	-24	2507	575.63	-434.35	-4.66
4	SLU 49	2	-17	2523	578.8	-436.97	-3.29
4	SLU 50	2	-24	2507	575.63	-434.35	-4.66
4	SLU 51	2	-17	2523	578.8	-436.97	-3.29
4	SLU 52	3	-19	2861	654.95	-495.43	-3.85
4	SLU 53	4	-31	2835	649.67	-491.07	-6.13
4	SLU 54	3	-24	2850	652.84	-493.68	-4.76
4	SLU 55	3	-19	2861	654.95	-495.43	-3.85
4	SLU 56	4	-31	2835	649.67	-491.07	-6.13
4	SLU 57	3	-24	2850	652.84	-493.68	-4.76
4	SLU 58	4	-31	2835	649.67	-491.07	-6.13
4	SLU 59	3	-24	2850	652.84	-493.68	-4.76
4	SLU 60	4	-34	2976	681.4	-515.37	-6.77
4	SLU 61	4	-26	2991	684.57	-517.99	-5.39
4	SLU 62	4	-34	2976	681.4	-515.37	-6.77
4	SLU 63	4	-26	2991	684.57	-517.99	-5.39
4	SLU 64	3	-29	2753	631.22	-476.81	-5.67
4	SLU 65	3	-17	2779	636.5	-481.17	-3.38
4	SLU 66	3	-29	2753	631.22	-476.81	-5.67
4	SLU 67	3	-22	2768	634.39	-479.43	-4.29
4	SLU 68	3	-17	2779	636.5	-481.17	-3.38
4	SLU 69	3	-29	2753	631.22	-476.81	-5.67
4	SLU 70	3	-22	2768	634.39	-479.43	-4.29
4	SLU 71	3	-29	2753	631.22	-476.81	-5.67
4	SLU 72	3	-22	2768	634.39	-479.43	-4.29
4	SLU 73	4	-23	3106	710.54	-537.89	-4.85
4	SLU 74	5	-35	3081	705.25	-533.53	-7.14
4	SLU 75	4	-28	3096	708.43	-536.14	-5.77
4	SLU 76	4	-23	3106	710.54	-537.89	-4.85
4	SLU 77	5	-35	3081	705.25	-533.53	-7.14
4	SLU 78	4	-28	3096	708.43	-536.14	-5.77
4	SLU 79	5	-35	3081	705.25	-533.53	-7.14
4	SLU 80	4	-28	3096	708.43	-536.14	-5.77
4	SLU 81	5	-38	3221	736.98	-557.84	-7.77
4	SLU 82	5	-31	3237	740.16	-560.45	-6.4
4	SLU 83	5	-38	3221	736.98	-557.84	-7.77
4	SLU 84	5	-31	3237	740.16	-560.45	-6.4
4	SLE RA 1	2	-21	2064	473.33	-357.45	-4.14
4	SLE RA 2	2	-13	2081	476.86	-360.35	-2.61
4	SLE RA 3	2	-21	2064	473.33	-357.45	-4.14
4	SLE RA 4	2	-16	2074	475.45	-359.19	-3.22
4	SLE RA 5	2	-13	2081	476.86	-360.35	-2.61
4	SLE RA 6	2	-21	2064	473.33	-357.45	-4.14

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
4	SLE RA 7	2	-16	2074	475.45	-359.19	-3.22
4	SLE RA 8	2	-21	2064	473.33	-357.45	-4.14
4	SLE RA 9	2	-16	2074	475.45	-359.19	-3.22
4	SLE RA 10	3	-17	2299	526.22	-398.16	-3.6
4	SLE RA 11	3	-25	2282	522.69	-395.26	-5.12
4	SLE RA 12	3	-21	2292	524.81	-397	-4.21
4	SLE RA 13	3	-17	2299	526.22	-398.16	-3.6
4	SLE RA 14	3	-25	2282	522.69	-395.26	-5.12
4	SLE RA 15	3	-21	2292	524.81	-397	-4.21
4	SLE RA 16	3	-25	2282	522.69	-395.26	-5.12
4	SLE RA 17	3	-21	2292	524.81	-397	-4.21
4	SLE RA 18	4	-27	2376	543.85	-411.46	-5.54
4	SLE RA 19	4	-22	2386	545.96	-413.21	-4.63
4	SLE RA 20	4	-27	2376	543.85	-411.46	-5.54
4	SLE RA 21	4	-22	2386	545.96	-413.21	-4.63
4	SLE FR 1	2	-21	2064	473.33	-357.45	-4.14
4	SLE FR 2	2	-20	2067	474.04	-358.03	-3.83
4	SLE FR 3	2	-21	2064	473.33	-357.45	-4.14
4	SLE FR 4	3	-21	2161	495.19	-374.23	-4.25
4	SLE FR 5	3	-23	2157	494.49	-373.65	-4.56
4	SLE FR 6	3	-24	2220	508.59	-384.45	-4.84
4	SLE QP 1	2	-21	2064	473.33	-357.45	-4.14
4	SLE QP 2	3	-23	2157	494.49	-373.65	-4.56
4	SLD 1	127	79	2621	596.78	-450.17	-17.61
4	SLD 2	159	39	2606	593.77	-447.71	-32.46
4	SLD 3	130	-52	2344	539.74	-402.63	-41.38
4	SLD 4	162	-92	2329	536.74	-400.17	-56.23
4	SLD 5	23	221	2722	612.79	-469.62	33.05
4	SLD 6	56	179	2707	609.67	-467.06	17.64
4	SLD 7	34	-216	1798	422.67	-311.15	-46.17
4	SLD 8	67	-257	1783	419.55	-308.59	-61.58
4	SLD 9	-62	211	2531	569.43	-438.71	52.46
4	SLD 10	-29	170	2516	566.31	-436.15	37.05
4	SLD 11	-51	-225	1608	379.3	-280.24	-26.76
4	SLD 12	-18	-267	1593	376.18	-277.68	-42.17
4	SLD 13	-157	46	1985	452.24	-347.13	47.11
4	SLD 14	-125	6	1971	449.23	-344.67	32.26
4	SLD 15	-154	-85	1708	395.2	-299.59	23.34
4	SLD 16	-122	-125	1694	392.19	-297.13	8.5
4	SLV 1	287	208	3214	727.67	-548.06	-34.58
4	SLV 2	360	117	3181	720.82	-542.44	-68.43
4	SLV 3	294	-89	2585	598.17	-440.12	-88.56
4	SLV 4	367	-180	2552	591.32	-434.5	-122.41
4	SLV 5	49	531	3441	763.36	-591.74	80.72
4	SLV 6	125	437	3406	756.28	-585.93	45.73
4	SLV 7	75	-461	1344	331.7	-231.94	-99.21
4	SLV 8	150	-555	1309	324.62	-226.14	-134.2
4	SLV 9	-145	509	3005	664.36	-521.17	125.08
4	SLV 10	-70	414	2971	657.28	-515.36	90.1
4	SLV 11	-120	-483	908	232.69	-161.37	-54.85
4	SLV 12	-44	-577	874	225.61	-155.56	-89.84
4	SLV 13	-362	134	1763	397.66	-312.8	113.29
4	SLV 14	-289	43	1730	390.81	-307.18	79.45
4	SLV 15	-354	-163	1134	268.16	-204.86	59.31
4	SLV 16	-281	-254	1101	261.31	-199.24	25.47
4	CRTFP Ux+	0	0	0	0	0	0
4	CRTFP Ux-	0	0	0	0	0	0
4	CRTFP Uy+	0	0	0	0	0	0
4	CRTFP Uy-	0	0	0	0	0	0
6	SLU 1	1	-13	1352	408.26	-36.62	-0.48
6	SLU 2	0	-4	1369	412.55	-37.06	-0.17
6	SLU 3	1	-13	1352	408.26	-36.62	-0.48
6	SLU 4	0	-8	1362	410.83	-36.88	-0.3
6	SLU 5	0	-4	1369	412.55	-37.06	-0.17
6	SLU 6	1	-13	1352	408.26	-36.62	-0.48
6	SLU 7	0	-8	1362	410.83	-36.88	-0.3
6	SLU 8	1	-13	1352	408.26	-36.62	-0.48
6	SLU 9	0	-8	1362	410.83	-36.88	-0.3
6	SLU 10	1	-8	1590	477.06	-43.06	-0.57
6	SLU 11	1	-17	1574	472.76	-42.63	-0.88
6	SLU 12	1	-12	1584	475.34	-42.88	-0.7
6	SLU 13	1	-8	1590	477.06	-43.06	-0.57
6	SLU 14	1	-17	1574	472.76	-42.63	-0.88
6	SLU 15	1	-12	1584	475.34	-42.88	-0.7
6	SLU 16	1	-17	1574	472.76	-42.63	-0.88
6	SLU 17	1	-12	1584	475.34	-42.88	-0.7
6	SLU 18	2	-18	1669	500.41	-45.2	-1.05
6	SLU 19	2	-13	1678	502.99	-45.46	-0.87
6	SLU 20	2	-18	1669	500.41	-45.2	-1.05
6	SLU 21	2	-13	1678	502.99	-45.46	-0.87
6	SLU 22	1	-15	1518	456.67	-41.12	-0.75
6	SLU 23	1	-7	1535	460.97	-41.55	-0.44
6	SLU 24	1	-15	1518	456.67	-41.12	-0.75
6	SLU 25	1	-10	1528	459.25	-41.38	-0.56
6	SLU 26	1	-7	1535	460.97	-41.55	-0.44
6	SLU 27	1	-15	1518	456.67	-41.12	-0.75

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
6	SLU 28	1	-10	1528	459.25	-41.38	-0.56
6	SLU 29	1	-15	1518	456.67	-41.12	-0.75
6	SLU 30	1	-10	1528	459.25	-41.38	-0.56
6	SLU 31	2	-11	1756	525.47	-47.55	-0.84
6	SLU 32	2	-19	1740	521.18	-47.12	-1.15
6	SLU 33	2	-14	1749	523.75	-47.38	-0.96
6	SLU 34	2	-11	1756	525.47	-47.55	-0.84
6	SLU 35	2	-19	1740	521.18	-47.12	-1.15
6	SLU 36	2	-14	1749	523.75	-47.38	-0.96
6	SLU 37	2	-19	1740	521.18	-47.12	-1.15
6	SLU 38	2	-14	1749	523.75	-47.38	-0.96
6	SLU 39	2	-21	1835	548.83	-49.69	-1.32
6	SLU 40	2	-16	1844	551.4	-49.95	-1.13
6	SLU 41	2	-21	1835	548.83	-49.69	-1.32
6	SLU 42	2	-16	1844	551.4	-49.95	-1.13
6	SLU 43	0	-15	1701	514.14	-46.07	-0.53
6	SLU 44	0	-7	1717	518.43	-46.51	-0.23
6	SLU 45	0	-15	1701	514.14	-46.07	-0.53
6	SLU 46	0	-10	1711	516.71	-46.33	-0.35
6	SLU 47	0	-7	1717	518.43	-46.51	-0.23
6	SLU 48	0	-15	1701	514.14	-46.07	-0.53
6	SLU 49	0	-10	1711	516.71	-46.33	-0.35
6	SLU 50	0	-15	1701	514.14	-46.07	-0.53
6	SLU 51	0	-10	1711	516.71	-46.33	-0.35
6	SLU 52	1	-11	1939	582.93	-52.51	-0.63
6	SLU 53	1	-19	1922	578.64	-52.07	-0.94
6	SLU 54	1	-14	1932	581.22	-52.33	-0.75
6	SLU 55	1	-11	1939	582.93	-52.51	-0.63
6	SLU 56	1	-19	1922	578.64	-52.07	-0.94
6	SLU 57	1	-14	1932	581.22	-52.33	-0.75
6	SLU 58	1	-19	1922	578.64	-52.07	-0.94
6	SLU 59	1	-14	1932	581.22	-52.33	-0.75
6	SLU 60	2	-21	2017	606.29	-54.64	-1.11
6	SLU 61	2	-16	2027	608.86	-54.9	-0.92
6	SLU 62	2	-21	2017	606.29	-54.64	-1.11
6	SLU 63	2	-16	2027	608.86	-54.9	-0.92
6	SLU 64	1	-18	1867	562.55	-50.56	-0.8
6	SLU 65	1	-10	1883	566.84	-51	-0.49
6	SLU 66	1	-18	1867	562.55	-50.56	-0.8
6	SLU 67	1	-13	1877	565.13	-50.82	-0.61
6	SLU 68	1	-10	1883	566.84	-51	-0.49
6	SLU 69	1	-18	1867	562.55	-50.56	-0.8
6	SLU 70	1	-13	1877	565.13	-50.82	-0.61
6	SLU 71	1	-18	1867	562.55	-50.56	-0.8
6	SLU 72	1	-13	1877	565.13	-50.82	-0.61
6	SLU 73	2	-14	2105	631.35	-57	-0.89
6	SLU 74	2	-22	2088	627.06	-56.56	-1.2
6	SLU 75	2	-17	2098	629.63	-56.82	-1.01
6	SLU 76	2	-14	2105	631.35	-57	-0.89
6	SLU 77	2	-22	2088	627.06	-56.56	-1.2
6	SLU 78	2	-17	2098	629.63	-56.82	-1.01
6	SLU 79	2	-22	2088	627.06	-56.56	-1.2
6	SLU 80	2	-17	2098	629.63	-56.82	-1.01
6	SLU 81	2	-24	2183	654.7	-59.14	-1.37
6	SLU 82	2	-19	2193	657.28	-59.39	-1.19
6	SLU 83	2	-24	2183	654.7	-59.14	-1.37
6	SLU 84	2	-19	2193	657.28	-59.39	-1.19
6	SLE RA 1	1	-13	1400	422.09	-37.91	-0.56
6	SLE RA 2	1	-8	1411	424.95	-38.2	-0.35
6	SLE RA 3	1	-13	1400	422.09	-37.91	-0.56
6	SLE RA 4	1	-10	1406	423.81	-38.08	-0.43
6	SLE RA 5	1	-8	1411	424.95	-38.2	-0.35
6	SLE RA 6	1	-13	1400	422.09	-37.91	-0.56
6	SLE RA 7	1	-10	1406	423.81	-38.08	-0.43
6	SLE RA 8	1	-13	1400	422.09	-37.91	-0.56
6	SLE RA 9	1	-10	1406	423.81	-38.08	-0.43
6	SLE RA 10	1	-11	1558	467.96	-42.2	-0.62
6	SLE RA 11	1	-16	1547	465.1	-41.91	-0.82
6	SLE RA 12	1	-13	1554	466.81	-42.08	-0.7
6	SLE RA 13	1	-11	1558	467.96	-42.2	-0.62
6	SLE RA 14	1	-16	1547	465.1	-41.91	-0.82
6	SLE RA 15	1	-13	1554	466.81	-42.08	-0.7
6	SLE RA 16	1	-16	1547	465.1	-41.91	-0.82
6	SLE RA 17	1	-13	1554	466.81	-42.08	-0.7
6	SLE RA 18	2	-17	1610	483.53	-43.62	-0.94
6	SLE RA 19	1	-14	1617	485.24	-43.8	-0.81
6	SLE RA 20	2	-17	1610	483.53	-43.62	-0.94
6	SLE RA 21	1	-14	1617	485.24	-43.8	-0.81
6	SLE FR 1	1	-13	1400	422.09	-37.91	-0.56
6	SLE FR 2	1	-12	1402	422.66	-37.97	-0.52
6	SLE FR 3	1	-13	1400	422.09	-37.91	-0.56
6	SLE FR 4	1	-13	1465	441.09	-39.68	-0.63
6	SLE FR 5	1	-14	1463	440.52	-39.62	-0.67
6	SLE FR 6	1	-15	1505	452.81	-40.77	-0.75
6	SLE QP 1	1	-13	1400	422.09	-37.91	-0.56
6	SLE QP 2	1	-14	1463	440.52	-39.62	-0.67

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
6	SLD 1	90	54	1761	524.83	-47.23	-30.15
6	SLD 2	112	28	1752	522.4	-46.99	-38.52
6	SLD 3	91	-35	1582	478.64	-42.5	-32.63
6	SLD 4	113	-61	1573	476.22	-42.26	-40.99
6	SLD 5	17	151	1828	536.76	-49.17	-2.67
6	SLD 6	40	123	1818	534.24	-48.92	-11.36
6	SLD 7	22	-146	1230	382.8	-33.4	-10.92
6	SLD 8	45	-174	1220	380.28	-33.15	-19.61
6	SLD 9	-43	145	1705	500.76	-46.09	18.27
6	SLD 10	-21	117	1696	498.24	-45.84	9.58
6	SLD 11	-38	-152	1108	346.8	-30.33	10.02
6	SLD 12	-15	-180	1098	344.28	-30.08	1.33
6	SLD 13	-111	32	1353	404.83	-36.98	39.65
6	SLD 14	-89	6	1344	402.4	-36.74	31.28
6	SLD 15	-110	-57	1174	358.64	-32.25	37.17
6	SLD 16	-88	-83	1165	356.21	-32.01	28.81
6	SLV 1	203	142	2143	632.71	-56.97	-68.03
6	SLV 2	253	81	2122	627.18	-56.42	-87.1
6	SLV 3	207	-60	1736	527.84	-46.23	-73.67
6	SLV 4	257	-121	1715	522.31	-45.68	-92.74
6	SLV 5	38	362	2292	659.27	-61.31	-5.33
6	SLV 6	89	299	2270	653.55	-60.75	-25.05
6	SLV 7	50	-313	935	309.69	-25.52	-24.12
6	SLV 8	102	-376	913	303.97	-24.95	-43.84
6	SLV 9	-100	347	2012	577.07	-54.29	42.5
6	SLV 10	-48	284	1991	571.36	-53.73	22.78
6	SLV 11	-87	-328	656	227.49	-18.5	23.7
6	SLV 12	-36	-391	634	221.78	-17.93	3.99
6	SLV 13	-255	92	1211	358.74	-33.56	91.4
6	SLV 14	-205	31	1190	353.21	-33.01	72.32
6	SLV 15	-252	-110	804	253.86	-22.82	85.76
6	SLV 16	-202	-171	783	248.33	-22.28	66.69
6	CRTFP Ux+	0	0	0	0	0	0
6	CRTFP Ux-	0	0	0	0	0	0
6	CRTFP Uy+	0	0	0	0	0	0
6	CRTFP Uy-	0	0	0	0	0	0
7	SLU 1	0	-12	1544	444.03	1.35	-0.08
7	SLU 2	0	-3	1562	448.38	1.39	0
7	SLU 3	0	-12	1544	444.03	1.35	-0.08
7	SLU 4	0	-7	1555	446.64	1.37	-0.03
7	SLU 5	0	-3	1562	448.38	1.39	0
7	SLU 6	0	-12	1544	444.03	1.35	-0.08
7	SLU 7	0	-7	1555	446.64	1.37	-0.03
7	SLU 8	0	-12	1544	444.03	1.35	-0.08
7	SLU 9	0	-7	1555	446.64	1.37	-0.03
7	SLU 10	1	-7	1815	517.71	1.59	-0.31
7	SLU 11	1	-16	1797	513.36	1.55	-0.39
7	SLU 12	1	-10	1808	515.97	1.57	-0.35
7	SLU 13	1	-7	1815	517.71	1.59	-0.31
7	SLU 14	1	-16	1797	513.36	1.55	-0.39
7	SLU 15	1	-10	1808	515.97	1.57	-0.35
7	SLU 16	1	-16	1797	513.36	1.55	-0.39
7	SLU 17	1	-10	1808	515.97	1.57	-0.35
7	SLU 18	2	-17	1905	543.07	1.64	-0.53
7	SLU 19	2	-12	1916	545.68	1.66	-0.48
7	SLU 20	2	-17	1905	543.07	1.64	-0.53
7	SLU 21	2	-12	1916	545.68	1.66	-0.48
7	SLU 22	1	-15	1733	495.98	1.51	-0.28
7	SLU 23	1	-6	1751	500.34	1.55	-0.2
7	SLU 24	1	-15	1733	495.98	1.51	-0.28
7	SLU 25	1	-9	1744	498.59	1.53	-0.23
7	SLU 26	1	-6	1751	500.34	1.55	-0.2
7	SLU 27	1	-15	1733	495.98	1.51	-0.28
7	SLU 28	1	-9	1744	498.59	1.53	-0.23
7	SLU 29	1	-15	1733	495.98	1.51	-0.28
7	SLU 30	1	-9	1744	498.59	1.53	-0.23
7	SLU 31	2	-9	2005	569.66	1.75	-0.52
7	SLU 32	2	-18	1986	565.31	1.71	-0.6
7	SLU 33	2	-13	1997	567.92	1.73	-0.55
7	SLU 34	2	-9	2005	569.66	1.75	-0.52
7	SLU 35	2	-18	1986	565.31	1.71	-0.6
7	SLU 36	2	-13	1997	567.92	1.73	-0.55
7	SLU 37	2	-18	1986	565.31	1.71	-0.6
7	SLU 38	2	-13	1997	567.92	1.73	-0.55
7	SLU 39	3	-20	2095	595.02	1.8	-0.73
7	SLU 40	2	-15	2106	597.64	1.82	-0.68
7	SLU 41	3	-20	2095	595.02	1.8	-0.73
7	SLU 42	2	-15	2106	597.64	1.82	-0.68
7	SLU 43	0	-15	1942	559.42	1.7	-0.03
7	SLU 44	0	-6	1960	563.78	1.74	0.05
7	SLU 45	0	-15	1942	559.42	1.7	-0.03
7	SLU 46	0	-9	1953	562.04	1.72	0.02
7	SLU 47	0	-6	1960	563.78	1.74	0.05
7	SLU 48	0	-15	1942	559.42	1.7	-0.03
7	SLU 49	0	-9	1953	562.04	1.72	0.02
7	SLU 50	0	-15	1942	559.42	1.7	-0.03

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
7	SLU 51	0	-9	1953	562.04	1.72	0.02
7	SLU 52	1	-10	2213	633.1	1.94	-0.27
7	SLU 53	1	-19	2195	628.75	1.9	-0.35
7	SLU 54	1	-13	2206	631.36	1.92	-0.3
7	SLU 55	1	-10	2213	633.1	1.94	-0.27
7	SLU 56	1	-19	2195	628.75	1.9	-0.35
7	SLU 57	1	-13	2206	631.36	1.92	-0.3
7	SLU 58	1	-19	2195	628.75	1.9	-0.35
7	SLU 59	1	-13	2206	631.36	1.92	-0.3
7	SLU 60	2	-20	2304	658.46	1.99	-0.48
7	SLU 61	2	-15	2315	661.08	2.01	-0.43
7	SLU 62	2	-20	2304	658.46	1.99	-0.48
7	SLU 63	2	-15	2315	661.08	2.01	-0.43
7	SLU 64	1	-17	2131	611.38	1.86	-0.24
7	SLU 65	1	-8	2150	615.73	1.9	-0.15
7	SLU 66	1	-17	2131	611.38	1.86	-0.24
7	SLU 67	1	-12	2142	613.99	1.88	-0.19
7	SLU 68	1	-8	2150	615.73	1.9	-0.15
7	SLU 69	1	-17	2131	611.38	1.86	-0.24
7	SLU 70	1	-12	2142	613.99	1.88	-0.19
7	SLU 71	1	-17	2131	611.38	1.86	-0.24
7	SLU 72	1	-12	2142	613.99	1.88	-0.19
7	SLU 73	2	-12	2403	685.06	2.1	-0.47
7	SLU 74	2	-21	2385	680.71	2.06	-0.55
7	SLU 75	2	-16	2396	683.32	2.08	-0.5
7	SLU 76	2	-12	2403	685.06	2.1	-0.47
7	SLU 77	2	-21	2385	680.71	2.06	-0.55
7	SLU 78	2	-16	2396	683.32	2.08	-0.5
7	SLU 79	2	-21	2385	680.71	2.06	-0.55
7	SLU 80	2	-16	2396	683.32	2.08	-0.5
7	SLU 81	2	-23	2493	710.42	2.15	-0.69
7	SLU 82	2	-17	2504	713.03	2.17	-0.64
7	SLU 83	2	-23	2493	710.42	2.15	-0.69
7	SLU 84	2	-17	2504	713.03	2.17	-0.64
7	SLE RA 1	1	-13	1598	458.87	1.39	-0.14
7	SLE RA 2	0	-7	1610	461.77	1.42	-0.08
7	SLE RA 3	1	-13	1598	458.87	1.39	-0.14
7	SLE RA 4	1	-9	1605	460.61	1.41	-0.1
7	SLE RA 5	0	-7	1610	461.77	1.42	-0.08
7	SLE RA 6	1	-13	1598	458.87	1.39	-0.14
7	SLE RA 7	1	-9	1605	460.61	1.41	-0.1
7	SLE RA 8	1	-13	1598	458.87	1.39	-0.14
7	SLE RA 9	1	-9	1605	460.61	1.41	-0.1
7	SLE RA 10	1	-9	1779	507.99	1.55	-0.29
7	SLE RA 11	1	-15	1767	505.09	1.53	-0.35
7	SLE RA 12	1	-12	1774	506.83	1.54	-0.31
7	SLE RA 13	1	-9	1779	507.99	1.55	-0.29
7	SLE RA 14	1	-15	1767	505.09	1.53	-0.35
7	SLE RA 15	1	-12	1774	506.83	1.54	-0.31
7	SLE RA 16	1	-15	1767	505.09	1.53	-0.35
7	SLE RA 17	1	-12	1774	506.83	1.54	-0.31
7	SLE RA 18	2	-16	1839	524.9	1.59	-0.44
7	SLE RA 19	1	-13	1846	526.64	1.6	-0.4
7	SLE RA 20	2	-16	1839	524.9	1.59	-0.44
7	SLE RA 21	1	-13	1846	526.64	1.6	-0.4
7	SLE FR 1	1	-13	1598	458.87	1.39	-0.14
7	SLE FR 2	1	-12	1600	459.45	1.4	-0.13
7	SLE FR 3	1	-13	1598	458.87	1.39	-0.14
7	SLE FR 4	1	-13	1673	479.26	1.46	-0.22
7	SLE FR 5	1	-14	1670	478.68	1.45	-0.23
7	SLE FR 6	1	-15	1718	491.89	1.49	-0.29
7	SLE QP 1	1	-13	1598	458.87	1.39	-0.14
7	SLE QP 2	1	-14	1670	478.68	1.45	-0.23
7	SLD 1	105	61	1988	562.07	2.5	-36.88
7	SLD 2	131	33	1978	559.64	2.47	-45.83
7	SLD 3	107	-37	1789	515.03	2.12	-37.57
7	SLD 4	133	-66	1779	512.6	2.09	-46.53
7	SLD 5	20	168	2070	575.93	2.35	-6.86
7	SLD 6	47	139	2060	573.42	2.32	-16.15
7	SLD 7	26	-159	1409	419.14	1.09	-9.19
7	SLD 8	53	-189	1398	416.62	1.06	-18.48
7	SLD 9	-51	161	1942	540.74	1.84	18.02
7	SLD 10	-24	132	1932	538.22	1.82	8.73
7	SLD 11	-45	-167	1281	383.95	0.58	15.7
7	SLD 12	-18	-196	1270	381.43	0.55	6.41
7	SLD 13	-131	38	1561	444.76	0.81	46.07
7	SLD 14	-105	9	1551	442.33	0.79	37.12
7	SLD 15	-129	-61	1363	397.72	0.44	45.38
7	SLD 16	-104	-89	1353	395.29	0.41	36.42
7	SLV 1	240	157	2394	668.76	3.83	-83.95
7	SLV 2	299	92	2371	663.22	3.77	-104.36
7	SLV 3	244	-66	1943	561.95	2.98	-85.55
7	SLV 4	303	-131	1920	556.42	2.91	-105.96
7	SLV 5	44	400	2579	699.72	3.49	-15.43
7	SLV 6	105	333	2556	694.01	3.43	-36.53
7	SLV 7	59	-344	1077	343.7	0.63	-20.76

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
7	SLV 8	120	-412	1053	337.98	0.56	-41.86
7	SLV 9	-118	384	2287	619.38	2.34	41.41
7	SLV 10	-57	316	2264	613.66	2.27	20.31
7	SLV 11	-103	-361	785	263.36	-0.52	36.07
7	SLV 12	-42	-428	761	257.64	-0.59	14.97
7	SLV 13	-301	104	1420	400.94	-0.01	105.5
7	SLV 14	-242	38	1397	395.41	-0.07	85.09
7	SLV 15	-297	-120	969	294.14	-0.87	103.9
7	SLV 16	-238	-185	946	288.6	-0.93	83.49
7	CRTFP Ux+	0	0	0	0	0	0
7	CRTFP Ux-	0	0	0	0	0	0
7	CRTFP Uy+	0	0	0	0	0	0
7	CRTFP Uy-	0	0	0	0	0	0
8	SLU 1	0	-10	1509	421.49	0.78	-0.05
8	SLU 2	0	-1	1526	425.3	0.81	0.03
8	SLU 3	0	-10	1509	421.49	0.78	-0.05
8	SLU 4	0	-5	1519	423.77	0.79	0
8	SLU 5	0	-1	1526	425.3	0.81	0.03
8	SLU 6	0	-10	1509	421.49	0.78	-0.05
8	SLU 7	0	-5	1519	423.77	0.79	0
8	SLU 8	0	-10	1509	421.49	0.78	-0.05
8	SLU 9	0	-5	1519	423.77	0.79	0
8	SLU 10	1	-4	1774	490.84	0.89	-0.27
8	SLU 11	1	-12	1757	487.04	0.86	-0.35
8	SLU 12	1	-7	1767	489.32	0.88	-0.3
8	SLU 13	1	-4	1774	490.84	0.89	-0.27
8	SLU 14	1	-12	1757	487.04	0.86	-0.35
8	SLU 15	1	-7	1767	489.32	0.88	-0.3
8	SLU 16	1	-12	1757	487.04	0.86	-0.35
8	SLU 17	1	-7	1767	489.32	0.88	-0.3
8	SLU 18	2	-14	1864	515.13	0.9	-0.47
8	SLU 19	1	-9	1874	517.41	0.92	-0.43
8	SLU 20	2	-14	1864	515.13	0.9	-0.47
8	SLU 21	1	-9	1874	517.41	0.92	-0.43
8	SLU 22	1	-12	1694	470.53	0.85	-0.24
8	SLU 23	1	-3	1711	474.33	0.88	-0.16
8	SLU 24	1	-12	1694	470.53	0.85	-0.24
8	SLU 25	1	-7	1705	472.81	0.87	-0.19
8	SLU 26	1	-3	1711	474.33	0.88	-0.16
8	SLU 27	1	-12	1694	470.53	0.85	-0.24
8	SLU 28	1	-7	1705	472.81	0.87	-0.19
8	SLU 29	1	-12	1694	470.53	0.85	-0.24
8	SLU 30	1	-7	1705	472.81	0.87	-0.19
8	SLU 31	2	-6	1960	539.88	0.97	-0.46
8	SLU 32	2	-14	1943	536.07	0.94	-0.54
8	SLU 33	2	-9	1953	538.36	0.96	-0.49
8	SLU 34	2	-6	1960	539.88	0.97	-0.46
8	SLU 35	2	-14	1943	536.07	0.94	-0.54
8	SLU 36	2	-9	1953	538.36	0.96	-0.49
8	SLU 37	2	-14	1943	536.07	0.94	-0.54
8	SLU 38	2	-9	1953	538.36	0.96	-0.49
8	SLU 39	2	-16	2049	564.16	0.98	-0.66
8	SLU 40	2	-11	2060	566.45	0.99	-0.62
8	SLU 41	2	-16	2049	564.16	0.98	-0.66
8	SLU 42	2	-11	2060	566.45	0.99	-0.62
8	SLU 43	0	-12	1898	531.12	0.98	0
8	SLU 44	0	-3	1915	534.93	1.01	0.08
8	SLU 45	0	-12	1898	531.12	0.98	0
8	SLU 46	0	-7	1908	533.41	1	0.05
8	SLU 47	0	-3	1915	534.93	1.01	0.08
8	SLU 48	0	-12	1898	531.12	0.98	0
8	SLU 49	0	-7	1908	533.41	1	0.05
8	SLU 50	0	-12	1898	531.12	0.98	0
8	SLU 51	0	-7	1908	533.41	1	0.05
8	SLU 52	1	-6	2163	600.48	1.1	-0.22
8	SLU 53	1	-15	2146	596.67	1.07	-0.3
8	SLU 54	1	-10	2156	598.95	1.09	-0.25
8	SLU 55	1	-6	2163	600.48	1.1	-0.22
8	SLU 56	1	-15	2146	596.67	1.07	-0.3
8	SLU 57	1	-10	2156	598.95	1.09	-0.25
8	SLU 58	1	-15	2146	596.67	1.07	-0.3
8	SLU 59	1	-10	2156	598.95	1.09	-0.25
8	SLU 60	2	-16	2253	624.76	1.11	-0.42
8	SLU 61	1	-11	2263	627.05	1.13	-0.38
8	SLU 62	2	-16	2253	624.76	1.11	-0.42
8	SLU 63	1	-11	2263	627.05	1.13	-0.38
8	SLU 64	1	-14	2083	580.16	1.06	-0.19
8	SLU 65	1	-5	2100	583.97	1.09	-0.11
8	SLU 66	1	-14	2083	580.16	1.06	-0.19
8	SLU 67	1	-9	2094	582.44	1.08	-0.14
8	SLU 68	1	-5	2100	583.97	1.09	-0.11
8	SLU 69	1	-14	2083	580.16	1.06	-0.19
8	SLU 70	1	-9	2094	582.44	1.08	-0.14
8	SLU 71	1	-14	2083	580.16	1.06	-0.19
8	SLU 72	1	-9	2094	582.44	1.08	-0.14
8	SLU 73	1	-8	2349	649.51	1.18	-0.41

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
8	SLU 74	2	-17	2332	645.71	1.15	-0.49
8	SLU 75	2	-12	2342	647.99	1.16	-0.44
8	SLU 76	1	-8	2349	649.51	1.18	-0.41
8	SLU 77	2	-17	2332	645.71	1.15	-0.49
8	SLU 78	2	-12	2342	647.99	1.16	-0.44
8	SLU 79	2	-17	2332	645.71	1.15	-0.49
8	SLU 80	2	-12	2342	647.99	1.16	-0.44
8	SLU 81	2	-18	2438	673.8	1.18	-0.61
8	SLU 82	2	-13	2449	676.08	1.2	-0.57
8	SLU 83	2	-18	2438	673.8	1.18	-0.61
8	SLU 84	2	-13	2449	676.08	1.2	-0.57
8	SLE RA 1	1	-10	1562	435.5	0.8	-0.1
8	SLE RA 2	0	-5	1573	438.04	0.82	-0.05
8	SLE RA 3	1	-10	1562	435.5	0.8	-0.1
8	SLE RA 4	0	-7	1569	437.02	0.81	-0.07
8	SLE RA 5	0	-5	1573	438.04	0.82	-0.05
8	SLE RA 6	1	-10	1562	435.5	0.8	-0.1
8	SLE RA 7	0	-7	1569	437.02	0.81	-0.07
8	SLE RA 8	1	-10	1562	435.5	0.8	-0.1
8	SLE RA 9	0	-7	1569	437.02	0.81	-0.07
8	SLE RA 10	1	-6	1739	481.74	0.88	-0.25
8	SLE RA 11	1	-12	1727	479.2	0.86	-0.3
8	SLE RA 12	1	-9	1734	480.72	0.87	-0.27
8	SLE RA 13	1	-6	1739	481.74	0.88	-0.25
8	SLE RA 14	1	-12	1727	479.2	0.86	-0.3
8	SLE RA 15	1	-9	1734	480.72	0.87	-0.27
8	SLE RA 16	1	-12	1727	479.2	0.86	-0.3
8	SLE RA 17	1	-9	1734	480.72	0.87	-0.27
8	SLE RA 18	1	-13	1798	497.93	0.88	-0.39
8	SLE RA 19	1	-10	1805	499.45	0.89	-0.36
8	SLE RA 20	1	-13	1798	497.93	0.88	-0.39
8	SLE RA 21	1	-10	1805	499.45	0.89	-0.36
8	SLE FR 1	1	-10	1562	435.5	0.8	-0.1
8	SLE FR 2	0	-9	1564	436.01	0.8	-0.09
8	SLE FR 3	1	-10	1562	435.5	0.8	-0.1
8	SLE FR 4	1	-10	1635	454.73	0.83	-0.18
8	SLE FR 5	1	-11	1633	454.23	0.82	-0.19
8	SLE FR 6	1	-12	1680	466.71	0.84	-0.25
8	SLE QP 1	1	-10	1562	435.5	0.8	-0.1
8	SLE QP 2	1	-11	1633	454.23	0.82	-0.19
8	SLD 1	105	58	1919	524.53	1.71	-36.89
8	SLD 2	131	32	1909	522.45	1.69	-45.85
8	SLD 3	107	-33	1731	483.04	1.42	-37.6
8	SLD 4	133	-59	1722	480.96	1.4	-46.56
8	SLD 5	20	157	2006	539.01	1.53	-6.82
8	SLD 6	47	131	1997	536.85	1.51	-16.12
8	SLD 7	26	-146	1381	400.71	0.58	-9.18
8	SLD 8	53	-173	1372	398.56	0.55	-18.48
8	SLD 9	-51	151	1894	509.9	1.09	18.1
8	SLD 10	-25	124	1884	507.74	1.07	8.8
8	SLD 11	-45	-153	1269	371.6	0.14	15.74
8	SLD 12	-18	-179	1259	369.45	0.11	6.44
8	SLD 13	-132	37	1544	427.49	0.25	46.18
8	SLD 14	-106	11	1535	425.42	0.22	37.22
8	SLD 15	-130	-54	1356	386.01	-0.04	45.47
8	SLD 16	-104	-80	1347	383.93	-0.07	36.51
8	SLV 1	240	145	2284	614.46	2.85	-84.02
8	SLV 2	299	86	2263	609.72	2.8	-104.45
8	SLV 3	244	-62	1858	520.26	2.2	-85.65
8	SLV 4	303	-121	1837	515.52	2.14	-106.08
8	SLV 5	44	371	2482	646.92	2.44	-15.38
8	SLV 6	105	310	2460	642.02	2.38	-36.5
8	SLV 7	59	-318	1062	332.89	0.27	-20.8
8	SLV 8	120	-379	1041	327.99	0.21	-41.92
8	SLV 9	-118	357	2225	580.46	1.44	41.54
8	SLV 10	-57	296	2203	575.56	1.38	20.42
8	SLV 11	-104	-332	806	266.44	-0.74	36.12
8	SLV 12	-43	-393	784	261.54	-0.79	15
8	SLV 13	-302	99	1428	392.94	-0.5	105.7
8	SLV 14	-243	40	1407	388.2	-0.55	85.27
8	SLV 15	-297	-108	1002	298.73	-1.15	104.08
8	SLV 16	-238	-167	982	293.99	-1.2	83.65
8	CRTFP Ux+	0	0	0	0	0	0
8	CRTFP Ux-	0	0	0	0	0	0
8	CRTFP Uy+	0	0	0	0	0	0
8	CRTFP Uy-	0	0	0	0	0	0
9	SLU 1	0	-8	1492	415.12	0.23	-0.06
9	SLU 2	0	0	1508	418.59	0.26	0.02
9	SLU 3	0	-8	1492	415.12	0.23	-0.06
9	SLU 4	0	-3	1502	417.2	0.25	-0.01
9	SLU 5	0	0	1508	418.59	0.26	0.02
9	SLU 6	0	-8	1492	415.12	0.23	-0.06
9	SLU 7	0	-3	1502	417.2	0.25	-0.01
9	SLU 8	0	-8	1492	415.12	0.23	-0.06
9	SLU 9	0	-3	1502	417.2	0.25	-0.01
9	SLU 10	1	-2	1756	483.57	0.24	-0.26

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
9	SLU 11	1	-10	1740	480.09	0.21	-0.33
9	SLU 12	1	-5	1749	482.18	0.23	-0.29
9	SLU 13	1	-2	1756	483.57	0.24	-0.26
9	SLU 14	1	-10	1740	480.09	0.21	-0.33
9	SLU 15	1	-5	1749	482.18	0.23	-0.29
9	SLU 16	1	-10	1740	480.09	0.21	-0.33
9	SLU 17	1	-5	1749	482.18	0.23	-0.29
9	SLU 18	2	-11	1846	507.94	0.21	-0.45
9	SLU 19	1	-6	1855	510.02	0.22	-0.41
9	SLU 20	2	-11	1846	507.94	0.21	-0.45
9	SLU 21	1	-6	1855	510.02	0.22	-0.41
9	SLU 22	1	-9	1677	463.65	0.23	-0.24
9	SLU 23	1	-1	1693	467.12	0.25	-0.16
9	SLU 24	1	-9	1677	463.65	0.23	-0.24
9	SLU 25	1	-4	1687	465.73	0.24	-0.19
9	SLU 26	1	-1	1693	467.12	0.25	-0.16
9	SLU 27	1	-9	1677	463.65	0.23	-0.24
9	SLU 28	1	-4	1687	465.73	0.24	-0.19
9	SLU 29	1	-9	1677	463.65	0.23	-0.24
9	SLU 30	1	-4	1687	465.73	0.24	-0.19
9	SLU 31	1	-3	1940	532.09	0.23	-0.44
9	SLU 32	2	-11	1924	528.62	0.21	-0.51
9	SLU 33	2	-7	1934	530.7	0.22	-0.47
9	SLU 34	1	-3	1940	532.09	0.23	-0.44
9	SLU 35	2	-11	1924	528.62	0.21	-0.51
9	SLU 36	2	-7	1934	530.7	0.22	-0.47
9	SLU 37	2	-11	1924	528.62	0.21	-0.51
9	SLU 38	2	-7	1934	530.7	0.22	-0.47
9	SLU 39	2	-12	2030	556.47	0.2	-0.63
9	SLU 40	2	-7	2040	558.55	0.21	-0.59
9	SLU 41	2	-12	2030	556.47	0.2	-0.63
9	SLU 42	2	-7	2040	558.55	0.21	-0.59
9	SLU 43	0	-9	1877	523.02	0.31	-0.01
9	SLU 44	0	-2	1893	526.49	0.33	0.06
9	SLU 45	0	-9	1877	523.02	0.31	-0.01
9	SLU 46	0	-5	1886	525.1	0.32	0.03
9	SLU 47	0	-2	1893	526.49	0.33	0.06
9	SLU 48	0	-9	1877	523.02	0.31	-0.01
9	SLU 49	0	-5	1886	525.1	0.32	0.03
9	SLU 50	0	-9	1877	523.02	0.31	-0.01
9	SLU 51	0	-5	1886	525.1	0.32	0.03
9	SLU 52	1	-4	2140	591.46	0.31	-0.21
9	SLU 53	1	-12	2124	587.99	0.29	-0.29
9	SLU 54	1	-7	2134	590.07	0.3	-0.24
9	SLU 55	1	-4	2140	591.46	0.31	-0.21
9	SLU 56	1	-12	2124	587.99	0.29	-0.29
9	SLU 57	1	-7	2134	590.07	0.3	-0.24
9	SLU 58	1	-12	2124	587.99	0.29	-0.29
9	SLU 59	1	-7	2134	590.07	0.3	-0.24
9	SLU 60	1	-12	2230	615.84	0.28	-0.41
9	SLU 61	1	-8	2240	617.92	0.29	-0.36
9	SLU 62	1	-12	2230	615.84	0.28	-0.41
9	SLU 63	1	-8	2240	617.92	0.29	-0.36
9	SLU 64	1	-11	2061	571.55	0.3	-0.19
9	SLU 65	0	-3	2077	575.02	0.32	-0.12
9	SLU 66	1	-11	2061	571.55	0.3	-0.19
9	SLU 67	1	-6	2071	573.63	0.31	-0.15
9	SLU 68	0	-3	2077	575.02	0.32	-0.12
9	SLU 69	1	-11	2061	571.55	0.3	-0.19
9	SLU 70	1	-6	2071	573.63	0.31	-0.15
9	SLU 71	1	-11	2061	571.55	0.3	-0.19
9	SLU 72	1	-6	2071	573.63	0.31	-0.15
9	SLU 73	1	-5	2325	639.99	0.3	-0.4
9	SLU 74	2	-13	2309	636.52	0.28	-0.47
9	SLU 75	1	-8	2318	638.6	0.29	-0.42
9	SLU 76	1	-5	2325	639.99	0.3	-0.4
9	SLU 77	2	-13	2309	636.52	0.28	-0.47
9	SLU 78	1	-8	2318	638.6	0.29	-0.42
9	SLU 79	2	-13	2309	636.52	0.28	-0.47
9	SLU 80	1	-8	2318	638.6	0.29	-0.42
9	SLU 81	2	-14	2415	664.36	0.27	-0.59
9	SLU 82	2	-9	2424	666.45	0.28	-0.54
9	SLU 83	2	-14	2415	664.36	0.27	-0.59
9	SLU 84	2	-9	2424	666.45	0.28	-0.54
9	SLE RA 1	0	-8	1545	428.99	0.23	-0.11
9	SLE RA 2	0	-3	1556	431.3	0.25	-0.06
9	SLE RA 3	0	-8	1545	428.99	0.23	-0.11
9	SLE RA 4	0	-5	1552	430.37	0.24	-0.08
9	SLE RA 5	0	-3	1556	431.3	0.25	-0.06
9	SLE RA 6	0	-8	1545	428.99	0.23	-0.11
9	SLE RA 7	0	-5	1552	430.37	0.24	-0.08
9	SLE RA 8	0	-8	1545	428.99	0.23	-0.11
9	SLE RA 9	0	-5	1552	430.37	0.24	-0.08
9	SLE RA 10	1	-4	1721	474.62	0.23	-0.24
9	SLE RA 11	1	-9	1710	472.3	0.22	-0.29
9	SLE RA 12	1	-6	1716	473.69	0.23	-0.26

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
9	SLE RA 13	1	-4	1721	474.62	0.23	-0.24
9	SLE RA 14	1	-9	1710	472.3	0.22	-0.29
9	SLE RA 15	1	-6	1716	473.69	0.23	-0.26
9	SLE RA 16	1	-9	1710	472.3	0.22	-0.29
9	SLE RA 17	1	-6	1716	473.69	0.23	-0.26
9	SLE RA 18	1	-10	1781	490.86	0.21	-0.37
9	SLE RA 19	1	-7	1787	492.25	0.22	-0.34
9	SLE RA 20	1	-10	1781	490.86	0.21	-0.37
9	SLE RA 21	1	-7	1787	492.25	0.22	-0.34
9	SLE FR 1	0	-8	1545	428.99	0.23	-0.11
9	SLE FR 2	0	-7	1547	429.45	0.24	-0.1
9	SLE FR 3	0	-8	1545	428.99	0.23	-0.11
9	SLE FR 4	1	-8	1618	448.01	0.23	-0.18
9	SLE FR 5	1	-9	1616	447.55	0.23	-0.19
9	SLE FR 6	1	-9	1663	459.93	0.22	-0.24
9	SLE QP 1	0	-8	1545	428.99	0.23	-0.11
9	SLE QP 2	1	-9	1616	447.55	0.23	-0.19
9	SLD 1	105	54	1875	508.72	0.96	-36.93
9	SLD 2	131	30	1866	506.88	0.94	-45.9
9	SLD 3	107	-31	1695	470.41	0.77	-37.65
9	SLD 4	133	-54	1687	468.57	0.75	-46.61
9	SLD 5	20	146	1969	524.69	0.75	-6.81
9	SLD 6	47	122	1960	522.78	0.73	-16.12
9	SLD 7	26	-134	1370	396.98	0.1	-9.21
9	SLD 8	53	-158	1361	395.06	0.08	-18.51
9	SLD 9	-52	141	1870	500.03	0.37	18.14
9	SLD 10	-25	117	1861	498.12	0.35	8.83
9	SLD 11	-45	-140	1271	372.32	-0.27	15.75
9	SLD 12	-18	-164	1262	370.41	-0.29	6.44
9	SLD 13	-132	36	1545	426.53	-0.29	46.24
9	SLD 14	-106	13	1536	424.69	-0.31	37.27
9	SLD 15	-130	-48	1365	388.22	-0.48	45.52
9	SLD 16	-104	-71	1357	386.37	-0.5	36.55
9	SLV 1	240	133	2206	586.97	1.9	-84.12
9	SLV 2	299	80	2187	582.78	1.85	-104.56
9	SLV 3	244	-58	1798	499.97	1.46	-85.76
9	SLV 4	303	-111	1779	495.77	1.41	-106.21
9	SLV 5	44	343	2419	622.87	1.41	-15.37
9	SLV 6	105	289	2399	618.53	1.36	-36.5
9	SLV 7	59	-294	1059	332.87	-0.05	-20.86
9	SLV 8	120	-349	1039	328.53	-0.1	-41.99
9	SLV 9	-118	331	2192	566.57	0.55	41.62
9	SLV 10	-58	277	2172	562.23	0.5	20.48
9	SLV 11	-104	-306	833	276.57	-0.91	36.13
9	SLV 12	-43	-360	813	272.23	-0.95	15
9	SLV 13	-302	94	1452	399.32	-0.96	105.84
9	SLV 14	-243	41	1433	395.13	-1	85.39
9	SLV 15	-298	-98	1044	312.32	-1.4	104.19
9	SLV 16	-239	-150	1025	308.12	-1.44	83.74
9	CRTFP Ux+	0	0	0	0	0	0
9	CRTFP Ux-	0	0	0	0	0	0
9	CRTFP Uy+	0	0	0	0	0	0
9	CRTFP Uy-	0	0	0	0	0	0
10	SLU 1	0	-6	1492	422.74	-0.19	-0.1
10	SLU 2	0	1	1508	426.08	-0.18	-0.03
10	SLU 3	0	-6	1492	422.74	-0.19	-0.1
10	SLU 4	0	-2	1501	424.74	-0.18	-0.06
10	SLU 5	0	1	1508	426.08	-0.18	-0.03
10	SLU 6	0	-6	1492	422.74	-0.19	-0.1
10	SLU 7	0	-2	1501	424.74	-0.18	-0.06
10	SLU 8	0	-6	1492	422.74	-0.19	-0.1
10	SLU 9	0	-2	1501	424.74	-0.18	-0.06
10	SLU 10	1	-1	1757	493.27	-0.28	-0.3
10	SLU 11	1	-8	1741	489.93	-0.29	-0.37
10	SLU 12	1	-3	1751	491.93	-0.28	-0.32
10	SLU 13	1	-1	1757	493.27	-0.28	-0.3
10	SLU 14	1	-8	1741	489.93	-0.29	-0.37
10	SLU 15	1	-3	1751	491.93	-0.28	-0.32
10	SLU 16	1	-8	1741	489.93	-0.29	-0.37
10	SLU 17	1	-3	1751	491.93	-0.28	-0.32
10	SLU 18	2	-8	1848	518.72	-0.34	-0.48
10	SLU 19	1	-4	1858	520.72	-0.33	-0.44
10	SLU 20	2	-8	1848	518.72	-0.34	-0.48
10	SLU 21	1	-4	1858	520.72	-0.33	-0.44
10	SLU 22	1	-7	1678	472.85	-0.26	-0.28
10	SLU 23	1	0	1693	476.19	-0.25	-0.2
10	SLU 24	1	-7	1678	472.85	-0.26	-0.28
10	SLU 25	1	-3	1687	474.86	-0.25	-0.23
10	SLU 26	1	0	1693	476.19	-0.25	-0.2
10	SLU 27	1	-7	1678	472.85	-0.26	-0.28
10	SLU 28	1	-3	1687	474.86	-0.25	-0.23
10	SLU 29	1	-7	1678	472.85	-0.26	-0.28
10	SLU 30	1	-3	1687	474.86	-0.25	-0.23
10	SLU 31	1	-2	1943	543.38	-0.35	-0.47
10	SLU 32	2	-9	1927	540.04	-0.36	-0.54
10	SLU 33	2	-4	1937	542.05	-0.35	-0.5

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
10	SLU 34	1	-2	1943	543.38	-0.35	-0.47
10	SLU 35	2	-9	1927	540.04	-0.36	-0.54
10	SLU 36	2	-4	1937	542.05	-0.35	-0.5
10	SLU 37	2	-9	1927	540.04	-0.36	-0.54
10	SLU 38	2	-4	1937	542.05	-0.35	-0.5
10	SLU 39	2	-9	2034	568.84	-0.41	-0.65
10	SLU 40	2	-5	2044	570.84	-0.4	-0.61
10	SLU 41	2	-9	2034	568.84	-0.41	-0.65
10	SLU 42	2	-5	2044	570.84	-0.4	-0.61
10	SLU 43	0	-8	1876	532.38	-0.22	-0.07
10	SLU 44	0	-1	1891	535.72	-0.21	0
10	SLU 45	0	-8	1876	532.38	-0.22	-0.07
10	SLU 46	0	-3	1885	534.38	-0.21	-0.03
10	SLU 47	0	-1	1891	535.72	-0.21	0
10	SLU 48	0	-8	1876	532.38	-0.22	-0.07
10	SLU 49	0	-3	1885	534.38	-0.21	-0.03
10	SLU 50	0	-8	1876	532.38	-0.22	-0.07
10	SLU 51	0	-3	1885	534.38	-0.21	-0.03
10	SLU 52	1	-2	2141	602.9	-0.31	-0.27
10	SLU 53	1	-9	2125	599.56	-0.32	-0.34
10	SLU 54	1	-5	2135	601.57	-0.32	-0.3
10	SLU 55	1	-2	2141	602.9	-0.31	-0.27
10	SLU 56	1	-9	2125	599.56	-0.32	-0.34
10	SLU 57	1	-5	2135	601.57	-0.32	-0.3
10	SLU 58	1	-9	2125	599.56	-0.32	-0.34
10	SLU 59	1	-5	2135	601.57	-0.32	-0.3
10	SLU 60	1	-10	2232	628.36	-0.37	-0.45
10	SLU 61	1	-6	2242	630.36	-0.36	-0.41
10	SLU 62	1	-10	2232	628.36	-0.37	-0.45
10	SLU 63	1	-6	2242	630.36	-0.36	-0.41
10	SLU 64	1	-9	2062	582.49	-0.29	-0.25
10	SLU 65	1	-2	2077	585.83	-0.28	-0.18
10	SLU 66	1	-9	2062	582.49	-0.29	-0.25
10	SLU 67	1	-5	2071	584.5	-0.28	-0.2
10	SLU 68	1	-2	2077	585.83	-0.28	-0.18
10	SLU 69	1	-9	2062	582.49	-0.29	-0.25
10	SLU 70	1	-5	2071	584.5	-0.28	-0.2
10	SLU 71	1	-9	2062	582.49	-0.29	-0.25
10	SLU 72	1	-5	2071	584.5	-0.28	-0.2
10	SLU 73	1	-3	2327	653.02	-0.38	-0.44
10	SLU 74	2	-10	2311	649.68	-0.39	-0.51
10	SLU 75	2	-6	2320	651.68	-0.39	-0.47
10	SLU 76	1	-3	2327	653.02	-0.38	-0.44
10	SLU 77	2	-10	2311	649.68	-0.39	-0.51
10	SLU 78	2	-6	2320	651.68	-0.39	-0.47
10	SLU 79	2	-10	2311	649.68	-0.39	-0.51
10	SLU 80	2	-6	2320	651.68	-0.39	-0.47
10	SLU 81	2	-11	2418	678.48	-0.44	-0.63
10	SLU 82	2	-7	2427	680.48	-0.43	-0.58
10	SLU 83	2	-11	2418	678.48	-0.44	-0.63
10	SLU 84	2	-7	2427	680.48	-0.43	-0.58
10	SLE RA 1	1	-7	1545	437.06	-0.21	-0.15
10	SLE RA 2	0	-2	1555	439.28	-0.2	-0.1
10	SLE RA 3	1	-7	1545	437.06	-0.21	-0.15
10	SLE RA 4	0	-4	1551	438.39	-0.2	-0.12
10	SLE RA 5	0	-2	1555	439.28	-0.2	-0.1
10	SLE RA 6	1	-7	1545	437.06	-0.21	-0.15
10	SLE RA 7	0	-4	1551	438.39	-0.2	-0.12
10	SLE RA 8	1	-7	1545	437.06	-0.21	-0.15
10	SLE RA 9	0	-4	1551	438.39	-0.2	-0.12
10	SLE RA 10	1	-3	1722	484.08	-0.27	-0.28
10	SLE RA 11	1	-8	1711	481.85	-0.28	-0.33
10	SLE RA 12	1	-5	1718	483.18	-0.27	-0.3
10	SLE RA 13	1	-3	1722	484.08	-0.27	-0.28
10	SLE RA 14	1	-8	1711	481.85	-0.28	-0.33
10	SLE RA 15	1	-5	1718	483.18	-0.27	-0.3
10	SLE RA 16	1	-8	1711	481.85	-0.28	-0.33
10	SLE RA 17	1	-5	1718	483.18	-0.27	-0.3
10	SLE RA 18	1	-8	1783	501.05	-0.31	-0.4
10	SLE RA 19	1	-5	1789	502.38	-0.3	-0.38
10	SLE RA 20	1	-8	1783	501.05	-0.31	-0.4
10	SLE RA 21	1	-5	1789	502.38	-0.3	-0.38
10	SLE FR 1	1	-7	1545	437.06	-0.21	-0.15
10	SLE FR 2	1	-6	1547	437.5	-0.21	-0.14
10	SLE FR 3	1	-7	1545	437.06	-0.21	-0.15
10	SLE FR 4	1	-6	1618	456.7	-0.24	-0.22
10	SLE FR 5	1	-7	1616	456.25	-0.24	-0.23
10	SLE FR 6	1	-7	1664	469.05	-0.26	-0.28
10	SLE QP 1	1	-7	1545	437.06	-0.21	-0.15
10	SLE QP 2	1	-7	1616	456.25	-0.24	-0.23
10	SLD 1	106	49	1854	511.95	0.35	-37
10	SLD 2	132	29	1846	510.26	0.34	-45.98
10	SLD 3	108	-29	1679	474.6	0.25	-37.73
10	SLD 4	133	-49	1671	472.91	0.23	-46.7
10	SLD 5	20	136	1956	530.23	0.11	-6.85
10	SLD 6	47	115	1947	528.48	0.09	-16.16

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
10	SLD 7	26	-124	1373	405.74	-0.25	-9.26
10	SLD 8	53	-146	1365	403.99	-0.26	-18.58
10	SLD 9	-52	132	1868	508.52	-0.21	18.12
10	SLD 10	-25	110	1860	506.77	-0.23	8.81
10	SLD 11	-45	-129	1285	384.03	-0.56	15.71
10	SLD 12	-18	-150	1277	382.28	-0.58	6.39
10	SLD 13	-132	35	1561	439.59	-0.71	46.24
10	SLD 14	-106	15	1554	437.91	-0.72	37.27
10	SLD 15	-130	-43	1387	402.25	-0.81	45.52
10	SLD 16	-104	-63	1379	400.56	-0.83	36.55
10	SLV 1	240	121	2157	583.17	1.11	-84.23
10	SLV 2	299	74	2140	579.33	1.07	-104.69
10	SLV 3	245	-56	1761	498.37	0.87	-85.89
10	SLV 4	304	-103	1743	494.53	0.83	-106.35
10	SLV 5	44	317	2387	624.36	0.55	-15.41
10	SLV 6	105	269	2369	620.38	0.51	-36.56
10	SLV 7	59	-273	1064	341.68	-0.26	-20.94
10	SLV 8	120	-322	1046	337.71	-0.3	-42.09
10	SLV 9	-119	308	2187	574.8	-0.18	41.63
10	SLV 10	-58	259	2168	570.82	-0.22	20.48
10	SLV 11	-104	-283	864	292.13	-0.98	36.1
10	SLV 12	-43	-331	845	288.15	-1.02	14.95
10	SLV 13	-302	89	1490	417.98	-1.31	105.9
10	SLV 14	-243	42	1472	414.13	-1.35	85.44
10	SLV 15	-298	-88	1093	333.18	-1.55	104.24
10	SLV 16	-239	-135	1075	329.33	-1.59	83.78
10	CRTFP Ux+	0	0	0	0	0	0
10	CRTFP Ux-	0	0	0	0	0	0
10	CRTFP Uy+	0	0	0	0	0	0
10	CRTFP Uy-	0	0	0	0	0	0
11	SLU 1	1	-5	1502	440.83	-0.4	-0.2
11	SLU 2	0	1	1518	444.22	-0.39	-0.13
11	SLU 3	1	-5	1502	440.83	-0.4	-0.2
11	SLU 4	0	-1	1511	442.86	-0.39	-0.16
11	SLU 5	0	1	1518	444.22	-0.39	-0.13
11	SLU 6	1	-5	1502	440.83	-0.4	-0.2
11	SLU 7	0	-1	1511	442.86	-0.39	-0.16
11	SLU 8	1	-5	1502	440.83	-0.4	-0.2
11	SLU 9	0	-1	1511	442.86	-0.39	-0.16
11	SLU 10	1	0	1771	515.73	-0.53	-0.39
11	SLU 11	1	-6	1756	512.34	-0.54	-0.46
11	SLU 12	1	-2	1765	514.37	-0.54	-0.42
11	SLU 13	1	0	1771	515.73	-0.53	-0.39
11	SLU 14	1	-6	1756	512.34	-0.54	-0.46
11	SLU 15	1	-2	1765	514.37	-0.54	-0.42
11	SLU 16	1	-6	1756	512.34	-0.54	-0.46
11	SLU 17	1	-2	1765	514.37	-0.54	-0.42
11	SLU 18	2	-7	1864	542.99	-0.6	-0.57
11	SLU 19	2	-3	1874	545.02	-0.6	-0.52
11	SLU 20	2	-7	1864	542.99	-0.6	-0.57
11	SLU 21	2	-3	1874	545.02	-0.6	-0.52
11	SLU 22	1	-6	1691	494.12	-0.5	-0.37
11	SLU 23	1	1	1706	497.5	-0.49	-0.3
11	SLU 24	1	-6	1691	494.12	-0.5	-0.37
11	SLU 25	1	-2	1700	496.15	-0.49	-0.33
11	SLU 26	1	1	1706	497.5	-0.49	-0.3
11	SLU 27	1	-6	1691	494.12	-0.5	-0.37
11	SLU 28	1	-2	1700	496.15	-0.49	-0.33
11	SLU 29	1	-6	1691	494.12	-0.5	-0.37
11	SLU 30	1	-2	1700	496.15	-0.49	-0.33
11	SLU 31	2	0	1960	569.02	-0.63	-0.56
11	SLU 32	2	-7	1945	565.63	-0.64	-0.63
11	SLU 33	2	-3	1954	567.66	-0.63	-0.58
11	SLU 34	2	0	1960	569.02	-0.63	-0.56
11	SLU 35	2	-7	1945	565.63	-0.64	-0.63
11	SLU 36	2	-3	1954	567.66	-0.63	-0.58
11	SLU 37	2	-7	1945	565.63	-0.64	-0.63
11	SLU 38	2	-3	1954	567.66	-0.63	-0.58
11	SLU 39	2	-8	2053	596.28	-0.7	-0.74
11	SLU 40	2	-4	2062	598.31	-0.69	-0.69
11	SLU 41	2	-8	2053	596.28	-0.7	-0.74
11	SLU 42	2	-4	2062	598.31	-0.69	-0.69
11	SLU 43	1	-7	1888	554.8	-0.48	-0.2
11	SLU 44	0	0	1903	558.19	-0.48	-0.13
11	SLU 45	1	-7	1888	554.8	-0.48	-0.2
11	SLU 46	1	-3	1897	556.84	-0.48	-0.16
11	SLU 47	0	0	1903	558.19	-0.48	-0.13
11	SLU 48	1	-7	1888	554.8	-0.48	-0.2
11	SLU 49	1	-3	1897	556.84	-0.48	-0.16
11	SLU 50	1	-7	1888	554.8	-0.48	-0.2
11	SLU 51	1	-3	1897	556.84	-0.48	-0.16
11	SLU 52	1	-1	2157	629.7	-0.62	-0.39
11	SLU 53	1	-8	2142	626.32	-0.62	-0.46
11	SLU 54	1	-4	2151	628.35	-0.62	-0.42
11	SLU 55	1	-1	2157	629.7	-0.62	-0.39
11	SLU 56	1	-8	2142	626.32	-0.62	-0.46

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
11	SLU 57	1	-4	2151	628.35	-0.62	-0.42
11	SLU 58	1	-8	2142	626.32	-0.62	-0.46
11	SLU 59	1	-4	2151	628.35	-0.62	-0.42
11	SLU 60	2	-8	2250	656.96	-0.68	-0.57
11	SLU 61	2	-4	2260	659	-0.68	-0.53
11	SLU 62	2	-8	2250	656.96	-0.68	-0.57
11	SLU 63	2	-4	2260	659	-0.68	-0.53
11	SLU 64	1	-8	2077	608.09	-0.58	-0.37
11	SLU 65	1	-1	2092	611.48	-0.58	-0.3
11	SLU 66	1	-8	2077	608.09	-0.58	-0.37
11	SLU 67	1	-3	2086	610.13	-0.58	-0.33
11	SLU 68	1	-1	2092	611.48	-0.58	-0.3
11	SLU 69	1	-8	2077	608.09	-0.58	-0.37
11	SLU 70	1	-3	2086	610.13	-0.58	-0.33
11	SLU 71	1	-8	2077	608.09	-0.58	-0.37
11	SLU 72	1	-3	2086	610.13	-0.58	-0.33
11	SLU 73	2	-2	2346	682.99	-0.72	-0.56
11	SLU 74	2	-9	2330	679.61	-0.72	-0.63
11	SLU 75	2	-5	2340	681.64	-0.72	-0.59
11	SLU 76	2	-2	2346	682.99	-0.72	-0.56
11	SLU 77	2	-9	2330	679.61	-0.72	-0.63
11	SLU 78	2	-5	2340	681.64	-0.72	-0.59
11	SLU 79	2	-9	2330	679.61	-0.72	-0.63
11	SLU 80	2	-5	2340	681.64	-0.72	-0.59
11	SLU 81	2	-9	2439	710.25	-0.78	-0.74
11	SLU 82	2	-5	2448	712.29	-0.78	-0.7
11	SLU 83	2	-9	2439	710.25	-0.78	-0.74
11	SLU 84	2	-5	2448	712.29	-0.78	-0.7
11	SLE RA 1	1	-6	1556	456.05	-0.43	-0.25
11	SLE RA 2	1	-1	1566	458.31	-0.42	-0.2
11	SLE RA 3	1	-6	1556	456.05	-0.43	-0.25
11	SLE RA 4	1	-3	1562	457.41	-0.42	-0.22
11	SLE RA 5	1	-1	1566	458.31	-0.42	-0.2
11	SLE RA 6	1	-6	1556	456.05	-0.43	-0.25
11	SLE RA 7	1	-3	1562	457.41	-0.42	-0.22
11	SLE RA 8	1	-6	1556	456.05	-0.43	-0.25
11	SLE RA 9	1	-3	1562	457.41	-0.42	-0.22
11	SLE RA 10	1	-2	1735	505.99	-0.52	-0.37
11	SLE RA 11	1	-6	1725	503.73	-0.52	-0.42
11	SLE RA 12	1	-4	1731	505.08	-0.52	-0.39
11	SLE RA 13	1	-2	1735	505.99	-0.52	-0.37
11	SLE RA 14	1	-6	1725	503.73	-0.52	-0.42
11	SLE RA 15	1	-4	1731	505.08	-0.52	-0.39
11	SLE RA 16	1	-6	1725	503.73	-0.52	-0.42
11	SLE RA 17	1	-4	1731	505.08	-0.52	-0.39
11	SLE RA 18	1	-7	1798	524.16	-0.56	-0.49
11	SLE RA 19	1	-4	1804	525.51	-0.56	-0.47
11	SLE RA 20	1	-7	1798	524.16	-0.56	-0.49
11	SLE RA 21	1	-4	1804	525.51	-0.56	-0.47
11	SLE FR 1	1	-6	1556	456.05	-0.43	-0.25
11	SLE FR 2	1	-5	1558	456.5	-0.43	-0.24
11	SLE FR 3	1	-6	1556	456.05	-0.43	-0.25
11	SLE FR 4	1	-5	1631	476.94	-0.47	-0.31
11	SLE FR 5	1	-6	1629	476.48	-0.47	-0.32
11	SLE FR 6	1	-6	1677	490.11	-0.49	-0.37
11	SLE QP 1	1	-6	1556	456.05	-0.43	-0.25
11	SLE QP 2	1	-6	1629	476.48	-0.47	-0.32
11	SLD 1	106	45	1849	529.82	0.02	-37.12
11	SLD 2	132	27	1841	528.24	0	-46.1
11	SLD 3	108	-28	1676	491.51	-0.02	-37.85
11	SLD 4	134	-46	1669	489.92	-0.04	-46.83
11	SLD 5	20	127	1959	551.18	-0.26	-6.94
11	SLD 6	47	108	1951	549.53	-0.27	-16.26
11	SLD 7	27	-117	1384	423.47	-0.39	-9.37
11	SLD 8	53	-135	1376	421.83	-0.4	-18.69
11	SLD 9	-51	124	1881	531.14	-0.53	18.05
11	SLD 10	-25	105	1873	529.49	-0.55	8.73
11	SLD 11	-45	-120	1306	403.44	-0.66	15.62
11	SLD 12	-18	-139	1298	401.79	-0.68	6.3
11	SLD 13	-132	34	1588	463.04	-0.9	46.18
11	SLD 14	-106	16	1581	461.46	-0.91	37.2
11	SLD 15	-130	-39	1416	424.73	-0.94	45.45
11	SLD 16	-104	-57	1409	423.15	-0.95	36.47
11	SLV 1	241	110	2130	598.02	0.64	-84.38
11	SLV 2	300	69	2113	594.4	0.6	-104.85
11	SLV 3	245	-55	1738	511.04	0.55	-86.05
11	SLV 4	304	-97	1721	507.42	0.52	-106.52
11	SLV 5	44	296	2379	646.2	0.01	-15.5
11	SLV 6	105	253	2362	642.46	-0.02	-36.66
11	SLV 7	59	-257	1074	356.25	-0.28	-21.06
11	SLV 8	120	-300	1056	352.51	-0.32	-42.22
11	SLV 9	-118	288	2201	600.46	-0.62	41.57
11	SLV 10	-58	245	2184	596.72	-0.65	20.42
11	SLV 11	-103	-265	895	310.51	-0.91	36.02
11	SLV 12	-43	-308	878	306.76	-0.94	14.86
11	SLV 13	-302	85	1536	445.55	-1.45	105.87

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
11	SLV 14	-243	44	1519	441.93	-1.48	85.4
11	SLV 15	-298	-81	1144	358.57	-1.54	104.21
11	SLV 16	-239	-122	1127	354.95	-1.57	83.74
11	CRTFP Ux+	0	0	0	0	0	0
11	CRTFP Ux-	0	0	0	0	0	0
11	CRTFP Uy+	0	0	0	0	0	0
11	CRTFP Uy-	0	0	0	0	0	0
12	SLU 1	1	-4	1362	417.37	25.12	-0.24
12	SLU 2	1	1	1375	420.6	25.38	-0.29
12	SLU 3	1	-4	1362	417.37	25.12	-0.24
12	SLU 4	1	-1	1370	419.3	25.27	-0.27
12	SLU 5	1	1	1375	420.6	25.38	-0.29
12	SLU 6	1	-4	1362	417.37	25.12	-0.24
12	SLU 7	1	-1	1370	419.3	25.27	-0.27
12	SLU 8	1	-4	1362	417.37	25.12	-0.24
12	SLU 9	1	-1	1370	419.3	25.27	-0.27
12	SLU 10	1	1	1607	489.72	29.61	-0.5
12	SLU 11	2	-5	1594	486.49	29.35	-0.46
12	SLU 12	2	-2	1602	488.43	29.5	-0.48
12	SLU 13	1	1	1607	489.72	29.61	-0.5
12	SLU 14	2	-5	1594	486.49	29.35	-0.46
12	SLU 15	2	-2	1602	488.43	29.5	-0.48
12	SLU 16	2	-5	1594	486.49	29.35	-0.46
12	SLU 17	2	-2	1602	488.43	29.5	-0.48
12	SLU 18	2	-5	1693	516.12	31.16	-0.55
12	SLU 19	2	-2	1701	518.06	31.32	-0.58
12	SLU 20	2	-5	1693	516.12	31.16	-0.55
12	SLU 21	2	-2	1701	518.06	31.32	-0.58
12	SLU 22	1	-5	1534	468.84	28.27	-0.39
12	SLU 23	1	1	1548	472.07	28.53	-0.43
12	SLU 24	1	-5	1534	468.84	28.27	-0.39
12	SLU 25	1	-1	1542	470.78	28.42	-0.41
12	SLU 26	1	1	1548	472.07	28.53	-0.43
12	SLU 27	1	-5	1534	468.84	28.27	-0.39
12	SLU 28	1	-1	1542	470.78	28.42	-0.41
12	SLU 29	1	-5	1534	468.84	28.27	-0.39
12	SLU 30	1	-1	1542	470.78	28.42	-0.41
12	SLU 31	2	0	1780	541.19	32.76	-0.65
12	SLU 32	2	-6	1766	537.97	32.5	-0.6
12	SLU 33	2	-2	1774	539.9	32.65	-0.63
12	SLU 34	2	0	1780	541.19	32.76	-0.65
12	SLU 35	2	-6	1766	537.97	32.5	-0.6
12	SLU 36	2	-2	1774	539.9	32.65	-0.63
12	SLU 37	2	-6	1766	537.97	32.5	-0.6
12	SLU 38	2	-2	1774	539.9	32.65	-0.63
12	SLU 39	2	-6	1865	567.59	34.31	-0.7
12	SLU 40	2	-2	1874	569.53	34.47	-0.72
12	SLU 41	2	-6	1865	567.59	34.31	-0.7
12	SLU 42	2	-2	1874	569.53	34.47	-0.72
12	SLU 43	1	-5	1711	524.93	31.58	-0.26
12	SLU 44	1	0	1725	528.16	31.83	-0.31
12	SLU 45	1	-5	1711	524.93	31.58	-0.26
12	SLU 46	1	-2	1719	526.87	31.73	-0.29
12	SLU 47	1	0	1725	528.16	31.83	-0.31
12	SLU 48	1	-5	1711	524.93	31.58	-0.26
12	SLU 49	1	-2	1719	526.87	31.73	-0.29
12	SLU 50	1	-5	1711	524.93	31.58	-0.26
12	SLU 51	1	-2	1719	526.87	31.73	-0.29
12	SLU 52	2	0	1957	597.28	36.06	-0.53
12	SLU 53	2	-6	1943	594.06	35.81	-0.48
12	SLU 54	2	-3	1951	595.99	35.96	-0.51
12	SLU 55	2	0	1957	597.28	36.06	-0.53
12	SLU 56	2	-6	1943	594.06	35.81	-0.48
12	SLU 57	2	-3	1951	595.99	35.96	-0.51
12	SLU 58	2	-6	1943	594.06	35.81	-0.48
12	SLU 59	2	-3	1951	595.99	35.96	-0.51
12	SLU 60	2	-6	2042	623.68	37.62	-0.57
12	SLU 61	2	-3	2051	625.62	37.77	-0.6
12	SLU 62	2	-6	2042	623.68	37.62	-0.57
12	SLU 63	2	-3	2051	625.62	37.77	-0.6
12	SLU 64	2	-6	1884	576.4	34.73	-0.41
12	SLU 65	1	0	1897	579.63	34.98	-0.46
12	SLU 66	2	-6	1884	576.4	34.73	-0.41
12	SLU 67	1	-3	1892	578.34	34.88	-0.44
12	SLU 68	1	0	1897	579.63	34.98	-0.46
12	SLU 69	2	-6	1884	576.4	34.73	-0.41
12	SLU 70	1	-3	1892	578.34	34.88	-0.44
12	SLU 71	2	-6	1884	576.4	34.73	-0.41
12	SLU 72	1	-3	1892	578.34	34.88	-0.44
12	SLU 73	2	-1	2129	648.76	39.21	-0.67
12	SLU 74	2	-7	2115	645.53	38.96	-0.63
12	SLU 75	2	-3	2124	647.47	39.11	-0.65
12	SLU 76	2	-1	2129	648.76	39.21	-0.67
12	SLU 77	2	-7	2115	645.53	38.96	-0.63
12	SLU 78	2	-3	2124	647.47	39.11	-0.65
12	SLU 79	2	-7	2115	645.53	38.96	-0.63

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
12	SLU 80	2	-3	2124	647.47	39.11	-0.65
12	SLU 81	2	-7	2215	675.15	40.77	-0.72
12	SLU 82	2	-4	2223	677.09	40.92	-0.75
12	SLU 83	2	-7	2215	675.15	40.77	-0.72
12	SLU 84	2	-4	2223	677.09	40.92	-0.75
12	SLE RA 1	1	-4	1411	432.07	26.02	-0.28
12	SLE RA 2	1	-1	1420	434.23	26.19	-0.31
12	SLE RA 3	1	-4	1411	432.07	26.02	-0.28
12	SLE RA 4	1	-2	1417	433.37	26.12	-0.3
12	SLE RA 5	1	-1	1420	434.23	26.19	-0.31
12	SLE RA 6	1	-4	1411	432.07	26.02	-0.28
12	SLE RA 7	1	-2	1417	433.37	26.12	-0.3
12	SLE RA 8	1	-4	1411	432.07	26.02	-0.28
12	SLE RA 9	1	-2	1417	433.37	26.12	-0.3
12	SLE RA 10	1	-1	1575	480.31	29.01	-0.46
12	SLE RA 11	2	-5	1566	478.16	28.84	-0.43
12	SLE RA 12	1	-3	1571	479.45	28.94	-0.45
12	SLE RA 13	1	-1	1575	480.31	29.01	-0.46
12	SLE RA 14	2	-5	1566	478.16	28.84	-0.43
12	SLE RA 15	1	-3	1571	479.45	28.94	-0.45
12	SLE RA 16	2	-5	1566	478.16	28.84	-0.43
12	SLE RA 17	1	-3	1571	479.45	28.94	-0.45
12	SLE RA 18	2	-5	1632	497.91	30.05	-0.49
12	SLE RA 19	2	-3	1637	499.2	30.15	-0.51
12	SLE RA 20	2	-5	1632	497.91	30.05	-0.49
12	SLE RA 21	2	-3	1637	499.2	30.15	-0.51
12	SLE FR 1	1	-4	1411	432.07	26.02	-0.28
12	SLE FR 2	1	-4	1413	432.5	26.05	-0.29
12	SLE FR 3	1	-4	1411	432.07	26.02	-0.28
12	SLE FR 4	1	-4	1479	452.25	27.26	-0.35
12	SLE FR 5	1	-5	1477	451.82	27.23	-0.34
12	SLE FR 6	1	-5	1521	464.99	28.03	-0.39
12	SLE QP 1	1	-4	1411	432.07	26.02	-0.28
12	SLE QP 2	1	-5	1477	451.82	27.23	-0.34
12	SLD 1	96	38	1662	499.94	30.98	-34.73
12	SLD 2	119	24	1656	498.56	30.86	-42.56
12	SLD 3	98	-25	1508	463.24	28.11	-33.19
12	SLD 4	121	-39	1502	461.86	27.98	-41.01
12	SLD 5	18	108	1770	522.43	32.77	-10.12
12	SLD 6	42	94	1763	521	32.64	-18.24
12	SLD 7	24	-100	1254	400.09	23.17	-4.97
12	SLD 8	48	-115	1248	398.66	23.04	-13.09
12	SLD 9	-46	106	1707	504.99	31.42	12.4
12	SLD 10	-22	91	1700	503.56	31.29	4.28
12	SLD 11	-40	-103	1191	382.65	21.82	17.55
12	SLD 12	-16	-118	1185	381.22	21.69	9.43
12	SLD 13	-118	29	1453	441.79	26.48	40.32
12	SLD 14	-95	15	1447	440.41	26.35	32.5
12	SLD 15	-116	-33	1298	405.09	23.6	41.87
12	SLD 16	-93	-47	1292	403.71	23.47	34.04
12	SLV 1	217	92	1899	561.45	35.79	-78.89
12	SLV 2	270	60	1885	558.31	35.5	-96.73
12	SLV 3	221	-50	1548	478.12	29.25	-75.39
12	SLV 4	274	-82	1534	474.98	28.96	-93.22
12	SLV 5	40	252	2142	612.25	39.81	-22.68
12	SLV 6	95	218	2127	609.01	39.52	-41.11
12	SLV 7	54	-222	971	334.48	18.03	-11
12	SLV 8	109	-256	956	331.23	17.73	-29.44
12	SLV 9	-106	246	1998	572.42	36.73	28.75
12	SLV 10	-52	213	1984	569.17	36.43	10.31
12	SLV 11	-93	-228	827	294.64	14.94	40.42
12	SLV 12	-38	-261	813	291.4	14.64	21.99
12	SLV 13	-272	73	1421	428.67	25.49	92.53
12	SLV 14	-219	40	1407	425.53	25.21	74.7
12	SLV 15	-268	-69	1069	345.34	18.96	96.04
12	SLV 16	-215	-102	1055	342.2	18.67	78.2
12	CRTFP Ux+	0	0	0	0	0	0
12	CRTFP Ux-	0	0	0	0	0	0
12	CRTFP Uy+	0	0	0	0	0	0
12	CRTFP Uy-	0	0	0	0	0	0
14	SLU 1	5	-10	3744	849.82	-14.55	-0.87
14	SLU 2	4	5	3783	857.39	-14.71	-0.71
14	SLU 3	5	-10	3744	849.82	-14.55	-0.87
14	SLU 4	4	-1	3767	854.36	-14.65	-0.78
14	SLU 5	4	5	3783	857.39	-14.71	-0.71
14	SLU 6	5	-10	3744	849.82	-14.55	-0.87
14	SLU 7	4	-1	3767	854.36	-14.65	-0.78
14	SLU 8	5	-10	3744	849.82	-14.55	-0.87
14	SLU 9	4	-1	3767	854.36	-14.65	-0.78
14	SLU 10	6	4	4426	1001.86	-17.94	-1.13
14	SLU 11	7	-11	4387	994.3	-17.79	-1.29
14	SLU 12	6	-2	4410	998.84	-17.88	-1.19
14	SLU 13	6	4	4426	1001.86	-17.94	-1.13
14	SLU 14	7	-11	4387	994.3	-17.79	-1.29
14	SLU 15	6	-2	4410	998.84	-17.88	-1.19
14	SLU 16	7	-11	4387	994.3	-17.79	-1.29

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
14	SLU 17	6	-2	4410	998.84	-17.88	-1.19
14	SLU 18	8	-12	4662	1056.22	-19.17	-1.47
14	SLU 19	7	-3	4686	1060.76	-19.27	-1.37
14	SLU 20	8	-12	4662	1056.22	-19.17	-1.47
14	SLU 21	7	-3	4686	1060.76	-19.27	-1.37
14	SLU 22	6	-11	4222	957.3	-16.92	-1.17
14	SLU 23	6	4	4261	964.87	-17.07	-1
14	SLU 24	6	-11	4222	957.3	-16.92	-1.17
14	SLU 25	6	-2	4245	961.84	-17.01	-1.07
14	SLU 26	6	4	4261	964.87	-17.07	-1
14	SLU 27	6	-11	4222	957.3	-16.92	-1.17
14	SLU 28	6	-2	4245	961.84	-17.01	-1.07
14	SLU 29	6	-11	4222	957.3	-16.92	-1.17
14	SLU 30	6	-2	4245	961.84	-17.01	-1.07
14	SLU 31	8	3	4904	1109.34	-20.31	-1.42
14	SLU 32	8	-12	4865	1101.78	-20.15	-1.58
14	SLU 33	8	-3	4888	1106.32	-20.24	-1.49
14	SLU 34	8	3	4904	1109.34	-20.31	-1.42
14	SLU 35	8	-12	4865	1101.78	-20.15	-1.58
14	SLU 36	8	-3	4888	1106.32	-20.24	-1.49
14	SLU 37	8	-12	4865	1101.78	-20.15	-1.58
14	SLU 38	8	-3	4888	1106.32	-20.24	-1.49
14	SLU 39	9	-13	5140	1163.7	-21.54	-1.76
14	SLU 40	9	-4	5164	1168.24	-21.63	-1.67
14	SLU 41	9	-13	5140	1163.7	-21.54	-1.76
14	SLU 42	9	-4	5164	1168.24	-21.63	-1.67
14	SLU 43	6	-12	4703	1067.92	-18.11	-1.04
14	SLU 44	5	3	4742	1075.48	-18.27	-0.87
14	SLU 45	6	-12	4703	1067.92	-18.11	-1.04
14	SLU 46	5	-3	4726	1072.46	-18.2	-0.94
14	SLU 47	5	3	4742	1075.48	-18.27	-0.87
14	SLU 48	6	-12	4703	1067.92	-18.11	-1.04
14	SLU 49	5	-3	4726	1072.46	-18.2	-0.94
14	SLU 50	6	-12	4703	1067.92	-18.11	-1.04
14	SLU 51	5	-3	4726	1072.46	-18.2	-0.94
14	SLU 52	7	1	5385	1219.96	-21.5	-1.29
14	SLU 53	8	-14	5346	1212.39	-21.34	-1.45
14	SLU 54	7	-5	5369	1216.93	-21.44	-1.36
14	SLU 55	7	1	5385	1219.96	-21.5	-1.29
14	SLU 56	8	-14	5346	1212.39	-21.34	-1.45
14	SLU 57	7	-5	5369	1216.93	-21.44	-1.36
14	SLU 58	8	-14	5346	1212.39	-21.34	-1.45
14	SLU 59	7	-5	5369	1216.93	-21.44	-1.36
14	SLU 60	9	-14	5622	1274.31	-22.73	-1.63
14	SLU 61	8	-5	5645	1278.85	-22.82	-1.54
14	SLU 62	9	-14	5622	1274.31	-22.73	-1.63
14	SLU 63	8	-5	5645	1278.85	-22.82	-1.54
14	SLU 64	7	-13	5181	1175.4	-20.47	-1.33
14	SLU 65	6	2	5220	1182.96	-20.63	-1.17
14	SLU 66	7	-13	5181	1175.4	-20.47	-1.33
14	SLU 67	7	-4	5204	1179.94	-20.57	-1.23
14	SLU 68	6	2	5220	1182.96	-20.63	-1.17
14	SLU 69	7	-13	5181	1175.4	-20.47	-1.33
14	SLU 70	7	-4	5204	1179.94	-20.57	-1.23
14	SLU 71	7	-13	5181	1175.4	-20.47	-1.33
14	SLU 72	7	-4	5204	1179.94	-20.57	-1.23
14	SLU 73	9	0	5863	1327.44	-23.86	-1.58
14	SLU 74	9	-15	5824	1319.88	-23.71	-1.75
14	SLU 75	9	-6	5848	1324.41	-23.8	-1.65
14	SLU 76	9	0	5863	1327.44	-23.86	-1.58
14	SLU 77	9	-15	5824	1319.88	-23.71	-1.75
14	SLU 78	9	-6	5848	1324.41	-23.8	-1.65
14	SLU 79	9	-15	5824	1319.88	-23.71	-1.75
14	SLU 80	9	-6	5848	1324.41	-23.8	-1.65
14	SLU 81	10	-15	6100	1381.79	-25.09	-1.92
14	SLU 82	10	-6	6123	1386.33	-25.18	-1.83
14	SLU 83	10	-15	6100	1381.79	-25.09	-1.92
14	SLU 84	10	-6	6123	1386.33	-25.18	-1.83
14	SLE RA 1	5	-10	3880	880.53	-15.23	-0.96
14	SLE RA 2	5	0	3906	885.57	-15.33	-0.85
14	SLE RA 3	5	-10	3880	880.53	-15.23	-0.96
14	SLE RA 4	5	-4	3896	883.56	-15.29	-0.89
14	SLE RA 5	5	0	3906	885.57	-15.33	-0.85
14	SLE RA 6	5	-10	3880	880.53	-15.23	-0.96
14	SLE RA 7	5	-4	3896	883.56	-15.29	-0.89
14	SLE RA 8	5	-10	3880	880.53	-15.23	-0.96
14	SLE RA 9	5	-4	3896	883.56	-15.29	-0.89
14	SLE RA 10	6	-1	4335	981.89	-17.49	-1.13
14	SLE RA 11	6	-11	4309	976.85	-17.38	-1.24
14	SLE RA 12	6	-5	4325	979.87	-17.45	-1.17
14	SLE RA 13	6	-1	4335	981.89	-17.49	-1.13
14	SLE RA 14	6	-11	4309	976.85	-17.38	-1.24
14	SLE RA 15	6	-5	4325	979.87	-17.45	-1.17
14	SLE RA 16	6	-11	4309	976.85	-17.38	-1.24
14	SLE RA 17	6	-5	4325	979.87	-17.45	-1.17
14	SLE RA 18	7	-11	4493	1018.13	-18.31	-1.36

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
14	SLE RA 19	7	-5	4508	1021.15	-18.37	-1.29
14	SLE RA 20	7	-11	4493	1018.13	-18.31	-1.36
14	SLE RA 21	7	-5	4508	1021.15	-18.37	-1.29
14	SLE FR 1	5	-10	3880	880.53	-15.23	-0.96
14	SLE FR 2	5	-8	3885	881.54	-15.25	-0.94
14	SLE FR 3	5	-10	3880	880.53	-15.23	-0.96
14	SLE FR 4	6	-8	4069	922.82	-16.17	-1.06
14	SLE FR 5	6	-11	4064	921.81	-16.15	-1.08
14	SLE FR 6	6	-11	4186	949.33	-16.77	-1.16
14	SLE QP 1	5	-10	3880	880.53	-15.23	-0.96
14	SLE QP 2	6	-11	4064	921.81	-16.15	-1.08
14	SLD 1	260	98	4547	1022.32	-10.33	-63.09
14	SLD 2	324	65	4531	1019.3	-10.56	-78.04
14	SLD 3	265	-66	4104	936.61	-8.38	-64.2
14	SLD 4	329	-99	4087	933.59	-8.6	-79.15
14	SLD 5	51	283	4887	1083.08	-17.29	-12.48
14	SLD 6	118	249	4870	1079.95	-17.53	-27.99
14	SLD 7	67	-263	3410	797.36	-10.77	-16.19
14	SLD 8	133	-297	3393	794.23	-11	-31.7
14	SLD 9	-122	276	4735	1049.39	-21.3	29.54
14	SLD 10	-55	242	4718	1046.26	-21.54	14.03
14	SLD 11	-106	-270	3258	763.67	-14.78	25.84
14	SLD 12	-40	-304	3241	760.54	-15.01	10.33
14	SLD 13	-317	77	4040	910.03	-23.7	76.99
14	SLD 14	-253	45	4024	907.01	-23.93	62.05
14	SLD 15	-313	-86	3597	824.32	-21.74	75.88
14	SLD 16	-248	-119	3581	821.3	-21.97	60.94
14	SLV 1	586	236	5165	1150.76	-2.85	-142.74
14	SLV 2	732	162	5127	1143.88	-3.38	-176.8
14	SLV 3	597	-136	4158	956.15	1.59	-145.29
14	SLV 4	743	-210	4120	949.26	1.07	-179.36
14	SLV 5	110	655	5934	1288.18	-18.71	-27.2
14	SLV 6	261	578	5895	1281.07	-19.26	-62.41
14	SLV 7	146	-585	2580	639.47	-3.89	-35.72
14	SLV 8	297	-662	2541	632.36	-4.44	-70.94
14	SLV 9	-286	641	5587	1211.26	-27.87	68.79
14	SLV 10	-135	564	5548	1204.15	-28.41	33.57
14	SLV 11	-249	-599	2233	562.55	-13.05	60.26
14	SLV 12	-98	-676	2194	555.44	-13.59	25.04
14	SLV 13	-732	189	4007	894.36	-33.38	177.21
14	SLV 14	-586	115	3970	887.47	-33.9	143.14
14	SLV 15	-721	-183	3001	699.74	-28.93	174.65
14	SLV 16	-575	-257	2963	692.86	-29.45	140.58
14	CRTFP Ux+	0	0	0	0	0	0
14	CRTFP Ux-	0	0	0	0	0	0
14	CRTFP Uy+	0	0	0	-0.01	0	0
14	CRTFP Uy-	0	0	0	0.01	0	0
16	SLU 1	2	-3	1475	455.66	-26.96	-0.82
16	SLU 2	2	3	1489	459.29	-27.23	-0.65
16	SLU 3	2	-3	1475	455.66	-26.96	-0.82
16	SLU 4	2	1	1483	457.84	-27.12	-0.72
16	SLU 5	2	3	1489	459.29	-27.23	-0.65
16	SLU 6	2	-3	1475	455.66	-26.96	-0.82
16	SLU 7	2	1	1483	457.84	-27.12	-0.72
16	SLU 8	2	-3	1475	455.66	-26.96	-0.82
16	SLU 9	2	1	1483	457.84	-27.12	-0.72
16	SLU 10	3	3	1743	535.52	-31.89	-0.91
16	SLU 11	3	-3	1728	531.9	-31.61	-1.08
16	SLU 12	3	1	1737	534.07	-31.78	-0.98
16	SLU 13	3	3	1743	535.52	-31.89	-0.91
16	SLU 14	3	-3	1728	531.9	-31.61	-1.08
16	SLU 15	3	1	1737	534.07	-31.78	-0.98
16	SLU 16	3	-3	1728	531.9	-31.61	-1.08
16	SLU 17	3	1	1737	534.07	-31.78	-0.98
16	SLU 18	3	-3	1837	564.57	-33.61	-1.19
16	SLU 19	3	1	1846	566.74	-33.77	-1.09
16	SLU 20	3	-3	1837	564.57	-33.61	-1.19
16	SLU 21	3	1	1846	566.74	-33.77	-1.09
16	SLU 22	3	-3	1663	512.42	-30.42	-1.01
16	SLU 23	3	3	1678	516.04	-30.69	-0.84
16	SLU 24	3	-3	1663	512.42	-30.42	-1.01
16	SLU 25	3	1	1672	514.59	-30.58	-0.91
16	SLU 26	3	3	1678	516.04	-30.69	-0.84
16	SLU 27	3	-3	1663	512.42	-30.42	-1.01
16	SLU 28	3	1	1672	514.59	-30.58	-0.91
16	SLU 29	3	-3	1663	512.42	-30.42	-1.01
16	SLU 30	3	1	1672	514.59	-30.58	-0.91
16	SLU 31	3	3	1932	592.28	-35.35	-1.1
16	SLU 32	4	-3	1917	588.65	-35.07	-1.26
16	SLU 33	4	0	1926	590.83	-35.24	-1.16
16	SLU 34	3	3	1932	592.28	-35.35	-1.1
16	SLU 35	4	-3	1917	588.65	-35.07	-1.26
16	SLU 36	4	0	1926	590.83	-35.24	-1.16
16	SLU 37	4	-3	1917	588.65	-35.07	-1.26
16	SLU 38	4	0	1926	590.83	-35.24	-1.16
16	SLU 39	4	-3	2026	621.32	-37.07	-1.37

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
16	SLU 40	4	0	2035	623.5	-37.23	-1.27
16	SLU 41	4	-3	2026	621.32	-37.07	-1.37
16	SLU 42	4	0	2035	623.5	-37.23	-1.27
16	SLU 43	3	-4	1852	572.9	-33.86	-1
16	SLU 44	3	2	1867	576.53	-34.13	-0.84
16	SLU 45	3	-4	1852	572.9	-33.86	-1
16	SLU 46	3	0	1861	575.08	-34.02	-0.9
16	SLU 47	3	2	1867	576.53	-34.13	-0.84
16	SLU 48	3	-4	1852	572.9	-33.86	-1
16	SLU 49	3	0	1861	575.08	-34.02	-0.9
16	SLU 50	3	-4	1852	572.9	-33.86	-1
16	SLU 51	3	0	1861	575.08	-34.02	-0.9
16	SLU 52	3	2	2121	652.76	-38.79	-1.09
16	SLU 53	4	-4	2106	649.14	-38.51	-1.26
16	SLU 54	3	0	2115	651.31	-38.68	-1.16
16	SLU 55	3	2	2121	652.76	-38.79	-1.09
16	SLU 56	4	-4	2106	649.14	-38.51	-1.26
16	SLU 57	3	0	2115	651.31	-38.68	-1.16
16	SLU 58	4	-4	2106	649.14	-38.51	-1.26
16	SLU 59	3	0	2115	651.31	-38.68	-1.16
16	SLU 60	4	-4	2215	681.81	-40.51	-1.37
16	SLU 61	4	0	2224	683.98	-40.67	-1.27
16	SLU 62	4	-4	2215	681.81	-40.51	-1.37
16	SLU 63	4	0	2224	683.98	-40.67	-1.27
16	SLU 64	3	-4	2041	629.66	-37.32	-1.19
16	SLU 65	3	2	2056	633.28	-37.59	-1.02
16	SLU 66	3	-4	2041	629.66	-37.32	-1.19
16	SLU 67	3	0	2050	631.83	-37.48	-1.09
16	SLU 68	3	2	2056	633.28	-37.59	-1.02
16	SLU 69	3	-4	2041	629.66	-37.32	-1.19
16	SLU 70	3	0	2050	631.83	-37.48	-1.09
16	SLU 71	3	-4	2041	629.66	-37.32	-1.19
16	SLU 72	3	0	2050	631.83	-37.48	-1.09
16	SLU 73	4	2	2309	709.52	-42.25	-1.28
16	SLU 74	4	-4	2295	705.89	-41.97	-1.45
16	SLU 75	4	0	2304	708.07	-42.14	-1.34
16	SLU 76	4	2	2309	709.52	-42.25	-1.28
16	SLU 77	4	-4	2295	705.89	-41.97	-1.45
16	SLU 78	4	0	2304	708.07	-42.14	-1.34
16	SLU 79	4	-4	2295	705.89	-41.97	-1.45
16	SLU 80	4	0	2304	708.07	-42.14	-1.34
16	SLU 81	4	-4	2403	738.56	-43.97	-1.56
16	SLU 82	4	0	2412	740.74	-44.13	-1.45
16	SLU 83	4	-4	2403	738.56	-43.97	-1.56
16	SLU 84	4	0	2412	740.74	-44.13	-1.45
16	SLE RA 1	2	-3	1528	471.88	-27.94	-0.87
16	SLE RA 2	2	1	1538	474.3	-28.13	-0.76
16	SLE RA 3	2	-3	1528	471.88	-27.94	-0.87
16	SLE RA 4	2	0	1534	473.33	-28.06	-0.81
16	SLE RA 5	2	1	1538	474.3	-28.13	-0.76
16	SLE RA 6	2	-3	1528	471.88	-27.94	-0.87
16	SLE RA 7	2	0	1534	473.33	-28.06	-0.81
16	SLE RA 8	2	-3	1528	471.88	-27.94	-0.87
16	SLE RA 9	2	0	1534	473.33	-28.06	-0.81
16	SLE RA 10	3	1	1708	525.12	-31.23	-0.93
16	SLE RA 11	3	-3	1698	522.7	-31.05	-1.04
16	SLE RA 12	3	-1	1704	524.15	-31.16	-0.98
16	SLE RA 13	3	1	1708	525.12	-31.23	-0.93
16	SLE RA 14	3	-3	1698	522.7	-31.05	-1.04
16	SLE RA 15	3	-1	1704	524.15	-31.16	-0.98
16	SLE RA 16	3	-3	1698	522.7	-31.05	-1.04
16	SLE RA 17	3	-1	1704	524.15	-31.16	-0.98
16	SLE RA 18	3	-3	1770	544.48	-32.38	-1.12
16	SLE RA 19	3	-1	1776	545.93	-32.49	-1.05
16	SLE RA 20	3	-3	1770	544.48	-32.38	-1.12
16	SLE RA 21	3	-1	1776	545.93	-32.49	-1.05
16	SLE FR 1	2	-3	1528	471.88	-27.94	-0.87
16	SLE FR 2	2	-2	1530	472.36	-27.98	-0.85
16	SLE FR 3	2	-3	1528	471.88	-27.94	-0.87
16	SLE FR 4	3	-2	1603	494.14	-29.31	-0.92
16	SLE FR 5	3	-3	1601	493.66	-29.27	-0.95
16	SLE FR 6	3	-3	1649	508.18	-30.16	-1
16	SLE QP 1	2	-3	1528	471.88	-27.94	-0.87
16	SLE QP 2	3	-3	1601	493.66	-29.27	-0.95
16	SLD 1	106	39	1773	541.32	-32.06	-36.84
16	SLD 2	131	28	1767	540.24	-31.98	-45.86
16	SLD 3	108	-26	1604	499.95	-28.92	-37.88
16	SLD 4	133	-37	1599	498.87	-28.84	-46.91
16	SLD 5	21	113	1910	571.1	-34.91	-6.8
16	SLD 6	47	101	1904	569.97	-34.82	-16.17
16	SLD 7	28	-105	1348	433.2	-24.44	-10.28
16	SLD 8	55	-116	1342	432.08	-24.35	-19.65
16	SLD 9	-49	110	1859	555.24	-34.2	17.75
16	SLD 10	-23	99	1854	554.11	-34.11	8.39
16	SLD 11	-42	-107	1297	417.34	-23.73	14.27
16	SLD 12	-16	-118	1292	416.22	-23.64	4.91

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
16	SLD 13	-128	31	1603	488.45	-29.71	45.01
16	SLD 14	-103	20	1598	487.37	-29.63	35.99
16	SLD 15	-126	-34	1435	447.08	-26.57	43.97
16	SLD 16	-101	-45	1429	446	-26.49	34.94
16	SLV 1	239	92	1992	602.22	-35.62	-82.93
16	SLV 2	296	67	1980	599.75	-35.43	-103.51
16	SLV 3	243	-56	1609	508.3	-28.49	-85.33
16	SLV 4	301	-81	1597	505.83	-28.29	-105.9
16	SLV 5	45	259	2304	669.59	-42.07	-14.36
16	SLV 6	105	233	2290	667.04	-41.87	-35.63
16	SLV 7	61	-234	1028	356.5	-18.29	-22.35
16	SLV 8	121	-260	1014	353.95	-18.09	-43.61
16	SLV 9	-116	254	2187	633.37	-40.46	41.72
16	SLV 10	-56	228	2174	630.82	-40.26	20.45
16	SLV 11	-99	-239	911	320.28	-16.68	33.74
16	SLV 12	-39	-265	898	317.73	-16.48	12.47
16	SLV 13	-296	75	1605	481.49	-30.25	104.01
16	SLV 14	-238	50	1592	479.02	-30.06	83.44
16	SLV 15	-291	-73	1222	387.56	-23.12	101.61
16	SLV 16	-233	-98	1210	385.1	-22.93	81.04
16	CRTFP Ux+	0	0	0	0	0	0
16	CRTFP Ux-	0	0	0	0	0	0
16	CRTFP Uy+	0	0	0	0	0	0
16	CRTFP Uy-	0	0	0	0	0	0
17	SLU 1	3	-2	1604	479.29	0.79	-1.06
17	SLU 2	3	5	1621	483.2	0.79	-1.01
17	SLU 3	3	-2	1604	479.29	0.79	-1.06
17	SLU 4	3	2	1614	481.64	0.79	-1.03
17	SLU 5	3	5	1621	483.2	0.79	-1.01
17	SLU 6	3	-2	1604	479.29	0.79	-1.06
17	SLU 7	3	2	1614	481.64	0.79	-1.03
17	SLU 8	3	-2	1604	479.29	0.79	-1.06
17	SLU 9	3	2	1614	481.64	0.79	-1.03
17	SLU 10	4	5	1897	562.62	0.91	-1.27
17	SLU 11	4	-1	1881	558.71	0.92	-1.32
17	SLU 12	4	3	1890	561.06	0.91	-1.29
17	SLU 13	4	5	1897	562.62	0.91	-1.27
17	SLU 14	4	-1	1881	558.71	0.92	-1.32
17	SLU 15	4	3	1890	561.06	0.91	-1.29
17	SLU 16	4	-1	1881	558.71	0.92	-1.32
17	SLU 17	4	3	1890	561.06	0.91	-1.29
17	SLU 18	4	-1	1999	592.75	0.97	-1.43
17	SLU 19	4	3	2009	595.1	0.97	-1.4
17	SLU 20	4	-1	1999	592.75	0.97	-1.43
17	SLU 21	4	3	2009	595.1	0.97	-1.4
17	SLU 22	4	-2	1810	538.45	0.88	-1.25
17	SLU 23	4	5	1826	542.36	0.88	-1.2
17	SLU 24	4	-2	1810	538.45	0.88	-1.25
17	SLU 25	4	2	1819	540.8	0.88	-1.22
17	SLU 26	4	5	1826	542.36	0.88	-1.2
17	SLU 27	4	-2	1810	538.45	0.88	-1.25
17	SLU 28	4	2	1819	540.8	0.88	-1.22
17	SLU 29	4	-2	1810	538.45	0.88	-1.25
17	SLU 30	4	2	1819	540.8	0.88	-1.22
17	SLU 31	4	5	2103	621.78	1.01	-1.46
17	SLU 32	5	-1	2086	617.88	1.01	-1.51
17	SLU 33	4	3	2096	620.22	1.01	-1.48
17	SLU 34	4	5	2103	621.78	1.01	-1.46
17	SLU 35	5	-1	2086	617.88	1.01	-1.51
17	SLU 36	4	3	2096	620.22	1.01	-1.48
17	SLU 37	5	-1	2086	617.88	1.01	-1.51
17	SLU 38	4	3	2096	620.22	1.01	-1.48
17	SLU 39	5	-1	2205	651.91	1.06	-1.62
17	SLU 40	5	3	2214	654.26	1.06	-1.59
17	SLU 41	5	-1	2205	651.91	1.06	-1.62
17	SLU 42	5	3	2214	654.26	1.06	-1.59
17	SLU 43	4	-2	2015	602.8	1	-1.31
17	SLU 44	4	4	2031	606.71	0.99	-1.26
17	SLU 45	4	-2	2015	602.8	1	-1.31
17	SLU 46	4	2	2025	605.14	0.99	-1.28
17	SLU 47	4	4	2031	606.71	0.99	-1.26
17	SLU 48	4	-2	2015	602.8	1	-1.31
17	SLU 49	4	2	2025	605.14	0.99	-1.28
17	SLU 50	4	-2	2015	602.8	1	-1.31
17	SLU 51	4	2	2025	605.14	0.99	-1.28
17	SLU 52	5	5	2308	686.13	1.12	-1.52
17	SLU 53	5	-2	2291	682.22	1.12	-1.57
17	SLU 54	5	2	2301	684.56	1.12	-1.54
17	SLU 55	5	5	2308	686.13	1.12	-1.52
17	SLU 56	5	-2	2291	682.22	1.12	-1.57
17	SLU 57	5	2	2301	684.56	1.12	-1.54
17	SLU 58	5	-2	2291	682.22	1.12	-1.57
17	SLU 59	5	2	2301	684.56	1.12	-1.54
17	SLU 60	5	-2	2410	716.26	1.18	-1.68
17	SLU 61	5	2	2420	718.6	1.17	-1.65
17	SLU 62	5	-2	2410	716.26	1.18	-1.68

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
17	SLU 63	5	2	2420	718.6	1.17	-1.65
17	SLU 64	4	-2	2220	661.96	1.09	-1.5
17	SLU 65	4	5	2237	665.87	1.09	-1.45
17	SLU 66	4	-2	2220	661.96	1.09	-1.5
17	SLU 67	4	2	2230	664.3	1.09	-1.47
17	SLU 68	4	5	2237	665.87	1.09	-1.45
17	SLU 69	4	-2	2220	661.96	1.09	-1.5
17	SLU 70	4	2	2230	664.3	1.09	-1.47
17	SLU 71	4	-2	2220	661.96	1.09	-1.5
17	SLU 72	4	2	2230	664.3	1.09	-1.47
17	SLU 73	5	5	2513	745.29	1.21	-1.71
17	SLU 74	5	-2	2497	741.38	1.21	-1.76
17	SLU 75	5	2	2507	743.72	1.21	-1.73
17	SLU 76	5	5	2513	745.29	1.21	-1.71
17	SLU 77	5	-2	2497	741.38	1.21	-1.76
17	SLU 78	5	2	2507	743.72	1.21	-1.73
17	SLU 79	5	-2	2497	741.38	1.21	-1.76
17	SLU 80	5	2	2507	743.72	1.21	-1.73
17	SLU 81	6	-2	2615	775.42	1.27	-1.87
17	SLU 82	6	2	2625	777.76	1.27	-1.84
17	SLU 83	6	-2	2615	775.42	1.27	-1.87
17	SLU 84	6	2	2625	777.76	1.27	-1.84
17	SLE RA 1	3	-2	1663	496.2	0.82	-1.11
17	SLE RA 2	3	3	1674	498.8	0.82	-1.08
17	SLE RA 3	3	-2	1663	496.2	0.82	-1.11
17	SLE RA 4	3	1	1669	497.76	0.82	-1.09
17	SLE RA 5	3	3	1674	498.8	0.82	-1.08
17	SLE RA 6	3	-2	1663	496.2	0.82	-1.11
17	SLE RA 7	3	1	1669	497.76	0.82	-1.09
17	SLE RA 8	3	-2	1663	496.2	0.82	-1.11
17	SLE RA 9	3	1	1669	497.76	0.82	-1.09
17	SLE RA 10	4	3	1858	551.75	0.9	-1.25
17	SLE RA 11	4	-1	1847	549.14	0.9	-1.29
17	SLE RA 12	4	1	1854	550.71	0.9	-1.27
17	SLE RA 13	4	3	1858	551.75	0.9	-1.25
17	SLE RA 14	4	-1	1847	549.14	0.9	-1.29
17	SLE RA 15	4	1	1854	550.71	0.9	-1.27
17	SLE RA 16	4	-1	1847	549.14	0.9	-1.29
17	SLE RA 17	4	1	1854	550.71	0.9	-1.27
17	SLE RA 18	4	-1	1926	571.84	0.94	-1.36
17	SLE RA 19	4	1	1933	573.4	0.94	-1.34
17	SLE RA 20	4	-1	1926	571.84	0.94	-1.36
17	SLE RA 21	4	1	1933	573.4	0.94	-1.34
17	SLE FR 1	3	-2	1663	496.2	0.82	-1.11
17	SLE FR 2	3	-1	1665	496.72	0.82	-1.11
17	SLE FR 3	3	-2	1663	496.2	0.82	-1.11
17	SLE FR 4	4	-1	1744	519.41	0.85	-1.18
17	SLE FR 5	4	-2	1742	518.89	0.85	-1.19
17	SLE FR 6	4	-2	1794	534.02	0.88	-1.24
17	SLE QP 1	3	-2	1663	496.2	0.82	-1.11
17	SLE QP 2	4	-2	1742	518.89	0.85	-1.19
17	SLD 1	118	43	1916	566	1.39	-41.21
17	SLD 2	146	33	1910	565.19	1.36	-50.95
17	SLD 3	120	-29	1729	521.5	1.43	-42.1
17	SLD 4	148	-39	1724	520.69	1.4	-51.84
17	SLD 5	24	124	2079	600.8	0.96	-8.24
17	SLD 6	53	114	2073	599.96	0.93	-18.36
17	SLD 7	32	-115	1457	452.49	1.1	-11.22
17	SLD 8	61	-125	1451	451.64	1.07	-21.33
17	SLD 9	-54	122	2032	586.13	0.64	18.96
17	SLD 10	-25	111	2027	585.29	0.61	8.84
17	SLD 11	-46	-117	1410	437.81	0.78	15.98
17	SLD 12	-16	-127	1405	436.97	0.75	5.87
17	SLD 13	-141	36	1760	517.09	0.31	49.47
17	SLD 14	-113	26	1755	516.28	0.28	39.72
17	SLD 15	-139	-36	1573	472.59	0.35	48.57
17	SLD 16	-111	-46	1568	471.78	0.32	38.83
17	SLV 1	264	100	2137	626.19	2.07	-92.61
17	SLV 2	328	76	2125	624.34	2.01	-114.82
17	SLV 3	270	-63	1714	525.16	2.17	-94.65
17	SLV 4	334	-86	1702	523.31	2.1	-116.86
17	SLV 5	49	284	2507	704.98	1.1	-17.38
17	SLV 6	115	260	2495	703.07	1.03	-40.34
17	SLV 7	69	-258	1096	368.22	1.42	-24.16
17	SLV 8	135	-282	1083	366.31	1.35	-47.12
17	SLV 9	-128	279	2401	671.46	0.36	44.75
17	SLV 10	-62	255	2388	669.55	0.29	21.79
17	SLV 11	-108	-263	989	334.71	0.68	37.97
17	SLV 12	-42	-287	976	332.8	0.61	15.01
17	SLV 13	-327	83	1782	514.47	-0.39	114.48
17	SLV 14	-263	60	1770	512.62	-0.46	92.27
17	SLV 15	-321	-79	1359	413.44	-0.3	112.45
17	SLV 16	-257	-103	1346	411.59	-0.36	90.24
17	CRTFP Ux+	0	0	0	0	0	0
17	CRTFP Ux-	0	0	0	0	0	0
17	CRTFP Uy+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
17	CRTFP Uy-	0	0	0	0	0	0
18	SLU 1	4	-1	1583	462.21	0.59	-1.27
18	SLU 2	4	6	1599	466.17	0.58	-1.23
18	SLU 3	4	-1	1583	462.21	0.59	-1.27
18	SLU 4	4	3	1593	464.59	0.58	-1.25
18	SLU 5	4	6	1599	466.17	0.58	-1.23
18	SLU 6	4	-1	1583	462.21	0.59	-1.27
18	SLU 7	4	3	1593	464.59	0.58	-1.25
18	SLU 8	4	-1	1583	462.21	0.59	-1.27
18	SLU 9	4	3	1593	464.59	0.58	-1.25
18	SLU 10	4	7	1872	542.32	0.66	-1.47
18	SLU 11	4	0	1856	538.35	0.67	-1.51
18	SLU 12	4	4	1866	540.73	0.67	-1.48
18	SLU 13	4	7	1872	542.32	0.66	-1.47
18	SLU 14	4	0	1856	538.35	0.67	-1.51
18	SLU 15	4	4	1866	540.73	0.67	-1.48
18	SLU 16	4	0	1856	538.35	0.67	-1.51
18	SLU 17	4	4	1866	540.73	0.67	-1.48
18	SLU 18	5	0	1973	570.98	0.71	-1.61
18	SLU 19	5	4	1983	573.36	0.7	-1.59
18	SLU 20	5	0	1973	570.98	0.71	-1.61
18	SLU 21	5	4	1983	573.36	0.7	-1.59
18	SLU 22	4	0	1786	518.96	0.65	-1.46
18	SLU 23	4	6	1802	522.93	0.64	-1.41
18	SLU 24	4	0	1786	518.96	0.65	-1.46
18	SLU 25	4	4	1796	521.34	0.64	-1.43
18	SLU 26	4	6	1802	522.93	0.64	-1.41
18	SLU 27	4	0	1786	518.96	0.65	-1.46
18	SLU 28	4	4	1796	521.34	0.64	-1.43
18	SLU 29	4	0	1786	518.96	0.65	-1.46
18	SLU 30	4	4	1796	521.34	0.64	-1.43
18	SLU 31	5	7	2075	599.07	0.73	-1.65
18	SLU 32	5	0	2059	595.1	0.74	-1.69
18	SLU 33	5	4	2069	597.48	0.73	-1.67
18	SLU 34	5	7	2075	599.07	0.73	-1.65
18	SLU 35	5	0	2059	595.1	0.74	-1.69
18	SLU 36	5	4	2069	597.48	0.73	-1.67
18	SLU 37	5	0	2059	595.1	0.74	-1.69
18	SLU 38	5	4	2069	597.48	0.73	-1.67
18	SLU 39	5	1	2176	627.74	0.77	-1.79
18	SLU 40	5	5	2186	630.11	0.77	-1.77
18	SLU 41	5	1	2176	627.74	0.77	-1.79
18	SLU 42	5	5	2186	630.11	0.77	-1.77
18	SLU 43	5	-1	1988	581.42	0.74	-1.59
18	SLU 44	4	6	2004	585.38	0.73	-1.55
18	SLU 45	5	-1	1988	581.42	0.74	-1.59
18	SLU 46	5	3	1998	583.79	0.74	-1.57
18	SLU 47	4	6	2004	585.38	0.73	-1.55
18	SLU 48	5	-1	1988	581.42	0.74	-1.59
18	SLU 49	5	3	1998	583.79	0.74	-1.57
18	SLU 50	5	-1	1988	581.42	0.74	-1.59
18	SLU 51	5	3	1998	583.79	0.74	-1.57
18	SLU 52	5	6	2277	661.52	0.82	-1.79
18	SLU 53	5	-1	2261	657.56	0.83	-1.83
18	SLU 54	5	4	2271	659.94	0.82	-1.8
18	SLU 55	5	6	2277	661.52	0.82	-1.79
18	SLU 56	5	-1	2261	657.56	0.83	-1.83
18	SLU 57	5	4	2271	659.94	0.82	-1.8
18	SLU 58	5	-1	2261	657.56	0.83	-1.83
18	SLU 59	5	4	2271	659.94	0.82	-1.8
18	SLU 60	6	0	2378	690.19	0.87	-1.93
18	SLU 61	6	4	2388	692.57	0.86	-1.91
18	SLU 62	6	0	2378	690.19	0.87	-1.93
18	SLU 63	6	4	2388	692.57	0.86	-1.91
18	SLU 64	5	-1	2191	638.17	0.8	-1.78
18	SLU 65	5	6	2207	642.13	0.79	-1.73
18	SLU 66	5	-1	2191	638.17	0.8	-1.78
18	SLU 67	5	3	2201	640.55	0.8	-1.75
18	SLU 68	5	6	2207	642.13	0.79	-1.73
18	SLU 69	5	-1	2191	638.17	0.8	-1.78
18	SLU 70	5	3	2201	640.55	0.8	-1.75
18	SLU 71	5	-1	2191	638.17	0.8	-1.78
18	SLU 72	5	3	2201	640.55	0.8	-1.75
18	SLU 73	6	7	2481	718.27	0.88	-1.97
18	SLU 74	6	0	2464	714.31	0.89	-2.01
18	SLU 75	6	4	2474	716.69	0.88	-1.99
18	SLU 76	6	7	2481	718.27	0.88	-1.97
18	SLU 77	6	0	2464	714.31	0.89	-2.01
18	SLU 78	6	4	2474	716.69	0.88	-1.99
18	SLU 79	6	0	2464	714.31	0.89	-2.01
18	SLU 80	6	4	2474	716.69	0.88	-1.99
18	SLU 81	6	0	2581	746.94	0.93	-2.11
18	SLU 82	6	4	2591	749.32	0.92	-2.09
18	SLU 83	6	0	2581	746.94	0.93	-2.11
18	SLU 84	6	4	2591	749.32	0.92	-2.09
18	SLE RA 1	4	-1	1641	478.43	0.6	-1.33

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18	SLE RA 2	4	4	1652	481.07	0.6	-1.3
18	SLE RA 3	4	-1	1641	478.43	0.6	-1.33
18	SLE RA 4	4	2	1647	480.01	0.6	-1.31
18	SLE RA 5	4	4	1652	481.07	0.6	-1.3
18	SLE RA 6	4	-1	1641	478.43	0.6	-1.33
18	SLE RA 7	4	2	1647	480.01	0.6	-1.31
18	SLE RA 8	4	-1	1641	478.43	0.6	-1.33
18	SLE RA 9	4	2	1647	480.01	0.6	-1.31
18	SLE RA 10	4	4	1834	531.83	0.66	-1.46
18	SLE RA 11	4	0	1823	529.19	0.66	-1.48
18	SLE RA 12	4	2	1829	530.77	0.66	-1.47
18	SLE RA 13	4	4	1834	531.83	0.66	-1.46
18	SLE RA 14	4	0	1823	529.19	0.66	-1.48
18	SLE RA 15	4	2	1829	530.77	0.66	-1.47
18	SLE RA 16	4	0	1823	529.19	0.66	-1.48
18	SLE RA 17	4	2	1829	530.77	0.66	-1.47
18	SLE RA 18	5	0	1901	550.94	0.69	-1.55
18	SLE RA 19	4	3	1907	552.53	0.68	-1.53
18	SLE RA 20	5	0	1901	550.94	0.69	-1.55
18	SLE RA 21	4	3	1907	552.53	0.68	-1.53
18	SLE FR 1	4	-1	1641	478.43	0.6	-1.33
18	SLE FR 2	4	0	1643	478.96	0.6	-1.32
18	SLE FR 3	4	-1	1641	478.43	0.6	-1.33
18	SLE FR 4	4	0	1721	500.71	0.63	-1.39
18	SLE FR 5	4	0	1719	500.18	0.63	-1.39
18	SLE FR 6	4	0	1771	514.68	0.65	-1.44
18	SLE QP 1	4	-1	1641	478.43	0.6	-1.33
18	SLE QP 2	4	0	1719	500.18	0.63	-1.39
18	SLD 1	118	43	1877	542.45	1.11	-41.51
18	SLD 2	147	35	1873	541.98	1.08	-51.27
18	SLD 3	121	-29	1688	497.57	1.21	-42.46
18	SLD 4	149	-38	1684	497.1	1.18	-52.22
18	SLD 5	24	125	2054	581.1	0.63	-8.38
18	SLD 6	53	116	2049	580.61	0.6	-18.52
18	SLD 7	33	-115	1425	431.51	0.97	-11.55
18	SLD 8	62	-124	1420	431.02	0.94	-21.69
18	SLD 9	-54	123	2017	569.34	0.32	18.9
18	SLD 10	-25	114	2012	568.86	0.29	8.76
18	SLD 11	-45	-117	1388	419.75	0.66	15.73
18	SLD 12	-16	-126	1383	419.26	0.63	5.6
18	SLD 13	-141	37	1753	503.26	0.08	49.44
18	SLD 14	-113	28	1749	502.79	0.05	39.67
18	SLD 15	-138	-36	1565	458.38	0.18	48.49
18	SLD 16	-110	-44	1560	457.91	0.15	38.72
18	SLV 1	265	99	2079	596.44	1.73	-93.04
18	SLV 2	329	79	2069	595.37	1.66	-115.3
18	SLV 3	272	-65	1651	494.54	1.96	-95.2
18	SLV 4	336	-85	1641	493.48	1.89	-117.46
18	SLV 5	49	285	2480	683.99	0.63	-17.44
18	SLV 6	116	265	2470	682.89	0.56	-40.45
18	SLV 7	70	-261	1052	344.34	1.41	-24.65
18	SLV 8	137	-281	1042	343.23	1.33	-47.66
18	SLV 9	-128	280	2395	657.13	-0.07	44.88
18	SLV 10	-62	260	2385	656.02	-0.15	21.86
18	SLV 11	-107	-266	968	317.47	0.7	37.67
18	SLV 12	-41	-286	957	316.37	0.63	14.65
18	SLV 13	-328	84	1797	506.89	-0.63	114.68
18	SLV 14	-264	64	1786	505.82	-0.7	92.41
18	SLV 15	-321	-80	1368	404.99	-0.4	112.52
18	SLV 16	-257	-100	1358	403.92	-0.47	90.25
18	CRTFP Ux+	0	0	0	0	0	0
18	CRTFP Ux-	0	0	0	0	0	0
18	CRTFP Uy+	0	0	0	0	0	0
18	CRTFP Uy-	0	0	0	0	0	0
19	SLU 1	4	-1	1570	456.11	0.19	-1.5
19	SLU 2	4	6	1588	460.27	0.18	-1.47
19	SLU 3	4	-1	1570	456.11	0.19	-1.5
19	SLU 4	4	4	1581	458.61	0.18	-1.48
19	SLU 5	4	6	1588	460.27	0.18	-1.47
19	SLU 6	4	-1	1570	456.11	0.19	-1.5
19	SLU 7	4	4	1581	458.61	0.18	-1.48
19	SLU 8	4	-1	1570	456.11	0.19	-1.5
19	SLU 9	4	4	1581	458.61	0.18	-1.48
19	SLU 10	5	7	1859	535.47	0.18	-1.68
19	SLU 11	5	0	1842	531.32	0.2	-1.71
19	SLU 12	5	4	1852	533.81	0.19	-1.69
19	SLU 13	5	7	1859	535.47	0.18	-1.68
19	SLU 14	5	0	1842	531.32	0.2	-1.71
19	SLU 15	5	4	1852	533.81	0.19	-1.69
19	SLU 16	5	0	1842	531.32	0.2	-1.71
19	SLU 17	5	4	1852	533.81	0.19	-1.69
19	SLU 18	5	1	1958	563.55	0.2	-1.81
19	SLU 19	5	5	1969	566.04	0.19	-1.79
19	SLU 20	5	1	1958	563.55	0.2	-1.81
19	SLU 21	5	5	1969	566.04	0.19	-1.79
19	SLU 22	5	0	1772	512.21	0.19	-1.67

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
19	SLU 23	5	7	1790	516.36	0.18	-1.64
19	SLU 24	5	0	1772	512.21	0.19	-1.67
19	SLU 25	5	4	1783	514.7	0.18	-1.65
19	SLU 26	5	7	1790	516.36	0.18	-1.64
19	SLU 27	5	0	1772	512.21	0.19	-1.67
19	SLU 28	5	4	1783	514.7	0.18	-1.65
19	SLU 29	5	0	1772	512.21	0.19	-1.67
19	SLU 30	5	4	1783	514.7	0.18	-1.65
19	SLU 31	5	8	2061	591.57	0.19	-1.85
19	SLU 32	5	1	2044	587.41	0.2	-1.89
19	SLU 33	5	5	2054	589.9	0.19	-1.87
19	SLU 34	5	8	2061	591.57	0.19	-1.85
19	SLU 35	5	1	2044	587.41	0.2	-1.89
19	SLU 36	5	5	2054	589.9	0.19	-1.87
19	SLU 37	5	1	2044	587.41	0.2	-1.89
19	SLU 38	5	5	2054	589.9	0.19	-1.87
19	SLU 39	6	1	2161	619.64	0.2	-1.98
19	SLU 40	6	5	2171	622.14	0.2	-1.96
19	SLU 41	6	1	2161	619.64	0.2	-1.98
19	SLU 42	6	5	2171	622.14	0.2	-1.96
19	SLU 43	5	-1	1972	573.72	0.25	-1.89
19	SLU 44	5	6	1989	577.87	0.23	-1.85
19	SLU 45	5	-1	1972	573.72	0.25	-1.89
19	SLU 46	5	3	1983	576.21	0.24	-1.87
19	SLU 47	5	6	1989	577.87	0.23	-1.85
19	SLU 48	5	-1	1972	573.72	0.25	-1.89
19	SLU 49	5	3	1983	576.21	0.24	-1.87
19	SLU 50	5	-1	1972	573.72	0.25	-1.89
19	SLU 51	5	3	1983	576.21	0.24	-1.87
19	SLU 52	6	7	2261	653.08	0.24	-2.07
19	SLU 53	6	0	2244	648.92	0.26	-2.1
19	SLU 54	6	4	2254	651.41	0.25	-2.08
19	SLU 55	6	7	2261	653.08	0.24	-2.07
19	SLU 56	6	0	2244	648.92	0.26	-2.1
19	SLU 57	6	4	2254	651.41	0.25	-2.08
19	SLU 58	6	0	2244	648.92	0.26	-2.1
19	SLU 59	6	4	2254	651.41	0.25	-2.08
19	SLU 60	6	0	2360	681.15	0.26	-2.2
19	SLU 61	6	4	2371	683.65	0.25	-2.18
19	SLU 62	6	0	2360	681.15	0.26	-2.2
19	SLU 63	6	4	2371	683.65	0.25	-2.18
19	SLU 64	6	0	2174	629.81	0.25	-2.06
19	SLU 65	6	6	2191	633.96	0.24	-2.03
19	SLU 66	6	0	2174	629.81	0.25	-2.06
19	SLU 67	6	4	2185	632.3	0.24	-2.04
19	SLU 68	6	6	2191	633.96	0.24	-2.03
19	SLU 69	6	0	2174	629.81	0.25	-2.06
19	SLU 70	6	4	2185	632.3	0.24	-2.04
19	SLU 71	6	0	2174	629.81	0.25	-2.06
19	SLU 72	6	4	2185	632.3	0.24	-2.04
19	SLU 73	6	7	2463	709.17	0.24	-2.24
19	SLU 74	6	0	2446	705.01	0.26	-2.28
19	SLU 75	6	5	2456	707.51	0.25	-2.26
19	SLU 76	6	7	2463	709.17	0.24	-2.24
19	SLU 77	6	0	2446	705.01	0.26	-2.28
19	SLU 78	6	5	2456	707.51	0.25	-2.26
19	SLU 79	6	0	2446	705.01	0.26	-2.28
19	SLU 80	6	5	2456	707.51	0.25	-2.26
19	SLU 81	7	1	2562	737.25	0.26	-2.37
19	SLU 82	7	5	2573	739.74	0.25	-2.35
19	SLU 83	7	1	2562	737.25	0.26	-2.37
19	SLU 84	7	5	2573	739.74	0.25	-2.35
19	SLE RA 1	4	0	1628	472.14	0.19	-1.55
19	SLE RA 2	4	4	1640	474.91	0.18	-1.53
19	SLE RA 3	4	0	1628	472.14	0.19	-1.55
19	SLE RA 4	4	2	1635	473.8	0.19	-1.53
19	SLE RA 5	4	4	1640	474.91	0.18	-1.53
19	SLE RA 6	4	0	1628	472.14	0.19	-1.55
19	SLE RA 7	4	2	1635	473.8	0.19	-1.53
19	SLE RA 8	4	0	1628	472.14	0.19	-1.55
19	SLE RA 9	4	2	1635	473.8	0.19	-1.53
19	SLE RA 10	5	5	1821	525.05	0.19	-1.67
19	SLE RA 11	5	0	1809	522.28	0.2	-1.69
19	SLE RA 12	5	3	1816	523.94	0.19	-1.68
19	SLE RA 13	5	5	1821	525.05	0.19	-1.67
19	SLE RA 14	5	0	1809	522.28	0.2	-1.69
19	SLE RA 15	5	3	1816	523.94	0.19	-1.68
19	SLE RA 16	5	0	1809	522.28	0.2	-1.69
19	SLE RA 17	5	3	1816	523.94	0.19	-1.68
19	SLE RA 18	5	0	1887	543.76	0.2	-1.75
19	SLE RA 19	5	3	1894	545.43	0.19	-1.74
19	SLE RA 20	5	0	1887	543.76	0.2	-1.75
19	SLE RA 21	5	3	1894	545.43	0.19	-1.74
19	SLE FR 1	4	0	1628	472.14	0.19	-1.55
19	SLE FR 2	4	0	1630	472.69	0.19	-1.54
19	SLE FR 3	4	0	1628	472.14	0.19	-1.55

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
19	SLE FR 4	5	1	1708	494.18	0.19	-1.6
19	SLE FR 5	5	0	1706	493.63	0.19	-1.61
19	SLE FR 6	5	0	1758	507.95	0.2	-1.65
19	SLE QP 1	4	0	1628	472.14	0.19	-1.55
19	SLE QP 2	5	0	1706	493.63	0.19	-1.61
19	SLD 1	122	43	1851	532	0.61	-42.79
19	SLD 2	150	36	1847	531.8	0.58	-52.57
19	SLD 3	119	-30	1658	485.23	0.78	-41.78
19	SLD 4	147	-37	1655	485.02	0.75	-51.56
19	SLD 5	34	127	2043	576.15	0.08	-11.89
19	SLD 6	63	119	2039	575.94	0.04	-22.04
19	SLD 7	24	-118	1400	420.25	0.64	-8.52
19	SLD 8	53	-125	1397	420.03	0.6	-18.67
19	SLD 9	-44	125	2015	567.22	-0.21	15.45
19	SLD 10	-15	117	2011	567.01	-0.25	5.3
19	SLD 11	-54	-120	1372	411.31	0.34	18.83
19	SLD 12	-25	-127	1369	411.1	0.31	8.67
19	SLD 13	-138	36	1757	502.23	-0.36	48.34
19	SLD 14	-110	30	1753	502.03	-0.39	38.56
19	SLD 15	-141	-37	1564	455.46	-0.19	49.36
19	SLD 16	-113	-44	1561	455.25	-0.22	39.58
19	SLV 1	273	99	2036	581.02	1.15	-95.69
19	SLV 2	337	83	2028	580.55	1.07	-117.98
19	SLV 3	266	-68	1598	474.82	1.53	-93.38
19	SLV 4	330	-84	1590	474.35	1.45	-115.68
19	SLV 5	72	288	2471	681.08	-0.07	-25.15
19	SLV 6	138	271	2463	680.6	-0.14	-48.19
19	SLV 7	49	-267	1013	327.09	1.2	-17.47
19	SLV 8	115	-283	1004	326.61	1.12	-40.51
19	SLV 9	-106	283	2407	660.64	-0.73	37.3
19	SLV 10	-40	267	2399	660.16	-0.81	14.25
19	SLV 11	-129	-272	948	306.66	0.53	44.98
19	SLV 12	-63	-288	940	306.17	0.46	21.93
19	SLV 13	-321	83	1821	512.9	-1.06	112.46
19	SLV 14	-257	67	1813	512.43	-1.14	90.16
19	SLV 15	-328	-83	1384	406.71	-0.68	114.76
19	SLV 16	-264	-99	1376	406.24	-0.76	92.47
19	CRTFP Ux+	0	0	0	0	0	0
19	CRTFP Ux-	0	0	0	0	0	0
19	CRTFP Uy+	0	0	0	0	0	0
19	CRTFP Uy-	0	0	0	0	0	0
20	SLU 1	5	-1	1571	462.63	-0.23	-1.75
20	SLU 2	5	6	1589	467.09	-0.25	-1.73
20	SLU 3	5	-1	1571	462.63	-0.23	-1.75
20	SLU 4	5	3	1582	465.31	-0.24	-1.74
20	SLU 5	5	6	1589	467.09	-0.25	-1.73
20	SLU 6	5	-1	1571	462.63	-0.23	-1.75
20	SLU 7	5	3	1582	465.31	-0.24	-1.74
20	SLU 8	5	-1	1571	462.63	-0.23	-1.75
20	SLU 9	5	3	1582	465.31	-0.24	-1.74
20	SLU 10	5	7	1861	544.02	-0.33	-1.93
20	SLU 11	5	0	1844	539.56	-0.31	-1.95
20	SLU 12	5	4	1854	542.24	-0.32	-1.94
20	SLU 13	5	7	1861	544.02	-0.33	-1.93
20	SLU 14	5	0	1844	539.56	-0.31	-1.95
20	SLU 15	5	4	1854	542.24	-0.32	-1.94
20	SLU 16	5	0	1844	539.56	-0.31	-1.95
20	SLU 17	5	4	1854	542.24	-0.32	-1.94
20	SLU 18	6	0	1961	572.54	-0.34	-2.03
20	SLU 19	6	4	1971	575.21	-0.35	-2.02
20	SLU 20	6	0	1961	572.54	-0.34	-2.03
20	SLU 21	6	4	1971	575.21	-0.35	-2.02
20	SLU 22	5	-1	1774	520.04	-0.29	-1.92
20	SLU 23	5	7	1792	524.5	-0.31	-1.89
20	SLU 24	5	-1	1774	520.04	-0.29	-1.92
20	SLU 25	5	4	1785	522.72	-0.3	-1.9
20	SLU 26	5	7	1792	524.5	-0.31	-1.89
20	SLU 27	5	-1	1774	520.04	-0.29	-1.92
20	SLU 28	5	4	1785	522.72	-0.3	-1.9
20	SLU 29	5	-1	1774	520.04	-0.29	-1.92
20	SLU 30	5	4	1785	522.72	-0.3	-1.9
20	SLU 31	6	7	2064	601.43	-0.39	-2.09
20	SLU 32	6	0	2047	596.98	-0.37	-2.12
20	SLU 33	6	5	2057	599.65	-0.38	-2.1
20	SLU 34	6	7	2064	601.43	-0.39	-2.09
20	SLU 35	6	0	2047	596.98	-0.37	-2.12
20	SLU 36	6	5	2057	599.65	-0.38	-2.1
20	SLU 37	6	0	2047	596.98	-0.37	-2.12
20	SLU 38	6	5	2057	599.65	-0.38	-2.1
20	SLU 39	6	1	2164	629.95	-0.4	-2.2
20	SLU 40	6	5	2174	632.62	-0.41	-2.19
20	SLU 41	6	1	2164	629.95	-0.4	-2.2
20	SLU 42	6	5	2174	632.62	-0.41	-2.19
20	SLU 43	6	-2	1973	581.74	-0.28	-2.22
20	SLU 44	6	5	1991	586.2	-0.3	-2.19
20	SLU 45	6	-2	1973	581.74	-0.28	-2.22

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
20	SLU 46	6	2	1983	584.41	-0.29	-2.2
20	SLU 47	6	5	1991	586.2	-0.3	-2.19
20	SLU 48	6	-2	1973	581.74	-0.28	-2.22
20	SLU 49	6	2	1983	584.41	-0.29	-2.2
20	SLU 50	6	-2	1973	581.74	-0.28	-2.22
20	SLU 51	6	2	1983	584.41	-0.29	-2.2
20	SLU 52	7	6	2263	663.13	-0.37	-2.39
20	SLU 53	7	-1	2246	658.67	-0.35	-2.42
20	SLU 54	7	3	2256	661.34	-0.37	-2.4
20	SLU 55	7	6	2263	663.13	-0.37	-2.39
20	SLU 56	7	-1	2246	658.67	-0.35	-2.42
20	SLU 57	7	3	2256	661.34	-0.37	-2.4
20	SLU 58	7	-1	2246	658.67	-0.35	-2.42
20	SLU 59	7	3	2256	661.34	-0.37	-2.4
20	SLU 60	7	0	2363	691.64	-0.39	-2.5
20	SLU 61	7	4	2373	694.32	-0.4	-2.49
20	SLU 62	7	0	2363	691.64	-0.39	-2.5
20	SLU 63	7	4	2373	694.32	-0.4	-2.49
20	SLU 64	7	-1	2176	639.15	-0.34	-2.38
20	SLU 65	7	6	2193	643.61	-0.36	-2.36
20	SLU 66	7	-1	2176	639.15	-0.34	-2.38
20	SLU 67	7	3	2186	641.82	-0.35	-2.37
20	SLU 68	7	6	2193	643.61	-0.36	-2.36
20	SLU 69	7	-1	2176	639.15	-0.34	-2.38
20	SLU 70	7	3	2186	641.82	-0.35	-2.37
20	SLU 71	7	-1	2176	639.15	-0.34	-2.38
20	SLU 72	7	3	2186	641.82	-0.35	-2.37
20	SLU 73	7	7	2466	720.54	-0.43	-2.56
20	SLU 74	7	0	2449	716.08	-0.41	-2.58
20	SLU 75	7	4	2459	718.76	-0.43	-2.57
20	SLU 76	7	7	2466	720.54	-0.43	-2.56
20	SLU 77	7	0	2449	716.08	-0.41	-2.58
20	SLU 78	7	4	2459	718.76	-0.43	-2.57
20	SLU 79	7	0	2449	716.08	-0.41	-2.58
20	SLU 80	7	4	2459	718.76	-0.43	-2.57
20	SLU 81	8	0	2565	749.05	-0.45	-2.67
20	SLU 82	7	4	2576	751.73	-0.46	-2.66
20	SLU 83	8	0	2565	749.05	-0.45	-2.67
20	SLU 84	7	4	2576	751.73	-0.46	-2.66
20	SLE RA 1	5	-1	1629	479.04	-0.25	-1.8
20	SLE RA 2	5	4	1641	482.01	-0.26	-1.78
20	SLE RA 3	5	-1	1629	479.04	-0.25	-1.8
20	SLE RA 4	5	2	1636	480.82	-0.25	-1.79
20	SLE RA 5	5	4	1641	482.01	-0.26	-1.78
20	SLE RA 6	5	-1	1629	479.04	-0.25	-1.8
20	SLE RA 7	5	2	1636	480.82	-0.25	-1.79
20	SLE RA 8	5	-1	1629	479.04	-0.25	-1.8
20	SLE RA 9	5	2	1636	480.82	-0.25	-1.79
20	SLE RA 10	5	4	1823	533.29	-0.31	-1.92
20	SLE RA 11	5	0	1811	530.32	-0.3	-1.93
20	SLE RA 12	5	2	1818	532.11	-0.31	-1.92
20	SLE RA 13	5	4	1823	533.29	-0.31	-1.92
20	SLE RA 14	5	0	1811	530.32	-0.3	-1.93
20	SLE RA 15	5	2	1818	532.11	-0.31	-1.92
20	SLE RA 16	5	0	1811	530.32	-0.3	-1.93
20	SLE RA 17	5	2	1818	532.11	-0.31	-1.92
20	SLE RA 18	6	0	1889	552.3	-0.32	-1.99
20	SLE RA 19	6	3	1896	554.09	-0.33	-1.98
20	SLE RA 20	6	0	1889	552.3	-0.32	-1.99
20	SLE RA 21	6	3	1896	554.09	-0.33	-1.98
20	SLE FR 1	5	-1	1629	479.04	-0.25	-1.8
20	SLE FR 2	5	0	1631	479.63	-0.25	-1.79
20	SLE FR 3	5	-1	1629	479.04	-0.25	-1.8
20	SLE FR 4	5	0	1709	501.61	-0.27	-1.85
20	SLE FR 5	5	-1	1707	501.02	-0.27	-1.85
20	SLE FR 6	5	-1	1759	515.67	-0.28	-1.89
20	SLE QP 1	5	-1	1629	479.04	-0.25	-1.8
20	SLE QP 2	5	-1	1707	501.02	-0.27	-1.85
20	SLD 1	123	43	1841	536.51	0.09	-43.12
20	SLD 2	151	38	1838	536.49	0.06	-52.9
20	SLD 3	120	-32	1642	486.56	0.31	-42.04
20	SLD 4	148	-37	1640	486.54	0.28	-51.82
20	SLD 5	35	128	2049	587.43	-0.47	-12.27
20	SLD 6	64	122	2047	587.4	-0.51	-22.42
20	SLD 7	24	-122	1387	420.93	0.24	-8.66
20	SLD 8	54	-127	1385	420.91	0.21	-18.81
20	SLD 9	-43	126	2029	581.12	-0.74	15.1
20	SLD 10	-14	120	2027	581.1	-0.78	4.95
20	SLD 11	-54	-124	1367	414.63	-0.03	18.71
20	SLD 12	-25	-129	1365	414.61	-0.07	8.56
20	SLD 13	-137	36	1774	515.49	-0.81	48.11
20	SLD 14	-109	30	1772	515.47	-0.85	38.33
20	SLD 15	-141	-39	1576	465.55	-0.6	49.2
20	SLD 16	-113	-45	1573	465.52	-0.63	39.42
20	SLV 1	274	99	2011	581.87	0.56	-96.12
20	SLV 2	338	87	2005	581.82	0.49	-118.42

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
20	SLV 3	267	-71	1560	468.47	1.05	-93.66
20	SLV 4	331	-83	1555	468.41	0.97	-115.96
20	SLV 5	74	291	2484	697.29	-0.73	-25.69
20	SLV 6	140	279	2478	697.24	-0.8	-48.74
20	SLV 7	49	-275	981	319.27	0.89	-17.48
20	SLV 8	115	-288	975	319.22	0.81	-40.53
20	SLV 9	-105	286	2439	682.82	-1.35	36.82
20	SLV 10	-39	274	2433	682.76	-1.43	13.77
20	SLV 11	-129	-280	936	304.79	0.27	45.03
20	SLV 12	-63	-293	930	304.74	0.19	21.98
20	SLV 13	-321	82	1859	533.62	-1.51	112.25
20	SLV 14	-257	69	1854	533.57	-1.58	89.95
20	SLV 15	-328	-88	1409	420.21	-1.03	114.71
20	SLV 16	-264	-101	1403	420.16	-1.1	92.42
20	CRTFP Ux+	0	0	0	0	0	0
20	CRTFP Ux-	0	0	0	0	0	0
20	CRTFP Uy+	0	0	0	0	0	0
20	CRTFP Uy-	0	0	0	0	0	0
21	SLU 1	6	-2	1583	480.57	-0.51	-2.04
21	SLU 2	6	5	1601	485.39	-0.53	-2.03
21	SLU 3	6	-2	1583	480.57	-0.51	-2.04
21	SLU 4	6	2	1594	483.46	-0.52	-2.03
21	SLU 5	6	5	1601	485.39	-0.53	-2.03
21	SLU 6	6	-2	1583	480.57	-0.51	-2.04
21	SLU 7	6	2	1594	483.46	-0.52	-2.03
21	SLU 8	6	-2	1583	480.57	-0.51	-2.04
21	SLU 9	6	2	1594	483.46	-0.52	-2.03
21	SLU 10	6	6	1877	566.42	-0.66	-2.22
21	SLU 11	6	-1	1859	561.6	-0.64	-2.23
21	SLU 12	6	3	1870	564.49	-0.65	-2.23
21	SLU 13	6	6	1877	566.42	-0.66	-2.22
21	SLU 14	6	-1	1859	561.6	-0.64	-2.23
21	SLU 15	6	3	1870	564.49	-0.65	-2.23
21	SLU 16	6	-1	1859	561.6	-0.64	-2.23
21	SLU 17	6	3	1870	564.49	-0.65	-2.23
21	SLU 18	7	-1	1977	596.33	-0.7	-2.32
21	SLU 19	6	3	1988	599.22	-0.71	-2.31
21	SLU 20	7	-1	1977	596.33	-0.7	-2.32
21	SLU 21	6	3	1988	599.22	-0.71	-2.31
21	SLU 22	6	-2	1788	541.06	-0.61	-2.21
21	SLU 23	6	6	1807	545.88	-0.63	-2.2
21	SLU 24	6	-2	1788	541.06	-0.61	-2.21
21	SLU 25	6	3	1799	543.95	-0.62	-2.2
21	SLU 26	6	6	1807	545.88	-0.63	-2.2
21	SLU 27	6	-2	1788	541.06	-0.61	-2.21
21	SLU 28	6	3	1799	543.95	-0.62	-2.2
21	SLU 29	6	-2	1788	541.06	-0.61	-2.21
21	SLU 30	6	3	1799	543.95	-0.62	-2.2
21	SLU 31	7	7	2083	626.91	-0.76	-2.39
21	SLU 32	7	-1	2064	622.09	-0.74	-2.4
21	SLU 33	7	4	2075	624.98	-0.75	-2.4
21	SLU 34	7	7	2083	626.91	-0.76	-2.39
21	SLU 35	7	-1	2064	622.09	-0.74	-2.4
21	SLU 36	7	4	2075	624.98	-0.75	-2.4
21	SLU 37	7	-1	2064	622.09	-0.74	-2.4
21	SLU 38	7	4	2075	624.98	-0.75	-2.4
21	SLU 39	7	0	2183	656.82	-0.8	-2.48
21	SLU 40	7	4	2194	659.71	-0.81	-2.48
21	SLU 41	7	0	2183	656.82	-0.8	-2.48
21	SLU 42	7	4	2194	659.71	-0.81	-2.48
21	SLU 43	7	-3	1987	604	-0.63	-2.59
21	SLU 44	7	4	2006	608.82	-0.65	-2.58
21	SLU 45	7	-3	1987	604	-0.63	-2.59
21	SLU 46	7	1	1998	606.89	-0.64	-2.59
21	SLU 47	7	4	2006	608.82	-0.65	-2.58
21	SLU 48	7	-3	1987	604	-0.63	-2.59
21	SLU 49	7	1	1998	606.89	-0.64	-2.59
21	SLU 50	7	-3	1987	604	-0.63	-2.59
21	SLU 51	7	1	1998	606.89	-0.64	-2.59
21	SLU 52	8	5	2282	689.85	-0.78	-2.78
21	SLU 53	8	-2	2263	685.03	-0.76	-2.79
21	SLU 54	8	2	2274	687.92	-0.77	-2.78
21	SLU 55	8	5	2282	689.85	-0.78	-2.78
21	SLU 56	8	-2	2263	685.03	-0.76	-2.79
21	SLU 57	8	2	2274	687.92	-0.77	-2.78
21	SLU 58	8	-2	2263	685.03	-0.76	-2.79
21	SLU 59	8	2	2274	687.92	-0.77	-2.78
21	SLU 60	8	-2	2382	719.76	-0.82	-2.87
21	SLU 61	8	3	2393	722.65	-0.83	-2.87
21	SLU 62	8	-2	2382	719.76	-0.82	-2.87
21	SLU 63	8	3	2393	722.65	-0.83	-2.87
21	SLU 64	8	-2	2193	664.49	-0.73	-2.76
21	SLU 65	8	5	2211	669.31	-0.75	-2.75
21	SLU 66	8	-2	2193	664.49	-0.73	-2.76
21	SLU 67	8	2	2204	667.38	-0.74	-2.76
21	SLU 68	8	5	2211	669.31	-0.75	-2.75

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
21	SLU 69	8	-2	2193	664.49	-0.73	-2.76
21	SLU 70	8	2	2204	667.38	-0.74	-2.76
21	SLU 71	8	-2	2193	664.49	-0.73	-2.76
21	SLU 72	8	2	2204	667.38	-0.74	-2.76
21	SLU 73	8	6	2487	750.34	-0.88	-2.95
21	SLU 74	8	-2	2469	745.53	-0.86	-2.96
21	SLU 75	8	3	2480	748.41	-0.87	-2.95
21	SLU 76	8	6	2487	750.34	-0.88	-2.95
21	SLU 77	8	-2	2469	745.53	-0.86	-2.96
21	SLU 78	8	3	2480	748.41	-0.87	-2.95
21	SLU 79	8	-2	2469	745.53	-0.86	-2.96
21	SLU 80	8	3	2480	748.41	-0.87	-2.95
21	SLU 81	9	-1	2587	780.25	-0.92	-3.04
21	SLU 82	9	3	2598	783.14	-0.93	-3.03
21	SLU 83	9	-1	2587	780.25	-0.92	-3.04
21	SLU 84	9	3	2598	783.14	-0.93	-3.03
21	SLE RA 1	6	-2	1642	497.85	-0.54	-2.09
21	SLE RA 2	6	3	1654	501.06	-0.55	-2.08
21	SLE RA 3	6	-2	1642	497.85	-0.54	-2.09
21	SLE RA 4	6	1	1649	499.78	-0.55	-2.08
21	SLE RA 5	6	3	1654	501.06	-0.55	-2.08
21	SLE RA 6	6	-2	1642	497.85	-0.54	-2.09
21	SLE RA 7	6	1	1649	499.78	-0.55	-2.08
21	SLE RA 8	6	-2	1642	497.85	-0.54	-2.09
21	SLE RA 9	6	1	1649	499.78	-0.55	-2.08
21	SLE RA 10	6	3	1838	555.09	-0.64	-2.21
21	SLE RA 11	6	-1	1826	551.88	-0.63	-2.22
21	SLE RA 12	6	1	1833	553.8	-0.63	-2.21
21	SLE RA 13	6	3	1838	555.09	-0.64	-2.21
21	SLE RA 14	6	-1	1826	551.88	-0.63	-2.22
21	SLE RA 15	6	1	1833	553.8	-0.63	-2.21
21	SLE RA 16	6	-1	1826	551.88	-0.63	-2.22
21	SLE RA 17	6	1	1833	553.8	-0.63	-2.21
21	SLE RA 18	6	-1	1904	575.03	-0.66	-2.27
21	SLE RA 19	6	2	1912	576.95	-0.67	-2.27
21	SLE RA 20	6	-1	1904	575.03	-0.66	-2.27
21	SLE RA 21	6	2	1912	576.95	-0.67	-2.27
21	SLE FR 1	6	-2	1642	497.85	-0.54	-2.09
21	SLE FR 2	6	-1	1644	498.5	-0.54	-2.09
21	SLE FR 3	6	-2	1642	497.85	-0.54	-2.09
21	SLE FR 4	6	-1	1723	521.65	-0.58	-2.14
21	SLE FR 5	6	-2	1720	521.01	-0.58	-2.14
21	SLE FR 6	6	-2	1773	536.44	-0.6	-2.18
21	SLE QP 1	6	-2	1642	497.85	-0.54	-2.09
21	SLE QP 2	6	-2	1720	521.01	-0.58	-2.14
21	SLD 1	124	43	1845	554.67	-0.24	-43.46
21	SLD 2	152	39	1843	554.77	-0.27	-53.23
21	SLD 3	121	-34	1640	500.8	-0.02	-42.3
21	SLD 4	149	-38	1638	500.9	-0.06	-52.07
21	SLD 5	36	129	2070	612.78	-0.79	-12.7
21	SLD 6	65	125	2068	612.88	-0.82	-22.84
21	SLD 7	25	-126	1385	433.2	-0.07	-8.82
21	SLD 8	54	-130	1384	433.3	-0.11	-18.96
21	SLD 9	-42	126	2057	608.71	-1.05	14.67
21	SLD 10	-13	122	2055	608.81	-1.08	4.53
21	SLD 11	-53	-129	1373	429.13	-0.33	18.55
21	SLD 12	-24	-132	1371	429.23	-0.37	8.41
21	SLD 13	-137	34	1803	541.11	-1.1	47.78
21	SLD 14	-109	30	1801	541.21	-1.13	38.01
21	SLD 15	-140	-42	1598	487.24	-0.88	48.95
21	SLD 16	-112	-46	1596	487.34	-0.92	39.18
21	SLV 1	276	99	2003	597.77	0.2	-96.52
21	SLV 2	340	91	2000	597.99	0.13	-118.8
21	SLV 3	268	-75	1537	475.46	0.69	-93.88
21	SLV 4	332	-83	1534	475.68	0.61	-116.15
21	SLV 5	75	295	2513	729.47	-1.06	-26.3
21	SLV 6	141	286	2510	729.69	-1.13	-49.32
21	SLV 7	49	-284	960	321.75	0.57	-17.49
21	SLV 8	115	-292	956	321.98	0.49	-40.51
21	SLV 9	-103	289	2484	720.03	-1.65	36.22
21	SLV 10	-37	280	2481	720.26	-1.72	13.2
21	SLV 11	-129	-290	931	312.32	-0.02	45.03
21	SLV 12	-63	-298	928	312.55	-0.1	22.01
21	SLV 13	-320	79	1907	566.33	-1.77	111.87
21	SLV 14	-256	71	1904	566.55	-1.84	89.59
21	SLV 15	-327	-94	1441	444.02	-1.28	114.51
21	SLV 16	-263	-103	1438	444.24	-1.35	92.24
21	CRTFP Ux+	0	0	0	0	0	0
21	CRTFP Ux-	0	0	0	0	0	0
21	CRTFP Uy+	0	0	0	0	0	0
21	CRTFP Uy-	0	0	0	0	0	0
22	SLU 1	6	-3	1449	458.73	26.61	-2.1
22	SLU 2	6	4	1466	463.39	26.91	-2.22
22	SLU 3	6	-3	1449	458.73	26.61	-2.1
22	SLU 4	6	1	1460	461.53	26.79	-2.17
22	SLU 5	6	4	1466	463.39	26.91	-2.22

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
22	SLU 6	6	-3	1449	458.73	26.61	-2.1
22	SLU 7	6	1	1460	461.53	26.79	-2.17
22	SLU 8	6	-3	1449	458.73	26.61	-2.1
22	SLU 9	6	1	1460	461.53	26.79	-2.17
22	SLU 10	7	5	1720	541.95	31.55	-2.42
22	SLU 11	7	-2	1703	537.28	31.24	-2.29
22	SLU 12	7	2	1713	540.08	31.42	-2.37
22	SLU 13	7	5	1720	541.95	31.55	-2.42
22	SLU 14	7	-2	1703	537.28	31.24	-2.29
22	SLU 15	7	2	1713	540.08	31.42	-2.37
22	SLU 16	7	-2	1703	537.28	31.24	-2.29
22	SLU 17	7	2	1713	540.08	31.42	-2.37
22	SLU 18	7	-2	1812	570.95	33.23	-2.37
22	SLU 19	7	2	1822	573.75	33.41	-2.45
22	SLU 20	7	-2	1812	570.95	33.23	-2.37
22	SLU 21	7	2	1822	573.75	33.41	-2.45
22	SLU 22	7	-2	1638	517.37	30.06	-2.26
22	SLU 23	7	4	1655	522.03	30.36	-2.39
22	SLU 24	7	-2	1638	517.37	30.06	-2.26
22	SLU 25	7	2	1649	520.17	30.24	-2.34
22	SLU 26	7	4	1655	522.03	30.36	-2.39
22	SLU 27	7	-2	1638	517.37	30.06	-2.26
22	SLU 28	7	2	1649	520.17	30.24	-2.34
22	SLU 29	7	-2	1638	517.37	30.06	-2.26
22	SLU 30	7	2	1649	520.17	30.24	-2.34
22	SLU 31	7	5	1909	600.59	35	-2.58
22	SLU 32	7	-2	1892	595.92	34.69	-2.46
22	SLU 33	7	2	1902	598.72	34.87	-2.53
22	SLU 34	7	5	1909	600.59	35	-2.58
22	SLU 35	7	-2	1892	595.92	34.69	-2.46
22	SLU 36	7	2	1902	598.72	34.87	-2.53
22	SLU 37	7	-2	1892	595.92	34.69	-2.46
22	SLU 38	7	2	1902	598.72	34.87	-2.53
22	SLU 39	7	-1	2001	629.59	36.68	-2.54
22	SLU 40	7	3	2011	632.39	36.86	-2.62
22	SLU 41	7	-1	2001	629.59	36.68	-2.54
22	SLU 42	7	3	2011	632.39	36.86	-2.62
22	SLU 43	8	-4	1820	576.24	33.41	-2.67
22	SLU 44	8	3	1836	580.9	33.71	-2.8
22	SLU 45	8	-4	1820	576.24	33.41	-2.67
22	SLU 46	8	0	1830	579.04	33.59	-2.74
22	SLU 47	8	3	1836	580.9	33.71	-2.8
22	SLU 48	8	-4	1820	576.24	33.41	-2.67
22	SLU 49	8	0	1830	579.04	33.59	-2.74
22	SLU 50	8	-4	1820	576.24	33.41	-2.67
22	SLU 51	8	0	1830	579.04	33.59	-2.74
22	SLU 52	8	4	2090	659.46	38.35	-2.99
22	SLU 53	8	-3	2073	654.79	38.04	-2.86
22	SLU 54	8	1	2083	657.59	38.22	-2.94
22	SLU 55	8	4	2090	659.46	38.35	-2.99
22	SLU 56	8	-3	2073	654.79	38.04	-2.86
22	SLU 57	8	1	2083	657.59	38.22	-2.94
22	SLU 58	8	-3	2073	654.79	38.04	-2.86
22	SLU 59	8	1	2083	657.59	38.22	-2.94
22	SLU 60	8	-3	2182	688.46	40.02	-2.94
22	SLU 61	8	1	2192	691.26	40.21	-3.02
22	SLU 62	8	-3	2182	688.46	40.02	-2.94
22	SLU 63	8	1	2192	691.26	40.21	-3.02
22	SLU 64	8	-3	2008	634.88	36.85	-2.84
22	SLU 65	8	3	2025	639.55	37.16	-2.96
22	SLU 66	8	-3	2008	634.88	36.85	-2.84
22	SLU 67	8	1	2019	637.68	37.04	-2.91
22	SLU 68	8	3	2025	639.55	37.16	-2.96
22	SLU 69	8	-3	2008	634.88	36.85	-2.84
22	SLU 70	8	1	2019	637.68	37.04	-2.91
22	SLU 71	8	-3	2008	634.88	36.85	-2.84
22	SLU 72	8	1	2019	637.68	37.04	-2.91
22	SLU 73	9	4	2279	718.1	41.79	-3.16
22	SLU 74	9	-3	2262	713.44	41.49	-3.03
22	SLU 75	9	1	2272	716.24	41.67	-3.1
22	SLU 76	9	4	2279	718.1	41.79	-3.16
22	SLU 77	9	-3	2262	713.44	41.49	-3.03
22	SLU 78	9	1	2272	716.24	41.67	-3.1
22	SLU 79	9	-3	2262	713.44	41.49	-3.03
22	SLU 80	9	1	2272	716.24	41.67	-3.1
22	SLU 81	9	-2	2371	747.1	43.47	-3.11
22	SLU 82	9	2	2381	749.9	43.66	-3.19
22	SLU 83	9	-2	2371	747.1	43.47	-3.11
22	SLU 84	9	2	2381	749.9	43.66	-3.19
22	SLE RA 1	6	-3	1503	475.48	27.59	-2.14
22	SLE RA 2	6	2	1515	478.59	27.8	-2.23
22	SLE RA 3	6	-3	1503	475.48	27.59	-2.14
22	SLE RA 4	6	0	1510	477.35	27.71	-2.2
22	SLE RA 5	6	2	1515	478.59	27.8	-2.23
22	SLE RA 6	6	-3	1503	475.48	27.59	-2.14
22	SLE RA 7	6	0	1510	477.35	27.71	-2.2

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
22	SLE RA 8	6	-3	1503	475.48	27.59	-2.14
22	SLE RA 9	6	0	1510	477.35	27.71	-2.2
22	SLE RA 10	7	2	1684	530.96	30.88	-2.36
22	SLE RA 11	7	-2	1673	527.85	30.68	-2.27
22	SLE RA 12	7	0	1679	529.72	30.8	-2.32
22	SLE RA 13	7	2	1684	530.96	30.88	-2.36
22	SLE RA 14	7	-2	1673	527.85	30.68	-2.27
22	SLE RA 15	7	0	1679	529.72	30.8	-2.32
22	SLE RA 16	7	-2	1673	527.85	30.68	-2.27
22	SLE RA 17	7	0	1679	529.72	30.8	-2.32
22	SLE RA 18	7	-2	1745	550.3	32	-2.33
22	SLE RA 19	7	1	1752	552.16	32.13	-2.38
22	SLE RA 20	7	-2	1745	550.3	32	-2.33
22	SLE RA 21	7	1	1752	552.16	32.13	-2.38
22	SLE FR 1	6	-3	1503	475.48	27.59	-2.14
22	SLE FR 2	6	-2	1506	476.1	27.63	-2.16
22	SLE FR 3	6	-3	1503	475.48	27.59	-2.14
22	SLE FR 4	6	-2	1578	498.55	28.96	-2.22
22	SLE FR 5	6	-2	1576	497.93	28.92	-2.2
22	SLE FR 6	6	-2	1624	512.89	29.8	-2.24
22	SLE QP 1	6	-3	1503	475.48	27.59	-2.14
22	SLE QP 2	6	-2	1576	497.93	28.92	-2.2
22	SLD 1	113	38	1683	527.96	31.1	-40.26
22	SLD 2	139	36	1682	528.09	31.07	-49.07
22	SLD 3	110	-33	1492	475.73	27.66	-37.92
22	SLD 4	136	-34	1491	475.86	27.63	-46.73
22	SLD 5	34	117	1898	586.1	34.81	-13.91
22	SLD 6	61	115	1897	586.24	34.77	-23.06
22	SLD 7	23	-118	1261	412.01	23.33	-6.11
22	SLD 8	49	-119	1261	412.14	23.29	-15.27
22	SLD 9	-37	115	1891	583.71	34.54	10.87
22	SLD 10	-10	113	1891	583.85	34.51	1.71
22	SLD 11	-48	-120	1254	409.62	23.06	18.66
22	SLD 12	-21	-122	1254	409.75	23.02	9.51
22	SLD 13	-123	29	1661	519.99	30.21	42.34
22	SLD 14	-97	28	1660	520.12	30.17	33.52
22	SLD 15	-126	-41	1470	467.76	26.76	44.67
22	SLD 16	-101	-43	1469	467.89	26.73	35.86
22	SLV 1	251	89	1819	566.49	33.89	-89.11
22	SLV 2	309	85	1818	566.78	33.82	-109.22
22	SLV 3	243	-71	1385	447.91	26.07	-83.81
22	SLV 4	301	-75	1384	448.2	25.99	-103.91
22	SLV 5	70	269	2307	698.23	42.3	-28.94
22	SLV 6	130	265	2306	698.54	42.22	-49.72
22	SLV 7	45	-264	861	302.97	16.23	-11.27
22	SLV 8	105	-268	860	303.27	16.15	-32.05
22	SLV 9	-92	263	2292	692.58	41.68	27.65
22	SLV 10	-32	259	2291	692.89	41.61	6.87
22	SLV 11	-117	-269	846	297.32	15.61	45.32
22	SLV 12	-57	-274	845	297.62	15.53	24.54
22	SLV 13	-289	70	1768	547.65	31.84	99.52
22	SLV 14	-231	66	1767	547.95	31.76	79.41
22	SLV 15	-296	-90	1334	429.07	24.02	104.82
22	SLV 16	-238	-94	1333	429.37	23.94	84.72
22	CRTFP Ux+	0	0	0	0	0	0
22	CRTFP Ux-	0	0	0	0	0	0
22	CRTFP Uy+	0	0	0	0	0	0
22	CRTFP Uy-	0	0	0	0	0	0
24	SLU 1	18	-7	3606	840.39	18.95	-4.1
24	SLU 2	18	10	3650	849.48	19.19	-4.22
24	SLU 3	18	-7	3606	840.39	18.95	-4.1
24	SLU 4	18	3	3632	845.85	19.1	-4.17
24	SLU 5	18	10	3650	849.48	19.19	-4.22
24	SLU 6	18	-7	3606	840.39	18.95	-4.1
24	SLU 7	18	3	3632	845.85	19.1	-4.17
24	SLU 8	18	-7	3606	840.39	18.95	-4.1
24	SLU 9	18	3	3632	845.85	19.1	-4.17
24	SLU 10	19	11	4283	996.19	22.45	-4.56
24	SLU 11	19	-5	4239	987.1	22.21	-4.44
24	SLU 12	19	5	4265	992.55	22.35	-4.51
24	SLU 13	19	11	4283	996.19	22.45	-4.56
24	SLU 14	19	-5	4239	987.1	22.21	-4.44
24	SLU 15	19	5	4265	992.55	22.35	-4.51
24	SLU 16	19	-5	4239	987.1	22.21	-4.44
24	SLU 17	19	5	4265	992.55	22.35	-4.51
24	SLU 18	20	-5	4510	1049.98	23.61	-4.59
24	SLU 19	20	5	4537	1055.43	23.75	-4.66
24	SLU 20	20	-5	4510	1049.98	23.61	-4.59
24	SLU 21	20	5	4537	1055.43	23.75	-4.66
24	SLU 22	19	-6	4077	949.8	21.36	-4.4
24	SLU 23	19	11	4121	958.89	21.6	-4.52
24	SLU 24	19	-6	4077	949.8	21.36	-4.4
24	SLU 25	19	4	4104	955.26	21.5	-4.47
24	SLU 26	19	11	4121	958.89	21.6	-4.52
24	SLU 27	19	-6	4077	949.8	21.36	-4.4
24	SLU 28	19	4	4104	955.26	21.5	-4.47

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
24	SLU 29	19	-6	4077	949.8	21.36	-4.4
24	SLU 30	19	4	4104	955.26	21.5	-4.47
24	SLU 31	21	12	4754	1105.6	24.86	-4.86
24	SLU 32	20	-4	4710	1096.51	24.62	-4.74
24	SLU 33	21	6	4737	1101.96	24.76	-4.81
24	SLU 34	21	12	4754	1105.6	24.86	-4.86
24	SLU 35	20	-4	4710	1096.51	24.62	-4.74
24	SLU 36	21	6	4737	1101.96	24.76	-4.81
24	SLU 37	20	-4	4710	1096.51	24.62	-4.74
24	SLU 38	21	6	4737	1101.96	24.76	-4.81
24	SLU 39	21	-4	4982	1159.39	26.02	-4.89
24	SLU 40	21	6	5008	1164.84	26.16	-4.96
24	SLU 41	21	-4	4982	1159.39	26.02	-4.89
24	SLU 42	21	6	5008	1164.84	26.16	-4.96
24	SLU 43	23	-9	4526	1055	23.82	-5.23
24	SLU 44	23	7	4570	1064.09	24.05	-5.34
24	SLU 45	23	-9	4526	1055	23.82	-5.23
24	SLU 46	23	1	4552	1060.45	23.96	-5.3
24	SLU 47	23	7	4570	1064.09	24.05	-5.34
24	SLU 48	23	-9	4526	1055	23.82	-5.23
24	SLU 49	23	1	4552	1060.45	23.96	-5.3
24	SLU 50	23	-9	4526	1055	23.82	-5.23
24	SLU 51	23	1	4552	1060.45	23.96	-5.3
24	SLU 52	24	9	5203	1210.79	27.31	-5.69
24	SLU 53	24	-8	5159	1201.71	27.07	-5.57
24	SLU 54	24	2	5186	1207.16	27.21	-5.64
24	SLU 55	24	9	5203	1210.79	27.31	-5.69
24	SLU 56	24	-8	5159	1201.71	27.07	-5.57
24	SLU 57	24	2	5186	1207.16	27.21	-5.64
24	SLU 58	24	-8	5159	1201.71	27.07	-5.57
24	SLU 59	24	2	5186	1207.16	27.21	-5.64
24	SLU 60	25	-7	5430	1264.58	28.47	-5.71
24	SLU 61	25	3	5457	1270.03	28.61	-5.78
24	SLU 62	25	-7	5430	1264.58	28.47	-5.71
24	SLU 63	25	3	5457	1270.03	28.61	-5.78
24	SLU 64	24	-8	4997	1164.41	26.22	-5.53
24	SLU 65	24	8	5041	1173.5	26.46	-5.65
24	SLU 66	24	-8	4997	1164.41	26.22	-5.53
24	SLU 67	24	2	5024	1169.86	26.37	-5.6
24	SLU 68	24	8	5041	1173.5	26.46	-5.65
24	SLU 69	24	-8	4997	1164.41	26.22	-5.53
24	SLU 70	24	2	5024	1169.86	26.37	-5.6
24	SLU 71	24	-8	4997	1164.41	26.22	-5.53
24	SLU 72	24	2	5024	1169.86	26.37	-5.6
24	SLU 73	25	10	5675	1320.2	29.72	-5.99
24	SLU 74	25	-7	5631	1311.12	29.48	-5.87
24	SLU 75	25	3	5657	1316.57	29.62	-5.94
24	SLU 76	25	10	5675	1320.2	29.72	-5.99
24	SLU 77	25	-7	5631	1311.12	29.48	-5.87
24	SLU 78	25	3	5657	1316.57	29.62	-5.94
24	SLU 79	25	-7	5631	1311.12	29.48	-5.87
24	SLU 80	25	3	5657	1316.57	29.62	-5.94
24	SLU 81	26	-6	5902	1373.99	30.88	-6.02
24	SLU 82	26	4	5928	1379.44	31.02	-6.09
24	SLU 83	26	-6	5902	1373.99	30.88	-6.02
24	SLU 84	26	4	5928	1379.44	31.02	-6.09
24	SLE RA 1	18	-7	3741	871.65	19.64	-4.19
24	SLE RA 2	18	4	3770	877.71	19.8	-4.26
24	SLE RA 3	18	-7	3741	871.65	19.64	-4.19
24	SLE RA 4	18	0	3758	875.29	19.74	-4.23
24	SLE RA 5	18	4	3770	877.71	19.8	-4.26
24	SLE RA 6	18	-7	3741	871.65	19.64	-4.19
24	SLE RA 7	18	0	3758	875.29	19.74	-4.23
24	SLE RA 8	18	-7	3741	871.65	19.64	-4.19
24	SLE RA 9	18	0	3758	875.29	19.74	-4.23
24	SLE RA 10	19	5	4192	975.52	21.97	-4.49
24	SLE RA 11	19	-6	4163	969.46	21.81	-4.41
24	SLE RA 12	19	1	4180	973.09	21.91	-4.46
24	SLE RA 13	19	5	4192	975.52	21.97	-4.49
24	SLE RA 14	19	-6	4163	969.46	21.81	-4.41
24	SLE RA 15	19	1	4180	973.09	21.91	-4.46
24	SLE RA 16	19	-6	4163	969.46	21.81	-4.41
24	SLE RA 17	19	1	4180	973.09	21.91	-4.46
24	SLE RA 18	19	-5	4344	1011.37	22.74	-4.51
24	SLE RA 19	20	1	4361	1015.01	22.84	-4.56
24	SLE RA 20	19	-5	4344	1011.37	22.74	-4.51
24	SLE RA 21	20	1	4361	1015.01	22.84	-4.56
24	SLE FR 1	18	-7	3741	871.65	19.64	-4.19
24	SLE FR 2	18	-4	3746	872.87	19.67	-4.2
24	SLE FR 3	18	-7	3741	871.65	19.64	-4.19
24	SLE FR 4	19	-4	3927	914.78	20.6	-4.3
24	SLE FR 5	19	-6	3921	913.57	20.57	-4.28
24	SLE FR 6	19	-6	4042	941.51	21.19	-4.35
24	SLE QP 1	18	-7	3741	871.65	19.64	-4.19
24	SLE QP 2	19	-6	3921	913.57	20.57	-4.28
24	SLD 1	281	90	4140	971.48	28.21	-68.2

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
24	SLD 2	344	91	4140	971.65	27.82	-82.87
24	SLD 3	272	-83	3644	869.41	25.66	-65.24
24	SLD 4	336	-83	3645	869.57	25.27	-79.91
24	SLD 5	87	286	4738	1085.7	26.87	-22.54
24	SLD 6	153	286	4738	1085.87	26.47	-37.77
24	SLD 7	58	-293	3087	745.45	18.38	-12.67
24	SLD 8	124	-292	3088	745.62	17.97	-27.89
24	SLD 9	-87	280	4755	1081.52	23.17	19.33
24	SLD 10	-21	280	4756	1081.69	22.77	4.1
24	SLD 11	-116	-299	3105	741.27	14.68	29.2
24	SLD 12	-50	-298	3105	741.44	14.27	13.97
24	SLD 13	-298	70	4198	957.57	15.88	71.34
24	SLD 14	-235	71	4199	957.73	15.49	56.67
24	SLD 15	-307	-103	3703	855.49	13.33	74.31
24	SLD 16	-243	-103	3703	855.66	12.94	59.63
24	SLV 1	617	213	4416	1045.38	38	-150.27
24	SLV 2	762	214	4418	1045.75	37.1	-183.72
24	SLV 3	598	-181	3292	813.62	32.21	-143.56
24	SLV 4	743	-180	3293	814	31.32	-177.01
24	SLV 5	174	656	5775	1304.47	34.9	-45.99
24	SLV 6	324	658	5776	1304.85	33.98	-80.56
24	SLV 7	110	-657	2027	531.96	15.62	-23.62
24	SLV 8	259	-655	2028	532.34	14.7	-58.19
24	SLV 9	-222	643	5815	1294.8	26.45	49.62
24	SLV 10	-72	644	5816	1295.18	25.53	15.05
24	SLV 11	-287	-670	2067	522.29	7.17	72
24	SLV 12	-137	-669	2068	522.67	6.25	37.42
24	SLV 13	-705	167	4550	1013.14	9.83	168.44
24	SLV 14	-560	169	4551	1013.52	8.94	134.99
24	SLV 15	-725	-227	3425	781.39	4.04	175.15
24	SLV 16	-580	-225	3427	781.76	3.15	141.7
24	CRTFP Ux+	0	0	0	0	0	0
24	CRTFP Ux-	0	0	0	0	0	0
24	CRTFP Uy+	0	0	0	-0.01	0	0
24	CRTFP Uy-	0	0	0	0.01	0	0
26	SLU 1	7	-2	1275	409.2	-23.63	-2.52
26	SLU 2	7	4	1290	413.33	-23.9	-2.43
26	SLU 3	7	-2	1275	409.2	-23.63	-2.52
26	SLU 4	7	2	1284	411.68	-23.79	-2.46
26	SLU 5	7	4	1290	413.33	-23.9	-2.43
26	SLU 6	7	-2	1275	409.2	-23.63	-2.52
26	SLU 7	7	2	1284	411.68	-23.79	-2.46
26	SLU 8	7	-2	1275	409.2	-23.63	-2.52
26	SLU 9	7	2	1284	411.68	-23.79	-2.46
26	SLU 10	8	5	1514	483.77	-28.03	-2.61
26	SLU 11	8	-1	1499	479.64	-27.76	-2.7
26	SLU 12	8	2	1508	482.12	-27.92	-2.65
26	SLU 13	8	5	1514	483.77	-28.03	-2.61
26	SLU 14	8	-1	1499	479.64	-27.76	-2.7
26	SLU 15	8	2	1508	482.12	-27.92	-2.65
26	SLU 16	8	-1	1499	479.64	-27.76	-2.7
26	SLU 17	8	2	1508	482.12	-27.92	-2.65
26	SLU 18	8	-1	1594	509.83	-29.53	-2.78
26	SLU 19	8	2	1603	512.3	-29.69	-2.73
26	SLU 20	8	-1	1594	509.83	-29.53	-2.78
26	SLU 21	8	2	1603	512.3	-29.69	-2.73
26	SLU 22	8	-2	1442	461.79	-26.71	-2.68
26	SLU 23	8	4	1457	465.92	-26.98	-2.59
26	SLU 24	8	-2	1442	461.79	-26.71	-2.68
26	SLU 25	8	2	1451	464.27	-26.87	-2.63
26	SLU 26	8	4	1457	465.92	-26.98	-2.59
26	SLU 27	8	-2	1442	461.79	-26.71	-2.68
26	SLU 28	8	2	1451	464.27	-26.87	-2.63
26	SLU 29	8	-2	1442	461.79	-26.71	-2.68
26	SLU 30	8	2	1451	464.27	-26.87	-2.63
26	SLU 31	8	5	1680	536.36	-31.11	-2.78
26	SLU 32	8	-1	1665	532.23	-30.84	-2.87
26	SLU 33	8	3	1674	534.7	-31	-2.81
26	SLU 34	8	5	1680	536.36	-31.11	-2.78
26	SLU 35	8	-1	1665	532.23	-30.84	-2.87
26	SLU 36	8	3	1674	534.7	-31	-2.81
26	SLU 37	8	-1	1665	532.23	-30.84	-2.87
26	SLU 38	8	3	1674	534.7	-31	-2.81
26	SLU 39	8	-1	1761	562.41	-32.61	-2.95
26	SLU 40	8	3	1770	564.89	-32.77	-2.89
26	SLU 41	8	-1	1761	562.41	-32.61	-2.95
26	SLU 42	8	3	1770	564.89	-32.77	-2.89
26	SLU 43	9	-3	1601	513.93	-29.66	-3.22
26	SLU 44	9	3	1616	518.06	-29.93	-3.13
26	SLU 45	9	-3	1601	513.93	-29.66	-3.22
26	SLU 46	9	1	1610	516.41	-29.82	-3.16
26	SLU 47	9	3	1616	518.06	-29.93	-3.13
26	SLU 48	9	-3	1601	513.93	-29.66	-3.22
26	SLU 49	9	1	1610	516.41	-29.82	-3.16
26	SLU 50	9	-3	1601	513.93	-29.66	-3.22
26	SLU 51	9	1	1610	516.41	-29.82	-3.16

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
26	SLU 52	10	4	1839	588.5	-34.06	-3.31
26	SLU 53	10	-2	1824	584.37	-33.79	-3.4
26	SLU 54	10	1	1833	586.85	-33.95	-3.35
26	SLU 55	10	4	1839	588.5	-34.06	-3.31
26	SLU 56	10	-2	1824	584.37	-33.79	-3.4
26	SLU 57	10	1	1833	586.85	-33.95	-3.35
26	SLU 58	10	-2	1824	584.37	-33.79	-3.4
26	SLU 59	10	1	1833	586.85	-33.95	-3.35
26	SLU 60	10	-2	1920	614.56	-35.56	-3.48
26	SLU 61	10	2	1929	617.03	-35.73	-3.43
26	SLU 62	10	-2	1920	614.56	-35.56	-3.48
26	SLU 63	10	2	1929	617.03	-35.73	-3.43
26	SLU 64	10	-2	1767	566.52	-32.74	-3.38
26	SLU 65	10	4	1782	570.65	-33.01	-3.29
26	SLU 66	10	-2	1767	566.52	-32.74	-3.38
26	SLU 67	10	1	1776	569	-32.9	-3.33
26	SLU 68	10	4	1782	570.65	-33.01	-3.29
26	SLU 69	10	-2	1767	566.52	-32.74	-3.38
26	SLU 70	10	1	1776	569	-32.9	-3.33
26	SLU 71	10	-2	1767	566.52	-32.74	-3.38
26	SLU 72	10	1	1776	569	-32.9	-3.33
26	SLU 73	10	4	2006	641.09	-37.14	-3.48
26	SLU 74	10	-2	1991	636.96	-36.87	-3.57
26	SLU 75	10	2	2000	639.43	-37.03	-3.51
26	SLU 76	10	4	2006	641.09	-37.14	-3.48
26	SLU 77	10	-2	1991	636.96	-36.87	-3.57
26	SLU 78	10	2	2000	639.43	-37.03	-3.51
26	SLU 79	10	-2	1991	636.96	-36.87	-3.57
26	SLU 80	10	2	2000	639.43	-37.03	-3.51
26	SLU 81	10	-1	2086	667.14	-38.64	-3.65
26	SLU 82	10	2	2095	669.62	-38.8	-3.59
26	SLU 83	10	-1	2086	667.14	-38.64	-3.65
26	SLU 84	10	2	2095	669.62	-38.8	-3.59
26	SLE RA 1	7	-2	1323	424.23	-24.51	-2.57
26	SLE RA 2	7	2	1333	426.98	-24.69	-2.51
26	SLE RA 3	7	-2	1323	424.23	-24.51	-2.57
26	SLE RA 4	7	1	1329	425.88	-24.62	-2.53
26	SLE RA 5	7	2	1333	426.98	-24.69	-2.51
26	SLE RA 6	7	-2	1323	424.23	-24.51	-2.57
26	SLE RA 7	7	1	1329	425.88	-24.62	-2.53
26	SLE RA 8	7	-2	1323	424.23	-24.51	-2.57
26	SLE RA 9	7	1	1329	425.88	-24.62	-2.53
26	SLE RA 10	8	2	1482	473.94	-27.44	-2.63
26	SLE RA 11	8	-1	1472	471.18	-27.26	-2.69
26	SLE RA 12	8	1	1478	472.84	-27.37	-2.65
26	SLE RA 13	8	2	1482	473.94	-27.44	-2.63
26	SLE RA 14	8	-1	1472	471.18	-27.26	-2.69
26	SLE RA 15	8	1	1478	472.84	-27.37	-2.65
26	SLE RA 16	8	-1	1472	471.18	-27.26	-2.69
26	SLE RA 17	8	1	1478	472.84	-27.37	-2.65
26	SLE RA 18	8	-1	1536	491.31	-28.44	-2.74
26	SLE RA 19	8	1	1542	492.96	-28.55	-2.7
26	SLE RA 20	8	-1	1536	491.31	-28.44	-2.74
26	SLE RA 21	8	1	1542	492.96	-28.55	-2.7
26	SLE FR 1	7	-2	1323	424.23	-24.51	-2.57
26	SLE FR 2	7	-1	1325	424.78	-24.54	-2.55
26	SLE FR 3	7	-2	1323	424.23	-24.51	-2.57
26	SLE FR 4	7	-1	1389	444.9	-25.72	-2.61
26	SLE FR 5	7	-2	1387	444.35	-25.69	-2.62
26	SLE FR 6	8	-2	1429	457.77	-26.47	-2.65
26	SLE QP 1	7	-2	1323	424.23	-24.51	-2.57
26	SLE QP 2	7	-2	1387	444.35	-25.69	-2.62
26	SLD 1	101	32	1453	461.94	-26.7	-34.66
26	SLD 2	123	34	1454	462.04	-26.73	-42.37
26	SLD 3	98	-30	1285	415.58	-23.62	-35.24
26	SLD 4	120	-28	1286	415.68	-23.65	-42.96
26	SLD 5	32	101	1661	519.9	-30.64	-8.49
26	SLD 6	55	103	1662	520.01	-30.68	-16.5
26	SLD 7	22	-104	1101	365.37	-20.39	-10.45
26	SLD 8	45	-102	1101	365.47	-20.42	-18.46
26	SLD 9	-30	99	1672	523.23	-30.95	13.22
26	SLD 10	-7	101	1673	523.33	-30.99	5.21
26	SLD 11	-40	-106	1111	368.69	-20.7	11.26
26	SLD 12	-17	-104	1112	368.8	-20.73	3.25
26	SLD 13	-105	25	1488	473.02	-27.72	37.72
26	SLD 14	-83	27	1489	473.13	-27.75	30.01
26	SLD 15	-109	-37	1319	426.66	-24.65	37.14
26	SLD 16	-86	-35	1320	426.77	-24.68	29.42
26	SLV 1	222	74	1537	484.07	-27.97	-75.8
26	SLV 2	272	78	1539	484.31	-28.04	-93.39
26	SLV 3	214	-66	1155	378.82	-20.99	-77.15
26	SLV 4	265	-61	1157	379.05	-21.06	-94.75
26	SLV 5	64	232	2010	615.82	-36.94	-16.06
26	SLV 6	117	236	2012	616.06	-37.01	-34.25
26	SLV 7	40	-235	737	264.97	-13.66	-20.58
26	SLV 8	92	-230	739	265.21	-13.73	-38.77

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
26	SLV 9	-77	227	2034	623.49	-37.64	33.53
26	SLV 10	-25	231	2036	623.73	-37.72	15.34
26	SLV 11	-102	-239	761	272.64	-14.36	29.01
26	SLV 12	-49	-235	763	272.88	-14.44	10.83
26	SLV 13	-250	58	1616	509.65	-30.32	89.51
26	SLV 14	-200	62	1618	509.88	-30.39	71.91
26	SLV 15	-258	-82	1234	404.4	-23.33	88.15
26	SLV 16	-207	-78	1236	404.63	-23.4	70.56
26	CRTFP Ux+	0	0	0	0	0	0
26	CRTFP Ux-	0	0	0	0	0	0
26	CRTFP Uy+	0	0	0	0	0	0
26	CRTFP Uy-	0	0	0	0	0	0
27	SLU 1	9	-1	1419	442.46	0.19	-3.09
27	SLU 2	9	5	1436	446.85	0.2	-3.12
27	SLU 3	9	-1	1419	442.46	0.19	-3.09
27	SLU 4	9	2	1429	445.09	0.19	-3.11
27	SLU 5	9	5	1436	446.85	0.2	-3.12
27	SLU 6	9	-1	1419	442.46	0.19	-3.09
27	SLU 7	9	2	1429	445.09	0.19	-3.11
27	SLU 8	9	-1	1419	442.46	0.19	-3.09
27	SLU 9	9	2	1429	445.09	0.19	-3.11
27	SLU 10	10	6	1684	522.27	0.25	-3.35
27	SLU 11	10	-1	1667	517.89	0.24	-3.32
27	SLU 12	10	3	1677	520.52	0.25	-3.34
27	SLU 13	10	6	1684	522.27	0.25	-3.35
27	SLU 14	10	-1	1667	517.89	0.24	-3.32
27	SLU 15	10	3	1677	520.52	0.25	-3.34
27	SLU 16	10	-1	1667	517.89	0.24	-3.32
27	SLU 17	10	3	1677	520.52	0.25	-3.34
27	SLU 18	10	0	1774	550.21	0.26	-3.42
27	SLU 19	10	3	1784	552.84	0.27	-3.44
27	SLU 20	10	0	1774	550.21	0.26	-3.42
27	SLU 21	10	3	1784	552.84	0.27	-3.44
27	SLU 22	9	-1	1604	498.78	0.23	-3.3
27	SLU 23	10	6	1620	503.17	0.24	-3.33
27	SLU 24	9	-1	1604	498.78	0.23	-3.3
27	SLU 25	10	3	1614	501.41	0.23	-3.32
27	SLU 26	10	6	1620	503.17	0.24	-3.33
27	SLU 27	9	-1	1604	498.78	0.23	-3.3
27	SLU 28	10	3	1614	501.41	0.23	-3.32
27	SLU 29	9	-1	1604	498.78	0.23	-3.3
27	SLU 30	10	3	1614	501.41	0.23	-3.32
27	SLU 31	10	6	1869	578.59	0.29	-3.56
27	SLU 32	10	0	1852	574.21	0.28	-3.53
27	SLU 33	10	4	1862	576.84	0.29	-3.55
27	SLU 34	10	6	1869	578.59	0.29	-3.56
27	SLU 35	10	0	1852	574.21	0.28	-3.53
27	SLU 36	10	4	1862	576.84	0.29	-3.55
27	SLU 37	10	0	1852	574.21	0.28	-3.53
27	SLU 38	10	4	1862	576.84	0.29	-3.55
27	SLU 39	10	0	1959	606.53	0.3	-3.63
27	SLU 40	10	4	1968	609.17	0.31	-3.65
27	SLU 41	10	0	1959	606.53	0.3	-3.63
27	SLU 42	10	4	1968	609.17	0.31	-3.65
27	SLU 43	11	-2	1782	555.89	0.23	-3.95
27	SLU 44	11	4	1798	560.27	0.24	-3.98
27	SLU 45	11	-2	1782	555.89	0.23	-3.95
27	SLU 46	11	2	1791	558.52	0.24	-3.97
27	SLU 47	11	4	1798	560.27	0.24	-3.98
27	SLU 48	11	-2	1782	555.89	0.23	-3.95
27	SLU 49	11	2	1791	558.52	0.24	-3.97
27	SLU 50	11	-2	1782	555.89	0.23	-3.95
27	SLU 51	11	2	1791	558.52	0.24	-3.97
27	SLU 52	12	5	2046	635.7	0.29	-4.21
27	SLU 53	12	-1	2030	631.31	0.28	-4.18
27	SLU 54	12	3	2040	633.95	0.29	-4.2
27	SLU 55	12	5	2046	635.7	0.29	-4.21
27	SLU 56	12	-1	2030	631.31	0.28	-4.18
27	SLU 57	12	3	2040	633.95	0.29	-4.2
27	SLU 58	12	-1	2030	631.31	0.28	-4.18
27	SLU 59	12	3	2040	633.95	0.29	-4.2
27	SLU 60	12	-1	2136	663.64	0.3	-4.28
27	SLU 61	12	3	2146	666.27	0.31	-4.3
27	SLU 62	12	-1	2136	663.64	0.3	-4.28
27	SLU 63	12	3	2146	666.27	0.31	-4.3
27	SLU 64	12	-2	1966	612.21	0.27	-4.15
27	SLU 65	12	5	1983	616.6	0.28	-4.18
27	SLU 66	12	-2	1966	612.21	0.27	-4.15
27	SLU 67	12	2	1976	614.84	0.28	-4.17
27	SLU 68	12	5	1983	616.6	0.28	-4.18
27	SLU 69	12	-2	1966	612.21	0.27	-4.15
27	SLU 70	12	2	1976	614.84	0.28	-4.17
27	SLU 71	12	-2	1966	612.21	0.27	-4.15
27	SLU 72	12	2	1976	614.84	0.28	-4.17
27	SLU 73	13	6	2231	692.02	0.33	-4.42
27	SLU 74	13	-1	2215	687.64	0.32	-4.38

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
27	SLU 75	13	3	2224	690.27	0.33	-4.4
27	SLU 76	13	6	2231	692.02	0.33	-4.42
27	SLU 77	13	-1	2215	687.64	0.32	-4.38
27	SLU 78	13	3	2224	690.27	0.33	-4.4
27	SLU 79	13	-1	2215	687.64	0.32	-4.38
27	SLU 80	13	3	2224	690.27	0.33	-4.4
27	SLU 81	13	-1	2321	719.96	0.34	-4.48
27	SLU 82	13	3	2331	722.59	0.35	-4.5
27	SLU 83	13	-1	2321	719.96	0.34	-4.48
27	SLU 84	13	3	2331	722.59	0.35	-4.5
27	SLE RA 1	9	-1	1472	458.55	0.2	-3.15
27	SLE RA 2	9	3	1483	461.48	0.21	-3.17
27	SLE RA 3	9	-1	1472	458.55	0.2	-3.15
27	SLE RA 4	9	1	1479	460.31	0.2	-3.16
27	SLE RA 5	9	3	1483	461.48	0.21	-3.17
27	SLE RA 6	9	-1	1472	458.55	0.2	-3.15
27	SLE RA 7	9	1	1479	460.31	0.2	-3.16
27	SLE RA 8	9	-1	1472	458.55	0.2	-3.15
27	SLE RA 9	9	1	1479	460.31	0.2	-3.16
27	SLE RA 10	10	4	1648	511.76	0.24	-3.32
27	SLE RA 11	10	-1	1637	508.84	0.23	-3.3
27	SLE RA 12	10	2	1644	510.59	0.24	-3.32
27	SLE RA 13	10	4	1648	511.76	0.24	-3.32
27	SLE RA 14	10	-1	1637	508.84	0.23	-3.3
27	SLE RA 15	10	2	1644	510.59	0.24	-3.32
27	SLE RA 16	10	-1	1637	508.84	0.23	-3.3
27	SLE RA 17	10	2	1644	510.59	0.24	-3.32
27	SLE RA 18	10	-1	1708	530.39	0.25	-3.37
27	SLE RA 19	10	2	1715	532.14	0.25	-3.38
27	SLE RA 20	10	-1	1708	530.39	0.25	-3.37
27	SLE RA 21	10	2	1715	532.14	0.25	-3.38
27	SLE FR 1	9	-1	1472	458.55	0.2	-3.15
27	SLE FR 2	9	0	1474	459.14	0.2	-3.15
27	SLE FR 3	9	-1	1472	458.55	0.2	-3.15
27	SLE FR 4	9	0	1545	480.69	0.21	-3.22
27	SLE FR 5	9	-1	1543	480.1	0.21	-3.22
27	SLE FR 6	9	-1	1590	494.47	0.22	-3.26
27	SLE QP 1	9	-1	1472	458.55	0.2	-3.15
27	SLE QP 2	9	-1	1543	480.1	0.21	-3.22
27	SLD 1	114	35	1606	496.17	0.58	-39.99
27	SLD 2	139	39	1608	496.37	0.56	-48.66
27	SLD 3	110	-33	1422	446.82	0.46	-38.63
27	SLD 4	135	-29	1423	447.02	0.43	-47.3
27	SLD 5	37	111	1841	559.71	0.52	-13.11
27	SLD 6	63	115	1843	559.91	0.5	-22.11
27	SLD 7	25	-115	1226	395.19	0.11	-8.58
27	SLD 8	50	-111	1228	395.39	0.08	-17.58
27	SLD 9	-32	109	1858	564.81	0.34	11.15
27	SLD 10	-6	113	1860	565.02	0.32	2.15
27	SLD 11	-45	-117	1243	400.29	-0.07	15.68
27	SLD 12	-19	-114	1245	400.5	-0.09	6.68
27	SLD 13	-117	27	1662	513.19	-0.01	40.87
27	SLD 14	-92	31	1664	513.39	-0.03	32.2
27	SLD 15	-121	-41	1478	463.83	-0.13	42.23
27	SLD 16	-96	-37	1479	464.03	-0.15	33.56
27	SLV 1	249	81	1687	516.39	1.05	-87.2
27	SLV 2	306	89	1691	516.85	1	-106.97
27	SLV 3	240	-73	1267	404.34	0.77	-84.12
27	SLV 4	297	-65	1271	404.8	0.72	-103.89
27	SLV 5	73	254	2220	660.77	0.91	-25.84
27	SLV 6	132	263	2224	661.24	0.86	-46.27
27	SLV 7	45	-259	823	287.26	-0.03	-15.56
27	SLV 8	103	-251	827	287.73	-0.08	-35.99
27	SLV 9	-85	249	2259	672.47	0.51	29.56
27	SLV 10	-26	257	2263	672.95	0.45	9.13
27	SLV 11	-114	-265	862	298.96	-0.43	39.84
27	SLV 12	-55	-257	866	299.43	-0.49	19.41
27	SLV 13	-279	63	1814	555.41	-0.29	97.46
27	SLV 14	-222	71	1818	555.86	-0.34	77.69
27	SLV 15	-287	-91	1395	443.35	-0.57	100.54
27	SLV 16	-230	-83	1399	443.81	-0.63	80.77
27	CRTFP Ux+	0	0	0	0	0	0
27	CRTFP Ux-	0	0	0	0	0	0
27	CRTFP Uy+	0	0	0	0	0	0
27	CRTFP Uy-	0	0	0	0	0	0
28	SLU 1	10	-1	1415	432.38	0.08	-3.38
28	SLU 2	10	6	1431	436.51	0.09	-3.42
28	SLU 3	10	-1	1415	432.38	0.08	-3.38
28	SLU 4	10	3	1424	434.86	0.09	-3.41
28	SLU 5	10	6	1431	436.51	0.09	-3.42
28	SLU 6	10	-1	1415	432.38	0.08	-3.38
28	SLU 7	10	3	1424	434.86	0.09	-3.41
28	SLU 8	10	-1	1415	432.38	0.08	-3.38
28	SLU 9	10	3	1424	434.86	0.09	-3.41
28	SLU 10	10	6	1677	509.61	0.13	-3.66
28	SLU 11	10	0	1661	505.48	0.11	-3.62

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
28	SLU 12	10	4	1671	507.96	0.12	-3.65
28	SLU 13	10	6	1677	509.61	0.13	-3.66
28	SLU 14	10	0	1661	505.48	0.11	-3.62
28	SLU 15	10	4	1671	507.96	0.12	-3.65
28	SLU 16	10	0	1661	505.48	0.11	-3.62
28	SLU 17	10	4	1671	507.96	0.12	-3.65
28	SLU 18	11	0	1767	536.81	0.13	-3.72
28	SLU 19	11	4	1777	539.29	0.13	-3.75
28	SLU 20	11	0	1767	536.81	0.13	-3.72
28	SLU 21	11	4	1777	539.29	0.13	-3.75
28	SLU 22	10	0	1598	486.96	0.1	-3.6
28	SLU 23	10	6	1614	491.09	0.12	-3.64
28	SLU 24	10	0	1598	486.96	0.1	-3.6
28	SLU 25	10	3	1608	489.44	0.11	-3.62
28	SLU 26	10	6	1614	491.09	0.12	-3.64
28	SLU 27	10	0	1598	486.96	0.1	-3.6
28	SLU 28	10	3	1608	489.44	0.11	-3.62
28	SLU 29	10	0	1598	486.96	0.1	-3.6
28	SLU 30	10	3	1608	489.44	0.11	-3.62
28	SLU 31	11	7	1861	564.2	0.15	-3.88
28	SLU 32	11	0	1845	560.07	0.14	-3.84
28	SLU 33	11	4	1855	562.55	0.15	-3.86
28	SLU 34	11	7	1861	564.2	0.15	-3.88
28	SLU 35	11	0	1845	560.07	0.14	-3.84
28	SLU 36	11	4	1855	562.55	0.15	-3.86
28	SLU 37	11	0	1845	560.07	0.14	-3.84
28	SLU 38	11	4	1855	562.55	0.15	-3.86
28	SLU 39	11	1	1951	591.4	0.15	-3.94
28	SLU 40	11	4	1960	593.88	0.16	-3.96
28	SLU 41	11	1	1951	591.4	0.15	-3.94
28	SLU 42	11	4	1960	593.88	0.16	-3.96
28	SLU 43	12	-1	1776	543.38	0.09	-4.33
28	SLU 44	13	5	1792	547.51	0.1	-4.37
28	SLU 45	12	-1	1776	543.38	0.09	-4.33
28	SLU 46	12	3	1786	545.86	0.1	-4.35
28	SLU 47	13	5	1792	547.51	0.1	-4.37
28	SLU 48	12	-1	1776	543.38	0.09	-4.33
28	SLU 49	12	3	1786	545.86	0.1	-4.35
28	SLU 50	12	-1	1776	543.38	0.09	-4.33
28	SLU 51	12	3	1786	545.86	0.1	-4.35
28	SLU 52	13	6	2039	620.61	0.14	-4.6
28	SLU 53	13	-1	2023	616.48	0.13	-4.56
28	SLU 54	13	3	2032	618.96	0.13	-4.59
28	SLU 55	13	6	2039	620.61	0.14	-4.6
28	SLU 56	13	-1	2023	616.48	0.13	-4.56
28	SLU 57	13	3	2032	618.96	0.13	-4.59
28	SLU 58	13	-1	2023	616.48	0.13	-4.56
28	SLU 59	13	3	2032	618.96	0.13	-4.59
28	SLU 60	13	0	2128	647.81	0.14	-4.67
28	SLU 61	13	4	2138	650.29	0.15	-4.69
28	SLU 62	13	0	2128	647.81	0.14	-4.67
28	SLU 63	13	4	2138	650.29	0.15	-4.69
28	SLU 64	13	-1	1960	597.96	0.12	-4.54
28	SLU 65	13	6	1976	602.09	0.13	-4.58
28	SLU 66	13	-1	1960	597.96	0.12	-4.54
28	SLU 67	13	3	1969	600.44	0.13	-4.56
28	SLU 68	13	6	1976	602.09	0.13	-4.58
28	SLU 69	13	-1	1960	597.96	0.12	-4.54
28	SLU 70	13	3	1969	600.44	0.13	-4.56
28	SLU 71	13	-1	1960	597.96	0.12	-4.54
28	SLU 72	13	3	1969	600.44	0.13	-4.56
28	SLU 73	14	6	2222	675.2	0.17	-4.82
28	SLU 74	14	0	2206	671.07	0.15	-4.78
28	SLU 75	14	4	2216	673.54	0.16	-4.8
28	SLU 76	14	6	2222	675.2	0.17	-4.82
28	SLU 77	14	0	2206	671.07	0.15	-4.78
28	SLU 78	14	4	2216	673.54	0.16	-4.8
28	SLU 79	14	0	2206	671.07	0.15	-4.78
28	SLU 80	14	4	2216	673.54	0.16	-4.8
28	SLU 81	14	0	2312	702.4	0.17	-4.88
28	SLU 82	14	4	2322	704.87	0.17	-4.91
28	SLU 83	14	0	2312	702.4	0.17	-4.88
28	SLU 84	14	4	2322	704.87	0.17	-4.91
28	SLE RA 1	10	-1	1467	447.97	0.08	-3.45
28	SLE RA 2	10	4	1478	450.73	0.09	-3.47
28	SLE RA 3	10	-1	1467	447.97	0.08	-3.45
28	SLE RA 4	10	2	1473	449.63	0.09	-3.46
28	SLE RA 5	10	4	1478	450.73	0.09	-3.47
28	SLE RA 6	10	-1	1467	447.97	0.08	-3.45
28	SLE RA 7	10	2	1473	449.63	0.09	-3.46
28	SLE RA 8	10	-1	1467	447.97	0.08	-3.45
28	SLE RA 9	10	2	1473	449.63	0.09	-3.46
28	SLE RA 10	10	4	1642	499.46	0.12	-3.63
28	SLE RA 11	10	0	1632	496.71	0.11	-3.6
28	SLE RA 12	10	2	1638	498.36	0.11	-3.62
28	SLE RA 13	10	4	1642	499.46	0.12	-3.63

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
28	SLE RA 14	10	0	1632	496.71	0.11	-3.6
28	SLE RA 15	10	2	1638	498.36	0.11	-3.62
28	SLE RA 16	10	0	1632	496.71	0.11	-3.6
28	SLE RA 17	10	2	1638	498.36	0.11	-3.62
28	SLE RA 18	11	0	1702	517.6	0.12	-3.67
28	SLE RA 19	11	3	1708	519.25	0.12	-3.69
28	SLE RA 20	11	0	1702	517.6	0.12	-3.67
28	SLE RA 21	11	3	1708	519.25	0.12	-3.69
28	SLE FR 1	10	-1	1467	447.97	0.08	-3.45
28	SLE FR 2	10	0	1469	448.53	0.09	-3.45
28	SLE FR 3	10	-1	1467	447.97	0.08	-3.45
28	SLE FR 4	10	0	1540	469.41	0.1	-3.52
28	SLE FR 5	10	0	1538	468.86	0.09	-3.51
28	SLE FR 6	10	0	1585	482.79	0.1	-3.56
28	SLE QP 1	10	-1	1467	447.97	0.08	-3.45
28	SLE QP 2	10	0	1538	468.86	0.09	-3.51
28	SLD 1	115	35	1589	480.67	0.48	-40.31
28	SLD 2	140	39	1591	481.01	0.45	-49
28	SLD 3	111	-32	1409	433.99	0.34	-38.87
28	SLD 4	136	-27	1411	434.33	0.32	-47.56
28	SLD 5	38	109	1825	543.08	0.43	-13.53
28	SLD 6	64	114	1828	543.44	0.4	-22.54
28	SLD 7	25	-112	1225	387.47	-0.03	-8.74
28	SLD 8	51	-107	1228	387.83	-0.06	-17.75
28	SLD 9	-31	106	1848	549.9	0.24	10.72
28	SLD 10	-5	111	1850	550.25	0.22	1.71
28	SLD 11	-44	-115	1247	394.29	-0.21	15.52
28	SLD 12	-18	-110	1250	394.64	-0.24	6.51
28	SLD 13	-116	26	1664	503.39	-0.13	40.53
28	SLD 14	-91	31	1667	503.73	-0.15	31.85
28	SLD 15	-120	-40	1484	456.71	-0.27	41.97
28	SLD 16	-95	-36	1487	457.05	-0.29	33.29
28	SLV 1	250	79	1653	495.49	0.97	-87.57
28	SLV 2	307	90	1659	496.27	0.92	-107.36
28	SLV 3	241	-71	1244	389.5	0.66	-84.3
28	SLV 4	298	-61	1250	390.28	0.6	-104.1
28	SLV 5	75	248	2190	637.31	0.85	-26.42
28	SLV 6	134	259	2196	638.11	0.79	-46.88
28	SLV 7	45	-254	827	284.02	-0.19	-15.54
28	SLV 8	103	-243	833	284.83	-0.24	-36
28	SLV 9	-83	242	2242	652.89	0.43	28.97
28	SLV 10	-25	253	2248	653.7	0.38	8.52
28	SLV 11	-113	-260	879	299.61	-0.6	39.85
28	SLV 12	-55	-249	885	300.41	-0.66	19.39
28	SLV 13	-277	60	1825	547.44	-0.42	97.07
28	SLV 14	-221	70	1831	548.22	-0.47	77.28
28	SLV 15	-286	-91	1416	441.45	-0.73	100.33
28	SLV 16	-230	-80	1422	442.23	-0.78	80.54
28	CRTFP Ux+	0	0	0	0	0	0
28	CRTFP Ux-	0	0	0	0	0	0
28	CRTFP Uy+	0	0	0	0	0	0
28	CRTFP Uy-	0	0	0	0	0	0
29	SLU 1	10	-1	1415	428.68	-0.1	-3.65
29	SLU 2	11	6	1431	432.57	-0.09	-3.69
29	SLU 3	10	-1	1415	428.68	-0.1	-3.65
29	SLU 4	10	3	1424	431.02	-0.09	-3.67
29	SLU 5	11	6	1431	432.57	-0.09	-3.69
29	SLU 6	10	-1	1415	428.68	-0.1	-3.65
29	SLU 7	10	3	1424	431.02	-0.09	-3.67
29	SLU 8	10	-1	1415	428.68	-0.1	-3.65
29	SLU 9	10	3	1424	431.02	-0.09	-3.67
29	SLU 10	11	6	1677	504.68	-0.09	-3.93
29	SLU 11	11	0	1661	500.79	-0.1	-3.89
29	SLU 12	11	4	1671	503.12	-0.09	-3.91
29	SLU 13	11	6	1677	504.68	-0.09	-3.93
29	SLU 14	11	0	1661	500.79	-0.1	-3.89
29	SLU 15	11	4	1671	503.12	-0.09	-3.91
29	SLU 16	11	0	1661	500.79	-0.1	-3.89
29	SLU 17	11	4	1671	503.12	-0.09	-3.91
29	SLU 18	11	0	1767	531.69	-0.1	-3.99
29	SLU 19	11	4	1776	534.03	-0.09	-4.02
29	SLU 20	11	0	1767	531.69	-0.1	-3.99
29	SLU 21	11	4	1776	534.03	-0.09	-4.02
29	SLU 22	11	0	1599	482.51	-0.1	-3.87
29	SLU 23	11	6	1614	486.4	-0.09	-3.91
29	SLU 24	11	0	1599	482.51	-0.1	-3.87
29	SLU 25	11	4	1608	484.85	-0.09	-3.89
29	SLU 26	11	6	1614	486.4	-0.09	-3.91
29	SLU 27	11	0	1599	482.51	-0.1	-3.87
29	SLU 28	11	4	1608	484.85	-0.09	-3.89
29	SLU 29	11	0	1599	482.51	-0.1	-3.87
29	SLU 30	11	4	1608	484.85	-0.09	-3.89
29	SLU 31	12	7	1860	558.51	-0.09	-4.15
29	SLU 32	12	1	1845	554.62	-0.1	-4.11
29	SLU 33	12	4	1854	556.95	-0.09	-4.13
29	SLU 34	12	7	1860	558.51	-0.09	-4.15

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
29	SLU 35	12	1	1845	554.62	-0.1	-4.11
29	SLU 36	12	4	1854	556.95	-0.09	-4.13
29	SLU 37	12	1	1845	554.62	-0.1	-4.11
29	SLU 38	12	4	1854	556.95	-0.09	-4.13
29	SLU 39	12	1	1950	585.52	-0.1	-4.21
29	SLU 40	12	4	1959	587.86	-0.09	-4.24
29	SLU 41	12	1	1950	585.52	-0.1	-4.21
29	SLU 42	12	4	1959	587.86	-0.09	-4.24
29	SLU 43	13	-1	1777	538.83	-0.13	-4.66
29	SLU 44	13	5	1792	542.72	-0.12	-4.71
29	SLU 45	13	-1	1777	538.83	-0.13	-4.66
29	SLU 46	13	3	1786	541.16	-0.12	-4.69
29	SLU 47	13	5	1792	542.72	-0.12	-4.71
29	SLU 48	13	-1	1777	538.83	-0.13	-4.66
29	SLU 49	13	3	1786	541.16	-0.12	-4.69
29	SLU 50	13	-1	1777	538.83	-0.13	-4.66
29	SLU 51	13	3	1786	541.16	-0.12	-4.69
29	SLU 52	14	6	2038	614.83	-0.12	-4.95
29	SLU 53	14	0	2023	610.94	-0.13	-4.9
29	SLU 54	14	3	2032	613.27	-0.12	-4.93
29	SLU 55	14	6	2038	614.83	-0.12	-4.95
29	SLU 56	14	0	2023	610.94	-0.13	-4.9
29	SLU 57	14	3	2032	613.27	-0.12	-4.93
29	SLU 58	14	0	2023	610.94	-0.13	-4.9
29	SLU 59	14	3	2032	613.27	-0.12	-4.93
29	SLU 60	14	0	2129	641.84	-0.13	-5.01
29	SLU 61	14	4	2138	644.17	-0.12	-5.04
29	SLU 62	14	0	2129	641.84	-0.13	-5.01
29	SLU 63	14	4	2138	644.17	-0.12	-5.04
29	SLU 64	14	0	1960	592.66	-0.13	-4.88
29	SLU 65	14	6	1976	596.55	-0.12	-4.93
29	SLU 66	14	0	1960	592.66	-0.13	-4.88
29	SLU 67	14	3	1970	594.99	-0.12	-4.91
29	SLU 68	14	6	1976	596.55	-0.12	-4.93
29	SLU 69	14	0	1960	592.66	-0.13	-4.88
29	SLU 70	14	3	1970	594.99	-0.12	-4.91
29	SLU 71	14	0	1960	592.66	-0.13	-4.88
29	SLU 72	14	3	1970	594.99	-0.12	-4.91
29	SLU 73	15	6	2222	668.66	-0.12	-5.17
29	SLU 74	15	0	2206	664.77	-0.13	-5.12
29	SLU 75	15	4	2216	667.1	-0.12	-5.15
29	SLU 76	15	6	2222	668.66	-0.12	-5.17
29	SLU 77	15	0	2206	664.77	-0.13	-5.12
29	SLU 78	15	4	2216	667.1	-0.12	-5.15
29	SLU 79	15	0	2206	664.77	-0.13	-5.12
29	SLU 80	15	4	2216	667.1	-0.12	-5.15
29	SLU 81	15	0	2312	695.67	-0.13	-5.23
29	SLU 82	15	4	2321	698.01	-0.12	-5.26
29	SLU 83	15	0	2312	695.67	-0.13	-5.23
29	SLU 84	15	4	2321	698.01	-0.12	-5.26
29	SLE RA 1	11	0	1468	444.06	-0.1	-3.71
29	SLE RA 2	11	4	1478	446.65	-0.09	-3.74
29	SLE RA 3	11	0	1468	444.06	-0.1	-3.71
29	SLE RA 4	11	2	1474	445.62	-0.1	-3.73
29	SLE RA 5	11	4	1478	446.65	-0.09	-3.74
29	SLE RA 6	11	0	1468	444.06	-0.1	-3.71
29	SLE RA 7	11	2	1474	445.62	-0.1	-3.73
29	SLE RA 8	11	0	1468	444.06	-0.1	-3.71
29	SLE RA 9	11	2	1474	445.62	-0.1	-3.73
29	SLE RA 10	11	4	1642	494.73	-0.09	-3.9
29	SLE RA 11	11	0	1632	492.13	-0.1	-3.87
29	SLE RA 12	11	2	1638	493.69	-0.1	-3.89
29	SLE RA 13	11	4	1642	494.73	-0.09	-3.9
29	SLE RA 14	11	0	1632	492.13	-0.1	-3.87
29	SLE RA 15	11	2	1638	493.69	-0.1	-3.89
29	SLE RA 16	11	0	1632	492.13	-0.1	-3.87
29	SLE RA 17	11	2	1638	493.69	-0.1	-3.89
29	SLE RA 18	11	0	1702	512.74	-0.1	-3.94
29	SLE RA 19	11	3	1708	514.29	-0.1	-3.96
29	SLE RA 20	11	0	1702	512.74	-0.1	-3.94
29	SLE RA 21	11	3	1708	514.29	-0.1	-3.96
29	SLE FR 1	11	0	1468	444.06	-0.1	-3.71
29	SLE FR 2	11	0	1470	444.58	-0.1	-3.72
29	SLE FR 3	11	0	1468	444.06	-0.1	-3.71
29	SLE FR 4	11	1	1540	465.18	-0.1	-3.78
29	SLE FR 5	11	0	1538	464.66	-0.1	-3.78
29	SLE FR 6	11	0	1585	478.4	-0.1	-3.82
29	SLE QP 1	11	0	1468	444.06	-0.1	-3.71
29	SLE QP 2	11	0	1538	464.66	-0.1	-3.78
29	SLD 1	116	34	1576	471.95	0.29	-40.57
29	SLD 2	141	40	1579	472.46	0.27	-49.26
29	SLD 3	112	-31	1400	427.65	0.17	-39.06
29	SLD 4	136	-25	1404	428.16	0.14	-47.75
29	SLD 5	39	106	1814	533.85	0.21	-13.9
29	SLD 6	65	112	1818	534.38	0.19	-22.92
29	SLD 7	25	-110	1229	386.18	-0.2	-8.87

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
29	SLD 8	51	-104	1233	386.72	-0.23	-17.88
29	SLD 9	-30	103	1843	542.61	0.02	10.33
29	SLD 10	-4	109	1847	543.15	0	1.31
29	SLD 11	-44	-113	1258	394.95	-0.39	15.36
29	SLD 12	-18	-107	1261	395.48	-0.42	6.35
29	SLD 13	-115	24	1672	501.17	-0.34	40.19
29	SLD 14	-90	30	1675	501.68	-0.37	31.51
29	SLD 15	-119	-40	1496	456.87	-0.47	41.7
29	SLD 16	-94	-34	1500	457.38	-0.49	33.02
29	SLV 1	251	77	1624	481	0.79	-87.82
29	SLV 2	307	91	1631	482.17	0.74	-107.62
29	SLV 3	241	-70	1225	380.42	0.51	-84.39
29	SLV 4	298	-56	1233	381.6	0.46	-104.19
29	SLV 5	76	241	2165	621.67	0.61	-26.92
29	SLV 6	135	255	2173	622.89	0.56	-47.39
29	SLV 7	45	-249	837	286.42	-0.32	-15.5
29	SLV 8	103	-235	845	287.64	-0.38	-35.97
29	SLV 9	-82	235	2231	641.69	0.18	28.41
29	SLV 10	-23	249	2239	642.91	0.12	7.95
29	SLV 11	-113	-256	902	306.44	-0.76	39.83
29	SLV 12	-55	-242	910	307.66	-0.82	19.37
29	SLV 13	-276	56	1843	547.73	-0.66	96.64
29	SLV 14	-219	69	1851	548.91	-0.71	76.84
29	SLV 15	-286	-92	1444	447.16	-0.94	100.06
29	SLV 16	-229	-78	1452	448.33	-1	80.27
29	CRTFP Ux+	0	0	0	0	0	0
29	CRTFP Ux-	0	0	0	0	0	0
29	CRTFP Uy+	0	0	0	0	0	0
29	CRTFP Uy-	0	0	0	0	0	0
30	SLU 1	11	-1	1422	431.71	-0.26	-3.89
30	SLU 2	11	5	1437	435.41	-0.25	-3.94
30	SLU 3	11	-1	1422	431.71	-0.26	-3.89
30	SLU 4	11	3	1431	433.93	-0.25	-3.92
30	SLU 5	11	5	1437	435.41	-0.25	-3.94
30	SLU 6	11	-1	1422	431.71	-0.26	-3.89
30	SLU 7	11	3	1431	433.93	-0.25	-3.92
30	SLU 8	11	-1	1422	431.71	-0.26	-3.89
30	SLU 9	11	3	1431	433.93	-0.25	-3.92
30	SLU 10	12	6	1684	507.92	-0.28	-4.18
30	SLU 11	12	0	1669	504.22	-0.29	-4.12
30	SLU 12	12	3	1678	506.44	-0.29	-4.16
30	SLU 13	12	6	1684	507.92	-0.28	-4.18
30	SLU 14	12	0	1669	504.22	-0.29	-4.12
30	SLU 15	12	3	1678	506.44	-0.29	-4.16
30	SLU 16	12	0	1669	504.22	-0.29	-4.12
30	SLU 17	12	3	1678	506.44	-0.29	-4.16
30	SLU 18	12	0	1774	535.3	-0.31	-4.23
30	SLU 19	12	4	1783	537.52	-0.3	-4.26
30	SLU 20	12	0	1774	535.3	-0.31	-4.23
30	SLU 21	12	4	1783	537.52	-0.3	-4.26
30	SLU 22	12	0	1606	485.83	-0.28	-4.11
30	SLU 23	12	6	1621	489.53	-0.27	-4.16
30	SLU 24	12	0	1606	485.83	-0.28	-4.11
30	SLU 25	12	3	1615	488.05	-0.28	-4.14
30	SLU 26	12	6	1621	489.53	-0.27	-4.16
30	SLU 27	12	0	1606	485.83	-0.28	-4.11
30	SLU 28	12	3	1615	488.05	-0.28	-4.14
30	SLU 29	12	0	1606	485.83	-0.28	-4.11
30	SLU 30	12	3	1615	488.05	-0.28	-4.14
30	SLU 31	13	6	1867	562.05	-0.3	-4.4
30	SLU 32	12	0	1852	558.35	-0.32	-4.35
30	SLU 33	12	4	1861	560.57	-0.31	-4.38
30	SLU 34	13	6	1867	562.05	-0.3	-4.4
30	SLU 35	12	0	1852	558.35	-0.32	-4.35
30	SLU 36	12	4	1861	560.57	-0.31	-4.38
30	SLU 37	12	0	1852	558.35	-0.32	-4.35
30	SLU 38	12	4	1861	560.57	-0.31	-4.38
30	SLU 39	13	0	1958	589.43	-0.33	-4.45
30	SLU 40	13	4	1967	591.65	-0.32	-4.48
30	SLU 41	13	0	1958	589.43	-0.33	-4.45
30	SLU 42	13	4	1967	591.65	-0.32	-4.48
30	SLU 43	14	-1	1785	542.66	-0.33	-4.97
30	SLU 44	14	5	1800	546.36	-0.32	-5.03
30	SLU 45	14	-1	1785	542.66	-0.33	-4.97
30	SLU 46	14	3	1794	544.88	-0.32	-5.01
30	SLU 47	14	5	1800	546.36	-0.32	-5.03
30	SLU 48	14	-1	1785	542.66	-0.33	-4.97
30	SLU 49	14	3	1794	544.88	-0.32	-5.01
30	SLU 50	14	-1	1785	542.66	-0.33	-4.97
30	SLU 51	14	3	1794	544.88	-0.32	-5.01
30	SLU 52	15	5	2047	618.88	-0.35	-5.27
30	SLU 53	15	-1	2032	615.18	-0.36	-5.21
30	SLU 54	15	3	2041	617.4	-0.36	-5.25
30	SLU 55	15	5	2047	618.88	-0.35	-5.27
30	SLU 56	15	-1	2032	615.18	-0.36	-5.21
30	SLU 57	15	3	2041	617.4	-0.36	-5.25

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
30	SLU 58	15	-1	2032	615.18	-0.36	-5.21
30	SLU 59	15	3	2041	617.4	-0.36	-5.25
30	SLU 60	15	0	2138	646.26	-0.38	-5.32
30	SLU 61	15	3	2147	648.48	-0.37	-5.35
30	SLU 62	15	0	2138	646.26	-0.38	-5.32
30	SLU 63	15	3	2147	648.48	-0.37	-5.35
30	SLU 64	15	-1	1969	596.79	-0.35	-5.2
30	SLU 65	15	5	1984	600.49	-0.34	-5.25
30	SLU 66	15	-1	1969	596.79	-0.35	-5.2
30	SLU 67	15	3	1978	599.01	-0.35	-5.23
30	SLU 68	15	5	1984	600.49	-0.34	-5.25
30	SLU 69	15	-1	1969	596.79	-0.35	-5.2
30	SLU 70	15	3	1978	599.01	-0.35	-5.23
30	SLU 71	15	-1	1969	596.79	-0.35	-5.2
30	SLU 72	15	3	1978	599.01	-0.35	-5.23
30	SLU 73	16	6	2231	673	-0.37	-5.49
30	SLU 74	15	0	2216	669.3	-0.39	-5.44
30	SLU 75	16	3	2225	671.52	-0.38	-5.47
30	SLU 76	16	6	2231	673	-0.37	-5.49
30	SLU 77	15	0	2216	669.3	-0.39	-5.44
30	SLU 78	16	3	2225	671.52	-0.38	-5.47
30	SLU 79	15	0	2216	669.3	-0.39	-5.44
30	SLU 80	16	3	2225	671.52	-0.38	-5.47
30	SLU 81	16	0	2322	700.38	-0.4	-5.54
30	SLU 82	16	4	2331	702.6	-0.39	-5.57
30	SLU 83	16	0	2322	700.38	-0.4	-5.54
30	SLU 84	16	4	2331	702.6	-0.39	-5.57
30	SLE RA 1	11	-1	1474	447.17	-0.27	-3.95
30	SLE RA 2	11	3	1484	449.64	-0.26	-3.99
30	SLE RA 3	11	-1	1474	447.17	-0.27	-3.95
30	SLE RA 4	11	2	1480	448.65	-0.26	-3.97
30	SLE RA 5	11	3	1484	449.64	-0.26	-3.99
30	SLE RA 6	11	-1	1474	447.17	-0.27	-3.95
30	SLE RA 7	11	2	1480	448.65	-0.26	-3.97
30	SLE RA 8	11	-1	1474	447.17	-0.27	-3.95
30	SLE RA 9	11	2	1480	448.65	-0.26	-3.97
30	SLE RA 10	12	4	1649	497.98	-0.28	-4.15
30	SLE RA 11	12	0	1639	495.52	-0.29	-4.11
30	SLE RA 12	12	2	1645	497	-0.28	-4.13
30	SLE RA 13	12	4	1649	497.98	-0.28	-4.15
30	SLE RA 14	12	0	1639	495.52	-0.29	-4.11
30	SLE RA 15	12	2	1645	497	-0.28	-4.13
30	SLE RA 16	12	0	1639	495.52	-0.29	-4.11
30	SLE RA 17	12	2	1645	497	-0.28	-4.13
30	SLE RA 18	12	0	1709	516.24	-0.3	-4.18
30	SLE RA 19	12	2	1715	517.72	-0.29	-4.2
30	SLE RA 20	12	0	1709	516.24	-0.3	-4.18
30	SLE RA 21	12	2	1715	517.72	-0.29	-4.2
30	SLE FR 1	11	-1	1474	447.17	-0.27	-3.95
30	SLE FR 2	11	0	1476	447.66	-0.27	-3.96
30	SLE FR 3	11	-1	1474	447.17	-0.27	-3.95
30	SLE FR 4	11	0	1547	468.38	-0.27	-4.02
30	SLE FR 5	11	0	1545	467.89	-0.28	-4.02
30	SLE FR 6	12	0	1592	481.7	-0.28	-4.06
30	SLE QP 1	11	-1	1474	447.17	-0.27	-3.95
30	SLE QP 2	11	0	1545	467.89	-0.28	-4.02
30	SLD 1	116	22	1570	470.67	0.12	-40.78
30	SLD 2	141	30	1574	471.39	0.09	-49.46
30	SLD 3	112	-41	1398	428.13	0.02	-39.2
30	SLD 4	137	-34	1402	428.85	-0.01	-47.88
30	SLD 5	40	100	1811	532.99	0	-14.24
30	SLD 6	66	107	1816	533.73	-0.02	-23.24
30	SLD 7	26	-112	1239	391.17	-0.33	-8.98
30	SLD 8	52	-104	1243	391.92	-0.35	-17.98
30	SLD 9	-29	103	1847	543.86	-0.2	9.95
30	SLD 10	-3	111	1851	544.61	-0.22	0.94
30	SLD 11	-43	-108	1274	402.05	-0.53	15.21
30	SLD 12	-18	-101	1278	402.79	-0.55	6.2
30	SLD 13	-114	33	1688	506.93	-0.55	39.84
30	SLD 14	-89	40	1692	507.65	-0.57	31.17
30	SLD 15	-118	-30	1516	464.39	-0.64	41.42
30	SLD 16	-93	-23	1520	465.11	-0.67	32.74
30	SLV 1	251	51	1600	473.97	0.62	-87.98
30	SLV 2	308	68	1610	475.61	0.57	-107.76
30	SLV 3	241	-93	1210	377.38	0.4	-84.4
30	SLV 4	298	-76	1220	379.02	0.34	-104.18
30	SLV 5	78	228	2149	615.62	0.35	-27.38
30	SLV 6	136	244	2159	617.31	0.3	-47.82
30	SLV 7	44	-253	849	293.63	-0.39	-15.45
30	SLV 8	103	-236	859	295.33	-0.45	-35.9
30	SLV 9	-80	235	2230	640.45	-0.1	27.86
30	SLV 10	-21	252	2240	642.15	-0.16	7.41
30	SLV 11	-113	-245	930	318.47	-0.85	39.79
30	SLV 12	-55	-228	940	320.16	-0.9	19.34
30	SLV 13	-275	76	1870	556.76	-0.89	96.15
30	SLV 14	-218	92	1879	558.4	-0.95	76.37

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
30	SLV 15	-285	-69	1480	460.17	-1.12	99.73
30	SLV 16	-228	-52	1489	461.81	-1.17	79.94
30	CRTFP Ux+	0	0	0	0	0	0
30	CRTFP Ux-	0	0	0	0	0	0
30	CRTFP Uy+	0	0	0	0	0	0
30	CRTFP Uy-	0	0	0	0	0	0
31	SLU 1	12	-1	1432	440.41	-0.31	-4.11
31	SLU 2	12	5	1447	444	-0.3	-4.18
31	SLU 3	12	-1	1432	440.41	-0.31	-4.11
31	SLU 4	12	2	1441	442.56	-0.31	-4.15
31	SLU 5	12	5	1447	444	-0.3	-4.18
31	SLU 6	12	-1	1432	440.41	-0.31	-4.11
31	SLU 7	12	2	1441	442.56	-0.31	-4.15
31	SLU 8	12	-1	1432	440.41	-0.31	-4.11
31	SLU 9	12	2	1441	442.56	-0.31	-4.15
31	SLU 10	13	5	1695	518.13	-0.34	-4.41
31	SLU 11	12	-1	1680	514.54	-0.35	-4.35
31	SLU 12	12	3	1689	516.69	-0.35	-4.39
31	SLU 13	13	5	1695	518.13	-0.34	-4.41
31	SLU 14	12	-1	1680	514.54	-0.35	-4.35
31	SLU 15	12	3	1689	516.69	-0.35	-4.39
31	SLU 16	12	-1	1680	514.54	-0.35	-4.35
31	SLU 17	12	3	1689	516.69	-0.35	-4.39
31	SLU 18	13	-1	1787	546.31	-0.37	-4.45
31	SLU 19	13	3	1795	548.46	-0.36	-4.49
31	SLU 20	13	-1	1787	546.31	-0.37	-4.45
31	SLU 21	13	3	1795	548.46	-0.36	-4.49
31	SLU 22	12	-1	1617	495.72	-0.34	-4.34
31	SLU 23	13	5	1632	499.31	-0.33	-4.4
31	SLU 24	12	-1	1617	495.72	-0.34	-4.34
31	SLU 25	12	3	1626	497.88	-0.34	-4.38
31	SLU 26	13	5	1632	499.31	-0.33	-4.4
31	SLU 27	12	-1	1617	495.72	-0.34	-4.34
31	SLU 28	12	3	1626	497.88	-0.34	-4.38
31	SLU 29	12	-1	1617	495.72	-0.34	-4.34
31	SLU 30	12	3	1626	497.88	-0.34	-4.38
31	SLU 31	13	5	1880	573.44	-0.37	-4.64
31	SLU 32	13	-1	1865	569.85	-0.38	-4.58
31	SLU 33	13	3	1874	572.01	-0.38	-4.61
31	SLU 34	13	5	1880	573.44	-0.37	-4.64
31	SLU 35	13	-1	1865	569.85	-0.38	-4.58
31	SLU 36	13	3	1874	572.01	-0.38	-4.61
31	SLU 37	13	-1	1865	569.85	-0.38	-4.58
31	SLU 38	13	3	1874	572.01	-0.38	-4.61
31	SLU 39	13	-1	1971	601.62	-0.4	-4.68
31	SLU 40	13	3	1980	603.78	-0.39	-4.72
31	SLU 41	13	-1	1971	601.62	-0.4	-4.68
31	SLU 42	13	3	1980	603.78	-0.39	-4.72
31	SLU 43	15	-2	1799	553.57	-0.39	-5.27
31	SLU 44	15	4	1813	557.16	-0.39	-5.33
31	SLU 45	15	-2	1799	553.57	-0.39	-5.27
31	SLU 46	15	2	1807	555.72	-0.39	-5.31
31	SLU 47	15	4	1813	557.16	-0.39	-5.33
31	SLU 48	15	-2	1799	553.57	-0.39	-5.27
31	SLU 49	15	2	1807	555.72	-0.39	-5.31
31	SLU 50	15	-2	1799	553.57	-0.39	-5.27
31	SLU 51	15	2	1807	555.72	-0.39	-5.31
31	SLU 52	16	5	2061	631.29	-0.43	-5.57
31	SLU 53	16	-1	2047	627.7	-0.43	-5.51
31	SLU 54	16	2	2055	629.85	-0.43	-5.54
31	SLU 55	16	5	2061	631.29	-0.43	-5.57
31	SLU 56	16	-1	2047	627.7	-0.43	-5.51
31	SLU 57	16	2	2055	629.85	-0.43	-5.54
31	SLU 58	16	-1	2047	627.7	-0.43	-5.51
31	SLU 59	16	2	2055	629.85	-0.43	-5.54
31	SLU 60	16	-1	2153	659.47	-0.45	-5.61
31	SLU 61	16	2	2162	661.62	-0.45	-5.65
31	SLU 62	16	-1	2153	659.47	-0.45	-5.61
31	SLU 63	16	2	2162	661.62	-0.45	-5.65
31	SLU 64	16	-1	1983	608.88	-0.42	-5.5
31	SLU 65	16	4	1998	612.47	-0.42	-5.56
31	SLU 66	16	-1	1983	608.88	-0.42	-5.5
31	SLU 67	16	2	1992	611.03	-0.42	-5.53
31	SLU 68	16	4	1998	612.47	-0.42	-5.56
31	SLU 69	16	-1	1983	608.88	-0.42	-5.5
31	SLU 70	16	2	1992	611.03	-0.42	-5.53
31	SLU 71	16	-1	1983	608.88	-0.42	-5.5
31	SLU 72	16	2	1992	611.03	-0.42	-5.53
31	SLU 73	16	5	2246	686.6	-0.46	-5.8
31	SLU 74	16	-1	2231	683.01	-0.46	-5.73
31	SLU 75	16	2	2240	685.17	-0.46	-5.77
31	SLU 76	16	5	2246	686.6	-0.46	-5.8
31	SLU 77	16	-1	2231	683.01	-0.46	-5.73
31	SLU 78	16	2	2240	685.17	-0.46	-5.77
31	SLU 79	16	-1	2231	683.01	-0.46	-5.73
31	SLU 80	16	2	2240	685.17	-0.46	-5.77

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
31	SLU 81	17	-1	2338	714.78	-0.48	-5.83
31	SLU 82	17	2	2347	716.94	-0.48	-5.87
31	SLU 83	17	-1	2338	714.78	-0.48	-5.83
31	SLU 84	17	2	2347	716.94	-0.48	-5.87
31	SLE RA 1	12	-1	1485	456.21	-0.32	-4.18
31	SLE RA 2	12	3	1495	458.61	-0.31	-4.22
31	SLE RA 3	12	-1	1485	456.21	-0.32	-4.18
31	SLE RA 4	12	1	1491	457.65	-0.32	-4.2
31	SLE RA 5	12	3	1495	458.61	-0.31	-4.22
31	SLE RA 6	12	-1	1485	456.21	-0.32	-4.18
31	SLE RA 7	12	1	1491	457.65	-0.32	-4.2
31	SLE RA 8	12	-1	1485	456.21	-0.32	-4.18
31	SLE RA 9	12	1	1491	457.65	-0.32	-4.2
31	SLE RA 10	12	3	1660	508.03	-0.34	-4.38
31	SLE RA 11	12	-1	1650	505.63	-0.35	-4.34
31	SLE RA 12	12	1	1656	507.07	-0.34	-4.36
31	SLE RA 13	12	3	1660	508.03	-0.34	-4.38
31	SLE RA 14	12	-1	1650	505.63	-0.35	-4.34
31	SLE RA 15	12	1	1656	507.07	-0.34	-4.36
31	SLE RA 16	12	-1	1650	505.63	-0.35	-4.34
31	SLE RA 17	12	1	1656	507.07	-0.34	-4.36
31	SLE RA 18	13	-1	1721	526.81	-0.36	-4.4
31	SLE RA 19	13	1	1727	528.25	-0.35	-4.43
31	SLE RA 20	13	-1	1721	526.81	-0.36	-4.4
31	SLE RA 21	13	1	1727	528.25	-0.35	-4.43
31	SLE FR 1	12	-1	1485	456.21	-0.32	-4.18
31	SLE FR 2	12	0	1487	456.69	-0.32	-4.19
31	SLE FR 3	12	-1	1485	456.21	-0.32	-4.18
31	SLE FR 4	12	0	1558	477.87	-0.33	-4.25
31	SLE FR 5	12	-1	1556	477.39	-0.33	-4.25
31	SLE FR 6	12	-1	1603	491.51	-0.34	-4.29
31	SLE QP 1	12	-1	1485	456.21	-0.32	-4.18
31	SLE QP 2	12	-1	1556	477.39	-0.33	-4.25
31	SLD 1	117	20	1567	475.98	0.06	-40.94
31	SLD 2	142	29	1573	476.94	0.03	-49.6
31	SLD 3	112	-42	1399	434.36	-0.02	-39.3
31	SLD 4	137	-34	1404	435.32	-0.04	-47.96
31	SLD 5	41	97	1814	539.74	-0.1	-14.55
31	SLD 6	67	106	1819	540.74	-0.12	-23.54
31	SLD 7	26	-111	1251	401.01	-0.34	-9.07
31	SLD 8	52	-103	1256	402	-0.36	-18.07
31	SLD 9	-28	100	1856	552.78	-0.3	9.57
31	SLD 10	-2	109	1861	553.78	-0.32	0.58
31	SLD 11	-43	-108	1293	414.05	-0.54	15.05
31	SLD 12	-17	-99	1298	415.05	-0.57	6.06
31	SLD 13	-113	32	1708	519.47	-0.62	39.47
31	SLD 14	-88	40	1713	520.42	-0.64	30.81
31	SLD 15	-117	-31	1539	477.85	-0.7	41.11
31	SLD 16	-93	-22	1544	478.81	-0.72	32.45
31	SLV 1	251	47	1581	473.9	0.55	-88.06
31	SLV 2	308	66	1593	476.09	0.5	-107.8
31	SLV 3	241	-95	1198	379.4	0.39	-84.33
31	SLV 4	297	-76	1209	381.59	0.34	-104.08
31	SLV 5	79	221	2141	618.87	0.2	-27.79
31	SLV 6	138	241	2153	621.13	0.15	-48.2
31	SLV 7	44	-252	863	303.87	-0.35	-15.38
31	SLV 8	103	-232	875	306.13	-0.4	-35.79
31	SLV 9	-78	229	2237	648.65	-0.26	27.3
31	SLV 10	-20	249	2249	650.92	-0.31	6.89
31	SLV 11	-113	-243	959	333.66	-0.81	39.71
31	SLV 12	-55	-223	971	335.92	-0.87	19.3
31	SLV 13	-273	74	1903	573.2	-1	95.59
31	SLV 14	-217	93	1914	575.39	-1.05	75.84
31	SLV 15	-284	-68	1519	478.7	-1.16	99.31
31	SLV 16	-227	-49	1531	480.89	-1.21	79.56
31	CRTFP Ux+	0	0	0	0	0	0
31	CRTFP Ux-	0	0	0	0	0	0
31	CRTFP Uy+	0	0	0	0	0	0
31	CRTFP Uy-	0	0	0	0	0	0
32	SLU 1	11	-2	1290	404.68	23.87	-3.85
32	SLU 2	11	4	1303	407.88	24.12	-4.01
32	SLU 3	11	-2	1290	404.68	23.87	-3.85
32	SLU 4	11	2	1297	406.6	24.02	-3.95
32	SLU 5	11	4	1303	407.88	24.12	-4.01
32	SLU 6	11	-2	1290	404.68	23.87	-3.85
32	SLU 7	11	2	1297	406.6	24.02	-3.95
32	SLU 8	11	-2	1290	404.68	23.87	-3.85
32	SLU 9	11	2	1297	406.6	24.02	-3.95
32	SLU 10	12	4	1525	476.29	28.26	-4.22
32	SLU 11	12	-2	1513	473.09	28.01	-4.06
32	SLU 12	12	2	1520	475.01	28.16	-4.16
32	SLU 13	12	4	1525	476.29	28.26	-4.22
32	SLU 14	12	-2	1513	473.09	28.01	-4.06
32	SLU 15	12	2	1520	475.01	28.16	-4.16
32	SLU 16	12	-2	1513	473.09	28.01	-4.06
32	SLU 17	12	2	1520	475.01	28.16	-4.16

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
32	SLU 18	12	-2	1608	502.41	29.79	-4.15
32	SLU 19	12	2	1616	504.32	29.94	-4.25
32	SLU 20	12	-2	1608	502.41	29.79	-4.15
32	SLU 21	12	2	1616	504.32	29.94	-4.25
32	SLU 22	12	-2	1456	455.71	26.96	-4.06
32	SLU 23	12	4	1469	458.91	27.2	-4.21
32	SLU 24	12	-2	1456	455.71	26.96	-4.06
32	SLU 25	12	2	1463	457.63	27.1	-4.15
32	SLU 26	12	4	1469	458.91	27.2	-4.21
32	SLU 27	12	-2	1456	455.71	26.96	-4.06
32	SLU 28	12	2	1463	457.63	27.1	-4.15
32	SLU 29	12	-2	1456	455.71	26.96	-4.06
32	SLU 30	12	2	1463	457.63	27.1	-4.15
32	SLU 31	12	4	1692	527.31	31.34	-4.43
32	SLU 32	12	-2	1679	524.12	31.1	-4.27
32	SLU 33	12	2	1686	526.04	31.25	-4.36
32	SLU 34	12	4	1692	527.31	31.34	-4.43
32	SLU 35	12	-2	1679	524.12	31.1	-4.27
32	SLU 36	12	2	1686	526.04	31.25	-4.36
32	SLU 37	12	-2	1679	524.12	31.1	-4.27
32	SLU 38	12	2	1686	526.04	31.25	-4.36
32	SLU 39	12	-2	1774	553.43	32.87	-4.36
32	SLU 40	13	2	1782	555.35	33.02	-4.45
32	SLU 41	12	-2	1774	553.43	32.87	-4.36
32	SLU 42	13	2	1782	555.35	33.02	-4.45
32	SLU 43	14	-2	1620	508.59	29.98	-4.93
32	SLU 44	14	3	1633	511.79	30.22	-5.09
32	SLU 45	14	-2	1620	508.59	29.98	-4.93
32	SLU 46	14	1	1627	510.51	30.13	-5.03
32	SLU 47	14	3	1633	511.79	30.22	-5.09
32	SLU 48	14	-2	1620	508.59	29.98	-4.93
32	SLU 49	14	1	1627	510.51	30.13	-5.03
32	SLU 50	14	-2	1620	508.59	29.98	-4.93
32	SLU 51	14	1	1627	510.51	30.13	-5.03
32	SLU 52	15	3	1855	580.2	34.36	-5.31
32	SLU 53	15	-2	1843	577	34.12	-5.15
32	SLU 54	15	1	1850	578.92	34.27	-5.24
32	SLU 55	15	3	1855	580.2	34.36	-5.31
32	SLU 56	15	-2	1843	577	34.12	-5.15
32	SLU 57	15	1	1850	578.92	34.27	-5.24
32	SLU 58	15	-2	1843	577	34.12	-5.15
32	SLU 59	15	1	1850	578.92	34.27	-5.24
32	SLU 60	15	-2	1938	606.32	35.89	-5.24
32	SLU 61	15	1	1946	608.23	36.04	-5.33
32	SLU 62	15	-2	1938	606.32	35.89	-5.24
32	SLU 63	15	1	1946	608.23	36.04	-5.33
32	SLU 64	15	-2	1786	559.62	33.06	-5.14
32	SLU 65	15	3	1799	562.82	33.31	-5.3
32	SLU 66	15	-2	1786	559.62	33.06	-5.14
32	SLU 67	15	1	1793	561.54	33.21	-5.24
32	SLU 68	15	3	1799	562.82	33.31	-5.3
32	SLU 69	15	-2	1786	559.62	33.06	-5.14
32	SLU 70	15	1	1793	561.54	33.21	-5.24
32	SLU 71	15	-2	1786	559.62	33.06	-5.14
32	SLU 72	15	1	1793	561.54	33.21	-5.24
32	SLU 73	16	3	2021	631.22	37.45	-5.51
32	SLU 74	15	-2	2009	628.03	37.2	-5.35
32	SLU 75	15	1	2016	629.95	37.35	-5.45
32	SLU 76	16	3	2021	631.22	37.45	-5.51
32	SLU 77	15	-2	2009	628.03	37.2	-5.35
32	SLU 78	15	1	2016	629.95	37.35	-5.45
32	SLU 79	15	-2	2009	628.03	37.2	-5.35
32	SLU 80	15	1	2016	629.95	37.35	-5.45
32	SLU 81	16	-2	2104	657.34	38.98	-5.44
32	SLU 82	16	1	2112	659.26	39.12	-5.54
32	SLU 83	16	-2	2104	657.34	38.98	-5.44
32	SLU 84	16	1	2112	659.26	39.12	-5.54
32	SLE RA 1	11	-2	1337	419.26	24.75	-3.91
32	SLE RA 2	11	2	1346	421.39	24.92	-4.01
32	SLE RA 3	11	-2	1337	419.26	24.75	-3.91
32	SLE RA 4	11	1	1342	420.54	24.85	-3.97
32	SLE RA 5	11	2	1346	421.39	24.92	-4.01
32	SLE RA 6	11	-2	1337	419.26	24.75	-3.91
32	SLE RA 7	11	1	1342	420.54	24.85	-3.97
32	SLE RA 8	11	-2	1337	419.26	24.75	-3.91
32	SLE RA 9	11	1	1342	420.54	24.85	-3.97
32	SLE RA 10	12	2	1494	467	27.68	-4.16
32	SLE RA 11	12	-2	1486	464.87	27.52	-4.05
32	SLE RA 12	12	1	1491	466.15	27.61	-4.11
32	SLE RA 13	12	2	1494	467	27.68	-4.16
32	SLE RA 14	12	-2	1486	464.87	27.52	-4.05
32	SLE RA 15	12	1	1491	466.15	27.61	-4.11
32	SLE RA 16	12	-2	1486	464.87	27.52	-4.05
32	SLE RA 17	12	1	1491	466.15	27.61	-4.11
32	SLE RA 18	12	-2	1549	484.41	28.7	-4.11
32	SLE RA 19	12	1	1555	485.69	28.8	-4.17

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
32	SLE RA 20	12	-2	1549	484.41	28.7	-4.11
32	SLE RA 21	12	1	1555	485.69	28.8	-4.17
32	SLE FR 1	11	-2	1337	419.26	24.75	-3.91
32	SLE FR 2	11	-1	1339	419.69	24.79	-3.93
32	SLE FR 3	11	-2	1337	419.26	24.75	-3.91
32	SLE FR 4	11	-1	1403	439.23	25.97	-3.99
32	SLE FR 5	11	-2	1401	438.81	25.94	-3.97
32	SLE FR 6	11	-2	1443	451.84	26.73	-4.01
32	SLE QP 1	11	-2	1337	419.26	24.75	-3.91
32	SLE QP 2	11	-2	1401	438.81	25.94	-3.97
32	SLD 1	105	16	1400	434.42	26.19	-37.06
32	SLD 2	127	25	1405	435.5	26.27	-44.97
32	SLD 3	101	-39	1251	397.12	23.37	-34.54
32	SLD 4	123	-31	1256	398.21	23.45	-42.45
32	SLD 5	38	85	1625	493.66	30.26	-14.79
32	SLD 6	61	94	1630	494.79	30.34	-23
32	SLD 7	23	-101	1127	369.33	20.86	-6.41
32	SLD 8	46	-91	1133	370.46	20.95	-14.62
32	SLD 9	-24	88	1669	507.15	30.93	6.68
32	SLD 10	-1	97	1674	508.28	31.01	-1.53
32	SLD 11	-38	-97	1171	382.83	21.53	15.06
32	SLD 12	-15	-88	1176	383.96	21.62	6.85
32	SLD 13	-100	27	1546	479.41	28.42	34.51
32	SLD 14	-78	36	1551	480.5	28.5	26.6
32	SLD 15	-104	-28	1396	442.11	25.6	37.03
32	SLD 16	-82	-19	1401	443.2	25.68	29.12
32	SLV 1	225	38	1398	428.53	26.5	-79.53
32	SLV 2	276	59	1410	431.01	26.68	-97.56
32	SLV 3	215	-88	1059	343.84	20.1	-73.83
32	SLV 4	266	-67	1071	346.32	20.28	-91.86
32	SLV 5	72	194	1910	563.26	35.75	-28.67
32	SLV 6	124	215	1922	565.82	35.94	-47.31
32	SLV 7	39	-226	780	280.96	14.41	-9.67
32	SLV 8	91	-205	792	283.53	14.6	-28.31
32	SLV 9	-69	202	2010	594.09	37.28	20.37
32	SLV 10	-16	223	2022	596.65	37.47	1.73
32	SLV 11	-101	-219	880	311.79	15.94	39.37
32	SLV 12	-49	-198	892	314.36	16.13	20.73
32	SLV 13	-243	64	1731	531.29	31.59	83.93
32	SLV 14	-192	85	1742	533.77	31.78	65.9
32	SLV 15	-253	-62	1392	446.6	25.19	89.63
32	SLV 16	-202	-42	1403	449.08	25.38	71.6
32	CRTFP Ux+	0	0	0	0	0	0
32	CRTFP Ux-	0	0	0	0	0	0
32	CRTFP Uy+	0	0	0	0	0	0
32	CRTFP Uy-	0	0	0	0	0	0
34	SLU 1	33	-5	3709	840.84	-23.86	-8.01
34	SLU 2	34	10	3747	848.19	-24.01	-8.03
34	SLU 3	33	-5	3709	840.84	-23.86	-8.01
34	SLU 4	33	4	3732	845.25	-23.95	-8.02
34	SLU 5	34	10	3747	848.19	-24.01	-8.03
34	SLU 6	33	-5	3709	840.84	-23.86	-8.01
34	SLU 7	33	4	3732	845.25	-23.95	-8.02
34	SLU 8	33	-5	3709	840.84	-23.86	-8.01
34	SLU 9	33	4	3732	845.25	-23.95	-8.02
34	SLU 10	35	10	4387	991.76	-27.34	-8.47
34	SLU 11	35	-5	4348	984.42	-27.19	-8.46
34	SLU 12	35	4	4371	988.82	-27.28	-8.46
34	SLU 13	35	10	4387	991.76	-27.34	-8.47
34	SLU 14	35	-5	4348	984.42	-27.19	-8.46
34	SLU 15	35	4	4371	988.82	-27.28	-8.46
34	SLU 16	35	-5	4348	984.42	-27.19	-8.46
34	SLU 17	35	4	4371	988.82	-27.28	-8.46
34	SLU 18	35	-5	4623	1045.95	-28.62	-8.65
34	SLU 19	36	4	4646	1050.36	-28.71	-8.66
34	SLU 20	35	-5	4623	1045.95	-28.62	-8.65
34	SLU 21	36	4	4646	1050.36	-28.71	-8.66
34	SLU 22	35	-5	4185	947.88	-26.38	-8.44
34	SLU 23	35	10	4224	955.22	-26.52	-8.46
34	SLU 24	35	-5	4185	947.88	-26.38	-8.44
34	SLU 25	35	4	4208	952.29	-26.47	-8.45
34	SLU 26	35	10	4224	955.22	-26.52	-8.46
34	SLU 27	35	-5	4185	947.88	-26.38	-8.44
34	SLU 28	35	4	4208	952.29	-26.47	-8.45
34	SLU 29	35	-5	4185	947.88	-26.38	-8.44
34	SLU 30	35	4	4208	952.29	-26.47	-8.45
34	SLU 31	37	9	4863	1098.8	-29.86	-8.9
34	SLU 32	36	-6	4825	1091.45	-29.71	-8.89
34	SLU 33	37	3	4848	1095.86	-29.8	-8.9
34	SLU 34	37	9	4863	1098.8	-29.86	-8.9
34	SLU 35	36	-6	4825	1091.45	-29.71	-8.89
34	SLU 36	37	3	4848	1095.86	-29.8	-8.9
34	SLU 37	36	-6	4825	1091.45	-29.71	-8.89
34	SLU 38	37	3	4848	1095.86	-29.8	-8.9
34	SLU 39	37	-6	5099	1152.99	-31.14	-9.08
34	SLU 40	37	3	5122	1157.39	-31.23	-9.09

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
34	SLU 41	37	-6	5099	1152.99	-31.14	-9.08
34	SLU 42	37	3	5122	1157.39	-31.23	-9.09
34	SLU 43	42	-6	4658	1056.4	-30.16	-10.27
34	SLU 44	43	9	4696	1063.74	-30.3	-10.28
34	SLU 45	42	-6	4658	1056.4	-30.16	-10.27
34	SLU 46	43	3	4681	1060.81	-30.24	-10.28
34	SLU 47	43	9	4696	1063.74	-30.3	-10.28
34	SLU 48	42	-6	4658	1056.4	-30.16	-10.27
34	SLU 49	43	3	4681	1060.81	-30.24	-10.28
34	SLU 50	42	-6	4658	1056.4	-30.16	-10.27
34	SLU 51	43	3	4681	1060.81	-30.24	-10.28
34	SLU 52	45	8	5336	1207.32	-33.63	-10.73
34	SLU 53	44	-7	5298	1199.97	-33.49	-10.71
34	SLU 54	44	2	5321	1204.38	-33.58	-10.72
34	SLU 55	45	8	5336	1207.32	-33.63	-10.73
34	SLU 56	44	-7	5298	1199.97	-33.49	-10.71
34	SLU 57	44	2	5321	1204.38	-33.58	-10.72
34	SLU 58	44	-7	5298	1199.97	-33.49	-10.71
34	SLU 59	44	2	5321	1204.38	-33.58	-10.72
34	SLU 60	45	-7	5572	1261.51	-34.92	-10.9
34	SLU 61	45	2	5595	1265.91	-35	-10.91
34	SLU 62	45	-7	5572	1261.51	-34.92	-10.9
34	SLU 63	45	2	5595	1265.91	-35	-10.91
34	SLU 64	44	-7	5134	1163.44	-32.67	-10.7
34	SLU 65	45	8	5173	1170.78	-32.82	-10.71
34	SLU 66	44	-7	5134	1163.44	-32.67	-10.7
34	SLU 67	44	2	5157	1167.84	-32.76	-10.71
34	SLU 68	45	8	5173	1170.78	-32.82	-10.71
34	SLU 69	44	-7	5134	1163.44	-32.67	-10.7
34	SLU 70	44	2	5157	1167.84	-32.76	-10.71
34	SLU 71	44	-7	5134	1163.44	-32.67	-10.7
34	SLU 72	44	2	5157	1167.84	-32.76	-10.71
34	SLU 73	46	8	5812	1314.35	-36.15	-11.16
34	SLU 74	46	-7	5774	1307.01	-36.01	-11.14
34	SLU 75	46	2	5797	1311.41	-36.09	-11.15
34	SLU 76	46	8	5812	1314.35	-36.15	-11.16
34	SLU 77	46	-7	5774	1307.01	-36.01	-11.14
34	SLU 78	46	2	5797	1311.41	-36.09	-11.15
34	SLU 79	46	-7	5774	1307.01	-36.01	-11.14
34	SLU 80	46	2	5797	1311.41	-36.09	-11.15
34	SLU 81	46	-7	6048	1368.54	-37.43	-11.34
34	SLU 82	47	2	6071	1372.95	-37.52	-11.34
34	SLU 83	46	-7	6048	1368.54	-37.43	-11.34
34	SLU 84	47	2	6071	1372.95	-37.52	-11.34
34	SLE RA 1	33	-5	3845	871.43	-24.58	-8.14
34	SLE RA 2	34	5	3870	876.32	-24.68	-8.14
34	SLE RA 3	33	-5	3845	871.43	-24.58	-8.14
34	SLE RA 4	34	1	3860	874.36	-24.64	-8.14
34	SLE RA 5	34	5	3870	876.32	-24.68	-8.14
34	SLE RA 6	33	-5	3845	871.43	-24.58	-8.14
34	SLE RA 7	34	1	3860	874.36	-24.64	-8.14
34	SLE RA 8	33	-5	3845	871.43	-24.58	-8.14
34	SLE RA 9	34	1	3860	874.36	-24.64	-8.14
34	SLE RA 10	35	5	4297	972.04	-26.9	-8.44
34	SLE RA 11	35	-5	4271	967.14	-26.8	-8.43
34	SLE RA 12	35	1	4287	970.08	-26.86	-8.44
34	SLE RA 13	35	5	4297	972.04	-26.9	-8.44
34	SLE RA 14	35	-5	4271	967.14	-26.8	-8.43
34	SLE RA 15	35	1	4287	970.08	-26.86	-8.44
34	SLE RA 16	35	-5	4271	967.14	-26.8	-8.43
34	SLE RA 17	35	1	4287	970.08	-26.86	-8.44
34	SLE RA 18	35	-5	4454	1008.16	-27.75	-8.56
34	SLE RA 19	35	1	4469	1011.1	-27.81	-8.56
34	SLE RA 20	35	-5	4454	1008.16	-27.75	-8.56
34	SLE RA 21	35	1	4469	1011.1	-27.81	-8.56
34	SLE FR 1	33	-5	3845	871.43	-24.58	-8.14
34	SLE FR 2	34	-3	3850	872.41	-24.6	-8.14
34	SLE FR 3	33	-5	3845	871.43	-24.58	-8.14
34	SLE FR 4	34	-3	4033	913.43	-25.55	-8.26
34	SLE FR 5	34	-5	4028	912.45	-25.53	-8.26
34	SLE FR 6	34	-5	4149	939.8	-26.17	-8.35
34	SLE QP 1	33	-5	3845	871.43	-24.58	-8.14
34	SLE QP 2	34	-5	4028	912.45	-25.53	-8.26
34	SLD 1	297	42	3998	900.25	-17.57	-71.97
34	SLD 2	361	72	4015	903.41	-18.01	-86.56
34	SLD 3	284	-116	3555	814.97	-15.71	-70.03
34	SLD 4	348	-86	3573	818.13	-16.15	-84.61
34	SLD 5	109	238	4684	1036.97	-25.8	-24.94
34	SLD 6	176	269	4702	1040.25	-26.26	-40.08
34	SLD 7	65	-289	3208	752.69	-19.61	-18.46
34	SLD 8	132	-258	3226	755.97	-20.07	-33.6
34	SLD 9	-64	248	4829	1068.93	-31	17.07
34	SLD 10	3	279	4847	1072.2	-31.46	1.94
34	SLD 11	-108	-279	3354	784.65	-24.81	23.55
34	SLD 12	-42	-248	3371	787.92	-25.27	8.42
34	SLD 13	-280	76	4483	1006.77	-34.91	68.09

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
34	SLD 14	-216	106	4500	1009.93	-35.36	53.5
34	SLD 15	-293	-82	4040	921.49	-33.06	70.03
34	SLD 16	-229	-52	4057	924.64	-33.5	55.45
34	SLV 1	635	102	3957	884	-7.32	-153.79
34	SLV 2	781	170	3996	891.2	-8.33	-187.03
34	SLV 3	605	-257	2952	690.34	-3.09	-149.37
34	SLV 4	751	-188	2991	697.54	-4.11	-182.62
34	SLV 5	206	546	5517	1194.99	-26.11	-46.42
34	SLV 6	358	617	5557	1202.43	-27.15	-80.78
34	SLV 7	106	-650	2166	549.46	-12.02	-31.71
34	SLV 8	257	-579	2206	556.9	-13.07	-66.08
34	SLV 9	-189	569	5849	1267.99	-38	49.55
34	SLV 10	-38	640	5889	1275.44	-39.04	15.18
34	SLV 11	-290	-627	2498	622.46	-23.91	64.25
34	SLV 12	-139	-556	2539	629.91	-24.96	29.89
34	SLV 13	-683	178	5064	1127.35	-46.96	166.09
34	SLV 14	-537	247	5103	1134.55	-47.97	132.85
34	SLV 15	-713	-181	4059	933.69	-42.74	170.51
34	SLV 16	-567	-112	4098	940.89	-43.75	137.26
34	CRTFP Ux+	0	0	0	0	0	0
34	CRTFP Ux-	0	0	0	0	0	0
34	CRTFP Uy+	0	0	0	-0.01	0	0
34	CRTFP Uy-	0	0	0	0.01	0	0
36	SLU 1	15	-2	1511	456.19	-27.52	-5.2
36	SLU 2	15	4	1526	459.56	-27.79	-5.16
36	SLU 3	15	-2	1511	456.19	-27.52	-5.2
36	SLU 4	15	2	1520	458.22	-27.68	-5.18
36	SLU 5	15	4	1526	459.56	-27.79	-5.16
36	SLU 6	15	-2	1511	456.19	-27.52	-5.2
36	SLU 7	15	2	1520	458.22	-27.68	-5.18
36	SLU 8	15	-2	1511	456.19	-27.52	-5.2
36	SLU 9	15	2	1520	458.22	-27.68	-5.18
36	SLU 10	16	4	1784	534.98	-32.42	-5.45
36	SLU 11	15	-3	1769	531.61	-32.15	-5.49
36	SLU 12	16	1	1778	533.63	-32.31	-5.47
36	SLU 13	16	4	1784	534.98	-32.42	-5.45
36	SLU 14	15	-3	1769	531.61	-32.15	-5.49
36	SLU 15	16	1	1778	533.63	-32.31	-5.47
36	SLU 16	15	-3	1769	531.61	-32.15	-5.49
36	SLU 17	16	1	1778	533.63	-32.31	-5.47
36	SLU 18	16	-3	1879	563.93	-34.14	-5.61
36	SLU 19	16	1	1888	565.95	-34.3	-5.59
36	SLU 20	16	-3	1879	563.93	-34.14	-5.61
36	SLU 21	16	1	1888	565.95	-34.3	-5.59
36	SLU 22	15	-2	1703	512.47	-30.97	-5.48
36	SLU 23	16	4	1718	515.84	-31.25	-5.44
36	SLU 24	15	-2	1703	512.47	-30.97	-5.48
36	SLU 25	16	1	1712	514.5	-31.14	-5.46
36	SLU 26	16	4	1718	515.84	-31.25	-5.44
36	SLU 27	15	-2	1703	512.47	-30.97	-5.48
36	SLU 28	16	1	1712	514.5	-31.14	-5.46
36	SLU 29	15	-2	1703	512.47	-30.97	-5.48
36	SLU 30	16	1	1712	514.5	-31.14	-5.46
36	SLU 31	17	4	1976	591.26	-35.88	-5.73
36	SLU 32	16	-3	1961	587.89	-35.61	-5.77
36	SLU 33	16	1	1970	589.91	-35.77	-5.75
36	SLU 34	17	4	1976	591.26	-35.88	-5.73
36	SLU 35	16	-3	1961	587.89	-35.61	-5.77
36	SLU 36	16	1	1970	589.91	-35.77	-5.75
36	SLU 37	16	-3	1961	587.89	-35.61	-5.77
36	SLU 38	16	1	1970	589.91	-35.77	-5.75
36	SLU 39	17	-3	2072	620.21	-37.59	-5.89
36	SLU 40	17	1	2080	622.23	-37.76	-5.87
36	SLU 41	17	-3	2072	620.21	-37.59	-5.89
36	SLU 42	17	1	2080	622.23	-37.76	-5.87
36	SLU 43	19	-3	1898	573.76	-34.59	-6.66
36	SLU 44	19	4	1913	577.13	-34.86	-6.63
36	SLU 45	19	-3	1898	573.76	-34.59	-6.66
36	SLU 46	19	1	1907	575.78	-34.75	-6.64
36	SLU 47	19	4	1913	577.13	-34.86	-6.63
36	SLU 48	19	-3	1898	573.76	-34.59	-6.66
36	SLU 49	19	1	1907	575.78	-34.75	-6.64
36	SLU 50	19	-3	1898	573.76	-34.59	-6.66
36	SLU 51	19	1	1907	575.78	-34.75	-6.64
36	SLU 52	20	3	2171	652.54	-39.49	-6.91
36	SLU 53	20	-3	2156	649.17	-39.22	-6.95
36	SLU 54	20	1	2165	651.19	-39.38	-6.93
36	SLU 55	20	3	2171	652.54	-39.49	-6.91
36	SLU 56	20	-3	2156	649.17	-39.22	-6.95
36	SLU 57	20	1	2165	651.19	-39.38	-6.93
36	SLU 58	20	-3	2156	649.17	-39.22	-6.95
36	SLU 59	20	1	2165	651.19	-39.38	-6.93
36	SLU 60	20	-3	2267	681.49	-41.21	-7.07
36	SLU 61	20	1	2275	683.51	-41.37	-7.05
36	SLU 62	20	-3	2267	681.49	-41.21	-7.07
36	SLU 63	20	1	2275	683.51	-41.37	-7.05

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
36	SLU 64	20	-3	2090	630.04	-38.04	-6.94
36	SLU 65	20	3	2105	633.41	-38.32	-6.91
36	SLU 66	20	-3	2090	630.04	-38.04	-6.94
36	SLU 67	20	1	2099	632.06	-38.21	-6.92
36	SLU 68	20	3	2105	633.41	-38.32	-6.91
36	SLU 69	20	-3	2090	630.04	-38.04	-6.94
36	SLU 70	20	1	2099	632.06	-38.21	-6.92
36	SLU 71	20	-3	2090	630.04	-38.04	-6.94
36	SLU 72	20	1	2099	632.06	-38.21	-6.92
36	SLU 73	21	3	2363	708.82	-42.95	-7.2
36	SLU 74	20	-3	2348	705.45	-42.68	-7.23
36	SLU 75	21	0	2357	707.47	-42.84	-7.21
36	SLU 76	21	3	2363	708.82	-42.95	-7.2
36	SLU 77	20	-3	2348	705.45	-42.68	-7.23
36	SLU 78	21	0	2357	707.47	-42.84	-7.21
36	SLU 79	20	-3	2348	705.45	-42.68	-7.23
36	SLU 80	21	0	2357	707.47	-42.84	-7.21
36	SLU 81	21	-3	2459	737.77	-44.66	-7.36
36	SLU 82	21	0	2468	739.79	-44.83	-7.33
36	SLU 83	21	-3	2459	737.77	-44.66	-7.36
36	SLU 84	21	0	2468	739.79	-44.83	-7.33
36	SLE RA 1	15	-2	1566	472.27	-28.51	-5.28
36	SLE RA 2	15	2	1576	474.52	-28.69	-5.25
36	SLE RA 3	15	-2	1566	472.27	-28.51	-5.28
36	SLE RA 4	15	0	1572	473.62	-28.61	-5.26
36	SLE RA 5	15	2	1576	474.52	-28.69	-5.25
36	SLE RA 6	15	-2	1566	472.27	-28.51	-5.28
36	SLE RA 7	15	0	1572	473.62	-28.61	-5.26
36	SLE RA 8	15	-2	1566	472.27	-28.51	-5.28
36	SLE RA 9	15	0	1572	473.62	-28.61	-5.26
36	SLE RA 10	16	2	1748	524.8	-31.77	-5.45
36	SLE RA 11	15	-3	1738	522.55	-31.59	-5.47
36	SLE RA 12	16	0	1744	523.9	-31.7	-5.46
36	SLE RA 13	16	2	1748	524.8	-31.77	-5.45
36	SLE RA 14	15	-3	1738	522.55	-31.59	-5.47
36	SLE RA 15	16	0	1744	523.9	-31.7	-5.46
36	SLE RA 16	15	-3	1738	522.55	-31.59	-5.47
36	SLE RA 17	16	0	1744	523.9	-31.7	-5.46
36	SLE RA 18	16	-3	1811	544.09	-32.92	-5.55
36	SLE RA 19	16	0	1817	545.44	-33.03	-5.54
36	SLE RA 20	16	-3	1811	544.09	-32.92	-5.55
36	SLE RA 21	16	0	1817	545.44	-33.03	-5.54
36	SLE FR 1	15	-2	1566	472.27	-28.51	-5.28
36	SLE FR 2	15	-1	1568	472.72	-28.54	-5.27
36	SLE FR 3	15	-2	1566	472.27	-28.51	-5.28
36	SLE FR 4	15	-2	1641	494.27	-29.87	-5.36
36	SLE FR 5	15	-2	1639	493.82	-29.83	-5.36
36	SLE FR 6	15	-2	1689	508.18	-30.71	-5.42
36	SLE QP 1	15	-2	1566	472.27	-28.51	-5.28
36	SLE QP 2	15	-2	1639	493.82	-29.83	-5.36
36	SLD 1	125	17	1609	482.68	-28.84	-43.71
36	SLD 2	152	32	1616	484.28	-28.99	-52.55
36	SLD 3	120	-51	1437	443.1	-25.7	-42.86
36	SLD 4	146	-36	1444	444.7	-25.85	-51.71
36	SLD 5	47	101	1888	549.91	-34.23	-14.88
36	SLD 6	74	116	1896	551.57	-34.39	-24.06
36	SLD 7	28	-125	1315	417.99	-23.77	-12.07
36	SLD 8	56	-110	1323	419.65	-23.93	-21.25
36	SLD 9	-25	105	1956	567.99	-35.73	10.53
36	SLD 10	2	121	1963	569.65	-35.88	1.35
36	SLD 11	-44	-121	1383	436.07	-25.27	13.33
36	SLD 12	-17	-105	1391	437.73	-25.42	4.15
36	SLD 13	-116	31	1834	542.94	-33.81	40.99
36	SLD 14	-90	46	1842	544.54	-33.96	32.14
36	SLD 15	-121	-36	1663	503.36	-30.67	41.83
36	SLD 16	-95	-21	1670	504.96	-30.82	32.98
36	SLV 1	267	41	1568	468.1	-27.54	-92.95
36	SLV 2	327	75	1585	471.74	-27.88	-113.11
36	SLV 3	254	-113	1178	378.22	-20.41	-91.03
36	SLV 4	314	-79	1195	381.86	-20.76	-111.2
36	SLV 5	88	231	2204	621.09	-39.82	-27.15
36	SLV 6	150	267	2221	624.86	-40.18	-47.99
36	SLV 7	46	-281	903	321.48	-16.07	-20.76
36	SLV 8	108	-246	920	325.25	-16.42	-41.6
36	SLV 9	-77	241	2358	662.39	-43.23	30.88
36	SLV 10	-15	277	2376	666.16	-43.59	10.04
36	SLV 11	-120	-271	1058	362.78	-19.48	37.26
36	SLV 12	-58	-236	1075	366.55	-19.83	16.42
36	SLV 13	-284	74	2084	605.78	-38.9	100.47
36	SLV 14	-224	108	2101	609.42	-39.25	80.31
36	SLV 15	-297	-80	1694	515.9	-31.78	102.39
36	SLV 16	-237	-45	1710	519.54	-32.12	82.23
36	CRTFP Ux+	0	0	0	0	0	0
36	CRTFP Ux-	0	0	0	0	0	0
36	CRTFP Uy+	0	0	0	0	0	0
36	CRTFP Uy-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
37	SLU 1	17	-4	1636	466.31	0.85	-5.97
37	SLU 2	17	4	1652	469.67	0.85	-6.06
37	SLU 3	17	-4	1636	466.31	0.85	-5.97
37	SLU 4	17	1	1646	468.33	0.85	-6.02
37	SLU 5	17	4	1652	469.67	0.85	-6.06
37	SLU 6	17	-4	1636	466.31	0.85	-5.97
37	SLU 7	17	1	1646	468.33	0.85	-6.02
37	SLU 8	17	-4	1636	466.31	0.85	-5.97
37	SLU 9	17	1	1646	468.33	0.85	-6.02
37	SLU 10	18	3	1929	544.62	1.09	-6.39
37	SLU 11	18	-4	1913	541.25	1.09	-6.29
37	SLU 12	18	0	1923	543.27	1.09	-6.35
37	SLU 13	18	3	1929	544.62	1.09	-6.39
37	SLU 14	18	-4	1913	541.25	1.09	-6.29
37	SLU 15	18	0	1923	543.27	1.09	-6.35
37	SLU 16	18	-4	1913	541.25	1.09	-6.29
37	SLU 17	18	0	1923	543.27	1.09	-6.35
37	SLU 18	18	-4	2032	573.37	1.19	-6.43
37	SLU 19	18	0	2041	575.39	1.19	-6.49
37	SLU 20	18	-4	2032	573.37	1.19	-6.43
37	SLU 21	18	0	2041	575.39	1.19	-6.49
37	SLU 22	18	-4	1843	522.29	1.02	-6.29
37	SLU 23	18	3	1859	525.65	1.02	-6.38
37	SLU 24	18	-4	1843	522.29	1.02	-6.29
37	SLU 25	18	0	1852	524.31	1.02	-6.34
37	SLU 26	18	3	1859	525.65	1.02	-6.38
37	SLU 27	18	-4	1843	522.29	1.02	-6.29
37	SLU 28	18	0	1852	524.31	1.02	-6.34
37	SLU 29	18	-4	1843	522.29	1.02	-6.29
37	SLU 30	18	0	1852	524.31	1.02	-6.34
37	SLU 31	19	3	2136	600.6	1.26	-6.71
37	SLU 32	19	-5	2119	597.23	1.26	-6.61
37	SLU 33	19	0	2129	599.25	1.26	-6.67
37	SLU 34	19	3	2136	600.6	1.26	-6.71
37	SLU 35	19	-5	2119	597.23	1.26	-6.61
37	SLU 36	19	0	2129	599.25	1.26	-6.67
37	SLU 37	19	-5	2119	597.23	1.26	-6.61
37	SLU 38	19	0	2129	599.25	1.26	-6.67
37	SLU 39	19	-5	2238	629.35	1.36	-6.75
37	SLU 40	19	0	2248	631.37	1.36	-6.81
37	SLU 41	19	-5	2238	629.35	1.36	-6.75
37	SLU 42	19	0	2248	631.37	1.36	-6.81
37	SLU 43	22	-4	2056	587.01	1.04	-7.65
37	SLU 44	22	3	2072	590.37	1.04	-7.74
37	SLU 45	22	-4	2056	587.01	1.04	-7.65
37	SLU 46	22	0	2066	589.03	1.04	-7.71
37	SLU 47	22	3	2072	590.37	1.04	-7.74
37	SLU 48	22	-4	2056	587.01	1.04	-7.65
37	SLU 49	22	0	2066	589.03	1.04	-7.71
37	SLU 50	22	-4	2056	587.01	1.04	-7.65
37	SLU 51	22	0	2066	589.03	1.04	-7.71
37	SLU 52	23	2	2349	665.32	1.28	-8.07
37	SLU 53	23	-5	2333	661.96	1.28	-7.98
37	SLU 54	23	-1	2343	663.97	1.28	-8.03
37	SLU 55	23	2	2349	665.32	1.28	-8.07
37	SLU 56	23	-5	2333	661.96	1.28	-7.98
37	SLU 57	23	-1	2343	663.97	1.28	-8.03
37	SLU 58	23	-5	2333	661.96	1.28	-7.98
37	SLU 59	23	-1	2343	663.97	1.28	-8.03
37	SLU 60	23	-5	2452	694.07	1.38	-8.11
37	SLU 61	23	-1	2461	696.09	1.38	-8.17
37	SLU 62	23	-5	2452	694.07	1.38	-8.11
37	SLU 63	23	-1	2461	696.09	1.38	-8.17
37	SLU 64	23	-5	2263	642.99	1.21	-7.97
37	SLU 65	23	2	2279	646.35	1.21	-8.06
37	SLU 66	23	-5	2263	642.99	1.21	-7.97
37	SLU 67	23	0	2272	645.01	1.21	-8.03
37	SLU 68	23	2	2279	646.35	1.21	-8.06
37	SLU 69	23	-5	2263	642.99	1.21	-7.97
37	SLU 70	23	0	2272	645.01	1.21	-8.03
37	SLU 71	23	-5	2263	642.99	1.21	-7.97
37	SLU 72	23	0	2272	645.01	1.21	-8.03
37	SLU 73	24	2	2556	721.3	1.45	-8.39
37	SLU 74	23	-5	2540	717.93	1.45	-8.29
37	SLU 75	24	-1	2549	719.95	1.45	-8.35
37	SLU 76	24	2	2556	721.3	1.45	-8.39
37	SLU 77	23	-5	2540	717.93	1.45	-8.29
37	SLU 78	24	-1	2549	719.95	1.45	-8.35
37	SLU 79	23	-5	2540	717.93	1.45	-8.29
37	SLU 80	24	-1	2549	719.95	1.45	-8.35
37	SLU 81	24	-6	2658	750.05	1.56	-8.43
37	SLU 82	24	-1	2668	752.07	1.56	-8.49
37	SLU 83	24	-6	2658	750.05	1.56	-8.43
37	SLU 84	24	-1	2668	752.07	1.56	-8.49
37	SLE RA 1	17	-4	1695	482.3	0.9	-6.06
37	SLE RA 2	17	1	1706	484.55	0.9	-6.12

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
37	SLE RA 3	17	-4	1695	482.3	0.9	-6.06
37	SLE RA 4	17	-1	1702	483.65	0.9	-6.1
37	SLE RA 5	17	1	1706	484.55	0.9	-6.12
37	SLE RA 6	17	-4	1695	482.3	0.9	-6.06
37	SLE RA 7	17	-1	1702	483.65	0.9	-6.1
37	SLE RA 8	17	-4	1695	482.3	0.9	-6.06
37	SLE RA 9	17	-1	1702	483.65	0.9	-6.1
37	SLE RA 10	18	1	1891	534.51	1.06	-6.34
37	SLE RA 11	18	-4	1880	532.27	1.06	-6.28
37	SLE RA 12	18	-1	1886	533.61	1.06	-6.31
37	SLE RA 13	18	1	1891	534.51	1.06	-6.34
37	SLE RA 14	18	-4	1880	532.27	1.06	-6.28
37	SLE RA 15	18	-1	1886	533.61	1.06	-6.31
37	SLE RA 16	18	-4	1880	532.27	1.06	-6.28
37	SLE RA 17	18	-1	1886	533.61	1.06	-6.31
37	SLE RA 18	18	-4	1959	553.68	1.12	-6.37
37	SLE RA 19	18	-1	1965	555.03	1.12	-6.41
37	SLE RA 20	18	-4	1959	553.68	1.12	-6.37
37	SLE RA 21	18	-1	1965	555.03	1.12	-6.41
37	SLE FR 1	17	-4	1695	482.3	0.9	-6.06
37	SLE FR 2	17	-3	1697	482.75	0.9	-6.07
37	SLE FR 3	17	-4	1695	482.3	0.9	-6.06
37	SLE FR 4	17	-3	1776	504.16	0.96	-6.17
37	SLE FR 5	17	-4	1774	503.72	0.96	-6.15
37	SLE FR 6	18	-4	1827	517.99	1.01	-6.22
37	SLE QP 1	17	-4	1695	482.3	0.9	-6.06
37	SLE QP 2	17	-4	1774	503.72	0.96	-6.15
37	SLD 1	139	17	1724	488.94	1.56	-48.59
37	SLD 2	167	36	1733	490.75	1.54	-58.61
37	SLD 3	132	-61	1537	449.52	1.54	-46.49
37	SLD 4	161	-42	1545	451.33	1.52	-56.51
37	SLD 5	53	113	2040	558.4	1.18	-18.37
37	SLD 6	83	133	2049	560.28	1.16	-28.77
37	SLD 7	31	-146	1416	427.01	1.11	-11.37
37	SLD 8	61	-126	1424	428.89	1.09	-21.77
37	SLD 9	-27	119	2124	578.55	0.83	9.46
37	SLD 10	3	139	2133	580.42	0.81	-0.93
37	SLD 11	-48	-141	1499	447.16	0.77	16.46
37	SLD 12	-18	-121	1508	449.03	0.75	6.07
37	SLD 13	-126	35	2003	556.1	0.4	44.2
37	SLD 14	-97	54	2012	557.91	0.38	34.18
37	SLD 15	-133	-43	1816	516.68	0.38	46.3
37	SLD 16	-104	-24	1824	518.49	0.36	36.28
37	SLV 1	294	42	1659	469.71	2.33	-103.08
37	SLV 2	360	85	1679	473.83	2.29	-125.91
37	SLV 3	280	-135	1233	380.18	2.29	-98.32
37	SLV 4	346	-91	1253	384.3	2.24	-121.15
37	SLV 5	98	262	2378	627.79	1.46	-34.07
37	SLV 6	166	307	2398	632.05	1.42	-57.67
37	SLV 7	50	-327	959	329.36	1.31	-18.21
37	SLV 8	118	-282	979	333.62	1.26	-41.81
37	SLV 9	-83	275	2569	673.82	0.67	29.5
37	SLV 10	-15	319	2589	678.08	0.62	5.9
37	SLV 11	-132	-315	1150	375.38	0.51	45.37
37	SLV 12	-63	-270	1170	379.65	0.47	21.77
37	SLV 13	-311	84	2296	623.13	-0.32	108.84
37	SLV 14	-245	127	2315	627.26	-0.36	86.01
37	SLV 15	-325	-93	1870	533.6	-0.36	113.6
37	SLV 16	-259	-50	1890	537.73	-0.41	90.77
37	CRTFP Ux+	0	0	0	0	0	0
37	CRTFP Ux-	0	0	0	0	0	0
37	CRTFP Uy+	0	0	0	0	0	0
37	CRTFP Uy-	0	0	0	0	0	0
38	SLU 1	17	-6	1616	439.38	0.42	-6.18
38	SLU 2	18	2	1633	442.6	0.41	-6.28
38	SLU 3	17	-6	1616	439.38	0.42	-6.18
38	SLU 4	18	-1	1626	441.31	0.41	-6.24
38	SLU 5	18	2	1633	442.6	0.41	-6.28
38	SLU 6	17	-6	1616	439.38	0.42	-6.18
38	SLU 7	18	-1	1626	441.31	0.41	-6.24
38	SLU 8	17	-6	1616	439.38	0.42	-6.18
38	SLU 9	18	-1	1626	441.31	0.41	-6.24
38	SLU 10	19	1	1903	511.35	0.57	-6.6
38	SLU 11	18	-7	1887	508.13	0.58	-6.51
38	SLU 12	18	-2	1897	510.06	0.57	-6.57
38	SLU 13	19	1	1903	511.35	0.57	-6.6
38	SLU 14	18	-7	1887	508.13	0.58	-6.51
38	SLU 15	18	-2	1897	510.06	0.57	-6.57
38	SLU 16	18	-7	1887	508.13	0.58	-6.51
38	SLU 17	18	-2	1897	510.06	0.57	-6.57
38	SLU 18	19	-7	2003	537.59	0.65	-6.65
38	SLU 19	19	-3	2013	539.52	0.64	-6.71
38	SLU 20	19	-7	2003	537.59	0.65	-6.65
38	SLU 21	19	-3	2013	539.52	0.64	-6.71
38	SLU 22	18	-7	1819	490.78	0.53	-6.51
38	SLU 23	19	1	1835	494	0.52	-6.6

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
38	SLU 24	18	-7	1819	490.78	0.53	-6.51
38	SLU 25	18	-2	1828	492.71	0.52	-6.57
38	SLU 26	19	1	1835	494	0.52	-6.6
38	SLU 27	18	-7	1819	490.78	0.53	-6.51
38	SLU 28	18	-2	1828	492.71	0.52	-6.57
38	SLU 29	18	-7	1819	490.78	0.53	-6.51
38	SLU 30	18	-2	1828	492.71	0.52	-6.57
38	SLU 31	19	0	2106	562.75	0.68	-6.93
38	SLU 32	19	-8	2089	559.53	0.69	-6.83
38	SLU 33	19	-3	2099	561.46	0.68	-6.89
38	SLU 34	19	0	2106	562.75	0.68	-6.93
38	SLU 35	19	-8	2089	559.53	0.69	-6.83
38	SLU 36	19	-3	2099	561.46	0.68	-6.89
38	SLU 37	19	-8	2089	559.53	0.69	-6.83
38	SLU 38	19	-3	2099	561.46	0.68	-6.89
38	SLU 39	20	-8	2205	588.99	0.76	-6.97
38	SLU 40	20	-4	2215	590.92	0.75	-7.03
38	SLU 41	20	-8	2205	588.99	0.76	-6.97
38	SLU 42	20	-4	2215	590.92	0.75	-7.03
38	SLU 43	22	-7	2032	553.57	0.51	-7.93
38	SLU 44	23	1	2048	556.79	0.5	-8.02
38	SLU 45	22	-7	2032	553.57	0.51	-7.93
38	SLU 46	23	-3	2042	555.5	0.5	-7.98
38	SLU 47	23	1	2048	556.79	0.5	-8.02
38	SLU 48	22	-7	2032	553.57	0.51	-7.93
38	SLU 49	23	-3	2042	555.5	0.5	-7.98
38	SLU 50	22	-7	2032	553.57	0.51	-7.93
38	SLU 51	23	-3	2042	555.5	0.5	-7.98
38	SLU 52	24	0	2319	625.54	0.66	-8.35
38	SLU 53	23	-8	2303	622.32	0.67	-8.25
38	SLU 54	23	-4	2313	624.25	0.66	-8.31
38	SLU 55	24	0	2319	625.54	0.66	-8.35
38	SLU 56	23	-8	2303	622.32	0.67	-8.25
38	SLU 57	23	-4	2313	624.25	0.66	-8.31
38	SLU 58	23	-8	2303	622.32	0.67	-8.25
38	SLU 59	23	-4	2313	624.25	0.66	-8.31
38	SLU 60	24	-9	2419	651.78	0.73	-8.39
38	SLU 61	24	-4	2429	653.72	0.73	-8.45
38	SLU 62	24	-9	2419	651.78	0.73	-8.39
38	SLU 63	24	-4	2429	653.72	0.73	-8.45
38	SLU 64	23	-8	2234	604.97	0.62	-8.25
38	SLU 65	24	0	2251	608.19	0.61	-8.35
38	SLU 66	23	-8	2234	604.97	0.62	-8.25
38	SLU 67	23	-3	2244	606.9	0.61	-8.31
38	SLU 68	24	0	2251	608.19	0.61	-8.35
38	SLU 69	23	-8	2234	604.97	0.62	-8.25
38	SLU 70	23	-3	2244	606.9	0.61	-8.31
38	SLU 71	23	-8	2234	604.97	0.62	-8.25
38	SLU 72	23	-3	2244	606.9	0.61	-8.31
38	SLU 73	24	-1	2521	676.94	0.77	-8.67
38	SLU 74	24	-9	2505	673.72	0.78	-8.58
38	SLU 75	24	-4	2515	675.65	0.77	-8.63
38	SLU 76	24	-1	2521	676.94	0.77	-8.67
38	SLU 77	24	-9	2505	673.72	0.78	-8.58
38	SLU 78	24	-4	2515	675.65	0.77	-8.63
38	SLU 79	24	-9	2505	673.72	0.78	-8.58
38	SLU 80	24	-4	2515	675.65	0.77	-8.63
38	SLU 81	24	-10	2621	703.18	0.85	-8.72
38	SLU 82	25	-5	2631	705.12	0.84	-8.77
38	SLU 83	24	-10	2621	703.18	0.85	-8.72
38	SLU 84	25	-5	2631	705.12	0.84	-8.77
38	SLE RA 1	18	-6	1674	454.07	0.45	-6.28
38	SLE RA 2	18	-1	1685	456.21	0.44	-6.34
38	SLE RA 3	18	-6	1674	454.07	0.45	-6.28
38	SLE RA 4	18	-3	1681	455.35	0.45	-6.31
38	SLE RA 5	18	-1	1685	456.21	0.44	-6.34
38	SLE RA 6	18	-6	1674	454.07	0.45	-6.28
38	SLE RA 7	18	-3	1681	455.35	0.45	-6.31
38	SLE RA 8	18	-6	1674	454.07	0.45	-6.28
38	SLE RA 9	18	-3	1681	455.35	0.45	-6.31
38	SLE RA 10	18	-2	1866	502.05	0.55	-6.56
38	SLE RA 11	18	-7	1855	499.9	0.56	-6.49
38	SLE RA 12	18	-4	1861	501.19	0.55	-6.53
38	SLE RA 13	18	-2	1866	502.05	0.55	-6.56
38	SLE RA 14	18	-7	1855	499.9	0.56	-6.49
38	SLE RA 15	18	-4	1861	501.19	0.55	-6.53
38	SLE RA 16	18	-7	1855	499.9	0.56	-6.49
38	SLE RA 17	18	-4	1861	501.19	0.55	-6.53
38	SLE RA 18	18	-7	1932	519.54	0.6	-6.59
38	SLE RA 19	19	-4	1939	520.83	0.6	-6.62
38	SLE RA 20	18	-7	1932	519.54	0.6	-6.59
38	SLE RA 21	19	-4	1939	520.83	0.6	-6.62
38	SLE FR 1	18	-6	1674	454.07	0.45	-6.28
38	SLE FR 2	18	-5	1676	454.5	0.45	-6.29
38	SLE FR 3	18	-6	1674	454.07	0.45	-6.28
38	SLE FR 4	18	-5	1754	474.14	0.5	-6.38

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
38	SLE FR 5	18	-6	1752	473.71	0.5	-6.37
38	SLE FR 6	18	-7	1803	486.8	0.53	-6.43
38	SLE QP 1	18	-6	1674	454.07	0.45	-6.28
38	SLE QP 2	18	-6	1752	473.71	0.5	-6.37
38	SLD 1	139	14	1683	455.22	1.16	-48.77
38	SLD 2	168	36	1692	457.13	1.13	-58.78
38	SLD 3	132	-69	1495	417.78	1.26	-46.65
38	SLD 4	161	-47	1504	419.69	1.24	-56.66
38	SLD 5	54	118	2014	524.24	0.55	-18.61
38	SLD 6	84	140	2023	526.22	0.53	-29.01
38	SLD 7	32	-159	1385	399.44	0.89	-11.54
38	SLD 8	62	-137	1394	401.43	0.86	-21.93
38	SLD 9	-26	124	2109	545.99	0.13	9.19
38	SLD 10	4	146	2118	547.97	0.11	-1.2
38	SLD 11	-48	-153	1480	421.19	0.47	16.27
38	SLD 12	-18	-130	1489	423.18	0.44	5.88
38	SLD 13	-126	35	1999	527.72	-0.24	43.92
38	SLD 14	-97	57	2009	529.63	-0.26	33.91
38	SLD 15	-132	-48	1811	490.28	-0.14	46.04
38	SLD 16	-103	-27	1820	492.19	-0.16	36.03
38	SLV 1	295	39	1594	431.24	2	-103.21
38	SLV 2	360	89	1615	435.59	1.95	-126.04
38	SLV 3	280	-149	1166	346.19	2.23	-98.4
38	SLV 4	345	-100	1187	350.55	2.18	-121.22
38	SLV 5	99	275	2346	588.36	0.62	-34.35
38	SLV 6	168	326	2368	592.86	0.57	-57.94
38	SLV 7	49	-353	918	304.87	1.38	-18.3
38	SLV 8	118	-302	940	309.37	1.33	-41.9
38	SLV 9	-82	289	2563	638.05	-0.34	29.16
38	SLV 10	-14	341	2585	642.55	-0.39	5.57
38	SLV 11	-132	-339	1135	354.56	0.43	45.2
38	SLV 12	-64	-288	1157	359.06	0.38	21.61
38	SLV 13	-310	87	2316	596.87	-1.19	108.49
38	SLV 14	-244	137	2337	601.23	-1.24	85.66
38	SLV 15	-325	-101	1888	511.82	-0.96	113.3
38	SLV 16	-259	-52	1909	516.18	-1.01	90.47
38	CRTFP Ux+	0	0	0	0	0	0
38	CRTFP Ux-	0	0	0	0	0	0
38	CRTFP Uy+	0	0	0	0	0	0
38	CRTFP Uy-	0	0	0	0	0	0
39	SLU 1	18	-9	1614	428.31	-0.33	-6.31
39	SLU 2	18	-1	1631	431.63	-0.35	-6.41
39	SLU 3	18	-9	1614	428.31	-0.33	-6.31
39	SLU 4	18	-4	1625	430.31	-0.34	-6.37
39	SLU 5	18	-1	1631	431.63	-0.35	-6.41
39	SLU 6	18	-9	1614	428.31	-0.33	-6.31
39	SLU 7	18	-4	1625	430.31	-0.34	-6.37
39	SLU 8	18	-9	1614	428.31	-0.33	-6.31
39	SLU 9	18	-4	1625	430.31	-0.34	-6.37
39	SLU 10	19	-3	1899	497.5	-0.34	-6.73
39	SLU 11	18	-11	1883	494.18	-0.32	-6.63
39	SLU 12	19	-6	1893	496.17	-0.33	-6.69
39	SLU 13	19	-3	1899	497.5	-0.34	-6.73
39	SLU 14	18	-11	1883	494.18	-0.32	-6.63
39	SLU 15	19	-6	1893	496.17	-0.33	-6.69
39	SLU 16	18	-11	1883	494.18	-0.32	-6.63
39	SLU 17	19	-6	1893	496.17	-0.33	-6.69
39	SLU 18	19	-12	1997	522.4	-0.32	-6.77
39	SLU 19	19	-7	2007	524.4	-0.33	-6.83
39	SLU 20	19	-12	1997	522.4	-0.32	-6.77
39	SLU 21	19	-7	2007	524.4	-0.33	-6.83
39	SLU 22	19	-11	1815	477.62	-0.33	-6.64
39	SLU 23	19	-2	1832	480.94	-0.35	-6.73
39	SLU 24	19	-11	1815	477.62	-0.33	-6.64
39	SLU 25	19	-5	1825	479.61	-0.35	-6.7
39	SLU 26	19	-2	1832	480.94	-0.35	-6.73
39	SLU 27	19	-11	1815	477.62	-0.33	-6.64
39	SLU 28	19	-5	1825	479.61	-0.35	-6.7
39	SLU 29	19	-11	1815	477.62	-0.33	-6.64
39	SLU 30	19	-5	1825	479.61	-0.35	-6.7
39	SLU 31	20	-4	2100	546.8	-0.35	-7.05
39	SLU 32	19	-12	2083	543.48	-0.32	-6.95
39	SLU 33	20	-7	2093	545.47	-0.34	-7.01
39	SLU 34	20	-4	2100	546.8	-0.35	-7.05
39	SLU 35	19	-12	2083	543.48	-0.32	-6.95
39	SLU 36	20	-7	2093	545.47	-0.34	-7.01
39	SLU 37	19	-12	2083	543.48	-0.32	-6.95
39	SLU 38	20	-7	2093	545.47	-0.34	-7.01
39	SLU 39	20	-13	2198	571.71	-0.32	-7.09
39	SLU 40	20	-8	2208	573.7	-0.33	-7.15
39	SLU 41	20	-13	2198	571.71	-0.32	-7.09
39	SLU 42	20	-8	2208	573.7	-0.33	-7.15
39	SLU 43	23	-11	2030	539.9	-0.43	-8.1
39	SLU 44	23	-3	2047	543.22	-0.45	-8.2
39	SLU 45	23	-11	2030	539.9	-0.43	-8.1
39	SLU 46	23	-6	2040	541.9	-0.44	-8.16

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
39	SLU 47	23	-3	2047	543.22	-0.45	-8.2
39	SLU 48	23	-11	2030	539.9	-0.43	-8.1
39	SLU 49	23	-6	2040	541.9	-0.44	-8.16
39	SLU 50	23	-11	2030	539.9	-0.43	-8.1
39	SLU 51	23	-6	2040	541.9	-0.44	-8.16
39	SLU 52	24	-5	2315	609.09	-0.44	-8.51
39	SLU 53	23	-13	2298	605.77	-0.42	-8.42
39	SLU 54	24	-8	2308	607.76	-0.43	-8.47
39	SLU 55	24	-5	2315	609.09	-0.44	-8.51
39	SLU 56	23	-13	2298	605.77	-0.42	-8.42
39	SLU 57	24	-8	2308	607.76	-0.43	-8.47
39	SLU 58	23	-13	2298	605.77	-0.42	-8.42
39	SLU 59	24	-8	2308	607.76	-0.43	-8.47
39	SLU 60	24	-14	2413	633.99	-0.41	-8.55
39	SLU 61	24	-9	2423	635.99	-0.43	-8.61
39	SLU 62	24	-14	2413	633.99	-0.41	-8.55
39	SLU 63	24	-9	2423	635.99	-0.43	-8.61
39	SLU 64	24	-13	2230	589.21	-0.43	-8.42
39	SLU 65	24	-4	2247	592.53	-0.45	-8.52
39	SLU 66	24	-13	2230	589.21	-0.43	-8.42
39	SLU 67	24	-8	2241	591.2	-0.44	-8.48
39	SLU 68	24	-4	2247	592.53	-0.45	-8.52
39	SLU 69	24	-13	2230	589.21	-0.43	-8.42
39	SLU 70	24	-8	2241	591.2	-0.44	-8.48
39	SLU 71	24	-13	2230	589.21	-0.43	-8.42
39	SLU 72	24	-8	2241	591.2	-0.44	-8.48
39	SLU 73	25	-6	2515	658.39	-0.44	-8.84
39	SLU 74	24	-15	2499	655.07	-0.42	-8.74
39	SLU 75	25	-10	2509	657.06	-0.44	-8.8
39	SLU 76	25	-6	2515	658.39	-0.44	-8.84
39	SLU 77	24	-15	2499	655.07	-0.42	-8.74
39	SLU 78	25	-10	2509	657.06	-0.44	-8.8
39	SLU 79	24	-15	2499	655.07	-0.42	-8.74
39	SLU 80	25	-10	2509	657.06	-0.44	-8.8
39	SLU 81	25	-16	2613	683.3	-0.42	-8.87
39	SLU 82	25	-10	2624	685.29	-0.43	-8.93
39	SLU 83	25	-16	2613	683.3	-0.42	-8.87
39	SLU 84	25	-10	2624	685.29	-0.43	-8.93
39	SLE RA 1	18	-10	1672	442.4	-0.33	-6.41
39	SLE RA 2	18	-4	1683	444.61	-0.34	-6.47
39	SLE RA 3	18	-10	1672	442.4	-0.33	-6.41
39	SLE RA 4	18	-6	1678	443.73	-0.34	-6.45
39	SLE RA 5	18	-4	1683	444.61	-0.34	-6.47
39	SLE RA 6	18	-10	1672	442.4	-0.33	-6.41
39	SLE RA 7	18	-6	1678	443.73	-0.34	-6.45
39	SLE RA 8	18	-10	1672	442.4	-0.33	-6.41
39	SLE RA 9	18	-6	1678	443.73	-0.34	-6.45
39	SLE RA 10	19	-5	1862	488.52	-0.34	-6.68
39	SLE RA 11	18	-11	1850	486.31	-0.32	-6.62
39	SLE RA 12	19	-7	1857	487.64	-0.33	-6.66
39	SLE RA 13	19	-5	1862	488.52	-0.34	-6.68
39	SLE RA 14	18	-11	1850	486.31	-0.32	-6.62
39	SLE RA 15	19	-7	1857	487.64	-0.33	-6.66
39	SLE RA 16	18	-11	1850	486.31	-0.32	-6.62
39	SLE RA 17	19	-7	1857	487.64	-0.33	-6.66
39	SLE RA 18	19	-11	1927	505.13	-0.32	-6.71
39	SLE RA 19	19	-8	1934	506.46	-0.33	-6.75
39	SLE RA 20	19	-11	1927	505.13	-0.32	-6.71
39	SLE RA 21	19	-8	1934	506.46	-0.33	-6.75
39	SLE FR 1	18	-10	1672	442.4	-0.33	-6.41
39	SLE FR 2	18	-8	1674	442.84	-0.33	-6.42
39	SLE FR 3	18	-10	1672	442.4	-0.33	-6.41
39	SLE FR 4	18	-9	1751	461.66	-0.33	-6.51
39	SLE FR 5	18	-10	1748	461.22	-0.33	-6.5
39	SLE FR 6	18	-10	1799	473.76	-0.33	-6.56
39	SLE QP 1	18	-10	1672	442.4	-0.33	-6.41
39	SLE QP 2	18	-10	1748	461.22	-0.33	-6.5
39	SLD 1	139	10	1659	437.37	0.42	-48.85
39	SLD 2	168	35	1669	439.45	0.39	-58.86
39	SLD 3	132	-79	1466	399.18	0.66	-46.7
39	SLD 4	161	-55	1475	401.26	0.64	-56.71
39	SLD 5	54	123	2012	511.21	-0.46	-18.77
39	SLD 6	84	149	2022	513.37	-0.49	-29.16
39	SLD 7	31	-176	1366	383.92	0.35	-11.61
39	SLD 8	61	-150	1376	386.08	0.32	-22
39	SLD 9	-25	130	2120	536.35	-0.98	9
39	SLD 10	5	156	2130	538.51	-1	-1.38
39	SLD 11	-48	-169	1475	409.06	-0.16	16.16
39	SLD 12	-18	-143	1485	411.22	-0.19	5.77
39	SLD 13	-125	35	2021	521.17	-1.29	43.72
39	SLD 14	-96	59	2031	523.26	-1.32	33.71
39	SLD 15	-132	-55	1827	482.99	-1.05	45.87
39	SLD 16	-103	-30	1837	485.07	-1.07	35.86
39	SLV 1	295	36	1544	406.49	1.38	-103.23
39	SLV 2	360	92	1566	411.24	1.32	-126.05
39	SLV 3	279	-168	1104	319.74	1.93	-98.36

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
39	SLV 4	345	-112	1126	324.48	1.87	-121.18
39	SLV 5	100	292	2346	574.63	-0.63	-34.53
39	SLV 6	168	350	2369	579.54	-0.7	-58.11
39	SLV 7	49	-387	880	285.46	1.22	-18.31
39	SLV 8	117	-329	903	290.37	1.15	-41.89
39	SLV 9	-81	309	2594	632.07	-1.81	28.89
39	SLV 10	-13	367	2617	636.97	-1.87	5.31
39	SLV 11	-132	-370	1128	342.9	0.04	45.12
39	SLV 12	-64	-312	1151	347.8	-0.02	21.54
39	SLV 13	-309	91	2370	597.95	-2.53	108.18
39	SLV 14	-243	148	2393	602.7	-2.59	85.37
39	SLV 15	-324	-112	1930	511.2	-1.97	113.05
39	SLV 16	-258	-56	1953	515.94	-2.03	90.24
39	CRTFP Ux+	0	0	0	0	0	0
39	CRTFP Ux-	0	0	0	0	0	0
39	CRTFP Uy+	0	0	0	0	0	0
39	CRTFP Uy-	0	0	0	0	0	0
40	SLU 1	18	-13	1637	437.61	-1.25	-6.37
40	SLU 2	18	-4	1655	441.3	-1.29	-6.47
40	SLU 3	18	-13	1637	437.61	-1.25	-6.37
40	SLU 4	18	-8	1648	439.83	-1.27	-6.43
40	SLU 5	18	-4	1655	441.3	-1.29	-6.47
40	SLU 6	18	-13	1637	437.61	-1.25	-6.37
40	SLU 7	18	-8	1648	439.83	-1.27	-6.43
40	SLU 8	18	-13	1637	437.61	-1.25	-6.37
40	SLU 9	18	-8	1648	439.83	-1.27	-6.43
40	SLU 10	19	-7	1926	508.46	-1.47	-6.78
40	SLU 11	19	-16	1908	504.77	-1.43	-6.67
40	SLU 12	19	-11	1919	506.98	-1.45	-6.73
40	SLU 13	19	-7	1926	508.46	-1.47	-6.78
40	SLU 14	19	-16	1908	504.77	-1.43	-6.67
40	SLU 15	19	-11	1919	506.98	-1.45	-6.73
40	SLU 16	19	-16	1908	504.77	-1.43	-6.67
40	SLU 17	19	-11	1919	506.98	-1.45	-6.73
40	SLU 18	19	-17	2024	533.55	-1.51	-6.8
40	SLU 19	19	-12	2034	535.76	-1.53	-6.86
40	SLU 20	19	-17	2024	533.55	-1.51	-6.8
40	SLU 21	19	-12	2034	535.76	-1.53	-6.86
40	SLU 22	19	-15	1840	487.95	-1.4	-6.68
40	SLU 23	19	-6	1858	491.64	-1.43	-6.79
40	SLU 24	19	-15	1840	487.95	-1.4	-6.68
40	SLU 25	19	-10	1851	490.17	-1.42	-6.75
40	SLU 26	19	-6	1858	491.64	-1.43	-6.79
40	SLU 27	19	-15	1840	487.95	-1.4	-6.68
40	SLU 28	19	-10	1851	490.17	-1.42	-6.75
40	SLU 29	19	-15	1840	487.95	-1.4	-6.68
40	SLU 30	19	-10	1851	490.17	-1.42	-6.75
40	SLU 31	20	-9	2128	558.8	-1.61	-7.09
40	SLU 32	19	-18	2110	555.11	-1.57	-6.99
40	SLU 33	20	-13	2121	557.32	-1.6	-7.05
40	SLU 34	20	-9	2128	558.8	-1.61	-7.09
40	SLU 35	19	-18	2110	555.11	-1.57	-6.99
40	SLU 36	20	-13	2121	557.32	-1.6	-7.05
40	SLU 37	19	-18	2110	555.11	-1.57	-6.99
40	SLU 38	20	-13	2121	557.32	-1.6	-7.05
40	SLU 39	20	-20	2226	583.89	-1.65	-7.12
40	SLU 40	20	-14	2237	586.1	-1.67	-7.18
40	SLU 41	20	-20	2226	583.89	-1.65	-7.12
40	SLU 42	20	-14	2237	586.1	-1.67	-7.18
40	SLU 43	23	-17	2059	551.64	-1.58	-8.17
40	SLU 44	23	-7	2077	555.33	-1.61	-8.27
40	SLU 45	23	-17	2059	551.64	-1.58	-8.17
40	SLU 46	23	-11	2070	553.85	-1.6	-8.23
40	SLU 47	23	-7	2077	555.33	-1.61	-8.27
40	SLU 48	23	-17	2059	551.64	-1.58	-8.17
40	SLU 49	23	-11	2070	553.85	-1.6	-8.23
40	SLU 50	23	-17	2059	551.64	-1.58	-8.17
40	SLU 51	23	-11	2070	553.85	-1.6	-8.23
40	SLU 52	24	-10	2347	622.48	-1.79	-8.58
40	SLU 53	24	-19	2330	618.79	-1.76	-8.48
40	SLU 54	24	-14	2340	621.01	-1.78	-8.54
40	SLU 55	24	-10	2347	622.48	-1.79	-8.58
40	SLU 56	24	-19	2330	618.79	-1.76	-8.48
40	SLU 57	24	-14	2340	621.01	-1.78	-8.54
40	SLU 58	24	-19	2330	618.79	-1.76	-8.48
40	SLU 59	24	-14	2340	621.01	-1.78	-8.54
40	SLU 60	24	-21	2446	647.57	-1.83	-8.61
40	SLU 61	24	-15	2456	649.79	-1.85	-8.67
40	SLU 62	24	-21	2446	647.57	-1.83	-8.61
40	SLU 63	24	-15	2456	649.79	-1.85	-8.67
40	SLU 64	24	-19	2262	601.98	-1.72	-8.49
40	SLU 65	24	-9	2279	605.67	-1.76	-8.59
40	SLU 66	24	-19	2262	601.98	-1.72	-8.49
40	SLU 67	24	-13	2272	604.19	-1.74	-8.55
40	SLU 68	24	-9	2279	605.67	-1.76	-8.59
40	SLU 69	24	-19	2262	601.98	-1.72	-8.49

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
40	SLU 70	24	-13	2272	604.19	-1.74	-8.55
40	SLU 71	24	-19	2262	601.98	-1.72	-8.49
40	SLU 72	24	-13	2272	604.19	-1.74	-8.55
40	SLU 73	25	-12	2550	672.82	-1.94	-8.89
40	SLU 74	24	-22	2532	669.13	-1.9	-8.79
40	SLU 75	25	-16	2543	671.35	-1.92	-8.85
40	SLU 76	25	-12	2550	672.82	-1.94	-8.89
40	SLU 77	24	-22	2532	669.13	-1.9	-8.79
40	SLU 78	25	-16	2543	671.35	-1.92	-8.85
40	SLU 79	24	-22	2532	669.13	-1.9	-8.79
40	SLU 80	25	-16	2543	671.35	-1.92	-8.85
40	SLU 81	25	-23	2648	697.91	-1.98	-8.92
40	SLU 82	25	-17	2659	700.13	-2	-8.98
40	SLU 83	25	-23	2648	697.91	-1.98	-8.92
40	SLU 84	25	-17	2659	700.13	-2	-8.98
40	SLE RA 1	18	-14	1695	452	-1.29	-6.46
40	SLE RA 2	18	-8	1707	454.46	-1.32	-6.53
40	SLE RA 3	18	-14	1695	452	-1.29	-6.46
40	SLE RA 4	18	-10	1702	453.47	-1.31	-6.5
40	SLE RA 5	18	-8	1707	454.46	-1.32	-6.53
40	SLE RA 6	18	-14	1695	452	-1.29	-6.46
40	SLE RA 7	18	-10	1702	453.47	-1.31	-6.5
40	SLE RA 8	18	-14	1695	452	-1.29	-6.46
40	SLE RA 9	18	-10	1702	453.47	-1.31	-6.5
40	SLE RA 10	19	-10	1887	499.23	-1.44	-6.73
40	SLE RA 11	19	-16	1876	496.77	-1.41	-6.66
40	SLE RA 12	19	-12	1883	498.24	-1.43	-6.7
40	SLE RA 13	19	-10	1887	499.23	-1.44	-6.73
40	SLE RA 14	19	-16	1876	496.77	-1.41	-6.66
40	SLE RA 15	19	-12	1883	498.24	-1.43	-6.7
40	SLE RA 16	19	-16	1876	496.77	-1.41	-6.66
40	SLE RA 17	19	-12	1883	498.24	-1.43	-6.7
40	SLE RA 18	19	-17	1953	515.95	-1.46	-6.75
40	SLE RA 19	19	-13	1960	517.43	-1.48	-6.79
40	SLE RA 20	19	-17	1953	515.95	-1.46	-6.75
40	SLE RA 21	19	-13	1960	517.43	-1.48	-6.79
40	SLE FR 1	18	-14	1695	452	-1.29	-6.46
40	SLE FR 2	18	-13	1698	452.49	-1.3	-6.47
40	SLE FR 3	18	-14	1695	452	-1.29	-6.46
40	SLE FR 4	18	-13	1775	471.68	-1.35	-6.56
40	SLE FR 5	18	-15	1773	471.18	-1.34	-6.55
40	SLE FR 6	18	-15	1824	483.97	-1.38	-6.6
40	SLE QP 1	18	-14	1695	452	-1.29	-6.46
40	SLE QP 2	18	-15	1773	471.18	-1.34	-6.55
40	SLD 1	139	6	1660	439.89	-0.49	-48.85
40	SLD 2	168	34	1671	442.25	-0.53	-58.85
40	SLD 3	132	-91	1457	397.86	-0.09	-46.67
40	SLD 4	161	-63	1468	400.22	-0.13	-56.67
40	SLD 5	54	129	2043	524.67	-1.68	-18.85
40	SLD 6	84	158	2054	527.12	-1.72	-29.23
40	SLD 7	31	-196	1366	384.56	-0.35	-11.59
40	SLD 8	61	-167	1377	387.02	-0.38	-21.97
40	SLD 9	-25	137	2168	555.35	-2.3	8.88
40	SLD 10	5	166	2179	557.8	-2.34	-1.5
40	SLD 11	-48	-187	1491	415.24	-0.97	16.14
40	SLD 12	-18	-159	1502	417.69	-1	5.76
40	SLD 13	-125	34	2077	542.15	-2.56	43.58
40	SLD 14	-96	62	2088	544.51	-2.59	33.58
40	SLD 15	-132	-63	1874	500.12	-2.16	45.75
40	SLD 16	-103	-36	1885	502.48	-2.19	35.76
40	SLV 1	294	32	1514	399.42	0.6	-103.16
40	SLV 2	360	96	1539	404.81	0.52	-125.95
40	SLV 3	279	-189	1053	303.94	1.51	-98.22
40	SLV 4	344	-126	1077	309.33	1.43	-121.02
40	SLV 5	101	312	2386	592.49	-2.11	-34.66
40	SLV 6	169	377	2411	598.06	-2.19	-58.22
40	SLV 7	48	-426	848	274.22	0.92	-18.2
40	SLV 8	116	-360	873	279.79	0.84	-41.76
40	SLV 9	-80	331	2672	662.58	-3.52	28.67
40	SLV 10	-12	396	2697	668.14	-3.6	5.11
40	SLV 11	-133	-407	1134	344.31	-0.5	45.12
40	SLV 12	-64	-341	1159	349.87	-0.58	21.57
40	SLV 13	-308	96	2468	633.04	-4.12	107.92
40	SLV 14	-242	159	2492	638.42	-4.2	85.13
40	SLV 15	-324	-125	2006	537.56	-3.21	112.86
40	SLV 16	-258	-62	2031	542.94	-3.29	90.07
40	CRTFP Ux+	0	0	0	0	0	0
40	CRTFP Ux-	0	0	0	0	0	0
40	CRTFP Uy+	0	0	0	0	0	0
40	CRTFP Uy-	0	0	0	0	0	0
41	SLU 1	18	-18	1688	469.79	-2.21	-6.35
41	SLU 2	18	-8	1707	474.13	-2.26	-6.46
41	SLU 3	18	-18	1688	469.79	-2.21	-6.35
41	SLU 4	18	-12	1700	472.4	-2.24	-6.42
41	SLU 5	18	-8	1707	474.13	-2.26	-6.46
41	SLU 6	18	-18	1688	469.79	-2.21	-6.35

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
41	SLU 7	18	-12	1700	472.4	-2.24	-6.42
41	SLU 8	18	-18	1688	469.79	-2.21	-6.35
41	SLU 9	18	-12	1700	472.4	-2.24	-6.42
41	SLU 10	19	-12	1986	547.2	-2.63	-6.75
41	SLU 11	18	-22	1967	542.86	-2.58	-6.64
41	SLU 12	19	-16	1978	545.46	-2.61	-6.7
41	SLU 13	19	-12	1986	547.2	-2.63	-6.75
41	SLU 14	18	-22	1967	542.86	-2.58	-6.64
41	SLU 15	19	-16	1978	545.46	-2.61	-6.7
41	SLU 16	18	-22	1967	542.86	-2.58	-6.64
41	SLU 17	19	-16	1978	545.46	-2.61	-6.7
41	SLU 18	19	-24	2087	574.17	-2.74	-6.76
41	SLU 19	19	-18	2098	576.78	-2.78	-6.83
41	SLU 20	19	-24	2087	574.17	-2.74	-6.76
41	SLU 21	19	-18	2098	576.78	-2.78	-6.83
41	SLU 22	18	-21	1897	524.65	-2.5	-6.66
41	SLU 23	19	-11	1916	528.99	-2.55	-6.76
41	SLU 24	18	-21	1897	524.65	-2.5	-6.66
41	SLU 25	19	-15	1909	527.25	-2.53	-6.72
41	SLU 26	19	-11	1916	528.99	-2.55	-6.76
41	SLU 27	18	-21	1897	524.65	-2.5	-6.66
41	SLU 28	19	-15	1909	527.25	-2.53	-6.72
41	SLU 29	18	-21	1897	524.65	-2.5	-6.66
41	SLU 30	19	-15	1909	527.25	-2.53	-6.72
41	SLU 31	20	-15	2195	602.06	-2.93	-7.05
41	SLU 32	19	-25	2176	597.71	-2.88	-6.94
41	SLU 33	19	-19	2187	600.32	-2.91	-7.01
41	SLU 34	20	-15	2195	602.06	-2.93	-7.05
41	SLU 35	19	-25	2176	597.71	-2.88	-6.94
41	SLU 36	19	-19	2187	600.32	-2.91	-7.01
41	SLU 37	19	-25	2176	597.71	-2.88	-6.94
41	SLU 38	19	-19	2187	600.32	-2.91	-7.01
41	SLU 39	19	-27	2296	629.03	-3.04	-7.07
41	SLU 40	20	-21	2307	631.63	-3.07	-7.13
41	SLU 41	19	-27	2296	629.03	-3.04	-7.07
41	SLU 42	20	-21	2307	631.63	-3.07	-7.13
41	SLU 43	23	-22	2123	591.92	-2.77	-8.16
41	SLU 44	23	-12	2142	596.26	-2.82	-8.26
41	SLU 45	23	-22	2123	591.92	-2.77	-8.16
41	SLU 46	23	-16	2135	594.53	-2.8	-8.22
41	SLU 47	23	-12	2142	596.26	-2.82	-8.26
41	SLU 48	23	-22	2123	591.92	-2.77	-8.16
41	SLU 49	23	-16	2135	594.53	-2.8	-8.22
41	SLU 50	23	-22	2123	591.92	-2.77	-8.16
41	SLU 51	23	-16	2135	594.53	-2.8	-8.22
41	SLU 52	24	-16	2421	669.33	-3.2	-8.55
41	SLU 53	23	-26	2402	664.99	-3.15	-8.44
41	SLU 54	24	-20	2413	667.59	-3.18	-8.51
41	SLU 55	24	-16	2421	669.33	-3.2	-8.55
41	SLU 56	23	-26	2402	664.99	-3.15	-8.44
41	SLU 57	24	-20	2413	667.59	-3.18	-8.51
41	SLU 58	23	-26	2402	664.99	-3.15	-8.44
41	SLU 59	24	-20	2413	667.59	-3.18	-8.51
41	SLU 60	24	-28	2521	696.3	-3.31	-8.56
41	SLU 61	24	-22	2533	698.91	-3.34	-8.63
41	SLU 62	24	-28	2521	696.3	-3.31	-8.56
41	SLU 63	24	-22	2533	698.91	-3.34	-8.63
41	SLU 64	24	-25	2332	646.78	-3.06	-8.46
41	SLU 65	24	-15	2351	651.12	-3.11	-8.57
41	SLU 66	24	-25	2332	646.78	-3.06	-8.46
41	SLU 67	24	-19	2344	649.38	-3.09	-8.52
41	SLU 68	24	-15	2351	651.12	-3.11	-8.57
41	SLU 69	24	-25	2332	646.78	-3.06	-8.46
41	SLU 70	24	-19	2344	649.38	-3.09	-8.52
41	SLU 71	24	-25	2332	646.78	-3.06	-8.46
41	SLU 72	24	-19	2344	649.38	-3.09	-8.52
41	SLU 73	25	-19	2630	724.19	-3.49	-8.85
41	SLU 74	24	-29	2611	719.84	-3.44	-8.75
41	SLU 75	24	-23	2622	722.45	-3.47	-8.81
41	SLU 76	25	-19	2630	724.19	-3.49	-8.85
41	SLU 77	24	-29	2611	719.84	-3.44	-8.75
41	SLU 78	24	-23	2622	722.45	-3.47	-8.81
41	SLU 79	24	-29	2611	719.84	-3.44	-8.75
41	SLU 80	24	-23	2622	722.45	-3.47	-8.81
41	SLU 81	25	-31	2730	751.16	-3.6	-8.87
41	SLU 82	25	-25	2742	753.76	-3.63	-8.93
41	SLU 83	25	-31	2730	751.16	-3.6	-8.87
41	SLU 84	25	-25	2742	753.76	-3.63	-8.93
41	SLE RA 1	18	-19	1748	485.46	-2.29	-6.44
41	SLE RA 2	18	-12	1761	488.36	-2.33	-6.51
41	SLE RA 3	18	-19	1748	485.46	-2.29	-6.44
41	SLE RA 4	18	-15	1756	487.2	-2.31	-6.48
41	SLE RA 5	18	-12	1761	488.36	-2.33	-6.51
41	SLE RA 6	18	-19	1748	485.46	-2.29	-6.44
41	SLE RA 7	18	-15	1756	487.2	-2.31	-6.48
41	SLE RA 8	18	-19	1748	485.46	-2.29	-6.44

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
41	SLE RA 9	18	-15	1756	487.2	-2.31	-6.48
41	SLE RA 10	19	-15	1947	537.07	-2.58	-6.7
41	SLE RA 11	18	-21	1934	534.18	-2.54	-6.63
41	SLE RA 12	19	-17	1941	535.91	-2.56	-6.67
41	SLE RA 13	19	-15	1947	537.07	-2.58	-6.7
41	SLE RA 14	18	-21	1934	534.18	-2.54	-6.63
41	SLE RA 15	19	-17	1941	535.91	-2.56	-6.67
41	SLE RA 16	18	-21	1934	534.18	-2.54	-6.63
41	SLE RA 17	19	-17	1941	535.91	-2.56	-6.67
41	SLE RA 18	19	-23	2014	555.05	-2.65	-6.71
41	SLE RA 19	19	-18	2021	556.79	-2.67	-6.76
41	SLE RA 20	19	-23	2014	555.05	-2.65	-6.71
41	SLE RA 21	19	-18	2021	556.79	-2.67	-6.76
41	SLE FR 1	18	-19	1748	485.46	-2.29	-6.44
41	SLE FR 2	18	-17	1751	486.04	-2.3	-6.45
41	SLE FR 3	18	-19	1748	485.46	-2.29	-6.44
41	SLE FR 4	18	-19	1830	506.92	-2.41	-6.54
41	SLE FR 5	18	-20	1828	506.34	-2.4	-6.52
41	SLE FR 6	18	-21	1881	520.26	-2.47	-6.58
41	SLE QP 1	18	-19	1748	485.46	-2.29	-6.44
41	SLE QP 2	18	-20	1828	506.34	-2.4	-6.52
41	SLD 1	139	2	1688	465.28	-1.44	-48.77
41	SLD 2	168	33	1700	468.07	-1.48	-58.75
41	SLD 3	132	-104	1471	416.09	-0.89	-46.55
41	SLD 4	161	-73	1483	418.89	-0.93	-56.53
41	SLD 5	55	136	2111	567.59	-2.93	-18.88
41	SLD 6	84	168	2123	570.49	-2.97	-29.24
41	SLD 7	31	-217	1387	403.64	-1.1	-11.48
41	SLD 8	61	-185	1399	406.54	-1.14	-21.85
41	SLD 9	-24	145	2256	606.14	-3.66	8.8
41	SLD 10	5	177	2268	609.04	-3.7	-1.56
41	SLD 11	-48	-208	1532	442.2	-1.83	16.2
41	SLD 12	-18	-175	1544	445.1	-1.87	5.83
41	SLD 13	-124	33	2172	593.8	-3.87	43.49
41	SLD 14	-96	64	2184	596.59	-3.91	33.5
41	SLD 15	-132	-73	1955	544.61	-3.32	45.71
41	SLD 16	-103	-42	1967	547.41	-3.36	35.72
41	SLV 1	294	29	1508	412.21	-0.2	-103
41	SLV 2	360	100	1535	418.58	-0.3	-125.77
41	SLV 3	278	-211	1015	300.49	1.05	-97.97
41	SLV 4	344	-140	1042	306.86	0.95	-120.74
41	SLV 5	101	333	2470	645.2	-3.6	-34.74
41	SLV 6	169	407	2498	651.78	-3.7	-58.28
41	SLV 7	47	-468	826	272.82	0.56	-17.98
41	SLV 8	115	-394	854	279.4	0.46	-41.51
41	SLV 9	-79	355	2802	733.28	-5.26	28.47
41	SLV 10	-11	428	2830	739.86	-5.36	4.93
41	SLV 11	-133	-446	1157	360.9	-1.1	45.23
41	SLV 12	-65	-373	1185	367.48	-1.2	21.7
41	SLV 13	-307	100	2613	705.82	-5.75	107.7
41	SLV 14	-242	171	2640	712.19	-5.85	84.93
41	SLV 15	-324	-140	2120	594.1	-4.5	112.72
41	SLV 16	-258	-69	2147	600.47	-4.6	89.96
41	CRTFP Ux+	0	0	0	0	0	0
41	CRTFP Ux-	0	0	0	0	0	0
41	CRTFP Uy+	0	0	0	0	0	0
41	CRTFP Uy-	0	0	0	0	0	0
42	SLU 1	15	-19	1522	450.95	40.54	-4.87
42	SLU 2	16	-10	1540	455.45	40.99	-5.24
42	SLU 3	15	-19	1522	450.95	40.54	-4.87
42	SLU 4	15	-13	1533	453.65	40.81	-5.09
42	SLU 5	16	-10	1540	455.45	40.99	-5.24
42	SLU 6	15	-19	1522	450.95	40.54	-4.87
42	SLU 7	15	-13	1533	453.65	40.81	-5.09
42	SLU 8	15	-19	1522	450.95	40.54	-4.87
42	SLU 9	15	-13	1533	453.65	40.81	-5.09
42	SLU 10	16	-14	1791	527.17	47.68	-5.34
42	SLU 11	16	-23	1774	522.67	47.22	-4.97
42	SLU 12	16	-18	1784	525.37	47.49	-5.19
42	SLU 13	16	-14	1791	527.17	47.68	-5.34
42	SLU 14	16	-23	1774	522.67	47.22	-4.97
42	SLU 15	16	-18	1784	525.37	47.49	-5.19
42	SLU 16	16	-23	1774	522.67	47.22	-4.97
42	SLU 17	16	-18	1784	525.37	47.49	-5.19
42	SLU 18	16	-25	1882	553.4	50.08	-5.01
42	SLU 19	16	-20	1892	556.1	50.36	-5.23
42	SLU 20	16	-25	1882	553.4	50.08	-5.01
42	SLU 21	16	-20	1892	556.1	50.36	-5.23
42	SLU 22	16	-22	1711	504.87	45.55	-5.03
42	SLU 23	16	-13	1729	509.37	46	-5.39
42	SLU 24	16	-22	1711	504.87	45.55	-5.03
42	SLU 25	16	-17	1722	507.57	45.82	-5.25
42	SLU 26	16	-13	1729	509.37	46	-5.39
42	SLU 27	16	-22	1711	504.87	45.55	-5.03
42	SLU 28	16	-17	1722	507.57	45.82	-5.25
42	SLU 29	16	-22	1711	504.87	45.55	-5.03

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
42	SLU 30	16	-17	1722	507.57	45.82	-5.25
42	SLU 31	17	-17	1981	581.08	52.69	-5.49
42	SLU 32	16	-27	1963	576.58	52.23	-5.12
42	SLU 33	17	-21	1973	579.28	52.5	-5.34
42	SLU 34	17	-17	1981	581.08	52.69	-5.49
42	SLU 35	16	-27	1963	576.58	52.23	-5.12
42	SLU 36	17	-21	1973	579.28	52.5	-5.34
42	SLU 37	16	-27	1963	576.58	52.23	-5.12
42	SLU 38	17	-21	1973	579.28	52.5	-5.34
42	SLU 39	17	-29	2071	607.32	55.09	-5.17
42	SLU 40	17	-23	2081	610.02	55.37	-5.39
42	SLU 41	17	-29	2071	607.32	55.09	-5.17
42	SLU 42	17	-23	2081	610.02	55.37	-5.39
42	SLU 43	20	-24	1914	567.75	50.98	-6.28
42	SLU 44	20	-14	1931	572.25	51.44	-6.65
42	SLU 45	20	-24	1914	567.75	50.98	-6.28
42	SLU 46	20	-18	1924	570.45	51.25	-6.5
42	SLU 47	20	-14	1931	572.25	51.44	-6.65
42	SLU 48	20	-24	1914	567.75	50.98	-6.28
42	SLU 49	20	-18	1924	570.45	51.25	-6.5
42	SLU 50	20	-24	1914	567.75	50.98	-6.28
42	SLU 51	20	-18	1924	570.45	51.25	-6.5
42	SLU 52	20	-19	2183	643.97	58.12	-6.75
42	SLU 53	20	-28	2165	639.47	57.66	-6.38
42	SLU 54	20	-22	2176	642.17	57.94	-6.6
42	SLU 55	20	-19	2183	643.97	58.12	-6.75
42	SLU 56	20	-28	2165	639.47	57.66	-6.38
42	SLU 57	20	-22	2176	642.17	57.94	-6.6
42	SLU 58	20	-28	2165	639.47	57.66	-6.38
42	SLU 59	20	-22	2176	642.17	57.94	-6.6
42	SLU 60	20	-30	2273	670.2	60.53	-6.42
42	SLU 61	21	-24	2284	672.9	60.8	-6.64
42	SLU 62	20	-30	2273	670.2	60.53	-6.42
42	SLU 63	21	-24	2284	672.9	60.8	-6.64
42	SLU 64	20	-27	2103	621.66	55.99	-6.44
42	SLU 65	21	-17	2120	626.16	56.45	-6.8
42	SLU 66	20	-27	2103	621.66	55.99	-6.44
42	SLU 67	20	-21	2113	624.36	56.26	-6.66
42	SLU 68	21	-17	2120	626.16	56.45	-6.8
42	SLU 69	20	-27	2103	621.66	55.99	-6.44
42	SLU 70	20	-21	2113	624.36	56.26	-6.66
42	SLU 71	20	-27	2103	621.66	55.99	-6.44
42	SLU 72	20	-21	2113	624.36	56.26	-6.66
42	SLU 73	21	-22	2372	697.88	63.13	-6.9
42	SLU 74	21	-31	2355	693.38	62.67	-6.53
42	SLU 75	21	-26	2365	696.08	62.95	-6.75
42	SLU 76	21	-22	2372	697.88	63.13	-6.9
42	SLU 77	21	-31	2355	693.38	62.67	-6.53
42	SLU 78	21	-26	2365	696.08	62.95	-6.75
42	SLU 79	21	-31	2355	693.38	62.67	-6.53
42	SLU 80	21	-26	2365	696.08	62.95	-6.75
42	SLU 81	21	-33	2462	724.12	65.54	-6.58
42	SLU 82	21	-28	2473	726.82	65.81	-6.8
42	SLU 83	21	-33	2462	724.12	65.54	-6.58
42	SLU 84	21	-28	2473	726.82	65.81	-6.8
42	SLE RA 1	15	-20	1576	466.35	41.97	-4.92
42	SLE RA 2	16	-14	1588	469.35	42.27	-5.16
42	SLE RA 3	15	-20	1576	466.35	41.97	-4.92
42	SLE RA 4	16	-16	1583	468.15	42.15	-5.06
42	SLE RA 5	16	-14	1588	469.35	42.27	-5.16
42	SLE RA 6	15	-20	1576	466.35	41.97	-4.92
42	SLE RA 7	16	-16	1583	468.15	42.15	-5.06
42	SLE RA 8	15	-20	1576	466.35	41.97	-4.92
42	SLE RA 9	16	-16	1583	468.15	42.15	-5.06
42	SLE RA 10	16	-17	1756	517.17	46.73	-5.23
42	SLE RA 11	16	-23	1744	514.17	46.42	-4.98
42	SLE RA 12	16	-19	1751	515.97	46.61	-5.13
42	SLE RA 13	16	-17	1756	517.17	46.73	-5.23
42	SLE RA 14	16	-23	1744	514.17	46.42	-4.98
42	SLE RA 15	16	-19	1751	515.97	46.61	-5.13
42	SLE RA 16	16	-23	1744	514.17	46.42	-4.98
42	SLE RA 17	16	-19	1751	515.97	46.61	-5.13
42	SLE RA 18	16	-24	1816	534.66	48.33	-5.01
42	SLE RA 19	16	-20	1823	536.46	48.51	-5.16
42	SLE RA 20	16	-24	1816	534.66	48.33	-5.01
42	SLE RA 21	16	-20	1823	536.46	48.51	-5.16
42	SLE FR 1	15	-20	1576	466.35	41.97	-4.92
42	SLE FR 2	15	-19	1578	466.95	42.03	-4.97
42	SLE FR 3	15	-20	1576	466.35	41.97	-4.92
42	SLE FR 4	16	-20	1650	487.44	43.94	-4.99
42	SLE FR 5	16	-21	1648	486.84	43.88	-4.94
42	SLE FR 6	16	-22	1696	500.5	45.15	-4.96
42	SLE QP 1	15	-20	1576	466.35	41.97	-4.92
42	SLE QP 2	16	-21	1648	486.84	43.88	-4.94
42	SLD 1	120	-1	1503	441.48	40.53	-42.02
42	SLD 2	145	28	1515	444.37	40.82	-51.5

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
42	SLD 3	114	-100	1301	390.59	35.31	-37.31
42	SLD 4	139	-70	1313	393.48	35.6	-46.79
42	SLD 5	47	123	1907	549.36	50.68	-19.71
42	SLD 6	73	154	1919	552.36	50.97	-29.55
42	SLD 7	26	-205	1233	379.71	33.29	-4.02
42	SLD 8	52	-174	1245	382.71	33.59	-13.86
42	SLD 9	-21	131	2051	590.98	54.17	3.97
42	SLD 10	5	162	2063	593.98	54.46	-5.87
42	SLD 11	-42	-196	1377	421.33	36.78	19.66
42	SLD 12	-16	-165	1389	424.33	37.08	9.82
42	SLD 13	-107	27	1983	580.21	52.15	36.9
42	SLD 14	-83	57	1995	583.1	52.44	27.42
42	SLD 15	-114	-71	1781	529.32	46.94	41.61
42	SLD 16	-89	-41	1792	532.21	47.23	32.13
42	SLV 1	254	23	1317	382.88	36.19	-89.6
42	SLV 2	311	91	1343	389.46	36.85	-111.22
42	SLV 3	240	-200	857	267.29	24.35	-78.92
42	SLV 4	296	-132	883	273.88	25	-100.54
42	SLV 5	88	306	2236	628.55	59.3	-38.6
42	SLV 6	146	376	2263	635.36	59.97	-60.95
42	SLV 7	40	-438	704	243.25	19.81	-3.01
42	SLV 8	99	-368	731	250.06	20.49	-25.36
42	SLV 9	-68	326	2565	723.63	67.26	15.47
42	SLV 10	-9	396	2591	730.43	67.94	-6.88
42	SLV 11	-115	-418	1033	338.33	27.78	51.06
42	SLV 12	-57	-348	1060	345.14	28.46	28.71
42	SLV 13	-265	90	2413	699.81	62.75	90.65
42	SLV 14	-209	157	2438	706.4	63.41	69.03
42	SLV 15	-280	-134	1953	584.22	50.91	101.33
42	SLV 16	-223	-66	1979	590.81	51.56	79.71
42	CRTFP Ux+	0	0	0	0	0	0
42	CRTFP Ux-	0	0	0	0	0	0
42	CRTFP Uy+	0	0	0	0	0	0
42	CRTFP Uy-	0	0	0	0	0	0
44	SLU 1	20	-29	2198	513.13	391.08	0.31
44	SLU 2	20	-16	2225	518.8	395.83	-2.35
44	SLU 3	20	-29	2198	513.13	391.08	0.31
44	SLU 4	20	-21	2214	516.53	393.93	-1.28
44	SLU 5	20	-16	2225	518.8	395.83	-2.35
44	SLU 6	20	-29	2198	513.13	391.08	0.31
44	SLU 7	20	-21	2214	516.53	393.93	-1.28
44	SLU 8	20	-29	2198	513.13	391.08	0.31
44	SLU 9	20	-21	2214	516.53	393.93	-1.28
44	SLU 10	21	-23	2591	603.03	460.62	-1.23
44	SLU 11	20	-36	2564	597.35	455.87	1.44
44	SLU 12	21	-28	2580	600.76	458.72	-0.16
44	SLU 13	21	-23	2591	603.03	460.62	-1.23
44	SLU 14	20	-36	2564	597.35	455.87	1.44
44	SLU 15	21	-28	2580	600.76	458.72	-0.16
44	SLU 16	20	-36	2564	597.35	455.87	1.44
44	SLU 17	21	-28	2580	600.76	458.72	-0.16
44	SLU 18	20	-39	2721	633.45	483.63	1.92
44	SLU 19	21	-31	2737	636.85	486.48	0.32
44	SLU 20	20	-39	2721	633.45	483.63	1.92
44	SLU 21	21	-31	2737	636.85	486.48	0.32
44	SLU 22	20	-34	2473	576.47	439.7	1.05
44	SLU 23	21	-21	2500	582.14	444.45	-1.61
44	SLU 24	20	-34	2473	576.47	439.7	1.05
44	SLU 25	21	-26	2489	579.87	442.55	-0.55
44	SLU 26	21	-21	2500	582.14	444.45	-1.61
44	SLU 27	20	-34	2473	576.47	439.7	1.05
44	SLU 28	21	-26	2489	579.87	442.55	-0.55
44	SLU 29	20	-34	2473	576.47	439.7	1.05
44	SLU 30	21	-26	2489	579.87	442.55	-0.55
44	SLU 31	21	-28	2866	666.37	509.24	-0.49
44	SLU 32	21	-41	2839	660.69	504.48	2.17
44	SLU 33	21	-33	2855	664.1	507.34	0.57
44	SLU 34	21	-28	2866	666.37	509.24	-0.49
44	SLU 35	21	-41	2839	660.69	504.48	2.17
44	SLU 36	21	-33	2855	664.1	507.34	0.57
44	SLU 37	21	-41	2839	660.69	504.48	2.17
44	SLU 38	21	-33	2855	664.1	507.34	0.57
44	SLU 39	21	-44	2996	696.79	532.25	2.65
44	SLU 40	21	-36	3012	700.19	535.1	1.06
44	SLU 41	21	-44	2996	696.79	532.25	2.65
44	SLU 42	21	-36	3012	700.19	535.1	1.06
44	SLU 43	25	-36	2763	645.35	491.74	0.16
44	SLU 44	26	-23	2790	651.02	496.49	-2.51
44	SLU 45	25	-36	2763	645.35	491.74	0.16
44	SLU 46	26	-28	2779	648.75	494.59	-1.44
44	SLU 47	26	-23	2790	651.02	496.49	-2.51
44	SLU 48	25	-36	2763	645.35	491.74	0.16
44	SLU 49	26	-28	2779	648.75	494.59	-1.44
44	SLU 50	25	-36	2763	645.35	491.74	0.16
44	SLU 51	26	-28	2779	648.75	494.59	-1.44
44	SLU 52	27	-30	3156	735.25	561.28	-1.39

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
44	SLU 53	26	-43	3129	729.57	556.52	1.28
44	SLU 54	26	-35	3145	732.98	559.38	-0.32
44	SLU 55	27	-30	3156	735.25	561.28	-1.39
44	SLU 56	26	-43	3129	729.57	556.52	1.28
44	SLU 57	26	-35	3145	732.98	559.38	-0.32
44	SLU 58	26	-43	3129	729.57	556.52	1.28
44	SLU 59	26	-35	3145	732.98	559.38	-0.32
44	SLU 60	26	-46	3286	765.67	584.29	1.76
44	SLU 61	26	-38	3302	769.07	587.14	0.16
44	SLU 62	26	-46	3286	765.67	584.29	1.76
44	SLU 63	26	-38	3302	769.07	587.14	0.16
44	SLU 64	26	-41	3038	708.69	540.35	0.89
44	SLU 65	27	-28	3065	714.36	545.11	-1.77
44	SLU 66	26	-41	3038	708.69	540.35	0.89
44	SLU 67	26	-33	3054	712.09	543.21	-0.7
44	SLU 68	27	-28	3065	714.36	545.11	-1.77
44	SLU 69	26	-41	3038	708.69	540.35	0.89
44	SLU 70	26	-33	3054	712.09	543.21	-0.7
44	SLU 71	26	-41	3038	708.69	540.35	0.89
44	SLU 72	26	-33	3054	712.09	543.21	-0.7
44	SLU 73	27	-35	3431	798.59	609.89	-0.65
44	SLU 74	26	-48	3404	792.91	605.14	2.01
44	SLU 75	27	-40	3420	796.32	607.99	0.42
44	SLU 76	27	-35	3431	798.59	609.89	-0.65
44	SLU 77	26	-48	3404	792.91	605.14	2.01
44	SLU 78	27	-40	3420	796.32	607.99	0.42
44	SLU 79	26	-48	3404	792.91	605.14	2.01
44	SLU 80	27	-40	3420	796.32	607.99	0.42
44	SLU 81	27	-51	3561	829.01	632.91	2.49
44	SLU 82	27	-43	3577	832.41	635.76	0.9
44	SLU 83	27	-51	3561	829.01	632.91	2.49
44	SLU 84	27	-43	3577	832.41	635.76	0.9
44	SLE RA 1	20	-31	2277	531.22	404.97	0.52
44	SLE RA 2	20	-22	2295	535.01	408.14	-1.25
44	SLE RA 3	20	-31	2277	531.22	404.97	0.52
44	SLE RA 4	20	-25	2287	533.49	406.87	-0.54
44	SLE RA 5	20	-22	2295	535.01	408.14	-1.25
44	SLE RA 6	20	-31	2277	531.22	404.97	0.52
44	SLE RA 7	20	-25	2287	533.49	406.87	-0.54
44	SLE RA 8	20	-31	2277	531.22	404.97	0.52
44	SLE RA 9	20	-25	2287	533.49	406.87	-0.54
44	SLE RA 10	21	-26	2539	591.16	451.33	-0.5
44	SLE RA 11	20	-35	2521	587.37	448.16	1.27
44	SLE RA 12	20	-30	2531	589.64	450.06	0.21
44	SLE RA 13	21	-26	2539	591.16	451.33	-0.5
44	SLE RA 14	20	-35	2521	587.37	448.16	1.27
44	SLE RA 15	20	-30	2531	589.64	450.06	0.21
44	SLE RA 16	20	-35	2521	587.37	448.16	1.27
44	SLE RA 17	20	-30	2531	589.64	450.06	0.21
44	SLE RA 18	20	-37	2625	611.44	466.67	1.59
44	SLE RA 19	21	-32	2636	613.71	468.57	0.53
44	SLE RA 20	20	-37	2625	611.44	466.67	1.59
44	SLE RA 21	21	-32	2636	613.71	468.57	0.53
44	SLE FR 1	20	-31	2277	531.22	404.97	0.52
44	SLE FR 2	20	-29	2280	531.98	405.61	0.17
44	SLE FR 3	20	-31	2277	531.22	404.97	0.52
44	SLE FR 4	20	-31	2385	556.04	424.12	0.49
44	SLE FR 5	20	-33	2381	555.29	423.48	0.85
44	SLE FR 6	20	-34	2451	571.33	435.82	1.06
44	SLE QP 1	20	-31	2277	531.22	404.97	0.52
44	SLE QP 2	20	-33	2381	555.29	423.48	0.85
44	SLD 1	164	-4	2158	500.56	387.43	-40.91
44	SLD 2	199	39	2176	504.19	390.49	-57.65
44	SLD 3	153	-145	1852	436.21	333.33	-12.4
44	SLD 4	188	-102	1869	439.84	336.39	-29.14
44	SLD 5	67	174	2773	635.12	493.59	-48.75
44	SLD 6	103	219	2791	638.89	496.77	-66.12
44	SLD 7	30	-296	1751	420.63	313.26	46.29
44	SLD 8	67	-251	1769	424.4	316.43	28.92
44	SLD 9	-27	186	2993	686.18	530.53	-27.23
44	SLD 10	10	231	3011	689.94	533.71	-44.6
44	SLD 11	-63	-284	1972	471.68	350.2	67.81
44	SLD 12	-26	-239	1990	475.45	353.38	50.44
44	SLD 13	-148	37	2893	670.73	510.57	30.83
44	SLD 14	-113	80	2911	674.36	513.64	14.09
44	SLD 15	-159	-104	2587	606.39	456.47	59.34
44	SLD 16	-124	-61	2604	610.02	459.54	42.6
44	SLV 1	348	31	1870	429.83	340.76	-94.37
44	SLV 2	429	130	1909	438.11	347.74	-132.53
44	SLV 3	324	-289	1174	283.7	217.9	-29.64
44	SLV 4	404	-190	1213	291.98	224.88	-67.8
44	SLV 5	126	435	3269	736.25	582.44	-111.89
44	SLV 6	209	538	3310	744.8	589.66	-151.33
44	SLV 7	44	-631	949	249.14	172.91	103.86
44	SLV 8	128	-529	990	257.7	180.13	64.42
44	SLV 9	-88	464	3773	852.88	666.84	-62.73

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
44	SLV 10	-4	566	3814	861.43	674.05	-102.17
44	SLV 11	-169	-603	1453	365.77	257.31	153.02
44	SLV 12	-86	-501	1494	374.33	264.52	113.58
44	SLV 13	-364	125	3549	818.6	622.08	69.49
44	SLV 14	-284	224	3589	826.87	629.06	31.33
44	SLV 15	-389	-195	2853	672.47	499.23	134.22
44	SLV 16	-308	-96	2893	680.74	506.2	96.06
44	CRTFP Ux+	0	0	0	0	0	0
44	CRTFP Ux-	0	0	0	0	0	0
44	CRTFP Uy+	0	0	0	0	0	0
44	CRTFP Uy-	0	0	0	0	0	0
78	SLU 1	0	-12	1160	31.05	-233.15	-2.91
78	SLU 2	0	-5	1174	31.4	-235.92	-1.11
78	SLU 3	0	-12	1160	31.05	-233.15	-2.91
78	SLU 4	0	-7	1168	31.26	-234.81	-1.83
78	SLU 5	0	-5	1174	31.4	-235.92	-1.11
78	SLU 6	0	-12	1160	31.05	-233.15	-2.91
78	SLU 7	0	-7	1168	31.26	-234.81	-1.83
78	SLU 8	0	-12	1160	31.05	-233.15	-2.91
78	SLU 9	0	-7	1168	31.26	-234.81	-1.83
78	SLU 10	1	-8	1364	36.43	-272.93	-2.04
78	SLU 11	1	-15	1350	36.08	-270.16	-3.84
78	SLU 12	1	-11	1358	36.29	-271.82	-2.76
78	SLU 13	1	-8	1364	36.43	-272.93	-2.04
78	SLU 14	1	-15	1350	36.08	-270.16	-3.84
78	SLU 15	1	-11	1358	36.29	-271.82	-2.76
78	SLU 16	1	-15	1350	36.08	-270.16	-3.84
78	SLU 17	1	-11	1358	36.29	-271.82	-2.76
78	SLU 18	1	-17	1431	38.24	-286.02	-4.24
78	SLU 19	1	-13	1439	38.45	-287.68	-3.16
78	SLU 20	1	-17	1431	38.24	-286.02	-4.24
78	SLU 21	1	-13	1439	38.45	-287.68	-3.16
78	SLU 22	1	-14	1302	34.83	-260.79	-3.56
78	SLU 23	1	-7	1316	35.17	-263.56	-1.75
78	SLU 24	1	-14	1302	34.83	-260.79	-3.56
78	SLU 25	1	-10	1311	35.04	-262.46	-2.47
78	SLU 26	1	-7	1316	35.17	-263.56	-1.75
78	SLU 27	1	-14	1302	34.83	-260.79	-3.56
78	SLU 28	1	-10	1311	35.04	-262.46	-2.47
78	SLU 29	1	-14	1302	34.83	-260.79	-3.56
78	SLU 30	1	-10	1311	35.04	-262.46	-2.47
78	SLU 31	1	-11	1506	40.2	-300.57	-2.69
78	SLU 32	2	-18	1492	39.86	-297.8	-4.49
78	SLU 33	2	-14	1500	40.07	-299.46	-3.41
78	SLU 34	1	-11	1506	40.2	-300.57	-2.69
78	SLU 35	2	-18	1492	39.86	-297.8	-4.49
78	SLU 36	2	-14	1500	40.07	-299.46	-3.41
78	SLU 37	2	-18	1492	39.86	-297.8	-4.49
78	SLU 38	2	-14	1500	40.07	-299.46	-3.41
78	SLU 39	2	-20	1573	42.01	-313.66	-4.89
78	SLU 40	2	-15	1582	42.22	-315.32	-3.81
78	SLU 41	2	-20	1573	42.01	-313.66	-4.89
78	SLU 42	2	-15	1582	42.22	-315.32	-3.81
78	SLU 43	0	-14	1459	39.07	-293.62	-3.56
78	SLU 44	0	-7	1473	39.42	-296.39	-1.76
78	SLU 45	0	-14	1459	39.07	-293.62	-3.56
78	SLU 46	0	-10	1468	39.28	-295.28	-2.48
78	SLU 47	0	-7	1473	39.42	-296.39	-1.76
78	SLU 48	0	-14	1459	39.07	-293.62	-3.56
78	SLU 49	0	-10	1468	39.28	-295.28	-2.48
78	SLU 50	0	-14	1459	39.07	-293.62	-3.56
78	SLU 51	0	-10	1468	39.28	-295.28	-2.48
78	SLU 52	1	-11	1663	44.45	-333.4	-2.69
78	SLU 53	1	-18	1649	44.1	-330.63	-4.49
78	SLU 54	1	-14	1657	44.31	-332.29	-3.41
78	SLU 55	1	-11	1663	44.45	-333.4	-2.69
78	SLU 56	1	-18	1649	44.1	-330.63	-4.49
78	SLU 57	1	-14	1657	44.31	-332.29	-3.41
78	SLU 58	1	-18	1649	44.1	-330.63	-4.49
78	SLU 59	1	-14	1657	44.31	-332.29	-3.41
78	SLU 60	1	-20	1730	46.26	-346.49	-4.89
78	SLU 61	1	-15	1739	46.47	-348.15	-3.81
78	SLU 62	1	-20	1730	46.26	-346.49	-4.89
78	SLU 63	1	-15	1739	46.47	-348.15	-3.81
78	SLU 64	1	-17	1601	42.85	-321.26	-4.21
78	SLU 65	1	-10	1615	43.19	-324.03	-2.41
78	SLU 66	1	-17	1601	42.85	-321.26	-4.21
78	SLU 67	1	-13	1610	43.06	-322.92	-3.13
78	SLU 68	1	-10	1615	43.19	-324.03	-2.41
78	SLU 69	1	-17	1601	42.85	-321.26	-4.21
78	SLU 70	1	-13	1610	43.06	-322.92	-3.13
78	SLU 71	1	-17	1601	42.85	-321.26	-4.21
78	SLU 72	1	-13	1610	43.06	-322.92	-3.13
78	SLU 73	1	-13	1805	48.23	-361.04	-3.34
78	SLU 74	2	-21	1791	47.88	-358.27	-5.14
78	SLU 75	1	-16	1800	48.09	-359.93	-4.06

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
78	SLU 76	1	-13	1805	48.23	-361.04	-3.34
78	SLU 77	2	-21	1791	47.88	-358.27	-5.14
78	SLU 78	1	-16	1800	48.09	-359.93	-4.06
78	SLU 79	2	-21	1791	47.88	-358.27	-5.14
78	SLU 80	1	-16	1800	48.09	-359.93	-4.06
78	SLU 81	2	-22	1872	50.03	-374.13	-5.54
78	SLU 82	2	-18	1881	50.24	-375.79	-4.46
78	SLU 83	2	-22	1872	50.03	-374.13	-5.54
78	SLU 84	2	-18	1881	50.24	-375.79	-4.46
78	SLE RA 1	1	-12	1201	32.13	-241.05	-3.1
78	SLE RA 2	0	-8	1210	32.36	-242.9	-1.89
78	SLE RA 3	1	-12	1201	32.13	-241.05	-3.1
78	SLE RA 4	0	-10	1206	32.27	-242.16	-2.37
78	SLE RA 5	0	-8	1210	32.36	-242.9	-1.89
78	SLE RA 6	1	-12	1201	32.13	-241.05	-3.1
78	SLE RA 7	0	-10	1206	32.27	-242.16	-2.37
78	SLE RA 8	1	-12	1201	32.13	-241.05	-3.1
78	SLE RA 9	0	-10	1206	32.27	-242.16	-2.37
78	SLE RA 10	1	-10	1336	35.71	-267.57	-2.52
78	SLE RA 11	1	-15	1327	35.48	-265.72	-3.72
78	SLE RA 12	1	-12	1333	35.62	-266.83	-3
78	SLE RA 13	1	-10	1336	35.71	-267.57	-2.52
78	SLE RA 14	1	-15	1327	35.48	-265.72	-3.72
78	SLE RA 15	1	-12	1333	35.62	-266.83	-3
78	SLE RA 16	1	-15	1327	35.48	-265.72	-3.72
78	SLE RA 17	1	-12	1333	35.62	-266.83	-3
78	SLE RA 18	1	-16	1381	36.92	-276.29	-3.98
78	SLE RA 19	1	-13	1387	37.06	-277.4	-3.26
78	SLE RA 20	1	-16	1381	36.92	-276.29	-3.98
78	SLE RA 21	1	-13	1387	37.06	-277.4	-3.26
78	SLE FR 1	1	-12	1201	32.13	-241.05	-3.1
78	SLE FR 2	1	-12	1202	32.18	-241.42	-2.86
78	SLE FR 3	1	-12	1201	32.13	-241.05	-3.1
78	SLE FR 4	1	-13	1257	33.61	-251.99	-3.12
78	SLE FR 5	1	-14	1255	33.57	-251.62	-3.36
78	SLE FR 6	1	-14	1291	34.52	-258.67	-3.54
78	SLE QP 1	1	-12	1201	32.13	-241.05	-3.1
78	SLE QP 2	1	-14	1255	33.57	-251.62	-3.36
78	SLD 1	76	47	1516	40.32	-299.39	8.26
78	SLD 2	94	23	1508	40.12	-297.82	1.91
78	SLD 3	77	-31	1363	36.57	-269.14	-11.15
78	SLD 4	95	-55	1355	36.38	-267.57	-17.5
78	SLD 5	14	131	1569	41.34	-312.4	31.91
78	SLD 6	33	107	1561	41.14	-310.77	25.31
78	SLD 7	19	-128	1057	28.86	-211.59	-32.79
78	SLD 8	38	-153	1049	28.66	-209.96	-39.38
78	SLD 9	-36	126	1461	38.47	-293.29	32.66
78	SLD 10	-17	101	1452	38.27	-291.66	26.07
78	SLD 11	-32	-134	949	25.99	-192.47	-32.04
78	SLD 12	-13	-158	940	25.79	-190.84	-38.63
78	SLD 13	-94	27	1155	30.76	-235.67	10.78
78	SLD 14	-75	4	1147	30.56	-234.1	4.42
78	SLD 15	-92	-50	1001	27.01	-205.43	-8.63
78	SLD 16	-74	-74	993	26.82	-203.86	-14.98
78	SLV 1	172	124	1851	48.95	-360.48	23.02
78	SLV 2	213	70	1833	48.51	-356.91	8.53
78	SLV 3	175	-53	1503	40.45	-291.82	-21.06
78	SLV 4	216	-107	1484	40.01	-288.24	-35.54
78	SLV 5	32	315	1969	51.24	-389.74	76.71
78	SLV 6	75	260	1950	50.78	-386.04	61.74
78	SLV 7	43	-274	807	22.91	-160.85	-70.2
78	SLV 8	86	-329	788	22.45	-157.15	-85.17
78	SLV 9	-84	302	1721	44.69	-346.09	78.45
78	SLV 10	-41	247	1702	44.23	-342.4	63.48
78	SLV 11	-73	-287	559	16.36	-117.21	-68.46
78	SLV 12	-30	-343	540	15.9	-113.51	-83.43
78	SLV 13	-215	80	1025	27.12	-215.01	28.82
78	SLV 14	-173	26	1007	26.68	-211.43	14.33
78	SLV 15	-212	-97	677	18.63	-146.34	-15.26
78	SLV 16	-170	-151	658	18.18	-142.76	-29.74
78	CRTFP Ux+	0	0	0	0	0	0
78	CRTFP Ux-	0	0	0	0	0	0
78	CRTFP Uy+	0	0	0	0	0	0
78	CRTFP Uy-	0	0	0	0	0	0
81	SLU 1	11	-4	2373	65.01	-1.88	-0.1
81	SLU 2	11	7	2400	65.66	-1.89	-0.1
81	SLU 3	11	-4	2373	65.01	-1.88	-0.1
81	SLU 4	11	2	2389	65.4	-1.89	-0.1
81	SLU 5	11	7	2400	65.66	-1.89	-0.1
81	SLU 6	11	-4	2373	65.01	-1.88	-0.1
81	SLU 7	11	2	2389	65.4	-1.89	-0.1
81	SLU 8	11	-4	2373	65.01	-1.88	-0.1
81	SLU 9	11	2	2389	65.4	-1.89	-0.1
81	SLU 10	12	8	2817	77.05	-2.29	-0.11
81	SLU 11	12	-3	2789	76.4	-2.29	-0.1
81	SLU 12	12	3	2806	76.79	-2.29	-0.11

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
81	SLU 13	12	8	2817	77.05	-2.29	-0.11
81	SLU 14	12	-3	2789	76.4	-2.29	-0.1
81	SLU 15	12	3	2806	76.79	-2.29	-0.11
81	SLU 16	12	-3	2789	76.4	-2.29	-0.1
81	SLU 17	12	3	2806	76.79	-2.29	-0.11
81	SLU 18	13	-3	2968	81.28	-2.46	-0.11
81	SLU 19	13	4	2984	81.67	-2.47	-0.11
81	SLU 20	13	-3	2968	81.28	-2.46	-0.11
81	SLU 21	13	4	2984	81.67	-2.47	-0.11
81	SLU 22	12	-4	2683	73.51	-2.21	-0.1
81	SLU 23	12	7	2711	74.16	-2.21	-0.1
81	SLU 24	12	-4	2683	73.51	-2.21	-0.1
81	SLU 25	12	3	2700	73.9	-2.21	-0.1
81	SLU 26	12	7	2711	74.16	-2.21	-0.1
81	SLU 27	12	-4	2683	73.51	-2.21	-0.1
81	SLU 28	12	3	2700	73.9	-2.21	-0.1
81	SLU 29	12	-4	2683	73.51	-2.21	-0.1
81	SLU 30	12	3	2700	73.9	-2.21	-0.1
81	SLU 31	13	9	3127	85.56	-2.62	-0.11
81	SLU 32	13	-3	3100	84.9	-2.61	-0.11
81	SLU 33	13	4	3116	85.29	-2.62	-0.11
81	SLU 34	13	9	3127	85.56	-2.62	-0.11
81	SLU 35	13	-3	3100	84.9	-2.61	-0.11
81	SLU 36	13	4	3116	85.29	-2.62	-0.11
81	SLU 37	13	-3	3100	84.9	-2.61	-0.11
81	SLU 38	13	4	3116	85.29	-2.62	-0.11
81	SLU 39	13	-2	3278	89.78	-2.79	-0.12
81	SLU 40	13	5	3295	90.18	-2.79	-0.12
81	SLU 41	13	-2	3278	89.78	-2.79	-0.12
81	SLU 42	13	5	3295	90.18	-2.79	-0.12
81	SLU 43	14	-6	2979	81.59	-2.33	-0.12
81	SLU 44	14	5	3006	82.25	-2.34	-0.12
81	SLU 45	14	-6	2979	81.59	-2.33	-0.12
81	SLU 46	14	1	2995	81.99	-2.34	-0.12
81	SLU 47	14	5	3006	82.25	-2.34	-0.12
81	SLU 48	14	-6	2979	81.59	-2.33	-0.12
81	SLU 49	14	1	2995	81.99	-2.34	-0.12
81	SLU 50	14	-6	2979	81.59	-2.33	-0.12
81	SLU 51	14	1	2995	81.99	-2.34	-0.12
81	SLU 52	15	6	3422	93.64	-2.75	-0.13
81	SLU 53	15	-5	3395	92.98	-2.74	-0.13
81	SLU 54	15	2	3411	93.38	-2.74	-0.13
81	SLU 55	15	6	3422	93.64	-2.75	-0.13
81	SLU 56	15	-5	3395	92.98	-2.74	-0.13
81	SLU 57	15	2	3411	93.38	-2.74	-0.13
81	SLU 58	15	-5	3395	92.98	-2.74	-0.13
81	SLU 59	15	2	3411	93.38	-2.74	-0.13
81	SLU 60	16	-4	3573	97.87	-2.92	-0.13
81	SLU 61	16	2	3590	98.26	-2.92	-0.13
81	SLU 62	16	-4	3573	97.87	-2.92	-0.13
81	SLU 63	16	2	3590	98.26	-2.92	-0.13
81	SLU 64	15	-5	3289	90.1	-2.66	-0.13
81	SLU 65	15	6	3316	90.75	-2.67	-0.13
81	SLU 66	15	-5	3289	90.1	-2.66	-0.13
81	SLU 67	15	1	3305	90.49	-2.66	-0.13
81	SLU 68	15	6	3316	90.75	-2.67	-0.13
81	SLU 69	15	-5	3289	90.1	-2.66	-0.13
81	SLU 70	15	1	3305	90.49	-2.66	-0.13
81	SLU 71	15	-5	3289	90.1	-2.66	-0.13
81	SLU 72	15	1	3305	90.49	-2.66	-0.13
81	SLU 73	16	7	3733	102.14	-3.07	-0.14
81	SLU 74	16	-4	3705	101.49	-3.07	-0.14
81	SLU 75	16	3	3722	101.88	-3.07	-0.14
81	SLU 76	16	7	3733	102.14	-3.07	-0.14
81	SLU 77	16	-4	3705	101.49	-3.07	-0.14
81	SLU 78	16	3	3722	101.88	-3.07	-0.14
81	SLU 79	16	-4	3705	101.49	-3.07	-0.14
81	SLU 80	16	3	3722	101.88	-3.07	-0.14
81	SLU 81	16	-4	3884	106.37	-3.24	-0.14
81	SLU 82	16	3	3900	106.76	-3.24	-0.14
81	SLU 83	16	-4	3884	106.37	-3.24	-0.14
81	SLU 84	16	3	3900	106.76	-3.24	-0.14
81	SLE RA 1	11	-4	2462	67.44	-1.97	-0.1
81	SLE RA 2	12	3	2480	67.87	-1.98	-0.1
81	SLE RA 3	11	-4	2462	67.44	-1.97	-0.1
81	SLE RA 4	12	0	2473	67.7	-1.98	-0.1
81	SLE RA 5	12	3	2480	67.87	-1.98	-0.1
81	SLE RA 6	11	-4	2462	67.44	-1.97	-0.1
81	SLE RA 7	12	0	2473	67.7	-1.98	-0.1
81	SLE RA 8	11	-4	2462	67.44	-1.97	-0.1
81	SLE RA 9	12	0	2473	67.7	-1.98	-0.1
81	SLE RA 10	12	4	2757	75.47	-2.25	-0.1
81	SLE RA 11	12	-3	2739	75.03	-2.25	-0.1
81	SLE RA 12	12	1	2750	75.29	-2.25	-0.1
81	SLE RA 13	12	4	2757	75.47	-2.25	-0.1
81	SLE RA 14	12	-3	2739	75.03	-2.25	-0.1

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
81	SLE RA 15	12	1	2750	75.29	-2.25	-0.1
81	SLE RA 16	12	-3	2739	75.03	-2.25	-0.1
81	SLE RA 17	12	1	2750	75.29	-2.25	-0.1
81	SLE RA 18	12	-3	2858	78.29	-2.36	-0.11
81	SLE RA 19	12	1	2869	78.55	-2.36	-0.11
81	SLE RA 20	12	-3	2858	78.29	-2.36	-0.11
81	SLE RA 21	12	1	2869	78.55	-2.36	-0.11
81	SLE FR 1	11	-4	2462	67.44	-1.97	-0.1
81	SLE FR 2	11	-3	2465	67.52	-1.98	-0.1
81	SLE FR 3	11	-4	2462	67.44	-1.97	-0.1
81	SLE FR 4	12	-2	2584	70.78	-2.09	-0.1
81	SLE FR 5	12	-4	2581	70.69	-2.09	-0.1
81	SLE FR 6	12	-4	2660	72.86	-2.17	-0.1
81	SLE QP 1	11	-4	2462	67.44	-1.97	-0.1
81	SLE QP 2	12	-4	2581	70.69	-2.09	-0.1
81	SLD 1	186	60	2753	74.93	5.57	-5.01
81	SLD 2	226	61	2753	74.94	5.11	-5.43
81	SLD 3	180	-55	2447	67.58	5.82	-4.88
81	SLD 4	221	-55	2447	67.59	5.36	-5.3
81	SLD 5	58	191	3097	83.11	0	-1.62
81	SLD 6	100	191	3097	83.12	-0.47	-2.05
81	SLD 7	39	-195	2076	58.6	0.83	-1.18
81	SLD 8	81	-194	2077	58.62	0.35	-1.61
81	SLD 9	-57	187	3085	82.76	-4.53	1.41
81	SLD 10	-15	187	3085	82.78	-5.01	0.98
81	SLD 11	-76	-199	2064	58.26	-3.71	1.85
81	SLD 12	-34	-198	2065	58.27	-4.18	1.42
81	SLD 13	-197	47	2714	73.79	-9.54	5.09
81	SLD 14	-157	48	2715	73.8	-10	4.68
81	SLD 15	-203	-68	2408	66.44	-9.29	5.23
81	SLD 16	-162	-68	2408	66.45	-9.75	4.81
81	SLV 1	410	142	2972	80.35	15.41	-11.31
81	SLV 2	502	143	2973	80.38	14.36	-12.26
81	SLV 3	397	-120	2277	63.67	15.97	-11.02
81	SLV 4	489	-119	2278	63.69	14.93	-11.96
81	SLV 5	117	438	3752	98.89	2.69	-3.57
81	SLV 6	212	439	3753	98.92	1.61	-4.54
81	SLV 7	74	-437	1435	43.26	4.57	-2.58
81	SLV 8	169	-436	1436	43.29	3.49	-3.56
81	SLV 9	-146	429	3725	98.09	-7.67	3.36
81	SLV 10	-51	430	3726	98.12	-8.75	2.38
81	SLV 11	-188	-446	1408	42.46	-5.79	4.34
81	SLV 12	-93	-445	1409	42.49	-6.87	3.37
81	SLV 13	-466	112	2883	77.69	-19.11	11.76
81	SLV 14	-373	113	2884	77.71	-20.15	10.82
81	SLV 15	-478	-151	2188	61	-18.54	12.06
81	SLV 16	-386	-150	2189	61.03	-19.59	11.11
81	CRTFP Ux+	0	0	0	0	0	0
81	CRTFP Ux-	0	0	0	0	0	0
81	CRTFP Uy+	0	0	0	0	0	0
81	CRTFP Uy-	0	0	0	0	0	0
84	SLU 1	2	-6	2408	63.85	-0.99	0.18
84	SLU 2	2	4	2431	64.37	-1.01	0.18
84	SLU 3	2	-6	2408	63.85	-0.99	0.18
84	SLU 4	2	0	2422	64.16	-1	0.18
84	SLU 5	2	4	2431	64.37	-1.01	0.18
84	SLU 6	2	-6	2408	63.85	-0.99	0.18
84	SLU 7	2	0	2422	64.16	-1	0.18
84	SLU 8	2	-6	2408	63.85	-0.99	0.18
84	SLU 9	2	0	2422	64.16	-1	0.18
84	SLU 10	3	3	2844	75.24	-2.06	0.19
84	SLU 11	4	-7	2821	74.72	-2.04	0.19
84	SLU 12	3	-1	2835	75.03	-2.05	0.19
84	SLU 13	3	3	2844	75.24	-2.06	0.19
84	SLU 14	4	-7	2821	74.72	-2.04	0.19
84	SLU 15	3	-1	2835	75.03	-2.05	0.19
84	SLU 16	4	-7	2821	74.72	-2.04	0.19
84	SLU 17	3	-1	2835	75.03	-2.05	0.19
84	SLU 18	4	-7	2997	79.38	-2.49	0.2
84	SLU 19	4	-1	3011	79.69	-2.5	0.2
84	SLU 20	4	-7	2997	79.38	-2.49	0.2
84	SLU 21	4	-1	3011	79.69	-2.5	0.2
84	SLU 22	3	-7	2715	71.94	-1.73	0.19
84	SLU 23	3	3	2738	72.46	-1.74	0.19
84	SLU 24	3	-7	2715	71.94	-1.73	0.19
84	SLU 25	3	-1	2729	72.25	-1.74	0.19
84	SLU 26	3	3	2738	72.46	-1.74	0.19
84	SLU 27	3	-7	2715	71.94	-1.73	0.19
84	SLU 28	3	-1	2729	72.25	-1.74	0.19
84	SLU 29	3	-7	2715	71.94	-1.73	0.19
84	SLU 30	3	-1	2729	72.25	-1.74	0.19
84	SLU 31	4	2	3151	83.33	-2.79	0.2
84	SLU 32	4	-8	3127	82.81	-2.77	0.21
84	SLU 33	4	-2	3141	83.12	-2.78	0.2
84	SLU 34	4	2	3151	83.33	-2.79	0.2
84	SLU 35	4	-8	3127	82.81	-2.77	0.21

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
84	SLU 36	4	-2	3141	83.12	-2.78	0.2
84	SLU 37	4	-8	3127	82.81	-2.77	0.21
84	SLU 38	4	-2	3141	83.12	-2.78	0.2
84	SLU 39	5	-8	3304	87.47	-3.22	0.21
84	SLU 40	5	-2	3318	87.78	-3.23	0.21
84	SLU 41	5	-8	3304	87.47	-3.22	0.21
84	SLU 42	5	-2	3318	87.78	-3.23	0.21
84	SLU 43	3	-8	3025	80.23	-1.04	0.23
84	SLU 44	3	2	3049	80.75	-1.06	0.23
84	SLU 45	3	-8	3025	80.23	-1.04	0.23
84	SLU 46	3	-2	3039	80.54	-1.05	0.23
84	SLU 47	3	2	3049	80.75	-1.06	0.23
84	SLU 48	3	-8	3025	80.23	-1.04	0.23
84	SLU 49	3	-2	3039	80.54	-1.05	0.23
84	SLU 50	3	-8	3025	80.23	-1.04	0.23
84	SLU 51	3	-2	3039	80.54	-1.05	0.23
84	SLU 52	4	1	3461	91.62	-2.11	0.24
84	SLU 53	4	-9	3438	91.1	-2.09	0.24
84	SLU 54	4	-3	3452	91.41	-2.1	0.24
84	SLU 55	4	1	3461	91.62	-2.11	0.24
84	SLU 56	4	-9	3438	91.1	-2.09	0.24
84	SLU 57	4	-3	3452	91.41	-2.1	0.24
84	SLU 58	4	-9	3438	91.1	-2.09	0.24
84	SLU 59	4	-3	3452	91.41	-2.1	0.24
84	SLU 60	5	-9	3615	95.76	-2.54	0.25
84	SLU 61	4	-3	3629	96.07	-2.55	0.25
84	SLU 62	5	-9	3615	95.76	-2.54	0.25
84	SLU 63	4	-3	3629	96.07	-2.55	0.25
84	SLU 64	4	-9	3332	88.32	-1.77	0.24
84	SLU 65	3	1	3355	88.84	-1.79	0.24
84	SLU 66	4	-9	3332	88.32	-1.77	0.24
84	SLU 67	4	-3	3346	88.63	-1.78	0.24
84	SLU 68	3	1	3355	88.84	-1.79	0.24
84	SLU 69	4	-9	3332	88.32	-1.77	0.24
84	SLU 70	4	-3	3346	88.63	-1.78	0.24
84	SLU 71	4	-9	3332	88.32	-1.77	0.24
84	SLU 72	4	-3	3346	88.63	-1.78	0.24
84	SLU 73	5	1	3768	99.71	-2.84	0.25
84	SLU 74	5	-9	3745	99.19	-2.82	0.26
84	SLU 75	5	-3	3759	99.5	-2.83	0.25
84	SLU 76	5	1	3768	99.71	-2.84	0.25
84	SLU 77	5	-9	3745	99.19	-2.82	0.26
84	SLU 78	5	-3	3759	99.5	-2.83	0.25
84	SLU 79	5	-9	3745	99.19	-2.82	0.26
84	SLU 80	5	-3	3759	99.5	-2.83	0.25
84	SLU 81	5	-10	3921	103.85	-3.27	0.26
84	SLU 82	5	-4	3935	104.16	-3.28	0.26
84	SLU 83	5	-10	3921	103.85	-3.27	0.26
84	SLU 84	5	-4	3935	104.16	-3.28	0.26
84	SLE RA 1	3	-6	2496	66.16	-1.2	0.18
84	SLE RA 2	2	0	2511	66.51	-1.21	0.18
84	SLE RA 3	3	-6	2496	66.16	-1.2	0.18
84	SLE RA 4	3	-2	2505	66.37	-1.21	0.18
84	SLE RA 5	2	0	2511	66.51	-1.21	0.18
84	SLE RA 6	3	-6	2496	66.16	-1.2	0.18
84	SLE RA 7	3	-2	2505	66.37	-1.21	0.18
84	SLE RA 8	3	-6	2496	66.16	-1.2	0.18
84	SLE RA 9	3	-2	2505	66.37	-1.21	0.18
84	SLE RA 10	3	0	2786	73.75	-1.91	0.19
84	SLE RA 11	3	-7	2771	73.41	-1.9	0.19
84	SLE RA 12	3	-3	2780	73.62	-1.91	0.19
84	SLE RA 13	3	0	2786	73.75	-1.91	0.19
84	SLE RA 14	3	-7	2771	73.41	-1.9	0.19
84	SLE RA 15	3	-3	2780	73.62	-1.91	0.19
84	SLE RA 16	3	-7	2771	73.41	-1.9	0.19
84	SLE RA 17	3	-3	2780	73.62	-1.91	0.19
84	SLE RA 18	4	-7	2889	76.51	-2.2	0.2
84	SLE RA 19	4	-3	2898	76.72	-2.21	0.2
84	SLE RA 20	4	-7	2889	76.51	-2.2	0.2
84	SLE RA 21	4	-3	2898	76.72	-2.21	0.2
84	SLE FR 1	3	-6	2496	66.16	-1.2	0.18
84	SLE FR 2	3	-5	2499	66.23	-1.2	0.18
84	SLE FR 3	3	-6	2496	66.16	-1.2	0.18
84	SLE FR 4	3	-5	2617	69.34	-1.5	0.19
84	SLE FR 5	3	-7	2614	69.27	-1.5	0.19
84	SLE FR 6	3	-7	2692	71.34	-1.7	0.19
84	SLE QP 1	3	-6	2496	66.16	-1.2	0.18
84	SLE QP 2	3	-7	2614	69.27	-1.5	0.19
84	SLD 1	171	65	2912	76.52	7.51	-4.86
84	SLD 2	212	43	2902	76.31	7.17	-5.29
84	SLD 3	175	-43	2648	70.64	7.98	-4.69
84	SLD 4	215	-65	2639	70.44	7.64	-5.12
84	SLD 5	34	187	3107	80.43	0.61	-1.42
84	SLD 6	75	165	3097	80.22	0.25	-1.87
84	SLD 7	45	-174	2227	60.84	2.19	-0.86
84	SLD 8	87	-196	2217	60.63	1.83	-1.31

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
84	SLD 9	-81	183	3010	77.9	-4.84	1.68
84	SLD 10	-39	160	3000	77.69	-5.19	1.23
84	SLD 11	-69	-178	2130	58.32	-3.26	2.25
84	SLD 12	-28	-200	2120	58.11	-3.61	1.8
84	SLD 13	-209	51	2589	68.1	-10.64	5.5
84	SLD 14	-169	30	2579	67.89	-10.99	5.06
84	SLD 15	-206	-57	2325	62.22	-10.17	5.67
84	SLD 16	-165	-78	2315	62.02	-10.51	5.23
84	SLV 1	387	156	3293	85.79	19.07	-11.33
84	SLV 2	480	107	3271	85.32	18.29	-12.32
84	SLV 3	395	-89	2694	72.44	20.15	-10.95
84	SLV 4	487	-139	2672	71.98	19.37	-11.94
84	SLV 5	73	433	3734	94.63	3.32	-3.49
84	SLV 6	168	382	3712	94.15	2.52	-4.51
84	SLV 7	98	-386	1737	50.16	6.92	-2.21
84	SLV 8	194	-437	1714	49.68	6.11	-3.23
84	SLV 9	-188	424	3513	88.86	-9.11	3.61
84	SLV 10	-92	373	3490	88.38	-9.92	2.58
84	SLV 11	-162	-395	1516	44.39	-5.52	4.88
84	SLV 12	-67	-446	1493	43.91	-6.33	3.86
84	SLV 13	-481	125	2555	66.55	-22.38	12.31
84	SLV 14	-389	76	2533	66.09	-23.16	11.32
84	SLV 15	-474	-120	1956	53.21	-21.3	12.7
84	SLV 16	-381	-170	1934	52.75	-22.08	11.71
84	CRTFP Ux+	0	0	0	0	0	0
84	CRTFP Ux-	0	0	0	0	0	0
84	CRTFP Uy+	0	0	0	0	0	0
84	CRTFP Uy-	0	0	0	0	0	0
87	SLU 1	21	-3	2389	63.31	3.66	-0.43
87	SLU 2	22	7	2412	63.81	3.81	-0.43
87	SLU 3	21	-3	2389	63.31	3.66	-0.43
87	SLU 4	22	3	2403	63.61	3.75	-0.43
87	SLU 5	22	7	2412	63.81	3.81	-0.43
87	SLU 6	21	-3	2389	63.31	3.66	-0.43
87	SLU 7	22	3	2403	63.61	3.75	-0.43
87	SLU 8	21	-3	2389	63.31	3.66	-0.43
87	SLU 9	22	3	2403	63.61	3.75	-0.43
87	SLU 10	23	7	2823	74.64	5.36	-0.45
87	SLU 11	22	-3	2800	74.14	5.21	-0.46
87	SLU 12	23	3	2814	74.44	5.3	-0.46
87	SLU 13	23	7	2823	74.64	5.36	-0.45
87	SLU 14	22	-3	2800	74.14	5.21	-0.46
87	SLU 15	23	3	2814	74.44	5.3	-0.46
87	SLU 16	22	-3	2800	74.14	5.21	-0.46
87	SLU 17	23	3	2814	74.44	5.3	-0.46
87	SLU 18	23	-3	2976	78.78	5.88	-0.47
87	SLU 19	23	3	2990	79.08	5.97	-0.47
87	SLU 20	23	-3	2976	78.78	5.88	-0.47
87	SLU 21	23	3	2990	79.08	5.97	-0.47
87	SLU 22	22	-3	2696	71.38	4.78	-0.46
87	SLU 23	23	7	2718	71.89	4.92	-0.45
87	SLU 24	22	-3	2696	71.38	4.78	-0.46
87	SLU 25	23	3	2709	71.68	4.86	-0.46
87	SLU 26	23	7	2718	71.89	4.92	-0.45
87	SLU 27	22	-3	2696	71.38	4.78	-0.46
87	SLU 28	23	3	2709	71.68	4.86	-0.46
87	SLU 29	22	-3	2696	71.38	4.78	-0.46
87	SLU 30	23	3	2709	71.68	4.86	-0.46
87	SLU 31	24	7	3129	82.72	6.47	-0.48
87	SLU 32	24	-3	3107	82.21	6.33	-0.49
87	SLU 33	24	3	3120	82.51	6.42	-0.48
87	SLU 34	24	7	3129	82.72	6.47	-0.48
87	SLU 35	24	-3	3107	82.21	6.33	-0.49
87	SLU 36	24	3	3120	82.51	6.42	-0.48
87	SLU 37	24	-3	3107	82.21	6.33	-0.49
87	SLU 38	24	3	3120	82.51	6.42	-0.48
87	SLU 39	24	-3	3283	86.85	6.99	-0.5
87	SLU 40	24	3	3296	87.16	7.08	-0.49
87	SLU 41	24	-3	3283	86.85	6.99	-0.5
87	SLU 42	24	3	3296	87.16	7.08	-0.49
87	SLU 43	27	-4	3001	79.53	4.38	-0.56
87	SLU 44	28	6	3024	80.03	4.53	-0.55
87	SLU 45	27	-4	3001	79.53	4.38	-0.56
87	SLU 46	28	2	3015	79.83	4.47	-0.55
87	SLU 47	28	6	3024	80.03	4.53	-0.55
87	SLU 48	27	-4	3001	79.53	4.38	-0.56
87	SLU 49	28	2	3015	79.83	4.47	-0.55
87	SLU 50	27	-4	3001	79.53	4.38	-0.56
87	SLU 51	28	2	3015	79.83	4.47	-0.55
87	SLU 52	29	6	3435	90.86	6.08	-0.58
87	SLU 53	28	-4	3412	90.36	5.93	-0.58
87	SLU 54	29	2	3426	90.66	6.02	-0.58
87	SLU 55	29	6	3435	90.86	6.08	-0.58
87	SLU 56	28	-4	3412	90.36	5.93	-0.58
87	SLU 57	29	2	3426	90.66	6.02	-0.58
87	SLU 58	28	-4	3412	90.36	5.93	-0.58

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
87	SLU 59	29	2	3426	90.66	6.02	-0.58
87	SLU 60	29	-4	3588	95	6.59	-0.59
87	SLU 61	29	2	3602	95.3	6.68	-0.59
87	SLU 62	29	-4	3588	95	6.59	-0.59
87	SLU 63	29	2	3602	95.3	6.68	-0.59
87	SLU 64	28	-4	3307	87.61	5.49	-0.58
87	SLU 65	29	6	3330	88.11	5.64	-0.58
87	SLU 66	28	-4	3307	87.61	5.49	-0.58
87	SLU 67	29	2	3321	87.91	5.58	-0.58
87	SLU 68	29	6	3330	88.11	5.64	-0.58
87	SLU 69	28	-4	3307	87.61	5.49	-0.58
87	SLU 70	29	2	3321	87.91	5.58	-0.58
87	SLU 71	28	-4	3307	87.61	5.49	-0.58
87	SLU 72	29	2	3321	87.91	5.58	-0.58
87	SLU 73	30	6	3741	98.94	7.19	-0.6
87	SLU 74	30	-4	3718	98.44	7.04	-0.61
87	SLU 75	30	2	3732	98.74	7.13	-0.6
87	SLU 76	30	6	3741	98.94	7.19	-0.6
87	SLU 77	30	-4	3718	98.44	7.04	-0.61
87	SLU 78	30	2	3732	98.74	7.13	-0.6
87	SLU 79	30	-4	3718	98.44	7.04	-0.61
87	SLU 80	30	2	3732	98.74	7.13	-0.6
87	SLU 81	30	-4	3895	103.08	7.71	-0.62
87	SLU 82	30	2	3908	103.38	7.8	-0.62
87	SLU 83	30	-4	3895	103.08	7.71	-0.62
87	SLU 84	30	2	3908	103.38	7.8	-0.62
87	SLE RA 1	22	-3	2477	65.61	3.98	-0.44
87	SLE RA 2	22	4	2492	65.95	4.08	-0.44
87	SLE RA 3	22	-3	2477	65.61	3.98	-0.44
87	SLE RA 4	22	1	2486	65.82	4.04	-0.44
87	SLE RA 5	22	4	2492	65.95	4.08	-0.44
87	SLE RA 6	22	-3	2477	65.61	3.98	-0.44
87	SLE RA 7	22	1	2486	65.82	4.04	-0.44
87	SLE RA 8	22	-3	2477	65.61	3.98	-0.44
87	SLE RA 9	22	1	2486	65.82	4.04	-0.44
87	SLE RA 10	23	3	2766	73.17	5.11	-0.46
87	SLE RA 11	22	-3	2751	72.83	5.02	-0.46
87	SLE RA 12	23	1	2760	73.03	5.07	-0.46
87	SLE RA 13	23	3	2766	73.17	5.11	-0.46
87	SLE RA 14	22	-3	2751	72.83	5.02	-0.46
87	SLE RA 15	23	1	2760	73.03	5.07	-0.46
87	SLE RA 16	22	-3	2751	72.83	5.02	-0.46
87	SLE RA 17	23	1	2760	73.03	5.07	-0.46
87	SLE RA 18	23	-3	2868	75.93	5.46	-0.47
87	SLE RA 19	23	1	2877	76.13	5.52	-0.46
87	SLE RA 20	23	-3	2868	75.93	5.46	-0.47
87	SLE RA 21	23	1	2877	76.13	5.52	-0.46
87	SLE FR 1	22	-3	2477	65.61	3.98	-0.44
87	SLE FR 2	22	-2	2480	65.68	4	-0.44
87	SLE FR 3	22	-3	2477	65.61	3.98	-0.44
87	SLE FR 4	22	-2	2597	68.78	4.44	-0.45
87	SLE FR 5	22	-3	2594	68.71	4.42	-0.45
87	SLE FR 6	22	-3	2673	70.77	4.72	-0.45
87	SLE QP 1	22	-3	2477	65.61	3.98	-0.44
87	SLE QP 2	22	-3	2594	68.71	4.42	-0.45
87	SLD 1	196	28	2567	67.54	13.65	-5.35
87	SLD 2	237	48	2577	67.75	13.26	-5.77
87	SLD 3	188	-76	2303	61.69	12.16	-5.43
87	SLD 4	228	-57	2314	61.9	11.77	-5.85
87	SLD 5	72	158	2982	77.15	9.6	-1.64
87	SLD 6	114	178	2993	77.37	9.2	-2.08
87	SLD 7	44	-191	2103	57.65	4.63	-1.91
87	SLD 8	86	-170	2114	57.87	4.22	-2.35
87	SLD 9	-42	164	3075	79.55	4.62	1.45
87	SLD 10	0	185	3085	79.77	4.22	1.01
87	SLD 11	-70	-184	2196	60.04	-0.35	1.18
87	SLD 12	-28	-164	2206	60.26	-0.75	0.74
87	SLD 13	-184	50	2875	75.51	-2.92	4.95
87	SLD 14	-144	70	2885	75.73	-3.31	4.53
87	SLD 15	-193	-54	2611	69.66	-4.41	4.87
87	SLD 16	-152	-34	2621	69.88	-4.8	4.45
87	SLV 1	420	68	2531	66	25.49	-11.64
87	SLV 2	512	113	2554	66.48	24.61	-12.61
87	SLV 3	401	-170	1932	52.71	22.11	-11.82
87	SLV 4	494	-125	1955	53.2	21.23	-12.79
87	SLV 5	136	362	3475	87.87	16.19	-3.17
87	SLV 6	232	408	3499	88.37	15.28	-4.17
87	SLV 7	73	-430	1479	43.58	4.93	-3.79
87	SLV 8	169	-383	1503	44.08	4.01	-4.79
87	SLV 9	-125	377	3686	93.33	4.83	3.89
87	SLV 10	-29	424	3710	93.84	3.92	2.89
87	SLV 11	-188	-414	1690	49.05	-6.44	3.27
87	SLV 12	-92	-368	1713	49.55	-7.35	2.27
87	SLV 13	-450	119	3234	84.22	-12.38	11.89
87	SLV 14	-357	164	3257	84.7	-13.26	10.92
87	SLV 15	-468	-119	2635	70.93	-15.76	11.71

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
87	SLV 16	-376	-74	2658	71.42	-16.64	10.74
87	CRTFP Ux+	0	0	0	0	0	0
87	CRTFP Ux-	0	0	0	0	0	0
87	CRTFP Uy+	0	0	0	0	0	0
87	CRTFP Uy-	0	0	0	0	0	0
90	SLU 1	13	-19	1354	35.56	263.18	4.3
90	SLU 2	13	-10	1370	35.91	266.17	2.15
90	SLU 3	13	-19	1354	35.56	263.18	4.3
90	SLU 4	13	-14	1364	35.77	264.97	3.01
90	SLU 5	13	-10	1370	35.91	266.17	2.15
90	SLU 6	13	-19	1354	35.56	263.18	4.3
90	SLU 7	13	-14	1364	35.77	264.97	3.01
90	SLU 8	13	-19	1354	35.56	263.18	4.3
90	SLU 9	13	-14	1364	35.77	264.97	3.01
90	SLU 10	14	-14	1594	41.73	307.82	3.22
90	SLU 11	13	-23	1578	41.37	304.83	5.37
90	SLU 12	13	-18	1588	41.58	306.63	4.08
90	SLU 13	14	-14	1594	41.73	307.82	3.22
90	SLU 14	13	-23	1578	41.37	304.83	5.37
90	SLU 15	13	-18	1588	41.58	306.63	4.08
90	SLU 16	13	-23	1578	41.37	304.83	5.37
90	SLU 17	13	-18	1588	41.58	306.63	4.08
90	SLU 18	14	-25	1674	43.86	322.69	5.82
90	SLU 19	14	-20	1684	44.07	324.48	4.53
90	SLU 20	14	-25	1674	43.86	322.69	5.82
90	SLU 21	14	-20	1684	44.07	324.48	4.53
90	SLU 22	13	-22	1523	39.93	294.39	5.08
90	SLU 23	14	-13	1538	40.29	297.38	2.93
90	SLU 24	13	-22	1523	39.93	294.39	5.08
90	SLU 25	14	-17	1532	40.14	296.18	3.79
90	SLU 26	14	-13	1538	40.29	297.38	2.93
90	SLU 27	13	-22	1523	39.93	294.39	5.08
90	SLU 28	14	-17	1532	40.14	296.18	3.79
90	SLU 29	13	-22	1523	39.93	294.39	5.08
90	SLU 30	14	-17	1532	40.14	296.18	3.79
90	SLU 31	14	-18	1762	46.1	339.03	3.99
90	SLU 32	14	-26	1747	45.74	336.05	6.14
90	SLU 33	14	-21	1756	45.96	337.84	4.85
90	SLU 34	14	-18	1762	46.1	339.03	3.99
90	SLU 35	14	-26	1747	45.74	336.05	6.14
90	SLU 36	14	-21	1756	45.96	337.84	4.85
90	SLU 37	14	-26	1747	45.74	336.05	6.14
90	SLU 38	14	-21	1756	45.96	337.84	4.85
90	SLU 39	14	-28	1843	48.23	353.9	6.6
90	SLU 40	14	-23	1852	48.45	355.69	5.31
90	SLU 41	14	-28	1843	48.23	353.9	6.6
90	SLU 42	14	-23	1852	48.45	355.69	5.31
90	SLU 43	16	-23	1703	44.73	331.43	5.33
90	SLU 44	17	-15	1718	45.08	334.42	3.18
90	SLU 45	16	-23	1703	44.73	331.43	5.33
90	SLU 46	17	-18	1712	44.94	333.22	4.04
90	SLU 47	17	-15	1718	45.08	334.42	3.18
90	SLU 48	16	-23	1703	44.73	331.43	5.33
90	SLU 49	17	-18	1712	44.94	333.22	4.04
90	SLU 50	16	-23	1703	44.73	331.43	5.33
90	SLU 51	17	-18	1712	44.94	333.22	4.04
90	SLU 52	17	-19	1942	50.89	376.07	4.24
90	SLU 53	17	-28	1927	50.54	373.09	6.39
90	SLU 54	17	-22	1936	50.75	374.88	5.1
90	SLU 55	17	-19	1942	50.89	376.07	4.24
90	SLU 56	17	-28	1927	50.54	373.09	6.39
90	SLU 57	17	-22	1936	50.75	374.88	5.1
90	SLU 58	17	-28	1927	50.54	373.09	6.39
90	SLU 59	17	-22	1936	50.75	374.88	5.1
90	SLU 60	17	-29	2023	53.03	390.94	6.85
90	SLU 61	17	-24	2032	53.24	392.73	5.56
90	SLU 62	17	-29	2023	53.03	390.94	6.85
90	SLU 63	17	-24	2032	53.24	392.73	5.56
90	SLU 64	17	-26	1871	49.1	362.64	6.1
90	SLU 65	17	-18	1887	49.45	365.63	3.95
90	SLU 66	17	-26	1871	49.1	362.64	6.1
90	SLU 67	17	-21	1880	49.31	364.43	4.81
90	SLU 68	17	-18	1887	49.45	365.63	3.95
90	SLU 69	17	-26	1871	49.1	362.64	6.1
90	SLU 70	17	-21	1880	49.31	364.43	4.81
90	SLU 71	17	-26	1871	49.1	362.64	6.1
90	SLU 72	17	-21	1880	49.31	364.43	4.81
90	SLU 73	18	-22	2111	55.27	407.29	5.02
90	SLU 74	18	-31	2095	54.91	404.3	7.17
90	SLU 75	18	-26	2104	55.12	406.09	5.88
90	SLU 76	18	-22	2111	55.27	407.29	5.02
90	SLU 77	18	-31	2095	54.91	404.3	7.17
90	SLU 78	18	-26	2104	55.12	406.09	5.88
90	SLU 79	18	-31	2095	54.91	404.3	7.17
90	SLU 80	18	-26	2104	55.12	406.09	5.88
90	SLU 81	18	-33	2191	57.4	422.15	7.62

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
90	SLU 82	18	-27	2200	57.61	423.94	6.33
90	SLU 83	18	-33	2191	57.4	422.15	7.62
90	SLU 84	18	-27	2200	57.61	423.94	6.33
90	SLE RA 1	13	-20	1402	36.81	272.1	4.52
90	SLE RA 2	13	-14	1413	37.04	274.09	3.09
90	SLE RA 3	13	-20	1402	36.81	272.1	4.52
90	SLE RA 4	13	-16	1409	36.95	273.29	3.66
90	SLE RA 5	13	-14	1413	37.04	274.09	3.09
90	SLE RA 6	13	-20	1402	36.81	272.1	4.52
90	SLE RA 7	13	-16	1409	36.95	273.29	3.66
90	SLE RA 8	13	-20	1402	36.81	272.1	4.52
90	SLE RA 9	13	-16	1409	36.95	273.29	3.66
90	SLE RA 10	13	-17	1562	40.92	301.86	3.8
90	SLE RA 11	13	-22	1552	40.68	299.87	5.23
90	SLE RA 12	13	-19	1558	40.82	301.06	4.37
90	SLE RA 13	13	-17	1562	40.92	301.86	3.8
90	SLE RA 14	13	-22	1552	40.68	299.87	5.23
90	SLE RA 15	13	-19	1558	40.82	301.06	4.37
90	SLE RA 16	13	-22	1552	40.68	299.87	5.23
90	SLE RA 17	13	-19	1558	40.82	301.06	4.37
90	SLE RA 18	13	-24	1616	42.34	311.77	5.54
90	SLE RA 19	14	-20	1622	42.48	312.96	4.68
90	SLE RA 20	13	-24	1616	42.34	311.77	5.54
90	SLE RA 21	14	-20	1622	42.48	312.96	4.68
90	SLE FR 1	13	-20	1402	36.81	272.1	4.52
90	SLE FR 2	13	-18	1404	36.85	272.49	4.24
90	SLE FR 3	13	-20	1402	36.81	272.1	4.52
90	SLE FR 4	13	-20	1468	38.51	284.4	4.54
90	SLE FR 5	13	-21	1466	38.47	284	4.83
90	SLE FR 6	13	-22	1509	39.57	291.93	5.03
90	SLE QP 1	13	-20	1402	36.81	272.1	4.52
90	SLE QP 2	13	-21	1466	38.47	284	4.83
90	SLD 1	104	-3	1328	34.65	262.03	-4.46
90	SLD 2	125	25	1338	34.87	263.95	-11.84
90	SLD 3	99	-93	1151	30.61	228.03	17.99
90	SLD 4	120	-65	1161	30.84	229.95	10.61
90	SLD 5	40	110	1690	43.37	328.26	-29.28
90	SLD 6	62	139	1700	43.6	330.25	-36.94
90	SLD 7	23	-188	1099	29.9	214.94	45.55
90	SLD 8	45	-160	1110	30.13	216.93	37.88
90	SLD 9	-19	118	1823	46.8	351.06	-28.23
90	SLD 10	3	147	1833	47.03	353.06	-35.89
90	SLD 11	-36	-181	1232	33.34	237.74	46.6
90	SLD 12	-14	-152	1243	33.57	239.74	38.94
90	SLD 13	-94	23	1772	46.1	338.04	-0.95
90	SLD 14	-73	51	1782	46.32	339.96	-8.33
90	SLD 15	-99	-66	1595	42.06	304.05	21.5
90	SLD 16	-78	-39	1605	42.28	305.97	14.11
90	SLV 1	221	19	1149	29.72	233.57	-16.31
90	SLV 2	269	82	1172	30.23	237.95	-33.15
90	SLV 3	209	-184	747	20.55	156.37	34.66
90	SLV 4	258	-121	770	21.06	160.75	17.82
90	SLV 5	75	277	1973	49.57	384.35	-72.64
90	SLV 6	125	342	1997	50.09	388.88	-90.04
90	SLV 7	37	-402	632	19	127.01	97.26
90	SLV 8	87	-337	656	19.52	131.54	79.85
90	SLV 9	-60	295	2277	57.41	436.46	-70.2
90	SLV 10	-11	360	2301	57.94	440.98	-87.6
90	SLV 11	-99	-383	936	26.84	179.12	99.7
90	SLV 12	-49	-319	960	27.36	183.64	82.3
90	SLV 13	-232	80	2163	55.87	407.25	-8.17
90	SLV 14	-183	142	2185	56.38	411.63	-25
90	SLV 15	-243	-124	1760	46.7	330.05	42.8
90	SLV 16	-195	-61	1783	47.21	334.43	25.97
90	CRTFP Ux+	0	0	0	0	0	0
90	CRTFP Ux-	0	0	0	0	0	0
90	CRTFP Uy+	0	0	0	0	0	0
90	CRTFP Uy-	0	0	0	0	0	0
91	SLU 1	-1	-14	1308	-1.59	-228.48	-3.48
91	SLU 2	-1	-6	1323	-1.66	-230.89	-1.36
91	SLU 3	-1	-14	1308	-1.59	-228.48	-3.48
91	SLU 4	-1	-9	1317	-1.64	-229.93	-2.2
91	SLU 5	-1	-6	1323	-1.66	-230.89	-1.36
91	SLU 6	-1	-14	1308	-1.59	-228.48	-3.48
91	SLU 7	-1	-9	1317	-1.64	-229.93	-2.2
91	SLU 8	-1	-14	1308	-1.59	-228.48	-3.48
91	SLU 9	-1	-9	1317	-1.64	-229.93	-2.2
91	SLU 10	-1	-10	1534	-1.98	-265.76	-2.43
91	SLU 11	-1	-18	1520	-1.91	-263.34	-4.56
91	SLU 12	-1	-13	1529	-1.95	-264.79	-3.28
91	SLU 13	-1	-10	1534	-1.98	-265.76	-2.43
91	SLU 14	-1	-18	1520	-1.91	-263.34	-4.56
91	SLU 15	-1	-13	1529	-1.95	-264.79	-3.28
91	SLU 16	-1	-18	1520	-1.91	-263.34	-4.56
91	SLU 17	-1	-13	1529	-1.95	-264.79	-3.28
91	SLU 18	-1	-20	1611	-2.05	-278.29	-5.02

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
91	SLU 19	-1	-15	1620	-2.09	-279.73	-3.75
91	SLU 20	-1	-20	1611	-2.05	-278.29	-5.02
91	SLU 21	-1	-15	1620	-2.09	-279.73	-3.75
91	SLU 22	-1	-17	1467	-1.83	-254.49	-4.23
91	SLU 23	-1	-9	1482	-1.9	-256.9	-2.11
91	SLU 24	-1	-17	1467	-1.83	-254.49	-4.23
91	SLU 25	-1	-12	1476	-1.87	-255.94	-2.95
91	SLU 26	-1	-9	1482	-1.9	-256.9	-2.11
91	SLU 27	-1	-17	1467	-1.83	-254.49	-4.23
91	SLU 28	-1	-12	1476	-1.87	-255.94	-2.95
91	SLU 29	-1	-17	1467	-1.83	-254.49	-4.23
91	SLU 30	-1	-12	1476	-1.87	-255.94	-2.95
91	SLU 31	-1	-13	1694	-2.22	-291.77	-3.18
91	SLU 32	-1	-22	1679	-2.14	-289.35	-5.31
91	SLU 33	-1	-16	1688	-2.19	-290.8	-4.03
91	SLU 34	-1	-13	1694	-2.22	-291.77	-3.18
91	SLU 35	-1	-22	1679	-2.14	-289.35	-5.31
91	SLU 36	-1	-16	1688	-2.19	-290.8	-4.03
91	SLU 37	-1	-22	1679	-2.14	-289.35	-5.31
91	SLU 38	-1	-16	1688	-2.19	-290.8	-4.03
91	SLU 39	-1	-23	1770	-2.28	-304.3	-5.77
91	SLU 40	-1	-18	1779	-2.32	-305.74	-4.5
91	SLU 41	-1	-23	1770	-2.28	-304.3	-5.77
91	SLU 42	-1	-18	1779	-2.32	-305.74	-4.5
91	SLU 43	-2	-17	1646	-1.99	-288.11	-4.26
91	SLU 44	-2	-9	1660	-2.06	-290.52	-2.14
91	SLU 45	-2	-17	1646	-1.99	-288.11	-4.26
91	SLU 46	-2	-12	1655	-2.03	-289.56	-2.99
91	SLU 47	-2	-9	1660	-2.06	-290.52	-2.14
91	SLU 48	-2	-17	1646	-1.99	-288.11	-4.26
91	SLU 49	-2	-12	1655	-2.03	-289.56	-2.99
91	SLU 50	-2	-17	1646	-1.99	-288.11	-4.26
91	SLU 51	-2	-12	1655	-2.03	-289.56	-2.99
91	SLU 52	-1	-13	1872	-2.38	-325.38	-3.22
91	SLU 53	-1	-22	1858	-2.31	-322.97	-5.34
91	SLU 54	-1	-17	1867	-2.35	-324.42	-4.07
91	SLU 55	-1	-13	1872	-2.38	-325.38	-3.22
91	SLU 56	-1	-22	1858	-2.31	-322.97	-5.34
91	SLU 57	-1	-17	1867	-2.35	-324.42	-4.07
91	SLU 58	-1	-22	1858	-2.31	-322.97	-5.34
91	SLU 59	-1	-17	1867	-2.35	-324.42	-4.07
91	SLU 60	-1	-24	1949	-2.45	-337.91	-5.8
91	SLU 61	-1	-18	1957	-2.49	-339.36	-4.53
91	SLU 62	-1	-24	1949	-2.45	-337.91	-5.8
91	SLU 63	-1	-18	1957	-2.49	-339.36	-4.53
91	SLU 64	-1	-20	1805	-2.22	-314.12	-5.01
91	SLU 65	-1	-12	1820	-2.29	-316.53	-2.89
91	SLU 66	-1	-20	1805	-2.22	-314.12	-5.01
91	SLU 67	-1	-15	1814	-2.27	-315.57	-3.74
91	SLU 68	-1	-12	1820	-2.29	-316.53	-2.89
91	SLU 69	-1	-20	1805	-2.22	-314.12	-5.01
91	SLU 70	-1	-15	1814	-2.27	-315.57	-3.74
91	SLU 71	-1	-20	1805	-2.22	-314.12	-5.01
91	SLU 72	-1	-15	1814	-2.27	-315.57	-3.74
91	SLU 73	-1	-16	2032	-2.61	-351.39	-3.97
91	SLU 74	-1	-25	2017	-2.54	-348.98	-6.09
91	SLU 75	-1	-20	2026	-2.58	-350.43	-4.82
91	SLU 76	-1	-16	2032	-2.61	-351.39	-3.97
91	SLU 77	-1	-25	2017	-2.54	-348.98	-6.09
91	SLU 78	-1	-20	2026	-2.58	-350.43	-4.82
91	SLU 79	-1	-25	2017	-2.54	-348.98	-6.09
91	SLU 80	-1	-20	2026	-2.58	-350.43	-4.82
91	SLU 81	-1	-27	2108	-2.68	-363.92	-6.55
91	SLU 82	-1	-21	2117	-2.72	-365.37	-5.28
91	SLU 83	-1	-27	2108	-2.68	-363.92	-6.55
91	SLU 84	-1	-21	2117	-2.72	-365.37	-5.28
91	SLE RA 1	-1	-15	1354	-1.66	-235.91	-3.69
91	SLE RA 2	-1	-9	1363	-1.71	-237.52	-2.28
91	SLE RA 3	-1	-15	1354	-1.66	-235.91	-3.69
91	SLE RA 4	-1	-12	1359	-1.69	-236.88	-2.84
91	SLE RA 5	-1	-9	1363	-1.71	-237.52	-2.28
91	SLE RA 6	-1	-15	1354	-1.66	-235.91	-3.69
91	SLE RA 7	-1	-12	1359	-1.69	-236.88	-2.84
91	SLE RA 8	-1	-15	1354	-1.66	-235.91	-3.69
91	SLE RA 9	-1	-12	1359	-1.69	-236.88	-2.84
91	SLE RA 10	-1	-12	1505	-1.92	-260.76	-3
91	SLE RA 11	-1	-18	1495	-1.87	-259.16	-4.41
91	SLE RA 12	-1	-14	1501	-1.9	-260.12	-3.56
91	SLE RA 13	-1	-12	1505	-1.92	-260.76	-3
91	SLE RA 14	-1	-18	1495	-1.87	-259.16	-4.41
91	SLE RA 15	-1	-14	1501	-1.9	-260.12	-3.56
91	SLE RA 16	-1	-18	1495	-1.87	-259.16	-4.41
91	SLE RA 17	-1	-14	1501	-1.9	-260.12	-3.56
91	SLE RA 18	-1	-19	1555	-1.96	-269.12	-4.72
91	SLE RA 19	-1	-16	1561	-1.99	-270.08	-3.87
91	SLE RA 20	-1	-19	1555	-1.96	-269.12	-4.72

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
91	SLE RA 21	-1	-16	1561	-1.99	-270.08	-3.87
91	SLE FR 1	-1	-15	1354	-1.66	-235.91	-3.69
91	SLE FR 2	-1	-14	1356	-1.67	-236.24	-3.41
91	SLE FR 3	-1	-15	1354	-1.66	-235.91	-3.69
91	SLE FR 4	-1	-15	1416	-1.76	-246.2	-3.72
91	SLE FR 5	-1	-16	1414	-1.75	-245.87	-4
91	SLE FR 6	-1	-17	1455	-1.81	-252.52	-4.2
91	SLE QP 1	-1	-15	1354	-1.66	-235.91	-3.69
91	SLE QP 2	-1	-16	1414	-1.75	-245.87	-4
91	SLD 1	88	55	1697	-2.51	-289.28	13.83
91	SLD 2	108	27	1689	-2.47	-287.92	6.97
91	SLD 3	86	-37	1542	-1.71	-263.12	-9.09
91	SLD 4	105	-64	1534	-1.66	-261.76	-15.96
91	SLD 5	22	155	1737	-3.22	-299.08	38.65
91	SLD 6	42	126	1729	-3.17	-297.67	31.53
91	SLD 7	15	-151	1220	-0.53	-211.86	-37.76
91	SLD 8	35	-180	1212	-0.49	-210.45	-44.88
91	SLD 9	-37	148	1617	-3.01	-281.3	36.89
91	SLD 10	-17	119	1608	-2.97	-279.89	29.76
91	SLD 11	-44	-158	1100	-0.33	-194.08	-39.52
91	SLD 12	-24	-187	1091	-0.28	-192.67	-46.64
91	SLD 13	-107	32	1295	-1.83	-229.99	7.96
91	SLD 14	-88	4	1287	-1.79	-228.63	1.1
91	SLD 15	-110	-60	1140	-1.03	-203.83	-14.96
91	SLD 16	-90	-88	1131	-0.99	-202.47	-21.82
91	SLV 1	203	146	2059	-3.49	-344.83	36.54
91	SLV 2	247	83	2040	-3.39	-341.73	20.9
91	SLV 3	198	-63	1707	-1.66	-285.42	-15.51
91	SLV 4	242	-126	1688	-1.56	-282.33	-31.15
91	SLV 5	52	372	2148	-5.08	-366.79	92.84
91	SLV 6	97	307	2129	-4.98	-363.59	76.68
91	SLV 7	35	-323	975	1.01	-168.78	-80.66
91	SLV 8	80	-389	956	1.11	-165.58	-96.83
91	SLV 9	-82	356	1873	-4.61	-326.17	88.83
91	SLV 10	-37	291	1854	-4.51	-322.97	72.66
91	SLV 11	-99	-339	699	1.48	-128.16	-84.67
91	SLV 12	-54	-404	680	1.58	-124.96	-100.84
91	SLV 13	-244	93	1140	-1.94	-209.42	23.15
91	SLV 14	-200	30	1122	-1.84	-206.33	7.51
91	SLV 15	-249	-115	788	-0.11	-150.02	-28.9
91	SLV 16	-205	-178	770	-0.01	-146.92	-44.54
91	CRTFP Ux+	0	0	0	0	0	0
91	CRTFP Ux-	0	0	0	0	0	0
91	CRTFP Uy+	0	0	0	0	0	0
91	CRTFP Uy-	0	0	0	0	0	0
94	SLU 1	11	-4	2713	-0.96	-1.89	0.36
94	SLU 2	11	9	2740	-1.11	-1.89	0.36
94	SLU 3	11	-4	2713	-0.96	-1.89	0.36
94	SLU 4	11	3	2729	-1.05	-1.89	0.36
94	SLU 5	11	9	2740	-1.11	-1.89	0.36
94	SLU 6	11	-4	2713	-0.96	-1.89	0.36
94	SLU 7	11	3	2729	-1.05	-1.89	0.36
94	SLU 8	11	-4	2713	-0.96	-1.89	0.36
94	SLU 9	11	3	2729	-1.05	-1.89	0.36
94	SLU 10	12	10	3216	-1.25	-2.31	0.39
94	SLU 11	12	-3	3189	-1.1	-2.3	0.39
94	SLU 12	12	5	3205	-1.19	-2.3	0.39
94	SLU 13	12	10	3216	-1.25	-2.31	0.39
94	SLU 14	12	-3	3189	-1.1	-2.3	0.39
94	SLU 15	12	5	3205	-1.19	-2.3	0.39
94	SLU 16	12	-3	3189	-1.1	-2.3	0.39
94	SLU 17	12	5	3205	-1.19	-2.3	0.39
94	SLU 18	13	-2	3393	-1.16	-2.48	0.4
94	SLU 19	13	5	3409	-1.25	-2.48	0.41
94	SLU 20	13	-2	3393	-1.16	-2.48	0.4
94	SLU 21	13	5	3409	-1.25	-2.48	0.41
94	SLU 22	12	-3	3068	-1.05	-2.22	0.39
94	SLU 23	12	10	3096	-1.19	-2.22	0.39
94	SLU 24	12	-3	3068	-1.05	-2.22	0.39
94	SLU 25	12	4	3085	-1.14	-2.22	0.39
94	SLU 26	12	10	3096	-1.19	-2.22	0.39
94	SLU 27	12	-3	3068	-1.05	-2.22	0.39
94	SLU 28	12	4	3085	-1.14	-2.22	0.39
94	SLU 29	12	-3	3068	-1.05	-2.22	0.39
94	SLU 30	12	4	3085	-1.14	-2.22	0.39
94	SLU 31	13	11	3572	-1.34	-2.64	0.42
94	SLU 32	13	-2	3544	-1.19	-2.63	0.42
94	SLU 33	13	6	3561	-1.28	-2.63	0.42
94	SLU 34	13	11	3572	-1.34	-2.64	0.42
94	SLU 35	13	-2	3544	-1.19	-2.63	0.42
94	SLU 36	13	6	3561	-1.28	-2.63	0.42
94	SLU 37	13	-2	3544	-1.19	-2.63	0.42
94	SLU 38	13	6	3561	-1.28	-2.63	0.42
94	SLU 39	14	-1	3748	-1.25	-2.81	0.43
94	SLU 40	14	6	3765	-1.34	-2.81	0.43
94	SLU 41	14	-1	3748	-1.25	-2.81	0.43

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
94	SLU 42	14	6	3765	-1.34	-2.81	0.43
94	SLU 43	15	-6	3405	-1.22	-2.34	0.46
94	SLU 44	15	7	3432	-1.37	-2.35	0.46
94	SLU 45	15	-6	3405	-1.22	-2.34	0.46
94	SLU 46	15	2	3421	-1.31	-2.34	0.46
94	SLU 47	15	7	3432	-1.37	-2.35	0.46
94	SLU 48	15	-6	3405	-1.22	-2.34	0.46
94	SLU 49	15	2	3421	-1.31	-2.34	0.46
94	SLU 50	15	-6	3405	-1.22	-2.34	0.46
94	SLU 51	15	2	3421	-1.31	-2.34	0.46
94	SLU 52	16	8	3908	-1.51	-2.76	0.49
94	SLU 53	15	-4	3881	-1.36	-2.75	0.49
94	SLU 54	16	3	3897	-1.45	-2.76	0.49
94	SLU 55	16	8	3908	-1.51	-2.76	0.49
94	SLU 56	15	-4	3881	-1.36	-2.75	0.49
94	SLU 57	16	3	3897	-1.45	-2.76	0.49
94	SLU 58	15	-4	3881	-1.36	-2.75	0.49
94	SLU 59	16	3	3897	-1.45	-2.76	0.49
94	SLU 60	16	-4	4085	-1.42	-2.93	0.5
94	SLU 61	16	4	4101	-1.51	-2.93	0.5
94	SLU 62	16	-4	4085	-1.42	-2.93	0.5
94	SLU 63	16	4	4101	-1.51	-2.93	0.5
94	SLU 64	15	-5	3760	-1.31	-2.67	0.48
94	SLU 65	15	8	3788	-1.45	-2.68	0.49
94	SLU 66	15	-5	3760	-1.31	-2.67	0.48
94	SLU 67	15	3	3777	-1.39	-2.68	0.49
94	SLU 68	15	8	3788	-1.45	-2.68	0.49
94	SLU 69	15	-5	3760	-1.31	-2.67	0.48
94	SLU 70	15	3	3777	-1.39	-2.68	0.49
94	SLU 71	15	-5	3760	-1.31	-2.67	0.48
94	SLU 72	15	3	3777	-1.39	-2.68	0.49
94	SLU 73	16	9	4264	-1.6	-3.09	0.52
94	SLU 74	16	-4	4236	-1.45	-3.08	0.52
94	SLU 75	16	4	4253	-1.54	-3.09	0.52
94	SLU 76	16	9	4264	-1.6	-3.09	0.52
94	SLU 77	16	-4	4236	-1.45	-3.08	0.52
94	SLU 78	16	4	4253	-1.54	-3.09	0.52
94	SLU 79	16	-4	4236	-1.45	-3.08	0.52
94	SLU 80	16	4	4253	-1.54	-3.09	0.52
94	SLU 81	17	-3	4440	-1.51	-3.26	0.53
94	SLU 82	17	5	4457	-1.6	-3.26	0.53
94	SLU 83	17	-3	4440	-1.51	-3.26	0.53
94	SLU 84	17	5	4457	-1.6	-3.26	0.53
94	SLE RA 1	12	-4	2814	-0.99	-1.98	0.37
94	SLE RA 2	12	5	2833	-1.08	-1.99	0.37
94	SLE RA 3	12	-4	2814	-0.99	-1.98	0.37
94	SLE RA 4	12	1	2825	-1.04	-1.99	0.37
94	SLE RA 5	12	5	2833	-1.08	-1.99	0.37
94	SLE RA 6	12	-4	2814	-0.99	-1.98	0.37
94	SLE RA 7	12	1	2825	-1.04	-1.99	0.37
94	SLE RA 8	12	-4	2814	-0.99	-1.98	0.37
94	SLE RA 9	12	1	2825	-1.04	-1.99	0.37
94	SLE RA 10	12	5	3150	-1.18	-2.26	0.39
94	SLE RA 11	12	-3	3132	-1.08	-2.26	0.39
94	SLE RA 12	12	2	3143	-1.14	-2.26	0.39
94	SLE RA 13	12	5	3150	-1.18	-2.26	0.39
94	SLE RA 14	12	-3	3132	-1.08	-2.26	0.39
94	SLE RA 15	12	2	3143	-1.14	-2.26	0.39
94	SLE RA 16	12	-3	3132	-1.08	-2.26	0.39
94	SLE RA 17	12	2	3143	-1.14	-2.26	0.39
94	SLE RA 18	13	-3	3268	-1.12	-2.38	0.4
94	SLE RA 19	13	2	3279	-1.18	-2.38	0.4
94	SLE RA 20	13	-3	3268	-1.12	-2.38	0.4
94	SLE RA 21	13	2	3279	-1.18	-2.38	0.4
94	SLE FR 1	12	-4	2814	-0.99	-1.98	0.37
94	SLE FR 2	12	-2	2818	-1.01	-1.98	0.37
94	SLE FR 3	12	-4	2814	-0.99	-1.98	0.37
94	SLE FR 4	12	-2	2954	-1.05	-2.1	0.38
94	SLE FR 5	12	-4	2950	-1.03	-2.1	0.38
94	SLE FR 6	12	-3	3041	-1.05	-2.18	0.38
94	SLE QP 1	12	-4	2814	-0.99	-1.98	0.37
94	SLE QP 2	12	-4	2950	-1.03	-2.1	0.38
94	SLD 1	214	71	3127	-1.64	6.84	0.42
94	SLD 2	256	71	3127	-1.64	6.35	1.38
94	SLD 3	208	-63	2821	0.06	7.1	0.34
94	SLD 4	250	-63	2822	0.06	6.61	1.3
94	SLD 5	66	222	3466	-3.79	0.36	0.15
94	SLD 6	110	223	3467	-3.79	-0.14	1.14
94	SLD 7	46	-225	2449	1.88	1.24	-0.1
94	SLD 8	89	-225	2449	1.87	0.73	0.9
94	SLD 9	-65	218	3452	-3.93	-4.93	-0.15
94	SLD 10	-22	218	3452	-3.93	-5.44	0.85
94	SLD 11	-86	-230	2434	1.74	-4.06	-0.39
94	SLD 12	-43	-230	2435	1.73	-4.57	0.61
94	SLD 13	-226	56	3079	-2.11	-10.81	-0.55
94	SLD 14	-184	56	3080	-2.11	-11.3	0.41

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
94	SLD 15	-232	-79	2774	-0.41	-10.55	-0.63
94	SLD 16	-190	-78	2774	-0.41	-11.04	0.33
94	SLV 1	473	166	3352	-2.37	18.32	0.48
94	SLV 2	569	167	3353	-2.37	17.2	2.66
94	SLV 3	459	-139	2659	1.49	18.91	0.31
94	SLV 4	555	-138	2660	1.48	17.8	2.49
94	SLV 5	137	509	4122	-7.28	3.52	-0.14
94	SLV 6	236	511	4123	-7.28	2.37	2.12
94	SLV 7	89	-507	1811	5.58	5.52	-0.7
94	SLV 8	189	-506	1813	5.58	4.37	1.56
94	SLV 9	-165	499	4088	-7.63	-8.57	-0.81
94	SLV 10	-65	500	4090	-7.63	-9.72	1.45
94	SLV 11	-212	-518	1778	5.23	-6.57	-1.37
94	SLV 12	-113	-517	1779	5.23	-7.73	0.89
94	SLV 13	-531	131	3241	-3.54	-22	-1.74
94	SLV 14	-435	132	3242	-3.54	-23.12	0.44
94	SLV 15	-546	-174	2548	0.32	-21.4	-1.91
94	SLV 16	-449	-173	2549	0.32	-22.52	0.27
94	CRTFP Ux+	0	0	0	0	0	0
94	CRTFP Ux-	0	0	0	0	0	0
94	CRTFP Uy+	0	0	0	0	0	0
94	CRTFP Uy-	0	0	0	0	0	0
97	SLU 1	1	-7	2658	-4.42	-0.89	0.3
97	SLU 2	1	5	2679	-4.6	-0.9	0.29
97	SLU 3	1	-7	2658	-4.42	-0.89	0.3
97	SLU 4	1	0	2671	-4.53	-0.9	0.3
97	SLU 5	1	5	2679	-4.6	-0.9	0.29
97	SLU 6	1	-7	2658	-4.42	-0.89	0.3
97	SLU 7	1	0	2671	-4.53	-0.9	0.3
97	SLU 8	1	-7	2658	-4.42	-0.89	0.3
97	SLU 9	1	0	2671	-4.53	-0.9	0.3
97	SLU 10	2	4	3132	-5.41	-2.06	0.33
97	SLU 11	2	-7	3111	-5.24	-2.05	0.33
97	SLU 12	2	0	3124	-5.34	-2.06	0.33
97	SLU 13	2	4	3132	-5.41	-2.06	0.33
97	SLU 14	2	-7	3111	-5.24	-2.05	0.33
97	SLU 15	2	0	3124	-5.34	-2.06	0.33
97	SLU 16	2	-7	3111	-5.24	-2.05	0.33
97	SLU 17	2	0	3124	-5.34	-2.06	0.33
97	SLU 18	3	-8	3305	-5.59	-2.54	0.34
97	SLU 19	3	-1	3318	-5.69	-2.55	0.34
97	SLU 20	3	-8	3305	-5.59	-2.54	0.34
97	SLU 21	3	-1	3318	-5.69	-2.55	0.34
97	SLU 22	2	-7	2995	-5.02	-1.7	0.32
97	SLU 23	2	4	3016	-5.19	-1.71	0.32
97	SLU 24	2	-7	2995	-5.02	-1.7	0.32
97	SLU 25	2	0	3008	-5.12	-1.7	0.32
97	SLU 26	2	4	3016	-5.19	-1.71	0.32
97	SLU 27	2	-7	2995	-5.02	-1.7	0.32
97	SLU 28	2	0	3008	-5.12	-1.7	0.32
97	SLU 29	2	-7	2995	-5.02	-1.7	0.32
97	SLU 30	2	0	3008	-5.12	-1.7	0.32
97	SLU 31	3	4	3469	-6.01	-2.87	0.35
97	SLU 32	3	-8	3448	-5.83	-2.85	0.36
97	SLU 33	3	-1	3461	-5.94	-2.86	0.36
97	SLU 34	3	4	3469	-6.01	-2.87	0.35
97	SLU 35	3	-8	3448	-5.83	-2.85	0.36
97	SLU 36	3	-1	3461	-5.94	-2.86	0.36
97	SLU 37	3	-8	3448	-5.83	-2.85	0.36
97	SLU 38	3	-1	3461	-5.94	-2.86	0.36
97	SLU 39	4	-8	3642	-6.18	-3.35	0.37
97	SLU 40	4	-1	3655	-6.29	-3.36	0.37
97	SLU 41	4	-8	3642	-6.18	-3.35	0.37
97	SLU 42	4	-1	3655	-6.29	-3.36	0.37
97	SLU 43	1	-8	3339	-5.55	-0.88	0.38
97	SLU 44	1	3	3361	-5.72	-0.89	0.37
97	SLU 45	1	-8	3339	-5.55	-0.88	0.38
97	SLU 46	1	-1	3352	-5.65	-0.89	0.37
97	SLU 47	1	3	3361	-5.72	-0.89	0.37
97	SLU 48	1	-8	3339	-5.55	-0.88	0.38
97	SLU 49	1	-1	3352	-5.65	-0.89	0.37
97	SLU 50	1	-8	3339	-5.55	-0.88	0.38
97	SLU 51	1	-1	3352	-5.65	-0.89	0.37
97	SLU 52	2	2	3814	-6.54	-2.05	0.41
97	SLU 53	3	-9	3792	-6.36	-2.04	0.41
97	SLU 54	2	-2	3805	-6.46	-2.05	0.41
97	SLU 55	2	2	3814	-6.54	-2.05	0.41
97	SLU 56	3	-9	3792	-6.36	-2.04	0.41
97	SLU 57	2	-2	3805	-6.46	-2.05	0.41
97	SLU 58	3	-9	3792	-6.36	-2.04	0.41
97	SLU 59	2	-2	3805	-6.46	-2.05	0.41
97	SLU 60	3	-9	3986	-6.71	-2.53	0.42
97	SLU 61	3	-2	3999	-6.81	-2.54	0.42
97	SLU 62	3	-9	3986	-6.71	-2.53	0.42
97	SLU 63	3	-2	3999	-6.81	-2.54	0.42
97	SLU 64	2	-9	3676	-6.14	-1.69	0.4

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
97	SLU 65	2	3	3698	-6.32	-1.7	0.4
97	SLU 66	2	-9	3676	-6.14	-1.69	0.4
97	SLU 67	2	-2	3689	-6.25	-1.7	0.4
97	SLU 68	2	3	3698	-6.32	-1.7	0.4
97	SLU 69	2	-9	3676	-6.14	-1.69	0.4
97	SLU 70	2	-2	3689	-6.25	-1.7	0.4
97	SLU 71	2	-9	3676	-6.14	-1.69	0.4
97	SLU 72	2	-2	3689	-6.25	-1.7	0.4
97	SLU 73	3	2	4151	-7.13	-2.86	0.43
97	SLU 74	3	-10	4129	-6.95	-2.84	0.44
97	SLU 75	3	-3	4142	-7.06	-2.85	0.43
97	SLU 76	3	2	4151	-7.13	-2.86	0.43
97	SLU 77	3	-10	4129	-6.95	-2.84	0.44
97	SLU 78	3	-3	4142	-7.06	-2.85	0.43
97	SLU 79	3	-10	4129	-6.95	-2.84	0.44
97	SLU 80	3	-3	4142	-7.06	-2.85	0.43
97	SLU 81	4	-10	4324	-7.3	-3.34	0.45
97	SLU 82	4	-3	4337	-7.41	-3.35	0.45
97	SLU 83	4	-10	4324	-7.3	-3.34	0.45
97	SLU 84	4	-3	4337	-7.41	-3.35	0.45
97	SLE RA 1	2	-7	2754	-4.59	-1.12	0.3
97	SLE RA 2	1	1	2768	-4.71	-1.13	0.3
97	SLE RA 3	2	-7	2754	-4.59	-1.12	0.3
97	SLE RA 4	1	-2	2763	-4.66	-1.13	0.3
97	SLE RA 5	1	1	2768	-4.71	-1.13	0.3
97	SLE RA 6	2	-7	2754	-4.59	-1.12	0.3
97	SLE RA 7	1	-2	2763	-4.66	-1.13	0.3
97	SLE RA 8	2	-7	2754	-4.59	-1.12	0.3
97	SLE RA 9	1	-2	2763	-4.66	-1.13	0.3
97	SLE RA 10	2	0	3070	-5.25	-1.9	0.32
97	SLE RA 11	2	-7	3056	-5.14	-1.89	0.33
97	SLE RA 12	2	-3	3065	-5.21	-1.9	0.33
97	SLE RA 13	2	0	3070	-5.25	-1.9	0.32
97	SLE RA 14	2	-7	3056	-5.14	-1.89	0.33
97	SLE RA 15	2	-3	3065	-5.21	-1.9	0.33
97	SLE RA 16	2	-7	3056	-5.14	-1.89	0.33
97	SLE RA 17	2	-3	3065	-5.21	-1.9	0.33
97	SLE RA 18	3	-8	3185	-5.37	-2.22	0.34
97	SLE RA 19	3	-3	3194	-5.44	-2.23	0.33
97	SLE RA 20	3	-8	3185	-5.37	-2.22	0.34
97	SLE RA 21	3	-3	3194	-5.44	-2.23	0.33
97	SLE FR 1	2	-7	2754	-4.59	-1.12	0.3
97	SLE FR 2	2	-5	2757	-4.62	-1.12	0.3
97	SLE FR 3	2	-7	2754	-4.59	-1.12	0.3
97	SLE FR 4	2	-5	2886	-4.85	-1.45	0.31
97	SLE FR 5	2	-7	2883	-4.83	-1.45	0.31
97	SLE FR 6	2	-7	2970	-4.98	-1.67	0.32
97	SLE QP 1	2	-7	2754	-4.59	-1.12	0.3
97	SLE QP 2	2	-7	2883	-4.83	-1.45	0.31
97	SLD 1	198	76	3186	-6.25	8.96	0.18
97	SLD 2	240	51	3177	-6.17	8.57	1.06
97	SLD 3	202	-49	2941	-4.23	9.44	0.21
97	SLD 4	244	-74	2932	-4.15	9.04	1.1
97	SLD 5	38	218	3349	-8.35	1.09	-0.11
97	SLD 6	82	192	3340	-8.26	0.68	0.8
97	SLD 7	53	-201	2532	-1.62	2.68	0.02
97	SLD 8	97	-227	2523	-1.53	2.28	0.93
97	SLD 9	-93	213	3244	-8.12	-5.18	-0.31
97	SLD 10	-49	187	3235	-8.03	-5.59	0.61
97	SLD 11	-79	-206	2426	-1.39	-3.59	-0.18
97	SLD 12	-35	-232	2417	-1.31	-3.99	0.74
97	SLD 13	-241	60	2834	-5.5	-11.95	-0.47
97	SLD 14	-198	35	2826	-5.42	-12.34	0.41
97	SLD 15	-236	-65	2589	-3.48	-11.47	-0.44
97	SLD 16	-194	-90	2581	-3.4	-11.86	0.45
97	SLV 1	449	182	3573	-8.07	22.32	0.01
97	SLV 2	546	125	3553	-7.88	21.42	2.02
97	SLV 3	459	-103	3016	-3.49	23.41	0.1
97	SLV 4	555	-160	2997	-3.29	22.51	2.11
97	SLV 5	86	503	3942	-12.82	4.36	-0.66
97	SLV 6	185	444	3922	-12.62	3.43	1.43
97	SLV 7	119	-447	2086	2.46	7.99	-0.36
97	SLV 8	218	-506	2066	2.66	7.06	1.73
97	SLV 9	-215	492	3701	-12.31	-9.96	-1.1
97	SLV 10	-115	433	3681	-12.11	-10.89	0.98
97	SLV 11	-182	-458	1845	2.97	-6.33	-0.8
97	SLV 12	-82	-517	1825	3.17	-7.26	1.28
97	SLV 13	-552	146	2770	-6.36	-25.41	-1.49
97	SLV 14	-455	89	2750	-6.16	-26.31	0.53
97	SLV 15	-542	-139	2213	-1.77	-24.32	-1.4
97	SLV 16	-445	-196	2194	-1.58	-25.22	0.62
97	CRTFP Ux+	0	0	0	0	0	0
97	CRTFP Ux-	0	0	0	0	0	0
97	CRTFP Uy+	0	0	0	0	0	0
97	CRTFP Uy-	0	0	0	0	0	0
100	SLU 1	23	-3	2635	-4.48	4.08	0.34

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
100	SLU 2	24	9	2656	-4.66	4.24	0.36
100	SLU 3	23	-3	2635	-4.48	4.08	0.34
100	SLU 4	23	4	2647	-4.59	4.18	0.35
100	SLU 5	24	9	2656	-4.66	4.24	0.36
100	SLU 6	23	-3	2635	-4.48	4.08	0.34
100	SLU 7	23	4	2647	-4.59	4.18	0.35
100	SLU 8	23	-3	2635	-4.48	4.08	0.34
100	SLU 9	23	4	2647	-4.59	4.18	0.35
100	SLU 10	25	9	3107	-5.48	6	0.4
100	SLU 11	24	-3	3086	-5.3	5.83	0.38
100	SLU 12	25	4	3098	-5.41	5.93	0.39
100	SLU 13	25	9	3107	-5.48	6	0.4
100	SLU 14	24	-3	3086	-5.3	5.83	0.38
100	SLU 15	25	4	3098	-5.41	5.93	0.39
100	SLU 16	24	-3	3086	-5.3	5.83	0.38
100	SLU 17	25	4	3098	-5.41	5.93	0.39
100	SLU 18	25	-3	3279	-5.65	6.58	0.4
100	SLU 19	25	4	3292	-5.76	6.68	0.41
100	SLU 20	25	-3	3279	-5.65	6.58	0.4
100	SLU 21	25	4	3292	-5.76	6.68	0.41
100	SLU 22	24	-3	2971	-5.08	5.34	0.37
100	SLU 23	25	9	2992	-5.26	5.5	0.39
100	SLU 24	24	-3	2971	-5.08	5.34	0.37
100	SLU 25	25	4	2984	-5.19	5.44	0.38
100	SLU 26	25	9	2992	-5.26	5.5	0.39
100	SLU 27	24	-3	2971	-5.08	5.34	0.37
100	SLU 28	25	4	2984	-5.19	5.44	0.38
100	SLU 29	24	-3	2971	-5.08	5.34	0.37
100	SLU 30	25	4	2984	-5.19	5.44	0.38
100	SLU 31	26	9	3443	-6.08	7.26	0.43
100	SLU 32	26	-3	3422	-5.9	7.09	0.41
100	SLU 33	26	4	3435	-6.01	7.19	0.42
100	SLU 34	26	9	3443	-6.08	7.26	0.43
100	SLU 35	26	-3	3422	-5.9	7.09	0.41
100	SLU 36	26	4	3435	-6.01	7.19	0.42
100	SLU 37	26	-3	3422	-5.9	7.09	0.41
100	SLU 38	26	4	3435	-6.01	7.19	0.42
100	SLU 39	26	-3	3616	-6.25	7.84	0.43
100	SLU 40	26	4	3628	-6.36	7.94	0.44
100	SLU 41	26	-3	3616	-6.25	7.84	0.43
100	SLU 42	26	4	3628	-6.36	7.94	0.44
100	SLU 43	30	-3	3310	-5.62	4.87	0.44
100	SLU 44	30	8	3331	-5.79	5.04	0.45
100	SLU 45	30	-3	3310	-5.62	4.87	0.44
100	SLU 46	30	3	3322	-5.72	4.97	0.45
100	SLU 47	30	8	3331	-5.79	5.04	0.45
100	SLU 48	30	-3	3310	-5.62	4.87	0.44
100	SLU 49	30	3	3322	-5.72	4.97	0.45
100	SLU 50	30	-3	3310	-5.62	4.87	0.44
100	SLU 51	30	3	3322	-5.72	4.97	0.45
100	SLU 52	31	8	3782	-6.61	6.79	0.49
100	SLU 53	31	-3	3761	-6.44	6.62	0.48
100	SLU 54	31	3	3773	-6.54	6.72	0.48
100	SLU 55	31	8	3782	-6.61	6.79	0.49
100	SLU 56	31	-3	3761	-6.44	6.62	0.48
100	SLU 57	31	3	3773	-6.54	6.72	0.48
100	SLU 58	31	-3	3761	-6.44	6.62	0.48
100	SLU 59	31	3	3773	-6.54	6.72	0.48
100	SLU 60	31	-4	3954	-6.79	7.37	0.49
100	SLU 61	32	3	3967	-6.89	7.47	0.5
100	SLU 62	31	-4	3954	-6.79	7.37	0.49
100	SLU 63	32	3	3967	-6.89	7.47	0.5
100	SLU 64	31	-4	3646	-6.22	6.13	0.47
100	SLU 65	31	8	3667	-6.4	6.29	0.48
100	SLU 66	31	-4	3646	-6.22	6.13	0.47
100	SLU 67	31	3	3659	-6.33	6.23	0.48
100	SLU 68	31	8	3667	-6.4	6.29	0.48
100	SLU 69	31	-4	3646	-6.22	6.13	0.47
100	SLU 70	31	3	3659	-6.33	6.23	0.48
100	SLU 71	31	-4	3646	-6.22	6.13	0.47
100	SLU 72	31	3	3659	-6.33	6.23	0.48
100	SLU 73	32	8	4118	-7.22	8.05	0.52
100	SLU 74	32	-4	4097	-7.04	7.88	0.5
100	SLU 75	32	3	4110	-7.14	7.98	0.51
100	SLU 76	32	8	4118	-7.22	8.05	0.52
100	SLU 77	32	-4	4097	-7.04	7.88	0.5
100	SLU 78	32	3	4110	-7.14	7.98	0.51
100	SLU 79	32	-4	4097	-7.04	7.88	0.5
100	SLU 80	32	3	4110	-7.14	7.98	0.51
100	SLU 81	33	-4	4291	-7.39	8.63	0.52
100	SLU 82	33	3	4303	-7.5	8.73	0.53
100	SLU 83	33	-4	4291	-7.39	8.63	0.52
100	SLU 84	33	3	4303	-7.5	8.73	0.53
100	SLE RA 1	24	-3	2731	-4.65	4.44	0.35
100	SLE RA 2	24	5	2745	-4.77	4.55	0.36
100	SLE RA 3	24	-3	2731	-4.65	4.44	0.35

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
100	SLE RA 4	24	2	2739	-4.72	4.5	0.36
100	SLE RA 5	24	5	2745	-4.77	4.55	0.36
100	SLE RA 6	24	-3	2731	-4.65	4.44	0.35
100	SLE RA 7	24	2	2739	-4.72	4.5	0.36
100	SLE RA 8	24	-3	2731	-4.65	4.44	0.35
100	SLE RA 9	24	2	2739	-4.72	4.5	0.36
100	SLE RA 10	25	5	3046	-5.32	5.72	0.39
100	SLE RA 11	24	-3	3032	-5.2	5.61	0.38
100	SLE RA 12	24	2	3040	-5.27	5.67	0.38
100	SLE RA 13	25	5	3046	-5.32	5.72	0.39
100	SLE RA 14	24	-3	3032	-5.2	5.61	0.38
100	SLE RA 15	24	2	3040	-5.27	5.67	0.38
100	SLE RA 16	24	-3	3032	-5.2	5.61	0.38
100	SLE RA 17	24	2	3040	-5.27	5.67	0.38
100	SLE RA 18	25	-3	3160	-5.43	6.11	0.39
100	SLE RA 19	25	2	3169	-5.5	6.17	0.39
100	SLE RA 20	25	-3	3160	-5.43	6.11	0.39
100	SLE RA 21	25	2	3169	-5.5	6.17	0.39
100	SLE FR 1	24	-3	2731	-4.65	4.44	0.35
100	SLE FR 2	24	-1	2733	-4.68	4.46	0.35
100	SLE FR 3	24	-3	2731	-4.65	4.44	0.35
100	SLE FR 4	24	-1	2862	-4.91	4.96	0.37
100	SLE FR 5	24	-3	2860	-4.89	4.94	0.36
100	SLE FR 6	24	-3	2946	-5.04	5.27	0.37
100	SLE QP 1	24	-3	2731	-4.65	4.44	0.35
100	SLE QP 2	24	-3	2860	-4.89	4.94	0.36
100	SLD 1	226	33	2811	-5.48	15.55	0.34
100	SLD 2	269	56	2820	-5.57	15.11	1.25
100	SLD 3	218	-88	2566	-3.44	13.84	0.16
100	SLD 4	260	-65	2575	-3.53	13.4	1.07
100	SLD 5	82	184	3212	-8.13	10.87	0.3
100	SLD 6	126	208	3221	-8.22	10.41	1.24
100	SLD 7	53	-221	2398	-1.32	5.18	-0.31
100	SLD 8	97	-197	2407	-1.41	4.73	0.63
100	SLD 9	-49	192	3312	-8.36	5.15	0.09
100	SLD 10	-5	215	3321	-8.45	4.69	1.04
100	SLD 11	-78	-213	2498	-1.55	-0.54	-0.52
100	SLD 12	-34	-189	2507	-1.64	-0.99	0.43
100	SLD 13	-212	60	3144	-6.24	-3.53	-0.34
100	SLD 14	-170	82	3153	-6.33	-3.97	0.57
100	SLD 15	-221	-62	2900	-4.2	-5.23	-0.52
100	SLD 16	-178	-39	2909	-4.29	-5.67	0.39
100	SLV 1	486	79	2746	-6.23	29.16	0.32
100	SLV 2	583	131	2767	-6.43	28.16	2.39
100	SLV 3	466	-196	2192	-1.6	25.3	-0.1
100	SLV 4	563	-144	2212	-1.8	24.3	1.98
100	SLV 5	157	420	3659	-12.25	18.44	0.22
100	SLV 6	257	474	3680	-12.46	17.4	2.37
100	SLV 7	91	-498	1810	3.21	5.55	-1.17
100	SLV 8	191	-444	1832	3	4.51	0.98
100	SLV 9	-143	438	3888	-12.77	5.36	-0.25
100	SLV 10	-43	492	3909	-12.98	4.33	1.9
100	SLV 11	-209	-480	2039	2.68	-7.53	-1.64
100	SLV 12	-109	-426	2060	2.48	-8.56	0.51
100	SLV 13	-515	139	3507	-7.98	-14.42	-1.25
100	SLV 14	-418	191	3528	-8.18	-15.42	0.83
100	SLV 15	-535	-137	2953	-3.34	-18.29	-1.67
100	SLV 16	-438	-84	2973	-3.54	-19.29	0.41
100	CRTFP Ux+	0	0	0	0	0	0
100	CRTFP Ux-	0	0	0	0	0	0
100	CRTFP Uy+	0	0	0	0	0	0
100	CRTFP Uy-	0	0	0	0	0	0
103	SLU 1	14	-22	1480	-2.41	242.29	5.59
103	SLU 2	14	-12	1495	-2.51	244.65	3.12
103	SLU 3	14	-22	1480	-2.41	242.29	5.59
103	SLU 4	14	-16	1489	-2.47	243.71	4.11
103	SLU 5	14	-12	1495	-2.51	244.65	3.12
103	SLU 6	14	-22	1480	-2.41	242.29	5.59
103	SLU 7	14	-16	1489	-2.47	243.71	4.11
103	SLU 8	14	-22	1480	-2.41	242.29	5.59
103	SLU 9	14	-16	1489	-2.47	243.71	4.11
103	SLU 10	15	-17	1738	-2.98	281.03	4.39
103	SLU 11	15	-27	1723	-2.87	278.67	6.86
103	SLU 12	15	-21	1732	-2.93	280.09	5.38
103	SLU 13	15	-17	1738	-2.98	281.03	4.39
103	SLU 14	15	-27	1723	-2.87	278.67	6.86
103	SLU 15	15	-21	1732	-2.93	280.09	5.38
103	SLU 16	15	-27	1723	-2.87	278.67	6.86
103	SLU 17	15	-21	1732	-2.93	280.09	5.38
103	SLU 18	15	-29	1827	-3.07	294.26	7.41
103	SLU 19	15	-23	1836	-3.13	295.68	5.92
103	SLU 20	15	-29	1827	-3.07	294.26	7.41
103	SLU 21	15	-23	1836	-3.13	295.68	5.92
103	SLU 22	15	-26	1663	-2.75	269.54	6.52
103	SLU 23	15	-16	1678	-2.85	271.89	4.05
103	SLU 24	15	-26	1663	-2.75	269.54	6.52

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
103	SLU 25	15	-20	1672	-2.81	270.95	5.04
103	SLU 26	15	-16	1678	-2.85	271.89	4.05
103	SLU 27	15	-26	1663	-2.75	269.54	6.52
103	SLU 28	15	-20	1672	-2.81	270.95	5.04
103	SLU 29	15	-26	1663	-2.75	269.54	6.52
103	SLU 30	15	-20	1672	-2.81	270.95	5.04
103	SLU 31	16	-21	1920	-3.32	308.27	5.32
103	SLU 32	16	-31	1905	-3.21	305.92	7.8
103	SLU 33	16	-25	1914	-3.27	307.33	6.31
103	SLU 34	16	-21	1920	-3.32	308.27	5.32
103	SLU 35	16	-31	1905	-3.21	305.92	7.8
103	SLU 36	16	-25	1914	-3.27	307.33	6.31
103	SLU 37	16	-31	1905	-3.21	305.92	7.8
103	SLU 38	16	-25	1914	-3.27	307.33	6.31
103	SLU 39	16	-33	2009	-3.41	321.51	8.34
103	SLU 40	16	-27	2018	-3.47	322.92	6.85
103	SLU 41	16	-33	2009	-3.41	321.51	8.34
103	SLU 42	16	-27	2018	-3.47	322.92	6.85
103	SLU 43	18	-28	1862	-3.01	305.64	6.95
103	SLU 44	18	-18	1877	-3.12	308	4.48
103	SLU 45	18	-28	1862	-3.01	305.64	6.95
103	SLU 46	18	-22	1871	-3.07	307.05	5.47
103	SLU 47	18	-18	1877	-3.12	308	4.48
103	SLU 48	18	-28	1862	-3.01	305.64	6.95
103	SLU 49	18	-22	1871	-3.07	307.05	5.47
103	SLU 50	18	-28	1862	-3.01	305.64	6.95
103	SLU 51	18	-22	1871	-3.07	307.05	5.47
103	SLU 52	19	-23	2119	-3.58	344.37	5.75
103	SLU 53	19	-33	2105	-3.47	342.02	8.22
103	SLU 54	19	-27	2113	-3.54	343.43	6.74
103	SLU 55	19	-23	2119	-3.58	344.37	5.75
103	SLU 56	19	-33	2105	-3.47	342.02	8.22
103	SLU 57	19	-27	2113	-3.54	343.43	6.74
103	SLU 58	19	-33	2105	-3.47	342.02	8.22
103	SLU 59	19	-27	2113	-3.54	343.43	6.74
103	SLU 60	19	-35	2208	-3.67	357.61	8.77
103	SLU 61	19	-29	2217	-3.74	359.02	7.28
103	SLU 62	19	-35	2208	-3.67	357.61	8.77
103	SLU 63	19	-29	2217	-3.74	359.02	7.28
103	SLU 64	19	-31	2044	-3.35	332.89	7.88
103	SLU 65	19	-21	2059	-3.46	335.24	5.41
103	SLU 66	19	-31	2044	-3.35	332.89	7.88
103	SLU 67	19	-25	2053	-3.42	334.3	6.4
103	SLU 68	19	-21	2059	-3.46	335.24	5.41
103	SLU 69	19	-31	2044	-3.35	332.89	7.88
103	SLU 70	19	-25	2053	-3.42	334.3	6.4
103	SLU 71	19	-31	2044	-3.35	332.89	7.88
103	SLU 72	19	-25	2053	-3.42	334.3	6.4
103	SLU 73	20	-26	2302	-3.92	371.62	6.68
103	SLU 74	20	-36	2287	-3.81	369.27	9.15
103	SLU 75	20	-30	2296	-3.88	370.68	7.67
103	SLU 76	20	-26	2302	-3.92	371.62	6.68
103	SLU 77	20	-36	2287	-3.81	369.27	9.15
103	SLU 78	20	-30	2296	-3.88	370.68	7.67
103	SLU 79	20	-36	2287	-3.81	369.27	9.15
103	SLU 80	20	-30	2296	-3.88	370.68	7.67
103	SLU 81	20	-39	2391	-4.01	384.86	9.7
103	SLU 82	20	-33	2400	-4.08	386.27	8.21
103	SLU 83	20	-39	2391	-4.01	384.86	9.7
103	SLU 84	20	-33	2400	-4.08	386.27	8.21
103	SLE RA 1	14	-23	1533	-2.5	250.08	5.86
103	SLE RA 2	14	-17	1542	-2.57	251.65	4.21
103	SLE RA 3	14	-23	1533	-2.5	250.08	5.86
103	SLE RA 4	14	-19	1538	-2.55	251.02	4.87
103	SLE RA 5	14	-17	1542	-2.57	251.65	4.21
103	SLE RA 6	14	-23	1533	-2.5	250.08	5.86
103	SLE RA 7	14	-19	1538	-2.55	251.02	4.87
103	SLE RA 8	14	-23	1533	-2.5	250.08	5.86
103	SLE RA 9	14	-19	1538	-2.55	251.02	4.87
103	SLE RA 10	15	-20	1704	-2.88	275.9	5.06
103	SLE RA 11	15	-27	1694	-2.81	274.33	6.71
103	SLE RA 12	15	-23	1700	-2.85	275.27	5.72
103	SLE RA 13	15	-20	1704	-2.88	275.9	5.06
103	SLE RA 14	15	-27	1694	-2.81	274.33	6.71
103	SLE RA 15	15	-23	1700	-2.85	275.27	5.72
103	SLE RA 16	15	-27	1694	-2.81	274.33	6.71
103	SLE RA 17	15	-23	1700	-2.85	275.27	5.72
103	SLE RA 18	15	-28	1764	-2.94	284.73	7.07
103	SLE RA 19	15	-24	1770	-2.99	285.67	6.08
103	SLE RA 20	15	-28	1764	-2.94	284.73	7.07
103	SLE RA 21	15	-24	1770	-2.99	285.67	6.08
103	SLE FR 1	14	-23	1533	-2.5	250.08	5.86
103	SLE FR 2	14	-22	1535	-2.52	250.39	5.53
103	SLE FR 3	14	-23	1533	-2.5	250.08	5.86
103	SLE FR 4	15	-23	1604	-2.65	260.79	5.89
103	SLE FR 5	15	-25	1602	-2.64	260.47	6.22

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
103	SLE FR 6	15	-26	1648	-2.72	267.4	6.46
103	SLE QP 1	14	-23	1533	-2.5	250.08	5.86
103	SLE QP 2	15	-25	1602	-2.64	260.47	6.22
103	SLD 1	117	-4	1443	-2.69	239.94	1.14
103	SLD 2	138	28	1452	-2.77	241.4	-6.66
103	SLD 3	114	-107	1274	-1.45	213.23	26.9
103	SLD 4	135	-76	1283	-1.53	214.69	19.11
103	SLD 5	42	127	1807	-4.5	294.27	-31.51
103	SLD 6	64	159	1817	-4.58	295.79	-39.6
103	SLD 7	32	-218	1244	-0.37	205.26	54.38
103	SLD 8	54	-185	1254	-0.46	206.78	46.29
103	SLD 9	-25	136	1950	-4.82	314.17	-33.85
103	SLD 10	-3	169	1960	-4.9	315.68	-41.94
103	SLD 11	-35	-209	1387	-0.69	225.16	52.04
103	SLD 12	-13	-176	1397	-0.77	226.67	43.95
103	SLD 13	-106	26	1920	-3.74	306.25	-6.66
103	SLD 14	-85	58	1930	-3.82	307.71	-14.46
103	SLD 15	-109	-77	1751	-2.51	279.55	19.1
103	SLD 16	-88	-45	1761	-2.58	281.01	11.31
103	SLV 1	249	22	1238	-2.74	213.34	-5.2
103	SLV 2	297	94	1259	-2.92	216.67	-22.97
103	SLV 3	241	-213	854	0.07	152.7	53.3
103	SLV 4	290	-141	875	-0.11	156.03	35.53
103	SLV 5	78	319	2067	-6.86	337.08	-79.42
103	SLV 6	128	393	2089	-7.05	340.52	-97.78
103	SLV 7	54	-464	788	2.5	134.96	115.59
103	SLV 8	104	-389	810	2.32	138.4	97.23
103	SLV 9	-75	340	2394	-7.59	382.55	-84.78
103	SLV 10	-25	414	2416	-7.77	385.99	-103.15
103	SLV 11	-99	-443	1115	1.78	180.43	110.23
103	SLV 12	-49	-368	1137	1.59	183.87	91.86
103	SLV 13	-261	92	2328	-5.16	364.91	-23.09
103	SLV 14	-212	164	2350	-5.34	368.24	-40.86
103	SLV 15	-268	-143	1945	-2.35	304.28	35.42
103	SLV 16	-219	-71	1966	-2.53	307.61	17.65
103	CRTFP Ux+	0	0	0	0	0	0
103	CRTFP Ux-	0	0	0	0	0	0
103	CRTFP Uy+	0	0	0	0	0	0
103	CRTFP Uy-	0	0	0	0	0	0
104	SLU 1	-3	-14	1267	-0.94	-195.03	-3.55
104	SLU 2	-3	-6	1279	-1	-196.72	-1.42
104	SLU 3	-3	-14	1267	-0.94	-195.03	-3.55
104	SLU 4	-3	-9	1274	-0.98	-196.04	-2.28
104	SLU 5	-3	-6	1279	-1	-196.72	-1.42
104	SLU 6	-3	-14	1267	-0.94	-195.03	-3.55
104	SLU 7	-3	-9	1274	-0.98	-196.04	-2.28
104	SLU 8	-3	-14	1267	-0.94	-195.03	-3.55
104	SLU 9	-3	-9	1274	-0.98	-196.04	-2.28
104	SLU 10	-3	-10	1482	-1.19	-225.35	-2.51
104	SLU 11	-3	-19	1470	-1.13	-223.66	-4.64
104	SLU 12	-3	-14	1477	-1.16	-224.67	-3.37
104	SLU 13	-3	-10	1482	-1.19	-225.35	-2.51
104	SLU 14	-3	-19	1470	-1.13	-223.66	-4.64
104	SLU 15	-3	-14	1477	-1.16	-224.67	-3.37
104	SLU 16	-3	-19	1470	-1.13	-223.66	-4.64
104	SLU 17	-3	-14	1477	-1.16	-224.67	-3.37
104	SLU 18	-3	-21	1557	-1.2	-235.93	-5.11
104	SLU 19	-3	-16	1565	-1.24	-236.95	-3.83
104	SLU 20	-3	-21	1557	-1.2	-235.93	-5.11
104	SLU 21	-3	-16	1565	-1.24	-236.95	-3.83
104	SLU 22	-3	-17	1420	-1.07	-216.37	-4.31
104	SLU 23	-3	-9	1432	-1.14	-218.06	-2.18
104	SLU 24	-3	-17	1420	-1.07	-216.37	-4.31
104	SLU 25	-3	-12	1427	-1.11	-217.38	-3.03
104	SLU 26	-3	-9	1432	-1.14	-218.06	-2.18
104	SLU 27	-3	-17	1420	-1.07	-216.37	-4.31
104	SLU 28	-3	-12	1427	-1.11	-217.38	-3.03
104	SLU 29	-3	-17	1420	-1.07	-216.37	-4.31
104	SLU 30	-3	-12	1427	-1.11	-217.38	-3.03
104	SLU 31	-3	-13	1635	-1.32	-246.69	-3.27
104	SLU 32	-3	-22	1623	-1.26	-245	-5.4
104	SLU 33	-3	-17	1631	-1.3	-246.02	-4.12
104	SLU 34	-3	-13	1635	-1.32	-246.69	-3.27
104	SLU 35	-3	-22	1623	-1.26	-245	-5.4
104	SLU 36	-3	-17	1631	-1.3	-246.02	-4.12
104	SLU 37	-3	-22	1623	-1.26	-245	-5.4
104	SLU 38	-3	-17	1631	-1.3	-246.02	-4.12
104	SLU 39	-3	-24	1711	-1.34	-257.28	-5.87
104	SLU 40	-3	-19	1718	-1.38	-258.29	-4.59
104	SLU 41	-3	-24	1711	-1.34	-257.28	-5.87
104	SLU 42	-3	-19	1718	-1.38	-258.29	-4.59
104	SLU 43	-3	-18	1594	-1.18	-246.22	-4.36
104	SLU 44	-3	-9	1606	-1.24	-247.91	-2.23
104	SLU 45	-3	-18	1594	-1.18	-246.22	-4.36
104	SLU 46	-3	-13	1601	-1.21	-247.23	-3.08
104	SLU 47	-3	-9	1606	-1.24	-247.91	-2.23

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
104	SLU 48	-3	-18	1594	-1.18	-246.22	-4.36
104	SLU 49	-3	-13	1601	-1.21	-247.23	-3.08
104	SLU 50	-3	-18	1594	-1.18	-246.22	-4.36
104	SLU 51	-3	-13	1601	-1.21	-247.23	-3.08
104	SLU 52	-3	-14	1810	-1.42	-276.54	-3.32
104	SLU 53	-4	-22	1798	-1.36	-274.85	-5.45
104	SLU 54	-3	-17	1805	-1.4	-275.86	-4.17
104	SLU 55	-3	-14	1810	-1.42	-276.54	-3.32
104	SLU 56	-4	-22	1798	-1.36	-274.85	-5.45
104	SLU 57	-3	-17	1805	-1.4	-275.86	-4.17
104	SLU 58	-4	-22	1798	-1.36	-274.85	-5.45
104	SLU 59	-3	-17	1805	-1.4	-275.86	-4.17
104	SLU 60	-4	-24	1885	-1.44	-287.12	-5.92
104	SLU 61	-4	-19	1892	-1.48	-288.14	-4.64
104	SLU 62	-4	-24	1885	-1.44	-287.12	-5.92
104	SLU 63	-4	-19	1892	-1.48	-288.14	-4.64
104	SLU 64	-3	-21	1747	-1.31	-267.56	-5.12
104	SLU 65	-3	-12	1759	-1.37	-269.25	-2.99
104	SLU 66	-3	-21	1747	-1.31	-267.56	-5.12
104	SLU 67	-3	-16	1754	-1.35	-268.57	-3.84
104	SLU 68	-3	-12	1759	-1.37	-269.25	-2.99
104	SLU 69	-3	-21	1747	-1.31	-267.56	-5.12
104	SLU 70	-3	-16	1754	-1.35	-268.57	-3.84
104	SLU 71	-3	-21	1747	-1.31	-267.56	-5.12
104	SLU 72	-3	-16	1754	-1.35	-268.57	-3.84
104	SLU 73	-4	-17	1963	-1.56	-297.88	-4.08
104	SLU 74	-4	-25	1951	-1.49	-296.19	-6.21
104	SLU 75	-4	-20	1958	-1.53	-297.21	-4.93
104	SLU 76	-4	-17	1963	-1.56	-297.88	-4.08
104	SLU 77	-4	-25	1951	-1.49	-296.19	-6.21
104	SLU 78	-4	-20	1958	-1.53	-297.21	-4.93
104	SLU 79	-4	-25	1951	-1.49	-296.19	-6.21
104	SLU 80	-4	-20	1958	-1.53	-297.21	-4.93
104	SLU 81	-4	-27	2038	-1.57	-308.47	-6.67
104	SLU 82	-4	-22	2045	-1.61	-309.48	-5.4
104	SLU 83	-4	-27	2038	-1.57	-308.47	-6.67
104	SLU 84	-4	-22	2045	-1.61	-309.48	-5.4
104	SLE RA 1	-3	-15	1310	-0.98	-201.13	-3.77
104	SLE RA 2	-3	-10	1318	-1.02	-202.25	-2.35
104	SLE RA 3	-3	-15	1310	-0.98	-201.13	-3.77
104	SLE RA 4	-3	-12	1315	-1	-201.8	-2.92
104	SLE RA 5	-3	-10	1318	-1.02	-202.25	-2.35
104	SLE RA 6	-3	-15	1310	-0.98	-201.13	-3.77
104	SLE RA 7	-3	-12	1315	-1	-201.8	-2.92
104	SLE RA 8	-3	-15	1310	-0.98	-201.13	-3.77
104	SLE RA 9	-3	-12	1315	-1	-201.8	-2.92
104	SLE RA 10	-3	-13	1454	-1.14	-221.34	-3.08
104	SLE RA 11	-3	-18	1446	-1.1	-220.21	-4.5
104	SLE RA 12	-3	-15	1451	-1.13	-220.89	-3.64
104	SLE RA 13	-3	-13	1454	-1.14	-221.34	-3.08
104	SLE RA 14	-3	-18	1446	-1.1	-220.21	-4.5
104	SLE RA 15	-3	-15	1451	-1.13	-220.89	-3.64
104	SLE RA 16	-3	-18	1446	-1.1	-220.21	-4.5
104	SLE RA 17	-3	-15	1451	-1.13	-220.89	-3.64
104	SLE RA 18	-3	-19	1504	-1.15	-228.4	-4.81
104	SLE RA 19	-3	-16	1509	-1.18	-229.07	-3.96
104	SLE RA 20	-3	-19	1504	-1.15	-228.4	-4.81
104	SLE RA 21	-3	-16	1509	-1.18	-229.07	-3.96
104	SLE FR 1	-3	-15	1310	-0.98	-201.13	-3.77
104	SLE FR 2	-3	-14	1312	-0.99	-201.35	-3.49
104	SLE FR 3	-3	-15	1310	-0.98	-201.13	-3.77
104	SLE FR 4	-3	-15	1370	-1.04	-209.53	-3.8
104	SLE FR 5	-3	-17	1368	-1.03	-209.31	-4.08
104	SLE FR 6	-3	-17	1407	-1.07	-214.76	-4.29
104	SLE QP 1	-3	-15	1310	-0.98	-201.13	-3.77
104	SLE QP 2	-3	-17	1368	-1.03	-209.31	-4.08
104	SLD 1	86	55	1629	-1.63	-242.78	13.84
104	SLD 2	103	27	1622	-1.59	-241.85	6.96
104	SLD 3	83	-37	1499	-0.91	-224.66	-9.19
104	SLD 4	100	-65	1492	-0.87	-223.74	-16.06
104	SLD 5	22	155	1646	-2.32	-247.17	38.75
104	SLD 6	39	126	1639	-2.28	-246.21	31.62
104	SLD 7	13	-152	1213	0.09	-186.78	-38
104	SLD 8	30	-181	1206	0.13	-185.81	-45.13
104	SLD 9	-36	148	1531	-2.19	-232.8	36.97
104	SLD 10	-18	119	1524	-2.15	-231.84	29.84
104	SLD 11	-45	-159	1098	0.22	-172.41	-39.78
104	SLD 12	-27	-188	1091	0.26	-171.44	-46.91
104	SLD 13	-105	32	1245	-1.19	-194.88	7.9
104	SLD 14	-89	4	1238	-1.15	-193.95	1.03
104	SLD 15	-108	-60	1115	-0.47	-176.76	-15.13
104	SLD 16	-91	-88	1108	-0.43	-175.83	-22
104	SLV 1	199	146	1962	-2.39	-285.65	36.67
104	SLV 2	238	83	1947	-2.31	-283.53	21
104	SLV 3	193	-63	1667	-0.76	-244.52	-15.62
104	SLV 4	232	-126	1652	-0.67	-242.4	-31.28

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
104	SLV 5	53	373	2000	-3.95	-295.37	93.18
104	SLV 6	93	307	1984	-3.86	-293.18	76.99
104	SLV 7	33	-324	1016	1.5	-158.26	-81.09
104	SLV 8	72	-390	1000	1.59	-156.08	-97.28
104	SLV 9	-78	357	1737	-3.65	-262.53	89.12
104	SLV 10	-38	291	1721	-3.56	-260.35	72.93
104	SLV 11	-98	-340	753	1.8	-125.43	-85.16
104	SLV 12	-59	-406	737	1.89	-123.25	-101.35
104	SLV 13	-237	93	1085	-1.39	-176.21	23.12
104	SLV 14	-199	30	1070	-1.3	-174.09	7.46
104	SLV 15	-243	-116	790	0.25	-135.08	-29.16
104	SLV 16	-205	-179	775	0.33	-132.96	-44.83
104	CRTFP Ux+	0	0	0	0	0	0
104	CRTFP Ux-	0	0	0	0	0	0
104	CRTFP Uy+	0	0	0	0	0	0
104	CRTFP Uy-	0	0	0	0	0	0
107	SLU 1	9	-3	2696	-0.2	-1.58	0.43
107	SLU 2	9	10	2719	-0.34	-1.59	0.43
107	SLU 3	9	-3	2696	-0.2	-1.58	0.43
107	SLU 4	9	5	2710	-0.29	-1.58	0.43
107	SLU 5	9	10	2719	-0.34	-1.59	0.43
107	SLU 6	9	-3	2696	-0.2	-1.58	0.43
107	SLU 7	9	5	2710	-0.29	-1.58	0.43
107	SLU 8	9	-3	2696	-0.2	-1.58	0.43
107	SLU 9	9	5	2710	-0.29	-1.58	0.43
107	SLU 10	10	11	3193	-0.31	-1.94	0.47
107	SLU 11	10	-2	3170	-0.17	-1.93	0.47
107	SLU 12	10	6	3184	-0.25	-1.94	0.47
107	SLU 13	10	11	3193	-0.31	-1.94	0.47
107	SLU 14	10	-2	3170	-0.17	-1.93	0.47
107	SLU 15	10	6	3184	-0.25	-1.94	0.47
107	SLU 16	10	-2	3170	-0.17	-1.93	0.47
107	SLU 17	10	6	3184	-0.25	-1.94	0.47
107	SLU 18	10	-1	3374	-0.16	-2.08	0.49
107	SLU 19	10	7	3388	-0.24	-2.09	0.49
107	SLU 20	10	-1	3374	-0.16	-2.08	0.49
107	SLU 21	10	7	3388	-0.24	-2.09	0.49
107	SLU 22	10	-2	3051	-0.16	-1.87	0.46
107	SLU 23	10	11	3074	-0.3	-1.87	0.47
107	SLU 24	10	-2	3051	-0.16	-1.87	0.46
107	SLU 25	10	6	3064	-0.24	-1.87	0.46
107	SLU 26	10	11	3074	-0.3	-1.87	0.47
107	SLU 27	10	-2	3051	-0.16	-1.87	0.46
107	SLU 28	10	6	3064	-0.24	-1.87	0.46
107	SLU 29	10	-2	3051	-0.16	-1.87	0.46
107	SLU 30	10	6	3064	-0.24	-1.87	0.46
107	SLU 31	11	12	3548	-0.27	-2.22	0.51
107	SLU 32	11	0	3525	-0.13	-2.22	0.5
107	SLU 33	11	7	3539	-0.21	-2.22	0.51
107	SLU 34	11	12	3548	-0.27	-2.22	0.51
107	SLU 35	11	0	3525	-0.13	-2.22	0.5
107	SLU 36	11	7	3539	-0.21	-2.22	0.51
107	SLU 37	11	0	3525	-0.13	-2.22	0.5
107	SLU 38	11	7	3539	-0.21	-2.22	0.51
107	SLU 39	11	0	3729	-0.12	-2.37	0.52
107	SLU 40	11	8	3742	-0.2	-2.37	0.52
107	SLU 41	11	0	3729	-0.12	-2.37	0.52
107	SLU 42	11	8	3742	-0.2	-2.37	0.52
107	SLU 43	12	-5	3383	-0.28	-1.96	0.55
107	SLU 44	12	8	3406	-0.41	-1.96	0.55
107	SLU 45	12	-5	3383	-0.28	-1.96	0.55
107	SLU 46	12	3	3397	-0.36	-1.96	0.55
107	SLU 47	12	8	3406	-0.41	-1.96	0.55
107	SLU 48	12	-5	3383	-0.28	-1.96	0.55
107	SLU 49	12	3	3397	-0.36	-1.96	0.55
107	SLU 50	12	-5	3383	-0.28	-1.96	0.55
107	SLU 51	12	3	3397	-0.36	-1.96	0.55
107	SLU 52	13	10	3881	-0.38	-2.31	0.59
107	SLU 53	13	-3	3858	-0.25	-2.31	0.59
107	SLU 54	13	5	3871	-0.33	-2.31	0.59
107	SLU 55	13	10	3881	-0.38	-2.31	0.59
107	SLU 56	13	-3	3858	-0.25	-2.31	0.59
107	SLU 57	13	5	3871	-0.33	-2.31	0.59
107	SLU 58	13	-3	3858	-0.25	-2.31	0.59
107	SLU 59	13	5	3871	-0.33	-2.31	0.59
107	SLU 60	13	-2	4061	-0.23	-2.46	0.6
107	SLU 61	13	6	4075	-0.31	-2.46	0.61
107	SLU 62	13	-2	4061	-0.23	-2.46	0.6
107	SLU 63	13	6	4075	-0.31	-2.46	0.61
107	SLU 64	12	-3	3738	-0.24	-2.25	0.58
107	SLU 65	13	9	3761	-0.37	-2.25	0.58
107	SLU 66	12	-3	3738	-0.24	-2.25	0.58
107	SLU 67	12	4	3752	-0.32	-2.25	0.58
107	SLU 68	13	9	3761	-0.37	-2.25	0.58
107	SLU 69	12	-3	3738	-0.24	-2.25	0.58
107	SLU 70	12	4	3752	-0.32	-2.25	0.58

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
107	SLU 71	12	-3	3738	-0.24	-2.25	0.58
107	SLU 72	12	4	3752	-0.32	-2.25	0.58
107	SLU 73	13	11	4235	-0.34	-2.6	0.62
107	SLU 74	13	-2	4212	-0.21	-2.6	0.62
107	SLU 75	13	6	4226	-0.29	-2.6	0.62
107	SLU 76	13	11	4235	-0.34	-2.6	0.62
107	SLU 77	13	-2	4212	-0.21	-2.6	0.62
107	SLU 78	13	6	4226	-0.29	-2.6	0.62
107	SLU 79	13	-2	4212	-0.21	-2.6	0.62
107	SLU 80	13	6	4226	-0.29	-2.6	0.62
107	SLU 81	13	-1	4416	-0.19	-2.75	0.64
107	SLU 82	13	7	4429	-0.27	-2.75	0.64
107	SLU 83	13	-1	4416	-0.19	-2.75	0.64
107	SLU 84	13	7	4429	-0.27	-2.75	0.64
107	SLE RA 1	9	-3	2797	-0.19	-1.66	0.44
107	SLE RA 2	9	6	2813	-0.28	-1.67	0.44
107	SLE RA 3	9	-3	2797	-0.19	-1.66	0.44
107	SLE RA 4	9	2	2806	-0.25	-1.67	0.44
107	SLE RA 5	9	6	2813	-0.28	-1.67	0.44
107	SLE RA 6	9	-3	2797	-0.19	-1.66	0.44
107	SLE RA 7	9	2	2806	-0.25	-1.67	0.44
107	SLE RA 8	9	-3	2797	-0.19	-1.66	0.44
107	SLE RA 9	9	2	2806	-0.25	-1.67	0.44
107	SLE RA 10	10	7	3129	-0.26	-1.9	0.47
107	SLE RA 11	10	-2	3114	-0.17	-1.9	0.47
107	SLE RA 12	10	3	3123	-0.22	-1.9	0.47
107	SLE RA 13	10	7	3129	-0.26	-1.9	0.47
107	SLE RA 14	10	-2	3114	-0.17	-1.9	0.47
107	SLE RA 15	10	3	3123	-0.22	-1.9	0.47
107	SLE RA 16	10	-2	3114	-0.17	-1.9	0.47
107	SLE RA 17	10	3	3123	-0.22	-1.9	0.47
107	SLE RA 18	10	-1	3249	-0.16	-2	0.48
107	SLE RA 19	10	4	3258	-0.22	-2	0.48
107	SLE RA 20	10	-1	3249	-0.16	-2	0.48
107	SLE RA 21	10	4	3258	-0.22	-2	0.48
107	SLE FR 1	9	-3	2797	-0.19	-1.66	0.44
107	SLE FR 2	9	-1	2800	-0.21	-1.67	0.44
107	SLE FR 3	9	-3	2797	-0.19	-1.66	0.44
107	SLE FR 4	10	-1	2936	-0.2	-1.77	0.45
107	SLE FR 5	10	-2	2933	-0.18	-1.76	0.45
107	SLE FR 6	10	-2	3023	-0.18	-1.83	0.46
107	SLE QP 1	9	-3	2797	-0.19	-1.66	0.44
107	SLE QP 2	10	-2	2933	-0.18	-1.76	0.45
107	SLD 1	212	72	3087	-0.77	7.3	0.46
107	SLD 2	248	73	3088	-0.77	6.85	1.48
107	SLD 3	206	-62	2831	0.81	7.54	0.37
107	SLD 4	242	-62	2832	0.81	7.09	1.39
107	SLD 5	66	224	3367	-2.76	0.76	0.22
107	SLD 6	104	224	3368	-2.76	0.29	1.27
107	SLD 7	46	-225	2514	2.51	1.55	-0.09
107	SLD 8	84	-224	2514	2.51	1.09	0.97
107	SLD 9	-65	219	3351	-2.88	-4.62	-0.07
107	SLD 10	-27	220	3352	-2.88	-5.08	0.99
107	SLD 11	-84	-229	2498	2.39	-3.82	-0.37
107	SLD 12	-46	-229	2498	2.39	-4.29	0.68
107	SLD 13	-223	57	3034	-1.17	-10.62	-0.49
107	SLD 14	-186	57	3034	-1.17	-11.07	0.53
107	SLD 15	-229	-78	2778	0.41	-10.38	-0.58
107	SLD 16	-192	-77	2778	0.41	-10.83	0.44
107	SLV 1	471	167	3287	-1.48	18.93	0.48
107	SLV 2	555	168	3288	-1.48	17.91	2.81
107	SLV 3	457	-138	2705	2.11	19.48	0.28
107	SLV 4	541	-137	2706	2.11	18.46	2.6
107	SLV 5	137	511	3921	-6.02	3.99	-0.08
107	SLV 6	224	512	3922	-6.02	2.93	2.32
107	SLV 7	93	-507	1982	5.95	5.81	-0.77
107	SLV 8	180	-506	1983	5.95	4.76	1.63
107	SLV 9	-160	501	3882	-6.31	-8.29	-0.73
107	SLV 10	-74	502	3883	-6.32	-9.34	1.67
107	SLV 11	-205	-517	1944	5.65	-6.46	-1.42
107	SLV 12	-118	-516	1945	5.65	-7.52	0.98
107	SLV 13	-522	132	3159	-2.47	-21.99	-1.7
107	SLV 14	-438	134	3160	-2.48	-23.01	0.62
107	SLV 15	-535	-173	2578	1.12	-21.44	-1.9
107	SLV 16	-451	-172	2579	1.11	-22.46	0.42
107	CRTFP Ux+	0	0	0	0	0	0
107	CRTFP Ux-	0	0	0	0	0	0
107	CRTFP Uy+	0	0	0	0	0	0
107	CRTFP Uy-	0	0	0	0	0	0
110	SLU 1	-5	-12	7469	3020.77	0.19	4.17
110	SLU 2	-6	23	7511	3035.35	0.15	4.61
110	SLU 3	-5	-12	7469	3020.77	0.19	4.17
110	SLU 4	-5	9	7494	3029.52	0.16	4.44
110	SLU 5	-6	23	7511	3035.35	0.15	4.61
110	SLU 6	-5	-12	7469	3020.77	0.19	4.17
110	SLU 7	-5	9	7494	3029.52	0.16	4.44

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
110	SLU 8	-5	-12	7469	3020.77	0.19	4.17
110	SLU 9	-5	9	7494	3029.52	0.16	4.44
110	SLU 10	-2	23	8787	3553.51	-2.13	2.82
110	SLU 11	-1	-13	8745	3538.93	-2.1	2.38
110	SLU 12	-1	9	8770	3547.67	-2.12	2.64
110	SLU 13	-2	23	8787	3553.51	-2.13	2.82
110	SLU 14	-1	-13	8745	3538.93	-2.1	2.38
110	SLU 15	-1	9	8770	3547.67	-2.12	2.64
110	SLU 16	-1	-13	8745	3538.93	-2.1	2.38
110	SLU 17	-1	9	8770	3547.67	-2.12	2.64
110	SLU 18	1	-13	9291	3760.99	-3.08	1.61
110	SLU 19	0	8	9317	3769.74	-3.1	1.87
110	SLU 20	1	-13	9291	3760.99	-3.08	1.61
110	SLU 21	0	8	9317	3769.74	-3.1	1.87
110	SLU 22	-2	-12	8420	3407.47	-1.37	3.04
110	SLU 23	-3	23	8462	3422.05	-1.4	3.48
110	SLU 24	-2	-12	8420	3407.47	-1.37	3.04
110	SLU 25	-3	9	8445	3416.22	-1.39	3.3
110	SLU 26	-3	23	8462	3422.05	-1.4	3.48
110	SLU 27	-2	-12	8420	3407.47	-1.37	3.04
110	SLU 28	-3	9	8445	3416.22	-1.39	3.3
110	SLU 29	-2	-12	8420	3407.47	-1.37	3.04
110	SLU 30	-3	9	8445	3416.22	-1.39	3.3
110	SLU 31	1	22	9738	3940.21	-3.69	1.69
110	SLU 32	2	-13	9696	3925.63	-3.65	1.25
110	SLU 33	1	8	9721	3934.38	-3.67	1.51
110	SLU 34	1	22	9738	3940.21	-3.69	1.69
110	SLU 35	2	-13	9696	3925.63	-3.65	1.25
110	SLU 36	1	8	9721	3934.38	-3.67	1.51
110	SLU 37	2	-13	9696	3925.63	-3.65	1.25
110	SLU 38	1	8	9721	3934.38	-3.67	1.51
110	SLU 39	3	-14	10243	4147.7	-4.63	0.48
110	SLU 40	3	8	10268	4156.44	-4.65	0.74
110	SLU 41	3	-14	10243	4147.7	-4.63	0.48
110	SLU 42	3	8	10268	4156.44	-4.65	0.74
110	SLU 43	-7	-15	9383	3794.42	0.78	5.81
110	SLU 44	-8	20	9425	3809	0.74	6.25
110	SLU 45	-7	-15	9383	3794.42	0.78	5.81
110	SLU 46	-8	6	9408	3803.16	0.75	6.07
110	SLU 47	-8	20	9425	3809	0.74	6.25
110	SLU 48	-7	-15	9383	3794.42	0.78	5.81
110	SLU 49	-8	6	9408	3803.16	0.75	6.07
110	SLU 50	-7	-15	9383	3794.42	0.78	5.81
110	SLU 51	-8	6	9408	3803.16	0.75	6.07
110	SLU 52	-4	19	10701	4327.15	-1.55	4.46
110	SLU 53	-3	-16	10659	4312.57	-1.51	4.02
110	SLU 54	-4	5	10684	4321.32	-1.53	4.28
110	SLU 55	-4	19	10701	4327.15	-1.55	4.46
110	SLU 56	-3	-16	10659	4312.57	-1.51	4.02
110	SLU 57	-4	5	10684	4321.32	-1.53	4.28
110	SLU 58	-3	-16	10659	4312.57	-1.51	4.02
110	SLU 59	-4	5	10684	4321.32	-1.53	4.28
110	SLU 60	-1	-16	11206	4534.64	-2.49	3.25
110	SLU 61	-2	5	11231	4543.39	-2.51	3.51
110	SLU 62	-1	-16	11206	4534.64	-2.49	3.25
110	SLU 63	-2	5	11231	4543.39	-2.51	3.51
110	SLU 64	-5	-16	10335	4181.12	-0.78	4.68
110	SLU 65	-5	19	10377	4195.7	-0.82	5.12
110	SLU 66	-5	-16	10335	4181.12	-0.78	4.68
110	SLU 67	-5	5	10360	4189.87	-0.8	4.94
110	SLU 68	-5	19	10377	4195.7	-0.82	5.12
110	SLU 69	-5	-16	10335	4181.12	-0.78	4.68
110	SLU 70	-5	5	10360	4189.87	-0.8	4.94
110	SLU 71	-5	-16	10335	4181.12	-0.78	4.68
110	SLU 72	-5	5	10360	4189.87	-0.8	4.94
110	SLU 73	-1	19	11652	4713.86	-3.1	3.33
110	SLU 74	-1	-17	11610	4699.28	-3.06	2.89
110	SLU 75	-1	5	11636	4708.02	-3.09	3.15
110	SLU 76	-1	19	11652	4713.86	-3.1	3.33
110	SLU 77	-1	-17	11610	4699.28	-3.06	2.89
110	SLU 78	-1	5	11636	4708.02	-3.09	3.15
110	SLU 79	-1	-17	11610	4699.28	-3.06	2.89
110	SLU 80	-1	5	11636	4708.02	-3.09	3.15
110	SLU 81	1	-17	12157	4921.34	-4.04	2.12
110	SLU 82	1	4	12182	4930.09	-4.06	2.38
110	SLU 83	1	-17	12157	4921.34	-4.04	2.12
110	SLU 84	1	4	12182	4930.09	-4.06	2.38
110	SLE RA 1	-4	-12	7741	3131.26	-0.26	3.85
110	SLE RA 2	-5	12	7769	3140.98	-0.28	4.14
110	SLE RA 3	-4	-12	7741	3131.26	-0.26	3.85
110	SLE RA 4	-4	2	7757	3137.09	-0.27	4.02
110	SLE RA 5	-5	12	7769	3140.98	-0.28	4.14
110	SLE RA 6	-4	-12	7741	3131.26	-0.26	3.85
110	SLE RA 7	-4	2	7757	3137.09	-0.27	4.02
110	SLE RA 8	-4	-12	7741	3131.26	-0.26	3.85
110	SLE RA 9	-4	2	7757	3137.09	-0.27	4.02

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
110	SLE RA 10	-2	11	8619	3486.41	-1.8	2.95
110	SLE RA 11	-1	-12	8591	3476.69	-1.78	2.65
110	SLE RA 12	-2	2	8608	3482.53	-1.8	2.83
110	SLE RA 13	-2	11	8619	3486.41	-1.8	2.95
110	SLE RA 14	-1	-12	8591	3476.69	-1.78	2.65
110	SLE RA 15	-2	2	8608	3482.53	-1.8	2.83
110	SLE RA 16	-1	-12	8591	3476.69	-1.78	2.65
110	SLE RA 17	-2	2	8608	3482.53	-1.8	2.83
110	SLE RA 18	0	-13	8956	3624.74	-2.43	2.14
110	SLE RA 19	-1	1	8973	3630.57	-2.45	2.32
110	SLE RA 20	0	-13	8956	3624.74	-2.43	2.14
110	SLE RA 21	-1	1	8973	3630.57	-2.45	2.32
110	SLE FR 1	-4	-12	7741	3131.26	-0.26	3.85
110	SLE FR 2	-4	-7	7746	3133.2	-0.26	3.91
110	SLE FR 3	-4	-12	7741	3131.26	-0.26	3.85
110	SLE FR 4	-3	-7	8111	3281.24	-0.92	3.39
110	SLE FR 5	-3	-12	8105	3279.3	-0.91	3.34
110	SLE FR 6	-2	-12	8348	3378	-1.35	2.99
110	SLE QP 1	-4	-12	7741	3131.26	-0.26	3.85
110	SLE QP 2	-3	-12	8105	3279.3	-0.91	3.34
110	SLD 1	595	241	8838	3561.59	23.39	-244.52
110	SLD 2	691	165	8822	3556.24	22.64	-277.22
110	SLD 3	606	-140	8380	3407.67	24.48	-248.53
110	SLD 4	703	-216	8365	3402.31	23.73	-281.23
110	SLD 5	124	670	9024	3599.41	5.01	-52.88
110	SLD 6	224	591	9008	3593.85	4.23	-86.81
110	SLD 7	161	-601	7500	3086.34	8.63	-66.24
110	SLD 8	262	-679	7484	3080.78	7.85	-100.18
110	SLD 9	-267	655	8726	3477.82	-9.67	106.85
110	SLD 10	-167	576	8710	3472.26	-10.45	72.92
110	SLD 11	-230	-615	7202	2964.75	-6.06	93.48
110	SLD 12	-129	-694	7186	2959.19	-6.83	59.55
110	SLD 13	-709	192	7845	3156.29	-25.55	287.9
110	SLD 14	-612	116	7830	3150.94	-26.3	255.21
110	SLD 15	-697	-190	7388	3002.37	-24.47	283.89
110	SLD 16	-601	-266	7373	2997.01	-25.21	251.2
110	SLV 1	1362	564	9775	3922.99	54.58	-562.79
110	SLV 2	1582	391	9740	3910.79	52.87	-637.33
110	SLV 3	1388	-301	8737	3573.5	57.05	-571.98
110	SLV 4	1608	-475	8701	3561.3	55.35	-646.51
110	SLV 5	287	1537	10194	4006.95	12.61	-125.23
110	SLV 6	514	1358	10157	3994.34	10.85	-202.28
110	SLV 7	373	-1348	6733	2841.96	20.85	-155.85
110	SLV 8	600	-1527	6696	2829.35	19.09	-232.89
110	SLV 9	-606	1503	9514	3729.25	-20.91	239.56
110	SLV 10	-379	1324	9477	3716.64	-22.67	162.52
110	SLV 11	-520	-1382	6053	2564.26	-12.67	208.95
110	SLV 12	-293	-1561	6016	2551.65	-14.44	131.91
110	SLV 13	-1614	450	7509	2997.31	-57.17	653.18
110	SLV 14	-1394	277	7473	2985.11	-58.87	578.65
110	SLV 15	-1588	-415	6471	2647.81	-54.7	644
110	SLV 16	-1368	-588	6435	2635.61	-56.4	569.47
110	CRTFP Ux+	0	0	0	-0.01	0	0.01
110	CRTFP Ux-	0	0	0	0.01	0	-0.01
110	CRTFP Uy+	0	0	0	-0.01	0	0
110	CRTFP Uy-	0	0	0	0.01	0	0
110	CRTFP Rz+	0	0	0	0	0	0
110	CRTFP Rz-	0	0	0	0	0	0
113	SLU 1	51	0	7381	2981.3	3.99	-16.19
113	SLU 2	52	35	7421	2995.04	4.35	-16.48
113	SLU 3	51	0	7381	2981.3	3.99	-16.19
113	SLU 4	51	21	7405	2989.54	4.21	-16.36
113	SLU 5	52	35	7421	2995.04	4.35	-16.48
113	SLU 6	51	0	7381	2981.3	3.99	-16.19
113	SLU 7	51	21	7405	2989.54	4.21	-16.36
113	SLU 8	51	0	7381	2981.3	3.99	-16.19
113	SLU 9	51	21	7405	2989.54	4.21	-16.36
113	SLU 10	52	37	8690	3509.8	7.24	-15.93
113	SLU 11	51	2	8650	3496.06	6.89	-15.64
113	SLU 12	52	23	8674	3504.3	7.1	-15.82
113	SLU 13	52	37	8690	3509.8	7.24	-15.93
113	SLU 14	51	2	8650	3496.06	6.89	-15.64
113	SLU 15	52	23	8674	3504.3	7.1	-15.82
113	SLU 16	51	2	8650	3496.06	6.89	-15.64
113	SLU 17	52	23	8674	3504.3	7.1	-15.82
113	SLU 18	52	2	9194	3716.68	8.13	-15.41
113	SLU 19	52	23	9218	3724.92	8.34	-15.58
113	SLU 20	52	2	9194	3716.68	8.13	-15.41
113	SLU 21	52	23	9218	3724.92	8.34	-15.58
113	SLU 22	52	1	8329	3366.17	6.02	-16.13
113	SLU 23	53	36	8369	3379.9	6.38	-16.42
113	SLU 24	52	1	8329	3366.17	6.02	-16.13
113	SLU 25	53	22	8353	3374.41	6.23	-16.3
113	SLU 26	53	36	8369	3379.9	6.38	-16.42
113	SLU 27	52	1	8329	3366.17	6.02	-16.13
113	SLU 28	53	22	8353	3374.41	6.23	-16.3

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
113	SLU 29	52	1	8329	3366.17	6.02	-16.13
113	SLU 30	53	22	8353	3374.41	6.23	-16.3
113	SLU 31	53	37	9638	3894.67	9.27	-15.87
113	SLU 32	53	3	9598	3880.93	8.91	-15.58
113	SLU 33	53	24	9622	3889.17	9.13	-15.75
113	SLU 34	53	37	9638	3894.67	9.27	-15.87
113	SLU 35	53	3	9598	3880.93	8.91	-15.58
113	SLU 36	53	24	9622	3889.17	9.13	-15.75
113	SLU 37	53	3	9598	3880.93	8.91	-15.58
113	SLU 38	53	24	9622	3889.17	9.13	-15.75
113	SLU 39	53	3	10141	4101.54	10.15	-15.35
113	SLU 40	53	24	10165	4109.79	10.37	-15.52
113	SLU 41	53	3	10141	4101.54	10.15	-15.35
113	SLU 42	53	24	10165	4109.79	10.37	-15.52
113	SLU 43	66	0	9271	3743.74	4.5	-21.07
113	SLU 44	66	35	9311	3757.47	4.85	-21.35
113	SLU 45	66	0	9271	3743.74	4.5	-21.07
113	SLU 46	66	21	9295	3751.98	4.71	-21.24
113	SLU 47	66	35	9311	3757.47	4.85	-21.35
113	SLU 48	66	0	9271	3743.74	4.5	-21.07
113	SLU 49	66	21	9295	3751.98	4.71	-21.24
113	SLU 50	66	0	9271	3743.74	4.5	-21.07
113	SLU 51	66	21	9295	3751.98	4.71	-21.24
113	SLU 52	67	36	10579	4272.23	7.75	-20.81
113	SLU 53	66	2	10539	4258.5	7.39	-20.52
113	SLU 54	67	22	10563	4266.74	7.6	-20.69
113	SLU 55	67	36	10579	4272.23	7.75	-20.81
113	SLU 56	66	2	10539	4258.5	7.39	-20.52
113	SLU 57	67	22	10563	4266.74	7.6	-20.69
113	SLU 58	66	2	10539	4258.5	7.39	-20.52
113	SLU 59	67	22	10563	4266.74	7.6	-20.69
113	SLU 60	66	2	11083	4479.11	8.63	-20.29
113	SLU 61	67	23	11107	4487.35	8.84	-20.46
113	SLU 62	66	2	11083	4479.11	8.63	-20.29
113	SLU 63	67	23	11107	4487.35	8.84	-20.46
113	SLU 64	67	1	10219	4128.61	6.52	-21
113	SLU 65	68	36	10259	4142.34	6.88	-21.29
113	SLU 66	67	1	10219	4128.61	6.52	-21
113	SLU 67	67	22	10243	4136.85	6.74	-21.18
113	SLU 68	68	36	10259	4142.34	6.88	-21.29
113	SLU 69	67	1	10219	4128.61	6.52	-21
113	SLU 70	67	22	10243	4136.85	6.74	-21.18
113	SLU 71	67	1	10219	4128.61	6.52	-21
113	SLU 72	67	22	10243	4136.85	6.74	-21.18
113	SLU 73	68	37	11527	4657.1	9.77	-20.75
113	SLU 74	67	3	11487	4643.37	9.42	-20.46
113	SLU 75	68	23	11511	4651.61	9.63	-20.63
113	SLU 76	68	37	11527	4657.1	9.77	-20.75
113	SLU 77	67	3	11487	4643.37	9.42	-20.46
113	SLU 78	68	23	11511	4651.61	9.63	-20.63
113	SLU 79	67	3	11487	4643.37	9.42	-20.46
113	SLU 80	68	23	11511	4651.61	9.63	-20.63
113	SLU 81	68	3	12031	4863.98	10.66	-20.22
113	SLU 82	68	24	12055	4872.22	10.87	-20.4
113	SLU 83	68	3	12031	4863.98	10.66	-20.22
113	SLU 84	68	24	12055	4872.22	10.87	-20.4
113	SLE RA 1	51	1	7652	3091.26	4.57	-16.17
113	SLE RA 2	52	24	7679	3100.42	4.81	-16.36
113	SLE RA 3	51	1	7652	3091.26	4.57	-16.17
113	SLE RA 4	51	14	7668	3096.76	4.71	-16.29
113	SLE RA 5	52	24	7679	3100.42	4.81	-16.36
113	SLE RA 6	51	1	7652	3091.26	4.57	-16.17
113	SLE RA 7	51	14	7668	3096.76	4.71	-16.29
113	SLE RA 8	51	1	7652	3091.26	4.57	-16.17
113	SLE RA 9	51	14	7668	3096.76	4.71	-16.29
113	SLE RA 10	52	25	8525	3443.59	6.74	-16
113	SLE RA 11	52	2	8498	3434.44	6.5	-15.81
113	SLE RA 12	52	15	8514	3439.93	6.64	-15.92
113	SLE RA 13	52	25	8525	3443.59	6.74	-16
113	SLE RA 14	52	2	8498	3434.44	6.5	-15.81
113	SLE RA 15	52	15	8514	3439.93	6.64	-15.92
113	SLE RA 16	52	2	8498	3434.44	6.5	-15.81
113	SLE RA 17	52	15	8514	3439.93	6.64	-15.92
113	SLE RA 18	52	2	8860	3581.51	7.33	-15.65
113	SLE RA 19	52	16	8876	3587.01	7.47	-15.77
113	SLE RA 20	52	2	8860	3581.51	7.33	-15.65
113	SLE RA 21	52	16	8876	3587.01	7.47	-15.77
113	SLE FR 1	51	1	7652	3091.26	4.57	-16.17
113	SLE FR 2	51	5	7658	3093.1	4.62	-16.21
113	SLE FR 3	51	1	7652	3091.26	4.57	-16.17
113	SLE FR 4	51	6	8020	3240.17	5.45	-16.05
113	SLE FR 5	51	1	8015	3238.34	5.4	-16.01
113	SLE FR 6	51	1	8256	3336.39	5.95	-15.91
113	SLE QP 1	51	1	7652	3091.26	4.57	-16.17
113	SLE QP 2	51	1	8015	3238.34	5.4	-16.01
113	SLD 1	667	110	7765	3120.46	30.54	-271.08

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
113	SLD 2	764	179	7781	3125.89	29.72	-303.73
113	SLD 3	644	-259	7312	2968.59	26.87	-261.87
113	SLD 4	741	-189	7328	2974.02	26.04	-294.52
113	SLD 5	236	567	8620	3431.31	18.82	-94.45
113	SLD 6	336	639	8637	3436.95	17.97	-128.34
113	SLD 7	158	-661	7112	2925.07	6.57	-63.76
113	SLD 8	258	-589	7129	2930.71	5.71	-97.65
113	SLD 9	-156	591	8901	3545.97	5.08	65.62
113	SLD 10	-55	663	8917	3551.61	4.23	31.73
113	SLD 11	-234	-637	7393	3039.73	-7.17	96.31
113	SLD 12	-133	-565	7409	3045.37	-8.02	62.42
113	SLD 13	-638	191	8701	3502.66	-15.25	262.49
113	SLD 14	-541	261	8717	3508.09	-16.07	229.84
113	SLD 15	-661	-177	8249	3350.79	-18.92	271.7
113	SLD 16	-564	-108	8265	3356.22	-19.74	239.05
113	SLV 1	1458	247	7441	2968.2	62.81	-598.5
113	SLV 2	1679	406	7478	2980.58	60.94	-672.93
113	SLV 3	1404	-589	6414	2623.26	54.48	-577.64
113	SLV 4	1625	-431	6450	2635.65	52.6	-652.07
113	SLV 5	473	1285	9387	3675.91	35.95	-195.1
113	SLV 6	701	1449	9425	3688.71	34.02	-272.04
113	SLV 7	295	-1503	5963	2526.12	8.17	-125.55
113	SLV 8	524	-1339	6000	2538.92	6.23	-202.49
113	SLV 9	-421	1341	10029	3937.76	4.57	170.46
113	SLV 10	-193	1505	10067	3950.56	2.63	93.52
113	SLV 11	-599	-1447	6604	2787.97	-23.22	240.01
113	SLV 12	-370	-1283	6642	2800.77	-25.15	163.07
113	SLV 13	-1523	433	9579	3841.03	-41.81	620.04
113	SLV 14	-1302	591	9616	3853.42	-43.68	545.61
113	SLV 15	-1576	-403	8552	3496.09	-50.14	640.9
113	SLV 16	-1355	-245	8588	3508.48	-52.02	566.47
113	CRTFP Ux+	0	0	0	0.01	0	0.01
113	CRTFP Ux-	0	0	0	-0.01	0	-0.01
113	CRTFP Uy+	0	0	0	-0.01	0	0
113	CRTFP Uy-	0	0	0	0.01	0	0
113	CRTFP Rz+	0	0	0	0	0	0
113	CRTFP Rz-	0	0	0	0	0	0
116	SLU 1	12	-23	1427	-1.3	200.43	5.83
116	SLU 2	12	-13	1439	-1.39	201.89	3.34
116	SLU 3	12	-23	1427	-1.3	200.43	5.83
116	SLU 4	12	-17	1435	-1.36	201.3	4.34
116	SLU 5	12	-13	1439	-1.39	201.89	3.34
116	SLU 6	12	-23	1427	-1.3	200.43	5.83
116	SLU 7	12	-17	1435	-1.36	201.3	4.34
116	SLU 8	12	-23	1427	-1.3	200.43	5.83
116	SLU 9	12	-17	1435	-1.36	201.3	4.34
116	SLU 10	13	-18	1672	-1.63	230.51	4.65
116	SLU 11	13	-28	1660	-1.53	229.05	7.13
116	SLU 12	13	-22	1667	-1.59	229.93	5.64
116	SLU 13	13	-18	1672	-1.63	230.51	4.65
116	SLU 14	13	-28	1660	-1.53	229.05	7.13
116	SLU 15	13	-22	1667	-1.59	229.93	5.64
116	SLU 16	13	-28	1660	-1.53	229.05	7.13
116	SLU 17	13	-22	1667	-1.59	229.93	5.64
116	SLU 18	13	-30	1760	-1.63	241.32	7.69
116	SLU 19	13	-24	1767	-1.69	242.19	6.2
116	SLU 20	13	-30	1760	-1.63	241.32	7.69
116	SLU 21	13	-24	1767	-1.69	242.19	6.2
116	SLU 22	13	-27	1603	-1.47	221.87	6.78
116	SLU 23	13	-17	1615	-1.56	223.32	4.3
116	SLU 24	13	-27	1603	-1.47	221.87	6.78
116	SLU 25	13	-21	1610	-1.52	222.74	5.29
116	SLU 26	13	-17	1615	-1.56	223.32	4.3
116	SLU 27	13	-27	1603	-1.47	221.87	6.78
116	SLU 28	13	-21	1610	-1.52	222.74	5.29
116	SLU 29	13	-27	1603	-1.47	221.87	6.78
116	SLU 30	13	-21	1610	-1.52	222.74	5.29
116	SLU 31	13	-22	1847	-1.79	251.94	5.6
116	SLU 32	13	-32	1835	-1.7	250.49	8.09
116	SLU 33	13	-26	1843	-1.76	251.36	6.6
116	SLU 34	13	-22	1847	-1.79	251.94	5.6
116	SLU 35	13	-32	1835	-1.7	250.49	8.09
116	SLU 36	13	-26	1843	-1.76	251.36	6.6
116	SLU 37	13	-32	1835	-1.7	250.49	8.09
116	SLU 38	13	-26	1843	-1.76	251.36	6.6
116	SLU 39	14	-34	1935	-1.8	262.76	8.65
116	SLU 40	14	-28	1942	-1.86	263.63	7.16
116	SLU 41	14	-34	1935	-1.8	262.76	8.65
116	SLU 42	14	-28	1942	-1.86	263.63	7.16
116	SLU 43	15	-28	1796	-1.63	253.21	7.25
116	SLU 44	15	-19	1808	-1.73	254.67	4.76
116	SLU 45	15	-28	1796	-1.63	253.21	7.25
116	SLU 46	15	-23	1803	-1.69	254.09	5.76
116	SLU 47	15	-19	1808	-1.73	254.67	4.76
116	SLU 48	15	-28	1796	-1.63	253.21	7.25
116	SLU 49	15	-23	1803	-1.69	254.09	5.76

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
116	SLU 50	15	-28	1796	-1.63	253.21	7.25
116	SLU 51	15	-23	1803	-1.69	254.09	5.76
116	SLU 52	16	-24	2040	-1.96	283.29	6.07
116	SLU 53	16	-34	2028	-1.86	281.83	8.55
116	SLU 54	16	-28	2035	-1.92	282.71	7.06
116	SLU 55	16	-24	2040	-1.96	283.29	6.07
116	SLU 56	16	-34	2028	-1.86	281.83	8.55
116	SLU 57	16	-28	2035	-1.92	282.71	7.06
116	SLU 58	16	-34	2028	-1.86	281.83	8.55
116	SLU 59	16	-28	2035	-1.92	282.71	7.06
116	SLU 60	16	-36	2128	-1.96	294.1	9.11
116	SLU 61	16	-30	2135	-2.02	294.97	7.62
116	SLU 62	16	-36	2128	-1.96	294.1	9.11
116	SLU 63	16	-30	2135	-2.02	294.97	7.62
116	SLU 64	16	-32	1971	-1.8	274.65	8.2
116	SLU 65	16	-22	1983	-1.9	276.1	5.72
116	SLU 66	16	-32	1971	-1.8	274.65	8.2
116	SLU 67	16	-26	1978	-1.86	275.52	6.71
116	SLU 68	16	-22	1983	-1.9	276.1	5.72
116	SLU 69	16	-32	1971	-1.8	274.65	8.2
116	SLU 70	16	-26	1978	-1.86	275.52	6.71
116	SLU 71	16	-32	1971	-1.8	274.65	8.2
116	SLU 72	16	-26	1978	-1.86	275.52	6.71
116	SLU 73	17	-28	2216	-2.13	304.72	7.02
116	SLU 74	17	-37	2203	-2.03	303.27	9.51
116	SLU 75	17	-32	2211	-2.09	304.14	8.02
116	SLU 76	17	-28	2216	-2.13	304.72	7.02
116	SLU 77	17	-37	2203	-2.03	303.27	9.51
116	SLU 78	17	-32	2211	-2.09	304.14	8.02
116	SLU 79	17	-37	2203	-2.03	303.27	9.51
116	SLU 80	17	-32	2211	-2.09	304.14	8.02
116	SLU 81	17	-40	2303	-2.13	315.54	10.07
116	SLU 82	17	-34	2310	-2.19	316.41	8.58
116	SLU 83	17	-40	2303	-2.13	315.54	10.07
116	SLU 84	17	-34	2310	-2.19	316.41	8.58
116	SLE RA 1	12	-24	1477	-1.35	206.56	6.1
116	SLE RA 2	12	-17	1486	-1.41	207.53	4.44
116	SLE RA 3	12	-24	1477	-1.35	206.56	6.1
116	SLE RA 4	12	-20	1482	-1.39	207.14	5.11
116	SLE RA 5	12	-17	1486	-1.41	207.53	4.44
116	SLE RA 6	12	-24	1477	-1.35	206.56	6.1
116	SLE RA 7	12	-20	1482	-1.39	207.14	5.11
116	SLE RA 8	12	-24	1477	-1.35	206.56	6.1
116	SLE RA 9	12	-20	1482	-1.39	207.14	5.11
116	SLE RA 10	13	-21	1641	-1.57	226.61	5.31
116	SLE RA 11	13	-27	1633	-1.5	225.64	6.97
116	SLE RA 12	13	-23	1637	-1.54	226.22	5.98
116	SLE RA 13	13	-21	1641	-1.57	226.61	5.31
116	SLE RA 14	13	-27	1633	-1.5	225.64	6.97
116	SLE RA 15	13	-23	1637	-1.54	226.22	5.98
116	SLE RA 16	13	-27	1633	-1.5	225.64	6.97
116	SLE RA 17	13	-23	1637	-1.54	226.22	5.98
116	SLE RA 18	13	-29	1699	-1.57	233.82	7.34
116	SLE RA 19	13	-25	1704	-1.61	234.4	6.35
116	SLE RA 20	13	-29	1699	-1.57	233.82	7.34
116	SLE RA 21	13	-25	1704	-1.61	234.4	6.35
116	SLE FR 1	12	-24	1477	-1.35	206.56	6.1
116	SLE FR 2	12	-23	1479	-1.36	206.75	5.77
116	SLE FR 3	12	-24	1477	-1.35	206.56	6.1
116	SLE FR 4	12	-24	1546	-1.43	214.93	6.14
116	SLE FR 5	12	-25	1544	-1.41	214.73	6.47
116	SLE FR 6	12	-26	1588	-1.46	220.19	6.72
116	SLE QP 1	12	-24	1477	-1.35	206.56	6.1
116	SLE QP 2	12	-25	1544	-1.41	214.73	6.47
116	SLD 1	113	-5	1381	-1.61	196.5	1.36
116	SLD 2	131	27	1388	-1.68	197.31	-6.45
116	SLD 3	111	-108	1246	-0.52	180.05	27.23
116	SLD 4	129	-77	1253	-0.59	180.85	19.42
116	SLD 5	39	126	1698	-3.11	233.92	-31.42
116	SLD 6	58	159	1706	-3.18	234.76	-39.52
116	SLD 7	32	-219	1246	0.54	179.08	54.81
116	SLD 8	50	-186	1254	0.47	179.91	46.71
116	SLD 9	-26	135	1834	-3.3	249.56	-33.77
116	SLD 10	-7	168	1842	-3.37	250.39	-41.87
116	SLD 11	-33	-210	1382	0.35	194.71	52.46
116	SLD 12	-15	-177	1390	0.28	195.55	44.36
116	SLD 13	-104	26	1835	-2.24	248.62	-6.48
116	SLD 14	-86	57	1842	-2.31	249.42	-14.28
116	SLD 15	-106	-78	1699	-1.14	232.16	19.39
116	SLD 16	-88	-46	1707	-1.22	232.97	11.59
116	SLV 1	242	21	1171	-1.86	172.9	-5.02
116	SLV 2	283	93	1188	-2.02	174.73	-22.81
116	SLV 3	237	-214	863	0.63	135.54	53.72
116	SLV 4	278	-142	880	0.47	137.37	35.93
116	SLV 5	74	318	1893	-5.26	258.17	-79.53
116	SLV 6	116	393	1910	-5.43	260.06	-97.92

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
116	SLV 7	57	-465	866	3.03	133.65	116.25
116	SLV 8	99	-391	883	2.86	135.54	97.87
116	SLV 9	-75	340	2205	-5.69	293.93	-84.92
116	SLV 10	-32	414	2221	-5.86	295.82	-103.31
116	SLV 11	-92	-444	1178	2.6	169.4	110.86
116	SLV 12	-49	-369	1194	2.43	171.3	92.48
116	SLV 13	-253	91	2208	-3.29	292.1	-22.99
116	SLV 14	-212	163	2225	-3.46	293.93	-40.77
116	SLV 15	-258	-144	1900	-0.81	254.74	35.75
116	SLV 16	-217	-72	1917	-0.97	256.57	17.96
116	CRTFP Ux+	0	0	0	0	0	0
116	CRTFP Ux-	0	0	0	0	0	0
116	CRTFP Uy+	0	0	0	0	0	0
116	CRTFP Uy-	0	0	0	0	0	0
117	SLU 1	-4	-15	1246	-0.29	-176.34	-3.62
117	SLU 2	-4	-6	1257	-0.34	-177.46	-1.48
117	SLU 3	-4	-15	1246	-0.29	-176.34	-3.62
117	SLU 4	-4	-9	1253	-0.32	-177.01	-2.34
117	SLU 5	-4	-6	1257	-0.34	-177.46	-1.48
117	SLU 6	-4	-15	1246	-0.29	-176.34	-3.62
117	SLU 7	-4	-9	1253	-0.32	-177.01	-2.34
117	SLU 8	-4	-15	1246	-0.29	-176.34	-3.62
117	SLU 9	-4	-9	1253	-0.32	-177.01	-2.34
117	SLU 10	-4	-10	1456	-0.4	-202.76	-2.58
117	SLU 11	-4	-19	1446	-0.34	-201.64	-4.71
117	SLU 12	-4	-14	1452	-0.37	-202.31	-3.43
117	SLU 13	-4	-10	1456	-0.4	-202.76	-2.58
117	SLU 14	-4	-19	1446	-0.34	-201.64	-4.71
117	SLU 15	-4	-14	1452	-0.37	-202.31	-3.43
117	SLU 16	-4	-19	1446	-0.34	-201.64	-4.71
117	SLU 17	-4	-14	1452	-0.37	-202.31	-3.43
117	SLU 18	-4	-21	1532	-0.36	-212.48	-5.18
117	SLU 19	-4	-16	1538	-0.4	-213.15	-3.9
117	SLU 20	-4	-21	1532	-0.36	-212.48	-5.18
117	SLU 21	-4	-16	1538	-0.4	-213.15	-3.9
117	SLU 22	-4	-18	1397	-0.32	-195.19	-4.38
117	SLU 23	-4	-9	1407	-0.38	-196.32	-2.25
117	SLU 24	-4	-18	1397	-0.32	-195.19	-4.38
117	SLU 25	-4	-13	1403	-0.35	-195.87	-3.1
117	SLU 26	-4	-9	1407	-0.38	-196.32	-2.25
117	SLU 27	-4	-18	1397	-0.32	-195.19	-4.38
117	SLU 28	-4	-13	1403	-0.35	-195.87	-3.1
117	SLU 29	-4	-18	1397	-0.32	-195.19	-4.38
117	SLU 30	-4	-13	1403	-0.35	-195.87	-3.1
117	SLU 31	-5	-14	1607	-0.43	-221.61	-3.34
117	SLU 32	-5	-22	1597	-0.37	-220.49	-5.48
117	SLU 33	-5	-17	1603	-0.41	-221.16	-4.2
117	SLU 34	-5	-14	1607	-0.43	-221.61	-3.34
117	SLU 35	-5	-22	1597	-0.37	-220.49	-5.48
117	SLU 36	-5	-17	1603	-0.41	-221.16	-4.2
117	SLU 37	-5	-22	1597	-0.37	-220.49	-5.48
117	SLU 38	-5	-17	1603	-0.41	-221.16	-4.2
117	SLU 39	-5	-24	1682	-0.4	-231.33	-5.95
117	SLU 40	-5	-19	1688	-0.43	-232	-4.67
117	SLU 41	-5	-24	1682	-0.4	-231.33	-5.95
117	SLU 42	-5	-19	1688	-0.43	-232	-4.67
117	SLU 43	-5	-18	1569	-0.36	-222.78	-4.44
117	SLU 44	-5	-9	1579	-0.42	-223.9	-2.3
117	SLU 45	-5	-18	1569	-0.36	-222.78	-4.44
117	SLU 46	-5	-13	1575	-0.4	-223.45	-3.16
117	SLU 47	-5	-9	1579	-0.42	-223.9	-2.3
117	SLU 48	-5	-18	1569	-0.36	-222.78	-4.44
117	SLU 49	-5	-13	1575	-0.4	-223.45	-3.16
117	SLU 50	-5	-18	1569	-0.36	-222.78	-4.44
117	SLU 51	-5	-13	1575	-0.4	-223.45	-3.16
117	SLU 52	-5	-14	1779	-0.47	-249.2	-3.4
117	SLU 53	-5	-22	1769	-0.41	-248.08	-5.53
117	SLU 54	-5	-17	1775	-0.45	-248.75	-4.25
117	SLU 55	-5	-14	1779	-0.47	-249.2	-3.4
117	SLU 56	-5	-22	1769	-0.41	-248.08	-5.53
117	SLU 57	-5	-17	1775	-0.45	-248.75	-4.25
117	SLU 58	-5	-22	1769	-0.41	-248.08	-5.53
117	SLU 59	-5	-17	1775	-0.45	-248.75	-4.25
117	SLU 60	-6	-24	1854	-0.44	-258.92	-6
117	SLU 61	-6	-19	1860	-0.47	-259.59	-4.72
117	SLU 62	-6	-24	1854	-0.44	-258.92	-6
117	SLU 63	-6	-19	1860	-0.47	-259.59	-4.72
117	SLU 64	-5	-21	1719	-0.4	-241.63	-5.2
117	SLU 65	-5	-12	1729	-0.45	-242.75	-3.07
117	SLU 66	-5	-21	1719	-0.4	-241.63	-5.2
117	SLU 67	-5	-16	1725	-0.43	-242.3	-3.92
117	SLU 68	-5	-12	1729	-0.45	-242.75	-3.07
117	SLU 69	-5	-21	1719	-0.4	-241.63	-5.2
117	SLU 70	-5	-16	1725	-0.43	-242.3	-3.92
117	SLU 71	-5	-21	1719	-0.4	-241.63	-5.2
117	SLU 72	-5	-16	1725	-0.43	-242.3	-3.92

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
117	SLU 73	-6	-17	1929	-0.5	-268.05	-4.17
117	SLU 74	-6	-25	1919	-0.45	-266.93	-6.3
117	SLU 75	-6	-20	1925	-0.48	-267.6	-5.02
117	SLU 76	-6	-17	1929	-0.5	-268.05	-4.17
117	SLU 77	-6	-25	1919	-0.45	-266.93	-6.3
117	SLU 78	-6	-20	1925	-0.48	-267.6	-5.02
117	SLU 79	-6	-25	1919	-0.45	-266.93	-6.3
117	SLU 80	-6	-20	1925	-0.48	-267.6	-5.02
117	SLU 81	-6	-27	2004	-0.47	-277.77	-6.77
117	SLU 82	-6	-22	2011	-0.5	-278.44	-5.49
117	SLU 83	-6	-27	2004	-0.47	-277.77	-6.77
117	SLU 84	-6	-22	2011	-0.5	-278.44	-5.49
117	SLE RA 1	-4	-15	1289	-0.3	-181.73	-3.83
117	SLE RA 2	-4	-10	1296	-0.33	-182.48	-2.41
117	SLE RA 3	-4	-15	1289	-0.3	-181.73	-3.83
117	SLE RA 4	-4	-12	1293	-0.32	-182.18	-2.98
117	SLE RA 5	-4	-10	1296	-0.33	-182.48	-2.41
117	SLE RA 6	-4	-15	1289	-0.3	-181.73	-3.83
117	SLE RA 7	-4	-12	1293	-0.32	-182.18	-2.98
117	SLE RA 8	-4	-15	1289	-0.3	-181.73	-3.83
117	SLE RA 9	-4	-12	1293	-0.32	-182.18	-2.98
117	SLE RA 10	-4	-13	1429	-0.37	-199.34	-3.14
117	SLE RA 11	-4	-18	1423	-0.33	-198.59	-4.56
117	SLE RA 12	-4	-15	1427	-0.35	-199.04	-3.71
117	SLE RA 13	-4	-13	1429	-0.37	-199.34	-3.14
117	SLE RA 14	-4	-18	1423	-0.33	-198.59	-4.56
117	SLE RA 15	-4	-15	1427	-0.35	-199.04	-3.71
117	SLE RA 16	-4	-18	1423	-0.33	-198.59	-4.56
117	SLE RA 17	-4	-15	1427	-0.35	-199.04	-3.71
117	SLE RA 18	-4	-20	1480	-0.35	-205.82	-4.88
117	SLE RA 19	-4	-16	1484	-0.37	-206.27	-4.02
117	SLE RA 20	-4	-20	1480	-0.35	-205.82	-4.88
117	SLE RA 21	-4	-16	1484	-0.37	-206.27	-4.02
117	SLE FR 1	-4	-15	1289	-0.3	-181.73	-3.83
117	SLE FR 2	-4	-14	1291	-0.3	-181.88	-3.55
117	SLE FR 3	-4	-15	1289	-0.3	-181.73	-3.83
117	SLE FR 4	-4	-16	1348	-0.32	-189.1	-3.86
117	SLE FR 5	-4	-17	1346	-0.31	-188.95	-4.15
117	SLE FR 6	-4	-18	1384	-0.32	-193.77	-4.36
117	SLE QP 1	-4	-15	1289	-0.3	-181.73	-3.83
117	SLE QP 2	-4	-17	1346	-0.31	-188.95	-4.15
117	SLD 1	83	55	1590	-0.75	-215.97	13.83
117	SLD 2	98	27	1584	-0.72	-215.39	6.95
117	SLD 3	81	-37	1482	-0.11	-204.15	-9.28
117	SLD 4	95	-65	1477	-0.07	-203.56	-16.16
117	SLD 5	20	155	1585	-1.44	-215.22	38.82
117	SLD 6	35	126	1579	-1.4	-214.61	31.68
117	SLD 7	13	-153	1226	0.71	-175.79	-38.19
117	SLD 8	28	-181	1220	0.75	-175.18	-45.33
117	SLD 9	-36	148	1473	-1.37	-202.73	37.03
117	SLD 10	-21	119	1467	-1.34	-202.12	29.89
117	SLD 11	-43	-160	1114	0.78	-163.3	-39.97
117	SLD 12	-28	-188	1108	0.81	-162.69	-47.12
117	SLD 13	-104	32	1216	-0.55	-174.35	7.86
117	SLD 14	-89	4	1211	-0.52	-173.76	0.98
117	SLD 15	-106	-61	1109	0.09	-162.52	-15.24
117	SLD 16	-91	-89	1103	0.13	-161.93	-22.12
117	SLV 1	195	146	1902	-1.31	-250.61	36.73
117	SLV 2	228	83	1889	-1.23	-249.27	21.04
117	SLV 3	190	-63	1657	0.15	-223.76	-15.73
117	SLV 4	223	-126	1645	0.23	-222.42	-31.41
117	SLV 5	51	373	1888	-2.86	-248.66	93.43
117	SLV 6	85	308	1875	-2.78	-247.28	77.22
117	SLV 7	35	-325	1074	2.02	-159.17	-81.43
117	SLV 8	69	-391	1061	2.1	-157.78	-97.64
117	SLV 9	-77	357	1632	-2.73	-220.12	89.35
117	SLV 10	-43	292	1619	-2.64	-218.74	73.14
117	SLV 11	-93	-341	818	2.16	-130.63	-85.51
117	SLV 12	-59	-407	804	2.24	-129.24	-101.73
117	SLV 13	-231	93	1048	-0.85	-155.48	23.12
117	SLV 14	-198	30	1036	-0.78	-154.14	7.44
117	SLV 15	-236	-117	804	0.61	-128.63	-29.34
117	SLV 16	-203	-180	791	0.69	-127.29	-45.02
117	CRTFP Ux+	0	0	0	0	0	0
117	CRTFP Ux-	0	0	0	0	0	0
117	CRTFP Uy+	0	0	0	0	0	0
117	CRTFP Uy-	0	0	0	0	0	0
120	SLU 1	7	-2	2699	0.37	-1.28	0.47
120	SLU 2	7	11	2718	0.24	-1.28	0.47
120	SLU 3	7	-2	2699	0.37	-1.28	0.47
120	SLU 4	7	6	2710	0.29	-1.28	0.47
120	SLU 5	7	11	2718	0.24	-1.28	0.47
120	SLU 6	7	-2	2699	0.37	-1.28	0.47
120	SLU 7	7	6	2710	0.29	-1.28	0.47
120	SLU 8	7	-2	2699	0.37	-1.28	0.47
120	SLU 9	7	6	2710	0.29	-1.28	0.47

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
120	SLU 10	7	13	3195	0.42	-1.58	0.52
120	SLU 11	7	0	3176	0.54	-1.57	0.52
120	SLU 12	7	8	3188	0.47	-1.58	0.52
120	SLU 13	7	13	3195	0.42	-1.58	0.52
120	SLU 14	7	0	3176	0.54	-1.57	0.52
120	SLU 15	7	8	3188	0.47	-1.58	0.52
120	SLU 16	7	0	3176	0.54	-1.57	0.52
120	SLU 17	7	8	3188	0.47	-1.58	0.52
120	SLU 18	7	1	3381	0.62	-1.7	0.54
120	SLU 19	7	9	3392	0.54	-1.7	0.54
120	SLU 20	7	1	3381	0.62	-1.7	0.54
120	SLU 21	7	9	3392	0.54	-1.7	0.54
120	SLU 22	7	-1	3056	0.51	-1.52	0.51
120	SLU 23	7	12	3075	0.38	-1.52	0.51
120	SLU 24	7	-1	3056	0.51	-1.52	0.51
120	SLU 25	7	7	3068	0.43	-1.52	0.51
120	SLU 26	7	12	3075	0.38	-1.52	0.51
120	SLU 27	7	-1	3056	0.51	-1.52	0.51
120	SLU 28	7	7	3068	0.43	-1.52	0.51
120	SLU 29	7	-1	3056	0.51	-1.52	0.51
120	SLU 30	7	7	3068	0.43	-1.52	0.51
120	SLU 31	8	14	3553	0.56	-1.82	0.56
120	SLU 32	8	1	3534	0.68	-1.81	0.55
120	SLU 33	8	9	3545	0.61	-1.82	0.56
120	SLU 34	8	14	3553	0.56	-1.82	0.56
120	SLU 35	8	1	3534	0.68	-1.81	0.55
120	SLU 36	8	9	3545	0.61	-1.82	0.56
120	SLU 37	8	1	3534	0.68	-1.81	0.55
120	SLU 38	8	9	3545	0.61	-1.82	0.56
120	SLU 39	8	2	3739	0.76	-1.94	0.57
120	SLU 40	8	10	3750	0.68	-1.94	0.58
120	SLU 41	8	2	3739	0.76	-1.94	0.57
120	SLU 42	8	10	3750	0.68	-1.94	0.58
120	SLU 43	9	-3	3386	0.43	-1.59	0.6
120	SLU 44	9	10	3405	0.3	-1.59	0.6
120	SLU 45	9	-3	3386	0.43	-1.59	0.6
120	SLU 46	9	5	3397	0.36	-1.59	0.6
120	SLU 47	9	10	3405	0.3	-1.59	0.6
120	SLU 48	9	-3	3386	0.43	-1.59	0.6
120	SLU 49	9	5	3397	0.36	-1.59	0.6
120	SLU 50	9	-3	3386	0.43	-1.59	0.6
120	SLU 51	9	5	3397	0.36	-1.59	0.6
120	SLU 52	9	12	3882	0.48	-1.88	0.65
120	SLU 53	9	-1	3863	0.61	-1.88	0.64
120	SLU 54	9	7	3875	0.53	-1.88	0.64
120	SLU 55	9	12	3882	0.48	-1.88	0.65
120	SLU 56	9	-1	3863	0.61	-1.88	0.64
120	SLU 57	9	7	3875	0.53	-1.88	0.64
120	SLU 58	9	-1	3863	0.61	-1.88	0.64
120	SLU 59	9	7	3875	0.53	-1.88	0.64
120	SLU 60	9	0	4068	0.68	-2	0.66
120	SLU 61	9	8	4080	0.6	-2	0.67
120	SLU 62	9	0	4068	0.68	-2	0.66
120	SLU 63	9	8	4080	0.6	-2	0.67
120	SLU 64	9	-2	3743	0.57	-1.83	0.63
120	SLU 65	9	11	3762	0.45	-1.83	0.64
120	SLU 66	9	-2	3743	0.57	-1.83	0.63
120	SLU 67	9	6	3755	0.5	-1.83	0.64
120	SLU 68	9	11	3762	0.45	-1.83	0.64
120	SLU 69	9	-2	3743	0.57	-1.83	0.63
120	SLU 70	9	6	3755	0.5	-1.83	0.64
120	SLU 71	9	-2	3743	0.57	-1.83	0.63
120	SLU 72	9	6	3755	0.5	-1.83	0.64
120	SLU 73	10	13	4240	0.62	-2.12	0.69
120	SLU 74	10	0	4221	0.75	-2.12	0.68
120	SLU 75	10	8	4232	0.67	-2.12	0.68
120	SLU 76	10	13	4240	0.62	-2.12	0.69
120	SLU 77	10	0	4221	0.75	-2.12	0.68
120	SLU 78	10	8	4232	0.67	-2.12	0.68
120	SLU 79	10	0	4221	0.75	-2.12	0.68
120	SLU 80	10	8	4232	0.67	-2.12	0.68
120	SLU 81	10	1	4426	0.82	-2.24	0.7
120	SLU 82	10	9	4437	0.74	-2.24	0.7
120	SLU 83	10	1	4426	0.82	-2.24	0.7
120	SLU 84	10	9	4437	0.74	-2.24	0.7
120	SLE RA 1	7	-1	2801	0.41	-1.35	0.48
120	SLE RA 2	7	7	2813	0.33	-1.35	0.48
120	SLE RA 3	7	-1	2801	0.41	-1.35	0.48
120	SLE RA 4	7	4	2808	0.36	-1.35	0.48
120	SLE RA 5	7	7	2813	0.33	-1.35	0.48
120	SLE RA 6	7	-1	2801	0.41	-1.35	0.48
120	SLE RA 7	7	4	2808	0.36	-1.35	0.48
120	SLE RA 8	7	-1	2801	0.41	-1.35	0.48
120	SLE RA 9	7	4	2808	0.36	-1.35	0.48
120	SLE RA 10	7	8	3132	0.44	-1.55	0.51
120	SLE RA 11	7	0	3119	0.53	-1.55	0.51

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
120	SLE RA 12	7	5	3127	0.48	-1.55	0.51
120	SLE RA 13	7	8	3132	0.44	-1.55	0.51
120	SLE RA 14	7	0	3119	0.53	-1.55	0.51
120	SLE RA 15	7	5	3127	0.48	-1.55	0.51
120	SLE RA 16	7	0	3119	0.53	-1.55	0.51
120	SLE RA 17	7	5	3127	0.48	-1.55	0.51
120	SLE RA 18	7	0	3256	0.58	-1.63	0.52
120	SLE RA 19	7	6	3263	0.52	-1.63	0.53
120	SLE RA 20	7	0	3256	0.58	-1.63	0.52
120	SLE RA 21	7	6	3263	0.52	-1.63	0.53
120	SLE FR 1	7	-1	2801	0.41	-1.35	0.48
120	SLE FR 2	7	0	2803	0.39	-1.35	0.48
120	SLE FR 3	7	-1	2801	0.41	-1.35	0.48
120	SLE FR 4	7	1	2940	0.44	-1.44	0.49
120	SLE FR 5	7	-1	2937	0.46	-1.44	0.49
120	SLE FR 6	7	-1	3028	0.49	-1.49	0.5
120	SLE QP 1	7	-1	2801	0.41	-1.35	0.48
120	SLE QP 2	7	-1	2937	0.46	-1.44	0.49
120	SLD 1	209	74	3072	-0.14	7.76	0.4
120	SLD 2	240	74	3072	-0.14	7.35	1.45
120	SLD 3	204	-61	2862	1.37	7.98	0.3
120	SLD 4	235	-60	2862	1.36	7.57	1.34
120	SLD 5	65	225	3296	-2.01	1.14	0.24
120	SLD 6	97	226	3296	-2.01	0.72	1.32
120	SLD 7	46	-223	2596	3.02	1.87	-0.1
120	SLD 8	79	-223	2597	3.02	1.45	0.98
120	SLD 9	-65	221	3278	-2.1	-4.32	0.01
120	SLD 10	-32	221	3278	-2.1	-4.74	1.09
120	SLD 11	-83	-228	2579	2.93	-3.59	-0.33
120	SLD 12	-50	-227	2579	2.93	-4.01	0.75
120	SLD 13	-221	58	3012	-0.44	-10.44	-0.36
120	SLD 14	-190	59	3013	-0.45	-10.85	0.68
120	SLD 15	-226	-76	2803	1.07	-10.22	-0.46
120	SLD 16	-195	-76	2803	1.06	-10.63	0.58
120	SLV 1	469	168	3247	-0.88	19.57	0.29
120	SLV 2	540	170	3248	-0.88	18.64	2.67
120	SLV 3	456	-137	2771	2.55	20.07	0.06
120	SLV 4	528	-136	2772	2.54	19.14	2.44
120	SLV 5	138	513	3752	-5.13	4.45	-0.09
120	SLV 6	212	514	3753	-5.14	3.49	2.37
120	SLV 7	97	-506	2165	6.28	6.12	-0.86
120	SLV 8	170	-504	2166	6.28	5.16	1.6
120	SLV 9	-156	502	3709	-5.36	-8.03	-0.61
120	SLV 10	-83	504	3710	-5.36	-8.99	1.84
120	SLV 11	-198	-516	2122	6.06	-6.36	-1.38
120	SLV 12	-124	-515	2123	6.05	-7.32	1.07
120	SLV 13	-513	134	3103	-1.62	-22.01	-1.45
120	SLV 14	-442	135	3104	-1.63	-22.94	0.92
120	SLV 15	-526	-172	2627	1.8	-21.51	-1.69
120	SLV 16	-455	-170	2628	1.8	-22.44	0.69
120	CRTFP Ux+	0	0	0	0	0	0
120	CRTFP Ux-	0	0	0	0	0	0
120	CRTFP Uy+	0	0	0	0	0	0
120	CRTFP Uy-	0	0	0	0	0	0
123	SLU 1	9	-24	1406	-0.23	179.53	6.04
123	SLU 2	9	-14	1415	-0.31	180.3	3.55
123	SLU 3	9	-24	1406	-0.23	179.53	6.04
123	SLU 4	9	-18	1411	-0.28	179.99	4.55
123	SLU 5	9	-14	1415	-0.31	180.3	3.55
123	SLU 6	9	-24	1406	-0.23	179.53	6.04
123	SLU 7	9	-18	1411	-0.28	179.99	4.55
123	SLU 8	9	-24	1406	-0.23	179.53	6.04
123	SLU 9	9	-18	1411	-0.28	179.99	4.55
123	SLU 10	9	-19	1644	-0.32	205.4	4.89
123	SLU 11	9	-29	1635	-0.24	204.63	7.37
123	SLU 12	9	-23	1641	-0.29	205.09	5.88
123	SLU 13	9	-19	1644	-0.32	205.4	4.89
123	SLU 14	9	-29	1635	-0.24	204.63	7.37
123	SLU 15	9	-23	1641	-0.29	205.09	5.88
123	SLU 16	9	-29	1635	-0.24	204.63	7.37
123	SLU 17	9	-23	1641	-0.29	205.09	5.88
123	SLU 18	9	-31	1733	-0.24	215.38	7.94
123	SLU 19	9	-25	1739	-0.29	215.84	6.45
123	SLU 20	9	-31	1733	-0.24	215.38	7.94
123	SLU 21	9	-25	1739	-0.29	215.84	6.45
123	SLU 22	9	-28	1579	-0.23	198.34	7.02
123	SLU 23	9	-18	1588	-0.31	199.11	4.53
123	SLU 24	9	-28	1579	-0.23	198.34	7.02
123	SLU 25	9	-22	1584	-0.28	198.8	5.53
123	SLU 26	9	-18	1588	-0.31	199.11	4.53
123	SLU 27	9	-28	1579	-0.23	198.34	7.02
123	SLU 28	9	-22	1584	-0.28	198.8	5.53
123	SLU 29	9	-28	1579	-0.23	198.34	7.02
123	SLU 30	9	-22	1584	-0.28	198.8	5.53
123	SLU 31	10	-23	1817	-0.32	224.2	5.87
123	SLU 32	10	-33	1808	-0.24	223.44	8.35

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
123	SLU 33	10	-27	1813	-0.29	223.9	6.86
123	SLU 34	10	-23	1817	-0.32	224.2	5.87
123	SLU 35	10	-33	1808	-0.24	223.44	8.35
123	SLU 36	10	-27	1813	-0.29	223.9	6.86
123	SLU 37	10	-33	1808	-0.24	223.44	8.35
123	SLU 38	10	-27	1813	-0.29	223.9	6.86
123	SLU 39	10	-35	1906	-0.24	234.19	8.92
123	SLU 40	10	-29	1912	-0.29	234.65	7.43
123	SLU 41	10	-35	1906	-0.24	234.19	8.92
123	SLU 42	10	-29	1912	-0.29	234.65	7.43
123	SLU 43	11	-29	1768	-0.3	226.94	7.52
123	SLU 44	11	-20	1778	-0.38	227.71	5.03
123	SLU 45	11	-29	1768	-0.3	226.94	7.52
123	SLU 46	11	-24	1774	-0.35	227.4	6.02
123	SLU 47	11	-20	1778	-0.38	227.71	5.03
123	SLU 48	11	-29	1768	-0.3	226.94	7.52
123	SLU 49	11	-24	1774	-0.35	227.4	6.02
123	SLU 50	11	-29	1768	-0.3	226.94	7.52
123	SLU 51	11	-24	1774	-0.35	227.4	6.02
123	SLU 52	12	-25	2007	-0.39	252.8	6.36
123	SLU 53	12	-35	1997	-0.31	252.04	8.85
123	SLU 54	12	-29	2003	-0.36	252.5	7.36
123	SLU 55	12	-25	2007	-0.39	252.8	6.36
123	SLU 56	12	-35	1997	-0.31	252.04	8.85
123	SLU 57	12	-29	2003	-0.36	252.5	7.36
123	SLU 58	12	-35	1997	-0.31	252.04	8.85
123	SLU 59	12	-29	2003	-0.36	252.5	7.36
123	SLU 60	12	-37	2096	-0.31	262.79	9.42
123	SLU 61	12	-31	2101	-0.36	263.25	7.93
123	SLU 62	12	-37	2096	-0.31	262.79	9.42
123	SLU 63	12	-31	2101	-0.36	263.25	7.93
123	SLU 64	12	-33	1941	-0.3	245.75	8.5
123	SLU 65	12	-23	1950	-0.38	246.52	6.01
123	SLU 66	12	-33	1941	-0.3	245.75	8.5
123	SLU 67	12	-27	1947	-0.35	246.21	7
123	SLU 68	12	-23	1950	-0.38	246.52	6.01
123	SLU 69	12	-33	1941	-0.3	245.75	8.5
123	SLU 70	12	-27	1947	-0.35	246.21	7
123	SLU 71	12	-33	1941	-0.3	245.75	8.5
123	SLU 72	12	-27	1947	-0.35	246.21	7
123	SLU 73	12	-29	2180	-0.39	271.61	7.34
123	SLU 74	12	-39	2170	-0.31	270.85	9.83
123	SLU 75	12	-33	2176	-0.36	271.31	8.34
123	SLU 76	12	-29	2180	-0.39	271.61	7.34
123	SLU 77	12	-39	2170	-0.31	270.85	9.83
123	SLU 78	12	-33	2176	-0.36	271.31	8.34
123	SLU 79	12	-39	2170	-0.31	270.85	9.83
123	SLU 80	12	-33	2176	-0.36	271.31	8.34
123	SLU 81	12	-41	2268	-0.31	281.6	10.4
123	SLU 82	12	-35	2274	-0.36	282.06	8.91
123	SLU 83	12	-41	2268	-0.31	281.6	10.4
123	SLU 84	12	-35	2274	-0.36	282.06	8.91
123	SLE RA 1	9	-25	1455	-0.23	184.9	6.32
123	SLE RA 2	9	-18	1461	-0.29	185.41	4.66
123	SLE RA 3	9	-25	1455	-0.23	184.9	6.32
123	SLE RA 4	9	-21	1459	-0.26	185.21	5.33
123	SLE RA 5	9	-18	1461	-0.29	185.41	4.66
123	SLE RA 6	9	-25	1455	-0.23	184.9	6.32
123	SLE RA 7	9	-21	1459	-0.26	185.21	5.33
123	SLE RA 8	9	-25	1455	-0.23	184.9	6.32
123	SLE RA 9	9	-21	1459	-0.26	185.21	5.33
123	SLE RA 10	9	-22	1614	-0.29	202.15	5.55
123	SLE RA 11	9	-28	1608	-0.24	201.63	7.21
123	SLE RA 12	9	-24	1612	-0.27	201.94	6.21
123	SLE RA 13	9	-22	1614	-0.29	202.15	5.55
123	SLE RA 14	9	-28	1608	-0.24	201.63	7.21
123	SLE RA 15	9	-24	1612	-0.27	201.94	6.21
123	SLE RA 16	9	-28	1608	-0.24	201.63	7.21
123	SLE RA 17	9	-24	1612	-0.27	201.94	6.21
123	SLE RA 18	9	-30	1673	-0.24	208.81	7.59
123	SLE RA 19	9	-26	1677	-0.27	209.11	6.59
123	SLE RA 20	9	-30	1673	-0.24	208.81	7.59
123	SLE RA 21	9	-26	1677	-0.27	209.11	6.59
123	SLE FR 1	9	-25	1455	-0.23	184.9	6.32
123	SLE FR 2	9	-23	1456	-0.24	185.01	5.99
123	SLE FR 3	9	-25	1455	-0.23	184.9	6.32
123	SLE FR 4	9	-25	1522	-0.24	192.18	6.37
123	SLE FR 5	9	-26	1521	-0.23	192.07	6.7
123	SLE FR 6	9	-27	1564	-0.23	196.85	6.96
123	SLE QP 1	9	-25	1455	-0.23	184.9	6.32
123	SLE QP 2	9	-26	1521	-0.23	192.07	6.7
123	SLD 1	109	-6	1350	-0.58	173.48	1.54
123	SLD 2	124	26	1355	-0.65	173.75	-6.27
123	SLD 3	106	-109	1243	0.39	164.8	27.47
123	SLD 4	121	-78	1249	0.33	165.08	19.66
123	SLD 5	37	125	1628	-1.79	199.56	-31.29

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
123	SLD 6	53	158	1634	-1.86	199.84	-39.4
123	SLD 7	29	-220	1274	1.46	170.63	55.14
123	SLD 8	45	-187	1280	1.39	170.91	47.03
123	SLD 9	-26	135	1761	-1.85	213.23	-33.63
123	SLD 10	-11	167	1767	-1.92	213.52	-41.74
123	SLD 11	-35	-211	1407	1.39	184.31	52.8
123	SLD 12	-19	-178	1413	1.33	184.59	44.69
123	SLD 13	-103	25	1792	-0.79	219.07	-6.26
123	SLD 14	-88	57	1798	-0.86	219.34	-14.07
123	SLD 15	-106	-79	1686	0.18	210.39	19.67
123	SLD 16	-91	-47	1691	0.12	210.67	11.86
123	SLV 1	237	20	1129	-1.02	149.45	-4.89
123	SLV 2	271	92	1141	-1.17	150.07	-22.69
123	SLV 3	231	-215	888	1.19	129.74	53.99
123	SLV 4	265	-143	900	1.05	130.36	36.18
123	SLV 5	73	318	1765	-3.77	208.96	-79.53
123	SLV 6	108	392	1777	-3.92	209.6	-97.94
123	SLV 7	55	-466	961	3.6	143.25	116.71
123	SLV 8	90	-392	973	3.45	143.89	98.3
123	SLV 9	-72	339	2068	-3.92	240.26	-84.9
123	SLV 10	-37	414	2080	-4.07	240.9	-103.31
123	SLV 11	-90	-445	1264	3.46	174.55	111.34
123	SLV 12	-55	-371	1277	3.3	175.19	92.94
123	SLV 13	-247	91	2141	-1.51	253.79	-22.78
123	SLV 14	-213	163	2153	-1.66	254.41	-40.58
123	SLV 15	-253	-145	1900	0.7	234.07	36.1
123	SLV 16	-219	-73	1912	0.55	234.7	18.29
123	CRTFP Ux+	0	0	0	0	0	0
123	CRTFP Ux-	0	0	0	0	0	0
123	CRTFP Uy+	0	0	0	0	0	0
123	CRTFP Uy-	0	0	0	0	0	0
124	SLU 1	-5	-15	1247	0.34	-171.53	-3.66
124	SLU 2	-5	-6	1256	0.29	-172.23	-1.53
124	SLU 3	-5	-15	1247	0.34	-171.53	-3.66
124	SLU 4	-5	-10	1252	0.31	-171.95	-2.38
124	SLU 5	-5	-6	1256	0.29	-172.23	-1.53
124	SLU 6	-5	-15	1247	0.34	-171.53	-3.66
124	SLU 7	-5	-10	1252	0.31	-171.95	-2.38
124	SLU 8	-5	-15	1247	0.34	-171.53	-3.66
124	SLU 9	-5	-10	1252	0.31	-171.95	-2.38
124	SLU 10	-6	-11	1456	0.36	-196.9	-2.62
124	SLU 11	-5	-19	1447	0.41	-196.2	-4.76
124	SLU 12	-6	-14	1452	0.38	-196.62	-3.48
124	SLU 13	-6	-11	1456	0.36	-196.9	-2.62
124	SLU 14	-5	-19	1447	0.41	-196.2	-4.76
124	SLU 15	-6	-14	1452	0.38	-196.62	-3.48
124	SLU 16	-5	-19	1447	0.41	-196.2	-4.76
124	SLU 17	-6	-14	1452	0.38	-196.62	-3.48
124	SLU 18	-6	-21	1533	0.44	-206.78	-5.23
124	SLU 19	-6	-16	1538	0.41	-207.2	-3.95
124	SLU 20	-6	-21	1533	0.44	-206.78	-5.23
124	SLU 21	-6	-16	1538	0.41	-207.2	-3.95
124	SLU 22	-5	-18	1398	0.4	-189.93	-4.43
124	SLU 23	-5	-9	1407	0.35	-190.63	-2.29
124	SLU 24	-5	-18	1398	0.4	-189.93	-4.43
124	SLU 25	-5	-13	1403	0.37	-190.35	-3.15
124	SLU 26	-5	-9	1407	0.35	-190.63	-2.29
124	SLU 27	-5	-18	1398	0.4	-189.93	-4.43
124	SLU 28	-5	-13	1403	0.37	-190.35	-3.15
124	SLU 29	-5	-18	1398	0.4	-189.93	-4.43
124	SLU 30	-5	-13	1403	0.37	-190.35	-3.15
124	SLU 31	-6	-14	1607	0.42	-215.3	-3.39
124	SLU 32	-6	-22	1598	0.47	-214.61	-5.53
124	SLU 33	-6	-17	1603	0.44	-215.02	-4.25
124	SLU 34	-6	-14	1607	0.42	-215.3	-3.39
124	SLU 35	-6	-22	1598	0.47	-214.61	-5.53
124	SLU 36	-6	-17	1603	0.44	-215.02	-4.25
124	SLU 37	-6	-22	1598	0.47	-214.61	-5.53
124	SLU 38	-6	-17	1603	0.44	-215.02	-4.25
124	SLU 39	-6	-24	1684	0.51	-225.18	-6
124	SLU 40	-6	-19	1689	0.48	-225.6	-4.72
124	SLU 41	-6	-24	1684	0.51	-225.18	-6
124	SLU 42	-6	-19	1689	0.48	-225.6	-4.72
124	SLU 43	-6	-18	1570	0.42	-216.68	-4.5
124	SLU 44	-7	-10	1578	0.37	-217.38	-2.36
124	SLU 45	-6	-18	1570	0.42	-216.68	-4.5
124	SLU 46	-7	-13	1575	0.39	-217.1	-3.22
124	SLU 47	-7	-10	1578	0.37	-217.38	-2.36
124	SLU 48	-6	-18	1570	0.42	-216.68	-4.5
124	SLU 49	-7	-13	1575	0.39	-217.1	-3.22
124	SLU 50	-6	-18	1570	0.42	-216.68	-4.5
124	SLU 51	-7	-13	1575	0.39	-217.1	-3.22
124	SLU 52	-7	-14	1778	0.44	-242.05	-3.46
124	SLU 53	-7	-23	1770	0.49	-241.35	-5.6
124	SLU 54	-7	-17	1775	0.46	-241.77	-4.31
124	SLU 55	-7	-14	1778	0.44	-242.05	-3.46

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
124	SLU 56	-7	-23	1770	0.49	-241.35	-5.6
124	SLU 57	-7	-17	1775	0.46	-241.77	-4.31
124	SLU 58	-7	-23	1770	0.49	-241.35	-5.6
124	SLU 59	-7	-17	1775	0.46	-241.77	-4.31
124	SLU 60	-7	-24	1856	0.52	-251.93	-6.07
124	SLU 61	-7	-19	1861	0.49	-252.35	-4.79
124	SLU 62	-7	-24	1856	0.52	-251.93	-6.07
124	SLU 63	-7	-19	1861	0.49	-252.35	-4.79
124	SLU 64	-7	-21	1721	0.48	-235.09	-5.26
124	SLU 65	-7	-13	1729	0.43	-235.78	-3.13
124	SLU 66	-7	-21	1721	0.48	-235.09	-5.26
124	SLU 67	-7	-16	1726	0.45	-235.5	-3.98
124	SLU 68	-7	-13	1729	0.43	-235.78	-3.13
124	SLU 69	-7	-21	1721	0.48	-235.09	-5.26
124	SLU 70	-7	-16	1726	0.45	-235.5	-3.98
124	SLU 71	-7	-21	1721	0.48	-235.09	-5.26
124	SLU 72	-7	-16	1726	0.45	-235.5	-3.98
124	SLU 73	-7	-17	1929	0.5	-260.45	-4.23
124	SLU 74	-7	-26	1921	0.55	-259.76	-6.36
124	SLU 75	-7	-21	1926	0.52	-260.18	-5.08
124	SLU 76	-7	-17	1929	0.5	-260.45	-4.23
124	SLU 77	-7	-26	1921	0.55	-259.76	-6.36
124	SLU 78	-7	-21	1926	0.52	-260.18	-5.08
124	SLU 79	-7	-26	1921	0.55	-259.76	-6.36
124	SLU 80	-7	-21	1926	0.52	-260.18	-5.08
124	SLU 81	-7	-27	2006	0.59	-270.33	-6.83
124	SLU 82	-7	-22	2012	0.56	-270.75	-5.55
124	SLU 83	-7	-27	2006	0.59	-270.33	-6.83
124	SLU 84	-7	-22	2012	0.56	-270.75	-5.55
124	SLE RA 1	-5	-16	1290	0.35	-176.79	-3.88
124	SLE RA 2	-5	-10	1296	0.32	-177.26	-2.46
124	SLE RA 3	-5	-16	1290	0.35	-176.79	-3.88
124	SLE RA 4	-5	-12	1294	0.33	-177.07	-3.03
124	SLE RA 5	-5	-10	1296	0.32	-177.26	-2.46
124	SLE RA 6	-5	-16	1290	0.35	-176.79	-3.88
124	SLE RA 7	-5	-12	1294	0.33	-177.07	-3.03
124	SLE RA 8	-5	-16	1290	0.35	-176.79	-3.88
124	SLE RA 9	-5	-12	1294	0.33	-177.07	-3.03
124	SLE RA 10	-6	-13	1429	0.37	-193.7	-3.19
124	SLE RA 11	-5	-19	1424	0.4	-193.24	-4.61
124	SLE RA 12	-5	-15	1427	0.38	-193.52	-3.76
124	SLE RA 13	-6	-13	1429	0.37	-193.7	-3.19
124	SLE RA 14	-5	-19	1424	0.4	-193.24	-4.61
124	SLE RA 15	-5	-15	1427	0.38	-193.52	-3.76
124	SLE RA 16	-5	-19	1424	0.4	-193.24	-4.61
124	SLE RA 17	-5	-15	1427	0.38	-193.52	-3.76
124	SLE RA 18	-6	-20	1481	0.43	-200.29	-4.93
124	SLE RA 19	-6	-16	1484	0.41	-200.57	-4.07
124	SLE RA 20	-6	-20	1481	0.43	-200.29	-4.93
124	SLE RA 21	-6	-16	1484	0.41	-200.57	-4.07
124	SLE FR 1	-5	-16	1290	0.35	-176.79	-3.88
124	SLE FR 2	-5	-15	1292	0.35	-176.88	-3.6
124	SLE FR 3	-5	-16	1290	0.35	-176.79	-3.88
124	SLE FR 4	-5	-16	1349	0.37	-183.93	-3.91
124	SLE FR 5	-5	-17	1348	0.38	-183.84	-4.19
124	SLE FR 6	-5	-18	1386	0.39	-188.54	-4.4
124	SLE QP 1	-5	-16	1290	0.35	-176.79	-3.88
124	SLE QP 2	-5	-17	1348	0.38	-183.84	-4.19
124	SLD 1	80	55	1579	0.11	-207.55	13.81
124	SLD 2	92	27	1575	0.14	-207.22	6.92
124	SLD 3	81	-37	1492	0.69	-200.54	-9.35
124	SLD 4	93	-65	1487	0.72	-200.22	-16.23
124	SLD 5	14	155	1552	-0.6	-201.69	38.86
124	SLD 6	26	126	1547	-0.56	-201.36	31.71
124	SLD 7	18	-153	1260	1.34	-178.35	-38.31
124	SLD 8	31	-182	1255	1.37	-178.01	-45.46
124	SLD 9	-42	148	1440	-0.62	-189.67	37.07
124	SLD 10	-29	119	1436	-0.59	-189.33	29.93
124	SLD 11	-37	-160	1148	1.31	-166.32	-40.1
124	SLD 12	-24	-189	1144	1.35	-165.99	-47.25
124	SLD 13	-104	31	1208	0.03	-167.46	7.85
124	SLD 14	-92	4	1203	0.06	-167.14	0.96
124	SLD 15	-103	-61	1120	0.61	-160.46	-15.31
124	SLD 16	-90	-89	1116	0.64	-160.13	-22.2
124	SLV 1	189	147	1876	-0.22	-237.98	36.75
124	SLV 2	217	83	1866	-0.15	-237.24	21.04
124	SLV 3	192	-63	1677	1.09	-222.08	-15.83
124	SLV 4	220	-127	1667	1.16	-221.34	-31.53
124	SLV 5	38	374	1812	-1.83	-224.46	93.59
124	SLV 6	67	308	1801	-1.75	-223.7	77.35
124	SLV 7	48	-326	1149	2.56	-171.47	-81.66
124	SLV 8	77	-391	1138	2.63	-170.71	-97.89
124	SLV 9	-88	357	1557	-1.88	-196.97	89.5
124	SLV 10	-59	292	1547	-1.81	-196.21	73.27
124	SLV 11	-77	-342	894	2.5	-143.98	-85.74
124	SLV 12	-48	-407	884	2.58	-143.22	-101.98

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
124	SLV 13	-231	93	1028	-0.41	-146.34	23.14
124	SLV 14	-202	29	1018	-0.34	-145.6	7.44
124	SLV 15	-227	-117	829	0.9	-130.44	-29.43
124	SLV 16	-199	-180	819	0.98	-129.7	-45.14
124	CRTFP Ux+	0	0	0	0	0	0
124	CRTFP Ux-	0	0	0	0	0	0
124	CRTFP Uy+	0	0	0	0	0	0
124	CRTFP Uy-	0	0	0	0	0	0
127	SLU 1	4	0	2717	0.84	-0.99	0.48
127	SLU 2	4	13	2732	0.72	-0.99	0.48
127	SLU 3	4	0	2717	0.84	-0.99	0.48
127	SLU 4	4	7	2726	0.77	-0.99	0.48
127	SLU 5	4	13	2732	0.72	-0.99	0.48
127	SLU 6	4	0	2717	0.84	-0.99	0.48
127	SLU 7	4	7	2726	0.77	-0.99	0.48
127	SLU 8	4	0	2717	0.84	-0.99	0.48
127	SLU 9	4	7	2726	0.77	-0.99	0.48
127	SLU 10	4	15	3217	1.01	-1.22	0.53
127	SLU 11	4	2	3202	1.13	-1.22	0.53
127	SLU 12	4	10	3211	1.06	-1.22	0.53
127	SLU 13	4	15	3217	1.01	-1.22	0.53
127	SLU 14	4	2	3202	1.13	-1.22	0.53
127	SLU 15	4	10	3211	1.06	-1.22	0.53
127	SLU 16	4	2	3202	1.13	-1.22	0.53
127	SLU 17	4	10	3211	1.06	-1.22	0.53
127	SLU 18	4	3	3410	1.26	-1.32	0.55
127	SLU 19	4	11	3419	1.19	-1.32	0.55
127	SLU 20	4	3	3410	1.26	-1.32	0.55
127	SLU 21	4	11	3419	1.19	-1.32	0.55
127	SLU 22	4	1	3080	1.07	-1.19	0.52
127	SLU 23	4	14	3095	0.94	-1.18	0.52
127	SLU 24	4	1	3080	1.07	-1.19	0.52
127	SLU 25	4	9	3089	0.99	-1.19	0.52
127	SLU 26	4	14	3095	0.94	-1.18	0.52
127	SLU 27	4	1	3080	1.07	-1.19	0.52
127	SLU 28	4	9	3089	0.99	-1.19	0.52
127	SLU 29	4	1	3080	1.07	-1.19	0.52
127	SLU 30	4	9	3089	0.99	-1.19	0.52
127	SLU 31	5	16	3580	1.24	-1.42	0.57
127	SLU 32	5	3	3565	1.36	-1.42	0.57
127	SLU 33	5	11	3574	1.29	-1.42	0.57
127	SLU 34	5	16	3580	1.24	-1.42	0.57
127	SLU 35	5	3	3565	1.36	-1.42	0.57
127	SLU 36	5	11	3574	1.29	-1.42	0.57
127	SLU 37	5	3	3565	1.36	-1.42	0.57
127	SLU 38	5	11	3574	1.29	-1.42	0.57
127	SLU 39	5	4	3773	1.49	-1.52	0.59
127	SLU 40	5	12	3782	1.41	-1.52	0.59
127	SLU 41	5	4	3773	1.49	-1.52	0.59
127	SLU 42	5	12	3782	1.41	-1.52	0.59
127	SLU 43	5	-1	3408	1.01	-1.22	0.61
127	SLU 44	5	12	3423	0.89	-1.22	0.61
127	SLU 45	5	-1	3408	1.01	-1.22	0.61
127	SLU 46	5	7	3417	0.94	-1.22	0.61
127	SLU 47	5	12	3423	0.89	-1.22	0.61
127	SLU 48	5	-1	3408	1.01	-1.22	0.61
127	SLU 49	5	7	3417	0.94	-1.22	0.61
127	SLU 50	5	-1	3408	1.01	-1.22	0.61
127	SLU 51	5	7	3417	0.94	-1.22	0.61
127	SLU 52	6	14	3908	1.18	-1.45	0.66
127	SLU 53	6	1	3892	1.31	-1.45	0.66
127	SLU 54	6	9	3902	1.23	-1.45	0.66
127	SLU 55	6	14	3908	1.18	-1.45	0.66
127	SLU 56	6	1	3892	1.31	-1.45	0.66
127	SLU 57	6	9	3902	1.23	-1.45	0.66
127	SLU 58	6	1	3892	1.31	-1.45	0.66
127	SLU 59	6	9	3902	1.23	-1.45	0.66
127	SLU 60	6	2	4100	1.43	-1.55	0.68
127	SLU 61	6	10	4109	1.36	-1.55	0.68
127	SLU 62	6	2	4100	1.43	-1.55	0.68
127	SLU 63	6	10	4109	1.36	-1.55	0.68
127	SLU 64	6	1	3771	1.24	-1.41	0.65
127	SLU 65	6	13	3786	1.12	-1.41	0.65
127	SLU 66	6	1	3771	1.24	-1.41	0.65
127	SLU 67	6	8	3780	1.17	-1.41	0.65
127	SLU 68	6	13	3786	1.12	-1.41	0.65
127	SLU 69	6	1	3771	1.24	-1.41	0.65
127	SLU 70	6	8	3780	1.17	-1.41	0.65
127	SLU 71	6	1	3771	1.24	-1.41	0.65
127	SLU 72	6	8	3780	1.17	-1.41	0.65
127	SLU 73	6	16	4271	1.41	-1.65	0.7
127	SLU 74	6	3	4255	1.54	-1.65	0.7
127	SLU 75	6	11	4265	1.46	-1.65	0.7
127	SLU 76	6	16	4271	1.41	-1.65	0.7
127	SLU 77	6	3	4255	1.54	-1.65	0.7
127	SLU 78	6	11	4265	1.46	-1.65	0.7

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
127	SLU 79	6	3	4255	1.54	-1.65	0.7
127	SLU 80	6	11	4265	1.46	-1.65	0.7
127	SLU 81	6	4	4463	1.66	-1.75	0.72
127	SLU 82	6	12	4472	1.59	-1.75	0.72
127	SLU 83	6	4	4463	1.66	-1.75	0.72
127	SLU 84	6	12	4472	1.59	-1.75	0.72
127	SLE RA 1	4	0	2821	0.9	-1.05	0.49
127	SLE RA 2	4	9	2831	0.82	-1.04	0.49
127	SLE RA 3	4	0	2821	0.9	-1.05	0.49
127	SLE RA 4	4	5	2827	0.85	-1.04	0.49
127	SLE RA 5	4	9	2831	0.82	-1.04	0.49
127	SLE RA 6	4	0	2821	0.9	-1.05	0.49
127	SLE RA 7	4	5	2827	0.85	-1.04	0.49
127	SLE RA 8	4	0	2821	0.9	-1.05	0.49
127	SLE RA 9	4	5	2827	0.85	-1.04	0.49
127	SLE RA 10	4	10	3154	1.02	-1.2	0.53
127	SLE RA 11	4	2	3144	1.1	-1.2	0.52
127	SLE RA 12	4	7	3150	1.05	-1.2	0.53
127	SLE RA 13	4	10	3154	1.02	-1.2	0.53
127	SLE RA 14	4	2	3144	1.1	-1.2	0.52
127	SLE RA 15	4	7	3150	1.05	-1.2	0.53
127	SLE RA 16	4	2	3144	1.1	-1.2	0.52
127	SLE RA 17	4	7	3150	1.05	-1.2	0.53
127	SLE RA 18	4	2	3282	1.19	-1.27	0.54
127	SLE RA 19	4	7	3289	1.14	-1.27	0.54
127	SLE RA 20	4	2	3282	1.19	-1.27	0.54
127	SLE RA 21	4	7	3289	1.14	-1.27	0.54
127	SLE FR 1	4	0	2821	0.9	-1.05	0.49
127	SLE FR 2	4	2	2823	0.89	-1.05	0.49
127	SLE FR 3	4	0	2821	0.9	-1.05	0.49
127	SLE FR 4	4	2	2961	0.97	-1.11	0.51
127	SLE FR 5	4	1	2959	0.99	-1.11	0.5
127	SLE FR 6	4	1	3052	1.04	-1.16	0.51
127	SLE QP 1	4	0	2821	0.9	-1.05	0.49
127	SLE QP 2	4	1	2959	0.99	-1.11	0.5
127	SLD 1	208	75	3073	0.36	8.23	0.28
127	SLD 2	233	76	3074	0.35	7.86	1.32
127	SLD 3	203	-59	2908	1.82	8.43	0.18
127	SLD 4	228	-59	2908	1.82	8.06	1.22
127	SLD 5	64	227	3244	-1.42	1.52	0.21
127	SLD 6	90	227	3244	-1.42	1.14	1.29
127	SLD 7	47	-221	2693	3.46	2.19	-0.13
127	SLD 8	73	-221	2694	3.46	1.81	0.94
127	SLD 9	-65	222	3225	-1.48	-4.03	0.07
127	SLD 10	-38	223	3225	-1.48	-4.41	1.14
127	SLD 11	-81	-226	2674	3.4	-3.36	-0.28
127	SLD 12	-55	-225	2675	3.4	-3.74	0.8
127	SLD 13	-220	60	3010	0.16	-10.28	-0.21
127	SLD 14	-194	61	3010	0.16	-10.65	0.83
127	SLD 15	-225	-74	2845	1.62	-10.08	-0.31
127	SLD 16	-199	-74	2845	1.62	-10.45	0.73
127	SLV 1	469	170	3224	-0.43	20.21	0.01
127	SLV 2	527	171	3224	-0.44	19.37	2.37
127	SLV 3	457	-135	2849	2.89	20.67	-0.23
127	SLV 4	516	-134	2849	2.89	19.83	2.13
127	SLV 5	140	514	3607	-4.47	4.89	-0.15
127	SLV 6	200	516	3607	-4.48	4.03	2.29
127	SLV 7	101	-504	2358	6.6	6.43	-0.94
127	SLV 8	162	-502	2358	6.6	5.56	1.5
127	SLV 9	-153	504	3560	-4.62	-7.79	-0.49
127	SLV 10	-93	505	3561	-4.63	-8.65	1.95
127	SLV 11	-191	-514	2311	6.46	-6.25	-1.28
127	SLV 12	-131	-513	2312	6.45	-7.12	1.16
127	SLV 13	-507	136	3069	-0.91	-22.06	-1.12
127	SLV 14	-449	137	3070	-0.92	-22.9	1.24
127	SLV 15	-518	-170	2694	2.41	-21.59	-1.36
127	SLV 16	-460	-168	2695	2.41	-22.43	1
127	CRTFP Ux+	0	0	0	0	0	0
127	CRTFP Ux-	0	0	0	0	0	0
127	CRTFP Uy+	0	0	0	0	0	0
127	CRTFP Uy-	0	0	0	0	0	0
130	SLU 1	6	-25	1413	0.75	178.25	6.23
130	SLU 2	6	-15	1421	0.67	178.51	3.75
130	SLU 3	6	-25	1413	0.75	178.25	6.23
130	SLU 4	6	-19	1418	0.7	178.4	4.74
130	SLU 5	6	-15	1421	0.67	178.51	3.75
130	SLU 6	6	-25	1413	0.75	178.25	6.23
130	SLU 7	6	-19	1418	0.7	178.4	4.74
130	SLU 8	6	-25	1413	0.75	178.25	6.23
130	SLU 9	6	-19	1418	0.7	178.4	4.74
130	SLU 10	6	-20	1653	0.88	204.05	5.11
130	SLU 11	5	-30	1645	0.95	203.8	7.59
130	SLU 12	5	-24	1650	0.91	203.95	6.1
130	SLU 13	6	-20	1653	0.88	204.05	5.11
130	SLU 14	5	-30	1645	0.95	203.8	7.59
130	SLU 15	5	-24	1650	0.91	203.95	6.1

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
130	SLU 16	5	-30	1645	0.95	203.8	7.59
130	SLU 17	5	-24	1650	0.91	203.95	6.1
130	SLU 18	5	-32	1745	1.04	214.74	8.17
130	SLU 19	5	-26	1749	0.99	214.9	6.68
130	SLU 20	5	-32	1745	1.04	214.74	8.17
130	SLU 21	5	-26	1749	0.99	214.9	6.68
130	SLU 22	6	-28	1588	0.91	197.42	7.24
130	SLU 23	6	-19	1596	0.83	197.67	4.75
130	SLU 24	6	-28	1588	0.91	197.42	7.24
130	SLU 25	6	-22	1593	0.86	197.57	5.74
130	SLU 26	6	-19	1596	0.83	197.67	4.75
130	SLU 27	6	-28	1588	0.91	197.42	7.24
130	SLU 28	6	-22	1593	0.86	197.57	5.74
130	SLU 29	6	-28	1588	0.91	197.42	7.24
130	SLU 30	6	-22	1593	0.86	197.57	5.74
130	SLU 31	5	-24	1828	1.03	223.22	6.11
130	SLU 32	5	-34	1820	1.11	222.96	8.59
130	SLU 33	5	-28	1825	1.06	223.12	7.1
130	SLU 34	5	-24	1828	1.03	223.22	6.11
130	SLU 35	5	-34	1820	1.11	222.96	8.59
130	SLU 36	5	-28	1825	1.06	223.12	7.1
130	SLU 37	5	-34	1820	1.11	222.96	8.59
130	SLU 38	5	-28	1825	1.06	223.12	7.1
130	SLU 39	5	-36	1920	1.19	233.91	9.17
130	SLU 40	5	-30	1924	1.15	234.07	7.68
130	SLU 41	5	-36	1920	1.19	233.91	9.17
130	SLU 42	5	-30	1924	1.15	234.07	7.68
130	SLU 43	7	-31	1777	0.92	225.15	7.76
130	SLU 44	7	-21	1784	0.85	225.41	5.28
130	SLU 45	7	-31	1777	0.92	225.15	7.76
130	SLU 46	7	-25	1782	0.88	225.31	6.27
130	SLU 47	7	-21	1784	0.85	225.41	5.28
130	SLU 48	7	-31	1777	0.92	225.15	7.76
130	SLU 49	7	-25	1782	0.88	225.31	6.27
130	SLU 50	7	-31	1777	0.92	225.15	7.76
130	SLU 51	7	-25	1782	0.88	225.31	6.27
130	SLU 52	7	-26	2017	1.05	250.96	6.63
130	SLU 53	7	-36	2009	1.12	250.7	9.12
130	SLU 54	7	-30	2014	1.08	250.85	7.63
130	SLU 55	7	-26	2017	1.05	250.96	6.63
130	SLU 56	7	-36	2009	1.12	250.7	9.12
130	SLU 57	7	-30	2014	1.08	250.85	7.63
130	SLU 58	7	-36	2009	1.12	250.7	9.12
130	SLU 59	7	-30	2014	1.08	250.85	7.63
130	SLU 60	7	-38	2109	1.21	261.65	9.7
130	SLU 61	7	-32	2113	1.16	261.8	8.21
130	SLU 62	7	-38	2109	1.21	261.65	9.7
130	SLU 63	7	-32	2113	1.16	261.8	8.21
130	SLU 64	7	-34	1952	1.08	244.32	8.76
130	SLU 65	7	-25	1960	1	244.58	6.28
130	SLU 66	7	-34	1952	1.08	244.32	8.76
130	SLU 67	7	-28	1957	1.03	244.47	7.27
130	SLU 68	7	-25	1960	1	244.58	6.28
130	SLU 69	7	-34	1952	1.08	244.32	8.76
130	SLU 70	7	-28	1957	1.03	244.47	7.27
130	SLU 71	7	-34	1952	1.08	244.32	8.76
130	SLU 72	7	-28	1957	1.03	244.47	7.27
130	SLU 73	7	-30	2192	1.2	270.12	7.63
130	SLU 74	7	-40	2184	1.28	269.87	10.12
130	SLU 75	7	-34	2189	1.23	270.02	8.63
130	SLU 76	7	-30	2192	1.2	270.12	7.63
130	SLU 77	7	-40	2184	1.28	269.87	10.12
130	SLU 78	7	-34	2189	1.23	270.02	8.63
130	SLU 79	7	-40	2184	1.28	269.87	10.12
130	SLU 80	7	-34	2189	1.23	270.02	8.63
130	SLU 81	7	-42	2284	1.36	280.82	10.7
130	SLU 82	7	-36	2288	1.32	280.97	9.21
130	SLU 83	7	-42	2284	1.36	280.82	10.7
130	SLU 84	7	-36	2288	1.32	280.97	9.21
130	SLE RA 1	6	-26	1463	0.79	183.73	6.52
130	SLE RA 2	6	-19	1468	0.74	183.9	4.86
130	SLE RA 3	6	-26	1463	0.79	183.73	6.52
130	SLE RA 4	6	-22	1466	0.76	183.83	5.53
130	SLE RA 5	6	-19	1468	0.74	183.9	4.86
130	SLE RA 6	6	-26	1463	0.79	183.73	6.52
130	SLE RA 7	6	-22	1466	0.76	183.83	5.53
130	SLE RA 8	6	-26	1463	0.79	183.73	6.52
130	SLE RA 9	6	-22	1466	0.76	183.83	5.53
130	SLE RA 10	6	-23	1623	0.88	200.93	5.77
130	SLE RA 11	5	-29	1618	0.93	200.76	7.43
130	SLE RA 12	6	-25	1621	0.9	200.86	6.43
130	SLE RA 13	6	-23	1623	0.88	200.93	5.77
130	SLE RA 14	5	-29	1618	0.93	200.76	7.43
130	SLE RA 15	6	-25	1621	0.9	200.86	6.43
130	SLE RA 16	5	-29	1618	0.93	200.76	7.43
130	SLE RA 17	6	-25	1621	0.9	200.86	6.43

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
130	SLE RA 18	5	-31	1684	0.99	208.06	7.81
130	SLE RA 19	5	-27	1687	0.96	208.16	6.82
130	SLE RA 20	5	-31	1684	0.99	208.06	7.81
130	SLE RA 21	5	-27	1687	0.96	208.16	6.82
130	SLE FR 1	6	-26	1463	0.79	183.73	6.52
130	SLE FR 2	6	-24	1464	0.78	183.76	6.19
130	SLE FR 3	6	-26	1463	0.79	183.73	6.52
130	SLE FR 4	6	-26	1531	0.84	191.06	6.58
130	SLE FR 5	6	-27	1530	0.85	191.02	6.91
130	SLE FR 6	6	-28	1574	0.89	195.89	7.17
130	SLE QP 1	6	-26	1463	0.79	183.73	6.52
130	SLE QP 2	6	-27	1530	0.85	191.02	6.91
130	SLD 1	106	-7	1346	0.32	169.62	1.7
130	SLD 2	118	25	1350	0.26	169.47	-6.11
130	SLD 3	103	-110	1266	1.2	166.58	27.65
130	SLD 4	115	-79	1270	1.14	166.42	19.83
130	SLD 5	36	124	1594	-0.62	189.28	-31.12
130	SLD 6	49	157	1598	-0.68	189.12	-39.23
130	SLD 7	25	-221	1328	2.31	179.13	55.37
130	SLD 8	38	-188	1332	2.24	178.97	47.25
130	SLD 9	-27	134	1727	-0.54	203.08	-33.44
130	SLD 10	-14	167	1731	-0.6	202.92	-41.55
130	SLD 11	-38	-212	1461	2.38	192.93	53.05
130	SLD 12	-25	-179	1465	2.32	192.77	44.94
130	SLD 13	-104	24	1789	0.57	215.62	-6.02
130	SLD 14	-91	56	1793	0.51	215.47	-13.83
130	SLD 15	-107	-79	1710	1.44	212.58	19.93
130	SLD 16	-95	-48	1713	1.38	212.42	12.11
130	SLV 1	235	19	1110	-0.36	142.04	-4.78
130	SLV 2	262	91	1118	-0.49	141.69	-22.6
130	SLV 3	227	-216	928	1.63	135.08	54.13
130	SLV 4	255	-144	936	1.5	134.73	36.31
130	SLV 5	75	317	1676	-2.48	187.02	-79.41
130	SLV 6	104	392	1684	-2.62	186.66	-97.83
130	SLV 7	51	-467	1071	4.15	163.81	116.96
130	SLV 8	79	-393	1080	4.01	163.44	98.54
130	SLV 9	-68	338	1980	-2.31	218.6	-84.73
130	SLV 10	-39	413	1988	-2.45	218.24	-103.14
130	SLV 11	-93	-446	1375	4.32	195.39	111.65
130	SLV 12	-64	-371	1383	4.18	195.03	93.23
130	SLV 13	-244	90	2123	0.21	247.32	-22.49
130	SLV 14	-216	162	2131	0.07	246.97	-40.31
130	SLV 15	-251	-145	1941	2.2	240.36	36.42
130	SLV 16	-223	-73	1949	2.06	240.01	18.6
130	CRTFP Ux+	0	0	0	0	0	0
130	CRTFP Ux-	0	0	0	0	0	0
130	CRTFP Uy+	0	0	0	0	0	0
130	CRTFP Uy-	0	0	0	0	0	0
131	SLU 1	-6	-15	1268	0.91	-179.59	-3.69
131	SLU 2	-6	-6	1275	0.86	-179.98	-1.56
131	SLU 3	-6	-15	1268	0.91	-179.59	-3.69
131	SLU 4	-6	-10	1272	0.88	-179.82	-2.41
131	SLU 5	-6	-6	1275	0.86	-179.98	-1.56
131	SLU 6	-6	-15	1268	0.91	-179.59	-3.69
131	SLU 7	-6	-10	1272	0.88	-179.82	-2.41
131	SLU 8	-6	-15	1268	0.91	-179.59	-3.69
131	SLU 9	-6	-10	1272	0.88	-179.82	-2.41
131	SLU 10	-7	-11	1479	1.06	-206.52	-2.65
131	SLU 11	-6	-19	1472	1.1	-206.14	-4.79
131	SLU 12	-7	-14	1477	1.07	-206.37	-3.51
131	SLU 13	-7	-11	1479	1.06	-206.52	-2.65
131	SLU 14	-6	-19	1472	1.1	-206.14	-4.79
131	SLU 15	-7	-14	1477	1.07	-206.37	-3.51
131	SLU 16	-6	-19	1472	1.1	-206.14	-4.79
131	SLU 17	-7	-14	1477	1.07	-206.37	-3.51
131	SLU 18	-7	-21	1560	1.18	-217.51	-5.26
131	SLU 19	-7	-16	1564	1.16	-217.74	-3.98
131	SLU 20	-7	-21	1560	1.18	-217.51	-5.26
131	SLU 21	-7	-16	1564	1.16	-217.74	-3.98
131	SLU 22	-6	-18	1422	1.06	-199.43	-4.46
131	SLU 23	-7	-9	1429	1.01	-199.81	-2.32
131	SLU 24	-6	-18	1422	1.06	-199.43	-4.46
131	SLU 25	-7	-13	1426	1.03	-199.66	-3.18
131	SLU 26	-7	-9	1429	1.01	-199.81	-2.32
131	SLU 27	-6	-18	1422	1.06	-199.43	-4.46
131	SLU 28	-7	-13	1426	1.03	-199.66	-3.18
131	SLU 29	-6	-18	1422	1.06	-199.43	-4.46
131	SLU 30	-7	-13	1426	1.03	-199.66	-3.18
131	SLU 31	-7	-14	1634	1.21	-226.36	-3.42
131	SLU 32	-7	-22	1627	1.25	-225.97	-5.55
131	SLU 33	-7	-17	1631	1.22	-226.2	-4.27
131	SLU 34	-7	-14	1634	1.21	-226.36	-3.42
131	SLU 35	-7	-22	1627	1.25	-225.97	-5.55
131	SLU 36	-7	-17	1631	1.22	-226.2	-4.27
131	SLU 37	-7	-22	1627	1.25	-225.97	-5.55
131	SLU 38	-7	-17	1631	1.22	-226.2	-4.27

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
131	SLU 39	-7	-24	1714	1.33	-237.35	-6.02
131	SLU 40	-7	-19	1719	1.31	-237.58	-4.74
131	SLU 41	-7	-24	1714	1.33	-237.35	-6.02
131	SLU 42	-7	-19	1719	1.31	-237.58	-4.74
131	SLU 43	-8	-18	1595	1.13	-226.67	-4.54
131	SLU 44	-8	-10	1602	1.08	-227.05	-2.4
131	SLU 45	-8	-18	1595	1.13	-226.67	-4.54
131	SLU 46	-8	-13	1599	1.1	-226.9	-3.26
131	SLU 47	-8	-10	1602	1.08	-227.05	-2.4
131	SLU 48	-8	-18	1595	1.13	-226.67	-4.54
131	SLU 49	-8	-13	1599	1.1	-226.9	-3.26
131	SLU 50	-8	-18	1595	1.13	-226.67	-4.54
131	SLU 51	-8	-13	1599	1.1	-226.9	-3.26
131	SLU 52	-8	-14	1807	1.28	-253.6	-3.5
131	SLU 53	-8	-23	1800	1.32	-253.21	-5.63
131	SLU 54	-8	-18	1804	1.29	-253.44	-4.35
131	SLU 55	-8	-14	1807	1.28	-253.6	-3.5
131	SLU 56	-8	-23	1800	1.32	-253.21	-5.63
131	SLU 57	-8	-18	1804	1.29	-253.44	-4.35
131	SLU 58	-8	-23	1800	1.32	-253.21	-5.63
131	SLU 59	-8	-18	1804	1.29	-253.44	-4.35
131	SLU 60	-8	-25	1888	1.4	-264.59	-6.1
131	SLU 61	-9	-19	1892	1.38	-264.82	-4.82
131	SLU 62	-8	-25	1888	1.4	-264.59	-6.1
131	SLU 63	-9	-19	1892	1.38	-264.82	-4.82
131	SLU 64	-8	-21	1750	1.28	-246.5	-5.3
131	SLU 65	-8	-13	1757	1.23	-246.89	-3.17
131	SLU 66	-8	-21	1750	1.28	-246.5	-5.3
131	SLU 67	-8	-16	1754	1.25	-246.73	-4.02
131	SLU 68	-8	-13	1757	1.23	-246.89	-3.17
131	SLU 69	-8	-21	1750	1.28	-246.5	-5.3
131	SLU 70	-8	-16	1754	1.25	-246.73	-4.02
131	SLU 71	-8	-21	1750	1.28	-246.5	-5.3
131	SLU 72	-8	-16	1754	1.25	-246.73	-4.02
131	SLU 73	-9	-17	1961	1.43	-273.43	-4.26
131	SLU 74	-8	-26	1954	1.47	-273.05	-6.4
131	SLU 75	-9	-21	1958	1.44	-273.28	-5.12
131	SLU 76	-9	-17	1961	1.43	-273.43	-4.26
131	SLU 77	-8	-26	1954	1.47	-273.05	-6.4
131	SLU 78	-9	-21	1958	1.44	-273.28	-5.12
131	SLU 79	-8	-26	1954	1.47	-273.05	-6.4
131	SLU 80	-9	-21	1958	1.44	-273.28	-5.12
131	SLU 81	-9	-28	2042	1.55	-284.42	-6.87
131	SLU 82	-9	-22	2046	1.53	-284.66	-5.59
131	SLU 83	-9	-28	2042	1.55	-284.42	-6.87
131	SLU 84	-9	-22	2046	1.53	-284.66	-5.59
131	SLE RA 1	-6	-16	1312	0.95	-185.26	-3.91
131	SLE RA 2	-6	-10	1317	0.92	-185.52	-2.49
131	SLE RA 3	-6	-16	1312	0.95	-185.26	-3.91
131	SLE RA 4	-6	-12	1315	0.93	-185.41	-3.06
131	SLE RA 5	-6	-10	1317	0.92	-185.52	-2.49
131	SLE RA 6	-6	-16	1312	0.95	-185.26	-3.91
131	SLE RA 7	-6	-12	1315	0.93	-185.41	-3.06
131	SLE RA 8	-6	-16	1312	0.95	-185.26	-3.91
131	SLE RA 9	-6	-12	1315	0.93	-185.41	-3.06
131	SLE RA 10	-7	-13	1453	1.05	-203.21	-3.22
131	SLE RA 11	-6	-19	1448	1.08	-202.95	-4.64
131	SLE RA 12	-7	-15	1451	1.06	-203.11	-3.79
131	SLE RA 13	-7	-13	1453	1.05	-203.21	-3.22
131	SLE RA 14	-6	-19	1448	1.08	-202.95	-4.64
131	SLE RA 15	-7	-15	1451	1.06	-203.11	-3.79
131	SLE RA 16	-6	-19	1448	1.08	-202.95	-4.64
131	SLE RA 17	-7	-15	1451	1.06	-203.11	-3.79
131	SLE RA 18	-7	-20	1507	1.13	-210.54	-4.95
131	SLE RA 19	-7	-17	1510	1.12	-210.69	-4.1
131	SLE RA 20	-7	-20	1507	1.13	-210.54	-4.95
131	SLE RA 21	-7	-17	1510	1.12	-210.69	-4.1
131	SLE FR 1	-6	-16	1312	0.95	-185.26	-3.91
131	SLE FR 2	-6	-15	1313	0.94	-185.31	-3.63
131	SLE FR 3	-6	-16	1312	0.95	-185.26	-3.91
131	SLE FR 4	-6	-16	1371	1	-192.89	-3.94
131	SLE FR 5	-6	-17	1370	1.01	-192.84	-4.22
131	SLE FR 6	-6	-18	1409	1.04	-197.9	-4.43
131	SLE QP 1	-6	-16	1312	0.95	-185.26	-3.91
131	SLE QP 2	-6	-17	1370	1.01	-192.84	-4.22
131	SLD 1	79	55	1595	0.87	-216.05	13.78
131	SLD 2	89	27	1592	0.9	-215.92	6.89
131	SLD 3	81	-37	1526	1.39	-212.64	-9.39
131	SLD 4	91	-65	1522	1.42	-212.52	-16.29
131	SLD 5	12	155	1545	0.16	-205.01	38.88
131	SLD 6	23	126	1541	0.19	-204.89	31.72
131	SLD 7	19	-153	1313	1.91	-193.66	-38.38
131	SLD 8	30	-182	1309	1.94	-193.54	-45.54
131	SLD 9	-43	148	1432	0.07	-192.15	37.09
131	SLD 10	-32	119	1428	0.1	-192.02	29.94
131	SLD 11	-35	-160	1200	1.82	-180.8	-40.17

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
131	SLD 12	-25	-189	1196	1.85	-180.67	-47.32
131	SLD 13	-104	31	1219	0.59	-173.17	7.84
131	SLD 14	-93	3	1215	0.62	-173.04	0.95
131	SLD 15	-102	-61	1149	1.12	-169.76	-15.34
131	SLD 16	-91	-89	1146	1.14	-169.64	-22.23
131	SLV 1	187	147	1883	0.69	-245.86	36.73
131	SLV 2	211	83	1875	0.76	-245.58	21.01
131	SLV 3	192	-63	1726	1.88	-238.13	-15.9
131	SLV 4	216	-127	1718	1.95	-237.85	-31.62
131	SLV 5	36	374	1767	-0.92	-220.58	93.65
131	SLV 6	60	308	1758	-0.85	-220.29	77.4
131	SLV 7	52	-326	1240	3.05	-194.8	-81.78
131	SLV 8	77	-392	1232	3.12	-194.51	-98.03
131	SLV 9	-89	358	1509	-1.11	-191.17	89.58
131	SLV 10	-65	292	1500	-1.04	-190.88	73.33
131	SLV 11	-73	-342	982	2.86	-165.39	-85.85
131	SLV 12	-48	-408	974	2.93	-165.1	-102.1
131	SLV 13	-229	93	1023	0.06	-147.84	23.17
131	SLV 14	-205	29	1015	0.13	-147.56	7.45
131	SLV 15	-224	-117	865	1.25	-140.1	-29.46
131	SLV 16	-200	-181	857	1.32	-139.82	-45.18
131	CRTFP Ux+	0	0	0	0	0	0
131	CRTFP Ux-	0	0	0	0	0	0
131	CRTFP Uy+	0	0	0	0	0	0
131	CRTFP Uy-	0	0	0	0	0	0
134	SLU 1	2	1	2748	1.24	-0.7	0.46
134	SLU 2	2	14	2760	1.12	-0.7	0.47
134	SLU 3	2	1	2748	1.24	-0.7	0.46
134	SLU 4	2	9	2755	1.17	-0.7	0.46
134	SLU 5	2	14	2760	1.12	-0.7	0.47
134	SLU 6	2	1	2748	1.24	-0.7	0.46
134	SLU 7	2	9	2755	1.17	-0.7	0.46
134	SLU 8	2	1	2748	1.24	-0.7	0.46
134	SLU 9	2	9	2755	1.17	-0.7	0.46
134	SLU 10	2	17	3255	1.52	-0.87	0.51
134	SLU 11	2	4	3244	1.64	-0.88	0.51
134	SLU 12	2	12	3251	1.57	-0.88	0.51
134	SLU 13	2	17	3255	1.52	-0.87	0.51
134	SLU 14	2	4	3244	1.64	-0.88	0.51
134	SLU 15	2	12	3251	1.57	-0.88	0.51
134	SLU 16	2	4	3244	1.64	-0.88	0.51
134	SLU 17	2	12	3251	1.57	-0.88	0.51
134	SLU 18	2	5	3456	1.81	-0.95	0.53
134	SLU 19	1	13	3463	1.74	-0.95	0.53
134	SLU 20	2	5	3456	1.81	-0.95	0.53
134	SLU 21	1	13	3463	1.74	-0.95	0.53
134	SLU 22	2	3	3119	1.54	-0.85	0.5
134	SLU 23	2	16	3131	1.42	-0.85	0.5
134	SLU 24	2	3	3119	1.54	-0.85	0.5
134	SLU 25	2	11	3126	1.47	-0.85	0.5
134	SLU 26	2	16	3131	1.42	-0.85	0.5
134	SLU 27	2	3	3119	1.54	-0.85	0.5
134	SLU 28	2	11	3126	1.47	-0.85	0.5
134	SLU 29	2	3	3119	1.54	-0.85	0.5
134	SLU 30	2	11	3126	1.47	-0.85	0.5
134	SLU 31	2	19	3626	1.82	-1.03	0.55
134	SLU 32	2	6	3615	1.94	-1.03	0.55
134	SLU 33	2	13	3622	1.87	-1.03	0.55
134	SLU 34	2	19	3626	1.82	-1.03	0.55
134	SLU 35	2	6	3615	1.94	-1.03	0.55
134	SLU 36	2	13	3622	1.87	-1.03	0.55
134	SLU 37	2	6	3615	1.94	-1.03	0.55
134	SLU 38	2	13	3622	1.87	-1.03	0.55
134	SLU 39	2	7	3827	2.11	-1.11	0.57
134	SLU 40	1	15	3834	2.04	-1.11	0.57
134	SLU 41	2	7	3827	2.11	-1.11	0.57
134	SLU 42	1	15	3834	2.04	-1.11	0.57
134	SLU 43	2	1	3446	1.51	-0.86	0.59
134	SLU 44	2	14	3457	1.39	-0.86	0.59
134	SLU 45	2	1	3446	1.51	-0.86	0.59
134	SLU 46	2	9	3453	1.44	-0.86	0.59
134	SLU 47	2	14	3457	1.39	-0.86	0.59
134	SLU 48	2	1	3446	1.51	-0.86	0.59
134	SLU 49	2	9	3453	1.44	-0.86	0.59
134	SLU 50	2	1	3446	1.51	-0.86	0.59
134	SLU 51	2	9	3453	1.44	-0.86	0.59
134	SLU 52	2	17	3953	1.79	-1.03	0.64
134	SLU 53	2	4	3941	1.91	-1.03	0.63
134	SLU 54	2	11	3948	1.84	-1.03	0.64
134	SLU 55	2	17	3953	1.79	-1.03	0.64
134	SLU 56	2	4	3941	1.91	-1.03	0.63
134	SLU 57	2	11	3948	1.84	-1.03	0.64
134	SLU 58	2	4	3941	1.91	-1.03	0.63
134	SLU 59	2	11	3948	1.84	-1.03	0.64
134	SLU 60	2	5	4153	2.08	-1.11	0.65
134	SLU 61	2	13	4160	2.01	-1.11	0.66

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
134	SLU 62	2	5	4153	2.08	-1.11	0.65
134	SLU 63	2	13	4160	2.01	-1.11	0.66
134	SLU 64	2	3	3817	1.81	-1.01	0.63
134	SLU 65	2	16	3828	1.69	-1.01	0.63
134	SLU 66	2	3	3817	1.81	-1.01	0.63
134	SLU 67	2	11	3824	1.74	-1.01	0.63
134	SLU 68	2	16	3828	1.69	-1.01	0.63
134	SLU 69	2	3	3817	1.81	-1.01	0.63
134	SLU 70	2	11	3824	1.74	-1.01	0.63
134	SLU 71	2	3	3817	1.81	-1.01	0.63
134	SLU 72	2	11	3824	1.74	-1.01	0.63
134	SLU 73	2	18	4324	2.09	-1.19	0.68
134	SLU 74	2	5	4312	2.21	-1.19	0.67
134	SLU 75	2	13	4319	2.14	-1.19	0.67
134	SLU 76	2	18	4324	2.09	-1.19	0.68
134	SLU 77	2	5	4312	2.21	-1.19	0.67
134	SLU 78	2	13	4319	2.14	-1.19	0.67
134	SLU 79	2	5	4312	2.21	-1.19	0.67
134	SLU 80	2	13	4319	2.14	-1.19	0.67
134	SLU 81	2	7	4524	2.38	-1.26	0.69
134	SLU 82	2	14	4531	2.31	-1.26	0.7
134	SLU 83	2	7	4524	2.38	-1.26	0.69
134	SLU 84	2	14	4531	2.31	-1.26	0.7
134	SLE RA 1	2	2	2854	1.33	-0.74	0.47
134	SLE RA 2	2	10	2862	1.25	-0.74	0.48
134	SLE RA 3	2	2	2854	1.33	-0.74	0.47
134	SLE RA 4	2	7	2859	1.28	-0.74	0.47
134	SLE RA 5	2	10	2862	1.25	-0.74	0.48
134	SLE RA 6	2	2	2854	1.33	-0.74	0.47
134	SLE RA 7	2	7	2859	1.28	-0.74	0.47
134	SLE RA 8	2	2	2854	1.33	-0.74	0.47
134	SLE RA 9	2	7	2859	1.28	-0.74	0.47
134	SLE RA 10	2	12	3192	1.51	-0.86	0.51
134	SLE RA 11	2	4	3185	1.59	-0.86	0.5
134	SLE RA 12	2	9	3189	1.55	-0.86	0.51
134	SLE RA 13	2	12	3192	1.51	-0.86	0.51
134	SLE RA 14	2	4	3185	1.59	-0.86	0.5
134	SLE RA 15	2	9	3189	1.55	-0.86	0.51
134	SLE RA 16	2	4	3185	1.59	-0.86	0.5
134	SLE RA 17	2	9	3189	1.55	-0.86	0.51
134	SLE RA 18	2	4	3326	1.71	-0.91	0.52
134	SLE RA 19	2	9	3331	1.66	-0.91	0.52
134	SLE RA 20	2	4	3326	1.71	-0.91	0.52
134	SLE RA 21	2	9	3331	1.66	-0.91	0.52
134	SLE FR 1	2	2	2854	1.33	-0.74	0.47
134	SLE FR 2	2	4	2856	1.31	-0.74	0.47
134	SLE FR 3	2	2	2854	1.33	-0.74	0.47
134	SLE FR 4	2	4	2997	1.42	-0.79	0.49
134	SLE FR 5	2	3	2996	1.44	-0.8	0.49
134	SLE FR 6	2	3	3090	1.52	-0.83	0.49
134	SLE QP 1	2	2	2854	1.33	-0.74	0.47
134	SLE QP 2	2	3	2996	1.44	-0.8	0.49
134	SLD 1	207	77	3089	0.8	8.69	0.21
134	SLD 2	227	77	3089	0.8	8.36	1.21
134	SLD 3	202	-57	2967	2.23	8.87	0.11
134	SLD 4	222	-57	2967	2.23	8.55	1.11
134	SLD 5	63	228	3208	-0.92	1.89	0.18
134	SLD 6	84	229	3208	-0.92	1.55	1.23
134	SLD 7	47	-219	2803	3.85	2.51	-0.15
134	SLD 8	68	-219	2803	3.84	2.17	0.89
134	SLD 9	-65	224	3189	-0.96	-3.76	0.08
134	SLD 10	-44	224	3189	-0.97	-4.1	1.12
134	SLD 11	-81	-224	2784	3.8	-3.14	-0.25
134	SLD 12	-60	-223	2784	3.8	-3.48	0.79
134	SLD 13	-219	62	3025	0.65	-10.14	-0.14
134	SLD 14	-199	63	3025	0.65	-10.47	0.86
134	SLD 15	-224	-72	2903	2.08	-9.95	-0.24
134	SLD 16	-204	-72	2903	2.08	-10.28	0.76
134	SLV 1	471	171	3212	-0.01	20.86	-0.14
134	SLV 2	517	173	3213	-0.01	20.11	2.14
134	SLV 3	460	-133	2936	3.24	21.29	-0.37
134	SLV 4	506	-132	2937	3.23	20.54	1.92
134	SLV 5	142	515	3479	-3.91	5.33	-0.19
134	SLV 6	189	517	3480	-3.92	4.55	2.17
134	SLV 7	106	-501	2559	6.9	6.75	-0.96
134	SLV 8	154	-500	2560	6.9	5.98	1.41
134	SLV 9	-150	505	3432	-4.01	-7.57	-0.43
134	SLV 10	-103	506	3433	-4.02	-8.35	1.93
134	SLV 11	-186	-511	2512	6.8	-6.14	-1.2
134	SLV 12	-139	-510	2513	6.79	-6.92	1.17
134	SLV 13	-503	137	3055	-0.35	-22.13	-0.94
134	SLV 14	-457	139	3056	-0.36	-22.88	1.34
134	SLV 15	-513	-168	2779	2.89	-21.7	-1.17
134	SLV 16	-468	-166	2780	2.89	-22.45	1.11
134	CRTFP Ux+	0	0	0	0	0	0
134	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
134	CRTFP Uy+	0	0	0	0	0	0
134	CRTFP Uy-	0	0	0	0	0	0
137	SLU 1	3	-25	1447	1.6	194.59	6.41
137	SLU 2	3	-15	1452	1.53	194.48	3.93
137	SLU 3	3	-25	1447	1.6	194.59	6.41
137	SLU 4	3	-19	1450	1.56	194.53	4.92
137	SLU 5	3	-15	1452	1.53	194.48	3.93
137	SLU 6	3	-25	1447	1.6	194.59	6.41
137	SLU 7	3	-19	1450	1.56	194.53	4.92
137	SLU 8	3	-25	1447	1.6	194.59	6.41
137	SLU 9	3	-19	1450	1.56	194.53	4.92
137	SLU 10	2	-21	1693	1.91	224.03	5.31
137	SLU 11	2	-31	1688	1.98	224.14	7.79
137	SLU 12	2	-25	1691	1.94	224.08	6.3
137	SLU 13	2	-21	1693	1.91	224.03	5.31
137	SLU 14	2	-31	1688	1.98	224.14	7.79
137	SLU 15	2	-25	1691	1.94	224.08	6.3
137	SLU 16	2	-31	1688	1.98	224.14	7.79
137	SLU 17	2	-25	1691	1.94	224.08	6.3
137	SLU 18	2	-33	1791	2.14	236.8	8.38
137	SLU 19	2	-27	1794	2.1	236.74	6.89
137	SLU 20	2	-33	1791	2.14	236.8	8.38
137	SLU 21	2	-27	1794	2.1	236.74	6.89
137	SLU 22	2	-29	1629	1.89	216.79	7.43
137	SLU 23	3	-19	1634	1.82	216.68	4.95
137	SLU 24	2	-29	1629	1.89	216.79	7.43
137	SLU 25	3	-23	1632	1.85	216.73	5.94
137	SLU 26	3	-19	1634	1.82	216.68	4.95
137	SLU 27	2	-29	1629	1.89	216.79	7.43
137	SLU 28	3	-23	1632	1.85	216.73	5.94
137	SLU 29	2	-29	1629	1.89	216.79	7.43
137	SLU 30	3	-23	1632	1.85	216.73	5.94
137	SLU 31	2	-25	1874	2.2	246.23	6.33
137	SLU 32	2	-35	1869	2.27	246.34	8.8
137	SLU 33	2	-29	1872	2.23	246.27	7.32
137	SLU 34	2	-25	1874	2.2	246.23	6.33
137	SLU 35	2	-35	1869	2.27	246.34	8.8
137	SLU 36	2	-29	1872	2.23	246.27	7.32
137	SLU 37	2	-35	1869	2.27	246.34	8.8
137	SLU 38	2	-29	1872	2.23	246.27	7.32
137	SLU 39	1	-37	1972	2.43	259	9.39
137	SLU 40	1	-31	1975	2.39	258.94	7.91
137	SLU 41	1	-37	1972	2.43	259	9.39
137	SLU 42	1	-31	1975	2.39	258.94	7.91
137	SLU 43	4	-32	1819	1.98	245.36	7.98
137	SLU 44	4	-22	1824	1.91	245.25	5.5
137	SLU 45	4	-32	1819	1.98	245.36	7.98
137	SLU 46	4	-26	1822	1.94	245.29	6.5
137	SLU 47	4	-22	1824	1.91	245.25	5.5
137	SLU 48	4	-32	1819	1.98	245.36	7.98
137	SLU 49	4	-26	1822	1.94	245.29	6.5
137	SLU 50	4	-32	1819	1.98	245.36	7.98
137	SLU 51	4	-26	1822	1.94	245.29	6.5
137	SLU 52	3	-27	2065	2.29	274.8	6.88
137	SLU 53	3	-37	2059	2.36	274.91	9.36
137	SLU 54	3	-31	2063	2.32	274.84	7.87
137	SLU 55	3	-27	2065	2.29	274.8	6.88
137	SLU 56	3	-37	2059	2.36	274.91	9.36
137	SLU 57	3	-31	2063	2.32	274.84	7.87
137	SLU 58	3	-37	2059	2.36	274.91	9.36
137	SLU 59	3	-31	2063	2.32	274.84	7.87
137	SLU 60	3	-39	2162	2.52	287.57	9.95
137	SLU 61	3	-33	2166	2.48	287.5	8.46
137	SLU 62	3	-39	2162	2.52	287.57	9.95
137	SLU 63	3	-33	2166	2.48	287.5	8.46
137	SLU 64	3	-36	2001	2.27	267.56	9
137	SLU 65	4	-26	2006	2.2	267.45	6.52
137	SLU 66	3	-36	2001	2.27	267.56	9
137	SLU 67	4	-30	2004	2.23	267.49	7.51
137	SLU 68	4	-26	2006	2.2	267.45	6.52
137	SLU 69	3	-36	2001	2.27	267.56	9
137	SLU 70	4	-30	2004	2.23	267.49	7.51
137	SLU 71	3	-36	2001	2.27	267.56	9
137	SLU 72	4	-30	2004	2.23	267.49	7.51
137	SLU 73	3	-31	2246	2.58	297	7.9
137	SLU 74	3	-41	2241	2.65	297.11	10.38
137	SLU 75	3	-35	2244	2.61	297.04	8.89
137	SLU 76	3	-31	2246	2.58	297	7.9
137	SLU 77	3	-41	2241	2.65	297.11	10.38
137	SLU 78	3	-35	2244	2.61	297.04	8.89
137	SLU 79	3	-41	2241	2.65	297.11	10.38
137	SLU 80	3	-35	2244	2.61	297.04	8.89
137	SLU 81	2	-43	2344	2.81	309.77	10.97
137	SLU 82	2	-37	2347	2.77	309.7	9.48
137	SLU 83	2	-43	2344	2.81	309.77	10.97
137	SLU 84	2	-37	2347	2.77	309.7	9.48

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
137	SLE RA 1	3	-26	1499	1.68	200.94	6.7
137	SLE RA 2	3	-20	1502	1.64	200.86	5.05
137	SLE RA 3	3	-26	1499	1.68	200.94	6.7
137	SLE RA 4	3	-23	1501	1.65	200.89	5.71
137	SLE RA 5	3	-20	1502	1.64	200.86	5.05
137	SLE RA 6	3	-26	1499	1.68	200.94	6.7
137	SLE RA 7	3	-23	1501	1.65	200.89	5.71
137	SLE RA 8	3	-26	1499	1.68	200.94	6.7
137	SLE RA 9	3	-23	1501	1.65	200.89	5.71
137	SLE RA 10	2	-23	1663	1.89	220.56	5.97
137	SLE RA 11	2	-30	1659	1.93	220.63	7.62
137	SLE RA 12	2	-26	1661	1.91	220.59	6.63
137	SLE RA 13	2	-23	1663	1.89	220.56	5.97
137	SLE RA 14	2	-30	1659	1.93	220.63	7.62
137	SLE RA 15	2	-26	1661	1.91	220.59	6.63
137	SLE RA 16	2	-30	1659	1.93	220.63	7.62
137	SLE RA 17	2	-26	1661	1.91	220.59	6.63
137	SLE RA 18	2	-32	1728	2.04	229.08	8.01
137	SLE RA 19	2	-28	1730	2.02	229.03	7.02
137	SLE RA 20	2	-32	1728	2.04	229.08	8.01
137	SLE RA 21	2	-28	1730	2.02	229.03	7.02
137	SLE FR 1	3	-26	1499	1.68	200.94	6.7
137	SLE FR 2	3	-25	1500	1.67	200.92	6.37
137	SLE FR 3	3	-26	1499	1.68	200.94	6.7
137	SLE FR 4	3	-27	1568	1.78	209.36	6.76
137	SLE FR 5	3	-28	1568	1.79	209.38	7.09
137	SLE FR 6	2	-29	1613	1.86	215.01	7.36
137	SLE QP 1	3	-26	1499	1.68	200.94	6.7
137	SLE QP 2	3	-28	1568	1.79	209.38	7.09
137	SLD 1	105	-7	1367	1.13	182.35	1.85
137	SLD 2	115	24	1369	1.07	181.85	-5.96
137	SLD 3	101	-111	1311	1.92	184.38	27.77
137	SLD 4	110	-79	1313	1.87	183.89	19.96
137	SLD 5	37	123	1592	0.4	198.37	-30.91
137	SLD 6	47	156	1594	0.34	197.86	-39.02
137	SLD 7	21	-222	1405	3.06	205.14	55.49
137	SLD 8	31	-189	1407	3	204.63	47.38
137	SLD 9	-26	133	1728	0.58	214.13	-33.19
137	SLD 10	-16	165	1730	0.52	213.61	-41.31
137	SLD 11	-42	-212	1542	3.24	220.9	53.2
137	SLD 12	-32	-179	1543	3.18	220.38	45.09
137	SLD 13	-105	23	1822	1.71	234.87	-5.77
137	SLD 14	-95	55	1824	1.65	234.37	-13.59
137	SLD 15	-110	-80	1766	2.51	236.9	20.15
137	SLD 16	-100	-49	1768	2.45	236.4	12.33
137	SLV 1	237	18	1110	0.28	147.53	-4.68
137	SLV 2	258	90	1114	0.15	146.4	-22.5
137	SLV 3	226	-217	982	2.09	152.23	54.17
137	SLV 4	248	-145	987	1.96	151.1	36.35
137	SLV 5	80	316	1622	-1.37	184.11	-79.16
137	SLV 6	103	390	1626	-1.5	182.94	-97.58
137	SLV 7	46	-467	1198	4.68	199.78	117.01
137	SLV 8	69	-393	1202	4.54	198.61	98.59
137	SLV 9	-63	337	1933	-0.96	220.15	-84.41
137	SLV 10	-41	411	1938	-1.1	218.98	-102.82
137	SLV 11	-98	-446	1509	5.08	235.81	111.77
137	SLV 12	-75	-372	1514	4.94	234.64	93.35
137	SLV 13	-243	89	2149	1.61	267.66	-22.16
137	SLV 14	-221	161	2153	1.49	266.52	-39.98
137	SLV 15	-253	-146	2022	3.43	272.36	36.69
137	SLV 16	-232	-74	2026	3.3	271.22	18.87
137	CRTFP Ux+	0	0	0	0	0	0
137	CRTFP Ux-	0	0	0	0	0	0
137	CRTFP Uy+	0	0	0	0	0	0
137	CRTFP Uy-	0	0	0	0	0	0
138	SLU 1	-7	-15	1306	1.4	-199.19	-3.7
138	SLU 2	-8	-6	1311	1.36	-199.36	-1.57
138	SLU 3	-7	-15	1306	1.4	-199.19	-3.7
138	SLU 4	-8	-10	1309	1.38	-199.29	-2.43
138	SLU 5	-8	-6	1311	1.36	-199.36	-1.57
138	SLU 6	-7	-15	1306	1.4	-199.19	-3.7
138	SLU 7	-8	-10	1309	1.38	-199.29	-2.43
138	SLU 8	-7	-15	1306	1.4	-199.19	-3.7
138	SLU 9	-8	-10	1309	1.38	-199.29	-2.43
138	SLU 10	-8	-11	1524	1.65	-230	-2.66
138	SLU 11	-7	-19	1519	1.69	-229.84	-4.79
138	SLU 12	-8	-14	1522	1.67	-229.94	-3.52
138	SLU 13	-8	-11	1524	1.65	-230	-2.66
138	SLU 14	-7	-19	1519	1.69	-229.84	-4.79
138	SLU 15	-8	-14	1522	1.67	-229.94	-3.52
138	SLU 16	-7	-19	1519	1.69	-229.84	-4.79
138	SLU 17	-8	-14	1522	1.67	-229.94	-3.52
138	SLU 18	-7	-21	1610	1.82	-242.97	-5.26
138	SLU 19	-8	-16	1613	1.8	-243.07	-3.98
138	SLU 20	-7	-21	1610	1.82	-242.97	-5.26
138	SLU 21	-8	-16	1613	1.8	-243.07	-3.98

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
138	SLU 22	-7	-18	1466	1.63	-222.15	-4.47
138	SLU 23	-8	-9	1472	1.58	-222.31	-2.34
138	SLU 24	-7	-18	1466	1.63	-222.15	-4.47
138	SLU 25	-8	-13	1470	1.6	-222.25	-3.19
138	SLU 26	-8	-9	1472	1.58	-222.31	-2.34
138	SLU 27	-7	-18	1466	1.63	-222.15	-4.47
138	SLU 28	-8	-13	1470	1.6	-222.25	-3.19
138	SLU 29	-7	-18	1466	1.63	-222.15	-4.47
138	SLU 30	-8	-13	1470	1.6	-222.25	-3.19
138	SLU 31	-8	-14	1685	1.88	-252.96	-3.43
138	SLU 32	-7	-22	1679	1.92	-252.79	-5.56
138	SLU 33	-8	-17	1682	1.9	-252.89	-4.28
138	SLU 34	-8	-14	1685	1.88	-252.96	-3.43
138	SLU 35	-7	-22	1679	1.92	-252.79	-5.56
138	SLU 36	-8	-17	1682	1.9	-252.89	-4.28
138	SLU 37	-7	-22	1679	1.92	-252.79	-5.56
138	SLU 38	-8	-17	1682	1.9	-252.89	-4.28
138	SLU 39	-8	-24	1770	2.05	-265.92	-6.02
138	SLU 40	-8	-19	1774	2.02	-266.02	-4.75
138	SLU 41	-8	-24	1770	2.05	-265.92	-6.02
138	SLU 42	-8	-19	1774	2.02	-266.02	-4.75
138	SLU 43	-9	-18	1643	1.74	-251.08	-4.55
138	SLU 44	-10	-10	1648	1.7	-251.25	-2.42
138	SLU 45	-9	-18	1643	1.74	-251.08	-4.55
138	SLU 46	-10	-13	1646	1.72	-251.18	-3.28
138	SLU 47	-10	-10	1648	1.7	-251.25	-2.42
138	SLU 48	-9	-18	1643	1.74	-251.08	-4.55
138	SLU 49	-10	-13	1646	1.72	-251.18	-3.28
138	SLU 50	-9	-18	1643	1.74	-251.08	-4.55
138	SLU 51	-10	-13	1646	1.72	-251.18	-3.28
138	SLU 52	-10	-14	1861	2	-281.89	-3.51
138	SLU 53	-10	-23	1855	2.04	-281.73	-5.64
138	SLU 54	-10	-18	1859	2.01	-281.82	-4.36
138	SLU 55	-10	-14	1861	2	-281.89	-3.51
138	SLU 56	-10	-23	1855	2.04	-281.73	-5.64
138	SLU 57	-10	-18	1859	2.01	-281.82	-4.36
138	SLU 58	-10	-23	1855	2.04	-281.73	-5.64
138	SLU 59	-10	-18	1859	2.01	-281.82	-4.36
138	SLU 60	-10	-25	1946	2.16	-294.86	-6.11
138	SLU 61	-10	-19	1950	2.14	-294.96	-4.83
138	SLU 62	-10	-25	1946	2.16	-294.86	-6.11
138	SLU 63	-10	-19	1950	2.14	-294.96	-4.83
138	SLU 64	-10	-21	1803	1.97	-274.04	-5.32
138	SLU 65	-10	-13	1809	1.93	-274.2	-3.19
138	SLU 66	-10	-21	1803	1.97	-274.04	-5.32
138	SLU 67	-10	-16	1807	1.94	-274.14	-4.04
138	SLU 68	-10	-13	1809	1.93	-274.2	-3.19
138	SLU 69	-10	-21	1803	1.97	-274.04	-5.32
138	SLU 70	-10	-16	1807	1.94	-274.14	-4.04
138	SLU 71	-10	-21	1803	1.97	-274.04	-5.32
138	SLU 72	-10	-16	1807	1.94	-274.14	-4.04
138	SLU 73	-10	-17	2021	2.22	-304.84	-4.28
138	SLU 74	-10	-26	2016	2.26	-304.68	-6.41
138	SLU 75	-10	-21	2019	2.24	-304.78	-5.13
138	SLU 76	-10	-17	2021	2.22	-304.84	-4.28
138	SLU 77	-10	-26	2016	2.26	-304.68	-6.41
138	SLU 78	-10	-21	2019	2.24	-304.78	-5.13
138	SLU 79	-10	-26	2016	2.26	-304.68	-6.41
138	SLU 80	-10	-21	2019	2.24	-304.78	-5.13
138	SLU 81	-10	-28	2107	2.39	-317.81	-6.87
138	SLU 82	-10	-23	2110	2.36	-317.91	-5.6
138	SLU 83	-10	-28	2107	2.39	-317.81	-6.87
138	SLU 84	-10	-23	2110	2.36	-317.91	-5.6
138	SLE RA 1	-7	-16	1352	1.46	-205.75	-3.92
138	SLE RA 2	-8	-10	1355	1.44	-205.86	-2.5
138	SLE RA 3	-7	-16	1352	1.46	-205.75	-3.92
138	SLE RA 4	-7	-12	1354	1.45	-205.82	-3.07
138	SLE RA 5	-8	-10	1355	1.44	-205.86	-2.5
138	SLE RA 6	-7	-16	1352	1.46	-205.75	-3.92
138	SLE RA 7	-7	-12	1354	1.45	-205.82	-3.07
138	SLE RA 8	-7	-16	1352	1.46	-205.75	-3.92
138	SLE RA 9	-7	-12	1354	1.45	-205.82	-3.07
138	SLE RA 10	-8	-13	1497	1.63	-226.29	-3.23
138	SLE RA 11	-7	-19	1494	1.66	-226.18	-4.65
138	SLE RA 12	-8	-15	1496	1.64	-226.25	-3.8
138	SLE RA 13	-8	-13	1497	1.63	-226.29	-3.23
138	SLE RA 14	-7	-19	1494	1.66	-226.18	-4.65
138	SLE RA 15	-8	-15	1496	1.64	-226.25	-3.8
138	SLE RA 16	-7	-19	1494	1.66	-226.18	-4.65
138	SLE RA 17	-8	-15	1496	1.64	-226.25	-3.8
138	SLE RA 18	-7	-20	1554	1.74	-234.94	-4.96
138	SLE RA 19	-8	-17	1556	1.73	-235	-4.11
138	SLE RA 20	-7	-20	1554	1.74	-234.94	-4.96
138	SLE RA 21	-8	-17	1556	1.73	-235	-4.11
138	SLE FR 1	-7	-16	1352	1.46	-205.75	-3.92
138	SLE FR 2	-7	-15	1353	1.46	-205.77	-3.64

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
138	SLE FR 3	-7	-16	1352	1.46	-205.75	-3.92
138	SLE FR 4	-7	-16	1413	1.54	-214.53	-3.95
138	SLE FR 5	-7	-17	1413	1.55	-214.51	-4.23
138	SLE FR 6	-7	-18	1453	1.6	-220.34	-4.44
138	SLE QP 1	-7	-16	1352	1.46	-205.75	-3.92
138	SLE QP 2	-7	-17	1413	1.55	-214.51	-4.23
138	SLD 1	78	55	1635	1.53	-239.75	13.76
138	SLD 2	87	27	1632	1.55	-239.78	6.87
138	SLD 3	82	-37	1582	2.01	-238.76	-9.41
138	SLD 4	90	-65	1579	2.03	-238.79	-16.31
138	SLD 5	9	155	1561	0.8	-223.58	38.86
138	SLD 6	18	126	1558	0.83	-223.6	31.7
138	SLD 7	22	-153	1384	2.4	-220.27	-38.39
138	SLD 8	31	-182	1381	2.43	-220.3	-45.55
138	SLD 9	-45	148	1444	0.67	-208.72	37.08
138	SLD 10	-37	119	1441	0.69	-208.75	29.93
138	SLD 11	-33	-160	1267	2.26	-205.41	-40.17
138	SLD 12	-24	-189	1264	2.29	-205.44	-47.33
138	SLD 13	-105	31	1246	1.06	-190.23	7.84
138	SLD 14	-96	3	1243	1.09	-190.26	0.95
138	SLD 15	-101	-61	1193	1.54	-189.24	-15.33
138	SLD 16	-93	-89	1190	1.57	-189.26	-22.23
138	SLV 1	188	147	1920	1.5	-272.22	36.69
138	SLV 2	207	84	1914	1.56	-272.28	20.97
138	SLV 3	196	-63	1799	2.59	-269.93	-15.93
138	SLV 4	216	-127	1793	2.65	-269.99	-31.66
138	SLV 5	31	374	1750	-0.14	-235.27	93.63
138	SLV 6	51	308	1744	-0.08	-235.34	77.37
138	SLV 7	59	-326	1348	3.49	-227.64	-81.79
138	SLV 8	80	-392	1342	3.55	-227.7	-98.04
138	SLV 9	-94	358	1483	-0.46	-201.31	89.57
138	SLV 10	-74	292	1477	-0.39	-201.38	73.32
138	SLV 11	-66	-343	1082	3.17	-193.68	-85.84
138	SLV 12	-46	-408	1075	3.24	-193.74	-102.09
138	SLV 13	-230	92	1032	0.45	-159.02	23.19
138	SLV 14	-211	29	1026	0.51	-159.09	7.46
138	SLV 15	-222	-118	911	1.53	-156.73	-29.43
138	SLV 16	-202	-181	906	1.6	-156.8	-45.16
138	CRTFP Ux+	0	0	0	0	0	0
138	CRTFP Ux-	0	0	0	0	0	0
138	CRTFP Uy+	0	0	0	0	0	0
138	CRTFP Uy-	0	0	0	0	0	0
141	SLU 1	-1	3	2791	1.56	-0.42	0.41
141	SLU 2	-1	16	2799	1.45	-0.41	0.42
141	SLU 3	-1	3	2791	1.56	-0.42	0.41
141	SLU 4	-1	11	2796	1.5	-0.41	0.42
141	SLU 5	-1	16	2799	1.45	-0.41	0.42
141	SLU 6	-1	3	2791	1.56	-0.42	0.41
141	SLU 7	-1	11	2796	1.5	-0.41	0.42
141	SLU 8	-1	3	2791	1.56	-0.42	0.41
141	SLU 9	-1	11	2796	1.5	-0.41	0.42
141	SLU 10	-1	19	3307	1.93	-0.54	0.46
141	SLU 11	-1	6	3299	2.05	-0.54	0.46
141	SLU 12	-1	14	3304	1.98	-0.54	0.46
141	SLU 13	-1	19	3307	1.93	-0.54	0.46
141	SLU 14	-1	6	3299	2.05	-0.54	0.46
141	SLU 15	-1	14	3304	1.98	-0.54	0.46
141	SLU 16	-1	6	3299	2.05	-0.54	0.46
141	SLU 17	-1	14	3304	1.98	-0.54	0.46
141	SLU 18	-1	7	3517	2.25	-0.59	0.47
141	SLU 19	-1	15	3522	2.18	-0.59	0.48
141	SLU 20	-1	7	3517	2.25	-0.59	0.47
141	SLU 21	-1	15	3522	2.18	-0.59	0.48
141	SLU 22	-1	5	3172	1.92	-0.53	0.45
141	SLU 23	-1	18	3180	1.81	-0.53	0.45
141	SLU 24	-1	5	3172	1.92	-0.53	0.45
141	SLU 25	-1	13	3177	1.85	-0.53	0.45
141	SLU 26	-1	18	3180	1.81	-0.53	0.45
141	SLU 27	-1	5	3172	1.92	-0.53	0.45
141	SLU 28	-1	13	3177	1.85	-0.53	0.45
141	SLU 29	-1	5	3172	1.92	-0.53	0.45
141	SLU 30	-1	13	3177	1.85	-0.53	0.45
141	SLU 31	-1	21	3688	2.29	-0.65	0.49
141	SLU 32	-1	8	3680	2.41	-0.65	0.49
141	SLU 33	-1	16	3685	2.34	-0.65	0.49
141	SLU 34	-1	21	3688	2.29	-0.65	0.49
141	SLU 35	-1	8	3680	2.41	-0.65	0.49
141	SLU 36	-1	16	3685	2.34	-0.65	0.49
141	SLU 37	-1	8	3680	2.41	-0.65	0.49
141	SLU 38	-1	16	3685	2.34	-0.65	0.49
141	SLU 39	-1	9	3898	2.61	-0.7	0.51
141	SLU 40	-1	17	3903	2.54	-0.7	0.51
141	SLU 41	-1	9	3898	2.61	-0.7	0.51
141	SLU 42	-1	17	3903	2.54	-0.7	0.51
141	SLU 43	-1	3	3497	1.91	-0.5	0.53
141	SLU 44	-1	16	3505	1.8	-0.5	0.53

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
141	SLU 45	-1	3	3497	1.91	-0.5	0.53
141	SLU 46	-1	11	3502	1.84	-0.5	0.53
141	SLU 47	-1	16	3505	1.8	-0.5	0.53
141	SLU 48	-1	3	3497	1.91	-0.5	0.53
141	SLU 49	-1	11	3502	1.84	-0.5	0.53
141	SLU 50	-1	3	3497	1.91	-0.5	0.53
141	SLU 51	-1	11	3502	1.84	-0.5	0.53
141	SLU 52	-1	19	4014	2.28	-0.62	0.57
141	SLU 53	-1	6	4006	2.39	-0.63	0.57
141	SLU 54	-1	14	4011	2.32	-0.62	0.57
141	SLU 55	-1	19	4014	2.28	-0.62	0.57
141	SLU 56	-1	6	4006	2.39	-0.63	0.57
141	SLU 57	-1	14	4011	2.32	-0.62	0.57
141	SLU 58	-1	6	4006	2.39	-0.63	0.57
141	SLU 59	-1	14	4011	2.32	-0.62	0.57
141	SLU 60	-1	7	4224	2.6	-0.68	0.59
141	SLU 61	-1	15	4229	2.53	-0.68	0.59
141	SLU 62	-1	7	4224	2.6	-0.68	0.59
141	SLU 63	-1	15	4229	2.53	-0.68	0.59
141	SLU 64	-1	5	3878	2.27	-0.62	0.56
141	SLU 65	-1	18	3886	2.15	-0.61	0.57
141	SLU 66	-1	5	3878	2.27	-0.62	0.56
141	SLU 67	-1	13	3883	2.2	-0.61	0.56
141	SLU 68	-1	18	3886	2.15	-0.61	0.57
141	SLU 69	-1	5	3878	2.27	-0.62	0.56
141	SLU 70	-1	13	3883	2.2	-0.61	0.56
141	SLU 71	-1	5	3878	2.27	-0.62	0.56
141	SLU 72	-1	13	3883	2.2	-0.61	0.56
141	SLU 73	-2	21	4395	2.64	-0.73	0.61
141	SLU 74	-1	8	4387	2.75	-0.74	0.6
141	SLU 75	-2	16	4392	2.68	-0.74	0.61
141	SLU 76	-2	21	4395	2.64	-0.73	0.61
141	SLU 77	-1	8	4387	2.75	-0.74	0.6
141	SLU 78	-2	16	4392	2.68	-0.74	0.61
141	SLU 79	-1	8	4387	2.75	-0.74	0.6
141	SLU 80	-2	16	4392	2.68	-0.74	0.61
141	SLU 81	-2	10	4605	2.96	-0.79	0.62
141	SLU 82	-2	17	4610	2.89	-0.79	0.62
141	SLU 83	-2	10	4605	2.96	-0.79	0.62
141	SLU 84	-2	17	4610	2.89	-0.79	0.62
141	SLE RA 1	-1	4	2900	1.67	-0.45	0.42
141	SLE RA 2	-1	12	2905	1.59	-0.45	0.43
141	SLE RA 3	-1	4	2900	1.67	-0.45	0.42
141	SLE RA 4	-1	9	2903	1.62	-0.45	0.43
141	SLE RA 5	-1	12	2905	1.59	-0.45	0.43
141	SLE RA 6	-1	4	2900	1.67	-0.45	0.42
141	SLE RA 7	-1	9	2903	1.62	-0.45	0.43
141	SLE RA 8	-1	4	2900	1.67	-0.45	0.42
141	SLE RA 9	-1	9	2903	1.62	-0.45	0.43
141	SLE RA 10	-1	14	3244	1.91	-0.53	0.45
141	SLE RA 11	-1	6	3239	1.99	-0.53	0.45
141	SLE RA 12	-1	11	3242	1.94	-0.53	0.45
141	SLE RA 13	-1	14	3244	1.91	-0.53	0.45
141	SLE RA 14	-1	6	3239	1.99	-0.53	0.45
141	SLE RA 15	-1	11	3242	1.94	-0.53	0.45
141	SLE RA 16	-1	6	3239	1.99	-0.53	0.45
141	SLE RA 17	-1	11	3242	1.94	-0.53	0.45
141	SLE RA 18	-1	6	3384	2.13	-0.57	0.46
141	SLE RA 19	-1	12	3387	2.08	-0.56	0.47
141	SLE RA 20	-1	6	3384	2.13	-0.57	0.46
141	SLE RA 21	-1	12	3387	2.08	-0.56	0.47
141	SLE FR 1	-1	4	2900	1.67	-0.45	0.42
141	SLE FR 2	-1	5	2901	1.65	-0.45	0.42
141	SLE FR 3	-1	4	2900	1.67	-0.45	0.42
141	SLE FR 4	-1	6	3046	1.79	-0.48	0.44
141	SLE FR 5	-1	4	3045	1.8	-0.48	0.44
141	SLE FR 6	-1	5	3142	1.9	-0.51	0.44
141	SLE QP 1	-1	4	2900	1.67	-0.45	0.42
141	SLE QP 2	-1	4	3045	1.8	-0.48	0.44
141	SLD 1	208	79	3115	1.01	9.15	-0.27
141	SLD 2	223	79	3115	1.01	8.86	0.67
141	SLD 3	203	-55	3036	2.39	9.33	-0.36
141	SLD 4	218	-55	3036	2.39	9.04	0.58
141	SLD 5	63	230	3186	-0.53	2.25	0.01
141	SLD 6	78	230	3186	-0.53	1.95	0.99
141	SLD 7	48	-217	2922	4.08	2.83	-0.29
141	SLD 8	64	-216	2922	4.08	2.53	0.69
141	SLD 9	-66	225	3168	-0.47	-3.5	0.18
141	SLD 10	-50	226	3168	-0.47	-3.8	1.16
141	SLD 11	-80	-221	2904	4.14	-2.91	-0.12
141	SLD 12	-65	-221	2904	4.14	-3.22	0.86
141	SLD 13	-220	64	3054	1.22	-10	0.29
141	SLD 14	-205	64	3054	1.22	-10.3	1.24
141	SLD 15	-224	-70	2975	2.6	-9.83	0.2
141	SLD 16	-210	-70	2975	2.6	-10.12	1.15
141	SLV 1	476	173	3210	-0.01	21.52	-1.19

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
141	SLV 2	509	174	3210	-0.01	20.86	0.97
141	SLV 3	466	-131	3030	3.13	21.92	-1.39
141	SLV 4	499	-130	3030	3.12	21.26	0.76
141	SLV 5	145	516	3367	-3.49	5.75	-0.53
141	SLV 6	180	517	3368	-3.5	5.06	1.7
141	SLV 7	112	-498	2767	6.97	7.09	-1.21
141	SLV 8	147	-497	2767	6.96	6.41	1.01
141	SLV 9	-148	506	3322	-3.35	-7.38	-0.14
141	SLV 10	-114	507	3323	-3.36	-8.06	2.09
141	SLV 11	-181	-508	2722	7.11	-6.03	-0.83
141	SLV 12	-147	-507	2722	7.1	-6.72	1.4
141	SLV 13	-501	139	3060	0.49	-22.23	0.11
141	SLV 14	-468	140	3060	0.48	-22.89	2.26
141	SLV 15	-511	-165	2880	3.62	-21.83	-0.1
141	SLV 16	-478	-164	2880	3.62	-22.49	2.06
141	CRTFP Ux+	0	0	0	0	0	0
141	CRTFP Ux-	0	0	0	0	0	0
141	CRTFP Uy+	0	0	0	0	0	0
141	CRTFP Uy-	0	0	0	0	0	0
143	SLU 1	-9	-15	1358	1.77	-228.49	-3.7
143	SLU 2	-9	-6	1363	1.73	-228.51	-1.58
143	SLU 3	-9	-15	1358	1.77	-228.49	-3.7
143	SLU 4	-9	-10	1361	1.75	-228.51	-2.42
143	SLU 5	-9	-6	1363	1.73	-228.51	-1.58
143	SLU 6	-9	-15	1358	1.77	-228.49	-3.7
143	SLU 7	-9	-10	1361	1.75	-228.51	-2.42
143	SLU 8	-9	-15	1358	1.77	-228.49	-3.7
143	SLU 9	-9	-10	1361	1.75	-228.51	-2.42
143	SLU 10	-9	-11	1586	2.1	-265.08	-2.66
143	SLU 11	-8	-19	1582	2.14	-265.06	-4.78
143	SLU 12	-9	-14	1584	2.12	-265.07	-3.5
143	SLU 13	-9	-11	1586	2.1	-265.08	-2.66
143	SLU 14	-8	-19	1582	2.14	-265.06	-4.78
143	SLU 15	-9	-14	1584	2.12	-265.07	-3.5
143	SLU 16	-8	-19	1582	2.14	-265.06	-4.78
143	SLU 17	-9	-14	1584	2.12	-265.07	-3.5
143	SLU 18	-8	-21	1678	2.3	-280.73	-5.24
143	SLU 19	-9	-16	1680	2.28	-280.75	-3.97
143	SLU 20	-8	-21	1678	2.3	-280.73	-5.24
143	SLU 21	-9	-16	1680	2.28	-280.75	-3.97
143	SLU 22	-9	-18	1527	2.05	-255.95	-4.46
143	SLU 23	-9	-10	1531	2.01	-255.97	-2.33
143	SLU 24	-9	-18	1527	2.05	-255.95	-4.46
143	SLU 25	-9	-13	1530	2.03	-255.96	-3.18
143	SLU 26	-9	-10	1531	2.01	-255.97	-2.33
143	SLU 27	-9	-18	1527	2.05	-255.95	-4.46
143	SLU 28	-9	-13	1530	2.03	-255.96	-3.18
143	SLU 29	-9	-18	1527	2.05	-255.95	-4.46
143	SLU 30	-9	-13	1530	2.03	-255.96	-3.18
143	SLU 31	-9	-14	1755	2.38	-292.54	-3.41
143	SLU 32	-8	-22	1751	2.42	-292.52	-5.53
143	SLU 33	-9	-17	1753	2.4	-292.53	-4.26
143	SLU 34	-9	-14	1755	2.38	-292.54	-3.41
143	SLU 35	-8	-22	1751	2.42	-292.52	-5.53
143	SLU 36	-9	-17	1753	2.4	-292.53	-4.26
143	SLU 37	-8	-22	1751	2.42	-292.52	-5.53
143	SLU 38	-9	-17	1753	2.4	-292.53	-4.26
143	SLU 39	-8	-24	1847	2.58	-308.19	-6
143	SLU 40	-9	-19	1849	2.56	-308.2	-4.72
143	SLU 41	-8	-24	1847	2.58	-308.19	-6
143	SLU 42	-9	-19	1849	2.56	-308.2	-4.72
143	SLU 43	-11	-18	1708	2.21	-287.63	-4.55
143	SLU 44	-12	-10	1712	2.17	-287.65	-2.43
143	SLU 45	-11	-18	1708	2.21	-287.63	-4.55
143	SLU 46	-11	-13	1710	2.18	-287.64	-3.27
143	SLU 47	-12	-10	1712	2.17	-287.65	-2.43
143	SLU 48	-11	-18	1708	2.21	-287.63	-4.55
143	SLU 49	-11	-13	1710	2.18	-287.64	-3.27
143	SLU 50	-11	-18	1708	2.21	-287.63	-4.55
143	SLU 51	-11	-13	1710	2.18	-287.64	-3.27
143	SLU 52	-12	-14	1936	2.54	-324.22	-3.5
143	SLU 53	-11	-23	1931	2.57	-324.2	-5.63
143	SLU 54	-11	-18	1934	2.55	-324.21	-4.35
143	SLU 55	-12	-14	1936	2.54	-324.22	-3.5
143	SLU 56	-11	-23	1931	2.57	-324.2	-5.63
143	SLU 57	-11	-18	1934	2.55	-324.21	-4.35
143	SLU 58	-11	-23	1931	2.57	-324.2	-5.63
143	SLU 59	-11	-18	1934	2.55	-324.21	-4.35
143	SLU 60	-11	-25	2027	2.73	-339.87	-6.09
143	SLU 61	-11	-19	2030	2.71	-339.88	-4.82
143	SLU 62	-11	-25	2027	2.73	-339.87	-6.09
143	SLU 63	-11	-19	2030	2.71	-339.88	-4.82
143	SLU 64	-11	-21	1877	2.49	-315.08	-5.3
143	SLU 65	-12	-13	1881	2.45	-315.1	-3.18
143	SLU 66	-11	-21	1877	2.49	-315.08	-5.3
143	SLU 67	-11	-16	1879	2.46	-315.09	-4.03

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
143	SLU 68	-12	-13	1881	2.45	-315.1	-3.18
143	SLU 69	-11	-21	1877	2.49	-315.08	-5.3
143	SLU 70	-11	-16	1879	2.46	-315.09	-4.03
143	SLU 71	-11	-21	1877	2.49	-315.08	-5.3
143	SLU 72	-11	-16	1879	2.46	-315.09	-4.03
143	SLU 73	-11	-17	2105	2.82	-351.67	-4.26
143	SLU 74	-11	-26	2100	2.86	-351.65	-6.38
143	SLU 75	-11	-21	2103	2.83	-351.66	-5.11
143	SLU 76	-11	-17	2105	2.82	-351.67	-4.26
143	SLU 77	-11	-26	2100	2.86	-351.65	-6.38
143	SLU 78	-11	-21	2103	2.83	-351.66	-5.11
143	SLU 79	-11	-26	2100	2.86	-351.65	-6.38
143	SLU 80	-11	-21	2103	2.83	-351.66	-5.11
143	SLU 81	-11	-28	2196	3.01	-367.32	-6.85
143	SLU 82	-11	-22	2199	2.99	-367.34	-5.57
143	SLU 83	-11	-28	2196	3.01	-367.32	-6.85
143	SLU 84	-11	-22	2199	2.99	-367.34	-5.57
143	SLE RA 1	-9	-16	1407	1.85	-236.34	-3.91
143	SLE RA 2	-9	-10	1409	1.83	-236.35	-2.5
143	SLE RA 3	-9	-16	1407	1.85	-236.34	-3.91
143	SLE RA 4	-9	-12	1408	1.84	-236.35	-3.07
143	SLE RA 5	-9	-10	1409	1.83	-236.35	-2.5
143	SLE RA 6	-9	-16	1407	1.85	-236.34	-3.91
143	SLE RA 7	-9	-12	1408	1.84	-236.35	-3.07
143	SLE RA 8	-9	-16	1407	1.85	-236.34	-3.91
143	SLE RA 9	-9	-12	1408	1.84	-236.35	-3.07
143	SLE RA 10	-9	-13	1558	2.07	-260.73	-3.22
143	SLE RA 11	-8	-19	1556	2.1	-260.72	-4.63
143	SLE RA 12	-9	-15	1557	2.08	-260.73	-3.78
143	SLE RA 13	-9	-13	1558	2.07	-260.73	-3.22
143	SLE RA 14	-8	-19	1556	2.1	-260.72	-4.63
143	SLE RA 15	-9	-15	1557	2.08	-260.73	-3.78
143	SLE RA 16	-8	-19	1556	2.1	-260.72	-4.63
143	SLE RA 17	-9	-15	1557	2.08	-260.73	-3.78
143	SLE RA 18	-8	-20	1620	2.2	-271.16	-4.94
143	SLE RA 19	-9	-17	1621	2.19	-271.17	-4.09
143	SLE RA 20	-8	-20	1620	2.2	-271.16	-4.94
143	SLE RA 21	-9	-17	1621	2.19	-271.17	-4.09
143	SLE FR 1	-9	-16	1407	1.85	-236.34	-3.91
143	SLE FR 2	-9	-15	1407	1.85	-236.34	-3.63
143	SLE FR 3	-9	-16	1407	1.85	-236.34	-3.91
143	SLE FR 4	-9	-16	1471	1.95	-246.79	-3.94
143	SLE FR 5	-9	-17	1470	1.96	-246.78	-4.22
143	SLE FR 6	-8	-18	1513	2.03	-253.75	-4.43
143	SLE QP 1	-9	-16	1407	1.85	-236.34	-3.91
143	SLE QP 2	-9	-17	1470	1.96	-246.78	-4.22
143	SLD 1	78	55	1693	2.02	-275.66	13.75
143	SLD 2	85	27	1692	2.05	-275.79	6.85
143	SLD 3	83	-37	1655	2.46	-277.1	-9.4
143	SLD 4	90	-65	1654	2.49	-277.24	-16.29
143	SLD 5	7	155	1596	1.3	-253.2	38.82
143	SLD 6	14	126	1594	1.32	-253.34	31.66
143	SLD 7	24	-153	1469	2.77	-258.02	-38.33
143	SLD 8	31	-182	1467	2.8	-258.17	-45.49
143	SLD 9	-48	148	1474	1.12	-235.4	37.05
143	SLD 10	-41	119	1472	1.14	-235.54	29.89
143	SLD 11	-32	-160	1347	2.59	-240.23	-40.1
143	SLD 12	-24	-189	1345	2.62	-240.37	-47.26
143	SLD 13	-107	31	1287	1.42	-216.33	7.85
143	SLD 14	-100	3	1286	1.45	-216.47	0.95
143	SLD 15	-102	-61	1249	1.86	-217.78	-15.3
143	SLD 16	-95	-89	1247	1.89	-217.91	-22.19
143	SLV 1	190	147	1979	2.11	-312.76	36.65
143	SLV 2	206	84	1976	2.17	-313.07	20.92
143	SLV 3	202	-63	1893	3.12	-316.08	-15.91
143	SLV 4	217	-126	1889	3.17	-316.39	-31.63
143	SLV 5	28	374	1756	0.46	-261.42	93.52
143	SLV 6	44	308	1752	0.52	-261.75	77.26
143	SLV 7	66	-326	1468	3.8	-272.49	-81.67
143	SLV 8	82	-391	1464	3.86	-272.82	-97.92
143	SLV 9	-99	357	1477	0.05	-220.75	89.48
143	SLV 10	-83	292	1473	0.11	-221.08	73.23
143	SLV 11	-61	-342	1189	3.39	-231.82	-85.71
143	SLV 12	-45	-408	1185	3.45	-232.15	-101.96
143	SLV 13	-234	92	1052	0.74	-177.18	23.19
143	SLV 14	-219	29	1048	0.8	-177.49	7.46
143	SLV 15	-223	-118	965	1.74	-180.5	-29.37
143	SLV 16	-207	-181	962	1.8	-180.81	-45.09
143	CRTFP Ux+	0	0	0	0	0	0
143	CRTFP Ux-	0	0	0	0	0	0
143	CRTFP Uy+	0	0	0	0	0	0
143	CRTFP Uy-	0	0	0	0	0	0
146	SLU 1	1	-26	1502	2.24	226.05	6.56
146	SLU 2	2	-16	1506	2.18	225.7	4.1
146	SLU 3	1	-26	1502	2.24	226.05	6.56
146	SLU 4	2	-20	1504	2.21	225.84	5.08

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
146	SLU 5	2	-16	1506	2.18	225.7	4.1
146	SLU 6	1	-26	1502	2.24	226.05	6.56
146	SLU 7	2	-20	1504	2.21	225.84	5.08
146	SLU 8	1	-26	1502	2.24	226.05	6.56
146	SLU 9	2	-20	1504	2.21	225.84	5.08
146	SLU 10	0	-22	1759	2.7	262.24	5.49
146	SLU 11	0	-32	1756	2.76	262.58	7.95
146	SLU 12	0	-26	1758	2.73	262.37	6.48
146	SLU 13	0	-22	1759	2.7	262.24	5.49
146	SLU 14	0	-32	1756	2.76	262.58	7.95
146	SLU 15	0	-26	1758	2.73	262.37	6.48
146	SLU 16	0	-32	1756	2.76	262.58	7.95
146	SLU 17	0	-26	1758	2.73	262.37	6.48
146	SLU 18	-1	-34	1864	2.98	278.24	8.55
146	SLU 19	0	-28	1867	2.95	278.03	7.07
146	SLU 20	-1	-34	1864	2.98	278.24	8.55
146	SLU 21	0	-28	1867	2.95	278.03	7.07
146	SLU 22	0	-30	1694	2.64	253.53	7.59
146	SLU 23	1	-20	1697	2.58	253.18	5.13
146	SLU 24	0	-30	1694	2.64	253.53	7.59
146	SLU 25	1	-24	1696	2.6	253.32	6.11
146	SLU 26	1	-20	1697	2.58	253.18	5.13
146	SLU 27	0	-30	1694	2.64	253.53	7.59
146	SLU 28	1	-24	1696	2.6	253.32	6.11
146	SLU 29	0	-30	1694	2.64	253.53	7.59
146	SLU 30	1	-24	1696	2.6	253.32	6.11
146	SLU 31	-1	-26	1951	3.09	289.71	6.52
146	SLU 32	-1	-36	1947	3.15	290.06	8.99
146	SLU 33	-1	-30	1949	3.12	289.85	7.51
146	SLU 34	-1	-26	1951	3.09	289.71	6.52
146	SLU 35	-1	-36	1947	3.15	290.06	8.99
146	SLU 36	-1	-30	1949	3.12	289.85	7.51
146	SLU 37	-1	-36	1947	3.15	290.06	8.99
146	SLU 38	-1	-30	1949	3.12	289.85	7.51
146	SLU 39	-1	-38	2056	3.38	305.71	9.58
146	SLU 40	-1	-32	2058	3.34	305.51	8.1
146	SLU 41	-1	-38	2056	3.38	305.71	9.58
146	SLU 42	-1	-32	2058	3.34	305.51	8.1
146	SLU 43	2	-33	1887	2.78	284.44	8.17
146	SLU 44	2	-23	1891	2.72	284.1	5.71
146	SLU 45	2	-33	1887	2.78	284.44	8.17
146	SLU 46	2	-27	1890	2.75	284.24	6.7
146	SLU 47	2	-23	1891	2.72	284.1	5.71
146	SLU 48	2	-33	1887	2.78	284.44	8.17
146	SLU 49	2	-27	1890	2.75	284.24	6.7
146	SLU 50	2	-33	1887	2.78	284.44	8.17
146	SLU 51	2	-27	1890	2.75	284.24	6.7
146	SLU 52	1	-28	2144	3.24	320.63	7.1
146	SLU 53	1	-38	2141	3.3	320.97	9.57
146	SLU 54	1	-32	2143	3.26	320.77	8.09
146	SLU 55	1	-28	2144	3.24	320.63	7.1
146	SLU 56	1	-38	2141	3.3	320.97	9.57
146	SLU 57	1	-32	2143	3.26	320.77	8.09
146	SLU 58	1	-38	2141	3.3	320.97	9.57
146	SLU 59	1	-32	2143	3.26	320.77	8.09
146	SLU 60	0	-40	2250	3.52	336.63	10.17
146	SLU 61	0	-35	2252	3.49	336.42	8.69
146	SLU 62	0	-40	2250	3.52	336.63	10.17
146	SLU 63	0	-35	2252	3.49	336.42	8.69
146	SLU 64	1	-37	2079	3.18	311.92	9.21
146	SLU 65	1	-27	2082	3.12	311.58	6.74
146	SLU 66	1	-37	2079	3.18	311.92	9.21
146	SLU 67	1	-31	2081	3.14	311.71	7.73
146	SLU 68	1	-27	2082	3.12	311.58	6.74
146	SLU 69	1	-37	2079	3.18	311.92	9.21
146	SLU 70	1	-31	2081	3.14	311.71	7.73
146	SLU 71	1	-37	2079	3.18	311.92	9.21
146	SLU 72	1	-31	2081	3.14	311.71	7.73
146	SLU 73	0	-32	2336	3.63	348.11	8.14
146	SLU 74	0	-42	2332	3.69	348.45	10.6
146	SLU 75	0	-36	2334	3.66	348.24	9.12
146	SLU 76	0	-32	2336	3.63	348.11	8.14
146	SLU 77	0	-42	2332	3.69	348.45	10.6
146	SLU 78	0	-36	2334	3.66	348.24	9.12
146	SLU 79	0	-42	2332	3.69	348.45	10.6
146	SLU 80	0	-36	2334	3.66	348.24	9.12
146	SLU 81	-1	-45	2441	3.92	364.11	11.2
146	SLU 82	-1	-39	2443	3.88	363.9	9.72
146	SLU 83	-1	-45	2441	3.92	364.11	11.2
146	SLU 84	-1	-39	2443	3.88	363.9	9.72
146	SLE RA 1	1	-27	1557	2.36	233.9	6.85
146	SLE RA 2	1	-21	1559	2.32	233.67	5.21
146	SLE RA 3	1	-27	1557	2.36	233.9	6.85
146	SLE RA 4	1	-23	1558	2.33	233.76	5.87
146	SLE RA 5	1	-21	1559	2.32	233.67	5.21
146	SLE RA 6	1	-27	1557	2.36	233.9	6.85

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
146	SLE RA 7	1	-23	1558	2.33	233.76	5.87
146	SLE RA 8	1	-27	1557	2.36	233.9	6.85
146	SLE RA 9	1	-23	1558	2.33	233.76	5.87
146	SLE RA 10	0	-24	1728	2.66	258.02	6.14
146	SLE RA 11	0	-31	1726	2.7	258.25	7.78
146	SLE RA 12	0	-27	1727	2.68	258.12	6.8
146	SLE RA 13	0	-24	1728	2.66	258.02	6.14
146	SLE RA 14	0	-31	1726	2.7	258.25	7.78
146	SLE RA 15	0	-27	1727	2.68	258.12	6.8
146	SLE RA 16	0	-31	1726	2.7	258.25	7.78
146	SLE RA 17	0	-27	1727	2.68	258.12	6.8
146	SLE RA 18	0	-33	1798	2.85	268.69	8.18
146	SLE RA 19	0	-29	1800	2.83	268.55	7.2
146	SLE RA 20	0	-33	1798	2.85	268.69	8.18
146	SLE RA 21	0	-29	1800	2.83	268.55	7.2
146	SLE FR 1	1	-27	1557	2.36	233.9	6.85
146	SLE FR 2	1	-26	1558	2.35	233.85	6.53
146	SLE FR 3	1	-27	1557	2.36	233.9	6.85
146	SLE FR 4	1	-28	1630	2.5	244.29	6.92
146	SLE FR 5	1	-29	1630	2.5	244.34	7.25
146	SLE FR 6	0	-30	1678	2.6	251.3	7.52
146	SLE QP 1	1	-27	1557	2.36	233.9	6.85
146	SLE QP 2	1	-29	1630	2.5	244.34	7.25
146	SLD 1	107	-8	1409	1.74	210.28	2
146	SLD 2	114	23	1409	1.69	209.53	-5.81
146	SLD 3	101	-112	1375	2.48	214.92	27.85
146	SLD 4	108	-80	1375	2.42	214.17	20.04
146	SLD 5	39	122	1615	1.19	227.35	-30.64
146	SLD 6	46	155	1616	1.13	226.57	-38.75
146	SLD 7	19	-222	1501	3.63	242.84	55.52
146	SLD 8	27	-189	1501	3.57	242.06	47.41
146	SLD 9	-26	131	1758	1.44	246.61	-32.9
146	SLD 10	-18	164	1758	1.38	245.84	-41.01
146	SLD 11	-45	-213	1644	3.88	262.11	53.26
146	SLD 12	-37	-180	1644	3.82	261.33	45.15
146	SLD 13	-107	22	1884	2.59	274.5	-5.53
146	SLD 14	-100	54	1884	2.53	273.75	-13.34
146	SLD 15	-113	-81	1850	3.32	279.15	20.32
146	SLD 16	-105	-49	1850	3.27	278.4	12.51
146	SLV 1	243	17	1125	0.77	166.5	-4.55
146	SLV 2	259	89	1126	0.65	164.79	-22.36
146	SLV 3	230	-217	1048	2.43	177.08	54.14
146	SLV 4	246	-145	1048	2.31	175.38	36.33
146	SLV 5	87	314	1596	-0.49	205.56	-78.77
146	SLV 6	104	389	1597	-0.62	203.79	-97.18
146	SLV 7	44	-467	1337	5.05	240.84	116.86
146	SLV 8	61	-393	1337	4.92	239.08	98.46
146	SLV 9	-59	335	1922	0.09	249.6	-83.95
146	SLV 10	-42	410	1922	-0.04	247.84	-102.36
146	SLV 11	-103	-446	1662	5.63	284.88	111.68
146	SLV 12	-86	-372	1663	5.5	283.12	93.28
146	SLV 13	-245	88	2211	2.7	313.3	-21.82
146	SLV 14	-229	160	2211	2.58	311.59	-39.63
146	SLV 15	-258	-147	2133	4.36	323.88	36.87
146	SLV 16	-242	-75	2134	4.24	322.18	19.06
146	CRTFP Ux+	0	0	0	0	0	0
146	CRTFP Ux-	0	0	0	0	0	0
146	CRTFP Uy+	0	0	0	0	0	0
146	CRTFP Uy-	0	0	0	0	0	0
148	SLU 1	-3	5	2841	1.76	-0.14	0.34
148	SLU 2	-3	18	2846	1.65	-0.13	0.34
148	SLU 3	-3	5	2841	1.76	-0.14	0.34
148	SLU 4	-3	13	2844	1.69	-0.13	0.34
148	SLU 5	-3	18	2846	1.65	-0.13	0.34
148	SLU 6	-3	5	2841	1.76	-0.14	0.34
148	SLU 7	-3	13	2844	1.69	-0.13	0.34
148	SLU 8	-3	5	2841	1.76	-0.14	0.34
148	SLU 9	-3	13	2844	1.69	-0.13	0.34
148	SLU 10	-3	21	3370	2.17	-0.2	0.37
148	SLU 11	-3	8	3365	2.27	-0.21	0.37
148	SLU 12	-3	16	3368	2.21	-0.2	0.37
148	SLU 13	-3	21	3370	2.17	-0.2	0.37
148	SLU 14	-3	8	3365	2.27	-0.21	0.37
148	SLU 15	-3	16	3368	2.21	-0.2	0.37
148	SLU 16	-3	8	3365	2.27	-0.21	0.37
148	SLU 17	-3	16	3368	2.21	-0.2	0.37
148	SLU 18	-4	9	3589	2.5	-0.24	0.38
148	SLU 19	-4	17	3592	2.43	-0.23	0.39
148	SLU 20	-4	9	3589	2.5	-0.24	0.38
148	SLU 21	-4	17	3592	2.43	-0.23	0.39
148	SLU 22	-3	7	3233	2.14	-0.21	0.36
148	SLU 23	-3	20	3238	2.04	-0.2	0.37
148	SLU 24	-3	7	3233	2.14	-0.21	0.36
148	SLU 25	-3	15	3236	2.08	-0.21	0.37
148	SLU 26	-3	20	3238	2.04	-0.2	0.37
148	SLU 27	-3	7	3233	2.14	-0.21	0.36

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
148	SLU 28	-3	15	3236	2.08	-0.21	0.37
148	SLU 29	-3	7	3233	2.14	-0.21	0.36
148	SLU 30	-3	15	3236	2.08	-0.21	0.37
148	SLU 31	-4	23	3762	2.55	-0.27	0.4
148	SLU 32	-4	10	3757	2.66	-0.28	0.4
148	SLU 33	-4	18	3760	2.59	-0.28	0.4
148	SLU 34	-4	23	3762	2.55	-0.27	0.4
148	SLU 35	-4	10	3757	2.66	-0.28	0.4
148	SLU 36	-4	18	3760	2.59	-0.28	0.4
148	SLU 37	-4	10	3757	2.66	-0.28	0.4
148	SLU 38	-4	18	3760	2.59	-0.28	0.4
148	SLU 39	-4	12	3982	2.88	-0.31	0.41
148	SLU 40	-4	19	3984	2.81	-0.31	0.41
148	SLU 41	-4	12	3982	2.88	-0.31	0.41
148	SLU 42	-4	19	3984	2.81	-0.31	0.41
148	SLU 43	-4	6	3559	2.16	-0.16	0.43
148	SLU 44	-4	18	3564	2.05	-0.15	0.44
148	SLU 45	-4	6	3559	2.16	-0.16	0.43
148	SLU 46	-4	13	3562	2.09	-0.15	0.43
148	SLU 47	-4	18	3564	2.05	-0.15	0.44
148	SLU 48	-4	6	3559	2.16	-0.16	0.43
148	SLU 49	-4	13	3562	2.09	-0.15	0.43
148	SLU 50	-4	6	3559	2.16	-0.16	0.43
148	SLU 51	-4	13	3562	2.09	-0.15	0.43
148	SLU 52	-4	22	4087	2.56	-0.22	0.47
148	SLU 53	-4	9	4083	2.67	-0.22	0.46
148	SLU 54	-4	16	4086	2.61	-0.22	0.46
148	SLU 55	-4	22	4087	2.56	-0.22	0.47
148	SLU 56	-4	9	4083	2.67	-0.22	0.46
148	SLU 57	-4	16	4086	2.61	-0.22	0.46
148	SLU 58	-4	9	4083	2.67	-0.22	0.46
148	SLU 59	-4	16	4086	2.61	-0.22	0.46
148	SLU 60	-4	10	4307	2.89	-0.25	0.48
148	SLU 61	-4	18	4310	2.83	-0.25	0.48
148	SLU 62	-4	10	4307	2.89	-0.25	0.48
148	SLU 63	-4	18	4310	2.83	-0.25	0.48
148	SLU 64	-4	8	3951	2.54	-0.23	0.46
148	SLU 65	-4	21	3956	2.43	-0.22	0.46
148	SLU 66	-4	8	3951	2.54	-0.23	0.46
148	SLU 67	-4	15	3954	2.47	-0.22	0.46
148	SLU 68	-4	21	3956	2.43	-0.22	0.46
148	SLU 69	-4	8	3951	2.54	-0.23	0.46
148	SLU 70	-4	15	3954	2.47	-0.22	0.46
148	SLU 71	-4	8	3951	2.54	-0.23	0.46
148	SLU 72	-4	15	3954	2.47	-0.22	0.46
148	SLU 73	-5	24	4480	2.95	-0.29	0.49
148	SLU 74	-4	11	4475	3.05	-0.3	0.49
148	SLU 75	-5	19	4478	2.99	-0.29	0.49
148	SLU 76	-5	24	4480	2.95	-0.29	0.49
148	SLU 77	-4	11	4475	3.05	-0.3	0.49
148	SLU 78	-5	19	4478	2.99	-0.29	0.49
148	SLU 79	-4	11	4475	3.05	-0.3	0.49
148	SLU 80	-5	19	4478	2.99	-0.29	0.49
148	SLU 81	-5	12	4699	3.28	-0.33	0.5
148	SLU 82	-5	20	4702	3.21	-0.32	0.5
148	SLU 83	-5	12	4699	3.28	-0.33	0.5
148	SLU 84	-5	20	4702	3.21	-0.32	0.5
148	SLE RA 1	-3	6	2953	1.87	-0.16	0.35
148	SLE RA 2	-3	14	2956	1.8	-0.16	0.35
148	SLE RA 3	-3	6	2953	1.87	-0.16	0.35
148	SLE RA 4	-3	11	2955	1.83	-0.16	0.35
148	SLE RA 5	-3	14	2956	1.8	-0.16	0.35
148	SLE RA 6	-3	6	2953	1.87	-0.16	0.35
148	SLE RA 7	-3	11	2955	1.83	-0.16	0.35
148	SLE RA 8	-3	6	2953	1.87	-0.16	0.35
148	SLE RA 9	-3	11	2955	1.83	-0.16	0.35
148	SLE RA 10	-3	16	3305	2.14	-0.2	0.37
148	SLE RA 11	-3	8	3302	2.21	-0.21	0.37
148	SLE RA 12	-3	13	3304	2.17	-0.2	0.37
148	SLE RA 13	-3	16	3305	2.14	-0.2	0.37
148	SLE RA 14	-3	8	3302	2.21	-0.21	0.37
148	SLE RA 15	-3	13	3304	2.17	-0.2	0.37
148	SLE RA 16	-3	8	3302	2.21	-0.21	0.37
148	SLE RA 17	-3	13	3304	2.17	-0.2	0.37
148	SLE RA 18	-3	9	3452	2.36	-0.23	0.38
148	SLE RA 19	-3	14	3454	2.32	-0.22	0.38
148	SLE RA 20	-3	9	3452	2.36	-0.23	0.38
148	SLE RA 21	-3	14	3454	2.32	-0.22	0.38
148	SLE FR 1	-3	6	2953	1.87	-0.16	0.35
148	SLE FR 2	-3	7	2954	1.85	-0.16	0.35
148	SLE FR 3	-3	6	2953	1.87	-0.16	0.35
148	SLE FR 4	-3	8	3103	2	-0.18	0.36
148	SLE FR 5	-3	6	3103	2.02	-0.18	0.35
148	SLE FR 6	-3	7	3203	2.11	-0.19	0.36
148	SLE QP 1	-3	6	2953	1.87	-0.16	0.35
148	SLE QP 2	-3	6	3103	2.02	-0.18	0.35

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
148	SLD 1	210	80	3150	1.22	9.62	-0.47
148	SLD 2	220	81	3150	1.22	9.36	0.39
148	SLD 3	206	-53	3111	2.52	9.78	-0.55
148	SLD 4	215	-53	3111	2.51	9.53	0.32
148	SLD 5	63	231	3176	-0.18	2.6	-0.1
148	SLD 6	74	231	3176	-0.18	2.33	0.8
148	SLD 7	50	-214	3046	4.13	3.16	-0.35
148	SLD 8	60	-213	3046	4.12	2.9	0.55
148	SLD 9	-66	226	3160	-0.09	-3.25	0.16
148	SLD 10	-56	227	3160	-0.1	-3.52	1.06
148	SLD 11	-80	-219	3029	4.22	-2.69	-0.09
148	SLD 12	-70	-218	3029	4.21	-2.96	0.81
148	SLD 13	-222	66	3095	1.52	-9.89	0.39
148	SLD 14	-212	66	3095	1.52	-10.14	1.26
148	SLD 15	-226	-68	3056	2.81	-9.72	0.31
148	SLD 16	-216	-67	3056	2.81	-9.97	1.18
148	SLV 1	483	174	3215	0.19	22.19	-1.54
148	SLV 2	505	175	3215	0.19	21.61	0.44
148	SLV 3	473	-129	3126	3.13	22.57	-1.71
148	SLV 4	496	-128	3126	3.12	22	0.27
148	SLV 5	149	516	3271	-2.98	6.16	-0.68
148	SLV 6	172	517	3271	-2.98	5.56	1.36
148	SLV 7	117	-494	2975	6.8	7.44	-1.25
148	SLV 8	141	-493	2975	6.79	6.85	0.8
148	SLV 9	-147	506	3231	-2.76	-7.21	-0.09
148	SLV 10	-124	507	3230	-2.77	-7.8	1.95
148	SLV 11	-178	-504	2935	7.02	-5.92	-0.65
148	SLV 12	-155	-503	2935	7.01	-6.51	1.39
148	SLV 13	-502	141	3080	0.91	-22.36	0.44
148	SLV 14	-480	142	3080	0.9	-22.93	2.41
148	SLV 15	-512	-163	2991	3.84	-21.97	0.27
148	SLV 16	-489	-161	2991	3.84	-22.55	2.25
148	CRTFP Ux+	0	0	0	0	0	0
148	CRTFP Ux-	0	0	0	0	0	0
148	CRTFP Uy+	0	0	0	0	0	0
148	CRTFP Uy-	0	0	0	0	0	0
151	SLU 1	-21	2	7742	-3101.59	24.83	-3.97
151	SLU 2	-23	38	7766	-3112.91	24.74	-4.73
151	SLU 3	-21	2	7742	-3101.59	24.83	-3.97
151	SLU 4	-22	23	7757	-3108.38	24.77	-4.43
151	SLU 5	-23	38	7766	-3112.91	24.74	-4.73
151	SLU 6	-21	2	7742	-3101.59	24.83	-3.97
151	SLU 7	-22	23	7757	-3108.38	24.77	-4.43
151	SLU 8	-21	2	7742	-3101.59	24.83	-3.97
151	SLU 9	-22	23	7757	-3108.38	24.77	-4.43
151	SLU 10	-16	40	9136	-3655.67	26.42	-1.76
151	SLU 11	-14	4	9111	-3644.35	26.51	-1
151	SLU 12	-15	26	9126	-3651.14	26.46	-1.45
151	SLU 13	-16	40	9136	-3655.67	26.42	-1.76
151	SLU 14	-14	4	9111	-3644.35	26.51	-1
151	SLU 15	-15	26	9126	-3651.14	26.46	-1.45
151	SLU 16	-14	4	9111	-3644.35	26.51	-1
151	SLU 17	-15	26	9126	-3651.14	26.46	-1.45
151	SLU 18	-11	5	9698	-3876.97	27.24	0.28
151	SLU 19	-13	27	9713	-3883.75	27.18	-0.18
151	SLU 20	-11	5	9698	-3876.97	27.24	0.28
151	SLU 21	-13	27	9713	-3883.75	27.18	-0.18
151	SLU 22	-17	4	8767	-3507.42	26.36	-2.05
151	SLU 23	-19	39	8791	-3518.73	26.27	-2.81
151	SLU 24	-17	4	8767	-3507.42	26.36	-2.05
151	SLU 25	-18	25	8781	-3514.21	26.3	-2.51
151	SLU 26	-19	39	8791	-3518.73	26.27	-2.81
151	SLU 27	-17	4	8767	-3507.42	26.36	-2.05
151	SLU 28	-18	25	8781	-3514.21	26.3	-2.51
151	SLU 29	-17	4	8767	-3507.42	26.36	-2.05
151	SLU 30	-18	25	8781	-3514.21	26.3	-2.51
151	SLU 31	-12	41	10161	-4061.49	27.95	0.16
151	SLU 32	-10	6	10136	-4050.18	28.04	0.92
151	SLU 33	-11	27	10151	-4056.97	27.99	0.46
151	SLU 34	-12	41	10161	-4061.49	27.95	0.16
151	SLU 35	-10	6	10136	-4050.18	28.04	0.92
151	SLU 36	-11	27	10151	-4056.97	27.99	0.46
151	SLU 37	-10	6	10136	-4050.18	28.04	0.92
151	SLU 38	-11	27	10151	-4056.97	27.99	0.46
151	SLU 39	-7	7	10723	-4282.79	28.77	2.19
151	SLU 40	-9	28	10738	-4289.58	28.71	1.74
151	SLU 41	-7	7	10723	-4282.79	28.77	2.19
151	SLU 42	-9	28	10738	-4289.58	28.71	1.74
151	SLU 43	-28	3	9713	-3892.93	31.75	-5.82
151	SLU 44	-30	38	9738	-3904.24	31.66	-6.58
151	SLU 45	-28	3	9713	-3892.93	31.75	-5.82
151	SLU 46	-30	24	9728	-3899.72	31.7	-6.27
151	SLU 47	-30	38	9738	-3904.24	31.66	-6.58
151	SLU 48	-28	3	9713	-3892.93	31.75	-5.82
151	SLU 49	-30	24	9728	-3899.72	31.7	-6.27
151	SLU 50	-28	3	9713	-3892.93	31.75	-5.82

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
151	SLU 51	-30	24	9728	-3899.72	31.7	-6.27
151	SLU 52	-24	40	11107	-4447.01	33.35	-3.6
151	SLU 53	-22	5	11083	-4435.69	33.44	-2.84
151	SLU 54	-23	26	11097	-4442.48	33.38	-3.3
151	SLU 55	-24	40	11107	-4447.01	33.35	-3.6
151	SLU 56	-22	5	11083	-4435.69	33.44	-2.84
151	SLU 57	-23	26	11097	-4442.48	33.38	-3.3
151	SLU 58	-22	5	11083	-4435.69	33.44	-2.84
151	SLU 59	-23	26	11097	-4442.48	33.38	-3.3
151	SLU 60	-19	6	11670	-4668.3	34.16	-1.57
151	SLU 61	-20	27	11684	-4675.09	34.1	-2.03
151	SLU 62	-19	6	11670	-4668.3	34.16	-1.57
151	SLU 63	-20	27	11684	-4675.09	34.1	-2.03
151	SLU 64	-24	4	10738	-4298.76	33.28	-3.9
151	SLU 65	-26	39	10763	-4310.07	33.19	-4.66
151	SLU 66	-24	4	10738	-4298.76	33.28	-3.9
151	SLU 67	-26	25	10753	-4305.55	33.23	-4.36
151	SLU 68	-26	39	10763	-4310.07	33.19	-4.66
151	SLU 69	-24	4	10738	-4298.76	33.28	-3.9
151	SLU 70	-26	25	10753	-4305.55	33.23	-4.36
151	SLU 71	-24	4	10738	-4298.76	33.28	-3.9
151	SLU 72	-26	25	10753	-4305.55	33.23	-4.36
151	SLU 73	-20	41	12132	-4852.83	34.88	-1.69
151	SLU 74	-18	6	12108	-4841.52	34.97	-0.93
151	SLU 75	-19	27	12122	-4848.31	34.91	-1.38
151	SLU 76	-20	41	12132	-4852.83	34.88	-1.69
151	SLU 77	-18	6	12108	-4841.52	34.97	-0.93
151	SLU 78	-19	27	12122	-4848.31	34.91	-1.38
151	SLU 79	-18	6	12108	-4841.52	34.97	-0.93
151	SLU 80	-19	27	12122	-4848.31	34.91	-1.38
151	SLU 81	-15	7	12694	-5074.13	35.69	0.35
151	SLU 82	-16	28	12709	-5080.92	35.64	-0.11
151	SLU 83	-15	7	12694	-5074.13	35.69	0.35
151	SLU 84	-16	28	12709	-5080.92	35.64	-0.11
151	SLE RA 1	-20	3	8035	-3217.54	25.26	-3.42
151	SLE RA 2	-21	26	8051	-3225.09	25.2	-3.93
151	SLE RA 3	-20	3	8035	-3217.54	25.26	-3.42
151	SLE RA 4	-20	17	8045	-3222.07	25.23	-3.73
151	SLE RA 5	-21	26	8051	-3225.09	25.2	-3.93
151	SLE RA 6	-20	3	8035	-3217.54	25.26	-3.42
151	SLE RA 7	-20	17	8045	-3222.07	25.23	-3.73
151	SLE RA 8	-20	3	8035	-3217.54	25.26	-3.42
151	SLE RA 9	-20	17	8045	-3222.07	25.23	-3.73
151	SLE RA 10	-17	28	8964	-3586.93	26.33	-1.95
151	SLE RA 11	-15	4	8948	-3579.38	26.39	-1.44
151	SLE RA 12	-16	18	8958	-3583.91	26.35	-1.74
151	SLE RA 13	-17	28	8964	-3586.93	26.33	-1.95
151	SLE RA 14	-15	4	8948	-3579.38	26.39	-1.44
151	SLE RA 15	-16	18	8958	-3583.91	26.35	-1.74
151	SLE RA 16	-15	4	8948	-3579.38	26.39	-1.44
151	SLE RA 17	-16	18	8958	-3583.91	26.35	-1.74
151	SLE RA 18	-13	5	9339	-3734.46	26.87	-0.59
151	SLE RA 19	-14	19	9349	-3738.98	26.83	-0.89
151	SLE RA 20	-13	5	9339	-3734.46	26.87	-0.59
151	SLE RA 21	-14	19	9349	-3738.98	26.83	-0.89
151	SLE FR 1	-20	3	8035	-3217.54	25.26	-3.42
151	SLE FR 2	-20	7	8038	-3219.05	25.25	-3.52
151	SLE FR 3	-20	3	8035	-3217.54	25.26	-3.42
151	SLE FR 4	-18	8	8429	-3374.13	25.73	-2.67
151	SLE FR 5	-18	3	8426	-3372.62	25.75	-2.57
151	SLE FR 6	-17	4	8687	-3476	26.07	-2.01
151	SLE QP 1	-20	3	8035	-3217.54	25.26	-3.42
151	SLE QP 2	-18	3	8426	-3372.62	25.75	-2.57
151	SLD 1	594	258	9093	-3645.7	54.46	246.6
151	SLD 2	642	182	9084	-3641.3	54.62	273.1
151	SLD 3	608	-123	8879	-3539.13	56.02	251.89
151	SLD 4	657	-199	8869	-3534.73	56.18	278.4
151	SLD 5	126	687	8955	-3617.8	31.93	54.37
151	SLD 6	176	608	8945	-3613.23	32.1	81.88
151	SLD 7	174	-585	8241	-3262.57	37.14	72.02
151	SLD 8	224	-664	8231	-3258	37.31	99.52
151	SLD 9	-260	671	8622	-3487.24	14.18	-104.67
151	SLD 10	-210	592	8612	-3482.67	14.35	-77.16
151	SLD 11	-212	-601	7908	-3132.01	19.4	-87.03
151	SLD 12	-162	-680	7897	-3127.44	19.56	-59.52
151	SLD 13	-692	206	7983	-3210.5	-4.69	-283.54
151	SLD 14	-644	130	7973	-3206.1	-4.53	-257.04
151	SLD 15	-678	-176	7769	-3103.93	-3.13	-278.25
151	SLD 16	-630	-251	7759	-3099.53	-2.97	-251.74
151	SLV 1	1380	583	9949	-3995.67	91.32	566.53
151	SLV 2	1490	409	9927	-3985.64	91.69	626.95
151	SLV 3	1413	-284	9462	-3753.69	94.88	578.67
151	SLV 4	1522	-457	9440	-3743.66	95.25	639.09
151	SLV 5	312	1555	9629	-3930.22	39.89	127.57
151	SLV 6	425	1376	9606	-3919.85	40.26	190.03
151	SLV 7	421	-1334	8007	-3123.62	51.75	168.06

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
151	SLV 8	534	-1512	7985	-3113.25	52.13	230.51
151	SLV 9	-570	1519	8868	-3631.99	-0.64	-235.65
151	SLV 10	-456	1340	8845	-3621.62	-0.26	-173.2
151	SLV 11	-461	-1369	7246	-2825.39	11.23	-195.17
151	SLV 12	-347	-1548	7224	-2815.02	11.6	-132.72
151	SLV 13	-1558	464	7412	-3001.58	-43.75	-644.24
151	SLV 14	-1448	291	7390	-2991.54	-43.39	-583.81
151	SLV 15	-1525	-403	6925	-2759.6	-40.2	-632.09
151	SLV 16	-1415	-576	6903	-2749.56	-39.83	-571.67
151	CRTFP Ux+	0	0	0	0.01	0	-0.01
151	CRTFP Ux-	0	0	0	-0.01	0	0.01
151	CRTFP Uy+	0	0	0	0.01	0	0
151	CRTFP Uy-	0	0	0	-0.01	0	0
154	SLU 1	12	15	7605	-3050.8	-28.62	6.63
154	SLU 2	13	50	7627	-3061.29	-28.42	7.07
154	SLU 3	12	15	7605	-3050.8	-28.62	6.63
154	SLU 4	13	36	7618	-3057.09	-28.5	6.9
154	SLU 5	13	50	7627	-3061.29	-28.42	7.07
154	SLU 6	12	15	7605	-3050.8	-28.62	6.63
154	SLU 7	13	36	7618	-3057.09	-28.5	6.9
154	SLU 8	12	15	7605	-3050.8	-28.62	6.63
154	SLU 9	13	36	7618	-3057.09	-28.5	6.9
154	SLU 10	7	54	8984	-3599.49	-32.28	4.74
154	SLU 11	6	19	8962	-3588.99	-32.48	4.29
154	SLU 12	6	40	8975	-3595.29	-32.36	4.56
154	SLU 13	7	54	8984	-3599.49	-32.28	4.74
154	SLU 14	6	19	8962	-3588.99	-32.48	4.29
154	SLU 15	6	40	8975	-3595.29	-32.36	4.56
154	SLU 16	6	19	8962	-3588.99	-32.48	4.29
154	SLU 17	6	40	8975	-3595.29	-32.36	4.56
154	SLU 18	3	21	9543	-3819.65	-34.14	3.29
154	SLU 19	4	42	9557	-3825.94	-34.02	3.56
154	SLU 20	3	21	9543	-3819.65	-34.14	3.29
154	SLU 21	4	42	9557	-3825.94	-34.02	3.56
154	SLU 22	8	18	8622	-3453.84	-31.76	5.22
154	SLU 23	9	53	8644	-3464.34	-31.56	5.66
154	SLU 24	8	18	8622	-3453.84	-31.76	5.22
154	SLU 25	9	39	8635	-3460.14	-31.64	5.48
154	SLU 26	9	53	8644	-3464.34	-31.56	5.66
154	SLU 27	8	18	8622	-3453.84	-31.76	5.22
154	SLU 28	9	39	8635	-3460.14	-31.64	5.48
154	SLU 29	8	18	8622	-3453.84	-31.76	5.22
154	SLU 30	9	39	8635	-3460.14	-31.64	5.48
154	SLU 31	3	57	10001	-4002.53	-35.42	3.32
154	SLU 32	2	23	9979	-3992.04	-35.62	2.88
154	SLU 33	2	43	9992	-3998.33	-35.5	3.14
154	SLU 34	3	57	10001	-4002.53	-35.42	3.32
154	SLU 35	2	23	9979	-3992.04	-35.62	2.88
154	SLU 36	2	43	9992	-3998.33	-35.5	3.14
154	SLU 37	2	23	9979	-3992.04	-35.62	2.88
154	SLU 38	2	43	9992	-3998.33	-35.5	3.14
154	SLU 39	-1	25	10560	-4222.69	-37.28	1.88
154	SLU 40	0	45	10574	-4228.99	-37.16	2.14
154	SLU 41	-1	25	10560	-4222.69	-37.28	1.88
154	SLU 42	0	45	10574	-4228.99	-37.16	2.14
154	SLU 43	17	18	9538	-3827.85	-36.13	9.11
154	SLU 44	18	53	9560	-3838.34	-35.93	9.55
154	SLU 45	17	18	9538	-3827.85	-36.13	9.11
154	SLU 46	18	39	9551	-3834.14	-36.01	9.37
154	SLU 47	18	53	9560	-3838.34	-35.93	9.55
154	SLU 48	17	18	9538	-3827.85	-36.13	9.11
154	SLU 49	18	39	9551	-3834.14	-36.01	9.37
154	SLU 50	17	18	9538	-3827.85	-36.13	9.11
154	SLU 51	18	39	9551	-3834.14	-36.01	9.37
154	SLU 52	12	57	10917	-4376.54	-39.79	7.21
154	SLU 53	11	23	10895	-4366.04	-39.99	6.77
154	SLU 54	11	44	10908	-4372.34	-39.87	7.03
154	SLU 55	12	57	10917	-4376.54	-39.79	7.21
154	SLU 56	11	23	10895	-4366.04	-39.99	6.77
154	SLU 57	11	44	10908	-4372.34	-39.87	7.03
154	SLU 58	11	23	10895	-4366.04	-39.99	6.77
154	SLU 59	11	44	10908	-4372.34	-39.87	7.03
154	SLU 60	8	25	11476	-4596.7	-41.65	5.77
154	SLU 61	9	45	11490	-4603	-41.53	6.03
154	SLU 62	8	25	11476	-4596.7	-41.65	5.77
154	SLU 63	9	45	11490	-4603	-41.53	6.03
154	SLU 64	13	21	10555	-4230.9	-39.27	7.69
154	SLU 65	14	56	10577	-4241.39	-39.07	8.14
154	SLU 66	13	21	10555	-4230.9	-39.27	7.69
154	SLU 67	14	42	10568	-4237.19	-39.15	7.96
154	SLU 68	14	56	10577	-4241.39	-39.07	8.14
154	SLU 69	13	21	10555	-4230.9	-39.27	7.69
154	SLU 70	14	42	10568	-4237.19	-39.15	7.96
154	SLU 71	13	21	10555	-4230.9	-39.27	7.69
154	SLU 72	14	42	10568	-4237.19	-39.15	7.96
154	SLU 73	8	61	11934	-4779.58	-42.93	5.8

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
154	SLU 74	7	26	11912	-4769.09	-43.13	5.35
154	SLU 75	7	47	11925	-4775.39	-43.01	5.62
154	SLU 76	8	61	11934	-4779.58	-42.93	5.8
154	SLU 77	7	26	11912	-4769.09	-43.13	5.35
154	SLU 78	7	47	11925	-4775.39	-43.01	5.62
154	SLU 79	7	26	11912	-4769.09	-43.13	5.35
154	SLU 80	7	47	11925	-4775.39	-43.01	5.62
154	SLU 81	4	28	12493	-4999.75	-44.79	4.35
154	SLU 82	5	49	12507	-5006.04	-44.67	4.62
154	SLU 83	4	28	12493	-4999.75	-44.79	4.35
154	SLU 84	5	49	12507	-5006.04	-44.67	4.62
154	SLE RA 1	11	16	7895	-3165.95	-29.52	6.23
154	SLE RA 2	12	39	7910	-3172.95	-29.38	6.52
154	SLE RA 3	11	16	7895	-3165.95	-29.52	6.23
154	SLE RA 4	11	30	7904	-3170.15	-29.44	6.41
154	SLE RA 5	12	39	7910	-3172.95	-29.38	6.52
154	SLE RA 6	11	16	7895	-3165.95	-29.52	6.23
154	SLE RA 7	11	30	7904	-3170.15	-29.44	6.41
154	SLE RA 8	11	16	7895	-3165.95	-29.52	6.23
154	SLE RA 9	11	30	7904	-3170.15	-29.44	6.41
154	SLE RA 10	7	42	8815	-3531.75	-31.96	4.96
154	SLE RA 11	7	19	8800	-3524.75	-32.09	4.67
154	SLE RA 12	7	33	8809	-3528.95	-32.01	4.85
154	SLE RA 13	7	42	8815	-3531.75	-31.96	4.96
154	SLE RA 14	7	19	8800	-3524.75	-32.09	4.67
154	SLE RA 15	7	33	8809	-3528.95	-32.01	4.85
154	SLE RA 16	7	19	8800	-3524.75	-32.09	4.67
154	SLE RA 17	7	33	8809	-3528.95	-32.01	4.85
154	SLE RA 18	5	20	9188	-3678.52	-33.2	4
154	SLE RA 19	5	34	9197	-3682.72	-33.11	4.18
154	SLE RA 20	5	20	9188	-3678.52	-33.2	4
154	SLE RA 21	5	34	9197	-3682.72	-33.11	4.18
154	SLE FR 1	11	16	7895	-3165.95	-29.52	6.23
154	SLE FR 2	11	20	7898	-3167.35	-29.49	6.29
154	SLE FR 3	11	16	7895	-3165.95	-29.52	6.23
154	SLE FR 4	9	22	8286	-3321.12	-30.59	5.62
154	SLE FR 5	9	17	8283	-3319.72	-30.62	5.56
154	SLE FR 6	8	18	8542	-3422.24	-31.36	5.11
154	SLE QP 1	11	16	7895	-3165.95	-29.52	6.23
154	SLE QP 2	9	17	8283	-3319.72	-30.62	5.56
154	SLD 1	644	124	7862	-3165.03	0.72	264.27
154	SLD 2	691	194	7871	-3169.23	1	290.53
154	SLD 3	621	-245	7651	-3060.14	-1.7	253.62
154	SLD 4	668	-175	7660	-3064.33	-1.43	279.88
154	SLD 5	218	583	8473	-3430.86	-17.64	89.63
154	SLD 6	267	655	8482	-3435.22	-17.35	116.88
154	SLD 7	140	-647	7771	-3081.21	-25.73	54.14
154	SLD 8	188	-575	7780	-3085.56	-25.44	81.4
154	SLD 9	-170	609	8786	-3553.89	-35.8	-70.28
154	SLD 10	-121	681	8795	-3558.24	-35.52	-43.02
154	SLD 11	-249	-621	8084	-3204.23	-43.89	-105.76
154	SLD 12	-200	-549	8094	-3208.58	-43.6	-78.51
154	SLD 13	-649	209	8906	-3575.12	-59.81	-268.76
154	SLD 14	-602	279	8915	-3579.31	-59.54	-242.5
154	SLD 15	-673	-160	8695	-3470.22	-62.24	-279.41
154	SLD 16	-626	-90	8704	-3474.41	-61.96	-253.15
154	SLV 1	1459	260	7320	-2965.86	40.95	596.32
154	SLV 2	1566	418	7340	-2975.42	41.57	656.19
154	SLV 3	1406	-578	6842	-2727.57	35.45	572.2
154	SLV 4	1513	-420	6862	-2737.13	36.07	632.06
154	SLV 5	486	1302	8712	-3571.46	-1.03	197.41
154	SLV 6	597	1466	8733	-3581.34	-0.39	259.29
154	SLV 7	308	-1490	7118	-2777.17	-19.37	117.01
154	SLV 8	418	-1326	7139	-2787.05	-18.73	178.89
154	SLV 9	-400	1360	9427	-3852.4	-42.51	-167.77
154	SLV 10	-289	1524	9448	-3862.28	-41.87	-105.89
154	SLV 11	-578	-1432	7833	-3058.1	-60.85	-248.17
154	SLV 12	-468	-1268	7854	-3067.99	-60.21	-186.29
154	SLV 13	-1495	454	9704	-3902.31	-97.31	-620.94
154	SLV 14	-1387	612	9725	-3911.87	-96.69	-561.08
154	SLV 15	-1548	-384	9226	-3664.03	-102.81	-645.07
154	SLV 16	-1441	-226	9246	-3673.59	-102.19	-585.2
154	CRTFP Ux+	0	0	0	-0.01	0	-0.01
154	CRTFP Ux-	0	0	0	0.01	0	0.01
154	CRTFP Uy+	0	0	0	0.01	0	0
154	CRTFP Uy-	0	0	0	-0.01	0	0
156	SLU 1	-10	-15	1420	1.95	-264.8	-3.67
156	SLU 2	-11	-6	1423	1.92	-264.74	-1.56
156	SLU 3	-10	-15	1420	1.95	-264.8	-3.67
156	SLU 4	-10	-10	1422	1.93	-264.76	-2.4
156	SLU 5	-11	-6	1423	1.92	-264.74	-1.56
156	SLU 6	-10	-15	1420	1.95	-264.8	-3.67
156	SLU 7	-10	-10	1422	1.93	-264.76	-2.4
156	SLU 8	-10	-15	1420	1.95	-264.8	-3.67
156	SLU 9	-10	-10	1422	1.93	-264.76	-2.4
156	SLU 10	-10	-11	1659	2.32	-308.49	-2.63

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
156	SLU 11	-10	-19	1656	2.36	-308.55	-4.74
156	SLU 12	-10	-14	1658	2.34	-308.51	-3.47
156	SLU 13	-10	-11	1659	2.32	-308.49	-2.63
156	SLU 14	-10	-19	1656	2.36	-308.55	-4.74
156	SLU 15	-10	-14	1658	2.34	-308.51	-3.47
156	SLU 16	-10	-19	1656	2.36	-308.55	-4.74
156	SLU 17	-10	-14	1658	2.34	-308.51	-3.47
156	SLU 18	-10	-21	1758	2.53	-327.3	-5.19
156	SLU 19	-10	-16	1759	2.51	-327.26	-3.93
156	SLU 20	-10	-21	1758	2.53	-327.3	-5.19
156	SLU 21	-10	-16	1759	2.51	-327.26	-3.93
156	SLU 22	-10	-18	1599	2.26	-297.71	-4.42
156	SLU 23	-11	-9	1602	2.23	-297.65	-2.31
156	SLU 24	-10	-18	1599	2.26	-297.71	-4.42
156	SLU 25	-10	-13	1600	2.24	-297.67	-3.15
156	SLU 26	-11	-9	1602	2.23	-297.65	-2.31
156	SLU 27	-10	-18	1599	2.26	-297.71	-4.42
156	SLU 28	-10	-13	1600	2.24	-297.67	-3.15
156	SLU 29	-10	-18	1599	2.26	-297.71	-4.42
156	SLU 30	-10	-13	1600	2.24	-297.67	-3.15
156	SLU 31	-10	-14	1838	2.63	-341.4	-3.38
156	SLU 32	-10	-22	1835	2.66	-341.46	-5.49
156	SLU 33	-10	-17	1837	2.64	-341.42	-4.22
156	SLU 34	-10	-14	1838	2.63	-341.4	-3.38
156	SLU 35	-10	-22	1835	2.66	-341.46	-5.49
156	SLU 36	-10	-17	1837	2.64	-341.42	-4.22
156	SLU 37	-10	-22	1835	2.66	-341.46	-5.49
156	SLU 38	-10	-17	1837	2.64	-341.42	-4.22
156	SLU 39	-10	-24	1936	2.83	-360.21	-5.94
156	SLU 40	-10	-19	1938	2.81	-360.17	-4.68
156	SLU 41	-10	-24	1936	2.83	-360.21	-5.94
156	SLU 42	-10	-19	1938	2.81	-360.17	-4.68
156	SLU 43	-13	-18	1785	2.43	-332.95	-4.52
156	SLU 44	-14	-10	1788	2.4	-332.9	-2.4
156	SLU 45	-13	-18	1785	2.43	-332.95	-4.52
156	SLU 46	-14	-13	1787	2.41	-332.92	-3.25
156	SLU 47	-14	-10	1788	2.4	-332.9	-2.4
156	SLU 48	-13	-18	1785	2.43	-332.95	-4.52
156	SLU 49	-14	-13	1787	2.41	-332.92	-3.25
156	SLU 50	-13	-18	1785	2.43	-332.95	-4.52
156	SLU 51	-14	-13	1787	2.41	-332.92	-3.25
156	SLU 52	-13	-14	2024	2.8	-376.65	-3.47
156	SLU 53	-13	-23	2021	2.84	-376.7	-5.58
156	SLU 54	-13	-18	2023	2.82	-376.67	-4.31
156	SLU 55	-13	-14	2024	2.8	-376.65	-3.47
156	SLU 56	-13	-23	2021	2.84	-376.7	-5.58
156	SLU 57	-13	-18	2023	2.82	-376.67	-4.31
156	SLU 58	-13	-23	2021	2.84	-376.7	-5.58
156	SLU 59	-13	-18	2023	2.82	-376.67	-4.31
156	SLU 60	-13	-24	2122	3.01	-395.45	-6.04
156	SLU 61	-13	-19	2124	2.99	-395.42	-4.77
156	SLU 62	-13	-24	2122	3.01	-395.45	-6.04
156	SLU 63	-13	-19	2124	2.99	-395.42	-4.77
156	SLU 64	-13	-21	1963	2.74	-365.86	-5.26
156	SLU 65	-14	-13	1966	2.71	-365.81	-3.15
156	SLU 66	-13	-21	1963	2.74	-365.86	-5.26
156	SLU 67	-13	-16	1965	2.72	-365.83	-4
156	SLU 68	-14	-13	1966	2.71	-365.81	-3.15
156	SLU 69	-13	-21	1963	2.74	-365.86	-5.26
156	SLU 70	-13	-16	1965	2.72	-365.83	-4
156	SLU 71	-13	-21	1963	2.74	-365.86	-5.26
156	SLU 72	-13	-16	1965	2.72	-365.83	-4
156	SLU 73	-13	-17	2203	3.11	-409.56	-4.22
156	SLU 74	-13	-26	2200	3.14	-409.61	-6.33
156	SLU 75	-13	-21	2202	3.12	-409.58	-5.06
156	SLU 76	-13	-17	2203	3.11	-409.56	-4.22
156	SLU 77	-13	-26	2200	3.14	-409.61	-6.33
156	SLU 78	-13	-21	2202	3.12	-409.58	-5.06
156	SLU 79	-13	-26	2200	3.14	-409.61	-6.33
156	SLU 80	-13	-21	2202	3.12	-409.58	-5.06
156	SLU 81	-13	-27	2301	3.32	-428.36	-6.79
156	SLU 82	-13	-22	2303	3.3	-428.33	-5.52
156	SLU 83	-13	-27	2301	3.32	-428.36	-6.79
156	SLU 84	-13	-22	2303	3.3	-428.33	-5.52
156	SLE RA 1	-10	-16	1471	2.04	-274.2	-3.88
156	SLE RA 2	-10	-10	1473	2.02	-274.16	-2.48
156	SLE RA 3	-10	-16	1471	2.04	-274.2	-3.88
156	SLE RA 4	-10	-12	1472	2.03	-274.18	-3.04
156	SLE RA 5	-10	-10	1473	2.02	-274.16	-2.48
156	SLE RA 6	-10	-16	1471	2.04	-274.2	-3.88
156	SLE RA 7	-10	-12	1472	2.03	-274.18	-3.04
156	SLE RA 8	-10	-16	1471	2.04	-274.2	-3.88
156	SLE RA 9	-10	-12	1472	2.03	-274.18	-3.04
156	SLE RA 10	-10	-13	1631	2.29	-303.33	-3.19
156	SLE RA 11	-10	-19	1629	2.31	-303.37	-4.6
156	SLE RA 12	-10	-15	1630	2.3	-303.34	-3.75

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
156	SLE RA 13	-10	-13	1631	2.29	-303.33	-3.19
156	SLE RA 14	-10	-19	1629	2.31	-303.37	-4.6
156	SLE RA 15	-10	-15	1630	2.3	-303.34	-3.75
156	SLE RA 16	-10	-19	1629	2.31	-303.37	-4.6
156	SLE RA 17	-10	-15	1630	2.3	-303.34	-3.75
156	SLE RA 18	-10	-20	1696	2.42	-315.87	-4.9
156	SLE RA 19	-10	-16	1697	2.41	-315.84	-4.06
156	SLE RA 20	-10	-20	1696	2.42	-315.87	-4.9
156	SLE RA 21	-10	-16	1697	2.41	-315.84	-4.06
156	SLE FR 1	-10	-16	1471	2.04	-274.2	-3.88
156	SLE FR 2	-10	-15	1471	2.04	-274.19	-3.6
156	SLE FR 3	-10	-16	1471	2.04	-274.2	-3.88
156	SLE FR 4	-10	-16	1539	2.15	-286.69	-3.91
156	SLE FR 5	-10	-17	1539	2.16	-286.7	-4.19
156	SLE FR 6	-10	-18	1584	2.23	-295.03	-4.39
156	SLE QP 1	-10	-16	1471	2.04	-274.2	-3.88
156	SLE QP 2	-10	-17	1539	2.16	-286.7	-4.19
156	SLD 1	80	55	1765	2.27	-320.94	13.75
156	SLD 2	85	27	1764	2.3	-321.15	6.86
156	SLD 3	85	-37	1740	2.68	-323.51	-9.34
156	SLD 4	90	-65	1740	2.7	-323.72	-16.23
156	SLD 5	6	155	1643	1.57	-293	38.75
156	SLD 6	12	126	1643	1.59	-293.22	31.6
156	SLD 7	25	-153	1563	2.92	-301.56	-38.21
156	SLD 8	31	-182	1562	2.95	-301.78	-45.36
156	SLD 9	-51	148	1515	1.37	-271.62	36.98
156	SLD 10	-45	119	1514	1.39	-271.84	29.83
156	SLD 11	-32	-160	1435	2.72	-280.19	-39.98
156	SLD 12	-26	-189	1434	2.75	-280.4	-47.13
156	SLD 13	-110	31	1338	1.61	-249.68	7.85
156	SLD 14	-105	3	1337	1.63	-249.9	0.96
156	SLD 15	-105	-61	1313	2.02	-252.25	-15.24
156	SLD 16	-100	-89	1312	2.04	-252.46	-22.13
156	SLV 1	195	147	2055	2.43	-364.93	36.61
156	SLV 2	206	84	2053	2.48	-365.41	20.9
156	SLV 3	208	-63	2000	3.35	-370.78	-15.82
156	SLV 4	219	-126	1998	3.4	-371.26	-31.53
156	SLV 5	28	373	1778	0.82	-301.11	93.33
156	SLV 6	40	308	1775	0.87	-301.61	77.09
156	SLV 7	71	-325	1594	3.9	-320.63	-81.43
156	SLV 8	82	-391	1592	3.95	-321.12	-97.67
156	SLV 9	-103	357	1485	0.36	-252.28	89.29
156	SLV 10	-91	292	1483	0.42	-252.77	73.05
156	SLV 11	-60	-342	1302	3.44	-271.79	-85.46
156	SLV 12	-48	-407	1299	3.5	-272.29	-101.7
156	SLV 13	-239	92	1079	0.91	-202.14	23.15
156	SLV 14	-228	29	1077	0.96	-202.62	7.44
156	SLV 15	-226	-118	1024	1.83	-207.99	-29.28
156	SLV 16	-215	-181	1022	1.89	-208.47	-44.99
156	CRTFP Ux+	0	0	0	0	0	0
156	CRTFP Ux-	0	0	0	0	0	0
156	CRTFP Uy+	0	0	0	0	0	0
156	CRTFP Uy-	0	0	0	0	0	0
159	SLU 1	1	-27	1572	2.58	269.11	6.69
159	SLU 2	2	-17	1574	2.53	268.66	4.24
159	SLU 3	1	-27	1572	2.58	269.11	6.69
159	SLU 4	2	-21	1573	2.55	268.84	5.22
159	SLU 5	2	-17	1574	2.53	268.66	4.24
159	SLU 6	1	-27	1572	2.58	269.11	6.69
159	SLU 7	2	-21	1573	2.55	268.84	5.22
159	SLU 8	1	-27	1572	2.58	269.11	6.69
159	SLU 9	2	-21	1573	2.55	268.84	5.22
159	SLU 10	0	-23	1843	3.11	314.31	5.65
159	SLU 11	0	-33	1841	3.16	314.76	8.09
159	SLU 12	0	-27	1843	3.13	314.49	6.63
159	SLU 13	0	-23	1843	3.11	314.31	5.65
159	SLU 14	0	-33	1841	3.16	314.76	8.09
159	SLU 15	0	-27	1843	3.13	314.49	6.63
159	SLU 16	0	-33	1841	3.16	314.76	8.09
159	SLU 17	0	-27	1843	3.13	314.49	6.63
159	SLU 18	-1	-35	1957	3.41	334.33	8.7
159	SLU 19	-1	-29	1958	3.38	334.05	7.23
159	SLU 20	-1	-35	1957	3.41	334.33	8.7
159	SLU 21	-1	-29	1958	3.38	334.05	7.23
159	SLU 22	0	-31	1776	3.02	303.48	7.73
159	SLU 23	1	-21	1777	2.97	303.03	5.28
159	SLU 24	0	-31	1776	3.02	303.48	7.73
159	SLU 25	1	-25	1777	2.99	303.21	6.26
159	SLU 26	1	-21	1777	2.97	303.03	5.28
159	SLU 27	0	-31	1776	3.02	303.48	7.73
159	SLU 28	1	-25	1777	2.99	303.21	6.26
159	SLU 29	0	-31	1776	3.02	303.48	7.73
159	SLU 30	1	-25	1777	2.99	303.21	6.26
159	SLU 31	-1	-27	2047	3.55	348.68	6.69
159	SLU 32	-1	-37	2045	3.6	349.13	9.14
159	SLU 33	-1	-31	2046	3.57	348.86	7.67

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
159	SLU 34	-1	-27	2047	3.55	348.68	6.69
159	SLU 35	-1	-37	2045	3.6	349.13	9.14
159	SLU 36	-1	-31	2046	3.57	348.86	7.67
159	SLU 37	-1	-37	2045	3.6	349.13	9.14
159	SLU 38	-1	-31	2046	3.57	348.86	7.67
159	SLU 39	-2	-39	2160	3.85	368.7	9.74
159	SLU 40	-2	-33	2161	3.82	368.43	8.27
159	SLU 41	-2	-39	2160	3.85	368.7	9.74
159	SLU 42	-2	-33	2161	3.82	368.43	8.27
159	SLU 43	2	-34	1974	3.21	338.06	8.34
159	SLU 44	3	-24	1976	3.15	337.61	5.89
159	SLU 45	2	-34	1974	3.21	338.06	8.34
159	SLU 46	2	-28	1975	3.18	337.79	6.87
159	SLU 47	3	-24	1976	3.15	337.61	5.89
159	SLU 48	2	-34	1974	3.21	338.06	8.34
159	SLU 49	2	-28	1975	3.18	337.79	6.87
159	SLU 50	2	-34	1974	3.21	338.06	8.34
159	SLU 51	2	-28	1975	3.18	337.79	6.87
159	SLU 52	1	-29	2245	3.73	383.26	7.3
159	SLU 53	1	-39	2243	3.79	383.71	9.74
159	SLU 54	1	-33	2244	3.75	383.44	8.28
159	SLU 55	1	-29	2245	3.73	383.26	7.3
159	SLU 56	1	-39	2243	3.79	383.71	9.74
159	SLU 57	1	-33	2244	3.75	383.44	8.28
159	SLU 58	1	-39	2243	3.79	383.71	9.74
159	SLU 59	1	-33	2244	3.75	383.44	8.28
159	SLU 60	0	-42	2359	4.04	403.27	10.35
159	SLU 61	0	-36	2360	4	403	8.88
159	SLU 62	0	-42	2359	4.04	403.27	10.35
159	SLU 63	0	-36	2360	4	403	8.88
159	SLU 64	1	-38	2177	3.65	372.43	9.38
159	SLU 65	1	-28	2179	3.59	371.98	6.93
159	SLU 66	1	-38	2177	3.65	372.43	9.38
159	SLU 67	1	-32	2179	3.61	372.16	7.91
159	SLU 68	1	-28	2179	3.59	371.98	6.93
159	SLU 69	1	-38	2177	3.65	372.43	9.38
159	SLU 70	1	-32	2179	3.61	372.16	7.91
159	SLU 71	1	-38	2177	3.65	372.43	9.38
159	SLU 72	1	-32	2179	3.61	372.16	7.91
159	SLU 73	0	-34	2449	4.17	417.63	8.34
159	SLU 74	-1	-43	2447	4.23	418.08	10.78
159	SLU 75	0	-37	2448	4.19	417.81	9.32
159	SLU 76	0	-34	2449	4.17	417.63	8.34
159	SLU 77	-1	-43	2447	4.23	418.08	10.78
159	SLU 78	0	-37	2448	4.19	417.81	9.32
159	SLU 79	-1	-43	2447	4.23	418.08	10.78
159	SLU 80	0	-37	2448	4.19	417.81	9.32
159	SLU 81	-1	-46	2562	4.47	437.65	11.39
159	SLU 82	-1	-40	2563	4.44	437.37	9.92
159	SLU 83	-1	-46	2562	4.47	437.65	11.39
159	SLU 84	-1	-40	2563	4.44	437.37	9.92
159	SLE RA 1	1	-28	1630	2.71	278.93	6.99
159	SLE RA 2	1	-22	1631	2.67	278.63	5.35
159	SLE RA 3	1	-28	1630	2.71	278.93	6.99
159	SLE RA 4	1	-24	1631	2.69	278.75	6.01
159	SLE RA 5	1	-22	1631	2.67	278.63	5.35
159	SLE RA 6	1	-28	1630	2.71	278.93	6.99
159	SLE RA 7	1	-24	1631	2.69	278.75	6.01
159	SLE RA 8	1	-28	1630	2.71	278.93	6.99
159	SLE RA 9	1	-24	1631	2.69	278.75	6.01
159	SLE RA 10	0	-25	1811	3.06	309.06	6.29
159	SLE RA 11	0	-32	1810	3.1	309.36	7.92
159	SLE RA 12	0	-28	1811	3.07	309.18	6.94
159	SLE RA 13	0	-25	1811	3.06	309.06	6.29
159	SLE RA 14	0	-32	1810	3.1	309.36	7.92
159	SLE RA 15	0	-28	1811	3.07	309.18	6.94
159	SLE RA 16	0	-32	1810	3.1	309.36	7.92
159	SLE RA 17	0	-28	1811	3.07	309.18	6.94
159	SLE RA 18	0	-33	1887	3.26	322.41	8.32
159	SLE RA 19	0	-30	1887	3.24	322.23	7.35
159	SLE RA 20	0	-33	1887	3.26	322.41	8.32
159	SLE RA 21	0	-30	1887	3.24	322.23	7.35
159	SLE FR 1	1	-28	1630	2.71	278.93	6.99
159	SLE FR 2	1	-27	1630	2.7	278.87	6.66
159	SLE FR 3	1	-28	1630	2.71	278.93	6.99
159	SLE FR 4	1	-28	1707	2.87	291.91	7.06
159	SLE FR 5	1	-30	1707	2.87	291.97	7.39
159	SLE FR 6	0	-31	1758	2.98	300.67	7.66
159	SLE QP 1	1	-28	1630	2.71	278.93	6.99
159	SLE QP 2	1	-30	1707	2.87	291.97	7.39
159	SLD 1	111	-9	1465	2.09	249.5	2.15
159	SLD 2	116	22	1463	2.04	248.62	-5.65
159	SLD 3	105	-112	1450	2.75	255.77	27.88
159	SLD 4	110	-81	1449	2.71	254.88	20.09
159	SLD 5	41	121	1657	1.65	270.05	-30.33
159	SLD 6	46	154	1656	1.6	269.13	-38.43

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
159	SLD 7	21	-222	1608	3.87	290.94	55.44
159	SLD 8	26	-190	1607	3.82	290.03	47.35
159	SLD 9	-25	130	1807	1.93	293.92	-32.57
159	SLD 10	-20	163	1806	1.88	293	-40.67
159	SLD 11	-45	-213	1758	4.15	314.81	53.2
159	SLD 12	-40	-180	1757	4.1	313.9	45.11
159	SLD 13	-108	21	1966	3.04	329.06	-5.31
159	SLD 14	-104	53	1964	3	328.18	-13.11
159	SLD 15	-115	-82	1951	3.71	335.33	20.42
159	SLD 16	-110	-50	1950	3.66	334.45	12.62
159	SLV 1	253	16	1153	1.08	194.97	-4.38
159	SLV 2	264	88	1150	0.97	192.96	-22.15
159	SLV 3	239	-218	1120	2.59	209.21	54.05
159	SLV 4	250	-146	1117	2.48	207.2	36.27
159	SLV 5	93	312	1593	0.08	242.01	-78.24
159	SLV 6	105	386	1590	-0.03	239.93	-96.61
159	SLV 7	47	-467	1481	5.12	289.49	116.52
159	SLV 8	58	-393	1478	5.01	287.4	98.15
159	SLV 9	-57	333	1936	0.74	296.54	-83.37
159	SLV 10	-46	408	1933	0.63	294.46	-101.75
159	SLV 11	-104	-446	1824	5.78	344.02	111.39
159	SLV 12	-92	-372	1822	5.66	341.94	93.01
159	SLV 13	-248	86	2297	3.26	376.75	-21.5
159	SLV 14	-237	158	2295	3.16	374.74	-39.28
159	SLV 15	-262	-147	2264	4.78	390.99	36.93
159	SLV 16	-252	-75	2261	4.67	388.98	19.15
159	CRTFP Ux+	0	0	0	0	0	0
159	CRTFP Ux-	0	0	0	0	0	0
159	CRTFP Uy+	0	0	0	0	0	0
159	CRTFP Uy-	0	0	0	0	0	0
161	SLU 1	-4	7	2894	1.71	0.14	0.23
161	SLU 2	-5	19	2896	1.62	0.15	0.24
161	SLU 3	-4	7	2894	1.71	0.14	0.23
161	SLU 4	-5	14	2895	1.66	0.14	0.23
161	SLU 5	-5	19	2896	1.62	0.15	0.24
161	SLU 6	-4	7	2894	1.71	0.14	0.23
161	SLU 7	-5	14	2895	1.66	0.14	0.23
161	SLU 8	-4	7	2894	1.71	0.14	0.23
161	SLU 9	-5	14	2895	1.66	0.14	0.23
161	SLU 10	-5	23	3434	2.08	0.13	0.25
161	SLU 11	-5	10	3433	2.18	0.12	0.25
161	SLU 12	-5	18	3434	2.12	0.13	0.25
161	SLU 13	-5	23	3434	2.08	0.13	0.25
161	SLU 14	-5	10	3433	2.18	0.12	0.25
161	SLU 15	-5	18	3434	2.12	0.13	0.25
161	SLU 16	-5	10	3433	2.18	0.12	0.25
161	SLU 17	-5	18	3434	2.12	0.13	0.25
161	SLU 18	-5	12	3664	2.37	0.11	0.26
161	SLU 19	-5	19	3665	2.32	0.12	0.26
161	SLU 20	-5	12	3664	2.37	0.11	0.26
161	SLU 21	-5	19	3665	2.32	0.12	0.26
161	SLU 22	-5	9	3297	2.06	0.1	0.25
161	SLU 23	-5	22	3299	1.97	0.11	0.25
161	SLU 24	-5	9	3297	2.06	0.1	0.25
161	SLU 25	-5	17	3298	2	0.11	0.25
161	SLU 26	-5	22	3299	1.97	0.11	0.25
161	SLU 27	-5	9	3297	2.06	0.1	0.25
161	SLU 28	-5	17	3298	2	0.11	0.25
161	SLU 29	-5	9	3297	2.06	0.1	0.25
161	SLU 30	-5	17	3298	2	0.11	0.25
161	SLU 31	-6	25	3838	2.43	0.1	0.27
161	SLU 32	-6	13	3836	2.52	0.09	0.26
161	SLU 33	-6	20	3837	2.47	0.09	0.27
161	SLU 34	-6	25	3838	2.43	0.1	0.27
161	SLU 35	-6	13	3836	2.52	0.09	0.26
161	SLU 36	-6	20	3837	2.47	0.09	0.27
161	SLU 37	-6	13	3836	2.52	0.09	0.26
161	SLU 38	-6	20	3837	2.47	0.09	0.27
161	SLU 39	-6	14	4067	2.72	0.08	0.27
161	SLU 40	-6	22	4068	2.66	0.09	0.27
161	SLU 41	-6	14	4067	2.72	0.08	0.27
161	SLU 42	-6	22	4068	2.66	0.09	0.27
161	SLU 43	-6	8	3624	2.11	0.19	0.3
161	SLU 44	-6	21	3626	2.02	0.2	0.3
161	SLU 45	-6	8	3624	2.11	0.19	0.3
161	SLU 46	-6	15	3625	2.05	0.19	0.3
161	SLU 47	-6	21	3626	2.02	0.2	0.3
161	SLU 48	-6	8	3624	2.11	0.19	0.3
161	SLU 49	-6	15	3625	2.05	0.19	0.3
161	SLU 50	-6	8	3624	2.11	0.19	0.3
161	SLU 51	-6	15	3625	2.05	0.19	0.3
161	SLU 52	-6	24	4164	2.48	0.18	0.32
161	SLU 53	-6	11	4163	2.57	0.17	0.31
161	SLU 54	-6	19	4164	2.52	0.18	0.32
161	SLU 55	-6	24	4164	2.48	0.18	0.32
161	SLU 56	-6	11	4163	2.57	0.17	0.31

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
161	SLU 57	-6	19	4164	2.52	0.18	0.32
161	SLU 58	-6	11	4163	2.57	0.17	0.31
161	SLU 59	-6	19	4164	2.52	0.18	0.32
161	SLU 60	-7	13	4393	2.77	0.17	0.32
161	SLU 61	-7	21	4394	2.71	0.17	0.32
161	SLU 62	-7	13	4393	2.77	0.17	0.32
161	SLU 63	-7	21	4394	2.71	0.17	0.32
161	SLU 64	-6	10	4027	2.45	0.16	0.31
161	SLU 65	-6	23	4029	2.36	0.16	0.32
161	SLU 66	-6	10	4027	2.45	0.16	0.31
161	SLU 67	-6	18	4028	2.4	0.16	0.31
161	SLU 68	-6	23	4029	2.36	0.16	0.32
161	SLU 69	-6	10	4027	2.45	0.16	0.31
161	SLU 70	-6	18	4028	2.4	0.16	0.31
161	SLU 71	-6	10	4027	2.45	0.16	0.31
161	SLU 72	-6	18	4028	2.4	0.16	0.31
161	SLU 73	-7	27	4568	2.82	0.15	0.33
161	SLU 74	-7	14	4566	2.92	0.14	0.33
161	SLU 75	-7	22	4567	2.86	0.15	0.33
161	SLU 76	-7	27	4568	2.82	0.15	0.33
161	SLU 77	-7	14	4566	2.92	0.14	0.33
161	SLU 78	-7	22	4567	2.86	0.15	0.33
161	SLU 79	-7	14	4566	2.92	0.14	0.33
161	SLU 80	-7	22	4567	2.86	0.15	0.33
161	SLU 81	-7	15	4797	3.11	0.13	0.33
161	SLU 82	-7	23	4798	3.06	0.14	0.34
161	SLU 83	-7	15	4797	3.11	0.13	0.33
161	SLU 84	-7	23	4798	3.06	0.14	0.34
161	SLE RA 1	-5	7	3009	1.81	0.13	0.24
161	SLE RA 2	-5	16	3010	1.75	0.13	0.24
161	SLE RA 3	-5	7	3009	1.81	0.13	0.24
161	SLE RA 4	-5	12	3010	1.78	0.13	0.24
161	SLE RA 5	-5	16	3010	1.75	0.13	0.24
161	SLE RA 6	-5	7	3009	1.81	0.13	0.24
161	SLE RA 7	-5	12	3010	1.78	0.13	0.24
161	SLE RA 8	-5	7	3009	1.81	0.13	0.24
161	SLE RA 9	-5	12	3010	1.78	0.13	0.24
161	SLE RA 10	-5	18	3369	2.06	0.12	0.25
161	SLE RA 11	-5	10	3368	2.12	0.12	0.25
161	SLE RA 12	-5	15	3369	2.08	0.12	0.25
161	SLE RA 13	-5	18	3369	2.06	0.12	0.25
161	SLE RA 14	-5	10	3368	2.12	0.12	0.25
161	SLE RA 15	-5	15	3369	2.08	0.12	0.25
161	SLE RA 16	-5	10	3368	2.12	0.12	0.25
161	SLE RA 17	-5	15	3369	2.08	0.12	0.25
161	SLE RA 18	-5	11	3522	2.25	0.11	0.25
161	SLE RA 19	-5	16	3523	2.22	0.12	0.25
161	SLE RA 20	-5	11	3522	2.25	0.11	0.25
161	SLE RA 21	-5	16	3523	2.22	0.12	0.25
161	SLE FR 1	-5	7	3009	1.81	0.13	0.24
161	SLE FR 2	-5	9	3009	1.8	0.13	0.24
161	SLE FR 3	-5	7	3009	1.81	0.13	0.24
161	SLE FR 4	-5	10	3163	1.93	0.12	0.24
161	SLE FR 5	-5	8	3163	1.94	0.12	0.24
161	SLE FR 6	-5	9	3266	2.03	0.12	0.24
161	SLE QP 1	-5	7	3009	1.81	0.13	0.24
161	SLE QP 2	-5	8	3163	1.94	0.12	0.24
161	SLD 1	209	82	3188	1.2	10.09	-0.65
161	SLD 2	214	82	3188	1.2	9.87	0.12
161	SLD 3	213	-51	3184	2.32	10.25	-0.71
161	SLD 4	218	-50	3184	2.32	10.04	0.06
161	SLD 5	51	232	3178	0.03	2.94	-0.23
161	SLD 6	57	232	3178	0.03	2.72	0.57
161	SLD 7	65	-211	3162	3.75	3.49	-0.41
161	SLD 8	70	-210	3162	3.75	3.27	0.39
161	SLD 9	-80	227	3164	0.14	-3.02	0.09
161	SLD 10	-74	228	3164	0.14	-3.25	0.89
161	SLD 11	-66	-215	3148	3.86	-2.47	-0.09
161	SLD 12	-61	-215	3148	3.86	-2.7	0.71
161	SLD 13	-228	67	3143	1.57	-9.79	0.42
161	SLD 14	-222	68	3143	1.57	-10.01	1.19
161	SLD 15	-224	-66	3138	2.69	-9.63	0.37
161	SLD 16	-218	-65	3138	2.68	-9.84	1.14
161	SLV 1	483	175	3225	0.23	22.88	-1.8
161	SLV 2	495	177	3225	0.23	22.39	-0.05
161	SLV 3	492	-126	3214	2.77	23.25	-1.93
161	SLV 4	505	-125	3214	2.76	22.76	-0.17
161	SLV 5	123	515	3199	-2.41	6.55	-0.83
161	SLV 6	136	517	3198	-2.42	6.05	0.98
161	SLV 7	154	-490	3162	6.04	7.82	-1.24
161	SLV 8	167	-489	3161	6.03	7.31	0.58
161	SLV 9	-176	505	3165	-2.15	-7.06	-0.1
161	SLV 10	-163	507	3165	-2.15	-7.57	1.72
161	SLV 11	-145	-500	3128	6.31	-5.8	-0.5
161	SLV 12	-133	-499	3128	6.3	-6.31	1.31
161	SLV 13	-514	142	3112	1.12	-22.52	0.65

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
161	SLV 14	-502	143	3112	1.12	-23.01	2.41
161	SLV 15	-505	-160	3101	3.66	-22.14	0.53
161	SLV 16	-492	-158	3101	3.65	-22.63	2.29
161	CRTFP Ux+	0	0	0	0	0	0
161	CRTFP Ux-	0	0	0	0	0	0
161	CRTFP Uy+	0	0	0	0	0	0
161	CRTFP Uy-	0	0	0	0	0	0
164	SLU 1	-15	3	2763	4.43	13.15	1.03
164	SLU 2	-15	15	2768	4.36	13.12	1.01
164	SLU 3	-15	3	2763	4.43	13.15	1.03
164	SLU 4	-15	10	2766	4.39	13.13	1.02
164	SLU 5	-15	15	2768	4.36	13.12	1.01
164	SLU 6	-15	3	2763	4.43	13.15	1.03
164	SLU 7	-15	10	2766	4.39	13.13	1.02
164	SLU 8	-15	3	2763	4.43	13.15	1.03
164	SLU 9	-15	10	2766	4.39	13.13	1.02
164	SLU 10	-14	16	3269	5.3	14.24	1.17
164	SLU 11	-14	5	3264	5.36	14.28	1.19
164	SLU 12	-14	11	3267	5.32	14.25	1.18
164	SLU 13	-14	16	3269	5.3	14.24	1.17
164	SLU 14	-14	5	3264	5.36	14.28	1.19
164	SLU 15	-14	11	3267	5.32	14.25	1.18
164	SLU 16	-14	5	3264	5.36	14.28	1.19
164	SLU 17	-14	11	3267	5.32	14.25	1.18
164	SLU 18	-13	5	3479	5.76	14.76	1.26
164	SLU 19	-13	12	3482	5.72	14.73	1.25
164	SLU 20	-13	5	3479	5.76	14.76	1.26
164	SLU 21	-13	12	3482	5.72	14.73	1.25
164	SLU 22	-14	4	3139	5.14	14.12	1.15
164	SLU 23	-15	16	3144	5.08	14.08	1.13
164	SLU 24	-14	4	3139	5.14	14.12	1.15
164	SLU 25	-15	11	3142	5.1	14.09	1.14
164	SLU 26	-15	16	3144	5.08	14.08	1.13
164	SLU 27	-14	4	3139	5.14	14.12	1.15
164	SLU 28	-15	11	3142	5.1	14.09	1.14
164	SLU 29	-14	4	3139	5.14	14.12	1.15
164	SLU 30	-15	11	3142	5.1	14.09	1.14
164	SLU 31	-13	17	3644	6.01	15.2	1.3
164	SLU 32	-13	6	3640	6.07	15.24	1.32
164	SLU 33	-13	12	3642	6.04	15.22	1.3
164	SLU 34	-13	17	3644	6.01	15.2	1.3
164	SLU 35	-13	6	3640	6.07	15.24	1.32
164	SLU 36	-13	12	3642	6.04	15.22	1.3
164	SLU 37	-13	6	3640	6.07	15.24	1.32
164	SLU 38	-13	12	3642	6.04	15.22	1.3
164	SLU 39	-12	6	3854	6.47	15.72	1.38
164	SLU 40	-13	13	3857	6.44	15.7	1.37
164	SLU 41	-12	6	3854	6.47	15.72	1.38
164	SLU 42	-13	13	3857	6.44	15.7	1.37
164	SLU 43	-20	4	3463	5.51	16.77	1.3
164	SLU 44	-20	15	3468	5.45	16.73	1.28
164	SLU 45	-20	4	3463	5.51	16.77	1.3
164	SLU 46	-20	11	3466	5.47	16.75	1.29
164	SLU 47	-20	15	3468	5.45	16.73	1.28
164	SLU 48	-20	4	3463	5.51	16.77	1.3
164	SLU 49	-20	11	3466	5.47	16.75	1.29
164	SLU 50	-20	4	3463	5.51	16.77	1.3
164	SLU 51	-20	11	3466	5.47	16.75	1.29
164	SLU 52	-19	17	3969	6.38	17.85	1.44
164	SLU 53	-18	5	3964	6.44	17.89	1.46
164	SLU 54	-19	12	3967	6.41	17.87	1.45
164	SLU 55	-19	17	3969	6.38	17.85	1.44
164	SLU 56	-18	5	3964	6.44	17.89	1.46
164	SLU 57	-19	12	3967	6.41	17.87	1.45
164	SLU 58	-18	5	3964	6.44	17.89	1.46
164	SLU 59	-19	12	3967	6.41	17.87	1.45
164	SLU 60	-18	6	4179	6.85	18.37	1.53
164	SLU 61	-18	13	4182	6.81	18.35	1.52
164	SLU 62	-18	6	4179	6.85	18.37	1.53
164	SLU 63	-18	13	4182	6.81	18.35	1.52
164	SLU 64	-19	5	3839	6.22	17.73	1.42
164	SLU 65	-19	16	3844	6.16	17.69	1.4
164	SLU 66	-19	5	3839	6.22	17.73	1.42
164	SLU 67	-19	12	3842	6.18	17.71	1.41
164	SLU 68	-19	16	3844	6.16	17.69	1.4
164	SLU 69	-19	5	3839	6.22	17.73	1.42
164	SLU 70	-19	12	3842	6.18	17.71	1.41
164	SLU 71	-19	5	3839	6.22	17.73	1.42
164	SLU 72	-19	12	3842	6.18	17.71	1.41
164	SLU 73	-18	18	4345	7.09	18.82	1.56
164	SLU 74	-18	6	4340	7.16	18.86	1.58
164	SLU 75	-18	13	4343	7.12	18.83	1.57
164	SLU 76	-18	18	4345	7.09	18.82	1.56
164	SLU 77	-18	6	4340	7.16	18.86	1.58
164	SLU 78	-18	13	4343	7.12	18.83	1.57
164	SLU 79	-18	6	4340	7.16	18.86	1.58

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
164	SLU 80	-18	13	4343	7.12	18.83	1.57
164	SLU 81	-17	7	4554	7.56	19.34	1.65
164	SLU 82	-17	14	4557	7.52	19.31	1.64
164	SLU 83	-17	7	4554	7.56	19.34	1.65
164	SLU 84	-17	14	4557	7.52	19.31	1.64
164	SLE RA 1	-15	4	2870	4.63	13.43	1.07
164	SLE RA 2	-15	11	2874	4.59	13.4	1.05
164	SLE RA 3	-15	4	2870	4.63	13.43	1.07
164	SLE RA 4	-15	8	2872	4.6	13.41	1.06
164	SLE RA 5	-15	11	2874	4.59	13.4	1.05
164	SLE RA 6	-15	4	2870	4.63	13.43	1.07
164	SLE RA 7	-15	8	2872	4.6	13.41	1.06
164	SLE RA 8	-15	4	2870	4.63	13.43	1.07
164	SLE RA 9	-15	8	2872	4.6	13.41	1.06
164	SLE RA 10	-14	12	3208	5.21	14.15	1.16
164	SLE RA 11	-14	4	3204	5.25	14.18	1.18
164	SLE RA 12	-14	9	3206	5.23	14.16	1.17
164	SLE RA 13	-14	12	3208	5.21	14.15	1.16
164	SLE RA 14	-14	4	3204	5.25	14.18	1.18
164	SLE RA 15	-14	9	3206	5.23	14.16	1.17
164	SLE RA 16	-14	4	3204	5.25	14.18	1.18
164	SLE RA 17	-14	9	3206	5.23	14.16	1.17
164	SLE RA 18	-13	5	3347	5.52	14.5	1.22
164	SLE RA 19	-14	9	3349	5.5	14.48	1.21
164	SLE RA 20	-13	5	3347	5.52	14.5	1.22
164	SLE RA 21	-14	9	3349	5.5	14.48	1.21
164	SLE FR 1	-15	4	2870	4.63	13.43	1.07
164	SLE FR 2	-15	5	2871	4.62	13.42	1.07
164	SLE FR 3	-15	4	2870	4.63	13.43	1.07
164	SLE FR 4	-14	6	3014	4.89	13.74	1.11
164	SLE FR 5	-14	4	3014	4.9	13.75	1.11
164	SLE FR 6	-14	4	3109	5.07	13.96	1.14
164	SLE QP 1	-15	4	2870	4.63	13.43	1.07
164	SLE QP 2	-14	4	3014	4.9	13.75	1.11
164	SLD 1	192	87	3237	4.95	26.5	0.13
164	SLD 2	198	62	3235	4.98	26.63	0.89
164	SLD 3	196	-37	3208	5.71	27.15	0.34
164	SLD 4	202	-61	3207	5.75	27.28	1.1
164	SLD 5	39	225	3124	3.74	16.54	0.21
164	SLD 6	45	200	3122	3.77	16.67	1.01
164	SLD 7	53	-186	3030	6.29	18.71	0.92
164	SLD 8	59	-212	3028	6.33	18.84	1.71
164	SLD 9	-88	220	2999	3.47	8.66	0.51
164	SLD 10	-81	194	2997	3.5	8.79	1.31
164	SLD 11	-74	-192	2905	6.02	10.83	1.22
164	SLD 12	-67	-217	2903	6.06	10.96	2.01
164	SLD 13	-231	69	2820	4.05	0.22	1.12
164	SLD 14	-224	45	2819	4.08	0.35	1.89
164	SLD 15	-226	-54	2792	4.81	0.87	1.33
164	SLD 16	-220	-79	2791	4.85	1	2.1
164	SLV 1	456	192	3523	5.02	42.86	-1.14
164	SLV 2	470	136	3519	5.09	43.16	0.61
164	SLV 3	465	-88	3459	6.76	44.35	-0.66
164	SLV 4	480	-144	3455	6.83	44.64	1.09
164	SLV 5	107	506	3264	2.26	20.13	-0.93
164	SLV 6	122	448	3260	2.34	20.43	0.88
164	SLV 7	139	-428	3052	8.07	25.07	0.67
164	SLV 8	154	-486	3048	8.15	25.37	2.48
164	SLV 9	-182	494	2979	1.65	2.13	-0.25
164	SLV 10	-167	436	2975	1.72	2.43	1.56
164	SLV 11	-151	-440	2767	7.45	7.07	1.35
164	SLV 12	-136	-498	2763	7.53	7.37	3.16
164	SLV 13	-508	152	2572	2.96	-17.14	1.14
164	SLV 14	-494	96	2568	3.03	-16.85	2.89
164	SLV 15	-499	-128	2508	4.7	-15.66	1.62
164	SLV 16	-484	-184	2504	4.78	-15.36	3.37
164	CRTFP Ux+	0	0	0	0	0	0
164	CRTFP Ux-	0	0	0	0	0	0
164	CRTFP Uy+	0	0	0	0	0	0
164	CRTFP Uy-	0	0	0	0	0	0
167	SLU 1	4	8	2706	4.24	-14.56	-0.57
167	SLU 2	4	19	2710	4.18	-14.48	-0.54
167	SLU 3	4	8	2706	4.24	-14.56	-0.57
167	SLU 4	4	14	2709	4.21	-14.51	-0.55
167	SLU 5	4	19	2710	4.18	-14.48	-0.54
167	SLU 6	4	8	2706	4.24	-14.56	-0.57
167	SLU 7	4	14	2709	4.21	-14.51	-0.55
167	SLU 8	4	8	2706	4.24	-14.56	-0.57
167	SLU 9	4	14	2709	4.21	-14.51	-0.55
167	SLU 10	2	21	3206	5.1	-16.61	-0.64
167	SLU 11	2	10	3202	5.17	-16.69	-0.67
167	SLU 12	2	16	3204	5.13	-16.64	-0.66
167	SLU 13	2	21	3206	5.1	-16.61	-0.64
167	SLU 14	2	10	3202	5.17	-16.69	-0.67
167	SLU 15	2	16	3204	5.13	-16.64	-0.66
167	SLU 16	2	10	3202	5.17	-16.69	-0.67

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
167	SLU 17	2	16	3204	5.13	-16.64	-0.66
167	SLU 18	1	10	3414	5.56	-17.6	-0.72
167	SLU 19	1	17	3417	5.52	-17.55	-0.7
167	SLU 20	1	10	3414	5.56	-17.6	-0.72
167	SLU 21	1	17	3417	5.52	-17.55	-0.7
167	SLU 22	3	9	3078	4.94	-16.27	-0.65
167	SLU 23	3	20	3082	4.88	-16.19	-0.62
167	SLU 24	3	9	3078	4.94	-16.27	-0.65
167	SLU 25	3	16	3081	4.91	-16.22	-0.63
167	SLU 26	3	20	3082	4.88	-16.19	-0.62
167	SLU 27	3	9	3078	4.94	-16.27	-0.65
167	SLU 28	3	16	3081	4.91	-16.22	-0.63
167	SLU 29	3	9	3078	4.94	-16.27	-0.65
167	SLU 30	3	16	3081	4.91	-16.22	-0.63
167	SLU 31	1	22	3578	5.8	-18.32	-0.72
167	SLU 32	1	11	3574	5.86	-18.39	-0.75
167	SLU 33	1	18	3576	5.83	-18.35	-0.73
167	SLU 34	1	22	3578	5.8	-18.32	-0.72
167	SLU 35	1	11	3574	5.86	-18.39	-0.75
167	SLU 36	1	18	3576	5.83	-18.35	-0.73
167	SLU 37	1	11	3574	5.86	-18.39	-0.75
167	SLU 38	1	18	3576	5.83	-18.35	-0.73
167	SLU 39	0	12	3786	6.26	-19.3	-0.79
167	SLU 40	0	19	3789	6.22	-19.26	-0.77
167	SLU 41	0	12	3786	6.26	-19.3	-0.79
167	SLU 42	0	19	3789	6.22	-19.26	-0.77
167	SLU 43	6	9	3390	5.28	-18.34	-0.72
167	SLU 44	6	20	3395	5.22	-18.26	-0.69
167	SLU 45	6	9	3390	5.28	-18.34	-0.72
167	SLU 46	6	16	3393	5.24	-18.3	-0.7
167	SLU 47	6	20	3395	5.22	-18.26	-0.69
167	SLU 48	6	9	3390	5.28	-18.34	-0.72
167	SLU 49	6	16	3393	5.24	-18.3	-0.7
167	SLU 50	6	9	3390	5.28	-18.34	-0.72
167	SLU 51	6	16	3393	5.24	-18.3	-0.7
167	SLU 52	4	23	3890	6.14	-20.39	-0.79
167	SLU 53	4	11	3886	6.2	-20.47	-0.82
167	SLU 54	4	18	3889	6.16	-20.42	-0.8
167	SLU 55	4	23	3890	6.14	-20.39	-0.79
167	SLU 56	4	11	3886	6.2	-20.47	-0.82
167	SLU 57	4	18	3889	6.16	-20.42	-0.8
167	SLU 58	4	11	3886	6.2	-20.47	-0.82
167	SLU 59	4	18	3889	6.16	-20.42	-0.8
167	SLU 60	3	12	4098	6.59	-21.38	-0.86
167	SLU 61	3	19	4101	6.56	-21.33	-0.84
167	SLU 62	3	12	4098	6.59	-21.38	-0.86
167	SLU 63	3	19	4101	6.56	-21.33	-0.84
167	SLU 64	5	11	3762	5.98	-20.05	-0.79
167	SLU 65	5	22	3767	5.92	-19.97	-0.76
167	SLU 66	5	11	3762	5.98	-20.05	-0.79
167	SLU 67	5	17	3765	5.94	-20	-0.77
167	SLU 68	5	22	3767	5.92	-19.97	-0.76
167	SLU 69	5	11	3762	5.98	-20.05	-0.79
167	SLU 70	5	17	3765	5.94	-20	-0.77
167	SLU 71	5	11	3762	5.98	-20.05	-0.79
167	SLU 72	5	17	3765	5.94	-20	-0.77
167	SLU 73	3	24	4262	6.84	-22.1	-0.86
167	SLU 74	3	13	4258	6.9	-22.17	-0.89
167	SLU 75	3	20	4261	6.86	-22.13	-0.88
167	SLU 76	3	24	4262	6.84	-22.1	-0.86
167	SLU 77	3	13	4258	6.9	-22.17	-0.89
167	SLU 78	3	20	4261	6.86	-22.13	-0.88
167	SLU 79	3	13	4258	6.9	-22.17	-0.89
167	SLU 80	3	20	4261	6.86	-22.13	-0.88
167	SLU 81	2	14	4470	7.29	-23.09	-0.94
167	SLU 82	2	20	4473	7.26	-23.04	-0.92
167	SLU 83	2	14	4470	7.29	-23.09	-0.94
167	SLU 84	2	20	4473	7.26	-23.04	-0.92
167	SLE RA 1	4	8	2812	4.44	-15.05	-0.59
167	SLE RA 2	4	15	2815	4.4	-14.99	-0.57
167	SLE RA 3	4	8	2812	4.44	-15.05	-0.59
167	SLE RA 4	4	12	2814	4.42	-15.02	-0.58
167	SLE RA 5	4	15	2815	4.4	-14.99	-0.57
167	SLE RA 6	4	8	2812	4.44	-15.05	-0.59
167	SLE RA 7	4	12	2814	4.42	-15.02	-0.58
167	SLE RA 8	4	8	2812	4.44	-15.05	-0.59
167	SLE RA 9	4	12	2814	4.42	-15.02	-0.58
167	SLE RA 10	3	17	3146	5.02	-16.41	-0.64
167	SLE RA 11	3	9	3143	5.06	-16.46	-0.66
167	SLE RA 12	3	14	3144	5.03	-16.43	-0.65
167	SLE RA 13	3	17	3146	5.02	-16.41	-0.64
167	SLE RA 14	3	9	3143	5.06	-16.46	-0.66
167	SLE RA 15	3	14	3144	5.03	-16.43	-0.65
167	SLE RA 16	3	9	3143	5.06	-16.46	-0.66
167	SLE RA 17	3	14	3144	5.03	-16.43	-0.65
167	SLE RA 18	2	10	3284	5.32	-17.07	-0.69

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
167	SLE RA 19	2	14	3286	5.3	-17.04	-0.68
167	SLE RA 20	2	10	3284	5.32	-17.07	-0.69
167	SLE RA 21	2	14	3286	5.3	-17.04	-0.68
167	SLE FR 1	4	8	2812	4.44	-15.05	-0.59
167	SLE FR 2	4	9	2813	4.44	-15.04	-0.59
167	SLE FR 3	4	8	2812	4.44	-15.05	-0.59
167	SLE FR 4	3	10	2955	4.7	-15.64	-0.62
167	SLE FR 5	3	9	2954	4.71	-15.65	-0.62
167	SLE FR 6	3	9	3048	4.88	-16.06	-0.64
167	SLE QP 1	4	8	2812	4.44	-15.05	-0.59
167	SLE QP 2	3	9	2954	4.71	-15.65	-0.62
167	SLD 1	215	43	2773	3.97	-1.74	-1.3
167	SLD 2	221	65	2774	3.93	-1.55	-0.5
167	SLD 3	209	-76	2746	4.74	-2.7	-1.62
167	SLD 4	215	-54	2747	4.71	-2.51	-0.83
167	SLD 5	74	192	2940	3.33	-10.09	-0.62
167	SLD 6	80	215	2941	3.29	-9.9	0.2
167	SLD 7	54	-206	2850	5.9	-13.29	-1.71
167	SLD 8	60	-183	2852	5.87	-13.1	-0.89
167	SLD 9	-53	200	3056	3.55	-18.21	-0.36
167	SLD 10	-47	223	3057	3.51	-18.01	0.46
167	SLD 11	-73	-198	2967	6.12	-21.41	-1.44
167	SLD 12	-67	-175	2968	6.09	-21.21	-0.62
167	SLD 13	-209	71	3160	4.71	-28.8	-0.42
167	SLD 14	-203	94	3162	4.68	-28.61	0.38
167	SLD 15	-215	-48	3134	5.48	-29.76	-0.74
167	SLD 16	-209	-26	3135	5.45	-29.57	0.05
167	SLV 1	488	86	2540	3.02	16.12	-2.17
167	SLV 2	501	137	2544	2.95	16.56	-0.36
167	SLV 3	474	-185	2479	4.78	13.94	-2.91
167	SLV 4	488	-134	2483	4.7	14.38	-1.1
167	SLV 5	164	424	2921	1.57	-2.98	-0.63
167	SLV 6	178	477	2924	1.49	-2.53	1.24
167	SLV 7	119	-479	2718	7.42	-10.24	-3.09
167	SLV 8	133	-426	2721	7.34	-9.78	-1.22
167	SLV 9	-126	443	3187	2.08	-21.52	-0.02
167	SLV 10	-113	496	3190	2	-21.07	1.85
167	SLV 11	-171	-460	2983	7.93	-28.78	-2.49
167	SLV 12	-157	-407	2987	7.85	-28.33	-0.62
167	SLV 13	-481	151	3425	4.72	-45.69	-0.15
167	SLV 14	-467	202	3429	4.64	-45.25	1.66
167	SLV 15	-494	-120	3364	6.47	-47.86	-0.89
167	SLV 16	-481	-69	3368	6.39	-47.42	0.92
167	CRTFP Ux+	0	0	0	0	0	0
167	CRTFP Ux-	0	0	0	0	0	0
167	CRTFP Uy+	0	0	0	0	0	0
167	CRTFP Uy-	0	0	0	0	0	0
169	SLU 1	-12	-15	1483	1.85	-304.24	-3.62
169	SLU 2	-13	-6	1485	1.82	-304.16	-1.52
169	SLU 3	-12	-15	1483	1.85	-304.24	-3.62
169	SLU 4	-12	-10	1484	1.83	-304.19	-2.36
169	SLU 5	-13	-6	1485	1.82	-304.16	-1.52
169	SLU 6	-12	-15	1483	1.85	-304.24	-3.62
169	SLU 7	-12	-10	1484	1.83	-304.19	-2.36
169	SLU 8	-12	-15	1483	1.85	-304.24	-3.62
169	SLU 9	-12	-10	1484	1.83	-304.19	-2.36
169	SLU 10	-12	-11	1734	2.19	-355.51	-2.57
169	SLU 11	-12	-19	1732	2.22	-355.59	-4.67
169	SLU 12	-12	-14	1734	2.2	-355.54	-3.41
169	SLU 13	-12	-11	1734	2.19	-355.51	-2.57
169	SLU 14	-12	-19	1732	2.22	-355.59	-4.67
169	SLU 15	-12	-14	1734	2.2	-355.54	-3.41
169	SLU 16	-12	-19	1732	2.22	-355.59	-4.67
169	SLU 17	-12	-14	1734	2.2	-355.54	-3.41
169	SLU 18	-11	-21	1839	2.38	-377.59	-5.12
169	SLU 19	-12	-16	1840	2.36	-377.55	-3.86
169	SLU 20	-11	-21	1839	2.38	-377.59	-5.12
169	SLU 21	-12	-16	1840	2.36	-377.55	-3.86
169	SLU 22	-12	-18	1672	2.13	-342.93	-4.36
169	SLU 23	-12	-9	1674	2.1	-342.86	-2.26
169	SLU 24	-12	-18	1672	2.13	-342.93	-4.36
169	SLU 25	-12	-13	1673	2.11	-342.89	-3.1
169	SLU 26	-12	-9	1674	2.1	-342.86	-2.26
169	SLU 27	-12	-18	1672	2.13	-342.93	-4.36
169	SLU 28	-12	-13	1673	2.11	-342.89	-3.1
169	SLU 29	-12	-18	1672	2.13	-342.93	-4.36
169	SLU 30	-12	-13	1673	2.11	-342.89	-3.1
169	SLU 31	-12	-14	1923	2.47	-394.2	-3.31
169	SLU 32	-12	-22	1921	2.51	-394.28	-5.41
169	SLU 33	-12	-17	1922	2.49	-394.24	-4.15
169	SLU 34	-12	-14	1923	2.47	-394.2	-3.31
169	SLU 35	-12	-22	1921	2.51	-394.28	-5.41
169	SLU 36	-12	-17	1922	2.49	-394.24	-4.15
169	SLU 37	-12	-22	1921	2.51	-394.28	-5.41
169	SLU 38	-12	-17	1922	2.49	-394.24	-4.15
169	SLU 39	-11	-24	2028	2.67	-416.29	-5.86

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
169	SLU 40	-12	-19	2029	2.65	-416.24	-4.6
169	SLU 41	-11	-24	2028	2.67	-416.29	-5.86
169	SLU 42	-12	-19	2029	2.65	-416.24	-4.6
169	SLU 43	-16	-18	1863	2.3	-382.25	-4.45
169	SLU 44	-16	-10	1865	2.27	-382.17	-2.36
169	SLU 45	-16	-18	1863	2.3	-382.25	-4.45
169	SLU 46	-16	-13	1865	2.29	-382.2	-3.2
169	SLU 47	-16	-10	1865	2.27	-382.17	-2.36
169	SLU 48	-16	-18	1863	2.3	-382.25	-4.45
169	SLU 49	-16	-13	1865	2.29	-382.2	-3.2
169	SLU 50	-16	-18	1863	2.3	-382.25	-4.45
169	SLU 51	-16	-13	1865	2.29	-382.2	-3.2
169	SLU 52	-16	-14	2115	2.65	-433.52	-3.41
169	SLU 53	-15	-22	2113	2.68	-433.59	-5.5
169	SLU 54	-16	-17	2114	2.66	-433.55	-4.24
169	SLU 55	-16	-14	2115	2.65	-433.52	-3.41
169	SLU 56	-15	-22	2113	2.68	-433.59	-5.5
169	SLU 57	-16	-17	2114	2.66	-433.55	-4.24
169	SLU 58	-15	-22	2113	2.68	-433.59	-5.5
169	SLU 59	-16	-17	2114	2.66	-433.55	-4.24
169	SLU 60	-15	-24	2220	2.84	-455.6	-5.95
169	SLU 61	-15	-19	2221	2.82	-455.55	-4.69
169	SLU 62	-15	-24	2220	2.84	-455.6	-5.95
169	SLU 63	-15	-19	2221	2.82	-455.55	-4.69
169	SLU 64	-16	-21	2052	2.59	-420.94	-5.19
169	SLU 65	-16	-13	2054	2.56	-420.86	-3.1
169	SLU 66	-16	-21	2052	2.59	-420.94	-5.19
169	SLU 67	-16	-16	2053	2.57	-420.89	-3.93
169	SLU 68	-16	-13	2054	2.56	-420.86	-3.1
169	SLU 69	-16	-21	2052	2.59	-420.94	-5.19
169	SLU 70	-16	-16	2053	2.57	-420.89	-3.93
169	SLU 71	-16	-21	2052	2.59	-420.94	-5.19
169	SLU 72	-16	-16	2053	2.57	-420.89	-3.93
169	SLU 73	-16	-17	2303	2.93	-472.21	-4.14
169	SLU 74	-15	-25	2301	2.96	-472.29	-6.24
169	SLU 75	-16	-20	2302	2.94	-472.24	-4.98
169	SLU 76	-16	-17	2303	2.93	-472.21	-4.14
169	SLU 77	-15	-25	2301	2.96	-472.29	-6.24
169	SLU 78	-16	-20	2302	2.94	-472.24	-4.98
169	SLU 79	-15	-25	2301	2.96	-472.29	-6.24
169	SLU 80	-16	-20	2302	2.94	-472.24	-4.98
169	SLU 81	-15	-27	2408	3.12	-494.29	-6.69
169	SLU 82	-15	-22	2409	3.1	-494.25	-5.43
169	SLU 83	-15	-27	2408	3.12	-494.29	-6.69
169	SLU 84	-15	-22	2409	3.1	-494.25	-5.43
169	SLE RA 1	-12	-16	1537	1.93	-315.3	-3.83
169	SLE RA 2	-12	-10	1538	1.91	-315.24	-2.43
169	SLE RA 3	-12	-16	1537	1.93	-315.3	-3.83
169	SLE RA 4	-12	-12	1538	1.92	-315.26	-2.99
169	SLE RA 5	-12	-10	1538	1.91	-315.24	-2.43
169	SLE RA 6	-12	-16	1537	1.93	-315.3	-3.83
169	SLE RA 7	-12	-12	1538	1.92	-315.26	-2.99
169	SLE RA 8	-12	-16	1537	1.93	-315.3	-3.83
169	SLE RA 9	-12	-12	1538	1.92	-315.26	-2.99
169	SLE RA 10	-12	-13	1704	2.16	-349.48	-3.13
169	SLE RA 11	-12	-18	1703	2.18	-349.53	-4.53
169	SLE RA 12	-12	-15	1704	2.17	-349.5	-3.69
169	SLE RA 13	-12	-13	1704	2.16	-349.48	-3.13
169	SLE RA 14	-12	-18	1703	2.18	-349.53	-4.53
169	SLE RA 15	-12	-15	1704	2.17	-349.5	-3.69
169	SLE RA 16	-12	-18	1703	2.18	-349.53	-4.53
169	SLE RA 17	-12	-15	1704	2.17	-349.5	-3.69
169	SLE RA 18	-12	-20	1774	2.28	-364.2	-4.83
169	SLE RA 19	-12	-16	1775	2.27	-364.17	-3.99
169	SLE RA 20	-12	-20	1774	2.28	-364.2	-4.83
169	SLE RA 21	-12	-16	1775	2.27	-364.17	-3.99
169	SLE FR 1	-12	-16	1537	1.93	-315.3	-3.83
169	SLE FR 2	-12	-14	1537	1.92	-315.29	-3.55
169	SLE FR 3	-12	-16	1537	1.93	-315.3	-3.83
169	SLE FR 4	-12	-16	1608	2.03	-329.96	-3.85
169	SLE FR 5	-12	-17	1608	2.04	-329.97	-4.13
169	SLE FR 6	-12	-18	1656	2.11	-339.75	-4.33
169	SLE QP 1	-12	-16	1537	1.93	-315.3	-3.83
169	SLE QP 2	-12	-17	1608	2.04	-329.97	-4.13
169	SLD 1	81	55	1838	2.15	-370.15	13.78
169	SLD 2	85	28	1838	2.17	-370.4	6.89
169	SLD 3	86	-37	1827	2.52	-373.32	-9.23
169	SLD 4	90	-65	1826	2.54	-373.57	-16.11
169	SLD 5	7	155	1695	1.5	-337.13	38.67
169	SLD 6	10	126	1695	1.52	-337.39	31.53
169	SLD 7	24	-152	1656	2.74	-347.68	-38.01
169	SLD 8	28	-181	1656	2.76	-347.94	-45.15
169	SLD 9	-51	148	1561	1.31	-311.99	36.89
169	SLD 10	-48	119	1560	1.33	-312.25	29.75
169	SLD 11	-34	-160	1521	2.55	-322.55	-39.79
169	SLD 12	-31	-188	1521	2.58	-322.81	-46.93

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
169	SLD 13	-114	31	1390	1.53	-286.37	7.85
169	SLD 14	-110	3	1390	1.55	-286.62	0.97
169	SLD 15	-108	-61	1378	1.9	-289.53	-15.16
169	SLD 16	-105	-89	1378	1.93	-289.78	-22.04
169	SLV 1	201	147	2134	2.29	-421.78	36.59
169	SLV 2	209	84	2133	2.34	-422.35	20.9
169	SLV 3	213	-62	2107	3.14	-428.98	-15.64
169	SLV 4	220	-125	2107	3.19	-429.55	-31.33
169	SLV 5	32	373	1807	0.81	-346.37	93.06
169	SLV 6	39	308	1806	0.86	-346.96	76.85
169	SLV 7	70	-325	1718	3.63	-370.39	-81.05
169	SLV 8	78	-390	1717	3.68	-370.98	-97.27
169	SLV 9	-102	356	1499	0.39	-288.95	89.01
169	SLV 10	-94	291	1499	0.44	-289.54	72.79
169	SLV 11	-63	-341	1410	3.21	-312.97	-85.11
169	SLV 12	-55	-407	1410	3.26	-313.56	-101.32
169	SLV 13	-244	92	1110	0.89	-230.38	23.07
169	SLV 14	-237	29	1109	0.93	-230.95	7.38
169	SLV 15	-232	-117	1083	1.73	-237.59	-29.17
169	SLV 16	-225	-181	1083	1.78	-238.16	-44.85
169	CRTFP Ux+	0	0	0	0	0	0
169	CRTFP Ux-	0	0	0	0	0	0
169	CRTFP Uy+	0	0	0	0	0	0
169	CRTFP Uy-	0	0	0	0	0	0
172	SLU 1	3	-28	1645	2.42	318.33	6.79
172	SLU 2	4	-18	1645	2.38	317.91	4.36
172	SLU 3	3	-28	1645	2.42	318.33	6.79
172	SLU 4	4	-22	1645	2.4	318.08	5.33
172	SLU 5	4	-18	1645	2.38	317.91	4.36
172	SLU 6	3	-28	1645	2.42	318.33	6.79
172	SLU 7	4	-22	1645	2.4	318.08	5.33
172	SLU 8	3	-28	1645	2.42	318.33	6.79
172	SLU 9	4	-22	1645	2.4	318.08	5.33
172	SLU 10	2	-24	1931	2.9	373.5	5.78
172	SLU 11	2	-33	1930	2.95	373.92	8.2
172	SLU 12	2	-27	1930	2.92	373.67	6.75
172	SLU 13	2	-24	1931	2.9	373.5	5.78
172	SLU 14	2	-33	1930	2.95	373.92	8.2
172	SLU 15	2	-27	1930	2.92	373.67	6.75
172	SLU 16	2	-33	1930	2.95	373.92	8.2
172	SLU 17	2	-27	1930	2.92	373.67	6.75
172	SLU 18	1	-36	2052	3.17	397.74	8.8
172	SLU 19	1	-30	2053	3.14	397.49	7.35
172	SLU 20	1	-36	2052	3.17	397.74	8.8
172	SLU 21	1	-30	2053	3.14	397.49	7.35
172	SLU 22	2	-32	1860	2.82	360.23	7.83
172	SLU 23	3	-22	1861	2.78	359.8	5.41
172	SLU 24	2	-32	1860	2.82	360.23	7.83
172	SLU 25	3	-26	1861	2.79	359.97	6.38
172	SLU 26	3	-22	1861	2.78	359.8	5.41
172	SLU 27	2	-32	1860	2.82	360.23	7.83
172	SLU 28	3	-26	1861	2.79	359.97	6.38
172	SLU 29	2	-32	1860	2.82	360.23	7.83
172	SLU 30	3	-26	1861	2.79	359.97	6.38
172	SLU 31	1	-28	2146	3.3	415.39	6.82
172	SLU 32	1	-38	2146	3.35	415.82	9.25
172	SLU 33	1	-32	2146	3.32	415.56	7.79
172	SLU 34	1	-28	2146	3.3	415.39	6.82
172	SLU 35	1	-38	2146	3.35	415.82	9.25
172	SLU 36	1	-32	2146	3.32	415.56	7.79
172	SLU 37	1	-38	2146	3.35	415.82	9.25
172	SLU 38	1	-32	2146	3.32	415.56	7.79
172	SLU 39	0	-40	2268	3.57	439.64	9.85
172	SLU 40	0	-34	2268	3.54	439.38	8.4
172	SLU 41	0	-40	2268	3.57	439.64	9.85
172	SLU 42	0	-34	2268	3.54	439.38	8.4
172	SLU 43	5	-34	2064	3.01	399.47	8.46
172	SLU 44	5	-25	2065	2.97	399.04	6.04
172	SLU 45	5	-34	2064	3.01	399.47	8.46
172	SLU 46	5	-29	2065	2.99	399.21	7.01
172	SLU 47	5	-25	2065	2.97	399.04	6.04
172	SLU 48	5	-34	2064	3.01	399.47	8.46
172	SLU 49	5	-29	2065	2.99	399.21	7.01
172	SLU 50	5	-34	2064	3.01	399.47	8.46
172	SLU 51	5	-29	2065	2.99	399.21	7.01
172	SLU 52	4	-30	2350	3.49	454.63	7.45
172	SLU 53	3	-40	2350	3.54	455.06	9.88
172	SLU 54	4	-34	2350	3.51	454.8	8.42
172	SLU 55	4	-30	2350	3.49	454.63	7.45
172	SLU 56	3	-40	2350	3.54	455.06	9.88
172	SLU 57	4	-34	2350	3.51	454.8	8.42
172	SLU 58	3	-40	2350	3.54	455.06	9.88
172	SLU 59	4	-34	2350	3.51	454.8	8.42
172	SLU 60	3	-43	2472	3.76	478.88	10.48
172	SLU 61	3	-37	2472	3.74	478.62	9.03
172	SLU 62	3	-43	2472	3.76	478.88	10.48

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
172	SLU 63	3	-37	2472	3.74	478.62	9.03
172	SLU 64	4	-39	2280	3.41	441.36	9.51
172	SLU 65	4	-29	2280	3.37	440.94	7.09
172	SLU 66	4	-39	2280	3.41	441.36	9.51
172	SLU 67	4	-33	2280	3.38	441.11	8.06
172	SLU 68	4	-29	2280	3.37	440.94	7.09
172	SLU 69	4	-39	2280	3.41	441.36	9.51
172	SLU 70	4	-33	2280	3.38	441.11	8.06
172	SLU 71	4	-39	2280	3.41	441.36	9.51
172	SLU 72	4	-33	2280	3.38	441.11	8.06
172	SLU 73	3	-35	2566	3.89	496.53	8.5
172	SLU 74	2	-44	2565	3.94	496.95	10.92
172	SLU 75	3	-39	2566	3.91	496.7	9.47
172	SLU 76	3	-35	2566	3.89	496.53	8.5
172	SLU 77	2	-44	2565	3.94	496.95	10.92
172	SLU 78	3	-39	2566	3.91	496.7	9.47
172	SLU 79	2	-44	2565	3.94	496.95	10.92
172	SLU 80	3	-39	2566	3.91	496.7	9.47
172	SLU 81	2	-47	2688	4.16	520.77	11.53
172	SLU 82	2	-41	2688	4.13	520.52	10.07
172	SLU 83	2	-47	2688	4.16	520.77	11.53
172	SLU 84	2	-41	2688	4.13	520.52	10.07
172	SLE RA 1	3	-29	1706	2.54	330.3	7.08
172	SLE RA 2	3	-22	1707	2.51	330.02	5.47
172	SLE RA 3	3	-29	1706	2.54	330.3	7.08
172	SLE RA 4	3	-25	1707	2.52	330.13	6.12
172	SLE RA 5	3	-22	1707	2.51	330.02	5.47
172	SLE RA 6	3	-29	1706	2.54	330.3	7.08
172	SLE RA 7	3	-25	1707	2.52	330.13	6.12
172	SLE RA 8	3	-29	1706	2.54	330.3	7.08
172	SLE RA 9	3	-25	1707	2.52	330.13	6.12
172	SLE RA 10	2	-26	1897	2.86	367.08	6.41
172	SLE RA 11	2	-33	1897	2.89	367.36	8.03
172	SLE RA 12	2	-29	1897	2.87	367.19	7.06
172	SLE RA 13	2	-26	1897	2.86	367.08	6.41
172	SLE RA 14	2	-33	1897	2.89	367.36	8.03
172	SLE RA 15	2	-29	1897	2.87	367.19	7.06
172	SLE RA 16	2	-33	1897	2.89	367.36	8.03
172	SLE RA 17	2	-29	1897	2.87	367.19	7.06
172	SLE RA 18	2	-34	1978	3.04	383.24	8.43
172	SLE RA 19	2	-30	1978	3.02	383.07	7.46
172	SLE RA 20	2	-34	1978	3.04	383.24	8.43
172	SLE RA 21	2	-30	1978	3.02	383.07	7.46
172	SLE FR 1	3	-29	1706	2.54	330.3	7.08
172	SLE FR 2	3	-28	1706	2.53	330.25	6.76
172	SLE FR 3	3	-29	1706	2.54	330.3	7.08
172	SLE FR 4	3	-29	1788	2.68	346.13	7.17
172	SLE FR 5	3	-30	1788	2.69	346.18	7.49
172	SLE FR 6	2	-32	1842	2.79	356.77	7.76
172	SLE QP 1	3	-29	1706	2.54	330.3	7.08
172	SLE QP 2	3	-30	1788	2.69	346.18	7.49
172	SLD 1	117	-10	1529	1.99	295.32	2.32
172	SLD 2	120	21	1526	1.96	294.46	-5.46
172	SLD 3	112	-113	1523	2.58	301.98	27.89
172	SLD 4	114	-81	1521	2.54	301.12	20.12
172	SLD 5	44	120	1720	1.6	321.15	-29.98
172	SLD 6	47	152	1717	1.56	320.26	-38.05
172	SLD 7	26	-222	1701	3.56	343.33	55.27
172	SLD 8	29	-190	1698	3.52	342.44	47.19
172	SLD 9	-23	129	1878	1.85	349.93	-32.22
172	SLD 10	-21	161	1875	1.81	349.04	-40.29
172	SLD 11	-41	-213	1859	3.81	372.11	53.03
172	SLD 12	-39	-180	1856	3.77	371.22	44.96
172	SLD 13	-109	20	2055	2.83	391.25	-5.14
172	SLD 14	-106	52	2053	2.79	390.39	-12.91
172	SLD 15	-114	-82	2050	3.42	397.9	20.44
172	SLD 16	-112	-51	2047	3.38	397.05	12.66
172	SLV 1	264	15	1196	1.11	230.06	-4.13
172	SLV 2	270	87	1190	1.02	228.1	-21.86
172	SLV 3	252	-218	1183	2.44	245.16	53.94
172	SLV 4	257	-146	1177	2.35	243.2	36.21
172	SLV 5	98	310	1632	0.23	289.16	-77.56
172	SLV 6	103	384	1626	0.13	287.14	-95.89
172	SLV 7	57	-466	1589	4.67	339.5	115.99
172	SLV 8	63	-392	1583	4.58	337.48	97.67
172	SLV 9	-57	331	1993	0.8	354.89	-82.69
172	SLV 10	-51	405	1987	0.71	352.87	-101.02
172	SLV 11	-98	-445	1950	5.24	405.23	110.86
172	SLV 12	-92	-371	1944	5.15	403.21	92.54
172	SLV 13	-252	85	2399	3.02	449.16	-21.23
172	SLV 14	-246	157	2393	2.93	447.21	-38.96
172	SLV 15	-264	-148	2386	4.35	464.27	36.83
172	SLV 16	-258	-76	2380	4.27	462.31	19.11
172	CRTFP Ux+	0	0	0	0	0	0
172	CRTFP Ux-	0	0	0	0	0	0
172	CRTFP Uy+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
172	CRTFP Uy-	0	0	0	0	0	0
174	SLU 1	-5	7	2532	-69.85	0.33	-0.04
174	SLU 2	-5	18	2532	-69.88	0.34	-0.04
174	SLU 3	-5	7	2532	-69.85	0.33	-0.04
174	SLU 4	-5	14	2532	-69.87	0.34	-0.04
174	SLU 5	-5	18	2532	-69.88	0.34	-0.04
174	SLU 6	-5	7	2532	-69.85	0.33	-0.04
174	SLU 7	-5	14	2532	-69.87	0.34	-0.04
174	SLU 8	-5	7	2532	-69.85	0.33	-0.04
174	SLU 9	-5	14	2532	-69.87	0.34	-0.04
174	SLU 10	-5	21	3006	-82.92	0.37	-0.06
174	SLU 11	-5	11	3006	-82.89	0.36	-0.06
174	SLU 12	-5	17	3006	-82.91	0.37	-0.06
174	SLU 13	-5	21	3006	-82.92	0.37	-0.06
174	SLU 14	-5	11	3006	-82.89	0.36	-0.06
174	SLU 15	-5	17	3006	-82.91	0.37	-0.06
174	SLU 16	-5	11	3006	-82.89	0.36	-0.06
174	SLU 17	-5	17	3006	-82.91	0.37	-0.06
174	SLU 18	-5	12	3209	-88.48	0.37	-0.07
174	SLU 19	-6	19	3209	-88.5	0.38	-0.07
174	SLU 20	-5	12	3209	-88.48	0.37	-0.07
174	SLU 21	-6	19	3209	-88.5	0.38	-0.07
174	SLU 22	-5	10	2887	-79.61	0.34	-0.05
174	SLU 23	-5	20	2887	-79.64	0.35	-0.05
174	SLU 24	-5	10	2887	-79.61	0.34	-0.05
174	SLU 25	-5	16	2887	-79.63	0.34	-0.05
174	SLU 26	-5	20	2887	-79.64	0.35	-0.05
174	SLU 27	-5	10	2887	-79.61	0.34	-0.05
174	SLU 28	-5	16	2887	-79.63	0.34	-0.05
174	SLU 29	-5	10	2887	-79.61	0.34	-0.05
174	SLU 30	-5	16	2887	-79.63	0.34	-0.05
174	SLU 31	-6	24	3361	-92.68	0.37	-0.07
174	SLU 32	-6	13	3361	-92.66	0.36	-0.07
174	SLU 33	-6	19	3361	-92.67	0.37	-0.07
174	SLU 34	-6	24	3361	-92.68	0.37	-0.07
174	SLU 35	-6	13	3361	-92.66	0.36	-0.07
174	SLU 36	-6	19	3361	-92.67	0.37	-0.07
174	SLU 37	-6	13	3361	-92.66	0.36	-0.07
174	SLU 38	-6	19	3361	-92.67	0.37	-0.07
174	SLU 39	-6	14	3564	-98.24	0.38	-0.08
174	SLU 40	-6	21	3564	-98.26	0.38	-0.08
174	SLU 41	-6	14	3564	-98.24	0.38	-0.08
174	SLU 42	-6	21	3564	-98.26	0.38	-0.08
174	SLU 43	-6	9	3170	-87.46	0.43	-0.05
174	SLU 44	-6	20	3170	-87.49	0.44	-0.05
174	SLU 45	-6	9	3170	-87.46	0.43	-0.05
174	SLU 46	-6	15	3170	-87.48	0.44	-0.05
174	SLU 47	-6	20	3170	-87.49	0.44	-0.05
174	SLU 48	-6	9	3170	-87.46	0.43	-0.05
174	SLU 49	-6	15	3170	-87.48	0.44	-0.05
174	SLU 50	-6	9	3170	-87.46	0.43	-0.05
174	SLU 51	-6	15	3170	-87.48	0.44	-0.05
174	SLU 52	-7	23	3644	-100.53	0.47	-0.07
174	SLU 53	-6	12	3644	-100.5	0.46	-0.07
174	SLU 54	-7	18	3644	-100.52	0.47	-0.07
174	SLU 55	-7	23	3644	-100.53	0.47	-0.07
174	SLU 56	-6	12	3644	-100.5	0.46	-0.07
174	SLU 57	-7	18	3644	-100.52	0.47	-0.07
174	SLU 58	-6	12	3644	-100.5	0.46	-0.07
174	SLU 59	-7	18	3644	-100.52	0.47	-0.07
174	SLU 60	-7	13	3847	-106.09	0.47	-0.08
174	SLU 61	-7	20	3847	-106.11	0.48	-0.08
174	SLU 62	-7	13	3847	-106.09	0.47	-0.08
174	SLU 63	-7	20	3847	-106.11	0.48	-0.08
174	SLU 64	-6	11	3525	-97.22	0.44	-0.06
174	SLU 65	-6	22	3525	-97.25	0.45	-0.06
174	SLU 66	-6	11	3525	-97.22	0.44	-0.06
174	SLU 67	-6	18	3525	-97.24	0.44	-0.06
174	SLU 68	-6	22	3525	-97.25	0.45	-0.06
174	SLU 69	-6	11	3525	-97.22	0.44	-0.06
174	SLU 70	-6	18	3525	-97.24	0.44	-0.06
174	SLU 71	-6	11	3525	-97.22	0.44	-0.06
174	SLU 72	-6	18	3525	-97.24	0.44	-0.06
174	SLU 73	-7	25	3999	-110.29	0.47	-0.08
174	SLU 74	-7	14	3999	-110.26	0.46	-0.08
174	SLU 75	-7	21	3999	-110.28	0.47	-0.08
174	SLU 76	-7	25	3999	-110.29	0.47	-0.08
174	SLU 77	-7	14	3999	-110.26	0.46	-0.08
174	SLU 78	-7	21	3999	-110.28	0.47	-0.08
174	SLU 79	-7	14	3999	-110.26	0.46	-0.08
174	SLU 80	-7	21	3999	-110.28	0.47	-0.08
174	SLU 81	-7	16	4202	-115.85	0.48	-0.09
174	SLU 82	-7	22	4202	-115.87	0.48	-0.09
174	SLU 83	-7	16	4202	-115.85	0.48	-0.09
174	SLU 84	-7	22	4202	-115.87	0.48	-0.09
174	SLE RA 1	-5	8	2634	-72.64	0.34	-0.05

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
174	SLE RA 2	-5	15	2633	-72.66	0.34	-0.05
174	SLE RA 3	-5	8	2634	-72.64	0.34	-0.05
174	SLE RA 4	-5	12	2634	-72.65	0.34	-0.05
174	SLE RA 5	-5	15	2633	-72.66	0.34	-0.05
174	SLE RA 6	-5	8	2634	-72.64	0.34	-0.05
174	SLE RA 7	-5	12	2634	-72.65	0.34	-0.05
174	SLE RA 8	-5	8	2634	-72.64	0.34	-0.05
174	SLE RA 9	-5	12	2634	-72.65	0.34	-0.05
174	SLE RA 10	-5	17	2949	-81.35	0.36	-0.06
174	SLE RA 11	-5	10	2950	-81.33	0.35	-0.06
174	SLE RA 12	-5	14	2949	-81.35	0.36	-0.06
174	SLE RA 13	-5	17	2949	-81.35	0.36	-0.06
174	SLE RA 14	-5	10	2950	-81.33	0.35	-0.06
174	SLE RA 15	-5	14	2949	-81.35	0.36	-0.06
174	SLE RA 16	-5	10	2950	-81.33	0.35	-0.06
174	SLE RA 17	-5	14	2949	-81.35	0.36	-0.06
174	SLE RA 18	-5	11	3085	-85.06	0.36	-0.06
174	SLE RA 19	-5	15	3085	-85.07	0.36	-0.06
174	SLE RA 20	-5	11	3085	-85.06	0.36	-0.06
174	SLE RA 21	-5	15	3085	-85.07	0.36	-0.06
174	SLE FR 1	-5	8	2634	-72.64	0.34	-0.05
174	SLE FR 2	-5	9	2634	-72.64	0.34	-0.05
174	SLE FR 3	-5	8	2634	-72.64	0.34	-0.05
174	SLE FR 4	-5	10	2769	-76.37	0.34	-0.05
174	SLE FR 5	-5	9	2769	-76.37	0.34	-0.05
174	SLE FR 6	-5	10	2859	-78.85	0.35	-0.05
174	SLE QP 1	-5	8	2634	-72.64	0.34	-0.05
174	SLE QP 2	-5	9	2769	-76.37	0.34	-0.05
174	SLD 1	183	72	2774	-76.98	9.12	4.58
174	SLD 2	185	72	2773	-76.98	8.97	5.17
174	SLD 3	187	-42	2796	-76.86	9.27	4.48
174	SLD 4	188	-41	2795	-76.85	9.11	5.07
174	SLD 5	46	200	2737	-76.75	2.82	1.27
174	SLD 6	47	201	2737	-76.74	2.65	1.88
174	SLD 7	57	-179	2811	-76.32	3.3	0.94
174	SLD 8	59	-179	2810	-76.32	3.13	1.56
174	SLD 9	-69	197	2728	-76.41	-2.45	-1.66
174	SLD 10	-67	197	2728	-76.41	-2.61	-1.04
174	SLD 11	-57	-183	2801	-75.99	-1.97	-1.98
174	SLD 12	-56	-183	2801	-75.98	-2.13	-1.37
174	SLD 13	-198	59	2743	-75.88	-8.42	-5.17
174	SLD 14	-197	60	2743	-75.87	-8.58	-4.58
174	SLD 15	-195	-55	2765	-75.75	-8.28	-5.27
174	SLD 16	-193	-54	2765	-75.75	-8.44	-4.68
174	SLV 1	425	152	2782	-77.88	20.39	10.52
174	SLV 2	428	153	2782	-77.87	20.04	11.86
174	SLV 3	433	-107	2832	-77.59	20.72	10.29
174	SLV 4	436	-105	2832	-77.58	20.37	11.64
174	SLV 5	111	444	2697	-77.27	5.99	2.96
174	SLV 6	114	445	2697	-77.26	5.62	4.35
174	SLV 7	137	-418	2864	-76.29	7.09	2.22
174	SLV 8	141	-417	2864	-76.28	6.72	3.62
174	SLV 9	-151	435	2674	-76.45	-6.03	-3.72
174	SLV 10	-147	436	2674	-76.44	-6.4	-2.32
174	SLV 11	-124	-427	2841	-75.47	-4.93	-4.45
174	SLV 12	-121	-426	2841	-75.46	-5.3	-3.06
174	SLV 13	-446	123	2706	-75.15	-19.68	-11.74
174	SLV 14	-442	124	2706	-75.14	-20.04	-10.4
174	SLV 15	-438	-135	2756	-74.86	-19.35	-11.96
174	SLV 16	-435	-134	2756	-74.85	-19.71	-10.62
174	CRTFP Ux+	0	0	0	0	0	0
174	CRTFP Ux-	0	0	0	0	0	0
174	CRTFP Uy+	0	0	0	0	0	0
174	CRTFP Uy-	0	0	0	0	0	0
177	SLU 1	-17	4	2470	-66.79	11.37	0.51
177	SLU 2	-18	13	2472	-66.9	11.34	0.48
177	SLU 3	-17	4	2470	-66.79	11.37	0.51
177	SLU 4	-18	10	2471	-66.86	11.35	0.49
177	SLU 5	-18	13	2472	-66.9	11.34	0.48
177	SLU 6	-17	4	2470	-66.79	11.37	0.51
177	SLU 7	-18	10	2471	-66.86	11.35	0.49
177	SLU 8	-17	4	2470	-66.79	11.37	0.51
177	SLU 9	-18	10	2471	-66.86	11.35	0.49
177	SLU 10	-17	15	2922	-79.04	12.3	0.67
177	SLU 11	-17	5	2920	-78.93	12.33	0.7
177	SLU 12	-17	11	2921	-79	12.31	0.68
177	SLU 13	-17	15	2922	-79.04	12.3	0.67
177	SLU 14	-17	5	2920	-78.93	12.33	0.7
177	SLU 15	-17	11	2921	-79	12.31	0.68
177	SLU 16	-17	5	2920	-78.93	12.33	0.7
177	SLU 17	-17	11	2921	-79	12.31	0.68
177	SLU 18	-17	5	3113	-84.13	12.75	0.79
177	SLU 19	-17	11	3114	-84.2	12.73	0.76
177	SLU 20	-17	5	3113	-84.13	12.75	0.79
177	SLU 21	-17	11	3114	-84.2	12.73	0.76
177	SLU 22	-18	4	2807	-75.89	12.2	0.65

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
177	SLU 23	-18	14	2810	-76.01	12.17	0.61
177	SLU 24	-18	4	2807	-75.89	12.2	0.65
177	SLU 25	-18	10	2809	-75.96	12.18	0.63
177	SLU 26	-18	14	2810	-76.01	12.17	0.61
177	SLU 27	-18	4	2807	-75.89	12.2	0.65
177	SLU 28	-18	10	2809	-75.96	12.18	0.63
177	SLU 29	-18	4	2807	-75.89	12.2	0.65
177	SLU 30	-18	10	2809	-75.96	12.18	0.63
177	SLU 31	-17	15	3260	-88.15	13.13	0.8
177	SLU 32	-17	6	3257	-88.03	13.16	0.84
177	SLU 33	-17	12	3259	-88.1	13.14	0.82
177	SLU 34	-17	15	3260	-88.15	13.13	0.8
177	SLU 35	-17	6	3257	-88.03	13.16	0.84
177	SLU 36	-17	12	3259	-88.1	13.14	0.82
177	SLU 37	-17	6	3257	-88.03	13.16	0.84
177	SLU 38	-17	12	3259	-88.1	13.14	0.82
177	SLU 39	-17	6	3450	-93.24	13.57	0.92
177	SLU 40	-17	12	3452	-93.3	13.55	0.9
177	SLU 41	-17	6	3450	-93.24	13.57	0.92
177	SLU 42	-17	12	3452	-93.3	13.55	0.9
177	SLU 43	-23	4	3095	-83.71	14.5	0.62
177	SLU 44	-23	14	3097	-83.82	14.47	0.59
177	SLU 45	-23	4	3095	-83.71	14.5	0.62
177	SLU 46	-23	10	3096	-83.77	14.48	0.6
177	SLU 47	-23	14	3097	-83.82	14.47	0.59
177	SLU 48	-23	4	3095	-83.71	14.5	0.62
177	SLU 49	-23	10	3096	-83.77	14.48	0.6
177	SLU 50	-23	4	3095	-83.71	14.5	0.62
177	SLU 51	-23	10	3096	-83.77	14.48	0.6
177	SLU 52	-23	15	3547	-95.96	15.43	0.78
177	SLU 53	-22	6	3545	-95.85	15.46	0.81
177	SLU 54	-23	12	3546	-95.91	15.44	0.79
177	SLU 55	-23	15	3547	-95.96	15.43	0.78
177	SLU 56	-22	6	3545	-95.85	15.46	0.81
177	SLU 57	-23	12	3546	-95.91	15.44	0.79
177	SLU 58	-22	6	3545	-95.85	15.46	0.81
177	SLU 59	-23	12	3546	-95.91	15.44	0.79
177	SLU 60	-22	6	3738	-101.05	15.87	0.89
177	SLU 61	-22	12	3739	-101.12	15.85	0.87
177	SLU 62	-22	6	3738	-101.05	15.87	0.89
177	SLU 63	-22	12	3739	-101.12	15.85	0.87
177	SLU 64	-23	5	3433	-92.81	15.32	0.76
177	SLU 65	-23	15	3435	-92.92	15.29	0.72
177	SLU 66	-23	5	3433	-92.81	15.32	0.76
177	SLU 67	-23	11	3434	-92.88	15.31	0.73
177	SLU 68	-23	15	3435	-92.92	15.29	0.72
177	SLU 69	-23	5	3433	-92.81	15.32	0.76
177	SLU 70	-23	11	3434	-92.88	15.31	0.73
177	SLU 71	-23	5	3433	-92.81	15.32	0.76
177	SLU 72	-23	11	3434	-92.88	15.31	0.73
177	SLU 73	-23	16	3885	-105.06	16.26	0.91
177	SLU 74	-22	7	3883	-104.95	16.29	0.95
177	SLU 75	-23	12	3884	-105.02	16.27	0.92
177	SLU 76	-23	16	3885	-105.06	16.26	0.91
177	SLU 77	-22	7	3883	-104.95	16.29	0.95
177	SLU 78	-23	12	3884	-105.02	16.27	0.92
177	SLU 79	-22	7	3883	-104.95	16.29	0.95
177	SLU 80	-23	12	3884	-105.02	16.27	0.92
177	SLU 81	-22	7	4075	-110.15	16.7	1.03
177	SLU 82	-22	13	4077	-110.22	16.68	1.01
177	SLU 83	-22	7	4075	-110.15	16.7	1.03
177	SLU 84	-22	13	4077	-110.22	16.68	1.01
177	SLE RA 1	-17	4	2566	-69.39	11.61	0.55
177	SLE RA 2	-18	10	2568	-69.47	11.59	0.53
177	SLE RA 3	-17	4	2566	-69.39	11.61	0.55
177	SLE RA 4	-18	8	2567	-69.44	11.59	0.54
177	SLE RA 5	-18	10	2568	-69.47	11.59	0.53
177	SLE RA 6	-17	4	2566	-69.39	11.61	0.55
177	SLE RA 7	-18	8	2567	-69.44	11.59	0.54
177	SLE RA 8	-17	4	2566	-69.39	11.61	0.55
177	SLE RA 9	-18	8	2567	-69.44	11.59	0.54
177	SLE RA 10	-17	11	2868	-77.56	12.23	0.66
177	SLE RA 11	-17	5	2866	-77.48	12.25	0.68
177	SLE RA 12	-17	9	2867	-77.53	12.24	0.66
177	SLE RA 13	-17	11	2868	-77.56	12.23	0.66
177	SLE RA 14	-17	5	2866	-77.48	12.25	0.68
177	SLE RA 15	-17	9	2867	-77.53	12.24	0.66
177	SLE RA 16	-17	5	2866	-77.48	12.25	0.68
177	SLE RA 17	-17	9	2867	-77.53	12.24	0.66
177	SLE RA 18	-17	5	2995	-80.95	12.52	0.73
177	SLE RA 19	-17	9	2996	-81	12.51	0.72
177	SLE RA 20	-17	5	2995	-80.95	12.52	0.73
177	SLE RA 21	-17	9	2996	-81	12.51	0.72
177	SLE FR 1	-17	4	2566	-69.39	11.61	0.55
177	SLE FR 2	-18	5	2567	-69.41	11.6	0.55
177	SLE FR 3	-17	4	2566	-69.39	11.61	0.55

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
177	SLE FR 4	-17	6	2695	-72.87	11.88	0.6
177	SLE FR 5	-17	4	2695	-72.86	11.88	0.61
177	SLE FR 6	-17	4	2781	-75.17	12.07	0.64
177	SLE QP 1	-17	4	2566	-69.39	11.61	0.55
177	SLE QP 2	-17	4	2695	-72.86	11.88	0.61
177	SLD 1	164	75	2886	-78.24	22.94	4.83
177	SLD 2	166	54	2886	-78.19	23.05	5.49
177	SLD 3	166	-31	2881	-77.61	23.49	5.17
177	SLD 4	168	-52	2880	-77.57	23.6	5.83
177	SLD 5	32	194	2761	-75.43	14.33	1.11
177	SLD 6	34	173	2761	-75.39	14.45	1.8
177	SLD 7	41	-160	2742	-73.35	16.15	2.24
177	SLD 8	43	-181	2741	-73.31	16.27	2.94
177	SLD 9	-78	190	2648	-72.41	7.5	-1.72
177	SLD 10	-76	168	2648	-72.36	7.62	-1.03
177	SLD 11	-69	-164	2629	-70.33	9.31	-0.59
177	SLD 12	-67	-186	2628	-70.28	9.43	0.1
177	SLD 13	-203	60	2510	-68.15	0.16	-4.62
177	SLD 14	-201	39	2509	-68.11	0.28	-3.95
177	SLD 15	-200	-46	2504	-67.52	0.71	-4.28
177	SLD 16	-198	-67	2503	-67.48	0.82	-3.61
177	SLV 1	396	166	3133	-85.14	37.14	10.25
177	SLV 2	401	118	3131	-85.04	37.4	11.77
177	SLV 3	402	-75	3119	-83.72	38.38	11.02
177	SLV 4	407	-123	3118	-83.62	38.64	12.54
177	SLV 5	95	436	2847	-78.73	17.48	1.77
177	SLV 6	100	386	2845	-78.63	17.75	3.34
177	SLV 7	116	-368	2803	-74	21.62	4.34
177	SLV 8	121	-417	2801	-73.9	21.88	5.92
177	SLV 9	-156	426	2589	-71.82	1.88	-4.71
177	SLV 10	-151	376	2587	-71.71	2.15	-3.13
177	SLV 11	-135	-378	2544	-67.09	6.01	-2.13
177	SLV 12	-130	-428	2543	-66.99	6.28	-0.55
177	SLV 13	-442	132	2272	-62.09	-14.87	-11.33
177	SLV 14	-437	84	2270	-62	-14.62	-9.81
177	SLV 15	-435	-109	2258	-60.68	-13.63	-10.56
177	SLV 16	-431	-157	2257	-60.58	-13.38	-9.03
177	CRTFP Ux+	0	0	0	0	0	0
177	CRTFP Ux-	0	0	0	0	0	0
177	CRTFP Uy+	0	0	0	0	0	0
177	CRTFP Uy-	0	0	0	0	0	0
180	SLU 1	7	7	2417	-65.39	-12.71	-0.57
180	SLU 2	7	17	2419	-65.49	-12.65	-0.54
180	SLU 3	7	7	2417	-65.39	-12.71	-0.57
180	SLU 4	7	13	2418	-65.45	-12.67	-0.55
180	SLU 5	7	17	2419	-65.49	-12.65	-0.54
180	SLU 6	7	7	2417	-65.39	-12.71	-0.57
180	SLU 7	7	13	2418	-65.45	-12.67	-0.55
180	SLU 8	7	7	2417	-65.39	-12.71	-0.57
180	SLU 9	7	13	2418	-65.45	-12.67	-0.55
180	SLU 10	5	19	2864	-77.5	-14.51	-0.71
180	SLU 11	6	9	2862	-77.4	-14.58	-0.74
180	SLU 12	6	15	2863	-77.46	-14.54	-0.72
180	SLU 13	5	19	2864	-77.5	-14.51	-0.71
180	SLU 14	6	9	2862	-77.4	-14.58	-0.74
180	SLU 15	6	15	2863	-77.46	-14.54	-0.72
180	SLU 16	6	9	2862	-77.4	-14.58	-0.74
180	SLU 17	6	15	2863	-77.46	-14.54	-0.72
180	SLU 18	5	10	3053	-82.55	-15.38	-0.81
180	SLU 19	5	16	3054	-82.61	-15.34	-0.8
180	SLU 20	5	10	3053	-82.55	-15.38	-0.81
180	SLU 21	5	16	3054	-82.61	-15.34	-0.8
180	SLU 22	6	9	2751	-74.41	-14.21	-0.69
180	SLU 23	6	18	2753	-74.51	-14.14	-0.66
180	SLU 24	6	9	2751	-74.41	-14.21	-0.69
180	SLU 25	6	14	2753	-74.47	-14.17	-0.67
180	SLU 26	6	18	2753	-74.51	-14.14	-0.66
180	SLU 27	6	9	2751	-74.41	-14.21	-0.69
180	SLU 28	6	14	2753	-74.47	-14.17	-0.67
180	SLU 29	6	9	2751	-74.41	-14.21	-0.69
180	SLU 30	6	14	2753	-74.47	-14.17	-0.67
180	SLU 31	5	20	3199	-86.52	-16.01	-0.83
180	SLU 32	5	10	3197	-86.42	-16.07	-0.86
180	SLU 33	5	16	3198	-86.48	-16.03	-0.84
180	SLU 34	5	20	3199	-86.52	-16.01	-0.83
180	SLU 35	5	10	3197	-86.42	-16.07	-0.86
180	SLU 36	5	16	3198	-86.48	-16.03	-0.84
180	SLU 37	5	10	3197	-86.42	-16.07	-0.86
180	SLU 38	5	16	3198	-86.48	-16.03	-0.84
180	SLU 39	4	11	3387	-91.57	-16.87	-0.93
180	SLU 40	4	17	3389	-91.63	-16.83	-0.92
180	SLU 41	4	11	3387	-91.57	-16.87	-0.93
180	SLU 42	4	17	3389	-91.63	-16.83	-0.92
180	SLU 43	9	9	3027	-81.92	-16.02	-0.7
180	SLU 44	9	19	3029	-82.02	-15.95	-0.67
180	SLU 45	9	9	3027	-81.92	-16.02	-0.7

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
180	SLU 46	9	15	3029	-81.98	-15.98	-0.68
180	SLU 47	9	19	3029	-82.02	-15.95	-0.67
180	SLU 48	9	9	3027	-81.92	-16.02	-0.7
180	SLU 49	9	15	3029	-81.98	-15.98	-0.68
180	SLU 50	9	9	3027	-81.92	-16.02	-0.7
180	SLU 51	9	15	3029	-81.98	-15.98	-0.68
180	SLU 52	8	20	3475	-94.03	-17.81	-0.84
180	SLU 53	8	11	3473	-93.93	-17.88	-0.87
180	SLU 54	8	17	3474	-93.99	-17.84	-0.85
180	SLU 55	8	20	3475	-94.03	-17.81	-0.84
180	SLU 56	8	11	3473	-93.93	-17.88	-0.87
180	SLU 57	8	17	3474	-93.99	-17.84	-0.85
180	SLU 58	8	11	3473	-93.93	-17.88	-0.87
180	SLU 59	8	17	3474	-93.99	-17.84	-0.85
180	SLU 60	7	12	3663	-99.08	-18.68	-0.94
180	SLU 61	7	17	3665	-99.14	-18.64	-0.92
180	SLU 62	7	12	3663	-99.08	-18.68	-0.94
180	SLU 63	7	17	3665	-99.14	-18.64	-0.92
180	SLU 64	8	10	3362	-90.94	-17.51	-0.82
180	SLU 65	8	20	3364	-91.03	-17.44	-0.79
180	SLU 66	8	10	3362	-90.94	-17.51	-0.82
180	SLU 67	8	16	3363	-90.99	-17.47	-0.8
180	SLU 68	8	20	3364	-91.03	-17.44	-0.79
180	SLU 69	8	10	3362	-90.94	-17.51	-0.82
180	SLU 70	8	16	3363	-90.99	-17.47	-0.8
180	SLU 71	8	10	3362	-90.94	-17.51	-0.82
180	SLU 72	8	16	3363	-90.99	-17.47	-0.8
180	SLU 73	7	22	3809	-103.05	-19.31	-0.96
180	SLU 74	7	12	3807	-102.95	-19.37	-0.99
180	SLU 75	7	18	3808	-103.01	-19.33	-0.97
180	SLU 76	7	22	3809	-103.05	-19.31	-0.96
180	SLU 77	7	12	3807	-102.95	-19.37	-0.99
180	SLU 78	7	18	3808	-103.01	-19.33	-0.97
180	SLU 79	7	12	3807	-102.95	-19.37	-0.99
180	SLU 80	7	18	3808	-103.01	-19.33	-0.97
180	SLU 81	7	13	3998	-108.1	-20.17	-1.06
180	SLU 82	7	19	3999	-108.16	-20.13	-1.05
180	SLU 83	7	13	3998	-108.1	-20.17	-1.06
180	SLU 84	7	19	3999	-108.16	-20.13	-1.05
180	SLE RA 1	7	8	2512	-67.97	-13.14	-0.61
180	SLE RA 2	7	14	2514	-68.03	-13.1	-0.58
180	SLE RA 3	7	8	2512	-67.97	-13.14	-0.61
180	SLE RA 4	7	11	2513	-68.01	-13.11	-0.59
180	SLE RA 5	7	14	2514	-68.03	-13.1	-0.58
180	SLE RA 6	7	8	2512	-67.97	-13.14	-0.61
180	SLE RA 7	7	11	2513	-68.01	-13.11	-0.59
180	SLE RA 8	7	8	2512	-67.97	-13.14	-0.61
180	SLE RA 9	7	11	2513	-68.01	-13.11	-0.59
180	SLE RA 10	6	15	2811	-76.04	-14.34	-0.7
180	SLE RA 11	6	9	2809	-75.98	-14.38	-0.72
180	SLE RA 12	6	13	2810	-76.02	-14.36	-0.71
180	SLE RA 13	6	15	2811	-76.04	-14.34	-0.7
180	SLE RA 14	6	9	2809	-75.98	-14.38	-0.72
180	SLE RA 15	6	13	2810	-76.02	-14.36	-0.71
180	SLE RA 16	6	9	2809	-75.98	-14.38	-0.72
180	SLE RA 17	6	13	2810	-76.02	-14.36	-0.71
180	SLE RA 18	5	9	2937	-79.41	-14.92	-0.77
180	SLE RA 19	5	13	2937	-79.45	-14.89	-0.75
180	SLE RA 20	5	9	2937	-79.41	-14.92	-0.77
180	SLE RA 21	5	13	2937	-79.45	-14.89	-0.75
180	SLE FR 1	7	8	2512	-67.97	-13.14	-0.61
180	SLE FR 2	7	9	2513	-67.98	-13.13	-0.6
180	SLE FR 3	7	8	2512	-67.97	-13.14	-0.61
180	SLE FR 4	6	9	2640	-71.41	-13.66	-0.65
180	SLE FR 5	6	8	2640	-71.4	-13.67	-0.65
180	SLE FR 6	6	9	2725	-73.69	-14.03	-0.69
180	SLE QP 1	7	8	2512	-67.97	-13.14	-0.61
180	SLE QP 2	6	8	2640	-71.4	-13.67	-0.65
180	SLD 1	191	38	2468	-66.98	-1.6	4.04
180	SLD 2	193	57	2468	-67.01	-1.43	4.71
180	SLD 3	187	-65	2463	-66.38	-2.43	3.61
180	SLD 4	189	-46	2464	-66.42	-2.26	4.28
180	SLD 5	67	166	2595	-70.96	-8.86	1.15
180	SLD 6	69	186	2596	-70.99	-8.68	1.85
180	SLD 7	54	-177	2579	-68.99	-11.62	-0.27
180	SLD 8	56	-157	2580	-69.02	-11.44	0.43
180	SLD 9	-43	173	2700	-73.78	-15.9	-1.74
180	SLD 10	-41	193	2700	-73.82	-15.73	-1.04
180	SLD 11	-56	-169	2684	-71.81	-18.67	-3.16
180	SLD 12	-55	-149	2684	-71.84	-18.49	-2.46
180	SLD 13	-177	62	2816	-76.39	-25.09	-5.59
180	SLD 14	-175	81	2816	-76.42	-24.92	-4.92
180	SLD 15	-180	-41	2811	-75.79	-25.92	-6.02
180	SLD 16	-179	-21	2811	-75.83	-25.75	-5.34
180	SLV 1	428	75	2248	-61.29	13.9	10.06
180	SLV 2	432	119	2248	-61.37	14.29	11.59

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
180	SLV 3	419	-158	2237	-59.95	12.02	9.09
180	SLV 4	424	-114	2238	-60.02	12.41	10.62
180	SLV 5	145	365	2538	-70.38	-2.69	3.46
180	SLV 6	149	411	2539	-70.46	-2.29	5.05
180	SLV 7	115	-411	2502	-65.9	-8.96	0.24
180	SLV 8	119	-366	2503	-65.97	-8.56	1.83
180	SLV 9	-107	382	2776	-76.83	-18.79	-3.13
180	SLV 10	-103	428	2777	-76.91	-18.39	-1.55
180	SLV 11	-137	-395	2740	-72.34	-25.05	-6.36
180	SLV 12	-133	-349	2741	-72.42	-24.65	-4.77
180	SLV 13	-411	131	3042	-82.78	-39.75	-11.93
180	SLV 14	-407	175	3043	-82.86	-39.37	-10.4
180	SLV 15	-420	-102	3031	-81.44	-41.63	-12.9
180	SLV 16	-416	-58	3032	-81.51	-41.24	-11.36
180	CRTFP Ux+	0	0	0	0	0	0
180	CRTFP Ux-	0	0	0	0	0	0
180	CRTFP Uy+	0	0	0	0	0	0
180	CRTFP Uy-	0	0	0	0	0	0
182	SLU 1	-12	-12	1303	-35.52	-288.96	-3.36
182	SLU 2	-12	-5	1304	-35.56	-288.92	-1.6
182	SLU 3	-12	-12	1303	-35.52	-288.96	-3.36
182	SLU 4	-12	-8	1303	-35.54	-288.94	-2.3
182	SLU 5	-12	-5	1304	-35.56	-288.92	-1.6
182	SLU 6	-12	-12	1303	-35.52	-288.96	-3.36
182	SLU 7	-12	-8	1303	-35.54	-288.94	-2.3
182	SLU 8	-12	-12	1303	-35.52	-288.96	-3.36
182	SLU 9	-12	-8	1303	-35.54	-288.94	-2.3
182	SLU 10	-12	-9	1524	-41.54	-338.2	-2.47
182	SLU 11	-12	-16	1523	-41.5	-338.24	-4.23
182	SLU 12	-12	-12	1523	-41.53	-338.22	-3.17
182	SLU 13	-12	-9	1524	-41.54	-338.2	-2.47
182	SLU 14	-12	-16	1523	-41.5	-338.24	-4.23
182	SLU 15	-12	-12	1523	-41.53	-338.22	-3.17
182	SLU 16	-12	-16	1523	-41.5	-338.24	-4.23
182	SLU 17	-12	-12	1523	-41.53	-338.22	-3.17
182	SLU 18	-12	-17	1617	-44.07	-359.36	-4.6
182	SLU 19	-12	-13	1618	-44.09	-359.33	-3.55
182	SLU 20	-12	-17	1617	-44.07	-359.36	-4.6
182	SLU 21	-12	-13	1618	-44.09	-359.33	-3.55
182	SLU 22	-12	-15	1469	-40.04	-326.15	-3.98
182	SLU 23	-12	-8	1470	-40.09	-326.11	-2.22
182	SLU 24	-12	-15	1469	-40.04	-326.15	-3.98
182	SLU 25	-12	-10	1470	-40.07	-326.13	-2.92
182	SLU 26	-12	-8	1470	-40.09	-326.11	-2.22
182	SLU 27	-12	-15	1469	-40.04	-326.15	-3.98
182	SLU 28	-12	-10	1470	-40.07	-326.13	-2.92
182	SLU 29	-12	-15	1469	-40.04	-326.15	-3.98
182	SLU 30	-12	-10	1470	-40.07	-326.13	-2.92
182	SLU 31	-12	-11	1690	-46.07	-375.39	-3.09
182	SLU 32	-12	-18	1690	-46.03	-375.43	-4.85
182	SLU 33	-12	-14	1690	-46.05	-375.41	-3.79
182	SLU 34	-12	-11	1690	-46.07	-375.39	-3.09
182	SLU 35	-12	-18	1690	-46.03	-375.43	-4.85
182	SLU 36	-12	-14	1690	-46.05	-375.41	-3.79
182	SLU 37	-12	-18	1690	-46.03	-375.43	-4.85
182	SLU 38	-12	-14	1690	-46.05	-375.41	-3.79
182	SLU 39	-12	-20	1784	-48.59	-396.55	-5.22
182	SLU 40	-12	-16	1784	-48.62	-396.52	-4.16
182	SLU 41	-12	-20	1784	-48.59	-396.55	-5.22
182	SLU 42	-12	-16	1784	-48.62	-396.52	-4.16
182	SLU 43	-15	-15	1636	-44.62	-362.9	-4.16
182	SLU 44	-16	-8	1637	-44.67	-362.86	-2.4
182	SLU 45	-15	-15	1636	-44.62	-362.9	-4.16
182	SLU 46	-16	-11	1637	-44.65	-362.87	-3.1
182	SLU 47	-16	-8	1637	-44.67	-362.86	-2.4
182	SLU 48	-15	-15	1636	-44.62	-362.9	-4.16
182	SLU 49	-16	-11	1637	-44.65	-362.87	-3.1
182	SLU 50	-15	-15	1636	-44.62	-362.9	-4.16
182	SLU 51	-16	-11	1637	-44.65	-362.87	-3.1
182	SLU 52	-16	-12	1857	-50.65	-412.14	-3.27
182	SLU 53	-15	-19	1857	-50.61	-412.17	-5.03
182	SLU 54	-15	-14	1857	-50.63	-412.15	-3.97
182	SLU 55	-16	-12	1857	-50.65	-412.14	-3.27
182	SLU 56	-15	-19	1857	-50.61	-412.17	-5.03
182	SLU 57	-15	-14	1857	-50.63	-412.15	-3.97
182	SLU 58	-15	-19	1857	-50.61	-412.17	-5.03
182	SLU 59	-15	-14	1857	-50.63	-412.15	-3.97
182	SLU 60	-15	-20	1951	-53.17	-433.29	-5.4
182	SLU 61	-15	-16	1951	-53.2	-433.27	-4.34
182	SLU 62	-15	-20	1951	-53.17	-433.29	-5.4
182	SLU 63	-15	-16	1951	-53.2	-433.27	-4.34
182	SLU 64	-15	-18	1803	-49.15	-400.09	-4.77
182	SLU 65	-16	-10	1804	-49.19	-400.05	-3.01
182	SLU 66	-15	-18	1803	-49.15	-400.09	-4.77
182	SLU 67	-16	-13	1803	-49.17	-400.06	-3.72
182	SLU 68	-16	-10	1804	-49.19	-400.05	-3.01

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
182	SLU 69	-15	-18	1803	-49.15	-400.09	-4.77
182	SLU 70	-16	-13	1803	-49.17	-400.06	-3.72
182	SLU 71	-15	-18	1803	-49.15	-400.09	-4.77
182	SLU 72	-16	-13	1803	-49.17	-400.06	-3.72
182	SLU 73	-16	-14	2024	-55.17	-449.33	-3.88
182	SLU 74	-15	-21	2023	-55.13	-449.36	-5.64
182	SLU 75	-15	-17	2024	-55.16	-449.34	-4.59
182	SLU 76	-16	-14	2024	-55.17	-449.33	-3.88
182	SLU 77	-15	-21	2023	-55.13	-449.36	-5.64
182	SLU 78	-15	-17	2024	-55.16	-449.34	-4.59
182	SLU 79	-15	-21	2023	-55.13	-449.36	-5.64
182	SLU 80	-15	-17	2024	-55.16	-449.34	-4.59
182	SLU 81	-15	-23	2118	-57.7	-470.48	-6.02
182	SLU 82	-15	-18	2118	-57.72	-470.46	-4.96
182	SLU 83	-15	-23	2118	-57.7	-470.48	-6.02
182	SLU 84	-15	-18	2118	-57.72	-470.46	-4.96
182	SLE RA 1	-12	-13	1350	-36.81	-299.59	-3.54
182	SLE RA 2	-12	-8	1351	-36.84	-299.56	-2.36
182	SLE RA 3	-12	-13	1350	-36.81	-299.59	-3.54
182	SLE RA 4	-12	-10	1351	-36.83	-299.57	-2.83
182	SLE RA 5	-12	-8	1351	-36.84	-299.56	-2.36
182	SLE RA 6	-12	-13	1350	-36.81	-299.59	-3.54
182	SLE RA 7	-12	-10	1351	-36.83	-299.57	-2.83
182	SLE RA 8	-12	-13	1350	-36.81	-299.59	-3.54
182	SLE RA 9	-12	-10	1351	-36.83	-299.57	-2.83
182	SLE RA 10	-12	-11	1498	-40.83	-332.41	-2.94
182	SLE RA 11	-12	-15	1497	-40.8	-332.44	-4.12
182	SLE RA 12	-12	-12	1497	-40.82	-332.42	-3.41
182	SLE RA 13	-12	-11	1498	-40.83	-332.41	-2.94
182	SLE RA 14	-12	-15	1497	-40.8	-332.44	-4.12
182	SLE RA 15	-12	-12	1497	-40.82	-332.42	-3.41
182	SLE RA 16	-12	-15	1497	-40.8	-332.44	-4.12
182	SLE RA 17	-12	-12	1497	-40.82	-332.42	-3.41
182	SLE RA 18	-12	-16	1560	-42.51	-346.52	-4.36
182	SLE RA 19	-12	-13	1560	-42.53	-346.5	-3.66
182	SLE RA 20	-12	-16	1560	-42.51	-346.52	-4.36
182	SLE RA 21	-12	-13	1560	-42.53	-346.5	-3.66
182	SLE FR 1	-12	-13	1350	-36.81	-299.59	-3.54
182	SLE FR 2	-12	-12	1350	-36.82	-299.58	-3.3
182	SLE FR 3	-12	-13	1350	-36.81	-299.59	-3.54
182	SLE FR 4	-12	-13	1413	-38.53	-313.66	-3.55
182	SLE FR 5	-12	-14	1413	-38.52	-313.66	-3.79
182	SLE FR 6	-12	-15	1455	-39.66	-323.05	-3.95
182	SLE QP 1	-12	-13	1350	-36.81	-299.59	-3.54
182	SLE QP 2	-12	-14	1413	-38.52	-313.66	-3.79
182	SLD 1	71	47	1612	-44.02	-352.37	13.61
182	SLD 2	72	24	1612	-44.02	-352.58	7.8
182	SLD 3	73	-31	1609	-43.79	-355.05	-5.8
182	SLD 4	75	-54	1609	-43.78	-355.26	-11.61
182	SLD 5	8	132	1477	-40.52	-321.13	33.02
182	SLD 6	9	107	1478	-40.52	-321.35	26.98
182	SLD 7	18	-129	1467	-39.75	-330.07	-31.68
182	SLD 8	19	-153	1467	-39.75	-330.29	-37.72
182	SLD 9	-43	125	1359	-37.3	-297.04	30.15
182	SLD 10	-41	101	1359	-37.3	-297.26	24.11
182	SLD 11	-33	-135	1349	-36.52	-305.98	-34.55
182	SLD 12	-32	-160	1349	-36.52	-306.2	-40.59
182	SLD 13	-98	26	1217	-33.26	-272.07	4.04
182	SLD 14	-97	3	1218	-33.26	-272.28	-1.77
182	SLD 15	-96	-52	1214	-33.03	-274.75	-15.37
182	SLD 16	-94	-75	1214	-33.03	-274.96	-21.18
182	SLV 1	177	125	1867	-51.07	-402.07	35.8
182	SLV 2	179	72	1868	-51.07	-402.56	22.54
182	SLV 3	183	-52	1860	-50.54	-408.17	-8.27
182	SLV 4	186	-106	1861	-50.54	-408.66	-21.53
182	SLV 5	34	317	1560	-43.09	-330.76	79.8
182	SLV 6	37	261	1561	-43.09	-331.27	66.1
182	SLV 7	55	-275	1536	-41.33	-351.09	-67.12
182	SLV 8	58	-330	1537	-41.32	-351.59	-80.82
182	SLV 9	-82	302	1290	-35.72	-275.74	73.25
182	SLV 10	-79	247	1290	-35.72	-276.24	59.54
182	SLV 11	-61	-289	1266	-33.96	-296.06	-73.67
182	SLV 12	-58	-345	1266	-33.95	-296.57	-87.37
182	SLV 13	-210	78	966	-26.5	-218.67	13.96
182	SLV 14	-207	24	966	-26.5	-219.16	0.7
182	SLV 15	-203	-100	958	-25.97	-224.77	-30.11
182	SLV 16	-200	-153	959	-25.97	-225.26	-43.37
182	CRTFP Ux+	0	0	0	0	0	0
182	CRTFP Ux-	0	0	0	0	0	0
182	CRTFP Uy+	0	0	0	0	0	0
182	CRTFP Uy-	0	0	0	0	0	0
219	SLU 1	5	-20	1221	-72.47	261.11	5.28
219	SLU 2	5	-13	1221	-72.45	260.91	3.55
219	SLU 3	5	-20	1221	-72.47	261.11	5.28
219	SLU 4	5	-16	1221	-72.46	260.99	4.24
219	SLU 5	5	-13	1221	-72.45	260.91	3.55

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
219	SLU 6	5	-20	1221	-72.47	261.11	5.28
219	SLU 7	5	-16	1221	-72.46	260.99	4.24
219	SLU 8	5	-20	1221	-72.47	261.11	5.28
219	SLU 9	5	-16	1221	-72.46	260.99	4.24
219	SLU 10	4	-17	1434	-85.09	306.92	4.53
219	SLU 11	4	-24	1434	-85.11	307.12	6.26
219	SLU 12	4	-20	1434	-85.1	307	5.22
219	SLU 13	4	-17	1434	-85.09	306.92	4.53
219	SLU 14	4	-24	1434	-85.11	307.12	6.26
219	SLU 15	4	-20	1434	-85.1	307	5.22
219	SLU 16	4	-24	1434	-85.11	307.12	6.26
219	SLU 17	4	-20	1434	-85.1	307	5.22
219	SLU 18	4	-26	1526	-90.52	326.83	6.68
219	SLU 19	4	-22	1525	-90.51	326.71	5.64
219	SLU 20	4	-26	1526	-90.52	326.83	6.68
219	SLU 21	4	-22	1525	-90.51	326.71	5.64
219	SLU 22	5	-23	1382	-82.02	295.82	6.01
219	SLU 23	5	-16	1382	-82	295.62	4.29
219	SLU 24	5	-23	1382	-82.02	295.82	6.01
219	SLU 25	5	-19	1382	-82.01	295.7	4.98
219	SLU 26	5	-16	1382	-82	295.62	4.29
219	SLU 27	5	-23	1382	-82.02	295.82	6.01
219	SLU 28	5	-19	1382	-82.01	295.7	4.98
219	SLU 29	5	-23	1382	-82.02	295.82	6.01
219	SLU 30	5	-19	1382	-82.01	295.7	4.98
219	SLU 31	4	-20	1595	-94.64	341.63	5.27
219	SLU 32	4	-27	1595	-94.66	341.82	7
219	SLU 33	4	-23	1595	-94.65	341.71	5.96
219	SLU 34	4	-20	1595	-94.64	341.63	5.27
219	SLU 35	4	-27	1595	-94.66	341.82	7
219	SLU 36	4	-23	1595	-94.65	341.71	5.96
219	SLU 37	4	-27	1595	-94.66	341.82	7
219	SLU 38	4	-23	1595	-94.65	341.71	5.96
219	SLU 39	3	-29	1687	-100.07	361.54	7.42
219	SLU 40	3	-25	1686	-100.06	361.42	6.38
219	SLU 41	3	-29	1687	-100.07	361.54	7.42
219	SLU 42	3	-25	1686	-100.06	361.42	6.38
219	SLU 43	7	-25	1532	-90.93	327.54	6.61
219	SLU 44	7	-18	1532	-90.92	327.35	4.88
219	SLU 45	7	-25	1532	-90.93	327.54	6.61
219	SLU 46	7	-21	1532	-90.92	327.42	5.57
219	SLU 47	7	-18	1532	-90.92	327.35	4.88
219	SLU 48	7	-25	1532	-90.93	327.54	6.61
219	SLU 49	7	-21	1532	-90.92	327.42	5.57
219	SLU 50	7	-25	1532	-90.93	327.54	6.61
219	SLU 51	7	-21	1532	-90.92	327.42	5.57
219	SLU 52	6	-22	1745	-103.56	373.35	5.86
219	SLU 53	6	-29	1745	-103.57	373.55	7.59
219	SLU 54	6	-25	1745	-103.56	373.43	6.55
219	SLU 55	6	-22	1745	-103.56	373.35	5.86
219	SLU 56	6	-29	1745	-103.57	373.55	7.59
219	SLU 57	6	-25	1745	-103.56	373.43	6.55
219	SLU 58	6	-29	1745	-103.57	373.55	7.59
219	SLU 59	6	-25	1745	-103.56	373.43	6.55
219	SLU 60	6	-31	1837	-108.99	393.26	8.01
219	SLU 61	6	-27	1836	-108.98	393.15	6.98
219	SLU 62	6	-31	1837	-108.99	393.26	8.01
219	SLU 63	6	-27	1836	-108.98	393.15	6.98
219	SLU 64	6	-28	1693	-100.48	362.25	7.35
219	SLU 65	6	-21	1693	-100.47	362.05	5.62
219	SLU 66	6	-28	1693	-100.48	362.25	7.35
219	SLU 67	6	-24	1693	-100.48	362.13	6.31
219	SLU 68	6	-21	1693	-100.47	362.05	5.62
219	SLU 69	6	-28	1693	-100.48	362.25	7.35
219	SLU 70	6	-24	1693	-100.48	362.13	6.31
219	SLU 71	6	-28	1693	-100.48	362.25	7.35
219	SLU 72	6	-24	1693	-100.48	362.13	6.31
219	SLU 73	5	-25	1906	-113.11	408.06	6.6
219	SLU 74	5	-32	1906	-113.12	408.26	8.33
219	SLU 75	5	-28	1906	-113.11	408.14	7.29
219	SLU 76	5	-25	1906	-113.11	408.06	6.6
219	SLU 77	5	-32	1906	-113.12	408.26	8.33
219	SLU 78	5	-28	1906	-113.11	408.14	7.29
219	SLU 79	5	-32	1906	-113.12	408.26	8.33
219	SLU 80	5	-28	1906	-113.11	408.14	7.29
219	SLU 81	5	-34	1998	-118.54	427.97	8.75
219	SLU 82	5	-30	1998	-118.53	427.86	7.71
219	SLU 83	5	-34	1998	-118.54	427.97	8.75
219	SLU 84	5	-30	1998	-118.53	427.86	7.71
219	SLE RA 1	5	-21	1267	-75.2	271.03	5.49
219	SLE RA 2	5	-16	1267	-75.19	270.9	4.34
219	SLE RA 3	5	-21	1267	-75.2	271.03	5.49
219	SLE RA 4	5	-18	1267	-75.19	270.95	4.8
219	SLE RA 5	5	-16	1267	-75.19	270.9	4.34
219	SLE RA 6	5	-21	1267	-75.2	271.03	5.49
219	SLE RA 7	5	-18	1267	-75.19	270.95	4.8

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
219	SLE RA 8	5	-21	1267	-75.2	271.03	5.49
219	SLE RA 9	5	-18	1267	-75.19	270.95	4.8
219	SLE RA 10	4	-19	1409	-83.61	301.57	4.99
219	SLE RA 11	4	-24	1409	-83.62	301.7	6.14
219	SLE RA 12	4	-21	1409	-83.62	301.62	5.45
219	SLE RA 13	4	-19	1409	-83.61	301.57	4.99
219	SLE RA 14	4	-24	1409	-83.62	301.7	6.14
219	SLE RA 15	4	-21	1409	-83.62	301.62	5.45
219	SLE RA 16	4	-24	1409	-83.62	301.7	6.14
219	SLE RA 17	4	-21	1409	-83.62	301.62	5.45
219	SLE RA 18	4	-25	1470	-87.23	314.84	6.42
219	SLE RA 19	4	-22	1470	-87.23	314.76	5.73
219	SLE RA 20	4	-25	1470	-87.23	314.84	6.42
219	SLE RA 21	4	-22	1470	-87.23	314.76	5.73
219	SLE FR 1	5	-21	1267	-75.2	271.03	5.49
219	SLE FR 2	5	-20	1267	-75.19	271	5.26
219	SLE FR 3	5	-21	1267	-75.2	271.03	5.49
219	SLE FR 4	5	-21	1328	-78.81	284.14	5.54
219	SLE FR 5	5	-22	1328	-78.81	284.17	5.77
219	SLE FR 6	4	-23	1369	-81.21	292.93	5.96
219	SLE QP 1	5	-21	1267	-75.2	271.03	5.49
219	SLE QP 2	5	-22	1328	-78.81	284.17	5.77
219	SLD 1	89	-8	1127	-66.96	243.19	6.92
219	SLD 2	89	15	1125	-66.83	242.71	1.32
219	SLD 3	86	-81	1140	-67.55	247.37	25.12
219	SLD 4	86	-59	1138	-67.42	246.89	19.52
219	SLD 5	33	85	1249	-74.41	265.7	-19.43
219	SLD 6	34	109	1247	-74.28	265.2	-25.23
219	SLD 7	25	-160	1292	-76.37	279.66	41.24
219	SLD 8	26	-136	1289	-76.23	279.16	35.44
219	SLD 9	-16	92	1367	-81.38	289.18	-23.9
219	SLD 10	-16	115	1364	-81.25	288.68	-29.71
219	SLD 11	-24	-153	1409	-83.34	303.14	36.77
219	SLD 12	-24	-130	1407	-83.2	302.64	30.97
219	SLD 13	-77	14	1518	-90.2	321.45	-7.99
219	SLD 14	-77	37	1516	-90.07	320.97	-13.58
219	SLD 15	-80	-59	1531	-90.78	325.64	10.22
219	SLD 16	-79	-37	1529	-90.65	325.15	4.62
219	SLV 1	196	10	870	-51.76	190.6	8.51
219	SLV 2	197	62	864	-51.46	189.5	-4.24
219	SLV 3	191	-157	899	-53.09	200.1	49.84
219	SLV 4	192	-105	893	-52.79	199	37.09
219	SLV 5	70	222	1149	-68.79	242.1	-51.42
219	SLV 6	71	275	1143	-68.48	240.96	-64.6
219	SLV 7	52	-334	1245	-73.21	273.75	86.35
219	SLV 8	53	-281	1239	-72.91	272.62	73.17
219	SLV 9	-43	237	1417	-84.71	295.72	-61.63
219	SLV 10	-43	290	1411	-84.4	294.59	-74.81
219	SLV 11	-61	-319	1513	-89.13	327.38	76.13
219	SLV 12	-61	-266	1507	-88.83	326.25	62.95
219	SLV 13	-182	61	1763	-104.83	369.34	-25.55
219	SLV 14	-182	112	1757	-104.53	368.24	-38.3
219	SLV 15	-188	-106	1792	-106.15	378.84	15.78
219	SLV 16	-187	-55	1786	-105.86	377.74	3.03
219	CRTFP Ux+	0	0	0	0	0	0
219	CRTFP Ux-	0	0	0	0	0	0
219	CRTFP Uy+	0	0	0	0	0	0
219	CRTFP Uy-	0	0	0	0	0	0
220	SLU 1	-41	-37	4096	14.44	-713.6	-6.2
220	SLU 2	-41	-15	4096	13.87	-713.62	-2.42
220	SLU 3	-41	-37	4096	14.44	-713.6	-6.2
220	SLU 4	-41	-24	4096	14.1	-713.61	-3.94
220	SLU 5	-41	-15	4096	13.87	-713.62	-2.42
220	SLU 6	-41	-37	4096	14.44	-713.6	-6.2
220	SLU 7	-41	-24	4096	14.1	-713.61	-3.94
220	SLU 8	-41	-37	4096	14.44	-713.6	-6.2
220	SLU 9	-41	-24	4096	14.1	-713.61	-3.94
220	SLU 10	-42	-26	4788	16.18	-835.29	-4.21
220	SLU 11	-42	-48	4788	16.76	-835.27	-7.99
220	SLU 12	-42	-35	4788	16.42	-835.28	-5.72
220	SLU 13	-42	-26	4788	16.18	-835.29	-4.21
220	SLU 14	-42	-48	4788	16.76	-835.27	-7.99
220	SLU 15	-42	-35	4788	16.42	-835.28	-5.72
220	SLU 16	-42	-48	4788	16.76	-835.27	-7.99
220	SLU 17	-42	-35	4788	16.42	-835.28	-5.72
220	SLU 18	-42	-52	5084	17.75	-887.41	-8.75
220	SLU 19	-42	-39	5084	17.41	-887.42	-6.48
220	SLU 20	-42	-52	5084	17.75	-887.41	-8.75
220	SLU 21	-42	-39	5084	17.41	-887.42	-6.48
220	SLU 22	-42	-45	4620	16.29	-805.63	-7.46
220	SLU 23	-42	-23	4620	15.72	-805.65	-3.68
220	SLU 24	-42	-45	4620	16.29	-805.63	-7.46
220	SLU 25	-42	-32	4620	15.95	-805.64	-5.19
220	SLU 26	-42	-23	4620	15.72	-805.65	-3.68
220	SLU 27	-42	-45	4620	16.29	-805.63	-7.46
220	SLU 28	-42	-32	4620	15.95	-805.64	-5.19

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
220	SLU 29	-42	-45	4620	16.29	-805.63	-7.46
220	SLU 30	-42	-32	4620	15.95	-805.64	-5.19
220	SLU 31	-43	-34	5312	18.03	-927.32	-5.46
220	SLU 32	-43	-55	5312	18.61	-927.29	-9.24
220	SLU 33	-43	-42	5312	18.26	-927.31	-6.98
220	SLU 34	-43	-34	5312	18.03	-927.32	-5.46
220	SLU 35	-43	-55	5312	18.61	-927.29	-9.24
220	SLU 36	-43	-42	5312	18.26	-927.31	-6.98
220	SLU 37	-43	-55	5312	18.61	-927.29	-9.24
220	SLU 38	-43	-42	5312	18.26	-927.31	-6.98
220	SLU 39	-43	-60	5608	19.6	-979.44	-10.01
220	SLU 40	-43	-47	5608	19.26	-979.45	-7.74
220	SLU 41	-43	-60	5608	19.6	-979.44	-10.01
220	SLU 42	-43	-47	5608	19.26	-979.45	-7.74
220	SLU 43	-53	-45	5145	18.14	-896.12	-7.63
220	SLU 44	-53	-24	5145	17.56	-896.15	-3.85
220	SLU 45	-53	-45	5145	18.14	-896.12	-7.63
220	SLU 46	-53	-32	5145	17.8	-896.14	-5.36
220	SLU 47	-53	-24	5145	17.56	-896.15	-3.85
220	SLU 48	-53	-45	5145	18.14	-896.12	-7.63
220	SLU 49	-53	-32	5145	17.8	-896.14	-5.36
220	SLU 50	-53	-45	5145	18.14	-896.12	-7.63
220	SLU 51	-53	-32	5145	17.8	-896.14	-5.36
220	SLU 52	-53	-34	5837	19.88	-1017.82	-5.64
220	SLU 53	-54	-56	5837	20.46	-1017.79	-9.42
220	SLU 54	-53	-43	5837	20.11	-1017.81	-7.15
220	SLU 55	-53	-34	5837	19.88	-1017.82	-5.64
220	SLU 56	-54	-56	5837	20.46	-1017.79	-9.42
220	SLU 57	-53	-43	5837	20.11	-1017.81	-7.15
220	SLU 58	-54	-56	5837	20.46	-1017.79	-9.42
220	SLU 59	-53	-43	5837	20.11	-1017.81	-7.15
220	SLU 60	-54	-61	6133	21.45	-1069.94	-10.18
220	SLU 61	-54	-48	6133	21.11	-1069.95	-7.91
220	SLU 62	-54	-61	6133	21.45	-1069.94	-10.18
220	SLU 63	-54	-48	6133	21.11	-1069.95	-7.91
220	SLU 64	-54	-53	5669	19.99	-988.15	-8.89
220	SLU 65	-54	-31	5669	19.41	-988.18	-5.11
220	SLU 66	-54	-53	5669	19.99	-988.15	-8.89
220	SLU 67	-54	-40	5669	19.64	-988.17	-6.62
220	SLU 68	-54	-31	5669	19.41	-988.18	-5.11
220	SLU 69	-54	-53	5669	19.99	-988.15	-8.89
220	SLU 70	-54	-40	5669	19.64	-988.17	-6.62
220	SLU 71	-54	-53	5669	19.99	-988.15	-8.89
220	SLU 72	-54	-40	5669	19.64	-988.17	-6.62
220	SLU 73	-54	-42	6361	21.73	-1109.85	-6.89
220	SLU 74	-55	-64	6361	22.31	-1109.82	-10.67
220	SLU 75	-54	-51	6361	21.96	-1109.84	-8.41
220	SLU 76	-54	-42	6361	21.73	-1109.85	-6.89
220	SLU 77	-55	-64	6361	22.31	-1109.82	-10.67
220	SLU 78	-54	-51	6361	21.96	-1109.84	-8.41
220	SLU 79	-55	-64	6361	22.31	-1109.82	-10.67
220	SLU 80	-54	-51	6361	21.96	-1109.84	-8.41
220	SLU 81	-55	-69	6657	23.3	-1161.96	-11.44
220	SLU 82	-55	-55	6657	22.96	-1161.98	-9.17
220	SLU 83	-55	-69	6657	23.3	-1161.96	-11.44
220	SLU 84	-55	-55	6657	22.96	-1161.98	-9.17
220	SLE RA 1	-41	-39	4246	14.97	-739.89	-6.56
220	SLE RA 2	-41	-25	4245	14.59	-739.91	-4.04
220	SLE RA 3	-41	-39	4246	14.97	-739.89	-6.56
220	SLE RA 4	-41	-30	4246	14.74	-739.9	-5.05
220	SLE RA 5	-41	-25	4245	14.59	-739.91	-4.04
220	SLE RA 6	-41	-39	4246	14.97	-739.89	-6.56
220	SLE RA 7	-41	-30	4246	14.74	-739.9	-5.05
220	SLE RA 8	-41	-39	4246	14.97	-739.89	-6.56
220	SLE RA 9	-41	-30	4246	14.74	-739.9	-5.05
220	SLE RA 10	-42	-32	4707	16.13	-821.02	-5.23
220	SLE RA 11	-42	-46	4707	16.52	-821	-7.75
220	SLE RA 12	-42	-38	4707	16.29	-821.01	-6.24
220	SLE RA 13	-42	-32	4707	16.13	-821.02	-5.23
220	SLE RA 14	-42	-46	4707	16.52	-821	-7.75
220	SLE RA 15	-42	-38	4707	16.29	-821.01	-6.24
220	SLE RA 16	-42	-46	4707	16.52	-821	-7.75
220	SLE RA 17	-42	-38	4707	16.29	-821.01	-6.24
220	SLE RA 18	-42	-49	4905	17.18	-855.77	-8.26
220	SLE RA 19	-42	-41	4904	16.95	-855.78	-6.75
220	SLE RA 20	-42	-49	4905	17.18	-855.77	-8.26
220	SLE RA 21	-42	-41	4904	16.95	-855.78	-6.75
220	SLE FR 1	-41	-39	4246	14.97	-739.89	-6.56
220	SLE FR 2	-41	-36	4246	14.89	-739.89	-6.06
220	SLE FR 3	-41	-39	4246	14.97	-739.89	-6.56
220	SLE FR 4	-41	-39	4443	15.56	-774.66	-6.57
220	SLE FR 5	-41	-42	4443	15.63	-774.65	-7.07
220	SLE FR 6	-42	-44	4575	16.07	-797.83	-7.41
220	SLE QP 1	-41	-39	4246	14.97	-739.89	-6.56
220	SLE QP 2	-41	-42	4443	15.63	-774.65	-7.07
220	SLD 1	225	148	5054	14.03	-874.75	25.4

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
220	SLD 2	223	74	5057	14.37	-875.21	13.01
220	SLD 3	220	-94	5084	20.35	-880.03	-16.32
220	SLD 4	218	-167	5087	20.68	-880.49	-28.71
220	SLD 5	48	408	4581	5.45	-796.5	70.52
220	SLD 6	45	332	4583	5.8	-796.97	57.66
220	SLD 7	30	-397	4679	26.5	-814.11	-68.55
220	SLD 8	27	-473	4682	26.85	-814.59	-81.41
220	SLD 9	-110	388	4204	4.42	-734.72	67.27
220	SLD 10	-112	312	4207	4.76	-735.19	54.41
220	SLD 11	-128	-416	4303	25.47	-752.33	-71.8
220	SLD 12	-131	-492	4306	25.81	-752.81	-84.66
220	SLD 13	-300	82	3800	10.58	-668.82	14.57
220	SLD 14	-303	9	3802	10.92	-669.27	2.18
220	SLD 15	-306	-159	3829	16.9	-674.1	-27.16
220	SLD 16	-308	-232	3832	17.23	-674.56	-39.54
220	SLV 1	568	389	5839	12.02	-1003.26	66.77
220	SLV 2	562	223	5845	12.79	-1004.3	38.53
220	SLV 3	555	-158	5906	26.36	-1015.29	-27.96
220	SLV 4	550	-325	5913	27.13	-1016.33	-56.2
220	SLV 5	162	979	4757	-7.48	-824.61	169.12
220	SLV 6	157	807	4764	-6.69	-825.69	139.93
220	SLV 7	121	-847	4982	40.32	-864.7	-146.66
220	SLV 8	115	-1019	4989	41.11	-865.78	-175.85
220	SLV 9	-198	935	3898	-9.84	-683.52	161.71
220	SLV 10	-204	762	3904	-9.05	-684.6	132.52
220	SLV 11	-239	-891	4123	37.95	-723.62	-154.07
220	SLV 12	-245	-1064	4129	38.75	-724.7	-183.27
220	SLV 13	-633	241	2974	4.14	-532.97	42.06
220	SLV 14	-638	74	2980	4.9	-534.02	13.82
220	SLV 15	-645	-307	3041	18.48	-545	-52.67
220	SLV 16	-651	-474	3048	19.24	-546.05	-80.92
220	CRTFP Ux+	0	0	0	0	0	0
220	CRTFP Ux-	0	0	0	0	0	0
220	CRTFP Uy+	0	0	0	0	0	0
220	CRTFP Uy-	0	0	0	0	0	0
223	SLU 1	-27	-23	2635	15.11	-72.45	-0.18
223	SLU 2	-27	-9	2635	14.45	-72.46	0.06
223	SLU 3	-27	-23	2635	15.11	-72.45	-0.18
223	SLU 4	-27	-14	2635	14.71	-72.46	-0.04
223	SLU 5	-27	-9	2635	14.45	-72.46	0.06
223	SLU 6	-27	-23	2635	15.11	-72.45	-0.18
223	SLU 7	-27	-14	2635	14.71	-72.46	-0.04
223	SLU 8	-27	-23	2635	15.11	-72.45	-0.18
223	SLU 9	-27	-14	2635	14.71	-72.46	-0.04
223	SLU 10	-27	-15	3083	16.88	-84.91	0.05
223	SLU 11	-27	-29	3083	17.53	-84.91	-0.18
223	SLU 12	-27	-21	3083	17.14	-84.91	-0.04
223	SLU 13	-27	-15	3083	16.88	-84.91	0.05
223	SLU 14	-27	-29	3083	17.53	-84.91	-0.18
223	SLU 15	-27	-21	3083	17.14	-84.91	-0.04
223	SLU 16	-27	-29	3083	17.53	-84.91	-0.18
223	SLU 17	-27	-21	3083	17.14	-84.91	-0.04
223	SLU 18	-27	-32	3276	18.57	-90.24	-0.18
223	SLU 19	-27	-24	3276	18.18	-90.25	-0.04
223	SLU 20	-27	-32	3276	18.57	-90.24	-0.18
223	SLU 21	-27	-24	3276	18.18	-90.25	-0.04
223	SLU 22	-27	-27	2974	17.05	-81.87	-0.18
223	SLU 23	-27	-14	2974	16.39	-81.87	0.05
223	SLU 24	-27	-27	2974	17.05	-81.87	-0.18
223	SLU 25	-27	-19	2974	16.66	-81.87	-0.04
223	SLU 26	-27	-14	2974	16.39	-81.87	0.05
223	SLU 27	-27	-27	2974	17.05	-81.87	-0.18
223	SLU 28	-27	-19	2974	16.66	-81.87	-0.04
223	SLU 29	-27	-27	2974	17.05	-81.87	-0.18
223	SLU 30	-27	-19	2974	16.66	-81.87	-0.04
223	SLU 31	-28	-20	3423	18.82	-94.32	0.05
223	SLU 32	-28	-34	3423	19.47	-94.32	-0.19
223	SLU 33	-28	-26	3423	19.08	-94.32	-0.05
223	SLU 34	-28	-20	3423	18.82	-94.32	0.05
223	SLU 35	-28	-34	3423	19.47	-94.32	-0.19
223	SLU 36	-28	-26	3423	19.08	-94.32	-0.05
223	SLU 37	-28	-34	3423	19.47	-94.32	-0.19
223	SLU 38	-28	-26	3423	19.08	-94.32	-0.05
223	SLU 39	-28	-37	3615	20.51	-99.66	-0.19
223	SLU 40	-28	-28	3615	20.12	-99.66	-0.05
223	SLU 41	-28	-37	3615	20.51	-99.66	-0.19
223	SLU 42	-28	-28	3615	20.12	-99.66	-0.05
223	SLU 43	-34	-28	3309	18.97	-90.96	-0.23
223	SLU 44	-34	-14	3309	18.32	-90.96	0.01
223	SLU 45	-34	-28	3309	18.97	-90.96	-0.23
223	SLU 46	-34	-20	3309	18.58	-90.96	-0.09
223	SLU 47	-34	-14	3309	18.32	-90.96	0.01
223	SLU 48	-34	-28	3309	18.97	-90.96	-0.23
223	SLU 49	-34	-20	3309	18.58	-90.96	-0.09
223	SLU 50	-34	-28	3309	18.97	-90.96	-0.23
223	SLU 51	-34	-20	3309	18.58	-90.96	-0.09

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
223	SLU 52	-35	-21	3758	20.74	-103.42	0
223	SLU 53	-35	-34	3758	21.4	-103.42	-0.23
223	SLU 54	-35	-26	3758	21	-103.42	-0.09
223	SLU 55	-35	-21	3758	20.74	-103.42	0
223	SLU 56	-35	-34	3758	21.4	-103.42	-0.23
223	SLU 57	-35	-26	3758	21	-103.42	-0.09
223	SLU 58	-35	-34	3758	21.4	-103.42	-0.23
223	SLU 59	-35	-26	3758	21	-103.42	-0.09
223	SLU 60	-35	-37	3950	22.43	-108.75	-0.24
223	SLU 61	-35	-29	3950	22.04	-108.75	-0.09
223	SLU 62	-35	-37	3950	22.43	-108.75	-0.24
223	SLU 63	-35	-29	3950	22.04	-108.75	-0.09
223	SLU 64	-35	-33	3648	20.91	-100.38	-0.23
223	SLU 65	-35	-19	3648	20.26	-100.38	0
223	SLU 66	-35	-33	3648	20.91	-100.38	-0.23
223	SLU 67	-35	-24	3648	20.52	-100.38	-0.09
223	SLU 68	-35	-19	3648	20.26	-100.38	0
223	SLU 69	-35	-33	3648	20.91	-100.38	-0.23
223	SLU 70	-35	-24	3648	20.52	-100.38	-0.09
223	SLU 71	-35	-33	3648	20.91	-100.38	-0.23
223	SLU 72	-35	-24	3648	20.52	-100.38	-0.09
223	SLU 73	-35	-25	4097	22.68	-112.83	0
223	SLU 74	-35	-39	4097	23.34	-112.83	-0.24
223	SLU 75	-35	-31	4097	22.95	-112.83	-0.1
223	SLU 76	-35	-25	4097	22.68	-112.83	0
223	SLU 77	-35	-39	4097	23.34	-112.83	-0.24
223	SLU 78	-35	-31	4097	22.95	-112.83	-0.1
223	SLU 79	-35	-39	4097	23.34	-112.83	-0.24
223	SLU 80	-35	-31	4097	22.95	-112.83	-0.1
223	SLU 81	-36	-42	4289	24.38	-118.17	-0.24
223	SLU 82	-36	-34	4289	23.98	-118.17	-0.1
223	SLU 83	-36	-42	4289	24.38	-118.17	-0.24
223	SLU 84	-36	-34	4289	23.98	-118.17	-0.1
223	SLE RA 1	-27	-24	2732	15.66	-75.14	-0.18
223	SLE RA 2	-27	-15	2732	15.22	-75.14	-0.02
223	SLE RA 3	-27	-24	2732	15.66	-75.14	-0.18
223	SLE RA 4	-27	-18	2732	15.4	-75.14	-0.08
223	SLE RA 5	-27	-15	2732	15.22	-75.14	-0.02
223	SLE RA 6	-27	-24	2732	15.66	-75.14	-0.18
223	SLE RA 7	-27	-18	2732	15.4	-75.14	-0.08
223	SLE RA 8	-27	-24	2732	15.66	-75.14	-0.18
223	SLE RA 9	-27	-18	2732	15.4	-75.14	-0.08
223	SLE RA 10	-27	-19	3031	16.84	-83.45	-0.03
223	SLE RA 11	-27	-28	3031	17.28	-83.45	-0.18
223	SLE RA 12	-27	-23	3031	17.02	-83.45	-0.09
223	SLE RA 13	-27	-19	3031	16.84	-83.45	-0.03
223	SLE RA 14	-27	-28	3031	17.28	-83.45	-0.18
223	SLE RA 15	-27	-23	3031	17.02	-83.45	-0.09
223	SLE RA 16	-27	-28	3031	17.28	-83.45	-0.18
223	SLE RA 17	-27	-23	3031	17.02	-83.45	-0.09
223	SLE RA 18	-27	-30	3159	17.97	-87	-0.18
223	SLE RA 19	-27	-25	3159	17.71	-87.01	-0.09
223	SLE RA 20	-27	-30	3159	17.97	-87	-0.18
223	SLE RA 21	-27	-25	3159	17.71	-87.01	-0.09
223	SLE FR 1	-27	-24	2732	15.66	-75.14	-0.18
223	SLE FR 2	-27	-22	2732	15.57	-75.14	-0.15
223	SLE FR 3	-27	-24	2732	15.66	-75.14	-0.18
223	SLE FR 4	-27	-24	2860	16.27	-78.7	-0.15
223	SLE FR 5	-27	-26	2860	16.35	-78.7	-0.18
223	SLE FR 6	-27	-27	2945	16.82	-81.07	-0.18
223	SLE QP 1	-27	-24	2732	15.66	-75.14	-0.18
223	SLE QP 2	-27	-26	2860	16.35	-78.7	-0.18
223	SLD 1	147	93	3237	14.24	-88.46	1.56
223	SLD 2	146	47	3239	14.62	-88.5	1.04
223	SLD 3	143	-59	3256	21.41	-89.01	-0.99
223	SLD 4	142	-104	3258	21.79	-89.05	-1.51
223	SLD 5	31	257	2943	4.7	-80.78	4.39
223	SLD 6	30	210	2945	5.09	-80.82	3.86
223	SLD 7	19	-249	3008	28.61	-82.61	-4.1
223	SLD 8	18	-296	3010	29.01	-82.66	-4.63
223	SLD 9	-72	245	2710	3.7	-74.74	4.27
223	SLD 10	-73	198	2712	4.1	-74.79	3.74
223	SLD 11	-83	-261	2775	27.62	-76.58	-4.22
223	SLD 12	-85	-308	2777	28.01	-76.63	-4.75
223	SLD 13	-196	53	2462	10.92	-68.35	1.15
223	SLD 14	-197	7	2464	11.3	-68.4	0.63
223	SLD 15	-199	-99	2482	18.09	-68.9	-1.4
223	SLD 16	-201	-144	2483	18.47	-68.95	-1.92
223	SLV 1	370	244	3721	11.57	-100.98	3.76
223	SLV 2	367	141	3725	12.43	-101.08	2.59
223	SLV 3	362	-101	3765	27.86	-102.23	-2.02
223	SLV 4	359	-204	3769	28.72	-102.34	-3.19
223	SLV 5	106	616	3050	-10.11	-83.45	10.2
223	SLV 6	102	509	3054	-9.21	-83.55	8.99
223	SLV 7	79	-533	3197	44.2	-87.62	-9.07
223	SLV 8	75	-640	3201	45.09	-87.73	-10.29

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
223	SLV 9	-129	588	2519	-12.38	-69.67	9.93
223	SLV 10	-133	481	2523	-11.49	-69.78	8.71
223	SLV 11	-156	-561	2666	41.92	-73.85	-9.35
223	SLV 12	-160	-667	2671	42.82	-73.96	-10.57
223	SLV 13	-413	152	1951	3.99	-55.07	2.83
223	SLV 14	-416	49	1955	4.85	-55.17	1.66
223	SLV 15	-421	-192	1996	20.28	-56.32	-2.95
223	SLV 16	-424	-296	1999	21.14	-56.42	-4.12
223	CRTFP Ux+	0	0	0	0	0	0
223	CRTFP Ux-	0	0	0	0	0	0
223	CRTFP Uy+	0	0	0	0	0	0
223	CRTFP Uy-	0	0	0	0	0	0
224	SLU 1	-31	-24	3055	18.32	1.42	0.64
224	SLU 2	-31	-9	3055	17.57	1.41	0.44
224	SLU 3	-31	-24	3055	18.32	1.42	0.64
224	SLU 4	-31	-15	3055	17.87	1.41	0.52
224	SLU 5	-31	-9	3055	17.57	1.41	0.44
224	SLU 6	-31	-24	3055	18.32	1.42	0.64
224	SLU 7	-31	-15	3055	17.87	1.41	0.52
224	SLU 8	-31	-24	3055	18.32	1.42	0.64
224	SLU 9	-31	-15	3055	17.87	1.41	0.52
224	SLU 10	-32	-15	3581	20.49	1.45	0.68
224	SLU 11	-32	-31	3581	21.24	1.45	0.87
224	SLU 12	-32	-21	3581	20.79	1.45	0.76
224	SLU 13	-32	-15	3581	20.49	1.45	0.68
224	SLU 14	-32	-31	3581	21.24	1.45	0.87
224	SLU 15	-32	-21	3581	20.79	1.45	0.76
224	SLU 16	-32	-31	3581	21.24	1.45	0.87
224	SLU 17	-32	-21	3581	20.79	1.45	0.76
224	SLU 18	-32	-33	3806	22.5	1.47	0.98
224	SLU 19	-32	-24	3806	22.05	1.47	0.86
224	SLU 20	-32	-33	3806	22.5	1.47	0.98
224	SLU 21	-32	-24	3806	22.05	1.47	0.86
224	SLU 22	-32	-29	3452	20.66	1.46	0.8
224	SLU 23	-32	-13	3452	19.91	1.46	0.61
224	SLU 24	-32	-29	3452	20.66	1.46	0.8
224	SLU 25	-32	-19	3452	20.21	1.46	0.69
224	SLU 26	-32	-13	3452	19.91	1.46	0.61
224	SLU 27	-32	-29	3452	20.66	1.46	0.8
224	SLU 28	-32	-19	3452	20.21	1.46	0.69
224	SLU 29	-32	-29	3452	20.66	1.46	0.8
224	SLU 30	-32	-19	3452	20.21	1.46	0.69
224	SLU 31	-32	-20	3978	22.84	1.5	0.85
224	SLU 32	-32	-35	3978	23.59	1.5	1.04
224	SLU 33	-32	-26	3978	23.14	1.5	0.92
224	SLU 34	-32	-20	3978	22.84	1.5	0.85
224	SLU 35	-32	-35	3978	23.59	1.5	1.04
224	SLU 36	-32	-26	3978	23.14	1.5	0.92
224	SLU 37	-32	-35	3978	23.59	1.5	1.04
224	SLU 38	-32	-26	3978	23.14	1.5	0.92
224	SLU 39	-33	-38	4204	24.84	1.51	1.14
224	SLU 40	-33	-29	4204	24.39	1.51	1.03
224	SLU 41	-33	-38	4204	24.84	1.51	1.14
224	SLU 42	-33	-29	4204	24.39	1.51	1.03
224	SLU 43	-40	-29	3835	23.01	1.83	0.77
224	SLU 44	-40	-14	3835	22.26	1.82	0.58
224	SLU 45	-40	-29	3835	23.01	1.83	0.77
224	SLU 46	-40	-20	3835	22.56	1.82	0.65
224	SLU 47	-40	-14	3835	22.26	1.82	0.58
224	SLU 48	-40	-29	3835	23.01	1.83	0.77
224	SLU 49	-40	-20	3835	22.56	1.82	0.65
224	SLU 50	-40	-29	3835	23.01	1.83	0.77
224	SLU 51	-40	-20	3835	22.56	1.82	0.65
224	SLU 52	-41	-21	4361	25.18	1.86	0.81
224	SLU 53	-41	-36	4361	25.93	1.86	1.01
224	SLU 54	-41	-27	4361	25.48	1.86	0.89
224	SLU 55	-41	-21	4361	25.18	1.86	0.81
224	SLU 56	-41	-36	4361	25.93	1.86	1.01
224	SLU 57	-41	-27	4361	25.48	1.86	0.89
224	SLU 58	-41	-36	4361	25.93	1.86	1.01
224	SLU 59	-41	-27	4361	25.48	1.86	0.89
224	SLU 60	-41	-39	4586	27.19	1.88	1.11
224	SLU 61	-41	-30	4586	26.74	1.88	0.99
224	SLU 62	-41	-39	4586	27.19	1.88	1.11
224	SLU 63	-41	-30	4586	26.74	1.88	0.99
224	SLU 64	-41	-34	4232	25.35	1.87	0.93
224	SLU 65	-41	-19	4232	24.6	1.87	0.74
224	SLU 66	-41	-34	4232	25.35	1.87	0.93
224	SLU 67	-41	-25	4232	24.9	1.87	0.82
224	SLU 68	-41	-19	4232	24.6	1.87	0.74
224	SLU 69	-41	-34	4232	25.35	1.87	0.93
224	SLU 70	-41	-25	4232	24.9	1.87	0.82
224	SLU 71	-41	-34	4232	25.35	1.87	0.93
224	SLU 72	-41	-25	4232	24.9	1.87	0.82
224	SLU 73	-41	-25	4758	27.53	1.9	0.98
224	SLU 74	-41	-41	4758	28.28	1.91	1.17

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
224	SLU 75	-41	-32	4758	27.83	1.91	1.06
224	SLU 76	-41	-25	4758	27.53	1.9	0.98
224	SLU 77	-41	-41	4758	28.28	1.91	1.17
224	SLU 78	-41	-32	4758	27.83	1.91	1.06
224	SLU 79	-41	-41	4758	28.28	1.91	1.17
224	SLU 80	-41	-32	4758	27.83	1.91	1.06
224	SLU 81	-42	-44	4984	29.53	1.92	1.28
224	SLU 82	-42	-34	4984	29.08	1.92	1.16
224	SLU 83	-42	-44	4984	29.53	1.92	1.28
224	SLU 84	-42	-34	4984	29.08	1.92	1.16
224	SLE RA 1	-31	-25	3168	18.99	1.43	0.68
224	SLE RA 2	-31	-15	3168	18.49	1.43	0.55
224	SLE RA 3	-31	-25	3168	18.99	1.43	0.68
224	SLE RA 4	-31	-19	3168	18.69	1.43	0.61
224	SLE RA 5	-31	-15	3168	18.49	1.43	0.55
224	SLE RA 6	-31	-25	3168	18.99	1.43	0.68
224	SLE RA 7	-31	-19	3168	18.69	1.43	0.61
224	SLE RA 8	-31	-25	3168	18.99	1.43	0.68
224	SLE RA 9	-31	-19	3168	18.69	1.43	0.61
224	SLE RA 10	-32	-19	3519	20.44	1.45	0.71
224	SLE RA 11	-32	-30	3519	20.94	1.45	0.84
224	SLE RA 12	-32	-24	3519	20.64	1.45	0.76
224	SLE RA 13	-32	-19	3519	20.44	1.45	0.71
224	SLE RA 14	-32	-30	3519	20.94	1.45	0.84
224	SLE RA 15	-32	-24	3519	20.64	1.45	0.76
224	SLE RA 16	-32	-30	3519	20.94	1.45	0.84
224	SLE RA 17	-32	-24	3519	20.64	1.45	0.76
224	SLE RA 18	-32	-32	3669	21.77	1.46	0.91
224	SLE RA 19	-32	-25	3669	21.47	1.46	0.83
224	SLE RA 20	-32	-32	3669	21.77	1.46	0.91
224	SLE RA 21	-32	-25	3669	21.47	1.46	0.83
224	SLE FR 1	-31	-25	3168	18.99	1.43	0.68
224	SLE FR 2	-31	-23	3168	18.89	1.43	0.66
224	SLE FR 3	-31	-25	3168	18.99	1.43	0.68
224	SLE FR 4	-31	-25	3318	19.72	1.44	0.73
224	SLE FR 5	-31	-27	3318	19.82	1.44	0.75
224	SLE FR 6	-31	-28	3419	20.38	1.45	0.8
224	SLE QP 1	-31	-25	3168	18.99	1.43	0.68
224	SLE QP 2	-31	-27	3318	19.82	1.44	0.75
224	SLD 1	174	103	3726	17.51	2.61	-1.29
224	SLD 2	172	54	3728	17.94	2.62	-0.35
224	SLD 3	170	-65	3749	25.75	2.58	0.91
224	SLD 4	168	-114	3751	26.18	2.59	1.85
224	SLD 5	37	285	3405	6.47	1.83	-3.54
224	SLD 6	35	235	3407	6.92	1.84	-2.57
224	SLD 7	23	-276	3482	33.94	1.74	3.79
224	SLD 8	21	-327	3484	34.39	1.74	4.76
224	SLD 9	-84	273	3153	5.26	1.14	-3.26
224	SLD 10	-86	222	3155	5.71	1.14	-2.29
224	SLD 11	-98	-289	3230	32.72	1.04	4.08
224	SLD 12	-100	-340	3232	33.17	1.05	5.04
224	SLD 13	-231	60	2886	13.47	0.29	-0.35
224	SLD 14	-232	11	2888	13.9	0.3	0.59
224	SLD 15	-235	-108	2909	21.71	0.26	1.86
224	SLD 16	-236	-157	2911	22.14	0.27	2.79
224	SLV 1	437	269	4248	14.6	4.12	-3.89
224	SLV 2	433	157	4253	15.58	4.13	-1.76
224	SLV 3	427	-114	4301	33.3	4.05	1.11
224	SLV 4	423	-225	4306	34.29	4.06	3.24
224	SLV 5	125	683	3516	-10.48	2.34	-9
224	SLV 6	121	567	3520	-9.46	2.35	-6.8
224	SLV 7	93	-592	3692	51.88	2.12	7.66
224	SLV 8	89	-708	3697	52.9	2.13	9.86
224	SLV 9	-152	653	2940	-13.25	0.75	-8.36
224	SLV 10	-156	538	2945	-12.23	0.76	-6.15
224	SLV 11	-184	-622	3117	49.11	0.53	8.3
224	SLV 12	-188	-737	3121	50.13	0.54	10.5
224	SLV 13	-486	171	2331	5.36	-1.18	-1.74
224	SLV 14	-490	59	2336	6.34	-1.17	0.39
224	SLV 15	-496	-212	2384	24.06	-1.25	3.26
224	SLV 16	-500	-323	2389	25.05	-1.24	5.39
224	CRTFP Ux+	0	0	0	0	0	0
224	CRTFP Ux-	0	0	0	0	0	0
224	CRTFP Uy+	0	0	0	0	0	0
224	CRTFP Uy-	0	0	0	0	0	0
225	SLU 1	-31	-21	3011	19.02	1.29	0.72
225	SLU 2	-31	-6	3011	18.29	1.29	0.53
225	SLU 3	-31	-21	3011	19.02	1.29	0.72
225	SLU 4	-31	-12	3011	18.58	1.29	0.61
225	SLU 5	-31	-6	3011	18.29	1.29	0.53
225	SLU 6	-31	-21	3011	19.02	1.29	0.72
225	SLU 7	-31	-12	3011	18.58	1.29	0.61
225	SLU 8	-31	-21	3011	19.02	1.29	0.72
225	SLU 9	-31	-12	3011	18.58	1.29	0.61
225	SLU 10	-31	-12	3536	21.31	1.31	0.78
225	SLU 11	-31	-26	3536	22.05	1.32	0.98

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
225	SLU 12	-31	-17	3536	21.61	1.32	0.86
225	SLU 13	-31	-12	3536	21.31	1.31	0.78
225	SLU 14	-31	-26	3536	22.05	1.32	0.98
225	SLU 15	-31	-17	3536	21.61	1.32	0.86
225	SLU 16	-31	-26	3536	22.05	1.32	0.98
225	SLU 17	-31	-17	3536	21.61	1.32	0.86
225	SLU 18	-31	-28	3761	23.34	1.33	1.09
225	SLU 19	-31	-20	3761	22.9	1.33	0.97
225	SLU 20	-31	-28	3761	23.34	1.33	1.09
225	SLU 21	-31	-20	3761	22.9	1.33	0.97
225	SLU 22	-31	-24	3407	21.45	1.33	0.9
225	SLU 23	-31	-10	3407	20.71	1.32	0.71
225	SLU 24	-31	-24	3407	21.45	1.33	0.9
225	SLU 25	-31	-16	3407	21.01	1.32	0.78
225	SLU 26	-31	-10	3407	20.71	1.32	0.71
225	SLU 27	-31	-24	3407	21.45	1.33	0.9
225	SLU 28	-31	-16	3407	21.01	1.32	0.78
225	SLU 29	-31	-24	3407	21.45	1.33	0.9
225	SLU 30	-31	-16	3407	21.01	1.32	0.78
225	SLU 31	-32	-15	3932	23.74	1.35	0.96
225	SLU 32	-32	-30	3932	24.47	1.35	1.16
225	SLU 33	-32	-21	3932	24.03	1.35	1.04
225	SLU 34	-32	-15	3932	23.74	1.35	0.96
225	SLU 35	-32	-30	3932	24.47	1.35	1.16
225	SLU 36	-32	-21	3932	24.03	1.35	1.04
225	SLU 37	-32	-30	3932	24.47	1.35	1.16
225	SLU 38	-32	-21	3932	24.03	1.35	1.04
225	SLU 39	-32	-32	4157	25.77	1.37	1.27
225	SLU 40	-32	-23	4157	25.33	1.36	1.15
225	SLU 41	-32	-32	4157	25.77	1.37	1.27
225	SLU 42	-32	-23	4157	25.33	1.36	1.15
225	SLU 43	-39	-25	3778	23.9	1.66	0.88
225	SLU 44	-39	-11	3778	23.16	1.66	0.68
225	SLU 45	-39	-25	3778	23.9	1.66	0.88
225	SLU 46	-39	-17	3778	23.46	1.66	0.76
225	SLU 47	-39	-11	3778	23.16	1.66	0.68
225	SLU 48	-39	-25	3778	23.9	1.66	0.88
225	SLU 49	-39	-17	3778	23.46	1.66	0.76
225	SLU 50	-39	-25	3778	23.9	1.66	0.88
225	SLU 51	-39	-17	3778	23.46	1.66	0.76
225	SLU 52	-40	-16	4303	26.19	1.69	0.94
225	SLU 53	-40	-31	4303	26.92	1.69	1.13
225	SLU 54	-40	-22	4303	26.48	1.69	1.02
225	SLU 55	-40	-16	4303	26.19	1.69	0.94
225	SLU 56	-40	-31	4303	26.92	1.69	1.13
225	SLU 57	-40	-22	4303	26.48	1.69	1.02
225	SLU 58	-40	-31	4303	26.92	1.69	1.13
225	SLU 59	-40	-22	4303	26.48	1.69	1.02
225	SLU 60	-40	-33	4528	28.22	1.7	1.24
225	SLU 61	-40	-24	4528	27.78	1.7	1.13
225	SLU 62	-40	-33	4528	28.22	1.7	1.24
225	SLU 63	-40	-24	4528	27.78	1.7	1.13
225	SLU 64	-40	-29	4174	26.32	1.7	1.06
225	SLU 65	-40	-15	4174	25.59	1.7	0.86
225	SLU 66	-40	-29	4174	26.32	1.7	1.06
225	SLU 67	-40	-21	4174	25.88	1.7	0.94
225	SLU 68	-40	-15	4174	25.59	1.7	0.86
225	SLU 69	-40	-29	4174	26.32	1.7	1.06
225	SLU 70	-40	-21	4174	25.88	1.7	0.94
225	SLU 71	-40	-29	4174	26.32	1.7	1.06
225	SLU 72	-40	-21	4174	25.88	1.7	0.94
225	SLU 73	-41	-20	4699	28.61	1.72	1.12
225	SLU 74	-41	-34	4699	29.35	1.73	1.31
225	SLU 75	-41	-26	4699	28.91	1.73	1.2
225	SLU 76	-41	-20	4699	28.61	1.72	1.12
225	SLU 77	-41	-34	4699	29.35	1.73	1.31
225	SLU 78	-41	-26	4699	28.91	1.73	1.2
225	SLU 79	-41	-34	4699	29.35	1.73	1.31
225	SLU 80	-41	-26	4699	28.91	1.73	1.2
225	SLU 81	-41	-37	4924	30.65	1.74	1.42
225	SLU 82	-41	-28	4924	30.2	1.74	1.31
225	SLU 83	-41	-37	4924	30.65	1.74	1.42
225	SLU 84	-41	-28	4924	30.2	1.74	1.31
225	SLE RA 1	-31	-22	3124	19.72	1.3	0.77
225	SLE RA 2	-31	-12	3124	19.23	1.3	0.64
225	SLE RA 3	-31	-22	3124	19.72	1.3	0.77
225	SLE RA 4	-31	-16	3124	19.42	1.3	0.7
225	SLE RA 5	-31	-12	3124	19.23	1.3	0.64
225	SLE RA 6	-31	-22	3124	19.72	1.3	0.77
225	SLE RA 7	-31	-16	3124	19.42	1.3	0.7
225	SLE RA 8	-31	-22	3124	19.72	1.3	0.77
225	SLE RA 9	-31	-16	3124	19.42	1.3	0.7
225	SLE RA 10	-31	-16	3474	21.24	1.32	0.81
225	SLE RA 11	-31	-25	3474	21.73	1.32	0.94
225	SLE RA 12	-31	-19	3474	21.44	1.32	0.87
225	SLE RA 13	-31	-16	3474	21.24	1.32	0.81

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
225	SLE RA 14	-31	-25	3474	21.73	1.32	0.94
225	SLE RA 15	-31	-19	3474	21.44	1.32	0.87
225	SLE RA 16	-31	-25	3474	21.73	1.32	0.94
225	SLE RA 17	-31	-19	3474	21.44	1.32	0.87
225	SLE RA 18	-31	-27	3624	22.6	1.33	1.02
225	SLE RA 19	-31	-21	3624	22.3	1.33	0.94
225	SLE RA 20	-31	-27	3624	22.6	1.33	1.02
225	SLE RA 21	-31	-21	3624	22.3	1.33	0.94
225	SLE FR 1	-31	-22	3124	19.72	1.3	0.77
225	SLE FR 2	-31	-20	3124	19.62	1.3	0.75
225	SLE FR 3	-31	-22	3124	19.72	1.3	0.77
225	SLE FR 4	-31	-21	3274	20.48	1.31	0.82
225	SLE FR 5	-31	-23	3274	20.58	1.31	0.85
225	SLE FR 6	-31	-24	3374	21.16	1.31	0.89
225	SLE QP 1	-31	-22	3124	19.72	1.3	0.77
225	SLE QP 2	-31	-23	3274	20.58	1.31	0.85
225	SLD 1	174	97	3644	18.45	2.4	-1.2
225	SLD 2	173	52	3646	18.87	2.4	-0.27
225	SLD 3	170	-60	3667	26.51	2.42	1
225	SLD 4	168	-105	3669	26.93	2.43	1.93
225	SLD 5	38	267	3348	7.56	1.6	-3.44
225	SLD 6	36	222	3350	8	1.6	-2.48
225	SLD 7	24	-256	3427	34.43	1.67	3.88
225	SLD 8	22	-302	3429	34.87	1.68	4.84
225	SLD 9	-84	256	3119	6.29	0.94	-3.15
225	SLD 10	-86	210	3121	6.73	0.94	-2.19
225	SLD 11	-98	-268	3197	33.16	1.01	4.17
225	SLD 12	-100	-314	3199	33.6	1.02	5.13
225	SLD 13	-230	58	2879	14.23	0.19	-0.24
225	SLD 14	-232	14	2880	14.65	0.19	0.69
225	SLD 15	-235	-99	2902	22.29	0.21	1.96
225	SLD 16	-236	-143	2904	22.71	0.22	2.89
225	SLV 1	438	249	4119	15.77	3.8	-3.8
225	SLV 2	434	148	4123	16.73	3.81	-1.69
225	SLV 3	429	-108	4172	34.08	3.85	1.19
225	SLV 4	425	-208	4176	35.04	3.86	3.3
225	SLV 5	126	637	3445	-8.98	1.97	-8.89
225	SLV 6	122	532	3449	-7.98	1.98	-6.7
225	SLV 7	94	-553	3623	52.04	2.14	7.74
225	SLV 8	90	-657	3627	53.03	2.16	9.92
225	SLV 9	-152	610	2920	-11.87	0.46	-8.23
225	SLV 10	-156	506	2925	-10.88	0.47	-6.04
225	SLV 11	-184	-579	3099	49.15	0.63	8.39
225	SLV 12	-188	-683	3103	50.14	0.64	10.58
225	SLV 13	-486	162	2371	6.12	-1.25	-1.61
225	SLV 14	-491	61	2375	7.08	-1.24	0.51
225	SLV 15	-496	-195	2425	24.43	-1.2	3.38
225	SLV 16	-500	-295	2429	25.39	-1.19	5.49
225	CRTFP Ux+	0	0	0	0	0	0
225	CRTFP Ux-	0	0	0	0	0	0
225	CRTFP Uy+	0	0	0	0	0	0
225	CRTFP Uy-	0	0	0	0	0	0
226	SLU 1	-30	-17	2968	19.75	1.33	0.82
226	SLU 2	-30	-3	2968	19.03	1.32	0.64
226	SLU 3	-30	-17	2968	19.75	1.33	0.82
226	SLU 4	-30	-9	2968	19.32	1.32	0.71
226	SLU 5	-30	-3	2968	19.03	1.32	0.64
226	SLU 6	-30	-17	2968	19.75	1.33	0.82
226	SLU 7	-30	-9	2968	19.32	1.32	0.71
226	SLU 8	-30	-17	2968	19.75	1.33	0.82
226	SLU 9	-30	-9	2968	19.32	1.32	0.71
226	SLU 10	-31	-7	3492	22.16	1.38	0.9
226	SLU 11	-31	-21	3491	22.88	1.39	1.08
226	SLU 12	-31	-13	3492	22.45	1.38	0.98
226	SLU 13	-31	-7	3492	22.16	1.38	0.9
226	SLU 14	-31	-21	3491	22.88	1.39	1.08
226	SLU 15	-31	-13	3492	22.45	1.38	0.98
226	SLU 16	-31	-21	3491	22.88	1.39	1.08
226	SLU 17	-31	-13	3492	22.45	1.38	0.98
226	SLU 18	-31	-22	3716	24.22	1.41	1.2
226	SLU 19	-31	-14	3716	23.79	1.41	1.09
226	SLU 20	-31	-22	3716	24.22	1.41	1.2
226	SLU 21	-31	-14	3716	23.79	1.41	1.09
226	SLU 22	-31	-19	3363	22.26	1.38	1
226	SLU 23	-31	-6	3363	21.54	1.38	0.82
226	SLU 24	-31	-19	3363	22.26	1.38	1
226	SLU 25	-31	-11	3363	21.83	1.38	0.9
226	SLU 26	-31	-6	3363	21.54	1.38	0.82
226	SLU 27	-31	-19	3363	22.26	1.38	1
226	SLU 28	-31	-11	3363	21.83	1.38	0.9
226	SLU 29	-31	-19	3363	22.26	1.38	1
226	SLU 30	-31	-11	3363	21.83	1.38	0.9
226	SLU 31	-31	-10	3887	24.67	1.44	1.09
226	SLU 32	-32	-23	3886	25.39	1.44	1.27
226	SLU 33	-31	-15	3886	24.96	1.44	1.16
226	SLU 34	-31	-10	3887	24.67	1.44	1.09

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
226	SLU 35	-32	-23	3886	25.39	1.44	1.27
226	SLU 36	-31	-15	3886	24.96	1.44	1.16
226	SLU 37	-32	-23	3886	25.39	1.44	1.27
226	SLU 38	-31	-15	3886	24.96	1.44	1.16
226	SLU 39	-32	-25	4111	26.73	1.47	1.38
226	SLU 40	-32	-17	4111	26.3	1.47	1.28
226	SLU 41	-32	-25	4111	26.73	1.47	1.38
226	SLU 42	-32	-17	4111	26.3	1.47	1.28
226	SLU 43	-39	-21	3723	24.82	1.7	1
226	SLU 44	-39	-7	3723	24.1	1.7	0.82
226	SLU 45	-39	-21	3723	24.82	1.7	1
226	SLU 46	-39	-13	3723	24.39	1.7	0.89
226	SLU 47	-39	-7	3723	24.1	1.7	0.82
226	SLU 48	-39	-21	3723	24.82	1.7	1
226	SLU 49	-39	-13	3723	24.39	1.7	0.89
226	SLU 50	-39	-21	3723	24.82	1.7	1
226	SLU 51	-39	-13	3723	24.39	1.7	0.89
226	SLU 52	-39	-11	4247	27.22	1.76	1.08
226	SLU 53	-39	-25	4246	27.94	1.76	1.27
226	SLU 54	-39	-17	4247	27.51	1.76	1.16
226	SLU 55	-39	-11	4247	27.22	1.76	1.08
226	SLU 56	-39	-25	4246	27.94	1.76	1.27
226	SLU 57	-39	-17	4247	27.51	1.76	1.16
226	SLU 58	-39	-25	4246	27.94	1.76	1.27
226	SLU 59	-39	-17	4247	27.51	1.76	1.16
226	SLU 60	-40	-26	4471	29.28	1.79	1.38
226	SLU 61	-40	-18	4471	28.85	1.79	1.27
226	SLU 62	-40	-26	4471	29.28	1.79	1.38
226	SLU 63	-40	-18	4471	28.85	1.79	1.27
226	SLU 64	-40	-24	4118	27.32	1.76	1.19
226	SLU 65	-40	-10	4118	26.61	1.76	1
226	SLU 66	-40	-24	4118	27.32	1.76	1.19
226	SLU 67	-40	-16	4118	26.89	1.76	1.08
226	SLU 68	-40	-10	4118	26.61	1.76	1
226	SLU 69	-40	-24	4118	27.32	1.76	1.19
226	SLU 70	-40	-16	4118	26.89	1.76	1.08
226	SLU 71	-40	-24	4118	27.32	1.76	1.19
226	SLU 72	-40	-16	4118	26.89	1.76	1.08
226	SLU 73	-40	-14	4642	29.73	1.82	1.27
226	SLU 74	-40	-27	4641	30.45	1.82	1.45
226	SLU 75	-40	-20	4641	30.02	1.82	1.34
226	SLU 76	-40	-14	4642	29.73	1.82	1.27
226	SLU 77	-40	-27	4641	30.45	1.82	1.45
226	SLU 78	-40	-20	4641	30.02	1.82	1.34
226	SLU 79	-40	-27	4641	30.45	1.82	1.45
226	SLU 80	-40	-20	4641	30.02	1.82	1.34
226	SLU 81	-40	-29	4866	31.79	1.85	1.57
226	SLU 82	-40	-21	4866	31.36	1.85	1.46
226	SLU 83	-40	-29	4866	31.79	1.85	1.57
226	SLU 84	-40	-21	4866	31.36	1.85	1.46
226	SLE RA 1	-30	-17	3081	20.47	1.34	0.87
226	SLE RA 2	-30	-9	3081	19.99	1.34	0.75
226	SLE RA 3	-30	-17	3081	20.47	1.34	0.87
226	SLE RA 4	-30	-12	3081	20.18	1.34	0.8
226	SLE RA 5	-30	-9	3081	19.99	1.34	0.75
226	SLE RA 6	-30	-17	3081	20.47	1.34	0.87
226	SLE RA 7	-30	-12	3081	20.18	1.34	0.8
226	SLE RA 8	-30	-17	3081	20.47	1.34	0.87
226	SLE RA 9	-30	-12	3081	20.18	1.34	0.8
226	SLE RA 10	-31	-11	3430	22.07	1.38	0.93
226	SLE RA 11	-31	-20	3430	22.55	1.38	1.05
226	SLE RA 12	-31	-15	3430	22.26	1.38	0.98
226	SLE RA 13	-31	-11	3430	22.07	1.38	0.93
226	SLE RA 14	-31	-20	3430	22.55	1.38	1.05
226	SLE RA 15	-31	-15	3430	22.26	1.38	0.98
226	SLE RA 16	-31	-20	3430	22.55	1.38	1.05
226	SLE RA 17	-31	-15	3430	22.26	1.38	0.98
226	SLE RA 18	-31	-21	3579	23.45	1.4	1.12
226	SLE RA 19	-31	-16	3579	23.16	1.4	1.05
226	SLE RA 20	-31	-21	3579	23.45	1.4	1.12
226	SLE RA 21	-31	-16	3579	23.16	1.4	1.05
226	SLE FR 1	-30	-17	3081	20.47	1.34	0.87
226	SLE FR 2	-30	-16	3081	20.37	1.34	0.85
226	SLE FR 3	-30	-17	3081	20.47	1.34	0.87
226	SLE FR 4	-30	-17	3230	21.27	1.36	0.92
226	SLE FR 5	-30	-19	3230	21.36	1.36	0.95
226	SLE FR 6	-31	-19	3330	21.96	1.37	1
226	SLE QP 1	-30	-17	3081	20.47	1.34	0.87
226	SLE QP 2	-30	-19	3230	21.36	1.36	0.95
226	SLD 1	175	91	3565	19.41	2.42	-1.01
226	SLD 2	174	51	3566	19.82	2.42	-0.11
226	SLD 3	171	-55	3588	27.31	2.44	1.05
226	SLD 4	169	-95	3590	27.72	2.45	1.95
226	SLD 5	38	250	3295	8.66	1.64	-3.11
226	SLD 6	37	209	3296	9.08	1.65	-2.17
226	SLD 7	24	-237	3372	34.96	1.71	3.78

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
226	SLD 8	22	-278	3374	35.39	1.72	4.71
226	SLD 9	-83	240	3086	7.33	1	-2.82
226	SLD 10	-85	199	3088	7.76	1.01	-1.88
226	SLD 11	-97	-247	3164	33.64	1.07	4.06
226	SLD 12	-99	-288	3166	34.07	1.08	5
226	SLD 13	-230	58	2871	15.01	0.27	-0.06
226	SLD 14	-232	18	2872	15.42	0.28	0.84
226	SLD 15	-234	-89	2894	22.9	0.3	2.01
226	SLD 16	-236	-128	2896	23.31	0.3	2.91
226	SLV 1	439	230	3994	16.97	3.77	-3.52
226	SLV 2	435	140	3998	17.91	3.79	-1.47
226	SLV 3	430	-101	4047	34.89	3.82	1.17
226	SLV 4	426	-191	4051	35.83	3.84	3.22
226	SLV 5	127	592	3377	-7.48	2	-8.26
226	SLV 6	122	499	3381	-6.51	2.02	-6.14
226	SLV 7	95	-514	3555	52.26	2.17	7.37
226	SLV 8	90	-607	3558	53.22	2.19	9.5
226	SLV 9	-151	570	2902	-10.5	0.53	-7.6
226	SLV 10	-155	476	2906	-9.54	0.55	-5.48
226	SLV 11	-183	-536	3079	49.23	0.7	8.03
226	SLV 12	-187	-630	3083	50.2	0.72	10.15
226	SLV 13	-487	154	2410	6.9	-1.12	-1.33
226	SLV 14	-491	64	2413	7.83	-1.1	0.72
226	SLV 15	-496	-177	2463	24.82	-1.07	3.36
226	SLV 16	-500	-268	2466	25.75	-1.05	5.41
226	CRTFP Ux+	0	0	0	0	0	0
226	CRTFP Ux-	0	0	0	0	0	0
226	CRTFP Uy+	0	0	0	0	0	0
226	CRTFP Uy-	0	0	0	0	0	0
227	SLU 1	-29	-12	2923	20.5	1.42	0.92
227	SLU 2	-29	0	2923	19.8	1.42	0.76
227	SLU 3	-29	-12	2923	20.5	1.42	0.92
227	SLU 4	-29	-5	2923	20.08	1.42	0.83
227	SLU 5	-29	0	2923	19.8	1.42	0.76
227	SLU 6	-29	-12	2923	20.5	1.42	0.92
227	SLU 7	-29	-5	2923	20.08	1.42	0.83
227	SLU 8	-29	-12	2923	20.5	1.42	0.92
227	SLU 9	-29	-5	2923	20.08	1.42	0.83
227	SLU 10	-30	-2	3444	23.03	1.53	1.04
227	SLU 11	-30	-15	3444	23.73	1.53	1.2
227	SLU 12	-30	-7	3444	23.31	1.53	1.1
227	SLU 13	-30	-2	3444	23.03	1.53	1.04
227	SLU 14	-30	-15	3444	23.73	1.53	1.2
227	SLU 15	-30	-7	3444	23.31	1.53	1.1
227	SLU 16	-30	-15	3444	23.73	1.53	1.2
227	SLU 17	-30	-7	3444	23.31	1.53	1.1
227	SLU 18	-30	-16	3667	25.12	1.57	1.31
227	SLU 19	-30	-9	3667	24.7	1.57	1.22
227	SLU 20	-30	-16	3667	25.12	1.57	1.31
227	SLU 21	-30	-9	3667	24.7	1.57	1.22
227	SLU 22	-30	-14	3315	23.1	1.51	1.12
227	SLU 23	-30	-2	3315	22.39	1.51	0.96
227	SLU 24	-30	-14	3315	23.1	1.51	1.12
227	SLU 25	-30	-7	3315	22.67	1.51	1.02
227	SLU 26	-30	-2	3315	22.39	1.51	0.96
227	SLU 27	-30	-14	3315	23.1	1.51	1.12
227	SLU 28	-30	-7	3315	22.67	1.51	1.02
227	SLU 29	-30	-14	3315	23.1	1.51	1.12
227	SLU 30	-30	-7	3315	22.67	1.51	1.02
227	SLU 31	-31	-4	3836	25.63	1.62	1.23
227	SLU 32	-31	-17	3836	26.33	1.62	1.39
227	SLU 33	-31	-9	3836	25.91	1.62	1.29
227	SLU 34	-31	-4	3836	25.63	1.62	1.23
227	SLU 35	-31	-17	3836	26.33	1.62	1.39
227	SLU 36	-31	-9	3836	25.91	1.62	1.29
227	SLU 37	-31	-17	3836	26.33	1.62	1.39
227	SLU 38	-31	-9	3836	25.91	1.62	1.29
227	SLU 39	-31	-18	4059	27.71	1.67	1.5
227	SLU 40	-31	-10	4059	27.29	1.66	1.41
227	SLU 41	-31	-18	4059	27.71	1.67	1.5
227	SLU 42	-31	-10	4059	27.29	1.66	1.41
227	SLU 43	-38	-15	3665	25.76	1.82	1.14
227	SLU 44	-38	-3	3665	25.06	1.81	0.98
227	SLU 45	-38	-15	3665	25.76	1.82	1.14
227	SLU 46	-38	-8	3665	25.34	1.82	1.04
227	SLU 47	-38	-3	3665	25.06	1.81	0.98
227	SLU 48	-38	-15	3665	25.76	1.82	1.14
227	SLU 49	-38	-8	3665	25.34	1.82	1.04
227	SLU 50	-38	-15	3665	25.76	1.82	1.14
227	SLU 51	-38	-8	3665	25.34	1.82	1.04
227	SLU 52	-38	-5	4186	28.29	1.92	1.25
227	SLU 53	-38	-18	4186	29	1.92	1.41
227	SLU 54	-38	-10	4186	28.57	1.92	1.31
227	SLU 55	-38	-5	4186	28.29	1.92	1.25
227	SLU 56	-38	-18	4186	29	1.92	1.41
227	SLU 57	-38	-10	4186	28.57	1.92	1.31

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
227	SLU 58	-38	-18	4186	29	1.92	1.41
227	SLU 59	-38	-10	4186	28.57	1.92	1.31
227	SLU 60	-39	-19	4409	30.38	1.97	1.52
227	SLU 61	-39	-12	4409	29.96	1.97	1.43
227	SLU 62	-39	-19	4409	30.38	1.97	1.52
227	SLU 63	-39	-12	4409	29.96	1.97	1.43
227	SLU 64	-39	-17	4057	28.36	1.91	1.33
227	SLU 65	-39	-5	4058	27.65	1.91	1.17
227	SLU 66	-39	-17	4057	28.36	1.91	1.33
227	SLU 67	-39	-10	4057	27.93	1.91	1.23
227	SLU 68	-39	-5	4058	27.65	1.91	1.17
227	SLU 69	-39	-17	4057	28.36	1.91	1.33
227	SLU 70	-39	-10	4057	27.93	1.91	1.23
227	SLU 71	-39	-17	4057	28.36	1.91	1.33
227	SLU 72	-39	-10	4057	27.93	1.91	1.23
227	SLU 73	-39	-7	4579	30.89	2.01	1.44
227	SLU 74	-39	-20	4578	31.59	2.02	1.6
227	SLU 75	-39	-12	4578	31.17	2.01	1.5
227	SLU 76	-39	-7	4579	30.89	2.01	1.44
227	SLU 77	-39	-20	4578	31.59	2.02	1.6
227	SLU 78	-39	-12	4578	31.17	2.01	1.5
227	SLU 79	-39	-20	4578	31.59	2.02	1.6
227	SLU 80	-39	-12	4578	31.17	2.01	1.5
227	SLU 81	-40	-21	4801	32.97	2.06	1.71
227	SLU 82	-40	-13	4802	32.55	2.06	1.62
227	SLU 83	-40	-21	4801	32.97	2.06	1.71
227	SLU 84	-40	-13	4802	32.55	2.06	1.62
227	SLE RA 1	-30	-13	3035	21.24	1.45	0.98
227	SLE RA 2	-30	-4	3035	20.77	1.45	0.87
227	SLE RA 3	-30	-13	3035	21.24	1.45	0.98
227	SLE RA 4	-30	-8	3035	20.96	1.45	0.92
227	SLE RA 5	-30	-4	3035	20.77	1.45	0.87
227	SLE RA 6	-30	-13	3035	21.24	1.45	0.98
227	SLE RA 7	-30	-8	3035	20.96	1.45	0.92
227	SLE RA 8	-30	-13	3035	21.24	1.45	0.98
227	SLE RA 9	-30	-8	3035	20.96	1.45	0.92
227	SLE RA 10	-30	-6	3382	22.93	1.52	1.05
227	SLE RA 11	-30	-15	3382	23.4	1.52	1.16
227	SLE RA 12	-30	-10	3382	23.12	1.52	1.1
227	SLE RA 13	-30	-6	3382	22.93	1.52	1.05
227	SLE RA 14	-30	-15	3382	23.4	1.52	1.16
227	SLE RA 15	-30	-10	3382	23.12	1.52	1.1
227	SLE RA 16	-30	-15	3382	23.4	1.52	1.16
227	SLE RA 17	-30	-10	3382	23.12	1.52	1.1
227	SLE RA 18	-30	-15	3531	24.32	1.55	1.24
227	SLE RA 19	-30	-10	3531	24.04	1.55	1.17
227	SLE RA 20	-30	-15	3531	24.32	1.55	1.24
227	SLE RA 21	-30	-10	3531	24.04	1.55	1.17
227	SLE FR 1	-30	-13	3035	21.24	1.45	0.98
227	SLE FR 2	-30	-11	3035	21.15	1.45	0.96
227	SLE FR 3	-30	-13	3035	21.24	1.45	0.98
227	SLE FR 4	-30	-12	3184	22.07	1.48	1.04
227	SLE FR 5	-30	-14	3184	22.17	1.48	1.06
227	SLE FR 6	-30	-14	3283	22.78	1.5	1.11
227	SLE QP 1	-30	-13	3035	21.24	1.45	0.98
227	SLE QP 2	-30	-14	3184	22.17	1.48	1.06
227	SLD 1	176	86	3484	20.4	2.5	-0.76
227	SLD 2	174	51	3485	20.8	2.51	0.1
227	SLD 3	172	-50	3506	28.13	2.54	1.07
227	SLD 4	170	-85	3508	28.53	2.55	1.93
227	SLD 5	39	236	3239	9.77	1.73	-2.57
227	SLD 6	37	199	3240	10.18	1.74	-1.68
227	SLD 7	25	-218	3314	35.53	1.85	3.51
227	SLD 8	23	-254	3316	35.95	1.86	4.4
227	SLD 9	-83	227	3052	8.39	1.1	-2.29
227	SLD 10	-84	191	3053	8.8	1.11	-1.4
227	SLD 11	-97	-226	3127	34.15	1.22	3.79
227	SLD 12	-99	-263	3128	34.57	1.23	4.69
227	SLD 13	-230	58	2859	15.8	0.41	0.18
227	SLD 14	-231	23	2861	16.2	0.42	1.04
227	SLD 15	-234	-78	2882	23.53	0.45	2.01
227	SLD 16	-236	-114	2883	23.93	0.46	2.87
227	SLV 1	441	214	3869	18.2	3.81	-3.07
227	SLV 2	437	134	3872	19.1	3.83	-1.11
227	SLV 3	431	-95	3921	35.75	3.9	1.07
227	SLV 4	427	-175	3924	36.66	3.92	3.04
227	SLV 5	128	553	3310	-5.98	2.04	-7.19
227	SLV 6	123	470	3313	-5.04	2.06	-5.16
227	SLV 7	95	-477	3482	52.53	2.33	6.63
227	SLV 8	91	-560	3485	53.47	2.35	8.65
227	SLV 9	-150	533	2882	-9.14	0.61	-6.54
227	SLV 10	-155	450	2885	-8.2	0.63	-4.51
227	SLV 11	-183	-497	3054	49.37	0.89	7.27
227	SLV 12	-187	-580	3057	50.31	0.91	9.3
227	SLV 13	-486	148	2443	7.68	-0.96	-0.92
227	SLV 14	-490	68	2446	8.58	-0.94	1.04

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
227	SLV 15	-496	-161	2495	25.23	-0.87	3.22
227	SLV 16	-500	-241	2498	26.14	-0.85	5.18
227	CRTFP Ux+	0	0	0	0	0	0
227	CRTFP Ux-	0	0	0	0	0	0
227	CRTFP Uy+	0	0	0	0	0	0
227	CRTFP Uy-	0	0	0	0	0	0
228	SLU 1	-28	-7	2875	21.28	1.49	1.04
228	SLU 2	-28	4	2875	20.59	1.48	0.91
228	SLU 3	-28	-7	2875	21.28	1.49	1.04
228	SLU 4	-28	0	2875	20.86	1.48	0.97
228	SLU 5	-28	4	2875	20.59	1.48	0.91
228	SLU 6	-28	-7	2875	21.28	1.49	1.04
228	SLU 7	-28	0	2875	20.86	1.48	0.97
228	SLU 8	-28	-7	2875	21.28	1.49	1.04
228	SLU 9	-28	0	2875	20.86	1.48	0.97
228	SLU 10	-29	3	3392	23.93	1.63	1.18
228	SLU 11	-29	-9	3391	24.62	1.63	1.31
228	SLU 12	-29	-2	3392	24.2	1.63	1.24
228	SLU 13	-29	3	3392	23.93	1.63	1.18
228	SLU 14	-29	-9	3391	24.62	1.63	1.31
228	SLU 15	-29	-2	3392	24.2	1.63	1.24
228	SLU 16	-29	-9	3391	24.62	1.63	1.31
228	SLU 17	-29	-2	3392	24.2	1.63	1.24
228	SLU 18	-30	-9	3613	26.05	1.7	1.43
228	SLU 19	-30	-2	3613	25.64	1.69	1.35
228	SLU 20	-30	-9	3613	26.05	1.7	1.43
228	SLU 21	-30	-2	3613	25.64	1.69	1.35
228	SLU 22	-29	-8	3263	23.96	1.61	1.24
228	SLU 23	-29	3	3264	23.27	1.6	1.11
228	SLU 24	-29	-8	3263	23.96	1.61	1.24
228	SLU 25	-29	-1	3264	23.55	1.6	1.16
228	SLU 26	-29	3	3264	23.27	1.6	1.11
228	SLU 27	-29	-8	3263	23.96	1.61	1.24
228	SLU 28	-29	-1	3264	23.55	1.6	1.16
228	SLU 29	-29	-8	3263	23.96	1.61	1.24
228	SLU 30	-29	-1	3264	23.55	1.6	1.16
228	SLU 31	-30	2	3781	26.61	1.75	1.38
228	SLU 32	-30	-9	3780	27.3	1.75	1.51
228	SLU 33	-30	-2	3781	26.89	1.75	1.43
228	SLU 34	-30	2	3781	26.61	1.75	1.38
228	SLU 35	-30	-9	3780	27.3	1.75	1.51
228	SLU 36	-30	-2	3781	26.89	1.75	1.43
228	SLU 37	-30	-9	3780	27.3	1.75	1.51
228	SLU 38	-30	-2	3781	26.89	1.75	1.43
228	SLU 39	-30	-10	4002	28.73	1.82	1.62
228	SLU 40	-30	-3	4002	28.32	1.81	1.54
228	SLU 41	-30	-10	4002	28.73	1.82	1.62
228	SLU 42	-30	-3	4002	28.32	1.81	1.54
228	SLU 43	-37	-9	3604	26.74	1.89	1.29
228	SLU 44	-37	3	3604	26.05	1.89	1.16
228	SLU 45	-37	-9	3604	26.74	1.89	1.29
228	SLU 46	-37	-2	3604	26.33	1.89	1.21
228	SLU 47	-37	3	3604	26.05	1.89	1.16
228	SLU 48	-37	-9	3604	26.74	1.89	1.29
228	SLU 49	-37	-2	3604	26.33	1.89	1.21
228	SLU 50	-37	-9	3604	26.74	1.89	1.29
228	SLU 51	-37	-2	3604	26.33	1.89	1.21
228	SLU 52	-37	1	4121	29.39	2.03	1.43
228	SLU 53	-37	-10	4120	30.08	2.04	1.56
228	SLU 54	-37	-3	4121	29.67	2.03	1.48
228	SLU 55	-37	1	4121	29.39	2.03	1.43
228	SLU 56	-37	-10	4120	30.08	2.04	1.56
228	SLU 57	-37	-3	4121	29.67	2.03	1.48
228	SLU 58	-37	-10	4120	30.08	2.04	1.56
228	SLU 59	-37	-3	4121	29.67	2.03	1.48
228	SLU 60	-38	-11	4342	31.51	2.1	1.68
228	SLU 61	-38	-4	4342	31.1	2.1	1.6
228	SLU 62	-38	-11	4342	31.51	2.1	1.68
228	SLU 63	-38	-4	4342	31.1	2.1	1.6
228	SLU 64	-37	-10	3992	29.42	2.01	1.48
228	SLU 65	-37	2	3993	28.73	2.01	1.35
228	SLU 66	-37	-10	3992	29.42	2.01	1.48
228	SLU 67	-37	-3	3993	29.01	2.01	1.41
228	SLU 68	-37	2	3993	28.73	2.01	1.35
228	SLU 69	-37	-10	3992	29.42	2.01	1.48
228	SLU 70	-37	-3	3993	29.01	2.01	1.41
228	SLU 71	-37	-10	3992	29.42	2.01	1.48
228	SLU 72	-37	-3	3993	29.01	2.01	1.41
228	SLU 73	-38	0	4510	32.07	2.15	1.62
228	SLU 74	-38	-11	4509	32.76	2.16	1.75
228	SLU 75	-38	-4	4510	32.35	2.15	1.68
228	SLU 76	-38	0	4510	32.07	2.15	1.62
228	SLU 77	-38	-11	4509	32.76	2.16	1.75
228	SLU 78	-38	-4	4510	32.35	2.15	1.68
228	SLU 79	-38	-11	4509	32.76	2.16	1.75
228	SLU 80	-38	-4	4510	32.35	2.15	1.68

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
228	SLU 81	-39	-12	4731	34.2	2.22	1.87
228	SLU 82	-39	-5	4731	33.78	2.22	1.79
228	SLU 83	-39	-12	4731	34.2	2.22	1.87
228	SLU 84	-39	-5	4731	33.78	2.22	1.79
228	SLE RA 1	-29	-8	2986	22.04	1.52	1.1
228	SLE RA 2	-29	0	2986	21.58	1.52	1.01
228	SLE RA 3	-29	-8	2986	22.04	1.52	1.1
228	SLE RA 4	-29	-3	2986	21.77	1.52	1.05
228	SLE RA 5	-29	0	2986	21.58	1.52	1.01
228	SLE RA 6	-29	-8	2986	22.04	1.52	1.1
228	SLE RA 7	-29	-3	2986	21.77	1.52	1.05
228	SLE RA 8	-29	-8	2986	22.04	1.52	1.1
228	SLE RA 9	-29	-3	2986	21.77	1.52	1.05
228	SLE RA 10	-29	-1	3331	23.81	1.61	1.19
228	SLE RA 11	-29	-8	3330	24.27	1.62	1.28
228	SLE RA 12	-29	-4	3330	23.99	1.62	1.23
228	SLE RA 13	-29	-1	3331	23.81	1.61	1.19
228	SLE RA 14	-29	-8	3330	24.27	1.62	1.28
228	SLE RA 15	-29	-4	3330	23.99	1.62	1.23
228	SLE RA 16	-29	-8	3330	24.27	1.62	1.28
228	SLE RA 17	-29	-4	3330	23.99	1.62	1.23
228	SLE RA 18	-29	-9	3478	25.22	1.66	1.36
228	SLE RA 19	-29	-4	3478	24.95	1.66	1.3
228	SLE RA 20	-29	-9	3478	25.22	1.66	1.36
228	SLE RA 21	-29	-4	3478	24.95	1.66	1.3
228	SLE FR 1	-29	-8	2986	22.04	1.52	1.1
228	SLE FR 2	-29	-6	2986	21.95	1.52	1.08
228	SLE FR 3	-29	-8	2986	22.04	1.52	1.1
228	SLE FR 4	-29	-6	3133	22.91	1.56	1.16
228	SLE FR 5	-29	-8	3133	23	1.56	1.18
228	SLE FR 6	-29	-8	3232	23.63	1.59	1.23
228	SLE QP 1	-29	-8	2986	22.04	1.52	1.1
228	SLE QP 2	-29	-8	3133	23	1.56	1.18
228	SLD 1	177	83	3401	21.41	2.54	-0.43
228	SLD 2	176	53	3402	21.8	2.55	0.38
228	SLD 3	173	-44	3422	28.99	2.6	1.06
228	SLD 4	171	-75	3423	29.38	2.61	1.87
228	SLD 5	40	224	3181	10.89	1.77	-1.86
228	SLD 6	38	192	3182	11.29	1.78	-1.02
228	SLD 7	26	-201	3251	36.14	1.96	3.1
228	SLD 8	24	-233	3253	36.54	1.97	3.94
228	SLD 9	-82	217	3014	9.45	1.16	-1.59
228	SLD 10	-84	185	3015	9.85	1.17	-0.75
228	SLD 11	-96	-208	3085	34.7	1.35	3.37
228	SLD 12	-98	-240	3086	35.1	1.36	4.22
228	SLD 13	-229	59	2844	16.62	0.51	0.48
228	SLD 14	-231	28	2845	17	0.52	1.29
228	SLD 15	-233	-68	2865	24.19	0.57	1.97
228	SLD 16	-235	-99	2866	24.58	0.58	2.78
228	SLV 1	442	200	3744	19.44	3.8	-2.48
228	SLV 2	438	129	3746	20.32	3.82	-0.63
228	SLV 3	432	-90	3792	36.64	3.93	0.91
228	SLV 4	428	-160	3794	37.53	3.96	2.75
228	SLV 5	129	519	3243	-4.48	2.03	-5.73
228	SLV 6	125	447	3245	-3.57	2.05	-3.82
228	SLV 7	96	-446	3403	52.86	2.46	5.55
228	SLV 8	92	-519	3405	53.77	2.49	7.46
228	SLV 9	-150	503	2861	-7.78	0.64	-5.11
228	SLV 10	-154	430	2864	-6.86	0.66	-3.19
228	SLV 11	-182	-463	3022	49.57	1.07	6.17
228	SLV 12	-186	-535	3024	50.48	1.1	8.08
228	SLV 13	-486	144	2473	8.47	-0.83	-0.4
228	SLV 14	-490	74	2475	9.35	-0.81	1.45
228	SLV 15	-496	-145	2521	25.67	-0.7	2.98
228	SLV 16	-500	-216	2523	26.55	-0.68	4.83
228	CRTFP Ux+	0	0	0	0	0	0
228	CRTFP Ux-	0	0	0	0	0	0
228	CRTFP Uy+	0	0	0	0	0	0
228	CRTFP Uy-	0	0	0	0	0	0
229	SLU 1	-25	-2	2545	19.88	48.38	1.06
229	SLU 2	-25	8	2545	19.27	48.39	0.78
229	SLU 3	-25	-2	2545	19.88	48.38	1.06
229	SLU 4	-25	4	2545	19.51	48.38	0.89
229	SLU 5	-25	8	2545	19.27	48.39	0.78
229	SLU 6	-25	-2	2545	19.88	48.38	1.06
229	SLU 7	-25	4	2545	19.51	48.38	0.89
229	SLU 8	-25	-2	2545	19.88	48.38	1.06
229	SLU 9	-25	4	2545	19.51	48.38	0.89
229	SLU 10	-25	8	3006	22.38	57.07	1.01
229	SLU 11	-25	-2	3005	22.99	57.06	1.29
229	SLU 12	-25	4	3006	22.63	57.07	1.12
229	SLU 13	-25	8	3006	22.38	57.07	1.01
229	SLU 14	-25	-2	3005	22.99	57.06	1.29
229	SLU 15	-25	4	3006	22.63	57.07	1.12
229	SLU 16	-25	-2	3005	22.99	57.06	1.29
229	SLU 17	-25	4	3006	22.63	57.07	1.12

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
229	SLU 18	-26	-2	3202	24.33	60.78	1.38
229	SLU 19	-26	4	3203	23.96	60.79	1.22
229	SLU 20	-26	-2	3202	24.33	60.78	1.38
229	SLU 21	-26	4	3203	23.96	60.79	1.22
229	SLU 22	-25	-2	2891	22.38	54.91	1.22
229	SLU 23	-25	8	2892	21.77	54.92	0.95
229	SLU 24	-25	-2	2891	22.38	54.91	1.22
229	SLU 25	-25	4	2891	22.01	54.92	1.06
229	SLU 26	-25	8	2892	21.77	54.92	0.95
229	SLU 27	-25	-2	2891	22.38	54.91	1.22
229	SLU 28	-25	4	2891	22.01	54.92	1.06
229	SLU 29	-25	-2	2891	22.38	54.91	1.22
229	SLU 30	-25	4	2891	22.01	54.92	1.06
229	SLU 31	-26	8	3352	24.88	63.61	1.18
229	SLU 32	-26	-2	3351	25.49	63.6	1.45
229	SLU 33	-26	4	3352	25.13	63.6	1.29
229	SLU 34	-26	8	3352	24.88	63.61	1.18
229	SLU 35	-26	-2	3351	25.49	63.6	1.45
229	SLU 36	-26	4	3352	25.13	63.6	1.29
229	SLU 37	-26	-2	3351	25.49	63.6	1.45
229	SLU 38	-26	4	3352	25.13	63.6	1.29
229	SLU 39	-27	-2	3549	26.83	67.32	1.55
229	SLU 40	-27	4	3549	26.46	67.32	1.39
229	SLU 41	-27	-2	3549	26.83	67.32	1.55
229	SLU 42	-27	4	3549	26.46	67.32	1.39
229	SLU 43	-32	-2	3189	24.99	60.65	1.31
229	SLU 44	-32	8	3190	24.38	60.66	1.04
229	SLU 45	-32	-2	3189	24.99	60.65	1.31
229	SLU 46	-32	4	3190	24.62	60.66	1.15
229	SLU 47	-32	8	3190	24.38	60.66	1.04
229	SLU 48	-32	-2	3189	24.99	60.65	1.31
229	SLU 49	-32	4	3190	24.62	60.66	1.15
229	SLU 50	-32	-2	3189	24.99	60.65	1.31
229	SLU 51	-32	4	3190	24.62	60.66	1.15
229	SLU 52	-32	8	3650	27.49	69.34	1.27
229	SLU 53	-32	-2	3650	28.1	69.34	1.54
229	SLU 54	-32	4	3650	27.73	69.34	1.38
229	SLU 55	-32	8	3650	27.49	69.34	1.27
229	SLU 56	-32	-2	3650	28.1	69.34	1.54
229	SLU 57	-32	4	3650	27.73	69.34	1.38
229	SLU 58	-32	-2	3650	28.1	69.34	1.54
229	SLU 59	-32	4	3650	27.73	69.34	1.38
229	SLU 60	-33	-2	3847	29.43	73.06	1.64
229	SLU 61	-33	4	3848	29.07	73.06	1.48
229	SLU 62	-33	-2	3847	29.43	73.06	1.64
229	SLU 63	-33	4	3848	29.07	73.06	1.48
229	SLU 64	-33	-2	3536	27.49	67.19	1.48
229	SLU 65	-32	8	3536	26.88	67.2	1.21
229	SLU 66	-33	-2	3536	27.49	67.19	1.48
229	SLU 67	-32	4	3536	27.12	67.19	1.32
229	SLU 68	-32	8	3536	26.88	67.2	1.21
229	SLU 69	-33	-2	3536	27.49	67.19	1.48
229	SLU 70	-32	4	3536	27.12	67.19	1.32
229	SLU 71	-33	-2	3536	27.49	67.19	1.48
229	SLU 72	-32	4	3536	27.12	67.19	1.32
229	SLU 73	-33	8	3997	29.99	75.88	1.44
229	SLU 74	-33	-2	3996	30.6	75.87	1.71
229	SLU 75	-33	4	3996	30.23	75.88	1.55
229	SLU 76	-33	8	3997	29.99	75.88	1.44
229	SLU 77	-33	-2	3996	30.6	75.87	1.71
229	SLU 78	-33	4	3996	30.23	75.88	1.55
229	SLU 79	-33	-2	3996	30.6	75.87	1.71
229	SLU 80	-33	4	3996	30.23	75.88	1.55
229	SLU 81	-34	-2	4193	31.93	79.59	1.81
229	SLU 82	-34	4	4194	31.57	79.6	1.65
229	SLU 83	-34	-2	4193	31.93	79.59	1.81
229	SLU 84	-34	4	4194	31.57	79.6	1.65
229	SLE RA 1	-25	-2	2644	20.59	50.25	1.1
229	SLE RA 2	-25	5	2644	20.19	50.25	0.92
229	SLE RA 3	-25	-2	2644	20.59	50.25	1.1
229	SLE RA 4	-25	2	2644	20.35	50.25	0.99
229	SLE RA 5	-25	5	2644	20.19	50.25	0.92
229	SLE RA 6	-25	-2	2644	20.59	50.25	1.1
229	SLE RA 7	-25	2	2644	20.35	50.25	0.99
229	SLE RA 8	-25	-2	2644	20.59	50.25	1.1
229	SLE RA 9	-25	2	2644	20.35	50.25	0.99
229	SLE RA 10	-25	5	2951	22.26	56.04	1.08
229	SLE RA 11	-25	-2	2951	22.67	56.04	1.26
229	SLE RA 12	-25	2	2951	22.43	56.04	1.15
229	SLE RA 13	-25	5	2951	22.26	56.04	1.08
229	SLE RA 14	-25	-2	2951	22.67	56.04	1.26
229	SLE RA 15	-25	2	2951	22.43	56.04	1.15
229	SLE RA 16	-25	-2	2951	22.67	56.04	1.26
229	SLE RA 17	-25	2	2951	22.43	56.04	1.15
229	SLE RA 18	-26	-2	3082	23.56	58.52	1.32
229	SLE RA 19	-26	2	3082	23.31	58.52	1.21

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
229	SLE RA 20	-26	-2	3082	23.56	58.52	1.32
229	SLE RA 21	-26	2	3082	23.31	58.52	1.21
229	SLE FR 1	-25	-2	2644	20.59	50.25	1.1
229	SLE FR 2	-25	0	2644	20.51	50.25	1.07
229	SLE FR 3	-25	-2	2644	20.59	50.25	1.1
229	SLE FR 4	-25	0	2775	21.4	52.73	1.13
229	SLE FR 5	-25	-2	2775	21.48	52.73	1.17
229	SLE FR 6	-25	-2	2863	22.08	54.38	1.21
229	SLE QP 1	-25	-2	2644	20.59	50.25	1.1
229	SLE QP 2	-25	-2	2775	21.48	52.73	1.17
229	SLD 1	161	74	2989	20.2	57.38	-1.42
229	SLD 2	159	50	2989	20.54	57.4	-0.3
229	SLD 3	157	-35	3006	26.92	57.75	1.57
229	SLD 4	155	-59	3006	27.26	57.76	2.68
229	SLD 5	37	195	2813	10.79	53.56	-4.55
229	SLD 6	36	170	2813	11.14	53.58	-3.39
229	SLD 7	24	-168	2870	33.18	54.78	5.41
229	SLD 8	22	-193	2871	33.53	54.8	6.56
229	SLD 9	-73	190	2679	9.44	50.65	-4.23
229	SLD 10	-74	165	2680	9.79	50.67	-3.07
229	SLD 11	-86	-174	2737	31.83	51.88	5.73
229	SLD 12	-87	-199	2737	32.18	51.9	6.89
229	SLD 13	-205	56	2544	15.7	47.69	-0.34
229	SLD 14	-207	31	2544	16.05	47.71	0.77
229	SLD 15	-209	-53	2561	22.42	48.06	2.64
229	SLD 16	-211	-78	2562	22.76	48.08	3.76
229	SLV 1	399	171	3263	18.62	63.35	-4.72
229	SLV 2	395	115	3264	19.4	63.39	-2.18
229	SLV 3	390	-77	3302	33.87	64.19	2.06
229	SLV 4	386	-132	3303	34.65	64.23	4.6
229	SLV 5	117	446	2861	-2.79	54.63	-11.81
229	SLV 6	113	388	2863	-1.99	54.67	-9.19
229	SLV 7	87	-379	2992	48.05	57.42	10.79
229	SLV 8	83	-437	2994	48.85	57.46	13.42
229	SLV 9	-134	433	2557	-5.88	47.99	-11.08
229	SLV 10	-137	376	2558	-5.08	48.03	-8.45
229	SLV 11	-163	-392	2687	44.96	50.78	11.52
229	SLV 12	-167	-449	2689	45.76	50.83	14.15
229	SLV 13	-436	129	2247	8.32	41.22	-2.27
229	SLV 14	-440	73	2248	9.09	41.27	0.28
229	SLV 15	-445	-119	2286	23.57	42.06	4.51
229	SLV 16	-449	-174	2287	24.35	42.1	7.06
229	CRTFP Ux+	0	0	0	0	0	0
229	CRTFP Ux-	0	0	0	0	0	0
229	CRTFP Uy+	0	0	0	0	0	0
229	CRTFP Uy-	0	0	0	0	0	0
231	SLU 1	-46	8	5052	-213.54	48.82	0.19
231	SLU 2	-46	28	5054	-214.45	48.81	-0.07
231	SLU 3	-46	8	5052	-213.54	48.82	0.19
231	SLU 4	-46	20	5053	-214.09	48.81	0.04
231	SLU 5	-46	28	5054	-214.45	48.81	-0.07
231	SLU 6	-46	8	5052	-213.54	48.82	0.19
231	SLU 7	-46	20	5053	-214.09	48.81	0.04
231	SLU 8	-46	8	5052	-213.54	48.82	0.19
231	SLU 9	-46	20	5053	-214.09	48.81	0.04
231	SLU 10	-48	30	5974	-254.06	56.72	0.33
231	SLU 11	-48	11	5972	-253.15	56.74	0.59
231	SLU 12	-48	22	5973	-253.69	56.73	0.44
231	SLU 13	-48	30	5974	-254.06	56.72	0.33
231	SLU 14	-48	11	5972	-253.15	56.74	0.59
231	SLU 15	-48	22	5973	-253.69	56.73	0.44
231	SLU 16	-48	11	5972	-253.15	56.74	0.59
231	SLU 17	-48	22	5973	-253.69	56.73	0.44
231	SLU 18	-48	12	6366	-270.13	60.13	0.76
231	SLU 19	-48	23	6367	-270.67	60.12	0.61
231	SLU 20	-48	12	6366	-270.13	60.13	0.76
231	SLU 21	-48	23	6367	-270.67	60.12	0.61
231	SLU 22	-48	10	5743	-243.08	54.86	0.46
231	SLU 23	-48	29	5745	-243.98	54.85	0.2
231	SLU 24	-48	10	5743	-243.08	54.86	0.46
231	SLU 25	-48	22	5744	-243.62	54.85	0.3
231	SLU 26	-48	29	5745	-243.98	54.85	0.2
231	SLU 27	-48	10	5743	-243.08	54.86	0.46
231	SLU 28	-48	22	5744	-243.62	54.85	0.3
231	SLU 29	-48	10	5743	-243.08	54.86	0.46
231	SLU 30	-48	22	5744	-243.62	54.85	0.3
231	SLU 31	-49	32	6665	-283.59	62.76	0.6
231	SLU 32	-49	12	6663	-282.68	62.78	0.86
231	SLU 33	-49	24	6664	-283.23	62.77	0.7
231	SLU 34	-49	32	6665	-283.59	62.76	0.6
231	SLU 35	-49	12	6663	-282.68	62.78	0.86
231	SLU 36	-49	24	6664	-283.23	62.77	0.7
231	SLU 37	-49	12	6663	-282.68	62.78	0.86
231	SLU 38	-49	24	6664	-283.23	62.77	0.7
231	SLU 39	-50	13	7057	-299.66	66.17	1.03
231	SLU 40	-50	25	7058	-300.2	66.16	0.88

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
231	SLU 41	-50	13	7057	-299.66	66.17	1.03
231	SLU 42	-50	25	7058	-300.2	66.16	0.88
231	SLU 43	-59	10	6330	-267.48	61.4	0.16
231	SLU 44	-59	29	6332	-268.39	61.38	-0.1
231	SLU 45	-59	10	6330	-267.48	61.4	0.16
231	SLU 46	-59	22	6331	-268.02	61.39	0
231	SLU 47	-59	29	6332	-268.39	61.38	-0.1
231	SLU 48	-59	10	6330	-267.48	61.4	0.16
231	SLU 49	-59	22	6331	-268.02	61.39	0
231	SLU 50	-59	10	6330	-267.48	61.4	0.16
231	SLU 51	-59	22	6331	-268.02	61.39	0
231	SLU 52	-61	32	7252	-307.99	69.3	0.3
231	SLU 53	-61	12	7250	-307.09	69.31	0.56
231	SLU 54	-61	24	7251	-307.63	69.3	0.4
231	SLU 55	-61	32	7252	-307.99	69.3	0.3
231	SLU 56	-61	12	7250	-307.09	69.31	0.56
231	SLU 57	-61	24	7251	-307.63	69.3	0.4
231	SLU 58	-61	12	7250	-307.09	69.31	0.56
231	SLU 59	-61	24	7251	-307.63	69.3	0.4
231	SLU 60	-61	13	7645	-324.06	72.71	0.73
231	SLU 61	-62	25	7646	-324.61	72.7	0.57
231	SLU 62	-61	13	7645	-324.06	72.71	0.73
231	SLU 63	-62	25	7646	-324.61	72.7	0.57
231	SLU 64	-61	12	7021	-297.01	67.44	0.43
231	SLU 65	-61	31	7023	-297.92	67.42	0.17
231	SLU 66	-61	12	7021	-297.01	67.44	0.43
231	SLU 67	-61	23	7023	-297.56	67.43	0.27
231	SLU 68	-61	31	7023	-297.92	67.42	0.17
231	SLU 69	-61	12	7021	-297.01	67.44	0.43
231	SLU 70	-61	23	7023	-297.56	67.43	0.27
231	SLU 71	-61	12	7021	-297.01	67.44	0.43
231	SLU 72	-61	23	7023	-297.56	67.43	0.27
231	SLU 73	-63	34	7943	-337.53	75.34	0.57
231	SLU 74	-62	14	7941	-336.62	75.35	0.82
231	SLU 75	-63	26	7943	-337.17	75.34	0.67
231	SLU 76	-63	34	7943	-337.53	75.34	0.57
231	SLU 77	-62	14	7941	-336.62	75.35	0.82
231	SLU 78	-63	26	7943	-337.17	75.34	0.67
231	SLU 79	-62	14	7941	-336.62	75.35	0.82
231	SLU 80	-63	26	7943	-337.17	75.34	0.67
231	SLU 81	-63	15	8336	-353.6	78.74	1
231	SLU 82	-63	27	8337	-354.14	78.74	0.84
231	SLU 83	-63	15	8336	-353.6	78.74	1
231	SLU 84	-63	27	8337	-354.14	78.74	0.84
231	SLE RA 1	-47	9	5249	-221.98	50.55	0.27
231	SLE RA 2	-47	22	5250	-222.58	50.54	0.1
231	SLE RA 3	-47	9	5249	-221.98	50.55	0.27
231	SLE RA 4	-47	16	5250	-222.34	50.54	0.17
231	SLE RA 5	-47	22	5250	-222.58	50.54	0.1
231	SLE RA 6	-47	9	5249	-221.98	50.55	0.27
231	SLE RA 7	-47	16	5250	-222.34	50.54	0.17
231	SLE RA 8	-47	9	5249	-221.98	50.55	0.27
231	SLE RA 9	-47	16	5250	-222.34	50.54	0.17
231	SLE RA 10	-48	23	5864	-248.99	55.81	0.36
231	SLE RA 11	-48	10	5863	-248.39	55.82	0.53
231	SLE RA 12	-48	18	5863	-248.75	55.82	0.43
231	SLE RA 13	-48	23	5864	-248.99	55.81	0.36
231	SLE RA 14	-48	10	5863	-248.39	55.82	0.53
231	SLE RA 15	-48	18	5863	-248.75	55.82	0.43
231	SLE RA 16	-48	10	5863	-248.39	55.82	0.53
231	SLE RA 17	-48	18	5863	-248.75	55.82	0.43
231	SLE RA 18	-48	11	6125	-259.7	58.09	0.65
231	SLE RA 19	-48	19	6126	-260.07	58.08	0.55
231	SLE RA 20	-48	11	6125	-259.7	58.09	0.65
231	SLE RA 21	-48	19	6126	-260.07	58.08	0.55
231	SLE FR 1	-47	9	5249	-221.98	50.55	0.27
231	SLE FR 2	-47	11	5249	-222.1	50.54	0.23
231	SLE FR 3	-47	9	5249	-221.98	50.55	0.27
231	SLE FR 4	-47	12	5512	-233.42	52.81	0.35
231	SLE FR 5	-47	9	5512	-233.3	52.81	0.38
231	SLE FR 6	-47	10	5687	-240.84	54.32	0.46
231	SLE QP 1	-47	9	5249	-221.98	50.55	0.27
231	SLE QP 2	-47	9	5512	-233.3	52.81	0.38
231	SLD 1	327	151	5888	-252.93	65.39	15.09
231	SLD 2	325	109	5889	-252.5	65.5	16.62
231	SLD 3	320	-60	5916	-245.22	66.1	17.71
231	SLD 4	317	-103	5916	-244.79	66.2	19.24
231	SLD 5	77	389	5583	-251.04	55.48	0.26
231	SLD 6	75	345	5583	-250.59	55.59	1.85
231	SLD 7	53	-318	5675	-225.34	57.82	8.99
231	SLD 8	50	-361	5675	-224.89	57.93	10.58
231	SLD 9	-144	380	5349	-241.7	47.68	-9.81
231	SLD 10	-147	336	5349	-241.25	47.79	-8.22
231	SLD 11	-169	-327	5441	-216	50.03	-1.08
231	SLD 12	-172	-371	5441	-215.55	50.14	0.51
231	SLD 13	-411	121	5108	-221.81	39.41	-18.47

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
231	SLD 14	-414	79	5108	-221.37	39.52	-16.94
231	SLD 15	-419	-91	5135	-214.1	40.12	-15.86
231	SLD 16	-421	-133	5136	-213.66	40.22	-14.32
231	SLV 1	808	333	6372	-278.12	81.55	33.99
231	SLV 2	802	236	6372	-277.13	81.79	37.48
231	SLV 3	791	-149	6434	-260.61	83.15	39.94
231	SLV 4	785	-245	6435	-259.62	83.39	43.43
231	SLV 5	237	872	5674	-273.66	58.92	0.16
231	SLV 6	231	772	5675	-272.63	59.16	3.77
231	SLV 7	181	-733	5884	-215.3	64.25	20
231	SLV 8	175	-832	5885	-214.28	64.5	23.61
231	SLV 9	-269	851	5139	-252.31	41.12	-22.84
231	SLV 10	-275	751	5140	-251.29	41.36	-19.23
231	SLV 11	-325	-753	5349	-193.96	46.45	-3
231	SLV 12	-331	-853	5350	-192.94	46.7	0.61
231	SLV 13	-879	264	4589	-206.97	22.22	-42.67
231	SLV 14	-885	167	4590	-205.98	22.46	-39.18
231	SLV 15	-896	-218	4652	-189.47	23.82	-36.72
231	SLV 16	-902	-314	4652	-188.48	24.06	-33.22
231	CRTFP Ux+	0	0	0	0	0	0
231	CRTFP Ux-	0	0	0	0	0	0
231	CRTFP Uy+	0	0	0	0	0	0
231	CRTFP Uy-	0	0	0	0	0	0
233	SLU 1	-19	8	2116	16.21	-38.96	1.2
233	SLU 2	-19	17	2117	15.71	-38.97	1.32
233	SLU 3	-19	8	2116	16.21	-38.96	1.2
233	SLU 4	-19	13	2117	15.91	-38.97	1.27
233	SLU 5	-19	17	2117	15.71	-38.97	1.32
233	SLU 6	-19	8	2116	16.21	-38.96	1.2
233	SLU 7	-19	13	2117	15.91	-38.97	1.27
233	SLU 8	-19	8	2116	16.21	-38.96	1.2
233	SLU 9	-19	13	2117	15.91	-38.97	1.27
233	SLU 10	-20	19	2504	18.12	-46.14	1.56
233	SLU 11	-20	11	2503	18.61	-46.13	1.44
233	SLU 12	-20	15	2504	18.31	-46.13	1.51
233	SLU 13	-20	19	2504	18.12	-46.14	1.56
233	SLU 14	-20	11	2503	18.61	-46.13	1.44
233	SLU 15	-20	15	2504	18.31	-46.13	1.51
233	SLU 16	-20	11	2503	18.61	-46.13	1.44
233	SLU 17	-20	15	2504	18.31	-46.13	1.51
233	SLU 18	-20	11	2669	19.64	-49.2	1.54
233	SLU 19	-20	16	2670	19.34	-49.21	1.61
233	SLU 20	-20	11	2669	19.64	-49.2	1.54
233	SLU 21	-20	16	2670	19.34	-49.21	1.61
233	SLU 22	-20	10	2407	18.16	-44.34	1.38
233	SLU 23	-20	18	2408	17.66	-44.35	1.49
233	SLU 24	-20	10	2407	18.16	-44.34	1.38
233	SLU 25	-20	15	2407	17.86	-44.35	1.45
233	SLU 26	-20	18	2408	17.66	-44.35	1.49
233	SLU 27	-20	10	2407	18.16	-44.34	1.38
233	SLU 28	-20	15	2407	17.86	-44.35	1.45
233	SLU 29	-20	10	2407	18.16	-44.34	1.38
233	SLU 30	-20	15	2407	17.86	-44.35	1.45
233	SLU 31	-21	20	2795	20.07	-51.52	1.73
233	SLU 32	-21	12	2794	20.57	-51.5	1.61
233	SLU 33	-21	17	2795	20.27	-51.51	1.68
233	SLU 34	-21	20	2795	20.07	-51.52	1.73
233	SLU 35	-21	12	2794	20.57	-51.5	1.61
233	SLU 36	-21	17	2795	20.27	-51.51	1.68
233	SLU 37	-21	12	2794	20.57	-51.5	1.61
233	SLU 38	-21	17	2795	20.27	-51.51	1.68
233	SLU 39	-21	13	2960	21.6	-54.58	1.72
233	SLU 40	-21	18	2961	21.3	-54.58	1.79
233	SLU 41	-21	13	2960	21.6	-54.58	1.72
233	SLU 42	-21	18	2961	21.3	-54.58	1.79
233	SLU 43	-25	10	2651	20.4	-48.81	1.5
233	SLU 44	-25	19	2652	19.9	-48.82	1.62
233	SLU 45	-25	10	2651	20.4	-48.81	1.5
233	SLU 46	-25	15	2652	20.1	-48.81	1.57
233	SLU 47	-25	19	2652	19.9	-48.82	1.62
233	SLU 48	-25	10	2651	20.4	-48.81	1.5
233	SLU 49	-25	15	2652	20.1	-48.81	1.57
233	SLU 50	-25	10	2651	20.4	-48.81	1.5
233	SLU 51	-25	15	2652	20.1	-48.81	1.57
233	SLU 52	-26	21	3039	22.31	-55.98	1.86
233	SLU 53	-26	13	3039	22.8	-55.97	1.74
233	SLU 54	-26	17	3039	22.51	-55.98	1.81
233	SLU 55	-26	21	3039	22.31	-55.98	1.86
233	SLU 56	-26	13	3039	22.8	-55.97	1.74
233	SLU 57	-26	17	3039	22.51	-55.98	1.81
233	SLU 58	-26	13	3039	22.8	-55.97	1.74
233	SLU 59	-26	17	3039	22.51	-55.98	1.81
233	SLU 60	-26	13	3204	23.84	-59.04	1.84
233	SLU 61	-26	18	3205	23.54	-59.05	1.91
233	SLU 62	-26	13	3204	23.84	-59.04	1.84
233	SLU 63	-26	18	3205	23.54	-59.05	1.91

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
233	SLU 64	-26	12	2942	22.35	-54.18	1.68
233	SLU 65	-26	20	2943	21.86	-54.2	1.79
233	SLU 66	-26	12	2942	22.35	-54.18	1.68
233	SLU 67	-26	17	2942	22.05	-54.19	1.75
233	SLU 68	-26	20	2943	21.86	-54.2	1.79
233	SLU 69	-26	12	2942	22.35	-54.18	1.68
233	SLU 70	-26	17	2942	22.05	-54.19	1.75
233	SLU 71	-26	12	2942	22.35	-54.18	1.68
233	SLU 72	-26	17	2942	22.05	-54.19	1.75
233	SLU 73	-26	22	3330	24.26	-61.36	2.03
233	SLU 74	-26	14	3329	24.76	-61.35	1.91
233	SLU 75	-26	19	3330	24.46	-61.36	1.98
233	SLU 76	-26	22	3330	24.26	-61.36	2.03
233	SLU 77	-26	14	3329	24.76	-61.35	1.91
233	SLU 78	-26	19	3330	24.46	-61.36	1.98
233	SLU 79	-26	14	3329	24.76	-61.35	1.91
233	SLU 80	-26	19	3330	24.46	-61.36	1.98
233	SLU 81	-27	15	3495	25.79	-64.42	2.02
233	SLU 82	-27	20	3496	25.49	-64.43	2.09
233	SLU 83	-27	15	3495	25.79	-64.42	2.02
233	SLU 84	-27	20	3496	25.49	-64.43	2.09
233	SLE RA 1	-20	9	2199	16.77	-40.5	1.25
233	SLE RA 2	-20	14	2200	16.43	-40.51	1.33
233	SLE RA 3	-20	9	2199	16.77	-40.5	1.25
233	SLE RA 4	-20	12	2199	16.57	-40.5	1.3
233	SLE RA 5	-20	14	2200	16.43	-40.51	1.33
233	SLE RA 6	-20	9	2199	16.77	-40.5	1.25
233	SLE RA 7	-20	12	2199	16.57	-40.5	1.3
233	SLE RA 8	-20	9	2199	16.77	-40.5	1.25
233	SLE RA 9	-20	12	2199	16.57	-40.5	1.3
233	SLE RA 10	-20	16	2458	18.04	-45.28	1.49
233	SLE RA 11	-20	10	2457	18.37	-45.27	1.41
233	SLE RA 12	-20	13	2458	18.17	-45.28	1.46
233	SLE RA 13	-20	16	2458	18.04	-45.28	1.49
233	SLE RA 14	-20	10	2457	18.37	-45.27	1.41
233	SLE RA 15	-20	13	2458	18.17	-45.28	1.46
233	SLE RA 16	-20	10	2457	18.37	-45.27	1.41
233	SLE RA 17	-20	13	2458	18.17	-45.28	1.46
233	SLE RA 18	-20	11	2568	19.06	-47.32	1.48
233	SLE RA 19	-20	14	2568	18.86	-47.33	1.52
233	SLE RA 20	-20	11	2568	19.06	-47.32	1.48
233	SLE RA 21	-20	14	2568	18.86	-47.33	1.52
233	SLE FR 1	-20	9	2199	16.77	-40.5	1.25
233	SLE FR 2	-20	10	2199	16.7	-40.5	1.27
233	SLE FR 3	-20	9	2199	16.77	-40.5	1.25
233	SLE FR 4	-20	11	2310	17.39	-42.55	1.33
233	SLE FR 5	-20	9	2310	17.45	-42.54	1.32
233	SLE FR 6	-20	10	2384	17.91	-43.91	1.36
233	SLE QP 1	-20	9	2199	16.77	-40.5	1.25
233	SLE QP 2	-20	9	2310	17.45	-42.54	1.32
233	SLD 1	139	66	2448	16.48	-44.72	1.69
233	SLD 2	138	51	2448	16.75	-44.72	1.88
233	SLD 3	136	-21	2460	21.94	-44.95	0.43
233	SLD 4	134	-37	2460	22.21	-44.94	0.62
233	SLD 5	34	165	2332	8.78	-42.85	3.27
233	SLD 6	32	149	2332	9.06	-42.85	3.47
233	SLD 7	22	-127	2374	26.98	-43.61	-0.93
233	SLD 8	21	-143	2374	27.26	-43.61	-0.73
233	SLD 9	-60	161	2245	7.64	-41.48	3.37
233	SLD 10	-62	145	2246	7.93	-41.48	3.57
233	SLD 11	-72	-130	2288	25.84	-42.24	-0.83
233	SLD 12	-73	-146	2288	26.13	-42.23	-0.63
233	SLD 13	-174	55	2159	12.69	-40.14	2.02
233	SLD 14	-175	40	2159	12.97	-40.14	2.21
233	SLD 15	-177	-32	2172	18.15	-40.37	0.76
233	SLD 16	-179	-47	2172	18.43	-40.37	0.95
233	SLV 1	343	138	2625	15.28	-47.52	2.15
233	SLV 2	340	103	2625	15.91	-47.51	2.58
233	SLV 3	335	-60	2654	27.68	-48.03	-0.71
233	SLV 4	332	-95	2654	28.31	-48.03	-0.28
233	SLV 5	102	362	2361	-2.23	-43.26	5.75
233	SLV 6	99	326	2361	-1.58	-43.25	6.19
233	SLV 7	76	-299	2457	39.1	-44.97	-3.79
233	SLV 8	73	-336	2457	39.74	-44.97	-3.34
233	SLV 9	-113	355	2163	-4.84	-40.12	5.98
233	SLV 10	-116	318	2163	-4.19	-40.11	6.42
233	SLV 11	-138	-307	2259	36.49	-41.84	-3.56
233	SLV 12	-141	-343	2259	37.14	-41.83	-3.11
233	SLV 13	-372	114	1966	6.6	-37.06	2.92
233	SLV 14	-375	79	1966	7.22	-37.06	3.35
233	SLV 15	-379	-84	1994	19	-37.58	0.06
233	SLV 16	-383	-120	1995	19.62	-37.57	0.49
233	CRTFP Ux+	0	0	0	0	0	0
233	CRTFP Ux-	0	0	0	0	0	0
233	CRTFP Uy+	0	0	0	0	0	0
233	CRTFP Uy-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
234	SLU 1	-21	15	2373	15.88	0.52	1.26
234	SLU 2	-21	24	2374	15.36	0.52	1.23
234	SLU 3	-21	15	2373	15.88	0.52	1.26
234	SLU 4	-21	20	2373	15.56	0.52	1.24
234	SLU 5	-21	24	2374	15.36	0.52	1.23
234	SLU 6	-21	15	2373	15.88	0.52	1.26
234	SLU 7	-21	20	2373	15.56	0.52	1.24
234	SLU 8	-21	15	2373	15.88	0.52	1.26
234	SLU 9	-21	20	2373	15.56	0.52	1.24
234	SLU 10	-22	27	2810	17.45	0.57	1.46
234	SLU 11	-22	18	2809	17.97	0.57	1.49
234	SLU 12	-22	24	2809	17.65	0.57	1.47
234	SLU 13	-22	27	2810	17.45	0.57	1.46
234	SLU 14	-22	18	2809	17.97	0.57	1.49
234	SLU 15	-22	24	2809	17.65	0.57	1.47
234	SLU 16	-22	18	2809	17.97	0.57	1.49
234	SLU 17	-22	24	2809	17.65	0.57	1.47
234	SLU 18	-22	20	2996	18.86	0.59	1.59
234	SLU 19	-22	25	2996	18.55	0.59	1.57
234	SLU 20	-22	20	2996	18.86	0.59	1.59
234	SLU 21	-22	25	2996	18.55	0.59	1.57
234	SLU 22	-22	18	2700	17.62	0.56	1.43
234	SLU 23	-22	27	2701	17.1	0.56	1.41
234	SLU 24	-22	18	2700	17.62	0.56	1.43
234	SLU 25	-22	23	2701	17.31	0.56	1.41
234	SLU 26	-22	27	2701	17.1	0.56	1.41
234	SLU 27	-22	18	2700	17.62	0.56	1.43
234	SLU 28	-22	23	2701	17.31	0.56	1.41
234	SLU 29	-22	18	2700	17.62	0.56	1.43
234	SLU 30	-22	23	2701	17.31	0.56	1.41
234	SLU 31	-22	30	3137	19.19	0.61	1.64
234	SLU 32	-22	21	3136	19.71	0.61	1.66
234	SLU 33	-22	26	3137	19.4	0.61	1.64
234	SLU 34	-22	30	3137	19.19	0.61	1.64
234	SLU 35	-22	21	3136	19.71	0.61	1.66
234	SLU 36	-22	26	3137	19.4	0.61	1.64
234	SLU 37	-22	21	3136	19.71	0.61	1.66
234	SLU 38	-22	26	3137	19.4	0.61	1.64
234	SLU 39	-23	22	3323	20.61	0.63	1.76
234	SLU 40	-23	28	3323	20.29	0.63	1.74
234	SLU 41	-23	22	3323	20.61	0.63	1.76
234	SLU 42	-23	28	3323	20.29	0.63	1.74
234	SLU 43	-27	19	2973	20.04	0.66	1.57
234	SLU 44	-27	28	2973	19.52	0.66	1.55
234	SLU 45	-27	19	2973	20.04	0.66	1.57
234	SLU 46	-27	24	2973	19.73	0.66	1.56
234	SLU 47	-27	28	2973	19.52	0.66	1.55
234	SLU 48	-27	19	2973	20.04	0.66	1.57
234	SLU 49	-27	24	2973	19.73	0.66	1.56
234	SLU 50	-27	19	2973	20.04	0.66	1.57
234	SLU 51	-27	24	2973	19.73	0.66	1.56
234	SLU 52	-28	31	3409	21.61	0.71	1.78
234	SLU 53	-28	22	3409	22.13	0.71	1.8
234	SLU 54	-28	28	3409	21.82	0.71	1.79
234	SLU 55	-28	31	3409	21.61	0.71	1.78
234	SLU 56	-28	22	3409	22.13	0.71	1.8
234	SLU 57	-28	28	3409	21.82	0.71	1.79
234	SLU 58	-28	22	3409	22.13	0.71	1.8
234	SLU 59	-28	28	3409	21.82	0.71	1.79
234	SLU 60	-28	24	3595	23.03	0.73	1.9
234	SLU 61	-28	29	3596	22.71	0.73	1.89
234	SLU 62	-28	24	3595	23.03	0.73	1.9
234	SLU 63	-28	29	3596	22.71	0.73	1.89
234	SLU 64	-28	21	3300	21.79	0.7	1.75
234	SLU 65	-28	30	3301	21.27	0.7	1.72
234	SLU 66	-28	21	3300	21.79	0.7	1.75
234	SLU 67	-28	27	3300	21.47	0.7	1.73
234	SLU 68	-28	30	3301	21.27	0.7	1.72
234	SLU 69	-28	21	3300	21.79	0.7	1.75
234	SLU 70	-28	27	3300	21.47	0.7	1.73
234	SLU 71	-28	21	3300	21.79	0.7	1.75
234	SLU 72	-28	27	3300	21.47	0.7	1.73
234	SLU 73	-28	34	3737	23.36	0.75	1.95
234	SLU 74	-28	25	3736	23.88	0.75	1.98
234	SLU 75	-28	30	3736	23.56	0.75	1.96
234	SLU 76	-28	34	3737	23.36	0.75	1.95
234	SLU 77	-28	25	3736	23.88	0.75	1.98
234	SLU 78	-28	30	3736	23.56	0.75	1.96
234	SLU 79	-28	25	3736	23.88	0.75	1.98
234	SLU 80	-28	30	3736	23.56	0.75	1.96
234	SLU 81	-29	26	3923	24.77	0.77	2.07
234	SLU 82	-29	31	3923	24.46	0.77	2.06
234	SLU 83	-29	26	3923	24.77	0.77	2.07
234	SLU 84	-29	31	3923	24.46	0.77	2.06
234	SLE RA 1	-21	16	2466	16.38	0.53	1.31
234	SLE RA 2	-21	22	2467	16.03	0.53	1.29

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
234	SLE RA 3	-21	16	2466	16.38	0.53	1.31
234	SLE RA 4	-21	19	2467	16.17	0.53	1.3
234	SLE RA 5	-21	22	2467	16.03	0.53	1.29
234	SLE RA 6	-21	16	2466	16.38	0.53	1.31
234	SLE RA 7	-21	19	2467	16.17	0.53	1.3
234	SLE RA 8	-21	16	2466	16.38	0.53	1.31
234	SLE RA 9	-21	19	2467	16.17	0.53	1.3
234	SLE RA 10	-22	24	2758	17.42	0.56	1.44
234	SLE RA 11	-22	18	2757	17.77	0.56	1.46
234	SLE RA 12	-22	22	2757	17.56	0.56	1.45
234	SLE RA 13	-22	24	2758	17.42	0.56	1.44
234	SLE RA 14	-22	18	2757	17.77	0.56	1.46
234	SLE RA 15	-22	22	2757	17.56	0.56	1.45
234	SLE RA 16	-22	18	2757	17.77	0.56	1.46
234	SLE RA 17	-22	22	2757	17.56	0.56	1.45
234	SLE RA 18	-22	19	2882	18.37	0.58	1.52
234	SLE RA 19	-22	23	2882	18.16	0.58	1.52
234	SLE RA 20	-22	19	2882	18.37	0.58	1.52
234	SLE RA 21	-22	23	2882	18.16	0.58	1.52
234	SLE FR 1	-21	16	2466	16.38	0.53	1.31
234	SLE FR 2	-21	17	2467	16.31	0.53	1.3
234	SLE FR 3	-21	16	2466	16.38	0.53	1.31
234	SLE FR 4	-21	18	2591	16.9	0.54	1.37
234	SLE FR 5	-21	17	2591	16.97	0.54	1.37
234	SLE FR 6	-21	17	2674	17.37	0.55	1.41
234	SLE QP 1	-21	16	2466	16.38	0.53	1.31
234	SLE QP 2	-21	17	2591	16.97	0.54	1.37
234	SLD 1	159	78	2727	15.97	1.09	0.81
234	SLD 2	157	63	2727	16.25	1.1	1.33
234	SLD 3	155	-19	2741	21.65	1.1	1.07
234	SLD 4	153	-34	2741	21.93	1.11	1.59
234	SLD 5	39	188	2611	7.95	0.69	0.61
234	SLD 6	37	173	2611	8.25	0.7	1.15
234	SLD 7	26	-136	2657	26.89	0.72	1.49
234	SLD 8	25	-152	2657	27.18	0.73	2.03
234	SLD 9	-67	185	2525	6.76	0.36	0.72
234	SLD 10	-69	170	2525	7.06	0.36	1.25
234	SLD 11	-80	-139	2571	25.7	0.39	1.59
234	SLD 12	-82	-155	2571	26	0.4	2.13
234	SLD 13	-196	68	2441	12.01	-0.02	1.15
234	SLD 14	-197	52	2441	12.3	-0.02	1.67
234	SLD 15	-199	-30	2455	17.69	-0.01	1.42
234	SLD 16	-201	-45	2455	17.98	-0.01	1.93
234	SLV 1	389	157	2902	14.74	1.8	0.09
234	SLV 2	386	123	2902	15.39	1.81	1.27
234	SLV 3	381	-64	2934	27.64	1.82	0.68
234	SLV 4	377	-98	2933	28.29	1.83	1.86
234	SLV 5	116	407	2636	-3.5	0.88	-0.35
234	SLV 6	113	371	2636	-2.83	0.89	0.87
234	SLV 7	88	-330	2742	39.5	0.96	1.63
234	SLV 8	84	-366	2742	40.17	0.97	2.86
234	SLV 9	-126	399	2440	-6.22	0.12	-0.12
234	SLV 10	-130	364	2440	-5.55	0.13	1.11
234	SLV 11	-155	-338	2546	36.77	0.19	1.87
234	SLV 12	-159	-373	2546	37.44	0.21	3.09
234	SLV 13	-420	132	2249	5.65	-0.74	0.88
234	SLV 14	-423	98	2248	6.3	-0.73	2.06
234	SLV 15	-428	-89	2280	18.55	-0.72	1.47
234	SLV 16	-432	-124	2280	19.2	-0.71	2.66
234	CRTFP Ux+	0	0	0	0	0	0
234	CRTFP Ux-	0	0	0	0	0	0
234	CRTFP Uy+	0	0	0	0	0	0
234	CRTFP Uy-	0	0	0	0	0	0
235	SLU 1	-20	21	2355	13.29	0.43	1.17
235	SLU 2	-20	30	2356	12.81	0.43	1.16
235	SLU 3	-20	21	2355	13.29	0.43	1.17
235	SLU 4	-20	26	2355	13	0.43	1.16
235	SLU 5	-20	30	2356	12.81	0.43	1.16
235	SLU 6	-20	21	2355	13.29	0.43	1.17
235	SLU 7	-20	26	2355	13	0.43	1.16
235	SLU 8	-20	21	2355	13.29	0.43	1.17
235	SLU 9	-20	26	2355	13	0.43	1.16
235	SLU 10	-20	34	2790	14.23	0.48	1.36
235	SLU 11	-20	25	2789	14.7	0.48	1.37
235	SLU 12	-20	31	2789	14.42	0.48	1.37
235	SLU 13	-20	34	2790	14.23	0.48	1.36
235	SLU 14	-20	25	2789	14.7	0.48	1.37
235	SLU 15	-20	31	2789	14.42	0.48	1.37
235	SLU 16	-20	25	2789	14.7	0.48	1.37
235	SLU 17	-20	31	2789	14.42	0.48	1.37
235	SLU 18	-21	27	2975	15.31	0.5	1.46
235	SLU 19	-21	33	2975	15.02	0.5	1.45
235	SLU 20	-21	27	2975	15.31	0.5	1.46
235	SLU 21	-21	33	2975	15.02	0.5	1.45
235	SLU 22	-20	24	2681	14.54	0.47	1.32
235	SLU 23	-20	33	2681	14.06	0.47	1.31

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
235	SLU 24	-20	24	2681	14.54	0.47	1.32
235	SLU 25	-20	29	2681	14.25	0.47	1.32
235	SLU 26	-20	33	2681	14.06	0.47	1.31
235	SLU 27	-20	24	2681	14.54	0.47	1.32
235	SLU 28	-20	29	2681	14.25	0.47	1.32
235	SLU 29	-20	24	2681	14.54	0.47	1.32
235	SLU 30	-20	29	2681	14.25	0.47	1.32
235	SLU 31	-21	37	3115	15.48	0.52	1.51
235	SLU 32	-21	28	3115	15.95	0.51	1.52
235	SLU 33	-21	34	3115	15.67	0.52	1.52
235	SLU 34	-21	37	3115	15.48	0.52	1.51
235	SLU 35	-21	28	3115	15.95	0.51	1.52
235	SLU 36	-21	34	3115	15.67	0.52	1.52
235	SLU 37	-21	28	3115	15.95	0.51	1.52
235	SLU 38	-21	34	3115	15.67	0.52	1.52
235	SLU 39	-22	30	3301	16.56	0.53	1.61
235	SLU 40	-22	36	3301	16.27	0.54	1.6
235	SLU 41	-22	30	3301	16.56	0.53	1.61
235	SLU 42	-22	36	3301	16.27	0.54	1.6
235	SLU 43	-25	26	2950	16.85	0.55	1.47
235	SLU 44	-25	35	2950	16.37	0.55	1.46
235	SLU 45	-25	26	2950	16.85	0.55	1.47
235	SLU 46	-25	31	2950	16.56	0.55	1.46
235	SLU 47	-25	35	2950	16.37	0.55	1.46
235	SLU 48	-25	26	2950	16.85	0.55	1.47
235	SLU 49	-25	31	2950	16.56	0.55	1.46
235	SLU 50	-25	26	2950	16.85	0.55	1.47
235	SLU 51	-25	31	2950	16.56	0.55	1.46
235	SLU 52	-26	39	3385	17.78	0.6	1.66
235	SLU 53	-26	30	3384	18.26	0.59	1.67
235	SLU 54	-26	36	3384	17.98	0.59	1.67
235	SLU 55	-26	39	3385	17.78	0.6	1.66
235	SLU 56	-26	30	3384	18.26	0.59	1.67
235	SLU 57	-26	36	3384	17.98	0.59	1.67
235	SLU 58	-26	30	3384	18.26	0.59	1.67
235	SLU 59	-26	36	3384	17.98	0.59	1.67
235	SLU 60	-26	32	3570	18.87	0.61	1.76
235	SLU 61	-26	38	3570	18.58	0.61	1.75
235	SLU 62	-26	32	3570	18.87	0.61	1.76
235	SLU 63	-26	38	3570	18.58	0.61	1.75
235	SLU 64	-26	29	3275	18.1	0.59	1.62
235	SLU 65	-26	38	3276	17.62	0.59	1.61
235	SLU 66	-26	29	3275	18.1	0.59	1.62
235	SLU 67	-26	35	3276	17.81	0.59	1.62
235	SLU 68	-26	38	3276	17.62	0.59	1.61
235	SLU 69	-26	29	3275	18.1	0.59	1.62
235	SLU 70	-26	35	3276	17.81	0.59	1.62
235	SLU 71	-26	29	3275	18.1	0.59	1.62
235	SLU 72	-26	35	3276	17.81	0.59	1.62
235	SLU 73	-27	43	3710	19.03	0.63	1.81
235	SLU 74	-27	34	3709	19.51	0.63	1.82
235	SLU 75	-27	39	3710	19.23	0.63	1.82
235	SLU 76	-27	43	3710	19.03	0.63	1.81
235	SLU 77	-27	34	3709	19.51	0.63	1.82
235	SLU 78	-27	39	3710	19.23	0.63	1.82
235	SLU 79	-27	34	3709	19.51	0.63	1.82
235	SLU 80	-27	39	3710	19.23	0.63	1.82
235	SLU 81	-27	36	3896	20.12	0.65	1.91
235	SLU 82	-27	41	3896	19.83	0.65	1.9
235	SLU 83	-27	36	3896	20.12	0.65	1.91
235	SLU 84	-27	41	3896	19.83	0.65	1.9
235	SLE RA 1	-20	22	2448	13.65	0.44	1.21
235	SLE RA 2	-20	28	2448	13.33	0.44	1.21
235	SLE RA 3	-20	22	2448	13.65	0.44	1.21
235	SLE RA 4	-20	25	2448	13.46	0.44	1.21
235	SLE RA 5	-20	28	2448	13.33	0.44	1.21
235	SLE RA 6	-20	22	2448	13.65	0.44	1.21
235	SLE RA 7	-20	25	2448	13.46	0.44	1.21
235	SLE RA 8	-20	22	2448	13.65	0.44	1.21
235	SLE RA 9	-20	25	2448	13.46	0.44	1.21
235	SLE RA 10	-20	31	2738	14.27	0.47	1.34
235	SLE RA 11	-20	25	2737	14.59	0.47	1.35
235	SLE RA 12	-20	28	2738	14.4	0.47	1.34
235	SLE RA 13	-20	31	2738	14.27	0.47	1.34
235	SLE RA 14	-20	25	2737	14.59	0.47	1.35
235	SLE RA 15	-20	28	2738	14.4	0.47	1.34
235	SLE RA 16	-20	25	2737	14.59	0.47	1.35
235	SLE RA 17	-20	28	2738	14.4	0.47	1.34
235	SLE RA 18	-21	26	2861	14.99	0.49	1.4
235	SLE RA 19	-21	30	2862	14.8	0.49	1.4
235	SLE RA 20	-21	26	2861	14.99	0.49	1.4
235	SLE RA 21	-21	30	2862	14.8	0.49	1.4
235	SLE FR 1	-20	22	2448	13.65	0.44	1.21
235	SLE FR 2	-20	23	2448	13.58	0.44	1.21
235	SLE FR 3	-20	22	2448	13.65	0.44	1.21
235	SLE FR 4	-20	24	2572	13.99	0.46	1.27

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
235	SLE FR 5	-20	23	2572	14.05	0.45	1.27
235	SLE FR 6	-20	24	2655	14.32	0.46	1.31
235	SLE QP 1	-20	22	2448	13.65	0.44	1.21
235	SLE QP 2	-20	23	2572	14.05	0.45	1.27
235	SLD 1	160	83	2687	13.15	1	1.07
235	SLD 2	158	70	2687	13.41	1	1.57
235	SLD 3	156	-14	2701	18.32	0.99	1.19
235	SLD 4	155	-26	2701	18.58	0.99	1.69
235	SLD 5	40	192	2586	5.85	0.63	0.85
235	SLD 6	39	179	2585	6.11	0.64	1.37
235	SLD 7	28	-130	2632	23.08	0.6	1.24
235	SLD 8	26	-143	2632	23.34	0.6	1.75
235	SLD 9	-66	189	2512	4.76	0.31	0.79
235	SLD 10	-68	176	2512	5.03	0.31	1.3
235	SLD 11	-79	-133	2559	21.99	0.27	1.17
235	SLD 12	-80	-146	2558	22.25	0.28	1.69
235	SLD 13	-195	73	2443	9.52	-0.08	0.86
235	SLD 14	-196	60	2443	9.78	-0.08	1.35
235	SLD 15	-198	-24	2457	14.69	-0.09	0.97
235	SLD 16	-200	-37	2456	14.95	-0.09	1.47
235	SLV 1	391	159	2836	12.08	1.69	0.83
235	SLV 2	387	130	2835	12.67	1.7	1.96
235	SLV 3	382	-60	2868	23.82	1.67	1.09
235	SLV 4	379	-89	2867	24.41	1.68	2.22
235	SLV 5	118	407	2603	-4.56	0.86	0.33
235	SLV 6	114	377	2603	-3.95	0.87	1.5
235	SLV 7	89	-324	2709	34.57	0.78	1.2
235	SLV 8	85	-354	2708	35.17	0.79	2.37
235	SLV 9	-125	400	2436	-7.07	0.12	0.17
235	SLV 10	-129	370	2435	-6.47	0.13	1.35
235	SLV 11	-154	-331	2541	32.05	0.04	1.04
235	SLV 12	-158	-361	2541	32.66	0.05	2.22
235	SLV 13	-419	135	2277	3.69	-0.77	0.32
235	SLV 14	-422	106	2276	4.28	-0.76	1.45
235	SLV 15	-427	-84	2309	15.43	-0.79	0.58
235	SLV 16	-431	-113	2308	16.02	-0.78	1.72
235	CRTFP Ux+	0	0	0	0	0	0
235	CRTFP Ux-	0	0	0	0	0	0
235	CRTFP Uy+	0	0	0	0	0	0
235	CRTFP Uy-	0	0	0	0	0	0
236	SLU 1	-37	53	4661	708.66	-14.7	7.23
236	SLU 2	-37	71	4662	708.18	-14.7	7.34
236	SLU 3	-37	53	4661	708.66	-14.7	7.23
236	SLU 4	-37	63	4662	708.37	-14.7	7.3
236	SLU 5	-37	71	4662	708.18	-14.7	7.34
236	SLU 6	-37	53	4661	708.66	-14.7	7.23
236	SLU 7	-37	63	4662	708.37	-14.7	7.3
236	SLU 8	-37	53	4661	708.66	-14.7	7.23
236	SLU 9	-37	63	4662	708.37	-14.7	7.3
236	SLU 10	-39	81	5519	835.44	-17.84	7.95
236	SLU 11	-39	63	5519	835.92	-17.85	7.84
236	SLU 12	-39	74	5519	835.63	-17.85	7.91
236	SLU 13	-39	81	5519	835.44	-17.84	7.95
236	SLU 14	-39	63	5519	835.92	-17.85	7.84
236	SLU 15	-39	74	5519	835.63	-17.85	7.91
236	SLU 16	-39	63	5519	835.92	-17.85	7.84
236	SLU 17	-39	74	5519	835.63	-17.85	7.91
236	SLU 18	-40	68	5886	890.46	-19.2	8.1
236	SLU 19	-40	79	5886	890.17	-19.2	8.17
236	SLU 20	-40	68	5886	890.46	-19.2	8.1
236	SLU 21	-40	79	5886	890.17	-19.2	8.17
236	SLU 22	-39	61	5305	804.57	-17.02	7.74
236	SLU 23	-39	78	5305	804.09	-17.01	7.85
236	SLU 24	-39	61	5305	804.57	-17.02	7.74
236	SLU 25	-39	71	5305	804.28	-17.01	7.81
236	SLU 26	-39	78	5305	804.09	-17.01	7.85
236	SLU 27	-39	61	5305	804.57	-17.02	7.74
236	SLU 28	-39	71	5305	804.28	-17.01	7.81
236	SLU 29	-39	61	5305	804.57	-17.02	7.74
236	SLU 30	-39	71	5305	804.28	-17.01	7.81
236	SLU 31	-41	89	6163	931.35	-20.16	8.46
236	SLU 32	-41	71	6162	931.83	-20.16	8.35
236	SLU 33	-41	82	6162	931.54	-20.16	8.42
236	SLU 34	-41	89	6163	931.35	-20.16	8.46
236	SLU 35	-41	71	6162	931.83	-20.16	8.35
236	SLU 36	-41	82	6162	931.54	-20.16	8.42
236	SLU 37	-41	71	6162	931.83	-20.16	8.35
236	SLU 38	-41	82	6162	931.54	-20.16	8.42
236	SLU 39	-42	76	6529	986.37	-21.51	8.61
236	SLU 40	-42	87	6530	986.08	-21.51	8.68
236	SLU 41	-42	76	6529	986.37	-21.51	8.61
236	SLU 42	-42	87	6530	986.08	-21.51	8.68
236	SLU 43	-48	66	5839	888.38	-18.32	9.23
236	SLU 44	-48	84	5840	887.9	-18.31	9.34
236	SLU 45	-48	66	5839	888.38	-18.32	9.23
236	SLU 46	-48	77	5840	888.09	-18.31	9.29

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
236	SLU 47	-48	84	5840	887.9	-18.31	9.34
236	SLU 48	-48	66	5839	888.38	-18.32	9.23
236	SLU 49	-48	77	5840	888.09	-18.31	9.29
236	SLU 50	-48	66	5839	888.38	-18.32	9.23
236	SLU 51	-48	77	5840	888.09	-18.31	9.29
236	SLU 52	-50	94	6697	1015.16	-21.46	9.95
236	SLU 53	-50	77	6696	1015.64	-21.47	9.84
236	SLU 54	-50	87	6697	1015.35	-21.46	9.9
236	SLU 55	-50	94	6697	1015.16	-21.46	9.95
236	SLU 56	-50	77	6696	1015.64	-21.47	9.84
236	SLU 57	-50	87	6697	1015.35	-21.46	9.9
236	SLU 58	-50	77	6696	1015.64	-21.47	9.84
236	SLU 59	-50	87	6697	1015.35	-21.46	9.9
236	SLU 60	-50	81	7064	1070.17	-22.81	10.1
236	SLU 61	-50	92	7064	1069.89	-22.81	10.16
236	SLU 62	-50	81	7064	1070.17	-22.81	10.1
236	SLU 63	-50	92	7064	1069.89	-22.81	10.16
236	SLU 64	-49	74	6482	984.29	-20.63	9.74
236	SLU 65	-49	92	6483	983.81	-20.63	9.84
236	SLU 66	-49	74	6482	984.29	-20.63	9.74
236	SLU 67	-49	84	6483	984	-20.63	9.8
236	SLU 68	-49	92	6483	983.81	-20.63	9.84
236	SLU 69	-49	74	6482	984.29	-20.63	9.74
236	SLU 70	-49	84	6483	984	-20.63	9.8
236	SLU 71	-49	74	6482	984.29	-20.63	9.74
236	SLU 72	-49	84	6483	984	-20.63	9.8
236	SLU 73	-52	102	7340	1111.07	-23.78	10.45
236	SLU 74	-51	84	7340	1111.54	-23.78	10.35
236	SLU 75	-51	95	7340	1111.26	-23.78	10.41
236	SLU 76	-52	102	7340	1111.07	-23.78	10.45
236	SLU 77	-51	84	7340	1111.54	-23.78	10.35
236	SLU 78	-51	95	7340	1111.26	-23.78	10.41
236	SLU 79	-51	84	7340	1111.54	-23.78	10.35
236	SLU 80	-51	95	7340	1111.26	-23.78	10.41
236	SLU 81	-52	89	7707	1166.08	-25.13	10.61
236	SLU 82	-52	100	7708	1165.8	-25.13	10.67
236	SLU 83	-52	89	7707	1166.08	-25.13	10.61
236	SLU 84	-52	100	7708	1165.8	-25.13	10.67
236	SLE RA 1	-38	55	4845	736.06	-15.36	7.38
236	SLE RA 2	-38	67	4846	735.75	-15.36	7.45
236	SLE RA 3	-38	55	4845	736.06	-15.36	7.38
236	SLE RA 4	-38	62	4845	735.87	-15.36	7.42
236	SLE RA 5	-38	67	4846	735.75	-15.36	7.45
236	SLE RA 6	-38	55	4845	736.06	-15.36	7.38
236	SLE RA 7	-38	62	4845	735.87	-15.36	7.42
236	SLE RA 8	-38	55	4845	736.06	-15.36	7.38
236	SLE RA 9	-38	62	4845	735.87	-15.36	7.42
236	SLE RA 10	-39	74	5417	820.58	-17.46	7.86
236	SLE RA 11	-39	62	5417	820.9	-17.46	7.78
236	SLE RA 12	-39	69	5417	820.71	-17.46	7.83
236	SLE RA 13	-39	74	5417	820.58	-17.46	7.86
236	SLE RA 14	-39	62	5417	820.9	-17.46	7.78
236	SLE RA 15	-39	69	5417	820.71	-17.46	7.83
236	SLE RA 16	-39	62	5417	820.9	-17.46	7.78
236	SLE RA 17	-39	69	5417	820.71	-17.46	7.83
236	SLE RA 18	-40	65	5662	857.26	-18.36	7.96
236	SLE RA 19	-40	72	5662	857.07	-18.36	8
236	SLE RA 20	-40	65	5662	857.26	-18.36	7.96
236	SLE RA 21	-40	72	5662	857.07	-18.36	8
236	SLE FR 1	-38	55	4845	736.06	-15.36	7.38
236	SLE FR 2	-38	57	4845	736	-15.36	7.39
236	SLE FR 3	-38	55	4845	736.06	-15.36	7.38
236	SLE FR 4	-38	60	5090	772.36	-16.26	7.57
236	SLE FR 5	-38	58	5090	772.42	-16.26	7.55
236	SLE FR 6	-39	60	5253	796.66	-16.86	7.67
236	SLE QP 1	-38	55	4845	736.06	-15.36	7.38
236	SLE QP 2	-38	58	5090	772.42	-16.26	7.55
236	SLD 1	321	175	5278	800.23	-11.16	-45.87
236	SLD 2	316	154	5278	800.41	-11.08	-43.67
236	SLD 3	314	-17	5311	811.2	-11.39	-46.73
236	SLD 4	308	-38	5311	811.37	-11.31	-44.54
236	SLD 5	83	392	5097	764.07	-14.42	-7.98
236	SLD 6	77	370	5096	764.25	-14.34	-5.7
236	SLD 7	58	-248	5207	800.62	-15.17	-10.85
236	SLD 8	53	-270	5206	800.8	-15.09	-8.57
236	SLD 9	-129	386	4974	744.04	-17.43	23.67
236	SLD 10	-135	364	4974	744.22	-17.35	25.96
236	SLD 11	-153	-254	5084	780.6	-18.19	20.8
236	SLD 12	-159	-276	5083	780.78	-18.1	23.08
236	SLD 13	-385	155	4870	733.48	-21.21	59.64
236	SLD 14	-390	133	4869	733.65	-21.13	61.84
236	SLD 15	-392	-38	4902	744.44	-21.44	58.78
236	SLD 16	-397	-59	4902	744.61	-21.36	60.97
236	SLV 1	782	324	5521	836.01	-4.62	-114.44
236	SLV 2	770	275	5519	836.41	-4.44	-109.43
236	SLV 3	766	-113	5595	860.92	-5.13	-116.42

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
236	SLV 4	754	-161	5594	861.31	-4.95	-111.41
236	SLV 5	237	817	5107	753.58	-12.06	-27.88
236	SLV 6	225	767	5105	753.99	-11.87	-22.7
236	SLV 7	182	-637	5356	836.6	-13.77	-34.48
236	SLV 8	170	-687	5354	837.01	-13.58	-29.3
236	SLV 9	-246	803	4826	707.84	-18.94	44.41
236	SLV 10	-259	753	4825	708.25	-18.76	49.59
236	SLV 11	-301	-651	5075	790.86	-20.65	37.8
236	SLV 12	-314	-701	5073	791.26	-20.46	42.98
236	SLV 13	-830	277	4586	683.53	-27.57	126.51
236	SLV 14	-842	229	4585	683.93	-27.39	131.52
236	SLV 15	-846	-159	4661	708.44	-28.08	124.53
236	SLV 16	-859	-207	4659	708.83	-27.9	129.54
236	CRTFP Ux+	0	0	0	0	0	0
236	CRTFP Ux-	0	0	0	0	0	0
236	CRTFP Uy+	0	0	0	0	0	0
236	CRTFP Uy-	0	0	0	0	0	0
237	SLU 1	-17	52	4749	694.25	-4.9	0.41
237	SLU 2	-17	71	4750	694.05	-4.73	0.59
237	SLU 3	-17	52	4749	694.25	-4.9	0.41
237	SLU 4	-17	63	4750	694.13	-4.8	0.52
237	SLU 5	-17	71	4750	694.05	-4.73	0.59
237	SLU 6	-17	52	4749	694.25	-4.9	0.41
237	SLU 7	-17	63	4750	694.13	-4.8	0.52
237	SLU 8	-17	52	4749	694.25	-4.9	0.41
237	SLU 9	-17	63	4750	694.13	-4.8	0.52
237	SLU 10	-18	82	5626	818.52	-5.91	0.5
237	SLU 11	-17	63	5625	818.72	-6.08	0.32
237	SLU 12	-18	74	5626	818.6	-5.98	0.42
237	SLU 13	-18	82	5626	818.52	-5.91	0.5
237	SLU 14	-17	63	5625	818.72	-6.08	0.32
237	SLU 15	-18	74	5626	818.6	-5.98	0.42
237	SLU 16	-17	63	5625	818.72	-6.08	0.32
237	SLU 17	-18	74	5626	818.6	-5.98	0.42
237	SLU 18	-17	68	6001	872.07	-6.58	0.27
237	SLU 19	-18	79	6001	871.94	-6.48	0.38
237	SLU 20	-17	68	6001	872.07	-6.58	0.27
237	SLU 21	-18	79	6001	871.94	-6.48	0.38
237	SLU 22	-17	60	5406	788.02	-5.78	0.35
237	SLU 23	-18	79	5407	787.82	-5.61	0.53
237	SLU 24	-17	60	5406	788.02	-5.78	0.35
237	SLU 25	-18	71	5407	787.9	-5.68	0.46
237	SLU 26	-18	79	5407	787.82	-5.61	0.53
237	SLU 27	-17	60	5406	788.02	-5.78	0.35
237	SLU 28	-18	71	5407	787.9	-5.68	0.46
237	SLU 29	-17	60	5406	788.02	-5.78	0.35
237	SLU 30	-18	71	5407	787.9	-5.68	0.46
237	SLU 31	-18	90	6283	912.28	-6.79	0.44
237	SLU 32	-18	71	6282	912.49	-6.96	0.26
237	SLU 33	-18	82	6283	912.37	-6.86	0.36
237	SLU 34	-18	90	6283	912.28	-6.79	0.44
237	SLU 35	-18	71	6282	912.49	-6.96	0.26
237	SLU 36	-18	82	6283	912.37	-6.86	0.36
237	SLU 37	-18	71	6282	912.49	-6.96	0.26
237	SLU 38	-18	82	6283	912.37	-6.86	0.36
237	SLU 39	-18	76	6658	965.83	-7.46	0.21
237	SLU 40	-18	87	6658	965.71	-7.36	0.32
237	SLU 41	-18	76	6658	965.83	-7.46	0.21
237	SLU 42	-18	87	6658	965.71	-7.36	0.32
237	SLU 43	-22	65	5949	870.38	-6.07	0.56
237	SLU 44	-22	84	5949	870.17	-5.9	0.74
237	SLU 45	-22	65	5949	870.38	-6.07	0.56
237	SLU 46	-22	76	5949	870.26	-5.97	0.67
237	SLU 47	-22	84	5949	870.17	-5.9	0.74
237	SLU 48	-22	65	5949	870.38	-6.07	0.56
237	SLU 49	-22	76	5949	870.26	-5.97	0.67
237	SLU 50	-22	65	5949	870.38	-6.07	0.56
237	SLU 51	-22	76	5949	870.26	-5.97	0.67
237	SLU 52	-23	95	6825	994.64	-7.08	0.64
237	SLU 53	-22	76	6825	994.85	-7.24	0.46
237	SLU 54	-22	87	6825	994.72	-7.15	0.57
237	SLU 55	-23	95	6825	994.64	-7.08	0.64
237	SLU 56	-22	76	6825	994.85	-7.24	0.46
237	SLU 57	-22	87	6825	994.72	-7.15	0.57
237	SLU 58	-22	76	6825	994.85	-7.24	0.46
237	SLU 59	-22	87	6825	994.72	-7.15	0.57
237	SLU 60	-22	81	7200	1048.19	-7.75	0.42
237	SLU 61	-23	92	7201	1048.07	-7.65	0.53
237	SLU 62	-22	81	7200	1048.19	-7.75	0.42
237	SLU 63	-23	92	7201	1048.07	-7.65	0.53
237	SLU 64	-22	73	6606	964.15	-6.94	0.5
237	SLU 65	-23	92	6606	963.94	-6.78	0.68
237	SLU 66	-22	73	6606	964.15	-6.94	0.5
237	SLU 67	-22	84	6606	964.03	-6.85	0.61
237	SLU 68	-23	92	6606	963.94	-6.78	0.68
237	SLU 69	-22	73	6606	964.15	-6.94	0.5

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
237	SLU 70	-22	84	6606	964.03	-6.85	0.61
237	SLU 71	-22	73	6606	964.15	-6.94	0.5
237	SLU 72	-22	84	6606	964.03	-6.85	0.61
237	SLU 73	-23	103	7482	1088.41	-7.96	0.58
237	SLU 74	-23	84	7482	1088.62	-8.12	0.4
237	SLU 75	-23	95	7482	1088.49	-8.02	0.51
237	SLU 76	-23	103	7482	1088.41	-7.96	0.58
237	SLU 77	-23	84	7482	1088.62	-8.12	0.4
237	SLU 78	-23	95	7482	1088.49	-8.02	0.51
237	SLU 79	-23	84	7482	1088.62	-8.12	0.4
237	SLU 80	-23	95	7482	1088.49	-8.02	0.51
237	SLU 81	-23	89	7857	1141.96	-8.63	0.36
237	SLU 82	-23	100	7858	1141.84	-8.53	0.47
237	SLU 83	-23	89	7857	1141.96	-8.63	0.36
237	SLU 84	-23	100	7858	1141.84	-8.53	0.47
237	SLE RA 1	-17	54	4937	721.04	-5.15	0.4
237	SLE RA 2	-17	67	4937	720.91	-5.04	0.52
237	SLE RA 3	-17	54	4937	721.04	-5.15	0.4
237	SLE RA 4	-17	62	4937	720.96	-5.08	0.47
237	SLE RA 5	-17	67	4937	720.91	-5.04	0.52
237	SLE RA 6	-17	54	4937	721.04	-5.15	0.4
237	SLE RA 7	-17	62	4937	720.96	-5.08	0.47
237	SLE RA 8	-17	54	4937	721.04	-5.15	0.4
237	SLE RA 9	-17	62	4937	720.96	-5.08	0.47
237	SLE RA 10	-18	74	5521	803.89	-5.82	0.45
237	SLE RA 11	-17	62	5521	804.02	-5.93	0.33
237	SLE RA 12	-17	69	5521	803.94	-5.87	0.4
237	SLE RA 13	-18	74	5521	803.89	-5.82	0.45
237	SLE RA 14	-17	62	5521	804.02	-5.93	0.33
237	SLE RA 15	-17	69	5521	803.94	-5.87	0.4
237	SLE RA 16	-17	62	5521	804.02	-5.93	0.33
237	SLE RA 17	-17	69	5521	803.94	-5.87	0.4
237	SLE RA 18	-17	65	5771	839.59	-6.27	0.3
237	SLE RA 19	-18	72	5772	839.5	-6.21	0.38
237	SLE RA 20	-17	65	5771	839.59	-6.27	0.3
237	SLE RA 21	-18	72	5772	839.5	-6.21	0.38
237	SLE FR 1	-17	54	4937	721.04	-5.15	0.4
237	SLE FR 2	-17	57	4937	721.02	-5.13	0.42
237	SLE FR 3	-17	54	4937	721.04	-5.15	0.4
237	SLE FR 4	-17	60	5187	756.58	-5.46	0.39
237	SLE FR 5	-17	58	5187	756.61	-5.49	0.37
237	SLE FR 6	-17	60	5354	780.32	-5.71	0.35
237	SLE QP 1	-17	54	4937	721.04	-5.15	0.4
237	SLE QP 2	-17	58	5187	756.61	-5.49	0.37
237	SLD 1	346	175	5320	775.02	0.64	-53.33
237	SLD 2	341	160	5318	774.63	0.65	-51.25
237	SLD 3	351	-25	5359	785.11	-1.23	-54.41
237	SLD 4	347	-40	5357	784.71	-1.23	-52.33
237	SLD 5	84	402	5169	746.98	-0.81	-14.86
237	SLD 6	79	386	5166	746.57	-0.81	-12.71
237	SLD 7	104	-265	5299	780.6	-7.05	-18.47
237	SLD 8	99	-281	5297	780.19	-7.04	-16.32
237	SLD 9	-134	396	5078	733.02	-3.93	17.05
237	SLD 10	-139	381	5076	732.61	-3.92	19.21
237	SLD 11	-114	-271	5208	766.65	-10.17	13.44
237	SLD 12	-119	-287	5206	766.24	-10.16	15.6
237	SLD 13	-381	155	5018	728.5	-9.75	53.07
237	SLD 14	-386	140	5016	728.11	-9.74	55.15
237	SLD 15	-375	-45	5057	738.59	-11.62	51.99
237	SLD 16	-380	-60	5055	738.19	-11.61	54.06
237	SLV 1	811	324	5490	798.76	8.48	-122.24
237	SLV 2	800	291	5485	797.87	8.5	-117.5
237	SLV 3	825	-130	5578	821.66	4.24	-124.73
237	SLV 4	814	-164	5574	820.77	4.25	-119.99
237	SLV 5	215	839	5145	734.85	5.14	-34.39
237	SLV 6	203	804	5141	733.92	5.16	-29.49
237	SLV 7	260	-676	5441	811.19	-9.02	-42.67
237	SLV 8	249	-711	5436	810.26	-9	-37.77
237	SLV 9	-283	826	4939	702.95	-1.97	38.5
237	SLV 10	-294	791	4934	702.03	-1.95	43.4
237	SLV 11	-238	-689	5234	779.29	-16.13	30.22
237	SLV 12	-249	-724	5230	778.37	-16.11	35.12
237	SLV 13	-848	279	4801	692.44	-15.23	120.73
237	SLV 14	-859	245	4796	691.55	-15.21	125.47
237	SLV 15	-834	-176	4890	715.35	-19.47	118.24
237	SLV 16	-845	-209	4885	714.45	-19.46	122.98
237	CRTFP Ux+	0	0	0	0	0	0
237	CRTFP Ux-	0	0	0	0	0	0
237	CRTFP Uy+	0	0	0	0	0	0
237	CRTFP Uy-	0	0	0	0	0	0
238	SLU 1	-8	21	2574	2.64	-0.39	-1.26
238	SLU 2	-9	31	2574	2.38	-0.36	-1.2
238	SLU 3	-8	21	2574	2.64	-0.39	-1.26
238	SLU 4	-9	27	2574	2.49	-0.37	-1.22
238	SLU 5	-9	31	2574	2.38	-0.36	-1.2
238	SLU 6	-8	21	2574	2.64	-0.39	-1.26

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
238	SLU 7	-9	27	2574	2.49	-0.37	-1.22
238	SLU 8	-8	21	2574	2.64	-0.39	-1.26
238	SLU 9	-9	27	2574	2.49	-0.37	-1.22
238	SLU 10	-9	37	3053	1.3	-0.48	-1.34
238	SLU 11	-9	26	3053	1.56	-0.5	-1.4
238	SLU 12	-9	32	3053	1.4	-0.49	-1.37
238	SLU 13	-9	37	3053	1.3	-0.48	-1.34
238	SLU 14	-9	26	3053	1.56	-0.5	-1.4
238	SLU 15	-9	32	3053	1.4	-0.49	-1.37
238	SLU 16	-9	26	3053	1.56	-0.5	-1.4
238	SLU 17	-9	32	3053	1.4	-0.49	-1.37
238	SLU 18	-9	28	3259	1.09	-0.55	-1.46
238	SLU 19	-9	35	3258	0.94	-0.53	-1.43
238	SLU 20	-9	28	3259	1.09	-0.55	-1.46
238	SLU 21	-9	35	3258	0.94	-0.53	-1.43
238	SLU 22	-9	25	2933	2.02	-0.47	-1.37
238	SLU 23	-9	35	2933	1.76	-0.45	-1.31
238	SLU 24	-9	25	2933	2.02	-0.47	-1.37
238	SLU 25	-9	31	2933	1.87	-0.46	-1.34
238	SLU 26	-9	35	2933	1.76	-0.45	-1.31
238	SLU 27	-9	25	2933	2.02	-0.47	-1.37
238	SLU 28	-9	31	2933	1.87	-0.46	-1.34
238	SLU 29	-9	25	2933	2.02	-0.47	-1.37
238	SLU 30	-9	31	2933	1.87	-0.46	-1.34
238	SLU 31	-9	40	3412	0.68	-0.56	-1.46
238	SLU 32	-9	30	3412	0.94	-0.58	-1.51
238	SLU 33	-9	36	3412	0.78	-0.57	-1.48
238	SLU 34	-9	40	3412	0.68	-0.56	-1.46
238	SLU 35	-9	30	3412	0.94	-0.58	-1.51
238	SLU 36	-9	36	3412	0.78	-0.57	-1.48
238	SLU 37	-9	30	3412	0.94	-0.58	-1.51
238	SLU 38	-9	36	3412	0.78	-0.57	-1.48
238	SLU 39	-9	32	3617	0.47	-0.63	-1.57
238	SLU 40	-9	38	3617	0.32	-0.61	-1.54
238	SLU 41	-9	32	3617	0.47	-0.63	-1.57
238	SLU 42	-9	38	3617	0.32	-0.61	-1.54
238	SLU 43	-11	26	3223	3.65	-0.48	-1.6
238	SLU 44	-11	36	3223	3.39	-0.45	-1.54
238	SLU 45	-11	26	3223	3.65	-0.48	-1.6
238	SLU 46	-11	32	3223	3.49	-0.46	-1.56
238	SLU 47	-11	36	3223	3.39	-0.45	-1.54
238	SLU 48	-11	26	3223	3.65	-0.48	-1.6
238	SLU 49	-11	32	3223	3.49	-0.46	-1.56
238	SLU 50	-11	26	3223	3.65	-0.48	-1.6
238	SLU 51	-11	32	3223	3.49	-0.46	-1.56
238	SLU 52	-11	42	3702	2.3	-0.56	-1.68
238	SLU 53	-11	31	3702	2.56	-0.59	-1.74
238	SLU 54	-11	38	3702	2.41	-0.57	-1.71
238	SLU 55	-11	42	3702	2.3	-0.56	-1.68
238	SLU 56	-11	31	3702	2.56	-0.59	-1.74
238	SLU 57	-11	38	3702	2.41	-0.57	-1.71
238	SLU 58	-11	31	3702	2.56	-0.59	-1.74
238	SLU 59	-11	38	3702	2.41	-0.57	-1.71
238	SLU 60	-11	34	3908	2.1	-0.63	-1.8
238	SLU 61	-12	40	3907	1.94	-0.62	-1.77
238	SLU 62	-11	34	3908	2.1	-0.63	-1.8
238	SLU 63	-12	40	3907	1.94	-0.62	-1.77
238	SLU 64	-11	30	3582	3.03	-0.56	-1.71
238	SLU 65	-11	40	3582	2.77	-0.54	-1.65
238	SLU 66	-11	30	3582	3.03	-0.56	-1.71
238	SLU 67	-11	36	3582	2.87	-0.54	-1.68
238	SLU 68	-11	40	3582	2.77	-0.54	-1.65
238	SLU 69	-11	30	3582	3.03	-0.56	-1.71
238	SLU 70	-11	36	3582	2.87	-0.54	-1.68
238	SLU 71	-11	30	3582	3.03	-0.56	-1.71
238	SLU 72	-11	36	3582	2.87	-0.54	-1.68
238	SLU 73	-12	45	4061	1.68	-0.65	-1.79
238	SLU 74	-12	35	4061	1.94	-0.67	-1.85
238	SLU 75	-12	41	4061	1.79	-0.66	-1.82
238	SLU 76	-12	45	4061	1.68	-0.65	-1.79
238	SLU 77	-12	35	4061	1.94	-0.67	-1.85
238	SLU 78	-12	41	4061	1.79	-0.66	-1.82
238	SLU 79	-12	35	4061	1.94	-0.67	-1.85
238	SLU 80	-12	41	4061	1.79	-0.66	-1.82
238	SLU 81	-12	37	4267	1.48	-0.72	-1.91
238	SLU 82	-12	43	4266	1.32	-0.7	-1.88
238	SLU 83	-12	37	4267	1.48	-0.72	-1.91
238	SLU 84	-12	43	4266	1.32	-0.7	-1.88
238	SLE RA 1	-9	22	2677	2.46	-0.41	-1.29
238	SLE RA 2	-9	29	2677	2.29	-0.4	-1.25
238	SLE RA 3	-9	22	2677	2.46	-0.41	-1.29
238	SLE RA 4	-9	26	2677	2.36	-0.4	-1.27
238	SLE RA 5	-9	29	2677	2.29	-0.4	-1.25
238	SLE RA 6	-9	22	2677	2.46	-0.41	-1.29
238	SLE RA 7	-9	26	2677	2.36	-0.4	-1.27
238	SLE RA 8	-9	22	2677	2.46	-0.41	-1.29

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
238	SLE RA 9	-9	26	2677	2.36	-0.4	-1.27
238	SLE RA 10	-9	33	2996	1.57	-0.47	-1.35
238	SLE RA 11	-9	26	2996	1.74	-0.48	-1.39
238	SLE RA 12	-9	30	2996	1.64	-0.48	-1.36
238	SLE RA 13	-9	33	2996	1.57	-0.47	-1.35
238	SLE RA 14	-9	26	2996	1.74	-0.48	-1.39
238	SLE RA 15	-9	30	2996	1.64	-0.48	-1.36
238	SLE RA 16	-9	26	2996	1.74	-0.48	-1.39
238	SLE RA 17	-9	30	2996	1.64	-0.48	-1.36
238	SLE RA 18	-9	27	3133	1.43	-0.52	-1.43
238	SLE RA 19	-9	31	3133	1.33	-0.51	-1.4
238	SLE RA 20	-9	27	3133	1.43	-0.52	-1.43
238	SLE RA 21	-9	31	3133	1.33	-0.51	-1.4
238	SLE FR 1	-9	22	2677	2.46	-0.41	-1.29
238	SLE FR 2	-9	24	2677	2.43	-0.41	-1.28
238	SLE FR 3	-9	22	2677	2.46	-0.41	-1.29
238	SLE FR 4	-9	25	2814	2.12	-0.44	-1.32
238	SLE FR 5	-9	24	2814	2.15	-0.44	-1.33
238	SLE FR 6	-9	25	2905	1.95	-0.46	-1.36
238	SLE QP 1	-9	22	2677	2.46	-0.41	-1.29
238	SLE QP 2	-9	24	2814	2.15	-0.44	-1.33
238	SLD 1	186	87	2859	-1.9	0.29	-1.55
238	SLD 2	185	81	2859	-1.93	0.29	-1.12
238	SLD 3	190	-23	2887	1.9	0.07	-2.02
238	SLD 4	188	-29	2886	1.87	0.07	-1.58
238	SLD 5	45	212	2786	-4.81	0.11	-0.86
238	SLD 6	44	206	2785	-4.84	0.11	-0.41
238	SLD 7	57	-155	2877	7.85	-0.62	-2.4
238	SLD 8	55	-161	2877	7.82	-0.62	-1.94
238	SLD 9	-72	209	2751	-3.51	-0.26	-0.72
238	SLD 10	-74	203	2750	-3.54	-0.27	-0.27
238	SLD 11	-61	-158	2842	9.15	-0.99	-2.26
238	SLD 12	-62	-165	2841	9.12	-1	-1.8
238	SLD 13	-206	77	2741	2.44	-0.95	-1.09
238	SLD 14	-207	71	2740	2.41	-0.96	-0.65
238	SLD 15	-202	-34	2769	6.23	-1.17	-1.55
238	SLD 16	-204	-40	2768	6.2	-1.18	-1.11
238	SLV 1	436	167	2919	-7.43	1.23	-1.84
238	SLV 2	433	154	2917	-7.5	1.22	-0.85
238	SLV 3	444	-83	2981	1.19	0.73	-2.89
238	SLV 4	441	-96	2979	1.12	0.72	-1.9
238	SLV 5	114	451	2752	-13.76	0.82	-0.26
238	SLV 6	111	437	2750	-13.83	0.81	0.77
238	SLV 7	140	-383	2959	14.96	-0.84	-3.75
238	SLV 8	137	-397	2957	14.89	-0.85	-2.72
238	SLV 9	-154	444	2670	-10.58	-0.04	0.06
238	SLV 10	-158	430	2668	-10.65	-0.05	1.09
238	SLV 11	-128	-390	2878	18.14	-1.69	-3.43
238	SLV 12	-132	-404	2876	18.07	-1.7	-2.4
238	SLV 13	-458	144	2648	3.19	-1.61	-0.77
238	SLV 14	-462	130	2646	3.12	-1.62	0.23
238	SLV 15	-450	-106	2710	11.81	-2.11	-1.82
238	SLV 16	-454	-120	2709	11.74	-2.12	-0.82
238	CRTFP Ux+	0	0	0	0	0	0
238	CRTFP Ux-	0	0	0	0	0	0
238	CRTFP Uy+	0	0	0	0	0	0
238	CRTFP Uy-	0	0	0	0	0	0
239	SLU 1	-7	15	2585	3.91	-0.24	-1.06
239	SLU 2	-7	25	2584	3.61	-0.22	-1.01
239	SLU 3	-7	15	2585	3.91	-0.24	-1.06
239	SLU 4	-7	21	2585	3.73	-0.23	-1.03
239	SLU 5	-7	25	2584	3.61	-0.22	-1.01
239	SLU 6	-7	15	2585	3.91	-0.24	-1.06
239	SLU 7	-7	21	2585	3.73	-0.23	-1.03
239	SLU 8	-7	15	2585	3.91	-0.24	-1.06
239	SLU 9	-7	21	2585	3.73	-0.23	-1.03
239	SLU 10	-8	30	3066	2.98	-0.28	-1.15
239	SLU 11	-8	19	3067	3.28	-0.3	-1.2
239	SLU 12	-8	26	3067	3.1	-0.29	-1.17
239	SLU 13	-8	30	3066	2.98	-0.28	-1.15
239	SLU 14	-8	19	3067	3.28	-0.3	-1.2
239	SLU 15	-8	26	3067	3.1	-0.29	-1.17
239	SLU 16	-8	19	3067	3.28	-0.3	-1.2
239	SLU 17	-8	26	3067	3.1	-0.29	-1.17
239	SLU 18	-8	21	3274	3.01	-0.33	-1.26
239	SLU 19	-8	28	3273	2.83	-0.32	-1.23
239	SLU 20	-8	21	3274	3.01	-0.33	-1.26
239	SLU 21	-8	28	3273	2.83	-0.32	-1.23
239	SLU 22	-8	18	2946	3.61	-0.28	-1.17
239	SLU 23	-8	29	2945	3.32	-0.27	-1.12
239	SLU 24	-8	18	2946	3.61	-0.28	-1.17
239	SLU 25	-8	24	2946	3.43	-0.27	-1.14
239	SLU 26	-8	29	2945	3.32	-0.27	-1.12
239	SLU 27	-8	18	2946	3.61	-0.28	-1.17
239	SLU 28	-8	24	2946	3.43	-0.27	-1.14
239	SLU 29	-8	18	2946	3.61	-0.28	-1.17

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
239	SLU 30	-8	24	2946	3.43	-0.27	-1.14
239	SLU 31	-8	33	3427	2.69	-0.33	-1.25
239	SLU 32	-8	22	3428	2.98	-0.35	-1.3
239	SLU 33	-8	29	3428	2.81	-0.34	-1.27
239	SLU 34	-8	33	3427	2.69	-0.33	-1.25
239	SLU 35	-8	22	3428	2.98	-0.35	-1.3
239	SLU 36	-8	29	3428	2.81	-0.34	-1.27
239	SLU 37	-8	22	3428	2.98	-0.35	-1.3
239	SLU 38	-8	29	3428	2.81	-0.34	-1.27
239	SLU 39	-8	24	3635	2.71	-0.38	-1.36
239	SLU 40	-8	31	3634	2.54	-0.37	-1.33
239	SLU 41	-8	24	3635	2.71	-0.38	-1.36
239	SLU 42	-8	31	3634	2.54	-0.37	-1.33
239	SLU 43	-9	18	3237	5.19	-0.29	-1.34
239	SLU 44	-9	29	3236	4.89	-0.27	-1.29
239	SLU 45	-9	18	3237	5.19	-0.29	-1.34
239	SLU 46	-9	25	3236	5.01	-0.28	-1.31
239	SLU 47	-9	29	3236	4.89	-0.27	-1.29
239	SLU 48	-9	18	3237	5.19	-0.29	-1.34
239	SLU 49	-9	25	3236	5.01	-0.28	-1.31
239	SLU 50	-9	18	3237	5.19	-0.29	-1.34
239	SLU 51	-9	25	3236	5.01	-0.28	-1.31
239	SLU 52	-10	33	3718	4.26	-0.34	-1.43
239	SLU 53	-10	23	3719	4.56	-0.35	-1.48
239	SLU 54	-10	29	3718	4.38	-0.34	-1.45
239	SLU 55	-10	33	3718	4.26	-0.34	-1.43
239	SLU 56	-10	23	3719	4.56	-0.35	-1.48
239	SLU 57	-10	29	3718	4.38	-0.34	-1.45
239	SLU 58	-10	23	3719	4.56	-0.35	-1.48
239	SLU 59	-10	29	3718	4.38	-0.34	-1.45
239	SLU 60	-10	25	3926	4.29	-0.38	-1.54
239	SLU 61	-10	31	3925	4.11	-0.37	-1.51
239	SLU 62	-10	25	3926	4.29	-0.38	-1.54
239	SLU 63	-10	31	3925	4.11	-0.37	-1.51
239	SLU 64	-10	21	3598	4.89	-0.34	-1.45
239	SLU 65	-10	32	3597	4.59	-0.32	-1.4
239	SLU 66	-10	21	3598	4.89	-0.34	-1.45
239	SLU 67	-10	28	3597	4.71	-0.33	-1.42
239	SLU 68	-10	32	3597	4.59	-0.32	-1.4
239	SLU 69	-10	21	3598	4.89	-0.34	-1.45
239	SLU 70	-10	28	3597	4.71	-0.33	-1.42
239	SLU 71	-10	21	3598	4.89	-0.34	-1.45
239	SLU 72	-10	28	3597	4.71	-0.33	-1.42
239	SLU 73	-10	36	4079	3.96	-0.39	-1.54
239	SLU 74	-10	26	4080	4.26	-0.4	-1.59
239	SLU 75	-10	32	4079	4.08	-0.39	-1.56
239	SLU 76	-10	36	4079	3.96	-0.39	-1.54
239	SLU 77	-10	26	4080	4.26	-0.4	-1.59
239	SLU 78	-10	32	4079	4.08	-0.39	-1.56
239	SLU 79	-10	26	4080	4.26	-0.4	-1.59
239	SLU 80	-10	32	4079	4.08	-0.39	-1.56
239	SLU 81	-10	28	4287	3.99	-0.43	-1.64
239	SLU 82	-10	34	4286	3.81	-0.42	-1.61
239	SLU 83	-10	28	4287	3.99	-0.43	-1.64
239	SLU 84	-10	34	4286	3.81	-0.42	-1.61
239	SLE RA 1	-7	16	2688	3.83	-0.25	-1.09
239	SLE RA 2	-7	23	2688	3.63	-0.24	-1.06
239	SLE RA 3	-7	16	2688	3.83	-0.25	-1.09
239	SLE RA 4	-7	20	2688	3.71	-0.24	-1.07
239	SLE RA 5	-7	23	2688	3.63	-0.24	-1.06
239	SLE RA 6	-7	16	2688	3.83	-0.25	-1.09
239	SLE RA 7	-7	20	2688	3.71	-0.24	-1.07
239	SLE RA 8	-7	16	2688	3.83	-0.25	-1.09
239	SLE RA 9	-7	20	2688	3.71	-0.24	-1.07
239	SLE RA 10	-8	26	3009	3.21	-0.28	-1.15
239	SLE RA 11	-8	19	3010	3.41	-0.29	-1.18
239	SLE RA 12	-8	23	3009	3.29	-0.29	-1.16
239	SLE RA 13	-8	26	3009	3.21	-0.28	-1.15
239	SLE RA 14	-8	19	3010	3.41	-0.29	-1.18
239	SLE RA 15	-8	23	3009	3.29	-0.29	-1.16
239	SLE RA 16	-8	19	3010	3.41	-0.29	-1.18
239	SLE RA 17	-8	23	3009	3.29	-0.29	-1.16
239	SLE RA 18	-8	20	3148	3.23	-0.31	-1.22
239	SLE RA 19	-8	24	3147	3.11	-0.3	-1.2
239	SLE RA 20	-8	20	3148	3.23	-0.31	-1.22
239	SLE RA 21	-8	24	3147	3.11	-0.3	-1.2
239	SLE FR 1	-7	16	2688	3.83	-0.25	-1.09
239	SLE FR 2	-7	17	2688	3.79	-0.25	-1.09
239	SLE FR 3	-7	16	2688	3.83	-0.25	-1.09
239	SLE FR 4	-7	18	2826	3.61	-0.27	-1.12
239	SLE FR 5	-7	17	2826	3.65	-0.27	-1.13
239	SLE FR 6	-7	18	2918	3.53	-0.28	-1.16
239	SLE QP 1	-7	16	2688	3.83	-0.25	-1.09
239	SLE QP 2	-7	17	2826	3.65	-0.27	-1.13
239	SLD 1	188	80	2848	-0.64	0.43	-1.45
239	SLD 2	186	76	2847	-0.66	0.43	-1.03

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
239	SLD 3	191	-32	2882	3.61	0.26	-1.85
239	SLD 4	190	-36	2881	3.6	0.26	-1.42
239	SLD 5	46	208	2781	-4.09	0.2	-0.79
239	SLD 6	45	204	2780	-4.11	0.2	-0.35
239	SLD 7	58	-167	2895	10.1	-0.36	-2.1
239	SLD 8	56	-171	2894	10.08	-0.37	-1.65
239	SLD 9	-71	205	2758	-2.79	-0.17	-0.61
239	SLD 10	-73	201	2757	-2.81	-0.17	-0.16
239	SLD 11	-60	-170	2872	11.4	-0.73	-1.91
239	SLD 12	-61	-174	2871	11.38	-0.74	-1.47
239	SLD 13	-204	70	2771	3.69	-0.8	-0.84
239	SLD 14	-206	66	2770	3.68	-0.8	-0.42
239	SLD 15	-201	-42	2805	7.95	-0.97	-1.24
239	SLD 16	-202	-46	2805	7.94	-0.97	-0.81
239	SLV 1	438	161	2876	-6.48	1.33	-1.87
239	SLV 2	434	152	2875	-6.52	1.32	-0.9
239	SLV 3	446	-95	2954	3.18	0.95	-2.76
239	SLV 4	442	-103	2952	3.15	0.94	-1.79
239	SLV 5	115	451	2724	-14.04	0.8	-0.36
239	SLV 6	112	442	2723	-14.07	0.79	0.65
239	SLV 7	142	-400	2983	18.18	-0.49	-3.33
239	SLV 8	138	-409	2981	18.14	-0.5	-2.32
239	SLV 9	-153	444	2671	-10.85	-0.04	0.06
239	SLV 10	-157	435	2670	-10.88	-0.05	1.07
239	SLV 11	-127	-407	2930	21.36	-1.33	-2.91
239	SLV 12	-130	-416	2928	21.33	-1.34	-1.9
239	SLV 13	-457	137	2700	4.15	-1.47	-0.48
239	SLV 14	-460	129	2698	4.11	-1.48	0.5
239	SLV 15	-449	-118	2778	13.81	-1.86	-1.37
239	SLV 16	-453	-127	2776	13.77	-1.87	-0.39
239	CRTFP Ux+	0	0	0	0	0	0
239	CRTFP Ux-	0	0	0	0	0	0
239	CRTFP Uy+	0	0	0	0	0	0
239	CRTFP Uy-	0	0	0	0	0	0
240	SLU 1	-5	9	2318	4.57	43.08	-0.71
240	SLU 2	-5	19	2316	4.27	43.06	-0.86
240	SLU 3	-5	9	2318	4.57	43.08	-0.71
240	SLU 4	-5	15	2317	4.39	43.07	-0.8
240	SLU 5	-5	19	2316	4.27	43.06	-0.86
240	SLU 6	-5	9	2318	4.57	43.08	-0.71
240	SLU 7	-5	15	2317	4.39	43.07	-0.8
240	SLU 8	-5	9	2318	4.57	43.08	-0.71
240	SLU 9	-5	15	2317	4.39	43.07	-0.8
240	SLU 10	-6	23	2749	4.08	51.1	-1
240	SLU 11	-6	13	2750	4.38	51.12	-0.85
240	SLU 12	-6	19	2749	4.2	51.11	-0.94
240	SLU 13	-6	23	2749	4.08	51.1	-1
240	SLU 14	-6	13	2750	4.38	51.12	-0.85
240	SLU 15	-6	19	2749	4.2	51.11	-0.94
240	SLU 16	-6	13	2750	4.38	51.12	-0.85
240	SLU 17	-6	19	2749	4.2	51.11	-0.94
240	SLU 18	-6	14	2935	4.3	54.56	-0.91
240	SLU 19	-6	20	2935	4.12	54.55	-1
240	SLU 20	-6	14	2935	4.3	54.56	-0.91
240	SLU 21	-6	20	2935	4.12	54.55	-1
240	SLU 22	-6	12	2642	4.57	49.1	-0.81
240	SLU 23	-6	22	2640	4.27	49.08	-0.97
240	SLU 24	-6	12	2642	4.57	49.1	-0.81
240	SLU 25	-6	18	2641	4.39	49.09	-0.9
240	SLU 26	-6	22	2640	4.27	49.08	-0.97
240	SLU 27	-6	12	2642	4.57	49.1	-0.81
240	SLU 28	-6	18	2641	4.39	49.09	-0.9
240	SLU 29	-6	12	2642	4.57	49.1	-0.81
240	SLU 30	-6	18	2641	4.39	49.09	-0.9
240	SLU 31	-6	25	3073	4.08	57.12	-1.11
240	SLU 32	-6	15	3074	4.38	57.14	-0.95
240	SLU 33	-6	21	3073	4.2	57.13	-1.04
240	SLU 34	-6	25	3073	4.08	57.12	-1.11
240	SLU 35	-6	15	3074	4.38	57.14	-0.95
240	SLU 36	-6	21	3073	4.2	57.13	-1.04
240	SLU 37	-6	15	3074	4.38	57.14	-0.95
240	SLU 38	-6	21	3073	4.2	57.13	-1.04
240	SLU 39	-6	17	3260	4.3	60.58	-1.01
240	SLU 40	-6	23	3259	4.12	60.57	-1.1
240	SLU 41	-6	17	3260	4.3	60.58	-1.01
240	SLU 42	-6	23	3259	4.12	60.57	-1.1
240	SLU 43	-7	11	2902	5.94	53.94	-0.88
240	SLU 44	-7	21	2900	5.64	53.92	-1.04
240	SLU 45	-7	11	2902	5.94	53.94	-0.88
240	SLU 46	-7	17	2901	5.76	53.93	-0.98
240	SLU 47	-7	21	2900	5.64	53.92	-1.04
240	SLU 48	-7	11	2902	5.94	53.94	-0.88
240	SLU 49	-7	17	2901	5.76	53.93	-0.98
240	SLU 50	-7	11	2902	5.94	53.94	-0.88
240	SLU 51	-7	17	2901	5.76	53.93	-0.98
240	SLU 52	-7	24	3333	5.45	61.96	-1.18

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
240	SLU 53	-7	15	3334	5.75	61.98	-1.03
240	SLU 54	-7	21	3333	5.57	61.97	-1.12
240	SLU 55	-7	24	3333	5.45	61.96	-1.18
240	SLU 56	-7	15	3334	5.75	61.98	-1.03
240	SLU 57	-7	21	3333	5.57	61.97	-1.12
240	SLU 58	-7	15	3334	5.75	61.98	-1.03
240	SLU 59	-7	21	3333	5.57	61.97	-1.12
240	SLU 60	-7	16	3520	5.67	65.42	-1.09
240	SLU 61	-7	22	3519	5.49	65.41	-1.18
240	SLU 62	-7	16	3520	5.67	65.42	-1.09
240	SLU 63	-7	22	3519	5.49	65.41	-1.18
240	SLU 64	-7	14	3226	5.94	59.96	-0.99
240	SLU 65	-7	24	3224	5.64	59.94	-1.14
240	SLU 66	-7	14	3226	5.94	59.96	-0.99
240	SLU 67	-7	20	3225	5.76	59.95	-1.08
240	SLU 68	-7	24	3224	5.64	59.94	-1.14
240	SLU 69	-7	14	3226	5.94	59.96	-0.99
240	SLU 70	-7	20	3225	5.76	59.95	-1.08
240	SLU 71	-7	14	3226	5.94	59.96	-0.99
240	SLU 72	-7	20	3225	5.76	59.95	-1.08
240	SLU 73	-8	27	3657	5.45	67.98	-1.28
240	SLU 74	-8	17	3658	5.75	68	-1.13
240	SLU 75	-8	23	3658	5.57	67.99	-1.22
240	SLU 76	-8	27	3657	5.45	67.98	-1.28
240	SLU 77	-8	17	3658	5.75	68	-1.13
240	SLU 78	-8	23	3658	5.57	67.99	-1.22
240	SLU 79	-8	17	3658	5.75	68	-1.13
240	SLU 80	-8	23	3658	5.57	67.99	-1.22
240	SLU 81	-8	19	3844	5.67	71.44	-1.19
240	SLU 82	-8	25	3843	5.49	71.43	-1.28
240	SLU 83	-8	19	3844	5.67	71.44	-1.19
240	SLU 84	-8	25	3843	5.49	71.43	-1.28
240	SLE RA 1	-5	10	2410	4.57	44.8	-0.74
240	SLE RA 2	-5	17	2409	4.37	44.79	-0.84
240	SLE RA 3	-5	10	2410	4.57	44.8	-0.74
240	SLE RA 4	-5	14	2410	4.45	44.79	-0.8
240	SLE RA 5	-5	17	2409	4.37	44.79	-0.84
240	SLE RA 6	-5	10	2410	4.57	44.8	-0.74
240	SLE RA 7	-5	14	2410	4.45	44.79	-0.8
240	SLE RA 8	-5	10	2410	4.57	44.8	-0.74
240	SLE RA 9	-5	14	2410	4.45	44.79	-0.8
240	SLE RA 10	-6	19	2698	4.24	50.15	-0.93
240	SLE RA 11	-6	12	2699	4.44	50.16	-0.83
240	SLE RA 12	-6	16	2698	4.32	50.15	-0.89
240	SLE RA 13	-6	19	2698	4.24	50.15	-0.93
240	SLE RA 14	-6	12	2699	4.44	50.16	-0.83
240	SLE RA 15	-6	16	2698	4.32	50.15	-0.89
240	SLE RA 16	-6	12	2699	4.44	50.16	-0.83
240	SLE RA 17	-6	16	2698	4.32	50.15	-0.89
240	SLE RA 18	-6	13	2822	4.39	52.46	-0.87
240	SLE RA 19	-6	17	2822	4.27	52.45	-0.93
240	SLE RA 20	-6	13	2822	4.39	52.46	-0.87
240	SLE RA 21	-6	17	2822	4.27	52.45	-0.93
240	SLE FR 1	-5	10	2410	4.57	44.8	-0.74
240	SLE FR 2	-5	11	2410	4.53	44.8	-0.76
240	SLE FR 3	-5	10	2410	4.57	44.8	-0.74
240	SLE FR 4	-6	12	2534	4.48	47.1	-0.8
240	SLE FR 5	-6	11	2534	4.52	47.1	-0.78
240	SLE FR 6	-6	12	2616	4.48	48.63	-0.8
240	SLE QP 1	-5	10	2410	4.57	44.8	-0.74
240	SLE QP 2	-6	11	2534	4.52	47.1	-0.78
240	SLD 1	169	68	2535	0.46	47.55	-2.14
240	SLD 2	168	66	2534	0.46	47.54	-1.73
240	SLD 3	172	-34	2569	4.67	48.13	-0.44
240	SLD 4	171	-36	2569	4.67	48.12	-0.02
240	SLD 5	42	183	2482	-3.09	46.36	-3.93
240	SLD 6	41	182	2482	-3.09	46.35	-3.5
240	SLD 7	53	-157	2597	10.95	48.29	1.76
240	SLD 8	52	-158	2596	10.95	48.27	2.19
240	SLD 9	-63	181	2471	-1.91	45.92	-3.74
240	SLD 10	-64	179	2471	-1.92	45.91	-3.31
240	SLD 11	-52	-160	2586	12.12	47.85	1.94
240	SLD 12	-54	-161	2586	12.12	47.83	2.37
240	SLD 13	-182	58	2499	4.36	46.08	-1.53
240	SLD 14	-183	56	2499	4.36	46.07	-1.12
240	SLD 15	-179	-44	2533	8.58	46.66	0.17
240	SLD 16	-180	-46	2533	8.57	46.64	0.59
240	SLV 1	393	140	2537	-5.05	48.15	-3.89
240	SLV 2	390	136	2536	-5.05	48.12	-2.94
240	SLV 3	400	-92	2615	4.51	49.46	-0.01
240	SLV 4	397	-96	2614	4.51	49.43	0.93
240	SLV 5	104	403	2417	-12.84	45.44	-7.93
240	SLV 6	101	399	2416	-12.85	45.41	-6.95
240	SLV 7	128	-370	2677	19.01	49.81	4.98
240	SLV 8	125	-374	2676	19	49.78	5.96
240	SLV 9	-136	396	2392	-9.97	44.42	-7.51

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
240	SLV 10	-139	392	2391	-9.98	44.39	-6.53
240	SLV 11	-112	-377	2652	21.88	48.79	5.4
240	SLV 12	-115	-380	2651	21.88	48.76	6.38
240	SLV 13	-408	118	2454	4.53	44.77	-2.49
240	SLV 14	-411	114	2453	4.52	44.74	-1.54
240	SLV 15	-401	-114	2532	14.08	46.08	1.38
240	SLV 16	-404	-118	2531	14.08	46.05	2.33
240	CRTFP Ux+	0	0	0	0	0	0
240	CRTFP Ux-	0	0	0	0	0	0
240	CRTFP Uy+	0	0	0	0	0	0
240	CRTFP Uy-	0	0	0	0	0	0
242	SLU 1	-9	17	5013	-237.94	2.55	-0.51
242	SLU 2	-10	38	5010	-238.25	2.56	-0.52
242	SLU 3	-9	17	5013	-237.94	2.55	-0.51
242	SLU 4	-10	30	5011	-238.12	2.56	-0.51
242	SLU 5	-10	38	5010	-238.25	2.56	-0.52
242	SLU 6	-9	17	5013	-237.94	2.55	-0.51
242	SLU 7	-10	30	5011	-238.12	2.56	-0.51
242	SLU 8	-9	17	5013	-237.94	2.55	-0.51
242	SLU 9	-10	30	5011	-238.12	2.56	-0.51
242	SLU 10	-11	45	5946	-284.04	3	-0.61
242	SLU 11	-11	24	5950	-283.74	3	-0.6
242	SLU 12	-11	37	5948	-283.92	3	-0.6
242	SLU 13	-11	45	5946	-284.04	3	-0.61
242	SLU 14	-11	24	5950	-283.74	3	-0.6
242	SLU 15	-11	37	5948	-283.92	3	-0.6
242	SLU 16	-11	24	5950	-283.74	3	-0.6
242	SLU 17	-11	37	5948	-283.92	3	-0.6
242	SLU 18	-11	27	6351	-303.36	3.19	-0.63
242	SLU 19	-11	39	6349	-303.54	3.19	-0.64
242	SLU 20	-11	27	6351	-303.36	3.19	-0.63
242	SLU 21	-11	39	6349	-303.54	3.19	-0.64
242	SLU 22	-10	22	5715	-272.07	2.87	-0.57
242	SLU 23	-11	43	5712	-272.37	2.88	-0.59
242	SLU 24	-10	22	5715	-272.07	2.87	-0.57
242	SLU 25	-10	35	5713	-272.25	2.88	-0.58
242	SLU 26	-11	43	5712	-272.37	2.88	-0.59
242	SLU 27	-10	22	5715	-272.07	2.87	-0.57
242	SLU 28	-10	35	5713	-272.25	2.88	-0.58
242	SLU 29	-10	22	5715	-272.07	2.87	-0.57
242	SLU 30	-10	35	5713	-272.25	2.88	-0.58
242	SLU 31	-12	50	6648	-318.16	3.32	-0.67
242	SLU 32	-11	29	6651	-317.86	3.32	-0.66
242	SLU 33	-12	41	6649	-318.04	3.32	-0.67
242	SLU 34	-12	50	6648	-318.16	3.32	-0.67
242	SLU 35	-11	29	6651	-317.86	3.32	-0.66
242	SLU 36	-12	41	6649	-318.04	3.32	-0.67
242	SLU 37	-11	29	6651	-317.86	3.32	-0.66
242	SLU 38	-12	41	6649	-318.04	3.32	-0.67
242	SLU 39	-12	32	7053	-337.49	3.51	-0.7
242	SLU 40	-12	44	7051	-337.67	3.51	-0.71
242	SLU 41	-12	32	7053	-337.49	3.51	-0.7
242	SLU 42	-12	44	7051	-337.67	3.51	-0.71
242	SLU 43	-12	20	6277	-297.62	3.21	-0.64
242	SLU 44	-12	42	6273	-297.93	3.21	-0.65
242	SLU 45	-12	20	6277	-297.62	3.21	-0.64
242	SLU 46	-12	33	6275	-297.81	3.21	-0.64
242	SLU 47	-12	42	6273	-297.93	3.21	-0.65
242	SLU 48	-12	20	6277	-297.62	3.21	-0.64
242	SLU 49	-12	33	6275	-297.81	3.21	-0.64
242	SLU 50	-12	20	6277	-297.62	3.21	-0.64
242	SLU 51	-12	33	6275	-297.81	3.21	-0.64
242	SLU 52	-13	48	7210	-343.72	3.66	-0.74
242	SLU 53	-13	27	7213	-343.42	3.65	-0.73
242	SLU 54	-13	40	7211	-343.6	3.66	-0.73
242	SLU 55	-13	48	7210	-343.72	3.66	-0.74
242	SLU 56	-13	27	7213	-343.42	3.65	-0.73
242	SLU 57	-13	40	7211	-343.6	3.66	-0.73
242	SLU 58	-13	27	7213	-343.42	3.65	-0.73
242	SLU 59	-13	40	7211	-343.6	3.66	-0.73
242	SLU 60	-14	30	7614	-363.04	3.84	-0.76
242	SLU 61	-14	43	7612	-363.23	3.85	-0.77
242	SLU 62	-14	30	7614	-363.04	3.84	-0.76
242	SLU 63	-14	43	7612	-363.23	3.85	-0.77
242	SLU 64	-13	25	6978	-331.75	3.53	-0.7
242	SLU 65	-13	46	6975	-332.05	3.53	-0.71
242	SLU 66	-13	25	6978	-331.75	3.53	-0.7
242	SLU 67	-13	38	6976	-331.93	3.53	-0.71
242	SLU 68	-13	46	6975	-332.05	3.53	-0.71
242	SLU 69	-13	25	6978	-331.75	3.53	-0.7
242	SLU 70	-13	38	6976	-331.93	3.53	-0.71
242	SLU 71	-13	25	6978	-331.75	3.53	-0.7
242	SLU 72	-13	38	6976	-331.93	3.53	-0.71
242	SLU 73	-14	53	7911	-377.85	3.98	-0.8
242	SLU 74	-14	32	7915	-377.54	3.97	-0.79
242	SLU 75	-14	45	7913	-377.72	3.98	-0.8

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
242	SLU 76	-14	53	7911	-377.85	3.98	-0.8
242	SLU 77	-14	32	7915	-377.54	3.97	-0.79
242	SLU 78	-14	45	7913	-377.72	3.98	-0.8
242	SLU 79	-14	32	7915	-377.54	3.97	-0.79
242	SLU 80	-14	45	7913	-377.72	3.98	-0.8
242	SLU 81	-14	35	8316	-397.17	4.16	-0.83
242	SLU 82	-15	48	8314	-397.35	4.17	-0.84
242	SLU 83	-14	35	8316	-397.17	4.16	-0.83
242	SLU 84	-15	48	8314	-397.35	4.17	-0.84
242	SLE RA 1	-10	18	5214	-247.69	2.64	-0.52
242	SLE RA 2	-10	32	5212	-247.89	2.65	-0.53
242	SLE RA 3	-10	18	5214	-247.69	2.64	-0.52
242	SLE RA 4	-10	27	5212	-247.81	2.65	-0.53
242	SLE RA 5	-10	32	5212	-247.89	2.65	-0.53
242	SLE RA 6	-10	18	5214	-247.69	2.64	-0.52
242	SLE RA 7	-10	27	5212	-247.81	2.65	-0.53
242	SLE RA 8	-10	18	5214	-247.69	2.64	-0.52
242	SLE RA 9	-10	27	5212	-247.81	2.65	-0.53
242	SLE RA 10	-11	37	5836	-278.42	2.94	-0.59
242	SLE RA 11	-10	23	5838	-278.22	2.94	-0.58
242	SLE RA 12	-11	31	5837	-278.34	2.94	-0.59
242	SLE RA 13	-11	37	5836	-278.42	2.94	-0.59
242	SLE RA 14	-10	23	5838	-278.22	2.94	-0.58
242	SLE RA 15	-11	31	5837	-278.34	2.94	-0.59
242	SLE RA 16	-10	23	5838	-278.22	2.94	-0.58
242	SLE RA 17	-11	31	5837	-278.34	2.94	-0.59
242	SLE RA 18	-11	25	6105	-291.3	3.07	-0.61
242	SLE RA 19	-11	33	6104	-291.43	3.07	-0.62
242	SLE RA 20	-11	25	6105	-291.3	3.07	-0.61
242	SLE RA 21	-11	33	6104	-291.43	3.07	-0.62
242	SLE FR 1	-10	18	5214	-247.69	2.64	-0.52
242	SLE FR 2	-10	21	5213	-247.73	2.64	-0.53
242	SLE FR 3	-10	18	5214	-247.69	2.64	-0.52
242	SLE FR 4	-10	23	5481	-260.82	2.77	-0.55
242	SLE FR 5	-10	20	5481	-260.78	2.77	-0.55
242	SLE FR 6	-10	22	5660	-269.5	2.86	-0.57
242	SLE QP 1	-10	18	5214	-247.69	2.64	-0.52
242	SLE QP 2	-10	20	5481	-260.78	2.77	-0.55
242	SLD 1	366	143	5465	-266.01	10.45	16.56
242	SLD 2	364	144	5465	-265.99	10.32	17.43
242	SLD 3	373	-79	5539	-263.15	10.57	16.83
242	SLD 4	371	-78	5539	-263.13	10.45	17.7
242	SLD 5	93	394	5364	-266.69	4.93	3.85
242	SLD 6	91	395	5364	-266.66	4.8	4.75
242	SLD 7	116	-347	5611	-257.16	5.35	4.76
242	SLD 8	114	-346	5611	-257.14	5.22	5.66
242	SLD 9	-134	386	5352	-264.41	0.32	-6.76
242	SLD 10	-136	387	5351	-264.39	0.19	-5.86
242	SLD 11	-111	-354	5599	-254.89	0.74	-5.85
242	SLD 12	-113	-353	5598	-254.86	0.62	-4.95
242	SLD 13	-391	119	5424	-258.42	-4.91	-18.81
242	SLD 14	-393	119	5423	-258.4	-5.03	-17.93
242	SLD 15	-384	-104	5498	-255.57	-4.78	-18.53
242	SLD 16	-386	-103	5497	-255.54	-4.91	-17.66
242	SLV 1	850	299	5449	-273.37	20.3	38.53
242	SLV 2	845	302	5448	-273.31	20.02	40.51
242	SLV 3	865	-205	5617	-266.88	20.59	39.15
242	SLV 4	860	-203	5616	-266.83	20.31	41.14
242	SLV 5	226	868	5217	-274.41	7.69	9.5
242	SLV 6	221	870	5216	-274.35	7.4	11.55
242	SLV 7	278	-813	5777	-252.79	8.67	11.58
242	SLV 8	273	-811	5776	-252.73	8.37	13.63
242	SLV 9	-293	851	5186	-268.82	-2.83	-14.73
242	SLV 10	-298	854	5185	-268.76	-3.13	-12.68
242	SLV 11	-241	-830	5747	-247.2	-1.86	-12.65
242	SLV 12	-246	-828	5746	-247.14	-2.15	-10.6
242	SLV 13	-880	243	5346	-254.72	-14.77	-42.24
242	SLV 14	-885	245	5346	-254.67	-15.05	-40.25
242	SLV 15	-865	-261	5515	-248.24	-14.48	-41.61
242	SLV 16	-870	-259	5514	-248.18	-14.76	-39.63
242	CRTFP Ux+	0	0	0	0	0	0
242	CRTFP Ux-	0	0	0	0	0	0
242	CRTFP Uy+	0	0	0	0	0	0
242	CRTFP Uy-	0	0	0	0	0	0
244	SLU 1	-3	9	2295	4.68	-42.59	0.58
244	SLU 2	-4	19	2293	4.38	-42.57	0.74
244	SLU 3	-3	9	2295	4.68	-42.59	0.58
244	SLU 4	-3	15	2294	4.5	-42.58	0.68
244	SLU 5	-4	19	2293	4.38	-42.57	0.74
244	SLU 6	-3	9	2295	4.68	-42.59	0.58
244	SLU 7	-3	15	2294	4.5	-42.58	0.68
244	SLU 8	-3	9	2295	4.68	-42.59	0.58
244	SLU 9	-3	15	2294	4.5	-42.58	0.68
244	SLU 10	-4	22	2722	4.24	-50.52	0.84
244	SLU 11	-4	12	2723	4.54	-50.54	0.68
244	SLU 12	-4	18	2722	4.36	-50.53	0.78

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
244	SLU 13	-4	22	2722	4.24	-50.52	0.84
244	SLU 14	-4	12	2723	4.54	-50.54	0.68
244	SLU 15	-4	18	2722	4.36	-50.53	0.78
244	SLU 16	-4	12	2723	4.54	-50.54	0.68
244	SLU 17	-4	18	2722	4.36	-50.53	0.78
244	SLU 18	-4	14	2907	4.49	-53.95	0.73
244	SLU 19	-4	19	2906	4.31	-53.94	0.82
244	SLU 20	-4	14	2907	4.49	-53.95	0.73
244	SLU 21	-4	19	2906	4.31	-53.94	0.82
244	SLU 22	-4	11	2616	4.72	-48.55	0.66
244	SLU 23	-4	21	2615	4.41	-48.53	0.82
244	SLU 24	-4	11	2616	4.72	-48.55	0.66
244	SLU 25	-4	17	2615	4.53	-48.54	0.75
244	SLU 26	-4	21	2615	4.41	-48.53	0.82
244	SLU 27	-4	11	2616	4.72	-48.55	0.66
244	SLU 28	-4	17	2615	4.53	-48.54	0.75
244	SLU 29	-4	11	2616	4.72	-48.55	0.66
244	SLU 30	-4	17	2615	4.53	-48.54	0.75
244	SLU 31	-4	24	3043	4.28	-56.48	0.92
244	SLU 32	-4	14	3044	4.58	-56.5	0.76
244	SLU 33	-4	20	3044	4.4	-56.49	0.85
244	SLU 34	-4	24	3043	4.28	-56.48	0.92
244	SLU 35	-4	14	3044	4.58	-56.5	0.76
244	SLU 36	-4	20	3044	4.4	-56.49	0.85
244	SLU 37	-4	14	3044	4.58	-56.5	0.76
244	SLU 38	-4	20	3044	4.4	-56.49	0.85
244	SLU 39	-5	16	3228	4.52	-59.91	0.8
244	SLU 40	-5	22	3227	4.34	-59.9	0.9
244	SLU 41	-5	16	3228	4.52	-59.91	0.8
244	SLU 42	-5	22	3227	4.34	-59.9	0.9
244	SLU 43	-4	11	2873	6.07	-53.32	0.73
244	SLU 44	-4	20	2872	5.77	-53.3	0.89
244	SLU 45	-4	11	2873	6.07	-53.32	0.73
244	SLU 46	-4	17	2872	5.89	-53.31	0.83
244	SLU 47	-4	20	2872	5.77	-53.3	0.89
244	SLU 48	-4	11	2873	6.07	-53.32	0.73
244	SLU 49	-4	17	2872	5.89	-53.31	0.83
244	SLU 50	-4	11	2873	6.07	-53.32	0.73
244	SLU 51	-4	17	2872	5.89	-53.31	0.83
244	SLU 52	-5	24	3300	5.63	-61.25	0.99
244	SLU 53	-5	14	3302	5.94	-61.28	0.83
244	SLU 54	-5	20	3301	5.75	-61.26	0.93
244	SLU 55	-5	24	3300	5.63	-61.25	0.99
244	SLU 56	-5	14	3302	5.94	-61.28	0.83
244	SLU 57	-5	20	3301	5.75	-61.26	0.93
244	SLU 58	-5	14	3302	5.94	-61.28	0.83
244	SLU 59	-5	20	3301	5.75	-61.26	0.93
244	SLU 60	-5	15	3485	5.88	-64.68	0.87
244	SLU 61	-5	21	3484	5.7	-64.67	0.97
244	SLU 62	-5	15	3485	5.88	-64.68	0.87
244	SLU 63	-5	21	3484	5.7	-64.67	0.97
244	SLU 64	-5	13	3194	6.11	-59.28	0.81
244	SLU 65	-5	23	3193	5.8	-59.26	0.96
244	SLU 66	-5	13	3194	6.11	-59.28	0.81
244	SLU 67	-5	19	3193	5.92	-59.27	0.9
244	SLU 68	-5	23	3193	5.8	-59.26	0.96
244	SLU 69	-5	13	3194	6.11	-59.28	0.81
244	SLU 70	-5	19	3193	5.92	-59.27	0.9
244	SLU 71	-5	13	3194	6.11	-59.28	0.81
244	SLU 72	-5	19	3193	5.92	-59.27	0.9
244	SLU 73	-5	26	3621	5.67	-67.21	1.06
244	SLU 74	-5	16	3623	5.97	-67.24	0.91
244	SLU 75	-5	22	3622	5.79	-67.22	1
244	SLU 76	-5	26	3621	5.67	-67.21	1.06
244	SLU 77	-5	16	3623	5.97	-67.24	0.91
244	SLU 78	-5	22	3622	5.79	-67.22	1
244	SLU 79	-5	16	3623	5.97	-67.24	0.91
244	SLU 80	-5	22	3622	5.79	-67.22	1
244	SLU 81	-6	18	3806	5.92	-70.64	0.95
244	SLU 82	-6	23	3805	5.73	-70.63	1.04
244	SLU 83	-6	18	3806	5.92	-70.64	0.95
244	SLU 84	-6	23	3805	5.73	-70.63	1.04
244	SLE RA 1	-4	10	2387	4.69	-44.29	0.6
244	SLE RA 2	-4	16	2386	4.49	-44.28	0.71
244	SLE RA 3	-4	10	2387	4.69	-44.29	0.6
244	SLE RA 4	-4	13	2386	4.57	-44.28	0.67
244	SLE RA 5	-4	16	2386	4.49	-44.28	0.71
244	SLE RA 6	-4	10	2387	4.69	-44.29	0.6
244	SLE RA 7	-4	13	2386	4.57	-44.28	0.67
244	SLE RA 8	-4	10	2387	4.69	-44.29	0.6
244	SLE RA 9	-4	13	2386	4.57	-44.28	0.67
244	SLE RA 10	-4	18	2671	4.4	-49.58	0.78
244	SLE RA 11	-4	12	2672	4.6	-49.59	0.67
244	SLE RA 12	-4	16	2672	4.48	-49.59	0.73
244	SLE RA 13	-4	18	2671	4.4	-49.58	0.78
244	SLE RA 14	-4	12	2672	4.6	-49.59	0.67

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
244	SLE RA 15	-4	16	2672	4.48	-49.59	0.73
244	SLE RA 16	-4	12	2672	4.6	-49.59	0.67
244	SLE RA 17	-4	16	2672	4.48	-49.59	0.73
244	SLE RA 18	-4	13	2795	4.56	-51.87	0.7
244	SLE RA 19	-4	16	2794	4.44	-51.86	0.76
244	SLE RA 20	-4	13	2795	4.56	-51.87	0.7
244	SLE RA 21	-4	16	2794	4.44	-51.86	0.76
244	SLE FR 1	-4	10	2387	4.69	-44.29	0.6
244	SLE FR 2	-4	11	2386	4.65	-44.29	0.63
244	SLE FR 3	-4	10	2387	4.69	-44.29	0.6
244	SLE FR 4	-4	12	2509	4.61	-46.56	0.65
244	SLE FR 5	-4	10	2509	4.65	-46.57	0.63
244	SLE FR 6	-4	11	2591	4.63	-48.08	0.65
244	SLE QP 1	-4	10	2387	4.69	-44.29	0.6
244	SLE QP 2	-4	10	2509	4.65	-46.57	0.63
244	SLD 1	169	53	2468	0.58	-45.44	0.82
244	SLD 2	168	55	2469	0.59	-45.45	1.24
244	SLD 3	172	-48	2503	4.8	-46.02	-0.84
244	SLD 4	171	-46	2503	4.81	-46.03	-0.42
244	SLD 5	44	176	2445	-2.97	-45.35	3.05
244	SLD 6	42	178	2445	-2.96	-45.35	3.49
244	SLD 7	54	-161	2559	11.09	-47.28	-2.49
244	SLD 8	53	-159	2559	11.1	-47.29	-2.05
244	SLD 9	-60	180	2459	-1.8	-45.85	3.31
244	SLD 10	-62	182	2459	-1.78	-45.85	3.75
244	SLD 11	-50	-157	2573	12.26	-47.78	-2.23
244	SLD 12	-51	-155	2573	12.27	-47.78	-1.79
244	SLD 13	-178	67	2515	4.49	-47.1	1.68
244	SLD 14	-180	69	2515	4.5	-47.11	2.11
244	SLD 15	-175	-34	2549	8.71	-47.68	0.02
244	SLD 16	-176	-32	2550	8.72	-47.69	0.45
244	SLV 1	391	107	2416	-4.94	-44	1.04
244	SLV 2	388	112	2416	-4.91	-44.01	2.02
244	SLV 3	398	-123	2494	4.63	-45.31	-2.73
244	SLV 4	395	-117	2494	4.66	-45.33	-1.76
244	SLV 5	105	385	2363	-12.75	-43.79	6.12
244	SLV 6	102	391	2364	-12.72	-43.81	7.13
244	SLV 7	129	-380	2622	19.15	-48.18	-6.46
244	SLV 8	126	-374	2622	19.18	-48.2	-5.45
244	SLV 9	-133	395	2396	-9.88	-44.94	6.72
244	SLV 10	-136	401	2396	-9.85	-44.95	7.72
244	SLV 11	-109	-370	2655	22.03	-49.32	-5.86
244	SLV 12	-112	-364	2655	22.06	-49.34	-4.86
244	SLV 13	-403	138	2524	4.64	-47.8	3.02
244	SLV 14	-406	144	2524	4.67	-47.82	3.99
244	SLV 15	-395	-91	2602	14.21	-49.12	-0.75
244	SLV 16	-398	-86	2602	14.24	-49.13	0.22
244	CRTFP Ux+	0	0	0	0	0	0
244	CRTFP Ux-	0	0	0	0	0	0
244	CRTFP Uy+	0	0	0	0	0	0
244	CRTFP Uy-	0	0	0	0	0	0
245	SLU 1	-3	13	2559	4.31	0.36	0.86
245	SLU 2	-3	24	2557	4	0.34	0.82
245	SLU 3	-3	13	2559	4.31	0.36	0.86
245	SLU 4	-3	20	2558	4.13	0.35	0.83
245	SLU 5	-3	24	2557	4	0.34	0.82
245	SLU 6	-3	13	2559	4.31	0.36	0.86
245	SLU 7	-3	20	2558	4.13	0.35	0.83
245	SLU 8	-3	13	2559	4.31	0.36	0.86
245	SLU 9	-3	20	2558	4.13	0.35	0.83
245	SLU 10	-3	28	3035	3.53	0.42	0.9
245	SLU 11	-3	17	3036	3.84	0.44	0.95
245	SLU 12	-3	24	3035	3.66	0.43	0.92
245	SLU 13	-3	28	3035	3.53	0.42	0.9
245	SLU 14	-3	17	3036	3.84	0.44	0.95
245	SLU 15	-3	24	3035	3.66	0.43	0.92
245	SLU 16	-3	17	3036	3.84	0.44	0.95
245	SLU 17	-3	24	3035	3.66	0.43	0.92
245	SLU 18	-4	19	3241	3.64	0.47	0.99
245	SLU 19	-4	25	3240	3.45	0.47	0.96
245	SLU 20	-4	19	3241	3.64	0.47	0.99
245	SLU 21	-4	25	3240	3.45	0.47	0.96
245	SLU 22	-3	16	2916	4.12	0.42	0.93
245	SLU 23	-3	27	2915	3.81	0.4	0.88
245	SLU 24	-3	16	2916	4.12	0.42	0.93
245	SLU 25	-3	23	2916	3.94	0.41	0.9
245	SLU 26	-3	27	2915	3.81	0.4	0.88
245	SLU 27	-3	16	2916	4.12	0.42	0.93
245	SLU 28	-3	23	2916	3.94	0.41	0.9
245	SLU 29	-3	16	2916	4.12	0.42	0.93
245	SLU 30	-3	23	2916	3.94	0.41	0.9
245	SLU 31	-4	31	3393	3.34	0.48	0.97
245	SLU 32	-4	20	3394	3.65	0.5	1.02
245	SLU 33	-4	27	3393	3.47	0.49	0.99
245	SLU 34	-4	31	3393	3.34	0.48	0.97
245	SLU 35	-4	20	3394	3.65	0.5	1.02

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
245	SLU 36	-4	27	3393	3.47	0.49	0.99
245	SLU 37	-4	20	3394	3.65	0.5	1.02
245	SLU 38	-4	27	3393	3.47	0.49	0.99
245	SLU 39	-4	22	3598	3.45	0.53	1.05
245	SLU 40	-4	28	3598	3.26	0.52	1.03
245	SLU 41	-4	22	3598	3.45	0.53	1.05
245	SLU 42	-4	28	3598	3.26	0.52	1.03
245	SLU 43	-3	17	3203	5.67	0.45	1.1
245	SLU 44	-3	27	3202	5.36	0.43	1.05
245	SLU 45	-3	17	3203	5.67	0.45	1.1
245	SLU 46	-3	23	3203	5.49	0.44	1.07
245	SLU 47	-3	27	3202	5.36	0.43	1.05
245	SLU 48	-3	17	3203	5.67	0.45	1.1
245	SLU 49	-3	23	3203	5.49	0.44	1.07
245	SLU 50	-3	17	3203	5.67	0.45	1.1
245	SLU 51	-3	23	3203	5.49	0.44	1.07
245	SLU 52	-4	31	3680	4.89	0.51	1.14
245	SLU 53	-4	20	3681	5.2	0.53	1.18
245	SLU 54	-4	27	3680	5.02	0.52	1.16
245	SLU 55	-4	31	3680	4.89	0.51	1.14
245	SLU 56	-4	20	3681	5.2	0.53	1.18
245	SLU 57	-4	27	3680	5.02	0.52	1.16
245	SLU 58	-4	20	3681	5.2	0.53	1.18
245	SLU 59	-4	27	3680	5.02	0.52	1.16
245	SLU 60	-4	22	3885	5	0.56	1.22
245	SLU 61	-4	29	3885	4.81	0.55	1.19
245	SLU 62	-4	22	3885	5	0.56	1.22
245	SLU 63	-4	29	3885	4.81	0.55	1.19
245	SLU 64	-4	19	3561	5.48	0.5	1.16
245	SLU 65	-4	30	3560	5.17	0.49	1.12
245	SLU 66	-4	19	3561	5.48	0.5	1.16
245	SLU 67	-4	26	3561	5.3	0.5	1.14
245	SLU 68	-4	30	3560	5.17	0.49	1.12
245	SLU 69	-4	19	3561	5.48	0.5	1.16
245	SLU 70	-4	26	3561	5.3	0.5	1.14
245	SLU 71	-4	19	3561	5.48	0.5	1.16
245	SLU 72	-4	26	3561	5.3	0.5	1.14
245	SLU 73	-5	34	4037	4.7	0.57	1.21
245	SLU 74	-5	23	4039	5.01	0.59	1.25
245	SLU 75	-5	30	4038	4.82	0.58	1.22
245	SLU 76	-5	34	4037	4.7	0.57	1.21
245	SLU 77	-5	23	4039	5.01	0.59	1.25
245	SLU 78	-5	30	4038	4.82	0.58	1.22
245	SLU 79	-5	23	4039	5.01	0.59	1.25
245	SLU 80	-5	30	4038	4.82	0.58	1.22
245	SLU 81	-5	25	4243	4.81	0.62	1.29
245	SLU 82	-5	31	4243	4.62	0.61	1.26
245	SLU 83	-5	25	4243	4.81	0.62	1.29
245	SLU 84	-5	31	4243	4.62	0.61	1.26
245	SLE RA 1	-3	14	2661	4.26	0.38	0.88
245	SLE RA 2	-3	21	2660	4.05	0.36	0.85
245	SLE RA 3	-3	14	2661	4.26	0.38	0.88
245	SLE RA 4	-3	19	2660	4.13	0.37	0.86
245	SLE RA 5	-3	21	2660	4.05	0.36	0.85
245	SLE RA 6	-3	14	2661	4.26	0.38	0.88
245	SLE RA 7	-3	19	2660	4.13	0.37	0.86
245	SLE RA 8	-3	14	2661	4.26	0.38	0.88
245	SLE RA 9	-3	19	2660	4.13	0.37	0.86
245	SLE RA 10	-3	24	2978	3.74	0.42	0.91
245	SLE RA 11	-3	17	2979	3.94	0.43	0.94
245	SLE RA 12	-3	21	2979	3.82	0.42	0.92
245	SLE RA 13	-3	24	2978	3.74	0.42	0.91
245	SLE RA 14	-3	17	2979	3.94	0.43	0.94
245	SLE RA 15	-3	21	2979	3.82	0.42	0.92
245	SLE RA 16	-3	17	2979	3.94	0.43	0.94
245	SLE RA 17	-3	21	2979	3.82	0.42	0.92
245	SLE RA 18	-3	18	3115	3.81	0.45	0.96
245	SLE RA 19	-4	22	3115	3.69	0.45	0.95
245	SLE RA 20	-3	18	3115	3.81	0.45	0.96
245	SLE RA 21	-4	22	3115	3.69	0.45	0.95
245	SLE FR 1	-3	14	2661	4.26	0.38	0.88
245	SLE FR 2	-3	16	2661	4.22	0.37	0.87
245	SLE FR 3	-3	14	2661	4.26	0.38	0.88
245	SLE FR 4	-3	17	2797	4.08	0.4	0.9
245	SLE FR 5	-3	15	2797	4.12	0.4	0.91
245	SLE FR 6	-3	16	2888	4.03	0.41	0.92
245	SLE QP 1	-3	14	2661	4.26	0.38	0.88
245	SLE QP 2	-3	15	2797	4.12	0.4	0.91
245	SLD 1	190	60	2736	-0.28	0.9	0.16
245	SLD 2	189	64	2736	-0.25	0.9	0.58
245	SLD 3	194	-52	2770	4.07	1.06	0.59
245	SLD 4	192	-47	2770	4.1	1.06	1.01
245	SLD 5	50	196	2727	-3.81	0.31	-0.13
245	SLD 6	48	201	2727	-3.77	0.31	0.31
245	SLD 7	62	-175	2841	10.69	0.84	1.31
245	SLD 8	61	-170	2841	10.72	0.83	1.75

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
245	SLD 9	-67	201	2753	-2.48	-0.04	0.07
245	SLD 10	-68	206	2754	-2.45	-0.04	0.5
245	SLD 11	-55	-170	2867	12.02	0.49	1.5
245	SLD 12	-56	-165	2868	12.05	0.48	1.94
245	SLD 13	-198	78	2824	4.14	-0.26	0.8
245	SLD 14	-200	82	2825	4.17	-0.27	1.22
245	SLD 15	-195	-34	2859	8.49	-0.1	1.23
245	SLD 16	-196	-29	2859	8.52	-0.11	1.66
245	SLV 1	438	116	2657	-6.26	1.56	-0.81
245	SLV 2	435	127	2657	-6.19	1.54	0.16
245	SLV 3	447	-137	2734	3.61	1.92	0.17
245	SLV 4	443	-126	2735	3.68	1.9	1.14
245	SLV 5	118	425	2637	-13.99	0.21	-1.45
245	SLV 6	115	436	2637	-13.92	0.19	-0.45
245	SLV 7	146	-417	2896	18.91	1.4	1.82
245	SLV 8	142	-406	2897	18.99	1.39	2.81
245	SLV 9	-148	437	2698	-10.74	-0.59	-1
245	SLV 10	-152	448	2698	-10.67	-0.61	0
245	SLV 11	-121	-405	2957	22.16	0.6	2.26
245	SLV 12	-124	-394	2958	22.23	0.59	3.26
245	SLV 13	-449	157	2859	4.56	-1.11	0.67
245	SLV 14	-453	168	2860	4.63	-1.12	1.64
245	SLV 15	-441	-96	2937	14.43	-0.75	1.65
245	SLV 16	-444	-85	2938	14.5	-0.76	2.62
245	CRTFP Ux+	0	0	0	0	0	0
245	CRTFP Ux-	0	0	0	0	0	0
245	CRTFP Uy+	0	0	0	0	0	0
245	CRTFP Uy-	0	0	0	0	0	0
246	SLU 1	-1	18	2543	3.34	0.53	1.04
246	SLU 2	-2	29	2542	3.07	0.51	0.98
246	SLU 3	-1	18	2543	3.34	0.53	1.04
246	SLU 4	-2	25	2543	3.18	0.52	1
246	SLU 5	-2	29	2542	3.07	0.51	0.98
246	SLU 6	-1	18	2543	3.34	0.53	1.04
246	SLU 7	-2	25	2543	3.18	0.52	1
246	SLU 8	-1	18	2543	3.34	0.53	1.04
246	SLU 9	-2	25	2543	3.18	0.52	1
246	SLU 10	-2	33	3016	2.25	0.64	1.08
246	SLU 11	-2	23	3017	2.52	0.66	1.13
246	SLU 12	-2	29	3016	2.35	0.65	1.1
246	SLU 13	-2	33	3016	2.25	0.64	1.08
246	SLU 14	-2	23	3017	2.52	0.66	1.13
246	SLU 15	-2	29	3016	2.35	0.65	1.1
246	SLU 16	-2	23	3017	2.52	0.66	1.13
246	SLU 17	-2	29	3016	2.35	0.65	1.1
246	SLU 18	-3	25	3220	2.17	0.72	1.17
246	SLU 19	-3	31	3219	2	0.7	1.14
246	SLU 20	-3	25	3220	2.17	0.72	1.17
246	SLU 21	-3	31	3219	2	0.7	1.14
246	SLU 22	-2	22	2898	2.9	0.62	1.11
246	SLU 23	-2	32	2897	2.62	0.6	1.06
246	SLU 24	-2	22	2898	2.9	0.62	1.11
246	SLU 25	-2	28	2898	2.73	0.61	1.08
246	SLU 26	-2	32	2897	2.62	0.6	1.06
246	SLU 27	-2	22	2898	2.9	0.62	1.11
246	SLU 28	-2	28	2898	2.73	0.61	1.08
246	SLU 29	-2	22	2898	2.9	0.62	1.11
246	SLU 30	-2	28	2898	2.73	0.61	1.08
246	SLU 31	-3	37	3371	1.8	0.74	1.15
246	SLU 32	-3	26	3372	2.08	0.76	1.21
246	SLU 33	-3	32	3371	1.91	0.74	1.17
246	SLU 34	-3	37	3371	1.8	0.74	1.15
246	SLU 35	-3	26	3372	2.08	0.76	1.21
246	SLU 36	-3	32	3371	1.91	0.74	1.17
246	SLU 37	-3	26	3372	2.08	0.76	1.21
246	SLU 38	-3	32	3371	1.91	0.74	1.17
246	SLU 39	-3	28	3575	1.72	0.81	1.25
246	SLU 40	-3	34	3574	1.56	0.8	1.22
246	SLU 41	-3	28	3575	1.72	0.81	1.25
246	SLU 42	-3	34	3574	1.56	0.8	1.22
246	SLU 43	-2	23	3184	4.49	0.66	1.32
246	SLU 44	-2	33	3183	4.22	0.64	1.26
246	SLU 45	-2	23	3184	4.49	0.66	1.32
246	SLU 46	-2	29	3184	4.33	0.64	1.29
246	SLU 47	-2	33	3183	4.22	0.64	1.26
246	SLU 48	-2	23	3184	4.49	0.66	1.32
246	SLU 49	-2	29	3184	4.33	0.64	1.29
246	SLU 50	-2	23	3184	4.49	0.66	1.32
246	SLU 51	-2	29	3184	4.33	0.64	1.29
246	SLU 52	-3	38	3657	3.4	0.77	1.36
246	SLU 53	-2	27	3658	3.67	0.79	1.42
246	SLU 54	-3	34	3657	3.51	0.77	1.38
246	SLU 55	-3	38	3657	3.4	0.77	1.36
246	SLU 56	-2	27	3658	3.67	0.79	1.42
246	SLU 57	-3	34	3657	3.51	0.77	1.38
246	SLU 58	-2	27	3658	3.67	0.79	1.42

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
246	SLU 59	-3	34	3657	3.51	0.77	1.38
246	SLU 60	-3	29	3861	3.32	0.84	1.46
246	SLU 61	-3	36	3860	3.16	0.83	1.42
246	SLU 62	-3	29	3861	3.32	0.84	1.46
246	SLU 63	-3	36	3860	3.16	0.83	1.42
246	SLU 64	-2	26	3539	4.05	0.75	1.4
246	SLU 65	-2	37	3539	3.78	0.73	1.34
246	SLU 66	-2	26	3539	4.05	0.75	1.4
246	SLU 67	-2	32	3539	3.89	0.74	1.36
246	SLU 68	-2	37	3539	3.78	0.73	1.34
246	SLU 69	-2	26	3539	4.05	0.75	1.4
246	SLU 70	-2	32	3539	3.89	0.74	1.36
246	SLU 71	-2	26	3539	4.05	0.75	1.4
246	SLU 72	-2	32	3539	3.89	0.74	1.36
246	SLU 73	-3	41	4012	2.96	0.86	1.44
246	SLU 74	-3	31	4013	3.23	0.88	1.49
246	SLU 75	-3	37	4012	3.07	0.87	1.46
246	SLU 76	-3	41	4012	2.96	0.86	1.44
246	SLU 77	-3	31	4013	3.23	0.88	1.49
246	SLU 78	-3	37	4012	3.07	0.87	1.46
246	SLU 79	-3	31	4013	3.23	0.88	1.49
246	SLU 80	-3	37	4012	3.07	0.87	1.46
246	SLU 81	-3	33	4216	2.88	0.94	1.53
246	SLU 82	-3	39	4215	2.71	0.93	1.5
246	SLU 83	-3	33	4216	2.88	0.94	1.53
246	SLU 84	-3	39	4215	2.71	0.93	1.5
246	SLE RA 1	-2	19	2644	3.21	0.56	1.06
246	SLE RA 2	-2	26	2644	3.03	0.54	1.02
246	SLE RA 3	-2	19	2644	3.21	0.56	1.06
246	SLE RA 4	-2	24	2644	3.1	0.55	1.04
246	SLE RA 5	-2	26	2644	3.03	0.54	1.02
246	SLE RA 6	-2	19	2644	3.21	0.56	1.06
246	SLE RA 7	-2	24	2644	3.1	0.55	1.04
246	SLE RA 8	-2	19	2644	3.21	0.56	1.06
246	SLE RA 9	-2	24	2644	3.1	0.55	1.04
246	SLE RA 10	-2	29	2960	2.48	0.63	1.08
246	SLE RA 11	-2	22	2960	2.67	0.64	1.12
246	SLE RA 12	-2	27	2960	2.56	0.64	1.1
246	SLE RA 13	-2	29	2960	2.48	0.63	1.08
246	SLE RA 14	-2	22	2960	2.67	0.64	1.12
246	SLE RA 15	-2	27	2960	2.56	0.64	1.1
246	SLE RA 16	-2	22	2960	2.67	0.64	1.12
246	SLE RA 17	-2	27	2960	2.56	0.64	1.1
246	SLE RA 18	-2	24	3096	2.43	0.68	1.15
246	SLE RA 19	-2	28	3095	2.32	0.67	1.13
246	SLE RA 20	-2	24	3096	2.43	0.68	1.15
246	SLE RA 21	-2	28	3095	2.32	0.67	1.13
246	SLE FR 1	-2	19	2644	3.21	0.56	1.06
246	SLE FR 2	-2	21	2644	3.18	0.55	1.05
246	SLE FR 3	-2	19	2644	3.21	0.56	1.06
246	SLE FR 4	-2	22	2780	2.94	0.59	1.08
246	SLE FR 5	-2	21	2780	2.98	0.59	1.08
246	SLE FR 6	-2	22	2870	2.82	0.62	1.1
246	SLE QP 1	-2	19	2644	3.21	0.56	1.06
246	SLE QP 2	-2	21	2780	2.98	0.59	1.08
246	SLD 1	191	62	2701	-1.28	1.08	0.36
246	SLD 2	190	68	2702	-1.23	1.07	0.79
246	SLD 3	195	-47	2729	2.69	1.28	0.86
246	SLD 4	194	-40	2730	2.74	1.28	1.3
246	SLD 5	51	195	2714	-4.34	0.43	-0.06
246	SLD 6	50	203	2714	-4.29	0.42	0.39
246	SLD 7	63	-167	2807	8.9	1.12	1.63
246	SLD 8	62	-160	2807	8.95	1.11	2.07
246	SLD 9	-65	202	2752	-2.99	0.08	0.1
246	SLD 10	-67	209	2753	-2.94	0.07	0.54
246	SLD 11	-53	-161	2845	10.25	0.77	1.78
246	SLD 12	-55	-154	2846	10.3	0.76	2.23
246	SLD 13	-197	82	2830	3.22	-0.09	0.87
246	SLD 14	-199	89	2830	3.26	-0.1	1.3
246	SLD 15	-194	-27	2858	7.19	0.12	1.38
246	SLD 16	-195	-20	2858	7.24	0.11	1.81
246	SLV 1	439	113	2601	-7.08	1.7	-0.57
246	SLV 2	436	129	2602	-6.97	1.69	0.41
246	SLV 3	448	-134	2664	1.93	2.17	0.58
246	SLV 4	444	-118	2666	2.05	2.16	1.56
246	SLV 5	119	418	2630	-13.76	0.22	-1.51
246	SLV 6	116	433	2631	-13.64	0.21	-0.5
246	SLV 7	147	-406	2841	16.3	1.78	2.31
246	SLV 8	143	-390	2842	16.42	1.77	3.33
246	SLV 9	-147	431	2718	-10.46	-0.58	-1.16
246	SLV 10	-151	447	2719	-10.34	-0.6	-0.14
246	SLV 11	-119	-392	2929	19.6	0.98	2.67
246	SLV 12	-123	-376	2930	19.71	0.97	3.68
246	SLV 13	-448	160	2894	3.91	-0.97	0.61
246	SLV 14	-451	175	2895	4.02	-0.98	1.59
246	SLV 15	-440	-87	2957	12.93	-0.5	1.76

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
246	SLV 16	-443	-72	2958	13.04	-0.51	2.74
246	CRTFP Ux+	0	0	0	0	0	0
246	CRTFP Ux-	0	0	0	0	0	0
246	CRTFP Uy+	0	0	0	0	0	0
246	CRTFP Uy-	0	0	0	0	0	0
247	SLU 1	-2	47	4891	825.47	4.65	2.11
247	SLU 2	-2	67	4891	825.12	4.48	1.98
247	SLU 3	-2	47	4891	825.47	4.65	2.11
247	SLU 4	-2	59	4891	825.26	4.55	2.03
247	SLU 5	-2	67	4891	825.12	4.48	1.98
247	SLU 6	-2	47	4891	825.47	4.65	2.11
247	SLU 7	-2	59	4891	825.26	4.55	2.03
247	SLU 8	-2	47	4891	825.47	4.65	2.11
247	SLU 9	-2	59	4891	825.26	4.55	2.03
247	SLU 10	-4	76	5795	974.01	5.58	2.37
247	SLU 11	-3	57	5795	974.36	5.74	2.49
247	SLU 12	-3	69	5795	974.15	5.65	2.42
247	SLU 13	-4	76	5795	974.01	5.58	2.37
247	SLU 14	-3	57	5795	974.36	5.74	2.49
247	SLU 15	-3	69	5795	974.15	5.65	2.42
247	SLU 16	-3	57	5795	974.36	5.74	2.49
247	SLU 17	-3	69	5795	974.15	5.65	2.42
247	SLU 18	-4	61	6182	1038.17	6.21	2.66
247	SLU 19	-4	73	6182	1037.96	6.11	2.58
247	SLU 20	-4	61	6182	1038.17	6.21	2.66
247	SLU 21	-4	73	6182	1037.96	6.11	2.58
247	SLU 22	-3	54	5569	937.61	5.45	2.39
247	SLU 23	-3	74	5569	937.26	5.28	2.26
247	SLU 24	-3	54	5569	937.61	5.45	2.39
247	SLU 25	-3	66	5569	937.4	5.35	2.31
247	SLU 26	-3	74	5569	937.26	5.28	2.26
247	SLU 27	-3	54	5569	937.61	5.45	2.39
247	SLU 28	-3	66	5569	937.4	5.35	2.31
247	SLU 29	-3	54	5569	937.61	5.45	2.39
247	SLU 30	-3	66	5569	937.4	5.35	2.31
247	SLU 31	-5	84	6473	1086.14	6.38	2.65
247	SLU 32	-5	64	6473	1086.5	6.54	2.78
247	SLU 33	-5	76	6473	1086.29	6.45	2.7
247	SLU 34	-5	84	6473	1086.14	6.38	2.65
247	SLU 35	-5	64	6473	1086.5	6.54	2.78
247	SLU 36	-5	76	6473	1086.29	6.45	2.7
247	SLU 37	-5	64	6473	1086.5	6.54	2.78
247	SLU 38	-5	76	6473	1086.29	6.45	2.7
247	SLU 39	-5	68	6860	1150.31	7.01	2.94
247	SLU 40	-5	80	6860	1150.1	6.91	2.87
247	SLU 41	-5	68	6860	1150.31	7.01	2.94
247	SLU 42	-5	80	6860	1150.1	6.91	2.87
247	SLU 43	-2	59	6126	1034.66	5.77	2.64
247	SLU 44	-2	78	6126	1034.31	5.6	2.52
247	SLU 45	-2	59	6126	1034.66	5.77	2.64
247	SLU 46	-2	71	6126	1034.45	5.67	2.57
247	SLU 47	-2	78	6126	1034.31	5.6	2.52
247	SLU 48	-2	59	6126	1034.66	5.77	2.64
247	SLU 49	-2	71	6126	1034.45	5.67	2.57
247	SLU 50	-2	59	6126	1034.66	5.77	2.64
247	SLU 51	-2	71	6126	1034.45	5.67	2.57
247	SLU 52	-4	88	7029	1183.2	6.7	2.9
247	SLU 53	-4	69	7029	1183.55	6.86	3.03
247	SLU 54	-4	80	7029	1183.34	6.76	2.95
247	SLU 55	-4	88	7029	1183.2	6.7	2.9
247	SLU 56	-4	69	7029	1183.55	6.86	3.03
247	SLU 57	-4	80	7029	1183.34	6.76	2.95
247	SLU 58	-4	69	7029	1183.55	6.86	3.03
247	SLU 59	-4	80	7029	1183.34	6.76	2.95
247	SLU 60	-4	73	7417	1247.36	7.33	3.2
247	SLU 61	-4	85	7417	1247.15	7.23	3.12
247	SLU 62	-4	73	7417	1247.36	7.33	3.2
247	SLU 63	-4	85	7417	1247.15	7.23	3.12
247	SLU 64	-3	66	6804	1146.8	6.57	2.92
247	SLU 65	-3	86	6804	1146.45	6.4	2.8
247	SLU 66	-3	66	6804	1146.8	6.57	2.92
247	SLU 67	-3	78	6804	1146.59	6.47	2.85
247	SLU 68	-3	86	6804	1146.45	6.4	2.8
247	SLU 69	-3	66	6804	1146.8	6.57	2.92
247	SLU 70	-3	78	6804	1146.59	6.47	2.85
247	SLU 71	-3	66	6804	1146.8	6.57	2.92
247	SLU 72	-3	78	6804	1146.59	6.47	2.85
247	SLU 73	-5	95	7708	1295.34	7.5	3.18
247	SLU 74	-5	76	7708	1295.69	7.66	3.31
247	SLU 75	-5	88	7708	1295.48	7.57	3.23
247	SLU 76	-5	95	7708	1295.34	7.5	3.18
247	SLU 77	-5	76	7708	1295.69	7.66	3.31
247	SLU 78	-5	88	7708	1295.48	7.57	3.23
247	SLU 79	-5	76	7708	1295.69	7.66	3.31
247	SLU 80	-5	88	7708	1295.48	7.57	3.23
247	SLU 81	-5	80	8095	1359.5	8.13	3.48

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
247	SLU 82	-5	92	8095	1359.29	8.03	3.4
247	SLU 83	-5	80	8095	1359.5	8.13	3.48
247	SLU 84	-5	92	8095	1359.29	8.03	3.4
247	SLE RA 1	-2	49	5085	857.51	4.88	2.19
247	SLE RA 2	-2	62	5085	857.27	4.77	2.1
247	SLE RA 3	-2	49	5085	857.51	4.88	2.19
247	SLE RA 4	-2	57	5085	857.37	4.81	2.14
247	SLE RA 5	-2	62	5085	857.27	4.77	2.1
247	SLE RA 6	-2	49	5085	857.51	4.88	2.19
247	SLE RA 7	-2	57	5085	857.37	4.81	2.14
247	SLE RA 8	-2	49	5085	857.51	4.88	2.19
247	SLE RA 9	-2	57	5085	857.37	4.81	2.14
247	SLE RA 10	-3	69	5687	956.53	5.5	2.36
247	SLE RA 11	-3	56	5687	956.77	5.61	2.45
247	SLE RA 12	-3	64	5687	956.63	5.54	2.39
247	SLE RA 13	-3	69	5687	956.53	5.5	2.36
247	SLE RA 14	-3	56	5687	956.77	5.61	2.45
247	SLE RA 15	-3	64	5687	956.63	5.54	2.39
247	SLE RA 16	-3	56	5687	956.77	5.61	2.45
247	SLE RA 17	-3	64	5687	956.63	5.54	2.39
247	SLE RA 18	-4	59	5945	999.31	5.92	2.56
247	SLE RA 19	-4	66	5945	999.17	5.85	2.51
247	SLE RA 20	-4	59	5945	999.31	5.92	2.56
247	SLE RA 21	-4	66	5945	999.17	5.85	2.51
247	SLE FR 1	-2	49	5085	857.51	4.88	2.19
247	SLE FR 2	-2	52	5085	857.46	4.85	2.17
247	SLE FR 3	-2	49	5085	857.51	4.88	2.19
247	SLE FR 4	-3	55	5343	900	5.17	2.28
247	SLE FR 5	-3	52	5343	900.05	5.19	2.3
247	SLE FR 6	-3	54	5515	928.41	5.4	2.37
247	SLE QP 1	-2	49	5085	857.51	4.88	2.19
247	SLE QP 2	-3	52	5343	900.05	5.19	2.3
247	SLD 1	380	125	5160	869.26	9.64	-63.45
247	SLD 2	375	142	5162	869.73	9.64	-60.97
247	SLD 3	372	-81	5204	881.82	11.52	-61.25
247	SLD 4	367	-64	5206	882.28	11.52	-58.77
247	SLD 5	126	380	5222	871.6	3.67	-21.68
247	SLD 6	121	398	5223	872.09	3.66	-19.1
247	SLD 7	100	-306	5367	913.45	9.95	-14.34
247	SLD 8	94	-289	5368	913.93	9.94	-11.77
247	SLD 9	-99	393	5318	886.17	0.43	16.36
247	SLD 10	-105	411	5319	886.65	0.43	18.94
247	SLD 11	-126	-294	5463	928.01	6.71	23.7
247	SLD 12	-131	-276	5464	928.5	6.71	26.27
247	SLD 13	-372	168	5481	917.82	-1.14	63.36
247	SLD 14	-377	185	5482	918.28	-1.14	65.84
247	SLD 15	-380	-38	5524	930.37	0.74	65.56
247	SLD 16	-385	-21	5526	930.84	0.74	68.04
247	SLV 1	871	217	4926	829.66	15.37	-147.81
247	SLV 2	859	256	4930	830.73	15.37	-142.16
247	SLV 3	853	-250	5025	858.14	19.65	-142.82
247	SLV 4	841	-211	5029	859.21	19.65	-137.17
247	SLV 5	291	796	5067	835.34	1.75	-52.38
247	SLV 6	278	837	5071	836.45	1.75	-46.54
247	SLV 7	232	-762	5396	930.29	16.02	-35.74
247	SLV 8	219	-722	5400	931.39	16.02	-29.89
247	SLV 9	-224	826	5286	868.71	-5.64	34.49
247	SLV 10	-237	866	5290	869.81	-5.64	40.34
247	SLV 11	-284	-733	5615	963.66	8.63	51.13
247	SLV 12	-296	-692	5619	964.76	8.62	56.98
247	SLV 13	-846	315	5657	940.89	-9.27	141.76
247	SLV 14	-859	354	5661	941.96	-9.27	147.42
247	SLV 15	-864	-152	5756	969.37	-4.99	146.75
247	SLV 16	-877	-113	5760	970.44	-4.99	152.41
247	CRTFP Ux+	0	0	0	0	0	0
247	CRTFP Ux-	0	0	0	0	0	0
247	CRTFP Uy+	0	0	0	0	0	0
247	CRTFP Uy-	0	0	0	0	0	0
248	SLU 1	19	46	4775	842.92	21.04	-5.12
248	SLU 2	18	65	4775	842.31	21.03	-5.18
248	SLU 3	19	46	4775	842.92	21.04	-5.12
248	SLU 4	18	57	4775	842.55	21.04	-5.16
248	SLU 5	18	65	4775	842.31	21.03	-5.18
248	SLU 6	19	46	4775	842.92	21.04	-5.12
248	SLU 7	18	57	4775	842.55	21.04	-5.16
248	SLU 8	19	46	4775	842.92	21.04	-5.12
248	SLU 9	18	57	4775	842.55	21.04	-5.16
248	SLU 10	18	74	5656	995.07	25.27	-5.49
248	SLU 11	19	55	5656	995.69	25.28	-5.42
248	SLU 12	18	66	5656	995.32	25.27	-5.46
248	SLU 13	18	74	5656	995.07	25.27	-5.49
248	SLU 14	19	55	5656	995.69	25.28	-5.42
248	SLU 15	18	66	5656	995.32	25.27	-5.46
248	SLU 16	19	55	5656	995.69	25.28	-5.42
248	SLU 17	18	66	5656	995.32	25.27	-5.46
248	SLU 18	19	59	6033	1061.16	27.09	-5.55

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
248	SLU 19	18	70	6033	1060.79	27.09	-5.59
248	SLU 20	19	59	6033	1061.16	27.09	-5.55
248	SLU 21	18	70	6033	1060.79	27.09	-5.59
248	SLU 22	19	53	5437	957.99	24.16	-5.4
248	SLU 23	19	71	5437	957.37	24.16	-5.46
248	SLU 24	19	53	5437	957.99	24.16	-5.4
248	SLU 25	19	64	5437	957.62	24.16	-5.44
248	SLU 26	19	71	5437	957.37	24.16	-5.46
248	SLU 27	19	53	5437	957.99	24.16	-5.4
248	SLU 28	19	64	5437	957.62	24.16	-5.44
248	SLU 29	19	53	5437	957.99	24.16	-5.4
248	SLU 30	19	64	5437	957.62	24.16	-5.44
248	SLU 31	18	80	6318	1110.14	28.39	-5.77
248	SLU 32	19	62	6317	1110.75	28.4	-5.7
248	SLU 33	19	73	6318	1110.38	28.39	-5.74
248	SLU 34	18	80	6318	1110.14	28.39	-5.77
248	SLU 35	19	62	6317	1110.75	28.4	-5.7
248	SLU 36	19	73	6318	1110.38	28.39	-5.74
248	SLU 37	19	62	6317	1110.75	28.4	-5.7
248	SLU 38	19	73	6318	1110.38	28.39	-5.74
248	SLU 39	19	66	6695	1176.22	30.21	-5.83
248	SLU 40	19	77	6695	1175.85	30.21	-5.87
248	SLU 41	19	66	6695	1176.22	30.21	-5.83
248	SLU 42	19	77	6695	1175.85	30.21	-5.87
248	SLU 43	24	58	5981	1056.35	26.28	-6.56
248	SLU 44	24	76	5981	1055.73	26.28	-6.62
248	SLU 45	24	58	5981	1056.35	26.28	-6.56
248	SLU 46	24	69	5981	1055.98	26.28	-6.6
248	SLU 47	24	76	5981	1055.73	26.28	-6.62
248	SLU 48	24	58	5981	1056.35	26.28	-6.56
248	SLU 49	24	69	5981	1055.98	26.28	-6.6
248	SLU 50	24	58	5981	1056.35	26.28	-6.56
248	SLU 51	24	69	5981	1055.98	26.28	-6.6
248	SLU 52	24	85	6862	1208.5	30.51	-6.93
248	SLU 53	24	67	6862	1209.12	30.52	-6.86
248	SLU 54	24	78	6862	1208.75	30.52	-6.9
248	SLU 55	24	85	6862	1208.5	30.51	-6.93
248	SLU 56	24	67	6862	1209.12	30.52	-6.86
248	SLU 57	24	78	6862	1208.75	30.52	-6.9
248	SLU 58	24	67	6862	1209.12	30.52	-6.86
248	SLU 59	24	78	6862	1208.75	30.52	-6.9
248	SLU 60	24	71	7239	1274.59	32.34	-6.99
248	SLU 61	24	82	7239	1274.22	32.33	-7.03
248	SLU 62	24	71	7239	1274.59	32.34	-6.99
248	SLU 63	24	82	7239	1274.22	32.33	-7.03
248	SLU 64	25	64	6642	1171.41	29.41	-6.84
248	SLU 65	24	83	6643	1170.8	29.4	-6.9
248	SLU 66	25	64	6642	1171.41	29.41	-6.84
248	SLU 67	24	76	6642	1171.04	29.4	-6.88
248	SLU 68	24	83	6643	1170.8	29.4	-6.9
248	SLU 69	25	64	6642	1171.41	29.41	-6.84
248	SLU 70	24	76	6642	1171.04	29.4	-6.88
248	SLU 71	25	64	6642	1171.41	29.41	-6.84
248	SLU 72	24	76	6642	1171.04	29.4	-6.88
248	SLU 73	24	92	7523	1323.56	33.63	-7.21
248	SLU 74	24	74	7523	1324.18	33.64	-7.14
248	SLU 75	24	85	7523	1323.81	33.64	-7.18
248	SLU 76	24	92	7523	1323.56	33.63	-7.21
248	SLU 77	24	74	7523	1324.18	33.64	-7.14
248	SLU 78	24	85	7523	1323.81	33.64	-7.18
248	SLU 79	24	74	7523	1324.18	33.64	-7.14
248	SLU 80	24	85	7523	1323.81	33.64	-7.18
248	SLU 81	24	77	7901	1389.65	35.46	-7.27
248	SLU 82	24	89	7901	1389.28	35.45	-7.31
248	SLU 83	24	77	7901	1389.65	35.46	-7.27
248	SLU 84	24	89	7901	1389.28	35.45	-7.31
248	SLE RA 1	19	48	4964	875.8	21.93	-5.2
248	SLE RA 2	19	60	4964	875.39	21.93	-5.24
248	SLE RA 3	19	48	4964	875.8	21.93	-5.2
248	SLE RA 4	19	56	4964	875.55	21.93	-5.23
248	SLE RA 5	19	60	4964	875.39	21.93	-5.24
248	SLE RA 6	19	48	4964	875.8	21.93	-5.2
248	SLE RA 7	19	56	4964	875.55	21.93	-5.23
248	SLE RA 8	19	48	4964	875.8	21.93	-5.2
248	SLE RA 9	19	56	4964	875.55	21.93	-5.23
248	SLE RA 10	18	66	5551	977.23	24.75	-5.44
248	SLE RA 11	19	54	5551	977.64	24.76	-5.4
248	SLE RA 12	19	62	5551	977.4	24.75	-5.43
248	SLE RA 13	18	66	5551	977.23	24.75	-5.44
248	SLE RA 14	19	54	5551	977.64	24.76	-5.4
248	SLE RA 15	19	62	5551	977.4	24.75	-5.43
248	SLE RA 16	19	54	5551	977.64	24.76	-5.4
248	SLE RA 17	19	62	5551	977.4	24.75	-5.43
248	SLE RA 18	19	57	5803	1021.29	25.97	-5.49
248	SLE RA 19	19	64	5803	1021.04	25.96	-5.51
248	SLE RA 20	19	57	5803	1021.29	25.97	-5.49

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
248	SLE RA 21	19	64	5803	1021.04	25.96	-5.51
248	SLE FR 1	19	48	4964	875.8	21.93	-5.2
248	SLE FR 2	19	51	4964	875.72	21.93	-5.21
248	SLE FR 3	19	48	4964	875.8	21.93	-5.2
248	SLE FR 4	19	53	5216	919.36	23.14	-5.3
248	SLE FR 5	19	51	5216	919.45	23.14	-5.29
248	SLE FR 6	19	52	5384	948.54	23.95	-5.34
248	SLE QP 1	19	48	4964	875.8	21.93	-5.2
248	SLE QP 2	19	51	5216	919.45	23.14	-5.29
248	SLD 1	382	115	4980	875.16	27.82	-70.13
248	SLD 2	376	139	4980	875.05	27.9	-67.49
248	SLD 3	388	-81	5018	889.17	28.13	-68.33
248	SLD 4	382	-58	5018	889.05	28.2	-65.68
248	SLD 5	121	359	5087	884.96	24.06	-28.45
248	SLD 6	115	384	5088	884.84	24.14	-25.7
248	SLD 7	141	-296	5214	931.65	25.07	-22.44
248	SLD 8	134	-271	5215	931.53	25.15	-19.7
248	SLD 9	-97	373	5217	907.36	21.14	9.12
248	SLD 10	-103	397	5218	907.24	21.22	11.87
248	SLD 11	-77	-283	5344	954.05	22.14	15.13
248	SLD 12	-84	-258	5345	953.93	22.22	17.88
248	SLD 13	-344	159	5413	949.84	18.08	55.11
248	SLD 14	-350	183	5414	949.72	18.16	57.76
248	SLD 15	-338	-37	5451	963.84	18.38	56.91
248	SLD 16	-345	-14	5452	963.73	18.46	59.56
248	SLV 1	848	197	4677	818.36	33.85	-153.36
248	SLV 2	835	251	4678	818.1	34.02	-147.32
248	SLV 3	862	-250	4764	850.14	34.53	-149.26
248	SLV 4	848	-196	4765	849.88	34.71	-143.23
248	SLV 5	252	752	4923	841.01	25.25	-58.13
248	SLV 6	238	807	4924	840.75	25.43	-51.89
248	SLV 7	297	-736	5211	946.95	27.54	-44.49
248	SLV 8	283	-680	5212	946.68	27.72	-38.25
248	SLV 9	-245	782	5220	892.21	18.57	27.68
248	SLV 10	-260	838	5221	891.94	18.75	33.91
248	SLV 11	-200	-706	5508	998.15	20.86	41.32
248	SLV 12	-215	-650	5509	997.88	21.04	47.55
248	SLV 13	-810	297	5667	989.01	11.58	132.66
248	SLV 14	-824	351	5668	988.76	11.75	138.69
248	SLV 15	-797	-149	5753	1020.79	12.26	136.75
248	SLV 16	-811	-95	5754	1020.54	12.44	142.78
248	CRTFP Ux+	0	0	0	0	0	0
248	CRTFP Ux-	0	0	0	0	0	0
248	CRTFP Uy+	0	0	0	0	0	0
248	CRTFP Uy-	0	0	0	0	0	0
249	SLU 1	9	17	2260	15.05	-0.76	-1.04
249	SLU 2	9	25	2260	14.58	-0.76	-1.03
249	SLU 3	9	17	2260	15.05	-0.76	-1.04
249	SLU 4	9	22	2260	14.77	-0.76	-1.03
249	SLU 5	9	25	2260	14.58	-0.76	-1.03
249	SLU 6	9	17	2260	15.05	-0.76	-1.04
249	SLU 7	9	22	2260	14.77	-0.76	-1.03
249	SLU 8	9	17	2260	15.05	-0.76	-1.04
249	SLU 9	9	22	2260	14.77	-0.76	-1.03
249	SLU 10	9	29	2678	16.69	-0.88	-1.2
249	SLU 11	9	20	2678	17.15	-0.88	-1.21
249	SLU 12	9	25	2678	16.87	-0.88	-1.2
249	SLU 13	9	29	2678	16.69	-0.88	-1.2
249	SLU 14	9	20	2678	17.15	-0.88	-1.21
249	SLU 15	9	25	2678	16.87	-0.88	-1.2
249	SLU 16	9	20	2678	17.15	-0.88	-1.21
249	SLU 17	9	25	2678	16.87	-0.88	-1.2
249	SLU 18	9	21	2857	18.05	-0.93	-1.28
249	SLU 19	9	27	2857	17.77	-0.93	-1.27
249	SLU 20	9	21	2857	18.05	-0.93	-1.28
249	SLU 21	9	27	2857	17.77	-0.93	-1.27
249	SLU 22	9	19	2574	16.76	-0.85	-1.16
249	SLU 23	9	28	2574	16.29	-0.85	-1.15
249	SLU 24	9	19	2574	16.76	-0.85	-1.16
249	SLU 25	9	24	2574	16.48	-0.85	-1.16
249	SLU 26	9	28	2574	16.29	-0.85	-1.15
249	SLU 27	9	19	2574	16.76	-0.85	-1.16
249	SLU 28	9	24	2574	16.48	-0.85	-1.16
249	SLU 29	9	19	2574	16.76	-0.85	-1.16
249	SLU 30	9	24	2574	16.48	-0.85	-1.16
249	SLU 31	9	31	2992	18.4	-0.97	-1.32
249	SLU 32	9	23	2992	18.86	-0.97	-1.33
249	SLU 33	9	28	2992	18.58	-0.97	-1.33
249	SLU 34	9	31	2992	18.4	-0.97	-1.32
249	SLU 35	9	23	2992	18.86	-0.97	-1.33
249	SLU 36	9	28	2992	18.58	-0.97	-1.33
249	SLU 37	9	23	2992	18.86	-0.97	-1.33
249	SLU 38	9	28	2992	18.58	-0.97	-1.33
249	SLU 39	9	24	3171	19.76	-1.02	-1.4
249	SLU 40	9	29	3171	19.48	-1.02	-1.4
249	SLU 41	9	24	3171	19.76	-1.02	-1.4

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
249	SLU 42	9	29	3171	19.48	-1.02	-1.4
249	SLU 43	12	21	2830	18.98	-0.95	-1.31
249	SLU 44	12	29	2831	18.51	-0.95	-1.3
249	SLU 45	12	21	2830	18.98	-0.95	-1.31
249	SLU 46	12	26	2831	18.7	-0.95	-1.3
249	SLU 47	12	29	2831	18.51	-0.95	-1.3
249	SLU 48	12	21	2830	18.98	-0.95	-1.31
249	SLU 49	12	26	2831	18.7	-0.95	-1.3
249	SLU 50	12	21	2830	18.98	-0.95	-1.31
249	SLU 51	12	26	2831	18.7	-0.95	-1.3
249	SLU 52	12	33	3249	20.62	-1.07	-1.46
249	SLU 53	12	24	3248	21.08	-1.07	-1.47
249	SLU 54	12	29	3249	20.8	-1.07	-1.47
249	SLU 55	12	33	3249	20.62	-1.07	-1.46
249	SLU 56	12	24	3248	21.08	-1.07	-1.47
249	SLU 57	12	29	3249	20.8	-1.07	-1.47
249	SLU 58	12	24	3248	21.08	-1.07	-1.47
249	SLU 59	12	29	3249	20.8	-1.07	-1.47
249	SLU 60	12	26	3427	21.98	-1.12	-1.55
249	SLU 61	12	31	3428	21.7	-1.12	-1.54
249	SLU 62	12	26	3427	21.98	-1.12	-1.55
249	SLU 63	12	31	3428	21.7	-1.12	-1.54
249	SLU 64	12	23	3144	20.69	-1.05	-1.43
249	SLU 65	12	32	3145	20.22	-1.05	-1.42
249	SLU 66	12	23	3144	20.69	-1.05	-1.43
249	SLU 67	12	28	3144	20.41	-1.05	-1.43
249	SLU 68	12	32	3145	20.22	-1.05	-1.42
249	SLU 69	12	23	3144	20.69	-1.05	-1.43
249	SLU 70	12	28	3144	20.41	-1.05	-1.43
249	SLU 71	12	23	3144	20.69	-1.05	-1.43
249	SLU 72	12	28	3144	20.41	-1.05	-1.43
249	SLU 73	12	35	3563	22.32	-1.17	-1.59
249	SLU 74	12	27	3562	22.79	-1.16	-1.6
249	SLU 75	12	32	3562	22.51	-1.16	-1.59
249	SLU 76	12	35	3563	22.32	-1.17	-1.59
249	SLU 77	12	27	3562	22.79	-1.16	-1.6
249	SLU 78	12	32	3562	22.51	-1.16	-1.59
249	SLU 79	12	27	3562	22.79	-1.16	-1.6
249	SLU 80	12	32	3562	22.51	-1.16	-1.59
249	SLU 81	12	28	3741	23.69	-1.21	-1.67
249	SLU 82	12	33	3742	23.41	-1.22	-1.67
249	SLU 83	12	28	3741	23.69	-1.21	-1.67
249	SLU 84	12	33	3742	23.41	-1.22	-1.67
249	SLE RA 1	9	17	2350	15.54	-0.78	-1.07
249	SLE RA 2	9	23	2350	15.23	-0.78	-1.07
249	SLE RA 3	9	17	2350	15.54	-0.78	-1.07
249	SLE RA 4	9	21	2350	15.35	-0.78	-1.07
249	SLE RA 5	9	23	2350	15.23	-0.78	-1.07
249	SLE RA 6	9	17	2350	15.54	-0.78	-1.07
249	SLE RA 7	9	21	2350	15.35	-0.78	-1.07
249	SLE RA 8	9	17	2350	15.54	-0.78	-1.07
249	SLE RA 9	9	21	2350	15.35	-0.78	-1.07
249	SLE RA 10	9	25	2629	16.63	-0.86	-1.18
249	SLE RA 11	9	20	2628	16.94	-0.86	-1.19
249	SLE RA 12	9	23	2628	16.75	-0.86	-1.18
249	SLE RA 13	9	25	2629	16.63	-0.86	-1.18
249	SLE RA 14	9	20	2628	16.94	-0.86	-1.19
249	SLE RA 15	9	23	2628	16.75	-0.86	-1.18
249	SLE RA 16	9	20	2628	16.94	-0.86	-1.19
249	SLE RA 17	9	23	2628	16.75	-0.86	-1.18
249	SLE RA 18	9	21	2748	17.54	-0.9	-1.23
249	SLE RA 19	9	24	2748	17.35	-0.9	-1.23
249	SLE RA 20	9	21	2748	17.54	-0.9	-1.23
249	SLE RA 21	9	24	2748	17.35	-0.9	-1.23
249	SLE FR 1	9	17	2350	15.54	-0.78	-1.07
249	SLE FR 2	9	18	2350	15.47	-0.78	-1.07
249	SLE FR 3	9	17	2350	15.54	-0.78	-1.07
249	SLE FR 4	9	19	2469	16.08	-0.82	-1.12
249	SLE FR 5	9	18	2469	16.14	-0.82	-1.12
249	SLE FR 6	9	19	2549	16.54	-0.84	-1.15
249	SLE QP 1	9	17	2350	15.54	-0.78	-1.07
249	SLE QP 2	9	18	2469	16.14	-0.82	-1.12
249	SLD 1	180	48	2339	12.56	-0.3	-1.39
249	SLD 2	179	61	2339	12.35	-0.29	-0.89
249	SLD 3	183	-45	2353	18.07	-0.29	-1.51
249	SLD 4	181	-32	2353	17.86	-0.28	-1.02
249	SLD 5	57	163	2408	6.79	-0.68	-1.2
249	SLD 6	55	177	2408	6.57	-0.67	-0.68
249	SLD 7	66	-146	2456	25.15	-0.65	-1.61
249	SLD 8	64	-133	2456	24.93	-0.64	-1.1
249	SLD 9	-46	169	2482	7.35	-0.99	-1.15
249	SLD 10	-47	183	2482	7.13	-0.99	-0.63
249	SLD 11	-37	-140	2530	25.7	-0.96	-1.56
249	SLD 12	-38	-126	2530	25.49	-0.96	-1.05
249	SLD 13	-163	68	2585	14.42	-1.35	-1.22
249	SLD 14	-164	82	2585	14.21	-1.35	-0.73

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
249	SLD 15	-160	-24	2599	19.93	-1.35	-1.35
249	SLD 16	-162	-11	2599	19.72	-1.34	-0.85
249	SLV 1	400	85	2172	7.88	0.38	-1.74
249	SLV 2	396	115	2172	7.4	0.39	-0.61
249	SLV 3	406	-126	2204	20.38	0.4	-2.02
249	SLV 4	402	-95	2204	19.9	0.41	-0.9
249	SLV 5	119	347	2331	-5.13	-0.5	-1.29
249	SLV 6	115	378	2331	-5.62	-0.48	-0.13
249	SLV 7	139	-355	2438	36.55	-0.43	-2.23
249	SLV 8	135	-324	2439	36.06	-0.41	-1.07
249	SLV 9	-116	361	2499	-3.78	-1.22	-1.18
249	SLV 10	-120	392	2500	-4.27	-1.21	-0.01
249	SLV 11	-96	-341	2607	37.9	-1.15	-2.12
249	SLV 12	-100	-310	2607	37.4	-1.14	-0.95
249	SLV 13	-384	132	2734	12.37	-2.04	-1.35
249	SLV 14	-387	162	2734	11.9	-2.03	-0.22
249	SLV 15	-377	-79	2766	24.87	-2.02	-1.63
249	SLV 16	-381	-48	2766	24.4	-2.01	-0.5
249	CRTFP Ux+	0	0	0	0	0	0
249	CRTFP Ux-	0	0	0	0	0	0
249	CRTFP Uy+	0	0	0	0	0	0
249	CRTFP Uy-	0	0	0	0	0	0
250	SLU 1	9	11	2002	14.25	36.42	-1.07
250	SLU 2	9	18	2002	13.81	36.43	-1.2
250	SLU 3	9	11	2002	14.25	36.42	-1.07
250	SLU 4	9	15	2002	13.98	36.42	-1.15
250	SLU 5	9	18	2002	13.81	36.43	-1.2
250	SLU 6	9	11	2002	14.25	36.42	-1.07
250	SLU 7	9	15	2002	13.98	36.42	-1.15
250	SLU 8	9	11	2002	14.25	36.42	-1.07
250	SLU 9	9	15	2002	13.98	36.42	-1.15
250	SLU 10	9	21	2372	15.98	43.17	-1.39
250	SLU 11	9	13	2371	16.41	43.16	-1.27
250	SLU 12	9	18	2371	16.15	43.16	-1.34
250	SLU 13	9	21	2372	15.98	43.17	-1.39
250	SLU 14	9	13	2371	16.41	43.16	-1.27
250	SLU 15	9	18	2371	16.15	43.16	-1.34
250	SLU 16	9	13	2371	16.41	43.16	-1.27
250	SLU 17	9	18	2371	16.15	43.16	-1.34
250	SLU 18	9	14	2530	17.34	46.05	-1.36
250	SLU 19	9	19	2530	17.08	46.05	-1.43
250	SLU 20	9	14	2530	17.34	46.05	-1.36
250	SLU 21	9	19	2530	17.08	46.05	-1.43
250	SLU 22	9	12	2279	15.98	41.48	-1.22
250	SLU 23	9	20	2280	15.55	41.49	-1.34
250	SLU 24	9	12	2279	15.98	41.48	-1.22
250	SLU 25	9	17	2280	15.72	41.48	-1.29
250	SLU 26	9	20	2280	15.55	41.49	-1.34
250	SLU 27	9	12	2279	15.98	41.48	-1.22
250	SLU 28	9	17	2280	15.72	41.48	-1.29
250	SLU 29	9	12	2279	15.98	41.48	-1.22
250	SLU 30	9	17	2280	15.72	41.48	-1.29
250	SLU 31	9	22	2649	17.71	48.23	-1.54
250	SLU 32	9	15	2649	18.15	48.22	-1.42
250	SLU 33	9	19	2649	17.89	48.22	-1.49
250	SLU 34	9	22	2649	17.71	48.23	-1.54
250	SLU 35	9	15	2649	18.15	48.22	-1.42
250	SLU 36	9	19	2649	17.89	48.22	-1.49
250	SLU 37	9	15	2649	18.15	48.22	-1.42
250	SLU 38	9	19	2649	17.89	48.22	-1.49
250	SLU 39	9	16	2807	19.08	51.11	-1.5
250	SLU 40	9	20	2808	18.82	51.11	-1.58
250	SLU 41	9	16	2807	19.08	51.11	-1.5
250	SLU 42	9	20	2808	18.82	51.11	-1.58
250	SLU 43	12	13	2507	17.92	45.61	-1.35
250	SLU 44	12	21	2507	17.49	45.62	-1.47
250	SLU 45	12	13	2507	17.92	45.61	-1.35
250	SLU 46	12	18	2507	17.66	45.61	-1.42
250	SLU 47	12	21	2507	17.49	45.62	-1.47
250	SLU 48	12	13	2507	17.92	45.61	-1.35
250	SLU 49	12	18	2507	17.66	45.61	-1.42
250	SLU 50	12	13	2507	17.92	45.61	-1.35
250	SLU 51	12	18	2507	17.66	45.61	-1.42
250	SLU 52	11	23	2877	19.66	52.36	-1.67
250	SLU 53	12	15	2877	20.09	52.35	-1.54
250	SLU 54	12	20	2877	19.83	52.35	-1.62
250	SLU 55	11	23	2877	19.66	52.36	-1.67
250	SLU 56	12	15	2877	20.09	52.35	-1.54
250	SLU 57	12	20	2877	19.83	52.35	-1.62
250	SLU 58	12	15	2877	20.09	52.35	-1.54
250	SLU 59	12	20	2877	19.83	52.35	-1.62
250	SLU 60	12	16	3035	21.02	55.24	-1.63
250	SLU 61	12	21	3035	20.76	55.24	-1.7
250	SLU 62	12	16	3035	21.02	55.24	-1.63
250	SLU 63	12	21	3035	20.76	55.24	-1.7
250	SLU 64	12	15	2785	19.66	50.67	-1.49

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
250	SLU 65	12	23	2785	19.22	50.68	-1.62
250	SLU 66	12	15	2785	19.66	50.67	-1.49
250	SLU 67	12	19	2785	19.4	50.68	-1.57
250	SLU 68	12	23	2785	19.22	50.68	-1.62
250	SLU 69	12	15	2785	19.66	50.67	-1.49
250	SLU 70	12	19	2785	19.4	50.68	-1.57
250	SLU 71	12	15	2785	19.66	50.67	-1.49
250	SLU 72	12	19	2785	19.4	50.68	-1.57
250	SLU 73	12	25	3155	21.39	57.42	-1.81
250	SLU 74	12	17	3154	21.83	57.41	-1.69
250	SLU 75	12	22	3154	21.57	57.41	-1.76
250	SLU 76	12	25	3155	21.39	57.42	-1.81
250	SLU 77	12	17	3154	21.83	57.41	-1.69
250	SLU 78	12	22	3154	21.57	57.41	-1.76
250	SLU 79	12	17	3154	21.83	57.41	-1.69
250	SLU 80	12	22	3154	21.57	57.41	-1.76
250	SLU 81	12	18	3313	22.76	60.3	-1.77
250	SLU 82	12	23	3313	22.5	60.3	-1.85
250	SLU 83	12	18	3313	22.76	60.3	-1.77
250	SLU 84	12	23	3313	22.5	60.3	-1.85
250	SLE RA 1	9	11	2081	14.74	37.86	-1.12
250	SLE RA 2	9	16	2081	14.45	37.87	-1.2
250	SLE RA 3	9	11	2081	14.74	37.86	-1.12
250	SLE RA 4	9	14	2081	14.57	37.87	-1.17
250	SLE RA 5	9	16	2081	14.45	37.87	-1.2
250	SLE RA 6	9	11	2081	14.74	37.86	-1.12
250	SLE RA 7	9	14	2081	14.57	37.87	-1.17
250	SLE RA 8	9	11	2081	14.74	37.86	-1.12
250	SLE RA 9	9	14	2081	14.57	37.87	-1.17
250	SLE RA 10	9	18	2328	15.9	42.36	-1.33
250	SLE RA 11	9	13	2327	16.19	42.36	-1.25
250	SLE RA 12	9	16	2328	16.01	42.36	-1.3
250	SLE RA 13	9	18	2328	15.9	42.36	-1.33
250	SLE RA 14	9	13	2327	16.19	42.36	-1.25
250	SLE RA 15	9	16	2328	16.01	42.36	-1.3
250	SLE RA 16	9	13	2327	16.19	42.36	-1.25
250	SLE RA 17	9	16	2328	16.01	42.36	-1.3
250	SLE RA 18	9	13	2433	16.81	44.28	-1.3
250	SLE RA 19	9	16	2433	16.63	44.29	-1.35
250	SLE RA 20	9	13	2433	16.81	44.28	-1.3
250	SLE RA 21	9	16	2433	16.63	44.29	-1.35
250	SLE FR 1	9	11	2081	14.74	37.86	-1.12
250	SLE FR 2	9	12	2081	14.68	37.87	-1.13
250	SLE FR 3	9	11	2081	14.74	37.86	-1.12
250	SLE FR 4	9	13	2187	15.3	39.79	-1.19
250	SLE FR 5	9	12	2187	15.36	39.79	-1.17
250	SLE FR 6	9	12	2257	15.77	41.07	-1.21
250	SLE QP 1	9	11	2081	14.74	37.86	-1.12
250	SLE QP 2	9	12	2187	15.36	39.79	-1.17
250	SLD 1	160	37	2055	12.02	37.75	-1.76
250	SLD 2	158	50	2055	11.82	37.75	-1.57
250	SLD 3	162	-46	2068	17.22	37.96	-0.45
250	SLD 4	160	-32	2068	17.01	37.96	-0.26
250	SLD 5	51	139	2128	6.55	38.85	-3.4
250	SLD 6	50	153	2128	6.34	38.85	-3.2
250	SLD 7	59	-135	2170	23.88	39.57	0.95
250	SLD 8	58	-121	2170	23.67	39.57	1.15
250	SLD 9	-39	145	2203	7.06	40.01	-3.5
250	SLD 10	-41	159	2203	6.84	40.01	-3.3
250	SLD 11	-31	-130	2245	24.39	40.73	0.86
250	SLD 12	-33	-116	2245	24.17	40.73	1.06
250	SLD 13	-142	55	2305	13.71	41.62	-2.08
250	SLD 14	-144	69	2305	13.5	41.62	-1.89
250	SLD 15	-140	-27	2318	18.91	41.83	-0.78
250	SLD 16	-141	-13	2318	18.7	41.84	-0.59
250	SLV 1	353	68	1887	7.68	35.12	-2.5
250	SLV 2	349	99	1887	7.21	35.13	-2.07
250	SLV 3	358	-118	1915	19.48	35.61	0.47
250	SLV 4	355	-88	1915	19.02	35.62	0.9
250	SLV 5	105	301	2054	-4.67	37.64	-6.23
250	SLV 6	102	332	2053	-5.15	37.65	-5.78
250	SLV 7	123	-322	2149	34.67	39.28	3.66
250	SLV 8	120	-290	2148	34.19	39.29	4.11
250	SLV 9	-102	313	2225	-3.46	40.29	-6.45
250	SLV 10	-105	345	2225	-3.95	40.3	-6
250	SLV 11	-84	-309	2320	35.88	41.93	3.44
250	SLV 12	-87	-277	2320	35.4	41.94	3.88
250	SLV 13	-336	111	2458	11.71	43.96	-3.24
250	SLV 14	-340	142	2458	11.24	43.97	-2.81
250	SLV 15	-331	-76	2487	23.51	44.45	-0.28
250	SLV 16	-334	-45	2486	23.04	44.46	0.16
250	CRTFP Ux+	0	0	0	0	0	0
250	CRTFP Ux-	0	0	0	0	0	0
250	CRTFP Uy+	0	0	0	0	0	0
250	CRTFP Uy-	0	0	0	0	0	0
252	SLU 1	23	15	5062	-211.19	-93.12	-0.93

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
252	SLU 2	23	35	5063	-212	-93.07	-0.55
252	SLU 3	23	15	5062	-211.19	-93.12	-0.93
252	SLU 4	23	27	5062	-211.68	-93.09	-0.7
252	SLU 5	23	35	5063	-212	-93.07	-0.55
252	SLU 6	23	15	5062	-211.19	-93.12	-0.93
252	SLU 7	23	27	5062	-211.68	-93.09	-0.7
252	SLU 8	23	15	5062	-211.19	-93.12	-0.93
252	SLU 9	23	27	5062	-211.68	-93.09	-0.7
252	SLU 10	22	39	5995	-251.55	-109.8	-0.93
252	SLU 11	23	19	5994	-250.74	-109.84	-1.31
252	SLU 12	22	31	5995	-251.23	-109.81	-1.08
252	SLU 13	22	39	5995	-251.55	-109.8	-0.93
252	SLU 14	23	19	5994	-250.74	-109.84	-1.31
252	SLU 15	22	31	5995	-251.23	-109.81	-1.08
252	SLU 16	23	19	5994	-250.74	-109.84	-1.31
252	SLU 17	22	31	5995	-251.23	-109.81	-1.08
252	SLU 18	22	21	6394	-267.69	-117.01	-1.48
252	SLU 19	22	33	6395	-268.18	-116.98	-1.25
252	SLU 20	22	21	6394	-267.69	-117.01	-1.48
252	SLU 21	22	33	6395	-268.18	-116.98	-1.25
252	SLU 22	23	18	5763	-240.74	-105.77	-1.2
252	SLU 23	23	38	5764	-241.56	-105.73	-0.81
252	SLU 24	23	18	5763	-240.74	-105.77	-1.2
252	SLU 25	23	30	5763	-241.23	-105.75	-0.97
252	SLU 26	23	38	5764	-241.56	-105.73	-0.81
252	SLU 27	23	18	5763	-240.74	-105.77	-1.2
252	SLU 28	23	30	5763	-241.23	-105.75	-0.97
252	SLU 29	23	18	5763	-240.74	-105.77	-1.2
252	SLU 30	23	30	5763	-241.23	-105.75	-0.97
252	SLU 31	22	42	6696	-281.11	-122.45	-1.2
252	SLU 32	23	22	6695	-280.29	-122.5	-1.58
252	SLU 33	22	34	6696	-280.78	-122.47	-1.35
252	SLU 34	22	42	6696	-281.11	-122.45	-1.2
252	SLU 35	23	22	6695	-280.29	-122.5	-1.58
252	SLU 36	22	34	6696	-280.78	-122.47	-1.35
252	SLU 37	23	22	6695	-280.29	-122.5	-1.58
252	SLU 38	22	34	6696	-280.78	-122.47	-1.35
252	SLU 39	22	24	7095	-297.24	-129.67	-1.75
252	SLU 40	22	36	7096	-297.73	-129.64	-1.52
252	SLU 41	22	24	7095	-297.24	-129.67	-1.75
252	SLU 42	22	36	7096	-297.73	-129.64	-1.52
252	SLU 43	31	19	6340	-264.41	-116.71	-1.11
252	SLU 44	30	39	6341	-265.22	-116.67	-0.73
252	SLU 45	31	19	6340	-264.41	-116.71	-1.11
252	SLU 46	30	31	6341	-264.9	-116.68	-0.88
252	SLU 47	30	39	6341	-265.22	-116.67	-0.73
252	SLU 48	31	19	6340	-264.41	-116.71	-1.11
252	SLU 49	30	31	6341	-264.9	-116.68	-0.88
252	SLU 50	31	19	6340	-264.41	-116.71	-1.11
252	SLU 51	30	31	6341	-264.9	-116.68	-0.88
252	SLU 52	29	43	7274	-304.77	-133.39	-1.12
252	SLU 53	30	23	7272	-303.96	-133.44	-1.5
252	SLU 54	30	35	7273	-304.45	-133.41	-1.27
252	SLU 55	29	43	7274	-304.77	-133.39	-1.12
252	SLU 56	30	23	7272	-303.96	-133.44	-1.5
252	SLU 57	30	35	7273	-304.45	-133.41	-1.27
252	SLU 58	30	23	7272	-303.96	-133.44	-1.5
252	SLU 59	30	35	7273	-304.45	-133.41	-1.27
252	SLU 60	30	25	7672	-320.91	-140.6	-1.66
252	SLU 61	29	37	7673	-321.4	-140.58	-1.44
252	SLU 62	30	25	7672	-320.91	-140.6	-1.66
252	SLU 63	29	37	7673	-321.4	-140.58	-1.44
252	SLU 64	30	22	7041	-293.97	-129.37	-1.38
252	SLU 65	30	42	7042	-294.78	-129.32	-1
252	SLU 66	30	22	7041	-293.97	-129.37	-1.38
252	SLU 67	30	34	7042	-294.46	-129.34	-1.15
252	SLU 68	30	42	7042	-294.78	-129.32	-1
252	SLU 69	30	22	7041	-293.97	-129.37	-1.38
252	SLU 70	30	34	7042	-294.46	-129.34	-1.15
252	SLU 71	30	22	7041	-293.97	-129.37	-1.38
252	SLU 72	30	34	7042	-294.46	-129.34	-1.15
252	SLU 73	29	46	7975	-334.33	-146.05	-1.39
252	SLU 74	30	26	7973	-333.52	-146.09	-1.77
252	SLU 75	29	38	7974	-334.01	-146.07	-1.54
252	SLU 76	29	46	7975	-334.33	-146.05	-1.39
252	SLU 77	30	26	7973	-333.52	-146.09	-1.77
252	SLU 78	29	38	7974	-334.01	-146.07	-1.54
252	SLU 79	30	26	7973	-333.52	-146.09	-1.77
252	SLU 80	29	38	7974	-334.01	-146.07	-1.54
252	SLU 81	29	28	8373	-350.47	-153.26	-1.93
252	SLU 82	29	39	8374	-350.96	-153.23	-1.7
252	SLU 83	29	28	8373	-350.47	-153.26	-1.93
252	SLU 84	29	39	8374	-350.96	-153.23	-1.7
252	SLE RA 1	23	16	5262	-219.63	-96.73	-1
252	SLE RA 2	23	29	5263	-220.18	-96.7	-0.75
252	SLE RA 3	23	16	5262	-219.63	-96.73	-1

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
252	SLE RA 4	23	24	5262	-219.96	-96.71	-0.85
252	SLE RA 5	23	29	5263	-220.18	-96.7	-0.75
252	SLE RA 6	23	16	5262	-219.63	-96.73	-1
252	SLE RA 7	23	24	5262	-219.96	-96.71	-0.85
252	SLE RA 8	23	16	5262	-219.63	-96.73	-1
252	SLE RA 9	23	24	5262	-219.96	-96.71	-0.85
252	SLE RA 10	23	32	5884	-246.54	-107.85	-1.01
252	SLE RA 11	23	19	5884	-246	-107.88	-1.26
252	SLE RA 12	23	27	5884	-246.32	-107.86	-1.11
252	SLE RA 13	23	32	5884	-246.54	-107.85	-1.01
252	SLE RA 14	23	19	5884	-246	-107.88	-1.26
252	SLE RA 15	23	27	5884	-246.32	-107.86	-1.11
252	SLE RA 16	23	19	5884	-246	-107.88	-1.26
252	SLE RA 17	23	27	5884	-246.32	-107.86	-1.11
252	SLE RA 18	23	20	6150	-257.3	-112.66	-1.37
252	SLE RA 19	23	28	6151	-257.62	-112.64	-1.22
252	SLE RA 20	23	20	6150	-257.3	-112.66	-1.37
252	SLE RA 21	23	28	6151	-257.62	-112.64	-1.22
252	SLE FR 1	23	16	5262	-219.63	-96.73	-1
252	SLE FR 2	23	19	5262	-219.74	-96.73	-0.95
252	SLE FR 3	23	16	5262	-219.63	-96.73	-1
252	SLE FR 4	23	20	5529	-231.04	-101.51	-1.06
252	SLE FR 5	23	17	5528	-230.93	-101.51	-1.11
252	SLE FR 6	23	18	5706	-238.46	-104.7	-1.19
252	SLE QP 1	23	16	5262	-219.63	-96.73	-1
252	SLE QP 2	23	17	5528	-230.93	-101.51	-1.11
252	SLD 1	400	77	5149	-218.62	-84.58	17.15
252	SLD 2	397	117	5148	-218.94	-84.41	18.98
252	SLD 3	406	-133	5179	-210.91	-85.88	12.74
252	SLD 4	403	-93	5178	-211.23	-85.71	14.57
252	SLD 5	128	339	5369	-238.81	-94.53	10.38
252	SLD 6	125	380	5368	-239.15	-94.35	12.28
252	SLD 7	148	-361	5470	-213.11	-98.85	-4.32
252	SLD 8	145	-319	5469	-213.45	-98.67	-2.42
252	SLD 9	-99	354	5588	-248.41	-104.35	0.19
252	SLD 10	-102	395	5587	-248.75	-104.17	2.09
252	SLD 11	-79	-345	5689	-222.72	-108.67	-14.51
252	SLD 12	-82	-304	5688	-223.05	-108.49	-12.61
252	SLD 13	-356	128	5879	-250.63	-117.32	-16.8
252	SLD 14	-359	167	5878	-250.96	-117.15	-14.97
252	SLD 15	-350	-82	5909	-242.92	-118.61	-21.21
252	SLD 16	-353	-42	5908	-243.25	-118.44	-19.38
252	SLV 1	883	153	4662	-202.76	-62.86	40.57
252	SLV 2	876	243	4660	-203.51	-62.47	44.75
252	SLV 3	896	-324	4730	-185.26	-65.8	30.56
252	SLV 4	890	-233	4728	-186	-65.41	34.74
252	SLV 5	263	747	5165	-248.77	-85.6	25.04
252	SLV 6	256	841	5163	-249.53	-85.2	29.35
252	SLV 7	308	-841	5394	-190.4	-95.39	-8.32
252	SLV 8	302	-747	5392	-191.17	-94.99	-4.01
252	SLV 9	-255	782	5665	-270.7	-108.03	1.78
252	SLV 10	-262	876	5663	-271.46	-107.63	6.09
252	SLV 11	-209	-806	5894	-212.33	-117.82	-31.58
252	SLV 12	-216	-713	5892	-213.1	-117.42	-27.27
252	SLV 13	-843	268	6328	-275.87	-137.61	-36.97
252	SLV 14	-850	359	6327	-276.61	-137.23	-32.79
252	SLV 15	-830	-208	6397	-258.36	-140.55	-46.98
252	SLV 16	-836	-118	6395	-259.1	-140.16	-42.8
252	CRTFP Ux+	0	0	0	0	0	0
252	CRTFP Ux-	0	0	0	0	0	0
252	CRTFP Uy+	0	0	0	0	0	0
252	CRTFP Uy-	0	0	0	0	0	0
254	SLU 1	15	2	2804	17.68	-54.22	-1.19
254	SLU 2	14	13	2804	17.07	-54.22	-0.9
254	SLU 3	15	2	2804	17.68	-54.22	-1.19
254	SLU 4	14	8	2804	17.31	-54.22	-1.01
254	SLU 5	14	13	2804	17.07	-54.22	-0.9
254	SLU 6	15	2	2804	17.68	-54.22	-1.19
254	SLU 7	14	8	2804	17.31	-54.22	-1.01
254	SLU 8	15	2	2804	17.68	-54.22	-1.19
254	SLU 9	14	8	2804	17.31	-54.22	-1.01
254	SLU 10	14	13	3319	19.82	-64.13	-1.13
254	SLU 11	14	2	3319	20.43	-64.14	-1.41
254	SLU 12	14	9	3319	20.06	-64.14	-1.24
254	SLU 13	14	13	3319	19.82	-64.13	-1.13
254	SLU 14	14	2	3319	20.43	-64.14	-1.41
254	SLU 15	14	9	3319	20.06	-64.14	-1.24
254	SLU 16	14	2	3319	20.43	-64.14	-1.41
254	SLU 17	14	9	3319	20.06	-64.14	-1.24
254	SLU 18	14	3	3539	21.6	-68.39	-1.51
254	SLU 19	14	9	3540	21.24	-68.38	-1.34
254	SLU 20	14	3	3539	21.6	-68.39	-1.51
254	SLU 21	14	9	3540	21.24	-68.38	-1.34
254	SLU 22	15	2	3191	19.88	-61.69	-1.36
254	SLU 23	14	13	3191	19.27	-61.68	-1.07
254	SLU 24	15	2	3191	19.88	-61.69	-1.36

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
254	SLU 25	14	9	3191	19.52	-61.69	-1.18
254	SLU 26	14	13	3191	19.27	-61.68	-1.07
254	SLU 27	15	2	3191	19.88	-61.69	-1.36
254	SLU 28	14	9	3191	19.52	-61.69	-1.18
254	SLU 29	15	2	3191	19.88	-61.69	-1.36
254	SLU 30	14	9	3191	19.52	-61.69	-1.18
254	SLU 31	14	14	3706	22.02	-71.6	-1.29
254	SLU 32	14	3	3706	22.63	-71.61	-1.58
254	SLU 33	14	10	3706	22.26	-71.6	-1.41
254	SLU 34	14	14	3706	22.02	-71.6	-1.29
254	SLU 35	14	3	3706	22.63	-71.61	-1.58
254	SLU 36	14	10	3706	22.26	-71.6	-1.41
254	SLU 37	14	3	3706	22.63	-71.61	-1.58
254	SLU 38	14	10	3706	22.26	-71.6	-1.41
254	SLU 39	14	3	3927	23.81	-75.86	-1.68
254	SLU 40	14	10	3927	23.44	-75.85	-1.51
254	SLU 41	14	3	3927	23.81	-75.86	-1.68
254	SLU 42	14	10	3927	23.44	-75.85	-1.51
254	SLU 43	19	2	3512	22.23	-67.93	-1.48
254	SLU 44	19	13	3512	21.62	-67.92	-1.2
254	SLU 45	19	2	3512	22.23	-67.93	-1.48
254	SLU 46	19	8	3512	21.86	-67.93	-1.31
254	SLU 47	19	13	3512	21.62	-67.92	-1.2
254	SLU 48	19	2	3512	22.23	-67.93	-1.48
254	SLU 49	19	8	3512	21.86	-67.93	-1.31
254	SLU 50	19	2	3512	22.23	-67.93	-1.48
254	SLU 51	19	8	3512	21.86	-67.93	-1.31
254	SLU 52	18	14	4027	24.37	-77.84	-1.42
254	SLU 53	19	3	4027	24.97	-77.85	-1.71
254	SLU 54	18	9	4027	24.61	-77.84	-1.54
254	SLU 55	18	14	4027	24.37	-77.84	-1.42
254	SLU 56	19	3	4027	24.97	-77.85	-1.71
254	SLU 57	18	9	4027	24.61	-77.84	-1.54
254	SLU 58	19	3	4027	24.97	-77.85	-1.71
254	SLU 59	18	9	4027	24.61	-77.84	-1.54
254	SLU 60	18	3	4248	26.15	-82.1	-1.81
254	SLU 61	18	10	4248	25.79	-82.09	-1.64
254	SLU 62	18	3	4248	26.15	-82.1	-1.81
254	SLU 63	18	10	4248	25.79	-82.09	-1.64
254	SLU 64	19	2	3900	24.43	-75.4	-1.65
254	SLU 65	19	13	3900	23.82	-75.39	-1.37
254	SLU 66	19	2	3900	24.43	-75.4	-1.65
254	SLU 67	19	9	3900	24.06	-75.39	-1.48
254	SLU 68	19	13	3900	23.82	-75.39	-1.37
254	SLU 69	19	2	3900	24.43	-75.4	-1.65
254	SLU 70	19	9	3900	24.06	-75.39	-1.48
254	SLU 71	19	2	3900	24.43	-75.4	-1.65
254	SLU 72	19	9	3900	24.06	-75.39	-1.48
254	SLU 73	18	14	4415	26.57	-85.31	-1.59
254	SLU 74	19	3	4415	27.18	-85.31	-1.88
254	SLU 75	18	10	4415	26.81	-85.31	-1.71
254	SLU 76	18	14	4415	26.57	-85.31	-1.59
254	SLU 77	19	3	4415	27.18	-85.31	-1.88
254	SLU 78	18	10	4415	26.81	-85.31	-1.71
254	SLU 79	19	3	4415	27.18	-85.31	-1.88
254	SLU 80	18	10	4415	26.81	-85.31	-1.71
254	SLU 81	18	4	4635	28.35	-89.56	-1.98
254	SLU 82	18	10	4635	27.99	-89.56	-1.81
254	SLU 83	18	4	4635	28.35	-89.56	-1.98
254	SLU 84	18	10	4635	27.99	-89.56	-1.81
254	SLE RA 1	15	2	2915	18.31	-56.36	-1.23
254	SLE RA 2	14	9	2915	17.9	-56.35	-1.04
254	SLE RA 3	15	2	2915	18.31	-56.36	-1.23
254	SLE RA 4	14	6	2915	18.06	-56.35	-1.12
254	SLE RA 5	14	9	2915	17.9	-56.35	-1.04
254	SLE RA 6	15	2	2915	18.31	-56.36	-1.23
254	SLE RA 7	14	6	2915	18.06	-56.35	-1.12
254	SLE RA 8	15	2	2915	18.31	-56.36	-1.23
254	SLE RA 9	14	6	2915	18.06	-56.35	-1.12
254	SLE RA 10	14	10	3258	19.73	-62.96	-1.19
254	SLE RA 11	14	2	3258	20.14	-62.97	-1.39
254	SLE RA 12	14	7	3258	19.9	-62.96	-1.27
254	SLE RA 13	14	10	3258	19.73	-62.96	-1.19
254	SLE RA 14	14	2	3258	20.14	-62.97	-1.39
254	SLE RA 15	14	7	3258	19.9	-62.96	-1.27
254	SLE RA 16	14	2	3258	20.14	-62.97	-1.39
254	SLE RA 17	14	7	3258	19.9	-62.96	-1.27
254	SLE RA 18	14	3	3405	20.92	-65.8	-1.45
254	SLE RA 19	14	7	3405	20.68	-65.8	-1.34
254	SLE RA 20	14	3	3405	20.92	-65.8	-1.45
254	SLE RA 21	14	7	3405	20.68	-65.8	-1.34
254	SLE FR 1	15	2	2915	18.31	-56.36	-1.23
254	SLE FR 2	14	3	2915	18.23	-56.36	-1.2
254	SLE FR 3	15	2	2915	18.31	-56.36	-1.23
254	SLE FR 4	14	3	3062	19.01	-59.19	-1.26
254	SLE FR 5	14	2	3062	19.09	-59.19	-1.3

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
254	SLE FR 6	14	2	3160	19.62	-61.08	-1.34
254	SLE QP 1	15	2	2915	18.31	-56.36	-1.23
254	SLE QP 2	14	2	3062	19.09	-59.19	-1.3
254	SLD 1	220	33	2817	14.59	-53.51	-0.71
254	SLD 2	218	58	2816	14.3	-53.47	0.48
254	SLD 3	223	-85	2839	21.86	-54.03	-3.78
254	SLD 4	221	-60	2838	21.58	-53.99	-2.59
254	SLD 5	72	181	2956	6.82	-56.7	3.1
254	SLD 6	70	207	2954	6.52	-56.66	4.33
254	SLD 7	83	-212	3028	31.06	-58.45	-7.14
254	SLD 8	80	-186	3027	30.76	-58.41	-5.91
254	SLD 9	-52	190	3096	7.42	-59.97	3.31
254	SLD 10	-54	216	3095	7.12	-59.93	4.55
254	SLD 11	-41	-203	3169	31.67	-61.72	-6.93
254	SLD 12	-43	-177	3168	31.37	-61.68	-5.7
254	SLD 13	-192	63	3286	16.61	-64.39	-0.01
254	SLD 14	-194	89	3284	16.32	-64.35	1.18
254	SLD 15	-189	-54	3307	23.88	-64.91	-3.08
254	SLD 16	-191	-29	3306	23.59	-64.87	-1.89
254	SLV 1	483	72	2503	8.77	-46.22	0.02
254	SLV 2	478	130	2501	8.11	-46.13	2.73
254	SLV 3	490	-196	2553	25.28	-47.41	-6.96
254	SLV 4	486	-138	2550	24.62	-47.32	-4.24
254	SLV 5	145	408	2820	-8.81	-53.53	8.68
254	SLV 6	141	468	2818	-9.49	-53.43	11.49
254	SLV 7	170	-485	2985	46.23	-57.49	-14.57
254	SLV 8	165	-425	2982	45.55	-57.4	-11.77
254	SLV 9	-136	429	3141	-7.37	-60.98	9.17
254	SLV 10	-141	489	3139	-8.05	-60.89	11.97
254	SLV 11	-112	-464	3306	47.67	-64.95	-14.09
254	SLV 12	-117	-404	3303	46.99	-64.86	-11.28
254	SLV 13	-457	142	3573	13.56	-71.06	1.64
254	SLV 14	-461	200	3571	12.91	-70.97	4.36
254	SLV 15	-450	-126	3623	30.07	-72.25	-5.33
254	SLV 16	-454	-68	3620	29.42	-72.16	-2.62
254	CRTFP Ux+	0	0	0	0	0	0
254	CRTFP Ux-	0	0	0	0	0	0
254	CRTFP Uy+	0	0	0	0	0	0
254	CRTFP Uy-	0	0	0	0	0	0
255	SLU 1	17	-6	3132	16.95	-2.57	-1.44
255	SLU 2	17	7	3132	16.3	-2.56	-1.31
255	SLU 3	17	-6	3132	16.95	-2.57	-1.44
255	SLU 4	17	2	3132	16.56	-2.56	-1.37
255	SLU 5	17	7	3132	16.3	-2.56	-1.31
255	SLU 6	17	-6	3132	16.95	-2.57	-1.44
255	SLU 7	17	2	3132	16.56	-2.56	-1.37
255	SLU 8	17	-6	3132	16.95	-2.57	-1.44
255	SLU 9	17	2	3132	16.56	-2.56	-1.37
255	SLU 10	16	6	3705	18.87	-2.95	-1.62
255	SLU 11	17	-6	3705	19.53	-2.96	-1.75
255	SLU 12	16	1	3705	19.13	-2.95	-1.67
255	SLU 13	16	6	3705	18.87	-2.95	-1.62
255	SLU 14	17	-6	3705	19.53	-2.96	-1.75
255	SLU 15	16	1	3705	19.13	-2.95	-1.67
255	SLU 16	17	-6	3705	19.53	-2.96	-1.75
255	SLU 17	16	1	3705	19.13	-2.95	-1.67
255	SLU 18	16	-7	3951	20.63	-3.13	-1.89
255	SLU 19	16	1	3951	20.24	-3.12	-1.81
255	SLU 20	16	-7	3951	20.63	-3.13	-1.89
255	SLU 21	16	1	3951	20.24	-3.12	-1.81
255	SLU 22	17	-6	3564	19.03	-2.87	-1.67
255	SLU 23	17	6	3564	18.37	-2.86	-1.54
255	SLU 24	17	-6	3564	19.03	-2.87	-1.67
255	SLU 25	17	1	3564	18.63	-2.87	-1.59
255	SLU 26	17	6	3564	18.37	-2.86	-1.54
255	SLU 27	17	-6	3564	19.03	-2.87	-1.67
255	SLU 28	17	1	3564	18.63	-2.87	-1.59
255	SLU 29	17	-6	3564	19.03	-2.87	-1.67
255	SLU 30	17	1	3564	18.63	-2.87	-1.59
255	SLU 31	16	6	4137	20.95	-3.25	-1.85
255	SLU 32	17	-7	4137	21.6	-3.26	-1.98
255	SLU 33	16	1	4137	21.21	-3.25	-1.9
255	SLU 34	16	6	4137	20.95	-3.25	-1.85
255	SLU 35	17	-7	4137	21.6	-3.26	-1.98
255	SLU 36	16	1	4137	21.21	-3.25	-1.9
255	SLU 37	17	-7	4137	21.6	-3.26	-1.98
255	SLU 38	16	1	4137	21.21	-3.25	-1.9
255	SLU 39	16	-7	4383	22.7	-3.43	-2.11
255	SLU 40	16	0	4383	22.31	-3.42	-2.03
255	SLU 41	16	-7	4383	22.7	-3.43	-2.11
255	SLU 42	16	0	4383	22.31	-3.42	-2.03
255	SLU 43	22	-7	3924	21.33	-3.24	-1.8
255	SLU 44	22	5	3924	20.67	-3.23	-1.67
255	SLU 45	22	-7	3924	21.33	-3.24	-1.8
255	SLU 46	22	0	3924	20.93	-3.23	-1.72
255	SLU 47	22	5	3924	20.67	-3.23	-1.67

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
255	SLU 48	22	-7	3924	21.33	-3.24	-1.8
255	SLU 49	22	0	3924	20.93	-3.23	-1.72
255	SLU 50	22	-7	3924	21.33	-3.24	-1.8
255	SLU 51	22	0	3924	20.93	-3.23	-1.72
255	SLU 52	21	5	4497	23.25	-3.61	-1.98
255	SLU 53	22	-8	4497	23.9	-3.63	-2.11
255	SLU 54	21	0	4497	23.51	-3.62	-2.03
255	SLU 55	21	5	4497	23.25	-3.61	-1.98
255	SLU 56	22	-8	4497	23.9	-3.63	-2.11
255	SLU 57	21	0	4497	23.51	-3.62	-2.03
255	SLU 58	22	-8	4497	23.9	-3.63	-2.11
255	SLU 59	21	0	4497	23.51	-3.62	-2.03
255	SLU 60	21	-8	4743	25	-3.79	-2.24
255	SLU 61	21	-1	4743	24.61	-3.79	-2.16
255	SLU 62	21	-8	4743	25	-3.79	-2.24
255	SLU 63	21	-1	4743	24.61	-3.79	-2.16
255	SLU 64	22	-8	4355	23.4	-3.54	-2.03
255	SLU 65	22	5	4355	22.75	-3.53	-1.89
255	SLU 66	22	-8	4355	23.4	-3.54	-2.03
255	SLU 67	22	0	4355	23.01	-3.53	-1.95
255	SLU 68	22	5	4355	22.75	-3.53	-1.89
255	SLU 69	22	-8	4355	23.4	-3.54	-2.03
255	SLU 70	22	0	4355	23.01	-3.53	-1.95
255	SLU 71	22	-8	4355	23.4	-3.54	-2.03
255	SLU 72	22	0	4355	23.01	-3.53	-1.95
255	SLU 73	21	4	4929	25.32	-3.92	-2.2
255	SLU 74	22	-9	4929	25.98	-3.93	-2.34
255	SLU 75	21	-1	4929	25.58	-3.92	-2.26
255	SLU 76	21	4	4929	25.32	-3.92	-2.2
255	SLU 77	22	-9	4929	25.98	-3.93	-2.34
255	SLU 78	21	-1	4929	25.58	-3.92	-2.26
255	SLU 79	22	-9	4929	25.98	-3.93	-2.34
255	SLU 80	21	-1	4929	25.58	-3.92	-2.26
255	SLU 81	21	-9	5174	27.08	-4.1	-2.47
255	SLU 82	21	-1	5174	26.69	-4.09	-2.39
255	SLU 83	21	-9	5174	27.08	-4.1	-2.47
255	SLU 84	21	-1	5174	26.69	-4.09	-2.39
255	SLE RA 1	17	-6	3255	17.55	-2.66	-1.51
255	SLE RA 2	17	3	3255	17.11	-2.65	-1.42
255	SLE RA 3	17	-6	3255	17.55	-2.66	-1.51
255	SLE RA 4	17	-1	3255	17.28	-2.65	-1.46
255	SLE RA 5	17	3	3255	17.11	-2.65	-1.42
255	SLE RA 6	17	-6	3255	17.55	-2.66	-1.51
255	SLE RA 7	17	-1	3255	17.28	-2.65	-1.46
255	SLE RA 8	17	-6	3255	17.55	-2.66	-1.51
255	SLE RA 9	17	-1	3255	17.28	-2.65	-1.46
255	SLE RA 10	16	2	3638	18.82	-2.91	-1.63
255	SLE RA 11	17	-6	3638	19.26	-2.92	-1.72
255	SLE RA 12	17	-1	3638	19	-2.91	-1.66
255	SLE RA 13	16	2	3638	18.82	-2.91	-1.63
255	SLE RA 14	17	-6	3638	19.26	-2.92	-1.72
255	SLE RA 15	17	-1	3638	19	-2.91	-1.66
255	SLE RA 16	17	-6	3638	19.26	-2.92	-1.72
255	SLE RA 17	17	-1	3638	19	-2.91	-1.66
255	SLE RA 18	17	-7	3801	20	-3.03	-1.8
255	SLE RA 19	16	-1	3801	19.73	-3.02	-1.75
255	SLE RA 20	17	-7	3801	20	-3.03	-1.8
255	SLE RA 21	16	-1	3801	19.73	-3.02	-1.75
255	SLE FR 1	17	-6	3255	17.55	-2.66	-1.51
255	SLE FR 2	17	-4	3255	17.46	-2.66	-1.49
255	SLE FR 3	17	-6	3255	17.55	-2.66	-1.51
255	SLE FR 4	17	-4	3419	18.19	-2.77	-1.58
255	SLE FR 5	17	-6	3419	18.28	-2.77	-1.6
255	SLE FR 6	17	-6	3528	18.77	-2.84	-1.66
255	SLE QP 1	17	-6	3255	17.55	-2.66	-1.51
255	SLE QP 2	17	-6	3419	18.28	-2.77	-1.6
255	SLD 1	242	27	3110	13.51	-1.22	-1.5
255	SLD 2	240	59	3108	13.2	-1.2	-0.65
255	SLD 3	246	-109	3138	21.5	-1.38	-2.92
255	SLD 4	244	-77	3136	21.18	-1.35	-2.07
255	SLD 5	80	198	3285	4.86	-2.08	0.27
255	SLD 6	78	232	3283	4.54	-2.05	1.16
255	SLD 7	92	-255	3378	31.46	-2.6	-4.46
255	SLD 8	89	-221	3376	31.14	-2.57	-3.58
255	SLD 9	-56	209	3463	5.42	-2.97	0.38
255	SLD 10	-58	243	3461	5.1	-2.94	1.27
255	SLD 11	-44	-244	3556	32.02	-3.49	-4.35
255	SLD 12	-46	-210	3554	31.7	-3.46	-3.47
255	SLD 13	-210	64	3703	15.38	-4.19	-1.13
255	SLD 14	-212	97	3701	15.07	-4.16	-0.27
255	SLD 15	-206	-72	3731	23.36	-4.34	-2.55
255	SLD 16	-209	-39	3729	23.05	-4.32	-1.69
255	SLV 1	532	69	2712	7.35	0.76	-1.41
255	SLV 2	527	142	2708	6.64	0.82	0.54
255	SLV 3	540	-240	2776	25.47	0.41	-4.63
255	SLV 4	535	-166	2772	24.76	0.47	-2.68

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
255	SLV 5	161	457	3113	-12.22	-1.19	2.64
255	SLV 6	156	534	3108	-12.95	-1.13	4.65
255	SLV 7	188	-571	3324	48.18	-2.37	-8.11
255	SLV 8	183	-495	3320	47.44	-2.31	-6.1
255	SLV 9	-149	483	3519	-10.88	-3.22	2.9
255	SLV 10	-154	559	3514	-11.61	-3.16	4.92
255	SLV 11	-122	-546	3730	49.51	-4.4	-7.85
255	SLV 12	-127	-469	3726	48.78	-4.34	-5.83
255	SLV 13	-501	154	4067	11.8	-6.01	-0.51
255	SLV 14	-506	228	4063	11.09	-5.95	1.44
255	SLV 15	-493	-155	4130	29.92	-6.36	-3.74
255	SLV 16	-498	-81	4126	29.21	-6.3	-1.79
255	CRTFP Ux+	0	0	0	0	0	0
255	CRTFP Ux-	0	0	0	0	0	0
255	CRTFP Uy+	0	0	0	0	0	0
255	CRTFP Uy-	0	0	0	0	0	0
256	SLU 1	18	-14	3181	14.44	-2.34	-1.51
256	SLU 2	17	-1	3180	13.79	-2.33	-1.34
256	SLU 3	18	-14	3181	14.44	-2.34	-1.51
256	SLU 4	18	-6	3181	14.05	-2.33	-1.41
256	SLU 5	17	-1	3180	13.79	-2.33	-1.34
256	SLU 6	18	-14	3181	14.44	-2.34	-1.51
256	SLU 7	18	-6	3181	14.05	-2.33	-1.41
256	SLU 8	18	-14	3181	14.44	-2.34	-1.51
256	SLU 9	18	-6	3181	14.05	-2.33	-1.41
256	SLU 10	17	-3	3760	15.91	-2.64	-1.67
256	SLU 11	17	-17	3760	16.55	-2.65	-1.84
256	SLU 12	17	-8	3760	16.17	-2.64	-1.74
256	SLU 13	17	-3	3760	15.91	-2.64	-1.67
256	SLU 14	17	-17	3760	16.55	-2.65	-1.84
256	SLU 15	17	-8	3760	16.17	-2.64	-1.74
256	SLU 16	17	-17	3760	16.55	-2.65	-1.84
256	SLU 17	17	-8	3760	16.17	-2.64	-1.74
256	SLU 18	17	-18	4008	17.46	-2.78	-1.98
256	SLU 19	17	-9	4008	17.07	-2.77	-1.88
256	SLU 20	17	-18	4008	17.46	-2.78	-1.98
256	SLU 21	17	-9	4008	17.07	-2.77	-1.88
256	SLU 22	18	-16	3617	16.16	-2.58	-1.75
256	SLU 23	17	-2	3617	15.51	-2.57	-1.58
256	SLU 24	18	-16	3617	16.16	-2.58	-1.75
256	SLU 25	17	-8	3617	15.77	-2.58	-1.65
256	SLU 26	17	-2	3617	15.51	-2.57	-1.58
256	SLU 27	18	-16	3617	16.16	-2.58	-1.75
256	SLU 28	17	-8	3617	15.77	-2.58	-1.65
256	SLU 29	18	-16	3617	16.16	-2.58	-1.75
256	SLU 30	17	-8	3617	15.77	-2.58	-1.65
256	SLU 31	17	-5	4196	17.63	-2.88	-1.92
256	SLU 32	17	-18	4197	18.28	-2.89	-2.09
256	SLU 33	17	-10	4196	17.89	-2.88	-1.99
256	SLU 34	17	-5	4196	17.63	-2.88	-1.92
256	SLU 35	17	-18	4197	18.28	-2.89	-2.09
256	SLU 36	17	-10	4196	17.89	-2.88	-1.99
256	SLU 37	17	-18	4197	18.28	-2.89	-2.09
256	SLU 38	17	-10	4196	17.89	-2.88	-1.99
256	SLU 39	17	-19	4445	19.19	-3.02	-2.23
256	SLU 40	17	-11	4444	18.8	-3.01	-2.13
256	SLU 41	17	-19	4445	19.19	-3.02	-2.23
256	SLU 42	17	-11	4444	18.8	-3.01	-2.13
256	SLU 43	23	-18	3986	18.18	-2.96	-1.87
256	SLU 44	23	-4	3985	17.53	-2.95	-1.71
256	SLU 45	23	-18	3986	18.18	-2.96	-1.87
256	SLU 46	23	-10	3985	17.79	-2.95	-1.77
256	SLU 47	23	-4	3985	17.53	-2.95	-1.71
256	SLU 48	23	-18	3986	18.18	-2.96	-1.87
256	SLU 49	23	-10	3985	17.79	-2.95	-1.77
256	SLU 50	23	-18	3986	18.18	-2.96	-1.87
256	SLU 51	23	-10	3985	17.79	-2.95	-1.77
256	SLU 52	22	-7	4564	19.65	-3.26	-2.04
256	SLU 53	23	-20	4565	20.29	-3.27	-2.21
256	SLU 54	22	-12	4565	19.91	-3.26	-2.11
256	SLU 55	22	-7	4564	19.65	-3.26	-2.04
256	SLU 56	23	-20	4565	20.29	-3.27	-2.21
256	SLU 57	22	-12	4565	19.91	-3.26	-2.11
256	SLU 58	23	-20	4565	20.29	-3.27	-2.21
256	SLU 59	22	-12	4565	19.91	-3.26	-2.11
256	SLU 60	22	-21	4813	21.2	-3.4	-2.35
256	SLU 61	22	-13	4813	20.81	-3.39	-2.25
256	SLU 62	22	-21	4813	21.2	-3.4	-2.35
256	SLU 63	22	-13	4813	20.81	-3.39	-2.25
256	SLU 64	23	-20	4422	19.9	-3.2	-2.12
256	SLU 65	23	-6	4421	19.25	-3.19	-1.95
256	SLU 66	23	-20	4422	19.9	-3.2	-2.12
256	SLU 67	23	-11	4422	19.51	-3.2	-2.02
256	SLU 68	23	-6	4421	19.25	-3.19	-1.95
256	SLU 69	23	-20	4422	19.9	-3.2	-2.12
256	SLU 70	23	-11	4422	19.51	-3.2	-2.02

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
256	SLU 71	23	-20	4422	19.9	-3.2	-2.12
256	SLU 72	23	-11	4422	19.51	-3.2	-2.02
256	SLU 73	22	-8	5001	21.37	-3.5	-2.29
256	SLU 74	22	-22	5001	22.02	-3.51	-2.45
256	SLU 75	22	-14	5001	21.63	-3.5	-2.35
256	SLU 76	22	-8	5001	21.37	-3.5	-2.29
256	SLU 77	22	-22	5001	22.02	-3.51	-2.45
256	SLU 78	22	-14	5001	21.63	-3.5	-2.35
256	SLU 79	22	-22	5001	22.02	-3.51	-2.45
256	SLU 80	22	-14	5001	21.63	-3.5	-2.35
256	SLU 81	22	-23	5249	22.93	-3.64	-2.6
256	SLU 82	22	-15	5249	22.54	-3.63	-2.5
256	SLU 83	22	-23	5249	22.93	-3.64	-2.6
256	SLU 84	22	-15	5249	22.54	-3.63	-2.5
256	SLE RA 1	18	-15	3306	14.93	-2.41	-1.58
256	SLE RA 2	17	-6	3305	14.5	-2.4	-1.46
256	SLE RA 3	18	-15	3306	14.93	-2.41	-1.58
256	SLE RA 4	18	-9	3305	14.67	-2.41	-1.51
256	SLE RA 5	17	-6	3305	14.5	-2.4	-1.46
256	SLE RA 6	18	-15	3306	14.93	-2.41	-1.58
256	SLE RA 7	18	-9	3305	14.67	-2.41	-1.51
256	SLE RA 8	18	-15	3306	14.93	-2.41	-1.58
256	SLE RA 9	18	-9	3305	14.67	-2.41	-1.51
256	SLE RA 10	17	-7	3691	15.91	-2.61	-1.69
256	SLE RA 11	17	-16	3692	16.34	-2.62	-1.8
256	SLE RA 12	17	-11	3692	16.08	-2.61	-1.73
256	SLE RA 13	17	-7	3691	15.91	-2.61	-1.69
256	SLE RA 14	17	-16	3692	16.34	-2.62	-1.8
256	SLE RA 15	17	-11	3692	16.08	-2.61	-1.73
256	SLE RA 16	17	-16	3692	16.34	-2.62	-1.8
256	SLE RA 17	17	-11	3692	16.08	-2.61	-1.73
256	SLE RA 18	17	-17	3857	16.95	-2.7	-1.9
256	SLE RA 19	17	-12	3857	16.69	-2.7	-1.83
256	SLE RA 20	17	-17	3857	16.95	-2.7	-1.9
256	SLE RA 21	17	-12	3857	16.69	-2.7	-1.83
256	SLE FR 1	18	-15	3306	14.93	-2.41	-1.58
256	SLE FR 2	18	-13	3306	14.84	-2.41	-1.55
256	SLE FR 3	18	-15	3306	14.93	-2.41	-1.58
256	SLE FR 4	18	-14	3471	15.45	-2.5	-1.65
256	SLE FR 5	18	-15	3471	15.53	-2.5	-1.67
256	SLE FR 6	17	-16	3581	15.94	-2.56	-1.74
256	SLE QP 1	18	-15	3306	14.93	-2.41	-1.58
256	SLE QP 2	18	-15	3471	15.53	-2.5	-1.67
256	SLD 1	243	18	3118	10.89	-0.93	-0.97
256	SLD 2	241	55	3115	10.58	-0.9	-0.07
256	SLD 3	246	-127	3150	18.9	-1.06	-2.77
256	SLD 4	244	-90	3147	18.6	-1.04	-1.87
256	SLD 5	81	200	3318	2.1	-1.83	0.92
256	SLD 6	78	239	3315	1.78	-1.8	1.86
256	SLD 7	92	-282	3424	28.81	-2.28	-5.05
256	SLD 8	90	-243	3421	28.49	-2.26	-4.12
256	SLD 9	-55	213	3521	2.58	-2.74	0.77
256	SLD 10	-57	251	3518	2.26	-2.71	1.71
256	SLD 11	-43	-270	3627	29.29	-3.19	-5.2
256	SLD 12	-45	-231	3624	28.97	-3.17	-4.27
256	SLD 13	-209	59	3795	12.47	-3.96	-1.48
256	SLD 14	-211	96	3792	12.17	-3.93	-0.58
256	SLD 15	-205	-86	3827	20.48	-4.09	-3.27
256	SLD 16	-208	-48	3824	20.18	-4.07	-2.37
256	SLV 1	532	59	2665	4.89	1.09	-0.07
256	SLV 2	527	144	2659	4.2	1.15	1.98
256	SLV 3	540	-269	2737	23.08	0.78	-4.14
256	SLV 4	535	-184	2731	22.39	0.84	-2.09
256	SLV 5	161	474	3122	-14.99	-0.98	4.23
256	SLV 6	156	562	3116	-15.71	-0.92	6.35
256	SLV 7	188	-621	3363	45.64	-2	-9.34
256	SLV 8	183	-533	3356	44.92	-1.94	-7.22
256	SLV 9	-148	502	3586	-13.85	-3.06	3.88
256	SLV 10	-153	590	3580	-14.57	-2.99	6
256	SLV 11	-121	-593	3826	46.78	-4.08	-9.69
256	SLV 12	-126	-505	3820	46.06	-4.02	-7.57
256	SLV 13	-500	154	4211	8.68	-5.84	-1.25
256	SLV 14	-505	239	4205	7.98	-5.78	0.8
256	SLV 15	-492	-175	4283	26.87	-6.14	-5.32
256	SLV 16	-497	-90	4277	26.17	-6.09	-3.27
256	CRTFP Ux+	0	0	0	0	0	0
256	CRTFP Ux-	0	0	0	0	0	0
256	CRTFP Uy+	0	0	0	0	0	0
256	CRTFP Uy-	0	0	0	0	0	0
257	SLU 1	18	-23	3221	11.93	-2.02	-1.56
257	SLU 2	18	-8	3220	11.29	-2.01	-1.36
257	SLU 3	18	-23	3221	11.93	-2.02	-1.56
257	SLU 4	18	-14	3221	11.54	-2.02	-1.44
257	SLU 5	18	-8	3220	11.29	-2.01	-1.36
257	SLU 6	18	-23	3221	11.93	-2.02	-1.56
257	SLU 7	18	-14	3221	11.54	-2.02	-1.44

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
257	SLU 8	18	-23	3221	11.93	-2.02	-1.56
257	SLU 9	18	-14	3221	11.54	-2.02	-1.44
257	SLU 10	17	-13	3803	12.96	-2.22	-1.72
257	SLU 11	18	-27	3804	13.59	-2.23	-1.91
257	SLU 12	17	-18	3803	13.21	-2.22	-1.8
257	SLU 13	17	-13	3803	12.96	-2.22	-1.72
257	SLU 14	18	-27	3804	13.59	-2.23	-1.91
257	SLU 15	17	-18	3803	13.21	-2.22	-1.8
257	SLU 16	18	-27	3804	13.59	-2.23	-1.91
257	SLU 17	17	-18	3803	13.21	-2.22	-1.8
257	SLU 18	17	-29	4053	14.31	-2.32	-2.07
257	SLU 19	17	-20	4053	13.93	-2.31	-1.95
257	SLU 20	17	-29	4053	14.31	-2.32	-2.07
257	SLU 21	17	-20	4053	13.93	-2.31	-1.95
257	SLU 22	18	-26	3660	13.3	-2.19	-1.82
257	SLU 23	18	-11	3659	12.67	-2.18	-1.62
257	SLU 24	18	-26	3660	13.3	-2.19	-1.82
257	SLU 25	18	-17	3660	12.92	-2.19	-1.7
257	SLU 26	18	-11	3659	12.67	-2.18	-1.62
257	SLU 27	18	-26	3660	13.3	-2.19	-1.82
257	SLU 28	18	-17	3660	12.92	-2.19	-1.7
257	SLU 29	18	-26	3660	13.3	-2.19	-1.82
257	SLU 30	18	-17	3660	12.92	-2.19	-1.7
257	SLU 31	17	-16	4242	14.33	-2.39	-1.98
257	SLU 32	17	-30	4243	14.97	-2.4	-2.17
257	SLU 33	17	-22	4242	14.59	-2.39	-2.06
257	SLU 34	17	-16	4242	14.33	-2.39	-1.98
257	SLU 35	17	-30	4243	14.97	-2.4	-2.17
257	SLU 36	17	-22	4242	14.59	-2.39	-2.06
257	SLU 37	17	-30	4243	14.97	-2.4	-2.17
257	SLU 38	17	-22	4242	14.59	-2.39	-2.06
257	SLU 39	17	-32	4492	15.69	-2.49	-2.33
257	SLU 40	17	-23	4492	15.3	-2.48	-2.21
257	SLU 41	17	-32	4492	15.69	-2.49	-2.33
257	SLU 42	17	-23	4492	15.3	-2.48	-2.21
257	SLU 43	24	-29	4037	15.03	-2.57	-1.94
257	SLU 44	23	-14	4036	14.39	-2.56	-1.74
257	SLU 45	24	-29	4037	15.03	-2.57	-1.94
257	SLU 46	24	-20	4036	14.65	-2.56	-1.82
257	SLU 47	23	-14	4036	14.39	-2.56	-1.74
257	SLU 48	24	-29	4037	15.03	-2.57	-1.94
257	SLU 49	24	-20	4036	14.65	-2.56	-1.82
257	SLU 50	24	-29	4037	15.03	-2.57	-1.94
257	SLU 51	24	-20	4036	14.65	-2.56	-1.82
257	SLU 52	23	-18	4619	16.06	-2.77	-2.1
257	SLU 53	23	-33	4619	16.7	-2.78	-2.29
257	SLU 54	23	-24	4619	16.32	-2.77	-2.18
257	SLU 55	23	-18	4619	16.06	-2.77	-2.1
257	SLU 56	23	-33	4619	16.7	-2.78	-2.29
257	SLU 57	23	-24	4619	16.32	-2.77	-2.18
257	SLU 58	23	-33	4619	16.7	-2.78	-2.29
257	SLU 59	23	-24	4619	16.32	-2.77	-2.18
257	SLU 60	23	-35	4869	17.41	-2.87	-2.44
257	SLU 61	23	-26	4869	17.03	-2.86	-2.33
257	SLU 62	23	-35	4869	17.41	-2.87	-2.44
257	SLU 63	23	-26	4869	17.03	-2.86	-2.33
257	SLU 64	24	-32	4476	16.41	-2.74	-2.2
257	SLU 65	23	-17	4475	15.77	-2.73	-2
257	SLU 66	24	-32	4476	16.41	-2.74	-2.2
257	SLU 67	23	-23	4476	16.03	-2.73	-2.08
257	SLU 68	23	-17	4475	15.77	-2.73	-2
257	SLU 69	24	-32	4476	16.41	-2.74	-2.2
257	SLU 70	23	-23	4476	16.03	-2.73	-2.08
257	SLU 71	24	-32	4476	16.41	-2.74	-2.2
257	SLU 72	23	-23	4476	16.03	-2.73	-2.08
257	SLU 73	23	-21	5058	17.44	-2.94	-2.36
257	SLU 74	23	-36	5059	18.08	-2.95	-2.55
257	SLU 75	23	-27	5058	17.69	-2.94	-2.44
257	SLU 76	23	-21	5058	17.44	-2.94	-2.36
257	SLU 77	23	-36	5059	18.08	-2.95	-2.55
257	SLU 78	23	-27	5058	17.69	-2.94	-2.44
257	SLU 79	23	-36	5059	18.08	-2.95	-2.55
257	SLU 80	23	-27	5058	17.69	-2.94	-2.44
257	SLU 81	23	-38	5308	18.79	-3.04	-2.71
257	SLU 82	22	-29	5308	18.41	-3.03	-2.59
257	SLU 83	23	-38	5308	18.79	-3.04	-2.71
257	SLU 84	22	-29	5308	18.41	-3.03	-2.59
257	SLE RA 1	18	-24	3347	12.32	-2.07	-1.63
257	SLE RA 2	18	-14	3346	11.89	-2.06	-1.5
257	SLE RA 3	18	-24	3347	12.32	-2.07	-1.63
257	SLE RA 4	18	-18	3346	12.06	-2.07	-1.56
257	SLE RA 5	18	-14	3346	11.89	-2.06	-1.5
257	SLE RA 6	18	-24	3347	12.32	-2.07	-1.63
257	SLE RA 7	18	-18	3346	12.06	-2.07	-1.56
257	SLE RA 8	18	-24	3347	12.32	-2.07	-1.63
257	SLE RA 9	18	-18	3346	12.06	-2.07	-1.56

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
257	SLE RA 10	18	-17	3734	13.01	-2.2	-1.74
257	SLE RA 11	18	-27	3735	13.43	-2.21	-1.87
257	SLE RA 12	18	-21	3735	13.18	-2.21	-1.79
257	SLE RA 13	18	-17	3734	13.01	-2.2	-1.74
257	SLE RA 14	18	-27	3735	13.43	-2.21	-1.87
257	SLE RA 15	18	-21	3735	13.18	-2.21	-1.79
257	SLE RA 16	18	-27	3735	13.43	-2.21	-1.87
257	SLE RA 17	18	-21	3735	13.18	-2.21	-1.79
257	SLE RA 18	18	-28	3901	13.91	-2.27	-1.97
257	SLE RA 19	17	-22	3901	13.65	-2.27	-1.89
257	SLE RA 20	18	-28	3901	13.91	-2.27	-1.97
257	SLE RA 21	17	-22	3901	13.65	-2.27	-1.89
257	SLE FR 1	18	-24	3347	12.32	-2.07	-1.63
257	SLE FR 2	18	-22	3347	12.23	-2.07	-1.61
257	SLE FR 3	18	-24	3347	12.32	-2.07	-1.63
257	SLE FR 4	18	-23	3513	12.71	-2.13	-1.71
257	SLE FR 5	18	-25	3513	12.8	-2.13	-1.73
257	SLE FR 6	18	-26	3624	13.11	-2.17	-1.8
257	SLE QP 1	18	-24	3347	12.32	-2.07	-1.63
257	SLE QP 2	18	-25	3513	12.8	-2.13	-1.73
257	SLD 1	243	9	3116	8.16	-0.55	-0.84
257	SLD 2	241	51	3113	7.86	-0.52	0.1
257	SLD 3	247	-147	3151	16.21	-0.67	-2.91
257	SLD 4	244	-104	3148	15.91	-0.64	-1.97
257	SLD 5	81	205	3342	-0.7	-1.48	1.33
257	SLD 6	79	249	3339	-1.01	-1.45	2.31
257	SLD 7	93	-313	3459	26.15	-1.89	-5.58
257	SLD 8	90	-269	3455	25.84	-1.86	-4.6
257	SLD 9	-54	219	3571	-0.24	-2.4	1.13
257	SLD 10	-57	263	3567	-0.56	-2.37	2.11
257	SLD 11	-43	-299	3688	26.6	-2.81	-5.78
257	SLD 12	-45	-255	3684	26.29	-2.78	-4.8
257	SLD 13	-208	54	3878	9.68	-3.62	-1.5
257	SLD 14	-211	97	3875	9.38	-3.59	-0.56
257	SLD 15	-205	-101	3913	17.73	-3.74	-3.57
257	SLD 16	-207	-59	3910	17.43	-3.71	-2.63
257	SLV 1	532	51	2607	2.19	1.48	0.32
257	SLV 2	527	148	2599	1.51	1.55	2.46
257	SLV 3	540	-302	2687	20.48	1.21	-4.39
257	SLV 4	535	-205	2679	19.79	1.27	-2.25
257	SLV 5	162	497	3124	-17.86	-0.65	5.23
257	SLV 6	157	597	3116	-18.57	-0.58	7.45
257	SLV 7	189	-678	3389	43.08	-1.57	-10.46
257	SLV 8	183	-579	3381	42.37	-1.51	-8.24
257	SLV 9	-147	529	3645	-16.78	-2.75	4.77
257	SLV 10	-153	628	3637	-17.49	-2.69	6.99
257	SLV 11	-121	-647	3911	44.17	-3.68	-10.92
257	SLV 12	-126	-547	3903	43.46	-3.61	-8.7
257	SLV 13	-499	155	4347	5.8	-5.53	-1.22
257	SLV 14	-504	252	4339	5.11	-5.47	0.92
257	SLV 15	-491	-198	4427	24.08	-5.81	-5.92
257	SLV 16	-496	-101	4419	23.4	-5.75	-3.78
257	CRTFP Ux+	0	0	0	0	0	0
257	CRTFP Ux-	0	0	0	0	0	0
257	CRTFP Uy+	0	0	0	0	0	0
257	CRTFP Uy-	0	0	0	0	0	0
258	SLU 1	19	-32	3252	9.43	-1.76	-1.6
258	SLU 2	18	-16	3251	8.8	-1.74	-1.39
258	SLU 3	19	-32	3252	9.43	-1.76	-1.6
258	SLU 4	18	-22	3252	9.05	-1.75	-1.47
258	SLU 5	18	-16	3251	8.8	-1.74	-1.39
258	SLU 6	19	-32	3252	9.43	-1.76	-1.6
258	SLU 7	18	-22	3252	9.05	-1.75	-1.47
258	SLU 8	19	-32	3252	9.43	-1.76	-1.6
258	SLU 9	18	-22	3252	9.05	-1.75	-1.47
258	SLU 10	17	-22	3834	10.02	-1.87	-1.76
258	SLU 11	18	-38	3835	10.66	-1.88	-1.97
258	SLU 12	18	-29	3835	10.28	-1.87	-1.84
258	SLU 13	17	-22	3834	10.02	-1.87	-1.76
258	SLU 14	18	-38	3835	10.66	-1.88	-1.97
258	SLU 15	18	-29	3835	10.28	-1.87	-1.84
258	SLU 16	18	-38	3835	10.66	-1.88	-1.97
258	SLU 17	18	-29	3835	10.28	-1.87	-1.84
258	SLU 18	17	-41	4085	11.18	-1.94	-2.13
258	SLU 19	17	-31	4084	10.8	-1.93	-2
258	SLU 20	17	-41	4085	11.18	-1.94	-2.13
258	SLU 21	17	-31	4084	10.8	-1.93	-2
258	SLU 22	18	-37	3692	10.47	-1.86	-1.87
258	SLU 23	18	-21	3691	9.84	-1.85	-1.66
258	SLU 24	18	-37	3692	10.47	-1.86	-1.87
258	SLU 25	18	-27	3691	10.09	-1.86	-1.74
258	SLU 26	18	-21	3691	9.84	-1.85	-1.66
258	SLU 27	18	-37	3692	10.47	-1.86	-1.87
258	SLU 28	18	-27	3691	10.09	-1.86	-1.74
258	SLU 29	18	-37	3692	10.47	-1.86	-1.87
258	SLU 30	18	-27	3691	10.09	-1.86	-1.74

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
258	SLU 31	17	-27	4274	11.06	-1.98	-2.03
258	SLU 32	18	-43	4275	11.7	-1.99	-2.24
258	SLU 33	17	-33	4274	11.32	-1.98	-2.11
258	SLU 34	17	-27	4274	11.06	-1.98	-2.03
258	SLU 35	18	-43	4275	11.7	-1.99	-2.24
258	SLU 36	17	-33	4274	11.32	-1.98	-2.11
258	SLU 37	18	-43	4275	11.7	-1.99	-2.24
258	SLU 38	17	-33	4274	11.32	-1.98	-2.11
258	SLU 39	17	-46	4525	12.22	-2.04	-2.4
258	SLU 40	17	-36	4524	11.84	-2.04	-2.27
258	SLU 41	17	-46	4525	12.22	-2.04	-2.4
258	SLU 42	17	-36	4524	11.84	-2.04	-2.27
258	SLU 43	24	-40	4077	11.9	-2.25	-1.99
258	SLU 44	24	-24	4076	11.27	-2.23	-1.78
258	SLU 45	24	-40	4077	11.9	-2.25	-1.99
258	SLU 46	24	-30	4076	11.52	-2.24	-1.86
258	SLU 47	24	-24	4076	11.27	-2.23	-1.78
258	SLU 48	24	-40	4077	11.9	-2.25	-1.99
258	SLU 49	24	-30	4076	11.52	-2.24	-1.86
258	SLU 50	24	-40	4077	11.9	-2.25	-1.99
258	SLU 51	24	-30	4076	11.52	-2.24	-1.86
258	SLU 52	23	-30	4659	12.5	-2.36	-2.15
258	SLU 53	23	-46	4660	13.13	-2.37	-2.36
258	SLU 54	23	-37	4659	12.75	-2.36	-2.23
258	SLU 55	23	-30	4659	12.5	-2.36	-2.15
258	SLU 56	23	-46	4660	13.13	-2.37	-2.36
258	SLU 57	23	-37	4659	12.75	-2.36	-2.23
258	SLU 58	23	-46	4660	13.13	-2.37	-2.36
258	SLU 59	23	-37	4659	12.75	-2.36	-2.23
258	SLU 60	23	-49	4910	13.66	-2.43	-2.51
258	SLU 61	23	-39	4909	13.28	-2.42	-2.39
258	SLU 62	23	-49	4910	13.66	-2.43	-2.51
258	SLU 63	23	-39	4909	13.28	-2.42	-2.39
258	SLU 64	24	-44	4517	12.94	-2.35	-2.26
258	SLU 65	24	-29	4516	12.31	-2.34	-2.05
258	SLU 66	24	-44	4517	12.94	-2.35	-2.26
258	SLU 67	24	-35	4516	12.56	-2.35	-2.13
258	SLU 68	24	-29	4516	12.31	-2.34	-2.05
258	SLU 69	24	-44	4517	12.94	-2.35	-2.26
258	SLU 70	24	-35	4516	12.56	-2.35	-2.13
258	SLU 71	24	-44	4517	12.94	-2.35	-2.26
258	SLU 72	24	-35	4516	12.56	-2.35	-2.13
258	SLU 73	23	-35	5099	13.54	-2.47	-2.42
258	SLU 74	23	-51	5100	14.17	-2.48	-2.63
258	SLU 75	23	-41	5099	13.79	-2.47	-2.5
258	SLU 76	23	-35	5099	13.54	-2.47	-2.42
258	SLU 77	23	-51	5100	14.17	-2.48	-2.63
258	SLU 78	23	-41	5099	13.79	-2.47	-2.5
258	SLU 79	23	-51	5100	14.17	-2.48	-2.63
258	SLU 80	23	-41	5099	13.79	-2.47	-2.5
258	SLU 81	23	-53	5350	14.69	-2.53	-2.78
258	SLU 82	23	-44	5349	14.31	-2.53	-2.66
258	SLU 83	23	-53	5350	14.69	-2.53	-2.78
258	SLU 84	23	-44	5349	14.31	-2.53	-2.66
258	SLE RA 1	18	-33	3378	9.73	-1.79	-1.68
258	SLE RA 2	18	-23	3377	9.31	-1.78	-1.54
258	SLE RA 3	18	-33	3378	9.73	-1.79	-1.68
258	SLE RA 4	18	-27	3377	9.47	-1.78	-1.59
258	SLE RA 5	18	-23	3377	9.31	-1.78	-1.54
258	SLE RA 6	18	-33	3378	9.73	-1.79	-1.68
258	SLE RA 7	18	-27	3377	9.47	-1.78	-1.59
258	SLE RA 8	18	-33	3378	9.73	-1.79	-1.68
258	SLE RA 9	18	-27	3377	9.47	-1.78	-1.59
258	SLE RA 10	18	-27	3766	10.12	-1.86	-1.78
258	SLE RA 11	18	-37	3767	10.54	-1.87	-1.92
258	SLE RA 12	18	-31	3766	10.29	-1.87	-1.84
258	SLE RA 13	18	-27	3766	10.12	-1.86	-1.78
258	SLE RA 14	18	-37	3767	10.54	-1.87	-1.92
258	SLE RA 15	18	-31	3766	10.29	-1.87	-1.84
258	SLE RA 16	18	-37	3767	10.54	-1.87	-1.92
258	SLE RA 17	18	-31	3766	10.29	-1.87	-1.84
258	SLE RA 18	18	-39	3933	10.9	-1.91	-2.03
258	SLE RA 19	18	-33	3933	10.64	-1.9	-1.94
258	SLE RA 20	18	-39	3933	10.9	-1.91	-2.03
258	SLE RA 21	18	-33	3933	10.64	-1.9	-1.94
258	SLE FR 1	18	-33	3378	9.73	-1.79	-1.68
258	SLE FR 2	18	-31	3378	9.64	-1.79	-1.65
258	SLE FR 3	18	-33	3378	9.73	-1.79	-1.68
258	SLE FR 4	18	-33	3544	9.99	-1.82	-1.75
258	SLE FR 5	18	-35	3545	10.08	-1.82	-1.78
258	SLE FR 6	18	-36	3656	10.31	-1.85	-1.85
258	SLE QP 1	18	-33	3378	9.73	-1.79	-1.68
258	SLE QP 2	18	-35	3545	10.08	-1.82	-1.78
258	SLD 1	243	0	3104	5.28	-0.22	-0.72
258	SLD 2	241	48	3100	4.98	-0.19	0.24
258	SLD 3	246	-167	3142	13.39	-0.35	-2.96

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
258	SLD 4	244	-120	3138	13.09	-0.32	-2
258	SLD 5	81	212	3356	-3.55	-1.16	1.57
258	SLD 6	79	261	3352	-3.85	-1.13	2.57
258	SLD 7	93	-346	3483	23.47	-1.59	-5.89
258	SLD 8	91	-297	3479	23.17	-1.55	-4.88
258	SLD 9	-54	227	3610	-3.01	-2.09	1.32
258	SLD 10	-56	276	3606	-3.32	-2.06	2.32
258	SLD 11	-42	-331	3737	24.01	-2.52	-6.14
258	SLD 12	-45	-282	3733	23.7	-2.49	-5.14
258	SLD 13	-208	50	3951	7.07	-3.33	-1.57
258	SLD 14	-210	97	3947	6.77	-3.3	-0.6
258	SLD 15	-204	-118	3989	15.17	-3.46	-3.81
258	SLD 16	-206	-70	3985	14.88	-3.43	-2.84
258	SLV 1	531	44	2539	-0.86	1.84	0.63
258	SLV 2	526	152	2529	-1.54	1.91	2.83
258	SLV 3	539	-336	2625	17.54	1.55	-4.45
258	SLV 4	534	-228	2616	16.86	1.62	-2.25
258	SLV 5	162	525	3115	-20.86	-0.31	5.84
258	SLV 6	157	637	3105	-21.56	-0.24	8.12
258	SLV 7	189	-741	3404	40.47	-1.28	-11.1
258	SLV 8	183	-629	3394	39.77	-1.2	-8.82
258	SLV 9	-147	559	3695	-19.62	-2.44	5.25
258	SLV 10	-152	671	3685	-20.31	-2.37	7.53
258	SLV 11	-120	-707	3984	41.71	-3.41	-11.68
258	SLV 12	-125	-595	3974	41.02	-3.33	-9.4
258	SLV 13	-498	158	4473	3.29	-5.27	-1.32
258	SLV 14	-503	266	4464	2.62	-5.2	0.89
258	SLV 15	-490	-222	4560	21.69	-5.56	-6.4
258	SLV 16	-495	-114	4550	21.02	-5.48	-4.2
258	CRTFP Ux+	0	0	0	0	0	0
258	CRTFP Ux-	0	0	0	0	0	0
258	CRTFP Uy+	0	0	0	0	0	0
258	CRTFP Uy-	0	0	0	0	0	0
259	SLU 1	19	-41	3278	6.94	-1.71	-1.63
259	SLU 2	18	-24	3277	6.32	-1.69	-1.41
259	SLU 3	19	-41	3278	6.94	-1.71	-1.63
259	SLU 4	19	-31	3277	6.57	-1.7	-1.5
259	SLU 5	18	-24	3277	6.32	-1.69	-1.41
259	SLU 6	19	-41	3278	6.94	-1.71	-1.63
259	SLU 7	19	-31	3277	6.57	-1.7	-1.5
259	SLU 8	19	-41	3278	6.94	-1.71	-1.63
259	SLU 9	19	-31	3277	6.57	-1.7	-1.5
259	SLU 10	17	-33	3858	7.11	-1.78	-1.79
259	SLU 11	18	-49	3860	7.73	-1.8	-2
259	SLU 12	18	-39	3859	7.36	-1.79	-1.87
259	SLU 13	17	-33	3858	7.11	-1.78	-1.79
259	SLU 14	18	-49	3860	7.73	-1.8	-2
259	SLU 15	18	-39	3859	7.36	-1.79	-1.87
259	SLU 16	18	-49	3860	7.73	-1.8	-2
259	SLU 17	18	-39	3859	7.36	-1.79	-1.87
259	SLU 18	17	-53	4109	8.07	-1.84	-2.16
259	SLU 19	17	-43	4108	7.7	-1.83	-2.03
259	SLU 20	17	-53	4109	8.07	-1.84	-2.16
259	SLU 21	17	-43	4108	7.7	-1.83	-2.03
259	SLU 22	18	-47	3718	7.65	-1.79	-1.9
259	SLU 23	18	-30	3716	7.02	-1.77	-1.69
259	SLU 24	18	-47	3718	7.65	-1.79	-1.9
259	SLU 25	18	-37	3717	7.27	-1.78	-1.77
259	SLU 26	18	-30	3716	7.02	-1.77	-1.69
259	SLU 27	18	-47	3718	7.65	-1.79	-1.9
259	SLU 28	18	-37	3717	7.27	-1.78	-1.77
259	SLU 29	18	-47	3718	7.65	-1.79	-1.9
259	SLU 30	18	-37	3717	7.27	-1.78	-1.77
259	SLU 31	17	-39	4298	7.81	-1.87	-2.06
259	SLU 32	18	-56	4299	8.44	-1.88	-2.27
259	SLU 33	17	-46	4298	8.06	-1.87	-2.15
259	SLU 34	17	-39	4298	7.81	-1.87	-2.06
259	SLU 35	18	-56	4299	8.44	-1.88	-2.27
259	SLU 36	17	-46	4298	8.06	-1.87	-2.15
259	SLU 37	18	-56	4299	8.44	-1.88	-2.27
259	SLU 38	17	-46	4298	8.06	-1.87	-2.15
259	SLU 39	17	-59	4549	8.78	-1.92	-2.43
259	SLU 40	17	-49	4548	8.4	-1.91	-2.3
259	SLU 41	17	-59	4549	8.78	-1.92	-2.43
259	SLU 42	17	-49	4548	8.4	-1.91	-2.3
259	SLU 43	25	-51	4111	8.78	-2.19	-2.02
259	SLU 44	24	-34	4110	8.16	-2.17	-1.81
259	SLU 45	25	-51	4111	8.78	-2.19	-2.02
259	SLU 46	24	-41	4110	8.41	-2.18	-1.89
259	SLU 47	24	-34	4110	8.16	-2.17	-1.81
259	SLU 48	25	-51	4111	8.78	-2.19	-2.02
259	SLU 49	24	-41	4110	8.41	-2.18	-1.89
259	SLU 50	25	-51	4111	8.78	-2.19	-2.02
259	SLU 51	24	-41	4110	8.41	-2.18	-1.89
259	SLU 52	23	-43	4691	8.95	-2.27	-2.18
259	SLU 53	24	-60	4693	9.58	-2.28	-2.39

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
259	SLU 54	23	-50	4692	9.2	-2.27	-2.27
259	SLU 55	23	-43	4691	8.95	-2.27	-2.18
259	SLU 56	24	-60	4693	9.58	-2.28	-2.39
259	SLU 57	23	-50	4692	9.2	-2.27	-2.27
259	SLU 58	24	-60	4693	9.58	-2.28	-2.39
259	SLU 59	23	-50	4692	9.2	-2.27	-2.27
259	SLU 60	23	-63	4942	9.92	-2.32	-2.55
259	SLU 61	23	-53	4941	9.54	-2.31	-2.42
259	SLU 62	23	-63	4942	9.92	-2.32	-2.55
259	SLU 63	23	-53	4941	9.54	-2.31	-2.42
259	SLU 64	24	-58	4550	9.49	-2.27	-2.29
259	SLU 65	24	-41	4549	8.86	-2.26	-2.08
259	SLU 66	24	-58	4550	9.49	-2.27	-2.29
259	SLU 67	24	-47	4549	9.11	-2.26	-2.17
259	SLU 68	24	-41	4549	8.86	-2.26	-2.08
259	SLU 69	24	-58	4550	9.49	-2.27	-2.29
259	SLU 70	24	-47	4549	9.11	-2.26	-2.17
259	SLU 71	24	-58	4550	9.49	-2.27	-2.29
259	SLU 72	24	-47	4549	9.11	-2.26	-2.17
259	SLU 73	23	-49	5131	9.65	-2.35	-2.45
259	SLU 74	23	-66	5132	10.28	-2.37	-2.67
259	SLU 75	23	-56	5131	9.9	-2.36	-2.54
259	SLU 76	23	-49	5131	9.65	-2.35	-2.45
259	SLU 77	23	-66	5132	10.28	-2.37	-2.67
259	SLU 78	23	-56	5131	9.9	-2.36	-2.54
259	SLU 79	23	-66	5132	10.28	-2.37	-2.67
259	SLU 80	23	-56	5131	9.9	-2.36	-2.54
259	SLU 81	23	-69	5381	10.62	-2.41	-2.83
259	SLU 82	23	-59	5380	10.24	-2.4	-2.7
259	SLU 83	23	-69	5381	10.62	-2.41	-2.83
259	SLU 84	23	-59	5380	10.24	-2.4	-2.7
259	SLE RA 1	19	-43	3404	7.14	-1.73	-1.7
259	SLE RA 2	18	-32	3403	6.73	-1.72	-1.56
259	SLE RA 3	19	-43	3404	7.14	-1.73	-1.7
259	SLE RA 4	19	-36	3403	6.89	-1.72	-1.62
259	SLE RA 5	18	-32	3403	6.73	-1.72	-1.56
259	SLE RA 6	19	-43	3404	7.14	-1.73	-1.7
259	SLE RA 7	19	-36	3403	6.89	-1.72	-1.62
259	SLE RA 8	19	-43	3404	7.14	-1.73	-1.7
259	SLE RA 9	19	-36	3403	6.89	-1.72	-1.62
259	SLE RA 10	18	-37	3791	7.25	-1.78	-1.81
259	SLE RA 11	18	-48	3792	7.67	-1.79	-1.95
259	SLE RA 12	18	-42	3791	7.42	-1.79	-1.87
259	SLE RA 13	18	-37	3791	7.25	-1.78	-1.81
259	SLE RA 14	18	-48	3792	7.67	-1.79	-1.95
259	SLE RA 15	18	-42	3791	7.42	-1.79	-1.87
259	SLE RA 16	18	-48	3792	7.67	-1.79	-1.95
259	SLE RA 17	18	-42	3791	7.42	-1.79	-1.87
259	SLE RA 18	18	-51	3958	7.9	-1.82	-2.06
259	SLE RA 19	18	-44	3957	7.65	-1.81	-1.97
259	SLE RA 20	18	-51	3958	7.9	-1.82	-2.06
259	SLE RA 21	18	-44	3957	7.65	-1.81	-1.97
259	SLE FR 1	19	-43	3404	7.14	-1.73	-1.7
259	SLE FR 2	19	-41	3404	7.06	-1.73	-1.68
259	SLE FR 3	19	-43	3404	7.14	-1.73	-1.7
259	SLE FR 4	18	-43	3570	7.29	-1.76	-1.78
259	SLE FR 5	18	-45	3570	7.37	-1.76	-1.81
259	SLE FR 6	18	-47	3681	7.52	-1.78	-1.88
259	SLE QP 1	19	-43	3404	7.14	-1.73	-1.7
259	SLE QP 2	18	-45	3570	7.37	-1.76	-1.81
259	SLD 1	243	-9	3085	4.6	-0.1	-0.64
259	SLD 2	241	44	3080	4.31	-0.07	0.34
259	SLD 3	246	-189	3127	12.77	-0.26	-2.9
259	SLD 4	244	-136	3122	12.48	-0.22	-1.93
259	SLD 5	81	219	3363	-5.74	-1.04	1.61
259	SLD 6	79	274	3358	-6.03	-1	2.62
259	SLD 7	93	-381	3502	21.48	-1.56	-5.93
259	SLD 8	91	-326	3497	21.18	-1.52	-4.92
259	SLD 9	-54	235	3643	-6.44	-2	1.29
259	SLD 10	-56	290	3638	-6.74	-1.96	2.31
259	SLD 11	-42	-364	3782	20.77	-2.51	-6.25
259	SLD 12	-44	-309	3777	20.47	-2.47	-5.23
259	SLD 13	-207	45	4018	2.26	-3.3	-1.7
259	SLD 14	-209	98	4013	1.97	-3.26	-0.72
259	SLD 15	-204	-135	4060	10.43	-3.45	-3.96
259	SLD 16	-206	-82	4055	10.14	-3.41	-2.98
259	SLV 1	531	37	2463	1.12	2.02	0.86
259	SLV 2	526	157	2451	0.46	2.11	3.08
259	SLV 3	539	-371	2557	19.65	1.67	-4.28
259	SLV 4	534	-251	2545	18.99	1.76	-2.05
259	SLV 5	162	554	3098	-22.37	-0.12	5.97
259	SLV 6	157	679	3086	-23.05	-0.03	8.27
259	SLV 7	189	-807	3414	39.4	-1.29	-11.16
259	SLV 8	183	-682	3402	38.72	-1.2	-8.86
259	SLV 9	-146	591	3738	-23.98	-2.31	5.24
259	SLV 10	-152	716	3726	-24.66	-2.22	7.54

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
259	SLV 11	-120	-770	4054	37.79	-3.48	-11.89
259	SLV 12	-125	-645	4042	37.11	-3.39	-9.59
259	SLV 13	-497	160	4595	-4.25	-5.27	-1.57
259	SLV 14	-502	281	4583	-4.91	-5.18	0.65
259	SLV 15	-489	-248	4689	14.28	-5.62	-6.71
259	SLV 16	-494	-127	4677	13.62	-5.54	-4.48
259	CRTFP Ux+	0	0	0	0	0	0
259	CRTFP Ux-	0	0	0	0	0	0
259	CRTFP Uy+	0	0	0	0	0	0
259	CRTFP Uy-	0	0	0	0	0	0
260	SLU 1	16	-43	2858	3.84	78.43	-0.13
260	SLU 2	16	-28	2856	3.3	78.39	-0.4
260	SLU 3	16	-43	2858	3.84	78.43	-0.13
260	SLU 4	16	-34	2857	3.52	78.4	-0.29
260	SLU 5	16	-28	2856	3.3	78.39	-0.4
260	SLU 6	16	-43	2858	3.84	78.43	-0.13
260	SLU 7	16	-34	2857	3.52	78.4	-0.29
260	SLU 8	16	-43	2858	3.84	78.43	-0.13
260	SLU 9	16	-34	2857	3.52	78.4	-0.29
260	SLU 10	15	-36	3358	3.61	92.3	-0.46
260	SLU 11	15	-52	3360	4.15	92.34	-0.19
260	SLU 12	15	-43	3359	3.82	92.32	-0.35
260	SLU 13	15	-36	3358	3.61	92.3	-0.46
260	SLU 14	15	-52	3360	4.15	92.34	-0.19
260	SLU 15	15	-43	3359	3.82	92.32	-0.35
260	SLU 16	15	-52	3360	4.15	92.34	-0.19
260	SLU 17	15	-43	3359	3.82	92.32	-0.35
260	SLU 18	15	-56	3575	4.28	98.3	-0.21
260	SLU 19	15	-46	3574	3.96	98.28	-0.37
260	SLU 20	15	-56	3575	4.28	98.3	-0.21
260	SLU 21	15	-46	3574	3.96	98.28	-0.37
260	SLU 22	16	-50	3237	4.16	88.93	-0.17
260	SLU 23	16	-34	3235	3.62	88.9	-0.44
260	SLU 24	16	-50	3237	4.16	88.93	-0.17
260	SLU 25	16	-40	3236	3.84	88.91	-0.33
260	SLU 26	16	-34	3235	3.62	88.9	-0.44
260	SLU 27	16	-50	3237	4.16	88.93	-0.17
260	SLU 28	16	-40	3236	3.84	88.91	-0.33
260	SLU 29	16	-50	3237	4.16	88.93	-0.17
260	SLU 30	16	-40	3236	3.84	88.91	-0.33
260	SLU 31	15	-43	3737	3.93	102.81	-0.5
260	SLU 32	15	-59	3739	4.47	102.85	-0.23
260	SLU 33	15	-49	3738	4.14	102.82	-0.39
260	SLU 34	15	-43	3737	3.93	102.81	-0.5
260	SLU 35	15	-59	3739	4.47	102.85	-0.23
260	SLU 36	15	-49	3738	4.14	102.82	-0.39
260	SLU 37	15	-59	3739	4.47	102.85	-0.23
260	SLU 38	15	-49	3738	4.14	102.82	-0.39
260	SLU 39	15	-62	3954	4.6	108.81	-0.25
260	SLU 40	15	-53	3953	4.28	108.79	-0.41
260	SLU 41	15	-62	3954	4.6	108.81	-0.25
260	SLU 42	15	-53	3953	4.28	108.79	-0.41
260	SLU 43	21	-54	3585	4.88	98.35	-0.16
260	SLU 44	21	-38	3583	4.34	98.32	-0.43
260	SLU 45	21	-54	3585	4.88	98.35	-0.16
260	SLU 46	21	-45	3584	4.56	98.33	-0.32
260	SLU 47	21	-38	3583	4.34	98.32	-0.43
260	SLU 48	21	-54	3585	4.88	98.35	-0.16
260	SLU 49	21	-45	3584	4.56	98.33	-0.32
260	SLU 50	21	-54	3585	4.88	98.35	-0.16
260	SLU 51	21	-45	3584	4.56	98.33	-0.32
260	SLU 52	20	-47	4085	4.65	112.23	-0.48
260	SLU 53	20	-63	4087	5.19	112.27	-0.22
260	SLU 54	20	-53	4086	4.87	112.24	-0.38
260	SLU 55	20	-47	4085	4.65	112.23	-0.48
260	SLU 56	20	-63	4087	5.19	112.27	-0.22
260	SLU 57	20	-53	4086	4.87	112.24	-0.38
260	SLU 58	20	-63	4087	5.19	112.27	-0.22
260	SLU 59	20	-53	4086	4.87	112.24	-0.38
260	SLU 60	20	-66	4302	5.32	118.23	-0.24
260	SLU 61	20	-57	4301	5	118.21	-0.4
260	SLU 62	20	-66	4302	5.32	118.23	-0.24
260	SLU 63	20	-57	4301	5	118.21	-0.4
260	SLU 64	21	-60	3964	5.2	108.86	-0.2
260	SLU 65	21	-45	3962	4.66	108.82	-0.47
260	SLU 66	21	-60	3964	5.2	108.86	-0.2
260	SLU 67	21	-51	3963	4.88	108.84	-0.36
260	SLU 68	21	-45	3962	4.66	108.82	-0.47
260	SLU 69	21	-60	3964	5.2	108.86	-0.2
260	SLU 70	21	-51	3963	4.88	108.84	-0.36
260	SLU 71	21	-60	3964	5.2	108.86	-0.2
260	SLU 72	21	-51	3963	4.88	108.84	-0.36
260	SLU 73	20	-54	4464	4.97	122.74	-0.52
260	SLU 74	20	-69	4466	5.51	122.77	-0.26
260	SLU 75	20	-60	4465	5.19	122.75	-0.42
260	SLU 76	20	-54	4464	4.97	122.74	-0.52

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
260	SLU 77	20	-69	4466	5.51	122.77	-0.26
260	SLU 78	20	-60	4465	5.19	122.75	-0.42
260	SLU 79	20	-69	4466	5.51	122.77	-0.26
260	SLU 80	20	-60	4465	5.19	122.75	-0.42
260	SLU 81	20	-73	4681	5.64	128.74	-0.28
260	SLU 82	20	-64	4680	5.32	128.71	-0.44
260	SLU 83	20	-73	4681	5.64	128.74	-0.28
260	SLU 84	20	-64	4680	5.32	128.71	-0.44
260	SLE RA 1	16	-45	2966	3.93	81.43	-0.14
260	SLE RA 2	16	-35	2965	3.57	81.4	-0.32
260	SLE RA 3	16	-45	2966	3.93	81.43	-0.14
260	SLE RA 4	16	-39	2965	3.72	81.41	-0.25
260	SLE RA 5	16	-35	2965	3.57	81.4	-0.32
260	SLE RA 6	16	-45	2966	3.93	81.43	-0.14
260	SLE RA 7	16	-39	2965	3.72	81.41	-0.25
260	SLE RA 8	16	-45	2966	3.93	81.43	-0.14
260	SLE RA 9	16	-39	2965	3.72	81.41	-0.25
260	SLE RA 10	15	-41	3299	3.78	90.68	-0.36
260	SLE RA 11	16	-51	3301	4.14	90.7	-0.18
260	SLE RA 12	16	-45	3300	3.92	90.69	-0.29
260	SLE RA 13	15	-41	3299	3.78	90.68	-0.36
260	SLE RA 14	16	-51	3301	4.14	90.7	-0.18
260	SLE RA 15	16	-45	3300	3.92	90.69	-0.29
260	SLE RA 16	16	-51	3301	4.14	90.7	-0.18
260	SLE RA 17	16	-45	3300	3.92	90.69	-0.29
260	SLE RA 18	15	-53	3444	4.22	94.68	-0.2
260	SLE RA 19	15	-47	3443	4.01	94.66	-0.31
260	SLE RA 20	15	-53	3444	4.22	94.68	-0.2
260	SLE RA 21	15	-47	3443	4.01	94.66	-0.31
260	SLE FR 1	16	-45	2966	3.93	81.43	-0.14
260	SLE FR 2	16	-43	2966	3.86	81.42	-0.18
260	SLE FR 3	16	-45	2966	3.93	81.43	-0.14
260	SLE FR 4	16	-45	3109	3.95	85.4	-0.2
260	SLE FR 5	16	-48	3109	4.02	85.4	-0.16
260	SLE FR 6	16	-49	3205	4.08	88.05	-0.17
260	SLE QP 1	16	-45	2966	3.93	81.43	-0.14
260	SLE QP 2	16	-48	3109	4.02	85.4	-0.16
260	SLD 1	210	-15	2653	1.92	73.8	-0.11
260	SLD 2	208	35	2647	1.67	73.67	-0.72
260	SLD 3	213	-180	2693	9.06	74.78	2.75
260	SLD 4	211	-130	2687	8.82	74.66	2.14
260	SLD 5	70	195	2914	-7.36	80.48	-4.26
260	SLD 6	68	247	2908	-7.61	80.35	-4.9
260	SLD 7	80	-357	3047	16.46	83.75	5.28
260	SLD 8	78	-305	3041	16.2	83.62	4.65
260	SLD 9	-46	209	3178	-8.16	87.18	-4.97
260	SLD 10	-48	261	3172	-8.42	87.06	-5.6
260	SLD 11	-36	-342	3310	15.65	90.46	4.58
260	SLD 12	-38	-290	3305	15.39	90.33	3.94
260	SLD 13	-179	35	3532	-0.78	96.15	-2.46
260	SLD 14	-181	85	3526	-1.02	96.03	-3.07
260	SLD 15	-176	-130	3572	6.36	97.13	0.4
260	SLD 16	-178	-80	3566	6.12	97.01	-0.21
260	SLV 1	458	26	2067	-0.73	58.9	-0.03
260	SLV 2	454	140	2054	-1.28	58.62	-1.43
260	SLV 3	465	-349	2157	15.49	61.13	6.47
260	SLV 4	461	-235	2145	14.93	60.85	5.08
260	SLV 5	140	502	2664	-21.8	74.18	-9.47
260	SLV 6	135	620	2652	-22.37	73.89	-10.91
260	SLV 7	163	-749	2965	32.26	81.6	12.2
260	SLV 8	158	-631	2952	31.68	81.31	10.76
260	SLV 9	-126	536	3267	-23.65	89.5	-11.08
260	SLV 10	-131	654	3254	-24.22	89.21	-12.52
260	SLV 11	-103	-715	3567	30.41	96.92	10.59
260	SLV 12	-108	-597	3555	29.83	96.63	9.15
260	SLV 13	-429	140	4074	-6.9	109.96	-5.4
260	SLV 14	-433	254	4062	-7.45	109.68	-6.79
260	SLV 15	-422	-235	4165	9.32	112.19	1.11
260	SLV 16	-426	-121	4152	8.76	111.91	-0.29
260	CRTFP Ux+	0	0	0	0	0	0
260	CRTFP Ux-	0	0	0	0	0	0
260	CRTFP Uy+	0	0	0	0	0	0
260	CRTFP Uy-	0	0	0	0	0	0
262	SLU 1	35	-86	5214	898.18	1004.61	9.02
262	SLU 2	34	-57	5209	896.72	1003.57	3.59
262	SLU 3	35	-86	5214	898.18	1004.61	9.02
262	SLU 4	34	-69	5211	897.31	1003.99	5.76
262	SLU 5	34	-57	5209	896.72	1003.57	3.59
262	SLU 6	35	-86	5214	898.18	1004.61	9.02
262	SLU 7	34	-69	5211	897.31	1003.99	5.76
262	SLU 8	35	-86	5214	898.18	1004.61	9.02
262	SLU 9	34	-69	5211	897.31	1003.99	5.76
262	SLU 10	33	-75	6118	1052.54	1179.87	6.72
262	SLU 11	34	-104	6123	1054	1180.91	12.14
262	SLU 12	34	-87	6120	1053.12	1180.28	8.89
262	SLU 13	33	-75	6118	1052.54	1179.87	6.72

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
262	SLU 14	34	-104	6123	1054	1180.91	12.14
262	SLU 15	34	-87	6120	1053.12	1180.28	8.89
262	SLU 16	34	-104	6123	1054	1180.91	12.14
262	SLU 17	34	-87	6120	1053.12	1180.28	8.89
262	SLU 18	34	-112	6512	1120.78	1256.47	13.48
262	SLU 19	33	-94	6509	1119.9	1255.84	10.23
262	SLU 20	34	-112	6512	1120.78	1256.47	13.48
262	SLU 21	33	-94	6509	1119.9	1255.84	10.23
262	SLU 22	35	-100	5901	1016.14	1137.86	11.25
262	SLU 23	34	-70	5896	1014.68	1136.81	5.83
262	SLU 24	35	-100	5901	1016.14	1137.86	11.25
262	SLU 25	34	-82	5898	1015.26	1137.23	8
262	SLU 26	34	-70	5896	1014.68	1136.81	5.83
262	SLU 27	35	-100	5901	1016.14	1137.86	11.25
262	SLU 28	34	-82	5898	1015.26	1137.23	8
262	SLU 29	35	-100	5901	1016.14	1137.86	11.25
262	SLU 30	34	-82	5898	1015.26	1137.23	8
262	SLU 31	33	-88	6805	1170.49	1313.11	8.95
262	SLU 32	35	-117	6810	1171.95	1314.16	14.38
262	SLU 33	34	-100	6807	1171.08	1313.53	11.12
262	SLU 34	33	-88	6805	1170.49	1313.11	8.95
262	SLU 35	35	-117	6810	1171.95	1314.16	14.38
262	SLU 36	34	-100	6807	1171.08	1313.53	11.12
262	SLU 37	35	-117	6810	1171.95	1314.16	14.38
262	SLU 38	34	-100	6807	1171.08	1313.53	11.12
262	SLU 39	34	-125	7199	1238.73	1389.71	15.71
262	SLU 40	34	-107	7196	1237.85	1389.09	12.46
262	SLU 41	34	-125	7199	1238.73	1389.71	15.71
262	SLU 42	34	-107	7196	1237.85	1389.09	12.46
262	SLU 43	45	-108	6543	1127.19	1260.31	10.96
262	SLU 44	44	-79	6538	1125.74	1259.27	5.53
262	SLU 45	45	-108	6543	1127.19	1260.31	10.96
262	SLU 46	44	-90	6540	1126.32	1259.69	7.7
262	SLU 47	44	-79	6538	1125.74	1259.27	5.53
262	SLU 48	45	-108	6543	1127.19	1260.31	10.96
262	SLU 49	44	-90	6540	1126.32	1259.69	7.7
262	SLU 50	45	-108	6543	1127.19	1260.31	10.96
262	SLU 51	44	-90	6540	1126.32	1259.69	7.7
262	SLU 52	43	-96	7446	1281.55	1435.57	8.66
262	SLU 53	45	-126	7451	1283.01	1436.61	14.08
262	SLU 54	44	-108	7448	1282.13	1435.98	10.83
262	SLU 55	43	-96	7446	1281.55	1435.57	8.66
262	SLU 56	45	-126	7451	1283.01	1436.61	14.08
262	SLU 57	44	-108	7448	1282.13	1435.98	10.83
262	SLU 58	45	-126	7451	1283.01	1436.61	14.08
262	SLU 59	44	-108	7448	1282.13	1435.98	10.83
262	SLU 60	44	-133	7841	1349.79	1512.17	15.42
262	SLU 61	44	-116	7838	1348.91	1511.54	12.17
262	SLU 62	44	-133	7841	1349.79	1512.17	15.42
262	SLU 63	44	-116	7838	1348.91	1511.54	12.17
262	SLU 64	45	-121	7230	1245.15	1393.56	13.19
262	SLU 65	44	-92	7225	1243.69	1392.51	7.77
262	SLU 66	45	-121	7230	1245.15	1393.56	13.19
262	SLU 67	45	-103	7227	1244.27	1392.93	9.94
262	SLU 68	44	-92	7225	1243.69	1392.51	7.77
262	SLU 69	45	-121	7230	1245.15	1393.56	13.19
262	SLU 70	45	-103	7227	1244.27	1392.93	9.94
262	SLU 71	45	-121	7230	1245.15	1393.56	13.19
262	SLU 72	45	-103	7227	1244.27	1392.93	9.94
262	SLU 73	44	-110	8134	1399.51	1568.81	10.89
262	SLU 74	45	-139	8138	1400.96	1569.86	16.31
262	SLU 75	44	-121	8136	1400.09	1569.23	13.06
262	SLU 76	44	-110	8134	1399.51	1568.81	10.89
262	SLU 77	45	-139	8138	1400.96	1569.86	16.31
262	SLU 78	44	-121	8136	1400.09	1569.23	13.06
262	SLU 79	45	-139	8138	1400.96	1569.86	16.31
262	SLU 80	44	-121	8136	1400.09	1569.23	13.06
262	SLU 81	45	-146	8528	1467.74	1645.41	17.65
262	SLU 82	44	-129	8525	1466.87	1644.79	14.4
262	SLU 83	45	-146	8528	1467.74	1645.41	17.65
262	SLU 84	44	-129	8525	1466.87	1644.79	14.4
262	SLE RA 1	35	-90	5411	931.88	1042.68	9.65
262	SLE RA 2	34	-71	5407	930.91	1041.99	6.04
262	SLE RA 3	35	-90	5411	931.88	1042.68	9.65
262	SLE RA 4	34	-78	5409	931.3	1042.26	7.49
262	SLE RA 5	34	-71	5407	930.91	1041.99	6.04
262	SLE RA 6	35	-90	5411	931.88	1042.68	9.65
262	SLE RA 7	34	-78	5409	931.3	1042.26	7.49
262	SLE RA 8	35	-90	5411	931.88	1042.68	9.65
262	SLE RA 9	34	-78	5409	931.3	1042.26	7.49
262	SLE RA 10	34	-83	6013	1034.79	1159.52	8.12
262	SLE RA 11	34	-102	6016	1035.76	1160.22	11.74
262	SLE RA 12	34	-90	6014	1035.18	1159.8	9.57
262	SLE RA 13	34	-83	6013	1034.79	1159.52	8.12
262	SLE RA 14	34	-102	6016	1035.76	1160.22	11.74
262	SLE RA 15	34	-90	6014	1035.18	1159.8	9.57

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
262	SLE RA 16	34	-102	6016	1035.76	1160.22	11.74
262	SLE RA 17	34	-90	6014	1035.18	1159.8	9.57
262	SLE RA 18	34	-107	6276	1080.28	1210.59	12.63
262	SLE RA 19	34	-95	6274	1079.7	1210.17	10.46
262	SLE RA 20	34	-107	6276	1080.28	1210.59	12.63
262	SLE RA 21	34	-95	6274	1079.7	1210.17	10.46
262	SLE FR 1	35	-90	5411	931.88	1042.68	9.65
262	SLE FR 2	35	-86	5410	931.69	1042.54	8.93
262	SLE FR 3	35	-90	5411	931.88	1042.68	9.65
262	SLE FR 4	34	-91	5669	976.21	1092.91	9.82
262	SLE FR 5	35	-95	5670	976.4	1093.05	10.55
262	SLE FR 6	35	-99	5843	1006.08	1126.63	11.14
262	SLE QP 1	35	-90	5411	931.88	1042.68	9.65
262	SLE QP 2	35	-95	5670	976.4	1093.05	10.55
262	SLD 1	385	-35	4796	825.63	932.26	-62.28
262	SLD 2	378	61	4785	823.49	929.77	-78.96
262	SLD 3	392	-344	4887	850	950.04	-3.24
262	SLD 4	385	-249	4875	847.86	947.55	-19.92
262	SLD 5	131	357	5275	895	1018.77	-94.7
262	SLD 6	124	456	5263	892.78	1016.19	-112.01
262	SLD 7	155	-675	5576	976.23	1078.03	102.11
262	SLD 8	148	-576	5565	974.01	1075.45	84.81
262	SLD 9	-79	385	5776	978.8	1110.66	-63.71
262	SLD 10	-86	484	5764	976.57	1108.08	-81.02
262	SLD 11	-55	-647	6077	1060.02	1169.92	133.1
262	SLD 12	-62	-548	6065	1057.8	1167.34	115.79
262	SLD 13	-316	59	6465	1104.94	1238.56	41.01
262	SLD 14	-323	154	6454	1102.8	1236.07	24.34
262	SLD 15	-309	-251	6555	1129.31	1256.34	100.06
262	SLD 16	-315	-156	6544	1127.17	1253.85	83.38
262	SLV 1	834	40	3675	632.25	725.95	-155.42
262	SLV 2	819	258	3649	627.37	720.28	-193.44
262	SLV 3	851	-663	3880	687.53	766.27	-21.37
262	SLV 4	836	-445	3854	682.65	760.61	-59.39
262	SLV 5	255	932	4770	791.11	923.84	-228.6
262	SLV 6	239	1157	4743	786.06	917.98	-267.89
262	SLV 7	310	-1412	5454	975.37	1058.26	218.22
262	SLV 8	295	-1187	5427	970.33	1052.4	178.92
262	SLV 9	-225	996	5913	982.48	1133.71	-157.82
262	SLV 10	-241	1221	5886	977.43	1127.85	-197.12
262	SLV 11	-170	-1347	6597	1166.74	1268.12	288.99
262	SLV 12	-185	-1122	6570	1161.7	1262.27	249.69
262	SLV 13	-766	254	7486	1270.15	1425.5	80.49
262	SLV 14	-782	472	7460	1265.27	1419.83	42.47
262	SLV 15	-750	-449	7691	1325.43	1465.83	214.53
262	SLV 16	-765	-231	7665	1320.55	1460.16	176.51
262	CRTFP Ux+	0	0	0	0.01	0.01	0
262	CRTFP Ux-	0	0	0	-0.01	-0.01	0
262	CRTFP Uy+	0	0	0	0	0	0
262	CRTFP Uy-	0	0	0	0	0	0
297	SLU 1	-14	-12	1351	37.53	-266.11	-2.23
297	SLU 2	-14	-4	1350	37.48	-266.26	-0.64
297	SLU 3	-14	-12	1351	37.53	-266.11	-2.23
297	SLU 4	-14	-7	1350	37.5	-266.2	-1.28
297	SLU 5	-14	-4	1350	37.48	-266.26	-0.64
297	SLU 6	-14	-12	1351	37.53	-266.11	-2.23
297	SLU 7	-14	-7	1350	37.5	-266.2	-1.28
297	SLU 8	-14	-12	1351	37.53	-266.11	-2.23
297	SLU 9	-14	-7	1350	37.5	-266.2	-1.28
297	SLU 10	-14	-8	1578	43.79	-311.52	-1.4
297	SLU 11	-15	-15	1579	43.83	-311.36	-2.99
297	SLU 12	-14	-11	1578	43.81	-311.46	-2.03
297	SLU 13	-14	-8	1578	43.79	-311.52	-1.4
297	SLU 14	-15	-15	1579	43.83	-311.36	-2.99
297	SLU 15	-14	-11	1578	43.81	-311.46	-2.03
297	SLU 16	-15	-15	1579	43.83	-311.36	-2.99
297	SLU 17	-14	-11	1578	43.81	-311.46	-2.03
297	SLU 18	-15	-17	1677	46.54	-330.76	-3.31
297	SLU 19	-15	-12	1676	46.51	-330.85	-2.36
297	SLU 20	-15	-17	1677	46.54	-330.76	-3.31
297	SLU 21	-15	-12	1676	46.51	-330.85	-2.36
297	SLU 22	-15	-14	1524	42.31	-300.29	-2.76
297	SLU 23	-14	-7	1523	42.26	-300.44	-1.17
297	SLU 24	-15	-14	1524	42.31	-300.29	-2.76
297	SLU 25	-14	-10	1523	42.28	-300.38	-1.81
297	SLU 26	-14	-7	1523	42.26	-300.44	-1.17
297	SLU 27	-15	-14	1524	42.31	-300.29	-2.76
297	SLU 28	-14	-10	1523	42.28	-300.38	-1.81
297	SLU 29	-15	-14	1524	42.31	-300.29	-2.76
297	SLU 30	-14	-10	1523	42.28	-300.38	-1.81
297	SLU 31	-15	-10	1751	48.57	-345.7	-1.93
297	SLU 32	-15	-18	1752	48.62	-345.55	-3.52
297	SLU 33	-15	-13	1751	48.59	-345.64	-2.56
297	SLU 34	-15	-10	1751	48.57	-345.7	-1.93
297	SLU 35	-15	-18	1752	48.62	-345.55	-3.52
297	SLU 36	-15	-13	1751	48.59	-345.64	-2.56

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
297	SLU 37	-15	-18	1752	48.62	-345.55	-3.52
297	SLU 38	-15	-13	1751	48.59	-345.64	-2.56
297	SLU 39	-16	-19	1849	51.32	-364.94	-3.84
297	SLU 40	-15	-15	1849	51.29	-365.04	-2.89
297	SLU 41	-16	-19	1849	51.32	-364.94	-3.84
297	SLU 42	-15	-15	1849	51.29	-365.04	-2.89
297	SLU 43	-18	-14	1697	47.14	-334.22	-2.72
297	SLU 44	-18	-7	1696	47.1	-334.37	-1.13
297	SLU 45	-18	-14	1697	47.14	-334.22	-2.72
297	SLU 46	-18	-10	1696	47.12	-334.31	-1.76
297	SLU 47	-18	-7	1696	47.1	-334.37	-1.13
297	SLU 48	-18	-14	1697	47.14	-334.22	-2.72
297	SLU 49	-18	-10	1696	47.12	-334.31	-1.76
297	SLU 50	-18	-14	1697	47.14	-334.22	-2.72
297	SLU 51	-18	-10	1696	47.12	-334.31	-1.76
297	SLU 52	-18	-11	1924	53.41	-379.63	-1.89
297	SLU 53	-19	-18	1925	53.45	-379.48	-3.48
297	SLU 54	-18	-13	1924	53.42	-379.57	-2.52
297	SLU 55	-18	-11	1924	53.41	-379.63	-1.89
297	SLU 56	-19	-18	1925	53.45	-379.48	-3.48
297	SLU 57	-18	-13	1924	53.42	-379.57	-2.52
297	SLU 58	-19	-18	1925	53.45	-379.48	-3.48
297	SLU 59	-18	-13	1924	53.42	-379.57	-2.52
297	SLU 60	-19	-19	2023	56.15	-398.87	-3.8
297	SLU 61	-19	-15	2022	56.13	-398.97	-2.85
297	SLU 62	-19	-19	2023	56.15	-398.87	-3.8
297	SLU 63	-19	-15	2022	56.13	-398.97	-2.85
297	SLU 64	-19	-17	1870	51.93	-368.4	-3.25
297	SLU 65	-18	-10	1869	51.88	-368.55	-1.66
297	SLU 66	-19	-17	1870	51.93	-368.4	-3.25
297	SLU 67	-18	-12	1869	51.9	-368.49	-2.29
297	SLU 68	-18	-10	1869	51.88	-368.55	-1.66
297	SLU 69	-19	-17	1870	51.93	-368.4	-3.25
297	SLU 70	-18	-12	1869	51.9	-368.49	-2.29
297	SLU 71	-19	-17	1870	51.93	-368.4	-3.25
297	SLU 72	-18	-12	1869	51.9	-368.49	-2.29
297	SLU 73	-19	-13	2097	58.19	-413.81	-2.42
297	SLU 74	-19	-20	2098	58.23	-413.66	-4.01
297	SLU 75	-19	-16	2097	58.21	-413.75	-3.05
297	SLU 76	-19	-13	2097	58.19	-413.81	-2.42
297	SLU 77	-19	-20	2098	58.23	-413.66	-4.01
297	SLU 78	-19	-16	2097	58.21	-413.75	-3.05
297	SLU 79	-19	-20	2098	58.23	-413.66	-4.01
297	SLU 80	-19	-16	2097	58.21	-413.75	-3.05
297	SLU 81	-20	-22	2195	60.94	-433.06	-4.33
297	SLU 82	-19	-17	2195	60.91	-433.15	-3.38
297	SLU 83	-20	-22	2195	60.94	-433.06	-4.33
297	SLU 84	-19	-17	2195	60.91	-433.15	-3.38
297	SLE RA 1	-14	-12	1400	38.89	-275.87	-2.38
297	SLE RA 2	-14	-8	1400	38.86	-275.98	-1.32
297	SLE RA 3	-14	-12	1400	38.89	-275.87	-2.38
297	SLE RA 4	-14	-9	1400	38.87	-275.93	-1.75
297	SLE RA 5	-14	-8	1400	38.86	-275.98	-1.32
297	SLE RA 6	-14	-12	1400	38.89	-275.87	-2.38
297	SLE RA 7	-14	-9	1400	38.87	-275.93	-1.75
297	SLE RA 8	-14	-12	1400	38.89	-275.87	-2.38
297	SLE RA 9	-14	-9	1400	38.87	-275.93	-1.75
297	SLE RA 10	-14	-10	1552	43.07	-306.15	-1.83
297	SLE RA 11	-15	-15	1552	43.1	-306.04	-2.89
297	SLE RA 12	-14	-12	1552	43.08	-306.11	-2.25
297	SLE RA 13	-14	-10	1552	43.07	-306.15	-1.83
297	SLE RA 14	-15	-15	1552	43.1	-306.04	-2.89
297	SLE RA 15	-14	-12	1552	43.08	-306.11	-2.25
297	SLE RA 16	-15	-15	1552	43.1	-306.04	-2.89
297	SLE RA 17	-14	-12	1552	43.08	-306.11	-2.25
297	SLE RA 18	-15	-16	1617	44.9	-318.98	-3.1
297	SLE RA 19	-15	-13	1617	44.88	-319.04	-2.47
297	SLE RA 20	-15	-16	1617	44.9	-318.98	-3.1
297	SLE RA 21	-15	-13	1617	44.88	-319.04	-2.47
297	SLE FR 1	-14	-12	1400	38.89	-275.87	-2.38
297	SLE FR 2	-14	-11	1400	38.89	-275.89	-2.17
297	SLE FR 3	-14	-12	1400	38.89	-275.87	-2.38
297	SLE FR 4	-14	-12	1465	40.69	-288.82	-2.39
297	SLE FR 5	-14	-13	1465	40.69	-288.8	-2.6
297	SLE FR 6	-15	-14	1509	41.9	-297.42	-2.74
297	SLE QP 1	-14	-12	1400	38.89	-275.87	-2.38
297	SLE QP 2	-14	-13	1465	40.69	-288.8	-2.6
297	SLD 1	76	49	1659	45.93	-324.75	7.77
297	SLD 2	74	25	1661	45.98	-324.89	2.52
297	SLD 3	71	-30	1678	46.67	-326.15	-9.82
297	SLD 4	69	-54	1680	46.72	-326.29	-15.08
297	SLD 5	22	134	1494	41.14	-297.42	29.14
297	SLD 6	19	109	1496	41.19	-297.56	23.69
297	SLD 7	4	-130	1558	43.58	-302.08	-29.52
297	SLD 8	2	-154	1559	43.63	-302.22	-34.97
297	SLD 9	-30	128	1372	37.76	-275.39	29.78

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
297	SLD 10	-33	103	1373	37.81	-275.53	24.32
297	SLD 11	-48	-136	1435	40.2	-280.05	-28.88
297	SLD 12	-51	-161	1437	40.25	-280.19	-34.34
297	SLD 13	-97	27	1251	34.67	-251.32	9.88
297	SLD 14	-100	4	1253	34.72	-251.46	4.63
297	SLD 15	-102	-52	1270	35.41	-252.72	-7.71
297	SLD 16	-105	-76	1272	35.46	-252.85	-12.97
297	SLV 1	193	128	1908	52.66	-370.91	20.95
297	SLV 2	187	74	1911	52.78	-371.22	8.96
297	SLV 3	181	-51	1951	54.33	-374.1	-19.01
297	SLV 4	175	-106	1954	54.44	-374.41	-31
297	SLV 5	68	321	1532	41.72	-308.49	69.47
297	SLV 6	61	265	1535	41.83	-308.81	57.08
297	SLV 7	29	-277	1676	47.27	-319.11	-63.73
297	SLV 8	22	-333	1679	47.39	-319.43	-76.12
297	SLV 9	-51	307	1252	34	-258.17	70.92
297	SLV 10	-58	251	1255	34.12	-258.5	58.53
297	SLV 11	-90	-292	1396	39.56	-268.8	-62.27
297	SLV 12	-97	-348	1399	39.67	-269.12	-74.66
297	SLV 13	-204	79	976	26.95	-203.2	25.8
297	SLV 14	-210	25	980	27.06	-203.51	13.81
297	SLV 15	-216	-100	1020	28.61	-206.38	-14.16
297	SLV 16	-222	-155	1023	28.73	-206.7	-26.14
297	CRTFP Ux+	0	0	0	0	0	0
297	CRTFP Ux-	0	0	0	0	0	0
297	CRTFP Uy+	0	0	0	0	0	0
297	CRTFP Uy-	0	0	0	0	0	0
299	SLU 1	-16	-13	1568	-0.93	-282.54	-3.04
299	SLU 2	-15	-5	1566	-0.97	-282.84	-1.16
299	SLU 3	-16	-13	1568	-0.93	-282.54	-3.04
299	SLU 4	-16	-8	1567	-0.95	-282.72	-1.92
299	SLU 5	-15	-5	1566	-0.97	-282.84	-1.16
299	SLU 6	-16	-13	1568	-0.93	-282.54	-3.04
299	SLU 7	-16	-8	1567	-0.95	-282.72	-1.92
299	SLU 8	-16	-13	1568	-0.93	-282.54	-3.04
299	SLU 9	-16	-8	1567	-0.95	-282.72	-1.92
299	SLU 10	-16	-9	1829	-1.19	-330.31	-2.07
299	SLU 11	-17	-17	1831	-1.15	-330.01	-3.95
299	SLU 12	-16	-12	1830	-1.17	-330.19	-2.82
299	SLU 13	-16	-9	1829	-1.19	-330.31	-2.07
299	SLU 14	-17	-17	1831	-1.15	-330.01	-3.95
299	SLU 15	-16	-12	1830	-1.17	-330.19	-2.82
299	SLU 16	-17	-17	1831	-1.15	-330.01	-3.95
299	SLU 17	-16	-12	1830	-1.17	-330.19	-2.82
299	SLU 18	-17	-19	1944	-1.25	-350.35	-4.34
299	SLU 19	-17	-14	1943	-1.27	-350.53	-3.21
299	SLU 20	-17	-19	1944	-1.25	-350.35	-4.34
299	SLU 21	-17	-14	1943	-1.27	-350.53	-3.21
299	SLU 22	-17	-16	1768	-1.09	-318.35	-3.68
299	SLU 23	-16	-8	1766	-1.13	-318.66	-1.8
299	SLU 24	-17	-16	1768	-1.09	-318.35	-3.68
299	SLU 25	-16	-11	1767	-1.12	-318.53	-2.55
299	SLU 26	-16	-8	1766	-1.13	-318.66	-1.8
299	SLU 27	-17	-16	1768	-1.09	-318.35	-3.68
299	SLU 28	-16	-11	1767	-1.12	-318.53	-2.55
299	SLU 29	-17	-16	1768	-1.09	-318.35	-3.68
299	SLU 30	-16	-11	1767	-1.12	-318.53	-2.55
299	SLU 31	-17	-12	2029	-1.35	-366.12	-2.71
299	SLU 32	-18	-20	2031	-1.32	-365.82	-4.59
299	SLU 33	-17	-15	2030	-1.34	-366	-3.46
299	SLU 34	-17	-12	2029	-1.35	-366.12	-2.71
299	SLU 35	-18	-20	2031	-1.32	-365.82	-4.59
299	SLU 36	-17	-15	2030	-1.34	-366	-3.46
299	SLU 37	-18	-20	2031	-1.32	-365.82	-4.59
299	SLU 38	-17	-15	2030	-1.34	-366	-3.46
299	SLU 39	-18	-22	2143	-1.41	-386.16	-4.98
299	SLU 40	-18	-17	2142	-1.43	-386.34	-3.85
299	SLU 41	-18	-22	2143	-1.41	-386.16	-4.98
299	SLU 42	-18	-17	2142	-1.43	-386.34	-3.85
299	SLU 43	-20	-16	1970	-1.15	-355.03	-3.74
299	SLU 44	-20	-8	1968	-1.19	-355.33	-1.86
299	SLU 45	-20	-16	1970	-1.15	-355.03	-3.74
299	SLU 46	-20	-11	1969	-1.18	-355.21	-2.61
299	SLU 47	-20	-8	1968	-1.19	-355.33	-1.86
299	SLU 48	-20	-16	1970	-1.15	-355.03	-3.74
299	SLU 49	-20	-11	1969	-1.18	-355.21	-2.61
299	SLU 50	-20	-16	1970	-1.15	-355.03	-3.74
299	SLU 51	-20	-11	1969	-1.18	-355.21	-2.61
299	SLU 52	-21	-12	2231	-1.41	-402.79	-2.76
299	SLU 53	-21	-20	2233	-1.38	-402.49	-4.65
299	SLU 54	-21	-15	2232	-1.4	-402.67	-3.52
299	SLU 55	-21	-12	2231	-1.41	-402.79	-2.76
299	SLU 56	-21	-20	2233	-1.38	-402.49	-4.65
299	SLU 57	-21	-15	2232	-1.4	-402.67	-3.52
299	SLU 58	-21	-20	2233	-1.38	-402.49	-4.65
299	SLU 59	-21	-15	2232	-1.4	-402.67	-3.52

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
299	SLU 60	-22	-22	2346	-1.47	-422.83	-5.03
299	SLU 61	-21	-17	2345	-1.49	-423.01	-3.9
299	SLU 62	-22	-22	2346	-1.47	-422.83	-5.03
299	SLU 63	-21	-17	2345	-1.49	-423.01	-3.9
299	SLU 64	-21	-19	2170	-1.32	-390.84	-4.38
299	SLU 65	-21	-11	2168	-1.35	-391.14	-2.5
299	SLU 66	-21	-19	2170	-1.32	-390.84	-4.38
299	SLU 67	-21	-14	2169	-1.34	-391.02	-3.25
299	SLU 68	-21	-11	2168	-1.35	-391.14	-2.5
299	SLU 69	-21	-19	2170	-1.32	-390.84	-4.38
299	SLU 70	-21	-14	2169	-1.34	-391.02	-3.25
299	SLU 71	-21	-19	2170	-1.32	-390.84	-4.38
299	SLU 72	-21	-14	2169	-1.34	-391.02	-3.25
299	SLU 73	-22	-15	2431	-1.58	-438.6	-3.4
299	SLU 74	-22	-23	2433	-1.54	-438.3	-5.28
299	SLU 75	-22	-18	2432	-1.56	-438.48	-4.15
299	SLU 76	-22	-15	2431	-1.58	-438.6	-3.4
299	SLU 77	-22	-23	2433	-1.54	-438.3	-5.28
299	SLU 78	-22	-18	2432	-1.56	-438.48	-4.15
299	SLU 79	-22	-23	2433	-1.54	-438.3	-5.28
299	SLU 80	-22	-18	2432	-1.56	-438.48	-4.15
299	SLU 81	-23	-25	2546	-1.63	-458.64	-5.67
299	SLU 82	-22	-20	2544	-1.66	-458.82	-4.54
299	SLU 83	-23	-25	2546	-1.63	-458.64	-5.67
299	SLU 84	-22	-20	2544	-1.66	-458.82	-4.54
299	SLE RA 1	-16	-14	1625	-0.98	-292.77	-3.23
299	SLE RA 2	-16	-9	1624	-1	-292.98	-1.97
299	SLE RA 3	-16	-14	1625	-0.98	-292.77	-3.23
299	SLE RA 4	-16	-11	1624	-0.99	-292.89	-2.47
299	SLE RA 5	-16	-9	1624	-1	-292.98	-1.97
299	SLE RA 6	-16	-14	1625	-0.98	-292.77	-3.23
299	SLE RA 7	-16	-11	1624	-0.99	-292.89	-2.47
299	SLE RA 8	-16	-14	1625	-0.98	-292.77	-3.23
299	SLE RA 9	-16	-11	1624	-0.99	-292.89	-2.47
299	SLE RA 10	-16	-11	1799	-1.15	-324.62	-2.58
299	SLE RA 11	-17	-17	1801	-1.13	-324.42	-3.83
299	SLE RA 12	-17	-14	1800	-1.14	-324.54	-3.08
299	SLE RA 13	-16	-11	1799	-1.15	-324.62	-2.58
299	SLE RA 14	-17	-17	1801	-1.13	-324.42	-3.83
299	SLE RA 15	-17	-14	1800	-1.14	-324.54	-3.08
299	SLE RA 16	-17	-17	1801	-1.13	-324.42	-3.83
299	SLE RA 17	-17	-14	1800	-1.14	-324.54	-3.08
299	SLE RA 18	-17	-18	1876	-1.19	-337.98	-4.09
299	SLE RA 19	-17	-15	1875	-1.2	-338.1	-3.34
299	SLE RA 20	-17	-18	1876	-1.19	-337.98	-4.09
299	SLE RA 21	-17	-15	1875	-1.2	-338.1	-3.34
299	SLE FR 1	-16	-14	1625	-0.98	-292.77	-3.23
299	SLE FR 2	-16	-13	1625	-0.98	-292.81	-2.98
299	SLE FR 3	-16	-14	1625	-0.98	-292.77	-3.23
299	SLE FR 4	-16	-14	1700	-1.05	-306.37	-3.24
299	SLE FR 5	-16	-15	1700	-1.04	-306.33	-3.49
299	SLE FR 6	-17	-16	1751	-1.08	-315.37	-3.66
299	SLE QP 1	-16	-14	1625	-0.98	-292.77	-3.23
299	SLE QP 2	-16	-15	1700	-1.04	-306.33	-3.49
299	SLD 1	91	58	1918	-1.45	-344.39	13.01
299	SLD 2	86	30	1920	-1.43	-344.51	6.74
299	SLD 3	83	-35	1950	-1.09	-345.41	-7.92
299	SLD 4	78	-63	1953	-1.07	-345.52	-14.19
299	SLD 5	30	158	1715	-1.72	-316.18	35.53
299	SLD 6	25	129	1717	-1.7	-316.29	29.02
299	SLD 7	3	-152	1824	-0.52	-319.55	-34.26
299	SLD 8	-2	-182	1827	-0.5	-319.67	-40.77
299	SLD 9	-31	151	1574	-1.59	-293	33.79
299	SLD 10	-36	122	1577	-1.57	-293.12	27.29
299	SLD 11	-58	-160	1683	-0.38	-296.38	-36
299	SLD 12	-63	-189	1686	-0.36	-296.49	-42.5
299	SLD 13	-111	33	1448	-1.01	-267.15	7.22
299	SLD 14	-116	4	1450	-0.99	-267.26	0.95
299	SLD 15	-119	-61	1481	-0.65	-268.16	-13.71
299	SLD 16	-124	-89	1483	-0.63	-268.27	-19.98
299	SLV 1	230	152	2197	-1.98	-393.26	34.04
299	SLV 2	218	87	2202	-1.93	-393.52	19.74
299	SLV 3	212	-60	2271	-1.16	-395.58	-13.5
299	SLV 4	200	-124	2276	-1.11	-395.84	-27.8
299	SLV 5	89	379	1735	-2.58	-328.79	85.12
299	SLV 6	78	313	1740	-2.54	-329.06	70.34
299	SLV 7	28	-326	1983	0.15	-336.54	-73.35
299	SLV 8	17	-393	1988	0.2	-336.8	-88.13
299	SLV 9	-49	362	1413	-2.28	-275.87	81.15
299	SLV 10	-61	296	1418	-2.23	-276.13	66.38
299	SLV 11	-110	-344	1661	0.45	-283.61	-77.31
299	SLV 12	-122	-410	1666	0.5	-283.87	-92.09
299	SLV 13	-233	94	1125	-0.97	-216.83	20.83
299	SLV 14	-244	29	1130	-0.92	-217.09	6.53
299	SLV 15	-251	-118	1199	-0.15	-219.15	-26.71
299	SLV 16	-263	-182	1204	-0.1	-219.41	-41.01

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
299	CRTFP Ux+	0	0	0	0	0	0
299	CRTFP Ux-	0	0	0	0	0	0
299	CRTFP Uy+	0	0	0	0	0	0
299	CRTFP Uy-	0	0	0	0	0	0
301	SLU 1	-15	-13	1534	-1.15	-246.91	-3.02
301	SLU 2	-14	-5	1530	-1.19	-247.27	-1.14
301	SLU 3	-15	-13	1534	-1.15	-246.91	-3.02
301	SLU 4	-14	-8	1532	-1.17	-247.13	-1.89
301	SLU 5	-14	-5	1530	-1.19	-247.27	-1.14
301	SLU 6	-15	-13	1534	-1.15	-246.91	-3.02
301	SLU 7	-14	-8	1532	-1.17	-247.13	-1.89
301	SLU 8	-15	-13	1534	-1.15	-246.91	-3.02
301	SLU 9	-14	-8	1532	-1.17	-247.13	-1.89
301	SLU 10	-15	-9	1785	-1.45	-287.8	-2.04
301	SLU 11	-16	-17	1788	-1.41	-287.44	-3.92
301	SLU 12	-15	-12	1786	-1.44	-287.66	-2.79
301	SLU 13	-15	-9	1785	-1.45	-287.8	-2.04
301	SLU 14	-16	-17	1788	-1.41	-287.44	-3.92
301	SLU 15	-15	-12	1786	-1.44	-287.66	-2.79
301	SLU 16	-16	-17	1788	-1.41	-287.44	-3.92
301	SLU 17	-15	-12	1786	-1.44	-287.66	-2.79
301	SLU 18	-16	-19	1898	-1.53	-304.81	-4.31
301	SLU 19	-16	-14	1896	-1.55	-305.03	-3.18
301	SLU 20	-16	-19	1898	-1.53	-304.81	-4.31
301	SLU 21	-16	-14	1896	-1.55	-305.03	-3.18
301	SLU 22	-16	-16	1727	-1.34	-277.45	-3.66
301	SLU 23	-15	-8	1724	-1.39	-277.81	-1.77
301	SLU 24	-16	-16	1727	-1.34	-277.45	-3.66
301	SLU 25	-15	-11	1725	-1.37	-277.67	-2.53
301	SLU 26	-15	-8	1724	-1.39	-277.81	-1.77
301	SLU 27	-16	-16	1727	-1.34	-277.45	-3.66
301	SLU 28	-15	-11	1725	-1.37	-277.67	-2.53
301	SLU 29	-16	-16	1727	-1.34	-277.45	-3.66
301	SLU 30	-15	-11	1725	-1.37	-277.67	-2.53
301	SLU 31	-16	-12	1978	-1.65	-318.34	-2.68
301	SLU 32	-17	-20	1982	-1.61	-317.97	-4.56
301	SLU 33	-16	-15	1980	-1.64	-318.19	-3.43
301	SLU 34	-16	-12	1978	-1.65	-318.34	-2.68
301	SLU 35	-17	-20	1982	-1.61	-317.97	-4.56
301	SLU 36	-16	-15	1980	-1.64	-318.19	-3.43
301	SLU 37	-17	-20	1982	-1.61	-317.97	-4.56
301	SLU 38	-16	-15	1980	-1.64	-318.19	-3.43
301	SLU 39	-17	-22	2091	-1.73	-335.34	-4.95
301	SLU 40	-17	-17	2089	-1.75	-335.56	-3.82
301	SLU 41	-17	-22	2091	-1.73	-335.34	-4.95
301	SLU 42	-17	-17	2089	-1.75	-335.56	-3.82
301	SLU 43	-19	-16	1927	-1.42	-310.51	-3.71
301	SLU 44	-18	-8	1924	-1.47	-310.88	-1.82
301	SLU 45	-19	-16	1927	-1.42	-310.51	-3.71
301	SLU 46	-18	-11	1925	-1.45	-310.73	-2.58
301	SLU 47	-18	-8	1924	-1.47	-310.88	-1.82
301	SLU 48	-19	-16	1927	-1.42	-310.51	-3.71
301	SLU 49	-18	-11	1925	-1.45	-310.73	-2.58
301	SLU 50	-19	-16	1927	-1.42	-310.51	-3.71
301	SLU 51	-18	-11	1925	-1.45	-310.73	-2.58
301	SLU 52	-19	-12	2179	-1.73	-351.4	-2.73
301	SLU 53	-20	-20	2182	-1.69	-351.04	-4.61
301	SLU 54	-19	-15	2180	-1.72	-351.26	-3.48
301	SLU 55	-19	-12	2179	-1.73	-351.4	-2.73
301	SLU 56	-20	-20	2182	-1.69	-351.04	-4.61
301	SLU 57	-19	-15	2180	-1.72	-351.26	-3.48
301	SLU 58	-20	-20	2182	-1.69	-351.04	-4.61
301	SLU 59	-19	-15	2180	-1.72	-351.26	-3.48
301	SLU 60	-20	-22	2291	-1.81	-368.41	-5
301	SLU 61	-20	-17	2289	-1.83	-368.63	-3.87
301	SLU 62	-20	-22	2291	-1.81	-368.41	-5
301	SLU 63	-20	-17	2289	-1.83	-368.63	-3.87
301	SLU 64	-20	-19	2121	-1.62	-341.05	-4.34
301	SLU 65	-19	-11	2117	-1.66	-341.41	-2.46
301	SLU 66	-20	-19	2121	-1.62	-341.05	-4.34
301	SLU 67	-19	-14	2119	-1.65	-341.27	-3.21
301	SLU 68	-19	-11	2117	-1.66	-341.41	-2.46
301	SLU 69	-20	-19	2121	-1.62	-341.05	-4.34
301	SLU 70	-19	-14	2119	-1.65	-341.27	-3.21
301	SLU 71	-20	-19	2121	-1.62	-341.05	-4.34
301	SLU 72	-19	-14	2119	-1.65	-341.27	-3.21
301	SLU 73	-20	-15	2372	-1.93	-381.94	-3.36
301	SLU 74	-21	-23	2376	-1.89	-381.58	-5.25
301	SLU 75	-20	-18	2374	-1.91	-381.8	-4.12
301	SLU 76	-20	-15	2372	-1.93	-381.94	-3.36
301	SLU 77	-21	-23	2376	-1.89	-381.58	-5.25
301	SLU 78	-20	-18	2374	-1.91	-381.8	-4.12
301	SLU 79	-21	-23	2376	-1.89	-381.58	-5.25
301	SLU 80	-20	-18	2374	-1.91	-381.8	-4.12
301	SLU 81	-21	-25	2485	-2	-398.95	-5.63
301	SLU 82	-21	-20	2483	-2.03	-399.17	-4.5

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
301	SLU 83	-21	-25	2485	-2	-398.95	-5.63
301	SLU 84	-21	-20	2483	-2.03	-399.17	-4.5
301	SLE RA 1	-15	-14	1589	-1.2	-255.63	-3.2
301	SLE RA 2	-14	-8	1587	-1.23	-255.88	-1.95
301	SLE RA 3	-15	-14	1589	-1.2	-255.63	-3.2
301	SLE RA 4	-15	-11	1587	-1.22	-255.78	-2.45
301	SLE RA 5	-14	-8	1587	-1.23	-255.88	-1.95
301	SLE RA 6	-15	-14	1589	-1.2	-255.63	-3.2
301	SLE RA 7	-15	-11	1587	-1.22	-255.78	-2.45
301	SLE RA 8	-15	-14	1589	-1.2	-255.63	-3.2
301	SLE RA 9	-15	-11	1587	-1.22	-255.78	-2.45
301	SLE RA 10	-15	-11	1756	-1.41	-282.9	-2.55
301	SLE RA 11	-16	-17	1759	-1.38	-282.65	-3.8
301	SLE RA 12	-15	-13	1757	-1.4	-282.8	-3.05
301	SLE RA 13	-15	-11	1756	-1.41	-282.9	-2.55
301	SLE RA 14	-16	-17	1759	-1.38	-282.65	-3.8
301	SLE RA 15	-15	-13	1757	-1.4	-282.8	-3.05
301	SLE RA 16	-16	-17	1759	-1.38	-282.65	-3.8
301	SLE RA 17	-15	-13	1757	-1.4	-282.8	-3.05
301	SLE RA 18	-16	-18	1832	-1.46	-294.23	-4.06
301	SLE RA 19	-16	-15	1830	-1.47	-294.38	-3.31
301	SLE RA 20	-16	-18	1832	-1.46	-294.23	-4.06
301	SLE RA 21	-16	-15	1830	-1.47	-294.38	-3.31
301	SLE FR 1	-15	-14	1589	-1.2	-255.63	-3.2
301	SLE FR 2	-15	-13	1588	-1.21	-255.68	-2.95
301	SLE FR 3	-15	-14	1589	-1.2	-255.63	-3.2
301	SLE FR 4	-15	-14	1661	-1.29	-267.26	-3.21
301	SLE FR 5	-15	-15	1662	-1.28	-267.21	-3.46
301	SLE FR 6	-16	-16	1710	-1.33	-274.93	-3.63
301	SLE QP 1	-15	-14	1589	-1.2	-255.63	-3.2
301	SLE QP 2	-15	-15	1662	-1.28	-267.21	-3.46
301	SLD 1	92	58	1864	-1.75	-299.68	13.13
301	SLD 2	85	30	1867	-1.73	-299.77	6.84
301	SLD 3	84	-35	1909	-1.36	-300.54	-7.91
301	SLD 4	77	-63	1912	-1.34	-300.63	-14.19
301	SLD 5	33	159	1653	-2.02	-275.63	35.73
301	SLD 6	26	130	1656	-2	-275.72	29.21
301	SLD 7	4	-153	1803	-0.72	-278.47	-34.37
301	SLD 8	-3	-182	1806	-0.69	-278.57	-40.9
301	SLD 9	-27	151	1517	-1.87	-255.86	33.98
301	SLD 10	-34	122	1520	-1.84	-255.95	27.46
301	SLD 11	-56	-160	1667	-0.56	-258.71	-36.13
301	SLD 12	-63	-189	1670	-0.54	-258.8	-42.65
301	SLD 13	-107	33	1411	-1.22	-233.8	7.27
301	SLD 14	-114	5	1414	-1.2	-233.89	0.99
301	SLD 15	-116	-61	1456	-0.83	-234.66	-13.76
301	SLD 16	-123	-89	1459	-0.81	-234.74	-20.04
301	SLV 1	230	152	2125	-2.35	-341.37	34.26
301	SLV 2	215	88	2131	-2.3	-341.58	19.93
301	SLV 3	211	-60	2227	-1.46	-343.35	-13.5
301	SLV 4	195	-124	2233	-1.41	-343.55	-27.82
301	SLV 5	94	381	1643	-2.97	-286.4	85.54
301	SLV 6	78	314	1650	-2.92	-286.6	70.74
301	SLV 7	28	-327	1984	0	-292.97	-73.65
301	SLV 8	12	-393	1990	0.05	-293.18	-88.45
301	SLV 9	-43	363	1333	-2.61	-241.25	81.54
301	SLV 10	-59	297	1340	-2.56	-241.46	66.73
301	SLV 11	-109	-345	1673	0.36	-247.82	-77.65
301	SLV 12	-125	-411	1680	0.41	-248.03	-92.46
301	SLV 13	-226	94	1090	-1.15	-190.88	20.91
301	SLV 14	-241	30	1096	-1.1	-191.08	6.58
301	SLV 15	-245	-119	1192	-0.26	-192.85	-26.85
301	SLV 16	-261	-183	1198	-0.21	-193.05	-41.17
301	CRTFP Ux+	0	0	0	0	0	0
301	CRTFP Ux-	0	0	0	0	0	0
301	CRTFP Uy+	0	0	0	0	0	0
301	CRTFP Uy-	0	0	0	0	0	0
304	SLU 1	29	-49	3005	-543.96	512.66	17.36
304	SLU 2	27	-32	3000	-543.19	510.44	12.84
304	SLU 3	29	-49	3005	-543.96	512.66	17.36
304	SLU 4	28	-39	3002	-543.5	511.33	14.65
304	SLU 5	27	-32	3000	-543.19	510.44	12.84
304	SLU 6	29	-49	3005	-543.96	512.66	17.36
304	SLU 7	28	-39	3002	-543.5	511.33	14.65
304	SLU 8	29	-49	3005	-543.96	512.66	17.36
304	SLU 9	28	-39	3002	-543.5	511.33	14.65
304	SLU 10	29	-42	3513	-636.85	599.51	15.68
304	SLU 11	31	-59	3518	-637.62	601.73	20.2
304	SLU 12	30	-49	3515	-637.16	600.4	17.49
304	SLU 13	29	-42	3513	-636.85	599.51	15.68
304	SLU 14	31	-59	3518	-637.62	601.73	20.2
304	SLU 15	30	-49	3515	-637.16	600.4	17.49
304	SLU 16	31	-59	3518	-637.62	601.73	20.2
304	SLU 17	30	-49	3515	-637.16	600.4	17.49
304	SLU 18	31	-63	3737	-677.76	639.9	21.42
304	SLU 19	31	-53	3734	-677.3	638.57	18.7

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
304	SLU 20	31	-63	3737	-677.76	639.9	21.42
304	SLU 21	31	-53	3734	-677.3	638.57	18.7
304	SLU 22	30	-56	3393	-614.86	579.89	19.52
304	SLU 23	29	-39	3388	-614.09	577.67	15
304	SLU 24	30	-56	3393	-614.86	579.89	19.52
304	SLU 25	30	-46	3390	-614.4	578.55	16.81
304	SLU 26	29	-39	3388	-614.09	577.67	15
304	SLU 27	30	-56	3393	-614.86	579.89	19.52
304	SLU 28	30	-46	3390	-614.4	578.55	16.81
304	SLU 29	30	-56	3393	-614.86	579.89	19.52
304	SLU 30	30	-46	3390	-614.4	578.55	16.81
304	SLU 31	31	-50	3901	-707.75	666.73	17.84
304	SLU 32	32	-67	3906	-708.52	668.95	22.36
304	SLU 33	31	-56	3903	-708.06	667.62	19.65
304	SLU 34	31	-50	3901	-707.75	666.73	17.84
304	SLU 35	32	-67	3906	-708.52	668.95	22.36
304	SLU 36	31	-56	3903	-708.06	667.62	19.65
304	SLU 37	32	-67	3906	-708.52	668.95	22.36
304	SLU 38	31	-56	3903	-708.06	667.62	19.65
304	SLU 39	33	-71	4125	-748.66	707.12	23.58
304	SLU 40	32	-61	4122	-748.2	705.79	20.86
304	SLU 41	33	-71	4125	-748.66	707.12	23.58
304	SLU 42	32	-61	4122	-748.2	705.79	20.86
304	SLU 43	37	-61	3774	-682.84	643.41	21.83
304	SLU 44	35	-44	3769	-682.07	641.19	17.31
304	SLU 45	37	-61	3774	-682.84	643.41	21.83
304	SLU 46	36	-51	3771	-682.38	642.08	19.11
304	SLU 47	35	-44	3769	-682.07	641.19	17.31
304	SLU 48	37	-61	3774	-682.84	643.41	21.83
304	SLU 49	36	-51	3771	-682.38	642.08	19.11
304	SLU 50	37	-61	3774	-682.84	643.41	21.83
304	SLU 51	36	-51	3771	-682.38	642.08	19.11
304	SLU 52	37	-54	4281	-775.73	730.26	20.15
304	SLU 53	39	-71	4286	-776.5	732.48	24.67
304	SLU 54	38	-61	4283	-776.04	731.15	21.95
304	SLU 55	37	-54	4281	-775.73	730.26	20.15
304	SLU 56	39	-71	4286	-776.5	732.48	24.67
304	SLU 57	38	-61	4283	-776.04	731.15	21.95
304	SLU 58	39	-71	4286	-776.5	732.48	24.67
304	SLU 59	38	-61	4283	-776.04	731.15	21.95
304	SLU 60	40	-75	4506	-816.64	770.65	25.88
304	SLU 61	39	-65	4503	-816.18	769.32	23.17
304	SLU 62	40	-75	4506	-816.64	770.65	25.88
304	SLU 63	39	-65	4503	-816.18	769.32	23.17
304	SLU 64	39	-68	4162	-753.74	710.64	23.98
304	SLU 65	37	-51	4157	-752.97	708.42	19.47
304	SLU 66	39	-68	4162	-753.74	710.64	23.98
304	SLU 67	38	-58	4159	-753.28	709.3	21.27
304	SLU 68	37	-51	4157	-752.97	708.42	19.47
304	SLU 69	39	-68	4162	-753.74	710.64	23.98
304	SLU 70	38	-58	4159	-753.28	709.3	21.27
304	SLU 71	39	-68	4162	-753.74	710.64	23.98
304	SLU 72	38	-58	4159	-753.28	709.3	21.27
304	SLU 73	39	-62	4669	-846.63	797.48	22.31
304	SLU 74	40	-79	4674	-847.4	799.7	26.83
304	SLU 75	40	-68	4671	-846.94	798.37	24.11
304	SLU 76	39	-62	4669	-846.63	797.48	22.31
304	SLU 77	40	-79	4674	-847.4	799.7	26.83
304	SLU 78	40	-68	4671	-846.94	798.37	24.11
304	SLU 79	40	-79	4674	-847.4	799.7	26.83
304	SLU 80	40	-68	4671	-846.94	798.37	24.11
304	SLU 81	41	-83	4894	-887.54	837.87	28.04
304	SLU 82	40	-73	4891	-887.08	836.54	25.33
304	SLU 83	41	-83	4894	-887.54	837.87	28.04
304	SLU 84	40	-73	4891	-887.08	836.54	25.33
304	SLE RA 1	29	-51	3116	-564.22	531.87	17.98
304	SLE RA 2	28	-40	3113	-563.7	530.39	14.96
304	SLE RA 3	29	-51	3116	-564.22	531.87	17.98
304	SLE RA 4	29	-44	3114	-563.91	530.98	16.17
304	SLE RA 5	28	-40	3113	-563.7	530.39	14.96
304	SLE RA 6	29	-51	3116	-564.22	531.87	17.98
304	SLE RA 7	29	-44	3114	-563.91	530.98	16.17
304	SLE RA 8	29	-51	3116	-564.22	531.87	17.98
304	SLE RA 9	29	-44	3114	-563.91	530.98	16.17
304	SLE RA 10	30	-46	3454	-626.14	589.77	16.86
304	SLE RA 11	31	-58	3458	-626.66	591.25	19.87
304	SLE RA 12	30	-51	3456	-626.35	590.36	18.06
304	SLE RA 13	30	-46	3454	-626.14	589.77	16.86
304	SLE RA 14	31	-58	3458	-626.66	591.25	19.87
304	SLE RA 15	30	-51	3456	-626.35	590.36	18.06
304	SLE RA 16	31	-58	3458	-626.66	591.25	19.87
304	SLE RA 17	30	-51	3456	-626.35	590.36	18.06
304	SLE RA 18	31	-61	3604	-653.42	616.69	20.68
304	SLE RA 19	30	-54	3602	-653.11	615.8	18.87
304	SLE RA 20	31	-61	3604	-653.42	616.69	20.68
304	SLE RA 21	30	-54	3602	-653.11	615.8	18.87

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
304	SLE FR 1	29	-51	3116	-564.22	531.87	17.98
304	SLE FR 2	29	-49	3115	-564.12	531.57	17.37
304	SLE FR 3	29	-51	3116	-564.22	531.87	17.98
304	SLE FR 4	30	-52	3262	-590.88	557.02	18.18
304	SLE FR 5	30	-54	3262	-590.98	557.32	18.79
304	SLE FR 6	30	-56	3360	-608.82	574.28	19.33
304	SLE QP 1	29	-51	3116	-564.22	531.87	17.98
304	SLE QP 2	30	-54	3262	-590.98	557.32	18.79
304	SLD 1	233	-19	2762	-500.38	473.37	45.71
304	SLD 2	221	37	2756	-499.24	468.86	29.88
304	SLD 3	244	-201	2852	-514.39	495.11	93.28
304	SLD 4	231	-145	2846	-513.25	490.6	77.44
304	SLD 5	79	213	2978	-542.98	500.82	-39.43
304	SLD 6	66	271	2971	-541.8	496.14	-55.87
304	SLD 7	115	-396	3278	-589.66	573.29	119.12
304	SLD 8	102	-338	3272	-588.48	568.61	102.68
304	SLD 9	-42	230	3253	-593.48	546.02	-65.11
304	SLD 10	-55	288	3246	-592.3	541.34	-81.55
304	SLD 11	-7	-379	3553	-640.16	618.49	93.44
304	SLD 12	-20	-321	3547	-638.97	613.81	77.01
304	SLD 13	-172	37	3679	-668.71	624.03	-39.87
304	SLD 14	-184	93	3673	-667.57	619.52	-55.71
304	SLD 15	-161	-145	3769	-682.71	645.77	7.7
304	SLD 16	-173	-89	3763	-681.57	641.27	-8.14
304	SLV 1	494	25	2120	-384.18	365.66	80.57
304	SLV 2	465	153	2106	-381.58	355.39	44.47
304	SLV 3	518	-390	2325	-415.94	415.01	188.59
304	SLV 4	490	-262	2311	-413.34	404.73	152.48
304	SLV 5	143	552	2615	-481.72	428.75	-113.26
304	SLV 6	113	684	2600	-479.03	418.13	-150.57
304	SLV 7	223	-831	3296	-587.6	593.23	246.79
304	SLV 8	194	-698	3282	-584.91	582.61	209.47
304	SLV 9	-134	591	3243	-597.05	532.02	-171.9
304	SLV 10	-164	723	3228	-594.36	521.4	-209.22
304	SLV 11	-54	-792	3925	-702.93	696.5	188.15
304	SLV 12	-83	-660	3910	-700.24	685.88	150.83
304	SLV 13	-430	154	4214	-768.62	709.9	-114.91
304	SLV 14	-458	282	4200	-766.02	699.62	-151.01
304	SLV 15	-406	-261	4419	-800.38	759.24	-6.9
304	SLV 16	-434	-133	4405	-797.78	748.97	-43
304	CRTFP Ux+	0	0	0	0	0	0
304	CRTFP Ux-	0	0	0	0	0	0
304	CRTFP Uy+	0	0	0	0	0	0
304	CRTFP Uy-	0	0	0	0	0	0
306	SLU 1	-28	75	5740	-1130.94	-3	-6.26
306	SLU 2	-29	97	5740	-1131.04	-3.31	-6.39
306	SLU 3	-28	75	5740	-1130.94	-3	-6.26
306	SLU 4	-28	88	5740	-1131	-3.19	-6.34
306	SLU 5	-29	97	5740	-1131.04	-3.31	-6.39
306	SLU 6	-28	75	5740	-1130.94	-3	-6.26
306	SLU 7	-28	88	5740	-1131	-3.19	-6.34
306	SLU 8	-28	75	5740	-1130.94	-3	-6.26
306	SLU 9	-28	88	5740	-1131	-3.19	-6.34
306	SLU 10	-30	113	6744	-1332.61	-4.62	-6.73
306	SLU 11	-29	90	6744	-1332.51	-4.31	-6.6
306	SLU 12	-30	104	6744	-1332.57	-4.5	-6.68
306	SLU 13	-30	113	6744	-1332.61	-4.62	-6.73
306	SLU 14	-29	90	6744	-1332.51	-4.31	-6.6
306	SLU 15	-30	104	6744	-1332.57	-4.5	-6.68
306	SLU 16	-29	90	6744	-1332.51	-4.31	-6.6
306	SLU 17	-30	104	6744	-1332.57	-4.5	-6.68
306	SLU 18	-30	96	7174	-1418.89	-4.87	-6.74
306	SLU 19	-30	110	7174	-1418.96	-5.06	-6.82
306	SLU 20	-30	96	7174	-1418.89	-4.87	-6.74
306	SLU 21	-30	110	7174	-1418.96	-5.06	-6.82
306	SLU 22	-29	86	6499	-1282.86	-3.9	-6.57
306	SLU 23	-30	109	6499	-1282.96	-4.21	-6.7
306	SLU 24	-29	86	6499	-1282.86	-3.9	-6.57
306	SLU 25	-30	99	6499	-1282.92	-4.08	-6.65
306	SLU 26	-30	109	6499	-1282.96	-4.21	-6.7
306	SLU 27	-29	86	6499	-1282.86	-3.9	-6.57
306	SLU 28	-30	99	6499	-1282.92	-4.08	-6.65
306	SLU 29	-29	86	6499	-1282.86	-3.9	-6.57
306	SLU 30	-30	99	6499	-1282.92	-4.08	-6.65
306	SLU 31	-31	124	7503	-1484.53	-5.52	-7.04
306	SLU 32	-31	101	7502	-1484.43	-5.21	-6.91
306	SLU 33	-31	115	7503	-1484.49	-5.39	-6.99
306	SLU 34	-31	124	7503	-1484.53	-5.52	-7.04
306	SLU 35	-31	101	7502	-1484.43	-5.21	-6.91
306	SLU 36	-31	115	7503	-1484.49	-5.39	-6.99
306	SLU 37	-31	101	7502	-1484.43	-5.21	-6.91
306	SLU 38	-31	115	7503	-1484.49	-5.39	-6.99
306	SLU 39	-31	108	7933	-1570.82	-5.77	-7.06
306	SLU 40	-32	121	7933	-1570.88	-5.96	-7.13
306	SLU 41	-31	108	7933	-1570.82	-5.77	-7.06
306	SLU 42	-32	121	7933	-1570.88	-5.96	-7.13

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
306	SLU 43	-36	93	7202	-1418.13	-3.59	-8.03
306	SLU 44	-37	116	7202	-1418.24	-3.9	-8.16
306	SLU 45	-36	93	7202	-1418.13	-3.59	-8.03
306	SLU 46	-36	107	7202	-1418.19	-3.78	-8.11
306	SLU 47	-37	116	7202	-1418.24	-3.9	-8.16
306	SLU 48	-36	93	7202	-1418.13	-3.59	-8.03
306	SLU 49	-36	107	7202	-1418.19	-3.78	-8.11
306	SLU 50	-36	93	7202	-1418.13	-3.59	-8.03
306	SLU 51	-36	107	7202	-1418.19	-3.78	-8.11
306	SLU 52	-38	131	8206	-1619.8	-5.21	-8.5
306	SLU 53	-37	109	8206	-1619.7	-4.9	-8.37
306	SLU 54	-38	122	8206	-1619.76	-5.09	-8.45
306	SLU 55	-38	131	8206	-1619.8	-5.21	-8.5
306	SLU 56	-37	109	8206	-1619.7	-4.9	-8.37
306	SLU 57	-38	122	8206	-1619.76	-5.09	-8.45
306	SLU 58	-37	109	8206	-1619.7	-4.9	-8.37
306	SLU 59	-38	122	8206	-1619.76	-5.09	-8.45
306	SLU 60	-38	115	8636	-1706.09	-5.46	-8.52
306	SLU 61	-38	129	8636	-1706.15	-5.65	-8.59
306	SLU 62	-38	115	8636	-1706.09	-5.46	-8.52
306	SLU 63	-38	129	8636	-1706.15	-5.65	-8.59
306	SLU 64	-37	104	7961	-1570.05	-4.49	-8.35
306	SLU 65	-38	127	7961	-1570.16	-4.8	-8.47
306	SLU 66	-37	104	7961	-1570.05	-4.49	-8.35
306	SLU 67	-38	118	7961	-1570.12	-4.68	-8.42
306	SLU 68	-38	127	7961	-1570.16	-4.8	-8.47
306	SLU 69	-37	104	7961	-1570.05	-4.49	-8.35
306	SLU 70	-38	118	7961	-1570.12	-4.68	-8.42
306	SLU 71	-37	104	7961	-1570.05	-4.49	-8.35
306	SLU 72	-38	118	7961	-1570.12	-4.68	-8.42
306	SLU 73	-39	142	8965	-1771.73	-6.11	-8.81
306	SLU 74	-38	120	8964	-1771.62	-5.8	-8.68
306	SLU 75	-39	133	8965	-1771.68	-5.99	-8.76
306	SLU 76	-39	142	8965	-1771.73	-6.11	-8.81
306	SLU 77	-38	120	8964	-1771.62	-5.8	-8.68
306	SLU 78	-39	133	8965	-1771.68	-5.99	-8.76
306	SLU 79	-38	120	8964	-1771.62	-5.8	-8.68
306	SLU 80	-39	133	8965	-1771.68	-5.99	-8.76
306	SLU 81	-39	126	9395	-1858.01	-6.36	-8.83
306	SLU 82	-39	140	9395	-1858.07	-6.55	-8.91
306	SLU 83	-39	126	9395	-1858.01	-6.36	-8.83
306	SLU 84	-39	140	9395	-1858.07	-6.55	-8.91
306	SLE RA 1	-28	78	5957	-1174.34	-3.25	-6.35
306	SLE RA 2	-29	93	5957	-1174.41	-3.46	-6.44
306	SLE RA 3	-28	78	5957	-1174.34	-3.25	-6.35
306	SLE RA 4	-29	87	5957	-1174.39	-3.38	-6.4
306	SLE RA 5	-29	93	5957	-1174.41	-3.46	-6.44
306	SLE RA 6	-28	78	5957	-1174.34	-3.25	-6.35
306	SLE RA 7	-29	87	5957	-1174.39	-3.38	-6.4
306	SLE RA 8	-28	78	5957	-1174.34	-3.25	-6.35
306	SLE RA 9	-29	87	5957	-1174.39	-3.38	-6.4
306	SLE RA 10	-30	103	6626	-1308.79	-4.34	-6.66
306	SLE RA 11	-29	88	6626	-1308.72	-4.13	-6.58
306	SLE RA 12	-29	97	6626	-1308.76	-4.25	-6.63
306	SLE RA 13	-30	103	6626	-1308.79	-4.34	-6.66
306	SLE RA 14	-29	88	6626	-1308.72	-4.13	-6.58
306	SLE RA 15	-29	97	6626	-1308.76	-4.25	-6.63
306	SLE RA 16	-29	88	6626	-1308.72	-4.13	-6.58
306	SLE RA 17	-29	97	6626	-1308.76	-4.25	-6.63
306	SLE RA 18	-29	92	6913	-1366.31	-4.5	-6.67
306	SLE RA 19	-30	101	6913	-1366.36	-4.63	-6.72
306	SLE RA 20	-29	92	6913	-1366.31	-4.5	-6.67
306	SLE RA 21	-30	101	6913	-1366.36	-4.63	-6.72
306	SLE FR 1	-28	78	5957	-1174.34	-3.25	-6.35
306	SLE FR 2	-28	81	5957	-1174.36	-3.3	-6.37
306	SLE FR 3	-28	78	5957	-1174.34	-3.25	-6.35
306	SLE FR 4	-29	85	6244	-1231.95	-3.67	-6.46
306	SLE FR 5	-29	82	6244	-1231.94	-3.63	-6.45
306	SLE FR 6	-29	85	6435	-1270.33	-3.88	-6.51
306	SLE QP 1	-28	78	5957	-1174.34	-3.25	-6.35
306	SLE QP 2	-29	82	6244	-1231.94	-3.63	-6.45
306	SLD 1	424	229	6449	-1272.02	14.04	80.35
306	SLD 2	398	206	6446	-1271.52	14.81	77.91
306	SLD 3	431	-16	6496	-1281.28	12.56	81.74
306	SLD 4	405	-39	6493	-1280.78	13.33	79.3
306	SLD 5	106	506	6236	-1230.09	3.64	18.39
306	SLD 6	79	482	6232	-1229.58	4.43	15.85
306	SLD 7	130	-310	6391	-1260.97	-1.3	23.02
306	SLD 8	103	-334	6388	-1260.46	-0.51	20.48
306	SLD 9	-160	498	6099	-1203.41	-6.75	-33.37
306	SLD 10	-187	475	6096	-1202.9	-5.96	-35.91
306	SLD 11	-136	-318	6255	-1234.29	-11.69	-28.75
306	SLD 12	-163	-341	6252	-1233.78	-10.89	-31.28
306	SLD 13	-462	203	5995	-1183.09	-20.58	-92.19
306	SLD 14	-488	181	5991	-1182.59	-19.82	-94.64
306	SLD 15	-455	-42	6041	-1192.35	-22.06	-90.8

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
306	SLD 16	-481	-64	6038	-1191.86	-21.3	-93.25
306	SLV 1	1004	415	6714	-1323.55	36.75	191.77
306	SLV 2	945	364	6706	-1322.42	38.5	186.2
306	SLV 3	1020	-140	6820	-1344.6	33.39	194.94
306	SLV 4	961	-192	6812	-1343.47	35.13	189.37
306	SLV 5	278	1044	6226	-1227.91	12.95	50.25
306	SLV 6	217	991	6219	-1226.74	14.75	44.49
306	SLV 7	333	-809	6580	-1298.07	1.73	60.83
306	SLV 8	272	-862	6572	-1296.9	3.54	55.07
306	SLV 9	-329	1027	5915	-1166.97	-10.79	-67.96
306	SLV 10	-390	973	5907	-1165.8	-8.99	-73.72
306	SLV 11	-274	-826	6268	-1237.13	-22.01	-57.38
306	SLV 12	-335	-880	6261	-1235.96	-20.21	-63.14
306	SLV 13	-1018	357	5675	-1120.4	-42.39	-202.26
306	SLV 14	-1077	305	5668	-1119.27	-40.64	-207.84
306	SLV 15	-1002	-199	5781	-1141.45	-45.76	-199.09
306	SLV 16	-1061	-251	5774	-1140.32	-44.01	-204.66
306	CRTFP Ux+	0	0	0	0	0	0
306	CRTFP Ux-	0	0	0	0	0	0
306	CRTFP Uy+	0	0	0	0	0	0
306	CRTFP Uy-	0	0	0	0	0	0
309	SLU 1	7	69	6059	-1363.37	3.62	2.08
309	SLU 2	8	93	6058	-1363.21	3.91	2.14
309	SLU 3	7	69	6059	-1363.37	3.62	2.08
309	SLU 4	7	84	6059	-1363.28	3.79	2.12
309	SLU 5	8	93	6058	-1363.21	3.91	2.14
309	SLU 6	7	69	6059	-1363.37	3.62	2.08
309	SLU 7	7	84	6059	-1363.28	3.79	2.12
309	SLU 8	7	69	6059	-1363.37	3.62	2.08
309	SLU 9	7	84	6059	-1363.28	3.79	2.12
309	SLU 10	7	107	7125	-1606.99	4.72	1.93
309	SLU 11	6	83	7126	-1607.15	4.43	1.88
309	SLU 12	6	97	7125	-1607.05	4.61	1.91
309	SLU 13	7	107	7125	-1606.99	4.72	1.93
309	SLU 14	6	83	7126	-1607.15	4.43	1.88
309	SLU 15	6	97	7125	-1607.05	4.61	1.91
309	SLU 16	6	83	7126	-1607.15	4.43	1.88
309	SLU 17	6	97	7125	-1607.05	4.61	1.91
309	SLU 18	6	89	7583	-1711.62	4.78	1.79
309	SLU 19	6	103	7582	-1711.53	4.95	1.82
309	SLU 20	6	89	7583	-1711.62	4.78	1.79
309	SLU 21	6	103	7582	-1711.53	4.95	1.82
309	SLU 22	6	79	6865	-1547.11	4.2	1.98
309	SLU 23	7	103	6863	-1546.95	4.49	2.03
309	SLU 24	6	79	6865	-1547.11	4.2	1.98
309	SLU 25	7	94	6864	-1547.01	4.38	2.01
309	SLU 26	7	103	6863	-1546.95	4.49	2.03
309	SLU 27	6	79	6865	-1547.11	4.2	1.98
309	SLU 28	7	94	6864	-1547.01	4.38	2.01
309	SLU 29	6	79	6865	-1547.11	4.2	1.98
309	SLU 30	7	94	6864	-1547.01	4.38	2.01
309	SLU 31	6	117	7930	-1790.72	5.3	1.83
309	SLU 32	5	93	7931	-1790.88	5.02	1.77
309	SLU 33	6	108	7931	-1790.79	5.19	1.8
309	SLU 34	6	117	7930	-1790.72	5.3	1.83
309	SLU 35	5	93	7931	-1790.88	5.02	1.77
309	SLU 36	6	108	7931	-1790.79	5.19	1.8
309	SLU 37	5	93	7931	-1790.88	5.02	1.77
309	SLU 38	6	108	7931	-1790.79	5.19	1.8
309	SLU 39	5	99	8388	-1895.36	5.36	1.68
309	SLU 40	5	113	8388	-1895.26	5.54	1.72
309	SLU 41	5	99	8388	-1895.36	5.36	1.68
309	SLU 42	5	113	8388	-1895.26	5.54	1.72
309	SLU 43	9	87	7601	-1709.39	4.51	2.74
309	SLU 44	10	111	7600	-1709.23	4.79	2.8
309	SLU 45	9	87	7601	-1709.39	4.51	2.74
309	SLU 46	10	101	7600	-1709.29	4.68	2.78
309	SLU 47	10	111	7600	-1709.23	4.79	2.8
309	SLU 48	9	87	7601	-1709.39	4.51	2.74
309	SLU 49	10	101	7600	-1709.29	4.68	2.78
309	SLU 50	9	87	7601	-1709.39	4.51	2.74
309	SLU 51	10	101	7600	-1709.29	4.68	2.78
309	SLU 52	9	124	8666	-1953	5.61	2.59
309	SLU 53	8	100	8668	-1953.16	5.32	2.54
309	SLU 54	9	115	8667	-1953.07	5.49	2.57
309	SLU 55	9	124	8666	-1953	5.61	2.59
309	SLU 56	8	100	8668	-1953.16	5.32	2.54
309	SLU 57	9	115	8667	-1953.07	5.49	2.57
309	SLU 58	8	100	8668	-1953.16	5.32	2.54
309	SLU 59	9	115	8667	-1953.07	5.49	2.57
309	SLU 60	8	106	9125	-2057.64	5.67	2.45
309	SLU 61	8	121	9124	-2057.54	5.84	2.48
309	SLU 62	8	106	9125	-2057.64	5.67	2.45
309	SLU 63	8	121	9124	-2057.54	5.84	2.48
309	SLU 64	9	97	8406	-1893.13	5.09	2.64
309	SLU 65	9	121	8405	-1892.97	5.38	2.69

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
309	SLU 66	9	97	8406	-1893.13	5.09	2.64
309	SLU 67	9	111	8406	-1893.03	5.26	2.67
309	SLU 68	9	121	8405	-1892.97	5.38	2.69
309	SLU 69	9	97	8406	-1893.13	5.09	2.64
309	SLU 70	9	111	8406	-1893.03	5.26	2.67
309	SLU 71	9	97	8406	-1893.13	5.09	2.64
309	SLU 72	9	111	8406	-1893.03	5.26	2.67
309	SLU 73	8	134	9472	-2136.74	6.19	2.49
309	SLU 74	8	110	9473	-2136.9	5.9	2.43
309	SLU 75	8	125	9472	-2136.8	6.07	2.47
309	SLU 76	8	134	9472	-2136.74	6.19	2.49
309	SLU 77	8	110	9473	-2136.9	5.9	2.43
309	SLU 78	8	125	9472	-2136.8	6.07	2.47
309	SLU 79	8	110	9473	-2136.9	5.9	2.43
309	SLU 80	8	125	9472	-2136.8	6.07	2.47
309	SLU 81	7	116	9930	-2241.37	6.25	2.34
309	SLU 82	8	131	9929	-2241.28	6.42	2.38
309	SLU 83	7	116	9930	-2241.37	6.25	2.34
309	SLU 84	8	131	9929	-2241.28	6.42	2.38
309	SLE RA 1	7	72	6289	-1415.87	3.79	2.06
309	SLE RA 2	7	88	6289	-1415.76	3.98	2.09
309	SLE RA 3	7	72	6289	-1415.87	3.79	2.06
309	SLE RA 4	7	82	6289	-1415.81	3.9	2.08
309	SLE RA 5	7	88	6289	-1415.76	3.98	2.09
309	SLE RA 6	7	72	6289	-1415.87	3.79	2.06
309	SLE RA 7	7	82	6289	-1415.81	3.9	2.08
309	SLE RA 8	7	72	6289	-1415.87	3.79	2.06
309	SLE RA 9	7	82	6289	-1415.81	3.9	2.08
309	SLE RA 10	7	97	7000	-1578.28	4.52	1.95
309	SLE RA 11	6	81	7001	-1578.39	4.33	1.92
309	SLE RA 12	6	91	7000	-1578.32	4.44	1.94
309	SLE RA 13	7	97	7000	-1578.28	4.52	1.95
309	SLE RA 14	6	81	7001	-1578.39	4.33	1.92
309	SLE RA 15	6	91	7000	-1578.32	4.44	1.94
309	SLE RA 16	6	81	7001	-1578.39	4.33	1.92
309	SLE RA 17	6	91	7000	-1578.32	4.44	1.94
309	SLE RA 18	6	85	7305	-1648.03	4.56	1.86
309	SLE RA 19	6	95	7305	-1647.97	4.68	1.88
309	SLE RA 20	6	85	7305	-1648.03	4.56	1.86
309	SLE RA 21	6	95	7305	-1647.97	4.68	1.88
309	SLE FR 1	7	72	6289	-1415.87	3.79	2.06
309	SLE FR 2	7	75	6289	-1415.85	3.83	2.06
309	SLE FR 3	7	72	6289	-1415.87	3.79	2.06
309	SLE FR 4	7	79	6594	-1485.5	4.06	2
309	SLE FR 5	7	76	6594	-1485.52	4.02	2
309	SLE FR 6	6	79	6797	-1531.95	4.17	1.96
309	SLE QP 1	7	72	6289	-1415.87	3.79	2.06
309	SLE QP 2	7	76	6594	-1485.52	4.02	2
309	SLD 1	492	162	6353	-1429.7	22.1	108.86
309	SLD 2	463	188	6358	-1430.43	22.83	105.2
309	SLD 3	481	-94	6420	-1443.62	22.99	106.5
309	SLD 4	451	-68	6424	-1444.35	23.72	102.83
309	SLD 5	181	480	6420	-1447.4	7.83	38.99
309	SLD 6	150	507	6424	-1448.15	8.59	35.19
309	SLD 7	142	-373	6641	-1493.79	10.78	31.11
309	SLD 8	111	-346	6645	-1494.54	11.54	27.31
309	SLD 9	-98	498	6543	-1476.49	-3.5	-23.32
309	SLD 10	-129	525	6547	-1477.25	-2.75	-27.12
309	SLD 11	-137	-355	6764	-1522.88	-0.55	-31.2
309	SLD 12	-168	-328	6769	-1523.64	0.21	-35
309	SLD 13	-438	220	6764	-1526.69	-15.68	-98.84
309	SLD 14	-467	246	6769	-1527.42	-14.95	-102.51
309	SLD 15	-450	-36	6831	-1540.61	-14.79	-101.2
309	SLD 16	-479	-10	6835	-1541.34	-14.06	-104.87
309	SLV 1	1115	271	6043	-1357.93	45.3	246.02
309	SLV 2	1048	330	6053	-1359.59	46.97	237.66
309	SLV 3	1089	-310	6194	-1389.51	47.34	240.65
309	SLV 4	1022	-251	6203	-1391.17	49.01	232.28
309	SLV 5	404	994	6197	-1398.75	12.7	86.42
309	SLV 6	335	1055	6207	-1400.46	14.42	77.78
309	SLV 7	316	-943	6699	-1503.99	19.5	68.51
309	SLV 8	246	-881	6709	-1505.71	21.22	59.87
309	SLV 9	-233	1034	6480	-1465.33	-13.18	-55.88
309	SLV 10	-303	1095	6490	-1467.04	-11.46	-64.52
309	SLV 11	-321	-903	6981	-1570.57	-6.38	-73.78
309	SLV 12	-391	-842	6991	-1572.29	-4.66	-82.43
309	SLV 13	-1009	403	6985	-1579.87	-40.97	-228.29
309	SLV 14	-1076	462	6995	-1581.53	-39.3	-236.65
309	SLV 15	-1035	-178	7136	-1611.45	-38.93	-233.67
309	SLV 16	-1102	-119	7145	-1613.11	-37.26	-242.03
309	CRTFP Ux+	0	0	0	0	0	0
309	CRTFP Ux-	0	0	0	0	0	0
309	CRTFP Uy+	0	0	0	0	0	0
309	CRTFP Uy-	0	0	0	0	0	0
311	SLU 1	-13	-13	1497	-1.03	-212.81	-3
311	SLU 2	-13	-5	1493	-1.08	-213.15	-1.12

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
311	SLU 3	-13	-13	1497	-1.03	-212.81	-3
311	SLU 4	-13	-8	1495	-1.06	-213.01	-1.87
311	SLU 5	-13	-5	1493	-1.08	-213.15	-1.12
311	SLU 6	-13	-13	1497	-1.03	-212.81	-3
311	SLU 7	-13	-8	1495	-1.06	-213.01	-1.87
311	SLU 8	-13	-13	1497	-1.03	-212.81	-3
311	SLU 9	-13	-8	1495	-1.06	-213.01	-1.87
311	SLU 10	-14	-9	1739	-1.32	-246.91	-2.02
311	SLU 11	-15	-17	1744	-1.27	-246.57	-3.9
311	SLU 12	-14	-12	1741	-1.3	-246.77	-2.77
311	SLU 13	-14	-9	1739	-1.32	-246.91	-2.02
311	SLU 14	-15	-17	1744	-1.27	-246.57	-3.9
311	SLU 15	-14	-12	1741	-1.3	-246.77	-2.77
311	SLU 16	-15	-17	1744	-1.27	-246.57	-3.9
311	SLU 17	-14	-12	1741	-1.3	-246.77	-2.77
311	SLU 18	-15	-19	1849	-1.38	-261.04	-4.29
311	SLU 19	-15	-14	1847	-1.41	-261.24	-3.16
311	SLU 20	-15	-19	1849	-1.38	-261.04	-4.29
311	SLU 21	-15	-14	1847	-1.41	-261.24	-3.16
311	SLU 22	-14	-16	1685	-1.21	-238.21	-3.64
311	SLU 23	-14	-8	1680	-1.26	-238.55	-1.76
311	SLU 24	-14	-16	1685	-1.21	-238.21	-3.64
311	SLU 25	-14	-11	1682	-1.24	-238.42	-2.51
311	SLU 26	-14	-8	1680	-1.26	-238.55	-1.76
311	SLU 27	-14	-16	1685	-1.21	-238.21	-3.64
311	SLU 28	-14	-11	1682	-1.24	-238.42	-2.51
311	SLU 29	-14	-16	1685	-1.21	-238.21	-3.64
311	SLU 30	-14	-11	1682	-1.24	-238.42	-2.51
311	SLU 31	-15	-12	1926	-1.5	-272.32	-2.66
311	SLU 32	-16	-20	1931	-1.45	-271.97	-4.54
311	SLU 33	-15	-15	1928	-1.48	-272.18	-3.41
311	SLU 34	-15	-12	1926	-1.5	-272.32	-2.66
311	SLU 35	-16	-20	1931	-1.45	-271.97	-4.54
311	SLU 36	-15	-15	1928	-1.48	-272.18	-3.41
311	SLU 37	-16	-20	1931	-1.45	-271.97	-4.54
311	SLU 38	-15	-15	1928	-1.48	-272.18	-3.41
311	SLU 39	-16	-22	2037	-1.56	-286.44	-4.92
311	SLU 40	-16	-17	2034	-1.58	-286.65	-3.79
311	SLU 41	-16	-22	2037	-1.56	-286.44	-4.92
311	SLU 42	-16	-17	2034	-1.58	-286.65	-3.79
311	SLU 43	-17	-16	1882	-1.28	-267.94	-3.68
311	SLU 44	-16	-8	1878	-1.32	-268.28	-1.8
311	SLU 45	-17	-16	1882	-1.28	-267.94	-3.68
311	SLU 46	-17	-11	1880	-1.31	-268.14	-2.56
311	SLU 47	-16	-8	1878	-1.32	-268.28	-1.8
311	SLU 48	-17	-16	1882	-1.28	-267.94	-3.68
311	SLU 49	-17	-11	1880	-1.31	-268.14	-2.56
311	SLU 50	-17	-16	1882	-1.28	-267.94	-3.68
311	SLU 51	-17	-11	1880	-1.31	-268.14	-2.56
311	SLU 52	-18	-12	2124	-1.57	-302.04	-2.7
311	SLU 53	-18	-20	2129	-1.52	-301.7	-4.59
311	SLU 54	-18	-15	2126	-1.55	-301.91	-3.46
311	SLU 55	-18	-12	2124	-1.57	-302.04	-2.7
311	SLU 56	-18	-20	2129	-1.52	-301.7	-4.59
311	SLU 57	-18	-15	2126	-1.55	-301.91	-3.46
311	SLU 58	-18	-20	2129	-1.52	-301.7	-4.59
311	SLU 59	-18	-15	2126	-1.55	-301.91	-3.46
311	SLU 60	-19	-22	2234	-1.63	-316.17	-4.97
311	SLU 61	-18	-17	2232	-1.65	-316.38	-3.84
311	SLU 62	-19	-22	2234	-1.63	-316.17	-4.97
311	SLU 63	-18	-17	2232	-1.65	-316.38	-3.84
311	SLU 64	-18	-19	2070	-1.46	-293.34	-4.32
311	SLU 65	-17	-11	2065	-1.5	-293.69	-2.44
311	SLU 66	-18	-19	2070	-1.46	-293.34	-4.32
311	SLU 67	-18	-14	2067	-1.48	-293.55	-3.19
311	SLU 68	-17	-11	2065	-1.5	-293.69	-2.44
311	SLU 69	-18	-19	2070	-1.46	-293.34	-4.32
311	SLU 70	-18	-14	2067	-1.48	-293.55	-3.19
311	SLU 71	-18	-19	2070	-1.46	-293.34	-4.32
311	SLU 72	-18	-14	2067	-1.48	-293.55	-3.19
311	SLU 73	-19	-15	2311	-1.75	-327.45	-3.34
311	SLU 74	-19	-23	2316	-1.7	-327.1	-5.22
311	SLU 75	-19	-18	2313	-1.73	-327.31	-4.09
311	SLU 76	-19	-15	2311	-1.75	-327.45	-3.34
311	SLU 77	-19	-23	2316	-1.7	-327.1	-5.22
311	SLU 78	-19	-18	2313	-1.73	-327.31	-4.09
311	SLU 79	-19	-23	2316	-1.7	-327.1	-5.22
311	SLU 80	-19	-18	2313	-1.73	-327.31	-4.09
311	SLU 81	-20	-25	2422	-1.8	-341.57	-5.61
311	SLU 82	-19	-20	2419	-1.83	-341.78	-4.48
311	SLU 83	-20	-25	2422	-1.8	-341.57	-5.61
311	SLU 84	-19	-20	2419	-1.83	-341.78	-4.48
311	SLE RA 1	-14	-14	1551	-1.08	-220.06	-3.18
311	SLE RA 2	-13	-8	1548	-1.11	-220.29	-1.93
311	SLE RA 3	-14	-14	1551	-1.08	-220.06	-3.18
311	SLE RA 4	-13	-11	1549	-1.1	-220.2	-2.43

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
311	SLE RA 5	-13	-8	1548	-1.11	-220.29	-1.93
311	SLE RA 6	-14	-14	1551	-1.08	-220.06	-3.18
311	SLE RA 7	-13	-11	1549	-1.1	-220.2	-2.43
311	SLE RA 8	-14	-14	1551	-1.08	-220.06	-3.18
311	SLE RA 9	-13	-11	1549	-1.1	-220.2	-2.43
311	SLE RA 10	-14	-11	1712	-1.27	-242.8	-2.53
311	SLE RA 11	-14	-17	1715	-1.24	-242.57	-3.78
311	SLE RA 12	-14	-13	1713	-1.26	-242.71	-3.03
311	SLE RA 13	-14	-11	1712	-1.27	-242.8	-2.53
311	SLE RA 14	-14	-17	1715	-1.24	-242.57	-3.78
311	SLE RA 15	-14	-13	1713	-1.26	-242.71	-3.03
311	SLE RA 16	-14	-17	1715	-1.24	-242.57	-3.78
311	SLE RA 17	-14	-13	1713	-1.26	-242.71	-3.03
311	SLE RA 18	-15	-18	1786	-1.31	-252.22	-4.04
311	SLE RA 19	-15	-14	1784	-1.33	-252.36	-3.29
311	SLE RA 20	-15	-18	1786	-1.31	-252.22	-4.04
311	SLE RA 21	-15	-14	1784	-1.33	-252.36	-3.29
311	SLE FR 1	-14	-14	1551	-1.08	-220.06	-3.18
311	SLE FR 2	-14	-13	1550	-1.09	-220.11	-2.93
311	SLE FR 3	-14	-14	1551	-1.08	-220.06	-3.18
311	SLE FR 4	-14	-14	1621	-1.16	-229.76	-3.19
311	SLE FR 5	-14	-15	1621	-1.15	-229.71	-3.44
311	SLE FR 6	-14	-16	1668	-1.2	-236.14	-3.61
311	SLE QP 1	-14	-14	1551	-1.08	-220.06	-3.18
311	SLE QP 2	-14	-15	1621	-1.15	-229.71	-3.44
311	SLD 1	93	59	1809	-1.62	-256.44	13.19
311	SLD 2	84	31	1812	-1.6	-256.54	6.9
311	SLD 3	85	-35	1867	-1.19	-257.51	-7.91
311	SLD 4	76	-63	1871	-1.17	-257.61	-14.2
311	SLD 5	34	160	1588	-1.94	-236.07	35.88
311	SLD 6	25	130	1592	-1.92	-236.16	29.35
311	SLD 7	6	-153	1782	-0.53	-239.65	-34.47
311	SLD 8	-3	-182	1786	-0.5	-239.74	-41
311	SLD 9	-25	152	1457	-1.8	-219.68	34.12
311	SLD 10	-34	122	1461	-1.78	-219.77	27.59
311	SLD 11	-53	-160	1651	-0.38	-223.26	-36.23
311	SLD 12	-62	-190	1655	-0.36	-223.35	-42.76
311	SLD 13	-104	33	1372	-1.13	-201.81	7.32
311	SLD 14	-113	5	1376	-1.11	-201.9	1.03
311	SLD 15	-112	-61	1430	-0.71	-202.88	-13.78
311	SLD 16	-121	-89	1434	-0.69	-202.98	-20.07
311	SLV 1	230	153	2050	-2.21	-290.78	34.38
311	SLV 2	211	89	2058	-2.16	-290.99	20.04
311	SLV 3	211	-60	2182	-1.25	-293.24	-13.53
311	SLV 4	192	-124	2190	-1.2	-293.46	-27.88
311	SLV 5	95	381	1546	-2.95	-244.21	85.84
311	SLV 6	75	315	1555	-2.9	-244.43	71.02
311	SLV 7	33	-327	1987	0.27	-252.43	-73.88
311	SLV 8	12	-394	1995	0.32	-252.65	-88.71
311	SLV 9	-40	364	1247	-2.62	-206.77	81.82
311	SLV 10	-60	297	1256	-2.57	-206.99	67
311	SLV 11	-102	-345	1688	0.6	-214.99	-77.9
311	SLV 12	-123	-412	1696	0.65	-215.21	-92.72
311	SLV 13	-220	94	1052	-1.11	-165.96	20.99
311	SLV 14	-239	30	1061	-1.06	-166.18	6.65
311	SLV 15	-238	-119	1185	-0.14	-168.43	-26.92
311	SLV 16	-258	-183	1193	-0.09	-168.64	-41.26
311	CRTFP Ux+	0	0	0	0	0	0
311	CRTFP Ux-	0	0	0	0	0	0
311	CRTFP Uy+	0	0	0	0	0	0
311	CRTFP Uy-	0	0	0	0	0	0
314	SLU 1	14	-26	1553	-0.9	197.54	6.48
314	SLU 2	13	-17	1549	-0.94	196.44	4.22
314	SLU 3	14	-26	1553	-0.9	197.54	6.48
314	SLU 4	14	-20	1551	-0.92	196.88	5.12
314	SLU 5	13	-17	1549	-0.94	196.44	4.22
314	SLU 6	14	-26	1553	-0.9	197.54	6.48
314	SLU 7	14	-20	1551	-0.92	196.88	5.12
314	SLU 8	14	-26	1553	-0.9	197.54	6.48
314	SLU 9	14	-20	1551	-0.92	196.88	5.12
314	SLU 10	14	-22	1808	-1.21	228.7	5.57
314	SLU 11	15	-31	1812	-1.17	229.79	7.83
314	SLU 12	15	-26	1810	-1.19	229.14	6.47
314	SLU 13	14	-22	1808	-1.21	228.7	5.57
314	SLU 14	15	-31	1812	-1.17	229.79	7.83
314	SLU 15	15	-26	1810	-1.19	229.14	6.47
314	SLU 16	15	-31	1812	-1.17	229.79	7.83
314	SLU 17	15	-26	1810	-1.19	229.14	6.47
314	SLU 18	16	-33	1923	-1.28	243.62	8.4
314	SLU 19	15	-28	1921	-1.31	242.96	7.05
314	SLU 20	16	-33	1923	-1.28	243.62	8.4
314	SLU 21	15	-28	1921	-1.31	242.96	7.05
314	SLU 22	15	-30	1749	-1.1	221.86	7.48
314	SLU 23	14	-21	1746	-1.13	220.76	5.22
314	SLU 24	15	-30	1749	-1.1	221.86	7.48
314	SLU 25	15	-24	1747	-1.12	221.2	6.12

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
314	SLU 26	14	-21	1746	-1.13	220.76	5.22
314	SLU 27	15	-30	1749	-1.1	221.86	7.48
314	SLU 28	15	-24	1747	-1.12	221.2	6.12
314	SLU 29	15	-30	1749	-1.1	221.86	7.48
314	SLU 30	15	-24	1747	-1.12	221.2	6.12
314	SLU 31	15	-26	2005	-1.4	253.02	6.56
314	SLU 32	16	-35	2009	-1.37	254.12	8.82
314	SLU 33	16	-30	2006	-1.39	253.46	7.47
314	SLU 34	15	-26	2005	-1.4	253.02	6.56
314	SLU 35	16	-35	2009	-1.37	254.12	8.82
314	SLU 36	16	-30	2006	-1.39	253.46	7.47
314	SLU 37	16	-35	2009	-1.37	254.12	8.82
314	SLU 38	16	-30	2006	-1.39	253.46	7.47
314	SLU 39	17	-37	2120	-1.48	267.94	9.4
314	SLU 40	16	-32	2118	-1.5	267.28	8.04
314	SLU 41	17	-37	2120	-1.48	267.94	9.4
314	SLU 42	16	-32	2118	-1.5	267.28	8.04
314	SLU 43	18	-32	1951	-1.1	248.46	8.08
314	SLU 44	17	-23	1948	-1.14	247.37	5.82
314	SLU 45	18	-32	1951	-1.1	248.46	8.08
314	SLU 46	18	-27	1949	-1.12	247.8	6.73
314	SLU 47	17	-23	1948	-1.14	247.37	5.82
314	SLU 48	18	-32	1951	-1.1	248.46	8.08
314	SLU 49	18	-27	1949	-1.12	247.8	6.73
314	SLU 50	18	-32	1951	-1.1	248.46	8.08
314	SLU 51	18	-27	1949	-1.12	247.8	6.73
314	SLU 52	18	-28	2207	-1.41	279.62	7.17
314	SLU 53	19	-37	2211	-1.37	280.72	9.43
314	SLU 54	19	-32	2208	-1.39	280.06	8.07
314	SLU 55	18	-28	2207	-1.41	279.62	7.17
314	SLU 56	19	-37	2211	-1.37	280.72	9.43
314	SLU 57	19	-32	2208	-1.39	280.06	8.07
314	SLU 58	19	-37	2211	-1.37	280.72	9.43
314	SLU 59	19	-32	2208	-1.39	280.06	8.07
314	SLU 60	19	-40	2322	-1.49	294.54	10
314	SLU 61	19	-34	2319	-1.51	293.88	8.65
314	SLU 62	19	-40	2322	-1.49	294.54	10
314	SLU 63	19	-34	2319	-1.51	293.88	8.65
314	SLU 64	19	-36	2148	-1.3	272.78	9.08
314	SLU 65	18	-27	2144	-1.34	271.69	6.82
314	SLU 66	19	-36	2148	-1.3	272.78	9.08
314	SLU 67	18	-31	2146	-1.32	272.12	7.72
314	SLU 68	18	-27	2144	-1.34	271.69	6.82
314	SLU 69	19	-36	2148	-1.3	272.78	9.08
314	SLU 70	18	-31	2146	-1.32	272.12	7.72
314	SLU 71	19	-36	2148	-1.3	272.78	9.08
314	SLU 72	18	-31	2146	-1.32	272.12	7.72
314	SLU 73	19	-32	2403	-1.61	303.94	8.17
314	SLU 74	20	-41	2407	-1.57	305.04	10.43
314	SLU 75	20	-36	2405	-1.59	304.38	9.07
314	SLU 76	19	-32	2403	-1.61	303.94	8.17
314	SLU 77	20	-41	2407	-1.57	305.04	10.43
314	SLU 78	20	-36	2405	-1.59	304.38	9.07
314	SLU 79	20	-41	2407	-1.57	305.04	10.43
314	SLU 80	20	-36	2405	-1.59	304.38	9.07
314	SLU 81	20	-44	2518	-1.68	318.86	11
314	SLU 82	20	-38	2516	-1.71	318.21	9.65
314	SLU 83	20	-44	2518	-1.68	318.86	11
314	SLU 84	20	-38	2516	-1.71	318.21	9.65
314	SLE RA 1	14	-27	1609	-0.96	204.49	6.77
314	SLE RA 2	14	-21	1607	-0.98	203.76	5.26
314	SLE RA 3	14	-27	1609	-0.96	204.49	6.77
314	SLE RA 4	14	-23	1608	-0.97	204.05	5.86
314	SLE RA 5	14	-21	1607	-0.98	203.76	5.26
314	SLE RA 6	14	-27	1609	-0.96	204.49	6.77
314	SLE RA 7	14	-23	1608	-0.97	204.05	5.86
314	SLE RA 8	14	-27	1609	-0.96	204.49	6.77
314	SLE RA 9	14	-23	1608	-0.97	204.05	5.86
314	SLE RA 10	15	-24	1779	-1.16	225.26	6.16
314	SLE RA 11	15	-30	1782	-1.14	225.99	7.66
314	SLE RA 12	15	-27	1780	-1.15	225.55	6.76
314	SLE RA 13	15	-24	1779	-1.16	225.26	6.16
314	SLE RA 14	15	-30	1782	-1.14	225.99	7.66
314	SLE RA 15	15	-27	1780	-1.15	225.55	6.76
314	SLE RA 16	15	-30	1782	-1.14	225.99	7.66
314	SLE RA 17	15	-27	1780	-1.15	225.55	6.76
314	SLE RA 18	15	-32	1856	-1.21	235.21	8.05
314	SLE RA 19	15	-28	1854	-1.23	234.77	7.14
314	SLE RA 20	15	-32	1856	-1.21	235.21	8.05
314	SLE RA 21	15	-28	1854	-1.23	234.77	7.14
314	SLE FR 1	14	-27	1609	-0.96	204.49	6.77
314	SLE FR 2	14	-26	1609	-0.96	204.34	6.46
314	SLE FR 3	14	-27	1609	-0.96	204.49	6.77
314	SLE FR 4	15	-27	1683	-1.04	213.56	6.85
314	SLE FR 5	15	-28	1683	-1.03	213.7	7.15
314	SLE FR 6	15	-29	1733	-1.08	219.85	7.41

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
314	SLE QP 1	14	-27	1609	-0.96	204.49	6.77
314	SLE QP 2	15	-28	1683	-1.03	213.7	7.15
314	SLD 1	123	-10	1423	-0.96	182.97	2.44
314	SLD 2	114	20	1420	-0.96	180.79	-4.98
314	SLD 3	127	-107	1487	-0.5	193.17	26.87
314	SLD 4	118	-77	1484	-0.51	190.99	19.45
314	SLD 5	44	114	1509	-1.69	189.82	-28.58
314	SLD 6	34	145	1506	-1.7	187.55	-36.28
314	SLD 7	58	-211	1723	-0.18	223.82	52.86
314	SLD 8	49	-180	1719	-0.19	221.56	45.16
314	SLD 9	-19	123	1647	-1.88	205.85	-30.86
314	SLD 10	-29	154	1644	-1.88	203.58	-38.56
314	SLD 11	-5	-202	1860	-0.36	239.85	50.58
314	SLD 12	-15	-171	1857	-0.37	237.59	42.88
314	SLD 13	-89	21	1882	-1.56	236.41	-5.15
314	SLD 14	-98	50	1879	-1.56	234.23	-12.57
314	SLD 15	-84	-77	1946	-1.1	246.61	19.28
314	SLD 16	-94	-47	1943	-1.11	244.43	11.86
314	SLV 1	262	14	1090	-0.85	143.51	-3.43
314	SLV 2	240	82	1083	-0.87	138.54	-20.34
314	SLV 3	272	-208	1235	0.18	166.66	52.04
314	SLV 4	250	-140	1228	0.16	161.69	35.13
314	SLV 5	82	295	1287	-2.53	159.35	-73.96
314	SLV 6	60	366	1280	-2.55	154.21	-91.44
314	SLV 7	114	-443	1772	0.9	236.53	110.96
314	SLV 8	92	-372	1765	0.88	231.4	93.48
314	SLV 9	-63	316	1602	-2.95	196.01	-79.18
314	SLV 10	-85	386	1594	-2.96	190.87	-96.66
314	SLV 11	-31	-422	2086	0.48	273.19	105.74
314	SLV 12	-53	-352	2079	0.47	268.06	88.26
314	SLV 13	-221	83	2138	-2.23	265.71	-20.83
314	SLV 14	-242	151	2131	-2.24	260.74	-37.74
314	SLV 15	-211	-139	2283	-1.2	288.87	34.64
314	SLV 16	-233	-70	2276	-1.21	283.9	17.73
314	CRTFP Ux+	0	0	0	0	0	0
314	CRTFP Ux-	0	0	0	0	0	0
314	CRTFP Uy+	0	0	0	0	0	0
314	CRTFP Uy-	0	0	0	0	0	0
316	SLU 1	-12	42	2943	0.05	-4.08	-0.28
316	SLU 2	-13	54	2942	-0.03	-4.3	-0.28
316	SLU 3	-12	42	2943	0.05	-4.08	-0.28
316	SLU 4	-12	49	2943	0	-4.21	-0.28
316	SLU 5	-13	54	2942	-0.03	-4.3	-0.28
316	SLU 6	-12	42	2943	0.05	-4.08	-0.28
316	SLU 7	-12	49	2943	0	-4.21	-0.28
316	SLU 8	-12	42	2943	0.05	-4.08	-0.28
316	SLU 9	-12	49	2943	0	-4.21	-0.28
316	SLU 10	-13	62	3437	-0.39	-5.51	-0.31
316	SLU 11	-13	51	3438	-0.31	-5.29	-0.31
316	SLU 12	-13	58	3437	-0.36	-5.42	-0.31
316	SLU 13	-13	62	3437	-0.39	-5.51	-0.31
316	SLU 14	-13	51	3438	-0.31	-5.29	-0.31
316	SLU 15	-13	58	3437	-0.36	-5.42	-0.31
316	SLU 16	-13	51	3438	-0.31	-5.29	-0.31
316	SLU 17	-13	58	3437	-0.36	-5.42	-0.31
316	SLU 18	-13	54	3650	-0.47	-5.81	-0.32
316	SLU 19	-13	61	3650	-0.52	-5.94	-0.32
316	SLU 20	-13	54	3650	-0.47	-5.81	-0.32
316	SLU 21	-13	61	3650	-0.52	-5.94	-0.32
316	SLU 22	-13	48	3319	-0.18	-4.94	-0.3
316	SLU 23	-13	60	3318	-0.26	-5.16	-0.3
316	SLU 24	-13	48	3319	-0.18	-4.94	-0.3
316	SLU 25	-13	55	3319	-0.23	-5.07	-0.3
316	SLU 26	-13	60	3318	-0.26	-5.16	-0.3
316	SLU 27	-13	48	3319	-0.18	-4.94	-0.3
316	SLU 28	-13	55	3319	-0.23	-5.07	-0.3
316	SLU 29	-13	48	3319	-0.18	-4.94	-0.3
316	SLU 30	-13	55	3319	-0.23	-5.07	-0.3
316	SLU 31	-14	68	3813	-0.63	-6.37	-0.33
316	SLU 32	-13	57	3814	-0.55	-6.15	-0.33
316	SLU 33	-13	64	3813	-0.6	-6.28	-0.33
316	SLU 34	-14	68	3813	-0.63	-6.37	-0.33
316	SLU 35	-13	57	3814	-0.55	-6.15	-0.33
316	SLU 36	-13	64	3813	-0.6	-6.28	-0.33
316	SLU 37	-13	57	3814	-0.55	-6.15	-0.33
316	SLU 38	-13	64	3813	-0.6	-6.28	-0.33
316	SLU 39	-13	60	4026	-0.7	-6.67	-0.34
316	SLU 40	-14	67	4026	-0.75	-6.8	-0.34
316	SLU 41	-13	60	4026	-0.7	-6.67	-0.34
316	SLU 42	-14	67	4026	-0.75	-6.8	-0.34
316	SLU 43	-15	52	3698	0.15	-5.01	-0.35
316	SLU 44	-16	64	3696	0.06	-5.23	-0.35
316	SLU 45	-15	52	3698	0.15	-5.01	-0.35
316	SLU 46	-16	60	3697	0.1	-5.14	-0.35
316	SLU 47	-16	64	3696	0.06	-5.23	-0.35
316	SLU 48	-15	52	3698	0.15	-5.01	-0.35

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
316	SLU 49	-16	60	3697	0.1	-5.14	-0.35
316	SLU 50	-15	52	3698	0.15	-5.01	-0.35
316	SLU 51	-16	60	3697	0.1	-5.14	-0.35
316	SLU 52	-16	73	4191	-0.3	-6.44	-0.38
316	SLU 53	-16	61	4192	-0.22	-6.22	-0.38
316	SLU 54	-16	68	4192	-0.27	-6.35	-0.38
316	SLU 55	-16	73	4191	-0.3	-6.44	-0.38
316	SLU 56	-16	61	4192	-0.22	-6.22	-0.38
316	SLU 57	-16	68	4192	-0.27	-6.35	-0.38
316	SLU 58	-16	61	4192	-0.22	-6.22	-0.38
316	SLU 59	-16	68	4192	-0.27	-6.35	-0.38
316	SLU 60	-16	65	4404	-0.37	-6.74	-0.4
316	SLU 61	-16	72	4404	-0.42	-6.87	-0.4
316	SLU 62	-16	65	4404	-0.37	-6.74	-0.4
316	SLU 63	-16	72	4404	-0.42	-6.87	-0.4
316	SLU 64	-16	59	4074	-0.09	-5.87	-0.37
316	SLU 65	-16	70	4072	-0.17	-6.09	-0.37
316	SLU 66	-16	59	4074	-0.09	-5.87	-0.37
316	SLU 67	-16	66	4073	-0.14	-6	-0.37
316	SLU 68	-16	70	4072	-0.17	-6.09	-0.37
316	SLU 69	-16	59	4074	-0.09	-5.87	-0.37
316	SLU 70	-16	66	4073	-0.14	-6	-0.37
316	SLU 71	-16	59	4074	-0.09	-5.87	-0.37
316	SLU 72	-16	66	4073	-0.14	-6	-0.37
316	SLU 73	-17	79	4567	-0.53	-7.3	-0.41
316	SLU 74	-16	67	4568	-0.45	-7.08	-0.4
316	SLU 75	-17	74	4568	-0.5	-7.21	-0.41
316	SLU 76	-17	79	4567	-0.53	-7.3	-0.41
316	SLU 77	-16	67	4568	-0.45	-7.08	-0.4
316	SLU 78	-17	74	4568	-0.5	-7.21	-0.41
316	SLU 79	-16	67	4568	-0.45	-7.08	-0.4
316	SLU 80	-17	74	4568	-0.5	-7.21	-0.41
316	SLU 81	-17	71	4780	-0.61	-7.6	-0.42
316	SLU 82	-17	78	4780	-0.66	-7.73	-0.42
316	SLU 83	-17	71	4780	-0.61	-7.6	-0.42
316	SLU 84	-17	78	4780	-0.66	-7.73	-0.42
316	SLE RA 1	-12	44	3051	-0.02	-4.33	-0.28
316	SLE RA 2	-13	52	3050	-0.07	-4.47	-0.28
316	SLE RA 3	-12	44	3051	-0.02	-4.33	-0.28
316	SLE RA 4	-12	48	3050	-0.05	-4.41	-0.28
316	SLE RA 5	-13	52	3050	-0.07	-4.47	-0.28
316	SLE RA 6	-12	44	3051	-0.02	-4.33	-0.28
316	SLE RA 7	-12	48	3050	-0.05	-4.41	-0.28
316	SLE RA 8	-12	44	3051	-0.02	-4.33	-0.28
316	SLE RA 9	-12	48	3050	-0.05	-4.41	-0.28
316	SLE RA 10	-13	57	3380	-0.31	-5.28	-0.3
316	SLE RA 11	-12	49	3381	-0.26	-5.13	-0.3
316	SLE RA 12	-13	54	3380	-0.29	-5.22	-0.3
316	SLE RA 13	-13	57	3380	-0.31	-5.28	-0.3
316	SLE RA 14	-12	49	3381	-0.26	-5.13	-0.3
316	SLE RA 15	-13	54	3380	-0.29	-5.22	-0.3
316	SLE RA 16	-12	49	3381	-0.26	-5.13	-0.3
316	SLE RA 17	-13	54	3380	-0.29	-5.22	-0.3
316	SLE RA 18	-13	52	3522	-0.36	-5.48	-0.31
316	SLE RA 19	-13	57	3522	-0.39	-5.57	-0.31
316	SLE RA 20	-13	52	3522	-0.36	-5.48	-0.31
316	SLE RA 21	-13	57	3522	-0.39	-5.57	-0.31
316	SLE FR 1	-12	44	3051	-0.02	-4.33	-0.28
316	SLE FR 2	-12	45	3051	-0.03	-4.36	-0.28
316	SLE FR 3	-12	44	3051	-0.02	-4.33	-0.28
316	SLE FR 4	-12	48	3192	-0.13	-4.7	-0.29
316	SLE FR 5	-12	46	3192	-0.12	-4.67	-0.29
316	SLE FR 6	-12	48	3286	-0.19	-4.9	-0.3
316	SLE QP 1	-12	44	3051	-0.02	-4.33	-0.28
316	SLE QP 2	-12	46	3192	-0.12	-4.67	-0.29
316	SLD 1	227	122	3293	-0.61	5.23	-1.18
316	SLD 2	206	111	3291	-0.61	5.71	-0.18
316	SLD 3	231	-5	3329	0.15	4.31	-1.25
316	SLD 4	210	-16	3327	0.15	4.78	-0.25
316	SLD 5	61	266	3168	-1.42	-0.47	-0.81
316	SLD 6	39	254	3166	-1.42	0.02	0.22
316	SLD 7	75	-157	3290	1.11	-3.56	-1.06
316	SLD 8	53	-169	3287	1.12	-3.07	-0.02
316	SLD 9	-77	262	3097	-1.36	-6.28	-0.56
316	SLD 10	-99	250	3095	-1.35	-5.79	0.48
316	SLD 11	-64	-161	3219	1.18	-9.36	-0.8
316	SLD 12	-86	-173	3217	1.19	-8.87	0.23
316	SLD 13	-235	109	3057	-0.39	-14.13	-0.33
316	SLD 14	-256	97	3055	-0.38	-13.65	0.67
316	SLD 15	-231	-18	3094	0.37	-15.05	-0.4
316	SLD 16	-252	-30	3092	0.38	-14.58	0.6
316	SLV 1	534	219	3422	-1.27	17.97	-2.32
316	SLV 2	486	192	3417	-1.25	19.05	-0.04
316	SLV 3	544	-69	3505	0.46	15.87	-2.49
316	SLV 4	496	-96	3501	0.47	16.94	-0.21
316	SLV 5	155	545	3137	-3.09	4.92	-1.48

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
316	SLV 6	106	517	3132	-3.07	6.03	0.87
316	SLV 7	186	-416	3414	2.67	-2.1	-2.04
316	SLV 8	137	-443	3409	2.68	-0.98	0.31
316	SLV 9	-161	536	2975	-2.92	-8.36	-0.89
316	SLV 10	-211	508	2971	-2.9	-7.25	1.46
316	SLV 11	-130	-425	3252	2.83	-15.38	-1.45
316	SLV 12	-180	-453	3248	2.85	-14.26	0.9
316	SLV 13	-520	188	2884	-0.71	-26.29	-0.37
316	SLV 14	-568	161	2879	-0.69	-25.21	1.9
316	SLV 15	-511	-100	2967	1.02	-28.39	-0.54
316	SLV 16	-559	-127	2962	1.03	-27.32	1.74
316	CRTFP Ux+	0	0	0	0	0	0
316	CRTFP Ux-	0	0	0	0	0	0
316	CRTFP Uy+	0	0	0	0	0	0
316	CRTFP Uy-	0	0	0	0	0	0
319	SLU 1	2	36	2877	0.59	4.06	0.12
319	SLU 2	2	47	2874	0.5	4.25	0.11
319	SLU 3	2	36	2877	0.59	4.06	0.12
319	SLU 4	2	43	2875	0.53	4.17	0.12
319	SLU 5	2	47	2874	0.5	4.25	0.11
319	SLU 6	2	36	2877	0.59	4.06	0.12
319	SLU 7	2	43	2875	0.53	4.17	0.12
319	SLU 8	2	36	2877	0.59	4.06	0.12
319	SLU 9	2	43	2875	0.53	4.17	0.12
319	SLU 10	2	55	3364	0.32	5.09	0.12
319	SLU 11	1	43	3366	0.41	4.9	0.13
319	SLU 12	2	50	3365	0.36	5.01	0.12
319	SLU 13	2	55	3364	0.32	5.09	0.12
319	SLU 14	1	43	3366	0.41	4.9	0.13
319	SLU 15	2	50	3365	0.36	5.01	0.12
319	SLU 16	1	43	3366	0.41	4.9	0.13
319	SLU 17	2	50	3365	0.36	5.01	0.12
319	SLU 18	1	46	3576	0.33	5.26	0.13
319	SLU 19	1	53	3575	0.28	5.37	0.13
319	SLU 20	1	46	3576	0.33	5.26	0.13
319	SLU 21	1	53	3575	0.28	5.37	0.13
319	SLU 22	2	41	3248	0.48	4.69	0.13
319	SLU 23	2	53	3245	0.39	4.87	0.12
319	SLU 24	2	41	3248	0.48	4.69	0.13
319	SLU 25	2	48	3246	0.43	4.8	0.13
319	SLU 26	2	53	3245	0.39	4.87	0.12
319	SLU 27	2	41	3248	0.48	4.69	0.13
319	SLU 28	2	48	3246	0.43	4.8	0.13
319	SLU 29	2	41	3248	0.48	4.69	0.13
319	SLU 30	2	48	3246	0.43	4.8	0.13
319	SLU 31	2	60	3735	0.22	5.71	0.13
319	SLU 32	1	48	3738	0.3	5.53	0.14
319	SLU 33	1	55	3736	0.25	5.64	0.13
319	SLU 34	2	60	3735	0.22	5.71	0.13
319	SLU 35	1	48	3738	0.3	5.53	0.14
319	SLU 36	1	55	3736	0.25	5.64	0.13
319	SLU 37	1	48	3738	0.3	5.53	0.14
319	SLU 38	1	55	3736	0.25	5.64	0.13
319	SLU 39	1	51	3947	0.23	5.89	0.14
319	SLU 40	1	58	3946	0.18	6	0.14
319	SLU 41	1	51	3947	0.23	5.89	0.14
319	SLU 42	1	58	3946	0.18	6	0.14
319	SLU 43	3	45	3613	0.8	5.07	0.16
319	SLU 44	3	56	3610	0.71	5.25	0.14
319	SLU 45	3	45	3613	0.8	5.07	0.16
319	SLU 46	3	52	3611	0.75	5.18	0.15
319	SLU 47	3	56	3610	0.71	5.25	0.14
319	SLU 48	3	45	3613	0.8	5.07	0.16
319	SLU 49	3	52	3611	0.75	5.18	0.15
319	SLU 50	3	45	3613	0.8	5.07	0.16
319	SLU 51	3	52	3611	0.75	5.18	0.15
319	SLU 52	3	64	4100	0.54	6.09	0.15
319	SLU 53	2	52	4102	0.62	5.91	0.17
319	SLU 54	2	59	4101	0.57	6.02	0.16
319	SLU 55	3	64	4100	0.54	6.09	0.15
319	SLU 56	2	52	4102	0.62	5.91	0.17
319	SLU 57	2	59	4101	0.57	6.02	0.16
319	SLU 58	2	52	4102	0.62	5.91	0.17
319	SLU 59	2	59	4101	0.57	6.02	0.16
319	SLU 60	2	55	4312	0.55	6.27	0.17
319	SLU 61	2	62	4310	0.49	6.38	0.16
319	SLU 62	2	55	4312	0.55	6.27	0.17
319	SLU 63	2	62	4310	0.49	6.38	0.16
319	SLU 64	2	50	3984	0.69	5.69	0.17
319	SLU 65	3	62	3981	0.61	5.88	0.15
319	SLU 66	2	50	3984	0.69	5.69	0.17
319	SLU 67	3	57	3982	0.64	5.8	0.16
319	SLU 68	3	62	3981	0.61	5.88	0.15
319	SLU 69	2	50	3984	0.69	5.69	0.17
319	SLU 70	3	57	3982	0.64	5.8	0.16
319	SLU 71	2	50	3984	0.69	5.69	0.17

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
319	SLU 72	3	57	3982	0.64	5.8	0.16
319	SLU 73	2	69	4471	0.43	6.72	0.16
319	SLU 74	2	57	4473	0.52	6.53	0.17
319	SLU 75	2	64	4472	0.46	6.64	0.17
319	SLU 76	2	69	4471	0.43	6.72	0.16
319	SLU 77	2	57	4473	0.52	6.53	0.17
319	SLU 78	2	64	4472	0.46	6.64	0.17
319	SLU 79	2	57	4473	0.52	6.53	0.17
319	SLU 80	2	64	4472	0.46	6.64	0.17
319	SLU 81	2	60	4683	0.44	6.89	0.18
319	SLU 82	2	67	4682	0.39	7	0.17
319	SLU 83	2	60	4683	0.44	6.89	0.18
319	SLU 84	2	67	4682	0.39	7	0.17
319	SLE RA 1	2	38	2983	0.56	4.24	0.13
319	SLE RA 2	2	45	2981	0.5	4.36	0.12
319	SLE RA 3	2	38	2983	0.56	4.24	0.13
319	SLE RA 4	2	42	2982	0.52	4.31	0.12
319	SLE RA 5	2	45	2981	0.5	4.36	0.12
319	SLE RA 6	2	38	2983	0.56	4.24	0.13
319	SLE RA 7	2	42	2982	0.52	4.31	0.12
319	SLE RA 8	2	38	2983	0.56	4.24	0.13
319	SLE RA 9	2	42	2982	0.52	4.31	0.12
319	SLE RA 10	2	50	3308	0.38	4.92	0.12
319	SLE RA 11	2	42	3309	0.44	4.8	0.13
319	SLE RA 12	2	47	3308	0.4	4.87	0.13
319	SLE RA 13	2	50	3308	0.38	4.92	0.12
319	SLE RA 14	2	42	3309	0.44	4.8	0.13
319	SLE RA 15	2	47	3308	0.4	4.87	0.13
319	SLE RA 16	2	42	3309	0.44	4.8	0.13
319	SLE RA 17	2	47	3308	0.4	4.87	0.13
319	SLE RA 18	1	44	3449	0.39	5.04	0.13
319	SLE RA 19	2	49	3448	0.35	5.11	0.13
319	SLE RA 20	1	44	3449	0.39	5.04	0.13
319	SLE RA 21	2	49	3448	0.35	5.11	0.13
319	SLE FR 1	2	38	2983	0.56	4.24	0.13
319	SLE FR 2	2	39	2982	0.54	4.27	0.13
319	SLE FR 3	2	38	2983	0.56	4.24	0.13
319	SLE FR 4	2	41	3122	0.49	4.51	0.13
319	SLE FR 5	2	40	3123	0.5	4.48	0.13
319	SLE FR 6	2	41	3216	0.47	4.64	0.13
319	SLE QP 1	2	38	2983	0.56	4.24	0.13
319	SLE QP 2	2	40	3123	0.5	4.48	0.13
319	SLD 1	238	80	3009	-0.12	13.95	-0.79
319	SLD 2	217	92	3011	-0.12	14.37	0.17
319	SLD 3	233	-42	3058	0.69	14.48	-0.85
319	SLD 4	211	-29	3060	0.68	14.91	0.11
319	SLD 5	90	232	3013	-0.9	6.36	-0.41
319	SLD 6	67	245	3016	-0.9	6.8	0.59
319	SLD 7	70	-174	3177	1.78	8.13	-0.61
319	SLD 8	48	-161	3180	1.77	8.57	0.39
319	SLD 9	-44	240	3066	-0.76	0.39	-0.13
319	SLD 10	-67	253	3069	-0.77	0.83	0.87
319	SLD 11	-64	-166	3230	1.91	2.16	-0.33
319	SLD 12	-86	-153	3232	1.91	2.6	0.67
319	SLD 13	-207	108	3185	0.33	-5.94	0.14
319	SLD 14	-229	121	3188	0.32	-5.52	1.1
319	SLD 15	-213	-13	3234	1.13	-5.41	0.08
319	SLD 16	-235	-1	3237	1.13	-4.99	1.04
319	SLV 1	542	131	2861	-0.92	26.1	-1.96
319	SLV 2	493	160	2867	-0.94	27.06	0.23
319	SLV 3	529	-145	2972	0.9	27.33	-2.1
319	SLV 4	480	-117	2978	0.89	28.29	0.09
319	SLV 5	202	476	2873	-2.68	8.75	-1.09
319	SLV 6	151	505	2879	-2.7	9.75	1.17
319	SLV 7	158	-446	3245	3.39	12.84	-1.55
319	SLV 8	107	-416	3251	3.38	13.84	0.71
319	SLV 9	-103	495	2995	-2.37	-4.88	-0.45
319	SLV 10	-155	525	3001	-2.39	-3.88	1.81
319	SLV 11	-147	-426	3367	3.71	-0.79	-0.91
319	SLV 12	-199	-397	3373	3.69	0.21	1.35
319	SLV 13	-476	196	3267	0.12	-19.33	0.17
319	SLV 14	-525	224	3273	0.11	-18.37	2.36
319	SLV 15	-489	-81	3379	1.95	-18.1	0.03
319	SLV 16	-539	-52	3385	1.93	-17.14	2.22
319	CRTFP Ux+	0	0	0	0	0	0
319	CRTFP Ux-	0	0	0	0	0	0
319	CRTFP Uy+	0	0	0	0	0	0
319	CRTFP Uy-	0	0	0	0	0	0
321	SLU 1	-12	-13	1469	-0.69	-184.86	-2.99
321	SLU 2	-11	-5	1463	-0.74	-185.09	-1.11
321	SLU 3	-12	-13	1469	-0.69	-184.86	-2.99
321	SLU 4	-12	-8	1465	-0.72	-185	-1.87
321	SLU 5	-11	-5	1463	-0.74	-185.09	-1.11
321	SLU 6	-12	-13	1469	-0.69	-184.86	-2.99
321	SLU 7	-12	-8	1465	-0.72	-185	-1.87
321	SLU 8	-12	-13	1469	-0.69	-184.86	-2.99

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
321	SLU 9	-12	-8	1465	-0.72	-185	-1.87
321	SLU 10	-13	-9	1702	-0.92	-213.2	-2.01
321	SLU 11	-13	-17	1708	-0.86	-212.97	-3.89
321	SLU 12	-13	-12	1705	-0.89	-213.11	-2.76
321	SLU 13	-13	-9	1702	-0.92	-213.2	-2.01
321	SLU 14	-13	-17	1708	-0.86	-212.97	-3.89
321	SLU 15	-13	-12	1705	-0.89	-213.11	-2.76
321	SLU 16	-13	-17	1708	-0.86	-212.97	-3.89
321	SLU 17	-13	-12	1705	-0.89	-213.11	-2.76
321	SLU 18	-14	-19	1811	-0.94	-225.02	-4.27
321	SLU 19	-13	-14	1807	-0.97	-225.15	-3.15
321	SLU 20	-14	-19	1811	-0.94	-225.02	-4.27
321	SLU 21	-13	-14	1807	-0.97	-225.15	-3.15
321	SLU 22	-13	-16	1651	-0.82	-205.99	-3.62
321	SLU 23	-12	-8	1645	-0.87	-206.22	-1.75
321	SLU 24	-13	-16	1651	-0.82	-205.99	-3.62
321	SLU 25	-13	-11	1647	-0.85	-206.13	-2.5
321	SLU 26	-12	-8	1645	-0.87	-206.22	-1.75
321	SLU 27	-13	-16	1651	-0.82	-205.99	-3.62
321	SLU 28	-13	-11	1647	-0.85	-206.13	-2.5
321	SLU 29	-13	-16	1651	-0.82	-205.99	-3.62
321	SLU 30	-13	-11	1647	-0.85	-206.13	-2.5
321	SLU 31	-14	-12	1884	-1.04	-234.32	-2.64
321	SLU 32	-14	-20	1891	-0.99	-234.09	-4.52
321	SLU 33	-14	-15	1887	-1.02	-234.23	-3.39
321	SLU 34	-14	-12	1884	-1.04	-234.32	-2.64
321	SLU 35	-14	-20	1891	-0.99	-234.09	-4.52
321	SLU 36	-14	-15	1887	-1.02	-234.23	-3.39
321	SLU 37	-14	-20	1891	-0.99	-234.09	-4.52
321	SLU 38	-14	-15	1887	-1.02	-234.23	-3.39
321	SLU 39	-15	-22	1993	-1.06	-246.14	-4.91
321	SLU 40	-14	-17	1990	-1.1	-246.28	-3.78
321	SLU 41	-15	-22	1993	-1.06	-246.14	-4.91
321	SLU 42	-14	-17	1990	-1.1	-246.28	-3.78
321	SLU 43	-15	-16	1847	-0.85	-233.08	-3.67
321	SLU 44	-14	-8	1841	-0.91	-233.31	-1.79
321	SLU 45	-15	-16	1847	-0.85	-233.08	-3.67
321	SLU 46	-15	-11	1843	-0.88	-233.22	-2.55
321	SLU 47	-14	-8	1841	-0.91	-233.31	-1.79
321	SLU 48	-15	-16	1847	-0.85	-233.08	-3.67
321	SLU 49	-15	-11	1843	-0.88	-233.22	-2.55
321	SLU 50	-15	-16	1847	-0.85	-233.08	-3.67
321	SLU 51	-15	-11	1843	-0.88	-233.22	-2.55
321	SLU 52	-16	-12	2080	-1.08	-261.42	-2.69
321	SLU 53	-16	-20	2087	-1.03	-261.19	-4.57
321	SLU 54	-16	-15	2083	-1.06	-261.33	-3.44
321	SLU 55	-16	-12	2080	-1.08	-261.42	-2.69
321	SLU 56	-16	-20	2087	-1.03	-261.19	-4.57
321	SLU 57	-16	-15	2083	-1.06	-261.33	-3.44
321	SLU 58	-16	-20	2087	-1.03	-261.19	-4.57
321	SLU 59	-16	-15	2083	-1.06	-261.33	-3.44
321	SLU 60	-17	-22	2189	-1.1	-273.23	-4.95
321	SLU 61	-17	-17	2186	-1.13	-273.37	-3.83
321	SLU 62	-17	-22	2189	-1.1	-273.23	-4.95
321	SLU 63	-17	-17	2186	-1.13	-273.37	-3.83
321	SLU 64	-16	-19	2029	-0.98	-254.2	-4.31
321	SLU 65	-16	-11	2023	-1.03	-254.43	-2.43
321	SLU 66	-16	-19	2029	-0.98	-254.2	-4.31
321	SLU 67	-16	-14	2026	-1.01	-254.34	-3.18
321	SLU 68	-16	-11	2023	-1.03	-254.43	-2.43
321	SLU 69	-16	-19	2029	-0.98	-254.2	-4.31
321	SLU 70	-16	-14	2026	-1.01	-254.34	-3.18
321	SLU 71	-16	-19	2029	-0.98	-254.2	-4.31
321	SLU 72	-16	-14	2026	-1.01	-254.34	-3.18
321	SLU 73	-17	-15	2263	-1.21	-282.54	-3.32
321	SLU 74	-17	-23	2269	-1.15	-282.31	-5.2
321	SLU 75	-17	-18	2265	-1.18	-282.45	-4.07
321	SLU 76	-17	-15	2263	-1.21	-282.54	-3.32
321	SLU 77	-17	-23	2269	-1.15	-282.31	-5.2
321	SLU 78	-17	-18	2265	-1.18	-282.45	-4.07
321	SLU 79	-17	-23	2269	-1.15	-282.31	-5.2
321	SLU 80	-17	-18	2265	-1.18	-282.45	-4.07
321	SLU 81	-18	-25	2372	-1.23	-294.36	-5.59
321	SLU 82	-18	-20	2368	-1.26	-294.49	-4.46
321	SLU 83	-18	-25	2372	-1.23	-294.36	-5.59
321	SLU 84	-18	-20	2368	-1.26	-294.49	-4.46
321	SLE RA 1	-12	-14	1521	-0.73	-190.9	-3.17
321	SLE RA 2	-12	-8	1517	-0.76	-191.05	-1.92
321	SLE RA 3	-12	-14	1521	-0.73	-190.9	-3.17
321	SLE RA 4	-12	-11	1518	-0.75	-190.99	-2.42
321	SLE RA 5	-12	-8	1517	-0.76	-191.05	-1.92
321	SLE RA 6	-12	-14	1521	-0.73	-190.9	-3.17
321	SLE RA 7	-12	-11	1518	-0.75	-190.99	-2.42
321	SLE RA 8	-12	-14	1521	-0.73	-190.9	-3.17
321	SLE RA 9	-12	-11	1518	-0.75	-190.99	-2.42
321	SLE RA 10	-13	-11	1676	-0.88	-209.79	-2.52

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
321	SLE RA 11	-13	-17	1681	-0.84	-209.64	-3.77
321	SLE RA 12	-13	-13	1678	-0.86	-209.73	-3.02
321	SLE RA 13	-13	-11	1676	-0.88	-209.79	-2.52
321	SLE RA 14	-13	-17	1681	-0.84	-209.64	-3.77
321	SLE RA 15	-13	-13	1678	-0.86	-209.73	-3.02
321	SLE RA 16	-13	-17	1681	-0.84	-209.64	-3.77
321	SLE RA 17	-13	-13	1678	-0.86	-209.73	-3.02
321	SLE RA 18	-13	-18	1749	-0.89	-217.67	-4.03
321	SLE RA 19	-13	-14	1747	-0.91	-217.76	-3.28
321	SLE RA 20	-13	-18	1749	-0.89	-217.67	-4.03
321	SLE RA 21	-13	-14	1747	-0.91	-217.76	-3.28
321	SLE FR 1	-12	-14	1521	-0.73	-190.9	-3.17
321	SLE FR 2	-12	-13	1520	-0.73	-190.93	-2.92
321	SLE FR 3	-12	-14	1521	-0.73	-190.9	-3.17
321	SLE FR 4	-12	-14	1589	-0.78	-198.96	-3.18
321	SLE FR 5	-13	-15	1589	-0.78	-198.93	-3.43
321	SLE FR 6	-13	-16	1635	-0.81	-204.28	-3.6
321	SLE QP 1	-12	-14	1521	-0.73	-190.9	-3.17
321	SLE QP 2	-13	-15	1589	-0.78	-198.93	-3.43
321	SLD 1	94	59	1762	-1.2	-220.46	13.22
321	SLD 2	84	31	1767	-1.18	-220.6	6.92
321	SLD 3	87	-35	1835	-0.74	-222.41	-7.93
321	SLD 4	77	-63	1839	-0.71	-222.55	-14.22
321	SLD 5	34	160	1530	-1.62	-202.38	35.96
321	SLD 6	23	131	1534	-1.59	-202.52	29.43
321	SLD 7	11	-153	1772	-0.07	-208.89	-34.53
321	SLD 8	0	-182	1776	-0.04	-209.03	-41.06
321	SLD 9	-25	152	1403	-1.51	-188.83	34.2
321	SLD 10	-36	123	1407	-1.48	-188.97	27.67
321	SLD 11	-48	-161	1645	0.04	-195.34	-36.29
321	SLD 12	-59	-190	1649	0.07	-195.48	-42.82
321	SLD 13	-102	33	1339	-0.84	-175.31	7.36
321	SLD 14	-112	5	1344	-0.82	-175.45	1.07
321	SLD 15	-109	-61	1412	-0.37	-177.26	-13.78
321	SLD 16	-119	-89	1416	-0.35	-177.4	-20.08
321	SLV 1	231	153	1985	-1.74	-248.15	34.43
321	SLV 2	207	89	1995	-1.69	-248.46	20.08
321	SLV 3	215	-60	2150	-0.69	-252.6	-13.59
321	SLV 4	191	-124	2160	-0.63	-252.91	-27.94
321	SLV 5	93	382	1454	-2.69	-206.83	86.02
321	SLV 6	69	315	1464	-2.63	-207.15	71.19
321	SLV 7	40	-328	2004	0.83	-221.67	-74.04
321	SLV 8	16	-394	2014	0.89	-221.99	-88.87
321	SLV 9	-41	364	1164	-2.44	-175.87	82.01
321	SLV 10	-65	298	1174	-2.38	-176.19	67.18
321	SLV 11	-94	-346	1715	1.08	-190.71	-78.05
321	SLV 12	-118	-412	1725	1.13	-191.03	-92.88
321	SLV 13	-216	94	1019	-0.92	-144.95	21.08
321	SLV 14	-240	30	1029	-0.86	-145.26	6.73
321	SLV 15	-232	-119	1184	0.14	-149.4	-26.94
321	SLV 16	-256	-183	1194	0.19	-149.71	-41.29
321	CRTFP Ux+	0	0	0	0	0	0
321	CRTFP Ux-	0	0	0	0	0	0
321	CRTFP Uy+	0	0	0	0	0	0
321	CRTFP Uy-	0	0	0	0	0	0
324	SLU 1	12	-26	1534	-0.32	180.56	6.47
324	SLU 2	12	-17	1529	-0.38	179.72	4.21
324	SLU 3	12	-26	1534	-0.32	180.56	6.47
324	SLU 4	12	-20	1531	-0.36	180.06	5.11
324	SLU 5	12	-17	1529	-0.38	179.72	4.21
324	SLU 6	12	-26	1534	-0.32	180.56	6.47
324	SLU 7	12	-20	1531	-0.36	180.06	5.11
324	SLU 8	12	-26	1534	-0.32	180.56	6.47
324	SLU 9	12	-20	1531	-0.36	180.06	5.11
324	SLU 10	12	-22	1782	-0.52	207.11	5.56
324	SLU 11	13	-31	1787	-0.46	207.95	7.81
324	SLU 12	13	-26	1784	-0.49	207.45	6.46
324	SLU 13	12	-22	1782	-0.52	207.11	5.56
324	SLU 14	13	-31	1787	-0.46	207.95	7.81
324	SLU 15	13	-26	1784	-0.49	207.45	6.46
324	SLU 16	13	-31	1787	-0.46	207.95	7.81
324	SLU 17	13	-26	1784	-0.49	207.45	6.46
324	SLU 18	13	-33	1896	-0.52	219.69	8.39
324	SLU 19	13	-28	1892	-0.55	219.18	7.04
324	SLU 20	13	-33	1896	-0.52	219.69	8.39
324	SLU 21	13	-28	1892	-0.55	219.18	7.04
324	SLU 22	13	-30	1726	-0.42	201.24	7.46
324	SLU 23	12	-21	1721	-0.48	200.4	5.21
324	SLU 24	13	-30	1726	-0.42	201.24	7.46
324	SLU 25	13	-24	1723	-0.46	200.74	6.11
324	SLU 26	12	-21	1721	-0.48	200.4	5.21
324	SLU 27	13	-30	1726	-0.42	201.24	7.46
324	SLU 28	13	-24	1723	-0.46	200.74	6.11
324	SLU 29	13	-30	1726	-0.42	201.24	7.46
324	SLU 30	13	-24	1723	-0.46	200.74	6.11
324	SLU 31	13	-26	1974	-0.62	227.79	6.56

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
324	SLU 32	14	-35	1979	-0.56	228.63	8.81
324	SLU 33	13	-29	1976	-0.59	228.13	7.46
324	SLU 34	13	-26	1974	-0.62	227.79	6.56
324	SLU 35	14	-35	1979	-0.56	228.63	8.81
324	SLU 36	13	-29	1976	-0.59	228.13	7.46
324	SLU 37	14	-35	1979	-0.56	228.63	8.81
324	SLU 38	13	-29	1976	-0.59	228.13	7.46
324	SLU 39	14	-37	2088	-0.62	240.37	9.39
324	SLU 40	14	-32	2084	-0.65	239.86	8.03
324	SLU 41	14	-37	2088	-0.62	240.37	9.39
324	SLU 42	14	-32	2084	-0.65	239.86	8.03
324	SLU 43	15	-32	1929	-0.39	227.64	8.06
324	SLU 44	15	-23	1923	-0.44	226.8	5.81
324	SLU 45	15	-32	1929	-0.39	227.64	8.06
324	SLU 46	15	-26	1925	-0.42	227.14	6.71
324	SLU 47	15	-23	1923	-0.44	226.8	5.81
324	SLU 48	15	-32	1929	-0.39	227.64	8.06
324	SLU 49	15	-26	1925	-0.42	227.14	6.71
324	SLU 50	15	-32	1929	-0.39	227.64	8.06
324	SLU 51	15	-26	1925	-0.42	227.14	6.71
324	SLU 52	16	-28	2176	-0.58	254.19	7.16
324	SLU 53	16	-37	2182	-0.53	255.03	9.41
324	SLU 54	16	-32	2178	-0.56	254.52	8.06
324	SLU 55	16	-28	2176	-0.58	254.19	7.16
324	SLU 56	16	-37	2182	-0.53	255.03	9.41
324	SLU 57	16	-32	2178	-0.56	254.52	8.06
324	SLU 58	16	-37	2182	-0.53	255.03	9.41
324	SLU 59	16	-32	2178	-0.56	254.52	8.06
324	SLU 60	17	-40	2290	-0.59	266.76	9.99
324	SLU 61	16	-34	2287	-0.62	266.26	8.63
324	SLU 62	17	-40	2290	-0.59	266.76	9.99
324	SLU 63	16	-34	2287	-0.62	266.26	8.63
324	SLU 64	16	-36	2121	-0.49	248.32	9.06
324	SLU 65	16	-27	2115	-0.54	247.48	6.81
324	SLU 66	16	-36	2121	-0.49	248.32	9.06
324	SLU 67	16	-30	2117	-0.52	247.82	7.71
324	SLU 68	16	-27	2115	-0.54	247.48	6.81
324	SLU 69	16	-36	2121	-0.49	248.32	9.06
324	SLU 70	16	-30	2117	-0.52	247.82	7.71
324	SLU 71	16	-36	2121	-0.49	248.32	9.06
324	SLU 72	16	-30	2117	-0.52	247.82	7.71
324	SLU 73	17	-32	2368	-0.68	274.87	8.15
324	SLU 74	17	-41	2374	-0.63	275.71	10.41
324	SLU 75	17	-36	2370	-0.66	275.2	9.05
324	SLU 76	17	-32	2368	-0.68	274.87	8.15
324	SLU 77	17	-41	2374	-0.63	275.71	10.41
324	SLU 78	17	-36	2370	-0.66	275.2	9.05
324	SLU 79	17	-41	2374	-0.63	275.71	10.41
324	SLU 80	17	-36	2370	-0.66	275.2	9.05
324	SLU 81	17	-43	2482	-0.69	287.44	10.98
324	SLU 82	17	-38	2479	-0.72	286.94	9.63
324	SLU 83	17	-43	2482	-0.69	287.44	10.98
324	SLU 84	17	-38	2479	-0.72	286.94	9.63
324	SLE RA 1	12	-27	1589	-0.35	186.47	6.75
324	SLE RA 2	12	-21	1586	-0.39	185.91	5.25
324	SLE RA 3	12	-27	1589	-0.35	186.47	6.75
324	SLE RA 4	12	-23	1587	-0.37	186.13	5.85
324	SLE RA 5	12	-21	1586	-0.39	185.91	5.25
324	SLE RA 6	12	-27	1589	-0.35	186.47	6.75
324	SLE RA 7	12	-23	1587	-0.37	186.13	5.85
324	SLE RA 8	12	-27	1589	-0.35	186.47	6.75
324	SLE RA 9	12	-23	1587	-0.37	186.13	5.85
324	SLE RA 10	13	-24	1754	-0.48	204.17	6.15
324	SLE RA 11	13	-30	1758	-0.44	204.73	7.65
324	SLE RA 12	13	-27	1756	-0.47	204.39	6.75
324	SLE RA 13	13	-24	1754	-0.48	204.17	6.15
324	SLE RA 14	13	-30	1758	-0.44	204.73	7.65
324	SLE RA 15	13	-27	1756	-0.47	204.39	6.75
324	SLE RA 16	13	-30	1758	-0.44	204.73	7.65
324	SLE RA 17	13	-27	1756	-0.47	204.39	6.75
324	SLE RA 18	13	-32	1830	-0.48	212.55	8.03
324	SLE RA 19	13	-28	1828	-0.51	212.22	7.13
324	SLE RA 20	13	-32	1830	-0.48	212.55	8.03
324	SLE RA 21	13	-28	1828	-0.51	212.22	7.13
324	SLE FR 1	12	-27	1589	-0.35	186.47	6.75
324	SLE FR 2	12	-25	1588	-0.36	186.36	6.45
324	SLE FR 3	12	-27	1589	-0.35	186.47	6.75
324	SLE FR 4	12	-27	1661	-0.4	194.18	6.84
324	SLE FR 5	12	-28	1661	-0.39	194.29	7.14
324	SLE FR 6	13	-29	1709	-0.42	199.51	7.39
324	SLE QP 1	12	-27	1589	-0.35	186.47	6.75
324	SLE QP 2	12	-28	1661	-0.39	194.29	7.14
324	SLD 1	123	-10	1401	-0.48	168.11	2.39
324	SLD 2	111	20	1398	-0.5	166.66	-5.03
324	SLD 3	125	-107	1481	0.08	176.74	26.85
324	SLD 4	114	-77	1477	0.06	175.28	19.44

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
324	SLD 5	46	114	1464	-1.27	173.9	-28.66
324	SLD 6	34	145	1461	-1.29	172.39	-36.36
324	SLD 7	55	-211	1729	0.62	202.64	52.89
324	SLD 8	43	-180	1725	0.6	201.13	45.2
324	SLD 9	-18	123	1598	-1.38	187.46	-30.92
324	SLD 10	-30	155	1594	-1.4	185.95	-38.62
324	SLD 11	-9	-202	1862	0.51	216.2	50.63
324	SLD 12	-21	-171	1858	0.49	214.69	42.93
324	SLD 13	-89	21	1846	-0.85	213.31	-5.17
324	SLD 14	-100	51	1842	-0.87	211.85	-12.58
324	SLD 15	-86	-77	1925	-0.28	221.93	19.3
324	SLD 16	-98	-47	1921	-0.3	220.48	11.88
324	SLV 1	264	14	1068	-0.6	134.46	-3.52
324	SLV 2	238	82	1060	-0.64	131.15	-20.43
324	SLV 3	270	-208	1248	0.69	154.03	52.03
324	SLV 4	244	-140	1240	0.65	150.71	35.12
324	SLV 5	88	295	1213	-2.39	147.88	-74.11
324	SLV 6	61	366	1205	-2.44	144.45	-91.59
324	SLV 7	109	-443	1813	1.9	213.11	111.06
324	SLV 8	82	-373	1805	1.86	209.69	93.58
324	SLV 9	-57	316	1518	-2.64	178.9	-79.31
324	SLV 10	-84	387	1509	-2.69	175.48	-96.79
324	SLV 11	-36	-422	2118	1.65	244.13	105.86
324	SLV 12	-63	-352	2109	1.61	240.71	88.38
324	SLV 13	-219	83	2083	-1.43	237.87	-20.84
324	SLV 14	-245	152	2075	-1.47	234.56	-37.75
324	SLV 15	-213	-138	2263	-0.14	257.44	34.71
324	SLV 16	-239	-70	2255	-0.19	254.13	17.8
324	CRTFP Ux+	0	0	0	0	0	0
324	CRTFP Ux-	0	0	0	0	0	0
324	CRTFP Uy+	0	0	0	0	0	0
324	CRTFP Uy-	0	0	0	0	0	0
326	SLU 1	-11	44	2963	1.26	-5.15	-0.24
326	SLU 2	-11	56	2958	1.12	-5.37	-0.25
326	SLU 3	-11	44	2963	1.26	-5.15	-0.24
326	SLU 4	-11	51	2960	1.18	-5.28	-0.25
326	SLU 5	-11	56	2958	1.12	-5.37	-0.25
326	SLU 6	-11	44	2963	1.26	-5.15	-0.24
326	SLU 7	-11	51	2960	1.18	-5.28	-0.25
326	SLU 8	-11	44	2963	1.26	-5.15	-0.24
326	SLU 9	-11	51	2960	1.18	-5.28	-0.25
326	SLU 10	-11	65	3448	1.12	-6.8	-0.28
326	SLU 11	-11	53	3452	1.27	-6.59	-0.27
326	SLU 12	-11	60	3449	1.18	-6.72	-0.28
326	SLU 13	-11	65	3448	1.12	-6.8	-0.28
326	SLU 14	-11	53	3452	1.27	-6.59	-0.27
326	SLU 15	-11	60	3449	1.18	-6.72	-0.28
326	SLU 16	-11	53	3452	1.27	-6.59	-0.27
326	SLU 17	-11	60	3449	1.18	-6.72	-0.28
326	SLU 18	-11	57	3662	1.27	-7.2	-0.28
326	SLU 19	-11	64	3659	1.18	-7.33	-0.29
326	SLU 20	-11	57	3662	1.27	-7.2	-0.28
326	SLU 21	-11	64	3659	1.18	-7.33	-0.29
326	SLU 22	-11	51	3336	1.29	-6.18	-0.26
326	SLU 23	-11	62	3331	1.15	-6.4	-0.27
326	SLU 24	-11	51	3336	1.29	-6.18	-0.26
326	SLU 25	-11	58	3333	1.21	-6.31	-0.27
326	SLU 26	-11	62	3331	1.15	-6.4	-0.27
326	SLU 27	-11	51	3336	1.29	-6.18	-0.26
326	SLU 28	-11	58	3333	1.21	-6.31	-0.27
326	SLU 29	-11	51	3336	1.29	-6.18	-0.26
326	SLU 30	-11	58	3333	1.21	-6.31	-0.27
326	SLU 31	-12	71	3821	1.15	-7.83	-0.3
326	SLU 32	-11	60	3825	1.3	-7.62	-0.29
326	SLU 33	-11	67	3823	1.21	-7.74	-0.3
326	SLU 34	-12	71	3821	1.15	-7.83	-0.3
326	SLU 35	-11	60	3825	1.3	-7.62	-0.29
326	SLU 36	-11	67	3823	1.21	-7.74	-0.3
326	SLU 37	-11	60	3825	1.3	-7.62	-0.29
326	SLU 38	-11	67	3823	1.21	-7.74	-0.3
326	SLU 39	-11	63	4035	1.3	-8.23	-0.3
326	SLU 40	-12	70	4032	1.21	-8.36	-0.31
326	SLU 41	-11	63	4035	1.3	-8.23	-0.3
326	SLU 42	-12	70	4032	1.21	-8.36	-0.31
326	SLU 43	-14	55	3723	1.63	-6.35	-0.3
326	SLU 44	-14	67	3719	1.49	-6.56	-0.32
326	SLU 45	-14	55	3723	1.63	-6.35	-0.3
326	SLU 46	-14	62	3721	1.55	-6.47	-0.31
326	SLU 47	-14	67	3719	1.49	-6.56	-0.32
326	SLU 48	-14	55	3723	1.63	-6.35	-0.3
326	SLU 49	-14	62	3721	1.55	-6.47	-0.31
326	SLU 50	-14	55	3723	1.63	-6.35	-0.3
326	SLU 51	-14	62	3721	1.55	-6.47	-0.31
326	SLU 52	-14	76	4208	1.49	-7.99	-0.35
326	SLU 53	-14	64	4213	1.63	-7.78	-0.33
326	SLU 54	-14	71	4210	1.55	-7.91	-0.34

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
326	SLU 55	-14	76	4208	1.49	-7.99	-0.35
326	SLU 56	-14	64	4213	1.63	-7.78	-0.33
326	SLU 57	-14	71	4210	1.55	-7.91	-0.34
326	SLU 58	-14	64	4213	1.63	-7.78	-0.33
326	SLU 59	-14	71	4210	1.55	-7.91	-0.34
326	SLU 60	-14	68	4423	1.64	-8.39	-0.35
326	SLU 61	-14	75	4420	1.55	-8.52	-0.35
326	SLU 62	-14	68	4423	1.64	-8.39	-0.35
326	SLU 63	-14	75	4420	1.55	-8.52	-0.35
326	SLU 64	-14	62	4097	1.66	-7.37	-0.32
326	SLU 65	-14	73	4092	1.52	-7.59	-0.34
326	SLU 66	-14	62	4097	1.66	-7.37	-0.32
326	SLU 67	-14	69	4094	1.57	-7.5	-0.33
326	SLU 68	-14	73	4092	1.52	-7.59	-0.34
326	SLU 69	-14	62	4097	1.66	-7.37	-0.32
326	SLU 70	-14	69	4094	1.57	-7.5	-0.33
326	SLU 71	-14	62	4097	1.66	-7.37	-0.32
326	SLU 72	-14	69	4094	1.57	-7.5	-0.33
326	SLU 73	-15	82	4582	1.52	-9.02	-0.37
326	SLU 74	-14	71	4586	1.66	-8.81	-0.36
326	SLU 75	-15	78	4583	1.58	-8.94	-0.36
326	SLU 76	-15	82	4582	1.52	-9.02	-0.37
326	SLU 77	-14	71	4586	1.66	-8.81	-0.36
326	SLU 78	-15	78	4583	1.58	-8.94	-0.36
326	SLU 79	-14	71	4586	1.66	-8.81	-0.36
326	SLU 80	-15	78	4583	1.58	-8.94	-0.36
326	SLU 81	-14	74	4796	1.67	-9.42	-0.37
326	SLU 82	-15	81	4793	1.58	-9.55	-0.38
326	SLU 83	-14	74	4796	1.67	-9.42	-0.37
326	SLU 84	-15	81	4793	1.58	-9.55	-0.38
326	SLE RA 1	-11	46	3069	1.27	-5.45	-0.25
326	SLE RA 2	-11	54	3066	1.18	-5.59	-0.25
326	SLE RA 3	-11	46	3069	1.27	-5.45	-0.25
326	SLE RA 4	-11	51	3067	1.21	-5.53	-0.25
326	SLE RA 5	-11	54	3066	1.18	-5.59	-0.25
326	SLE RA 6	-11	46	3069	1.27	-5.45	-0.25
326	SLE RA 7	-11	51	3067	1.21	-5.53	-0.25
326	SLE RA 8	-11	46	3069	1.27	-5.45	-0.25
326	SLE RA 9	-11	51	3067	1.21	-5.53	-0.25
326	SLE RA 10	-11	60	3393	1.18	-6.55	-0.27
326	SLE RA 11	-11	52	3396	1.27	-6.4	-0.27
326	SLE RA 12	-11	57	3394	1.22	-6.49	-0.27
326	SLE RA 13	-11	60	3393	1.18	-6.55	-0.27
326	SLE RA 14	-11	52	3396	1.27	-6.4	-0.27
326	SLE RA 15	-11	57	3394	1.22	-6.49	-0.27
326	SLE RA 16	-11	52	3396	1.27	-6.4	-0.27
326	SLE RA 17	-11	57	3394	1.22	-6.49	-0.27
326	SLE RA 18	-11	55	3536	1.27	-6.81	-0.27
326	SLE RA 19	-11	59	3534	1.22	-6.9	-0.28
326	SLE RA 20	-11	55	3536	1.27	-6.81	-0.27
326	SLE RA 21	-11	59	3534	1.22	-6.9	-0.28
326	SLE FR 1	-11	46	3069	1.27	-5.45	-0.25
326	SLE FR 2	-11	48	3069	1.25	-5.48	-0.25
326	SLE FR 3	-11	46	3069	1.27	-5.45	-0.25
326	SLE FR 4	-11	50	3208	1.25	-5.88	-0.26
326	SLE FR 5	-11	49	3209	1.27	-5.86	-0.25
326	SLE FR 6	-11	50	3302	1.27	-6.13	-0.26
326	SLE QP 1	-11	46	3069	1.27	-5.45	-0.25
326	SLE QP 2	-11	49	3209	1.27	-5.86	-0.25
326	SLD 1	234	125	3293	0.5	3.99	-1.45
326	SLD 2	207	113	3292	0.53	4.46	-0.4
326	SLD 3	238	-2	3361	1.88	2.98	-1.39
326	SLD 4	212	-14	3360	1.91	3.45	-0.34
326	SLD 5	66	268	3133	-1.06	-1.54	-1.09
326	SLD 6	38	256	3131	-1.03	-1.05	0
326	SLD 7	80	-154	3358	3.53	-4.91	-0.89
326	SLD 8	53	-167	3356	3.56	-4.43	0.2
326	SLD 9	-74	264	3062	-1.02	-7.29	-0.71
326	SLD 10	-102	252	3061	-0.99	-6.8	0.38
326	SLD 11	-60	-159	3287	3.58	-10.66	-0.51
326	SLD 12	-88	-171	3286	3.61	-10.17	0.58
326	SLD 13	-233	111	3059	0.64	-15.16	-0.17
326	SLD 14	-260	99	3057	0.67	-14.69	0.88
326	SLD 15	-229	-16	3126	2.01	-16.17	-0.11
326	SLD 16	-256	-28	3125	2.04	-15.71	0.94
326	SLV 1	548	222	3403	-0.48	16.65	-2.99
326	SLV 2	487	195	3400	-0.42	17.72	-0.59
326	SLV 3	558	-66	3556	2.65	14.35	-2.85
326	SLV 4	497	-93	3553	2.72	15.42	-0.45
326	SLV 5	164	547	3036	-4.03	3.99	-2.16
326	SLV 6	101	519	3032	-3.96	5.09	0.31
326	SLV 7	197	-412	3547	6.41	-3.67	-1.7
326	SLV 8	134	-440	3544	6.48	-2.57	0.78
326	SLV 9	-156	537	2874	-3.93	-9.14	-1.28
326	SLV 10	-219	510	2871	-3.86	-8.04	1.19
326	SLV 11	-123	-422	3386	6.5	-16.81	-0.82

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
326	SLV 12	-186	-450	3382	6.57	-15.71	1.66
326	SLV 13	-519	190	2865	-0.17	-27.13	-0.06
326	SLV 14	-580	163	2862	-0.1	-26.07	2.34
326	SLV 15	-509	-98	3019	2.96	-29.43	0.08
326	SLV 16	-570	-124	3015	3.03	-28.37	2.48
326	CRTFP Ux+	0	0	0	0	0	0
326	CRTFP Ux-	0	0	0	0	0	0
326	CRTFP Uy+	0	0	0	0	0	0
326	CRTFP Uy-	0	0	0	0	0	0
329	SLU 1	1	38	2907	1.45	4.96	0.08
329	SLU 2	2	49	2902	1.31	5.14	0.08
329	SLU 3	1	38	2907	1.45	4.96	0.08
329	SLU 4	2	45	2904	1.37	5.07	0.08
329	SLU 5	2	49	2902	1.31	5.14	0.08
329	SLU 6	1	38	2907	1.45	4.96	0.08
329	SLU 7	2	45	2904	1.37	5.07	0.08
329	SLU 8	1	38	2907	1.45	4.96	0.08
329	SLU 9	2	45	2904	1.37	5.07	0.08
329	SLU 10	1	57	3390	1.4	6.17	0.08
329	SLU 11	1	45	3396	1.54	5.99	0.08
329	SLU 12	1	52	3392	1.46	6.1	0.08
329	SLU 13	1	57	3390	1.4	6.17	0.08
329	SLU 14	1	45	3396	1.54	5.99	0.08
329	SLU 15	1	52	3392	1.46	6.1	0.08
329	SLU 16	1	45	3396	1.54	5.99	0.08
329	SLU 17	1	52	3392	1.46	6.1	0.08
329	SLU 18	1	48	3605	1.58	6.44	0.09
329	SLU 19	1	55	3602	1.5	6.55	0.08
329	SLU 20	1	48	3605	1.58	6.44	0.09
329	SLU 21	1	55	3602	1.5	6.55	0.08
329	SLU 22	1	43	3278	1.54	5.73	0.09
329	SLU 23	2	55	3272	1.4	5.91	0.08
329	SLU 24	1	43	3278	1.54	5.73	0.09
329	SLU 25	1	50	3275	1.46	5.84	0.08
329	SLU 26	2	55	3272	1.4	5.91	0.08
329	SLU 27	1	43	3278	1.54	5.73	0.09
329	SLU 28	1	50	3275	1.46	5.84	0.08
329	SLU 29	1	43	3278	1.54	5.73	0.09
329	SLU 30	1	50	3275	1.46	5.84	0.08
329	SLU 31	1	62	3761	1.49	6.95	0.08
329	SLU 32	0	51	3767	1.63	6.76	0.09
329	SLU 33	1	58	3763	1.55	6.87	0.09
329	SLU 34	1	62	3761	1.49	6.95	0.08
329	SLU 35	0	51	3767	1.63	6.76	0.09
329	SLU 36	1	58	3763	1.55	6.87	0.09
329	SLU 37	0	51	3767	1.63	6.76	0.09
329	SLU 38	1	58	3763	1.55	6.87	0.09
329	SLU 39	0	54	3976	1.67	7.21	0.09
329	SLU 40	0	61	3973	1.58	7.32	0.09
329	SLU 41	0	54	3976	1.67	7.21	0.09
329	SLU 42	0	61	3973	1.58	7.32	0.09
329	SLU 43	2	47	3652	1.86	6.18	0.1
329	SLU 44	2	59	3647	1.72	6.36	0.1
329	SLU 45	2	47	3652	1.86	6.18	0.1
329	SLU 46	2	54	3649	1.77	6.29	0.1
329	SLU 47	2	59	3647	1.72	6.36	0.1
329	SLU 48	2	47	3652	1.86	6.18	0.1
329	SLU 49	2	54	3649	1.77	6.29	0.1
329	SLU 50	2	47	3652	1.86	6.18	0.1
329	SLU 51	2	54	3649	1.77	6.29	0.1
329	SLU 52	2	66	4135	1.81	7.4	0.1
329	SLU 53	1	55	4141	1.95	7.21	0.11
329	SLU 54	2	62	4137	1.86	7.32	0.1
329	SLU 55	2	66	4135	1.81	7.4	0.1
329	SLU 56	1	55	4141	1.95	7.21	0.11
329	SLU 57	2	62	4137	1.86	7.32	0.1
329	SLU 58	1	55	4141	1.95	7.21	0.11
329	SLU 59	2	62	4137	1.86	7.32	0.1
329	SLU 60	1	58	4350	1.98	7.66	0.11
329	SLU 61	1	65	4347	1.9	7.77	0.1
329	SLU 62	1	58	4350	1.98	7.66	0.11
329	SLU 63	1	65	4347	1.9	7.77	0.1
329	SLU 64	2	53	4023	1.94	6.95	0.11
329	SLU 65	2	64	4018	1.81	7.13	0.1
329	SLU 66	2	53	4023	1.94	6.95	0.11
329	SLU 67	2	60	4020	1.86	7.06	0.11
329	SLU 68	2	64	4018	1.81	7.13	0.1
329	SLU 69	2	53	4023	1.94	6.95	0.11
329	SLU 70	2	60	4020	1.86	7.06	0.11
329	SLU 71	2	53	4023	1.94	6.95	0.11
329	SLU 72	2	60	4020	1.86	7.06	0.11
329	SLU 73	1	72	4506	1.9	8.17	0.11
329	SLU 74	1	60	4512	2.03	7.99	0.11
329	SLU 75	1	67	4508	1.95	8.1	0.11
329	SLU 76	1	72	4506	1.9	8.17	0.11
329	SLU 77	1	60	4512	2.03	7.99	0.11

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
329	SLU 78	1	67	4508	1.95	8.1	0.11
329	SLU 79	1	60	4512	2.03	7.99	0.11
329	SLU 80	1	67	4508	1.95	8.1	0.11
329	SLU 81	1	63	4721	2.07	8.43	0.11
329	SLU 82	1	70	4718	1.99	8.54	0.11
329	SLU 83	1	63	4721	2.07	8.43	0.11
329	SLU 84	1	70	4718	1.99	8.54	0.11
329	SLE RA 1	1	39	3013	1.48	5.18	0.08
329	SLE RA 2	2	47	3009	1.38	5.3	0.08
329	SLE RA 3	1	39	3013	1.48	5.18	0.08
329	SLE RA 4	1	44	3011	1.42	5.25	0.08
329	SLE RA 5	2	47	3009	1.38	5.3	0.08
329	SLE RA 6	1	39	3013	1.48	5.18	0.08
329	SLE RA 7	1	44	3011	1.42	5.25	0.08
329	SLE RA 8	1	39	3013	1.48	5.18	0.08
329	SLE RA 9	1	44	3011	1.42	5.25	0.08
329	SLE RA 10	1	52	3335	1.44	5.99	0.08
329	SLE RA 11	1	44	3339	1.54	5.87	0.08
329	SLE RA 12	1	49	3337	1.48	5.94	0.08
329	SLE RA 13	1	52	3335	1.44	5.99	0.08
329	SLE RA 14	1	44	3339	1.54	5.87	0.08
329	SLE RA 15	1	49	3337	1.48	5.94	0.08
329	SLE RA 16	1	44	3339	1.54	5.87	0.08
329	SLE RA 17	1	49	3337	1.48	5.94	0.08
329	SLE RA 18	1	46	3479	1.56	6.16	0.09
329	SLE RA 19	1	51	3476	1.51	6.24	0.08
329	SLE RA 20	1	46	3479	1.56	6.16	0.09
329	SLE RA 21	1	51	3476	1.51	6.24	0.08
329	SLE FR 1	1	39	3013	1.48	5.18	0.08
329	SLE FR 2	1	41	3013	1.46	5.2	0.08
329	SLE FR 3	1	39	3013	1.48	5.18	0.08
329	SLE FR 4	1	43	3152	1.48	5.5	0.08
329	SLE FR 5	1	42	3153	1.5	5.47	0.08
329	SLE FR 6	1	43	3246	1.52	5.67	0.08
329	SLE QP 1	1	39	3013	1.48	5.18	0.08
329	SLE QP 2	1	42	3153	1.5	5.47	0.08
329	SLD 1	243	82	3026	0.95	14.81	-1.03
329	SLD 2	216	94	3028	0.92	15.23	-0.02
329	SLD 3	238	-40	3107	2.27	15.41	-1.14
329	SLD 4	211	-27	3109	2.24	15.83	-0.14
329	SLD 5	92	233	2992	-0.65	7.21	-0.45
329	SLD 6	64	246	2994	-0.68	7.65	0.59
329	SLD 7	73	-172	3261	3.74	9.21	-0.82
329	SLD 8	45	-159	3263	3.71	9.64	0.22
329	SLD 9	-43	242	3043	-0.71	1.3	-0.05
329	SLD 10	-71	255	3045	-0.74	1.74	0.99
329	SLD 11	-62	-163	3312	3.68	3.3	-0.42
329	SLD 12	-90	-150	3314	3.65	3.73	0.62
329	SLD 13	-208	111	3197	0.76	-4.88	0.3
329	SLD 14	-235	123	3199	0.73	-4.47	1.31
329	SLD 15	-214	-11	3278	2.08	-4.29	0.19
329	SLD 16	-241	1	3280	2.05	-3.87	1.2
329	SLV 1	554	132	2862	0.26	26.8	-2.45
329	SLV 2	492	161	2866	0.19	27.75	-0.17
329	SLV 3	541	-144	3045	3.25	28.18	-2.71
329	SLV 4	480	-115	3050	3.18	29.13	-0.42
329	SLV 5	209	477	2786	-3.38	9.43	-1.13
329	SLV 6	145	507	2791	-3.45	10.42	1.23
329	SLV 7	166	-443	3397	6.59	14.02	-1.97
329	SLV 8	103	-414	3401	6.52	15.01	0.39
329	SLV 9	-100	497	2904	-3.52	-4.06	-0.22
329	SLV 10	-164	526	2909	-3.59	-3.08	2.14
329	SLV 11	-143	-423	3515	6.46	0.53	-1.06
329	SLV 12	-207	-394	3520	6.39	1.51	1.3
329	SLV 13	-477	198	3256	-0.18	-18.18	0.59
329	SLV 14	-539	227	3261	-0.25	-17.23	2.87
329	SLV 15	-490	-78	3439	2.81	-16.8	0.34
329	SLV 16	-552	-49	3444	2.74	-15.85	2.62
329	CRTFP Ux+	0	0	0	0	0	0
329	CRTFP Ux-	0	0	0	0	0	0
329	CRTFP Uy+	0	0	0	0	0	0
329	CRTFP Uy-	0	0	0	0	0	0
331	SLU 1	-10	-13	1454	-0.2	-166.38	-2.99
331	SLU 2	-10	-5	1446	-0.26	-166.37	-1.11
331	SLU 3	-10	-13	1454	-0.2	-166.38	-2.99
331	SLU 4	-10	-8	1449	-0.23	-166.38	-1.86
331	SLU 5	-10	-5	1446	-0.26	-166.37	-1.11
331	SLU 6	-10	-13	1454	-0.2	-166.38	-2.99
331	SLU 7	-10	-8	1449	-0.23	-166.38	-1.86
331	SLU 8	-10	-13	1454	-0.2	-166.38	-2.99
331	SLU 9	-10	-8	1449	-0.23	-166.38	-1.86
331	SLU 10	-11	-9	1681	-0.33	-190.59	-2
331	SLU 11	-12	-17	1690	-0.27	-190.59	-3.88
331	SLU 12	-11	-12	1685	-0.31	-190.59	-2.75
331	SLU 13	-11	-9	1681	-0.33	-190.59	-2
331	SLU 14	-12	-17	1690	-0.27	-190.59	-3.88

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
331	SLU 15	-11	-12	1685	-0.31	-190.59	-2.75
331	SLU 16	-12	-17	1690	-0.27	-190.59	-3.88
331	SLU 17	-11	-12	1685	-0.31	-190.59	-2.75
331	SLU 18	-12	-19	1791	-0.3	-200.97	-4.26
331	SLU 19	-12	-14	1786	-0.34	-200.96	-3.14
331	SLU 20	-12	-19	1791	-0.3	-200.97	-4.26
331	SLU 21	-12	-14	1786	-0.34	-200.96	-3.14
331	SLU 22	-11	-16	1633	-0.25	-184.58	-3.62
331	SLU 23	-11	-8	1625	-0.31	-184.57	-1.74
331	SLU 24	-11	-16	1633	-0.25	-184.58	-3.62
331	SLU 25	-11	-11	1629	-0.28	-184.57	-2.49
331	SLU 26	-11	-8	1625	-0.31	-184.57	-1.74
331	SLU 27	-11	-16	1633	-0.25	-184.58	-3.62
331	SLU 28	-11	-11	1629	-0.28	-184.57	-2.49
331	SLU 29	-11	-16	1633	-0.25	-184.58	-3.62
331	SLU 30	-11	-11	1629	-0.28	-184.57	-2.49
331	SLU 31	-12	-11	1861	-0.38	-208.78	-2.63
331	SLU 32	-13	-20	1869	-0.32	-208.79	-4.51
331	SLU 33	-12	-15	1864	-0.36	-208.78	-3.38
331	SLU 34	-12	-11	1861	-0.38	-208.78	-2.63
331	SLU 35	-13	-20	1869	-0.32	-208.79	-4.51
331	SLU 36	-12	-15	1864	-0.36	-208.78	-3.38
331	SLU 37	-13	-20	1869	-0.32	-208.79	-4.51
331	SLU 38	-12	-15	1864	-0.36	-208.78	-3.38
331	SLU 39	-13	-21	1970	-0.36	-219.16	-4.89
331	SLU 40	-13	-17	1965	-0.39	-219.16	-3.77
331	SLU 41	-13	-21	1970	-0.36	-219.16	-4.89
331	SLU 42	-13	-17	1965	-0.39	-219.16	-3.77
331	SLU 43	-13	-16	1829	-0.24	-210.06	-3.67
331	SLU 44	-13	-8	1821	-0.3	-210.05	-1.79
331	SLU 45	-13	-16	1829	-0.24	-210.06	-3.67
331	SLU 46	-13	-11	1824	-0.28	-210.05	-2.54
331	SLU 47	-13	-8	1821	-0.3	-210.05	-1.79
331	SLU 48	-13	-16	1829	-0.24	-210.06	-3.67
331	SLU 49	-13	-11	1824	-0.28	-210.05	-2.54
331	SLU 50	-13	-16	1829	-0.24	-210.06	-3.67
331	SLU 51	-13	-11	1824	-0.28	-210.05	-2.54
331	SLU 52	-14	-12	2056	-0.37	-234.26	-2.69
331	SLU 53	-14	-20	2064	-0.31	-234.27	-4.56
331	SLU 54	-14	-15	2060	-0.35	-234.26	-3.44
331	SLU 55	-14	-12	2056	-0.37	-234.26	-2.69
331	SLU 56	-14	-20	2064	-0.31	-234.27	-4.56
331	SLU 57	-14	-15	2060	-0.35	-234.26	-3.44
331	SLU 58	-14	-20	2064	-0.31	-234.27	-4.56
331	SLU 59	-14	-15	2060	-0.35	-234.26	-3.44
331	SLU 60	-15	-22	2165	-0.35	-244.65	-4.94
331	SLU 61	-15	-17	2160	-0.38	-244.64	-3.82
331	SLU 62	-15	-22	2165	-0.35	-244.65	-4.94
331	SLU 63	-15	-17	2160	-0.38	-244.64	-3.82
331	SLU 64	-14	-19	2008	-0.29	-228.25	-4.3
331	SLU 65	-14	-11	2000	-0.35	-228.25	-2.42
331	SLU 66	-14	-19	2008	-0.29	-228.25	-4.3
331	SLU 67	-14	-14	2003	-0.33	-228.25	-3.17
331	SLU 68	-14	-11	2000	-0.35	-228.25	-2.42
331	SLU 69	-14	-19	2008	-0.29	-228.25	-4.3
331	SLU 70	-14	-14	2003	-0.33	-228.25	-3.17
331	SLU 71	-14	-19	2008	-0.29	-228.25	-4.3
331	SLU 72	-14	-14	2003	-0.33	-228.25	-3.17
331	SLU 73	-15	-14	2235	-0.42	-252.46	-3.31
331	SLU 74	-15	-23	2244	-0.37	-252.46	-5.19
331	SLU 75	-15	-18	2239	-0.4	-252.46	-4.06
331	SLU 76	-15	-14	2235	-0.42	-252.46	-3.31
331	SLU 77	-15	-23	2244	-0.37	-252.46	-5.19
331	SLU 78	-15	-18	2239	-0.4	-252.46	-4.06
331	SLU 79	-15	-23	2244	-0.37	-252.46	-5.19
331	SLU 80	-15	-18	2239	-0.4	-252.46	-4.06
331	SLU 81	-16	-24	2345	-0.4	-262.84	-5.57
331	SLU 82	-16	-19	2340	-0.43	-262.84	-4.45
331	SLU 83	-16	-24	2345	-0.4	-262.84	-5.57
331	SLU 84	-16	-19	2340	-0.43	-262.84	-4.45
331	SLE RA 1	-11	-14	1505	-0.21	-171.58	-3.17
331	SLE RA 2	-10	-8	1500	-0.25	-171.58	-1.92
331	SLE RA 3	-11	-14	1505	-0.21	-171.58	-3.17
331	SLE RA 4	-11	-11	1502	-0.24	-171.58	-2.42
331	SLE RA 5	-10	-8	1500	-0.25	-171.58	-1.92
331	SLE RA 6	-11	-14	1505	-0.21	-171.58	-3.17
331	SLE RA 7	-11	-11	1502	-0.24	-171.58	-2.42
331	SLE RA 8	-11	-14	1505	-0.21	-171.58	-3.17
331	SLE RA 9	-11	-11	1502	-0.24	-171.58	-2.42
331	SLE RA 10	-11	-11	1657	-0.3	-187.72	-2.51
331	SLE RA 11	-12	-17	1662	-0.26	-187.72	-3.76
331	SLE RA 12	-11	-13	1659	-0.29	-187.72	-3.01
331	SLE RA 13	-11	-11	1657	-0.3	-187.72	-2.51
331	SLE RA 14	-12	-17	1662	-0.26	-187.72	-3.76
331	SLE RA 15	-11	-13	1659	-0.29	-187.72	-3.01
331	SLE RA 16	-12	-17	1662	-0.26	-187.72	-3.76

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
331	SLE RA 17	-11	-13	1659	-0.29	-187.72	-3.01
331	SLE RA 18	-12	-18	1730	-0.28	-194.64	-4.02
331	SLE RA 19	-12	-14	1726	-0.31	-194.64	-3.27
331	SLE RA 20	-12	-18	1730	-0.28	-194.64	-4.02
331	SLE RA 21	-12	-14	1726	-0.31	-194.64	-3.27
331	SLE FR 1	-11	-14	1505	-0.21	-171.58	-3.17
331	SLE FR 2	-11	-13	1504	-0.22	-171.58	-2.92
331	SLE FR 3	-11	-14	1505	-0.21	-171.58	-3.17
331	SLE FR 4	-11	-14	1572	-0.24	-178.5	-3.17
331	SLE FR 5	-11	-15	1573	-0.23	-178.5	-3.42
331	SLE FR 6	-11	-16	1617	-0.25	-183.11	-3.59
331	SLE QP 1	-11	-14	1505	-0.21	-171.58	-3.17
331	SLE QP 2	-11	-15	1573	-0.23	-178.5	-3.42
331	SLD 1	96	59	1733	-0.6	-195.83	13.22
331	SLD 2	84	31	1738	-0.57	-196.05	6.92
331	SLD 3	91	-35	1822	-0.09	-199.55	-7.95
331	SLD 4	78	-63	1827	-0.06	-199.77	-14.24
331	SLD 5	34	160	1485	-1.13	-177.98	35.99
331	SLD 6	21	131	1490	-1.1	-178.21	29.46
331	SLD 7	16	-153	1780	0.58	-190.37	-34.56
331	SLD 8	3	-182	1785	0.6	-190.6	-41.09
331	SLD 9	-25	152	1360	-1.07	-166.4	34.25
331	SLD 10	-38	123	1366	-1.04	-166.63	27.72
331	SLD 11	-43	-161	1655	0.63	-178.79	-36.31
331	SLD 12	-56	-190	1661	0.66	-179.02	-42.84
331	SLD 13	-101	33	1319	-0.41	-157.23	7.4
331	SLD 14	-113	5	1324	-0.38	-157.45	1.11
331	SLD 15	-106	-61	1407	0.1	-160.95	-13.77
331	SLD 16	-118	-89	1412	0.13	-161.17	-20.06
331	SLV 1	233	153	1939	-1.06	-218.14	34.42
331	SLV 2	205	89	1951	-1	-218.64	20.07
331	SLV 3	221	-60	2140	0.1	-226.59	-13.65
331	SLV 4	193	-124	2152	0.16	-227.09	-27.99
331	SLV 5	91	382	1373	-2.26	-177.39	86.09
331	SLV 6	62	316	1385	-2.2	-177.91	71.26
331	SLV 7	51	-328	2044	1.61	-205.56	-74.12
331	SLV 8	22	-394	2056	1.67	-206.08	-88.95
331	SLV 9	-44	364	1090	-2.13	-150.92	82.1
331	SLV 10	-73	298	1102	-2.07	-151.44	67.28
331	SLV 11	-84	-346	1760	1.74	-179.09	-78.11
331	SLV 12	-113	-412	1772	1.8	-179.61	-92.93
331	SLV 13	-216	94	993	-0.63	-129.9	21.14
331	SLV 14	-243	30	1005	-0.57	-130.4	6.8
331	SLV 15	-228	-119	1194	0.53	-138.35	-26.92
331	SLV 16	-256	-184	1206	0.59	-138.86	-41.26
331	CRTFP Ux+	0	0	0	0	0	0
331	CRTFP Ux-	0	0	0	0	0	0
331	CRTFP Uy+	0	0	0	0	0	0
331	CRTFP Uy-	0	0	0	0	0	0
334	SLU 1	10	-26	1536	0.46	176.4	6.46
334	SLU 2	9	-17	1529	0.39	175.51	4.21
334	SLU 3	10	-26	1536	0.46	176.4	6.46
334	SLU 4	9	-20	1532	0.41	175.86	5.11
334	SLU 5	9	-17	1529	0.39	175.51	4.21
334	SLU 6	10	-26	1536	0.46	176.4	6.46
334	SLU 7	9	-20	1532	0.41	175.86	5.11
334	SLU 8	10	-26	1536	0.46	176.4	6.46
334	SLU 9	9	-20	1532	0.41	175.86	5.11
334	SLU 10	10	-22	1780	0.42	200.79	5.56
334	SLU 11	10	-31	1787	0.49	201.68	7.8
334	SLU 12	10	-25	1783	0.44	201.15	6.45
334	SLU 13	10	-22	1780	0.42	200.79	5.56
334	SLU 14	10	-31	1787	0.49	201.68	7.8
334	SLU 15	10	-25	1783	0.44	201.15	6.45
334	SLU 16	10	-31	1787	0.49	201.68	7.8
334	SLU 17	10	-25	1783	0.44	201.15	6.45
334	SLU 18	11	-33	1895	0.5	212.52	8.38
334	SLU 19	10	-28	1891	0.46	211.99	7.03
334	SLU 20	11	-33	1895	0.5	212.52	8.38
334	SLU 21	10	-28	1891	0.46	211.99	7.03
334	SLU 22	10	-29	1727	0.49	195.54	7.45
334	SLU 23	10	-21	1720	0.41	194.65	5.21
334	SLU 24	10	-29	1727	0.49	195.54	7.45
334	SLU 25	10	-24	1722	0.44	195	6.11
334	SLU 26	10	-21	1720	0.41	194.65	5.21
334	SLU 27	10	-29	1727	0.49	195.54	7.45
334	SLU 28	10	-24	1722	0.44	195	6.11
334	SLU 29	10	-29	1727	0.49	195.54	7.45
334	SLU 30	10	-24	1722	0.44	195	6.11
334	SLU 31	11	-26	1971	0.44	219.93	6.55
334	SLU 32	11	-35	1978	0.52	220.83	8.8
334	SLU 33	11	-29	1974	0.47	220.29	7.45
334	SLU 34	11	-26	1971	0.44	219.93	6.55
334	SLU 35	11	-35	1978	0.52	220.83	8.8
334	SLU 36	11	-29	1974	0.47	220.29	7.45
334	SLU 37	11	-35	1978	0.52	220.83	8.8

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
334	SLU 38	11	-29	1974	0.47	220.29	7.45
334	SLU 39	11	-37	2086	0.53	231.66	9.37
334	SLU 40	11	-32	2081	0.49	231.13	8.02
334	SLU 41	11	-37	2086	0.53	231.66	9.37
334	SLU 42	11	-32	2081	0.49	231.13	8.02
334	SLU 43	12	-32	1931	0.58	222.75	8.05
334	SLU 44	12	-23	1924	0.51	221.86	5.81
334	SLU 45	12	-32	1931	0.58	222.75	8.05
334	SLU 46	12	-26	1927	0.54	222.22	6.71
334	SLU 47	12	-23	1924	0.51	221.86	5.81
334	SLU 48	12	-32	1931	0.58	222.75	8.05
334	SLU 49	12	-26	1927	0.54	222.22	6.71
334	SLU 50	12	-32	1931	0.58	222.75	8.05
334	SLU 51	12	-26	1927	0.54	222.22	6.71
334	SLU 52	13	-28	2175	0.54	247.15	7.15
334	SLU 53	13	-37	2182	0.61	248.04	9.4
334	SLU 54	13	-32	2178	0.57	247.51	8.05
334	SLU 55	13	-28	2175	0.54	247.15	7.15
334	SLU 56	13	-37	2182	0.61	248.04	9.4
334	SLU 57	13	-32	2178	0.57	247.51	8.05
334	SLU 58	13	-37	2182	0.61	248.04	9.4
334	SLU 59	13	-32	2178	0.57	247.51	8.05
334	SLU 60	13	-39	2290	0.63	258.88	9.97
334	SLU 61	13	-34	2286	0.58	258.34	8.63
334	SLU 62	13	-39	2290	0.63	258.88	9.97
334	SLU 63	13	-34	2286	0.58	258.34	8.63
334	SLU 64	13	-36	2122	0.61	241.9	9.05
334	SLU 65	13	-27	2115	0.54	241	6.8
334	SLU 66	13	-36	2122	0.61	241.9	9.05
334	SLU 67	13	-30	2118	0.57	241.36	7.7
334	SLU 68	13	-27	2115	0.54	241	6.8
334	SLU 69	13	-36	2122	0.61	241.9	9.05
334	SLU 70	13	-30	2118	0.57	241.36	7.7
334	SLU 71	13	-36	2122	0.61	241.9	9.05
334	SLU 72	13	-30	2118	0.57	241.36	7.7
334	SLU 73	13	-32	2366	0.57	266.29	8.15
334	SLU 74	14	-41	2373	0.64	267.18	10.39
334	SLU 75	13	-36	2369	0.6	266.65	9.04
334	SLU 76	13	-32	2366	0.57	266.29	8.15
334	SLU 77	14	-41	2373	0.64	267.18	10.39
334	SLU 78	13	-36	2369	0.6	266.65	9.04
334	SLU 79	14	-41	2373	0.64	267.18	10.39
334	SLU 80	13	-36	2369	0.6	266.65	9.04
334	SLU 81	14	-43	2481	0.66	278.02	10.97
334	SLU 82	14	-38	2477	0.61	277.48	9.62
334	SLU 83	14	-43	2481	0.66	278.02	10.97
334	SLU 84	14	-38	2477	0.61	277.48	9.62
334	SLE RA 1	10	-27	1590	0.46	181.87	6.74
334	SLE RA 2	10	-21	1586	0.42	181.27	5.24
334	SLE RA 3	10	-27	1590	0.46	181.87	6.74
334	SLE RA 4	10	-23	1588	0.44	181.51	5.84
334	SLE RA 5	10	-21	1586	0.42	181.27	5.24
334	SLE RA 6	10	-27	1590	0.46	181.87	6.74
334	SLE RA 7	10	-23	1588	0.44	181.51	5.84
334	SLE RA 8	10	-27	1590	0.46	181.87	6.74
334	SLE RA 9	10	-23	1588	0.44	181.51	5.84
334	SLE RA 10	10	-24	1753	0.44	198.13	6.14
334	SLE RA 11	10	-30	1758	0.48	198.72	7.64
334	SLE RA 12	10	-27	1755	0.46	198.37	6.74
334	SLE RA 13	10	-24	1753	0.44	198.13	6.14
334	SLE RA 14	10	-30	1758	0.48	198.72	7.64
334	SLE RA 15	10	-27	1755	0.46	198.37	6.74
334	SLE RA 16	10	-30	1758	0.48	198.72	7.64
334	SLE RA 17	10	-27	1755	0.46	198.37	6.74
334	SLE RA 18	10	-32	1830	0.49	205.95	8.02
334	SLE RA 19	10	-28	1827	0.46	205.59	7.12
334	SLE RA 20	10	-32	1830	0.49	205.95	8.02
334	SLE RA 21	10	-28	1827	0.46	205.59	7.12
334	SLE FR 1	10	-27	1590	0.46	181.87	6.74
334	SLE FR 2	10	-25	1589	0.46	181.75	6.44
334	SLE FR 3	10	-27	1590	0.46	181.87	6.74
334	SLE FR 4	10	-27	1661	0.46	188.97	6.83
334	SLE FR 5	10	-28	1662	0.47	189.09	7.13
334	SLE FR 6	10	-29	1710	0.48	193.91	7.38
334	SLE QP 1	10	-27	1590	0.46	181.87	6.74
334	SLE QP 2	10	-28	1662	0.47	189.09	7.13
334	SLD 1	123	-10	1396	0.2	164.23	2.35
334	SLD 2	109	20	1392	0.17	163.18	-5.07
334	SLD 3	125	-107	1494	0.88	173.73	26.82
334	SLD 4	111	-77	1490	0.85	172.67	19.41
334	SLD 5	46	115	1435	-0.64	167.62	-28.69
334	SLD 6	32	146	1431	-0.67	166.53	-36.39
334	SLD 7	53	-211	1762	1.65	199.27	52.89
334	SLD 8	38	-180	1758	1.62	198.18	45.19
334	SLD 9	-18	124	1567	-0.67	180	-30.94
334	SLD 10	-33	155	1562	-0.7	178.91	-38.64

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
334	SLD 11	-12	-202	1893	1.62	211.66	50.64
334	SLD 12	-26	-171	1889	1.59	210.56	42.94
334	SLD 13	-91	21	1834	0.09	205.51	-5.16
334	SLD 14	-105	51	1830	0.06	204.46	-12.57
334	SLD 15	-89	-77	1932	0.78	215.01	19.32
334	SLD 16	-103	-47	1928	0.75	213.95	11.9
334	SLV 1	268	14	1055	-0.15	132.27	-3.61
334	SLV 2	237	82	1046	-0.22	129.88	-20.51
334	SLV 3	273	-208	1278	1.41	153.83	51.96
334	SLV 4	241	-140	1268	1.34	151.43	35.06
334	SLV 5	92	296	1146	-2.06	140.24	-74.17
334	SLV 6	59	366	1136	-2.13	137.76	-91.64
334	SLV 7	107	-444	1888	3.15	212.08	111.05
334	SLV 8	75	-373	1878	3.08	209.6	93.58
334	SLV 9	-55	317	1446	-2.13	168.58	-79.33
334	SLV 10	-88	387	1436	-2.2	166.1	-96.8
334	SLV 11	-40	-423	2188	3.07	240.42	105.89
334	SLV 12	-72	-352	2178	3	237.94	88.42
334	SLV 13	-221	84	2056	-0.39	226.76	-20.81
334	SLV 14	-253	152	2046	-0.46	224.36	-37.71
334	SLV 15	-217	-138	2279	1.17	248.31	34.76
334	SLV 16	-249	-70	2269	1.1	245.91	17.86
334	CRTFP Ux+	0	0	0	0	0	0
334	CRTFP Ux-	0	0	0	0	0	0
334	CRTFP Uy+	0	0	0	0	0	0
334	CRTFP Uy-	0	0	0	0	0	0
336	SLU 1	-9	46	3016	2.39	-6.22	-0.18
336	SLU 2	-10	58	3006	2.2	-6.43	-0.2
336	SLU 3	-9	46	3016	2.39	-6.22	-0.18
336	SLU 4	-10	53	3010	2.28	-6.35	-0.19
336	SLU 5	-10	58	3006	2.2	-6.43	-0.2
336	SLU 6	-9	46	3016	2.39	-6.22	-0.18
336	SLU 7	-10	53	3010	2.28	-6.35	-0.19
336	SLU 8	-9	46	3016	2.39	-6.22	-0.18
336	SLU 9	-10	53	3010	2.28	-6.35	-0.19
336	SLU 10	-10	67	3501	2.54	-8.09	-0.22
336	SLU 11	-9	55	3510	2.73	-7.87	-0.2
336	SLU 12	-10	62	3505	2.61	-8	-0.21
336	SLU 13	-10	67	3501	2.54	-8.09	-0.22
336	SLU 14	-9	55	3510	2.73	-7.87	-0.2
336	SLU 15	-10	62	3505	2.61	-8	-0.21
336	SLU 16	-9	55	3510	2.73	-7.87	-0.2
336	SLU 17	-10	62	3505	2.61	-8	-0.21
336	SLU 18	-10	59	3722	2.87	-8.58	-0.21
336	SLU 19	-10	66	3717	2.76	-8.71	-0.22
336	SLU 20	-10	59	3722	2.87	-8.58	-0.21
336	SLU 21	-10	66	3717	2.76	-8.71	-0.22
336	SLU 22	-10	53	3393	2.66	-7.42	-0.19
336	SLU 23	-10	65	3384	2.47	-7.63	-0.21
336	SLU 24	-10	53	3393	2.66	-7.42	-0.19
336	SLU 25	-10	60	3387	2.54	-7.54	-0.2
336	SLU 26	-10	65	3384	2.47	-7.63	-0.21
336	SLU 27	-10	53	3393	2.66	-7.42	-0.19
336	SLU 28	-10	60	3387	2.54	-7.54	-0.2
336	SLU 29	-10	53	3393	2.66	-7.42	-0.19
336	SLU 30	-10	60	3387	2.54	-7.54	-0.2
336	SLU 31	-10	74	3878	2.8	-9.28	-0.23
336	SLU 32	-10	62	3888	3	-9.07	-0.21
336	SLU 33	-10	69	3882	2.88	-9.2	-0.23
336	SLU 34	-10	74	3878	2.8	-9.28	-0.23
336	SLU 35	-10	62	3888	3	-9.07	-0.21
336	SLU 36	-10	69	3882	2.88	-9.2	-0.23
336	SLU 37	-10	62	3888	3	-9.07	-0.21
336	SLU 38	-10	69	3882	2.88	-9.2	-0.23
336	SLU 39	-10	66	4100	3.14	-9.78	-0.22
336	SLU 40	-10	73	4094	3.03	-9.91	-0.24
336	SLU 41	-10	66	4100	3.14	-9.78	-0.22
336	SLU 42	-10	73	4094	3.03	-9.91	-0.24
336	SLU 43	-12	58	3791	3.02	-7.67	-0.22
336	SLU 44	-12	69	3781	2.82	-7.89	-0.24
336	SLU 45	-12	58	3791	3.02	-7.67	-0.22
336	SLU 46	-12	65	3785	2.9	-7.8	-0.24
336	SLU 47	-12	69	3781	2.82	-7.89	-0.24
336	SLU 48	-12	58	3791	3.02	-7.67	-0.22
336	SLU 49	-12	65	3785	2.9	-7.8	-0.24
336	SLU 50	-12	58	3791	3.02	-7.67	-0.22
336	SLU 51	-12	65	3785	2.9	-7.8	-0.24
336	SLU 52	-13	79	4276	3.16	-9.54	-0.27
336	SLU 53	-12	67	4286	3.35	-9.33	-0.25
336	SLU 54	-12	74	4280	3.24	-9.46	-0.26
336	SLU 55	-13	79	4276	3.16	-9.54	-0.27
336	SLU 56	-12	67	4286	3.35	-9.33	-0.25
336	SLU 57	-12	74	4280	3.24	-9.46	-0.26
336	SLU 58	-12	67	4286	3.35	-9.33	-0.25
336	SLU 59	-12	74	4280	3.24	-9.46	-0.26
336	SLU 60	-12	71	4498	3.5	-10.04	-0.26

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
336	SLU 61	-12	78	4492	3.38	-10.17	-0.27
336	SLU 62	-12	71	4498	3.5	-10.04	-0.26
336	SLU 63	-12	78	4492	3.38	-10.17	-0.27
336	SLU 64	-12	65	4168	3.29	-8.87	-0.24
336	SLU 65	-13	76	4159	3.09	-9.08	-0.26
336	SLU 66	-12	65	4168	3.29	-8.87	-0.24
336	SLU 67	-13	71	4163	3.17	-9	-0.25
336	SLU 68	-13	76	4159	3.09	-9.08	-0.26
336	SLU 69	-12	65	4168	3.29	-8.87	-0.24
336	SLU 70	-13	71	4163	3.17	-9	-0.25
336	SLU 71	-12	65	4168	3.29	-8.87	-0.24
336	SLU 72	-13	71	4163	3.17	-9	-0.25
336	SLU 73	-13	85	4653	3.43	-10.74	-0.28
336	SLU 74	-12	74	4663	3.62	-10.53	-0.26
336	SLU 75	-13	81	4657	3.51	-10.65	-0.27
336	SLU 76	-13	85	4653	3.43	-10.74	-0.28
336	SLU 77	-12	74	4663	3.62	-10.53	-0.26
336	SLU 78	-13	81	4657	3.51	-10.65	-0.27
336	SLU 79	-12	74	4663	3.62	-10.53	-0.26
336	SLU 80	-13	81	4657	3.51	-10.65	-0.27
336	SLU 81	-13	78	4875	3.77	-11.24	-0.27
336	SLU 82	-13	85	4869	3.65	-11.36	-0.28
336	SLU 83	-13	78	4875	3.77	-11.24	-0.27
336	SLU 84	-13	85	4869	3.65	-11.36	-0.28
336	SLE RA 1	-9	48	3123	2.47	-6.56	-0.18
336	SLE RA 2	-10	56	3117	2.34	-6.7	-0.19
336	SLE RA 3	-9	48	3123	2.47	-6.56	-0.18
336	SLE RA 4	-10	53	3120	2.39	-6.65	-0.19
336	SLE RA 5	-10	56	3117	2.34	-6.7	-0.19
336	SLE RA 6	-9	48	3123	2.47	-6.56	-0.18
336	SLE RA 7	-10	53	3120	2.39	-6.65	-0.19
336	SLE RA 8	-9	48	3123	2.47	-6.56	-0.18
336	SLE RA 9	-10	53	3120	2.39	-6.65	-0.19
336	SLE RA 10	-10	62	3447	2.56	-7.81	-0.21
336	SLE RA 11	-10	54	3453	2.69	-7.66	-0.19
336	SLE RA 12	-10	59	3449	2.62	-7.75	-0.2
336	SLE RA 13	-10	62	3447	2.56	-7.81	-0.21
336	SLE RA 14	-10	54	3453	2.69	-7.66	-0.19
336	SLE RA 15	-10	59	3449	2.62	-7.75	-0.2
336	SLE RA 16	-10	54	3453	2.69	-7.66	-0.19
336	SLE RA 17	-10	59	3449	2.62	-7.75	-0.2
336	SLE RA 18	-10	57	3595	2.79	-8.14	-0.2
336	SLE RA 19	-10	62	3591	2.71	-8.22	-0.21
336	SLE RA 20	-10	57	3595	2.79	-8.14	-0.2
336	SLE RA 21	-10	62	3591	2.71	-8.22	-0.21
336	SLE FR 1	-9	48	3123	2.47	-6.56	-0.18
336	SLE FR 2	-9	50	3122	2.44	-6.59	-0.18
336	SLE FR 3	-9	48	3123	2.47	-6.56	-0.18
336	SLE FR 4	-10	52	3263	2.54	-7.06	-0.19
336	SLE FR 5	-9	51	3265	2.57	-7.03	-0.19
336	SLE FR 6	-10	53	3359	2.63	-7.35	-0.19
336	SLE QP 1	-9	48	3123	2.47	-6.56	-0.18
336	SLE QP 2	-9	51	3265	2.57	-7.03	-0.19
336	SLD 1	242	127	3325	1.73	2.77	-1.63
336	SLD 2	210	115	3325	1.77	3.23	-0.55
336	SLD 3	247	0	3440	3.59	1.67	-1.53
336	SLD 4	214	-11	3439	3.63	2.13	-0.45
336	SLD 5	71	270	3109	-0.52	-2.6	-1.16
336	SLD 6	38	258	3109	-0.48	-2.12	-0.04
336	SLD 7	86	-152	3491	5.68	-6.26	-0.84
336	SLD 8	52	-164	3491	5.72	-5.78	0.28
336	SLD 9	-71	266	3039	-0.59	-8.29	-0.65
336	SLD 10	-105	253	3038	-0.55	-7.81	0.47
336	SLD 11	-56	-156	3421	5.61	-11.95	-0.33
336	SLD 12	-90	-168	3420	5.65	-11.47	0.79
336	SLD 13	-233	113	3090	1.5	-16.2	0.08
336	SLD 14	-266	101	3090	1.54	-15.74	1.16
336	SLD 15	-229	-14	3205	3.36	-17.3	0.18
336	SLD 16	-261	-25	3204	3.4	-16.84	1.26
336	SLV 1	565	224	3404	0.67	15.37	-3.48
336	SLV 2	491	197	3403	0.78	16.43	-1.02
336	SLV 3	575	-63	3664	4.9	12.88	-3.26
336	SLV 4	501	-90	3663	5	13.93	-0.8
336	SLV 5	175	548	2912	-4.45	3.09	-2.42
336	SLV 6	98	520	2911	-4.34	4.18	0.13
336	SLV 7	209	-409	3779	9.63	-5.23	-1.67
336	SLV 8	132	-437	3779	9.74	-4.14	0.87
336	SLV 9	-151	538	2751	-4.61	-9.92	-1.24
336	SLV 10	-228	511	2750	-4.5	-8.83	1.3
336	SLV 11	-117	-419	3618	9.47	-18.25	-0.5
336	SLV 12	-194	-446	3617	9.58	-17.16	2.04
336	SLV 13	-520	192	2866	0.13	-28	0.42
336	SLV 14	-594	165	2865	0.23	-26.94	2.89
336	SLV 15	-510	-95	3126	4.36	-30.5	0.65
336	SLV 16	-584	-122	3125	4.46	-29.44	3.11
336	CRTFP Ux+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
336	CRTFP Ux-	0	0	0	0	0	0
336	CRTFP Uy+	0	0	0	0	0	0
336	CRTFP Uy-	0	0	0	0	0	0
338	SLU 1	-9	-13	1457	0.4	-159.86	-2.99
338	SLU 2	-9	-5	1447	0.34	-159.47	-1.12
338	SLU 3	-9	-13	1457	0.4	-159.86	-2.99
338	SLU 4	-9	-8	1451	0.36	-159.62	-1.87
338	SLU 5	-9	-5	1447	0.34	-159.47	-1.12
338	SLU 6	-9	-13	1457	0.4	-159.86	-2.99
338	SLU 7	-9	-8	1451	0.36	-159.62	-1.87
338	SLU 8	-9	-13	1457	0.4	-159.86	-2.99
338	SLU 9	-9	-8	1451	0.36	-159.62	-1.87
338	SLU 10	-10	-9	1682	0.38	-182.04	-2.01
338	SLU 11	-10	-17	1692	0.45	-182.43	-3.88
338	SLU 12	-10	-12	1686	0.41	-182.19	-2.75
338	SLU 13	-10	-9	1682	0.38	-182.04	-2.01
338	SLU 14	-10	-17	1692	0.45	-182.43	-3.88
338	SLU 15	-10	-12	1686	0.41	-182.19	-2.75
338	SLU 16	-10	-17	1692	0.45	-182.43	-3.88
338	SLU 17	-10	-12	1686	0.41	-182.19	-2.75
338	SLU 18	-10	-19	1793	0.47	-192.1	-4.25
338	SLU 19	-10	-14	1787	0.43	-191.87	-3.13
338	SLU 20	-10	-19	1793	0.47	-192.1	-4.25
338	SLU 21	-10	-14	1787	0.43	-191.87	-3.13
338	SLU 22	-10	-16	1636	0.44	-176.85	-3.62
338	SLU 23	-10	-8	1626	0.38	-176.46	-1.75
338	SLU 24	-10	-16	1636	0.44	-176.85	-3.62
338	SLU 25	-10	-11	1630	0.4	-176.62	-2.49
338	SLU 26	-10	-8	1626	0.38	-176.46	-1.75
338	SLU 27	-10	-16	1636	0.44	-176.85	-3.62
338	SLU 28	-10	-11	1630	0.4	-176.62	-2.49
338	SLU 29	-10	-16	1636	0.44	-176.85	-3.62
338	SLU 30	-10	-11	1630	0.4	-176.62	-2.49
338	SLU 31	-11	-11	1861	0.42	-199.03	-2.63
338	SLU 32	-11	-20	1871	0.49	-199.43	-4.5
338	SLU 33	-11	-15	1865	0.45	-199.19	-3.38
338	SLU 34	-11	-11	1861	0.42	-199.03	-2.63
338	SLU 35	-11	-20	1871	0.49	-199.43	-4.5
338	SLU 36	-11	-15	1865	0.45	-199.19	-3.38
338	SLU 37	-11	-20	1871	0.49	-199.43	-4.5
338	SLU 38	-11	-15	1865	0.45	-199.19	-3.38
338	SLU 39	-11	-21	1972	0.51	-209.1	-4.88
338	SLU 40	-11	-16	1966	0.47	-208.86	-3.76
338	SLU 41	-11	-21	1972	0.51	-209.1	-4.88
338	SLU 42	-11	-16	1966	0.47	-208.86	-3.76
338	SLU 43	-11	-16	1833	0.51	-201.99	-3.67
338	SLU 44	-11	-8	1823	0.44	-201.6	-1.8
338	SLU 45	-11	-16	1833	0.51	-201.99	-3.67
338	SLU 46	-11	-11	1827	0.47	-201.75	-2.55
338	SLU 47	-11	-8	1823	0.44	-201.6	-1.8
338	SLU 48	-11	-16	1833	0.51	-201.99	-3.67
338	SLU 49	-11	-11	1827	0.47	-201.75	-2.55
338	SLU 50	-11	-16	1833	0.51	-201.99	-3.67
338	SLU 51	-11	-11	1827	0.47	-201.75	-2.55
338	SLU 52	-12	-12	2058	0.49	-224.17	-2.69
338	SLU 53	-12	-20	2068	0.56	-224.56	-4.56
338	SLU 54	-12	-15	2062	0.52	-224.32	-3.44
338	SLU 55	-12	-12	2058	0.49	-224.17	-2.69
338	SLU 56	-12	-20	2068	0.56	-224.56	-4.56
338	SLU 57	-12	-15	2062	0.52	-224.32	-3.44
338	SLU 58	-12	-20	2068	0.56	-224.56	-4.56
338	SLU 59	-12	-15	2062	0.52	-224.32	-3.44
338	SLU 60	-13	-22	2169	0.58	-234.23	-4.94
338	SLU 61	-13	-17	2163	0.54	-234	-3.82
338	SLU 62	-13	-22	2169	0.58	-234.23	-4.94
338	SLU 63	-13	-17	2163	0.54	-234	-3.82
338	SLU 64	-12	-19	2012	0.55	-218.99	-4.3
338	SLU 65	-12	-11	2002	0.48	-218.59	-2.43
338	SLU 66	-12	-19	2012	0.55	-218.99	-4.3
338	SLU 67	-12	-14	2006	0.51	-218.75	-3.18
338	SLU 68	-12	-11	2002	0.48	-218.59	-2.43
338	SLU 69	-12	-19	2012	0.55	-218.99	-4.3
338	SLU 70	-12	-14	2006	0.51	-218.75	-3.18
338	SLU 71	-12	-19	2012	0.55	-218.99	-4.3
338	SLU 72	-12	-14	2006	0.51	-218.75	-3.18
338	SLU 73	-13	-14	2237	0.53	-241.16	-3.31
338	SLU 74	-13	-23	2247	0.6	-241.56	-5.18
338	SLU 75	-13	-18	2241	0.56	-241.32	-4.06
338	SLU 76	-13	-14	2237	0.53	-241.16	-3.31
338	SLU 77	-13	-23	2247	0.6	-241.56	-5.18
338	SLU 78	-13	-18	2241	0.56	-241.32	-4.06
338	SLU 79	-13	-23	2247	0.6	-241.56	-5.18
338	SLU 80	-13	-18	2241	0.56	-241.32	-4.06
338	SLU 81	-14	-24	2348	0.62	-251.23	-5.56
338	SLU 82	-14	-19	2342	0.58	-250.99	-4.44
338	SLU 83	-14	-24	2348	0.62	-251.23	-5.56

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
338	SLU 84	-14	-19	2342	0.58	-250.99	-4.44
338	SLE RA 1	-9	-14	1508	0.42	-164.72	-3.17
338	SLE RA 2	-9	-8	1502	0.37	-164.45	-1.92
338	SLE RA 3	-9	-14	1508	0.42	-164.72	-3.17
338	SLE RA 4	-9	-11	1504	0.39	-164.56	-2.42
338	SLE RA 5	-9	-8	1502	0.37	-164.45	-1.92
338	SLE RA 6	-9	-14	1508	0.42	-164.72	-3.17
338	SLE RA 7	-9	-11	1504	0.39	-164.56	-2.42
338	SLE RA 8	-9	-14	1508	0.42	-164.72	-3.17
338	SLE RA 9	-9	-11	1504	0.39	-164.56	-2.42
338	SLE RA 10	-10	-11	1658	0.4	-179.5	-2.51
338	SLE RA 11	-10	-16	1665	0.45	-179.76	-3.76
338	SLE RA 12	-10	-13	1661	0.42	-179.6	-3.01
338	SLE RA 13	-10	-11	1658	0.4	-179.5	-2.51
338	SLE RA 14	-10	-16	1665	0.45	-179.76	-3.76
338	SLE RA 15	-10	-13	1661	0.42	-179.6	-3.01
338	SLE RA 16	-10	-16	1665	0.45	-179.76	-3.76
338	SLE RA 17	-10	-13	1661	0.42	-179.6	-3.01
338	SLE RA 18	-10	-18	1732	0.46	-186.21	-4.01
338	SLE RA 19	-10	-14	1728	0.43	-186.05	-3.26
338	SLE RA 20	-10	-18	1732	0.46	-186.21	-4.01
338	SLE RA 21	-10	-14	1728	0.43	-186.05	-3.26
338	SLE FR 1	-9	-14	1508	0.42	-164.72	-3.17
338	SLE FR 2	-9	-13	1507	0.41	-164.66	-2.92
338	SLE FR 3	-9	-14	1508	0.42	-164.72	-3.17
338	SLE FR 4	-10	-14	1574	0.42	-171.11	-3.17
338	SLE FR 5	-10	-15	1576	0.43	-171.16	-3.42
338	SLE FR 6	-10	-16	1620	0.44	-175.46	-3.59
338	SLE QP 1	-9	-14	1508	0.42	-164.72	-3.17
338	SLE QP 2	-10	-15	1576	0.43	-171.16	-3.42
338	SLD 1	99	59	1726	0.18	-185.6	13.19
338	SLD 2	85	31	1732	0.2	-185.96	6.91
338	SLD 3	96	-35	1832	0.74	-192.14	-7.97
338	SLD 4	81	-63	1838	0.77	-192.5	-14.26
338	SLD 5	34	160	1458	-0.52	-165.45	35.98
338	SLD 6	19	131	1464	-0.49	-165.82	29.45
338	SLD 7	22	-153	1811	1.38	-187.24	-34.56
338	SLD 8	7	-182	1817	1.4	-187.61	-41.09
338	SLD 9	-26	152	1334	-0.55	-154.72	34.24
338	SLD 10	-41	123	1340	-0.52	-155.09	27.72
338	SLD 11	-38	-161	1688	1.35	-176.51	-36.3
338	SLD 12	-53	-190	1694	1.38	-176.88	-42.82
338	SLD 13	-100	33	1314	0.08	-149.83	7.41
338	SLD 14	-115	5	1319	0.11	-150.19	1.13
338	SLD 15	-104	-61	1420	0.65	-156.37	-13.75
338	SLD 16	-118	-89	1426	0.68	-156.73	-20.04
338	SLV 1	239	154	1919	-0.14	-204.22	34.36
338	SLV 2	207	89	1932	-0.08	-205.04	20.03
338	SLV 3	231	-59	2160	1.15	-219.07	-13.69
338	SLV 4	198	-124	2173	1.21	-219.88	-28.02
338	SLV 5	90	382	1308	-1.72	-158.26	86.05
338	SLV 6	56	316	1322	-1.66	-159.1	71.23
338	SLV 7	62	-328	2111	2.58	-207.76	-74.12
338	SLV 8	28	-394	2125	2.64	-208.6	-88.94
338	SLV 9	-47	364	1026	-1.79	-133.73	82.09
338	SLV 10	-81	298	1040	-1.72	-134.57	67.28
338	SLV 11	-75	-346	1829	2.52	-183.23	-78.08
338	SLV 12	-109	-412	1843	2.58	-184.07	-92.89
338	SLV 13	-217	94	978	-0.35	-122.44	21.18
338	SLV 14	-250	29	991	-0.29	-123.26	6.85
338	SLV 15	-226	-119	1219	0.94	-137.29	-26.87
338	SLV 16	-258	-184	1232	1	-138.11	-41.2
338	CRTFP Ux+	0	0	0	0	0	0
338	CRTFP Ux-	0	0	0	0	0	0
338	CRTFP Uy+	0	0	0	0	0	0
338	CRTFP Uy-	0	0	0	0	0	0
341	SLU 1	1	40	2963	2.26	5.87	0.01
341	SLU 2	2	51	2952	2.08	6.05	0.02
341	SLU 3	1	40	2963	2.26	5.87	0.01
341	SLU 4	1	46	2957	2.15	5.98	0.02
341	SLU 5	2	51	2952	2.08	6.05	0.02
341	SLU 6	1	40	2963	2.26	5.87	0.01
341	SLU 7	1	46	2957	2.15	5.98	0.02
341	SLU 8	1	40	2963	2.26	5.87	0.01
341	SLU 9	1	46	2957	2.15	5.98	0.02
341	SLU 10	1	59	3447	2.41	7.29	0.01
341	SLU 11	1	47	3458	2.59	7.11	0.01
341	SLU 12	1	54	3451	2.48	7.22	0.01
341	SLU 13	1	59	3447	2.41	7.29	0.01
341	SLU 14	1	47	3458	2.59	7.11	0.01
341	SLU 15	1	54	3451	2.48	7.22	0.01
341	SLU 16	1	47	3458	2.59	7.11	0.01
341	SLU 17	1	54	3451	2.48	7.22	0.01
341	SLU 18	0	51	3670	2.73	7.64	0
341	SLU 19	1	57	3663	2.62	7.75	0
341	SLU 20	0	51	3670	2.73	7.64	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
341	SLU 21	1	57	3663	2.62	7.75	0
341	SLU 22	1	45	3339	2.52	6.8	0.01
341	SLU 23	1	57	3329	2.34	6.98	0.01
341	SLU 24	1	45	3339	2.52	6.8	0.01
341	SLU 25	1	52	3333	2.41	6.91	0.01
341	SLU 26	1	57	3329	2.34	6.98	0.01
341	SLU 27	1	45	3339	2.52	6.8	0.01
341	SLU 28	1	52	3333	2.41	6.91	0.01
341	SLU 29	1	45	3339	2.52	6.8	0.01
341	SLU 30	1	52	3333	2.41	6.91	0.01
341	SLU 31	1	64	3823	2.67	8.21	0.01
341	SLU 32	0	53	3834	2.85	8.03	0
341	SLU 33	0	60	3828	2.74	8.14	0
341	SLU 34	1	64	3823	2.67	8.21	0.01
341	SLU 35	0	53	3834	2.85	8.03	0
341	SLU 36	0	60	3828	2.74	8.14	0
341	SLU 37	0	53	3834	2.85	8.03	0
341	SLU 38	0	60	3828	2.74	8.14	0
341	SLU 39	0	56	4046	2.99	8.56	0
341	SLU 40	0	63	4040	2.88	8.67	0
341	SLU 41	0	56	4046	2.99	8.56	0
341	SLU 42	0	63	4040	2.88	8.67	0
341	SLU 43	2	49	3723	2.85	7.32	0.02
341	SLU 44	2	61	3712	2.67	7.5	0.02
341	SLU 45	2	49	3723	2.85	7.32	0.02
341	SLU 46	2	56	3717	2.74	7.43	0.02
341	SLU 47	2	61	3712	2.67	7.5	0.02
341	SLU 48	2	49	3723	2.85	7.32	0.02
341	SLU 49	2	56	3717	2.74	7.43	0.02
341	SLU 50	2	49	3723	2.85	7.32	0.02
341	SLU 51	2	56	3717	2.74	7.43	0.02
341	SLU 52	2	69	4207	3	8.74	0.01
341	SLU 53	1	57	4218	3.18	8.56	0.01
341	SLU 54	1	64	4211	3.07	8.66	0.01
341	SLU 55	2	69	4207	3	8.74	0.01
341	SLU 56	1	57	4218	3.18	8.56	0.01
341	SLU 57	1	64	4211	3.07	8.66	0.01
341	SLU 58	1	57	4218	3.18	8.56	0.01
341	SLU 59	1	64	4211	3.07	8.66	0.01
341	SLU 60	1	60	4430	3.32	9.09	0.01
341	SLU 61	1	67	4423	3.21	9.19	0.01
341	SLU 62	1	60	4430	3.32	9.09	0.01
341	SLU 63	1	67	4423	3.21	9.19	0.01
341	SLU 64	1	55	4099	3.11	8.24	0.02
341	SLU 65	2	67	4089	2.93	8.42	0.02
341	SLU 66	1	55	4099	3.11	8.24	0.02
341	SLU 67	1	62	4093	3	8.35	0.02
341	SLU 68	2	67	4089	2.93	8.42	0.02
341	SLU 69	1	55	4099	3.11	8.24	0.02
341	SLU 70	1	62	4093	3	8.35	0.02
341	SLU 71	1	55	4099	3.11	8.24	0.02
341	SLU 72	1	62	4093	3	8.35	0.02
341	SLU 73	1	74	4583	3.26	9.66	0.01
341	SLU 74	1	63	4594	3.44	9.48	0.01
341	SLU 75	1	70	4587	3.33	9.59	0.01
341	SLU 76	1	74	4583	3.26	9.66	0.01
341	SLU 77	1	63	4594	3.44	9.48	0.01
341	SLU 78	1	70	4587	3.33	9.59	0.01
341	SLU 79	1	63	4594	3.44	9.48	0.01
341	SLU 80	1	70	4587	3.33	9.59	0.01
341	SLU 81	0	66	4806	3.58	10.01	0
341	SLU 82	1	73	4800	3.47	10.12	0.01
341	SLU 83	0	66	4806	3.58	10.01	0
341	SLU 84	1	73	4800	3.47	10.12	0.01
341	SLE RA 1	1	41	3071	2.33	6.14	0.01
341	SLE RA 2	1	49	3063	2.21	6.26	0.02
341	SLE RA 3	1	41	3071	2.33	6.14	0.01
341	SLE RA 4	1	46	3066	2.26	6.21	0.01
341	SLE RA 5	1	49	3063	2.21	6.26	0.02
341	SLE RA 6	1	41	3071	2.33	6.14	0.01
341	SLE RA 7	1	46	3066	2.26	6.21	0.01
341	SLE RA 8	1	41	3071	2.33	6.14	0.01
341	SLE RA 9	1	46	3066	2.26	6.21	0.01
341	SLE RA 10	1	54	3393	2.43	7.08	0.01
341	SLE RA 11	1	46	3400	2.55	6.96	0.01
341	SLE RA 12	1	51	3396	2.48	7.03	0.01
341	SLE RA 13	1	54	3393	2.43	7.08	0.01
341	SLE RA 14	1	46	3400	2.55	6.96	0.01
341	SLE RA 15	1	51	3396	2.48	7.03	0.01
341	SLE RA 16	1	46	3400	2.55	6.96	0.01
341	SLE RA 17	1	51	3396	2.48	7.03	0.01
341	SLE RA 18	0	49	3542	2.65	7.32	0
341	SLE RA 19	1	53	3537	2.58	7.39	0.01
341	SLE RA 20	0	49	3542	2.65	7.32	0
341	SLE RA 21	1	53	3537	2.58	7.39	0.01
341	SLE FR 1	1	41	3071	2.33	6.14	0.01

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
341	SLE FR 2	1	43	3069	2.31	6.16	0.01
341	SLE FR 3	1	41	3071	2.33	6.14	0.01
341	SLE FR 4	1	45	3210	2.4	6.52	0.01
341	SLE FR 5	1	43	3212	2.43	6.49	0.01
341	SLE FR 6	1	45	3306	2.49	6.73	0.01
341	SLE QP 1	1	41	3071	2.33	6.14	0.01
341	SLE QP 2	1	43	3212	2.43	6.49	0.01
341	SLD 1	250	83	3063	1.71	15.7	-1.27
341	SLD 2	217	96	3064	1.67	16.12	-0.25
341	SLD 3	244	-38	3189	3.43	16.38	-1.44
341	SLD 4	212	-26	3190	3.38	16.8	-0.41
341	SLD 5	96	235	2976	-0.37	8.07	-0.51
341	SLD 6	62	248	2977	-0.42	8.5	0.56
341	SLD 7	78	-170	3396	5.35	10.33	-1.05
341	SLD 8	44	-157	3397	5.3	10.76	0.02
341	SLD 9	-42	244	3027	-0.45	2.22	0.01
341	SLD 10	-76	257	3028	-0.49	2.65	1.07
341	SLD 11	-60	-161	3447	5.28	4.48	-0.54
341	SLD 12	-94	-148	3448	5.23	4.91	0.53
341	SLD 13	-210	113	3234	1.47	-3.81	0.43
341	SLD 14	-243	125	3234	1.43	-3.4	1.46
341	SLD 15	-215	-9	3360	3.19	-3.13	0.27
341	SLD 16	-248	4	3360	3.14	-2.72	1.29
341	SLV 1	569	133	2871	0.82	27.53	-2.92
341	SLV 2	495	162	2873	0.71	28.47	-0.59
341	SLV 3	557	-142	3158	4.71	29.08	-3.29
341	SLV 4	482	-114	3159	4.61	30.02	-0.96
341	SLV 5	217	478	2675	-3.93	10.1	-1.17
341	SLV 6	140	507	2677	-4.04	11.07	1.25
341	SLV 7	176	-441	3629	9.06	15.28	-2.4
341	SLV 8	100	-411	3631	8.95	16.25	0.02
341	SLV 9	-98	498	2793	-4.1	-3.27	0
341	SLV 10	-175	528	2795	-4.21	-2.29	2.42
341	SLV 11	-139	-421	3747	8.89	1.91	-1.23
341	SLV 12	-215	-391	3749	8.78	2.88	1.19
341	SLV 13	-481	201	3264	0.25	-17.04	0.98
341	SLV 14	-555	229	3266	0.14	-16.1	3.31
341	SLV 15	-493	-75	3550	4.15	-15.49	0.61
341	SLV 16	-567	-47	3552	4.04	-14.54	2.94
341	CRTFP Ux+	0	0	0	0	0	0
341	CRTFP Ux-	0	0	0	0	0	0
341	CRTFP Uy+	0	0	0	0	0	0
341	CRTFP Uy-	0	0	0	0	0	0
344	SLU 1	7	-26	1563	1.39	188.53	6.45
344	SLU 2	7	-17	1554	1.3	187.25	4.22
344	SLU 3	7	-26	1563	1.39	188.53	6.45
344	SLU 4	7	-20	1558	1.34	187.76	5.11
344	SLU 5	7	-17	1554	1.3	187.25	4.22
344	SLU 6	7	-26	1563	1.39	188.53	6.45
344	SLU 7	7	-20	1558	1.34	187.76	5.11
344	SLU 8	7	-26	1563	1.39	188.53	6.45
344	SLU 9	7	-20	1558	1.34	187.76	5.11
344	SLU 10	8	-22	1809	1.53	213.88	5.56
344	SLU 11	8	-31	1818	1.62	215.15	7.79
344	SLU 12	8	-25	1813	1.57	214.39	6.45
344	SLU 13	8	-22	1809	1.53	213.88	5.56
344	SLU 14	8	-31	1818	1.62	215.15	7.79
344	SLU 15	8	-25	1813	1.57	214.39	6.45
344	SLU 16	8	-31	1818	1.62	215.15	7.79
344	SLU 17	8	-25	1813	1.57	214.39	6.45
344	SLU 18	8	-33	1928	1.72	226.56	8.37
344	SLU 19	8	-28	1922	1.67	225.8	7.03
344	SLU 20	8	-33	1928	1.72	226.56	8.37
344	SLU 21	8	-28	1922	1.67	225.8	7.03
344	SLU 22	8	-29	1757	1.57	208.74	7.44
344	SLU 23	8	-21	1748	1.48	207.47	5.21
344	SLU 24	8	-29	1757	1.57	208.74	7.44
344	SLU 25	8	-24	1752	1.52	207.98	6.1
344	SLU 26	8	-21	1748	1.48	207.47	5.21
344	SLU 27	8	-29	1757	1.57	208.74	7.44
344	SLU 28	8	-24	1752	1.52	207.98	6.1
344	SLU 29	8	-29	1757	1.57	208.74	7.44
344	SLU 30	8	-24	1752	1.52	207.98	6.1
344	SLU 31	8	-26	2003	1.71	234.09	6.55
344	SLU 32	8	-35	2012	1.8	235.37	8.78
344	SLU 33	8	-29	2007	1.75	234.6	7.44
344	SLU 34	8	-26	2003	1.71	234.09	6.55
344	SLU 35	8	-35	2012	1.8	235.37	8.78
344	SLU 36	8	-29	2007	1.75	234.6	7.44
344	SLU 37	8	-35	2012	1.8	235.37	8.78
344	SLU 38	8	-29	2007	1.75	234.6	7.44
344	SLU 39	8	-37	2122	1.9	246.78	9.36
344	SLU 40	8	-32	2116	1.85	246.01	8.02
344	SLU 41	8	-37	2122	1.9	246.78	9.36
344	SLU 42	8	-32	2116	1.85	246.01	8.02
344	SLU 43	9	-32	1966	1.75	238.16	8.04

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
344	SLU 44	9	-23	1956	1.66	236.88	5.81
344	SLU 45	9	-32	1966	1.75	238.16	8.04
344	SLU 46	9	-26	1960	1.7	237.39	6.7
344	SLU 47	9	-23	1956	1.66	236.88	5.81
344	SLU 48	9	-32	1966	1.75	238.16	8.04
344	SLU 49	9	-26	1960	1.7	237.39	6.7
344	SLU 50	9	-32	1966	1.75	238.16	8.04
344	SLU 51	9	-26	1960	1.7	237.39	6.7
344	SLU 52	10	-28	2211	1.89	263.5	7.15
344	SLU 53	10	-37	2221	1.98	264.78	9.39
344	SLU 54	10	-32	2215	1.93	264.01	8.05
344	SLU 55	10	-28	2211	1.89	263.5	7.15
344	SLU 56	10	-37	2221	1.98	264.78	9.39
344	SLU 57	10	-32	2215	1.93	264.01	8.05
344	SLU 58	10	-37	2221	1.98	264.78	9.39
344	SLU 59	10	-32	2215	1.93	264.01	8.05
344	SLU 60	10	-39	2330	2.08	276.19	9.96
344	SLU 61	10	-34	2324	2.02	275.42	8.62
344	SLU 62	10	-39	2330	2.08	276.19	9.96
344	SLU 63	10	-34	2324	2.02	275.42	8.62
344	SLU 64	10	-36	2160	1.93	258.37	9.04
344	SLU 65	10	-27	2150	1.84	257.1	6.8
344	SLU 66	10	-36	2160	1.93	258.37	9.04
344	SLU 67	10	-30	2154	1.88	257.61	7.7
344	SLU 68	10	-27	2150	1.84	257.1	6.8
344	SLU 69	10	-36	2160	1.93	258.37	9.04
344	SLU 70	10	-30	2154	1.88	257.61	7.7
344	SLU 71	10	-36	2160	1.93	258.37	9.04
344	SLU 72	10	-30	2154	1.88	257.61	7.7
344	SLU 73	10	-32	2405	2.07	283.72	8.15
344	SLU 74	10	-41	2415	2.16	284.99	10.38
344	SLU 75	10	-36	2409	2.11	284.23	9.04
344	SLU 76	10	-32	2405	2.07	283.72	8.15
344	SLU 77	10	-41	2415	2.16	284.99	10.38
344	SLU 78	10	-36	2409	2.11	284.23	9.04
344	SLU 79	10	-41	2415	2.16	284.99	10.38
344	SLU 80	10	-36	2409	2.11	284.23	9.04
344	SLU 81	10	-43	2524	2.26	296.4	10.95
344	SLU 82	10	-38	2518	2.2	295.64	9.61
344	SLU 83	10	-43	2524	2.26	296.4	10.95
344	SLU 84	10	-38	2518	2.2	295.64	9.61
344	SLE RA 1	7	-27	1619	1.45	194.3	6.73
344	SLE RA 2	7	-21	1612	1.39	193.45	5.24
344	SLE RA 3	7	-27	1619	1.45	194.3	6.73
344	SLE RA 4	7	-23	1615	1.41	193.79	5.84
344	SLE RA 5	7	-21	1612	1.39	193.45	5.24
344	SLE RA 6	7	-27	1619	1.45	194.3	6.73
344	SLE RA 7	7	-23	1615	1.41	193.79	5.84
344	SLE RA 8	7	-27	1619	1.45	194.3	6.73
344	SLE RA 9	7	-23	1615	1.41	193.79	5.84
344	SLE RA 10	8	-24	1782	1.54	211.2	6.14
344	SLE RA 11	8	-30	1789	1.6	212.05	7.63
344	SLE RA 12	8	-27	1785	1.56	211.54	6.73
344	SLE RA 13	8	-24	1782	1.54	211.2	6.14
344	SLE RA 14	8	-30	1789	1.6	212.05	7.63
344	SLE RA 15	8	-27	1785	1.56	211.54	6.73
344	SLE RA 16	8	-30	1789	1.6	212.05	7.63
344	SLE RA 17	8	-27	1785	1.56	211.54	6.73
344	SLE RA 18	8	-32	1862	1.66	219.66	8.01
344	SLE RA 19	8	-28	1858	1.63	219.15	7.12
344	SLE RA 20	8	-32	1862	1.66	219.66	8.01
344	SLE RA 21	8	-28	1858	1.63	219.15	7.12
344	SLE FR 1	7	-27	1619	1.45	194.3	6.73
344	SLE FR 2	7	-25	1617	1.43	194.13	6.44
344	SLE FR 3	7	-27	1619	1.45	194.3	6.73
344	SLE FR 4	7	-27	1690	1.5	201.74	6.82
344	SLE FR 5	7	-28	1692	1.51	201.91	7.12
344	SLE FR 6	8	-29	1740	1.55	206.98	7.37
344	SLE QP 1	7	-27	1619	1.45	194.3	6.73
344	SLE QP 2	7	-28	1692	1.51	201.91	7.12
344	SLD 1	125	-10	1413	0.96	174.47	2.32
344	SLD 2	108	20	1408	0.92	173.52	-5.09
344	SLD 3	127	-107	1534	1.77	187.49	26.77
344	SLD 4	111	-77	1528	1.73	186.54	19.37
344	SLD 5	45	115	1427	0.12	174.28	-28.68
344	SLD 6	28	146	1422	0.08	173.3	-36.36
344	SLD 7	53	-211	1829	2.84	217.68	52.83
344	SLD 8	36	-180	1823	2.8	216.7	45.15
344	SLD 9	-21	124	1560	0.22	187.13	-30.91
344	SLD 10	-38	155	1554	0.18	186.14	-38.6
344	SLD 11	-13	-202	1961	2.94	230.52	50.6
344	SLD 12	-30	-171	1956	2.9	229.54	42.91
344	SLD 13	-96	21	1855	1.29	217.28	-5.13
344	SLD 14	-112	51	1850	1.25	216.34	-12.54
344	SLD 15	-93	-77	1975	2.1	230.3	19.32
344	SLD 16	-110	-47	1970	2.06	229.36	11.91

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
344	SLV 1	275	13	1056	0.25	139.24	-3.66
344	SLV 2	238	82	1044	0.16	137.08	-20.54
344	SLV 3	281	-208	1330	2.11	168.79	51.86
344	SLV 4	243	-140	1318	2.02	166.63	34.98
344	SLV 5	94	296	1090	-1.64	139.08	-74.13
344	SLV 6	55	366	1078	-1.74	136.85	-91.58
344	SLV 7	111	-444	2002	4.53	237.59	110.94
344	SLV 8	72	-373	1990	4.44	235.36	93.49
344	SLV 9	-57	317	1393	-1.42	168.47	-79.25
344	SLV 10	-96	387	1381	-1.51	166.24	-96.71
344	SLV 11	-40	-423	2305	4.76	266.97	105.81
344	SLV 12	-79	-352	2293	4.67	264.74	88.36
344	SLV 13	-228	84	2065	1.01	237.19	-20.74
344	SLV 14	-266	152	2053	0.92	235.03	-37.63
344	SLV 15	-223	-138	2339	2.86	266.74	34.78
344	SLV 16	-261	-70	2327	2.77	264.58	17.89
344	CRTFP Ux+	0	0	0	0	0	0
344	CRTFP Ux-	0	0	0	0	0	0
344	CRTFP Uy+	0	0	0	0	0	0
344	CRTFP Uy-	0	0	0	0	0	0
345	SLU 1	-8	-13	1481	1.09	-167.27	-2.99
345	SLU 2	-8	-5	1469	1.01	-166.31	-1.13
345	SLU 3	-8	-13	1481	1.09	-167.27	-2.99
345	SLU 4	-8	-8	1474	1.04	-166.69	-1.88
345	SLU 5	-8	-5	1469	1.01	-166.31	-1.13
345	SLU 6	-8	-13	1481	1.09	-167.27	-2.99
345	SLU 7	-8	-8	1474	1.04	-166.69	-1.88
345	SLU 8	-8	-13	1481	1.09	-167.27	-2.99
345	SLU 9	-8	-8	1474	1.04	-166.69	-1.88
345	SLU 10	-8	-9	1708	1.19	-189.87	-2.01
345	SLU 11	-8	-17	1720	1.27	-190.83	-3.87
345	SLU 12	-8	-12	1713	1.23	-190.25	-2.76
345	SLU 13	-8	-9	1708	1.19	-189.87	-2.01
345	SLU 14	-8	-17	1720	1.27	-190.83	-3.87
345	SLU 15	-8	-12	1713	1.23	-190.25	-2.76
345	SLU 16	-8	-17	1720	1.27	-190.83	-3.87
345	SLU 17	-8	-12	1713	1.23	-190.25	-2.76
345	SLU 18	-9	-19	1822	1.35	-200.92	-4.25
345	SLU 19	-9	-14	1815	1.3	-200.35	-3.13
345	SLU 20	-9	-19	1822	1.35	-200.92	-4.25
345	SLU 21	-9	-14	1815	1.3	-200.35	-3.13
345	SLU 22	-8	-16	1664	1.23	-185.08	-3.62
345	SLU 23	-8	-8	1651	1.16	-184.12	-1.75
345	SLU 24	-8	-16	1664	1.23	-185.08	-3.62
345	SLU 25	-8	-11	1656	1.19	-184.5	-2.5
345	SLU 26	-8	-8	1651	1.16	-184.12	-1.75
345	SLU 27	-8	-16	1664	1.23	-185.08	-3.62
345	SLU 28	-8	-11	1656	1.19	-184.5	-2.5
345	SLU 29	-8	-16	1664	1.23	-185.08	-3.62
345	SLU 30	-8	-11	1656	1.19	-184.5	-2.5
345	SLU 31	-9	-11	1890	1.34	-207.68	-2.63
345	SLU 32	-9	-20	1902	1.42	-208.64	-4.5
345	SLU 33	-9	-15	1895	1.37	-208.06	-3.38
345	SLU 34	-9	-11	1890	1.34	-207.68	-2.63
345	SLU 35	-9	-20	1902	1.42	-208.64	-4.5
345	SLU 36	-9	-15	1895	1.37	-208.06	-3.38
345	SLU 37	-9	-20	1902	1.42	-208.64	-4.5
345	SLU 38	-9	-15	1895	1.37	-208.06	-3.38
345	SLU 39	-9	-21	2004	1.5	-218.74	-4.87
345	SLU 40	-9	-16	1997	1.45	-218.16	-3.76
345	SLU 41	-9	-21	2004	1.5	-218.74	-4.87
345	SLU 42	-9	-16	1997	1.45	-218.16	-3.76
345	SLU 43	-10	-16	1864	1.37	-211.34	-3.68
345	SLU 44	-10	-8	1851	1.29	-210.38	-1.82
345	SLU 45	-10	-16	1864	1.37	-211.34	-3.68
345	SLU 46	-10	-11	1856	1.32	-210.77	-2.56
345	SLU 47	-10	-8	1851	1.29	-210.38	-1.82
345	SLU 48	-10	-16	1864	1.37	-211.34	-3.68
345	SLU 49	-10	-11	1856	1.32	-210.77	-2.56
345	SLU 50	-10	-16	1864	1.37	-211.34	-3.68
345	SLU 51	-10	-11	1856	1.32	-210.77	-2.56
345	SLU 52	-10	-12	2090	1.47	-233.94	-2.7
345	SLU 53	-11	-20	2102	1.55	-234.9	-4.56
345	SLU 54	-10	-15	2095	1.5	-234.32	-3.44
345	SLU 55	-10	-12	2090	1.47	-233.94	-2.7
345	SLU 56	-11	-20	2102	1.55	-234.9	-4.56
345	SLU 57	-10	-15	2095	1.5	-234.32	-3.44
345	SLU 58	-11	-20	2102	1.55	-234.9	-4.56
345	SLU 59	-10	-15	2095	1.5	-234.32	-3.44
345	SLU 60	-11	-22	2204	1.63	-245	-4.94
345	SLU 61	-11	-17	2197	1.58	-244.42	-3.82
345	SLU 62	-11	-22	2204	1.63	-245	-4.94
345	SLU 63	-11	-17	2197	1.58	-244.42	-3.82
345	SLU 64	-10	-19	2046	1.51	-229.15	-4.3
345	SLU 65	-10	-11	2033	1.43	-228.19	-2.44
345	SLU 66	-10	-19	2046	1.51	-229.15	-4.3

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
345	SLU 67	-10	-14	2038	1.46	-228.58	-3.18
345	SLU 68	-10	-11	2033	1.43	-228.19	-2.44
345	SLU 69	-10	-19	2046	1.51	-229.15	-4.3
345	SLU 70	-10	-14	2038	1.46	-228.58	-3.18
345	SLU 71	-10	-19	2046	1.51	-229.15	-4.3
345	SLU 72	-10	-14	2038	1.46	-228.58	-3.18
345	SLU 73	-11	-14	2272	1.62	-251.75	-3.32
345	SLU 74	-11	-23	2284	1.69	-252.71	-5.18
345	SLU 75	-11	-18	2277	1.65	-252.14	-4.06
345	SLU 76	-11	-14	2272	1.62	-251.75	-3.32
345	SLU 77	-11	-23	2284	1.69	-252.71	-5.18
345	SLU 78	-11	-18	2277	1.65	-252.14	-4.06
345	SLU 79	-11	-23	2284	1.69	-252.71	-5.18
345	SLU 80	-11	-18	2277	1.65	-252.14	-4.06
345	SLU 81	-11	-24	2386	1.77	-262.81	-5.56
345	SLU 82	-11	-19	2379	1.73	-262.23	-4.44
345	SLU 83	-11	-24	2386	1.77	-262.81	-5.56
345	SLU 84	-11	-19	2379	1.73	-262.23	-4.44
345	SLE RA 1	-8	-14	1533	1.13	-172.36	-3.17
345	SLE RA 2	-8	-8	1525	1.08	-171.72	-1.93
345	SLE RA 3	-8	-14	1533	1.13	-172.36	-3.17
345	SLE RA 4	-8	-11	1528	1.1	-171.97	-2.43
345	SLE RA 5	-8	-8	1525	1.08	-171.72	-1.93
345	SLE RA 6	-8	-14	1533	1.13	-172.36	-3.17
345	SLE RA 7	-8	-11	1528	1.1	-171.97	-2.43
345	SLE RA 8	-8	-14	1533	1.13	-172.36	-3.17
345	SLE RA 9	-8	-11	1528	1.1	-171.97	-2.43
345	SLE RA 10	-8	-11	1684	1.2	-187.42	-2.52
345	SLE RA 11	-8	-17	1693	1.25	-188.06	-3.76
345	SLE RA 12	-8	-13	1688	1.22	-187.68	-3.01
345	SLE RA 13	-8	-11	1684	1.2	-187.42	-2.52
345	SLE RA 14	-8	-17	1693	1.25	-188.06	-3.76
345	SLE RA 15	-8	-13	1688	1.22	-187.68	-3.01
345	SLE RA 16	-8	-17	1693	1.25	-188.06	-3.76
345	SLE RA 17	-8	-13	1688	1.22	-187.68	-3.01
345	SLE RA 18	-9	-18	1761	1.31	-194.79	-4.01
345	SLE RA 19	-9	-14	1756	1.27	-194.41	-3.27
345	SLE RA 20	-9	-18	1761	1.31	-194.79	-4.01
345	SLE RA 21	-9	-14	1756	1.27	-194.41	-3.27
345	SLE FR 1	-8	-14	1533	1.13	-172.36	-3.17
345	SLE FR 2	-8	-13	1532	1.12	-172.23	-2.92
345	SLE FR 3	-8	-14	1533	1.13	-172.36	-3.17
345	SLE FR 4	-8	-14	1600	1.17	-178.96	-3.18
345	SLE FR 5	-8	-15	1602	1.18	-179.09	-3.42
345	SLE FR 6	-8	-16	1647	1.22	-183.58	-3.59
345	SLE QP 1	-8	-14	1533	1.13	-172.36	-3.17
345	SLE QP 2	-8	-15	1602	1.18	-179.09	-3.42
345	SLD 1	104	59	1744	1	-192.13	13.16
345	SLD 2	88	31	1751	1.03	-192.68	6.88
345	SLD 3	102	-35	1870	1.63	-202.76	-7.98
345	SLD 4	85	-63	1877	1.67	-203.32	-14.26
345	SLD 5	36	160	1451	0.15	-166.66	35.92
345	SLD 6	18	131	1458	0.18	-167.24	29.4
345	SLD 7	27	-153	1870	2.27	-202.12	-34.52
345	SLD 8	10	-182	1877	2.31	-202.7	-41.04
345	SLD 9	-26	152	1326	0.06	-155.48	34.2
345	SLD 10	-43	123	1333	0.09	-156.06	27.68
345	SLD 11	-35	-161	1745	2.19	-190.94	-36.25
345	SLD 12	-52	-190	1752	2.22	-191.52	-42.77
345	SLD 13	-101	33	1327	0.7	-154.85	7.41
345	SLD 14	-118	5	1334	0.73	-155.41	1.13
345	SLD 15	-104	-61	1452	1.34	-165.49	-13.72
345	SLD 16	-120	-89	1459	1.37	-166.05	-20
345	SLV 1	248	154	1928	0.76	-208.97	34.28
345	SLV 2	211	89	1943	0.83	-210.24	19.97
345	SLV 3	242	-59	2213	2.21	-233.13	-13.7
345	SLV 4	205	-124	2229	2.28	-234.4	-28.02
345	SLV 5	91	382	1261	-1.16	-150.94	85.92
345	SLV 6	53	316	1277	-1.09	-152.25	71.12
345	SLV 7	72	-328	2212	3.66	-231.48	-74.03
345	SLV 8	33	-394	2229	3.73	-232.8	-88.83
345	SLV 9	-49	364	975	-1.37	-125.38	81.98
345	SLV 10	-88	298	991	-1.3	-126.7	67.19
345	SLV 11	-69	-346	1926	3.46	-205.92	-77.97
345	SLV 12	-108	-412	1943	3.53	-207.24	-92.76
345	SLV 13	-221	93	975	0.09	-123.77	21.17
345	SLV 14	-258	29	990	0.16	-125.05	6.85
345	SLV 15	-227	-119	1260	1.53	-147.94	-26.81
345	SLV 16	-264	-184	1276	1.6	-149.21	-41.13
345	CRTFP Ux+	0	0	0	0	0	0
345	CRTFP Ux-	0	0	0	0	0	0
345	CRTFP Uy+	0	0	0	0	0	0
345	CRTFP Uy-	0	0	0	0	0	0
348	SLU 1	-9	48	3101	3.51	-7.28	-0.09
348	SLU 2	-9	60	3085	3.28	-7.49	-0.12
348	SLU 3	-9	48	3101	3.51	-7.28	-0.09

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
348	SLU 4	-9	55	3091	3.37	-7.41	-0.1
348	SLU 5	-9	60	3085	3.28	-7.49	-0.12
348	SLU 6	-9	48	3101	3.51	-7.28	-0.09
348	SLU 7	-9	55	3091	3.37	-7.41	-0.1
348	SLU 8	-9	48	3101	3.51	-7.28	-0.09
348	SLU 9	-9	55	3091	3.37	-7.41	-0.1
348	SLU 10	-9	69	3594	3.92	-9.37	-0.12
348	SLU 11	-9	58	3610	4.16	-9.16	-0.09
348	SLU 12	-9	65	3600	4.02	-9.29	-0.11
348	SLU 13	-9	69	3594	3.92	-9.37	-0.12
348	SLU 14	-9	58	3610	4.16	-9.16	-0.09
348	SLU 15	-9	65	3600	4.02	-9.29	-0.11
348	SLU 16	-9	58	3610	4.16	-9.16	-0.09
348	SLU 17	-9	65	3600	4.02	-9.29	-0.11
348	SLU 18	-9	62	3828	4.43	-9.97	-0.09
348	SLU 19	-9	69	3818	4.29	-10.09	-0.11
348	SLU 20	-9	62	3828	4.43	-9.97	-0.09
348	SLU 21	-9	69	3818	4.29	-10.09	-0.11
348	SLU 22	-9	55	3489	4	-8.65	-0.09
348	SLU 23	-9	67	3474	3.77	-8.86	-0.12
348	SLU 24	-9	55	3489	4	-8.65	-0.09
348	SLU 25	-9	62	3480	3.86	-8.77	-0.11
348	SLU 26	-9	67	3474	3.77	-8.86	-0.12
348	SLU 27	-9	55	3489	4	-8.65	-0.09
348	SLU 28	-9	62	3480	3.86	-8.77	-0.11
348	SLU 29	-9	55	3489	4	-8.65	-0.09
348	SLU 30	-9	62	3480	3.86	-8.77	-0.11
348	SLU 31	-9	76	3982	4.41	-10.74	-0.13
348	SLU 32	-9	65	3998	4.64	-10.53	-0.09
348	SLU 33	-9	72	3989	4.5	-10.65	-0.11
348	SLU 34	-9	76	3982	4.41	-10.74	-0.13
348	SLU 35	-9	65	3998	4.64	-10.53	-0.09
348	SLU 36	-9	72	3989	4.5	-10.65	-0.11
348	SLU 37	-9	65	3998	4.64	-10.53	-0.09
348	SLU 38	-9	72	3989	4.5	-10.65	-0.11
348	SLU 39	-9	69	4216	4.92	-11.33	-0.1
348	SLU 40	-9	76	4207	4.78	-11.46	-0.12
348	SLU 41	-9	69	4216	4.92	-11.33	-0.1
348	SLU 42	-9	76	4207	4.78	-11.46	-0.12
348	SLU 43	-11	60	3898	4.4	-9	-0.11
348	SLU 44	-11	71	3882	4.17	-9.21	-0.14
348	SLU 45	-11	60	3898	4.4	-9	-0.11
348	SLU 46	-11	67	3889	4.26	-9.13	-0.13
348	SLU 47	-11	71	3882	4.17	-9.21	-0.14
348	SLU 48	-11	60	3898	4.4	-9	-0.11
348	SLU 49	-11	67	3889	4.26	-9.13	-0.13
348	SLU 50	-11	60	3898	4.4	-9	-0.11
348	SLU 51	-11	67	3889	4.26	-9.13	-0.13
348	SLU 52	-11	81	4391	4.81	-11.09	-0.15
348	SLU 53	-11	70	4407	5.04	-10.88	-0.12
348	SLU 54	-11	77	4397	4.9	-11.01	-0.13
348	SLU 55	-11	81	4391	4.81	-11.09	-0.15
348	SLU 56	-11	70	4407	5.04	-10.88	-0.12
348	SLU 57	-11	77	4397	4.9	-11.01	-0.13
348	SLU 58	-11	70	4407	5.04	-10.88	-0.12
348	SLU 59	-11	77	4397	4.9	-11.01	-0.13
348	SLU 60	-11	74	4625	5.32	-11.68	-0.12
348	SLU 61	-11	81	4616	5.18	-11.81	-0.14
348	SLU 62	-11	74	4625	5.32	-11.68	-0.12
348	SLU 63	-11	81	4616	5.18	-11.81	-0.14
348	SLU 64	-11	67	4286	4.89	-10.37	-0.11
348	SLU 65	-12	79	4271	4.66	-10.58	-0.14
348	SLU 66	-11	67	4286	4.89	-10.37	-0.11
348	SLU 67	-11	74	4277	4.75	-10.49	-0.13
348	SLU 68	-12	79	4271	4.66	-10.58	-0.14
348	SLU 69	-11	67	4286	4.89	-10.37	-0.11
348	SLU 70	-11	74	4277	4.75	-10.49	-0.13
348	SLU 71	-11	67	4286	4.89	-10.37	-0.11
348	SLU 72	-11	74	4277	4.75	-10.49	-0.13
348	SLU 73	-12	88	4780	5.3	-12.45	-0.15
348	SLU 74	-11	77	4795	5.53	-12.24	-0.12
348	SLU 75	-11	84	4786	5.39	-12.37	-0.14
348	SLU 76	-12	88	4780	5.3	-12.45	-0.15
348	SLU 77	-11	77	4795	5.53	-12.24	-0.12
348	SLU 78	-11	84	4786	5.39	-12.37	-0.14
348	SLU 79	-11	77	4795	5.53	-12.24	-0.12
348	SLU 80	-11	84	4786	5.39	-12.37	-0.14
348	SLU 81	-11	81	5013	5.81	-13.05	-0.12
348	SLU 82	-11	88	5004	5.67	-13.17	-0.14
348	SLU 83	-11	81	5013	5.81	-13.05	-0.12
348	SLU 84	-11	88	5004	5.67	-13.17	-0.14
348	SLE RA 1	-9	50	3212	3.65	-7.67	-0.09
348	SLE RA 2	-9	58	3201	3.5	-7.81	-0.11
348	SLE RA 3	-9	50	3212	3.65	-7.67	-0.09
348	SLE RA 4	-9	55	3206	3.56	-7.76	-0.1
348	SLE RA 5	-9	58	3201	3.5	-7.81	-0.11

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
348	SLE RA 6	-9	50	3212	3.65	-7.67	-0.09
348	SLE RA 7	-9	55	3206	3.56	-7.76	-0.1
348	SLE RA 8	-9	50	3212	3.65	-7.67	-0.09
348	SLE RA 9	-9	55	3206	3.56	-7.76	-0.1
348	SLE RA 10	-9	64	3541	3.93	-9.07	-0.11
348	SLE RA 11	-9	56	3551	4.08	-8.93	-0.09
348	SLE RA 12	-9	61	3545	3.99	-9.01	-0.1
348	SLE RA 13	-9	64	3541	3.93	-9.07	-0.11
348	SLE RA 14	-9	56	3551	4.08	-8.93	-0.09
348	SLE RA 15	-9	61	3545	3.99	-9.01	-0.1
348	SLE RA 16	-9	56	3551	4.08	-8.93	-0.09
348	SLE RA 17	-9	61	3545	3.99	-9.01	-0.1
348	SLE RA 18	-9	59	3697	4.27	-9.46	-0.09
348	SLE RA 19	-9	64	3690	4.17	-9.55	-0.1
348	SLE RA 20	-9	59	3697	4.27	-9.46	-0.09
348	SLE RA 21	-9	64	3690	4.17	-9.55	-0.1
348	SLE FR 1	-9	50	3212	3.65	-7.67	-0.09
348	SLE FR 2	-9	51	3210	3.62	-7.7	-0.09
348	SLE FR 3	-9	50	3212	3.65	-7.67	-0.09
348	SLE FR 4	-9	54	3355	3.81	-8.24	-0.09
348	SLE FR 5	-9	53	3357	3.84	-8.21	-0.09
348	SLE FR 6	-9	55	3454	3.96	-8.57	-0.09
348	SLE QP 1	-9	50	3212	3.65	-7.67	-0.09
348	SLE QP 2	-9	53	3357	3.84	-8.21	-0.09
348	SLD 1	251	129	3388	2.88	1.57	-1.73
348	SLD 2	213	117	3389	2.94	2.02	-0.64
348	SLD 3	256	3	3562	5.09	0.38	-1.58
348	SLD 4	217	-9	3563	5.14	0.84	-0.5
348	SLD 5	77	271	3103	0.19	-3.65	-1.2
348	SLD 6	36	259	3104	0.24	-3.17	-0.08
348	SLD 7	92	-149	3681	7.54	-7.6	-0.71
348	SLD 8	52	-162	3682	7.59	-7.13	0.41
348	SLD 9	-69	267	3032	0.08	-9.29	-0.59
348	SLD 10	-109	255	3033	0.14	-8.82	0.54
348	SLD 11	-54	-154	3610	7.43	-13.25	-0.1
348	SLD 12	-94	-166	3612	7.49	-12.77	1.03
348	SLD 13	-234	115	3152	2.53	-17.26	0.32
348	SLD 14	-273	103	3153	2.59	-16.8	1.41
348	SLD 15	-230	-11	3325	4.74	-18.44	0.47
348	SLD 16	-268	-23	3326	4.79	-17.99	1.55
348	SLV 1	585	226	3429	1.7	14.13	-3.83
348	SLV 2	496	199	3432	1.82	15.17	-1.36
348	SLV 3	595	-61	3823	6.71	11.43	-3.5
348	SLV 4	507	-88	3826	6.83	12.48	-1.03
348	SLV 5	186	549	2780	-4.44	2.2	-2.62
348	SLV 6	95	521	2783	-4.31	3.28	-0.07
348	SLV 7	221	-406	4094	12.24	-6.79	-1.51
348	SLV 8	130	-434	4096	12.37	-5.71	1.04
348	SLV 9	-147	539	2618	-4.7	-10.71	-1.22
348	SLV 10	-238	511	2621	-4.57	-9.63	1.34
348	SLV 11	-112	-416	3932	11.99	-19.7	-0.11
348	SLV 12	-203	-443	3934	12.12	-18.62	2.45
348	SLV 13	-524	193	2889	0.85	-28.9	0.85
348	SLV 14	-612	166	2891	0.97	-27.85	3.32
348	SLV 15	-514	-93	3283	5.85	-31.59	1.18
348	SLV 16	-602	-120	3285	5.98	-30.55	3.66
348	CRTFP Ux+	0	0	0	0	0	0
348	CRTFP Ux-	0	0	0	0	0	0
348	CRTFP Uy+	0	0	0	0	0	0
348	CRTFP Uy-	0	0	0	0	0	0
351	SLU 1	1	41	3043	3.11	6.81	-0.08
351	SLU 2	2	52	3027	2.89	6.99	-0.06
351	SLU 3	1	41	3043	3.11	6.81	-0.08
351	SLU 4	2	48	3033	2.98	6.92	-0.07
351	SLU 5	2	52	3027	2.89	6.99	-0.06
351	SLU 6	1	41	3043	3.11	6.81	-0.08
351	SLU 7	2	48	3033	2.98	6.92	-0.07
351	SLU 8	1	41	3043	3.11	6.81	-0.08
351	SLU 9	2	48	3033	2.98	6.92	-0.07
351	SLU 10	1	60	3535	3.45	8.43	-0.09
351	SLU 11	1	49	3551	3.66	8.26	-0.1
351	SLU 12	1	56	3541	3.53	8.36	-0.1
351	SLU 13	1	60	3535	3.45	8.43	-0.09
351	SLU 14	1	49	3551	3.66	8.26	-0.1
351	SLU 15	1	56	3541	3.53	8.36	-0.1
351	SLU 16	1	49	3551	3.66	8.26	-0.1
351	SLU 17	1	56	3541	3.53	8.36	-0.1
351	SLU 18	0	52	3769	3.9	8.87	-0.11
351	SLU 19	1	59	3759	3.77	8.98	-0.11
351	SLU 20	0	52	3769	3.9	8.87	-0.11
351	SLU 21	1	59	3759	3.77	8.98	-0.11
351	SLU 22	1	47	3430	3.53	7.89	-0.09
351	SLU 23	1	58	3413	3.32	8.07	-0.08
351	SLU 24	1	47	3430	3.53	7.89	-0.09
351	SLU 25	1	54	3420	3.4	8	-0.09
351	SLU 26	1	58	3413	3.32	8.07	-0.08

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
351	SLU 27	1	47	3430	3.53	7.89	-0.09
351	SLU 28	1	54	3420	3.4	8	-0.09
351	SLU 29	1	47	3430	3.53	7.89	-0.09
351	SLU 30	1	54	3420	3.4	8	-0.09
351	SLU 31	1	66	3921	3.87	9.51	-0.11
351	SLU 32	0	55	3938	4.09	9.33	-0.12
351	SLU 33	1	62	3928	3.96	9.44	-0.11
351	SLU 34	1	66	3921	3.87	9.51	-0.11
351	SLU 35	0	55	3938	4.09	9.33	-0.12
351	SLU 36	1	62	3928	3.96	9.44	-0.11
351	SLU 37	0	55	3938	4.09	9.33	-0.12
351	SLU 38	1	62	3928	3.96	9.44	-0.11
351	SLU 39	0	58	4155	4.32	9.95	-0.13
351	SLU 40	0	65	4145	4.2	10.06	-0.12
351	SLU 41	0	58	4155	4.32	9.95	-0.13
351	SLU 42	0	65	4145	4.2	10.06	-0.12
351	SLU 43	2	51	3824	3.89	8.49	-0.1
351	SLU 44	2	63	3807	3.68	8.67	-0.08
351	SLU 45	2	51	3824	3.89	8.49	-0.1
351	SLU 46	2	58	3814	3.76	8.6	-0.09
351	SLU 47	2	63	3807	3.68	8.67	-0.08
351	SLU 48	2	51	3824	3.89	8.49	-0.1
351	SLU 49	2	58	3814	3.76	8.6	-0.09
351	SLU 50	2	51	3824	3.89	8.49	-0.1
351	SLU 51	2	58	3814	3.76	8.6	-0.09
351	SLU 52	2	71	4315	4.24	10.11	-0.11
351	SLU 53	1	59	4332	4.45	9.93	-0.12
351	SLU 54	2	66	4322	4.32	10.04	-0.11
351	SLU 55	2	71	4315	4.24	10.11	-0.11
351	SLU 56	1	59	4332	4.45	9.93	-0.12
351	SLU 57	2	66	4322	4.32	10.04	-0.11
351	SLU 58	1	59	4332	4.45	9.93	-0.12
351	SLU 59	2	66	4322	4.32	10.04	-0.11
351	SLU 60	1	63	4549	4.68	10.55	-0.13
351	SLU 61	1	70	4539	4.56	10.66	-0.12
351	SLU 62	1	63	4549	4.68	10.55	-0.13
351	SLU 63	1	70	4539	4.56	10.66	-0.12
351	SLU 64	1	57	4210	4.32	9.57	-0.11
351	SLU 65	2	69	4194	4.1	9.74	-0.1
351	SLU 66	1	57	4210	4.32	9.57	-0.11
351	SLU 67	2	64	4200	4.19	9.67	-0.1
351	SLU 68	2	69	4194	4.1	9.74	-0.1
351	SLU 69	1	57	4210	4.32	9.57	-0.11
351	SLU 70	2	64	4200	4.19	9.67	-0.1
351	SLU 71	1	57	4210	4.32	9.57	-0.11
351	SLU 72	2	64	4200	4.19	9.67	-0.1
351	SLU 73	1	77	4702	4.66	11.19	-0.12
351	SLU 74	1	65	4718	4.87	11.01	-0.14
351	SLU 75	1	72	4708	4.74	11.12	-0.13
351	SLU 76	1	77	4702	4.66	11.19	-0.12
351	SLU 77	1	65	4718	4.87	11.01	-0.14
351	SLU 78	1	72	4708	4.74	11.12	-0.13
351	SLU 79	1	65	4718	4.87	11.01	-0.14
351	SLU 80	1	72	4708	4.74	11.12	-0.13
351	SLU 81	1	69	4936	5.11	11.63	-0.15
351	SLU 82	1	75	4926	4.98	11.73	-0.14
351	SLU 83	1	69	4936	5.11	11.63	-0.15
351	SLU 84	1	75	4926	4.98	11.73	-0.14
351	SLE RA 1	1	43	3154	3.23	7.12	-0.08
351	SLE RA 2	1	50	3143	3.09	7.24	-0.07
351	SLE RA 3	1	43	3154	3.23	7.12	-0.08
351	SLE RA 4	1	47	3147	3.14	7.19	-0.08
351	SLE RA 5	1	50	3143	3.09	7.24	-0.07
351	SLE RA 6	1	43	3154	3.23	7.12	-0.08
351	SLE RA 7	1	47	3147	3.14	7.19	-0.08
351	SLE RA 8	1	43	3154	3.23	7.12	-0.08
351	SLE RA 9	1	47	3147	3.14	7.19	-0.08
351	SLE RA 10	1	56	3481	3.46	8.2	-0.09
351	SLE RA 11	1	48	3492	3.6	8.08	-0.1
351	SLE RA 12	1	53	3486	3.51	8.15	-0.09
351	SLE RA 13	1	56	3481	3.46	8.2	-0.09
351	SLE RA 14	1	48	3492	3.6	8.08	-0.1
351	SLE RA 15	1	53	3486	3.51	8.15	-0.09
351	SLE RA 16	1	48	3492	3.6	8.08	-0.1
351	SLE RA 17	1	53	3486	3.51	8.15	-0.09
351	SLE RA 18	1	50	3637	3.76	8.5	-0.11
351	SLE RA 19	1	55	3631	3.67	8.57	-0.1
351	SLE RA 20	1	50	3637	3.76	8.5	-0.11
351	SLE RA 21	1	55	3631	3.67	8.57	-0.1
351	SLE FR 1	1	43	3154	3.23	7.12	-0.08
351	SLE FR 2	1	44	3151	3.2	7.15	-0.08
351	SLE FR 3	1	43	3154	3.23	7.12	-0.08
351	SLE FR 4	1	47	3297	3.36	7.56	-0.09
351	SLE FR 5	1	45	3299	3.39	7.53	-0.09
351	SLE FR 6	1	47	3395	3.49	7.81	-0.1
351	SLE QP 1	1	43	3154	3.23	7.12	-0.08

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
351	SLE QP 2	1	45	3299	3.39	7.53	-0.09
351	SLD 1	252	84	3121	2.64	16.62	-1.49
351	SLD 2	214	97	3120	2.58	17.03	-0.47
351	SLD 3	257	-37	3303	4.64	17.39	-1.7
351	SLD 4	219	-24	3302	4.59	17.8	-0.68
351	SLD 5	83	236	2970	0.15	8.95	-0.57
351	SLD 6	43	249	2969	0.09	9.37	0.49
351	SLD 7	100	-168	3576	6.82	11.5	-1.26
351	SLD 8	60	-155	3575	6.76	11.93	-0.2
351	SLD 9	-58	245	3023	0.01	3.14	0.02
351	SLD 10	-98	258	3022	-0.05	3.57	1.08
351	SLD 11	-41	-159	3628	6.68	5.7	-0.67
351	SLD 12	-81	-146	3627	6.62	6.12	0.39
351	SLD 13	-217	114	3296	2.18	-2.73	0.5
351	SLD 14	-255	127	3295	2.13	-2.32	1.52
351	SLD 15	-212	-7	3477	4.19	-1.96	0.29
351	SLD 16	-250	6	3477	4.13	-1.55	1.31
351	SLV 1	575	134	2892	1.71	28.28	-3.29
351	SLV 2	488	163	2891	1.58	29.22	-0.96
351	SLV 3	586	-141	3305	6.26	30.04	-3.77
351	SLV 4	500	-112	3303	6.13	30.97	-1.43
351	SLV 5	188	479	2552	-3.96	10.76	-1.19
351	SLV 6	98	508	2550	-4.1	11.72	1.22
351	SLV 7	226	-438	3927	11.19	16.6	-2.76
351	SLV 8	136	-409	3925	11.06	17.57	-0.35
351	SLV 9	-134	499	2673	-4.29	-2.5	0.17
351	SLV 10	-224	529	2671	-4.42	-1.53	2.58
351	SLV 11	-96	-418	4047	10.87	3.35	-1.4
351	SLV 12	-186	-389	4045	10.74	4.31	1.01
351	SLV 13	-498	202	3294	0.64	-15.9	1.25
351	SLV 14	-584	231	3293	0.51	-14.97	3.58
351	SLV 15	-486	-73	3707	5.19	-14.15	0.78
351	SLV 16	-573	-44	3705	5.06	-13.21	3.11
351	CRTFP Ux+	0	0	0	0	0	0
351	CRTFP Ux-	0	0	0	0	0	0
351	CRTFP Uy+	0	0	0	0	0	0
351	CRTFP Uy-	0	0	0	0	0	0
354	SLU 1	5	-26	1621	2.46	220.12	6.45
354	SLU 2	6	-17	1608	2.35	218.14	4.22
354	SLU 3	5	-26	1621	2.46	220.12	6.45
354	SLU 4	6	-20	1613	2.4	218.93	5.11
354	SLU 5	6	-17	1608	2.35	218.14	4.22
354	SLU 6	5	-26	1621	2.46	220.12	6.45
354	SLU 7	6	-20	1613	2.4	218.93	5.11
354	SLU 8	5	-26	1621	2.46	220.12	6.45
354	SLU 9	6	-20	1613	2.4	218.93	5.11
354	SLU 10	6	-22	1874	2.8	250.08	5.56
354	SLU 11	6	-31	1886	2.91	252.06	7.78
354	SLU 12	6	-26	1879	2.84	250.87	6.45
354	SLU 13	6	-22	1874	2.8	250.08	5.56
354	SLU 14	6	-31	1886	2.91	252.06	7.78
354	SLU 15	6	-26	1879	2.84	250.87	6.45
354	SLU 16	6	-31	1886	2.91	252.06	7.78
354	SLU 17	6	-26	1879	2.84	250.87	6.45
354	SLU 18	6	-33	2000	3.1	265.75	8.36
354	SLU 19	6	-28	1992	3.04	264.56	7.03
354	SLU 20	6	-33	2000	3.1	265.75	8.36
354	SLU 21	6	-28	1992	3.04	264.56	7.03
354	SLU 22	6	-30	1823	2.81	244.43	7.44
354	SLU 23	6	-21	1810	2.7	242.46	5.22
354	SLU 24	6	-30	1823	2.81	244.43	7.44
354	SLU 25	6	-24	1815	2.74	243.25	6.1
354	SLU 26	6	-21	1810	2.7	242.46	5.22
354	SLU 27	6	-30	1823	2.81	244.43	7.44
354	SLU 28	6	-24	1815	2.74	243.25	6.1
354	SLU 29	6	-30	1823	2.81	244.43	7.44
354	SLU 30	6	-24	1815	2.74	243.25	6.1
354	SLU 31	6	-26	2075	3.15	274.4	6.55
354	SLU 32	6	-35	2088	3.26	276.37	8.78
354	SLU 33	6	-30	2080	3.19	275.19	7.44
354	SLU 34	6	-26	2075	3.15	274.4	6.55
354	SLU 35	6	-35	2088	3.26	276.37	8.78
354	SLU 36	6	-30	2080	3.19	275.19	7.44
354	SLU 37	6	-35	2088	3.26	276.37	8.78
354	SLU 38	6	-30	2080	3.19	275.19	7.44
354	SLU 39	6	-37	2202	3.45	290.06	9.35
354	SLU 40	6	-32	2194	3.38	288.88	8.02
354	SLU 41	6	-37	2202	3.45	290.06	9.35
354	SLU 42	6	-32	2194	3.38	288.88	8.02
354	SLU 43	7	-32	2038	3.08	277.82	8.04
354	SLU 44	7	-23	2026	2.97	275.84	5.82
354	SLU 45	7	-32	2038	3.08	277.82	8.04
354	SLU 46	7	-27	2030	3.02	276.63	6.71
354	SLU 47	7	-23	2026	2.97	275.84	5.82
354	SLU 48	7	-32	2038	3.08	277.82	8.04
354	SLU 49	7	-27	2030	3.02	276.63	6.71

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
354	SLU 50	7	-32	2038	3.08	277.82	8.04
354	SLU 51	7	-27	2030	3.02	276.63	6.71
354	SLU 52	7	-28	2291	3.42	307.78	7.16
354	SLU 53	7	-37	2303	3.53	309.76	9.38
354	SLU 54	7	-32	2296	3.46	308.57	8.05
354	SLU 55	7	-28	2291	3.42	307.78	7.16
354	SLU 56	7	-37	2303	3.53	309.76	9.38
354	SLU 57	7	-32	2296	3.46	308.57	8.05
354	SLU 58	7	-37	2303	3.53	309.76	9.38
354	SLU 59	7	-32	2296	3.46	308.57	8.05
354	SLU 60	7	-40	2417	3.72	323.45	9.95
354	SLU 61	7	-34	2409	3.66	322.26	8.62
354	SLU 62	7	-40	2417	3.72	323.45	9.95
354	SLU 63	7	-34	2409	3.66	322.26	8.62
354	SLU 64	7	-36	2240	3.43	302.13	9.03
354	SLU 65	7	-27	2227	3.32	300.16	6.81
354	SLU 66	7	-36	2240	3.43	302.13	9.03
354	SLU 67	7	-31	2232	3.36	300.95	7.7
354	SLU 68	7	-27	2227	3.32	300.16	6.81
354	SLU 69	7	-36	2240	3.43	302.13	9.03
354	SLU 70	7	-31	2232	3.36	300.95	7.7
354	SLU 71	7	-36	2240	3.43	302.13	9.03
354	SLU 72	7	-31	2232	3.36	300.95	7.7
354	SLU 73	7	-32	2493	3.77	332.1	8.15
354	SLU 74	7	-41	2505	3.88	334.07	10.37
354	SLU 75	7	-36	2497	3.81	332.89	9.04
354	SLU 76	7	-32	2493	3.77	332.1	8.15
354	SLU 77	7	-41	2505	3.88	334.07	10.37
354	SLU 78	7	-36	2497	3.81	332.89	9.04
354	SLU 79	7	-41	2505	3.88	334.07	10.37
354	SLU 80	7	-36	2497	3.81	332.89	9.04
354	SLU 81	7	-43	2619	4.07	347.76	10.94
354	SLU 82	7	-38	2611	4	346.58	9.61
354	SLU 83	7	-43	2619	4.07	347.76	10.94
354	SLU 84	7	-38	2611	4	346.58	9.61
354	SLE RA 1	6	-27	1678	2.56	227.07	6.73
354	SLE RA 2	6	-21	1670	2.49	225.75	5.25
354	SLE RA 3	6	-27	1678	2.56	227.07	6.73
354	SLE RA 4	6	-23	1674	2.52	226.28	5.84
354	SLE RA 5	6	-21	1670	2.49	225.75	5.25
354	SLE RA 6	6	-27	1678	2.56	227.07	6.73
354	SLE RA 7	6	-23	1674	2.52	226.28	5.84
354	SLE RA 8	6	-27	1678	2.56	227.07	6.73
354	SLE RA 9	6	-23	1674	2.52	226.28	5.84
354	SLE RA 10	6	-24	1847	2.79	247.04	6.14
354	SLE RA 11	6	-30	1855	2.86	248.36	7.62
354	SLE RA 12	6	-27	1850	2.82	247.57	6.73
354	SLE RA 13	6	-24	1847	2.79	247.04	6.14
354	SLE RA 14	6	-30	1855	2.86	248.36	7.62
354	SLE RA 15	6	-27	1850	2.82	247.57	6.73
354	SLE RA 16	6	-30	1855	2.86	248.36	7.62
354	SLE RA 17	6	-27	1850	2.82	247.57	6.73
354	SLE RA 18	6	-32	1931	2.99	257.49	8
354	SLE RA 19	6	-28	1926	2.94	256.7	7.12
354	SLE RA 20	6	-32	1931	2.99	257.49	8
354	SLE RA 21	6	-28	1926	2.94	256.7	7.12
354	SLE FR 1	6	-27	1678	2.56	227.07	6.73
354	SLE FR 2	6	-26	1677	2.55	226.8	6.43
354	SLE FR 3	6	-27	1678	2.56	227.07	6.73
354	SLE FR 4	6	-27	1753	2.67	235.93	6.82
354	SLE FR 5	6	-28	1754	2.69	236.19	7.11
354	SLE FR 6	6	-29	1805	2.77	242.28	7.37
354	SLE QP 1	6	-27	1678	2.56	227.07	6.73
354	SLE QP 2	6	-28	1754	2.69	236.19	7.11
354	SLD 1	128	-10	1456	1.88	201.67	2.32
354	SLD 2	109	20	1449	1.83	200.58	-5.08
354	SLD 3	131	-107	1603	2.84	221.01	26.73
354	SLD 4	111	-77	1596	2.79	219.91	19.33
354	SLD 5	46	114	1444	1.01	196.92	-28.61
354	SLD 6	26	145	1437	0.96	195.78	-36.29
354	SLD 7	54	-211	1934	4.2	261.36	52.74
354	SLD 8	34	-180	1927	4.15	260.23	45.06
354	SLD 9	-23	124	1581	1.23	212.16	-30.84
354	SLD 10	-43	155	1574	1.17	211.02	-38.51
354	SLD 11	-15	-202	2071	4.42	276.6	50.51
354	SLD 12	-35	-171	2064	4.36	275.47	42.83
354	SLD 13	-100	21	1912	2.59	252.47	-5.11
354	SLD 14	-120	51	1906	2.54	251.38	-12.5
354	SLD 15	-98	-77	2059	3.54	271.8	19.3
354	SLD 16	-117	-47	2053	3.49	270.71	11.9
354	SLV 1	286	13	1074	0.86	157.44	-3.64
354	SLV 2	242	81	1059	0.74	154.95	-20.51
354	SLV 3	292	-209	1407	3.03	201.32	51.77
354	SLV 4	247	-140	1392	2.92	198.84	34.9
354	SLV 5	97	295	1049	-1.12	146.91	-73.97
354	SLV 6	51	366	1034	-1.23	144.34	-91.4

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
354	SLV 7	116	-444	2162	6.13	293.21	110.73
354	SLV 8	70	-373	2146	6.01	290.64	93.3
354	SLV 9	-59	317	1362	-0.63	181.75	-79.08
354	SLV 10	-105	387	1346	-0.75	179.17	-96.51
354	SLV 11	-40	-422	2475	6.61	328.04	105.62
354	SLV 12	-86	-352	2459	6.49	325.47	88.19
354	SLV 13	-236	84	2116	2.46	273.55	-20.68
354	SLV 14	-281	152	2101	2.35	271.06	-37.54
354	SLV 15	-231	-138	2450	4.63	317.44	34.73
354	SLV 16	-275	-70	2435	4.52	314.95	17.87
354	CRTFP Ux+	0	0	0	0	0	0
354	CRTFP Ux-	0	0	0	0	0	0
354	CRTFP Uy+	0	0	0	0	0	0
354	CRTFP Uy-	0	0	0	0	0	0
355	SLU 1	-7	-13	1529	1.85	-190.5	-3
355	SLU 2	-7	-5	1514	1.76	-188.78	-1.15
355	SLU 3	-7	-13	1529	1.85	-190.5	-3
355	SLU 4	-7	-8	1520	1.79	-189.47	-1.89
355	SLU 5	-7	-5	1514	1.76	-188.78	-1.15
355	SLU 6	-7	-13	1529	1.85	-190.5	-3
355	SLU 7	-7	-8	1520	1.79	-189.47	-1.89
355	SLU 8	-7	-13	1529	1.85	-190.5	-3
355	SLU 9	-7	-8	1520	1.79	-189.47	-1.89
355	SLU 10	-7	-9	1761	2.09	-216.32	-2.02
355	SLU 11	-7	-17	1776	2.18	-218.04	-3.88
355	SLU 12	-7	-12	1767	2.12	-217.01	-2.76
355	SLU 13	-7	-9	1761	2.09	-216.32	-2.02
355	SLU 14	-7	-17	1776	2.18	-218.04	-3.88
355	SLU 15	-7	-12	1767	2.12	-217.01	-2.76
355	SLU 16	-7	-17	1776	2.18	-218.04	-3.88
355	SLU 17	-7	-12	1767	2.12	-217.01	-2.76
355	SLU 18	-7	-19	1882	2.32	-229.84	-4.25
355	SLU 19	-7	-14	1873	2.27	-228.81	-3.14
355	SLU 20	-7	-19	1882	2.32	-229.84	-4.25
355	SLU 21	-7	-14	1873	2.27	-228.81	-3.14
355	SLU 22	-7	-16	1718	2.1	-211.42	-3.62
355	SLU 23	-7	-8	1702	2.01	-209.7	-1.77
355	SLU 24	-7	-16	1718	2.1	-211.42	-3.62
355	SLU 25	-7	-11	1709	2.05	-210.39	-2.51
355	SLU 26	-7	-8	1702	2.01	-209.7	-1.77
355	SLU 27	-7	-16	1718	2.1	-211.42	-3.62
355	SLU 28	-7	-11	1709	2.05	-210.39	-2.51
355	SLU 29	-7	-16	1718	2.1	-211.42	-3.62
355	SLU 30	-7	-11	1709	2.05	-210.39	-2.51
355	SLU 31	-7	-12	1950	2.35	-237.24	-2.64
355	SLU 32	-7	-20	1965	2.44	-238.96	-4.5
355	SLU 33	-7	-15	1956	2.38	-237.93	-3.38
355	SLU 34	-7	-12	1950	2.35	-237.24	-2.64
355	SLU 35	-7	-20	1965	2.44	-238.96	-4.5
355	SLU 36	-7	-15	1956	2.38	-237.93	-3.38
355	SLU 37	-7	-20	1965	2.44	-238.96	-4.5
355	SLU 38	-7	-15	1956	2.38	-237.93	-3.38
355	SLU 39	-8	-21	2071	2.58	-250.76	-4.87
355	SLU 40	-8	-16	2062	2.52	-249.73	-3.76
355	SLU 41	-8	-21	2071	2.58	-250.76	-4.87
355	SLU 42	-8	-16	2062	2.52	-249.73	-3.76
355	SLU 43	-9	-16	1923	2.31	-240.48	-3.69
355	SLU 44	-8	-8	1908	2.22	-238.76	-1.84
355	SLU 45	-9	-16	1923	2.31	-240.48	-3.69
355	SLU 46	-8	-11	1914	2.26	-239.45	-2.58
355	SLU 47	-8	-8	1908	2.22	-238.76	-1.84
355	SLU 48	-9	-16	1923	2.31	-240.48	-3.69
355	SLU 49	-8	-11	1914	2.26	-239.45	-2.58
355	SLU 50	-9	-16	1923	2.31	-240.48	-3.69
355	SLU 51	-8	-11	1914	2.26	-239.45	-2.58
355	SLU 52	-9	-12	2155	2.55	-266.3	-2.71
355	SLU 53	-9	-20	2170	2.64	-268.02	-4.57
355	SLU 54	-9	-15	2161	2.59	-266.99	-3.45
355	SLU 55	-9	-12	2155	2.55	-266.3	-2.71
355	SLU 56	-9	-20	2170	2.64	-268.02	-4.57
355	SLU 57	-9	-15	2161	2.59	-266.99	-3.45
355	SLU 58	-9	-20	2170	2.64	-268.02	-4.57
355	SLU 59	-9	-15	2161	2.59	-266.99	-3.45
355	SLU 60	-9	-22	2276	2.79	-279.82	-4.94
355	SLU 61	-9	-17	2267	2.73	-278.79	-3.83
355	SLU 62	-9	-22	2276	2.79	-279.82	-4.94
355	SLU 63	-9	-17	2267	2.73	-278.79	-3.83
355	SLU 64	-9	-19	2112	2.57	-261.4	-4.31
355	SLU 65	-9	-11	2097	2.48	-259.68	-2.46
355	SLU 66	-9	-19	2112	2.57	-261.4	-4.31
355	SLU 67	-9	-14	2103	2.52	-260.37	-3.2
355	SLU 68	-9	-11	2097	2.48	-259.68	-2.46
355	SLU 69	-9	-19	2112	2.57	-261.4	-4.31
355	SLU 70	-9	-14	2103	2.52	-260.37	-3.2
355	SLU 71	-9	-19	2112	2.57	-261.4	-4.31
355	SLU 72	-9	-14	2103	2.52	-260.37	-3.2

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
355	SLU 73	-9	-15	2344	2.81	-287.22	-3.33
355	SLU 74	-9	-23	2359	2.9	-288.94	-5.18
355	SLU 75	-9	-18	2350	2.85	-287.91	-4.07
355	SLU 76	-9	-15	2344	2.81	-287.22	-3.33
355	SLU 77	-9	-23	2359	2.9	-288.94	-5.18
355	SLU 78	-9	-18	2350	2.85	-287.91	-4.07
355	SLU 79	-9	-23	2359	2.9	-288.94	-5.18
355	SLU 80	-9	-18	2350	2.85	-287.91	-4.07
355	SLU 81	-9	-24	2465	3.04	-300.74	-5.56
355	SLU 82	-9	-20	2456	2.99	-299.71	-4.45
355	SLU 83	-9	-24	2465	3.04	-300.74	-5.56
355	SLU 84	-9	-20	2456	2.99	-299.71	-4.45
355	SLE RA 1	-7	-14	1583	1.92	-196.48	-3.18
355	SLE RA 2	-7	-9	1573	1.86	-195.33	-1.94
355	SLE RA 3	-7	-14	1583	1.92	-196.48	-3.18
355	SLE RA 4	-7	-11	1577	1.88	-195.79	-2.44
355	SLE RA 5	-7	-9	1573	1.86	-195.33	-1.94
355	SLE RA 6	-7	-14	1583	1.92	-196.48	-3.18
355	SLE RA 7	-7	-11	1577	1.88	-195.79	-2.44
355	SLE RA 8	-7	-14	1583	1.92	-196.48	-3.18
355	SLE RA 9	-7	-11	1577	1.88	-195.79	-2.44
355	SLE RA 10	-7	-11	1738	2.08	-213.69	-2.53
355	SLE RA 11	-7	-17	1748	2.14	-214.84	-3.76
355	SLE RA 12	-7	-13	1742	2.11	-214.15	-3.02
355	SLE RA 13	-7	-11	1738	2.08	-213.69	-2.53
355	SLE RA 14	-7	-17	1748	2.14	-214.84	-3.76
355	SLE RA 15	-7	-13	1742	2.11	-214.15	-3.02
355	SLE RA 16	-7	-17	1748	2.14	-214.84	-3.76
355	SLE RA 17	-7	-13	1742	2.11	-214.15	-3.02
355	SLE RA 18	-7	-18	1818	2.24	-222.71	-4.01
355	SLE RA 19	-7	-14	1812	2.2	-222.02	-3.27
355	SLE RA 20	-7	-18	1818	2.24	-222.71	-4.01
355	SLE RA 21	-7	-14	1812	2.2	-222.02	-3.27
355	SLE FR 1	-7	-14	1583	1.92	-196.48	-3.18
355	SLE FR 2	-7	-13	1581	1.91	-196.25	-2.93
355	SLE FR 3	-7	-14	1583	1.92	-196.48	-3.18
355	SLE FR 4	-7	-14	1652	2	-204.12	-3.18
355	SLE FR 5	-7	-15	1654	2.01	-204.35	-3.43
355	SLE FR 6	-7	-16	1701	2.08	-209.59	-3.6
355	SLE QP 1	-7	-14	1583	1.92	-196.48	-3.18
355	SLE QP 2	-7	-15	1654	2.01	-204.35	-3.43
355	SLD 1	110	59	1791	1.91	-217.62	13.12
355	SLD 2	91	31	1799	1.94	-218.46	6.84
355	SLD 3	108	-35	1939	2.63	-233.94	-7.97
355	SLD 4	89	-63	1947	2.66	-234.78	-14.24
355	SLD 5	39	160	1468	0.88	-183.26	35.82
355	SLD 6	19	130	1476	0.92	-184.13	29.31
355	SLD 7	31	-153	1960	3.28	-237.67	-34.45
355	SLD 8	11	-182	1969	3.31	-238.55	-40.96
355	SLD 9	-25	152	1339	0.72	-170.15	34.1
355	SLD 10	-45	122	1347	0.75	-171.02	27.59
355	SLD 11	-33	-161	1831	3.11	-224.56	-36.17
355	SLD 12	-52	-190	1840	3.15	-225.44	-42.68
355	SLD 13	-103	33	1361	1.37	-173.91	7.38
355	SLD 14	-122	4	1368	1.4	-174.76	1.1
355	SLD 15	-105	-61	1508	2.08	-190.24	-13.7
355	SLD 16	-124	-89	1516	2.12	-191.08	-19.98
355	SLV 1	260	154	1969	1.78	-234.78	34.2
355	SLV 2	217	89	1987	1.86	-236.7	19.9
355	SLV 3	255	-59	2304	3.42	-271.86	-13.67
355	SLV 4	212	-123	2322	3.49	-273.78	-27.97
355	SLV 5	97	382	1232	-0.56	-156.54	85.7
355	SLV 6	52	315	1251	-0.48	-158.53	70.92
355	SLV 7	80	-327	2351	4.88	-280.13	-73.85
355	SLV 8	35	-394	2370	4.97	-282.12	-88.63
355	SLV 9	-49	363	937	-0.94	-126.58	81.77
355	SLV 10	-93	297	956	-0.86	-128.57	66.99
355	SLV 11	-66	-345	2056	4.51	-250.17	-77.78
355	SLV 12	-111	-412	2075	4.59	-252.16	-92.56
355	SLV 13	-226	93	985	0.53	-134.92	21.11
355	SLV 14	-269	29	1003	0.61	-136.84	6.81
355	SLV 15	-231	-120	1321	2.17	-172	-26.76
355	SLV 16	-274	-184	1339	2.25	-173.92	-41.06
355	CRTFP Ux+	0	0	0	0	0	0
355	CRTFP Ux-	0	0	0	0	0	0
355	CRTFP Uy+	0	0	0	0	0	0
355	CRTFP Uy-	0	0	0	0	0	0
358	SLU 1	-8	49	3221	4.82	-8.35	0.03
358	SLU 2	-8	61	3198	4.55	-8.56	-0.01
358	SLU 3	-8	49	3221	4.82	-8.35	0.03
358	SLU 4	-8	56	3207	4.66	-8.48	0.01
358	SLU 5	-8	61	3198	4.55	-8.56	-0.01
358	SLU 6	-8	49	3221	4.82	-8.35	0.03
358	SLU 7	-8	56	3207	4.66	-8.48	0.01
358	SLU 8	-8	49	3221	4.82	-8.35	0.03
358	SLU 9	-8	56	3207	4.66	-8.48	0.01

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
358	SLU 10	-8	71	3730	5.51	-10.66	0.01
358	SLU 11	-8	59	3753	5.77	-10.46	0.05
358	SLU 12	-8	66	3739	5.61	-10.58	0.03
358	SLU 13	-8	71	3730	5.51	-10.66	0.01
358	SLU 14	-8	59	3753	5.77	-10.46	0.05
358	SLU 15	-8	66	3739	5.61	-10.58	0.03
358	SLU 16	-8	59	3753	5.77	-10.46	0.05
358	SLU 17	-8	66	3739	5.61	-10.58	0.03
358	SLU 18	-8	64	3981	6.18	-11.36	0.06
358	SLU 19	-8	71	3967	6.02	-11.48	0.03
358	SLU 20	-8	64	3981	6.18	-11.36	0.06
358	SLU 21	-8	71	3967	6.02	-11.48	0.03
358	SLU 22	-9	57	3627	5.53	-9.89	0.05
358	SLU 23	-9	68	3604	5.27	-10.1	0.01
358	SLU 24	-9	57	3627	5.53	-9.89	0.05
358	SLU 25	-9	64	3613	5.37	-10.01	0.02
358	SLU 26	-9	68	3604	5.27	-10.1	0.01
358	SLU 27	-9	57	3627	5.53	-9.89	0.05
358	SLU 28	-9	64	3613	5.37	-10.01	0.02
358	SLU 29	-9	57	3627	5.53	-9.89	0.05
358	SLU 30	-9	64	3613	5.37	-10.01	0.02
358	SLU 31	-9	78	4136	6.22	-12.2	0.02
358	SLU 32	-9	67	4159	6.49	-11.99	0.06
358	SLU 33	-9	74	4145	6.33	-12.11	0.04
358	SLU 34	-9	78	4136	6.22	-12.2	0.02
358	SLU 35	-9	67	4159	6.49	-11.99	0.06
358	SLU 36	-9	74	4145	6.33	-12.11	0.04
358	SLU 37	-9	67	4159	6.49	-11.99	0.06
358	SLU 38	-9	74	4145	6.33	-12.11	0.04
358	SLU 39	-9	71	4387	6.9	-12.89	0.07
358	SLU 40	-9	78	4373	6.74	-13.01	0.05
358	SLU 41	-9	71	4387	6.9	-12.89	0.07
358	SLU 42	-9	78	4373	6.74	-13.01	0.05
358	SLU 43	-11	62	4048	6.02	-10.34	0.04
358	SLU 44	-11	73	4025	5.75	-10.54	0
358	SLU 45	-11	62	4048	6.02	-10.34	0.04
358	SLU 46	-11	69	4034	5.86	-10.46	0.01
358	SLU 47	-11	73	4025	5.75	-10.54	0
358	SLU 48	-11	62	4048	6.02	-10.34	0.04
358	SLU 49	-11	69	4034	5.86	-10.46	0.01
358	SLU 50	-11	62	4048	6.02	-10.34	0.04
358	SLU 51	-11	69	4034	5.86	-10.46	0.01
358	SLU 52	-11	83	4557	6.7	-12.64	0.01
358	SLU 53	-11	72	4580	6.97	-12.44	0.05
358	SLU 54	-11	79	4566	6.81	-12.56	0.03
358	SLU 55	-11	83	4557	6.7	-12.64	0.01
358	SLU 56	-11	72	4580	6.97	-12.44	0.05
358	SLU 57	-11	79	4566	6.81	-12.56	0.03
358	SLU 58	-11	72	4580	6.97	-12.44	0.05
358	SLU 59	-11	79	4566	6.81	-12.56	0.03
358	SLU 60	-11	76	4808	7.38	-13.34	0.06
358	SLU 61	-11	83	4794	7.22	-13.46	0.04
358	SLU 62	-11	76	4808	7.38	-13.34	0.06
358	SLU 63	-11	83	4794	7.22	-13.46	0.04
358	SLU 64	-11	69	4454	6.73	-11.87	0.05
358	SLU 65	-11	81	4431	6.47	-12.08	0.01
358	SLU 66	-11	69	4454	6.73	-11.87	0.05
358	SLU 67	-11	76	4440	6.57	-11.99	0.03
358	SLU 68	-11	81	4431	6.47	-12.08	0.01
358	SLU 69	-11	69	4454	6.73	-11.87	0.05
358	SLU 70	-11	76	4440	6.57	-11.99	0.03
358	SLU 71	-11	69	4454	6.73	-11.87	0.05
358	SLU 72	-11	76	4440	6.57	-11.99	0.03
358	SLU 73	-11	91	4963	7.42	-14.18	0.03
358	SLU 74	-11	79	4986	7.69	-13.97	0.07
358	SLU 75	-11	86	4972	7.53	-14.09	0.05
358	SLU 76	-11	91	4963	7.42	-14.18	0.03
358	SLU 77	-11	79	4986	7.69	-13.97	0.07
358	SLU 78	-11	86	4972	7.53	-14.09	0.05
358	SLU 79	-11	79	4986	7.69	-13.97	0.07
358	SLU 80	-11	86	4972	7.53	-14.09	0.05
358	SLU 81	-11	83	5214	8.1	-14.87	0.08
358	SLU 82	-11	90	5200	7.94	-14.99	0.05
358	SLU 83	-11	83	5214	8.1	-14.87	0.08
358	SLU 84	-11	90	5200	7.94	-14.99	0.05
358	SLE RA 1	-8	51	3337	5.02	-8.79	0.04
358	SLE RA 2	-8	59	3322	4.84	-8.93	0.01
358	SLE RA 3	-8	51	3337	5.02	-8.79	0.04
358	SLE RA 4	-8	56	3328	4.92	-8.88	0.02
358	SLE RA 5	-8	59	3322	4.84	-8.93	0.01
358	SLE RA 6	-8	51	3337	5.02	-8.79	0.04
358	SLE RA 7	-8	56	3328	4.92	-8.88	0.02
358	SLE RA 8	-8	51	3337	5.02	-8.79	0.04
358	SLE RA 9	-8	56	3328	4.92	-8.88	0.02
358	SLE RA 10	-9	66	3676	5.48	-10.33	0.02
358	SLE RA 11	-8	58	3691	5.66	-10.19	0.05

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
358	SLE RA 12	-9	63	3682	5.55	-10.28	0.03
358	SLE RA 13	-9	66	3676	5.48	-10.33	0.02
358	SLE RA 14	-8	58	3691	5.66	-10.19	0.05
358	SLE RA 15	-9	63	3682	5.55	-10.28	0.03
358	SLE RA 16	-8	58	3691	5.66	-10.19	0.05
358	SLE RA 17	-9	63	3682	5.55	-10.28	0.03
358	SLE RA 18	-9	61	3843	5.93	-10.79	0.05
358	SLE RA 19	-9	66	3834	5.82	-10.88	0.04
358	SLE RA 20	-9	61	3843	5.93	-10.79	0.05
358	SLE RA 21	-9	66	3834	5.82	-10.88	0.04
358	SLE FR 1	-8	51	3337	5.02	-8.79	0.04
358	SLE FR 2	-8	53	3334	4.99	-8.82	0.03
358	SLE FR 3	-8	51	3337	5.02	-8.79	0.04
358	SLE FR 4	-8	56	3486	5.26	-9.42	0.04
358	SLE FR 5	-8	54	3489	5.29	-9.39	0.04
358	SLE FR 6	-8	56	3590	5.48	-9.79	0.04
358	SLE QP 1	-8	51	3337	5.02	-8.79	0.04
358	SLE QP 2	-8	54	3489	5.29	-9.39	0.04
358	SLD 1	260	130	3487	4.27	0.37	-1.7
358	SLD 2	216	118	3490	4.33	0.82	-0.64
358	SLD 3	265	4	3728	6.73	-0.91	-1.5
358	SLD 4	220	-7	3731	6.79	-0.45	-0.44
358	SLD 5	81	272	3122	1.23	-4.7	-1.17
358	SLD 6	35	260	3125	1.3	-4.22	-0.07
358	SLD 7	97	-147	3925	9.43	-8.95	-0.51
358	SLD 8	51	-159	3928	9.5	-8.48	0.58
358	SLD 9	-68	268	3050	1.09	-10.31	-0.5
358	SLD 10	-114	256	3053	1.16	-9.83	0.6
358	SLD 11	-52	-151	3853	9.29	-14.56	0.15
358	SLD 12	-98	-164	3856	9.35	-14.09	1.25
358	SLD 13	-237	116	3247	3.8	-18.33	0.53
358	SLD 14	-282	104	3250	3.86	-17.88	1.58
358	SLD 15	-233	-10	3488	6.26	-19.61	0.72
358	SLD 16	-277	-22	3491	6.32	-19.15	1.78
358	SLV 1	605	227	3486	3	12.91	-3.92
358	SLV 2	503	200	3492	3.14	13.95	-1.51
358	SLV 3	616	-59	4034	8.59	10.01	-3.48
358	SLV 4	514	-86	4040	8.73	11.05	-1.07
358	SLV 5	196	549	2656	-3.92	1.31	-2.71
358	SLV 6	91	522	2662	-3.77	2.39	-0.22
358	SLV 7	233	-403	4480	14.7	-8.35	-1.22
358	SLV 8	128	-431	4486	14.85	-7.28	1.27
358	SLV 9	-145	540	2491	-4.26	-11.51	-1.19
358	SLV 10	-250	512	2498	-4.12	-10.44	1.3
358	SLV 11	-108	-413	4315	14.36	-21.17	0.3
358	SLV 12	-213	-441	4322	14.5	-20.1	2.79
358	SLV 13	-531	194	2938	1.86	-29.84	1.15
358	SLV 14	-633	167	2944	2	-28.8	3.56
358	SLV 15	-520	-91	3485	7.45	-32.73	1.6
358	SLV 16	-622	-118	3491	7.58	-31.7	4.01
358	CRTFP Ux+	0	0	0	0	0	0
358	CRTFP Ux-	0	0	0	0	0	0
358	CRTFP Uy+	0	0	0	0	0	0
358	CRTFP Uy-	0	0	0	0	0	0
361	SLU 1	2	42	3151	4.16	7.78	-0.19
361	SLU 2	2	54	3128	3.92	7.95	-0.17
361	SLU 3	2	42	3151	4.16	7.78	-0.19
361	SLU 4	2	49	3137	4.01	7.88	-0.18
361	SLU 5	2	54	3128	3.92	7.95	-0.17
361	SLU 6	2	42	3151	4.16	7.78	-0.19
361	SLU 7	2	49	3137	4.01	7.88	-0.18
361	SLU 8	2	42	3151	4.16	7.78	-0.19
361	SLU 9	2	49	3137	4.01	7.88	-0.18
361	SLU 10	2	62	3656	4.72	9.6	-0.22
361	SLU 11	2	51	3680	4.96	9.43	-0.24
361	SLU 12	2	57	3666	4.82	9.53	-0.23
361	SLU 13	2	62	3656	4.72	9.6	-0.22
361	SLU 14	2	51	3680	4.96	9.43	-0.24
361	SLU 15	2	57	3666	4.82	9.53	-0.23
361	SLU 16	2	51	3680	4.96	9.43	-0.24
361	SLU 17	2	57	3666	4.82	9.53	-0.23
361	SLU 18	1	54	3906	5.3	10.14	-0.26
361	SLU 19	2	61	3892	5.16	10.24	-0.25
361	SLU 20	1	54	3906	5.3	10.14	-0.26
361	SLU 21	2	61	3892	5.16	10.24	-0.25
361	SLU 22	2	48	3553	4.77	9.01	-0.23
361	SLU 23	2	60	3530	4.53	9.19	-0.2
361	SLU 24	2	48	3553	4.77	9.01	-0.23
361	SLU 25	2	55	3539	4.62	9.12	-0.21
361	SLU 26	2	60	3530	4.53	9.19	-0.2
361	SLU 27	2	48	3553	4.77	9.01	-0.23
361	SLU 28	2	55	3539	4.62	9.12	-0.21
361	SLU 29	2	48	3553	4.77	9.01	-0.23
361	SLU 30	2	55	3539	4.62	9.12	-0.21
361	SLU 31	2	68	4058	5.33	10.84	-0.25
361	SLU 32	1	57	4081	5.57	10.66	-0.27

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
361	SLU 33	2	63	4067	5.42	10.77	-0.26
361	SLU 34	2	68	4058	5.33	10.84	-0.25
361	SLU 35	1	57	4081	5.57	10.66	-0.27
361	SLU 36	2	63	4067	5.42	10.77	-0.26
361	SLU 37	1	57	4081	5.57	10.66	-0.27
361	SLU 38	2	63	4067	5.42	10.77	-0.26
361	SLU 39	1	60	4308	5.91	11.37	-0.3
361	SLU 40	1	67	4294	5.77	11.48	-0.28
361	SLU 41	1	60	4308	5.91	11.37	-0.3
361	SLU 42	1	67	4294	5.77	11.48	-0.28
361	SLU 43	3	53	3959	5.2	9.68	-0.24
361	SLU 44	3	64	3936	4.96	9.86	-0.21
361	SLU 45	3	53	3959	5.2	9.68	-0.24
361	SLU 46	3	60	3945	5.05	9.79	-0.22
361	SLU 47	3	64	3936	4.96	9.86	-0.21
361	SLU 48	3	53	3959	5.2	9.68	-0.24
361	SLU 49	3	60	3945	5.05	9.79	-0.22
361	SLU 50	3	53	3959	5.2	9.68	-0.24
361	SLU 51	3	60	3945	5.05	9.79	-0.22
361	SLU 52	3	72	4464	5.76	11.51	-0.26
361	SLU 53	2	61	4487	6	11.34	-0.29
361	SLU 54	2	68	4473	5.86	11.44	-0.27
361	SLU 55	3	72	4464	5.76	11.51	-0.26
361	SLU 56	2	61	4487	6	11.34	-0.29
361	SLU 57	2	68	4473	5.86	11.44	-0.27
361	SLU 58	2	61	4487	6	11.34	-0.29
361	SLU 59	2	68	4473	5.86	11.44	-0.27
361	SLU 60	2	65	4713	6.34	12.05	-0.31
361	SLU 61	2	71	4700	6.2	12.15	-0.29
361	SLU 62	2	65	4713	6.34	12.05	-0.31
361	SLU 63	2	71	4700	6.2	12.15	-0.29
361	SLU 64	2	59	4361	5.8	10.92	-0.27
361	SLU 65	3	70	4338	5.57	11.09	-0.25
361	SLU 66	2	59	4361	5.8	10.92	-0.27
361	SLU 67	3	66	4347	5.66	11.02	-0.26
361	SLU 68	3	70	4338	5.57	11.09	-0.25
361	SLU 69	2	59	4361	5.8	10.92	-0.27
361	SLU 70	3	66	4347	5.66	11.02	-0.26
361	SLU 71	2	59	4361	5.8	10.92	-0.27
361	SLU 72	3	66	4347	5.66	11.02	-0.26
361	SLU 73	2	78	4866	6.37	12.75	-0.3
361	SLU 74	2	67	4889	6.61	12.57	-0.32
361	SLU 75	2	74	4875	6.46	12.68	-0.31
361	SLU 76	2	78	4866	6.37	12.75	-0.3
361	SLU 77	2	67	4889	6.61	12.57	-0.32
361	SLU 78	2	74	4875	6.46	12.68	-0.31
361	SLU 79	2	67	4889	6.61	12.57	-0.32
361	SLU 80	2	74	4875	6.46	12.68	-0.31
361	SLU 81	2	71	5115	6.95	13.28	-0.34
361	SLU 82	2	78	5101	6.81	13.39	-0.33
361	SLU 83	2	71	5115	6.95	13.28	-0.34
361	SLU 84	2	78	5101	6.81	13.39	-0.33
361	SLE RA 1	2	44	3266	4.33	8.13	-0.2
361	SLE RA 2	2	52	3251	4.17	8.24	-0.19
361	SLE RA 3	2	44	3266	4.33	8.13	-0.2
361	SLE RA 4	2	49	3257	4.24	8.2	-0.19
361	SLE RA 5	2	52	3251	4.17	8.24	-0.19
361	SLE RA 6	2	44	3266	4.33	8.13	-0.2
361	SLE RA 7	2	49	3257	4.24	8.2	-0.19
361	SLE RA 8	2	44	3266	4.33	8.13	-0.2
361	SLE RA 9	2	49	3257	4.24	8.2	-0.19
361	SLE RA 10	2	57	3603	4.71	9.35	-0.22
361	SLE RA 11	2	49	3618	4.87	9.23	-0.23
361	SLE RA 12	2	54	3609	4.77	9.3	-0.22
361	SLE RA 13	2	57	3603	4.71	9.35	-0.22
361	SLE RA 14	2	49	3618	4.87	9.23	-0.23
361	SLE RA 15	2	54	3609	4.77	9.3	-0.22
361	SLE RA 16	2	49	3618	4.87	9.23	-0.23
361	SLE RA 17	2	54	3609	4.77	9.3	-0.22
361	SLE RA 18	2	52	3769	5.09	9.7	-0.25
361	SLE RA 19	2	56	3760	5	9.77	-0.24
361	SLE RA 20	2	52	3769	5.09	9.7	-0.25
361	SLE RA 21	2	56	3760	5	9.77	-0.24
361	SLE FR 1	2	44	3266	4.33	8.13	-0.2
361	SLE FR 2	2	46	3263	4.3	8.15	-0.2
361	SLE FR 3	2	44	3266	4.33	8.13	-0.2
361	SLE FR 4	2	48	3414	4.53	8.62	-0.21
361	SLE FR 5	2	46	3417	4.56	8.6	-0.22
361	SLE FR 6	2	48	3518	4.71	8.92	-0.23
361	SLE QP 1	2	44	3266	4.33	8.13	-0.2
361	SLE QP 2	2	46	3417	4.56	8.6	-0.22
361	SLD 1	262	85	3203	3.82	17.57	-1.65
361	SLD 2	218	98	3201	3.75	17.98	-0.65
361	SLD 3	266	-35	3448	6.03	18.43	-1.89
361	SLD 4	223	-23	3446	5.97	18.84	-0.9
361	SLD 5	88	237	2983	1	9.83	-0.64

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
361	SLD 6	43	250	2980	0.93	10.25	0.39
361	SLD 7	104	-166	3799	8.39	12.71	-1.45
361	SLD 8	59	-153	3796	8.32	13.13	-0.42
361	SLD 9	-56	246	3038	0.8	4.07	-0.01
361	SLD 10	-101	259	3036	0.73	4.49	1.02
361	SLD 11	-40	-157	3854	8.19	6.95	-0.82
361	SLD 12	-85	-144	3851	8.12	7.37	0.21
361	SLD 13	-219	116	3388	3.15	-1.64	0.46
361	SLD 14	-263	128	3386	3.09	-1.23	1.46
361	SLD 15	-214	-5	3633	5.37	-0.78	0.22
361	SLD 16	-258	7	3631	5.3	-0.37	1.21
361	SLV 1	595	135	2930	2.89	29.08	-3.48
361	SLV 2	496	163	2924	2.75	30.01	-1.22
361	SLV 3	606	-140	3486	7.93	31.05	-4.03
361	SLV 4	507	-111	3480	7.78	31.98	-1.77
361	SLV 5	199	479	2430	-3.52	11.41	-1.19
361	SLV 6	97	508	2424	-3.67	12.37	1.15
361	SLV 7	236	-436	4282	13.25	17.99	-3.03
361	SLV 8	134	-407	4276	13.11	18.95	-0.69
361	SLV 9	-130	500	2558	-3.99	-1.75	0.26
361	SLV 10	-233	529	2552	-4.13	-0.79	2.6
361	SLV 11	-93	-416	4410	12.79	4.83	-1.58
361	SLV 12	-196	-386	4404	12.64	5.79	0.76
361	SLV 13	-503	204	3354	1.34	-14.78	1.34
361	SLV 14	-602	232	3348	1.19	-13.85	3.6
361	SLV 15	-492	-71	3910	6.37	-12.81	0.79
361	SLV 16	-591	-42	3904	6.23	-11.88	3.05
361	CRTFP Ux+	0	0	0	0	0	0
361	CRTFP Ux-	0	0	0	0	0	0
361	CRTFP Uy+	0	0	0	0	0	0
361	CRTFP Uy-	0	0	0	0	0	0
364	SLU 1	5	-26	1712	3.62	274.11	6.44
364	SLU 2	5	-17	1696	3.49	271.14	4.24
364	SLU 3	5	-26	1712	3.62	274.11	6.44
364	SLU 4	5	-20	1702	3.54	272.33	5.12
364	SLU 5	5	-17	1696	3.49	271.14	4.24
364	SLU 6	5	-26	1712	3.62	274.11	6.44
364	SLU 7	5	-20	1702	3.54	272.33	5.12
364	SLU 8	5	-26	1712	3.62	274.11	6.44
364	SLU 9	5	-20	1702	3.54	272.33	5.12
364	SLU 10	5	-22	1978	4.17	312.87	5.57
364	SLU 11	5	-31	1994	4.3	315.85	7.78
364	SLU 12	5	-26	1984	4.22	314.06	6.45
364	SLU 13	5	-22	1978	4.17	312.87	5.57
364	SLU 14	5	-31	1994	4.3	315.85	7.78
364	SLU 15	5	-26	1984	4.22	314.06	6.45
364	SLU 16	5	-31	1994	4.3	315.85	7.78
364	SLU 17	5	-26	1984	4.22	314.06	6.45
364	SLU 18	4	-33	2115	4.59	333.74	8.35
364	SLU 19	5	-28	2105	4.51	331.95	7.02
364	SLU 20	4	-33	2115	4.59	333.74	8.35
364	SLU 21	5	-28	2105	4.51	331.95	7.02
364	SLU 22	5	-30	1927	4.14	305.93	7.43
364	SLU 23	5	-21	1911	4.01	302.96	5.22
364	SLU 24	5	-30	1927	4.14	305.93	7.43
364	SLU 25	5	-24	1917	4.06	304.14	6.11
364	SLU 26	5	-21	1911	4.01	302.96	5.22
364	SLU 27	5	-30	1927	4.14	305.93	7.43
364	SLU 28	5	-24	1917	4.06	304.14	6.11
364	SLU 29	5	-30	1927	4.14	305.93	7.43
364	SLU 30	5	-24	1917	4.06	304.14	6.11
364	SLU 31	5	-26	2193	4.69	344.69	6.56
364	SLU 32	4	-35	2209	4.82	347.67	8.77
364	SLU 33	5	-30	2199	4.75	345.88	7.44
364	SLU 34	5	-26	2193	4.69	344.69	6.56
364	SLU 35	4	-35	2209	4.82	347.67	8.77
364	SLU 36	5	-30	2199	4.75	345.88	7.44
364	SLU 37	4	-35	2209	4.82	347.67	8.77
364	SLU 38	5	-30	2199	4.75	345.88	7.44
364	SLU 39	4	-37	2330	5.11	365.55	9.34
364	SLU 40	5	-32	2320	5.04	363.77	8.01
364	SLU 41	4	-37	2330	5.11	365.55	9.34
364	SLU 42	5	-32	2320	5.04	363.77	8.01
364	SLU 43	6	-32	2152	4.52	345.44	8.04
364	SLU 44	6	-23	2136	4.39	342.46	5.83
364	SLU 45	6	-32	2152	4.52	345.44	8.04
364	SLU 46	6	-27	2142	4.44	343.65	6.71
364	SLU 47	6	-23	2136	4.39	342.46	5.83
364	SLU 48	6	-32	2152	4.52	345.44	8.04
364	SLU 49	6	-27	2142	4.44	343.65	6.71
364	SLU 50	6	-32	2152	4.52	345.44	8.04
364	SLU 51	6	-27	2142	4.44	343.65	6.71
364	SLU 52	6	-29	2418	5.07	384.2	7.16
364	SLU 53	6	-37	2434	5.2	387.17	9.37
364	SLU 54	6	-32	2424	5.13	385.39	8.05
364	SLU 55	6	-29	2418	5.07	384.2	7.16

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
364	SLU 56	6	-37	2434	5.2	387.17	9.37
364	SLU 57	6	-32	2424	5.13	385.39	8.05
364	SLU 58	6	-37	2434	5.2	387.17	9.37
364	SLU 59	6	-32	2424	5.13	385.39	8.05
364	SLU 60	6	-40	2555	5.49	405.06	9.94
364	SLU 61	6	-34	2545	5.42	403.28	8.62
364	SLU 62	6	-40	2555	5.49	405.06	9.94
364	SLU 63	6	-34	2545	5.42	403.28	8.62
364	SLU 64	6	-36	2367	5.05	377.25	9.03
364	SLU 65	6	-27	2351	4.92	374.28	6.82
364	SLU 66	6	-36	2367	5.05	377.25	9.03
364	SLU 67	6	-31	2357	4.97	375.47	7.7
364	SLU 68	6	-27	2351	4.92	374.28	6.82
364	SLU 69	6	-36	2367	5.05	377.25	9.03
364	SLU 70	6	-31	2357	4.97	375.47	7.7
364	SLU 71	6	-36	2367	5.05	377.25	9.03
364	SLU 72	6	-31	2357	4.97	375.47	7.7
364	SLU 73	6	-33	2633	5.6	416.02	8.15
364	SLU 74	6	-41	2649	5.73	418.99	10.36
364	SLU 75	6	-36	2639	5.65	417.21	9.04
364	SLU 76	6	-33	2633	5.6	416.02	8.15
364	SLU 77	6	-41	2649	5.73	418.99	10.36
364	SLU 78	6	-36	2639	5.65	417.21	9.04
364	SLU 79	6	-41	2649	5.73	418.99	10.36
364	SLU 80	6	-36	2639	5.65	417.21	9.04
364	SLU 81	6	-44	2770	6.02	436.88	10.93
364	SLU 82	6	-38	2760	5.94	435.09	9.61
364	SLU 83	6	-44	2770	6.02	436.88	10.93
364	SLU 84	6	-38	2760	5.94	435.09	9.61
364	SLE RA 1	5	-27	1773	3.77	283.2	6.73
364	SLE RA 2	5	-21	1763	3.68	281.22	5.25
364	SLE RA 3	5	-27	1773	3.77	283.2	6.73
364	SLE RA 4	5	-23	1767	3.71	282.01	5.84
364	SLE RA 5	5	-21	1763	3.68	281.22	5.25
364	SLE RA 6	5	-27	1773	3.77	283.2	6.73
364	SLE RA 7	5	-23	1767	3.71	282.01	5.84
364	SLE RA 8	5	-27	1773	3.77	283.2	6.73
364	SLE RA 9	5	-23	1767	3.71	282.01	5.84
364	SLE RA 10	5	-25	1951	4.13	309.04	6.14
364	SLE RA 11	5	-30	1961	4.22	311.03	7.62
364	SLE RA 12	5	-27	1955	4.17	309.84	6.73
364	SLE RA 13	5	-25	1951	4.13	309.04	6.14
364	SLE RA 14	5	-30	1961	4.22	311.03	7.62
364	SLE RA 15	5	-27	1955	4.17	309.84	6.73
364	SLE RA 16	5	-30	1961	4.22	311.03	7.62
364	SLE RA 17	5	-27	1955	4.17	309.84	6.73
364	SLE RA 18	4	-32	2042	4.41	322.95	8
364	SLE RA 19	5	-28	2036	4.36	321.76	7.11
364	SLE RA 20	4	-32	2042	4.41	322.95	8
364	SLE RA 21	5	-28	2036	4.36	321.76	7.11
364	SLE FR 1	5	-27	1773	3.77	283.2	6.73
364	SLE FR 2	5	-26	1771	3.75	282.81	6.43
364	SLE FR 3	5	-27	1773	3.77	283.2	6.73
364	SLE FR 4	5	-27	1852	3.94	294.73	6.81
364	SLE FR 5	5	-28	1854	3.96	295.13	7.11
364	SLE FR 6	5	-29	1908	4.09	303.08	7.36
364	SLE QP 1	5	-27	1773	3.77	283.2	6.73
364	SLE QP 2	5	-28	1854	3.96	295.13	7.11
364	SLD 1	134	-10	1528	2.89	248.48	2.37
364	SLD 2	111	20	1519	2.83	247.03	-5.03
364	SLD 3	136	-108	1706	4	277.12	26.69
364	SLD 4	114	-78	1697	3.94	275.67	19.3
364	SLD 5	48	114	1489	1.98	238.23	-28.48
364	SLD 6	25	145	1481	1.92	236.72	-36.16
364	SLD 7	56	-211	2082	5.67	333.7	52.61
364	SLD 8	33	-180	2074	5.61	332.2	44.93
364	SLD 9	-23	123	1634	2.31	258.06	-30.72
364	SLD 10	-47	154	1625	2.25	256.55	-38.39
364	SLD 11	-15	-202	2227	6	353.54	50.37
364	SLD 12	-39	-171	2219	5.94	352.03	42.7
364	SLD 13	-104	21	2010	3.98	314.58	-5.09
364	SLD 14	-127	51	2002	3.92	313.13	-12.48
364	SLD 15	-102	-77	2188	5.09	343.23	19.24
364	SLD 16	-125	-47	2180	5.03	341.77	11.85
364	SLV 1	299	13	1110	1.53	188.76	-3.54
364	SLV 2	248	81	1091	1.4	185.45	-20.39
364	SLV 3	305	-209	1514	4.05	253.8	51.69
364	SLV 4	253	-140	1495	3.91	250.48	34.84
364	SLV 5	104	295	1025	-0.54	165.8	-73.68
364	SLV 6	50	365	1005	-0.67	162.37	-91.1
364	SLV 7	122	-443	2372	7.85	382.58	110.44
364	SLV 8	69	-373	2352	7.71	379.15	93.02
364	SLV 9	-59	316	1356	0.21	211.1	-78.81
364	SLV 10	-113	387	1336	0.07	207.68	-96.22
364	SLV 11	-41	-422	2702	8.59	427.88	105.31
364	SLV 12	-95	-351	2683	8.46	424.45	87.89

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
364	SLV 13	-244	84	2212	4.01	339.77	-20.63
364	SLV 14	-296	152	2194	3.87	336.46	-37.48
364	SLV 15	-239	-138	2616	6.52	404.8	34.6
364	SLV 16	-290	-69	2598	6.39	401.49	17.75
364	CRTFP Ux+	0	0	0	0	0	0
364	CRTFP Ux-	0	0	0	0	0	0
364	CRTFP Uy+	0	0	0	0	0	0
364	CRTFP Uy-	0	0	0	0	0	0
365	SLU 1	-6	-13	1602	2.65	-231.49	-3.02
365	SLU 2	-6	-5	1584	2.55	-228.79	-1.17
365	SLU 3	-6	-13	1602	2.65	-231.49	-3.02
365	SLU 4	-6	-8	1591	2.59	-229.87	-1.91
365	SLU 5	-6	-5	1584	2.55	-228.79	-1.17
365	SLU 6	-6	-13	1602	2.65	-231.49	-3.02
365	SLU 7	-6	-8	1591	2.59	-229.87	-1.91
365	SLU 8	-6	-13	1602	2.65	-231.49	-3.02
365	SLU 9	-6	-8	1591	2.59	-229.87	-1.91
365	SLU 10	-6	-9	1844	3.04	-263.67	-2.04
365	SLU 11	-6	-17	1863	3.14	-266.37	-3.88
365	SLU 12	-6	-12	1852	3.08	-264.75	-2.78
365	SLU 13	-6	-9	1844	3.04	-263.67	-2.04
365	SLU 14	-6	-17	1863	3.14	-266.37	-3.88
365	SLU 15	-6	-12	1852	3.08	-264.75	-2.78
365	SLU 16	-6	-17	1863	3.14	-266.37	-3.88
365	SLU 17	-6	-12	1852	3.08	-264.75	-2.78
365	SLU 18	-6	-19	1974	3.35	-281.32	-4.25
365	SLU 19	-6	-14	1963	3.29	-279.7	-3.15
365	SLU 20	-6	-19	1974	3.35	-281.32	-4.25
365	SLU 21	-6	-14	1963	3.29	-279.7	-3.15
365	SLU 22	-6	-16	1801	3.03	-258.09	-3.63
365	SLU 23	-6	-8	1783	2.92	-255.39	-1.79
365	SLU 24	-6	-16	1801	3.03	-258.09	-3.63
365	SLU 25	-6	-11	1790	2.97	-256.47	-2.52
365	SLU 26	-6	-8	1783	2.92	-255.39	-1.79
365	SLU 27	-6	-16	1801	3.03	-258.09	-3.63
365	SLU 28	-6	-11	1790	2.97	-256.47	-2.52
365	SLU 29	-6	-16	1801	3.03	-258.09	-3.63
365	SLU 30	-6	-11	1790	2.97	-256.47	-2.52
365	SLU 31	-6	-12	2043	3.41	-290.27	-2.65
365	SLU 32	-6	-20	2062	3.52	-292.97	-4.5
365	SLU 33	-6	-15	2051	3.45	-291.35	-3.39
365	SLU 34	-6	-12	2043	3.41	-290.27	-2.65
365	SLU 35	-6	-20	2062	3.52	-292.97	-4.5
365	SLU 36	-6	-15	2051	3.45	-291.35	-3.39
365	SLU 37	-6	-20	2062	3.52	-292.97	-4.5
365	SLU 38	-6	-15	2051	3.45	-291.35	-3.39
365	SLU 39	-6	-22	2173	3.73	-307.92	-4.87
365	SLU 40	-6	-17	2162	3.66	-306.3	-3.76
365	SLU 41	-6	-22	2173	3.73	-307.92	-4.87
365	SLU 42	-6	-17	2162	3.66	-306.3	-3.76
365	SLU 43	-8	-16	2015	3.31	-291.82	-3.71
365	SLU 44	-8	-8	1996	3.21	-289.12	-1.87
365	SLU 45	-8	-16	2015	3.31	-291.82	-3.71
365	SLU 46	-8	-12	2004	3.25	-290.2	-2.6
365	SLU 47	-8	-8	1996	3.21	-289.12	-1.87
365	SLU 48	-8	-16	2015	3.31	-291.82	-3.71
365	SLU 49	-8	-12	2004	3.25	-290.2	-2.6
365	SLU 50	-8	-16	2015	3.31	-291.82	-3.71
365	SLU 51	-8	-12	2004	3.25	-290.2	-2.6
365	SLU 52	-8	-12	2257	3.7	-324	-2.73
365	SLU 53	-8	-20	2275	3.8	-326.7	-4.58
365	SLU 54	-8	-15	2264	3.74	-325.08	-3.47
365	SLU 55	-8	-12	2257	3.7	-324	-2.73
365	SLU 56	-8	-20	2275	3.8	-326.7	-4.58
365	SLU 57	-8	-15	2264	3.74	-325.08	-3.47
365	SLU 58	-8	-20	2275	3.8	-326.7	-4.58
365	SLU 59	-8	-15	2264	3.74	-325.08	-3.47
365	SLU 60	-8	-22	2387	4.01	-341.65	-4.95
365	SLU 61	-8	-17	2376	3.95	-340.03	-3.84
365	SLU 62	-8	-22	2387	4.01	-341.65	-4.95
365	SLU 63	-8	-17	2376	3.95	-340.03	-3.84
365	SLU 64	-8	-19	2214	3.69	-318.42	-4.32
365	SLU 65	-8	-11	2195	3.59	-315.72	-2.48
365	SLU 66	-8	-19	2214	3.69	-318.42	-4.32
365	SLU 67	-8	-14	2203	3.63	-316.8	-3.22
365	SLU 68	-8	-11	2195	3.59	-315.72	-2.48
365	SLU 69	-8	-19	2214	3.69	-318.42	-4.32
365	SLU 70	-8	-14	2203	3.63	-316.8	-3.22
365	SLU 71	-8	-19	2214	3.69	-318.42	-4.32
365	SLU 72	-8	-14	2203	3.63	-316.8	-3.22
365	SLU 73	-8	-15	2456	4.08	-350.6	-3.35
365	SLU 74	-8	-23	2474	4.18	-353.3	-5.19
365	SLU 75	-8	-18	2463	4.12	-351.68	-4.08
365	SLU 76	-8	-15	2456	4.08	-350.6	-3.35
365	SLU 77	-8	-23	2474	4.18	-353.3	-5.19
365	SLU 78	-8	-18	2463	4.12	-351.68	-4.08

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
365	SLU 79	-8	-23	2474	4.18	-353.3	-5.19
365	SLU 80	-8	-18	2463	4.12	-351.68	-4.08
365	SLU 81	-8	-25	2586	4.39	-368.25	-5.56
365	SLU 82	-8	-20	2575	4.33	-366.63	-4.46
365	SLU 83	-8	-25	2586	4.39	-368.25	-5.56
365	SLU 84	-8	-20	2575	4.33	-366.63	-4.46
365	SLE RA 1	-6	-14	1659	2.76	-239.09	-3.19
365	SLE RA 2	-6	-9	1647	2.69	-237.29	-1.96
365	SLE RA 3	-6	-14	1659	2.76	-239.09	-3.19
365	SLE RA 4	-6	-11	1652	2.72	-238.01	-2.45
365	SLE RA 5	-6	-9	1647	2.69	-237.29	-1.96
365	SLE RA 6	-6	-14	1659	2.76	-239.09	-3.19
365	SLE RA 7	-6	-11	1652	2.72	-238.01	-2.45
365	SLE RA 8	-6	-14	1659	2.76	-239.09	-3.19
365	SLE RA 9	-6	-11	1652	2.72	-238.01	-2.45
365	SLE RA 10	-6	-11	1821	3.01	-260.54	-2.54
365	SLE RA 11	-6	-17	1833	3.08	-262.35	-3.77
365	SLE RA 12	-6	-13	1826	3.04	-261.26	-3.03
365	SLE RA 13	-6	-11	1821	3.01	-260.54	-2.54
365	SLE RA 14	-6	-17	1833	3.08	-262.35	-3.77
365	SLE RA 15	-6	-13	1826	3.04	-261.26	-3.03
365	SLE RA 16	-6	-17	1833	3.08	-262.35	-3.77
365	SLE RA 17	-6	-13	1826	3.04	-261.26	-3.03
365	SLE RA 18	-6	-18	1907	3.22	-272.31	-4.02
365	SLE RA 19	-6	-14	1900	3.18	-271.23	-3.28
365	SLE RA 20	-6	-18	1907	3.22	-272.31	-4.02
365	SLE RA 21	-6	-14	1900	3.18	-271.23	-3.28
365	SLE FR 1	-6	-14	1659	2.76	-239.09	-3.19
365	SLE FR 2	-6	-13	1657	2.74	-238.73	-2.95
365	SLE FR 3	-6	-14	1659	2.76	-239.09	-3.19
365	SLE FR 4	-6	-14	1731	2.88	-248.7	-3.19
365	SLE FR 5	-6	-15	1734	2.9	-249.06	-3.44
365	SLE FR 6	-6	-16	1783	2.99	-255.7	-3.6
365	SLE QP 1	-6	-14	1659	2.76	-239.09	-3.19
365	SLE QP 2	-6	-15	1734	2.9	-249.06	-3.44
365	SLD 1	116	59	1869	2.87	-264.28	13.08
365	SLD 2	95	31	1878	2.91	-265.51	6.81
365	SLD 3	114	-35	2042	3.68	-288.23	-7.93
365	SLD 4	92	-63	2051	3.72	-289.46	-14.19
365	SLD 5	42	159	1509	1.64	-216.85	35.69
365	SLD 6	20	130	1518	1.68	-218.12	29.18
365	SLD 7	34	-152	2085	4.35	-296.68	-34.33
365	SLD 8	12	-182	2094	4.39	-297.96	-40.83
365	SLD 9	-24	151	1373	1.4	-200.16	33.96
365	SLD 10	-46	122	1383	1.44	-201.43	27.45
365	SLD 11	-32	-160	1949	4.11	-280	-36.06
365	SLD 12	-55	-190	1958	4.15	-281.27	-42.56
365	SLD 13	-105	32	1417	2.07	-208.66	7.31
365	SLD 14	-126	4	1426	2.11	-209.88	1.05
365	SLD 15	-107	-61	1589	2.88	-232.61	-13.69
365	SLD 16	-128	-89	1598	2.92	-233.84	-19.96
365	SLV 1	273	153	2044	2.84	-284	34.12
365	SLV 2	225	89	2065	2.93	-286.79	19.84
365	SLV 3	267	-59	2436	4.69	-338.4	-13.57
365	SLV 4	219	-123	2457	4.78	-341.19	-27.85
365	SLV 5	104	381	1224	0.05	-176.01	85.41
365	SLV 6	54	314	1246	0.14	-178.89	70.64
365	SLV 7	85	-327	2532	6.2	-357.35	-73.58
365	SLV 8	35	-393	2553	6.29	-360.23	-88.34
365	SLV 9	-47	363	914	-0.5	-137.88	81.46
365	SLV 10	-97	296	936	-0.41	-140.77	66.7
365	SLV 11	-66	-345	2222	5.65	-319.22	-77.52
365	SLV 12	-117	-411	2243	5.74	-322.11	-92.29
365	SLV 13	-231	93	1011	1.01	-156.92	20.97
365	SLV 14	-280	28	1031	1.1	-159.72	6.69
365	SLV 15	-237	-120	1403	2.86	-211.33	-26.72
365	SLV 16	-285	-184	1424	2.95	-214.12	-41
365	CRTFP Ux+	0	0	0	0	0	0
365	CRTFP Ux-	0	0	0	0	0	0
365	CRTFP Uy+	0	0	0	0	0	0
365	CRTFP Uy-	0	0	0	0	0	0
368	SLU 1	-10	57	3848	117.13	-10.76	0.51
368	SLU 2	-10	70	3812	115.7	-10.99	0.44
368	SLU 3	-10	57	3848	117.13	-10.76	0.51
368	SLU 4	-10	65	3826	116.27	-10.9	0.47
368	SLU 5	-10	70	3812	115.7	-10.99	0.44
368	SLU 6	-10	57	3848	117.13	-10.76	0.51
368	SLU 7	-10	65	3826	116.27	-10.9	0.47
368	SLU 8	-10	57	3848	117.13	-10.76	0.51
368	SLU 9	-10	65	3826	116.27	-10.9	0.47
368	SLU 10	-10	82	4455	135.62	-13.64	0.51
368	SLU 11	-10	69	4491	137.05	-13.41	0.57
368	SLU 12	-10	76	4469	136.19	-13.54	0.53
368	SLU 13	-10	82	4455	135.62	-13.64	0.51
368	SLU 14	-10	69	4491	137.05	-13.41	0.57
368	SLU 15	-10	76	4469	136.19	-13.54	0.53

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
368	SLU 16	-10	69	4491	137.05	-13.41	0.57
368	SLU 17	-10	76	4469	136.19	-13.54	0.53
368	SLU 18	-11	74	4766	145.59	-14.54	0.6
368	SLU 19	-10	81	4745	144.73	-14.68	0.56
368	SLU 20	-11	74	4766	145.59	-14.54	0.6
368	SLU 21	-10	81	4745	144.73	-14.68	0.56
368	SLU 22	-11	66	4338	132.29	-12.7	0.57
368	SLU 23	-10	79	4302	130.86	-12.93	0.5
368	SLU 24	-11	66	4338	132.29	-12.7	0.57
368	SLU 25	-10	73	4316	131.43	-12.84	0.53
368	SLU 26	-10	79	4302	130.86	-12.93	0.5
368	SLU 27	-11	66	4338	132.29	-12.7	0.57
368	SLU 28	-10	73	4316	131.43	-12.84	0.53
368	SLU 29	-11	66	4338	132.29	-12.7	0.57
368	SLU 30	-10	73	4316	131.43	-12.84	0.53
368	SLU 31	-11	90	4945	150.78	-15.58	0.57
368	SLU 32	-11	77	4981	152.21	-15.34	0.63
368	SLU 33	-11	85	4959	151.35	-15.48	0.59
368	SLU 34	-11	90	4945	150.78	-15.58	0.57
368	SLU 35	-11	77	4981	152.21	-15.34	0.63
368	SLU 36	-11	85	4959	151.35	-15.48	0.59
368	SLU 37	-11	77	4981	152.21	-15.34	0.63
368	SLU 38	-11	85	4959	151.35	-15.48	0.59
368	SLU 39	-11	82	5256	160.75	-16.48	0.66
368	SLU 40	-11	90	5235	159.89	-16.62	0.62
368	SLU 41	-11	82	5256	160.75	-16.48	0.66
368	SLU 42	-11	90	5235	159.89	-16.62	0.62
368	SLU 43	-13	71	4834	147.08	-13.32	0.64
368	SLU 44	-13	84	4799	145.64	-13.55	0.57
368	SLU 45	-13	71	4834	147.08	-13.32	0.64
368	SLU 46	-13	79	4813	146.22	-13.46	0.6
368	SLU 47	-13	84	4799	145.64	-13.55	0.57
368	SLU 48	-13	71	4834	147.08	-13.32	0.64
368	SLU 49	-13	79	4813	146.22	-13.46	0.6
368	SLU 50	-13	71	4834	147.08	-13.32	0.64
368	SLU 51	-13	79	4813	146.22	-13.46	0.6
368	SLU 52	-13	96	5441	165.56	-16.2	0.64
368	SLU 53	-13	83	5477	166.99	-15.97	0.71
368	SLU 54	-13	91	5456	166.13	-16.11	0.67
368	SLU 55	-13	96	5441	165.56	-16.2	0.64
368	SLU 56	-13	83	5477	166.99	-15.97	0.71
368	SLU 57	-13	91	5456	166.13	-16.11	0.67
368	SLU 58	-13	83	5477	166.99	-15.97	0.71
368	SLU 59	-13	91	5456	166.13	-16.11	0.67
368	SLU 60	-13	88	5753	175.53	-17.1	0.74
368	SLU 61	-13	96	5731	174.67	-17.24	0.7
368	SLU 62	-13	88	5753	175.53	-17.1	0.74
368	SLU 63	-13	96	5731	174.67	-17.24	0.7
368	SLU 64	-14	80	5324	162.23	-15.26	0.7
368	SLU 65	-13	93	5288	160.8	-15.49	0.63
368	SLU 66	-14	80	5324	162.23	-15.26	0.7
368	SLU 67	-13	88	5303	161.37	-15.4	0.66
368	SLU 68	-13	93	5288	160.8	-15.49	0.63
368	SLU 69	-14	80	5324	162.23	-15.26	0.7
368	SLU 70	-13	88	5303	161.37	-15.4	0.66
368	SLU 71	-14	80	5324	162.23	-15.26	0.7
368	SLU 72	-13	88	5303	161.37	-15.4	0.66
368	SLU 73	-14	104	5931	180.72	-18.14	0.7
368	SLU 74	-14	91	5967	182.15	-17.91	0.77
368	SLU 75	-14	99	5946	181.29	-18.05	0.73
368	SLU 76	-14	104	5931	180.72	-18.14	0.7
368	SLU 77	-14	91	5967	182.15	-17.91	0.77
368	SLU 78	-14	99	5946	181.29	-18.05	0.73
368	SLU 79	-14	91	5967	182.15	-17.91	0.77
368	SLU 80	-14	99	5946	181.29	-18.05	0.73
368	SLU 81	-14	96	6243	190.69	-19.04	0.79
368	SLU 82	-14	104	6221	189.83	-19.18	0.76
368	SLU 83	-14	96	6243	190.69	-19.04	0.79
368	SLU 84	-14	104	6221	189.83	-19.18	0.76
368	SLE RA 1	-10	60	3988	121.46	-11.31	0.52
368	SLE RA 2	-10	68	3964	120.51	-11.47	0.48
368	SLE RA 3	-10	60	3988	121.46	-11.31	0.52
368	SLE RA 4	-10	65	3974	120.89	-11.4	0.5
368	SLE RA 5	-10	68	3964	120.51	-11.47	0.48
368	SLE RA 6	-10	60	3988	121.46	-11.31	0.52
368	SLE RA 7	-10	65	3974	120.89	-11.4	0.5
368	SLE RA 8	-10	60	3988	121.46	-11.31	0.52
368	SLE RA 9	-10	65	3974	120.89	-11.4	0.5
368	SLE RA 10	-10	76	4393	133.79	-13.23	0.52
368	SLE RA 11	-10	67	4416	134.74	-13.08	0.57
368	SLE RA 12	-10	72	4402	134.17	-13.17	0.54
368	SLE RA 13	-10	76	4393	133.79	-13.23	0.52
368	SLE RA 14	-10	67	4416	134.74	-13.08	0.57
368	SLE RA 15	-10	72	4402	134.17	-13.17	0.54
368	SLE RA 16	-10	67	4416	134.74	-13.08	0.57
368	SLE RA 17	-10	72	4402	134.17	-13.17	0.54

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
368	SLE RA 18	-11	71	4600	140.43	-13.83	0.59
368	SLE RA 19	-10	76	4586	139.86	-13.93	0.56
368	SLE RA 20	-11	71	4600	140.43	-13.83	0.59
368	SLE RA 21	-10	76	4586	139.86	-13.93	0.56
368	SLE FR 1	-10	60	3988	121.46	-11.31	0.52
368	SLE FR 2	-10	61	3983	121.27	-11.34	0.51
368	SLE FR 3	-10	60	3988	121.46	-11.31	0.52
368	SLE FR 4	-10	65	4167	126.96	-12.1	0.53
368	SLE FR 5	-10	63	4172	127.15	-12.07	0.54
368	SLE FR 6	-10	65	4294	130.95	-12.57	0.56
368	SLE QP 1	-10	60	3988	121.46	-11.31	0.52
368	SLE QP 2	-10	63	4172	127.15	-12.07	0.54
368	SLD 1	304	149	4128	124.23	-1.11	-10.38
368	SLD 2	247	135	4133	124.47	-0.61	-7.6
368	SLD 3	311	7	4491	138.29	-2.66	-9.97
368	SLD 4	253	-7	4497	138.53	-2.15	-7.19
368	SLD 5	96	309	3606	104.86	-6.62	-4.38
368	SLD 6	36	295	3611	105.11	-6.09	-1.5
368	SLD 7	116	-165	4816	151.73	-11.78	-3.01
368	SLD 8	57	-179	4822	151.98	-11.26	-0.13
368	SLD 9	-78	304	3521	102.33	-12.88	1.22
368	SLD 10	-137	290	3527	102.58	-12.35	4.1
368	SLD 11	-57	-170	4732	149.2	-18.05	2.58
368	SLD 12	-117	-183	4737	149.45	-17.52	5.46
368	SLD 13	-274	132	3847	115.78	-21.98	8.28
368	SLD 14	-331	119	3852	116.02	-21.47	11.05
368	SLD 15	-268	-10	4210	129.84	-23.53	8.69
368	SLD 16	-325	-23	4215	130.08	-23.02	11.46
368	SLV 1	708	258	4075	120.57	12.96	-24.39
368	SLV 2	578	228	4087	121.12	14.12	-18.06
368	SLV 3	723	-65	4900	152.5	9.44	-23.46
368	SLV 4	592	-95	4912	153.05	10.6	-17.13
368	SLV 5	232	622	2887	76.55	0.35	-10.67
368	SLV 6	97	591	2900	77.11	1.55	-4.13
368	SLV 7	279	-454	5636	182.99	-11.38	-7.56
368	SLV 8	144	-485	5649	183.56	-10.18	-1.02
368	SLV 9	-164	611	2694	70.75	-13.96	2.11
368	SLV 10	-300	579	2707	71.32	-12.76	8.65
368	SLV 11	-117	-465	5443	177.2	-25.69	5.22
368	SLV 12	-253	-496	5456	177.76	-24.49	11.76
368	SLV 13	-613	221	3432	101.26	-34.74	18.22
368	SLV 14	-743	190	3444	101.81	-33.58	24.54
368	SLV 15	-598	-102	4256	133.19	-38.26	19.15
368	SLV 16	-729	-132	4268	133.74	-37.1	25.48
368	CRTFP Ux+	0	0	0	0	0	0
368	CRTFP Ux-	0	0	0	0	0	0
368	CRTFP Uy+	0	0	0	0	0	0
368	CRTFP Uy-	0	0	0	0	0	0
371	SLU 1	4	49	3763	113.51	10.03	-0.52
371	SLU 2	4	62	3728	112.12	10.22	-0.48
371	SLU 3	4	49	3763	113.51	10.03	-0.52
371	SLU 4	4	57	3742	112.68	10.15	-0.49
371	SLU 5	4	62	3728	112.12	10.22	-0.48
371	SLU 6	4	49	3763	113.51	10.03	-0.52
371	SLU 7	4	57	3742	112.68	10.15	-0.49
371	SLU 8	4	49	3763	113.51	10.03	-0.52
371	SLU 9	4	57	3742	112.68	10.15	-0.49
371	SLU 10	4	71	4364	131.56	12.37	-0.57
371	SLU 11	4	59	4399	132.94	12.17	-0.61
371	SLU 12	4	66	4378	132.11	12.29	-0.58
371	SLU 13	4	71	4364	131.56	12.37	-0.57
371	SLU 14	4	59	4399	132.94	12.17	-0.61
371	SLU 15	4	66	4378	132.11	12.29	-0.58
371	SLU 16	4	59	4399	132.94	12.17	-0.61
371	SLU 17	4	66	4378	132.11	12.29	-0.58
371	SLU 18	4	63	4672	141.27	13.09	-0.65
371	SLU 19	4	70	4650	140.44	13.21	-0.63
371	SLU 20	4	63	4672	141.27	13.09	-0.65
371	SLU 21	4	70	4650	140.44	13.21	-0.63
371	SLU 22	4	56	4247	128.28	11.63	-0.58
371	SLU 23	4	69	4211	126.89	11.83	-0.54
371	SLU 24	4	56	4247	128.28	11.63	-0.58
371	SLU 25	4	64	4226	127.45	11.75	-0.56
371	SLU 26	4	69	4211	126.89	11.83	-0.54
371	SLU 27	4	56	4247	128.28	11.63	-0.58
371	SLU 28	4	64	4226	127.45	11.75	-0.56
371	SLU 29	4	56	4247	128.28	11.63	-0.58
371	SLU 30	4	64	4226	127.45	11.75	-0.56
371	SLU 31	4	79	4847	146.33	13.97	-0.64
371	SLU 32	4	66	4883	147.71	13.77	-0.68
371	SLU 33	4	73	4862	146.88	13.89	-0.65
371	SLU 34	4	79	4847	146.33	13.97	-0.64
371	SLU 35	4	66	4883	147.71	13.77	-0.68
371	SLU 36	4	73	4862	146.88	13.89	-0.65
371	SLU 37	4	66	4883	147.71	13.77	-0.68
371	SLU 38	4	73	4862	146.88	13.89	-0.65

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
371	SLU 39	4	70	5155	156.04	14.69	-0.72
371	SLU 40	4	78	5134	155.21	14.81	-0.69
371	SLU 41	4	70	5155	156.04	14.69	-0.72
371	SLU 42	4	78	5134	155.21	14.81	-0.69
371	SLU 43	5	61	4726	142.49	12.49	-0.65
371	SLU 44	5	74	4691	141.11	12.68	-0.61
371	SLU 45	5	61	4726	142.49	12.49	-0.65
371	SLU 46	5	69	4705	141.66	12.61	-0.62
371	SLU 47	5	74	4691	141.11	12.68	-0.61
371	SLU 48	5	61	4726	142.49	12.49	-0.65
371	SLU 49	5	69	4705	141.66	12.61	-0.62
371	SLU 50	5	61	4726	142.49	12.49	-0.65
371	SLU 51	5	69	4705	141.66	12.61	-0.62
371	SLU 52	5	84	5327	160.54	14.83	-0.7
371	SLU 53	5	71	5362	161.93	14.63	-0.74
371	SLU 54	5	79	5341	161.1	14.75	-0.72
371	SLU 55	5	84	5327	160.54	14.83	-0.7
371	SLU 56	5	71	5362	161.93	14.63	-0.74
371	SLU 57	5	79	5341	161.1	14.75	-0.72
371	SLU 58	5	71	5362	161.93	14.63	-0.74
371	SLU 59	5	79	5341	161.1	14.75	-0.72
371	SLU 60	5	75	5635	170.26	15.55	-0.78
371	SLU 61	5	83	5614	169.42	15.67	-0.76
371	SLU 62	5	75	5635	170.26	15.55	-0.78
371	SLU 63	5	83	5614	169.42	15.67	-0.76
371	SLU 64	5	68	5210	157.27	14.09	-0.71
371	SLU 65	5	81	5175	155.88	14.29	-0.67
371	SLU 66	5	68	5210	157.27	14.09	-0.71
371	SLU 67	5	76	5189	156.43	14.21	-0.69
371	SLU 68	5	81	5175	155.88	14.29	-0.67
371	SLU 69	5	68	5210	157.27	14.09	-0.71
371	SLU 70	5	76	5189	156.43	14.21	-0.69
371	SLU 71	5	68	5210	157.27	14.09	-0.71
371	SLU 72	5	76	5189	156.43	14.21	-0.69
371	SLU 73	5	91	5810	175.31	16.43	-0.77
371	SLU 74	5	78	5846	176.7	16.23	-0.81
371	SLU 75	5	86	5825	175.87	16.35	-0.78
371	SLU 76	5	91	5810	175.31	16.43	-0.77
371	SLU 77	5	78	5846	176.7	16.23	-0.81
371	SLU 78	5	86	5825	175.87	16.35	-0.78
371	SLU 79	5	78	5846	176.7	16.23	-0.81
371	SLU 80	5	86	5825	175.87	16.35	-0.78
371	SLU 81	5	82	6119	185.03	17.15	-0.85
371	SLU 82	5	90	6097	184.2	17.27	-0.82
371	SLU 83	5	82	6119	185.03	17.15	-0.85
371	SLU 84	5	90	6097	184.2	17.27	-0.82
371	SLE RA 1	4	51	3901	117.73	10.49	-0.53
371	SLE RA 2	4	60	3878	116.8	10.62	-0.51
371	SLE RA 3	4	51	3901	117.73	10.49	-0.53
371	SLE RA 4	4	56	3887	117.17	10.56	-0.52
371	SLE RA 5	4	60	3878	116.8	10.62	-0.51
371	SLE RA 6	4	51	3901	117.73	10.49	-0.53
371	SLE RA 7	4	56	3887	117.17	10.56	-0.52
371	SLE RA 8	4	51	3901	117.73	10.49	-0.53
371	SLE RA 9	4	56	3887	117.17	10.56	-0.52
371	SLE RA 10	4	66	4302	129.76	12.04	-0.57
371	SLE RA 11	4	57	4325	130.68	11.91	-0.6
371	SLE RA 12	4	63	4311	130.13	11.99	-0.58
371	SLE RA 13	4	66	4302	129.76	12.04	-0.57
371	SLE RA 14	4	57	4325	130.68	11.91	-0.6
371	SLE RA 15	4	63	4311	130.13	11.99	-0.58
371	SLE RA 16	4	57	4325	130.68	11.91	-0.6
371	SLE RA 17	4	63	4311	130.13	11.99	-0.58
371	SLE RA 18	4	60	4507	136.23	12.53	-0.62
371	SLE RA 19	4	65	4493	135.68	12.6	-0.61
371	SLE RA 20	4	60	4507	136.23	12.53	-0.62
371	SLE RA 21	4	65	4493	135.68	12.6	-0.61
371	SLE FR 1	4	51	3901	117.73	10.49	-0.53
371	SLE FR 2	4	53	3897	117.54	10.51	-0.53
371	SLE FR 3	4	51	3901	117.73	10.49	-0.53
371	SLE FR 4	4	56	4078	123.09	11.12	-0.56
371	SLE FR 5	4	54	4083	123.28	11.1	-0.56
371	SLE FR 6	4	56	4204	126.98	11.51	-0.58
371	SLE QP 1	4	51	3901	117.73	10.49	-0.53
371	SLE QP 2	4	54	4083	123.28	11.1	-0.56
371	SLD 1	309	98	3789	112.8	21.06	-10.7
371	SLD 2	253	112	3784	112.56	21.52	-8.03
371	SLD 3	315	-39	4152	126.48	22.17	-11.08
371	SLD 4	259	-25	4146	126.24	22.63	-8.42
371	SLD 5	108	270	3447	99.47	12.24	-3.99
371	SLD 6	50	285	3441	99.22	12.71	-1.23
371	SLD 7	126	-187	4656	145.08	15.93	-5.29
371	SLD 8	68	-173	4650	144.83	16.4	-2.53
371	SLD 9	-61	280	3516	101.73	5.79	1.4
371	SLD 10	-119	295	3511	101.48	6.27	4.17
371	SLD 11	-42	-177	4725	147.34	9.48	0.11

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
371	SLD 12	-100	-162	4719	147.09	9.96	2.87
371	SLD 13	-251	133	4020	120.32	-0.43	7.3
371	SLD 14	-307	147	4015	120.08	0.03	9.96
371	SLD 15	-246	-5	4383	134	0.68	6.91
371	SLD 16	-302	10	4377	133.76	1.13	9.57
371	SLV 1	701	154	3413	99.43	33.85	-23.7
371	SLV 2	574	186	3401	98.88	34.89	-17.63
371	SLV 3	714	-158	4237	130.5	36.38	-24.59
371	SLV 4	587	-125	4225	129.95	37.42	-18.52
371	SLV 5	240	544	2638	69.21	13.71	-8.38
371	SLV 6	109	578	2626	68.64	14.79	-2.11
371	SLV 7	283	-494	5382	172.77	22.13	-11.34
371	SLV 8	152	-460	5370	172.2	23.21	-5.07
371	SLV 9	-144	568	2796	74.36	-1.01	3.95
371	SLV 10	-275	602	2784	73.79	0.06	10.22
371	SLV 11	-101	-470	5541	177.92	7.41	0.99
371	SLV 12	-233	-437	5528	177.35	8.49	7.26
371	SLV 13	-579	233	3942	116.61	-15.22	17.4
371	SLV 14	-706	265	3930	116.06	-14.18	23.46
371	SLV 15	-566	-79	4765	147.68	-12.7	16.51
371	SLV 16	-694	-46	4753	147.13	-11.66	22.58
371	CRTFP Ux+	0	0	0	0	0	0
371	CRTFP Ux-	0	0	0	0	0	0
371	CRTFP Uy+	0	0	0	0	0	0
371	CRTFP Uy-	0	0	0	0	0	0
374	SLU 1	4	-22	1577	-40.99	300.44	5.68
374	SLU 2	4	-15	1560	-40.61	296.85	3.79
374	SLU 3	4	-22	1577	-40.99	300.44	5.68
374	SLU 4	4	-18	1567	-40.76	298.29	4.55
374	SLU 5	4	-15	1560	-40.61	296.85	3.79
374	SLU 6	4	-22	1577	-40.99	300.44	5.68
374	SLU 7	4	-18	1567	-40.76	298.29	4.55
374	SLU 8	4	-22	1577	-40.99	300.44	5.68
374	SLU 9	4	-18	1567	-40.76	298.29	4.55
374	SLU 10	4	-19	1822	-47.36	344.76	4.94
374	SLU 11	4	-27	1839	-47.74	348.35	6.83
374	SLU 12	4	-22	1829	-47.51	346.2	5.7
374	SLU 13	4	-19	1822	-47.36	344.76	4.94
374	SLU 14	4	-27	1839	-47.74	348.35	6.83
374	SLU 15	4	-22	1829	-47.51	346.2	5.7
374	SLU 16	4	-27	1839	-47.74	348.35	6.83
374	SLU 17	4	-22	1829	-47.51	346.2	5.7
374	SLU 18	4	-29	1952	-50.63	368.89	7.32
374	SLU 19	4	-24	1942	-50.4	366.73	6.19
374	SLU 20	4	-29	1952	-50.63	368.89	7.32
374	SLU 21	4	-24	1942	-50.4	366.73	6.19
374	SLU 22	4	-26	1777	-46.13	336.98	6.53
374	SLU 23	4	-18	1760	-45.75	333.4	4.64
374	SLU 24	4	-26	1777	-46.13	336.98	6.53
374	SLU 25	4	-21	1767	-45.9	334.83	5.4
374	SLU 26	4	-18	1760	-45.75	333.4	4.64
374	SLU 27	4	-26	1777	-46.13	336.98	6.53
374	SLU 28	4	-21	1767	-45.9	334.83	5.4
374	SLU 29	4	-26	1777	-46.13	336.98	6.53
374	SLU 30	4	-21	1767	-45.9	334.83	5.4
374	SLU 31	4	-23	2022	-52.5	381.31	5.79
374	SLU 32	4	-30	2039	-52.88	384.9	7.68
374	SLU 33	4	-26	2029	-52.65	382.74	6.55
374	SLU 34	4	-23	2022	-52.5	381.31	5.79
374	SLU 35	4	-30	2039	-52.88	384.9	7.68
374	SLU 36	4	-26	2029	-52.65	382.74	6.55
374	SLU 37	4	-30	2039	-52.88	384.9	7.68
374	SLU 38	4	-26	2029	-52.65	382.74	6.55
374	SLU 39	4	-32	2152	-55.77	405.43	8.17
374	SLU 40	4	-28	2142	-55.54	403.28	7.04
374	SLU 41	4	-32	2152	-55.77	405.43	8.17
374	SLU 42	4	-28	2142	-55.54	403.28	7.04
374	SLU 43	6	-28	1981	-51.53	378.04	7.09
374	SLU 44	6	-20	1964	-51.15	374.45	5.21
374	SLU 45	6	-28	1981	-51.53	378.04	7.09
374	SLU 46	6	-23	1971	-51.3	375.89	5.96
374	SLU 47	6	-20	1964	-51.15	374.45	5.21
374	SLU 48	6	-28	1981	-51.53	378.04	7.09
374	SLU 49	6	-23	1971	-51.3	375.89	5.96
374	SLU 50	6	-28	1981	-51.53	378.04	7.09
374	SLU 51	6	-23	1971	-51.3	375.89	5.96
374	SLU 52	6	-25	2227	-57.89	422.37	6.35
374	SLU 53	6	-32	2244	-58.28	425.96	8.24
374	SLU 54	6	-28	2234	-58.05	423.8	7.11
374	SLU 55	6	-25	2227	-57.89	422.37	6.35
374	SLU 56	6	-32	2244	-58.28	425.96	8.24
374	SLU 57	6	-28	2234	-58.05	423.8	7.11
374	SLU 58	6	-32	2244	-58.28	425.96	8.24
374	SLU 59	6	-28	2234	-58.05	423.8	7.11
374	SLU 60	6	-34	2356	-61.17	446.49	8.73
374	SLU 61	6	-30	2346	-60.94	444.34	7.6

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
374	SLU 62	6	-34	2356	-61.17	446.49	8.73
374	SLU 63	6	-30	2346	-60.94	444.34	7.6
374	SLU 64	6	-31	2181	-56.67	414.59	7.94
374	SLU 65	6	-24	2164	-56.29	411	6.06
374	SLU 66	6	-31	2181	-56.67	414.59	7.94
374	SLU 67	6	-27	2171	-56.44	412.43	6.81
374	SLU 68	6	-24	2164	-56.29	411	6.06
374	SLU 69	6	-31	2181	-56.67	414.59	7.94
374	SLU 70	6	-27	2171	-56.44	412.43	6.81
374	SLU 71	6	-31	2181	-56.67	414.59	7.94
374	SLU 72	6	-27	2171	-56.44	412.43	6.81
374	SLU 73	6	-28	2427	-63.03	458.91	7.2
374	SLU 74	6	-36	2444	-63.42	462.5	9.09
374	SLU 75	6	-31	2434	-63.19	460.35	7.96
374	SLU 76	6	-28	2427	-63.03	458.91	7.2
374	SLU 77	6	-36	2444	-63.42	462.5	9.09
374	SLU 78	6	-31	2434	-63.19	460.35	7.96
374	SLU 79	6	-36	2444	-63.42	462.5	9.09
374	SLU 80	6	-31	2434	-63.19	460.35	7.96
374	SLU 81	6	-38	2556	-66.31	483.04	9.58
374	SLU 82	6	-33	2546	-66.08	480.88	8.45
374	SLU 83	6	-38	2556	-66.31	483.04	9.58
374	SLU 84	6	-33	2546	-66.08	480.88	8.45
374	SLE RA 1	4	-23	1634	-42.46	310.88	5.92
374	SLE RA 2	4	-18	1623	-42.21	308.49	4.67
374	SLE RA 3	4	-23	1634	-42.46	310.88	5.92
374	SLE RA 4	4	-20	1627	-42.31	309.45	5.17
374	SLE RA 5	4	-18	1623	-42.21	308.49	4.67
374	SLE RA 6	4	-23	1634	-42.46	310.88	5.92
374	SLE RA 7	4	-20	1627	-42.31	309.45	5.17
374	SLE RA 8	4	-23	1634	-42.46	310.88	5.92
374	SLE RA 9	4	-20	1627	-42.31	309.45	5.17
374	SLE RA 10	4	-21	1798	-46.7	340.43	5.43
374	SLE RA 11	4	-26	1809	-46.96	342.82	6.69
374	SLE RA 12	4	-23	1802	-46.81	341.39	5.93
374	SLE RA 13	4	-21	1798	-46.7	340.43	5.43
374	SLE RA 14	4	-26	1809	-46.96	342.82	6.69
374	SLE RA 15	4	-23	1802	-46.81	341.39	5.93
374	SLE RA 16	4	-26	1809	-46.96	342.82	6.69
374	SLE RA 17	4	-23	1802	-46.81	341.39	5.93
374	SLE RA 18	4	-28	1884	-48.89	356.51	7.02
374	SLE RA 19	4	-25	1877	-48.73	355.08	6.26
374	SLE RA 20	4	-28	1884	-48.89	356.51	7.02
374	SLE RA 21	4	-25	1877	-48.73	355.08	6.26
374	SLE FR 1	4	-23	1634	-42.46	310.88	5.92
374	SLE FR 2	4	-22	1632	-42.41	310.4	5.67
374	SLE FR 3	4	-23	1634	-42.46	310.88	5.92
374	SLE FR 4	4	-24	1707	-44.34	324.09	6
374	SLE FR 5	4	-25	1709	-44.39	324.57	6.25
374	SLE FR 6	4	-26	1759	-45.68	333.7	6.47
374	SLE QP 1	4	-23	1634	-42.46	310.88	5.92
374	SLE QP 2	4	-25	1709	-44.39	324.57	6.25
374	SLD 1	120	-9	1399	-36.58	270.09	5.35
374	SLD 2	98	17	1391	-36.38	268.4	-1.66
374	SLD 3	123	-93	1581	-40.85	304.92	26.32
374	SLD 4	101	-67	1573	-40.65	303.23	19.31
374	SLD 5	43	98	1343	-35.64	256.02	-23.24
374	SLD 6	20	125	1334	-35.43	254.27	-30.52
374	SLD 7	52	-182	1950	-49.88	372.12	46.67
374	SLD 8	29	-155	1941	-49.68	370.37	39.39
374	SLD 9	-21	106	1477	-39.1	278.77	-26.89
374	SLD 10	-44	133	1468	-38.9	277.02	-34.17
374	SLD 11	-12	-174	2084	-53.35	394.87	43.03
374	SLD 12	-35	-147	2075	-53.14	393.12	35.75
374	SLD 13	-92	18	1846	-48.13	345.91	-6.81
374	SLD 14	-114	44	1837	-47.93	344.22	-13.82
374	SLD 15	-90	-66	2027	-52.4	380.74	14.17
374	SLD 16	-112	-40	2019	-52.2	379.05	7.15
374	SLV 1	269	10	1003	-26.58	200.38	4.33
374	SLV 2	219	69	983	-26.12	196.53	-11.65
374	SLV 3	275	-180	1416	-36.28	279.46	51.96
374	SLV 4	225	-121	1396	-35.83	275.62	35.97
374	SLV 5	93	254	878	-24.49	168.78	-60.69
374	SLV 6	41	314	858	-24.03	164.81	-77.22
374	SLV 7	113	-382	2255	-56.84	432.39	98.06
374	SLV 8	61	-321	2234	-56.37	428.42	81.53
374	SLV 9	-53	272	1184	-32.41	220.73	-69.03
374	SLV 10	-105	333	1163	-31.94	216.75	-85.56
374	SLV 11	-32	-364	2560	-64.75	484.34	89.72
374	SLV 12	-84	-303	2540	-64.29	480.36	73.19
374	SLV 13	-216	72	2022	-52.95	373.52	-23.47
374	SLV 14	-267	131	2002	-52.5	369.68	-39.45
374	SLV 15	-210	-119	2435	-62.66	452.61	24.16
374	SLV 16	-260	-60	2415	-62.2	448.76	8.17
374	CRTFP Ux+	0	0	0	0	0	0
374	CRTFP Ux-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
374	CRTFP Uy+	0	0	0	0	0	0
374	CRTFP Uy-	0	0	0	0	0	0
375	SLU 1	-5	-11	1441	-38.12	-245.32	-2.72
375	SLU 2	-5	-5	1422	-37.67	-242.07	-1.16
375	SLU 3	-5	-11	1441	-38.12	-245.32	-2.72
375	SLU 4	-5	-7	1430	-37.85	-243.37	-1.78
375	SLU 5	-5	-5	1422	-37.67	-242.07	-1.16
375	SLU 6	-5	-11	1441	-38.12	-245.32	-2.72
375	SLU 7	-5	-7	1430	-37.85	-243.37	-1.78
375	SLU 8	-5	-11	1441	-38.12	-245.32	-2.72
375	SLU 9	-5	-7	1430	-37.85	-243.37	-1.78
375	SLU 10	-5	-8	1658	-43.87	-280.58	-1.88
375	SLU 11	-5	-15	1677	-44.31	-283.83	-3.45
375	SLU 12	-5	-11	1665	-44.05	-281.88	-2.51
375	SLU 13	-5	-8	1658	-43.87	-280.58	-1.88
375	SLU 14	-5	-15	1677	-44.31	-283.83	-3.45
375	SLU 15	-5	-11	1665	-44.05	-281.88	-2.51
375	SLU 16	-5	-15	1677	-44.31	-283.83	-3.45
375	SLU 17	-5	-11	1665	-44.05	-281.88	-2.51
375	SLU 18	-5	-16	1778	-46.97	-300.34	-3.76
375	SLU 19	-5	-12	1767	-46.7	-298.38	-2.82
375	SLU 20	-5	-16	1778	-46.97	-300.34	-3.76
375	SLU 21	-5	-12	1767	-46.7	-298.38	-2.82
375	SLU 22	-5	-14	1621	-42.85	-274.76	-3.24
375	SLU 23	-5	-7	1603	-42.41	-271.5	-1.67
375	SLU 24	-5	-14	1621	-42.85	-274.76	-3.24
375	SLU 25	-5	-10	1610	-42.58	-272.8	-2.3
375	SLU 26	-5	-7	1603	-42.41	-271.5	-1.67
375	SLU 27	-5	-14	1621	-42.85	-274.76	-3.24
375	SLU 28	-5	-10	1610	-42.58	-272.8	-2.3
375	SLU 29	-5	-14	1621	-42.85	-274.76	-3.24
375	SLU 30	-5	-10	1610	-42.58	-272.8	-2.3
375	SLU 31	-5	-10	1838	-48.6	-310.01	-2.4
375	SLU 32	-5	-17	1857	-49.05	-313.26	-3.97
375	SLU 33	-5	-13	1846	-48.78	-311.31	-3.03
375	SLU 34	-5	-10	1838	-48.6	-310.01	-2.4
375	SLU 35	-5	-17	1857	-49.05	-313.26	-3.97
375	SLU 36	-5	-13	1846	-48.78	-311.31	-3.03
375	SLU 37	-5	-17	1857	-49.05	-313.26	-3.97
375	SLU 38	-5	-13	1846	-48.78	-311.31	-3.03
375	SLU 39	-5	-18	1958	-51.7	-329.77	-4.28
375	SLU 40	-5	-14	1947	-51.43	-327.81	-3.34
375	SLU 41	-5	-18	1958	-51.7	-329.77	-4.28
375	SLU 42	-5	-14	1947	-51.43	-327.81	-3.34
375	SLU 43	-7	-14	1811	-47.93	-308.83	-3.36
375	SLU 44	-7	-7	1792	-47.49	-305.58	-1.79
375	SLU 45	-7	-14	1811	-47.93	-308.83	-3.36
375	SLU 46	-7	-10	1800	-47.66	-306.88	-2.42
375	SLU 47	-7	-7	1792	-47.49	-305.58	-1.79
375	SLU 48	-7	-14	1811	-47.93	-308.83	-3.36
375	SLU 49	-7	-10	1800	-47.66	-306.88	-2.42
375	SLU 50	-7	-14	1811	-47.93	-308.83	-3.36
375	SLU 51	-7	-10	1800	-47.66	-306.88	-2.42
375	SLU 52	-6	-10	2028	-53.68	-344.09	-2.52
375	SLU 53	-7	-17	2047	-54.13	-347.34	-4.09
375	SLU 54	-6	-13	2036	-53.86	-345.39	-3.15
375	SLU 55	-6	-10	2028	-53.68	-344.09	-2.52
375	SLU 56	-7	-17	2047	-54.13	-347.34	-4.09
375	SLU 57	-6	-13	2036	-53.86	-345.39	-3.15
375	SLU 58	-7	-17	2047	-54.13	-347.34	-4.09
375	SLU 59	-6	-13	2036	-53.86	-345.39	-3.15
375	SLU 60	-6	-19	2148	-56.78	-363.84	-4.4
375	SLU 61	-6	-15	2137	-56.51	-361.89	-3.46
375	SLU 62	-6	-19	2148	-56.78	-363.84	-4.4
375	SLU 63	-6	-15	2137	-56.51	-361.89	-3.46
375	SLU 64	-7	-16	1991	-52.67	-338.26	-3.88
375	SLU 65	-7	-9	1973	-52.22	-335.01	-2.31
375	SLU 66	-7	-16	1991	-52.67	-338.26	-3.88
375	SLU 67	-7	-12	1980	-52.4	-336.31	-2.94
375	SLU 68	-7	-9	1973	-52.22	-335.01	-2.31
375	SLU 69	-7	-16	1991	-52.67	-338.26	-3.88
375	SLU 70	-7	-12	1980	-52.4	-336.31	-2.94
375	SLU 71	-7	-16	1991	-52.67	-338.26	-3.88
375	SLU 72	-7	-12	1980	-52.4	-336.31	-2.94
375	SLU 73	-6	-13	2209	-58.41	-373.52	-3.04
375	SLU 74	-7	-20	2227	-58.86	-376.77	-4.6
375	SLU 75	-7	-16	2216	-58.59	-374.82	-3.67
375	SLU 76	-6	-13	2209	-58.41	-373.52	-3.04
375	SLU 77	-7	-20	2227	-58.86	-376.77	-4.6
375	SLU 78	-7	-16	2216	-58.59	-374.82	-3.67
375	SLU 79	-7	-20	2227	-58.86	-376.77	-4.6
375	SLU 80	-7	-16	2216	-58.59	-374.82	-3.67
375	SLU 81	-7	-21	2328	-61.51	-393.27	-4.92
375	SLU 82	-6	-17	2317	-61.25	-391.32	-3.98
375	SLU 83	-7	-21	2328	-61.51	-393.27	-4.92
375	SLU 84	-6	-17	2317	-61.25	-391.32	-3.98

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
375	SLE RA 1	-5	-12	1492	-39.47	-253.73	-2.87
375	SLE RA 2	-5	-8	1480	-39.17	-251.56	-1.83
375	SLE RA 3	-5	-12	1492	-39.47	-253.73	-2.87
375	SLE RA 4	-5	-9	1485	-39.29	-252.43	-2.24
375	SLE RA 5	-5	-8	1480	-39.17	-251.56	-1.83
375	SLE RA 6	-5	-12	1492	-39.47	-253.73	-2.87
375	SLE RA 7	-5	-9	1485	-39.29	-252.43	-2.24
375	SLE RA 8	-5	-12	1492	-39.47	-253.73	-2.87
375	SLE RA 9	-5	-9	1485	-39.29	-252.43	-2.24
375	SLE RA 10	-5	-10	1637	-43.3	-277.24	-2.31
375	SLE RA 11	-5	-14	1649	-43.6	-279.41	-3.35
375	SLE RA 12	-5	-12	1642	-43.42	-278.1	-2.73
375	SLE RA 13	-5	-10	1637	-43.3	-277.24	-2.31
375	SLE RA 14	-5	-14	1649	-43.6	-279.41	-3.35
375	SLE RA 15	-5	-12	1642	-43.42	-278.1	-2.73
375	SLE RA 16	-5	-14	1649	-43.6	-279.41	-3.35
375	SLE RA 17	-5	-12	1642	-43.42	-278.1	-2.73
375	SLE RA 18	-5	-15	1717	-45.37	-290.41	-3.56
375	SLE RA 19	-5	-12	1709	-45.19	-289.11	-2.94
375	SLE RA 20	-5	-15	1717	-45.37	-290.41	-3.56
375	SLE RA 21	-5	-12	1709	-45.19	-289.11	-2.94
375	SLE FR 1	-5	-12	1492	-39.47	-253.73	-2.87
375	SLE FR 2	-5	-11	1490	-39.41	-253.3	-2.66
375	SLE FR 3	-5	-12	1492	-39.47	-253.73	-2.87
375	SLE FR 4	-5	-12	1557	-41.18	-264.3	-2.87
375	SLE FR 5	-5	-13	1560	-41.24	-264.74	-3.08
375	SLE FR 6	-5	-14	1605	-42.42	-272.07	-3.21
375	SLE QP 1	-5	-12	1492	-39.47	-253.73	-2.87
375	SLE QP 2	-5	-13	1560	-41.24	-264.74	-3.08
375	SLD 1	104	50	1675	-44.43	-280.68	13.93
375	SLD 2	83	26	1684	-44.65	-282.11	8.02
375	SLD 3	100	-29	1844	-48.59	-308.97	-3.95
375	SLD 4	80	-53	1853	-48.81	-310.4	-9.86
375	SLD 5	40	135	1335	-35.81	-226.09	31.32
375	SLD 6	19	110	1344	-36.04	-227.57	25.19
375	SLD 7	29	-130	1898	-49.67	-320.38	-28.28
375	SLD 8	8	-154	1907	-49.9	-321.86	-34.41
375	SLD 9	-18	128	1212	-32.58	-207.61	28.26
375	SLD 10	-39	103	1221	-32.81	-209.09	22.13
375	SLD 11	-29	-136	1775	-46.45	-301.9	-31.34
375	SLD 12	-50	-161	1785	-46.67	-303.38	-37.48
375	SLD 13	-90	27	1267	-33.67	-219.08	3.71
375	SLD 14	-111	3	1275	-33.89	-220.51	-2.2
375	SLD 15	-93	-52	1436	-37.83	-247.36	-14.17
375	SLD 16	-114	-76	1444	-38.05	-248.79	-20.08
375	SLV 1	243	130	1824	-48.56	-301.34	35.62
375	SLV 2	197	76	1844	-49.06	-304.6	22.15
375	SLV 3	236	-50	2208	-58	-365.59	-4.98
375	SLV 4	190	-104	2228	-58.51	-368.85	-18.45
375	SLV 5	97	323	1049	-28.92	-177.07	75.05
375	SLV 6	49	267	1070	-29.44	-180.44	61.13
375	SLV 7	73	-277	2329	-60.42	-391.25	-60.28
375	SLV 8	25	-334	2349	-60.93	-394.62	-74.21
375	SLV 9	-36	308	770	-21.55	-134.86	68.06
375	SLV 10	-83	251	791	-22.07	-138.23	54.13
375	SLV 11	-60	-293	2049	-53.04	-349.03	-67.28
375	SLV 12	-107	-350	2070	-53.56	-352.4	-81.2
375	SLV 13	-200	78	891	-23.98	-160.62	12.3
375	SLV 14	-246	24	912	-24.48	-163.88	-1.17
375	SLV 15	-207	-102	1275	-33.42	-224.87	-28.3
375	SLV 16	-253	-157	1295	-33.93	-228.13	-41.77
375	CRTFP Ux+	0	0	0	0	0	0
375	CRTFP Ux-	0	0	0	0	0	0
375	CRTFP Uy+	0	0	0	0	0	0
375	CRTFP Uy-	0	0	0	0	0	0
413	SLU 1	-9	-19	2494	-563.82	-397.1	-5.35
413	SLU 2	-8	-8	2460	-557.01	-391.7	-3.36
413	SLU 3	-9	-19	2494	-563.82	-397.1	-5.35
413	SLU 4	-9	-12	2474	-559.73	-393.86	-4.16
413	SLU 5	-8	-8	2460	-557.01	-391.7	-3.36
413	SLU 6	-9	-19	2494	-563.82	-397.1	-5.35
413	SLU 7	-9	-12	2474	-559.73	-393.86	-4.16
413	SLU 8	-9	-19	2494	-563.82	-397.1	-5.35
413	SLU 9	-9	-12	2474	-559.73	-393.86	-4.16
413	SLU 10	-8	-13	2871	-648.62	-456.55	-4.22
413	SLU 11	-8	-25	2904	-655.42	-461.95	-6.21
413	SLU 12	-8	-18	2884	-651.34	-458.71	-5.02
413	SLU 13	-8	-13	2871	-648.62	-456.55	-4.22
413	SLU 14	-8	-25	2904	-655.42	-461.95	-6.21
413	SLU 15	-8	-18	2884	-651.34	-458.71	-5.02
413	SLU 16	-8	-25	2904	-655.42	-461.95	-6.21
413	SLU 17	-8	-18	2884	-651.34	-458.71	-5.02
413	SLU 18	-8	-27	3080	-694.68	-489.74	-6.58
413	SLU 19	-8	-20	3060	-690.6	-486.5	-5.39
413	SLU 20	-8	-27	3080	-694.68	-489.74	-6.58
413	SLU 21	-8	-20	3060	-690.6	-486.5	-5.39

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
413	SLU 22	-9	-23	2808	-633.85	-446.7	-6
413	SLU 23	-8	-12	2774	-627.04	-441.3	-4.01
413	SLU 24	-9	-23	2808	-633.85	-446.7	-6
413	SLU 25	-9	-16	2788	-629.76	-443.46	-4.81
413	SLU 26	-8	-12	2774	-627.04	-441.3	-4.01
413	SLU 27	-9	-23	2808	-633.85	-446.7	-6
413	SLU 28	-9	-16	2788	-629.76	-443.46	-4.81
413	SLU 29	-9	-23	2808	-633.85	-446.7	-6
413	SLU 30	-9	-16	2788	-629.76	-443.46	-4.81
413	SLU 31	-8	-17	3185	-718.64	-506.15	-4.87
413	SLU 32	-8	-29	3218	-725.45	-511.55	-6.86
413	SLU 33	-8	-22	3198	-721.37	-508.31	-5.67
413	SLU 34	-8	-17	3185	-718.64	-506.15	-4.87
413	SLU 35	-8	-29	3218	-725.45	-511.55	-6.86
413	SLU 36	-8	-22	3198	-721.37	-508.31	-5.67
413	SLU 37	-8	-29	3218	-725.45	-511.55	-6.86
413	SLU 38	-8	-22	3198	-721.37	-508.31	-5.67
413	SLU 39	-8	-31	3394	-764.71	-539.34	-7.23
413	SLU 40	-8	-24	3374	-760.63	-536.1	-6.04
413	SLU 41	-8	-31	3394	-764.71	-539.34	-7.23
413	SLU 42	-8	-24	3374	-760.63	-536.1	-6.04
413	SLU 43	-11	-24	3134	-708.95	-499.22	-6.73
413	SLU 44	-11	-12	3101	-702.15	-493.82	-4.74
413	SLU 45	-11	-24	3134	-708.95	-499.22	-6.73
413	SLU 46	-11	-17	3114	-704.87	-495.98	-5.54
413	SLU 47	-11	-12	3101	-702.15	-493.82	-4.74
413	SLU 48	-11	-24	3134	-708.95	-499.22	-6.73
413	SLU 49	-11	-17	3114	-704.87	-495.98	-5.54
413	SLU 50	-11	-24	3134	-708.95	-499.22	-6.73
413	SLU 51	-11	-17	3114	-704.87	-495.98	-5.54
413	SLU 52	-11	-18	3511	-793.75	-558.67	-5.61
413	SLU 53	-11	-29	3545	-800.56	-564.07	-7.59
413	SLU 54	-11	-22	3525	-796.47	-560.83	-6.4
413	SLU 55	-11	-18	3511	-793.75	-558.67	-5.61
413	SLU 56	-11	-29	3545	-800.56	-564.07	-7.59
413	SLU 57	-11	-22	3525	-796.47	-560.83	-6.4
413	SLU 58	-11	-29	3545	-800.56	-564.07	-7.59
413	SLU 59	-11	-22	3525	-796.47	-560.83	-6.4
413	SLU 60	-11	-32	3720	-839.82	-591.86	-7.97
413	SLU 61	-11	-25	3700	-835.73	-588.62	-6.77
413	SLU 62	-11	-32	3720	-839.82	-591.86	-7.97
413	SLU 63	-11	-25	3700	-835.73	-588.62	-6.77
413	SLU 64	-11	-28	3448	-778.98	-548.82	-7.38
413	SLU 65	-11	-16	3415	-772.18	-543.43	-5.39
413	SLU 66	-11	-28	3448	-778.98	-548.82	-7.38
413	SLU 67	-11	-21	3428	-774.9	-545.59	-6.19
413	SLU 68	-11	-16	3415	-772.18	-543.43	-5.39
413	SLU 69	-11	-28	3448	-778.98	-548.82	-7.38
413	SLU 70	-11	-21	3428	-774.9	-545.59	-6.19
413	SLU 71	-11	-28	3448	-778.98	-548.82	-7.38
413	SLU 72	-11	-21	3428	-774.9	-545.59	-6.19
413	SLU 73	-11	-22	3825	-863.78	-608.27	-6.26
413	SLU 74	-11	-33	3858	-870.59	-613.67	-8.24
413	SLU 75	-11	-26	3838	-866.5	-610.43	-7.05
413	SLU 76	-11	-22	3825	-863.78	-608.27	-6.26
413	SLU 77	-11	-33	3858	-870.59	-613.67	-8.24
413	SLU 78	-11	-26	3838	-866.5	-610.43	-7.05
413	SLU 79	-11	-33	3858	-870.59	-613.67	-8.24
413	SLU 80	-11	-26	3838	-866.5	-610.43	-7.05
413	SLU 81	-11	-36	4034	-909.84	-641.46	-8.62
413	SLU 82	-11	-29	4014	-905.76	-638.22	-7.42
413	SLU 83	-11	-36	4034	-909.84	-641.46	-8.62
413	SLU 84	-11	-29	4014	-905.76	-638.22	-7.42
413	SLE RA 1	-9	-21	2583	-583.83	-411.27	-5.53
413	SLE RA 2	-9	-13	2561	-579.29	-407.67	-4.21
413	SLE RA 3	-9	-21	2583	-583.83	-411.27	-5.53
413	SLE RA 4	-9	-16	2570	-581.1	-409.11	-4.74
413	SLE RA 5	-9	-13	2561	-579.29	-407.67	-4.21
413	SLE RA 6	-9	-21	2583	-583.83	-411.27	-5.53
413	SLE RA 7	-9	-16	2570	-581.1	-409.11	-4.74
413	SLE RA 8	-9	-21	2583	-583.83	-411.27	-5.53
413	SLE RA 9	-9	-16	2570	-581.1	-409.11	-4.74
413	SLE RA 10	-8	-16	2835	-640.36	-450.9	-4.78
413	SLE RA 11	-9	-24	2857	-644.9	-454.5	-6.11
413	SLE RA 12	-8	-20	2844	-642.17	-452.34	-5.31
413	SLE RA 13	-8	-16	2835	-640.36	-450.9	-4.78
413	SLE RA 14	-9	-24	2857	-644.9	-454.5	-6.11
413	SLE RA 15	-8	-20	2844	-642.17	-452.34	-5.31
413	SLE RA 16	-9	-24	2857	-644.9	-454.5	-6.11
413	SLE RA 17	-8	-20	2844	-642.17	-452.34	-5.31
413	SLE RA 18	-8	-26	2974	-671.07	-473.03	-6.36
413	SLE RA 19	-8	-21	2961	-668.35	-470.87	-5.56
413	SLE RA 20	-8	-26	2974	-671.07	-473.03	-6.36
413	SLE RA 21	-8	-21	2961	-668.35	-470.87	-5.56
413	SLE FR 1	-9	-21	2583	-583.83	-411.27	-5.53
413	SLE FR 2	-9	-19	2579	-582.92	-410.55	-5.27

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
413	SLE FR 3	-9	-21	2583	-583.83	-411.27	-5.53
413	SLE FR 4	-9	-21	2696	-609.09	-429.08	-5.52
413	SLE FR 5	-9	-22	2701	-610	-429.8	-5.78
413	SLE FR 6	-9	-23	2779	-627.45	-442.15	-5.95
413	SLE QP 1	-9	-21	2583	-583.83	-411.27	-5.53
413	SLE QP 2	-9	-22	2701	-610	-429.8	-5.78
413	SLD 1	176	84	2898	-657.66	-458.49	56.83
413	SLD 2	141	44	2914	-661.02	-460.93	41.49
413	SLD 3	170	-49	3201	-720.77	-506.52	33.23
413	SLD 4	134	-89	3217	-724.13	-508.96	17.88
413	SLD 5	70	227	2294	-527.34	-364.66	54.46
413	SLD 6	33	185	2311	-530.83	-367.2	38.54
413	SLD 7	48	-217	3305	-737.71	-524.75	-24.22
413	SLD 8	11	-259	3321	-741.19	-527.29	-40.14
413	SLD 9	-28	215	2080	-478.8	-332.31	28.58
413	SLD 10	-65	173	2097	-482.29	-334.84	12.66
413	SLD 11	-50	-229	3090	-689.17	-492.4	-50.1
413	SLD 12	-87	-271	3107	-692.66	-494.93	-66.03
413	SLD 13	-151	45	2184	-495.87	-350.64	-29.45
413	SLD 14	-187	5	2200	-499.23	-353.08	-44.79
413	SLD 15	-158	-88	2487	-558.98	-398.67	-53.05
413	SLD 16	-193	-128	2503	-562.34	-401.11	-68.4
413	SLV 1	413	220	3154	-719.27	-495.65	137
413	SLV 2	332	127	3190	-726.93	-501.21	102.03
413	SLV 3	398	-82	3842	-862.61	-604.73	83.41
413	SLV 4	317	-175	3879	-870.27	-610.3	48.44
413	SLV 5	170	543	1779	-422.57	-282.06	131.16
413	SLV 6	87	447	1817	-430.49	-287.82	95.01
413	SLV 7	120	-465	4074	-900.37	-645.68	-47.47
413	SLV 8	37	-560	4111	-908.29	-651.44	-83.63
413	SLV 9	-54	516	1290	-311.71	-208.16	72.06
413	SLV 10	-137	420	1327	-319.62	-213.91	35.91
413	SLV 11	-104	-491	3585	-789.51	-571.78	-106.57
413	SLV 12	-187	-587	3622	-797.43	-577.53	-142.73
413	SLV 13	-335	131	1523	-349.73	-249.3	-60
413	SLV 14	-415	38	1559	-357.39	-254.86	-94.98
413	SLV 15	-350	-172	2211	-493.07	-358.38	-113.59
413	SLV 16	-430	-264	2247	-500.73	-363.95	-148.57
413	CRTFP Ux+	0	0	0	0	0	0
413	CRTFP Ux-	0	0	0	0	0	0
413	CRTFP Uy+	0	0	0	0	0	0
413	CRTFP Uy-	0	0	0	0	0	0
415	SLU 1	-6	-13	1666	-473.35	-44.11	-2.44
415	SLU 2	-6	-5	1645	-467.91	-43.53	-2.19
415	SLU 3	-6	-13	1666	-473.35	-44.11	-2.44
415	SLU 4	-6	-8	1653	-470.09	-43.76	-2.29
415	SLU 5	-6	-5	1645	-467.91	-43.53	-2.19
415	SLU 6	-6	-13	1666	-473.35	-44.11	-2.44
415	SLU 7	-6	-8	1653	-470.09	-43.76	-2.29
415	SLU 8	-6	-13	1666	-473.35	-44.11	-2.44
415	SLU 9	-6	-8	1653	-470.09	-43.76	-2.29
415	SLU 10	-6	-9	1917	-542	-50.68	-2.24
415	SLU 11	-6	-17	1938	-547.44	-51.26	-2.48
415	SLU 12	-6	-12	1925	-544.17	-50.91	-2.34
415	SLU 13	-6	-9	1917	-542	-50.68	-2.24
415	SLU 14	-6	-17	1938	-547.44	-51.26	-2.48
415	SLU 15	-6	-12	1925	-544.17	-50.91	-2.34
415	SLU 16	-6	-17	1938	-547.44	-51.26	-2.48
415	SLU 17	-6	-12	1925	-544.17	-50.91	-2.34
415	SLU 18	-6	-18	2055	-579.19	-54.32	-2.5
415	SLU 19	-6	-14	2042	-575.93	-53.97	-2.36
415	SLU 20	-6	-18	2055	-579.19	-54.32	-2.5
415	SLU 21	-6	-14	2042	-575.93	-53.97	-2.36
415	SLU 22	-6	-16	1874	-530.01	-49.58	-2.51
415	SLU 23	-6	-8	1853	-524.58	-49	-2.27
415	SLU 24	-6	-16	1874	-530.01	-49.58	-2.51
415	SLU 25	-6	-11	1861	-526.75	-49.23	-2.36
415	SLU 26	-6	-8	1853	-524.58	-49	-2.27
415	SLU 27	-6	-16	1874	-530.01	-49.58	-2.51
415	SLU 28	-6	-11	1861	-526.75	-49.23	-2.36
415	SLU 29	-6	-16	1874	-530.01	-49.58	-2.51
415	SLU 30	-6	-11	1861	-526.75	-49.23	-2.36
415	SLU 31	-6	-11	2125	-598.66	-56.15	-2.31
415	SLU 32	-6	-20	2146	-604.1	-56.72	-2.55
415	SLU 33	-6	-15	2133	-600.84	-56.38	-2.41
415	SLU 34	-6	-11	2125	-598.66	-56.15	-2.31
415	SLU 35	-6	-20	2146	-604.1	-56.72	-2.55
415	SLU 36	-6	-15	2133	-600.84	-56.38	-2.41
415	SLU 37	-6	-20	2146	-604.1	-56.72	-2.55
415	SLU 38	-6	-15	2133	-600.84	-56.38	-2.41
415	SLU 39	-6	-21	2263	-635.85	-59.79	-2.57
415	SLU 40	-6	-16	2250	-632.59	-59.44	-2.43
415	SLU 41	-6	-21	2263	-635.85	-59.79	-2.57
415	SLU 42	-6	-16	2250	-632.59	-59.44	-2.43
415	SLU 43	-8	-16	2095	-595.93	-55.47	-3.14
415	SLU 44	-8	-8	2073	-590.49	-54.89	-2.9

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
415	SLU 45	-8	-16	2095	-595.93	-55.47	-3.14
415	SLU 46	-8	-11	2082	-592.67	-55.12	-3
415	SLU 47	-8	-8	2073	-590.49	-54.89	-2.9
415	SLU 48	-8	-16	2095	-595.93	-55.47	-3.14
415	SLU 49	-8	-11	2082	-592.67	-55.12	-3
415	SLU 50	-8	-16	2095	-595.93	-55.47	-3.14
415	SLU 51	-8	-11	2082	-592.67	-55.12	-3
415	SLU 52	-8	-12	2345	-664.58	-62.04	-2.95
415	SLU 53	-8	-20	2367	-670.01	-62.62	-3.19
415	SLU 54	-8	-15	2354	-666.75	-62.27	-3.04
415	SLU 55	-8	-12	2345	-664.58	-62.04	-2.95
415	SLU 56	-8	-20	2367	-670.01	-62.62	-3.19
415	SLU 57	-8	-15	2354	-666.75	-62.27	-3.04
415	SLU 58	-8	-20	2367	-670.01	-62.62	-3.19
415	SLU 59	-8	-15	2354	-666.75	-62.27	-3.04
415	SLU 60	-8	-21	2484	-701.76	-65.68	-3.21
415	SLU 61	-8	-17	2471	-698.5	-65.33	-3.06
415	SLU 62	-8	-21	2484	-701.76	-65.68	-3.21
415	SLU 63	-8	-17	2471	-698.5	-65.33	-3.06
415	SLU 64	-8	-19	2303	-652.59	-60.93	-3.21
415	SLU 65	-8	-11	2281	-647.16	-60.36	-2.97
415	SLU 66	-8	-19	2303	-652.59	-60.93	-3.21
415	SLU 67	-8	-14	2290	-649.33	-60.59	-3.07
415	SLU 68	-8	-11	2281	-647.16	-60.36	-2.97
415	SLU 69	-8	-19	2303	-652.59	-60.93	-3.21
415	SLU 70	-8	-14	2290	-649.33	-60.59	-3.07
415	SLU 71	-8	-19	2303	-652.59	-60.93	-3.21
415	SLU 72	-8	-14	2290	-649.33	-60.59	-3.07
415	SLU 73	-8	-14	2553	-721.24	-67.5	-3.02
415	SLU 74	-8	-23	2575	-726.68	-68.08	-3.26
415	SLU 75	-8	-18	2562	-723.42	-67.74	-3.12
415	SLU 76	-8	-14	2553	-721.24	-67.5	-3.02
415	SLU 77	-8	-23	2575	-726.68	-68.08	-3.26
415	SLU 78	-8	-18	2562	-723.42	-67.74	-3.12
415	SLU 79	-8	-23	2575	-726.68	-68.08	-3.26
415	SLU 80	-8	-18	2562	-723.42	-67.74	-3.12
415	SLU 81	-8	-24	2692	-758.43	-71.15	-3.28
415	SLU 82	-8	-19	2679	-755.17	-70.8	-3.14
415	SLU 83	-8	-24	2692	-758.43	-71.15	-3.28
415	SLU 84	-8	-19	2679	-755.17	-70.8	-3.14
415	SLE RA 1	-6	-14	1726	-489.54	-45.67	-2.46
415	SLE RA 2	-6	-8	1711	-485.92	-45.29	-2.3
415	SLE RA 3	-6	-14	1726	-489.54	-45.67	-2.46
415	SLE RA 4	-6	-11	1717	-487.36	-45.44	-2.36
415	SLE RA 5	-6	-8	1711	-485.92	-45.29	-2.3
415	SLE RA 6	-6	-14	1726	-489.54	-45.67	-2.46
415	SLE RA 7	-6	-11	1717	-487.36	-45.44	-2.36
415	SLE RA 8	-6	-14	1726	-489.54	-45.67	-2.46
415	SLE RA 9	-6	-11	1717	-487.36	-45.44	-2.36
415	SLE RA 10	-6	-11	1893	-535.31	-50.05	-2.33
415	SLE RA 11	-6	-16	1907	-538.93	-50.44	-2.49
415	SLE RA 12	-6	-13	1899	-536.76	-50.21	-2.39
415	SLE RA 13	-6	-11	1893	-535.31	-50.05	-2.33
415	SLE RA 14	-6	-16	1907	-538.93	-50.44	-2.49
415	SLE RA 15	-6	-13	1899	-536.76	-50.21	-2.39
415	SLE RA 16	-6	-16	1907	-538.93	-50.44	-2.49
415	SLE RA 17	-6	-13	1899	-536.76	-50.21	-2.39
415	SLE RA 18	-6	-17	1985	-560.1	-52.48	-2.5
415	SLE RA 19	-6	-14	1976	-557.92	-52.25	-2.4
415	SLE RA 20	-6	-17	1985	-560.1	-52.48	-2.5
415	SLE RA 21	-6	-14	1976	-557.92	-52.25	-2.4
415	SLE FR 1	-6	-14	1726	-489.54	-45.67	-2.46
415	SLE FR 2	-6	-13	1723	-488.81	-45.59	-2.42
415	SLE FR 3	-6	-14	1726	-489.54	-45.67	-2.46
415	SLE FR 4	-6	-14	1801	-509.98	-47.64	-2.44
415	SLE FR 5	-6	-15	1804	-510.71	-47.71	-2.47
415	SLE FR 6	-6	-16	1855	-524.82	-49.08	-2.48
415	SLE QP 1	-6	-14	1726	-489.54	-45.67	-2.46
415	SLE QP 2	-6	-15	1804	-510.71	-47.71	-2.47
415	SLD 1	124	57	1930	-550.16	-50.74	44.77
415	SLD 2	100	30	1940	-552.77	-51	35.52
415	SLD 3	120	-34	2125	-599.64	-55.84	41.26
415	SLD 4	96	-62	2135	-602.26	-56.1	32.01
415	SLD 5	48	156	1541	-446.52	-40.79	20.44
415	SLD 6	22	127	1551	-449.24	-41.06	10.84
415	SLD 7	35	-150	2194	-611.48	-57.8	8.74
415	SLD 8	10	-178	2204	-614.19	-58.06	-0.86
415	SLD 9	-22	148	1403	-407.22	-37.37	-4.08
415	SLD 10	-47	120	1414	-409.94	-37.63	-13.68
415	SLD 11	-34	-157	2056	-572.18	-54.37	-15.78
415	SLD 12	-59	-186	2067	-574.89	-54.63	-25.38
415	SLD 13	-108	32	1472	-419.15	-39.33	-36.95
415	SLD 14	-132	5	1482	-421.77	-39.58	-46.2
415	SLD 15	-111	-60	1668	-468.64	-44.43	-40.46
415	SLD 16	-136	-87	1678	-471.26	-44.68	-49.71
415	SLV 1	291	149	2092	-601.13	-54.67	105.37

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
415	SLV 2	235	87	2115	-607.09	-55.24	84.28
415	SLV 3	283	-59	2537	-713.53	-66.25	97.41
415	SLV 4	227	-121	2560	-719.5	-66.83	76.31
415	SLV 5	116	373	1207	-365.16	-32.02	49.7
415	SLV 6	58	309	1231	-371.33	-32.61	27.9
415	SLV 7	88	-321	2690	-739.84	-70.64	23.15
415	SLV 8	31	-385	2714	-746.01	-71.23	1.34
415	SLV 9	-43	355	893	-275.4	-24.2	-6.28
415	SLV 10	-100	291	917	-281.57	-24.79	-28.09
415	SLV 11	-70	-338	2377	-650.08	-62.82	-32.84
415	SLV 12	-128	-402	2400	-656.25	-63.41	-54.64
415	SLV 13	-239	91	1047	-301.91	-28.6	-81.25
415	SLV 14	-294	29	1070	-307.88	-29.17	-102.35
415	SLV 15	-247	-117	1492	-414.32	-40.19	-89.22
415	SLV 16	-303	-179	1515	-420.29	-40.76	-110.31
415	CRTFP Ux+	0	0	0	0	0	0
415	CRTFP Ux-	0	0	0	0	0	0
415	CRTFP Uy+	0	0	0	0	0	0
415	CRTFP Uy-	0	0	0	0	0	0
416	SLU 1	-7	-14	1850	-471.87	3.29	-2.46
416	SLU 2	-7	-5	1825	-466.49	3.25	-2.44
416	SLU 3	-7	-14	1850	-471.87	3.29	-2.46
416	SLU 4	-7	-8	1835	-468.64	3.27	-2.45
416	SLU 5	-7	-5	1825	-466.49	3.25	-2.44
416	SLU 6	-7	-14	1850	-471.87	3.29	-2.46
416	SLU 7	-7	-8	1835	-468.64	3.27	-2.45
416	SLU 8	-7	-14	1850	-471.87	3.29	-2.46
416	SLU 9	-7	-8	1835	-468.64	3.27	-2.45
416	SLU 10	-7	-9	2125	-537.45	3.85	-2.38
416	SLU 11	-7	-18	2149	-542.83	3.9	-2.4
416	SLU 12	-7	-12	2135	-539.6	3.87	-2.39
416	SLU 13	-7	-9	2125	-537.45	3.85	-2.38
416	SLU 14	-7	-18	2149	-542.83	3.9	-2.4
416	SLU 15	-7	-12	2135	-539.6	3.87	-2.39
416	SLU 16	-7	-18	2149	-542.83	3.9	-2.4
416	SLU 17	-7	-12	2135	-539.6	3.87	-2.39
416	SLU 18	-7	-19	2278	-573.24	4.15	-2.37
416	SLU 19	-7	-14	2263	-570.02	4.13	-2.36
416	SLU 20	-7	-19	2278	-573.24	4.15	-2.37
416	SLU 21	-7	-14	2263	-570.02	4.13	-2.36
416	SLU 22	-7	-17	2079	-526.19	3.75	-2.46
416	SLU 23	-7	-7	2054	-520.81	3.71	-2.45
416	SLU 24	-7	-17	2079	-526.19	3.75	-2.46
416	SLU 25	-7	-11	2064	-522.96	3.73	-2.45
416	SLU 26	-7	-7	2054	-520.81	3.71	-2.45
416	SLU 27	-7	-17	2079	-526.19	3.75	-2.46
416	SLU 28	-7	-11	2064	-522.96	3.73	-2.45
416	SLU 29	-7	-17	2079	-526.19	3.75	-2.46
416	SLU 30	-7	-11	2064	-522.96	3.73	-2.45
416	SLU 31	-7	-11	2354	-591.77	4.32	-2.39
416	SLU 32	-7	-21	2378	-597.15	4.36	-2.4
416	SLU 33	-7	-15	2364	-593.92	4.33	-2.39
416	SLU 34	-7	-11	2354	-591.77	4.32	-2.39
416	SLU 35	-7	-21	2378	-597.15	4.36	-2.4
416	SLU 36	-7	-15	2364	-593.92	4.33	-2.39
416	SLU 37	-7	-21	2378	-597.15	4.36	-2.4
416	SLU 38	-7	-15	2364	-593.92	4.33	-2.39
416	SLU 39	-7	-22	2507	-627.56	4.61	-2.38
416	SLU 40	-7	-17	2492	-624.33	4.59	-2.37
416	SLU 41	-7	-22	2507	-627.56	4.61	-2.38
416	SLU 42	-7	-17	2492	-624.33	4.59	-2.37
416	SLU 43	-9	-17	2326	-594.81	4.12	-3.2
416	SLU 44	-9	-8	2302	-589.43	4.08	-3.18
416	SLU 45	-9	-17	2326	-594.81	4.12	-3.2
416	SLU 46	-9	-11	2311	-591.58	4.1	-3.19
416	SLU 47	-9	-8	2302	-589.43	4.08	-3.18
416	SLU 48	-9	-17	2326	-594.81	4.12	-3.2
416	SLU 49	-9	-11	2311	-591.58	4.1	-3.19
416	SLU 50	-9	-17	2326	-594.81	4.12	-3.2
416	SLU 51	-9	-11	2311	-591.58	4.1	-3.19
416	SLU 52	-9	-12	2601	-660.39	4.68	-3.12
416	SLU 53	-9	-21	2625	-665.77	4.72	-3.14
416	SLU 54	-9	-15	2611	-662.54	4.7	-3.13
416	SLU 55	-9	-12	2601	-660.39	4.68	-3.12
416	SLU 56	-9	-21	2625	-665.77	4.72	-3.14
416	SLU 57	-9	-15	2611	-662.54	4.7	-3.13
416	SLU 58	-9	-21	2625	-665.77	4.72	-3.14
416	SLU 59	-9	-15	2611	-662.54	4.7	-3.13
416	SLU 60	-9	-23	2754	-696.18	4.98	-3.11
416	SLU 61	-9	-17	2739	-692.95	4.96	-3.1
416	SLU 62	-9	-23	2754	-696.18	4.98	-3.11
416	SLU 63	-9	-17	2739	-692.95	4.96	-3.1
416	SLU 64	-9	-20	2555	-649.13	4.58	-3.2
416	SLU 65	-9	-11	2531	-643.75	4.54	-3.18
416	SLU 66	-9	-20	2555	-649.13	4.58	-3.2
416	SLU 67	-9	-14	2540	-645.9	4.56	-3.19

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
416	SLU 68	-9	-11	2531	-643.75	4.54	-3.18
416	SLU 69	-9	-20	2555	-649.13	4.58	-3.2
416	SLU 70	-9	-14	2540	-645.9	4.56	-3.19
416	SLU 71	-9	-20	2555	-649.13	4.58	-3.2
416	SLU 72	-9	-14	2540	-645.9	4.56	-3.19
416	SLU 73	-9	-15	2830	-714.71	5.15	-3.12
416	SLU 74	-9	-24	2855	-720.09	5.19	-3.14
416	SLU 75	-9	-18	2840	-716.86	5.16	-3.13
416	SLU 76	-9	-15	2830	-714.71	5.15	-3.12
416	SLU 77	-9	-24	2855	-720.09	5.19	-3.14
416	SLU 78	-9	-18	2840	-716.86	5.16	-3.13
416	SLU 79	-9	-24	2855	-720.09	5.19	-3.14
416	SLU 80	-9	-18	2840	-716.86	5.16	-3.13
416	SLU 81	-9	-25	2983	-750.5	5.44	-3.11
416	SLU 82	-9	-20	2969	-747.27	5.42	-3.1
416	SLU 83	-9	-25	2983	-750.5	5.44	-3.11
416	SLU 84	-9	-20	2969	-747.27	5.42	-3.1
416	SLE RA 1	-7	-15	1915	-487.39	3.42	-2.46
416	SLE RA 2	-7	-8	1899	-483.81	3.4	-2.45
416	SLE RA 3	-7	-15	1915	-487.39	3.42	-2.46
416	SLE RA 4	-7	-11	1905	-485.24	3.41	-2.45
416	SLE RA 5	-7	-8	1899	-483.81	3.4	-2.45
416	SLE RA 6	-7	-15	1915	-487.39	3.42	-2.46
416	SLE RA 7	-7	-11	1905	-485.24	3.41	-2.45
416	SLE RA 8	-7	-15	1915	-487.39	3.42	-2.46
416	SLE RA 9	-7	-11	1905	-485.24	3.41	-2.45
416	SLE RA 10	-7	-11	2099	-531.11	3.8	-2.41
416	SLE RA 11	-7	-17	2115	-534.7	3.83	-2.42
416	SLE RA 12	-7	-14	2105	-532.55	3.81	-2.41
416	SLE RA 13	-7	-11	2099	-531.11	3.8	-2.41
416	SLE RA 14	-7	-17	2115	-534.7	3.83	-2.42
416	SLE RA 15	-7	-14	2105	-532.55	3.81	-2.41
416	SLE RA 16	-7	-17	2115	-534.7	3.83	-2.42
416	SLE RA 17	-7	-14	2105	-532.55	3.81	-2.41
416	SLE RA 18	-7	-18	2200	-554.97	4	-2.4
416	SLE RA 19	-7	-15	2191	-552.82	3.98	-2.4
416	SLE RA 20	-7	-18	2200	-554.97	4	-2.4
416	SLE RA 21	-7	-15	2191	-552.82	3.98	-2.4
416	SLE FR 1	-7	-15	1915	-487.39	3.42	-2.46
416	SLE FR 2	-7	-13	1912	-486.67	3.42	-2.46
416	SLE FR 3	-7	-15	1915	-487.39	3.42	-2.46
416	SLE FR 4	-7	-14	1997	-506.95	3.59	-2.44
416	SLE FR 5	-7	-16	2001	-507.66	3.6	-2.44
416	SLE FR 6	-7	-16	2058	-521.18	3.71	-2.43
416	SLE QP 1	-7	-15	1915	-487.39	3.42	-2.46
416	SLE QP 2	-7	-16	2001	-507.66	3.6	-2.44
416	SLD 1	146	63	2126	-544.03	4.33	50.88
416	SLD 2	117	34	2136	-546.42	4.37	40.91
416	SLD 3	141	-39	2339	-591.09	4.85	49.55
416	SLD 4	113	-68	2350	-593.48	4.89	39.58
416	SLD 5	56	174	1711	-446.31	3.01	19.25
416	SLD 6	26	143	1722	-448.79	3.06	8.9
416	SLD 7	42	-167	2422	-603.19	4.74	14.81
416	SLD 8	12	-197	2433	-605.67	4.79	4.47
416	SLD 9	-26	166	1568	-409.66	2.41	-9.36
416	SLD 10	-56	135	1579	-412.14	2.45	-19.7
416	SLD 11	-40	-175	2280	-566.54	4.14	-13.79
416	SLD 12	-70	-205	2291	-569.02	4.18	-24.13
416	SLD 13	-127	37	1652	-421.85	2.3	-44.47
416	SLD 14	-156	7	1662	-424.24	2.35	-54.43
416	SLD 15	-131	-65	1865	-468.91	2.82	-45.8
416	SLD 16	-160	-95	1876	-471.3	2.87	-55.76
416	SLV 1	342	164	2288	-591.01	5.27	119.3
416	SLV 2	276	97	2312	-596.46	5.37	96.59
416	SLV 3	332	-68	2772	-697.91	6.44	116.27
416	SLV 4	267	-134	2796	-703.36	6.54	93.55
416	SLV 5	136	414	1343	-368.53	2.27	47.02
416	SLV 6	68	345	1368	-374.17	2.38	23.54
416	SLV 7	104	-359	2959	-724.88	6.2	36.9
416	SLV 8	36	-427	2983	-730.51	6.3	13.42
416	SLV 9	-51	396	1018	-284.82	0.89	-18.31
416	SLV 10	-119	327	1043	-290.45	0.99	-41.79
416	SLV 11	-83	-377	2634	-641.16	4.82	-28.42
416	SLV 12	-150	-445	2658	-646.8	4.92	-51.9
416	SLV 13	-281	103	1205	-311.97	0.65	-98.44
416	SLV 14	-347	37	1229	-317.42	0.75	-121.15
416	SLV 15	-291	-129	1690	-418.87	1.83	-101.47
416	SLV 16	-356	-195	1713	-424.32	1.93	-124.19
416	CRTFP Ux+	0	0	0	0	0	0
416	CRTFP Ux-	0	0	0	0	0	0
416	CRTFP Uy+	0	0	0	0	0	0
416	CRTFP Uy-	0	0	0	0	0	0
417	SLU 1	-7	-11	1755	-403.35	2.49	-2.5
417	SLU 2	-7	-2	1732	-398.82	2.46	-2.48
417	SLU 3	-7	-11	1755	-403.35	2.49	-2.5
417	SLU 4	-7	-6	1741	-400.63	2.47	-2.49

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
417	SLU 5	-7	-2	1732	-398.82	2.46	-2.48
417	SLU 6	-7	-11	1755	-403.35	2.49	-2.5
417	SLU 7	-7	-6	1741	-400.63	2.47	-2.49
417	SLU 8	-7	-11	1755	-403.35	2.49	-2.5
417	SLU 9	-7	-6	1741	-400.63	2.47	-2.49
417	SLU 10	-7	-6	2015	-456.76	2.91	-2.43
417	SLU 11	-7	-14	2038	-461.28	2.94	-2.45
417	SLU 12	-7	-9	2024	-458.57	2.92	-2.44
417	SLU 13	-7	-6	2015	-456.76	2.91	-2.43
417	SLU 14	-7	-14	2038	-461.28	2.94	-2.45
417	SLU 15	-7	-9	2024	-458.57	2.92	-2.44
417	SLU 16	-7	-14	2038	-461.28	2.94	-2.45
417	SLU 17	-7	-9	2024	-458.57	2.92	-2.44
417	SLU 18	-7	-16	2159	-486.11	3.13	-2.43
417	SLU 19	-7	-11	2145	-483.4	3.11	-2.42
417	SLU 20	-7	-16	2159	-486.11	3.13	-2.43
417	SLU 21	-7	-11	2145	-483.4	3.11	-2.42
417	SLU 22	-8	-14	1971	-447.74	2.84	-2.52
417	SLU 23	-7	-5	1948	-443.21	2.8	-2.49
417	SLU 24	-8	-14	1971	-447.74	2.84	-2.52
417	SLU 25	-7	-8	1957	-445.02	2.82	-2.5
417	SLU 26	-7	-5	1948	-443.21	2.8	-2.49
417	SLU 27	-8	-14	1971	-447.74	2.84	-2.52
417	SLU 28	-7	-8	1957	-445.02	2.82	-2.5
417	SLU 29	-8	-14	1971	-447.74	2.84	-2.52
417	SLU 30	-7	-8	1957	-445.02	2.82	-2.5
417	SLU 31	-7	-8	2231	-501.15	3.25	-2.45
417	SLU 32	-7	-17	2254	-505.67	3.28	-2.47
417	SLU 33	-7	-12	2240	-502.96	3.26	-2.46
417	SLU 34	-7	-8	2231	-501.15	3.25	-2.45
417	SLU 35	-7	-17	2254	-505.67	3.28	-2.47
417	SLU 36	-7	-12	2240	-502.96	3.26	-2.46
417	SLU 37	-7	-17	2254	-505.67	3.28	-2.47
417	SLU 38	-7	-12	2240	-502.96	3.26	-2.46
417	SLU 39	-7	-18	2375	-530.5	3.47	-2.45
417	SLU 40	-7	-13	2361	-527.78	3.45	-2.43
417	SLU 41	-7	-18	2375	-530.5	3.47	-2.45
417	SLU 42	-7	-13	2361	-527.78	3.45	-2.43
417	SLU 43	-10	-14	2208	-509.13	3.12	-3.25
417	SLU 44	-10	-5	2185	-504.61	3.09	-3.23
417	SLU 45	-10	-14	2208	-509.13	3.12	-3.25
417	SLU 46	-10	-8	2194	-506.42	3.1	-3.23
417	SLU 47	-10	-5	2185	-504.61	3.09	-3.23
417	SLU 48	-10	-14	2208	-509.13	3.12	-3.25
417	SLU 49	-10	-8	2194	-506.42	3.1	-3.23
417	SLU 50	-10	-14	2208	-509.13	3.12	-3.25
417	SLU 51	-10	-8	2194	-506.42	3.1	-3.23
417	SLU 52	-9	-8	2467	-562.54	3.54	-3.18
417	SLU 53	-10	-17	2490	-567.07	3.57	-3.2
417	SLU 54	-9	-12	2476	-564.35	3.55	-3.19
417	SLU 55	-9	-8	2467	-562.54	3.54	-3.18
417	SLU 56	-10	-17	2490	-567.07	3.57	-3.2
417	SLU 57	-9	-12	2476	-564.35	3.55	-3.19
417	SLU 58	-10	-17	2490	-567.07	3.57	-3.2
417	SLU 59	-9	-12	2476	-564.35	3.55	-3.19
417	SLU 60	-10	-18	2611	-591.9	3.76	-3.18
417	SLU 61	-9	-13	2598	-589.18	3.74	-3.17
417	SLU 62	-10	-18	2611	-591.9	3.76	-3.18
417	SLU 63	-9	-13	2598	-589.18	3.74	-3.17
417	SLU 64	-10	-16	2424	-553.52	3.47	-3.26
417	SLU 65	-10	-7	2401	-549	3.43	-3.24
417	SLU 66	-10	-16	2424	-553.52	3.47	-3.26
417	SLU 67	-10	-11	2410	-550.81	3.45	-3.25
417	SLU 68	-10	-7	2401	-549	3.43	-3.24
417	SLU 69	-10	-16	2424	-553.52	3.47	-3.26
417	SLU 70	-10	-11	2410	-550.81	3.45	-3.25
417	SLU 71	-10	-16	2424	-553.52	3.47	-3.26
417	SLU 72	-10	-11	2410	-550.81	3.45	-3.25
417	SLU 73	-10	-11	2683	-606.93	3.88	-3.19
417	SLU 74	-10	-19	2706	-611.46	3.91	-3.21
417	SLU 75	-10	-14	2693	-608.74	3.89	-3.2
417	SLU 76	-10	-11	2683	-606.93	3.88	-3.19
417	SLU 77	-10	-19	2706	-611.46	3.91	-3.21
417	SLU 78	-10	-14	2693	-608.74	3.89	-3.2
417	SLU 79	-10	-19	2706	-611.46	3.91	-3.21
417	SLU 80	-10	-14	2693	-608.74	3.89	-3.2
417	SLU 81	-10	-21	2827	-636.28	4.11	-3.19
417	SLU 82	-10	-16	2814	-633.57	4.09	-3.18
417	SLU 83	-10	-21	2827	-636.28	4.11	-3.19
417	SLU 84	-10	-16	2814	-633.57	4.09	-3.18
417	SLE RA 1	-7	-12	1817	-416.03	2.59	-2.51
417	SLE RA 2	-7	-6	1802	-413.02	2.57	-2.49
417	SLE RA 3	-7	-12	1817	-416.03	2.59	-2.51
417	SLE RA 4	-7	-8	1808	-414.22	2.58	-2.5
417	SLE RA 5	-7	-6	1802	-413.02	2.57	-2.49
417	SLE RA 6	-7	-12	1817	-416.03	2.59	-2.51

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
417	SLE RA 7	-7	-8	1808	-414.22	2.58	-2.5
417	SLE RA 8	-7	-12	1817	-416.03	2.59	-2.51
417	SLE RA 9	-7	-8	1808	-414.22	2.58	-2.5
417	SLE RA 10	-7	-8	1990	-451.64	2.87	-2.46
417	SLE RA 11	-7	-14	2005	-454.65	2.89	-2.47
417	SLE RA 12	-7	-10	1996	-452.84	2.88	-2.47
417	SLE RA 13	-7	-8	1990	-451.64	2.87	-2.46
417	SLE RA 14	-7	-14	2005	-454.65	2.89	-2.47
417	SLE RA 15	-7	-10	1996	-452.84	2.88	-2.47
417	SLE RA 16	-7	-14	2005	-454.65	2.89	-2.47
417	SLE RA 17	-7	-10	1996	-452.84	2.88	-2.47
417	SLE RA 18	-7	-15	2086	-471.21	3.02	-2.46
417	SLE RA 19	-7	-11	2077	-469.4	3	-2.45
417	SLE RA 20	-7	-15	2086	-471.21	3.02	-2.46
417	SLE RA 21	-7	-11	2077	-469.4	3	-2.45
417	SLE FR 1	-7	-12	1817	-416.03	2.59	-2.51
417	SLE FR 2	-7	-11	1814	-415.43	2.59	-2.5
417	SLE FR 3	-7	-12	1817	-416.03	2.59	-2.51
417	SLE FR 4	-7	-12	1895	-431.98	2.71	-2.49
417	SLE FR 5	-7	-13	1898	-432.58	2.72	-2.49
417	SLE FR 6	-7	-13	1952	-443.62	2.8	-2.48
417	SLE QP 1	-7	-12	1817	-416.03	2.59	-2.51
417	SLE QP 2	-7	-13	1898	-432.58	2.72	-2.49
417	SLD 1	146	60	2000	-459.86	3.38	50.88
417	SLD 2	117	34	2009	-461.65	3.42	40.91
417	SLD 3	141	-36	2198	-497.65	3.79	49.58
417	SLD 4	113	-62	2208	-499.44	3.83	39.61
417	SLD 5	55	164	1625	-382.8	2.28	19.18
417	SLD 6	25	137	1634	-384.66	2.32	8.83
417	SLD 7	42	-155	2285	-508.75	3.65	14.83
417	SLD 8	12	-183	2295	-510.61	3.69	4.48
417	SLD 9	-27	157	1501	-354.56	1.74	-9.46
417	SLD 10	-56	130	1510	-356.41	1.78	-19.82
417	SLD 11	-40	-163	2161	-480.51	3.12	-13.81
417	SLD 12	-70	-190	2171	-482.37	3.16	-24.16
417	SLD 13	-127	36	1588	-365.73	1.61	-44.59
417	SLD 14	-156	10	1597	-367.52	1.64	-54.57
417	SLD 15	-132	-60	1786	-403.51	2.02	-45.9
417	SLD 16	-160	-86	1795	-405.3	2.06	-55.87
417	SLV 1	342	153	2133	-495.13	4.23	119.38
417	SLV 2	276	93	2154	-499.21	4.32	96.64
417	SLV 3	332	-64	2583	-580.96	5.17	116.41
417	SLV 4	267	-124	2604	-585.04	5.26	93.67
417	SLV 5	136	389	1278	-319.67	1.72	46.93
417	SLV 6	68	327	1299	-323.89	1.81	23.42
417	SLV 7	104	-337	2779	-605.78	4.84	37
417	SLV 8	37	-398	2800	-610	4.93	13.5
417	SLV 9	-51	373	995	-255.17	0.5	-18.48
417	SLV 10	-119	311	1017	-259.39	0.59	-41.99
417	SLV 11	-83	-353	2496	-541.28	3.63	-28.41
417	SLV 12	-150	-415	2517	-545.5	3.72	-51.91
417	SLV 13	-282	99	1191	-280.13	0.18	-98.65
417	SLV 14	-347	39	1212	-284.21	0.27	-121.39
417	SLV 15	-291	-119	1641	-365.96	1.12	-101.63
417	SLV 16	-357	-179	1662	-370.04	1.2	-124.37
417	CRTFP Ux+	0	0	0	0	0	0
417	CRTFP Ux-	0	0	0	0	0	0
417	CRTFP Uy+	0	0	0	0	0	0
417	CRTFP Uy-	0	0	0	0	0	0
418	SLU 1	-8	-8	1688	-357.27	1.64	-2.53
418	SLU 2	-7	1	1666	-353.36	1.61	-2.5
418	SLU 3	-8	-8	1688	-357.27	1.64	-2.53
418	SLU 4	-7	-3	1675	-354.93	1.62	-2.51
418	SLU 5	-7	1	1666	-353.36	1.61	-2.5
418	SLU 6	-8	-8	1688	-357.27	1.64	-2.53
418	SLU 7	-7	-3	1675	-354.93	1.62	-2.51
418	SLU 8	-8	-8	1688	-357.27	1.64	-2.53
418	SLU 9	-7	-3	1675	-354.93	1.62	-2.51
418	SLU 10	-7	-2	1937	-402.61	1.89	-2.46
418	SLU 11	-8	-10	1959	-406.52	1.92	-2.49
418	SLU 12	-7	-5	1945	-404.17	1.9	-2.48
418	SLU 13	-7	-2	1937	-402.61	1.89	-2.46
418	SLU 14	-8	-10	1959	-406.52	1.92	-2.49
418	SLU 15	-7	-5	1945	-404.17	1.9	-2.48
418	SLU 16	-8	-10	1959	-406.52	1.92	-2.49
418	SLU 17	-7	-5	1945	-404.17	1.9	-2.48
418	SLU 18	-8	-11	2075	-427.62	2.04	-2.48
418	SLU 19	-7	-6	2061	-425.28	2.02	-2.46
418	SLU 20	-8	-11	2075	-427.62	2.04	-2.48
418	SLU 21	-7	-6	2061	-425.28	2.02	-2.46
418	SLU 22	-8	-9	1895	-395.04	1.85	-2.55
418	SLU 23	-8	-1	1873	-391.13	1.83	-2.52
418	SLU 24	-8	-9	1895	-395.04	1.85	-2.55
418	SLU 25	-8	-4	1882	-392.69	1.84	-2.54
418	SLU 26	-8	-1	1873	-391.13	1.83	-2.52
418	SLU 27	-8	-9	1895	-395.04	1.85	-2.55

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
418	SLU 28	-8	-4	1882	-392.69	1.84	-2.54
418	SLU 29	-8	-9	1895	-395.04	1.85	-2.55
418	SLU 30	-8	-4	1882	-392.69	1.84	-2.54
418	SLU 31	-8	-4	2144	-440.37	2.11	-2.49
418	SLU 32	-8	-12	2166	-444.28	2.14	-2.52
418	SLU 33	-8	-7	2152	-441.94	2.12	-2.5
418	SLU 34	-8	-4	2144	-440.37	2.11	-2.49
418	SLU 35	-8	-12	2166	-444.28	2.14	-2.52
418	SLU 36	-8	-7	2152	-441.94	2.12	-2.5
418	SLU 37	-8	-12	2166	-444.28	2.14	-2.52
418	SLU 38	-8	-7	2152	-441.94	2.12	-2.5
418	SLU 39	-8	-13	2282	-465.39	2.26	-2.51
418	SLU 40	-8	-8	2268	-463.04	2.24	-2.49
418	SLU 41	-8	-13	2282	-465.39	2.26	-2.51
418	SLU 42	-8	-8	2268	-463.04	2.24	-2.49
418	SLU 43	-10	-9	2123	-451.5	2.06	-3.28
418	SLU 44	-10	-1	2101	-447.6	2.03	-3.25
418	SLU 45	-10	-9	2123	-451.5	2.06	-3.28
418	SLU 46	-10	-4	2110	-449.16	2.04	-3.26
418	SLU 47	-10	-1	2101	-447.6	2.03	-3.25
418	SLU 48	-10	-9	2123	-451.5	2.06	-3.28
418	SLU 49	-10	-4	2110	-449.16	2.04	-3.26
418	SLU 50	-10	-9	2123	-451.5	2.06	-3.28
418	SLU 51	-10	-4	2110	-449.16	2.04	-3.26
418	SLU 52	-10	-3	2372	-496.84	2.31	-3.21
418	SLU 53	-10	-12	2394	-500.75	2.34	-3.24
418	SLU 54	-10	-7	2381	-498.4	2.32	-3.23
418	SLU 55	-10	-3	2372	-496.84	2.31	-3.21
418	SLU 56	-10	-12	2394	-500.75	2.34	-3.24
418	SLU 57	-10	-7	2381	-498.4	2.32	-3.23
418	SLU 58	-10	-12	2394	-500.75	2.34	-3.24
418	SLU 59	-10	-7	2381	-498.4	2.32	-3.23
418	SLU 60	-10	-13	2510	-521.85	2.46	-3.23
418	SLU 61	-10	-8	2497	-519.51	2.44	-3.21
418	SLU 62	-10	-13	2510	-521.85	2.46	-3.23
418	SLU 63	-10	-8	2497	-519.51	2.44	-3.21
418	SLU 64	-10	-11	2330	-489.27	2.27	-3.3
418	SLU 65	-10	-3	2308	-485.36	2.25	-3.27
418	SLU 66	-10	-11	2330	-489.27	2.27	-3.3
418	SLU 67	-10	-6	2317	-486.93	2.26	-3.29
418	SLU 68	-10	-3	2308	-485.36	2.25	-3.27
418	SLU 69	-10	-11	2330	-489.27	2.27	-3.3
418	SLU 70	-10	-6	2317	-486.93	2.26	-3.29
418	SLU 71	-10	-11	2330	-489.27	2.27	-3.3
418	SLU 72	-10	-6	2317	-486.93	2.26	-3.29
418	SLU 73	-10	-5	2579	-534.61	2.53	-3.24
418	SLU 74	-10	-14	2601	-538.51	2.55	-3.27
418	SLU 75	-10	-9	2588	-536.17	2.54	-3.25
418	SLU 76	-10	-5	2579	-534.61	2.53	-3.24
418	SLU 77	-10	-14	2601	-538.51	2.55	-3.27
418	SLU 78	-10	-9	2588	-536.17	2.54	-3.25
418	SLU 79	-10	-14	2601	-538.51	2.55	-3.27
418	SLU 80	-10	-9	2588	-536.17	2.54	-3.25
418	SLU 81	-10	-15	2717	-559.62	2.67	-3.26
418	SLU 82	-10	-10	2704	-557.27	2.66	-3.24
418	SLU 83	-10	-15	2717	-559.62	2.67	-3.26
418	SLU 84	-10	-10	2704	-557.27	2.66	-3.24
418	SLE RA 1	-8	-8	1747	-368.06	1.7	-2.53
418	SLE RA 2	-8	-3	1732	-365.46	1.68	-2.52
418	SLE RA 3	-8	-8	1747	-368.06	1.7	-2.53
418	SLE RA 4	-8	-5	1738	-366.5	1.69	-2.52
418	SLE RA 5	-8	-3	1732	-365.46	1.68	-2.52
418	SLE RA 6	-8	-8	1747	-368.06	1.7	-2.53
418	SLE RA 7	-8	-5	1738	-366.5	1.69	-2.52
418	SLE RA 8	-8	-8	1747	-368.06	1.7	-2.53
418	SLE RA 9	-8	-5	1738	-366.5	1.69	-2.52
418	SLE RA 10	-8	-4	1913	-398.29	1.87	-2.49
418	SLE RA 11	-8	-10	1928	-400.89	1.89	-2.51
418	SLE RA 12	-8	-6	1919	-399.33	1.88	-2.5
418	SLE RA 13	-8	-4	1913	-398.29	1.87	-2.49
418	SLE RA 14	-8	-10	1928	-400.89	1.89	-2.51
418	SLE RA 15	-8	-6	1919	-399.33	1.88	-2.5
418	SLE RA 16	-8	-10	1928	-400.89	1.89	-2.51
418	SLE RA 17	-8	-6	1919	-399.33	1.88	-2.5
418	SLE RA 18	-8	-11	2005	-414.96	1.97	-2.5
418	SLE RA 19	-8	-7	1996	-413.4	1.96	-2.49
418	SLE RA 20	-8	-11	2005	-414.96	1.97	-2.5
418	SLE RA 21	-8	-7	1996	-413.4	1.96	-2.49
418	SLE FR 1	-8	-8	1747	-368.06	1.7	-2.53
418	SLE FR 2	-8	-7	1744	-367.54	1.7	-2.53
418	SLE FR 3	-8	-8	1747	-368.06	1.7	-2.53
418	SLE FR 4	-8	-8	1822	-381.61	1.78	-2.52
418	SLE FR 5	-8	-9	1825	-382.13	1.78	-2.53
418	SLE FR 6	-8	-9	1876	-391.51	1.83	-2.52
418	SLE QP 1	-8	-8	1747	-368.06	1.7	-2.53
418	SLE QP 2	-8	-9	1825	-382.13	1.78	-2.53

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
418	SLD 1	145	59	1907	-401.85	2.38	50.9
418	SLD 2	117	35	1915	-403.2	2.41	40.92
418	SLD 3	141	-31	2093	-433.11	2.67	49.62
418	SLD 4	113	-55	2101	-434.46	2.71	39.64
418	SLD 5	55	156	1563	-340.14	1.5	19.13
418	SLD 6	25	132	1571	-341.54	1.53	8.77
418	SLD 7	42	-143	2185	-444.34	2.49	14.86
418	SLD 8	12	-168	2194	-445.74	2.52	4.49
418	SLD 9	-27	150	1455	-318.53	1.04	-9.54
418	SLD 10	-57	126	1464	-319.93	1.07	-19.91
418	SLD 11	-40	-150	2078	-422.72	2.03	-13.82
418	SLD 12	-70	-174	2086	-424.12	2.06	-24.18
418	SLD 13	-128	37	1548	-329.8	0.85	-44.69
418	SLD 14	-157	13	1556	-331.15	0.89	-54.67
418	SLD 15	-132	-53	1734	-361.06	1.15	-45.97
418	SLD 16	-161	-76	1742	-362.41	1.18	-55.95
418	SLV 1	342	145	2013	-427.37	3.14	119.46
418	SLV 2	276	91	2031	-430.44	3.22	96.7
418	SLV 3	333	-59	2437	-498.37	3.82	116.53
418	SLV 4	267	-113	2455	-501.45	3.89	93.77
418	SLV 5	135	367	1232	-286.88	1.14	46.86
418	SLV 6	67	311	1250	-290.06	1.22	23.34
418	SLV 7	105	-314	2645	-523.57	3.39	37.1
418	SLV 8	37	-369	2663	-526.75	3.46	13.57
418	SLV 9	-52	352	986	-237.51	0.1	-18.62
418	SLV 10	-120	296	1004	-240.69	0.17	-42.15
418	SLV 11	-83	-329	2399	-474.21	2.35	-28.39
418	SLV 12	-150	-384	2417	-477.38	2.42	-51.91
418	SLV 13	-282	95	1194	-262.82	-0.33	-98.82
418	SLV 14	-348	42	1212	-265.89	-0.26	-121.59
418	SLV 15	-291	-109	1618	-333.82	0.34	-101.75
418	SLV 16	-357	-163	1636	-336.9	0.42	-124.51
418	CRTFP Ux+	0	0	0	0	0	0
418	CRTFP Ux-	0	0	0	0	0	0
418	CRTFP Uy+	0	0	0	0	0	0
418	CRTFP Uy-	0	0	0	0	0	0
419	SLU 1	-8	-3	1649	-333.2	0.79	-2.53
419	SLU 2	-7	5	1627	-329.68	0.77	-2.49
419	SLU 3	-8	-3	1649	-333.2	0.79	-2.53
419	SLU 4	-8	1	1636	-331.09	0.78	-2.51
419	SLU 5	-7	5	1627	-329.68	0.77	-2.49
419	SLU 6	-8	-3	1649	-333.2	0.79	-2.53
419	SLU 7	-8	1	1636	-331.09	0.78	-2.51
419	SLU 8	-8	-3	1649	-333.2	0.79	-2.53
419	SLU 9	-8	1	1636	-331.09	0.78	-2.51
419	SLU 10	-8	3	1892	-374.48	0.88	-2.48
419	SLU 11	-8	-5	1913	-378.01	0.9	-2.52
419	SLU 12	-8	0	1900	-375.89	0.89	-2.49
419	SLU 13	-8	3	1892	-374.48	0.88	-2.48
419	SLU 14	-8	-5	1913	-378.01	0.9	-2.52
419	SLU 15	-8	0	1900	-375.89	0.89	-2.49
419	SLU 16	-8	-5	1913	-378.01	0.9	-2.52
419	SLU 17	-8	0	1900	-375.89	0.89	-2.49
419	SLU 18	-8	-6	2026	-397.21	0.95	-2.51
419	SLU 19	-8	-1	2013	-395.1	0.94	-2.48
419	SLU 20	-8	-6	2026	-397.21	0.95	-2.51
419	SLU 21	-8	-1	2013	-395.1	0.94	-2.48
419	SLU 22	-8	-5	1851	-367.59	0.88	-2.57
419	SLU 23	-8	3	1829	-364.06	0.86	-2.53
419	SLU 24	-8	-5	1851	-367.59	0.88	-2.57
419	SLU 25	-8	0	1838	-365.47	0.87	-2.55
419	SLU 26	-8	3	1829	-364.06	0.86	-2.53
419	SLU 27	-8	-5	1851	-367.59	0.88	-2.57
419	SLU 28	-8	0	1838	-365.47	0.87	-2.55
419	SLU 29	-8	-5	1851	-367.59	0.88	-2.57
419	SLU 30	-8	0	1838	-365.47	0.87	-2.55
419	SLU 31	-8	2	2094	-408.87	0.97	-2.52
419	SLU 32	-8	-6	2115	-412.39	0.99	-2.55
419	SLU 33	-8	-1	2102	-410.28	0.98	-2.53
419	SLU 34	-8	2	2094	-408.87	0.97	-2.52
419	SLU 35	-8	-6	2115	-412.39	0.99	-2.55
419	SLU 36	-8	-1	2102	-410.28	0.98	-2.53
419	SLU 37	-8	-6	2115	-412.39	0.99	-2.55
419	SLU 38	-8	-1	2102	-410.28	0.98	-2.53
419	SLU 39	-8	-7	2228	-431.6	1.04	-2.55
419	SLU 40	-8	-2	2215	-429.48	1.03	-2.52
419	SLU 41	-8	-7	2228	-431.6	1.04	-2.55
419	SLU 42	-8	-2	2215	-429.48	1.03	-2.52
419	SLU 43	-10	-4	2074	-421.37	0.99	-3.28
419	SLU 44	-10	4	2053	-417.85	0.97	-3.24
419	SLU 45	-10	-4	2074	-421.37	0.99	-3.28
419	SLU 46	-10	1	2061	-419.26	0.98	-3.26
419	SLU 47	-10	4	2053	-417.85	0.97	-3.24
419	SLU 48	-10	-4	2074	-421.37	0.99	-3.28
419	SLU 49	-10	1	2061	-419.26	0.98	-3.26
419	SLU 50	-10	-4	2074	-421.37	0.99	-3.28

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
419	SLU 51	-10	1	2061	-419.26	0.98	-3.26
419	SLU 52	-10	2	2317	-462.65	1.09	-3.22
419	SLU 53	-10	-6	2338	-466.18	1.11	-3.26
419	SLU 54	-10	-1	2325	-464.06	1.1	-3.24
419	SLU 55	-10	2	2317	-462.65	1.09	-3.22
419	SLU 56	-10	-6	2338	-466.18	1.11	-3.26
419	SLU 57	-10	-1	2325	-464.06	1.1	-3.24
419	SLU 58	-10	-6	2338	-466.18	1.11	-3.26
419	SLU 59	-10	-1	2325	-464.06	1.1	-3.24
419	SLU 60	-10	-6	2452	-485.38	1.16	-3.25
419	SLU 61	-10	-2	2439	-483.27	1.15	-3.23
419	SLU 62	-10	-6	2452	-485.38	1.16	-3.25
419	SLU 63	-10	-2	2439	-483.27	1.15	-3.23
419	SLU 64	-10	-5	2276	-455.76	1.08	-3.32
419	SLU 65	-10	3	2255	-452.23	1.06	-3.28
419	SLU 66	-10	-5	2276	-455.76	1.08	-3.32
419	SLU 67	-10	0	2263	-453.64	1.07	-3.29
419	SLU 68	-10	3	2255	-452.23	1.06	-3.28
419	SLU 69	-10	-5	2276	-455.76	1.08	-3.32
419	SLU 70	-10	0	2263	-453.64	1.07	-3.29
419	SLU 71	-10	-5	2276	-455.76	1.08	-3.32
419	SLU 72	-10	0	2263	-453.64	1.07	-3.29
419	SLU 73	-10	1	2519	-497.04	1.18	-3.26
419	SLU 74	-10	-7	2540	-500.56	1.2	-3.3
419	SLU 75	-10	-2	2527	-498.45	1.19	-3.28
419	SLU 76	-10	1	2519	-497.04	1.18	-3.26
419	SLU 77	-10	-7	2540	-500.56	1.2	-3.3
419	SLU 78	-10	-2	2527	-498.45	1.19	-3.28
419	SLU 79	-10	-7	2540	-500.56	1.2	-3.3
419	SLU 80	-10	-2	2527	-498.45	1.19	-3.28
419	SLU 81	-10	-8	2654	-519.77	1.25	-3.29
419	SLU 82	-10	-3	2641	-517.65	1.24	-3.27
419	SLU 83	-10	-8	2654	-519.77	1.25	-3.29
419	SLU 84	-10	-3	2641	-517.65	1.24	-3.27
419	SLE RA 1	-8	-4	1706	-343.03	0.81	-2.54
419	SLE RA 2	-8	2	1692	-340.68	0.8	-2.52
419	SLE RA 3	-8	-4	1706	-343.03	0.81	-2.54
419	SLE RA 4	-8	-1	1698	-341.62	0.81	-2.53
419	SLE RA 5	-8	2	1692	-340.68	0.8	-2.52
419	SLE RA 6	-8	-4	1706	-343.03	0.81	-2.54
419	SLE RA 7	-8	-1	1698	-341.62	0.81	-2.53
419	SLE RA 8	-8	-4	1706	-343.03	0.81	-2.54
419	SLE RA 9	-8	-1	1698	-341.62	0.81	-2.53
419	SLE RA 10	-8	1	1868	-370.55	0.88	-2.51
419	SLE RA 11	-8	-5	1883	-372.9	0.89	-2.53
419	SLE RA 12	-8	-2	1874	-371.49	0.88	-2.52
419	SLE RA 13	-8	1	1868	-370.55	0.88	-2.51
419	SLE RA 14	-8	-5	1883	-372.9	0.89	-2.53
419	SLE RA 15	-8	-2	1874	-371.49	0.88	-2.52
419	SLE RA 16	-8	-5	1883	-372.9	0.89	-2.53
419	SLE RA 17	-8	-2	1874	-371.49	0.88	-2.52
419	SLE RA 18	-8	-5	1958	-385.7	0.92	-2.53
419	SLE RA 19	-8	-2	1950	-384.29	0.92	-2.51
419	SLE RA 20	-8	-5	1958	-385.7	0.92	-2.53
419	SLE RA 21	-8	-2	1950	-384.29	0.92	-2.51
419	SLE FR 1	-8	-4	1706	-343.03	0.81	-2.54
419	SLE FR 2	-8	-3	1704	-342.56	0.81	-2.54
419	SLE FR 3	-8	-4	1706	-343.03	0.81	-2.54
419	SLE FR 4	-8	-3	1779	-355.36	0.84	-2.53
419	SLE FR 5	-8	-4	1782	-355.83	0.85	-2.54
419	SLE FR 6	-8	-5	1832	-364.36	0.87	-2.54
419	SLE QP 1	-8	-4	1706	-343.03	0.81	-2.54
419	SLE QP 2	-8	-4	1782	-355.83	0.85	-2.54
419	SLD 1	145	58	1846	-369.34	1.38	50.93
419	SLD 2	117	38	1853	-370.4	1.41	40.94
419	SLD 3	141	-26	2025	-396.79	1.56	49.66
419	SLD 4	113	-47	2032	-397.84	1.59	39.67
419	SLD 5	55	150	1527	-317.86	0.72	19.1
419	SLD 6	25	129	1534	-318.96	0.75	8.73
419	SLD 7	42	-131	2123	-409.35	1.32	14.89
419	SLD 8	12	-153	2131	-410.45	1.35	4.52
419	SLD 9	-27	144	1433	-301.2	0.34	-9.6
419	SLD 10	-57	123	1440	-302.3	0.37	-19.97
419	SLD 11	-40	-137	2029	-392.69	0.94	-13.81
419	SLD 12	-70	-159	2037	-393.79	0.97	-24.18
419	SLD 13	-128	38	1532	-313.81	0.1	-44.75
419	SLD 14	-157	17	1539	-314.87	0.13	-54.74
419	SLD 15	-132	-46	1711	-341.26	0.28	-46.01
419	SLD 16	-161	-67	1718	-342.31	0.31	-56.01
419	SLV 1	342	138	1929	-386.85	2.07	119.54
419	SLV 2	276	91	1945	-389.27	2.13	96.76
419	SLV 3	333	-53	2335	-449.21	2.48	116.65
419	SLV 4	267	-101	2351	-451.62	2.54	93.88
419	SLV 5	135	347	1204	-269.68	0.57	46.82
419	SLV 6	67	297	1220	-272.18	0.63	23.27
419	SLV 7	105	-292	2558	-477.52	1.93	37.2

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
419	SLV 8	37	-341	2575	-480.02	2	13.65
419	SLV 9	-53	333	989	-231.64	-0.31	-18.73
419	SLV 10	-120	284	1005	-234.13	-0.24	-42.27
419	SLV 11	-82	-306	2344	-439.48	1.06	-28.35
419	SLV 12	-150	-355	2360	-441.97	1.12	-51.9
419	SLV 13	-283	92	1213	-260.04	-0.85	-98.95
419	SLV 14	-348	45	1229	-262.45	-0.79	-121.73
419	SLV 15	-292	-99	1619	-322.39	-0.44	-101.84
419	SLV 16	-357	-147	1635	-324.8	-0.38	-124.62
419	CRTFP Ux+	0	0	0	0	0	0
419	CRTFP Ux-	0	0	0	0	0	0
419	CRTFP Uy+	0	0	0	0	0	0
419	CRTFP Uy-	0	0	0	0	0	0
420	SLU 1	-8	1	1636	-330.04	-0.01	-2.51
420	SLU 2	-7	9	1615	-326.7	-0.02	-2.46
420	SLU 3	-8	1	1636	-330.04	-0.01	-2.51
420	SLU 4	-8	6	1624	-328.04	-0.02	-2.48
420	SLU 5	-7	9	1615	-326.7	-0.02	-2.46
420	SLU 6	-8	1	1636	-330.04	-0.01	-2.51
420	SLU 7	-8	6	1624	-328.04	-0.02	-2.48
420	SLU 8	-8	1	1636	-330.04	-0.01	-2.51
420	SLU 9	-8	6	1624	-328.04	-0.02	-2.48
420	SLU 10	-8	8	1878	-371.13	-0.06	-2.46
420	SLU 11	-8	1	1899	-374.47	-0.05	-2.51
420	SLU 12	-8	5	1887	-372.46	-0.06	-2.48
420	SLU 13	-8	8	1878	-371.13	-0.06	-2.46
420	SLU 14	-8	1	1899	-374.47	-0.05	-2.51
420	SLU 15	-8	5	1887	-372.46	-0.06	-2.48
420	SLU 16	-8	1	1899	-374.47	-0.05	-2.51
420	SLU 17	-8	5	1887	-372.46	-0.06	-2.48
420	SLU 18	-8	0	2012	-393.51	-0.07	-2.51
420	SLU 19	-8	5	2000	-391.5	-0.07	-2.48
420	SLU 20	-8	0	2012	-393.51	-0.07	-2.51
420	SLU 21	-8	5	2000	-391.5	-0.07	-2.48
420	SLU 22	-8	1	1837	-364.14	-0.04	-2.56
420	SLU 23	-8	8	1816	-360.8	-0.05	-2.51
420	SLU 24	-8	1	1837	-364.14	-0.04	-2.56
420	SLU 25	-8	5	1825	-362.14	-0.04	-2.53
420	SLU 26	-8	8	1816	-360.8	-0.05	-2.51
420	SLU 27	-8	1	1837	-364.14	-0.04	-2.56
420	SLU 28	-8	5	1825	-362.14	-0.04	-2.53
420	SLU 29	-8	1	1837	-364.14	-0.04	-2.56
420	SLU 30	-8	5	1825	-362.14	-0.04	-2.53
420	SLU 31	-8	8	2079	-405.23	-0.09	-2.51
420	SLU 32	-8	0	2100	-408.56	-0.08	-2.56
420	SLU 33	-8	5	2088	-406.56	-0.08	-2.53
420	SLU 34	-8	8	2079	-405.23	-0.09	-2.51
420	SLU 35	-8	0	2100	-408.56	-0.08	-2.56
420	SLU 36	-8	5	2088	-406.56	-0.08	-2.53
420	SLU 37	-8	0	2100	-408.56	-0.08	-2.56
420	SLU 38	-8	5	2088	-406.56	-0.08	-2.53
420	SLU 39	-8	0	2213	-427.6	-0.09	-2.56
420	SLU 40	-8	5	2201	-425.6	-0.1	-2.53
420	SLU 41	-8	0	2213	-427.6	-0.09	-2.56
420	SLU 42	-8	5	2201	-425.6	-0.1	-2.53
420	SLU 43	-10	2	2058	-417.36	0	-3.25
420	SLU 44	-10	9	2037	-414.03	-0.01	-3.2
420	SLU 45	-10	2	2058	-417.36	0	-3.25
420	SLU 46	-10	6	2046	-415.36	-0.01	-3.22
420	SLU 47	-10	9	2037	-414.03	-0.01	-3.2
420	SLU 48	-10	2	2058	-417.36	0	-3.25
420	SLU 49	-10	6	2046	-415.36	-0.01	-3.22
420	SLU 50	-10	2	2058	-417.36	0	-3.25
420	SLU 51	-10	6	2046	-415.36	-0.01	-3.22
420	SLU 52	-10	9	2300	-458.45	-0.06	-3.2
420	SLU 53	-10	1	2321	-461.79	-0.04	-3.25
420	SLU 54	-10	6	2309	-459.79	-0.05	-3.22
420	SLU 55	-10	9	2300	-458.45	-0.06	-3.2
420	SLU 56	-10	1	2321	-461.79	-0.04	-3.25
420	SLU 57	-10	6	2309	-459.79	-0.05	-3.22
420	SLU 58	-10	1	2321	-461.79	-0.04	-3.25
420	SLU 59	-10	6	2309	-459.79	-0.05	-3.22
420	SLU 60	-10	1	2434	-480.83	-0.06	-3.25
420	SLU 61	-10	6	2421	-478.83	-0.07	-3.22
420	SLU 62	-10	1	2434	-480.83	-0.06	-3.25
420	SLU 63	-10	6	2421	-478.83	-0.07	-3.22
420	SLU 64	-10	1	2259	-451.46	-0.03	-3.3
420	SLU 65	-10	9	2238	-448.12	-0.04	-3.25
420	SLU 66	-10	1	2259	-451.46	-0.03	-3.3
420	SLU 67	-10	6	2247	-449.46	-0.04	-3.27
420	SLU 68	-10	9	2238	-448.12	-0.04	-3.25
420	SLU 69	-10	1	2259	-451.46	-0.03	-3.3
420	SLU 70	-10	6	2247	-449.46	-0.04	-3.27
420	SLU 71	-10	1	2259	-451.46	-0.03	-3.3
420	SLU 72	-10	6	2247	-449.46	-0.04	-3.27
420	SLU 73	-10	8	2501	-492.55	-0.08	-3.25

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
420	SLU 74	-10	1	2522	-495.89	-0.07	-3.3
420	SLU 75	-10	5	2510	-493.88	-0.08	-3.27
420	SLU 76	-10	8	2501	-492.55	-0.08	-3.25
420	SLU 77	-10	1	2522	-495.89	-0.07	-3.3
420	SLU 78	-10	5	2510	-493.88	-0.08	-3.27
420	SLU 79	-10	1	2522	-495.89	-0.07	-3.3
420	SLU 80	-10	5	2510	-493.88	-0.08	-3.27
420	SLU 81	-10	1	2635	-514.93	-0.09	-3.3
420	SLU 82	-10	5	2622	-512.92	-0.09	-3.27
420	SLU 83	-10	1	2635	-514.93	-0.09	-3.3
420	SLU 84	-10	5	2622	-512.92	-0.09	-3.27
420	SLE RA 1	-8	1	1694	-339.78	-0.02	-2.53
420	SLE RA 2	-8	6	1680	-337.56	-0.03	-2.5
420	SLE RA 3	-8	1	1694	-339.78	-0.02	-2.53
420	SLE RA 4	-8	4	1685	-338.45	-0.02	-2.51
420	SLE RA 5	-8	6	1680	-337.56	-0.03	-2.5
420	SLE RA 6	-8	1	1694	-339.78	-0.02	-2.53
420	SLE RA 7	-8	4	1685	-338.45	-0.02	-2.51
420	SLE RA 8	-8	1	1694	-339.78	-0.02	-2.53
420	SLE RA 9	-8	4	1685	-338.45	-0.02	-2.51
420	SLE RA 10	-8	6	1855	-367.18	-0.05	-2.49
420	SLE RA 11	-8	1	1869	-369.4	-0.04	-2.53
420	SLE RA 12	-8	4	1861	-368.07	-0.05	-2.51
420	SLE RA 13	-8	6	1855	-367.18	-0.05	-2.49
420	SLE RA 14	-8	1	1869	-369.4	-0.04	-2.53
420	SLE RA 15	-8	4	1861	-368.07	-0.05	-2.51
420	SLE RA 16	-8	1	1869	-369.4	-0.04	-2.53
420	SLE RA 17	-8	4	1861	-368.07	-0.05	-2.51
420	SLE RA 18	-8	1	1944	-382.09	-0.05	-2.53
420	SLE RA 19	-8	4	1936	-380.76	-0.06	-2.51
420	SLE RA 20	-8	1	1944	-382.09	-0.05	-2.53
420	SLE RA 21	-8	4	1936	-380.76	-0.06	-2.51
420	SLE FR 1	-8	1	1694	-339.78	-0.02	-2.53
420	SLE FR 2	-8	2	1691	-339.34	-0.02	-2.52
420	SLE FR 3	-8	1	1694	-339.78	-0.02	-2.53
420	SLE FR 4	-8	2	1766	-352.03	-0.03	-2.52
420	SLE FR 5	-8	1	1769	-352.48	-0.03	-2.53
420	SLE FR 6	-8	1	1819	-360.94	-0.03	-2.53
420	SLE QP 1	-8	1	1694	-339.78	-0.02	-2.53
420	SLE QP 2	-8	1	1769	-352.48	-0.03	-2.53
420	SLD 1	145	59	1816	-361	0.46	50.96
420	SLD 2	117	41	1822	-361.89	0.48	40.97
420	SLD 3	142	-20	1991	-387.22	0.53	49.72
420	SLD 4	113	-39	1997	-388.12	0.55	39.72
420	SLD 5	55	146	1515	-314.93	0	19.1
420	SLD 6	25	127	1522	-315.86	0.03	8.72
420	SLD 7	42	-119	2098	-402.34	0.24	14.95
420	SLD 8	12	-138	2105	-403.27	0.26	4.57
420	SLD 9	-27	140	1433	-301.68	-0.32	-9.63
420	SLD 10	-57	121	1439	-302.61	-0.29	-20
420	SLD 11	-40	-125	2016	-389.09	-0.08	-13.78
420	SLD 12	-70	-144	2022	-390.02	-0.06	-24.15
420	SLD 13	-128	41	1540	-316.84	-0.6	-44.78
420	SLD 14	-157	22	1547	-317.73	-0.58	-54.77
420	SLD 15	-132	-39	1715	-343.06	-0.53	-46.02
420	SLD 16	-161	-57	1721	-343.96	-0.51	-56.02
420	SLV 1	342	134	1878	-372.09	1.08	119.61
420	SLV 2	276	91	1892	-374.14	1.13	96.82
420	SLV 3	333	-47	2275	-431.66	1.24	116.76
420	SLV 4	268	-89	2289	-433.71	1.29	93.98
420	SLV 5	134	330	1194	-267.27	0.04	46.79
420	SLV 6	67	286	1208	-269.38	0.09	23.23
420	SLV 7	105	-272	2518	-465.82	0.58	37.31
420	SLV 8	38	-315	2532	-467.94	0.63	13.75
420	SLV 9	-53	317	1005	-237.01	-0.69	-18.8
420	SLV 10	-121	274	1020	-239.13	-0.63	-42.36
420	SLV 11	-82	-285	2329	-435.57	-0.15	-28.29
420	SLV 12	-150	-328	2343	-437.68	-0.1	-51.84
420	SLV 13	-283	91	1248	-271.24	-1.35	-99.03
420	SLV 14	-349	49	1262	-273.29	-1.29	-121.82
420	SLV 15	-292	-89	1645	-330.81	-1.18	-101.87
420	SLV 16	-357	-132	1659	-332.86	-1.13	-124.66
420	CRTFP Ux+	0	0	0	0	0	0
420	CRTFP Ux-	0	0	0	0	0	0
420	CRTFP Uy+	0	0	0	0	0	0
420	CRTFP Uy-	0	0	0	0	0	0
421	SLU 1	-8	6	1648	-345.69	-0.71	-2.47
421	SLU 2	-7	14	1628	-342.35	-0.72	-2.41
421	SLU 3	-8	6	1648	-345.69	-0.71	-2.47
421	SLU 4	-7	11	1636	-343.69	-0.71	-2.43
421	SLU 5	-7	14	1628	-342.35	-0.72	-2.41
421	SLU 6	-8	6	1648	-345.69	-0.71	-2.47
421	SLU 7	-7	11	1636	-343.69	-0.71	-2.43
421	SLU 8	-8	6	1648	-345.69	-0.71	-2.47
421	SLU 9	-7	11	1636	-343.69	-0.71	-2.43
421	SLU 10	-7	14	1894	-390.05	-0.89	-2.43

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
421	SLU 11	-8	7	1915	-393.39	-0.88	-2.48
421	SLU 12	-8	11	1902	-391.39	-0.89	-2.45
421	SLU 13	-7	14	1894	-390.05	-0.89	-2.43
421	SLU 14	-8	7	1915	-393.39	-0.88	-2.48
421	SLU 15	-8	11	1902	-391.39	-0.89	-2.45
421	SLU 16	-8	7	1915	-393.39	-0.88	-2.48
421	SLU 17	-8	11	1902	-391.39	-0.89	-2.45
421	SLU 18	-8	7	2029	-413.83	-0.96	-2.49
421	SLU 19	-8	11	2017	-411.83	-0.96	-2.46
421	SLU 20	-8	7	2029	-413.83	-0.96	-2.49
421	SLU 21	-8	11	2017	-411.83	-0.96	-2.46
421	SLU 22	-8	7	1852	-382.28	-0.84	-2.53
421	SLU 23	-8	14	1831	-378.95	-0.85	-2.47
421	SLU 24	-8	7	1852	-382.28	-0.84	-2.53
421	SLU 25	-8	11	1839	-380.28	-0.84	-2.5
421	SLU 26	-8	14	1831	-378.95	-0.85	-2.47
421	SLU 27	-8	7	1852	-382.28	-0.84	-2.53
421	SLU 28	-8	11	1839	-380.28	-0.84	-2.5
421	SLU 29	-8	7	1852	-382.28	-0.84	-2.53
421	SLU 30	-8	11	1839	-380.28	-0.84	-2.5
421	SLU 31	-8	15	2098	-426.65	-1.02	-2.49
421	SLU 32	-8	7	2118	-429.98	-1.01	-2.55
421	SLU 33	-8	12	2106	-427.98	-1.02	-2.51
421	SLU 34	-8	15	2098	-426.65	-1.02	-2.49
421	SLU 35	-8	7	2118	-429.98	-1.01	-2.55
421	SLU 36	-8	12	2106	-427.98	-1.02	-2.51
421	SLU 37	-8	7	2118	-429.98	-1.01	-2.55
421	SLU 38	-8	12	2106	-427.98	-1.02	-2.51
421	SLU 39	-8	8	2233	-450.42	-1.09	-2.55
421	SLU 40	-8	12	2220	-448.42	-1.09	-2.52
421	SLU 41	-8	8	2233	-450.42	-1.09	-2.55
421	SLU 42	-8	12	2220	-448.42	-1.09	-2.52
421	SLU 43	-10	8	2073	-436.85	-0.87	-3.19
421	SLU 44	-9	15	2052	-433.51	-0.88	-3.13
421	SLU 45	-10	8	2073	-436.85	-0.87	-3.19
421	SLU 46	-10	12	2060	-434.85	-0.88	-3.15
421	SLU 47	-9	15	2052	-433.51	-0.88	-3.13
421	SLU 48	-10	8	2073	-436.85	-0.87	-3.19
421	SLU 49	-10	12	2060	-434.85	-0.88	-3.15
421	SLU 50	-10	8	2073	-436.85	-0.87	-3.19
421	SLU 51	-10	12	2060	-434.85	-0.88	-3.15
421	SLU 52	-10	16	2319	-481.21	-1.06	-3.15
421	SLU 53	-10	9	2339	-484.55	-1.05	-3.2
421	SLU 54	-10	13	2327	-482.55	-1.05	-3.17
421	SLU 55	-10	16	2319	-481.21	-1.06	-3.15
421	SLU 56	-10	9	2339	-484.55	-1.05	-3.2
421	SLU 57	-10	13	2327	-482.55	-1.05	-3.17
421	SLU 58	-10	9	2339	-484.55	-1.05	-3.2
421	SLU 59	-10	13	2327	-482.55	-1.05	-3.17
421	SLU 60	-10	9	2454	-504.99	-1.12	-3.21
421	SLU 61	-10	13	2441	-502.99	-1.13	-3.18
421	SLU 62	-10	9	2454	-504.99	-1.12	-3.21
421	SLU 63	-10	13	2441	-502.99	-1.13	-3.18
421	SLU 64	-10	8	2276	-473.44	-1	-3.25
421	SLU 65	-10	16	2256	-470.11	-1.01	-3.19
421	SLU 66	-10	8	2276	-473.44	-1	-3.25
421	SLU 67	-10	13	2264	-471.44	-1.01	-3.22
421	SLU 68	-10	16	2256	-470.11	-1.01	-3.19
421	SLU 69	-10	8	2276	-473.44	-1	-3.25
421	SLU 70	-10	13	2264	-471.44	-1.01	-3.22
421	SLU 71	-10	8	2276	-473.44	-1	-3.25
421	SLU 72	-10	13	2264	-471.44	-1.01	-3.22
421	SLU 73	-10	16	2522	-517.81	-1.19	-3.21
421	SLU 74	-10	9	2543	-521.14	-1.18	-3.27
421	SLU 75	-10	13	2531	-519.14	-1.19	-3.23
421	SLU 76	-10	16	2522	-517.81	-1.19	-3.21
421	SLU 77	-10	9	2543	-521.14	-1.18	-3.27
421	SLU 78	-10	13	2531	-519.14	-1.19	-3.23
421	SLU 79	-10	9	2543	-521.14	-1.18	-3.27
421	SLU 80	-10	13	2531	-519.14	-1.19	-3.23
421	SLU 81	-10	9	2657	-541.58	-1.25	-3.27
421	SLU 82	-10	14	2645	-539.58	-1.26	-3.24
421	SLU 83	-10	9	2657	-541.58	-1.25	-3.27
421	SLU 84	-10	14	2645	-539.58	-1.26	-3.24
421	SLE RA 1	-8	6	1706	-356.14	-0.74	-2.49
421	SLE RA 2	-7	11	1693	-353.92	-0.75	-2.45
421	SLE RA 3	-8	6	1706	-356.14	-0.74	-2.49
421	SLE RA 4	-7	9	1698	-354.81	-0.75	-2.46
421	SLE RA 5	-7	11	1693	-353.92	-0.75	-2.45
421	SLE RA 6	-8	6	1706	-356.14	-0.74	-2.49
421	SLE RA 7	-7	9	1698	-354.81	-0.75	-2.46
421	SLE RA 8	-8	6	1706	-356.14	-0.74	-2.49
421	SLE RA 9	-7	9	1698	-354.81	-0.75	-2.46
421	SLE RA 10	-8	12	1870	-385.72	-0.87	-2.46
421	SLE RA 11	-8	7	1884	-387.94	-0.86	-2.5
421	SLE RA 12	-8	10	1876	-386.61	-0.86	-2.47

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
421	SLE RA 13	-8	12	1870	-385.72	-0.87	-2.46
421	SLE RA 14	-8	7	1884	-387.94	-0.86	-2.5
421	SLE RA 15	-8	10	1876	-386.61	-0.86	-2.47
421	SLE RA 16	-8	7	1884	-387.94	-0.86	-2.5
421	SLE RA 17	-8	10	1876	-386.61	-0.86	-2.47
421	SLE RA 18	-8	7	1960	-401.57	-0.91	-2.5
421	SLE RA 19	-8	10	1952	-400.24	-0.91	-2.48
421	SLE RA 20	-8	7	1960	-401.57	-0.91	-2.5
421	SLE RA 21	-8	10	1952	-400.24	-0.91	-2.48
421	SLE FR 1	-8	6	1706	-356.14	-0.74	-2.49
421	SLE FR 2	-8	7	1703	-355.7	-0.74	-2.48
421	SLE FR 3	-8	6	1706	-356.14	-0.74	-2.49
421	SLE FR 4	-8	8	1780	-369.33	-0.79	-2.48
421	SLE FR 5	-8	7	1782	-369.77	-0.79	-2.49
421	SLE FR 6	-8	7	1833	-378.86	-0.83	-2.49
421	SLE QP 1	-8	6	1706	-356.14	-0.74	-2.49
421	SLE QP 2	-8	7	1782	-369.77	-0.79	-2.49
421	SLD 1	145	61	1815	-374.37	-0.34	51.01
421	SLD 2	117	45	1820	-375.2	-0.33	41.01
421	SLD 3	142	-14	1989	-401.68	-0.38	49.78
421	SLD 4	113	-31	1994	-402.51	-0.36	39.79
421	SLD 5	55	143	1526	-329.42	-0.61	19.1
421	SLD 6	25	126	1531	-330.28	-0.59	8.73
421	SLD 7	42	-108	2107	-420.46	-0.73	15.02
421	SLD 8	12	-125	2112	-421.32	-0.71	4.65
421	SLD 9	-28	138	1452	-318.22	-0.87	-9.63
421	SLD 10	-57	121	1458	-319.08	-0.86	-20
421	SLD 11	-40	-113	2033	-409.26	-0.99	-13.71
421	SLD 12	-70	-130	2039	-410.12	-0.98	-24.09
421	SLD 13	-128	44	1570	-337.03	-1.22	-44.77
421	SLD 14	-157	27	1576	-337.86	-1.21	-54.76
421	SLD 15	-132	-32	1745	-364.34	-1.26	-45.99
421	SLD 16	-161	-48	1750	-365.17	-1.24	-55.99
421	SLV 1	342	131	1857	-380.45	0.23	119.66
421	SLV 2	276	93	1870	-382.34	0.27	96.87
421	SLV 3	333	-41	2253	-442.49	0.15	116.86
421	SLV 4	268	-78	2266	-444.37	0.19	94.07
421	SLV 5	134	317	1200	-278.2	-0.38	46.76
421	SLV 6	66	279	1213	-280.15	-0.33	23.2
421	SLV 7	106	-254	2519	-484.98	-0.65	37.43
421	SLV 8	38	-292	2532	-486.93	-0.61	13.87
421	SLV 9	-53	305	1033	-252.61	-0.98	-18.85
421	SLV 10	-121	267	1045	-254.56	-0.94	-42.41
421	SLV 11	-82	-266	2352	-459.39	-1.25	-28.19
421	SLV 12	-149	-304	2365	-461.34	-1.21	-51.74
421	SLV 13	-283	91	1299	-295.17	-1.78	-99.05
421	SLV 14	-349	54	1312	-297.05	-1.74	-121.84
421	SLV 15	-292	-80	1695	-357.2	-1.86	-101.85
421	SLV 16	-357	-117	1707	-359.09	-1.82	-124.64
421	CRTFP Ux+	0	0	0	0	0	0
421	CRTFP Ux-	0	0	0	0	0	0
421	CRTFP Uy+	0	0	0	0	0	0
421	CRTFP Uy-	0	0	0	0	0	0
422	SLU 1	-7	11	1680	-377.49	-1.25	-2.4
422	SLU 2	-7	18	1660	-374.01	-1.26	-2.33
422	SLU 3	-7	11	1680	-377.49	-1.25	-2.4
422	SLU 4	-7	16	1668	-375.4	-1.26	-2.36
422	SLU 5	-7	18	1660	-374.01	-1.26	-2.33
422	SLU 6	-7	11	1680	-377.49	-1.25	-2.4
422	SLU 7	-7	16	1668	-375.4	-1.26	-2.36
422	SLU 8	-7	11	1680	-377.49	-1.25	-2.4
422	SLU 9	-7	16	1668	-375.4	-1.26	-2.36
422	SLU 10	-7	20	1934	-428.16	-1.54	-2.37
422	SLU 11	-8	13	1954	-431.64	-1.53	-2.43
422	SLU 12	-7	17	1942	-429.55	-1.54	-2.39
422	SLU 13	-7	20	1934	-428.16	-1.54	-2.37
422	SLU 14	-8	13	1954	-431.64	-1.53	-2.43
422	SLU 15	-7	17	1942	-429.55	-1.54	-2.39
422	SLU 16	-8	13	1954	-431.64	-1.53	-2.43
422	SLU 17	-7	17	1942	-429.55	-1.54	-2.39
422	SLU 18	-8	14	2072	-454.84	-1.65	-2.45
422	SLU 19	-7	18	2060	-452.76	-1.66	-2.41
422	SLU 20	-8	14	2072	-454.84	-1.65	-2.45
422	SLU 21	-7	18	2060	-452.76	-1.66	-2.41
422	SLU 22	-8	13	1889	-418.99	-1.46	-2.47
422	SLU 23	-7	20	1869	-415.52	-1.47	-2.41
422	SLU 24	-8	13	1889	-418.99	-1.46	-2.47
422	SLU 25	-7	17	1877	-416.91	-1.47	-2.43
422	SLU 26	-7	20	1869	-415.52	-1.47	-2.41
422	SLU 27	-8	13	1889	-418.99	-1.46	-2.47
422	SLU 28	-7	17	1877	-416.91	-1.47	-2.43
422	SLU 29	-8	13	1889	-418.99	-1.46	-2.47
422	SLU 30	-7	17	1877	-416.91	-1.47	-2.43
422	SLU 31	-8	21	2144	-469.67	-1.75	-2.44
422	SLU 32	-8	14	2164	-473.14	-1.74	-2.51
422	SLU 33	-8	19	2152	-471.06	-1.75	-2.47

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
422	SLU 34	-8	21	2144	-469.67	-1.75	-2.44
422	SLU 35	-8	14	2164	-473.14	-1.74	-2.51
422	SLU 36	-8	19	2152	-471.06	-1.75	-2.47
422	SLU 37	-8	14	2164	-473.14	-1.74	-2.51
422	SLU 38	-8	19	2152	-471.06	-1.75	-2.47
422	SLU 39	-8	15	2281	-496.35	-1.87	-2.52
422	SLU 40	-8	19	2269	-494.27	-1.87	-2.48
422	SLU 41	-8	15	2281	-496.35	-1.87	-2.52
422	SLU 42	-8	19	2269	-494.27	-1.87	-2.48
422	SLU 43	-9	14	2113	-476.5	-1.55	-3.09
422	SLU 44	-9	21	2092	-473.03	-1.56	-3.03
422	SLU 45	-9	14	2113	-476.5	-1.55	-3.09
422	SLU 46	-9	19	2100	-474.42	-1.56	-3.05
422	SLU 47	-9	21	2092	-473.03	-1.56	-3.03
422	SLU 48	-9	14	2113	-476.5	-1.55	-3.09
422	SLU 49	-9	19	2100	-474.42	-1.56	-3.05
422	SLU 50	-9	14	2113	-476.5	-1.55	-3.09
422	SLU 51	-9	19	2100	-474.42	-1.56	-3.05
422	SLU 52	-9	23	2367	-527.18	-1.84	-3.06
422	SLU 53	-10	16	2387	-530.65	-1.84	-3.13
422	SLU 54	-9	20	2375	-528.57	-1.84	-3.09
422	SLU 55	-9	23	2367	-527.18	-1.84	-3.06
422	SLU 56	-10	16	2387	-530.65	-1.84	-3.13
422	SLU 57	-9	20	2375	-528.57	-1.84	-3.09
422	SLU 58	-10	16	2387	-530.65	-1.84	-3.13
422	SLU 59	-9	20	2375	-528.57	-1.84	-3.09
422	SLU 60	-10	17	2504	-553.86	-1.96	-3.14
422	SLU 61	-10	21	2492	-551.78	-1.96	-3.1
422	SLU 62	-10	17	2504	-553.86	-1.96	-3.14
422	SLU 63	-10	21	2492	-551.78	-1.96	-3.1
422	SLU 64	-10	16	2322	-518	-1.77	-3.17
422	SLU 65	-9	23	2302	-514.53	-1.77	-3.1
422	SLU 66	-10	16	2322	-518	-1.77	-3.17
422	SLU 67	-10	20	2310	-515.92	-1.77	-3.13
422	SLU 68	-9	23	2302	-514.53	-1.77	-3.1
422	SLU 69	-10	16	2322	-518	-1.77	-3.17
422	SLU 70	-10	20	2310	-515.92	-1.77	-3.13
422	SLU 71	-10	16	2322	-518	-1.77	-3.17
422	SLU 72	-10	20	2310	-515.92	-1.77	-3.13
422	SLU 73	-10	24	2576	-568.68	-2.05	-3.13
422	SLU 74	-10	17	2596	-572.16	-2.05	-3.2
422	SLU 75	-10	22	2584	-570.07	-2.05	-3.16
422	SLU 76	-10	24	2576	-568.68	-2.05	-3.13
422	SLU 77	-10	17	2596	-572.16	-2.05	-3.2
422	SLU 78	-10	22	2584	-570.07	-2.05	-3.16
422	SLU 79	-10	17	2596	-572.16	-2.05	-3.2
422	SLU 80	-10	22	2584	-570.07	-2.05	-3.16
422	SLU 81	-10	18	2714	-595.36	-2.17	-3.21
422	SLU 82	-10	22	2701	-593.28	-2.17	-3.18
422	SLU 83	-10	18	2714	-595.36	-2.17	-3.21
422	SLU 84	-10	22	2701	-593.28	-2.17	-3.18
422	SLE RA 1	-7	12	1740	-389.34	-1.31	-2.42
422	SLE RA 2	-7	16	1727	-387.03	-1.32	-2.38
422	SLE RA 3	-7	12	1740	-389.34	-1.31	-2.42
422	SLE RA 4	-7	15	1732	-387.95	-1.31	-2.39
422	SLE RA 5	-7	16	1727	-387.03	-1.32	-2.38
422	SLE RA 6	-7	12	1740	-389.34	-1.31	-2.42
422	SLE RA 7	-7	15	1732	-387.95	-1.31	-2.39
422	SLE RA 8	-7	12	1740	-389.34	-1.31	-2.42
422	SLE RA 9	-7	15	1732	-387.95	-1.31	-2.39
422	SLE RA 10	-7	18	1909	-423.13	-1.5	-2.4
422	SLE RA 11	-8	13	1923	-425.44	-1.5	-2.44
422	SLE RA 12	-7	16	1915	-424.06	-1.5	-2.42
422	SLE RA 13	-7	18	1909	-423.13	-1.5	-2.4
422	SLE RA 14	-8	13	1923	-425.44	-1.5	-2.44
422	SLE RA 15	-7	16	1915	-424.06	-1.5	-2.42
422	SLE RA 16	-8	13	1923	-425.44	-1.5	-2.44
422	SLE RA 17	-7	16	1915	-424.06	-1.5	-2.42
422	SLE RA 18	-8	13	2001	-440.92	-1.58	-2.45
422	SLE RA 19	-7	16	1993	-439.53	-1.58	-2.43
422	SLE RA 20	-8	13	2001	-440.92	-1.58	-2.45
422	SLE RA 21	-7	16	1993	-439.53	-1.58	-2.43
422	SLE FR 1	-7	12	1740	-389.34	-1.31	-2.42
422	SLE FR 2	-7	13	1737	-388.88	-1.31	-2.41
422	SLE FR 3	-7	12	1740	-389.34	-1.31	-2.42
422	SLE FR 4	-7	13	1816	-404.35	-1.39	-2.42
422	SLE FR 5	-7	12	1818	-404.82	-1.39	-2.43
422	SLE FR 6	-7	13	1871	-415.13	-1.45	-2.44
422	SLE QP 1	-7	12	1740	-389.34	-1.31	-2.42
422	SLE QP 2	-7	12	1818	-404.82	-1.39	-2.43
422	SLD 1	146	63	1837	-406.46	-0.97	51.05
422	SLD 2	117	49	1842	-407.27	-0.96	41.06
422	SLD 3	142	-9	2013	-436.81	-1.09	49.85
422	SLD 4	113	-23	2018	-437.62	-1.07	39.86
422	SLD 5	55	142	1554	-358.98	-1.1	19.13
422	SLD 6	25	128	1559	-359.81	-1.09	8.75

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
422	SLD 7	43	-98	2143	-460.15	-1.48	15.12
422	SLD 8	13	-113	2148	-460.99	-1.46	4.75
422	SLD 9	-28	138	1489	-348.64	-1.32	-9.61
422	SLD 10	-57	123	1494	-349.48	-1.31	-19.98
422	SLD 11	-40	-103	2077	-449.82	-1.7	-13.61
422	SLD 12	-69	-118	2082	-450.65	-1.68	-23.99
422	SLD 13	-128	48	1618	-372.01	-1.71	-44.72
422	SLD 14	-157	33	1623	-372.82	-1.7	-54.71
422	SLD 15	-132	-25	1795	-402.36	-1.83	-45.92
422	SLD 16	-160	-39	1800	-403.17	-1.81	-55.91
422	SLV 1	342	129	1862	-408.78	-0.44	119.69
422	SLV 2	276	96	1873	-410.61	-0.4	96.91
422	SLV 3	334	-35	2263	-477.72	-0.69	116.94
422	SLV 4	268	-68	2274	-479.55	-0.66	94.16
422	SLV 5	134	308	1219	-300.77	-0.73	46.73
422	SLV 6	66	274	1231	-302.67	-0.7	23.19
422	SLV 7	107	-239	2556	-530.57	-1.58	37.57
422	SLV 8	39	-272	2567	-532.47	-1.55	14.02
422	SLV 9	-54	297	1069	-277.17	-1.24	-18.88
422	SLV 10	-121	263	1081	-279.06	-1.2	-42.43
422	SLV 11	-81	-250	2406	-506.96	-2.09	-28.05
422	SLV 12	-149	-283	2418	-508.86	-2.05	-51.59
422	SLV 13	-283	92	1363	-330.08	-2.13	-99.02
422	SLV 14	-349	60	1374	-331.92	-2.09	-121.8
422	SLV 15	-291	-72	1764	-399.02	-2.38	-101.77
422	SLV 16	-357	-104	1775	-400.85	-2.35	-124.55
422	CRTFP Ux+	0	0	0	0	0	0
422	CRTFP Ux-	0	0	0	0	0	0
422	CRTFP Uy+	0	0	0	0	0	0
422	CRTFP Uy-	0	0	0	0	0	0
423	SLU 1	-7	16	1727	-421.71	-1.58	-2.3
423	SLU 2	-7	23	1707	-417.98	-1.58	-2.23
423	SLU 3	-7	16	1727	-421.71	-1.58	-2.3
423	SLU 4	-7	20	1715	-419.47	-1.58	-2.26
423	SLU 5	-7	23	1707	-417.98	-1.58	-2.23
423	SLU 6	-7	16	1727	-421.71	-1.58	-2.3
423	SLU 7	-7	20	1715	-419.47	-1.58	-2.26
423	SLU 8	-7	16	1727	-421.71	-1.58	-2.3
423	SLU 9	-7	20	1715	-419.47	-1.58	-2.26
423	SLU 10	-7	26	1991	-481.05	-1.92	-2.28
423	SLU 11	-7	19	2011	-484.79	-1.92	-2.35
423	SLU 12	-7	23	1999	-482.54	-1.92	-2.31
423	SLU 13	-7	26	1991	-481.05	-1.92	-2.28
423	SLU 14	-7	19	2011	-484.79	-1.92	-2.35
423	SLU 15	-7	23	1999	-482.54	-1.92	-2.31
423	SLU 16	-7	19	2011	-484.79	-1.92	-2.35
423	SLU 17	-7	23	1999	-482.54	-1.92	-2.31
423	SLU 18	-7	21	2133	-511.82	-2.07	-2.37
423	SLU 19	-7	25	2121	-509.58	-2.07	-2.33
423	SLU 20	-7	21	2133	-511.82	-2.07	-2.37
423	SLU 21	-7	25	2121	-509.58	-2.07	-2.33
423	SLU 22	-7	19	1944	-470	-1.84	-2.39
423	SLU 23	-7	25	1924	-466.26	-1.84	-2.31
423	SLU 24	-7	19	1944	-470	-1.84	-2.39
423	SLU 25	-7	23	1932	-467.76	-1.84	-2.34
423	SLU 26	-7	25	1924	-466.26	-1.84	-2.31
423	SLU 27	-7	19	1944	-470	-1.84	-2.39
423	SLU 28	-7	23	1932	-467.76	-1.84	-2.34
423	SLU 29	-7	19	1944	-470	-1.84	-2.39
423	SLU 30	-7	23	1932	-467.76	-1.84	-2.34
423	SLU 31	-7	28	2208	-529.34	-2.18	-2.36
423	SLU 32	-8	22	2228	-533.08	-2.18	-2.44
423	SLU 33	-7	26	2216	-530.83	-2.18	-2.39
423	SLU 34	-7	28	2208	-529.34	-2.18	-2.36
423	SLU 35	-8	22	2228	-533.08	-2.18	-2.44
423	SLU 36	-7	26	2216	-530.83	-2.18	-2.39
423	SLU 37	-8	22	2228	-533.08	-2.18	-2.44
423	SLU 38	-7	26	2216	-530.83	-2.18	-2.39
423	SLU 39	-8	23	2350	-560.11	-2.33	-2.46
423	SLU 40	-8	27	2338	-557.86	-2.33	-2.41
423	SLU 41	-8	23	2350	-560.11	-2.33	-2.46
423	SLU 42	-8	27	2338	-557.86	-2.33	-2.41
423	SLU 43	-9	21	2170	-531.67	-1.96	-2.96
423	SLU 44	-9	27	2150	-527.93	-1.97	-2.89
423	SLU 45	-9	21	2170	-531.67	-1.96	-2.96
423	SLU 46	-9	25	2158	-529.43	-1.96	-2.92
423	SLU 47	-9	27	2150	-527.93	-1.97	-2.89
423	SLU 48	-9	21	2170	-531.67	-1.96	-2.96
423	SLU 49	-9	25	2158	-529.43	-1.96	-2.92
423	SLU 50	-9	21	2170	-531.67	-1.96	-2.96
423	SLU 51	-9	25	2158	-529.43	-1.96	-2.92
423	SLU 52	-9	30	2435	-591.01	-2.31	-2.94
423	SLU 53	-9	24	2455	-594.75	-2.31	-3.01
423	SLU 54	-9	28	2443	-592.5	-2.31	-2.97
423	SLU 55	-9	30	2435	-591.01	-2.31	-2.94
423	SLU 56	-9	24	2455	-594.75	-2.31	-3.01

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
423	SLU 57	-9	28	2443	-592.5	-2.31	-2.97
423	SLU 58	-9	24	2455	-594.75	-2.31	-3.01
423	SLU 59	-9	28	2443	-592.5	-2.31	-2.97
423	SLU 60	-9	25	2577	-621.78	-2.45	-3.03
423	SLU 61	-9	29	2565	-619.53	-2.45	-2.99
423	SLU 62	-9	25	2577	-621.78	-2.45	-3.03
423	SLU 63	-9	29	2565	-619.53	-2.45	-2.99
423	SLU 64	-9	23	2387	-579.96	-2.22	-3.05
423	SLU 65	-9	29	2367	-576.22	-2.22	-2.98
423	SLU 66	-9	23	2387	-579.96	-2.22	-3.05
423	SLU 67	-9	27	2375	-577.72	-2.22	-3
423	SLU 68	-9	29	2367	-576.22	-2.22	-2.98
423	SLU 69	-9	23	2387	-579.96	-2.22	-3.05
423	SLU 70	-9	27	2375	-577.72	-2.22	-3
423	SLU 71	-9	23	2387	-579.96	-2.22	-3.05
423	SLU 72	-9	27	2375	-577.72	-2.22	-3
423	SLU 73	-9	32	2652	-639.3	-2.57	-3.03
423	SLU 74	-10	26	2672	-643.03	-2.56	-3.1
423	SLU 75	-9	30	2660	-640.79	-2.57	-3.05
423	SLU 76	-9	32	2652	-639.3	-2.57	-3.03
423	SLU 77	-10	26	2672	-643.03	-2.56	-3.1
423	SLU 78	-9	30	2660	-640.79	-2.57	-3.05
423	SLU 79	-10	26	2672	-643.03	-2.56	-3.1
423	SLU 80	-9	30	2660	-640.79	-2.57	-3.05
423	SLU 81	-10	27	2794	-670.07	-2.71	-3.12
423	SLU 82	-10	31	2782	-667.82	-2.71	-3.08
423	SLU 83	-10	27	2794	-670.07	-2.71	-3.12
423	SLU 84	-10	31	2782	-667.82	-2.71	-3.08
423	SLE RA 1	-7	17	1789	-435.51	-1.65	-2.33
423	SLE RA 2	-7	22	1775	-433.02	-1.65	-2.28
423	SLE RA 3	-7	17	1789	-435.51	-1.65	-2.33
423	SLE RA 4	-7	20	1781	-434.02	-1.65	-2.3
423	SLE RA 5	-7	22	1775	-433.02	-1.65	-2.28
423	SLE RA 6	-7	17	1789	-435.51	-1.65	-2.33
423	SLE RA 7	-7	20	1781	-434.02	-1.65	-2.3
423	SLE RA 8	-7	17	1789	-435.51	-1.65	-2.33
423	SLE RA 9	-7	20	1781	-434.02	-1.65	-2.3
423	SLE RA 10	-7	23	1965	-475.07	-1.88	-2.31
423	SLE RA 11	-7	19	1978	-477.56	-1.88	-2.36
423	SLE RA 12	-7	22	1970	-476.06	-1.88	-2.33
423	SLE RA 13	-7	23	1965	-475.07	-1.88	-2.31
423	SLE RA 14	-7	19	1978	-477.56	-1.88	-2.36
423	SLE RA 15	-7	22	1970	-476.06	-1.88	-2.33
423	SLE RA 16	-7	19	1978	-477.56	-1.88	-2.36
423	SLE RA 17	-7	22	1970	-476.06	-1.88	-2.33
423	SLE RA 18	-7	20	2060	-495.58	-1.98	-2.37
423	SLE RA 19	-7	23	2052	-494.09	-1.98	-2.34
423	SLE RA 20	-7	20	2060	-495.58	-1.98	-2.37
423	SLE RA 21	-7	23	2052	-494.09	-1.98	-2.34
423	SLE FR 1	-7	17	1789	-435.51	-1.65	-2.33
423	SLE FR 2	-7	18	1786	-435.01	-1.65	-2.32
423	SLE FR 3	-7	17	1789	-435.51	-1.65	-2.33
423	SLE FR 4	-7	19	1867	-453.03	-1.75	-2.33
423	SLE FR 5	-7	18	1870	-453.53	-1.75	-2.34
423	SLE FR 6	-7	18	1924	-465.55	-1.81	-2.35
423	SLE QP 1	-7	17	1789	-435.51	-1.65	-2.33
423	SLE QP 2	-7	18	1870	-453.53	-1.75	-2.34
423	SLD 1	146	66	1875	-453	-1.35	51.11
423	SLD 2	117	54	1880	-453.79	-1.34	41.13
423	SLD 3	142	-4	2056	-487.86	-1.51	49.94
423	SLD 4	114	-16	2061	-488.65	-1.5	39.95
423	SLD 5	55	143	1595	-400.21	-1.39	19.16
423	SLD 6	25	130	1600	-401.04	-1.37	8.8
423	SLD 7	43	-90	2199	-516.4	-1.93	15.24
423	SLD 8	13	-102	2204	-517.23	-1.92	4.88
423	SLD 9	-28	138	1537	-389.83	-1.58	-9.56
423	SLD 10	-57	126	1541	-390.66	-1.57	-19.92
423	SLD 11	-39	-94	2140	-506.03	-2.13	-13.48
423	SLD 12	-69	-107	2145	-506.85	-2.11	-23.84
423	SLD 13	-128	52	1679	-418.41	-2	-44.63
423	SLD 14	-157	39	1684	-419.21	-1.98	-54.62
423	SLD 15	-131	-18	1860	-453.27	-2.16	-45.81
423	SLD 16	-160	-30	1865	-454.06	-2.15	-55.79
423	SLV 1	342	127	1883	-452.56	-0.84	119.71
423	SLV 2	277	99	1893	-454.37	-0.81	96.95
423	SLV 3	334	-31	2294	-531.72	-1.21	117.02
423	SLV 4	269	-59	2305	-533.54	-1.18	94.26
423	SLV 5	134	301	1247	-332.5	-0.92	46.7
423	SLV 6	66	272	1257	-334.38	-0.89	23.18
423	SLV 7	107	-227	2617	-596.39	-2.16	37.73
423	SLV 8	40	-255	2628	-598.27	-2.13	14.21
423	SLV 9	-54	291	1112	-308.79	-1.37	-18.89
423	SLV 10	-122	262	1123	-310.67	-1.34	-42.41
423	SLV 11	-80	-236	2483	-572.69	-2.61	-27.86
423	SLV 12	-148	-265	2493	-574.56	-2.57	-51.38
423	SLV 13	-283	95	1435	-373.53	-2.32	-98.94

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
423	SLV 14	-348	67	1446	-375.34	-2.29	-121.7
423	SLV 15	-291	-64	1847	-452.69	-2.69	-101.63
423	SLV 16	-356	-92	1857	-454.51	-2.66	-124.39
423	CRTFP Ux+	0	0	0	0	0	0
423	CRTFP Ux-	0	0	0	0	0	0
423	CRTFP Uy+	0	0	0	0	0	0
423	CRTFP Uy-	0	0	0	0	0	0
424	SLU 1	-7	21	1779	-473.84	-1.59	-2.17
424	SLU 2	-6	28	1759	-469.74	-1.59	-2.09
424	SLU 3	-7	21	1779	-473.84	-1.59	-2.17
424	SLU 4	-6	25	1767	-471.38	-1.59	-2.12
424	SLU 5	-6	28	1759	-469.74	-1.59	-2.09
424	SLU 6	-7	21	1779	-473.84	-1.59	-2.17
424	SLU 7	-6	25	1767	-471.38	-1.59	-2.12
424	SLU 8	-7	21	1779	-473.84	-1.59	-2.17
424	SLU 9	-6	25	1767	-471.38	-1.59	-2.12
424	SLU 10	-7	32	2055	-543.35	-1.93	-2.15
424	SLU 11	-7	25	2075	-547.45	-1.93	-2.23
424	SLU 12	-7	29	2063	-544.99	-1.93	-2.18
424	SLU 13	-7	32	2055	-543.35	-1.93	-2.15
424	SLU 14	-7	25	2075	-547.45	-1.93	-2.23
424	SLU 15	-7	29	2063	-544.99	-1.93	-2.18
424	SLU 16	-7	25	2075	-547.45	-1.93	-2.23
424	SLU 17	-7	29	2063	-544.99	-1.93	-2.18
424	SLU 18	-7	27	2202	-578.99	-2.08	-2.26
424	SLU 19	-7	31	2190	-576.53	-2.08	-2.21
424	SLU 20	-7	27	2202	-578.99	-2.08	-2.26
424	SLU 21	-7	31	2190	-576.53	-2.08	-2.21
424	SLU 22	-7	24	2005	-530.13	-1.85	-2.26
424	SLU 23	-7	31	1985	-526.03	-1.85	-2.18
424	SLU 24	-7	24	2005	-530.13	-1.85	-2.26
424	SLU 25	-7	28	1993	-527.67	-1.85	-2.21
424	SLU 26	-7	31	1985	-526.03	-1.85	-2.18
424	SLU 27	-7	24	2005	-530.13	-1.85	-2.26
424	SLU 28	-7	28	1993	-527.67	-1.85	-2.21
424	SLU 29	-7	24	2005	-530.13	-1.85	-2.26
424	SLU 30	-7	28	1993	-527.67	-1.85	-2.21
424	SLU 31	-7	35	2281	-599.63	-2.19	-2.25
424	SLU 32	-7	28	2300	-603.73	-2.19	-2.32
424	SLU 33	-7	32	2288	-601.27	-2.19	-2.28
424	SLU 34	-7	35	2281	-599.63	-2.19	-2.25
424	SLU 35	-7	28	2300	-603.73	-2.19	-2.32
424	SLU 36	-7	32	2288	-601.27	-2.19	-2.28
424	SLU 37	-7	28	2300	-603.73	-2.19	-2.32
424	SLU 38	-7	32	2288	-601.27	-2.19	-2.28
424	SLU 39	-7	30	2427	-635.28	-2.34	-2.35
424	SLU 40	-7	34	2415	-632.82	-2.34	-2.31
424	SLU 41	-7	30	2427	-635.28	-2.34	-2.35
424	SLU 42	-7	34	2415	-632.82	-2.34	-2.31
424	SLU 43	-8	26	2236	-596.7	-1.98	-2.78
424	SLU 44	-8	33	2216	-592.6	-1.98	-2.71
424	SLU 45	-8	26	2236	-596.7	-1.98	-2.78
424	SLU 46	-8	30	2224	-594.24	-1.98	-2.74
424	SLU 47	-8	33	2216	-592.6	-1.98	-2.71
424	SLU 48	-8	26	2236	-596.7	-1.98	-2.78
424	SLU 49	-8	30	2224	-594.24	-1.98	-2.74
424	SLU 50	-8	26	2236	-596.7	-1.98	-2.78
424	SLU 51	-8	30	2224	-594.24	-1.98	-2.74
424	SLU 52	-8	37	2511	-666.2	-2.32	-2.77
424	SLU 53	-9	31	2531	-670.3	-2.32	-2.85
424	SLU 54	-9	34	2519	-667.84	-2.32	-2.8
424	SLU 55	-8	37	2511	-666.2	-2.32	-2.77
424	SLU 56	-9	31	2531	-670.3	-2.32	-2.85
424	SLU 57	-9	34	2519	-667.84	-2.32	-2.8
424	SLU 58	-9	31	2531	-670.3	-2.32	-2.85
424	SLU 59	-9	34	2519	-667.84	-2.32	-2.8
424	SLU 60	-9	32	2658	-701.85	-2.47	-2.88
424	SLU 61	-9	36	2646	-699.39	-2.47	-2.83
424	SLU 62	-9	32	2658	-701.85	-2.47	-2.88
424	SLU 63	-9	36	2646	-699.39	-2.47	-2.83
424	SLU 64	-9	29	2461	-652.98	-2.24	-2.88
424	SLU 65	-9	36	2441	-648.89	-2.24	-2.8
424	SLU 66	-9	29	2461	-652.98	-2.24	-2.88
424	SLU 67	-9	33	2449	-650.52	-2.24	-2.83
424	SLU 68	-9	36	2441	-648.89	-2.24	-2.8
424	SLU 69	-9	29	2461	-652.98	-2.24	-2.88
424	SLU 70	-9	33	2449	-650.52	-2.24	-2.83
424	SLU 71	-9	29	2461	-652.98	-2.24	-2.88
424	SLU 72	-9	33	2449	-650.52	-2.24	-2.83
424	SLU 73	-9	40	2737	-722.49	-2.58	-2.87
424	SLU 74	-9	33	2757	-726.59	-2.58	-2.94
424	SLU 75	-9	37	2745	-724.13	-2.58	-2.9
424	SLU 76	-9	40	2737	-722.49	-2.58	-2.87
424	SLU 77	-9	33	2757	-726.59	-2.58	-2.94
424	SLU 78	-9	37	2745	-724.13	-2.58	-2.9
424	SLU 79	-9	33	2757	-726.59	-2.58	-2.94

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
424	SLU 80	-9	37	2745	-724.13	-2.58	-2.9
424	SLU 81	-9	35	2884	-758.13	-2.72	-2.97
424	SLU 82	-9	39	2872	-755.67	-2.73	-2.92
424	SLU 83	-9	35	2884	-758.13	-2.72	-2.97
424	SLU 84	-9	39	2872	-755.67	-2.73	-2.92
424	SLE RA 1	-7	22	1844	-489.92	-1.66	-2.19
424	SLE RA 2	-7	26	1830	-487.19	-1.66	-2.14
424	SLE RA 3	-7	22	1844	-489.92	-1.66	-2.19
424	SLE RA 4	-7	25	1836	-488.29	-1.66	-2.16
424	SLE RA 5	-7	26	1830	-487.19	-1.66	-2.14
424	SLE RA 6	-7	22	1844	-489.92	-1.66	-2.19
424	SLE RA 7	-7	25	1836	-488.29	-1.66	-2.16
424	SLE RA 8	-7	22	1844	-489.92	-1.66	-2.19
424	SLE RA 9	-7	25	1836	-488.29	-1.66	-2.16
424	SLE RA 10	-7	29	2027	-536.26	-1.89	-2.18
424	SLE RA 11	-7	25	2041	-538.99	-1.89	-2.24
424	SLE RA 12	-7	27	2033	-537.36	-1.89	-2.21
424	SLE RA 13	-7	29	2027	-536.26	-1.89	-2.18
424	SLE RA 14	-7	25	2041	-538.99	-1.89	-2.24
424	SLE RA 15	-7	27	2033	-537.36	-1.89	-2.21
424	SLE RA 16	-7	25	2041	-538.99	-1.89	-2.24
424	SLE RA 17	-7	27	2033	-537.36	-1.89	-2.21
424	SLE RA 18	-7	26	2125	-560.02	-1.99	-2.25
424	SLE RA 19	-7	28	2117	-558.39	-1.99	-2.22
424	SLE RA 20	-7	26	2125	-560.02	-1.99	-2.25
424	SLE RA 21	-7	28	2117	-558.39	-1.99	-2.22
424	SLE FR 1	-7	22	1844	-489.92	-1.66	-2.19
424	SLE FR 2	-7	23	1841	-489.38	-1.66	-2.18
424	SLE FR 3	-7	22	1844	-489.92	-1.66	-2.19
424	SLE FR 4	-7	24	1925	-510.41	-1.76	-2.2
424	SLE FR 5	-7	23	1928	-510.95	-1.76	-2.21
424	SLE FR 6	-7	24	1984	-524.97	-1.83	-2.22
424	SLE QP 1	-7	22	1844	-489.92	-1.66	-2.19
424	SLE QP 2	-7	23	1928	-510.95	-1.76	-2.21
424	SLD 1	146	68	1921	-508.79	-1.37	51.19
424	SLD 2	117	58	1925	-509.56	-1.36	41.22
424	SLD 3	143	1	2107	-549.04	-1.55	50.04
424	SLD 4	114	-10	2111	-549.81	-1.54	40.07
424	SLD 5	55	144	1641	-448.97	-1.38	19.22
424	SLD 6	25	133	1646	-449.78	-1.37	8.88
424	SLD 7	44	-83	2263	-583.14	-1.97	15.41
424	SLD 8	14	-94	2268	-583.94	-1.96	5.06
424	SLD 9	-27	140	1589	-437.97	-1.56	-9.48
424	SLD 10	-57	129	1593	-438.77	-1.55	-19.83
424	SLD 11	-38	-87	2211	-572.13	-2.15	-13.3
424	SLD 12	-68	-97	2215	-572.94	-2.14	-23.65
424	SLD 13	-128	56	1745	-472.1	-1.98	-44.49
424	SLD 14	-156	46	1749	-472.87	-1.97	-54.46
424	SLD 15	-131	-12	1931	-512.35	-2.16	-45.64
424	SLD 16	-160	-22	1935	-513.12	-2.15	-55.61
424	SLV 1	342	126	1913	-506.28	-0.88	119.72
424	SLV 2	277	103	1922	-508.05	-0.85	96.99
424	SLV 3	334	-28	2336	-597.69	-1.28	117.09
424	SLV 4	269	-51	2346	-599.46	-1.25	94.37
424	SLV 5	133	297	1277	-370.27	-0.9	46.68
424	SLV 6	66	272	1287	-372.1	-0.87	23.19
424	SLV 7	108	-218	2690	-674.96	-2.23	37.94
424	SLV 8	40	-242	2699	-676.79	-2.2	14.45
424	SLV 9	-54	288	1157	-345.12	-1.32	-18.87
424	SLV 10	-121	264	1166	-346.95	-1.29	-42.36
424	SLV 11	-79	-226	2569	-649.81	-2.65	-27.61
424	SLV 12	-147	-250	2579	-651.64	-2.62	-51.1
424	SLV 13	-283	98	1511	-422.45	-2.27	-98.79
424	SLV 14	-348	74	1520	-424.22	-2.24	-121.51
424	SLV 15	-290	-57	1934	-513.86	-2.67	-101.41
424	SLV 16	-356	-80	1943	-515.63	-2.64	-124.14
424	CRTFP Ux+	0	0	0	0	0	0
424	CRTFP Ux-	0	0	0	0	0	0
424	CRTFP Uy+	0	0	0	0	0	0
424	CRTFP Uy-	0	0	0	0	0	0
425	SLU 1	-5	22	1642	-474.98	29.68	-2.21
425	SLU 2	-5	28	1624	-470.91	29.35	-2.25
425	SLU 3	-5	22	1642	-474.98	29.68	-2.21
425	SLU 4	-5	26	1632	-472.54	29.48	-2.23
425	SLU 5	-5	28	1624	-470.91	29.35	-2.25
425	SLU 6	-5	22	1642	-474.98	29.68	-2.21
425	SLU 7	-5	26	1632	-472.54	29.48	-2.23
425	SLU 8	-5	22	1642	-474.98	29.68	-2.21
425	SLU 9	-5	26	1632	-472.54	29.48	-2.23
425	SLU 10	-5	32	1899	-546.98	34.28	-2.4
425	SLU 11	-6	27	1917	-551.05	34.61	-2.36
425	SLU 12	-5	30	1907	-548.61	34.41	-2.38
425	SLU 13	-5	32	1899	-546.98	34.28	-2.4
425	SLU 14	-6	27	1917	-551.05	34.61	-2.36
425	SLU 15	-5	30	1907	-548.61	34.41	-2.38
425	SLU 16	-6	27	1917	-551.05	34.61	-2.36

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
425	SLU 17	-5	30	1907	-548.61	34.41	-2.38
425	SLU 18	-6	29	2035	-583.65	36.72	-2.43
425	SLU 19	-6	32	2024	-581.21	36.52	-2.45
425	SLU 20	-6	29	2035	-583.65	36.72	-2.43
425	SLU 21	-6	32	2024	-581.21	36.52	-2.45
425	SLU 22	-6	26	1852	-533.08	33.44	-2.36
425	SLU 23	-5	31	1834	-529.01	33.11	-2.4
425	SLU 24	-6	26	1852	-533.08	33.44	-2.36
425	SLU 25	-6	29	1841	-530.64	33.24	-2.38
425	SLU 26	-5	31	1834	-529.01	33.11	-2.4
425	SLU 27	-6	26	1852	-533.08	33.44	-2.36
425	SLU 28	-6	29	1841	-530.64	33.24	-2.38
425	SLU 29	-6	26	1852	-533.08	33.44	-2.36
425	SLU 30	-6	29	1841	-530.64	33.24	-2.38
425	SLU 31	-6	36	2109	-605.08	38.03	-2.55
425	SLU 32	-6	30	2127	-609.15	38.37	-2.51
425	SLU 33	-6	33	2116	-606.71	38.17	-2.53
425	SLU 34	-6	36	2109	-605.08	38.03	-2.55
425	SLU 35	-6	30	2127	-609.15	38.37	-2.51
425	SLU 36	-6	33	2116	-606.71	38.17	-2.53
425	SLU 37	-6	30	2127	-609.15	38.37	-2.51
425	SLU 38	-6	33	2116	-606.71	38.17	-2.53
425	SLU 39	-6	32	2245	-641.75	40.48	-2.58
425	SLU 40	-6	35	2234	-639.31	40.28	-2.6
425	SLU 41	-6	32	2245	-641.75	40.48	-2.58
425	SLU 42	-6	35	2234	-639.31	40.28	-2.6
425	SLU 43	-7	28	2063	-597.55	37.3	-2.83
425	SLU 44	-7	33	2045	-593.48	36.97	-2.86
425	SLU 45	-7	28	2063	-597.55	37.3	-2.83
425	SLU 46	-7	31	2052	-595.11	37.1	-2.85
425	SLU 47	-7	33	2045	-593.48	36.97	-2.86
425	SLU 48	-7	28	2063	-597.55	37.3	-2.83
425	SLU 49	-7	31	2052	-595.11	37.1	-2.85
425	SLU 50	-7	28	2063	-597.55	37.3	-2.83
425	SLU 51	-7	31	2052	-595.11	37.1	-2.85
425	SLU 52	-7	38	2320	-669.55	41.9	-3.01
425	SLU 53	-7	32	2338	-673.62	42.23	-2.98
425	SLU 54	-7	36	2327	-671.18	42.03	-3
425	SLU 55	-7	38	2320	-669.55	41.9	-3.01
425	SLU 56	-7	32	2338	-673.62	42.23	-2.98
425	SLU 57	-7	36	2327	-671.18	42.03	-3
425	SLU 58	-7	32	2338	-673.62	42.23	-2.98
425	SLU 59	-7	36	2327	-671.18	42.03	-3
425	SLU 60	-7	34	2456	-706.22	44.34	-3.04
425	SLU 61	-7	38	2445	-703.78	44.14	-3.06
425	SLU 62	-7	34	2456	-706.22	44.34	-3.04
425	SLU 63	-7	38	2445	-703.78	44.14	-3.06
425	SLU 64	-7	31	2273	-655.65	41.06	-2.97
425	SLU 65	-7	37	2255	-651.58	40.72	-3.01
425	SLU 66	-7	31	2273	-655.65	41.06	-2.97
425	SLU 67	-7	34	2262	-653.21	40.86	-3
425	SLU 68	-7	37	2255	-651.58	40.72	-3.01
425	SLU 69	-7	31	2273	-655.65	41.06	-2.97
425	SLU 70	-7	34	2262	-653.21	40.86	-3
425	SLU 71	-7	31	2273	-655.65	41.06	-2.97
425	SLU 72	-7	34	2262	-653.21	40.86	-3
425	SLU 73	-7	41	2530	-727.65	45.65	-3.16
425	SLU 74	-7	36	2548	-731.72	45.99	-3.12
425	SLU 75	-7	39	2537	-729.28	45.79	-3.15
425	SLU 76	-7	41	2530	-727.65	45.65	-3.16
425	SLU 77	-7	36	2548	-731.72	45.99	-3.12
425	SLU 78	-7	39	2537	-729.28	45.79	-3.15
425	SLU 79	-7	36	2548	-731.72	45.99	-3.12
425	SLU 80	-7	39	2537	-729.28	45.79	-3.15
425	SLU 81	-7	37	2666	-764.32	48.1	-3.19
425	SLU 82	-7	41	2655	-761.88	47.9	-3.21
425	SLU 83	-7	37	2666	-764.32	48.1	-3.19
425	SLU 84	-7	41	2655	-761.88	47.9	-3.21
425	SLE RA 1	-5	23	1702	-491.58	30.76	-2.26
425	SLE RA 2	-5	27	1690	-488.87	30.54	-2.28
425	SLE RA 3	-5	23	1702	-491.58	30.76	-2.26
425	SLE RA 4	-5	25	1695	-489.95	30.62	-2.27
425	SLE RA 5	-5	27	1690	-488.87	30.54	-2.28
425	SLE RA 6	-5	23	1702	-491.58	30.76	-2.26
425	SLE RA 7	-5	25	1695	-489.95	30.62	-2.27
425	SLE RA 8	-5	23	1702	-491.58	30.76	-2.26
425	SLE RA 9	-5	25	1695	-489.95	30.62	-2.27
425	SLE RA 10	-5	30	1874	-539.58	33.82	-2.38
425	SLE RA 11	-6	26	1885	-542.29	34.04	-2.36
425	SLE RA 12	-5	28	1878	-540.66	33.91	-2.37
425	SLE RA 13	-5	30	1874	-539.58	33.82	-2.38
425	SLE RA 14	-6	26	1885	-542.29	34.04	-2.36
425	SLE RA 15	-5	28	1878	-540.66	33.91	-2.37
425	SLE RA 16	-6	26	1885	-542.29	34.04	-2.36
425	SLE RA 17	-5	28	1878	-540.66	33.91	-2.37
425	SLE RA 18	-6	27	1964	-564.03	35.45	-2.4

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
425	SLE RA 19	-6	30	1957	-562.4	35.32	-2.41
425	SLE RA 20	-6	27	1964	-564.03	35.45	-2.4
425	SLE RA 21	-6	30	1957	-562.4	35.32	-2.41
425	SLE FR 1	-5	23	1702	-491.58	30.76	-2.26
425	SLE FR 2	-5	24	1700	-491.04	30.71	-2.26
425	SLE FR 3	-5	23	1702	-491.58	30.76	-2.26
425	SLE FR 4	-5	25	1778	-512.77	32.12	-2.3
425	SLE FR 5	-5	24	1781	-513.31	32.17	-2.3
425	SLE FR 6	-6	25	1833	-527.8	33.1	-2.33
425	SLE QP 1	-5	23	1702	-491.58	30.76	-2.26
425	SLE QP 2	-5	24	1781	-513.31	32.17	-2.3
425	SLD 1	132	63	1764	-510.23	32.12	44.57
425	SLD 2	106	55	1767	-510.9	32.19	35.74
425	SLD 3	129	3	1936	-551.39	35.23	45.65
425	SLD 4	103	-5	1939	-552.06	35.3	36.82
425	SLD 5	50	130	1513	-449.71	27.41	13.39
425	SLD 6	23	122	1516	-450.4	27.48	4.22
425	SLD 7	40	-70	2088	-586.92	37.78	16.98
425	SLD 8	13	-78	2091	-587.62	37.85	7.81
425	SLD 9	-24	127	1470	-439.01	26.48	-12.41
425	SLD 10	-51	119	1474	-439.7	26.56	-21.57
425	SLD 11	-34	-73	2045	-576.22	36.85	-8.82
425	SLD 12	-61	-81	2049	-576.92	36.92	-17.99
425	SLD 13	-114	54	1622	-474.56	29.03	-41.41
425	SLD 14	-140	46	1625	-475.23	29.1	-50.25
425	SLD 15	-117	-6	1795	-515.73	32.14	-40.34
425	SLD 16	-143	-14	1798	-516.4	32.21	-49.17
425	SLV 1	308	112	1743	-506.55	32.09	104.72
425	SLV 2	250	95	1750	-508.08	32.25	84.58
425	SLV 3	302	-24	2135	-600.04	39.15	107.19
425	SLV 4	243	-42	2142	-601.57	39.31	87.05
425	SLV 5	120	264	1172	-368.94	21.37	33.45
425	SLV 6	60	246	1180	-370.52	21.54	12.63
425	SLV 7	98	-191	2478	-680.55	44.91	41.68
425	SLV 8	37	-209	2486	-682.13	45.08	20.87
425	SLV 9	-48	258	1075	-344.49	19.25	-25.46
425	SLV 10	-109	240	1083	-346.07	19.42	-46.28
425	SLV 11	-71	-197	2381	-656.1	42.79	-17.23
425	SLV 12	-131	-215	2389	-657.68	42.96	-38.04
425	SLV 13	-254	91	1419	-425.06	25.02	-91.65
425	SLV 14	-313	73	1427	-426.59	25.18	-111.78
425	SLV 15	-261	-46	1811	-518.54	32.08	-89.18
425	SLV 16	-319	-63	1819	-520.07	32.24	-109.31
425	CRTFP Ux+	0	0	0	0	0	0
425	CRTFP Ux-	0	0	0	0	0	0
425	CRTFP Uy+	0	0	0	0	0	0
425	CRTFP Uy-	0	0	0	0	0	0
427	SLU 1	-15	78	5458	-1313.75	-7.31	-3.56
427	SLU 2	-15	95	5399	-1300.98	-7.55	-3.45
427	SLU 3	-15	78	5458	-1313.75	-7.31	-3.56
427	SLU 4	-15	88	5422	-1306.09	-7.45	-3.5
427	SLU 5	-15	95	5399	-1300.98	-7.55	-3.45
427	SLU 6	-15	78	5458	-1313.75	-7.31	-3.56
427	SLU 7	-15	88	5422	-1306.09	-7.45	-3.5
427	SLU 8	-15	78	5458	-1313.75	-7.31	-3.56
427	SLU 9	-15	88	5422	-1306.09	-7.45	-3.5
427	SLU 10	-15	111	6321	-1520.09	-9.57	-3.55
427	SLU 11	-16	93	6381	-1532.87	-9.33	-3.67
427	SLU 12	-16	104	6345	-1525.2	-9.47	-3.6
427	SLU 13	-15	111	6321	-1520.09	-9.57	-3.55
427	SLU 14	-16	93	6381	-1532.87	-9.33	-3.67
427	SLU 15	-16	104	6345	-1525.2	-9.47	-3.6
427	SLU 16	-16	93	6381	-1532.87	-9.33	-3.67
427	SLU 17	-16	104	6345	-1525.2	-9.47	-3.6
427	SLU 18	-16	100	6776	-1626.77	-10.2	-3.71
427	SLU 19	-16	110	6740	-1619.1	-10.34	-3.64
427	SLU 20	-16	100	6776	-1626.77	-10.2	-3.71
427	SLU 21	-16	110	6740	-1619.1	-10.34	-3.64
427	SLU 22	-16	89	6161	-1480.75	-8.78	-3.72
427	SLU 23	-16	107	6101	-1467.97	-9.02	-3.61
427	SLU 24	-16	89	6161	-1480.75	-8.78	-3.72
427	SLU 25	-16	100	6125	-1473.08	-8.92	-3.65
427	SLU 26	-16	107	6101	-1467.97	-9.02	-3.61
427	SLU 27	-16	89	6161	-1480.75	-8.78	-3.72
427	SLU 28	-16	100	6125	-1473.08	-8.92	-3.65
427	SLU 29	-16	89	6161	-1480.75	-8.78	-3.72
427	SLU 30	-16	100	6125	-1473.08	-8.92	-3.65
427	SLU 31	-16	122	7023	-1687.08	-11.03	-3.71
427	SLU 32	-17	105	7083	-1699.86	-10.8	-3.83
427	SLU 33	-17	115	7047	-1692.19	-10.94	-3.76
427	SLU 34	-16	122	7023	-1687.08	-11.03	-3.71
427	SLU 35	-17	105	7083	-1699.86	-10.8	-3.83
427	SLU 36	-17	115	7047	-1692.19	-10.94	-3.76
427	SLU 37	-17	105	7083	-1699.86	-10.8	-3.83
427	SLU 38	-17	115	7047	-1692.19	-10.94	-3.76
427	SLU 39	-17	111	7478	-1793.76	-11.66	-3.87

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
427	SLU 40	-17	122	7442	-1786.1	-11.8	-3.8
427	SLU 41	-17	111	7478	-1793.76	-11.66	-3.87
427	SLU 42	-17	122	7442	-1786.1	-11.8	-3.8
427	SLU 43	-20	97	6855	-1650.63	-9	-4.58
427	SLU 44	-19	114	6795	-1637.85	-9.24	-4.46
427	SLU 45	-20	97	6855	-1650.63	-9	-4.58
427	SLU 46	-19	107	6819	-1642.96	-9.14	-4.51
427	SLU 47	-19	114	6795	-1637.85	-9.24	-4.46
427	SLU 48	-20	97	6855	-1650.63	-9	-4.58
427	SLU 49	-19	107	6819	-1642.96	-9.14	-4.51
427	SLU 50	-20	97	6855	-1650.63	-9	-4.58
427	SLU 51	-19	107	6819	-1642.96	-9.14	-4.51
427	SLU 52	-20	130	7717	-1856.96	-11.26	-4.57
427	SLU 53	-20	113	7777	-1869.74	-11.02	-4.68
427	SLU 54	-20	123	7741	-1862.07	-11.16	-4.61
427	SLU 55	-20	130	7717	-1856.96	-11.26	-4.57
427	SLU 56	-20	113	7777	-1869.74	-11.02	-4.68
427	SLU 57	-20	123	7741	-1862.07	-11.16	-4.61
427	SLU 58	-20	113	7777	-1869.74	-11.02	-4.68
427	SLU 59	-20	123	7741	-1862.07	-11.16	-4.61
427	SLU 60	-21	119	8173	-1963.64	-11.89	-4.73
427	SLU 61	-20	130	8137	-1955.98	-12.03	-4.66
427	SLU 62	-21	119	8173	-1963.64	-11.89	-4.73
427	SLU 63	-20	130	8137	-1955.98	-12.03	-4.66
427	SLU 64	-21	108	7557	-1817.62	-10.47	-4.74
427	SLU 65	-20	126	7497	-1804.84	-10.71	-4.62
427	SLU 66	-21	108	7557	-1817.62	-10.47	-4.74
427	SLU 67	-20	119	7521	-1809.95	-10.61	-4.67
427	SLU 68	-20	126	7497	-1804.84	-10.71	-4.62
427	SLU 69	-21	108	7557	-1817.62	-10.47	-4.74
427	SLU 70	-20	119	7521	-1809.95	-10.61	-4.67
427	SLU 71	-21	108	7557	-1817.62	-10.47	-4.74
427	SLU 72	-20	119	7521	-1809.95	-10.61	-4.67
427	SLU 73	-21	142	8420	-2023.95	-12.72	-4.73
427	SLU 74	-21	124	8479	-2036.73	-12.49	-4.84
427	SLU 75	-21	135	8444	-2029.06	-12.63	-4.77
427	SLU 76	-21	142	8420	-2023.95	-12.72	-4.73
427	SLU 77	-21	124	8479	-2036.73	-12.49	-4.84
427	SLU 78	-21	135	8444	-2029.06	-12.63	-4.77
427	SLU 79	-21	124	8479	-2036.73	-12.49	-4.84
427	SLU 80	-21	135	8444	-2029.06	-12.63	-4.77
427	SLU 81	-22	131	8875	-2130.63	-13.35	-4.89
427	SLU 82	-21	141	8839	-2122.97	-13.5	-4.82
427	SLU 83	-22	131	8875	-2130.63	-13.35	-4.89
427	SLU 84	-21	141	8839	-2122.97	-13.5	-4.82
427	SLE RA 1	-16	81	5659	-1361.47	-7.73	-3.61
427	SLE RA 2	-15	92	5619	-1352.95	-7.89	-3.53
427	SLE RA 3	-16	81	5659	-1361.47	-7.73	-3.61
427	SLE RA 4	-15	88	5635	-1356.36	-7.83	-3.56
427	SLE RA 5	-15	92	5619	-1352.95	-7.89	-3.53
427	SLE RA 6	-16	81	5659	-1361.47	-7.73	-3.61
427	SLE RA 7	-15	88	5635	-1356.36	-7.83	-3.56
427	SLE RA 8	-16	81	5659	-1361.47	-7.73	-3.61
427	SLE RA 9	-15	88	5635	-1356.36	-7.83	-3.56
427	SLE RA 10	-16	103	6234	-1499.02	-9.23	-3.6
427	SLE RA 11	-16	91	6274	-1507.54	-9.08	-3.68
427	SLE RA 12	-16	98	6250	-1502.43	-9.17	-3.63
427	SLE RA 13	-16	103	6234	-1499.02	-9.23	-3.6
427	SLE RA 14	-16	91	6274	-1507.54	-9.08	-3.68
427	SLE RA 15	-16	98	6250	-1502.43	-9.17	-3.63
427	SLE RA 16	-16	91	6274	-1507.54	-9.08	-3.68
427	SLE RA 17	-16	98	6250	-1502.43	-9.17	-3.63
427	SLE RA 18	-16	96	6537	-1570.14	-9.65	-3.71
427	SLE RA 19	-16	103	6513	-1565.03	-9.75	-3.66
427	SLE RA 20	-16	96	6537	-1570.14	-9.65	-3.71
427	SLE RA 21	-16	103	6513	-1565.03	-9.75	-3.66
427	SLE FR 1	-16	81	5659	-1361.47	-7.73	-3.61
427	SLE FR 2	-16	83	5651	-1359.76	-7.76	-3.59
427	SLE FR 3	-16	81	5659	-1361.47	-7.73	-3.61
427	SLE FR 4	-16	88	5915	-1422.37	-8.34	-3.62
427	SLE FR 5	-16	85	5923	-1424.07	-8.31	-3.64
427	SLE FR 6	-16	88	6098	-1465.81	-8.69	-3.66
427	SLE QP 1	-16	81	5659	-1361.47	-7.73	-3.61
427	SLE QP 2	-16	85	5923	-1424.07	-8.31	-3.64
427	SLD 1	428	201	5819	-1406.3	1.06	106.13
427	SLD 2	344	183	5829	-1408.23	1.5	85.56
427	SLD 3	419	10	6413	-1535.02	-0.06	108.29
427	SLD 4	334	-8	6423	-1536.95	0.38	87.72
427	SLD 5	163	416	4987	-1222.79	-3.96	33.6
427	SLD 6	75	397	4996	-1224.79	-3.5	12.26
427	SLD 7	131	-220	6968	-1651.88	-7.7	40.8
427	SLD 8	44	-239	6978	-1653.88	-7.24	19.46
427	SLD 9	-76	409	4867	-1194.26	-9.38	-26.74
427	SLD 10	-163	391	4877	-1196.26	-8.92	-48.08
427	SLD 11	-107	-226	6849	-1623.35	-13.11	-19.54
427	SLD 12	-194	-245	6858	-1625.35	-12.66	-40.88

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
427	SLD 13	-366	179	5422	-1311.19	-17	-95
427	SLD 14	-450	161	5432	-1313.11	-16.56	-115.56
427	SLD 15	-375	-12	6016	-1439.91	-18.12	-92.84
427	SLD 16	-460	-30	6026	-1441.84	-17.68	-113.4
427	SLV 1	998	348	5690	-1384.34	13.1	246.97
427	SLV 2	806	307	5712	-1388.74	14.1	200.1
427	SLV 3	976	-85	7040	-1676.67	10.55	251.93
427	SLV 4	784	-126	7061	-1681.07	11.55	205.05
427	SLV 5	391	836	3798	-967.18	1.61	81.22
427	SLV 6	193	793	3820	-971.72	2.65	32.77
427	SLV 7	320	-608	8297	-1941.6	-6.89	97.74
427	SLV 8	121	-650	8319	-1946.14	-5.85	49.29
427	SLV 9	-153	821	3526	-902	-10.77	-56.57
427	SLV 10	-351	778	3548	-906.54	-9.73	-105.02
427	SLV 11	-224	-623	8025	-1876.42	-19.27	-40.05
427	SLV 12	-423	-665	8047	-1880.96	-18.23	-88.5
427	SLV 13	-816	297	4784	-1167.07	-28.17	-212.33
427	SLV 14	-1008	256	4805	-1171.47	-27.16	-259.2
427	SLV 15	-837	-136	6133	-1459.4	-30.72	-207.37
427	SLV 16	-1029	-177	6155	-1463.8	-29.71	-254.25
427	CRTFP Ux+	0	0	0	0	0	0
427	CRTFP Ux-	0	0	0	0	0	0
427	CRTFP Uy+	0	0	0	-0.01	0	0
427	CRTFP Uy-	0	0	0	0.01	0	0
429	SLU 1	-4	24	1640	-493.38	-30.42	-0.81
429	SLU 2	-3	29	1623	-489.23	-30.11	-0.65
429	SLU 3	-4	24	1640	-493.38	-30.42	-0.81
429	SLU 4	-3	27	1630	-490.89	-30.24	-0.71
429	SLU 5	-3	29	1623	-489.23	-30.11	-0.65
429	SLU 6	-4	24	1640	-493.38	-30.42	-0.81
429	SLU 7	-3	27	1630	-490.89	-30.24	-0.71
429	SLU 8	-4	24	1640	-493.38	-30.42	-0.81
429	SLU 9	-3	27	1630	-490.89	-30.24	-0.71
429	SLU 10	-3	34	1900	-569.57	-35.26	-0.6
429	SLU 11	-4	29	1917	-573.72	-35.57	-0.75
429	SLU 12	-4	32	1906	-571.23	-35.38	-0.66
429	SLU 13	-3	34	1900	-569.57	-35.26	-0.6
429	SLU 14	-4	29	1917	-573.72	-35.57	-0.75
429	SLU 15	-4	32	1906	-571.23	-35.38	-0.66
429	SLU 16	-4	29	1917	-573.72	-35.57	-0.75
429	SLU 17	-4	32	1906	-571.23	-35.38	-0.66
429	SLU 18	-4	31	2035	-608.16	-37.77	-0.73
429	SLU 19	-4	34	2025	-605.67	-37.58	-0.63
429	SLU 20	-4	31	2035	-608.16	-37.77	-0.73
429	SLU 21	-4	34	2025	-605.67	-37.58	-0.63
429	SLU 22	-4	28	1850	-554.69	-34.34	-0.8
429	SLU 23	-4	33	1833	-550.54	-34.03	-0.64
429	SLU 24	-4	28	1850	-554.69	-34.34	-0.8
429	SLU 25	-4	31	1840	-552.2	-34.15	-0.7
429	SLU 26	-4	33	1833	-550.54	-34.03	-0.64
429	SLU 27	-4	28	1850	-554.69	-34.34	-0.8
429	SLU 28	-4	31	1840	-552.2	-34.15	-0.7
429	SLU 29	-4	28	1850	-554.69	-34.34	-0.8
429	SLU 30	-4	31	1840	-552.2	-34.15	-0.7
429	SLU 31	-4	38	2110	-630.89	-39.17	-0.59
429	SLU 32	-4	33	2127	-635.04	-39.48	-0.74
429	SLU 33	-4	36	2117	-632.55	-39.29	-0.65
429	SLU 34	-4	38	2110	-630.89	-39.17	-0.59
429	SLU 35	-4	33	2127	-635.04	-39.48	-0.74
429	SLU 36	-4	36	2117	-632.55	-39.29	-0.65
429	SLU 37	-4	33	2127	-635.04	-39.48	-0.74
429	SLU 38	-4	36	2117	-632.55	-39.29	-0.65
429	SLU 39	-4	35	2246	-669.47	-41.68	-0.72
429	SLU 40	-4	38	2236	-666.98	-41.5	-0.62
429	SLU 41	-4	35	2246	-669.47	-41.68	-0.72
429	SLU 42	-4	38	2236	-666.98	-41.5	-0.62
429	SLU 43	-5	30	2060	-620.37	-38.21	-1.05
429	SLU 44	-4	35	2043	-616.22	-37.9	-0.9
429	SLU 45	-5	30	2060	-620.37	-38.21	-1.05
429	SLU 46	-4	33	2049	-617.88	-38.02	-0.96
429	SLU 47	-4	35	2043	-616.22	-37.9	-0.9
429	SLU 48	-5	30	2060	-620.37	-38.21	-1.05
429	SLU 49	-4	33	2049	-617.88	-38.02	-0.96
429	SLU 50	-5	30	2060	-620.37	-38.21	-1.05
429	SLU 51	-4	33	2049	-617.88	-38.02	-0.96
429	SLU 52	-5	40	2319	-696.57	-43.04	-0.84
429	SLU 53	-5	35	2336	-700.72	-43.35	-1
429	SLU 54	-5	38	2326	-698.23	-43.17	-0.9
429	SLU 55	-5	40	2319	-696.57	-43.04	-0.84
429	SLU 56	-5	35	2336	-700.72	-43.35	-1
429	SLU 57	-5	38	2326	-698.23	-43.17	-0.9
429	SLU 58	-5	35	2336	-700.72	-43.35	-1
429	SLU 59	-5	38	2326	-698.23	-43.17	-0.9
429	SLU 60	-5	37	2455	-735.15	-45.55	-0.97
429	SLU 61	-5	40	2445	-732.66	-45.37	-0.88
429	SLU 62	-5	37	2455	-735.15	-45.55	-0.97

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
429	SLU 63	-5	40	2445	-732.66	-45.37	-0.88
429	SLU 64	-5	34	2270	-681.69	-42.12	-1.04
429	SLU 65	-5	39	2253	-677.54	-41.81	-0.89
429	SLU 66	-5	34	2270	-681.69	-42.12	-1.04
429	SLU 67	-5	37	2260	-679.2	-41.94	-0.95
429	SLU 68	-5	39	2253	-677.54	-41.81	-0.89
429	SLU 69	-5	34	2270	-681.69	-42.12	-1.04
429	SLU 70	-5	37	2260	-679.2	-41.94	-0.95
429	SLU 71	-5	34	2270	-681.69	-42.12	-1.04
429	SLU 72	-5	37	2260	-679.2	-41.94	-0.95
429	SLU 73	-5	44	2530	-757.88	-46.96	-0.83
429	SLU 74	-5	39	2547	-762.03	-47.26	-0.99
429	SLU 75	-5	42	2537	-759.54	-47.08	-0.89
429	SLU 76	-5	44	2530	-757.88	-46.96	-0.83
429	SLU 77	-5	39	2547	-762.03	-47.26	-0.99
429	SLU 78	-5	42	2537	-759.54	-47.08	-0.89
429	SLU 79	-5	39	2547	-762.03	-47.26	-0.99
429	SLU 80	-5	42	2537	-759.54	-47.08	-0.89
429	SLU 81	-5	41	2665	-796.46	-49.47	-0.96
429	SLU 82	-5	44	2655	-793.97	-49.28	-0.87
429	SLU 83	-5	41	2665	-796.46	-49.47	-0.96
429	SLU 84	-5	44	2655	-793.97	-49.28	-0.87
429	SLE RA 1	-4	25	1700	-510.9	-31.54	-0.8
429	SLE RA 2	-3	29	1689	-508.13	-31.34	-0.7
429	SLE RA 3	-4	25	1700	-510.9	-31.54	-0.8
429	SLE RA 4	-4	27	1693	-509.24	-31.42	-0.74
429	SLE RA 5	-3	29	1689	-508.13	-31.34	-0.7
429	SLE RA 6	-4	25	1700	-510.9	-31.54	-0.8
429	SLE RA 7	-4	27	1693	-509.24	-31.42	-0.74
429	SLE RA 8	-4	25	1700	-510.9	-31.54	-0.8
429	SLE RA 9	-4	27	1693	-509.24	-31.42	-0.74
429	SLE RA 10	-4	32	1873	-561.69	-34.76	-0.66
429	SLE RA 11	-4	28	1884	-564.46	-34.97	-0.77
429	SLE RA 12	-4	30	1878	-562.8	-34.85	-0.7
429	SLE RA 13	-4	32	1873	-561.69	-34.76	-0.66
429	SLE RA 14	-4	28	1884	-564.46	-34.97	-0.77
429	SLE RA 15	-4	30	1878	-562.8	-34.85	-0.7
429	SLE RA 16	-4	28	1884	-564.46	-34.97	-0.77
429	SLE RA 17	-4	30	1878	-562.8	-34.85	-0.7
429	SLE RA 18	-4	30	1964	-587.42	-36.44	-0.75
429	SLE RA 19	-4	32	1957	-585.76	-36.32	-0.69
429	SLE RA 20	-4	30	1964	-587.42	-36.44	-0.75
429	SLE RA 21	-4	32	1957	-585.76	-36.32	-0.69
429	SLE FR 1	-4	25	1700	-510.9	-31.54	-0.8
429	SLE FR 2	-4	26	1698	-510.35	-31.5	-0.78
429	SLE FR 3	-4	25	1700	-510.9	-31.54	-0.8
429	SLE FR 4	-4	27	1777	-533.3	-32.97	-0.77
429	SLE FR 5	-4	26	1779	-533.85	-33.01	-0.79
429	SLE FR 6	-4	27	1832	-549.16	-33.99	-0.78
429	SLE QP 1	-4	25	1700	-510.9	-31.54	-0.8
429	SLE QP 2	-4	26	1779	-533.85	-33.01	-0.79
429	SLD 1	129	60	1740	-527.36	-32.02	46.75
429	SLD 2	103	56	1742	-527.86	-32.05	37.88
429	SLD 3	131	2	1913	-571.05	-35.23	45.1
429	SLD 4	106	-1	1915	-571.55	-35.25	36.22
429	SLD 5	41	125	1504	-465.46	-27.84	19.26
429	SLD 6	15	121	1507	-465.98	-27.86	10.05
429	SLD 7	50	-66	2080	-611.09	-38.53	13.74
429	SLD 8	24	-70	2083	-611.61	-38.56	4.53
429	SLD 9	-31	123	1475	-456.1	-27.46	-6.11
429	SLD 10	-57	119	1478	-456.62	-27.49	-15.32
429	SLD 11	-22	-68	2051	-601.73	-38.16	-11.62
429	SLD 12	-49	-72	2054	-602.25	-38.18	-20.84
429	SLD 13	-113	54	1643	-496.16	-30.77	-37.8
429	SLD 14	-138	51	1645	-496.66	-30.79	-46.67
429	SLD 15	-111	-3	1816	-539.85	-33.97	-39.45
429	SLD 16	-136	-7	1818	-540.34	-34	-48.33
429	SLV 1	298	102	1691	-519.34	-30.77	107.75
429	SLV 2	241	94	1696	-520.48	-30.83	87.52
429	SLV 3	304	-28	2083	-618.55	-38.06	103.99
429	SLV 4	247	-37	2088	-619.69	-38.12	83.76
429	SLV 5	99	250	1156	-378.62	-21.27	44.91
429	SLV 6	39	241	1161	-379.8	-21.33	23.99
429	SLV 7	119	-185	2464	-709.31	-45.55	32.36
429	SLV 8	60	-193	2469	-710.49	-45.61	11.44
429	SLV 9	-67	246	1089	-357.22	-20.41	-13.02
429	SLV 10	-126	238	1094	-358.4	-20.47	-33.93
429	SLV 11	-46	-188	2397	-687.91	-44.69	-25.57
429	SLV 12	-106	-197	2403	-689.09	-44.76	-46.48
429	SLV 13	-254	90	1470	-448.02	-27.91	-85.33
429	SLV 14	-312	81	1475	-449.16	-27.97	-105.56
429	SLV 15	-248	-41	1862	-547.23	-35.19	-89.1
429	SLV 16	-305	-49	1867	-548.36	-35.25	-109.33
429	CRTFP Ux+	0	0	0	0	0	0
429	CRTFP Ux-	0	0	0	0	0	0
429	CRTFP Uy+	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
429	CRTFP Uy-	0	0	0	0	0	0
430	SLU 1	-3	26	1815	-528.02	0.39	-1.12
430	SLU 2	-3	32	1797	-523.64	0.38	-1.06
430	SLU 3	-3	26	1815	-528.02	0.39	-1.12
430	SLU 4	-3	30	1804	-525.39	0.38	-1.08
430	SLU 5	-3	32	1797	-523.64	0.38	-1.06
430	SLU 6	-3	26	1815	-528.02	0.39	-1.12
430	SLU 7	-3	30	1804	-525.39	0.38	-1.08
430	SLU 8	-3	26	1815	-528.02	0.39	-1.12
430	SLU 9	-3	30	1804	-525.39	0.38	-1.08
430	SLU 10	-3	37	2103	-608.93	0.44	-1.09
430	SLU 11	-3	32	2122	-613.32	0.45	-1.15
430	SLU 12	-3	35	2111	-610.69	0.44	-1.11
430	SLU 13	-3	37	2103	-608.93	0.44	-1.09
430	SLU 14	-3	32	2122	-613.32	0.45	-1.15
430	SLU 15	-3	35	2111	-610.69	0.44	-1.11
430	SLU 16	-3	32	2122	-613.32	0.45	-1.15
430	SLU 17	-3	35	2111	-610.69	0.44	-1.11
430	SLU 18	-3	34	2253	-649.88	0.48	-1.16
430	SLU 19	-3	37	2242	-647.24	0.47	-1.12
430	SLU 20	-3	34	2253	-649.88	0.48	-1.16
430	SLU 21	-3	37	2242	-647.24	0.47	-1.12
430	SLU 22	-3	30	2048	-593.12	0.44	-1.17
430	SLU 23	-3	36	2030	-588.73	0.43	-1.11
430	SLU 24	-3	30	2048	-593.12	0.44	-1.17
430	SLU 25	-3	34	2037	-590.49	0.43	-1.14
430	SLU 26	-3	36	2030	-588.73	0.43	-1.11
430	SLU 27	-3	30	2048	-593.12	0.44	-1.17
430	SLU 28	-3	34	2037	-590.49	0.43	-1.14
430	SLU 29	-3	30	2048	-593.12	0.44	-1.17
430	SLU 30	-3	34	2037	-590.49	0.43	-1.14
430	SLU 31	-3	41	2336	-674.03	0.49	-1.14
430	SLU 32	-3	36	2355	-678.42	0.5	-1.2
430	SLU 33	-3	39	2344	-675.79	0.49	-1.16
430	SLU 34	-3	41	2336	-674.03	0.49	-1.14
430	SLU 35	-3	36	2355	-678.42	0.5	-1.2
430	SLU 36	-3	39	2344	-675.79	0.49	-1.16
430	SLU 37	-3	36	2355	-678.42	0.5	-1.2
430	SLU 38	-3	39	2344	-675.79	0.49	-1.16
430	SLU 39	-3	38	2486	-714.97	0.53	-1.21
430	SLU 40	-3	41	2475	-712.34	0.52	-1.17
430	SLU 41	-3	38	2486	-714.97	0.53	-1.21
430	SLU 42	-3	41	2475	-712.34	0.52	-1.17
430	SLU 43	-4	33	2280	-664.11	0.49	-1.43
430	SLU 44	-4	38	2261	-659.72	0.48	-1.38
430	SLU 45	-4	33	2280	-664.11	0.49	-1.43
430	SLU 46	-4	36	2269	-661.48	0.48	-1.4
430	SLU 47	-4	38	2261	-659.72	0.48	-1.38
430	SLU 48	-4	33	2280	-664.11	0.49	-1.43
430	SLU 49	-4	36	2269	-661.48	0.48	-1.4
430	SLU 50	-4	33	2280	-664.11	0.49	-1.43
430	SLU 51	-4	36	2269	-661.48	0.48	-1.4
430	SLU 52	-4	44	2568	-745.02	0.54	-1.41
430	SLU 53	-4	38	2586	-749.41	0.55	-1.46
430	SLU 54	-4	41	2575	-746.77	0.54	-1.43
430	SLU 55	-4	44	2568	-745.02	0.54	-1.41
430	SLU 56	-4	38	2586	-749.41	0.55	-1.46
430	SLU 57	-4	41	2575	-746.77	0.54	-1.43
430	SLU 58	-4	38	2586	-749.41	0.55	-1.46
430	SLU 59	-4	41	2575	-746.77	0.54	-1.43
430	SLU 60	-4	40	2718	-785.96	0.57	-1.47
430	SLU 61	-4	44	2707	-783.33	0.57	-1.44
430	SLU 62	-4	40	2718	-785.96	0.57	-1.47
430	SLU 63	-4	44	2707	-783.33	0.57	-1.44
430	SLU 64	-4	37	2513	-729.21	0.54	-1.49
430	SLU 65	-4	42	2495	-724.82	0.53	-1.43
430	SLU 66	-4	37	2513	-729.21	0.54	-1.49
430	SLU 67	-4	40	2502	-726.58	0.53	-1.45
430	SLU 68	-4	42	2495	-724.82	0.53	-1.43
430	SLU 69	-4	37	2513	-729.21	0.54	-1.49
430	SLU 70	-4	40	2502	-726.58	0.53	-1.45
430	SLU 71	-4	37	2513	-729.21	0.54	-1.49
430	SLU 72	-4	40	2502	-726.58	0.53	-1.45
430	SLU 73	-4	48	2801	-810.12	0.59	-1.46
430	SLU 74	-4	42	2820	-814.51	0.6	-1.51
430	SLU 75	-4	45	2808	-811.87	0.59	-1.48
430	SLU 76	-4	48	2801	-810.12	0.59	-1.46
430	SLU 77	-4	42	2820	-814.51	0.6	-1.51
430	SLU 78	-4	45	2808	-811.87	0.59	-1.48
430	SLU 79	-4	42	2820	-814.51	0.6	-1.51
430	SLU 80	-4	45	2808	-811.87	0.59	-1.48
430	SLU 81	-4	44	2951	-851.06	0.62	-1.53
430	SLU 82	-4	48	2940	-848.43	0.62	-1.49
430	SLU 83	-4	44	2951	-851.06	0.62	-1.53
430	SLU 84	-4	48	2940	-848.43	0.62	-1.49
430	SLE RA 1	-3	27	1882	-546.62	0.4	-1.13

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
430	SLE RA 2	-3	31	1869	-543.7	0.39	-1.09
430	SLE RA 3	-3	27	1882	-546.62	0.4	-1.13
430	SLE RA 4	-3	30	1874	-544.87	0.4	-1.11
430	SLE RA 5	-3	31	1869	-543.7	0.39	-1.09
430	SLE RA 6	-3	27	1882	-546.62	0.4	-1.13
430	SLE RA 7	-3	30	1874	-544.87	0.4	-1.11
430	SLE RA 8	-3	27	1882	-546.62	0.4	-1.13
430	SLE RA 9	-3	30	1874	-544.87	0.4	-1.11
430	SLE RA 10	-3	35	2074	-600.56	0.44	-1.11
430	SLE RA 11	-3	31	2086	-603.49	0.44	-1.15
430	SLE RA 12	-3	33	2079	-601.73	0.44	-1.13
430	SLE RA 13	-3	35	2074	-600.56	0.44	-1.11
430	SLE RA 14	-3	31	2086	-603.49	0.44	-1.15
430	SLE RA 15	-3	33	2079	-601.73	0.44	-1.13
430	SLE RA 16	-3	31	2086	-603.49	0.44	-1.15
430	SLE RA 17	-3	33	2079	-601.73	0.44	-1.13
430	SLE RA 18	-3	32	2174	-627.86	0.46	-1.16
430	SLE RA 19	-3	35	2166	-626.1	0.46	-1.14
430	SLE RA 20	-3	32	2174	-627.86	0.46	-1.16
430	SLE RA 21	-3	35	2166	-626.1	0.46	-1.14
430	SLE FR 1	-3	27	1882	-546.62	0.4	-1.13
430	SLE FR 2	-3	28	1879	-546.04	0.4	-1.12
430	SLE FR 3	-3	27	1882	-546.62	0.4	-1.13
430	SLE FR 4	-3	30	1967	-570.41	0.42	-1.13
430	SLE FR 5	-3	29	1969	-570.99	0.42	-1.14
430	SLE FR 6	-3	30	2028	-587.24	0.43	-1.15
430	SLE QP 1	-3	27	1882	-546.62	0.4	-1.13
430	SLE QP 2	-3	29	1969	-570.99	0.42	-1.14
430	SLD 1	144	65	1914	-561.26	0.8	50.35
430	SLD 2	116	62	1916	-561.67	0.82	40.54
430	SLD 3	147	2	2106	-608.21	0.85	51.36
430	SLD 4	119	-1	2107	-608.61	0.87	41.55
430	SLD 5	47	136	1662	-496.73	0.46	16.41
430	SLD 6	18	134	1664	-497.15	0.49	6.22
430	SLD 7	57	-74	2300	-653.2	0.6	19.75
430	SLD 8	27	-77	2302	-653.63	0.62	9.57
430	SLD 9	-34	135	1637	-488.36	0.21	-11.85
430	SLD 10	-63	132	1639	-488.79	0.24	-22.03
430	SLD 11	-24	-76	2275	-644.84	0.35	-8.5
430	SLD 12	-53	-79	2277	-645.26	0.38	-18.69
430	SLD 13	-125	59	1831	-533.37	-0.03	-43.83
430	SLD 14	-153	56	1833	-533.78	-0.01	-53.64
430	SLD 15	-122	-5	2023	-580.32	0.01	-42.82
430	SLD 16	-150	-7	2025	-580.72	0.03	-52.63
430	SLV 1	333	111	1845	-549.13	1.3	116.43
430	SLV 2	269	105	1849	-550.06	1.35	94.06
430	SLV 3	340	-33	2279	-655.72	1.39	118.73
430	SLV 4	275	-39	2283	-656.65	1.44	96.37
430	SLV 5	111	273	1272	-402.43	0.52	38.84
430	SLV 6	45	267	1276	-403.39	0.57	15.73
430	SLV 7	133	-205	2720	-757.74	0.84	46.52
430	SLV 8	67	-211	2724	-758.7	0.89	23.4
430	SLV 9	-73	269	1215	-383.29	-0.05	-25.68
430	SLV 10	-140	263	1219	-384.25	0	-48.8
430	SLV 11	-51	-209	2663	-738.6	0.27	-18.01
430	SLV 12	-118	-215	2667	-739.56	0.32	-41.12
430	SLV 13	-282	96	1656	-485.34	-0.6	-98.65
430	SLV 14	-346	90	1660	-486.27	-0.55	-121.01
430	SLV 15	-275	-47	2090	-591.93	-0.51	-96.34
430	SLV 16	-339	-53	2094	-592.86	-0.46	-118.71
430	CRTFP Ux+	0	0	0	0	0	0
430	CRTFP Ux-	0	0	0	0	0	0
430	CRTFP Uy+	0	0	0	0	0	0
430	CRTFP Uy-	0	0	0	0	0	0
431	SLU 1	-2	25	1803	-511.71	0.35	-0.85
431	SLU 2	-2	31	1784	-507.49	0.34	-0.81
431	SLU 3	-2	25	1803	-511.71	0.35	-0.85
431	SLU 4	-2	29	1792	-509.18	0.34	-0.83
431	SLU 5	-2	31	1784	-507.49	0.34	-0.81
431	SLU 6	-2	25	1803	-511.71	0.35	-0.85
431	SLU 7	-2	29	1792	-509.18	0.34	-0.83
431	SLU 8	-2	25	1803	-511.71	0.35	-0.85
431	SLU 9	-2	29	1792	-509.18	0.34	-0.83
431	SLU 10	-2	36	2089	-589.67	0.39	-0.83
431	SLU 11	-2	31	2107	-593.88	0.4	-0.88
431	SLU 12	-2	34	2096	-591.35	0.4	-0.85
431	SLU 13	-2	36	2089	-589.67	0.39	-0.83
431	SLU 14	-2	31	2107	-593.88	0.4	-0.88
431	SLU 15	-2	34	2096	-591.35	0.4	-0.85
431	SLU 16	-2	31	2107	-593.88	0.4	-0.88
431	SLU 17	-2	34	2096	-591.35	0.4	-0.85
431	SLU 18	-2	33	2237	-629.1	0.42	-0.89
431	SLU 19	-2	36	2226	-626.57	0.42	-0.86
431	SLU 20	-2	33	2237	-629.1	0.42	-0.89
431	SLU 21	-2	36	2226	-626.57	0.42	-0.86
431	SLU 22	-2	29	2034	-574.41	0.39	-0.9

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
431	SLU 23	-2	35	2016	-570.2	0.38	-0.85
431	SLU 24	-2	29	2034	-574.41	0.39	-0.9
431	SLU 25	-2	33	2023	-571.88	0.39	-0.87
431	SLU 26	-2	35	2016	-570.2	0.38	-0.85
431	SLU 27	-2	29	2034	-574.41	0.39	-0.9
431	SLU 28	-2	33	2023	-571.88	0.39	-0.87
431	SLU 29	-2	29	2034	-574.41	0.39	-0.9
431	SLU 30	-2	33	2023	-571.88	0.39	-0.87
431	SLU 31	-2	40	2320	-652.37	0.44	-0.87
431	SLU 32	-3	34	2339	-656.59	0.45	-0.92
431	SLU 33	-2	38	2328	-654.06	0.44	-0.89
431	SLU 34	-2	40	2320	-652.37	0.44	-0.87
431	SLU 35	-3	34	2339	-656.59	0.45	-0.92
431	SLU 36	-2	38	2328	-654.06	0.44	-0.89
431	SLU 37	-3	34	2339	-656.59	0.45	-0.92
431	SLU 38	-2	38	2328	-654.06	0.44	-0.89
431	SLU 39	-3	37	2469	-691.81	0.47	-0.93
431	SLU 40	-2	40	2458	-689.28	0.46	-0.9
431	SLU 41	-3	37	2469	-691.81	0.47	-0.93
431	SLU 42	-2	40	2458	-689.28	0.46	-0.9
431	SLU 43	-3	32	2264	-643.72	0.43	-1.1
431	SLU 44	-3	37	2246	-639.5	0.43	-1.05
431	SLU 45	-3	32	2264	-643.72	0.43	-1.1
431	SLU 46	-3	35	2253	-641.19	0.43	-1.07
431	SLU 47	-3	37	2246	-639.5	0.43	-1.05
431	SLU 48	-3	32	2264	-643.72	0.43	-1.1
431	SLU 49	-3	35	2253	-641.19	0.43	-1.07
431	SLU 50	-3	32	2264	-643.72	0.43	-1.1
431	SLU 51	-3	35	2253	-641.19	0.43	-1.07
431	SLU 52	-3	43	2550	-721.68	0.48	-1.07
431	SLU 53	-3	37	2568	-725.9	0.49	-1.12
431	SLU 54	-3	40	2557	-723.37	0.49	-1.09
431	SLU 55	-3	43	2550	-721.68	0.48	-1.07
431	SLU 56	-3	37	2568	-725.9	0.49	-1.12
431	SLU 57	-3	40	2557	-723.37	0.49	-1.09
431	SLU 58	-3	37	2568	-725.9	0.49	-1.12
431	SLU 59	-3	40	2557	-723.37	0.49	-1.09
431	SLU 60	-3	39	2699	-761.12	0.51	-1.13
431	SLU 61	-3	42	2688	-758.59	0.51	-1.1
431	SLU 62	-3	39	2699	-761.12	0.51	-1.13
431	SLU 63	-3	42	2688	-758.59	0.51	-1.1
431	SLU 64	-3	36	2496	-706.43	0.48	-1.14
431	SLU 65	-3	41	2477	-702.21	0.47	-1.09
431	SLU 66	-3	36	2496	-706.43	0.48	-1.14
431	SLU 67	-3	39	2485	-703.9	0.47	-1.11
431	SLU 68	-3	41	2477	-702.21	0.47	-1.09
431	SLU 69	-3	36	2496	-706.43	0.48	-1.14
431	SLU 70	-3	39	2485	-703.9	0.47	-1.11
431	SLU 71	-3	36	2496	-706.43	0.48	-1.14
431	SLU 72	-3	39	2485	-703.9	0.47	-1.11
431	SLU 73	-3	46	2782	-784.39	0.53	-1.11
431	SLU 74	-3	41	2800	-788.6	0.53	-1.16
431	SLU 75	-3	44	2789	-786.07	0.53	-1.13
431	SLU 76	-3	46	2782	-784.39	0.53	-1.11
431	SLU 77	-3	41	2800	-788.6	0.53	-1.16
431	SLU 78	-3	44	2789	-786.07	0.53	-1.13
431	SLU 79	-3	41	2800	-788.6	0.53	-1.16
431	SLU 80	-3	44	2789	-786.07	0.53	-1.13
431	SLU 81	-3	43	2930	-823.82	0.56	-1.17
431	SLU 82	-3	46	2919	-821.29	0.55	-1.14
431	SLU 83	-3	43	2930	-823.82	0.56	-1.17
431	SLU 84	-3	46	2919	-821.29	0.55	-1.14
431	SLE RA 1	-2	27	1869	-529.62	0.36	-0.87
431	SLE RA 2	-2	30	1857	-526.81	0.35	-0.83
431	SLE RA 3	-2	27	1869	-529.62	0.36	-0.87
431	SLE RA 4	-2	29	1861	-527.94	0.36	-0.85
431	SLE RA 5	-2	30	1857	-526.81	0.35	-0.83
431	SLE RA 6	-2	27	1869	-529.62	0.36	-0.87
431	SLE RA 7	-2	29	1861	-527.94	0.36	-0.85
431	SLE RA 8	-2	27	1869	-529.62	0.36	-0.87
431	SLE RA 9	-2	29	1861	-527.94	0.36	-0.85
431	SLE RA 10	-2	34	2059	-581.6	0.39	-0.85
431	SLE RA 11	-2	30	2072	-584.41	0.39	-0.88
431	SLE RA 12	-2	32	2064	-582.72	0.39	-0.86
431	SLE RA 13	-2	34	2059	-581.6	0.39	-0.85
431	SLE RA 14	-2	30	2072	-584.41	0.39	-0.88
431	SLE RA 15	-2	32	2064	-582.72	0.39	-0.86
431	SLE RA 16	-2	30	2072	-584.41	0.39	-0.88
431	SLE RA 17	-2	32	2064	-582.72	0.39	-0.86
431	SLE RA 18	-2	31	2159	-607.89	0.41	-0.89
431	SLE RA 19	-2	34	2151	-606.2	0.41	-0.87
431	SLE RA 20	-2	31	2159	-607.89	0.41	-0.89
431	SLE RA 21	-2	34	2151	-606.2	0.41	-0.87
431	SLE FR 1	-2	27	1869	-529.62	0.36	-0.87
431	SLE FR 2	-2	27	1866	-529.06	0.36	-0.86
431	SLE FR 3	-2	27	1869	-529.62	0.36	-0.87

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
431	SLE FR 4	-2	29	1953	-552.54	0.37	-0.87
431	SLE FR 5	-2	28	1956	-553.1	0.37	-0.87
431	SLE FR 6	-2	29	2014	-568.75	0.38	-0.88
431	SLE QP 1	-2	27	1869	-529.62	0.36	-0.87
431	SLE QP 2	-2	28	1956	-553.1	0.37	-0.87
431	SLD 1	145	63	1888	-540.07	0.78	50.69
431	SLD 2	117	62	1889	-540.31	0.8	40.86
431	SLD 3	148	1	2078	-585.64	0.82	51.67
431	SLD 4	120	0	2079	-585.88	0.84	41.85
431	SLD 5	48	134	1647	-480	0.43	16.73
431	SLD 6	19	133	1648	-480.25	0.46	6.53
431	SLD 7	57	-75	2280	-631.88	0.55	20.01
431	SLD 8	28	-76	2281	-632.13	0.58	9.81
431	SLD 9	-33	132	1630	-474.07	0.17	-11.56
431	SLD 10	-62	131	1631	-474.32	0.2	-21.76
431	SLD 11	-24	-77	2264	-625.96	0.29	-8.28
431	SLD 12	-53	-78	2265	-626.21	0.31	-18.48
431	SLD 13	-125	56	1832	-520.33	-0.09	-43.6
431	SLD 14	-153	55	1833	-520.57	-0.07	-53.42
431	SLD 15	-122	-6	2022	-565.89	-0.05	-42.61
431	SLD 16	-150	-7	2023	-566.13	-0.03	-52.44
431	SLV 1	334	109	1802	-523.73	1.3	116.85
431	SLV 2	270	106	1805	-524.27	1.35	94.45
431	SLV 3	341	-33	2234	-627.19	1.38	119.11
431	SLV 4	276	-37	2236	-627.74	1.43	96.71
431	SLV 5	112	269	1254	-387.17	0.51	39.24
431	SLV 6	46	266	1257	-387.74	0.56	16.08
431	SLV 7	134	-205	2693	-732.05	0.78	46.77
431	SLV 8	68	-208	2695	-732.61	0.83	23.61
431	SLV 9	-72	264	1216	-373.59	-0.09	-25.36
431	SLV 10	-139	261	1218	-374.16	-0.03	-48.51
431	SLV 11	-51	-210	2655	-718.47	0.19	-17.83
431	SLV 12	-117	-213	2657	-719.03	0.24	-40.98
431	SLV 13	-281	93	1675	-478.47	-0.69	-98.46
431	SLV 14	-346	89	1677	-479.01	-0.63	-120.86
431	SLV 15	-275	-50	2107	-581.93	-0.6	-96.2
431	SLV 16	-339	-53	2109	-582.48	-0.55	-118.6
431	CRTFP Ux+	0	0	0	0	0	0
431	CRTFP Ux-	0	0	0	0	0	0
431	CRTFP Uy+	0	0	0	0	0	0
431	CRTFP Uy-	0	0	0	0	0	0
432	SLU 1	-2	25	1795	-503	0.11	-0.6
432	SLU 2	-2	30	1777	-498.87	0.11	-0.56
432	SLU 3	-2	25	1795	-503	0.11	-0.6
432	SLU 4	-2	28	1784	-500.53	0.11	-0.58
432	SLU 5	-2	30	1777	-498.87	0.11	-0.56
432	SLU 6	-2	25	1795	-503	0.11	-0.6
432	SLU 7	-2	28	1784	-500.53	0.11	-0.58
432	SLU 8	-2	25	1795	-503	0.11	-0.6
432	SLU 9	-2	28	1784	-500.53	0.11	-0.58
432	SLU 10	-2	35	2080	-579.46	0.12	-0.58
432	SLU 11	-2	30	2098	-583.59	0.12	-0.62
432	SLU 12	-2	33	2087	-581.11	0.12	-0.6
432	SLU 13	-2	35	2080	-579.46	0.12	-0.58
432	SLU 14	-2	30	2098	-583.59	0.12	-0.62
432	SLU 15	-2	33	2087	-581.11	0.12	-0.6
432	SLU 16	-2	30	2098	-583.59	0.12	-0.62
432	SLU 17	-2	33	2087	-581.11	0.12	-0.6
432	SLU 18	-2	32	2228	-618.13	0.13	-0.63
432	SLU 19	-2	35	2217	-615.65	0.13	-0.6
432	SLU 20	-2	32	2228	-618.13	0.13	-0.63
432	SLU 21	-2	35	2217	-615.65	0.13	-0.6
432	SLU 22	-2	28	2025	-564.48	0.12	-0.64
432	SLU 23	-2	34	2007	-560.35	0.12	-0.6
432	SLU 24	-2	28	2025	-564.48	0.12	-0.64
432	SLU 25	-2	32	2014	-562	0.12	-0.62
432	SLU 26	-2	34	2007	-560.35	0.12	-0.6
432	SLU 27	-2	28	2025	-564.48	0.12	-0.64
432	SLU 28	-2	32	2014	-562	0.12	-0.62
432	SLU 29	-2	28	2025	-564.48	0.12	-0.64
432	SLU 30	-2	32	2014	-562	0.12	-0.62
432	SLU 31	-2	39	2310	-640.94	0.13	-0.62
432	SLU 32	-2	33	2329	-645.07	0.13	-0.66
432	SLU 33	-2	37	2318	-642.59	0.13	-0.63
432	SLU 34	-2	39	2310	-640.94	0.13	-0.62
432	SLU 35	-2	33	2329	-645.07	0.13	-0.66
432	SLU 36	-2	37	2318	-642.59	0.13	-0.63
432	SLU 37	-2	33	2329	-645.07	0.13	-0.66
432	SLU 38	-2	37	2318	-642.59	0.13	-0.63
432	SLU 39	-2	36	2459	-679.6	0.14	-0.67
432	SLU 40	-2	39	2448	-677.13	0.14	-0.64
432	SLU 41	-2	36	2459	-679.6	0.14	-0.67
432	SLU 42	-2	39	2448	-677.13	0.14	-0.64
432	SLU 43	-2	31	2254	-632.83	0.14	-0.77
432	SLU 44	-2	36	2236	-628.7	0.14	-0.73
432	SLU 45	-2	31	2254	-632.83	0.14	-0.77

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
432	SLU 46	-2	34	2243	-630.35	0.14	-0.75
432	SLU 47	-2	36	2236	-628.7	0.14	-0.73
432	SLU 48	-2	31	2254	-632.83	0.14	-0.77
432	SLU 49	-2	34	2243	-630.35	0.14	-0.75
432	SLU 50	-2	31	2254	-632.83	0.14	-0.77
432	SLU 51	-2	34	2243	-630.35	0.14	-0.75
432	SLU 52	-2	41	2539	-709.29	0.15	-0.75
432	SLU 53	-2	36	2557	-713.42	0.15	-0.79
432	SLU 54	-2	39	2546	-710.94	0.15	-0.76
432	SLU 55	-2	41	2539	-709.29	0.15	-0.75
432	SLU 56	-2	36	2557	-713.42	0.15	-0.79
432	SLU 57	-2	39	2546	-710.94	0.15	-0.76
432	SLU 58	-2	36	2557	-713.42	0.15	-0.79
432	SLU 59	-2	39	2546	-710.94	0.15	-0.76
432	SLU 60	-2	38	2687	-747.95	0.16	-0.8
432	SLU 61	-2	41	2676	-745.48	0.16	-0.77
432	SLU 62	-2	38	2687	-747.95	0.16	-0.8
432	SLU 63	-2	41	2676	-745.48	0.16	-0.77
432	SLU 64	-2	35	2485	-694.3	0.15	-0.81
432	SLU 65	-2	40	2467	-690.17	0.15	-0.77
432	SLU 66	-2	35	2485	-694.3	0.15	-0.81
432	SLU 67	-2	38	2474	-691.82	0.15	-0.78
432	SLU 68	-2	40	2467	-690.17	0.15	-0.77
432	SLU 69	-2	35	2485	-694.3	0.15	-0.81
432	SLU 70	-2	38	2474	-691.82	0.15	-0.78
432	SLU 71	-2	35	2485	-694.3	0.15	-0.81
432	SLU 72	-2	38	2474	-691.82	0.15	-0.78
432	SLU 73	-2	45	2770	-770.76	0.16	-0.78
432	SLU 74	-2	40	2788	-774.89	0.16	-0.83
432	SLU 75	-2	43	2777	-772.41	0.16	-0.8
432	SLU 76	-2	45	2770	-770.76	0.16	-0.78
432	SLU 77	-2	40	2788	-774.89	0.16	-0.83
432	SLU 78	-2	43	2777	-772.41	0.16	-0.8
432	SLU 79	-2	40	2788	-774.89	0.16	-0.83
432	SLU 80	-2	43	2777	-772.41	0.16	-0.8
432	SLU 81	-2	42	2918	-809.43	0.17	-0.83
432	SLU 82	-2	45	2907	-806.95	0.17	-0.81
432	SLU 83	-2	42	2918	-809.43	0.17	-0.83
432	SLU 84	-2	45	2907	-806.95	0.17	-0.81
432	SLE RA 1	-2	26	1861	-520.57	0.11	-0.61
432	SLE RA 2	-2	30	1848	-517.81	0.11	-0.59
432	SLE RA 3	-2	26	1861	-520.57	0.11	-0.61
432	SLE RA 4	-2	28	1853	-518.91	0.11	-0.6
432	SLE RA 5	-2	30	1848	-517.81	0.11	-0.59
432	SLE RA 6	-2	26	1861	-520.57	0.11	-0.61
432	SLE RA 7	-2	28	1853	-518.91	0.11	-0.6
432	SLE RA 8	-2	26	1861	-520.57	0.11	-0.61
432	SLE RA 9	-2	28	1853	-518.91	0.11	-0.6
432	SLE RA 10	-2	33	2051	-571.54	0.12	-0.6
432	SLE RA 11	-2	29	2063	-574.29	0.12	-0.63
432	SLE RA 12	-2	31	2056	-572.64	0.12	-0.61
432	SLE RA 13	-2	33	2051	-571.54	0.12	-0.6
432	SLE RA 14	-2	29	2063	-574.29	0.12	-0.63
432	SLE RA 15	-2	31	2056	-572.64	0.12	-0.61
432	SLE RA 16	-2	29	2063	-574.29	0.12	-0.63
432	SLE RA 17	-2	31	2056	-572.64	0.12	-0.61
432	SLE RA 18	-2	31	2149	-597.32	0.13	-0.63
432	SLE RA 19	-2	33	2142	-595.67	0.12	-0.61
432	SLE RA 20	-2	31	2149	-597.32	0.13	-0.63
432	SLE RA 21	-2	33	2142	-595.67	0.12	-0.61
432	SLE FR 1	-2	26	1861	-520.57	0.11	-0.61
432	SLE FR 2	-2	27	1858	-520.02	0.11	-0.61
432	SLE FR 3	-2	26	1861	-520.57	0.11	-0.61
432	SLE FR 4	-2	28	1945	-543.04	0.12	-0.61
432	SLE FR 5	-2	27	1947	-543.59	0.12	-0.62
432	SLE FR 6	-2	28	2005	-558.94	0.12	-0.62
432	SLE QP 1	-2	26	1861	-520.57	0.11	-0.61
432	SLE QP 2	-2	27	1947	-543.59	0.12	-0.62
432	SLD 1	146	62	1867	-526.88	0.54	50.98
432	SLD 2	118	62	1868	-526.95	0.56	41.14
432	SLD 3	149	0	2057	-571.73	0.56	51.95
432	SLD 4	120	0	2057	-571.81	0.58	42.11
432	SLD 5	49	132	1636	-470.53	0.22	17.02
432	SLD 6	19	132	1636	-470.6	0.24	6.81
432	SLD 7	58	-75	2267	-620.03	0.26	20.25
432	SLD 8	29	-75	2268	-620.11	0.29	10.04
432	SLD 9	-32	130	1627	-467.07	-0.05	-11.28
432	SLD 10	-61	130	1627	-467.15	-0.03	-21.49
432	SLD 11	-23	-78	2258	-616.58	0	-8.05
432	SLD 12	-52	-78	2259	-616.66	0.02	-18.26
432	SLD 13	-124	55	1837	-515.38	-0.34	-43.35
432	SLD 14	-152	54	1838	-515.45	-0.32	-53.19
432	SLD 15	-121	-8	2027	-560.23	-0.33	-42.38
432	SLD 16	-149	-8	2027	-560.3	-0.31	-52.22
432	SLV 1	335	107	1766	-505.9	1.09	117.18
432	SLV 2	271	107	1767	-506.08	1.14	94.76

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
432	SLV 3	341	-34	2196	-607.74	1.12	119.41
432	SLV 4	277	-35	2197	-607.92	1.17	96.99
432	SLV 5	113	266	1240	-377.77	0.34	39.56
432	SLV 6	47	265	1241	-377.95	0.39	16.39
432	SLV 7	134	-205	2674	-717.23	0.45	47
432	SLV 8	68	-206	2675	-717.41	0.5	23.82
432	SLV 9	-71	260	1220	-369.77	-0.26	-25.06
432	SLV 10	-138	260	1220	-369.95	-0.21	-48.24
432	SLV 11	-50	-211	2654	-709.24	-0.16	-17.63
432	SLV 12	-117	-211	2654	-709.42	-0.11	-40.8
432	SLV 13	-281	89	1698	-479.26	-0.93	-98.23
432	SLV 14	-345	89	1698	-479.44	-0.88	-120.65
432	SLV 15	-274	-52	2128	-581.1	-0.9	-96
432	SLV 16	-339	-53	2129	-581.28	-0.85	-118.42
432	CRTFP Ux+	0	0	0	0	0	0
432	CRTFP Ux-	0	0	0	0	0	0
432	CRTFP Uy+	0	0	0	0	0	0
432	CRTFP Uy-	0	0	0	0	0	0
433	SLU 1	-1	24	1796	-503.77	-0.18	-0.35
433	SLU 2	-1	30	1778	-499.63	-0.18	-0.32
433	SLU 3	-1	24	1796	-503.77	-0.18	-0.35
433	SLU 4	-1	28	1785	-501.29	-0.18	-0.33
433	SLU 5	-1	30	1778	-499.63	-0.18	-0.32
433	SLU 6	-1	24	1796	-503.77	-0.18	-0.35
433	SLU 7	-1	28	1785	-501.29	-0.18	-0.33
433	SLU 8	-1	24	1796	-503.77	-0.18	-0.35
433	SLU 9	-1	28	1785	-501.29	-0.18	-0.33
433	SLU 10	-1	35	2081	-580.52	-0.22	-0.33
433	SLU 11	-1	29	2100	-584.66	-0.23	-0.37
433	SLU 12	-1	33	2089	-582.18	-0.22	-0.34
433	SLU 13	-1	35	2081	-580.52	-0.22	-0.33
433	SLU 14	-1	29	2100	-584.66	-0.23	-0.37
433	SLU 15	-1	33	2089	-582.18	-0.22	-0.34
433	SLU 16	-1	29	2100	-584.66	-0.23	-0.37
433	SLU 17	-1	33	2089	-582.18	-0.22	-0.34
433	SLU 18	-1	31	2230	-619.33	-0.25	-0.37
433	SLU 19	-1	35	2219	-616.85	-0.24	-0.35
433	SLU 20	-1	31	2230	-619.33	-0.25	-0.37
433	SLU 21	-1	35	2219	-616.85	-0.24	-0.35
433	SLU 22	-1	28	2027	-565.45	-0.22	-0.38
433	SLU 23	-1	34	2009	-561.31	-0.21	-0.35
433	SLU 24	-1	28	2027	-565.45	-0.22	-0.38
433	SLU 25	-1	31	2016	-562.97	-0.21	-0.36
433	SLU 26	-1	34	2009	-561.31	-0.21	-0.35
433	SLU 27	-1	28	2027	-565.45	-0.22	-0.38
433	SLU 28	-1	31	2016	-562.97	-0.21	-0.36
433	SLU 29	-1	28	2027	-565.45	-0.22	-0.38
433	SLU 30	-1	31	2016	-562.97	-0.21	-0.36
433	SLU 31	-1	38	2313	-642.2	-0.26	-0.36
433	SLU 32	-1	33	2331	-646.34	-0.26	-0.4
433	SLU 33	-1	36	2320	-643.86	-0.26	-0.38
433	SLU 34	-1	38	2313	-642.2	-0.26	-0.36
433	SLU 35	-1	33	2331	-646.34	-0.26	-0.4
433	SLU 36	-1	36	2320	-643.86	-0.26	-0.38
433	SLU 37	-1	33	2331	-646.34	-0.26	-0.4
433	SLU 38	-1	36	2320	-643.86	-0.26	-0.38
433	SLU 39	-1	35	2461	-681.01	-0.28	-0.4
433	SLU 40	-1	38	2450	-678.52	-0.28	-0.38
433	SLU 41	-1	35	2461	-681.01	-0.28	-0.4
433	SLU 42	-1	38	2450	-678.52	-0.28	-0.38
433	SLU 43	-1	30	2255	-633.76	-0.22	-0.45
433	SLU 44	-1	36	2237	-629.62	-0.22	-0.41
433	SLU 45	-1	30	2255	-633.76	-0.22	-0.45
433	SLU 46	-1	34	2244	-631.28	-0.22	-0.43
433	SLU 47	-1	36	2237	-629.62	-0.22	-0.41
433	SLU 48	-1	30	2255	-633.76	-0.22	-0.45
433	SLU 49	-1	34	2244	-631.28	-0.22	-0.43
433	SLU 50	-1	30	2255	-633.76	-0.22	-0.45
433	SLU 51	-1	34	2244	-631.28	-0.22	-0.43
433	SLU 52	-1	41	2541	-710.51	-0.27	-0.43
433	SLU 53	-1	35	2559	-714.65	-0.27	-0.46
433	SLU 54	-1	39	2548	-712.17	-0.27	-0.44
433	SLU 55	-1	41	2541	-710.51	-0.27	-0.43
433	SLU 56	-1	35	2559	-714.65	-0.27	-0.46
433	SLU 57	-1	39	2548	-712.17	-0.27	-0.44
433	SLU 58	-1	35	2559	-714.65	-0.27	-0.46
433	SLU 59	-1	39	2548	-712.17	-0.27	-0.44
433	SLU 60	-1	37	2689	-749.32	-0.29	-0.47
433	SLU 61	-1	41	2679	-746.83	-0.29	-0.45
433	SLU 62	-1	37	2689	-749.32	-0.29	-0.47
433	SLU 63	-1	41	2679	-746.83	-0.29	-0.45
433	SLU 64	-1	34	2486	-695.44	-0.26	-0.48
433	SLU 65	-1	40	2468	-691.3	-0.25	-0.44
433	SLU 66	-1	34	2486	-695.44	-0.26	-0.48
433	SLU 67	-1	37	2476	-692.95	-0.26	-0.46
433	SLU 68	-1	40	2468	-691.3	-0.25	-0.44

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
433	SLU 69	-1	34	2486	-695.44	-0.26	-0.48
433	SLU 70	-1	37	2476	-692.95	-0.26	-0.46
433	SLU 71	-1	34	2486	-695.44	-0.26	-0.48
433	SLU 72	-1	37	2476	-692.95	-0.26	-0.46
433	SLU 73	-1	45	2772	-772.19	-0.3	-0.46
433	SLU 74	-1	39	2790	-776.33	-0.3	-0.49
433	SLU 75	-1	42	2779	-773.84	-0.3	-0.47
433	SLU 76	-1	45	2772	-772.19	-0.3	-0.46
433	SLU 77	-1	39	2790	-776.33	-0.3	-0.49
433	SLU 78	-1	42	2779	-773.84	-0.3	-0.47
433	SLU 79	-1	39	2790	-776.33	-0.3	-0.49
433	SLU 80	-1	42	2779	-773.84	-0.3	-0.47
433	SLU 81	-1	41	2921	-810.99	-0.32	-0.5
433	SLU 82	-1	44	2910	-808.51	-0.32	-0.48
433	SLU 83	-1	41	2921	-810.99	-0.32	-0.5
433	SLU 84	-1	44	2910	-808.51	-0.32	-0.48
433	SLE RA 1	-1	25	1862	-521.4	-0.19	-0.36
433	SLE RA 2	-1	29	1850	-518.64	-0.19	-0.34
433	SLE RA 3	-1	25	1862	-521.4	-0.19	-0.36
433	SLE RA 4	-1	28	1855	-519.74	-0.19	-0.35
433	SLE RA 5	-1	29	1850	-518.64	-0.19	-0.34
433	SLE RA 6	-1	25	1862	-521.4	-0.19	-0.36
433	SLE RA 7	-1	28	1855	-519.74	-0.19	-0.35
433	SLE RA 8	-1	25	1862	-521.4	-0.19	-0.36
433	SLE RA 9	-1	28	1855	-519.74	-0.19	-0.35
433	SLE RA 10	-1	32	2052	-572.56	-0.22	-0.35
433	SLE RA 11	-1	29	2064	-575.32	-0.22	-0.37
433	SLE RA 12	-1	31	2057	-573.67	-0.22	-0.36
433	SLE RA 13	-1	32	2052	-572.56	-0.22	-0.35
433	SLE RA 14	-1	29	2064	-575.32	-0.22	-0.37
433	SLE RA 15	-1	31	2057	-573.67	-0.22	-0.36
433	SLE RA 16	-1	29	2064	-575.32	-0.22	-0.37
433	SLE RA 17	-1	31	2057	-573.67	-0.22	-0.36
433	SLE RA 18	-1	30	2151	-598.43	-0.23	-0.37
433	SLE RA 19	-1	32	2144	-596.78	-0.23	-0.36
433	SLE RA 20	-1	30	2151	-598.43	-0.23	-0.37
433	SLE RA 21	-1	32	2144	-596.78	-0.23	-0.36
433	SLE FR 1	-1	25	1862	-521.4	-0.19	-0.36
433	SLE FR 2	-1	26	1859	-520.84	-0.19	-0.36
433	SLE FR 3	-1	25	1862	-521.4	-0.19	-0.36
433	SLE FR 4	-1	28	1946	-543.96	-0.2	-0.36
433	SLE FR 5	-1	27	1949	-544.51	-0.2	-0.37
433	SLE FR 6	-1	28	2007	-559.92	-0.21	-0.37
433	SLE QP 1	-1	25	1862	-521.4	-0.19	-0.36
433	SLE QP 2	-1	27	1949	-544.51	-0.2	-0.37
433	SLD 1	146	62	1844	-518.54	0.24	51.23
433	SLD 2	118	63	1844	-518.45	0.27	41.39
433	SLD 3	149	0	2034	-563.56	0.21	52.19
433	SLD 4	121	1	2034	-563.47	0.23	42.35
433	SLD 5	49	131	1630	-468.46	-0.03	17.28
433	SLD 6	20	132	1629	-468.37	0	7.08
433	SLD 7	59	-76	2262	-618.54	-0.14	20.49
433	SLD 8	29	-75	2262	-618.45	-0.12	10.28
433	SLD 9	-31	129	1635	-470.56	-0.29	-11.01
433	SLD 10	-61	130	1635	-470.48	-0.27	-21.22
433	SLD 11	-22	-79	2268	-620.64	-0.41	-7.81
433	SLD 12	-52	-78	2268	-620.55	-0.38	-18.01
433	SLD 13	-123	53	1864	-525.54	-0.64	-43.09
433	SLD 14	-151	54	1863	-525.46	-0.62	-52.92
433	SLD 15	-120	-9	2054	-570.56	-0.67	-42.12
433	SLD 16	-149	-8	2053	-570.48	-0.65	-51.96
433	SLV 1	336	106	1711	-485.11	0.82	117.42
433	SLV 2	271	109	1710	-484.91	0.87	95.01
433	SLV 3	342	-35	2142	-587.33	0.74	119.63
433	SLV 4	278	-33	2141	-587.14	0.79	97.22
433	SLV 5	114	264	1224	-371.71	0.2	39.84
433	SLV 6	48	266	1223	-371.51	0.26	16.67
433	SLV 7	135	-207	2661	-712.47	-0.06	47.21
433	SLV 8	69	-204	2660	-712.27	-0.01	24.04
433	SLV 9	-71	258	1237	-376.74	-0.4	-24.77
433	SLV 10	-137	260	1236	-376.54	-0.35	-47.94
433	SLV 11	-50	-213	2674	-717.5	-0.66	-17.4
433	SLV 12	-116	-211	2673	-717.3	-0.61	-40.57
433	SLV 13	-280	86	1756	-501.87	-1.2	-97.95
433	SLV 14	-344	88	1755	-501.68	-1.15	-120.37
433	SLV 15	-274	-55	2187	-604.1	-1.28	-95.74
433	SLV 16	-338	-53	2186	-603.91	-1.23	-118.16
433	CRTFP Ux+	0	0	0	0	0	0
433	CRTFP Ux-	0	0	0	0	0	0
433	CRTFP Uy+	0	0	0	0	0	0
433	CRTFP Uy-	0	0	0	0	0	0
434	SLU 1	0	24	1806	-513.9	-0.41	-0.1
434	SLU 2	0	30	1787	-509.64	-0.4	-0.06
434	SLU 3	0	24	1806	-513.9	-0.41	-0.1
434	SLU 4	0	28	1795	-511.34	-0.4	-0.08
434	SLU 5	0	30	1787	-509.64	-0.4	-0.06

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
434	SLU 6	0	24	1806	-513.9	-0.41	-0.1
434	SLU 7	0	28	1795	-511.34	-0.4	-0.08
434	SLU 8	0	24	1806	-513.9	-0.41	-0.1
434	SLU 9	0	28	1795	-511.34	-0.4	-0.08
434	SLU 10	0	35	2094	-592.68	-0.49	-0.07
434	SLU 11	0	29	2112	-596.94	-0.5	-0.1
434	SLU 12	0	32	2101	-594.38	-0.49	-0.09
434	SLU 13	0	35	2094	-592.68	-0.49	-0.07
434	SLU 14	0	29	2112	-596.94	-0.5	-0.1
434	SLU 15	0	32	2101	-594.38	-0.49	-0.09
434	SLU 16	0	29	2112	-596.94	-0.5	-0.1
434	SLU 17	0	32	2101	-594.38	-0.49	-0.09
434	SLU 18	0	31	2243	-632.52	-0.54	-0.11
434	SLU 19	0	35	2232	-629.97	-0.53	-0.09
434	SLU 20	0	31	2243	-632.52	-0.54	-0.11
434	SLU 21	0	35	2232	-629.97	-0.53	-0.09
434	SLU 22	0	28	2039	-577.19	-0.48	-0.12
434	SLU 23	0	33	2020	-572.93	-0.47	-0.09
434	SLU 24	0	28	2039	-577.19	-0.48	-0.12
434	SLU 25	0	31	2028	-574.63	-0.47	-0.1
434	SLU 26	0	33	2020	-572.93	-0.47	-0.09
434	SLU 27	0	28	2039	-577.19	-0.48	-0.12
434	SLU 28	0	31	2028	-574.63	-0.47	-0.1
434	SLU 29	0	28	2039	-577.19	-0.48	-0.12
434	SLU 30	0	31	2028	-574.63	-0.47	-0.1
434	SLU 31	0	38	2326	-655.97	-0.56	-0.1
434	SLU 32	0	33	2345	-660.22	-0.56	-0.13
434	SLU 33	0	36	2334	-657.67	-0.56	-0.11
434	SLU 34	0	38	2326	-655.97	-0.56	-0.1
434	SLU 35	0	33	2345	-660.22	-0.56	-0.13
434	SLU 36	0	36	2334	-657.67	-0.56	-0.11
434	SLU 37	0	33	2345	-660.22	-0.56	-0.13
434	SLU 38	0	36	2334	-657.67	-0.56	-0.11
434	SLU 39	0	35	2476	-695.81	-0.6	-0.13
434	SLU 40	0	38	2465	-693.26	-0.6	-0.11
434	SLU 41	0	35	2476	-695.81	-0.6	-0.13
434	SLU 42	0	38	2465	-693.26	-0.6	-0.11
434	SLU 43	0	30	2268	-646.37	-0.51	-0.12
434	SLU 44	0	36	2249	-642.11	-0.5	-0.09
434	SLU 45	0	30	2268	-646.37	-0.51	-0.12
434	SLU 46	0	34	2257	-643.81	-0.5	-0.1
434	SLU 47	0	36	2249	-642.11	-0.5	-0.09
434	SLU 48	0	30	2268	-646.37	-0.51	-0.12
434	SLU 49	0	34	2257	-643.81	-0.5	-0.1
434	SLU 50	0	30	2268	-646.37	-0.51	-0.12
434	SLU 51	0	34	2257	-643.81	-0.5	-0.1
434	SLU 52	0	41	2556	-725.15	-0.59	-0.09
434	SLU 53	0	35	2574	-729.41	-0.6	-0.13
434	SLU 54	0	39	2563	-726.85	-0.59	-0.11
434	SLU 55	0	41	2556	-725.15	-0.59	-0.09
434	SLU 56	0	35	2574	-729.41	-0.6	-0.13
434	SLU 57	0	39	2563	-726.85	-0.59	-0.11
434	SLU 58	0	35	2574	-729.41	-0.6	-0.13
434	SLU 59	0	39	2563	-726.85	-0.59	-0.11
434	SLU 60	0	37	2705	-764.99	-0.64	-0.13
434	SLU 61	0	41	2694	-762.44	-0.63	-0.11
434	SLU 62	0	37	2705	-764.99	-0.64	-0.13
434	SLU 63	0	41	2694	-762.44	-0.63	-0.11
434	SLU 64	0	34	2501	-709.66	-0.58	-0.14
434	SLU 65	0	40	2482	-705.4	-0.57	-0.11
434	SLU 66	0	34	2501	-709.66	-0.58	-0.14
434	SLU 67	0	37	2490	-707.1	-0.57	-0.12
434	SLU 68	0	40	2482	-705.4	-0.57	-0.11
434	SLU 69	0	34	2501	-709.66	-0.58	-0.14
434	SLU 70	0	37	2490	-707.1	-0.57	-0.12
434	SLU 71	0	34	2501	-709.66	-0.58	-0.14
434	SLU 72	0	37	2490	-707.1	-0.57	-0.12
434	SLU 73	0	44	2788	-788.44	-0.66	-0.12
434	SLU 74	0	39	2807	-792.69	-0.66	-0.15
434	SLU 75	0	42	2796	-790.14	-0.66	-0.13
434	SLU 76	0	44	2788	-788.44	-0.66	-0.12
434	SLU 77	0	39	2807	-792.69	-0.66	-0.15
434	SLU 78	0	42	2796	-790.14	-0.66	-0.13
434	SLU 79	0	39	2807	-792.69	-0.66	-0.15
434	SLU 80	0	42	2796	-790.14	-0.66	-0.13
434	SLU 81	0	41	2938	-828.28	-0.7	-0.15
434	SLU 82	0	44	2927	-825.73	-0.7	-0.13
434	SLU 83	0	41	2938	-828.28	-0.7	-0.15
434	SLU 84	0	44	2927	-825.73	-0.7	-0.13
434	SLE RA 1	0	25	1872	-531.98	-0.43	-0.1
434	SLE RA 2	0	29	1860	-529.14	-0.42	-0.08
434	SLE RA 3	0	25	1872	-531.98	-0.43	-0.1
434	SLE RA 4	0	28	1865	-530.28	-0.42	-0.09
434	SLE RA 5	0	29	1860	-529.14	-0.42	-0.08
434	SLE RA 6	0	25	1872	-531.98	-0.43	-0.1
434	SLE RA 7	0	28	1865	-530.28	-0.42	-0.09

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
434	SLE RA 8	0	25	1872	-531.98	-0.43	-0.1
434	SLE RA 9	0	28	1865	-530.28	-0.42	-0.09
434	SLE RA 10	0	32	2064	-584.5	-0.48	-0.09
434	SLE RA 11	0	29	2077	-587.34	-0.49	-0.11
434	SLE RA 12	0	31	2069	-585.64	-0.48	-0.1
434	SLE RA 13	0	32	2064	-584.5	-0.48	-0.09
434	SLE RA 14	0	29	2077	-587.34	-0.49	-0.11
434	SLE RA 15	0	31	2069	-585.64	-0.48	-0.1
434	SLE RA 16	0	29	2077	-587.34	-0.49	-0.11
434	SLE RA 17	0	31	2069	-585.64	-0.48	-0.1
434	SLE RA 18	0	30	2164	-611.06	-0.51	-0.11
434	SLE RA 19	0	32	2157	-609.36	-0.51	-0.1
434	SLE RA 20	0	30	2164	-611.06	-0.51	-0.11
434	SLE RA 21	0	32	2157	-609.36	-0.51	-0.1
434	SLE FR 1	0	25	1872	-531.98	-0.43	-0.1
434	SLE FR 2	0	26	1870	-531.41	-0.43	-0.1
434	SLE FR 3	0	25	1872	-531.98	-0.43	-0.1
434	SLE FR 4	0	27	1957	-555.14	-0.45	-0.1
434	SLE FR 5	0	27	1960	-555.7	-0.45	-0.11
434	SLE FR 6	0	28	2018	-571.52	-0.47	-0.11
434	SLE QP 1	0	25	1872	-531.98	-0.43	-0.1
434	SLE QP 2	0	27	1960	-555.7	-0.45	-0.11
434	SLD 1	147	62	1845	-526.82	0	51.44
434	SLD 2	119	64	1844	-526.57	0.02	41.62
434	SLD 3	150	-1	2036	-572.89	-0.06	52.4
434	SLD 4	122	1	2035	-572.64	-0.04	42.58
434	SLD 5	50	131	1636	-477.26	-0.23	17.53
434	SLD 6	21	133	1634	-477	-0.21	7.34
434	SLD 7	59	-77	2274	-630.82	-0.44	20.72
434	SLD 8	30	-75	2272	-630.56	-0.41	10.53
434	SLD 9	-31	128	1647	-480.85	-0.49	-10.74
434	SLD 10	-60	130	1646	-480.59	-0.47	-20.93
434	SLD 11	-22	-80	2285	-634.41	-0.7	-7.55
434	SLD 12	-51	-78	2284	-634.15	-0.67	-17.74
434	SLD 13	-122	52	1885	-538.77	-0.87	-42.79
434	SLD 14	-150	54	1883	-538.52	-0.85	-52.61
434	SLD 15	-120	-11	2076	-584.84	-0.93	-41.83
434	SLD 16	-148	-8	2075	-584.58	-0.91	-51.65
434	SLV 1	336	107	1699	-489.77	0.58	117.58
434	SLV 2	272	111	1696	-489.2	0.63	95.19
434	SLV 3	343	-35	2133	-594.37	0.44	119.78
434	SLV 4	278	-31	2131	-593.8	0.49	97.39
434	SLV 5	115	264	1223	-377.49	0.05	40.08
434	SLV 6	48	269	1221	-376.9	0.1	16.93
434	SLV 7	136	-209	2672	-726.15	-0.41	47.41
434	SLV 8	69	-204	2669	-725.56	-0.36	24.27
434	SLV 9	-70	257	1251	-385.85	-0.55	-24.48
434	SLV 10	-136	262	1248	-385.26	-0.49	-47.62
434	SLV 11	-49	-215	2699	-734.51	-1.01	-17.14
434	SLV 12	-115	-211	2696	-733.92	-0.96	-40.29
434	SLV 13	-279	84	1789	-517.61	-1.4	-97.6
434	SLV 14	-343	89	1786	-517.04	-1.35	-119.99
434	SLV 15	-273	-58	2224	-622.21	-1.54	-95.4
434	SLV 16	-337	-53	2221	-621.64	-1.49	-117.79
434	CRTFP Ux+	0	0	0	0	0	0
434	CRTFP Ux-	0	0	0	0	0	0
434	CRTFP Uy+	0	0	0	0	0	0
434	CRTFP Uy-	0	0	0	0	0	0
435	SLU 1	0	24	1821	-531.48	-0.44	0.18
435	SLU 2	1	30	1802	-527.03	-0.43	0.2
435	SLU 3	0	24	1821	-531.48	-0.44	0.18
435	SLU 4	1	28	1809	-528.81	-0.43	0.19
435	SLU 5	1	30	1802	-527.03	-0.43	0.2
435	SLU 6	0	24	1821	-531.48	-0.44	0.18
435	SLU 7	1	28	1809	-528.81	-0.43	0.19
435	SLU 8	0	24	1821	-531.48	-0.44	0.18
435	SLU 9	1	28	1809	-528.81	-0.43	0.19
435	SLU 10	1	35	2111	-613.7	-0.52	0.2
435	SLU 11	0	29	2130	-618.16	-0.53	0.18
435	SLU 12	1	33	2119	-615.49	-0.53	0.19
435	SLU 13	1	35	2111	-613.7	-0.52	0.2
435	SLU 14	0	29	2130	-618.16	-0.53	0.18
435	SLU 15	1	33	2119	-615.49	-0.53	0.19
435	SLU 16	0	29	2130	-618.16	-0.53	0.18
435	SLU 17	1	33	2119	-615.49	-0.53	0.19
435	SLU 18	0	31	2262	-655.3	-0.57	0.18
435	SLU 19	1	35	2251	-652.63	-0.57	0.19
435	SLU 20	0	31	2262	-655.3	-0.57	0.18
435	SLU 21	1	35	2251	-652.63	-0.57	0.19
435	SLU 22	0	28	2056	-597.51	-0.51	0.16
435	SLU 23	1	34	2037	-593.06	-0.5	0.19
435	SLU 24	0	28	2056	-597.51	-0.51	0.16
435	SLU 25	0	31	2044	-594.84	-0.5	0.18
435	SLU 26	1	34	2037	-593.06	-0.5	0.19
435	SLU 27	0	28	2056	-597.51	-0.51	0.16
435	SLU 28	0	31	2044	-594.84	-0.5	0.18

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
435	SLU 29	0	28	2056	-597.51	-0.51	0.16
435	SLU 30	0	31	2044	-594.84	-0.5	0.18
435	SLU 31	1	38	2346	-679.73	-0.59	0.19
435	SLU 32	0	33	2365	-684.19	-0.6	0.16
435	SLU 33	0	36	2354	-681.52	-0.6	0.18
435	SLU 34	1	38	2346	-679.73	-0.59	0.19
435	SLU 35	0	33	2365	-684.19	-0.6	0.16
435	SLU 36	0	36	2354	-681.52	-0.6	0.18
435	SLU 37	0	33	2365	-684.19	-0.6	0.16
435	SLU 38	0	36	2354	-681.52	-0.6	0.18
435	SLU 39	0	35	2497	-721.33	-0.64	0.16
435	SLU 40	0	38	2486	-718.66	-0.63	0.18
435	SLU 41	0	35	2497	-721.33	-0.64	0.16
435	SLU 42	0	38	2486	-718.66	-0.63	0.18
435	SLU 43	1	30	2286	-668.29	-0.55	0.24
435	SLU 44	1	36	2267	-663.84	-0.54	0.26
435	SLU 45	1	30	2286	-668.29	-0.55	0.24
435	SLU 46	1	34	2275	-665.62	-0.54	0.25
435	SLU 47	1	36	2267	-663.84	-0.54	0.26
435	SLU 48	1	30	2286	-668.29	-0.55	0.24
435	SLU 49	1	34	2275	-665.62	-0.54	0.25
435	SLU 50	1	30	2286	-668.29	-0.55	0.24
435	SLU 51	1	34	2275	-665.62	-0.54	0.25
435	SLU 52	1	41	2577	-750.51	-0.63	0.26
435	SLU 53	1	35	2595	-754.96	-0.64	0.23
435	SLU 54	1	39	2584	-752.29	-0.63	0.25
435	SLU 55	1	41	2577	-750.51	-0.63	0.26
435	SLU 56	1	35	2595	-754.96	-0.64	0.23
435	SLU 57	1	39	2584	-752.29	-0.63	0.25
435	SLU 58	1	35	2595	-754.96	-0.64	0.23
435	SLU 59	1	39	2584	-752.29	-0.63	0.25
435	SLU 60	1	37	2728	-792.11	-0.68	0.23
435	SLU 61	1	41	2717	-789.44	-0.67	0.25
435	SLU 62	1	37	2728	-792.11	-0.68	0.23
435	SLU 63	1	41	2717	-789.44	-0.67	0.25
435	SLU 64	1	34	2521	-734.32	-0.62	0.22
435	SLU 65	1	40	2502	-729.87	-0.61	0.25
435	SLU 66	1	34	2521	-734.32	-0.62	0.22
435	SLU 67	1	37	2510	-731.65	-0.61	0.24
435	SLU 68	1	40	2502	-729.87	-0.61	0.25
435	SLU 69	1	34	2521	-734.32	-0.62	0.22
435	SLU 70	1	37	2510	-731.65	-0.61	0.24
435	SLU 71	1	34	2521	-734.32	-0.62	0.22
435	SLU 72	1	37	2510	-731.65	-0.61	0.24
435	SLU 73	1	45	2812	-816.54	-0.7	0.25
435	SLU 74	1	39	2831	-820.99	-0.71	0.22
435	SLU 75	1	42	2819	-818.32	-0.7	0.24
435	SLU 76	1	45	2812	-816.54	-0.7	0.25
435	SLU 77	1	39	2831	-820.99	-0.71	0.22
435	SLU 78	1	42	2819	-818.32	-0.7	0.24
435	SLU 79	1	39	2831	-820.99	-0.71	0.22
435	SLU 80	1	42	2819	-818.32	-0.7	0.24
435	SLU 81	1	41	2963	-858.14	-0.75	0.22
435	SLU 82	1	44	2952	-855.47	-0.74	0.23
435	SLU 83	1	41	2963	-858.14	-0.75	0.22
435	SLU 84	1	44	2952	-855.47	-0.74	0.23
435	SLE RA 1	0	25	1888	-550.35	-0.46	0.17
435	SLE RA 2	1	29	1875	-547.38	-0.45	0.19
435	SLE RA 3	0	25	1888	-550.35	-0.46	0.17
435	SLE RA 4	1	28	1880	-548.57	-0.46	0.18
435	SLE RA 5	1	29	1875	-547.38	-0.45	0.19
435	SLE RA 6	0	25	1888	-550.35	-0.46	0.17
435	SLE RA 7	1	28	1880	-548.57	-0.46	0.18
435	SLE RA 8	0	25	1888	-550.35	-0.46	0.17
435	SLE RA 9	1	28	1880	-548.57	-0.46	0.18
435	SLE RA 10	1	32	2081	-605.16	-0.51	0.19
435	SLE RA 11	0	29	2094	-608.13	-0.52	0.17
435	SLE RA 12	1	31	2086	-606.35	-0.52	0.18
435	SLE RA 13	1	32	2081	-605.16	-0.51	0.19
435	SLE RA 14	0	29	2094	-608.13	-0.52	0.17
435	SLE RA 15	1	31	2086	-606.35	-0.52	0.18
435	SLE RA 16	0	29	2094	-608.13	-0.52	0.17
435	SLE RA 17	1	31	2086	-606.35	-0.52	0.18
435	SLE RA 18	0	30	2182	-632.9	-0.55	0.17
435	SLE RA 19	1	32	2175	-631.11	-0.54	0.18
435	SLE RA 20	0	30	2182	-632.9	-0.55	0.17
435	SLE RA 21	1	32	2175	-631.11	-0.54	0.18
435	SLE FR 1	0	25	1888	-550.35	-0.46	0.17
435	SLE FR 2	0	26	1885	-549.75	-0.46	0.18
435	SLE FR 3	0	25	1888	-550.35	-0.46	0.17
435	SLE FR 4	0	28	1974	-574.52	-0.49	0.18
435	SLE FR 5	0	27	1976	-575.11	-0.49	0.17
435	SLE FR 6	0	28	2035	-591.62	-0.5	0.17
435	SLE QP 1	0	25	1888	-550.35	-0.46	0.17
435	SLE QP 2	0	27	1976	-575.11	-0.49	0.17
435	SLD 1	148	51	1847	-541.71	-0.05	51.64

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
435	SLD 2	120	54	1846	-541.29	-0.03	41.84
435	SLD 3	150	-12	2041	-589.46	-0.11	52.6
435	SLD 4	122	-9	2039	-589.04	-0.09	42.79
435	SLD 5	51	128	1645	-492.82	-0.27	17.78
435	SLD 6	22	132	1643	-492.38	-0.24	7.6
435	SLD 7	60	-82	2290	-652	-0.48	20.97
435	SLD 8	31	-78	2288	-651.57	-0.46	10.79
435	SLD 9	-30	132	1665	-498.66	-0.52	-10.45
435	SLD 10	-59	135	1663	-498.22	-0.49	-20.62
435	SLD 11	-21	-78	2309	-657.84	-0.73	-7.26
435	SLD 12	-50	-75	2307	-657.41	-0.71	-17.43
435	SLD 13	-121	62	1913	-561.18	-0.88	-42.45
435	SLD 14	-149	66	1911	-560.76	-0.86	-52.25
435	SLD 15	-119	-1	2107	-608.94	-0.95	-41.49
435	SLD 16	-147	3	2105	-608.52	-0.93	-51.29
435	SLV 1	337	81	1684	-498.94	0.52	117.68
435	SLV 2	272	89	1679	-497.98	0.56	95.33
435	SLV 3	343	-62	2123	-607.37	0.37	119.88
435	SLV 4	279	-54	2118	-606.41	0.42	97.53
435	SLV 5	115	257	1224	-388.16	0.02	40.28
435	SLV 6	49	265	1219	-387.17	0.07	17.18
435	SLV 7	136	-219	2688	-749.59	-0.47	47.62
435	SLV 8	70	-212	2683	-748.6	-0.42	24.52
435	SLV 9	-69	265	1269	-401.62	-0.55	-24.17
435	SLV 10	-135	273	1264	-400.63	-0.5	-47.27
435	SLV 11	-48	-211	2733	-763.05	-1.04	-16.84
435	SLV 12	-114	-204	2729	-762.06	-0.99	-39.94
435	SLV 13	-278	108	1834	-543.81	-1.39	-97.18
435	SLV 14	-342	115	1829	-542.85	-1.34	-119.53
435	SLV 15	-271	-35	2273	-652.24	-1.54	-94.98
435	SLV 16	-336	-28	2269	-651.28	-1.49	-117.33
435	CRTFP Ux+	0	0	0	0	0	0
435	CRTFP Ux-	0	0	0	0	0	0
435	CRTFP Uy+	0	0	0	0	0	0
435	CRTFP Uy-	0	0	0	0	0	0
436	SLU 1	1	22	1646	-497.19	30.51	0.02
436	SLU 2	1	27	1629	-492.97	30.2	-0.06
436	SLU 3	1	22	1646	-497.19	30.51	0.02
436	SLU 4	1	25	1636	-494.66	30.32	-0.03
436	SLU 5	1	27	1629	-492.97	30.2	-0.06
436	SLU 6	1	22	1646	-497.19	30.51	0.02
436	SLU 7	1	25	1636	-494.66	30.32	-0.03
436	SLU 8	1	22	1646	-497.19	30.51	0.02
436	SLU 9	1	25	1636	-494.66	30.32	-0.03
436	SLU 10	1	31	1909	-574.88	35.38	-0.13
436	SLU 11	1	26	1926	-579.1	35.7	-0.05
436	SLU 12	1	29	1916	-576.57	35.51	-0.1
436	SLU 13	1	31	1909	-574.88	35.38	-0.13
436	SLU 14	1	26	1926	-579.1	35.7	-0.05
436	SLU 15	1	29	1916	-576.57	35.51	-0.1
436	SLU 16	1	26	1926	-579.1	35.7	-0.05
436	SLU 17	1	29	1916	-576.57	35.51	-0.1
436	SLU 18	1	28	2046	-614.21	37.92	-0.08
436	SLU 19	1	31	2035	-611.67	37.73	-0.12
436	SLU 20	1	28	2046	-614.21	37.92	-0.08
436	SLU 21	1	31	2035	-611.67	37.73	-0.12
436	SLU 22	1	25	1859	-559.56	34.45	-0.04
436	SLU 23	1	30	1842	-555.34	34.14	-0.12
436	SLU 24	1	25	1859	-559.56	34.45	-0.04
436	SLU 25	1	28	1848	-557.03	34.26	-0.09
436	SLU 26	1	30	1842	-555.34	34.14	-0.12
436	SLU 27	1	25	1859	-559.56	34.45	-0.04
436	SLU 28	1	28	1848	-557.03	34.26	-0.09
436	SLU 29	1	25	1859	-559.56	34.45	-0.04
436	SLU 30	1	28	1848	-557.03	34.26	-0.09
436	SLU 31	1	35	2121	-637.25	39.33	-0.19
436	SLU 32	1	29	2139	-641.47	39.64	-0.11
436	SLU 33	1	32	2128	-638.94	39.45	-0.15
436	SLU 34	1	35	2121	-637.25	39.33	-0.19
436	SLU 35	1	29	2139	-641.47	39.64	-0.11
436	SLU 36	1	32	2128	-638.94	39.45	-0.15
436	SLU 37	1	29	2139	-641.47	39.64	-0.11
436	SLU 38	1	32	2128	-638.94	39.45	-0.15
436	SLU 39	1	31	2259	-676.58	41.86	-0.13
436	SLU 40	1	34	2248	-674.04	41.67	-0.18
436	SLU 41	1	31	2259	-676.58	41.86	-0.13
436	SLU 42	1	34	2248	-674.04	41.67	-0.18
436	SLU 43	2	27	2067	-624.96	38.31	0.05
436	SLU 44	2	33	2050	-620.74	38	-0.03
436	SLU 45	2	27	2067	-624.96	38.31	0.05
436	SLU 46	2	30	2056	-622.43	38.12	0
436	SLU 47	2	33	2050	-620.74	38	-0.03
436	SLU 48	2	27	2067	-624.96	38.31	0.05
436	SLU 49	2	30	2056	-622.43	38.12	0
436	SLU 50	2	27	2067	-624.96	38.31	0.05
436	SLU 51	2	30	2056	-622.43	38.12	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
436	SLU 52	2	37	2329	-702.65	43.18	-0.1
436	SLU 53	2	32	2347	-706.87	43.5	-0.02
436	SLU 54	2	35	2336	-704.34	43.31	-0.07
436	SLU 55	2	37	2329	-702.65	43.18	-0.1
436	SLU 56	2	32	2347	-706.87	43.5	-0.02
436	SLU 57	2	35	2336	-704.34	43.31	-0.07
436	SLU 58	2	32	2347	-706.87	43.5	-0.02
436	SLU 59	2	35	2336	-704.34	43.31	-0.07
436	SLU 60	2	33	2467	-741.98	45.72	-0.05
436	SLU 61	2	37	2456	-739.44	45.53	-0.1
436	SLU 62	2	33	2467	-741.98	45.72	-0.05
436	SLU 63	2	37	2456	-739.44	45.53	-0.1
436	SLU 64	2	30	2280	-687.33	42.25	-0.01
436	SLU 65	2	36	2262	-683.11	41.94	-0.09
436	SLU 66	2	30	2280	-687.33	42.25	-0.01
436	SLU 67	2	34	2269	-684.8	42.07	-0.06
436	SLU 68	2	36	2262	-683.11	41.94	-0.09
436	SLU 69	2	30	2280	-687.33	42.25	-0.01
436	SLU 70	2	34	2269	-684.8	42.07	-0.06
436	SLU 71	2	30	2280	-687.33	42.25	-0.01
436	SLU 72	2	34	2269	-684.8	42.07	-0.06
436	SLU 73	2	40	2542	-765.02	47.13	-0.16
436	SLU 74	2	35	2559	-769.25	47.44	-0.08
436	SLU 75	2	38	2549	-766.71	47.25	-0.13
436	SLU 76	2	40	2542	-765.02	47.13	-0.16
436	SLU 77	2	35	2559	-769.25	47.44	-0.08
436	SLU 78	2	38	2549	-766.71	47.25	-0.13
436	SLU 79	2	35	2559	-769.25	47.44	-0.08
436	SLU 80	2	38	2549	-766.71	47.25	-0.13
436	SLU 81	2	37	2679	-804.35	49.66	-0.11
436	SLU 82	2	40	2669	-801.82	49.47	-0.16
436	SLU 83	2	37	2679	-804.35	49.66	-0.11
436	SLU 84	2	40	2669	-801.82	49.47	-0.16
436	SLE RA 1	1	23	1707	-515.01	31.64	0
436	SLE RA 2	1	26	1695	-512.19	31.43	-0.05
436	SLE RA 3	1	23	1707	-515.01	31.64	0
436	SLE RA 4	1	25	1700	-513.32	31.51	-0.03
436	SLE RA 5	1	26	1695	-512.19	31.43	-0.05
436	SLE RA 6	1	23	1707	-515.01	31.64	0
436	SLE RA 7	1	25	1700	-513.32	31.51	-0.03
436	SLE RA 8	1	23	1707	-515.01	31.64	0
436	SLE RA 9	1	25	1700	-513.32	31.51	-0.03
436	SLE RA 10	1	29	1882	-566.8	34.89	-0.09
436	SLE RA 11	1	26	1893	-569.62	35.09	-0.04
436	SLE RA 12	1	28	1886	-567.93	34.97	-0.07
436	SLE RA 13	1	29	1882	-566.8	34.89	-0.09
436	SLE RA 14	1	26	1893	-569.62	35.09	-0.04
436	SLE RA 15	1	28	1886	-567.93	34.97	-0.07
436	SLE RA 16	1	26	1893	-569.62	35.09	-0.04
436	SLE RA 17	1	28	1886	-567.93	34.97	-0.07
436	SLE RA 18	1	27	1973	-593.02	36.57	-0.06
436	SLE RA 19	1	29	1966	-591.33	36.45	-0.09
436	SLE RA 20	1	27	1973	-593.02	36.57	-0.06
436	SLE RA 21	1	29	1966	-591.33	36.45	-0.09
436	SLE FR 1	1	23	1707	-515.01	31.64	0
436	SLE FR 2	1	23	1704	-514.45	31.59	-0.01
436	SLE FR 3	1	23	1707	-515.01	31.64	0
436	SLE FR 4	1	25	1784	-537.85	33.08	-0.03
436	SLE FR 5	1	24	1787	-538.41	33.12	-0.02
436	SLE FR 6	1	25	1840	-554.02	34.11	-0.03
436	SLE QP 1	1	23	1707	-515.01	31.64	0
436	SLE QP 2	1	24	1787	-538.41	33.12	-0.02
436	SLD 1	133	44	1660	-504.51	31.03	46
436	SLD 2	108	49	1657	-504.01	31	37.12
436	SLD 3	136	-13	1835	-549.15	34.27	47.45
436	SLD 4	111	-8	1833	-548.64	34.24	38.58
436	SLD 5	46	115	1484	-460.74	27.59	14.86
436	SLD 6	20	120	1481	-460.21	27.56	5.65
436	SLD 7	55	-75	2068	-609.52	38.39	19.7
436	SLD 8	28	-71	2065	-608.99	38.36	10.49
436	SLD 9	-26	119	1508	-467.84	27.88	-10.52
436	SLD 10	-52	123	1506	-467.31	27.85	-19.73
436	SLD 11	-18	-72	2092	-616.62	38.68	-5.68
436	SLD 12	-44	-67	2090	-616.09	38.65	-14.89
436	SLD 13	-108	56	1741	-528.19	31.99	-38.61
436	SLD 14	-133	61	1739	-527.68	31.97	-47.48
436	SLD 15	-106	-1	1916	-572.82	35.24	-37.15
436	SLD 16	-131	4	1914	-572.31	35.21	-46.03
436	SLV 1	303	70	1497	-461.16	28.37	105.05
436	SLV 2	245	80	1492	-460	28.3	84.81
436	SLV 3	308	-60	1895	-562.5	35.73	108.37
436	SLV 4	251	-50	1890	-561.34	35.66	88.13
436	SLV 5	104	231	1098	-361.96	20.55	33.9
436	SLV 6	45	241	1093	-360.76	20.49	12.98
436	SLV 7	123	-201	2425	-699.76	45.09	44.96
436	SLV 8	64	-191	2420	-698.57	45.02	24.04

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
436	SLV 9	-61	239	1154	-378.26	21.22	-24.07
436	SLV 10	-121	249	1149	-377.06	21.15	-44.99
436	SLV 11	-42	-193	2481	-716.06	45.75	-13.01
436	SLV 12	-102	-183	2475	-714.87	45.68	-33.93
436	SLV 13	-248	98	1683	-515.49	30.57	-88.16
436	SLV 14	-306	107	1678	-514.33	30.51	-108.4
436	SLV 15	-243	-32	2081	-616.83	37.93	-84.84
436	SLV 16	-300	-22	2076	-615.67	37.87	-105.08
436	CRTFP Ux+	0	0	0	0	0	0
436	CRTFP Ux-	0	0	0	0	0	0
436	CRTFP Uy+	0	0	0	0	0	0
436	CRTFP Uy-	0	0	0	0	0	0
438	SLU 1	8	68	5414	-1297.9	7.4	1.49
438	SLU 2	8	86	5354	-1285.21	7.6	1.56
438	SLU 3	8	68	5414	-1297.9	7.4	1.49
438	SLU 4	8	78	5378	-1290.28	7.52	1.53
438	SLU 5	8	86	5354	-1285.21	7.6	1.56
438	SLU 6	8	68	5414	-1297.9	7.4	1.49
438	SLU 7	8	78	5378	-1290.28	7.52	1.53
438	SLU 8	8	68	5414	-1297.9	7.4	1.49
438	SLU 9	8	78	5378	-1290.28	7.52	1.53
438	SLU 10	9	99	6277	-1504.01	9.32	1.6
438	SLU 11	9	81	6337	-1516.71	9.12	1.53
438	SLU 12	9	92	6301	-1509.09	9.24	1.57
438	SLU 13	9	99	6277	-1504.01	9.32	1.6
438	SLU 14	9	81	6337	-1516.71	9.12	1.53
438	SLU 15	9	92	6301	-1509.09	9.24	1.57
438	SLU 16	9	81	6337	-1516.71	9.12	1.53
438	SLU 17	9	92	6301	-1509.09	9.24	1.57
438	SLU 18	9	87	6732	-1610.49	9.85	1.55
438	SLU 19	9	97	6696	-1602.87	9.97	1.59
438	SLU 20	9	87	6732	-1610.49	9.85	1.55
438	SLU 21	9	97	6696	-1602.87	9.97	1.59
438	SLU 22	8	78	6116	-1464.34	8.68	1.51
438	SLU 23	8	95	6056	-1451.64	8.88	1.57
438	SLU 24	8	78	6116	-1464.34	8.68	1.51
438	SLU 25	8	88	6080	-1456.72	8.8	1.55
438	SLU 26	8	95	6056	-1451.64	8.88	1.57
438	SLU 27	8	78	6116	-1464.34	8.68	1.51
438	SLU 28	8	88	6080	-1456.72	8.8	1.55
438	SLU 29	8	78	6116	-1464.34	8.68	1.51
438	SLU 30	8	88	6080	-1456.72	8.8	1.55
438	SLU 31	9	109	6978	-1670.45	10.6	1.61
438	SLU 32	9	91	7038	-1683.15	10.4	1.54
438	SLU 33	9	102	7002	-1675.53	10.52	1.58
438	SLU 34	9	109	6978	-1670.45	10.6	1.61
438	SLU 35	9	91	7038	-1683.15	10.4	1.54
438	SLU 36	9	102	7002	-1675.53	10.52	1.58
438	SLU 37	9	91	7038	-1683.15	10.4	1.54
438	SLU 38	9	102	7002	-1675.53	10.52	1.58
438	SLU 39	9	97	7434	-1776.92	11.13	1.56
438	SLU 40	9	107	7398	-1769.3	11.25	1.6
438	SLU 41	9	97	7434	-1776.92	11.13	1.56
438	SLU 42	9	107	7398	-1769.3	11.25	1.6
438	SLU 43	10	85	6798	-1630.21	9.18	1.93
438	SLU 44	10	103	6738	-1617.51	9.38	2
438	SLU 45	10	85	6798	-1630.21	9.18	1.93
438	SLU 46	10	96	6762	-1622.59	9.3	1.97
438	SLU 47	10	103	6738	-1617.51	9.38	2
438	SLU 48	10	85	6798	-1630.21	9.18	1.93
438	SLU 49	10	96	6762	-1622.59	9.3	1.97
438	SLU 50	10	85	6798	-1630.21	9.18	1.93
438	SLU 51	10	96	6762	-1622.59	9.3	1.97
438	SLU 52	11	116	7661	-1836.32	11.1	2.04
438	SLU 53	11	98	7720	-1849.02	10.9	1.97
438	SLU 54	11	109	7684	-1841.4	11.02	2.01
438	SLU 55	11	116	7661	-1836.32	11.1	2.04
438	SLU 56	11	98	7720	-1849.02	10.9	1.97
438	SLU 57	11	109	7684	-1841.4	11.02	2.01
438	SLU 58	11	98	7720	-1849.02	10.9	1.97
438	SLU 59	11	109	7684	-1841.4	11.02	2.01
438	SLU 60	11	104	8116	-1942.8	11.64	1.99
438	SLU 61	11	114	8080	-1935.18	11.76	2.03
438	SLU 62	11	104	8116	-1942.8	11.64	1.99
438	SLU 63	11	114	8080	-1935.18	11.76	2.03
438	SLU 64	11	95	7499	-1796.65	10.46	1.95
438	SLU 65	11	112	7439	-1783.95	10.66	2.02
438	SLU 66	11	95	7499	-1796.65	10.46	1.95
438	SLU 67	11	105	7463	-1789.03	10.58	1.99
438	SLU 68	11	112	7439	-1783.95	10.66	2.02
438	SLU 69	11	95	7499	-1796.65	10.46	1.95
438	SLU 70	11	105	7463	-1789.03	10.58	1.99
438	SLU 71	11	95	7499	-1796.65	10.46	1.95
438	SLU 72	11	105	7463	-1789.03	10.58	1.99
438	SLU 73	11	126	8362	-2002.76	12.38	2.05
438	SLU 74	11	108	8422	-2015.46	12.18	1.99

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
438	SLU 75	11	119	8386	-2007.84	12.3	2.03
438	SLU 76	11	126	8362	-2002.76	12.38	2.05
438	SLU 77	11	108	8422	-2015.46	12.18	1.99
438	SLU 78	11	119	8386	-2007.84	12.3	2.03
438	SLU 79	11	108	8422	-2015.46	12.18	1.99
438	SLU 80	11	119	8386	-2007.84	12.3	2.03
438	SLU 81	12	114	8817	-2109.23	12.91	2
438	SLU 82	12	124	8782	-2101.61	13.03	2.04
438	SLU 83	12	114	8817	-2109.23	12.91	2
438	SLU 84	12	124	8782	-2101.61	13.03	2.04
438	SLE RA 1	8	71	5614	-1345.46	7.77	1.5
438	SLE RA 2	8	82	5575	-1336.99	7.9	1.54
438	SLE RA 3	8	71	5614	-1345.46	7.77	1.5
438	SLE RA 4	8	78	5590	-1340.38	7.85	1.52
438	SLE RA 5	8	82	5575	-1336.99	7.9	1.54
438	SLE RA 6	8	71	5614	-1345.46	7.77	1.5
438	SLE RA 7	8	78	5590	-1340.38	7.85	1.52
438	SLE RA 8	8	71	5614	-1345.46	7.77	1.5
438	SLE RA 9	8	78	5590	-1340.38	7.85	1.52
438	SLE RA 10	9	91	6190	-1482.86	9.04	1.57
438	SLE RA 11	9	80	6230	-1491.33	8.91	1.52
438	SLE RA 12	9	87	6206	-1486.25	8.99	1.55
438	SLE RA 13	9	91	6190	-1482.86	9.04	1.57
438	SLE RA 14	9	80	6230	-1491.33	8.91	1.52
438	SLE RA 15	9	87	6206	-1486.25	8.99	1.55
438	SLE RA 16	9	80	6230	-1491.33	8.91	1.52
438	SLE RA 17	9	87	6206	-1486.25	8.99	1.55
438	SLE RA 18	9	83	6493	-1553.85	9.4	1.53
438	SLE RA 19	9	90	6469	-1548.77	9.48	1.56
438	SLE RA 20	9	83	6493	-1553.85	9.4	1.53
438	SLE RA 21	9	90	6469	-1548.77	9.48	1.56
438	SLE FR 1	8	71	5614	-1345.46	7.77	1.5
438	SLE FR 2	8	73	5606	-1343.76	7.79	1.5
438	SLE FR 3	8	71	5614	-1345.46	7.77	1.5
438	SLE FR 4	8	77	5870	-1406.28	8.28	1.52
438	SLE FR 5	8	75	5878	-1407.97	8.26	1.51
438	SLE FR 6	8	77	6054	-1449.65	8.58	1.51
438	SLE QP 1	8	71	5614	-1345.46	7.77	1.5
438	SLE QP 2	8	75	5878	-1407.97	8.26	1.51
438	SLD 1	437	135	5410	-1304.88	16.97	109.28
438	SLD 2	354	154	5400	-1302.96	17.36	89.08
438	SLD 3	446	-53	6007	-1433.7	17.83	111.28
438	SLD 4	363	-33	5997	-1431.78	18.23	91.08
438	SLD 5	155	370	4836	-1182.37	9.41	38.26
438	SLD 6	69	390	4826	-1180.38	9.83	17.29
438	SLD 7	183	-255	6826	-1611.79	12.29	44.92
438	SLD 8	97	-235	6816	-1609.79	12.7	23.96
438	SLD 9	-80	384	4940	-1206.15	3.81	-20.94
438	SLD 10	-166	404	4930	-1204.16	4.22	-41.91
438	SLD 11	-52	-241	6931	-1635.57	6.69	-14.28
438	SLD 12	-138	-221	6920	-1633.58	7.1	-35.25
438	SLD 13	-346	182	5759	-1384.16	-1.71	-88.07
438	SLD 14	-429	202	5749	-1382.25	-1.31	-108.27
438	SLD 15	-338	-5	6356	-1512.99	-0.85	-86.07
438	SLD 16	-421	14	6346	-1511.07	-0.45	-106.27
438	SLV 1	988	211	4813	-1173.28	28.14	247.57
438	SLV 2	798	255	4791	-1168.9	29.05	201.52
438	SLV 3	1007	-215	6169	-1465.79	30.12	252.17
438	SLV 4	818	-171	6147	-1461.41	31.03	206.12
438	SLV 5	343	745	3511	-895.53	10.89	85.25
438	SLV 6	147	791	3487	-891.01	11.83	37.64
438	SLV 7	407	-675	8030	-1870.56	17.48	100.57
438	SLV 8	211	-629	8007	-1866.04	18.42	52.97
438	SLV 9	-194	778	3749	-949.91	-1.9	-49.96
438	SLV 10	-390	824	3726	-945.39	-0.96	-97.56
438	SLV 11	-130	-642	8269	-1924.94	4.68	-34.63
438	SLV 12	-326	-596	8246	-1920.41	5.62	-82.23
438	SLV 13	-801	320	5609	-1354.54	-14.51	-203.1
438	SLV 14	-990	364	5587	-1350.16	-13.6	-249.16
438	SLV 15	-782	-106	6965	-1647.04	-12.54	-198.51
438	SLV 16	-971	-61	6943	-1642.67	-11.63	-244.56
438	CRTFP Ux+	0	0	0	0	0	0
438	CRTFP Ux-	0	0	0	0	0	0
438	CRTFP Uy+	0	0	0	-0.01	0	0
438	CRTFP Uy-	0	0	0	0.01	0	0
440	SLU 1	3	19	1643	-478.12	-29.71	1.34
440	SLU 2	3	25	1625	-473.98	-29.38	1.46
440	SLU 3	3	19	1643	-478.12	-29.71	1.34
440	SLU 4	3	23	1633	-475.64	-29.51	1.41
440	SLU 5	3	25	1625	-473.98	-29.38	1.46
440	SLU 6	3	19	1643	-478.12	-29.71	1.34
440	SLU 7	3	23	1633	-475.64	-29.51	1.41
440	SLU 8	3	19	1643	-478.12	-29.71	1.34
440	SLU 9	3	23	1633	-475.64	-29.51	1.41
440	SLU 10	3	28	1904	-551.83	-34.37	1.58
440	SLU 11	3	23	1921	-555.97	-34.7	1.46

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
440	SLU 12	3	26	1911	-553.49	-34.5	1.53
440	SLU 13	3	28	1904	-551.83	-34.37	1.58
440	SLU 14	3	23	1921	-555.97	-34.7	1.46
440	SLU 15	3	26	1911	-553.49	-34.5	1.53
440	SLU 16	3	23	1921	-555.97	-34.7	1.46
440	SLU 17	3	26	1911	-553.49	-34.5	1.53
440	SLU 18	3	24	2041	-589.33	-36.84	1.51
440	SLU 19	3	28	2030	-586.85	-36.64	1.59
440	SLU 20	3	24	2041	-589.33	-36.84	1.51
440	SLU 21	3	28	2030	-586.85	-36.64	1.59
440	SLU 22	3	22	1855	-537.39	-33.51	1.43
440	SLU 23	3	27	1837	-533.26	-33.18	1.55
440	SLU 24	3	22	1855	-537.39	-33.51	1.43
440	SLU 25	3	25	1844	-534.91	-33.31	1.5
440	SLU 26	3	27	1837	-533.26	-33.18	1.55
440	SLU 27	3	22	1855	-537.39	-33.51	1.43
440	SLU 28	3	25	1844	-534.91	-33.31	1.5
440	SLU 29	3	22	1855	-537.39	-33.51	1.43
440	SLU 30	3	25	1844	-534.91	-33.31	1.5
440	SLU 31	3	31	2115	-611.11	-38.17	1.67
440	SLU 32	3	26	2133	-615.24	-38.5	1.55
440	SLU 33	3	29	2122	-612.76	-38.3	1.62
440	SLU 34	3	31	2115	-611.11	-38.17	1.67
440	SLU 35	3	26	2133	-615.24	-38.5	1.55
440	SLU 36	3	29	2122	-612.76	-38.3	1.62
440	SLU 37	3	26	2133	-615.24	-38.5	1.55
440	SLU 38	3	29	2122	-612.76	-38.3	1.62
440	SLU 39	3	27	2252	-648.6	-40.64	1.6
440	SLU 40	3	30	2242	-646.12	-40.44	1.67
440	SLU 41	3	27	2252	-648.6	-40.64	1.6
440	SLU 42	3	30	2242	-646.12	-40.44	1.67
440	SLU 43	4	24	2064	-601.23	-37.32	1.71
440	SLU 44	4	30	2046	-597.1	-36.99	1.84
440	SLU 45	4	24	2064	-601.23	-37.32	1.71
440	SLU 46	4	27	2053	-598.75	-37.12	1.79
440	SLU 47	4	30	2046	-597.1	-36.99	1.84
440	SLU 48	4	24	2064	-601.23	-37.32	1.71
440	SLU 49	4	27	2053	-598.75	-37.12	1.79
440	SLU 50	4	24	2064	-601.23	-37.32	1.71
440	SLU 51	4	27	2053	-598.75	-37.12	1.79
440	SLU 52	4	33	2324	-674.95	-41.98	1.96
440	SLU 53	4	28	2342	-679.08	-42.31	1.84
440	SLU 54	4	31	2331	-676.6	-42.11	1.91
440	SLU 55	4	33	2324	-674.95	-41.98	1.96
440	SLU 56	4	28	2342	-679.08	-42.31	1.84
440	SLU 57	4	31	2331	-676.6	-42.11	1.91
440	SLU 58	4	28	2342	-679.08	-42.31	1.84
440	SLU 59	4	31	2331	-676.6	-42.11	1.91
440	SLU 60	4	29	2461	-712.44	-44.45	1.89
440	SLU 61	4	33	2450	-709.96	-44.25	1.96
440	SLU 62	4	29	2461	-712.44	-44.45	1.89
440	SLU 63	4	33	2450	-709.96	-44.25	1.96
440	SLU 64	4	27	2275	-660.51	-41.12	1.8
440	SLU 65	4	32	2258	-656.37	-40.79	1.92
440	SLU 66	4	27	2275	-660.51	-41.12	1.8
440	SLU 67	4	30	2265	-658.03	-40.92	1.87
440	SLU 68	4	32	2258	-656.37	-40.79	1.92
440	SLU 69	4	27	2275	-660.51	-41.12	1.8
440	SLU 70	4	30	2265	-658.03	-40.92	1.87
440	SLU 71	4	27	2275	-660.51	-41.12	1.8
440	SLU 72	4	30	2265	-658.03	-40.92	1.87
440	SLU 73	4	36	2536	-734.22	-45.78	2.04
440	SLU 74	4	30	2554	-738.35	-46.11	1.92
440	SLU 75	4	34	2543	-735.87	-45.91	1.99
440	SLU 76	4	36	2536	-734.22	-45.78	2.04
440	SLU 77	4	30	2554	-738.35	-46.11	1.92
440	SLU 78	4	34	2543	-735.87	-45.91	1.99
440	SLU 79	4	30	2554	-738.35	-46.11	1.92
440	SLU 80	4	34	2543	-735.87	-45.91	1.99
440	SLU 81	4	32	2673	-771.72	-48.25	1.97
440	SLU 82	4	35	2662	-769.24	-48.05	2.05
440	SLU 83	4	32	2673	-771.72	-48.25	1.97
440	SLU 84	4	35	2662	-769.24	-48.05	2.05
440	SLE RA 1	3	20	1704	-495.05	-30.8	1.37
440	SLE RA 2	3	24	1692	-492.3	-30.57	1.45
440	SLE RA 3	3	20	1704	-495.05	-30.8	1.37
440	SLE RA 4	3	22	1697	-493.4	-30.66	1.41
440	SLE RA 5	3	24	1692	-492.3	-30.57	1.45
440	SLE RA 6	3	20	1704	-495.05	-30.8	1.37
440	SLE RA 7	3	22	1697	-493.4	-30.66	1.41
440	SLE RA 8	3	20	1704	-495.05	-30.8	1.37
440	SLE RA 9	3	22	1697	-493.4	-30.66	1.41
440	SLE RA 10	3	26	1877	-544.2	-33.9	1.53
440	SLE RA 11	3	22	1889	-546.95	-34.12	1.45
440	SLE RA 12	3	25	1882	-545.3	-33.99	1.49
440	SLE RA 13	3	26	1877	-544.2	-33.9	1.53

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
440	SLE RA 14	3	22	1889	-546.95	-34.12	1.45
440	SLE RA 15	3	25	1882	-545.3	-33.99	1.49
440	SLE RA 16	3	22	1889	-546.95	-34.12	1.45
440	SLE RA 17	3	25	1882	-545.3	-33.99	1.49
440	SLE RA 18	3	23	1969	-569.19	-35.55	1.48
440	SLE RA 19	3	26	1962	-567.54	-35.42	1.53
440	SLE RA 20	3	23	1969	-569.19	-35.55	1.48
440	SLE RA 21	3	26	1962	-567.54	-35.42	1.53
440	SLE FR 1	3	20	1704	-495.05	-30.8	1.37
440	SLE FR 2	3	21	1701	-494.5	-30.75	1.38
440	SLE FR 3	3	20	1704	-495.05	-30.8	1.37
440	SLE FR 4	3	22	1781	-516.74	-32.18	1.42
440	SLE FR 5	3	21	1783	-517.3	-32.22	1.4
440	SLE FR 6	3	22	1836	-532.12	-33.17	1.42
440	SLE QP 1	3	20	1704	-495.05	-30.8	1.37
440	SLE QP 2	3	21	1783	-517.3	-32.22	1.4
440	SLD 1	137	38	1634	-482.11	-29.24	49.07
440	SLD 2	111	46	1630	-481.44	-29.17	40.29
440	SLD 3	140	-22	1809	-524.4	-32.41	47.84
440	SLD 4	114	-14	1805	-523.73	-32.34	39.06
440	SLD 5	49	113	1474	-442.85	-26.56	20.81
440	SLD 6	22	122	1471	-442.15	-26.49	11.69
440	SLD 7	57	-85	2058	-583.82	-37.1	16.71
440	SLD 8	31	-77	2054	-583.12	-37.03	7.59
440	SLD 9	-25	119	1512	-451.47	-27.42	-4.79
440	SLD 10	-51	127	1509	-450.77	-27.35	-13.9
440	SLD 11	-16	-80	2096	-592.45	-37.96	-8.89
440	SLD 12	-43	-71	2093	-591.75	-37.89	-18
440	SLD 13	-108	56	1761	-510.86	-32.11	-36.26
440	SLD 14	-133	64	1758	-510.19	-32.04	-45.04
440	SLD 15	-105	-4	1936	-553.15	-35.27	-37.49
440	SLD 16	-131	4	1933	-552.48	-35.2	-46.27
440	SLV 1	309	59	1443	-437.13	-25.44	110.24
440	SLV 2	250	77	1435	-435.6	-25.28	90.22
440	SLV 3	315	-76	1840	-533.16	-32.62	107.43
440	SLV 4	256	-58	1833	-531.62	-32.46	87.42
440	SLV 5	107	231	1081	-348.18	-19.36	45.65
440	SLV 6	47	250	1073	-346.59	-19.19	24.96
440	SLV 7	127	-220	2406	-668.25	-43.29	36.3
440	SLV 8	67	-201	2399	-666.67	-43.13	15.61
440	SLV 9	-61	243	1168	-367.93	-21.32	-12.81
440	SLV 10	-121	262	1160	-366.34	-21.15	-33.5
440	SLV 11	-41	-208	2494	-688	-45.25	-22.16
440	SLV 12	-101	-189	2486	-686.42	-45.09	-42.85
440	SLV 13	-250	100	1734	-502.97	-31.99	-84.61
440	SLV 14	-309	118	1726	-501.43	-31.82	-104.63
440	SLV 15	-244	-35	2131	-598.99	-39.17	-87.42
440	SLV 16	-303	-17	2124	-597.46	-39.01	-107.43
440	CRTFP Ux+	0	0	0	0	0	0
440	CRTFP Ux-	0	0	0	0	0	0
440	CRTFP Uy+	0	0	0	0	0	0
440	CRTFP Uy-	0	0	0	0	0	0
441	SLU 1	4	17	1781	-478	1.59	1.29
441	SLU 2	4	24	1761	-473.85	1.59	1.31
441	SLU 3	4	17	1781	-478	1.59	1.29
441	SLU 4	4	21	1769	-475.51	1.59	1.31
441	SLU 5	4	24	1761	-473.85	1.59	1.31
441	SLU 6	4	17	1781	-478	1.59	1.29
441	SLU 7	4	21	1769	-475.51	1.59	1.31
441	SLU 8	4	17	1781	-478	1.59	1.29
441	SLU 9	4	21	1769	-475.51	1.59	1.31
441	SLU 10	4	27	2061	-549.57	1.93	1.37
441	SLU 11	4	21	2080	-553.73	1.93	1.35
441	SLU 12	4	25	2069	-551.24	1.93	1.36
441	SLU 13	4	27	2061	-549.57	1.93	1.37
441	SLU 14	4	21	2080	-553.73	1.93	1.35
441	SLU 15	4	25	2069	-551.24	1.93	1.36
441	SLU 16	4	21	2080	-553.73	1.93	1.35
441	SLU 17	4	25	2069	-551.24	1.93	1.36
441	SLU 18	4	22	2209	-586.18	2.08	1.37
441	SLU 19	4	26	2197	-583.69	2.08	1.39
441	SLU 20	4	22	2209	-586.18	2.08	1.37
441	SLU 21	4	26	2197	-583.69	2.08	1.39
441	SLU 22	4	20	2009	-535.69	1.85	1.33
441	SLU 23	4	26	1989	-531.54	1.85	1.35
441	SLU 24	4	20	2009	-535.69	1.85	1.33
441	SLU 25	4	24	1997	-533.2	1.85	1.35
441	SLU 26	4	26	1989	-531.54	1.85	1.35
441	SLU 27	4	20	2009	-535.69	1.85	1.33
441	SLU 28	4	24	1997	-533.2	1.85	1.35
441	SLU 29	4	20	2009	-535.69	1.85	1.33
441	SLU 30	4	24	1997	-533.2	1.85	1.35
441	SLU 31	5	30	2288	-607.26	2.19	1.41
441	SLU 32	5	23	2308	-611.42	2.19	1.39
441	SLU 33	5	27	2296	-608.92	2.19	1.4
441	SLU 34	5	30	2288	-607.26	2.19	1.41

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
441	SLU 35	5	23	2308	-611.42	2.19	1.39
441	SLU 36	5	27	2296	-608.92	2.19	1.4
441	SLU 37	5	23	2308	-611.42	2.19	1.39
441	SLU 38	5	27	2296	-608.92	2.19	1.4
441	SLU 39	5	24	2437	-643.87	2.33	1.41
441	SLU 40	5	28	2425	-641.38	2.33	1.43
441	SLU 41	5	24	2437	-643.87	2.33	1.41
441	SLU 42	5	28	2425	-641.38	2.33	1.43
441	SLU 43	5	22	2237	-601.63	1.98	1.67
441	SLU 44	5	28	2217	-597.47	1.98	1.69
441	SLU 45	5	22	2237	-601.63	1.98	1.67
441	SLU 46	5	26	2225	-599.13	1.98	1.68
441	SLU 47	5	28	2217	-597.47	1.98	1.69
441	SLU 48	5	22	2237	-601.63	1.98	1.67
441	SLU 49	5	26	2225	-599.13	1.98	1.68
441	SLU 50	5	22	2237	-601.63	1.98	1.67
441	SLU 51	5	26	2225	-599.13	1.98	1.68
441	SLU 52	6	32	2517	-673.2	2.32	1.74
441	SLU 53	6	25	2537	-677.35	2.32	1.72
441	SLU 54	6	29	2525	-674.86	2.32	1.73
441	SLU 55	6	32	2517	-673.2	2.32	1.74
441	SLU 56	6	25	2537	-677.35	2.32	1.72
441	SLU 57	6	29	2525	-674.86	2.32	1.73
441	SLU 58	6	25	2537	-677.35	2.32	1.72
441	SLU 59	6	29	2525	-674.86	2.32	1.73
441	SLU 60	6	26	2665	-709.8	2.47	1.75
441	SLU 61	6	30	2653	-707.31	2.47	1.76
441	SLU 62	6	26	2665	-709.8	2.47	1.75
441	SLU 63	6	30	2653	-707.31	2.47	1.76
441	SLU 64	5	24	2465	-659.31	2.24	1.71
441	SLU 65	5	31	2445	-655.16	2.24	1.73
441	SLU 66	5	24	2465	-659.31	2.24	1.71
441	SLU 67	5	28	2453	-656.82	2.24	1.72
441	SLU 68	5	31	2445	-655.16	2.24	1.73
441	SLU 69	5	24	2465	-659.31	2.24	1.71
441	SLU 70	5	28	2453	-656.82	2.24	1.72
441	SLU 71	5	24	2465	-659.31	2.24	1.71
441	SLU 72	5	28	2453	-656.82	2.24	1.72
441	SLU 73	6	34	2745	-730.88	2.58	1.78
441	SLU 74	6	27	2764	-735.04	2.58	1.76
441	SLU 75	6	31	2753	-732.55	2.58	1.77
441	SLU 76	6	34	2745	-730.88	2.58	1.78
441	SLU 77	6	27	2764	-735.04	2.58	1.76
441	SLU 78	6	31	2753	-732.55	2.58	1.77
441	SLU 79	6	27	2764	-735.04	2.58	1.76
441	SLU 80	6	31	2753	-732.55	2.58	1.77
441	SLU 81	6	29	2893	-767.49	2.72	1.79
441	SLU 82	6	33	2881	-765	2.72	1.8
441	SLU 83	6	29	2893	-767.49	2.72	1.79
441	SLU 84	6	33	2881	-765	2.72	1.8
441	SLE RA 1	4	18	1846	-494.49	1.67	1.3
441	SLE RA 2	4	22	1833	-491.72	1.66	1.32
441	SLE RA 3	4	18	1846	-494.49	1.67	1.3
441	SLE RA 4	4	21	1838	-492.82	1.67	1.31
441	SLE RA 5	4	22	1833	-491.72	1.66	1.32
441	SLE RA 6	4	18	1846	-494.49	1.67	1.3
441	SLE RA 7	4	21	1838	-492.82	1.67	1.31
441	SLE RA 8	4	18	1846	-494.49	1.67	1.3
441	SLE RA 9	4	21	1838	-492.82	1.67	1.31
441	SLE RA 10	4	25	2032	-542.2	1.89	1.36
441	SLE RA 11	4	20	2046	-544.97	1.89	1.34
441	SLE RA 12	4	23	2038	-543.31	1.89	1.35
441	SLE RA 13	4	25	2032	-542.2	1.89	1.36
441	SLE RA 14	4	20	2046	-544.97	1.89	1.34
441	SLE RA 15	4	23	2038	-543.31	1.89	1.35
441	SLE RA 16	4	20	2046	-544.97	1.89	1.34
441	SLE RA 17	4	23	2038	-543.31	1.89	1.35
441	SLE RA 18	4	21	2131	-566.6	1.99	1.36
441	SLE RA 19	4	24	2123	-564.94	1.99	1.37
441	SLE RA 20	4	21	2131	-566.6	1.99	1.36
441	SLE RA 21	4	24	2123	-564.94	1.99	1.37
441	SLE FR 1	4	18	1846	-494.49	1.67	1.3
441	SLE FR 2	4	19	1843	-493.93	1.67	1.31
441	SLE FR 3	4	18	1846	-494.49	1.67	1.3
441	SLE FR 4	4	20	1929	-515.57	1.76	1.32
441	SLE FR 5	4	19	1932	-516.12	1.76	1.32
441	SLE FR 6	4	20	1989	-530.55	1.83	1.33
441	SLE QP 1	4	18	1846	-494.49	1.67	1.3
441	SLE QP 2	4	19	1932	-516.12	1.76	1.32
441	SLD 1	153	36	1758	-480.87	2	53.34
441	SLD 2	124	47	1754	-480.09	2.02	43.42
441	SLD 3	156	-31	1947	-522.43	2.18	54.36
441	SLD 4	127	-20	1943	-521.65	2.19	44.44
441	SLD 5	55	122	1593	-442.81	1.56	19.04
441	SLD 6	25	133	1589	-442	1.57	8.74
441	SLD 7	65	-102	2225	-581.33	2.16	22.44

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
441	SLD 8	35	-91	2221	-580.52	2.17	12.14
441	SLD 9	-27	129	1642	-451.72	1.36	-9.5
441	SLD 10	-56	140	1638	-450.91	1.37	-19.8
441	SLD 11	-17	-95	2274	-590.25	1.95	-6.1
441	SLD 12	-46	-84	2270	-589.44	1.97	-16.4
441	SLD 13	-119	58	1920	-510.59	1.33	-41.8
441	SLD 14	-148	69	1916	-509.81	1.34	-51.72
441	SLD 15	-116	-9	2109	-552.15	1.51	-40.78
441	SLD 16	-145	2	2105	-551.37	1.52	-50.7
441	SLV 1	344	58	1536	-435.81	2.32	120.09
441	SLV 2	279	83	1527	-434.03	2.34	97.47
441	SLV 3	351	-94	1966	-530.16	2.72	122.44
441	SLV 4	286	-70	1957	-528.38	2.75	99.82
441	SLV 5	120	253	1163	-349.57	1.3	41.69
441	SLV 6	52	278	1154	-347.74	1.33	18.31
441	SLV 7	142	-255	2598	-664.09	2.66	49.51
441	SLV 8	75	-230	2589	-662.25	2.68	26.13
441	SLV 9	-67	268	1274	-369.99	0.84	-23.49
441	SLV 10	-134	293	1265	-368.15	0.87	-46.87
441	SLV 11	-44	-240	2709	-684.51	2.2	-15.67
441	SLV 12	-111	-215	2700	-682.67	2.22	-39.05
441	SLV 13	-277	108	1906	-503.86	0.78	-97.18
441	SLV 14	-342	132	1897	-502.08	0.8	-119.8
441	SLV 15	-270	-45	2337	-598.21	1.19	-94.83
441	SLV 16	-335	-20	2327	-596.44	1.21	-117.45
441	CRTFP Ux+	0	0	0	0	0	0
441	CRTFP Ux-	0	0	0	0	0	0
441	CRTFP Uy+	0	0	0	0	0	0
441	CRTFP Uy-	0	0	0	0	0	0
442	SLU 1	5	12	1728	-425.76	1.59	1.46
442	SLU 2	5	19	1708	-422.01	1.59	1.49
442	SLU 3	5	12	1728	-425.76	1.59	1.46
442	SLU 4	5	16	1716	-423.51	1.59	1.48
442	SLU 5	5	19	1708	-422.01	1.59	1.49
442	SLU 6	5	12	1728	-425.76	1.59	1.46
442	SLU 7	5	16	1716	-423.51	1.59	1.48
442	SLU 8	5	12	1728	-425.76	1.59	1.46
442	SLU 9	5	16	1716	-423.51	1.59	1.48
442	SLU 10	5	21	1997	-487.14	1.93	1.54
442	SLU 11	5	15	2016	-490.89	1.93	1.51
442	SLU 12	5	19	2004	-488.64	1.93	1.53
442	SLU 13	5	21	1997	-487.14	1.93	1.54
442	SLU 14	5	15	2016	-490.89	1.93	1.51
442	SLU 15	5	19	2004	-488.64	1.93	1.53
442	SLU 16	5	15	2016	-490.89	1.93	1.51
442	SLU 17	5	19	2004	-488.64	1.93	1.53
442	SLU 18	5	16	2140	-518.81	2.08	1.53
442	SLU 19	5	20	2128	-516.56	2.08	1.55
442	SLU 20	5	16	2140	-518.81	2.08	1.53
442	SLU 21	5	20	2128	-516.56	2.08	1.55
442	SLU 22	5	14	1947	-475.41	1.85	1.5
442	SLU 23	5	21	1928	-471.66	1.85	1.53
442	SLU 24	5	14	1947	-475.41	1.85	1.5
442	SLU 25	5	18	1936	-473.16	1.85	1.52
442	SLU 26	5	21	1928	-471.66	1.85	1.53
442	SLU 27	5	14	1947	-475.41	1.85	1.5
442	SLU 28	5	18	1936	-473.16	1.85	1.52
442	SLU 29	5	14	1947	-475.41	1.85	1.5
442	SLU 30	5	18	1936	-473.16	1.85	1.52
442	SLU 31	5	23	2216	-536.79	2.19	1.58
442	SLU 32	5	16	2236	-540.54	2.19	1.55
442	SLU 33	5	20	2224	-538.29	2.19	1.57
442	SLU 34	5	23	2216	-536.79	2.19	1.58
442	SLU 35	5	16	2236	-540.54	2.19	1.55
442	SLU 36	5	20	2224	-538.29	2.19	1.57
442	SLU 37	5	16	2236	-540.54	2.19	1.55
442	SLU 38	5	20	2224	-538.29	2.19	1.57
442	SLU 39	5	17	2359	-568.45	2.34	1.57
442	SLU 40	5	21	2347	-566.2	2.34	1.59
442	SLU 41	5	17	2359	-568.45	2.34	1.57
442	SLU 42	5	21	2347	-566.2	2.34	1.59
442	SLU 43	6	16	2171	-536.46	1.98	1.89
442	SLU 44	6	22	2152	-532.71	1.97	1.92
442	SLU 45	6	16	2171	-536.46	1.98	1.89
442	SLU 46	6	20	2160	-534.21	1.97	1.91
442	SLU 47	6	22	2152	-532.71	1.97	1.92
442	SLU 48	6	16	2171	-536.46	1.98	1.89
442	SLU 49	6	20	2160	-534.21	1.97	1.91
442	SLU 50	6	16	2171	-536.46	1.98	1.89
442	SLU 51	6	20	2160	-534.21	1.97	1.91
442	SLU 52	6	25	2440	-597.85	2.32	1.97
442	SLU 53	6	18	2460	-601.6	2.32	1.94
442	SLU 54	6	22	2448	-599.35	2.32	1.96
442	SLU 55	6	25	2440	-597.85	2.32	1.97
442	SLU 56	6	18	2460	-601.6	2.32	1.94
442	SLU 57	6	22	2448	-599.35	2.32	1.96

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
442	SLU 58	6	18	2460	-601.6	2.32	1.94
442	SLU 59	6	22	2448	-599.35	2.32	1.96
442	SLU 60	6	19	2583	-629.51	2.47	1.96
442	SLU 61	6	23	2571	-627.26	2.47	1.98
442	SLU 62	6	19	2583	-629.51	2.47	1.96
442	SLU 63	6	23	2571	-627.26	2.47	1.98
442	SLU 64	6	17	2391	-586.11	2.24	1.93
442	SLU 65	6	24	2371	-582.36	2.23	1.96
442	SLU 66	6	17	2391	-586.11	2.24	1.93
442	SLU 67	6	21	2379	-583.86	2.23	1.94
442	SLU 68	6	24	2371	-582.36	2.23	1.96
442	SLU 69	6	17	2391	-586.11	2.24	1.93
442	SLU 70	6	21	2379	-583.86	2.23	1.94
442	SLU 71	6	17	2391	-586.11	2.24	1.93
442	SLU 72	6	21	2379	-583.86	2.23	1.94
442	SLU 73	6	26	2659	-647.5	2.58	2.01
442	SLU 74	6	19	2679	-651.24	2.58	1.98
442	SLU 75	6	24	2667	-648.99	2.58	2
442	SLU 76	6	26	2659	-647.5	2.58	2.01
442	SLU 77	6	19	2679	-651.24	2.58	1.98
442	SLU 78	6	24	2667	-648.99	2.58	2
442	SLU 79	6	19	2679	-651.24	2.58	1.98
442	SLU 80	6	24	2667	-648.99	2.58	2
442	SLU 81	6	20	2802	-679.16	2.73	2
442	SLU 82	7	24	2791	-676.91	2.73	2.02
442	SLU 83	6	20	2802	-679.16	2.73	2
442	SLU 84	7	24	2791	-676.91	2.73	2.02
442	SLE RA 1	5	13	1791	-439.94	1.66	1.47
442	SLE RA 2	5	17	1778	-437.44	1.66	1.49
442	SLE RA 3	5	13	1791	-439.94	1.66	1.47
442	SLE RA 4	5	16	1783	-438.44	1.66	1.49
442	SLE RA 5	5	17	1778	-437.44	1.66	1.49
442	SLE RA 6	5	13	1791	-439.94	1.66	1.47
442	SLE RA 7	5	16	1783	-438.44	1.66	1.49
442	SLE RA 8	5	13	1791	-439.94	1.66	1.47
442	SLE RA 9	5	16	1783	-438.44	1.66	1.49
442	SLE RA 10	5	19	1970	-480.87	1.89	1.53
442	SLE RA 11	5	14	1983	-483.36	1.89	1.51
442	SLE RA 12	5	17	1975	-481.87	1.89	1.52
442	SLE RA 13	5	19	1970	-480.87	1.89	1.53
442	SLE RA 14	5	14	1983	-483.36	1.89	1.51
442	SLE RA 15	5	17	1975	-481.87	1.89	1.52
442	SLE RA 16	5	14	1983	-483.36	1.89	1.51
442	SLE RA 17	5	17	1975	-481.87	1.89	1.52
442	SLE RA 18	5	15	2065	-501.97	1.99	1.52
442	SLE RA 19	5	18	2057	-500.47	1.99	1.53
442	SLE RA 20	5	15	2065	-501.97	1.99	1.52
442	SLE RA 21	5	18	2057	-500.47	1.99	1.53
442	SLE FR 1	5	13	1791	-439.94	1.66	1.47
442	SLE FR 2	5	14	1788	-439.44	1.66	1.48
442	SLE FR 3	5	13	1791	-439.94	1.66	1.47
442	SLE FR 4	5	14	1871	-458.05	1.76	1.49
442	SLE FR 5	5	14	1873	-458.55	1.76	1.49
442	SLE FR 6	5	14	1928	-470.96	1.83	1.5
442	SLE QP 1	5	13	1791	-439.94	1.66	1.47
442	SLE QP 2	5	14	1873	-458.55	1.76	1.49
442	SLD 1	154	30	1691	-426.62	2.03	53.53
442	SLD 2	125	43	1687	-425.83	2.04	43.59
442	SLD 3	157	-39	1875	-462.7	2.2	54.56
442	SLD 4	128	-26	1871	-461.91	2.21	44.63
442	SLD 5	55	118	1541	-394.55	1.58	19.19
442	SLD 6	26	131	1537	-393.73	1.59	8.88
442	SLD 7	65	-111	2154	-514.8	2.15	22.65
442	SLD 8	36	-98	2150	-513.98	2.16	12.34
442	SLD 9	-26	125	1597	-403.12	1.36	-9.37
442	SLD 10	-56	138	1592	-402.3	1.37	-19.68
442	SLD 11	-16	-104	2209	-523.38	1.93	-5.9
442	SLD 12	-46	-91	2205	-522.56	1.95	-16.21
442	SLD 13	-119	53	1876	-455.2	1.31	-41.65
442	SLD 14	-147	66	1871	-454.41	1.32	-51.59
442	SLD 15	-115	-16	2059	-491.27	1.48	-40.62
442	SLD 16	-144	-3	2055	-490.48	1.5	-50.55
442	SLV 1	344	51	1459	-385.79	2.37	120.3
442	SLV 2	279	79	1449	-383.99	2.39	97.65
442	SLV 3	351	-105	1876	-467.71	2.76	122.69
442	SLV 4	286	-76	1866	-465.91	2.78	100.04
442	SLV 5	120	250	1119	-313.15	1.34	41.82
442	SLV 6	53	280	1109	-311.29	1.37	18.4
442	SLV 7	143	-269	2511	-586.19	2.64	49.78
442	SLV 8	76	-239	2501	-584.33	2.67	26.37
442	SLV 9	-66	266	1246	-332.77	0.85	-23.39
442	SLV 10	-134	296	1236	-330.91	0.88	-46.8
442	SLV 11	-43	-253	2637	-605.82	2.15	-15.43
442	SLV 12	-110	-223	2627	-603.95	2.18	-38.84
442	SLV 13	-277	103	1880	-451.2	0.74	-97.06
442	SLV 14	-342	132	1870	-449.4	0.76	-119.71

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
442	SLV 15	-270	-52	2297	-533.11	1.13	-94.67
442	SLV 16	-335	-24	2287	-531.31	1.15	-117.32
442	CRTFP Ux+	0	0	0	0	0	0
442	CRTFP Ux-	0	0	0	0	0	0
442	CRTFP Uy+	0	0	0	0	0	0
442	CRTFP Uy-	0	0	0	0	0	0
443	SLU 1	5	7	1681	-380.98	1.27	1.59
443	SLU 2	5	14	1661	-377.56	1.26	1.64
443	SLU 3	5	7	1681	-380.98	1.27	1.59
443	SLU 4	5	11	1669	-378.93	1.27	1.62
443	SLU 5	5	14	1661	-377.56	1.26	1.64
443	SLU 6	5	7	1681	-380.98	1.27	1.59
443	SLU 7	5	11	1669	-378.93	1.27	1.62
443	SLU 8	5	7	1681	-380.98	1.27	1.59
443	SLU 9	5	11	1669	-378.93	1.27	1.62
443	SLU 10	5	15	1939	-433.59	1.55	1.68
443	SLU 11	5	8	1959	-437.01	1.55	1.64
443	SLU 12	5	12	1947	-434.96	1.55	1.66
443	SLU 13	5	15	1939	-433.59	1.55	1.68
443	SLU 14	5	8	1959	-437.01	1.55	1.64
443	SLU 15	5	12	1947	-434.96	1.55	1.66
443	SLU 16	5	8	1959	-437.01	1.55	1.64
443	SLU 17	5	12	1947	-434.96	1.55	1.66
443	SLU 18	5	9	2078	-461.03	1.67	1.66
443	SLU 19	5	13	2066	-458.98	1.67	1.68
443	SLU 20	5	9	2078	-461.03	1.67	1.66
443	SLU 21	5	13	2066	-458.98	1.67	1.68
443	SLU 22	5	8	1893	-423.72	1.48	1.63
443	SLU 23	5	15	1873	-420.3	1.48	1.67
443	SLU 24	5	8	1893	-423.72	1.48	1.63
443	SLU 25	5	12	1881	-421.66	1.48	1.65
443	SLU 26	5	15	1873	-420.3	1.48	1.67
443	SLU 27	5	8	1893	-423.72	1.48	1.63
443	SLU 28	5	12	1881	-421.66	1.48	1.65
443	SLU 29	5	8	1893	-423.72	1.48	1.63
443	SLU 30	5	12	1881	-421.66	1.48	1.65
443	SLU 31	6	16	2151	-476.33	1.76	1.71
443	SLU 32	5	9	2170	-479.75	1.76	1.67
443	SLU 33	5	13	2158	-477.7	1.76	1.7
443	SLU 34	6	16	2151	-476.33	1.76	1.71
443	SLU 35	5	9	2170	-479.75	1.76	1.67
443	SLU 36	5	13	2158	-477.7	1.76	1.7
443	SLU 37	5	9	2170	-479.75	1.76	1.67
443	SLU 38	5	13	2158	-477.7	1.76	1.7
443	SLU 39	6	9	2289	-503.77	1.89	1.69
443	SLU 40	6	14	2278	-501.72	1.88	1.71
443	SLU 41	6	9	2289	-503.77	1.89	1.69
443	SLU 42	6	14	2278	-501.72	1.88	1.71
443	SLU 43	7	9	2113	-480.62	1.57	2.06
443	SLU 44	7	16	2093	-477.2	1.57	2.1
443	SLU 45	7	9	2113	-480.62	1.57	2.06
443	SLU 46	7	13	2101	-478.57	1.57	2.09
443	SLU 47	7	16	2093	-477.2	1.57	2.1
443	SLU 48	7	9	2113	-480.62	1.57	2.06
443	SLU 49	7	13	2101	-478.57	1.57	2.09
443	SLU 50	7	9	2113	-480.62	1.57	2.06
443	SLU 51	7	13	2101	-478.57	1.57	2.09
443	SLU 52	7	17	2371	-533.23	1.86	2.15
443	SLU 53	7	10	2391	-536.65	1.86	2.1
443	SLU 54	7	14	2379	-534.6	1.86	2.13
443	SLU 55	7	17	2371	-533.23	1.86	2.15
443	SLU 56	7	10	2391	-536.65	1.86	2.1
443	SLU 57	7	14	2379	-534.6	1.86	2.13
443	SLU 58	7	10	2391	-536.65	1.86	2.1
443	SLU 59	7	14	2379	-534.6	1.86	2.13
443	SLU 60	7	10	2510	-560.67	1.98	2.12
443	SLU 61	7	15	2498	-558.62	1.98	2.15
443	SLU 62	7	10	2510	-560.67	1.98	2.12
443	SLU 63	7	15	2498	-558.62	1.98	2.15
443	SLU 64	7	10	2324	-523.36	1.79	2.09
443	SLU 65	7	17	2305	-519.94	1.78	2.14
443	SLU 66	7	10	2324	-523.36	1.79	2.09
443	SLU 67	7	14	2312	-521.3	1.79	2.12
443	SLU 68	7	17	2305	-519.94	1.78	2.14
443	SLU 69	7	10	2324	-523.36	1.79	2.09
443	SLU 70	7	14	2312	-521.3	1.79	2.12
443	SLU 71	7	10	2324	-523.36	1.79	2.09
443	SLU 72	7	14	2312	-521.3	1.79	2.12
443	SLU 73	7	18	2582	-575.97	2.07	2.18
443	SLU 74	7	11	2602	-579.39	2.07	2.14
443	SLU 75	7	15	2590	-577.34	2.07	2.16
443	SLU 76	7	18	2582	-575.97	2.07	2.18
443	SLU 77	7	11	2602	-579.39	2.07	2.14
443	SLU 78	7	15	2590	-577.34	2.07	2.16
443	SLU 79	7	11	2602	-579.39	2.07	2.14
443	SLU 80	7	15	2590	-577.34	2.07	2.16

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
443	SLU 81	7	11	2721	-603.41	2.19	2.16
443	SLU 82	7	15	2709	-601.36	2.19	2.18
443	SLU 83	7	11	2721	-603.41	2.19	2.16
443	SLU 84	7	15	2709	-601.36	2.19	2.18
443	SLE RA 1	5	7	1741	-393.19	1.33	1.6
443	SLE RA 2	5	12	1728	-390.91	1.33	1.63
443	SLE RA 3	5	7	1741	-393.19	1.33	1.6
443	SLE RA 4	5	10	1734	-391.82	1.33	1.62
443	SLE RA 5	5	12	1728	-390.91	1.33	1.63
443	SLE RA 6	5	7	1741	-393.19	1.33	1.6
443	SLE RA 7	5	10	1734	-391.82	1.33	1.62
443	SLE RA 8	5	7	1741	-393.19	1.33	1.6
443	SLE RA 9	5	10	1734	-391.82	1.33	1.62
443	SLE RA 10	5	13	1913	-428.27	1.52	1.66
443	SLE RA 11	5	8	1927	-430.55	1.52	1.63
443	SLE RA 12	5	11	1919	-429.18	1.52	1.65
443	SLE RA 13	5	13	1913	-428.27	1.52	1.66
443	SLE RA 14	5	8	1927	-430.55	1.52	1.63
443	SLE RA 15	5	11	1919	-429.18	1.52	1.65
443	SLE RA 16	5	8	1927	-430.55	1.52	1.63
443	SLE RA 17	5	11	1919	-429.18	1.52	1.65
443	SLE RA 18	5	8	2006	-446.56	1.6	1.64
443	SLE RA 19	5	11	1998	-445.19	1.6	1.66
443	SLE RA 20	5	8	2006	-446.56	1.6	1.64
443	SLE RA 21	5	11	1998	-445.19	1.6	1.66
443	SLE FR 1	5	7	1741	-393.19	1.33	1.6
443	SLE FR 2	5	8	1739	-392.73	1.33	1.61
443	SLE FR 3	5	7	1741	-393.19	1.33	1.6
443	SLE FR 4	5	8	1818	-408.74	1.41	1.62
443	SLE FR 5	5	7	1821	-409.2	1.41	1.62
443	SLE FR 6	5	8	1874	-419.87	1.46	1.62
443	SLE QP 1	5	7	1741	-393.19	1.33	1.6
443	SLE QP 2	5	7	1821	-409.2	1.41	1.62
443	SLD 1	154	24	1629	-379.19	1.74	53.66
443	SLD 2	125	38	1625	-378.4	1.75	43.71
443	SLD 3	157	-47	1808	-410.58	1.87	54.71
443	SLD 4	128	-33	1804	-409.79	1.88	44.77
443	SLD 5	56	114	1494	-352.88	1.32	19.3
443	SLD 6	26	129	1489	-352.06	1.33	8.98
443	SLD 7	66	-121	2090	-457.51	1.73	22.81
443	SLD 8	36	-106	2085	-456.69	1.74	12.49
443	SLD 9	-26	121	1556	-361.7	1.07	-9.26
443	SLD 10	-56	136	1551	-360.89	1.09	-19.58
443	SLD 11	-16	-114	2153	-466.33	1.49	-5.74
443	SLD 12	-45	-99	2148	-465.52	1.5	-16.06
443	SLD 13	-118	48	1838	-408.61	0.94	-41.53
443	SLD 14	-147	62	1833	-407.82	0.95	-51.48
443	SLD 15	-115	-23	2017	-439.99	1.06	-40.48
443	SLD 16	-144	-9	2012	-439.21	1.07	-50.42
443	SLV 1	345	44	1385	-340.81	2.17	120.43
443	SLV 2	280	77	1374	-339.03	2.2	97.76
443	SLV 3	352	-117	1791	-412.09	2.45	122.85
443	SLV 4	287	-84	1780	-410.3	2.48	100.18
443	SLV 5	120	250	1078	-281.24	1.2	41.89
443	SLV 6	53	284	1066	-279.39	1.23	18.46
443	SLV 7	144	-285	2432	-518.82	2.14	49.98
443	SLV 8	77	-251	2421	-516.97	2.17	26.55
443	SLV 9	-66	266	1221	-301.43	0.65	-23.32
443	SLV 10	-134	300	1209	-299.58	0.68	-46.75
443	SLV 11	-42	-269	2575	-539.01	1.59	-15.23
443	SLV 12	-110	-235	2564	-537.16	1.62	-38.66
443	SLV 13	-276	99	1861	-408.1	0.34	-96.95
443	SLV 14	-342	131	1851	-406.31	0.36	-119.62
443	SLV 15	-269	-62	2268	-479.37	0.62	-94.53
443	SLV 16	-334	-29	2257	-477.58	0.65	-117.19
443	CRTFP Ux+	0	0	0	0	0	0
443	CRTFP Ux-	0	0	0	0	0	0
443	CRTFP Uy+	0	0	0	0	0	0
443	CRTFP Uy-	0	0	0	0	0	0
444	SLU 1	5	1	1648	-348.35	0.72	1.7
444	SLU 2	5	9	1628	-345.16	0.72	1.76
444	SLU 3	5	1	1648	-348.35	0.72	1.7
444	SLU 4	5	6	1636	-346.44	0.72	1.73
444	SLU 5	5	9	1628	-345.16	0.72	1.76
444	SLU 6	5	1	1648	-348.35	0.72	1.7
444	SLU 7	5	6	1636	-346.44	0.72	1.73
444	SLU 8	5	1	1648	-348.35	0.72	1.7
444	SLU 9	5	6	1636	-346.44	0.72	1.73
444	SLU 10	6	9	1899	-394.53	0.9	1.79
444	SLU 11	6	1	1918	-397.72	0.9	1.73
444	SLU 12	6	6	1906	-395.81	0.9	1.77
444	SLU 13	6	9	1899	-394.53	0.9	1.79
444	SLU 14	6	1	1918	-397.72	0.9	1.73
444	SLU 15	6	6	1906	-395.81	0.9	1.77
444	SLU 16	6	1	1918	-397.72	0.9	1.73
444	SLU 17	6	6	1906	-395.81	0.9	1.77

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
444	SLU 18	6	1	2034	-418.88	0.98	1.75
444	SLU 19	6	6	2022	-416.96	0.98	1.78
444	SLU 20	6	1	2034	-418.88	0.98	1.75
444	SLU 21	6	6	2022	-416.96	0.98	1.78
444	SLU 22	6	1	1854	-386.02	0.85	1.73
444	SLU 23	6	9	1834	-382.83	0.85	1.78
444	SLU 24	6	1	1854	-386.02	0.85	1.73
444	SLU 25	6	6	1842	-384.11	0.85	1.76
444	SLU 26	6	9	1834	-382.83	0.85	1.78
444	SLU 27	6	1	1854	-386.02	0.85	1.73
444	SLU 28	6	6	1842	-384.11	0.85	1.76
444	SLU 29	6	1	1854	-386.02	0.85	1.73
444	SLU 30	6	6	1842	-384.11	0.85	1.76
444	SLU 31	6	9	2104	-432.2	1.03	1.82
444	SLU 32	6	1	2124	-435.39	1.03	1.76
444	SLU 33	6	6	2112	-433.47	1.03	1.79
444	SLU 34	6	9	2104	-432.2	1.03	1.82
444	SLU 35	6	1	2124	-435.39	1.03	1.76
444	SLU 36	6	6	2112	-433.47	1.03	1.79
444	SLU 37	6	1	2124	-435.39	1.03	1.76
444	SLU 38	6	6	2112	-433.47	1.03	1.79
444	SLU 39	6	1	2240	-456.55	1.11	1.78
444	SLU 40	6	6	2228	-454.63	1.11	1.81
444	SLU 41	6	1	2240	-456.55	1.11	1.78
444	SLU 42	6	6	2228	-454.63	1.11	1.81
444	SLU 43	7	2	2072	-439.94	0.89	2.2
444	SLU 44	7	9	2052	-436.75	0.89	2.26
444	SLU 45	7	2	2072	-439.94	0.89	2.2
444	SLU 46	7	6	2060	-438.03	0.89	2.23
444	SLU 47	7	9	2052	-436.75	0.89	2.26
444	SLU 48	7	2	2072	-439.94	0.89	2.2
444	SLU 49	7	6	2060	-438.03	0.89	2.23
444	SLU 50	7	2	2072	-439.94	0.89	2.2
444	SLU 51	7	6	2060	-438.03	0.89	2.23
444	SLU 52	7	9	2322	-486.12	1.07	2.29
444	SLU 53	7	2	2342	-489.31	1.07	2.23
444	SLU 54	7	6	2330	-487.4	1.07	2.27
444	SLU 55	7	9	2322	-486.12	1.07	2.29
444	SLU 56	7	2	2342	-489.31	1.07	2.23
444	SLU 57	7	6	2330	-487.4	1.07	2.27
444	SLU 58	7	2	2342	-489.31	1.07	2.23
444	SLU 59	7	6	2330	-487.4	1.07	2.27
444	SLU 60	7	2	2458	-510.47	1.15	2.25
444	SLU 61	7	6	2446	-508.55	1.15	2.28
444	SLU 62	7	2	2458	-510.47	1.15	2.25
444	SLU 63	7	6	2446	-508.55	1.15	2.28
444	SLU 64	7	2	2278	-477.61	1.03	2.23
444	SLU 65	7	9	2258	-474.42	1.03	2.28
444	SLU 66	7	2	2278	-477.61	1.03	2.23
444	SLU 67	7	6	2266	-475.7	1.03	2.26
444	SLU 68	7	9	2258	-474.42	1.03	2.28
444	SLU 69	7	2	2278	-477.61	1.03	2.23
444	SLU 70	7	6	2266	-475.7	1.03	2.26
444	SLU 71	7	2	2278	-477.61	1.03	2.23
444	SLU 72	7	6	2266	-475.7	1.03	2.26
444	SLU 73	7	9	2528	-523.79	1.2	2.32
444	SLU 74	7	2	2548	-526.98	1.2	2.26
444	SLU 75	7	6	2536	-525.06	1.2	2.3
444	SLU 76	7	9	2528	-523.79	1.2	2.32
444	SLU 77	7	2	2548	-526.98	1.2	2.26
444	SLU 78	7	6	2536	-525.06	1.2	2.3
444	SLU 79	7	2	2548	-526.98	1.2	2.26
444	SLU 80	7	6	2536	-525.06	1.2	2.3
444	SLU 81	7	2	2664	-548.14	1.28	2.28
444	SLU 82	7	6	2652	-546.22	1.28	2.31
444	SLU 83	7	2	2664	-548.14	1.28	2.28
444	SLU 84	7	6	2652	-546.22	1.28	2.31
444	SLE RA 1	5	1	1707	-359.11	0.76	1.71
444	SLE RA 2	5	6	1694	-356.99	0.76	1.74
444	SLE RA 3	5	1	1707	-359.11	0.76	1.71
444	SLE RA 4	5	4	1699	-357.84	0.76	1.73
444	SLE RA 5	5	6	1694	-356.99	0.76	1.74
444	SLE RA 6	5	1	1707	-359.11	0.76	1.71
444	SLE RA 7	5	4	1699	-357.84	0.76	1.73
444	SLE RA 8	5	1	1707	-359.11	0.76	1.71
444	SLE RA 9	5	4	1699	-357.84	0.76	1.73
444	SLE RA 10	6	6	1874	-389.9	0.88	1.77
444	SLE RA 11	6	1	1887	-392.03	0.88	1.73
444	SLE RA 12	6	4	1879	-390.75	0.88	1.75
444	SLE RA 13	6	6	1874	-389.9	0.88	1.77
444	SLE RA 14	6	1	1887	-392.03	0.88	1.73
444	SLE RA 15	6	4	1879	-390.75	0.88	1.75
444	SLE RA 16	6	1	1887	-392.03	0.88	1.73
444	SLE RA 17	6	4	1879	-390.75	0.88	1.75
444	SLE RA 18	6	1	1964	-406.13	0.93	1.74
444	SLE RA 19	6	4	1956	-404.86	0.93	1.76

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
444	SLE RA 20	6	1	1964	-406.13	0.93	1.74
444	SLE RA 21	6	4	1956	-404.86	0.93	1.76
444	SLE FR 1	5	1	1707	-359.11	0.76	1.71
444	SLE FR 2	5	2	1704	-358.69	0.76	1.71
444	SLE FR 3	5	1	1707	-359.11	0.76	1.71
444	SLE FR 4	5	2	1782	-372.79	0.81	1.72
444	SLE FR 5	5	1	1784	-373.22	0.81	1.72
444	SLE FR 6	5	1	1836	-382.62	0.84	1.72
444	SLE QP 1	5	1	1707	-359.11	0.76	1.71
444	SLE QP 2	5	1	1784	-373.22	0.81	1.72
444	SLD 1	154	18	1580	-342.94	1.25	53.74
444	SLD 2	126	34	1575	-342.16	1.26	43.79
444	SLD 3	157	-56	1756	-371.05	1.3	54.81
444	SLD 4	129	-40	1751	-370.27	1.31	44.86
444	SLD 5	56	112	1458	-321.79	0.86	19.37
444	SLD 6	26	129	1452	-320.98	0.88	9.05
444	SLD 7	66	-133	2045	-415.49	1.02	22.94
444	SLD 8	37	-116	2040	-414.67	1.04	12.62
444	SLD 9	-26	119	1529	-331.76	0.58	-9.18
444	SLD 10	-55	136	1523	-330.95	0.6	-19.5
444	SLD 11	-15	-126	2116	-425.46	0.74	-5.61
444	SLD 12	-45	-109	2111	-424.64	0.76	-15.94
444	SLD 13	-118	42	1817	-376.17	0.31	-41.43
444	SLD 14	-146	58	1812	-375.39	0.32	-51.38
444	SLD 15	-115	-31	1993	-404.28	0.36	-40.36
444	SLD 16	-143	-15	1988	-403.5	0.37	-50.31
444	SLV 1	345	38	1320	-304.22	1.81	120.49
444	SLV 2	280	75	1308	-302.43	1.84	97.81
444	SLV 3	352	-129	1720	-368.05	1.92	122.95
444	SLV 4	287	-92	1708	-366.26	1.95	100.27
444	SLV 5	120	252	1042	-256.37	0.93	41.93
444	SLV 6	53	290	1030	-254.53	0.97	18.5
444	SLV 7	145	-305	2376	-469.13	1.3	50.14
444	SLV 8	77	-266	2364	-467.28	1.33	26.7
444	SLV 9	-66	269	1205	-279.16	0.29	-23.26
444	SLV 10	-134	307	1192	-277.31	0.32	-46.7
444	SLV 11	-42	-288	2538	-491.91	0.65	-15.06
444	SLV 12	-109	-249	2526	-490.06	0.69	-38.5
444	SLV 13	-276	94	1860	-380.18	-0.33	-96.84
444	SLV 14	-341	131	1849	-378.39	-0.3	-119.52
444	SLV 15	-269	-73	2261	-444	-0.22	-94.38
444	SLV 16	-334	-36	2249	-442.21	-0.19	-117.06
444	CRTFP Ux+	0	0	0	0	0	0
444	CRTFP Ux-	0	0	0	0	0	0
444	CRTFP Uy+	0	0	0	0	0	0
444	CRTFP Uy-	0	0	0	0	0	0
445	SLU 1	6	-4	1636	-331.59	0.02	1.78
445	SLU 2	6	3	1616	-328.5	0.03	1.85
445	SLU 3	6	-4	1636	-331.59	0.02	1.78
445	SLU 4	6	0	1624	-329.74	0.03	1.82
445	SLU 5	6	3	1616	-328.5	0.03	1.85
445	SLU 6	6	-4	1636	-331.59	0.02	1.78
445	SLU 7	6	0	1624	-329.74	0.03	1.82
445	SLU 8	6	-4	1636	-331.59	0.02	1.78
445	SLU 9	6	0	1624	-329.74	0.03	1.82
445	SLU 10	6	2	1882	-374.34	0.07	1.87
445	SLU 11	6	-6	1902	-377.43	0.06	1.8
445	SLU 12	6	-1	1890	-375.58	0.07	1.84
445	SLU 13	6	2	1882	-374.34	0.07	1.87
445	SLU 14	6	-6	1902	-377.43	0.06	1.8
445	SLU 15	6	-1	1890	-375.58	0.07	1.84
445	SLU 16	6	-6	1902	-377.43	0.06	1.8
445	SLU 17	6	-1	1890	-375.58	0.07	1.84
445	SLU 18	6	-6	2016	-397.08	0.08	1.81
445	SLU 19	6	-1	2005	-395.23	0.08	1.86
445	SLU 20	6	-6	2016	-397.08	0.08	1.81
445	SLU 21	6	-1	2005	-395.23	0.08	1.86
445	SLU 22	6	-5	1839	-366.57	0.05	1.8
445	SLU 23	6	2	1819	-363.49	0.06	1.87
445	SLU 24	6	-5	1839	-366.57	0.05	1.8
445	SLU 25	6	-1	1827	-364.72	0.05	1.84
445	SLU 26	6	2	1819	-363.49	0.06	1.87
445	SLU 27	6	-5	1839	-366.57	0.05	1.8
445	SLU 28	6	-1	1827	-364.72	0.05	1.84
445	SLU 29	6	-5	1839	-366.57	0.05	1.8
445	SLU 30	6	-1	1827	-364.72	0.05	1.84
445	SLU 31	6	1	2086	-409.33	0.09	1.89
445	SLU 32	6	-6	2105	-412.42	0.09	1.82
445	SLU 33	6	-2	2094	-410.56	0.09	1.87
445	SLU 34	6	1	2086	-409.33	0.09	1.89
445	SLU 35	6	-6	2105	-412.42	0.09	1.82
445	SLU 36	6	-2	2094	-410.56	0.09	1.87
445	SLU 37	6	-6	2105	-412.42	0.09	1.82
445	SLU 38	6	-2	2094	-410.56	0.09	1.87
445	SLU 39	6	-7	2220	-432.06	0.11	1.83
445	SLU 40	6	-2	2208	-430.21	0.11	1.88

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
445	SLU 41	6	-7	2220	-432.06	0.11	1.83
445	SLU 42	6	-2	2208	-430.21	0.11	1.88
445	SLU 43	7	-6	2057	-419.07	0.02	2.3
445	SLU 44	7	2	2037	-415.98	0.03	2.37
445	SLU 45	7	-6	2057	-419.07	0.02	2.3
445	SLU 46	7	-1	2045	-417.22	0.02	2.34
445	SLU 47	7	2	2037	-415.98	0.03	2.37
445	SLU 48	7	-6	2057	-419.07	0.02	2.3
445	SLU 49	7	-1	2045	-417.22	0.02	2.34
445	SLU 50	7	-6	2057	-419.07	0.02	2.3
445	SLU 51	7	-1	2045	-417.22	0.02	2.34
445	SLU 52	8	1	2304	-461.83	0.06	2.4
445	SLU 53	7	-7	2323	-464.91	0.06	2.33
445	SLU 54	7	-2	2311	-463.06	0.06	2.37
445	SLU 55	8	1	2304	-461.83	0.06	2.4
445	SLU 56	7	-7	2323	-464.91	0.06	2.33
445	SLU 57	7	-2	2311	-463.06	0.06	2.37
445	SLU 58	7	-7	2323	-464.91	0.06	2.33
445	SLU 59	7	-2	2311	-463.06	0.06	2.37
445	SLU 60	7	-7	2438	-484.56	0.08	2.34
445	SLU 61	8	-2	2426	-482.71	0.08	2.38
445	SLU 62	7	-7	2438	-484.56	0.08	2.34
445	SLU 63	8	-2	2426	-482.71	0.08	2.38
445	SLU 64	7	-6	2260	-454.06	0.05	2.32
445	SLU 65	8	1	2240	-450.97	0.05	2.39
445	SLU 66	7	-6	2260	-454.06	0.05	2.32
445	SLU 67	7	-2	2248	-452.2	0.05	2.36
445	SLU 68	8	1	2240	-450.97	0.05	2.39
445	SLU 69	7	-6	2260	-454.06	0.05	2.32
445	SLU 70	7	-2	2248	-452.2	0.05	2.36
445	SLU 71	7	-6	2260	-454.06	0.05	2.32
445	SLU 72	7	-2	2248	-452.2	0.05	2.36
445	SLU 73	8	0	2507	-496.81	0.09	2.42
445	SLU 74	8	-7	2526	-499.9	0.09	2.35
445	SLU 75	8	-3	2515	-498.05	0.09	2.39
445	SLU 76	8	0	2507	-496.81	0.09	2.42
445	SLU 77	8	-7	2526	-499.9	0.09	2.35
445	SLU 78	8	-3	2515	-498.05	0.09	2.39
445	SLU 79	8	-7	2526	-499.9	0.09	2.35
445	SLU 80	8	-3	2515	-498.05	0.09	2.39
445	SLU 81	8	-8	2641	-519.54	0.11	2.36
445	SLU 82	8	-3	2629	-517.69	0.11	2.4
445	SLU 83	8	-8	2641	-519.54	0.11	2.36
445	SLU 84	8	-3	2629	-517.69	0.11	2.4
445	SLE RA 1	6	-5	1694	-341.58	0.03	1.78
445	SLE RA 2	6	0	1681	-339.53	0.03	1.83
445	SLE RA 3	6	-5	1694	-341.58	0.03	1.78
445	SLE RA 4	6	-2	1686	-340.35	0.03	1.81
445	SLE RA 5	6	0	1681	-339.53	0.03	1.83
445	SLE RA 6	6	-5	1694	-341.58	0.03	1.78
445	SLE RA 7	6	-2	1686	-340.35	0.03	1.81
445	SLE RA 8	6	-5	1694	-341.58	0.03	1.78
445	SLE RA 9	6	-2	1686	-340.35	0.03	1.81
445	SLE RA 10	6	0	1858	-370.09	0.06	1.85
445	SLE RA 11	6	-5	1871	-372.15	0.06	1.8
445	SLE RA 12	6	-2	1864	-370.91	0.06	1.83
445	SLE RA 13	6	0	1858	-370.09	0.06	1.85
445	SLE RA 14	6	-5	1871	-372.15	0.06	1.8
445	SLE RA 15	6	-2	1864	-370.91	0.06	1.83
445	SLE RA 16	6	-5	1871	-372.15	0.06	1.8
445	SLE RA 17	6	-2	1864	-370.91	0.06	1.83
445	SLE RA 18	6	-6	1948	-385.24	0.07	1.81
445	SLE RA 19	6	-3	1940	-384.01	0.07	1.84
445	SLE RA 20	6	-6	1948	-385.24	0.07	1.81
445	SLE RA 21	6	-3	1940	-384.01	0.07	1.84
445	SLE FR 1	6	-5	1694	-341.58	0.03	1.78
445	SLE FR 2	6	-4	1691	-341.17	0.03	1.79
445	SLE FR 3	6	-5	1694	-341.58	0.03	1.78
445	SLE FR 4	6	-4	1767	-354.27	0.04	1.8
445	SLE FR 5	6	-5	1770	-354.68	0.04	1.79
445	SLE FR 6	6	-5	1821	-363.41	0.05	1.79
445	SLE QP 1	6	-5	1694	-341.58	0.03	1.78
445	SLE QP 2	6	-5	1770	-354.68	0.04	1.79
445	SLD 1	154	12	1550	-321.32	0.62	53.78
445	SLD 2	126	30	1544	-320.5	0.64	43.83
445	SLD 3	157	-65	1726	-348.05	0.56	54.86
445	SLD 4	129	-47	1720	-347.23	0.58	44.92
445	SLD 5	56	110	1439	-304.44	0.29	19.41
445	SLD 6	26	129	1433	-303.58	0.31	9.09
445	SLD 7	67	-147	2026	-393.54	0.11	23.02
445	SLD 8	37	-128	2020	-392.68	0.13	12.7
445	SLD 9	-26	118	1520	-316.68	-0.04	-9.12
445	SLD 10	-55	137	1514	-315.83	-0.02	-19.45
445	SLD 11	-15	-139	2107	-405.78	-0.22	-5.51
445	SLD 12	-44	-120	2101	-404.93	-0.2	-15.83
445	SLD 13	-118	37	1820	-362.14	-0.5	-41.34

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
445	SLD 14	-146	55	1814	-361.31	-0.48	-51.28
445	SLD 15	-114	-40	1996	-388.87	-0.55	-40.26
445	SLD 16	-143	-22	1990	-388.04	-0.53	-50.2
445	SLV 1	345	33	1268	-278.65	1.35	120.48
445	SLV 2	280	75	1255	-276.77	1.4	97.81
445	SLV 3	352	-142	1668	-339.35	1.23	122.98
445	SLV 4	287	-100	1655	-337.46	1.28	100.31
445	SLV 5	120	256	1017	-240.51	0.6	41.94
445	SLV 6	53	300	1004	-238.56	0.65	18.5
445	SLV 7	145	-327	2351	-442.83	0.2	50.24
445	SLV 8	78	-284	2338	-440.88	0.25	26.81
445	SLV 9	-66	274	1202	-268.48	-0.16	-23.23
445	SLV 10	-134	317	1189	-266.53	-0.11	-46.66
445	SLV 11	-41	-310	2536	-470.81	-0.56	-14.92
445	SLV 12	-109	-266	2523	-468.86	-0.52	-38.36
445	SLV 13	-276	90	1885	-371.9	-1.19	-96.73
445	SLV 14	-341	132	1872	-370.02	-1.14	-119.4
445	SLV 15	-268	-85	2285	-432.6	-1.31	-94.24
445	SLV 16	-334	-43	2272	-430.71	-1.27	-116.91
445	CRTFP Ux+	0	0	0	0	0	0
445	CRTFP Ux-	0	0	0	0	0	0
445	CRTFP Uy+	0	0	0	0	0	0
445	CRTFP Uy-	0	0	0	0	0	0
446	SLU 1	6	-10	1648	-333.58	-0.77	1.83
446	SLU 2	6	-2	1628	-330.45	-0.77	1.91
446	SLU 3	6	-10	1648	-333.58	-0.77	1.83
446	SLU 4	6	-5	1636	-331.7	-0.77	1.88
446	SLU 5	6	-2	1628	-330.45	-0.77	1.91
446	SLU 6	6	-10	1648	-333.58	-0.77	1.83
446	SLU 7	6	-5	1636	-331.7	-0.77	1.88
446	SLU 8	6	-10	1648	-333.58	-0.77	1.83
446	SLU 9	6	-5	1636	-331.7	-0.77	1.88
446	SLU 10	6	-4	1896	-376.46	-0.89	1.93
446	SLU 11	6	-12	1916	-379.59	-0.89	1.84
446	SLU 12	6	-7	1904	-377.71	-0.89	1.89
446	SLU 13	6	-4	1896	-376.46	-0.89	1.93
446	SLU 14	6	-12	1916	-379.59	-0.89	1.84
446	SLU 15	6	-7	1904	-377.71	-0.89	1.89
446	SLU 16	6	-12	1916	-379.59	-0.89	1.84
446	SLU 17	6	-7	1904	-377.71	-0.89	1.89
446	SLU 18	6	-13	2030	-399.31	-0.94	1.85
446	SLU 19	6	-8	2018	-397.43	-0.94	1.9
446	SLU 20	6	-13	2030	-399.31	-0.94	1.85
446	SLU 21	6	-8	2018	-397.43	-0.94	1.9
446	SLU 22	6	-12	1852	-368.69	-0.87	1.84
446	SLU 23	6	-4	1832	-365.56	-0.86	1.92
446	SLU 24	6	-12	1852	-368.69	-0.87	1.84
446	SLU 25	6	-7	1840	-366.81	-0.86	1.89
446	SLU 26	6	-4	1832	-365.56	-0.86	1.92
446	SLU 27	6	-12	1852	-368.69	-0.87	1.84
446	SLU 28	6	-7	1840	-366.81	-0.86	1.89
446	SLU 29	6	-12	1852	-368.69	-0.87	1.84
446	SLU 30	6	-7	1840	-366.81	-0.86	1.89
446	SLU 31	6	-6	2100	-411.57	-0.98	1.94
446	SLU 32	6	-14	2120	-414.7	-0.99	1.86
446	SLU 33	6	-9	2108	-412.83	-0.98	1.91
446	SLU 34	6	-6	2100	-411.57	-0.98	1.94
446	SLU 35	6	-14	2120	-414.7	-0.99	1.86
446	SLU 36	6	-9	2108	-412.83	-0.98	1.91
446	SLU 37	6	-14	2120	-414.7	-0.99	1.86
446	SLU 38	6	-9	2108	-412.83	-0.98	1.91
446	SLU 39	6	-15	2235	-434.42	-1.04	1.86
446	SLU 40	6	-10	2223	-432.55	-1.03	1.91
446	SLU 41	6	-15	2235	-434.42	-1.04	1.86
446	SLU 42	6	-10	2223	-432.55	-1.03	1.91
446	SLU 43	7	-13	2072	-421.61	-0.97	2.37
446	SLU 44	8	-4	2052	-418.48	-0.97	2.45
446	SLU 45	7	-13	2072	-421.61	-0.97	2.37
446	SLU 46	7	-8	2060	-419.73	-0.97	2.42
446	SLU 47	8	-4	2052	-418.48	-0.97	2.45
446	SLU 48	7	-13	2072	-421.61	-0.97	2.37
446	SLU 49	7	-8	2060	-419.73	-0.97	2.42
446	SLU 50	7	-13	2072	-421.61	-0.97	2.37
446	SLU 51	7	-8	2060	-419.73	-0.97	2.42
446	SLU 52	8	-7	2320	-464.5	-1.09	2.47
446	SLU 53	8	-15	2340	-467.63	-1.09	2.39
446	SLU 54	8	-10	2328	-465.75	-1.09	2.44
446	SLU 55	8	-7	2320	-464.5	-1.09	2.47
446	SLU 56	8	-15	2340	-467.63	-1.09	2.39
446	SLU 57	8	-10	2328	-465.75	-1.09	2.44
446	SLU 58	8	-15	2340	-467.63	-1.09	2.39
446	SLU 59	8	-10	2328	-465.75	-1.09	2.44
446	SLU 60	8	-16	2455	-487.35	-1.14	2.39
446	SLU 61	8	-11	2443	-485.47	-1.14	2.44
446	SLU 62	8	-16	2455	-487.35	-1.14	2.39
446	SLU 63	8	-11	2443	-485.47	-1.14	2.44

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
446	SLU 64	7	-14	2276	-456.72	-1.07	2.38
446	SLU 65	8	-6	2256	-453.59	-1.06	2.47
446	SLU 66	7	-14	2276	-456.72	-1.07	2.38
446	SLU 67	8	-9	2264	-454.85	-1.06	2.43
446	SLU 68	8	-6	2256	-453.59	-1.06	2.47
446	SLU 69	7	-14	2276	-456.72	-1.07	2.38
446	SLU 70	8	-9	2264	-454.85	-1.06	2.43
446	SLU 71	7	-14	2276	-456.72	-1.07	2.38
446	SLU 72	8	-9	2264	-454.85	-1.06	2.43
446	SLU 73	8	-8	2524	-499.61	-1.18	2.48
446	SLU 74	8	-16	2544	-502.74	-1.19	2.4
446	SLU 75	8	-11	2532	-500.86	-1.18	2.45
446	SLU 76	8	-8	2524	-499.61	-1.18	2.48
446	SLU 77	8	-16	2544	-502.74	-1.19	2.4
446	SLU 78	8	-11	2532	-500.86	-1.18	2.45
446	SLU 79	8	-16	2544	-502.74	-1.19	2.4
446	SLU 80	8	-11	2532	-500.86	-1.18	2.45
446	SLU 81	8	-17	2659	-522.46	-1.24	2.41
446	SLU 82	8	-12	2647	-520.58	-1.23	2.46
446	SLU 83	8	-17	2659	-522.46	-1.24	2.41
446	SLU 84	8	-12	2647	-520.58	-1.23	2.46
446	SLE RA 1	6	-11	1706	-343.61	-0.8	1.83
446	SLE RA 2	6	-5	1693	-341.52	-0.8	1.89
446	SLE RA 3	6	-11	1706	-343.61	-0.8	1.83
446	SLE RA 4	6	-7	1698	-342.36	-0.8	1.86
446	SLE RA 5	6	-5	1693	-341.52	-0.8	1.89
446	SLE RA 6	6	-11	1706	-343.61	-0.8	1.83
446	SLE RA 7	6	-7	1698	-342.36	-0.8	1.86
446	SLE RA 8	6	-11	1706	-343.61	-0.8	1.83
446	SLE RA 9	6	-7	1698	-342.36	-0.8	1.86
446	SLE RA 10	6	-7	1871	-372.2	-0.87	1.9
446	SLE RA 11	6	-12	1885	-374.29	-0.88	1.84
446	SLE RA 12	6	-9	1877	-373.03	-0.88	1.87
446	SLE RA 13	6	-7	1871	-372.2	-0.87	1.9
446	SLE RA 14	6	-12	1885	-374.29	-0.88	1.84
446	SLE RA 15	6	-9	1877	-373.03	-0.88	1.87
446	SLE RA 16	6	-12	1885	-374.29	-0.88	1.84
446	SLE RA 17	6	-9	1877	-373.03	-0.88	1.87
446	SLE RA 18	6	-13	1961	-387.43	-0.91	1.85
446	SLE RA 19	6	-9	1953	-386.18	-0.91	1.88
446	SLE RA 20	6	-13	1961	-387.43	-0.91	1.85
446	SLE RA 21	6	-9	1953	-386.18	-0.91	1.88
446	SLE FR 1	6	-11	1706	-343.61	-0.8	1.83
446	SLE FR 2	6	-9	1703	-343.19	-0.8	1.84
446	SLE FR 3	6	-11	1706	-343.61	-0.8	1.83
446	SLE FR 4	6	-10	1780	-356.34	-0.83	1.85
446	SLE FR 5	6	-11	1783	-356.76	-0.83	1.83
446	SLE FR 6	6	-12	1834	-365.52	-0.86	1.84
446	SLE QP 1	6	-11	1706	-343.61	-0.8	1.83
446	SLE QP 2	6	-11	1783	-356.76	-0.83	1.83
446	SLD 1	154	6	1541	-316.98	-0.1	53.77
446	SLD 2	126	27	1535	-316.03	-0.08	43.83
446	SLD 3	158	-75	1721	-344.62	-0.27	54.87
446	SLD 4	129	-54	1714	-343.67	-0.24	44.93
446	SLD 5	56	110	1440	-303.26	-0.38	19.42
446	SLD 6	26	131	1433	-302.27	-0.35	9.1
446	SLD 7	67	-162	2039	-395.39	-0.92	23.08
446	SLD 8	37	-140	2032	-394.4	-0.89	12.76
446	SLD 9	-26	118	1533	-319.11	-0.77	-9.09
446	SLD 10	-55	139	1526	-318.13	-0.75	-19.41
446	SLD 11	-15	-154	2132	-411.24	-1.31	-5.44
446	SLD 12	-44	-132	2125	-410.26	-1.29	-15.75
446	SLD 13	-117	32	1851	-369.84	-1.43	-41.26
446	SLD 14	-146	53	1844	-368.89	-1.4	-51.2
446	SLD 15	-114	-49	2030	-397.48	-1.59	-40.17
446	SLD 16	-143	-29	2024	-396.53	-1.56	-50.1
446	SLV 1	345	28	1232	-266.1	0.83	120.42
446	SLV 2	279	76	1218	-263.93	0.89	97.76
446	SLV 3	352	-157	1641	-328.86	0.46	122.94
446	SLV 4	287	-109	1626	-326.69	0.52	100.28
446	SLV 5	120	264	1004	-235.17	0.21	41.9
446	SLV 6	52	313	989	-232.93	0.26	18.48
446	SLV 7	145	-353	2364	-444.37	-1.02	50.3
446	SLV 8	78	-304	2349	-442.13	-0.97	26.88
446	SLV 9	-66	281	1216	-271.38	-0.7	-23.21
446	SLV 10	-134	330	1201	-269.15	-0.64	-46.63
446	SLV 11	-41	-335	2576	-480.58	-1.93	-14.81
446	SLV 12	-108	-286	2561	-478.35	-1.87	-38.23
446	SLV 13	-276	87	1939	-386.82	-2.19	-96.61
446	SLV 14	-341	134	1925	-384.66	-2.13	-119.27
446	SLV 15	-268	-98	2347	-449.58	-2.55	-94.09
446	SLV 16	-333	-51	2333	-447.42	-2.5	-116.75
446	CRTFP Ux+	0	0	0	0	0	0
446	CRTFP Ux-	0	0	0	0	0	0
446	CRTFP Uy+	0	0	0	0	0	0
446	CRTFP Uy-	0	0	0	0	0	0

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
447	SLU 1	6	-15	1687	-356.36	-1.63	1.85
447	SLU 2	6	-7	1667	-353.01	-1.62	1.94
447	SLU 3	6	-15	1687	-356.36	-1.63	1.85
447	SLU 4	6	-10	1675	-354.35	-1.62	1.91
447	SLU 5	6	-7	1667	-353.01	-1.62	1.94
447	SLU 6	6	-15	1687	-356.36	-1.63	1.85
447	SLU 7	6	-10	1675	-354.35	-1.62	1.91
447	SLU 8	6	-15	1687	-356.36	-1.63	1.85
447	SLU 9	6	-10	1675	-354.35	-1.62	1.91
447	SLU 10	6	-10	1941	-403.28	-1.91	1.95
447	SLU 11	6	-19	1961	-406.63	-1.92	1.86
447	SLU 12	6	-13	1949	-404.62	-1.91	1.91
447	SLU 13	6	-10	1941	-403.28	-1.91	1.95
447	SLU 14	6	-19	1961	-406.63	-1.92	1.86
447	SLU 15	6	-13	1949	-404.62	-1.91	1.91
447	SLU 16	6	-19	1961	-406.63	-1.92	1.86
447	SLU 17	6	-13	1949	-404.62	-1.91	1.91
447	SLU 18	6	-20	2079	-428.17	-2.04	1.86
447	SLU 19	6	-15	2067	-426.16	-2.03	1.92
447	SLU 20	6	-20	2079	-428.17	-2.04	1.86
447	SLU 21	6	-15	2067	-426.16	-2.03	1.92
447	SLU 22	6	-18	1896	-394.71	-1.85	1.85
447	SLU 23	6	-9	1876	-391.35	-1.84	1.95
447	SLU 24	6	-18	1896	-394.71	-1.85	1.85
447	SLU 25	6	-13	1884	-392.7	-1.84	1.91
447	SLU 26	6	-9	1876	-391.35	-1.84	1.95
447	SLU 27	6	-18	1896	-394.71	-1.85	1.85
447	SLU 28	6	-13	1884	-392.7	-1.84	1.91
447	SLU 29	6	-18	1896	-394.71	-1.85	1.85
447	SLU 30	6	-13	1884	-392.7	-1.84	1.91
447	SLU 31	6	-12	2150	-441.62	-2.13	1.96
447	SLU 32	6	-21	2171	-444.97	-2.14	1.86
447	SLU 33	6	-16	2159	-442.96	-2.13	1.92
447	SLU 34	6	-12	2150	-441.62	-2.13	1.96
447	SLU 35	6	-21	2171	-444.97	-2.14	1.86
447	SLU 36	6	-16	2159	-442.96	-2.13	1.92
447	SLU 37	6	-21	2171	-444.97	-2.14	1.86
447	SLU 38	6	-16	2159	-442.96	-2.13	1.92
447	SLU 39	6	-22	2288	-466.52	-2.26	1.86
447	SLU 40	6	-17	2276	-464.51	-2.26	1.92
447	SLU 41	6	-22	2288	-466.52	-2.26	1.86
447	SLU 42	6	-17	2276	-464.51	-2.26	1.92
447	SLU 43	7	-19	2121	-450.13	-2.04	2.4
447	SLU 44	8	-11	2101	-446.77	-2.03	2.5
447	SLU 45	7	-19	2121	-450.13	-2.04	2.4
447	SLU 46	8	-14	2109	-448.11	-2.03	2.46
447	SLU 47	8	-11	2101	-446.77	-2.03	2.5
447	SLU 48	7	-19	2121	-450.13	-2.04	2.4
447	SLU 49	8	-14	2109	-448.11	-2.03	2.46
447	SLU 50	7	-19	2121	-450.13	-2.04	2.4
447	SLU 51	8	-14	2109	-448.11	-2.03	2.46
447	SLU 52	8	-14	2375	-497.04	-2.32	2.5
447	SLU 53	8	-22	2396	-500.39	-2.33	2.41
447	SLU 54	8	-17	2383	-498.38	-2.32	2.47
447	SLU 55	8	-14	2375	-497.04	-2.32	2.5
447	SLU 56	8	-22	2396	-500.39	-2.33	2.41
447	SLU 57	8	-17	2383	-498.38	-2.32	2.47
447	SLU 58	8	-22	2396	-500.39	-2.33	2.41
447	SLU 59	8	-17	2383	-498.38	-2.32	2.47
447	SLU 60	8	-24	2513	-521.94	-2.45	2.41
447	SLU 61	8	-19	2501	-519.92	-2.45	2.47
447	SLU 62	8	-24	2513	-521.94	-2.45	2.41
447	SLU 63	8	-19	2501	-519.92	-2.45	2.47
447	SLU 64	7	-22	2330	-488.47	-2.26	2.41
447	SLU 65	8	-13	2310	-485.12	-2.25	2.5
447	SLU 66	7	-22	2330	-488.47	-2.26	2.41
447	SLU 67	8	-16	2318	-486.46	-2.25	2.46
447	SLU 68	8	-13	2310	-485.12	-2.25	2.5
447	SLU 69	7	-22	2330	-488.47	-2.26	2.41
447	SLU 70	8	-16	2318	-486.46	-2.25	2.46
447	SLU 71	7	-22	2330	-488.47	-2.26	2.41
447	SLU 72	8	-16	2318	-486.46	-2.25	2.46
447	SLU 73	8	-16	2585	-535.38	-2.54	2.51
447	SLU 74	8	-25	2605	-538.74	-2.55	2.41
447	SLU 75	8	-20	2593	-536.73	-2.54	2.47
447	SLU 76	8	-16	2585	-535.38	-2.54	2.51
447	SLU 77	8	-25	2605	-538.74	-2.55	2.41
447	SLU 78	8	-20	2593	-536.73	-2.54	2.47
447	SLU 79	8	-25	2605	-538.74	-2.55	2.41
447	SLU 80	8	-20	2593	-536.73	-2.54	2.47
447	SLU 81	8	-26	2723	-560.28	-2.67	2.42
447	SLU 82	8	-21	2710	-558.27	-2.67	2.48
447	SLU 83	8	-26	2723	-560.28	-2.67	2.42
447	SLU 84	8	-21	2710	-558.27	-2.67	2.48
447	SLE RA 1	6	-16	1747	-367.32	-1.69	1.85
447	SLE RA 2	6	-10	1733	-365.08	-1.68	1.91

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
447	SLE RA 3	6	-16	1747	-367.32	-1.69	1.85
447	SLE RA 4	6	-13	1739	-365.98	-1.69	1.89
447	SLE RA 5	6	-10	1733	-365.08	-1.68	1.91
447	SLE RA 6	6	-16	1747	-367.32	-1.69	1.85
447	SLE RA 7	6	-13	1739	-365.98	-1.69	1.89
447	SLE RA 8	6	-16	1747	-367.32	-1.69	1.85
447	SLE RA 9	6	-13	1739	-365.98	-1.69	1.89
447	SLE RA 10	6	-12	1916	-398.6	-1.88	1.92
447	SLE RA 11	6	-18	1930	-400.83	-1.88	1.85
447	SLE RA 12	6	-15	1922	-399.49	-1.88	1.89
447	SLE RA 13	6	-12	1916	-398.6	-1.88	1.92
447	SLE RA 14	6	-18	1930	-400.83	-1.88	1.85
447	SLE RA 15	6	-15	1922	-399.49	-1.88	1.89
447	SLE RA 16	6	-18	1930	-400.83	-1.88	1.85
447	SLE RA 17	6	-15	1922	-399.49	-1.88	1.89
447	SLE RA 18	6	-19	2008	-415.19	-1.97	1.86
447	SLE RA 19	6	-16	2000	-413.85	-1.96	1.9
447	SLE RA 20	6	-19	2008	-415.19	-1.97	1.86
447	SLE RA 21	6	-16	2000	-413.85	-1.96	1.9
447	SLE FR 1	6	-16	1747	-367.32	-1.69	1.85
447	SLE FR 2	6	-15	1744	-366.87	-1.69	1.86
447	SLE FR 3	6	-16	1747	-367.32	-1.69	1.85
447	SLE FR 4	6	-16	1822	-381.23	-1.77	1.86
447	SLE FR 5	6	-17	1825	-381.68	-1.77	1.85
447	SLE FR 6	6	-18	1877	-391.26	-1.83	1.85
447	SLE QP 1	6	-16	1747	-367.32	-1.69	1.85
447	SLE QP 2	6	-17	1825	-381.68	-1.77	1.85
447	SLD 1	154	1	1557	-331.78	-0.87	53.73
447	SLD 2	125	25	1550	-330.59	-0.84	43.8
447	SLD 3	157	-85	1744	-362.88	-1.15	54.84
447	SLD 4	129	-62	1737	-361.69	-1.12	44.91
447	SLD 5	56	111	1464	-319.98	-1.09	19.39
447	SLD 6	26	135	1456	-318.74	-1.06	9.09
447	SLD 7	67	-177	2087	-423.65	-2.02	23.09
447	SLD 8	37	-153	2079	-422.42	-1.99	12.79
447	SLD 9	-26	119	1571	-340.95	-1.56	-9.09
447	SLD 10	-55	143	1563	-339.71	-1.53	-19.39
447	SLD 11	-14	-169	2194	-444.62	-2.49	-5.39
447	SLD 12	-44	-145	2186	-443.38	-2.46	-15.69
447	SLD 13	-117	28	1913	-401.67	-2.43	-41.2
447	SLD 14	-146	51	1906	-400.48	-2.4	-51.13
447	SLD 15	-114	-58	2100	-432.77	-2.71	-40.09
447	SLD 16	-142	-35	2093	-431.59	-2.68	-50.02
447	SLV 1	344	24	1214	-267.91	0.29	120.29
447	SLV 2	279	77	1198	-265.2	0.36	97.65
447	SLV 3	352	-172	1639	-338.53	-0.34	122.84
447	SLV 4	287	-119	1622	-335.82	-0.28	100.2
447	SLV 5	119	274	1004	-241.44	-0.22	41.82
447	SLV 6	52	329	987	-238.64	-0.15	18.42
447	SLV 7	146	-381	2419	-476.83	-2.33	50.32
447	SLV 8	78	-326	2402	-474.04	-2.26	26.92
447	SLV 9	-67	292	1248	-289.33	-1.29	-23.22
447	SLV 10	-134	347	1231	-286.53	-1.22	-46.61
447	SLV 11	-40	-362	2663	-524.72	-3.4	-14.72
447	SLV 12	-108	-308	2646	-521.92	-3.33	-38.12
447	SLV 13	-275	85	2028	-427.54	-3.27	-96.5
447	SLV 14	-341	138	2011	-424.83	-3.2	-119.13
447	SLV 15	-267	-111	2452	-498.16	-3.9	-93.95
447	SLV 16	-333	-58	2436	-495.45	-3.84	-116.58
447	CRTFP Ux+	0	0	0	0	0	0
447	CRTFP Ux-	0	0	0	0	0	0
447	CRTFP Uy+	0	0	0	0	0	0
447	CRTFP Uy-	0	0	0	0	0	0
448	SLU 1	6	-20	1754	-401.29	-2.49	1.85
448	SLU 2	6	-11	1733	-397.51	-2.47	1.95
448	SLU 3	6	-20	1754	-401.29	-2.49	1.85
448	SLU 4	6	-15	1742	-399.02	-2.48	1.91
448	SLU 5	6	-11	1733	-397.51	-2.47	1.95
448	SLU 6	6	-20	1754	-401.29	-2.49	1.85
448	SLU 7	6	-15	1742	-399.02	-2.48	1.91
448	SLU 8	6	-20	1754	-401.29	-2.49	1.85
448	SLU 9	6	-15	1742	-399.02	-2.48	1.91
448	SLU 10	6	-15	2020	-456.37	-2.94	1.95
448	SLU 11	6	-24	2041	-460.15	-2.95	1.84
448	SLU 12	6	-19	2028	-457.88	-2.94	1.91
448	SLU 13	6	-15	2020	-456.37	-2.94	1.95
448	SLU 14	6	-24	2041	-460.15	-2.95	1.84
448	SLU 15	6	-19	2028	-457.88	-2.94	1.91
448	SLU 16	6	-24	2041	-460.15	-2.95	1.84
448	SLU 17	6	-19	2028	-457.88	-2.94	1.91
448	SLU 18	6	-26	2164	-485.37	-3.15	1.84
448	SLU 19	6	-21	2151	-483.1	-3.14	1.91
448	SLU 20	6	-26	2164	-485.37	-3.15	1.84
448	SLU 21	6	-21	2151	-483.1	-3.14	1.91
448	SLU 22	6	-23	1973	-446.17	-2.84	1.84
448	SLU 23	6	-14	1952	-442.39	-2.82	1.95

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
448	SLU 24	6	-23	1973	-446.17	-2.84	1.84
448	SLU 25	6	-18	1960	-443.9	-2.83	1.91
448	SLU 26	6	-14	1952	-442.39	-2.82	1.95
448	SLU 27	6	-23	1973	-446.17	-2.84	1.84
448	SLU 28	6	-18	1960	-443.9	-2.83	1.91
448	SLU 29	6	-23	1973	-446.17	-2.84	1.84
448	SLU 30	6	-18	1960	-443.9	-2.83	1.91
448	SLU 31	6	-18	2239	-501.25	-3.29	1.95
448	SLU 32	6	-27	2259	-505.02	-3.3	1.84
448	SLU 33	6	-22	2247	-502.76	-3.29	1.9
448	SLU 34	6	-18	2239	-501.25	-3.29	1.95
448	SLU 35	6	-27	2259	-505.02	-3.3	1.84
448	SLU 36	6	-22	2247	-502.76	-3.29	1.9
448	SLU 37	6	-27	2259	-505.02	-3.3	1.84
448	SLU 38	6	-22	2247	-502.76	-3.29	1.9
448	SLU 39	6	-29	2382	-530.25	-3.5	1.84
448	SLU 40	6	-24	2370	-527.98	-3.49	1.9
448	SLU 41	6	-29	2382	-530.25	-3.5	1.84
448	SLU 42	6	-24	2370	-527.98	-3.49	1.9
448	SLU 43	7	-25	2205	-506.29	-3.12	2.4
448	SLU 44	8	-16	2185	-502.52	-3.1	2.51
448	SLU 45	7	-25	2205	-506.29	-3.12	2.4
448	SLU 46	8	-20	2193	-504.03	-3.11	2.46
448	SLU 47	8	-16	2185	-502.52	-3.1	2.51
448	SLU 48	7	-25	2205	-506.29	-3.12	2.4
448	SLU 49	8	-20	2193	-504.03	-3.11	2.46
448	SLU 50	7	-25	2205	-506.29	-3.12	2.4
448	SLU 51	8	-20	2193	-504.03	-3.11	2.46
448	SLU 52	8	-20	2471	-561.37	-3.56	2.5
448	SLU 53	7	-29	2492	-565.15	-3.58	2.4
448	SLU 54	8	-24	2480	-562.88	-3.57	2.46
448	SLU 55	8	-20	2471	-561.37	-3.56	2.5
448	SLU 56	7	-29	2492	-565.15	-3.58	2.4
448	SLU 57	8	-24	2480	-562.88	-3.57	2.46
448	SLU 58	7	-29	2492	-565.15	-3.58	2.4
448	SLU 59	8	-24	2480	-562.88	-3.57	2.46
448	SLU 60	7	-31	2615	-590.37	-3.78	2.4
448	SLU 61	8	-26	2603	-588.1	-3.77	2.46
448	SLU 62	7	-31	2615	-590.37	-3.78	2.4
448	SLU 63	8	-26	2603	-588.1	-3.77	2.46
448	SLU 64	7	-28	2424	-551.17	-3.47	2.4
448	SLU 65	8	-19	2403	-547.39	-3.45	2.5
448	SLU 66	7	-28	2424	-551.17	-3.47	2.4
448	SLU 67	8	-23	2412	-548.9	-3.46	2.46
448	SLU 68	8	-19	2403	-547.39	-3.45	2.5
448	SLU 69	7	-28	2424	-551.17	-3.47	2.4
448	SLU 70	8	-23	2412	-548.9	-3.46	2.46
448	SLU 71	7	-28	2424	-551.17	-3.47	2.4
448	SLU 72	8	-23	2412	-548.9	-3.46	2.46
448	SLU 73	8	-23	2690	-606.25	-3.91	2.5
448	SLU 74	7	-32	2711	-610.02	-3.93	2.39
448	SLU 75	8	-27	2698	-607.76	-3.92	2.46
448	SLU 76	8	-23	2690	-606.25	-3.91	2.5
448	SLU 77	7	-32	2711	-610.02	-3.93	2.39
448	SLU 78	8	-27	2698	-607.76	-3.92	2.46
448	SLU 79	7	-32	2711	-610.02	-3.93	2.39
448	SLU 80	8	-27	2698	-607.76	-3.92	2.46
448	SLU 81	7	-34	2834	-635.25	-4.13	2.39
448	SLU 82	8	-29	2821	-632.98	-4.12	2.46
448	SLU 83	7	-34	2834	-635.25	-4.13	2.39
448	SLU 84	8	-29	2821	-632.98	-4.12	2.46
448	SLE RA 1	6	-21	1816	-414.11	-2.59	1.84
448	SLE RA 2	6	-15	1803	-411.6	-2.58	1.92
448	SLE RA 3	6	-21	1816	-414.11	-2.59	1.84
448	SLE RA 4	6	-17	1808	-412.6	-2.58	1.89
448	SLE RA 5	6	-15	1803	-411.6	-2.58	1.92
448	SLE RA 6	6	-21	1816	-414.11	-2.59	1.84
448	SLE RA 7	6	-17	1808	-412.6	-2.58	1.89
448	SLE RA 8	6	-21	1816	-414.11	-2.59	1.84
448	SLE RA 9	6	-17	1808	-412.6	-2.58	1.89
448	SLE RA 10	6	-18	1994	-450.83	-2.89	1.91
448	SLE RA 11	6	-24	2008	-453.35	-2.9	1.84
448	SLE RA 12	6	-20	1999	-451.84	-2.89	1.89
448	SLE RA 13	6	-18	1994	-450.83	-2.89	1.91
448	SLE RA 14	6	-24	2008	-453.35	-2.9	1.84
448	SLE RA 15	6	-20	1999	-451.84	-2.89	1.89
448	SLE RA 16	6	-24	2008	-453.35	-2.9	1.84
448	SLE RA 17	6	-20	1999	-451.84	-2.89	1.89
448	SLE RA 18	6	-25	2090	-470.16	-3.03	1.84
448	SLE RA 19	6	-21	2081	-468.65	-3.02	1.89
448	SLE RA 20	6	-25	2090	-470.16	-3.03	1.84
448	SLE RA 21	6	-21	2081	-468.65	-3.02	1.89
448	SLE FR 1	6	-21	1816	-414.11	-2.59	1.84
448	SLE FR 2	6	-20	1814	-413.61	-2.59	1.86
448	SLE FR 3	6	-21	1816	-414.11	-2.59	1.84
448	SLE FR 4	6	-21	1896	-430.42	-2.72	1.86

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
448	SLE FR 5	6	-22	1898	-430.93	-2.72	1.84
448	SLE FR 6	6	-23	1953	-442.14	-2.81	1.84
448	SLE QP 1	6	-21	1816	-414.11	-2.59	1.84
448	SLE QP 2	6	-22	1898	-430.93	-2.72	1.84
448	SLD 1	154	-3	1598	-366.86	-1.64	53.64
448	SLD 2	125	23	1590	-365.3	-1.6	43.73
448	SLD 3	157	-95	1796	-404.13	-2.03	54.77
448	SLD 4	129	-69	1788	-402.57	-2	44.85
448	SLD 5	55	114	1511	-355.76	-1.81	19.34
448	SLD 6	26	140	1503	-354.13	-1.77	9.04
448	SLD 7	67	-193	2171	-479.99	-3.13	23.09
448	SLD 8	37	-166	2162	-478.37	-3.09	12.79
448	SLD 9	-26	122	1635	-383.49	-2.35	-9.1
448	SLD 10	-56	149	1626	-381.86	-2.32	-19.4
448	SLD 11	-14	-185	2294	-507.72	-3.67	-5.36
448	SLD 12	-44	-158	2286	-506.1	-3.64	-15.65
448	SLD 13	-117	25	2009	-459.29	-3.45	-41.16
448	SLD 14	-146	51	2001	-457.72	-3.41	-51.08
448	SLD 15	-114	-67	2207	-496.56	-3.84	-40.04
448	SLD 16	-142	-41	2199	-494.99	-3.81	-49.96
448	SLV 1	344	21	1214	-284.87	-0.24	120.11
448	SLV 2	279	80	1195	-281.3	-0.17	97.5
448	SLV 3	352	-188	1663	-369.49	-1.14	122.69
448	SLV 4	287	-129	1644	-365.92	-1.06	100.08
448	SLV 5	119	286	1019	-260.08	-0.65	41.7
448	SLV 6	51	347	999	-256.39	-0.57	18.33
448	SLV 7	146	-410	2516	-542.15	-3.64	50.31
448	SLV 8	78	-350	2497	-538.46	-3.56	26.93
448	SLV 9	-67	305	1300	-323.4	-1.89	-23.25
448	SLV 10	-134	366	1281	-319.71	-1.81	-46.62
448	SLV 11	-40	-391	2798	-605.47	-4.88	-14.64
448	SLV 12	-107	-330	2778	-601.78	-4.8	-38.02
448	SLV 13	-275	85	2153	-495.93	-4.38	-96.39
448	SLV 14	-340	144	2134	-492.36	-4.3	-119
448	SLV 15	-267	-124	2602	-580.55	-5.28	-93.81
448	SLV 16	-332	-65	2583	-576.98	-5.2	-116.42
448	CRTFP Ux+	0	0	0	0	0	0
448	CRTFP Ux-	0	0	0	0	0	0
448	CRTFP Uy+	0	0	0	0	0	0
448	CRTFP Uy-	0	0	0	0	0	0
449	SLU 1	6	-24	1849	-468.79	-3.3	1.82
449	SLU 2	6	-15	1827	-464.37	-3.28	1.94
449	SLU 3	6	-24	1849	-468.79	-3.3	1.82
449	SLU 4	6	-19	1836	-466.14	-3.29	1.89
449	SLU 5	6	-15	1827	-464.37	-3.28	1.94
449	SLU 6	6	-24	1849	-468.79	-3.3	1.82
449	SLU 7	6	-19	1836	-466.14	-3.29	1.89
449	SLU 8	6	-24	1849	-468.79	-3.3	1.82
449	SLU 9	6	-19	1836	-466.14	-3.29	1.89
449	SLU 10	6	-20	2132	-536.23	-3.9	1.93
449	SLU 11	6	-29	2153	-540.64	-3.92	1.81
449	SLU 12	6	-23	2140	-537.99	-3.91	1.88
449	SLU 13	6	-20	2132	-536.23	-3.9	1.93
449	SLU 14	6	-29	2153	-540.64	-3.92	1.81
449	SLU 15	6	-23	2140	-537.99	-3.91	1.88
449	SLU 16	6	-29	2153	-540.64	-3.92	1.81
449	SLU 17	6	-23	2140	-537.99	-3.91	1.88
449	SLU 18	6	-31	2284	-571.43	-4.19	1.81
449	SLU 19	6	-26	2271	-568.78	-4.18	1.88
449	SLU 20	6	-31	2284	-571.43	-4.19	1.81
449	SLU 21	6	-26	2271	-568.78	-4.18	1.88
449	SLU 22	6	-28	2081	-523.55	-3.78	1.81
449	SLU 23	6	-19	2060	-519.14	-3.75	1.93
449	SLU 24	6	-28	2081	-523.55	-3.78	1.81
449	SLU 25	6	-22	2068	-520.9	-3.76	1.88
449	SLU 26	6	-19	2060	-519.14	-3.75	1.93
449	SLU 27	6	-28	2081	-523.55	-3.78	1.81
449	SLU 28	6	-22	2068	-520.9	-3.76	1.88
449	SLU 29	6	-28	2081	-523.55	-3.78	1.81
449	SLU 30	6	-22	2068	-520.9	-3.76	1.88
449	SLU 31	6	-24	2364	-590.99	-4.38	1.91
449	SLU 32	6	-33	2385	-595.4	-4.4	1.8
449	SLU 33	6	-27	2373	-592.76	-4.38	1.87
449	SLU 34	6	-24	2364	-590.99	-4.38	1.91
449	SLU 35	6	-33	2385	-595.4	-4.4	1.8
449	SLU 36	6	-27	2373	-592.76	-4.38	1.87
449	SLU 37	6	-33	2385	-595.4	-4.4	1.8
449	SLU 38	6	-27	2373	-592.76	-4.38	1.87
449	SLU 39	6	-35	2516	-626.2	-4.66	1.8
449	SLU 40	6	-29	2503	-623.55	-4.65	1.86
449	SLU 41	6	-35	2516	-626.2	-4.66	1.8
449	SLU 42	6	-29	2503	-623.55	-4.65	1.86
449	SLU 43	7	-30	2324	-590.64	-4.13	2.38
449	SLU 44	7	-21	2302	-586.23	-4.11	2.49
449	SLU 45	7	-30	2324	-590.64	-4.13	2.38
449	SLU 46	7	-24	2311	-588	-4.12	2.44

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
449	SLU 47	7	-21	2302	-586.23	-4.11	2.49
449	SLU 48	7	-30	2324	-590.64	-4.13	2.38
449	SLU 49	7	-24	2311	-588	-4.12	2.44
449	SLU 50	7	-30	2324	-590.64	-4.13	2.38
449	SLU 51	7	-24	2311	-588	-4.12	2.44
449	SLU 52	8	-26	2607	-658.08	-4.73	2.48
449	SLU 53	7	-35	2628	-662.5	-4.75	2.36
449	SLU 54	7	-29	2615	-659.85	-4.74	2.43
449	SLU 55	8	-26	2607	-658.08	-4.73	2.48
449	SLU 56	7	-35	2628	-662.5	-4.75	2.36
449	SLU 57	7	-29	2615	-659.85	-4.74	2.43
449	SLU 58	7	-35	2628	-662.5	-4.75	2.36
449	SLU 59	7	-29	2615	-659.85	-4.74	2.43
449	SLU 60	7	-37	2759	-693.29	-5.02	2.36
449	SLU 61	7	-32	2746	-690.64	-5.01	2.43
449	SLU 62	7	-37	2759	-693.29	-5.02	2.36
449	SLU 63	7	-32	2746	-690.64	-5.01	2.43
449	SLU 64	7	-34	2556	-645.41	-4.6	2.36
449	SLU 65	7	-25	2535	-641	-4.58	2.48
449	SLU 66	7	-34	2556	-645.41	-4.6	2.36
449	SLU 67	7	-28	2543	-642.76	-4.59	2.43
449	SLU 68	7	-25	2535	-641	-4.58	2.48
449	SLU 69	7	-34	2556	-645.41	-4.6	2.36
449	SLU 70	7	-28	2543	-642.76	-4.59	2.43
449	SLU 71	7	-34	2556	-645.41	-4.6	2.36
449	SLU 72	7	-28	2543	-642.76	-4.59	2.43
449	SLU 73	8	-29	2839	-712.85	-5.2	2.47
449	SLU 74	7	-39	2860	-717.26	-5.23	2.35
449	SLU 75	7	-33	2848	-714.62	-5.21	2.42
449	SLU 76	8	-29	2839	-712.85	-5.2	2.47
449	SLU 77	7	-39	2860	-717.26	-5.23	2.35
449	SLU 78	7	-33	2848	-714.62	-5.21	2.42
449	SLU 79	7	-39	2860	-717.26	-5.23	2.35
449	SLU 80	7	-33	2848	-714.62	-5.21	2.42
449	SLU 81	7	-41	2991	-748.06	-5.49	2.35
449	SLU 82	7	-35	2978	-745.41	-5.48	2.42
449	SLU 83	7	-41	2991	-748.06	-5.49	2.35
449	SLU 84	7	-35	2978	-745.41	-5.48	2.42
449	SLE RA 1	6	-25	1915	-484.43	-3.44	1.82
449	SLE RA 2	6	-19	1901	-481.49	-3.42	1.9
449	SLE RA 3	6	-25	1915	-484.43	-3.44	1.82
449	SLE RA 4	6	-21	1907	-482.67	-3.43	1.87
449	SLE RA 5	6	-19	1901	-481.49	-3.42	1.9
449	SLE RA 6	6	-25	1915	-484.43	-3.44	1.82
449	SLE RA 7	6	-21	1907	-482.67	-3.43	1.87
449	SLE RA 8	6	-25	1915	-484.43	-3.44	1.82
449	SLE RA 9	6	-21	1907	-482.67	-3.43	1.87
449	SLE RA 10	6	-22	2104	-529.39	-3.84	1.89
449	SLE RA 11	6	-28	2118	-532.33	-3.85	1.81
449	SLE RA 12	6	-25	2110	-530.57	-3.84	1.86
449	SLE RA 13	6	-22	2104	-529.39	-3.84	1.89
449	SLE RA 14	6	-28	2118	-532.33	-3.85	1.81
449	SLE RA 15	6	-25	2110	-530.57	-3.84	1.86
449	SLE RA 16	6	-28	2118	-532.33	-3.85	1.81
449	SLE RA 17	6	-25	2110	-530.57	-3.84	1.86
449	SLE RA 18	6	-30	2205	-552.86	-4.03	1.81
449	SLE RA 19	6	-26	2197	-551.1	-4.02	1.85
449	SLE RA 20	6	-30	2205	-552.86	-4.03	1.81
449	SLE RA 21	6	-26	2197	-551.1	-4.02	1.85
449	SLE FR 1	6	-25	1915	-484.43	-3.44	1.82
449	SLE FR 2	6	-24	1912	-483.85	-3.43	1.84
449	SLE FR 3	6	-25	1915	-484.43	-3.44	1.82
449	SLE FR 4	6	-25	1999	-504.37	-3.61	1.83
449	SLE FR 5	6	-27	2002	-504.96	-3.62	1.82
449	SLE FR 6	6	-27	2060	-518.65	-3.73	1.82
449	SLE QP 1	6	-25	1915	-484.43	-3.44	1.82
449	SLE QP 2	6	-27	2002	-504.96	-3.62	1.82
449	SLD 1	153	-7	1663	-422.48	-2.35	53.53
449	SLD 2	125	22	1654	-420.4	-2.32	43.63
449	SLD 3	157	-105	1876	-468.65	-2.86	54.67
449	SLD 4	128	-76	1866	-466.57	-2.82	44.77
449	SLD 5	55	117	1582	-410.97	-2.49	19.26
449	SLD 6	25	147	1572	-408.81	-2.45	8.97
449	SLD 7	67	-209	2290	-564.85	-4.16	23.06
449	SLD 8	37	-179	2280	-562.69	-4.12	12.78
449	SLD 9	-26	126	1724	-447.23	-3.11	-9.14
449	SLD 10	-56	156	1714	-445.07	-3.07	-19.43
449	SLD 11	-14	-200	2432	-601.12	-4.78	-5.34
449	SLD 12	-44	-170	2422	-598.96	-4.74	-15.62
449	SLD 13	-117	23	2138	-543.36	-4.41	-41.13
449	SLD 14	-146	52	2128	-541.28	-4.37	-51.04
449	SLD 15	-114	-75	2350	-589.52	-4.91	-39.99
449	SLD 16	-142	-46	2341	-587.44	-4.88	-49.9
449	SLV 1	343	18	1230	-316.91	-0.74	119.89
449	SLV 2	278	83	1208	-312.17	-0.65	97.31
449	SLV 3	351	-204	1713	-421.73	-1.88	122.51

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
449	SLV 4	286	-139	1691	-416.98	-1.79	99.93
449	SLV 5	118	300	1047	-291.32	-1.05	41.55
449	SLV 6	51	367	1024	-286.42	-0.96	18.21
449	SLV 7	146	-441	2655	-640.7	-4.86	50.28
449	SLV 8	78	-373	2633	-635.79	-4.77	26.94
449	SLV 9	-67	320	1371	-374.13	-2.46	-23.3
449	SLV 10	-134	388	1349	-369.23	-2.37	-46.65
449	SLV 11	-40	-420	2980	-723.51	-6.27	-14.57
449	SLV 12	-107	-353	2957	-718.6	-6.18	-37.92
449	SLV 13	-275	86	2313	-592.94	-5.44	-96.29
449	SLV 14	-340	151	2291	-588.2	-5.35	-118.88
449	SLV 15	-267	-136	2796	-697.76	-6.58	-93.67
449	SLV 16	-332	-71	2774	-693.01	-6.49	-116.26
449	CRTFP Ux+	0	0	0	0	0	0
449	CRTFP Ux-	0	0	0	0	0	0
449	CRTFP Uy+	0	0	0	0	0	0
449	CRTFP Uy-	0	0	0	0	0	0
450	SLU 1	5	-23	1666	-469.89	44.07	2.19
450	SLU 2	5	-15	1647	-465.47	43.56	2.07
450	SLU 3	5	-23	1666	-469.89	44.07	2.19
450	SLU 4	5	-18	1654	-467.24	43.77	2.12
450	SLU 5	5	-15	1647	-465.47	43.56	2.07
450	SLU 6	5	-23	1666	-469.89	44.07	2.19
450	SLU 7	5	-18	1654	-467.24	43.77	2.12
450	SLU 8	5	-23	1666	-469.89	44.07	2.19
450	SLU 9	5	-18	1654	-467.24	43.77	2.12
450	SLU 10	5	-20	1923	-540.32	50.82	2.19
450	SLU 11	5	-28	1942	-544.75	51.33	2.31
450	SLU 12	5	-23	1931	-542.09	51.03	2.24
450	SLU 13	5	-20	1923	-540.32	50.82	2.19
450	SLU 14	5	-28	1942	-544.75	51.33	2.31
450	SLU 15	5	-23	1931	-542.09	51.03	2.24
450	SLU 16	5	-28	1942	-544.75	51.33	2.31
450	SLU 17	5	-23	1931	-542.09	51.03	2.24
450	SLU 18	5	-30	2061	-576.83	54.44	2.36
450	SLU 19	5	-25	2049	-574.18	54.14	2.29
450	SLU 20	5	-30	2061	-576.83	54.44	2.36
450	SLU 21	5	-25	2049	-574.18	54.14	2.29
450	SLU 22	5	-27	1876	-526.93	49.6	2.28
450	SLU 23	5	-19	1858	-522.51	49.1	2.15
450	SLU 24	5	-27	1876	-526.93	49.6	2.28
450	SLU 25	5	-22	1865	-524.27	49.3	2.2
450	SLU 26	5	-19	1858	-522.51	49.1	2.15
450	SLU 27	5	-27	1876	-526.93	49.6	2.28
450	SLU 28	5	-22	1865	-524.27	49.3	2.2
450	SLU 29	5	-27	1876	-526.93	49.6	2.28
450	SLU 30	5	-22	1865	-524.27	49.3	2.2
450	SLU 31	5	-23	2134	-597.36	56.36	2.27
450	SLU 32	5	-31	2153	-601.78	56.87	2.4
450	SLU 33	5	-26	2142	-599.13	56.56	2.32
450	SLU 34	5	-23	2134	-597.36	56.36	2.27
450	SLU 35	5	-31	2153	-601.78	56.87	2.4
450	SLU 36	5	-26	2142	-599.13	56.56	2.32
450	SLU 37	5	-31	2153	-601.78	56.87	2.4
450	SLU 38	5	-26	2142	-599.13	56.56	2.32
450	SLU 39	5	-33	2272	-633.87	59.98	2.45
450	SLU 40	5	-29	2260	-631.21	59.67	2.37
450	SLU 41	5	-33	2272	-633.87	59.98	2.45
450	SLU 42	5	-29	2260	-631.21	59.67	2.37
450	SLU 43	6	-29	2093	-591.3	55.39	2.82
450	SLU 44	6	-21	2074	-586.88	54.89	2.69
450	SLU 45	6	-29	2093	-591.3	55.39	2.82
450	SLU 46	6	-24	2082	-588.65	55.09	2.74
450	SLU 47	6	-21	2074	-586.88	54.89	2.69
450	SLU 48	6	-29	2093	-591.3	55.39	2.82
450	SLU 49	6	-24	2082	-588.65	55.09	2.74
450	SLU 50	6	-29	2093	-591.3	55.39	2.82
450	SLU 51	6	-24	2082	-588.65	55.09	2.74
450	SLU 52	6	-25	2351	-661.74	62.15	2.81
450	SLU 53	6	-33	2369	-666.16	62.65	2.94
450	SLU 54	6	-29	2358	-663.5	62.35	2.86
450	SLU 55	6	-25	2351	-661.74	62.15	2.81
450	SLU 56	6	-33	2369	-666.16	62.65	2.94
450	SLU 57	6	-29	2358	-663.5	62.35	2.86
450	SLU 58	6	-33	2369	-666.16	62.65	2.94
450	SLU 59	6	-29	2358	-663.5	62.35	2.86
450	SLU 60	6	-35	2488	-698.24	65.76	2.99
450	SLU 61	6	-31	2477	-695.59	65.46	2.92
450	SLU 62	6	-35	2488	-698.24	65.76	2.99
450	SLU 63	6	-31	2477	-695.59	65.46	2.92
450	SLU 64	6	-32	2304	-648.34	60.93	2.91
450	SLU 65	6	-24	2285	-643.92	60.42	2.78
450	SLU 66	6	-32	2304	-648.34	60.93	2.91
450	SLU 67	6	-27	2293	-645.68	60.62	2.83
450	SLU 68	6	-24	2285	-643.92	60.42	2.78
450	SLU 69	6	-32	2304	-648.34	60.93	2.91

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
450	SLU 70	6	-27	2293	-645.68	60.62	2.83
450	SLU 71	6	-32	2304	-648.34	60.93	2.91
450	SLU 72	6	-27	2293	-645.68	60.62	2.83
450	SLU 73	6	-29	2562	-718.77	67.68	2.9
450	SLU 74	6	-37	2580	-723.2	68.19	3.03
450	SLU 75	6	-32	2569	-720.54	67.88	2.95
450	SLU 76	6	-29	2562	-718.77	67.68	2.9
450	SLU 77	6	-37	2580	-723.2	68.19	3.03
450	SLU 78	6	-32	2569	-720.54	67.88	2.95
450	SLU 79	6	-37	2580	-723.2	68.19	3.03
450	SLU 80	6	-32	2569	-720.54	67.88	2.95
450	SLU 81	6	-39	2699	-755.28	71.3	3.08
450	SLU 82	6	-34	2688	-752.62	71	3
450	SLU 83	6	-39	2699	-755.28	71.3	3.08
450	SLU 84	6	-34	2688	-752.62	71	3
450	SLE RA 1	5	-24	1726	-486.19	45.65	2.22
450	SLE RA 2	5	-19	1713	-483.24	45.31	2.13
450	SLE RA 3	5	-24	1726	-486.19	45.65	2.22
450	SLE RA 4	5	-21	1718	-484.42	45.45	2.17
450	SLE RA 5	5	-19	1713	-483.24	45.31	2.13
450	SLE RA 6	5	-24	1726	-486.19	45.65	2.22
450	SLE RA 7	5	-21	1718	-484.42	45.45	2.17
450	SLE RA 8	5	-24	1726	-486.19	45.65	2.22
450	SLE RA 9	5	-21	1718	-484.42	45.45	2.17
450	SLE RA 10	5	-22	1898	-533.14	50.15	2.21
450	SLE RA 11	5	-27	1910	-536.09	50.49	2.3
450	SLE RA 12	5	-24	1903	-534.32	50.29	2.25
450	SLE RA 13	5	-22	1898	-533.14	50.15	2.21
450	SLE RA 14	5	-27	1910	-536.09	50.49	2.3
450	SLE RA 15	5	-24	1903	-534.32	50.29	2.25
450	SLE RA 16	5	-27	1910	-536.09	50.49	2.3
450	SLE RA 17	5	-24	1903	-534.32	50.29	2.25
450	SLE RA 18	5	-29	1989	-557.48	52.57	2.33
450	SLE RA 19	5	-25	1982	-555.71	52.36	2.28
450	SLE RA 20	5	-29	1989	-557.48	52.57	2.33
450	SLE RA 21	5	-25	1982	-555.71	52.36	2.28
450	SLE FR 1	5	-24	1726	-486.19	45.65	2.22
450	SLE FR 2	5	-23	1723	-485.6	45.58	2.2
450	SLE FR 3	5	-24	1726	-486.19	45.65	2.22
450	SLE FR 4	5	-24	1802	-506.98	47.66	2.23
450	SLE FR 5	5	-25	1805	-507.57	47.72	2.25
450	SLE FR 6	5	-26	1857	-521.83	49.11	2.27
450	SLE QP 1	5	-24	1726	-486.19	45.65	2.22
450	SLE QP 2	5	-25	1805	-507.57	47.72	2.25
450	SLD 1	130	-9	1483	-419.42	39.59	45.83
450	SLD 2	106	18	1473	-417.15	39.36	36.65
450	SLD 3	133	-96	1677	-467.79	44.67	48.98
450	SLD 4	109	-70	1668	-465.52	44.44	39.8
450	SLD 5	47	103	1416	-408.59	37.67	13.93
450	SLD 6	21	131	1407	-406.24	37.43	4.4
450	SLD 7	57	-190	2065	-569.85	54.59	24.44
450	SLD 8	32	-162	2056	-567.49	54.35	14.91
450	SLD 9	-22	111	1554	-447.65	41.1	-10.4
450	SLD 10	-48	139	1544	-445.3	40.86	-19.93
450	SLD 11	-12	-181	2203	-608.91	58.02	0.1
450	SLD 12	-37	-154	2193	-606.55	57.78	-9.43
450	SLD 13	-100	19	1941	-549.62	51.01	-35.29
450	SLD 14	-124	46	1932	-547.35	50.78	-44.48
450	SLD 15	-97	-69	2136	-598	56.09	-32.14
450	SLD 16	-121	-42	2127	-595.73	55.86	-41.33
450	SLV 1	291	12	1070	-306.58	29.19	101.76
450	SLV 2	236	73	1050	-301.41	28.66	80.83
450	SLV 3	298	-187	1513	-416.41	40.71	108.93
450	SLV 4	243	-126	1492	-411.24	40.19	88
450	SLV 5	100	266	922	-282.6	24.87	28.91
450	SLV 6	43	329	900	-277.25	24.33	7.27
450	SLV 7	124	-398	2395	-648.69	63.29	52.8
450	SLV 8	67	-336	2374	-643.35	62.75	31.17
450	SLV 9	-57	285	1236	-371.8	32.7	-26.66
450	SLV 10	-115	348	1214	-366.45	32.16	-48.3
450	SLV 11	-34	-379	2710	-737.89	71.11	-2.77
450	SLV 12	-91	-317	2688	-732.55	70.58	-24.41
450	SLV 13	-234	76	2118	-603.91	55.26	-83.49
450	SLV 14	-289	136	2097	-598.74	54.74	-104.43
450	SLV 15	-227	-124	2560	-713.74	66.78	-76.33
450	SLV 16	-282	-63	2539	-708.56	66.26	-97.26
450	CRTFP Ux+	0	0	0	0	0	0
450	CRTFP Ux-	0	0	0	0	0	0
450	CRTFP Uy+	0	0	0	0	0	0
450	CRTFP Uy-	0	0	0	0	0	0
452	SLU 1	7	-35	2576	-581.19	442.65	8.12
452	SLU 2	8	-24	2546	-575.33	437.4	6.06
452	SLU 3	7	-35	2576	-581.19	442.65	8.12
452	SLU 4	8	-28	2558	-577.67	439.5	6.88
452	SLU 5	8	-24	2546	-575.33	437.4	6.06
452	SLU 6	7	-35	2576	-581.19	442.65	8.12

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
452	SLU 7	8	-28	2558	-577.67	439.5	6.88
452	SLU 8	7	-35	2576	-581.19	442.65	8.12
452	SLU 9	8	-28	2558	-577.67	439.5	6.88
452	SLU 10	8	-31	2978	-671.42	510.96	7.39
452	SLU 11	8	-43	3007	-677.28	516.21	9.45
452	SLU 12	8	-36	2989	-673.77	513.06	8.22
452	SLU 13	8	-31	2978	-671.42	510.96	7.39
452	SLU 14	8	-43	3007	-677.28	516.21	9.45
452	SLU 15	8	-36	2989	-673.77	513.06	8.22
452	SLU 16	8	-43	3007	-677.28	516.21	9.45
452	SLU 17	8	-36	2989	-673.77	513.06	8.22
452	SLU 18	8	-46	3192	-718.46	547.73	10.02
452	SLU 19	8	-39	3174	-714.95	544.58	8.79
452	SLU 20	8	-46	3192	-718.46	547.73	10.02
452	SLU 21	8	-39	3174	-714.95	544.58	8.79
452	SLU 22	7	-41	2904	-654.4	498.74	9.1
452	SLU 23	8	-29	2875	-648.54	493.49	7.04
452	SLU 24	7	-41	2904	-654.4	498.74	9.1
452	SLU 25	8	-34	2887	-650.89	495.59	7.86
452	SLU 26	8	-29	2875	-648.54	493.49	7.04
452	SLU 27	7	-41	2904	-654.4	498.74	9.1
452	SLU 28	8	-34	2887	-650.89	495.59	7.86
452	SLU 29	7	-41	2904	-654.4	498.74	9.1
452	SLU 30	8	-34	2887	-650.89	495.59	7.86
452	SLU 31	8	-36	3307	-744.63	567.04	8.37
452	SLU 32	8	-48	3336	-750.49	572.3	10.43
452	SLU 33	8	-41	3318	-746.98	569.15	9.19
452	SLU 34	8	-36	3307	-744.63	567.04	8.37
452	SLU 35	8	-48	3336	-750.49	572.3	10.43
452	SLU 36	8	-41	3318	-746.98	569.15	9.19
452	SLU 37	8	-48	3336	-750.49	572.3	10.43
452	SLU 38	8	-41	3318	-746.98	569.15	9.19
452	SLU 39	8	-51	3521	-791.68	603.82	11
452	SLU 40	8	-44	3503	-788.16	600.67	9.77
452	SLU 41	8	-51	3521	-791.68	603.82	11
452	SLU 42	8	-44	3503	-788.16	600.67	9.77
452	SLU 43	10	-44	3235	-730.45	556.21	10.22
452	SLU 44	10	-32	3206	-724.59	550.96	8.16
452	SLU 45	10	-44	3235	-730.45	556.21	10.22
452	SLU 46	10	-37	3218	-726.93	553.06	8.98
452	SLU 47	10	-32	3206	-724.59	550.96	8.16
452	SLU 48	10	-44	3235	-730.45	556.21	10.22
452	SLU 49	10	-37	3218	-726.93	553.06	8.98
452	SLU 50	10	-44	3235	-730.45	556.21	10.22
452	SLU 51	10	-37	3218	-726.93	553.06	8.98
452	SLU 52	10	-40	3637	-820.68	624.52	9.49
452	SLU 53	10	-51	3667	-826.54	629.77	11.55
452	SLU 54	10	-44	3649	-823.02	626.62	10.32
452	SLU 55	10	-40	3637	-820.68	624.52	9.49
452	SLU 56	10	-51	3667	-826.54	629.77	11.55
452	SLU 57	10	-44	3649	-823.02	626.62	10.32
452	SLU 58	10	-51	3667	-826.54	629.77	11.55
452	SLU 59	10	-44	3649	-823.02	626.62	10.32
452	SLU 60	10	-55	3852	-867.72	661.3	12.12
452	SLU 61	10	-48	3834	-864.2	658.15	10.89
452	SLU 62	10	-55	3852	-867.72	661.3	12.12
452	SLU 63	10	-48	3834	-864.2	658.15	10.89
452	SLU 64	10	-50	3564	-803.66	612.3	11.2
452	SLU 65	10	-38	3535	-797.8	607.05	9.14
452	SLU 66	10	-50	3564	-803.66	612.3	11.2
452	SLU 67	10	-43	3547	-800.14	609.15	9.96
452	SLU 68	10	-38	3535	-797.8	607.05	9.14
452	SLU 69	10	-50	3564	-803.66	612.3	11.2
452	SLU 70	10	-43	3547	-800.14	609.15	9.96
452	SLU 71	10	-50	3564	-803.66	612.3	11.2
452	SLU 72	10	-43	3547	-800.14	609.15	9.96
452	SLU 73	10	-45	3966	-893.89	680.61	10.47
452	SLU 74	10	-57	3996	-899.75	685.86	12.53
452	SLU 75	10	-50	3978	-896.23	682.71	11.29
452	SLU 76	10	-45	3966	-893.89	680.61	10.47
452	SLU 77	10	-57	3996	-899.75	685.86	12.53
452	SLU 78	10	-50	3978	-896.23	682.71	11.29
452	SLU 79	10	-57	3996	-899.75	685.86	12.53
452	SLU 80	10	-50	3978	-896.23	682.71	11.29
452	SLU 81	10	-60	4181	-940.93	717.39	13.1
452	SLU 82	10	-53	4163	-937.42	714.24	11.87
452	SLU 83	10	-60	4181	-940.93	717.39	13.1
452	SLU 84	10	-53	4163	-937.42	714.24	11.87
452	SLE RA 1	7	-37	2670	-602.11	458.67	8.4
452	SLE RA 2	8	-29	2650	-598.2	455.17	7.03
452	SLE RA 3	7	-37	2670	-602.11	458.67	8.4
452	SLE RA 4	8	-32	2658	-599.76	456.57	7.58
452	SLE RA 5	8	-29	2650	-598.2	455.17	7.03
452	SLE RA 6	7	-37	2670	-602.11	458.67	8.4
452	SLE RA 7	8	-32	2658	-599.76	456.57	7.58
452	SLE RA 8	7	-37	2670	-602.11	458.67	8.4

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
452	SLE RA 9	8	-32	2658	-599.76	456.57	7.58
452	SLE RA 10	8	-34	2938	-662.26	504.21	7.91
452	SLE RA 11	7	-42	2957	-666.17	507.71	9.29
452	SLE RA 12	8	-37	2945	-663.83	505.61	8.46
452	SLE RA 13	8	-34	2938	-662.26	504.21	7.91
452	SLE RA 14	7	-42	2957	-666.17	507.71	9.29
452	SLE RA 15	8	-37	2945	-663.83	505.61	8.46
452	SLE RA 16	7	-42	2957	-666.17	507.71	9.29
452	SLE RA 17	8	-37	2945	-663.83	505.61	8.46
452	SLE RA 18	8	-44	3081	-693.62	528.73	9.67
452	SLE RA 19	8	-39	3069	-691.28	526.63	8.84
452	SLE RA 20	8	-44	3081	-693.62	528.73	9.67
452	SLE RA 21	8	-39	3069	-691.28	526.63	8.84
452	SLE FR 1	7	-37	2670	-602.11	458.67	8.4
452	SLE FR 2	7	-35	2666	-601.33	457.97	8.12
452	SLE FR 3	7	-37	2670	-602.11	458.67	8.4
452	SLE FR 4	7	-37	2789	-628.78	478.99	8.51
452	SLE FR 5	7	-39	2793	-629.56	479.69	8.78
452	SLE FR 6	7	-40	2875	-647.87	493.7	9.03
452	SLE QP 1	7	-37	2670	-602.11	458.67	8.4
452	SLE QP 2	7	-39	2793	-629.56	479.69	8.78
452	SLD 1	190	-15	2275	-515.29	394.06	49.06
452	SLD 2	154	26	2260	-512.22	391.53	32.88
452	SLD 3	196	-147	2587	-579.7	447.56	73.94
452	SLD 4	160	-106	2572	-576.63	445.03	57.76
452	SLD 5	67	153	2171	-498.72	373.79	-10.9
452	SLD 6	29	195	2155	-495.53	371.17	-27.69
452	SLD 7	86	-286	3209	-713.43	552.12	72.03
452	SLD 8	49	-244	3193	-710.25	549.5	55.23
452	SLD 9	-34	166	2392	-548.88	409.88	-37.67
452	SLD 10	-72	208	2377	-545.69	407.26	-54.47
452	SLD 11	-14	-273	3430	-763.6	588.21	45.25
452	SLD 12	-52	-231	3415	-760.41	585.59	28.46
452	SLD 13	-145	28	3014	-682.5	514.35	-40.2
452	SLD 14	-181	69	2999	-679.43	511.82	-56.38
452	SLD 15	-139	-104	3325	-746.91	567.85	-15.32
452	SLD 16	-176	-63	3310	-743.84	565.32	-31.5
452	SLV 1	425	15	1613	-369.04	284.5	100.9
452	SLV 2	342	108	1579	-362.04	278.75	64.01
452	SLV 3	439	-284	2320	-515.28	405.97	157.39
452	SLV 4	356	-191	2286	-508.28	400.22	120.5
452	SLV 5	143	396	1379	-332.18	239.02	-35.73
452	SLV 6	57	492	1344	-324.94	233.07	-73.86
452	SLV 7	188	-600	3736	-819.64	643.92	152.57
452	SLV 8	102	-504	3700	-812.41	637.97	114.44
452	SLV 9	-87	426	1885	-446.72	321.41	-96.88
452	SLV 10	-173	522	1850	-439.49	315.47	-135.01
452	SLV 11	-42	-571	4242	-934.19	726.32	91.42
452	SLV 12	-128	-474	4206	-926.95	720.37	53.29
452	SLV 13	-341	113	3300	-750.85	559.16	-102.95
452	SLV 14	-424	206	3266	-743.85	553.41	-139.83
452	SLV 15	-327	-186	4007	-897.09	680.64	-46.46
452	SLV 16	-410	-93	3972	-890.09	674.88	-83.34
452	CRTFP Ux+	0	0	0	0	0	0
452	CRTFP Ux-	0	0	0	0	0	0
452	CRTFP Uy+	0	0	0	0	0	0
452	CRTFP Uy-	0	0	0	0	0	0

1.3 Pressioni massime sul terreno

Nodo: *Nodo che interagisce col terreno.*
Ind.: *indice del nodo.*
Pressione minima: *situazione in cui si verifica la pressione minima nel nodo.*
Cont.: *nome breve della condizione o combinazione di carico a cui si riferisce la pressione minima.*
uz: *spostamento massimo verticale del nodo. [m]*
Valore: *pressione minima sul terreno del nodo. [daN/m²]*
Pressione massima: *situazione in cui si verifica la pressione massima nel nodo.*
Cont.: *nome breve della condizione o combinazione di carico a cui si riferisce la pressione massima.*
uz: *spostamento minimo verticale del nodo. [m]*
Valore: *pressione massima sul terreno del nodo. [daN/m²]*

Compressione estrema massima -7392.8 al nodo di indice 451, di coordinate x = -8.33, y = 5.87, z = -1.98, nel contesto SLV 11.
Spostamento estremo minimo -0.0024643 al nodo di indice 451, di coordinate x = -8.33, y = 5.87, z = -1.98, nel contesto SLV 11.
Spostamento estremo massimo -0.0004725 al nodo di indice 43, di coordinate x = -8.33, y = -3.13, z = -1.98, nel contesto SLV 7.

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
5	SLV 5	-0.0020649	-6194.6	SLV 12	-0.0004803	-1441
13	SLU 82	-0.0018081	-5424.2	SLV 12	-0.0005983	-1795
15	SLU 82	-0.0018057	-5417.2	SLV 12	-0.0006045	-1813.4
23	SLV 5	-0.0017363	-5208.9	SLV 12	-0.0005505	-1651.5

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
25	SLV 10	-0.0017444	-5233.1	SLV 7	-0.0005485	-1645.4
33	SLU 82	-0.0018008	-5402.4	SLV 7	-0.0005974	-1792.3
35	SLU 82	-0.0017901	-5370.4	SLV 7	-0.0005907	-1772
43	SLV 10	-0.0020893	-6267.8	SLV 7	-0.0004725	-1417.5
45	SLV 10	-0.0019927	-5978.1	SLV 7	-0.0005009	-1502.7
46	SLV 5	-0.0019684	-5905.2	SLV 12	-0.0005053	-1515.9
47	SLV 5	-0.0018612	-5583.5	SLV 12	-0.0005119	-1535.8
48	SLV 5	-0.0017713	-5313.9	SLV 12	-0.0005228	-1568.4
49	SLV 5	-0.0017041	-5112.4	SLV 12	-0.0005385	-1615.4
50	SLU 82	-0.001665	-4994.9	SLV 12	-0.0005584	-1675.1
51	SLU 82	-0.0016673	-5002	SLV 12	-0.0005809	-1742.8
52	SLU 82	-0.0016821	-5046.4	SLV 12	-0.0006035	-1810.4
53	SLU 82	-0.0016991	-5097.3	SLV 12	-0.0006219	-1865.7
54	SLU 82	-0.0017042	-5112.7	SLV 12	-0.0006308	-1892.5
55	SLU 82	-0.0016942	-5082.7	SLV 12	-0.000631	-1893
56	SLU 82	-0.0016708	-5012.4	SLV 12	-0.0006216	-1864.7
57	SLU 82	-0.0016486	-4945.7	SLV 12	-0.0006091	-1827.2
58	SLU 82	-0.0016368	-4910.4	SLV 12	-0.0005982	-1794.5
59	SLU 82	-0.001639	-4917.1	SLV 12	-0.0005915	-1774.6
60	SLU 82	-0.0016533	-4959.9	SLV 12	-0.0005902	-1770.6
61	SLU 82	-0.001672	-5016.1	SLV 12	-0.0005928	-1778.3
62	SLU 82	-0.001682	-5046.1	SLV 7	-0.0005936	-1780.9
63	SLV 10	-0.0018571	-5571.3	SLV 7	-0.0005023	-1506.9
64	SLU 82	-0.0016811	-5043.4	SLV 7	-0.0005913	-1773.8
65	SLV 10	-0.0017449	-5234.6	SLV 7	-0.0005094	-1528.1
66	SLU 82	-0.0016731	-5019.3	SLV 7	-0.0005908	-1772.3
67	SLV 10	-0.0016631	-4989.3	SLV 7	-0.000523	-1568.9
68	SLU 82	-0.0016664	-4999.1	SLV 7	-0.0005938	-1781.4
69	SLU 82	-0.0016179	-4853.7	SLV 7	-0.0005426	-1627.9
70	SLU 82	-0.0016659	-4997.7	SLV 7	-0.0006005	-1801.4
71	SLU 82	-0.0016226	-4867.9	SLV 7	-0.0005667	-1700.1
72	SLU 82	-0.0016728	-5018.5	SLV 7	-0.0006097	-1829.2
73	SLU 82	-0.0016461	-4938.2	SLV 7	-0.000592	-1776.1
74	SLU 82	-0.0016845	-5053.6	SLV 7	-0.0006194	-1858.3
75	SLU 82	-0.0016945	-5083.5	SLV 7	-0.000626	-1877.9
76	SLU 82	-0.0016755	-5026.5	SLV 7	-0.0006137	-1841.1
77	SLU 82	-0.0016928	-5078.5	SLV 7	-0.0006247	-1874
79	SLV 5	-0.0018888	-5666.3	SLV 12	-0.0005124	-1537.2
80	SLU 82	-0.0016792	-5037.6	SLV 12	-0.0006027	-1808.2
82	SLU 82	-0.0016836	-5050.9	SLV 7	-0.0006007	-1802
83	SLU 82	-0.001696	-5088.1	SLV 12	-0.0006349	-1904.6
85	SLU 82	-0.0016936	-5080.8	SLV 12	-0.0006409	-1922.8
86	SLU 82	-0.0016885	-5065.5	SLV 7	-0.0006352	-1905.6
88	SLU 82	-0.001678	-5034	SLV 7	-0.0006285	-1885.5
89	SLV 10	-0.0018766	-5629.7	SLV 7	-0.0005095	-1528.5
92	SLV 5	-0.0017391	-5217.3	SLV 12	-0.0005506	-1651.7
93	SLU 82	-0.0016522	-4956.5	SLV 12	-0.00066	-1980
95	SLU 82	-0.001656	-4968	SLV 7	-0.000658	-1974.1
96	SLU 82	-0.0016059	-4817.8	SLV 12	-0.0006728	-2018.4
98	SLU 82	-0.0016033	-4809.8	SLV 12	-0.0006787	-2036.1
99	SLU 82	-0.0015974	-4792.2	SLV 7	-0.0006738	-2021.3
101	SLU 82	-0.0015872	-4761.6	SLV 7	-0.0006672	-2001.7
102	SLV 10	-0.0017008	-5102.3	SLV 7	-0.0005548	-1664.5
105	SLU 82	-0.0016557	-4967	SLV 12	-0.0005965	-1789.6
106	SLU 82	-0.0016425	-4927.5	SLV 12	-0.0007217	-2165.1
108	SLU 82	-0.0016457	-4937.1	SLV 11	-0.0007199	-2159.6
109	SLU 82	-0.0015315	-4594.6	SLV 12	-0.0007042	-2112.6
111	SLU 82	-0.0015287	-4586	SLV 12	-0.0007099	-2129.8
112	SLU 82	-0.0015215	-4564.6	SLV 7	-0.000705	-2114.9
114	SLU 82	-0.0015117	-4535	SLV 7	-0.0006986	-2095.7
115	SLU 82	-0.0016266	-4879.8	SLV 3	-0.0006079	-1823.7
118	SLU 82	-0.0016276	-4882.7	SLV 16	-0.0006405	-1921.6
119	SLU 82	-0.0016457	-4937.1	SLV 12	-0.0007876	-2362.9
121	SLU 82	-0.0016483	-4944.9	SLV 11	-0.0007859	-2357.7
122	SLU 82	-0.0016011	-4803.4	SLV 3	-0.0006256	-1876.7
125	SLU 82	-0.0016284	-4885.3	SLV 16	-0.000663	-1989
126	SLU 82	-0.0016592	-4977.5	SLV 12	-0.000858	-2573.9
128	SLU 82	-0.0016612	-4983.6	SLV 11	-0.0008562	-2568.7
129	SLU 82	-0.0016112	-4833.6	SLV 3	-0.0006539	-1961.7
132	SLU 82	-0.0016564	-4969.3	SLV 16	-0.0006942	-2082.6
133	SLU 82	-0.0016814	-5044.1	SLV 12	-0.0009326	-2797.9
135	SLU 82	-0.0016828	-5048.5	SLV 11	-0.0009308	-2792.4
136	SLU 82	-0.001653	-4959	SLV 3	-0.0006919	-2075.8
139	SLU 82	-0.0017087	-5126	SLV 16	-0.0007333	-2199.8
140	SLU 82	-0.0017109	-5132.7	SLV 12	-0.0010107	-3032.2
142	SLU 82	-0.0017118	-5135.4	SLV 11	-0.0010088	-3026.3
144	SLU 82	-0.0017806	-5341.8	SLV 16	-0.0007787	-2336.2
145	SLU 82	-0.0017209	-5162.7	SLV 3	-0.000738	-2214
147	SLU 82	-0.0017456	-5236.9	SLU 1	-0.0010547	-3164.2
149	SLU 82	-0.001746	-5238.1	SLU 1	-0.0010549	-3164.7
150	SLU 82	-0.0016613	-4983.9	SLV 16	-0.0008912	-2673.6
152	SLU 82	-0.0016313	-4894	SLV 16	-0.0009058	-2717.4
153	SLU 82	-0.0016039	-4811.8	SLV 3	-0.0008978	-2693.4
155	SLU 82	-0.0016312	-4893.7	SLV 3	-0.000881	-2643
157	SLU 82	-0.0018654	-5596.1	SLV 16	-0.0008281	-2484.4
158	SLU 82	-0.0018061	-5418.4	SLV 4	-0.0007872	-2361.5

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
160	SLU 82	-0.0017817	-5345	SLU 1	-0.0010747	-3224
162	SLU 82	-0.0017815	-5344.5	SLU 1	-0.0010745	-3223.5
163	SLU 82	-0.0017552	-5265.7	SLV 16	-0.0009488	-2846.4
165	SLU 82	-0.001725	-5174.9	SLV 16	-0.0009634	-2890.2
166	SLU 82	-0.0016941	-5082.2	SLV 3	-0.0009549	-2864.8
168	SLU 82	-0.0017217	-5165.2	SLV 3	-0.0009381	-2814.4
170	SLU 82	-0.0019522	-5856.6	SLV 16	-0.0008773	-2631.8
171	SLU 82	-0.0018948	-5684.4	SLV 4	-0.0008297	-2489
173	SLU 81	-0.0018121	-5436.4	SLU 2	-0.0010918	-3275.3
175	SLU 81	-0.0018114	-5434.3	SLU 2	-0.0010913	-3273.8
176	SLU 82	-0.0018339	-5501.8	SLV 16	-0.0009996	-2998.8
178	SLU 82	-0.0018034	-5410.1	SLV 16	-0.0010146	-3043.8
179	SLU 82	-0.0017698	-5309.4	SLV 3	-0.0010068	-3020.5
181	SLU 82	-0.0017979	-5393.6	SLV 3	-0.0009892	-2967.6
183	SLU 82	-0.002025	-6074.9	SLV 13	-0.0009162	-2748.5
184	SLU 82	-0.0020778	-6233.3	SLV 13	-0.0009184	-2755.2
185	SLU 82	-0.0020348	-6104.5	SLV 13	-0.000928	-2784.1
186	SLU 82	-0.0020047	-6014.2	SLV 13	-0.0009424	-2827.3
187	SLU 82	-0.0019801	-5940.4	SLV 13	-0.0009584	-2875.2
188	SLU 82	-0.0019557	-5867.2	SLV 13	-0.0009736	-2920.7
189	SLU 82	-0.0019289	-5786.8	SLV 13	-0.0009868	-2960.5
190	SLU 82	-0.0018994	-5698.1	SLV 13	-0.0009981	-2994.3
191	SLU 82	-0.0018691	-5607.2	SLV 13	-0.0010083	-3024.8
192	SLU 82	-0.001843	-5529.1	SLV 14	-0.0010193	-3057.9
193	SLU 82	-0.0018263	-5478.8	SLV 14	-0.0010312	-3093.5
194	SLU 82	-0.0018149	-5444.8	SLV 14	-0.0010452	-3135.6
195	SLU 82	-0.0018055	-5416.6	SLV 14	-0.0010598	-3179.4
196	SLU 82	-0.0017995	-5398.4	SLV 14	-0.0010755	-3226.4
197	SLU 82	-0.0018037	-5411	SLU 1	-0.0010876	-3262.7
198	SLU 81	-0.0018129	-5438.8	SLU 2	-0.0010926	-3277.8
199	SLU 81	-0.0018199	-5459.7	SLU 2	-0.0010962	-3288.6
200	SLU 81	-0.0018221	-5466.2	SLU 2	-0.0010973	-3291.8
201	SLU 81	-0.0018212	-5463.7	SLU 2	-0.0010968	-3290.3
202	SLU 81	-0.0018202	-5460.7	SLU 2	-0.0010961	-3288.2
203	SLU 81	-0.0018151	-5445.3	SLU 2	-0.0010931	-3279.4
204	SLU 81	-0.0018046	-5413.7	SLU 2	-0.0010873	-3261.8
205	SLU 82	-0.0017912	-5373.5	SLU 1	-0.0010798	-3239.3
206	SLU 82	-0.0017811	-5343.3	SLV 1	-0.001056	-3168.1
207	SLU 82	-0.0017844	-5353.3	SLV 1	-0.0010388	-3116.4
208	SLU 82	-0.0017927	-5378.2	SLV 1	-0.0010232	-3069.7
209	SLU 82	-0.0018074	-5422.3	SLV 2	-0.0010099	-3029.8
210	SLU 82	-0.0018348	-5504.3	SLV 2	-0.0009947	-2984.2
211	SLU 82	-0.0018663	-5598.8	SLV 2	-0.00098	-2940.1
212	SLU 82	-0.0018947	-5684.1	SLV 2	-0.0009628	-2888.5
213	SLU 82	-0.0019171	-5751.2	SLV 2	-0.0009418	-2825.3
214	SLU 81	-0.0019331	-5799.4	SLV 2	-0.0009167	-2750
215	SLU 81	-0.0019454	-5836.1	SLV 2	-0.0008886	-2665.8
216	SLU 81	-0.0019599	-5879.7	SLV 2	-0.0008603	-2580.8
217	SLU 81	-0.0019868	-5960.5	SLV 2	-0.0008358	-2507.4
218	SLU 81	-0.0019655	-5896.5	SLV 2	-0.000849	-2546.9
221	SLU 81	-0.0020666	-6199.8	SLV 13	-0.0009267	-2780.1
222	SLU 81	-0.0020634	-6190.2	SLV 13	-0.0009272	-2781.6
230	SLU 82	-0.001881	-5643.1	SLV 13	-0.001018	-3054
232	SLU 82	-0.0018504	-5551.1	SLV 13	-0.0010346	-3103.7
236	SLU 82	-0.0018105	-5431.6	SLV 14	-0.0010777	-3233
237	SLU 82	-0.0018029	-5408.7	SLU 1	-0.0010885	-3265.4
241	SLU 81	-0.0018268	-5480.5	SLU 2	-0.0011007	-3302.1
243	SLU 81	-0.0018259	-5477.8	SLU 2	-0.0011001	-3300.3
247	SLU 82	-0.0017917	-5375.1	SLU 1	-0.0010813	-3244
248	SLU 82	-0.0017964	-5389.1	SLV 1	-0.0010624	-3187.3
251	SLU 82	-0.0018158	-5447.3	SLV 2	-0.0010286	-3085.8
253	SLU 82	-0.001844	-5531.9	SLV 2	-0.0010087	-3026.2
261	SLU 81	-0.001983	-5949.1	SLV 2	-0.0008537	-2561.1
263	SLU 81	-0.0020179	-6053.7	SLV 2	-0.0008442	-2532.7
264	SLU 81	-0.0019918	-5975.4	SLV 2	-0.0008692	-2607.5
265	SLU 81	-0.0019792	-5937.7	SLV 2	-0.0008987	-2696.1
266	SLU 81	-0.0019689	-5906.8	SLV 2	-0.000928	-2783.9
267	SLU 81	-0.0019548	-5864.4	SLV 2	-0.0009543	-2862.9
268	SLU 81	-0.0019344	-5803.2	SLV 2	-0.0009766	-2929.8
269	SLU 81	-0.0019079	-5723.8	SLV 2	-0.0009951	-2985.2
270	SLU 81	-0.0018785	-5635.5	SLV 2	-0.0010111	-3033.3
271	SLU 81	-0.0018523	-5556.9	SLV 2	-0.0010271	-3081.3
272	SLU 81	-0.001835	-5505.1	SLV 2	-0.0010397	-3119.2
273	SLU 81	-0.0018209	-5462.7	SLV 2	-0.0010534	-3160.1
274	SLU 81	-0.0021133	-6339.8	SLV 13	-0.0009252	-2775.5
275	SLU 81	-0.0020708	-6212.3	SLV 13	-0.0009349	-2804.7
276	SLU 81	-0.002042	-6126.1	SLV 13	-0.0009501	-2850.3
277	SLU 81	-0.0020188	-6056.5	SLV 13	-0.0009669	-2900.7
278	SLU 81	-0.0019959	-5987.6	SLV 13	-0.000983	-2949
279	SLU 81	-0.0019706	-5911.7	SLV 13	-0.0009972	-2991.7
280	SLU 81	-0.0019425	-5827.6	SLV 13	-0.0010095	-3028.5
281	SLU 81	-0.0019138	-5741.3	SLV 13	-0.0010208	-3062.3
282	SLU 81	-0.0018886	-5665.7	SLV 13	-0.0010326	-3097.9
283	SLU 81	-0.0018687	-5606.1	SLV 13	-0.0010435	-3130.4
284	SLU 81	-0.0018506	-5551.7	SLV 13	-0.0010549	-3164.6
285	SLU 81	-0.0018345	-5503.4	SLV 13	-0.0010668	-3200.4

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
286	SLU 81	-0.0018217	-5465	SLV 14	-0.0010797	-3239.2
287	SLU 81	-0.0018021	-5406.4	SLU 2	-0.0010894	-3268.1
288	SLU 81	-0.0018149	-5444.7	SLU 2	-0.0010958	-3287.4
289	SLU 81	-0.0018252	-5475.7	SLU 2	-0.001101	-3303
290	SLU 81	-0.0018307	-5492.1	SLU 2	-0.0011037	-3311.2
291	SLU 81	-0.0018315	-5494.6	SLU 2	-0.001104	-3312.1
292	SLU 81	-0.0018293	-5487.8	SLU 2	-0.0011027	-3308.1
293	SLU 81	-0.0018216	-5464.7	SLU 2	-0.0010985	-3295.5
294	SLU 81	-0.0018084	-5425.2	SLU 2	-0.0010914	-3274.2
295	SLU 81	-0.0017923	-5377	SLU 2	-0.0010828	-3248.4
296	SLU 81	-0.0018117	-5435.2	SLV 2	-0.0010687	-3206
298	SLU 81	-0.0020789	-6236.8	SLV 13	-0.0009251	-2775.3
300	SLU 81	-0.002049	-6147.1	SLV 13	-0.0009054	-2716.2
302	SLU 81	-0.0019994	-5998.1	SLV 13	-0.0008769	-2630.6
303	SLU 81	-0.0019063	-5718.9	SLV 2	-0.0008212	-2463.7
305	SLU 81	-0.0017204	-5161.2	SLV 14	-0.0010276	-3082.7
307	SLU 82	-0.001727	-5181.1	SLV 14	-0.0010545	-3163.6
308	SLU 81	-0.001738	-5214	SLU 2	-0.0010632	-3189.6
310	SLU 81	-0.0017317	-5195.1	SLV 1	-0.0010454	-3136.2
312	SLU 81	-0.0019481	-5844.3	SLV 13	-0.0008467	-2540.1
313	SLU 81	-0.0018617	-5585	SLV 2	-0.0008007	-2402.2
315	SLU 81	-0.0017015	-5104.6	SLV 14	-0.0010138	-3041.3
317	SLU 81	-0.0017101	-5130.3	SLV 14	-0.0010415	-3124.5
318	SLU 81	-0.0017343	-5203	SLU 2	-0.0010645	-3193.5
320	SLU 81	-0.0017263	-5179	SLV 1	-0.0010428	-3128.5
322	SLU 81	-0.0019074	-5722.3	SLV 13	-0.0008197	-2459.1
323	SLU 81	-0.0018344	-5503.3	SLV 2	-0.0007835	-2350.4
325	SLU 81	-0.0017061	-5118.4	SLV 14	-0.0010071	-3021.3
327	SLU 81	-0.0017167	-5150.2	SLV 10	-0.0010299	-3089.8
328	SLU 81	-0.0017493	-5248	SLV 5	-0.0010357	-3107
330	SLU 81	-0.0017395	-5218.5	SLV 5	-0.0010246	-3073.9
332	SLU 81	-0.0018855	-5656.5	SLV 13	-0.0007989	-2396.7
333	SLU 81	-0.0018334	-5500.2	SLV 2	-0.0007729	-2318.6
335	SLU 81	-0.0017334	-5200.1	SLV 9	-0.0009767	-2930
337	SLU 81	-0.001746	-5238.1	SLV 10	-0.000987	-2961.1
339	SLU 81	-0.0018879	-5663.8	SLV 13	-0.0007864	-2359.2
340	SLU 81	-0.0017816	-5344.9	SLV 5	-0.0009948	-2984.5
342	SLU 81	-0.00177	-5309.9	SLV 5	-0.0009831	-2949.2
343	SLU 81	-0.0018651	-5595.4	SLV 2	-0.0007717	-2315.1
346	SLU 81	-0.0019189	-5756.8	SLV 13	-0.0007837	-2351.2
347	SLU 81	-0.0017817	-5345.2	SLV 9	-0.0009286	-2785.9
349	SLU 81	-0.0017964	-5389.3	SLV 9	-0.0009409	-2822.6
350	SLU 81	-0.0018305	-5491.5	SLV 6	-0.0009495	-2848.4
352	SLU 81	-0.0018169	-5450.8	SLV 6	-0.0009357	-2807.1
353	SLU 81	-0.0019348	-5804.5	SLV 6	-0.000764	-2292
356	SLU 81	-0.0019819	-5945.6	SLV 9	-0.0007538	-2261.3
357	SLU 81	-0.001852	-5556	SLV 9	-0.0008825	-2647.5
359	SLU 81	-0.0018688	-5606.3	SLV 9	-0.0008957	-2687.1
360	SLU 81	-0.0018976	-5692.9	SLV 6	-0.0009032	-2709.6
362	SLU 81	-0.0018822	-5646.5	SLV 6	-0.0008886	-2665.7
363	SLU 81	-0.0020464	-6139.3	SLV 6	-0.000743	-2229.1
366	SLU 81	-0.0020793	-6237.8	SLV 9	-0.000735	-2205.1
367	SLU 81	-0.001949	-5847.1	SLV 9	-0.0008437	-2531.2
369	SLU 81	-0.0019679	-5903.6	SLV 9	-0.0008579	-2573.7
370	SLU 81	-0.0019885	-5965.5	SLV 6	-0.0008629	-2588.7
372	SLU 81	-0.0019711	-5913.2	SLV 6	-0.0008474	-2542.2
373	SLV 11	-0.0022093	-6628	SLV 6	-0.0007347	-2204.2
376	SLV 8	-0.0022361	-6708.2	SLV 9	-0.0007276	-2182.9
377	SLV 8	-0.0023482	-7044.7	SLV 9	-0.0007437	-2231
378	SLV 8	-0.0021761	-6528.2	SLV 9	-0.0007143	-2142.9
379	SLU 81	-0.0020239	-6071.6	SLV 9	-0.0006908	-2072.5
380	SLU 81	-0.0019181	-5754.2	SLV 9	-0.0006753	-2026
381	SLU 81	-0.0018432	-5529.5	SLV 9	-0.0006687	-2006
382	SLU 81	-0.0018	-5400.1	SLV 9	-0.000671	-2013
383	SLU 81	-0.0017875	-5362.5	SLV 9	-0.0006819	-2045.8
384	SLU 81	-0.0018028	-5408.4	SLV 9	-0.0007006	-2101.9
385	SLU 81	-0.0018413	-5524	SLV 9	-0.0007257	-2177.2
386	SLU 81	-0.0018963	-5688.8	SLV 9	-0.000755	-2265.1
387	SLU 81	-0.0019577	-5873.2	SLV 9	-0.0007853	-2356
388	SLU 81	-0.0020119	-6035.8	SLV 9	-0.0008119	-2435.6
389	SLU 81	-0.0020413	-6123.9	SLV 9	-0.0008286	-2485.7
390	SLU 81	-0.0020493	-6148	SLV 9	-0.0008372	-2511.6
391	SLU 81	-0.0020389	-6116.7	SLV 9	-0.0008393	-2518
392	SLU 81	-0.0020243	-6073	SLV 9	-0.00084	-2520.1
393	SLU 81	-0.0020155	-6046.6	SLV 9	-0.0008426	-2527.7
394	SLU 81	-0.0020173	-6052	SLV 6	-0.0008447	-2534.2
395	SLU 81	-0.0020296	-6088.8	SLV 6	-0.0008432	-2529.6
396	SLU 81	-0.0020473	-6141.9	SLV 6	-0.0008424	-2527.1
397	SLU 81	-0.0020602	-6180.6	SLV 6	-0.0008399	-2519.7
398	SLU 81	-0.0020537	-6161.1	SLV 6	-0.0008306	-2491.7
399	SLU 81	-0.0020251	-6075.4	SLV 6	-0.0008132	-2439.5
400	SLU 81	-0.0019708	-5912.4	SLV 6	-0.0007861	-2358.3
401	SLU 81	-0.0019087	-5726	SLV 6	-0.0007555	-2266.6
402	SLU 81	-0.0018529	-5558.7	SLV 6	-0.0007262	-2178.7
403	SLU 81	-0.0018136	-5440.7	SLV 6	-0.0007014	-2104.3
404	SLU 81	-0.0017977	-5393	SLV 6	-0.0006833	-2050

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
405	SLU 81	-0.0018099	-5429.7	SLV 6	-0.0006732	-2019.7
406	SLU 81	-0.0018532	-5559.7	SLV 6	-0.0006721	-2016.2
407	SLU 81	-0.0019289	-5786.6	SLV 6	-0.0006801	-2040.4
408	SLU 81	-0.0020361	-6108.4	SLV 6	-0.0006973	-2091.9
409	SLV 11	-0.0021815	-6544.4	SLV 6	-0.0007228	-2168.3
410	SLV 11	-0.0023555	-7066.4	SLV 6	-0.0007545	-2263.6
414	SLV 8	-0.0024532	-7359.7	SLV 9	-0.0007306	-2191.9
426	SLU 81	-0.0021691	-6507.2	SLV 9	-0.0008108	-2432.3
428	SLU 81	-0.0021922	-6576.6	SLV 9	-0.0008268	-2480.5
437	SLU 81	-0.0021978	-6593.3	SLV 6	-0.000825	-2475.1
439	SLU 81	-0.0021762	-6528.5	SLV 6	-0.0008079	-2423.6
451	SLV 11	-0.0024643	-7392.8	SLV 6	-0.0007386	-2215.7

1.4 Cedimenti fondazioni superficiali

Nodo: *nodo che interagisce col terreno.*
Ind.: *indice del nodo.*
spostamento nodale massimo: *situazione in cui si verifica lo spostamento massimo verticale nel nodo calcolato dal solutore ad elementi finiti. Lo spostamento massimo con segno è quello con valore massimo lungo l'asse Z, dove valori positivi rappresentano spostamenti verso l'alto.*
Cont.: *nome breve della condizione o combinazione di carico a cui si riferisce lo spostamento.*
uz: *spostamento verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento è dotato di segno. [m]*
Press.: *pressione sul terreno corrispondente allo spostamento. Valori positivi indicano trazione, valori negativi indicano compressione. [daN/m²]*
spostamento nodale minimo: *situazione in cui si verifica lo spostamento minimo verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento minimo con segno è quello con valore minimo lungo l'asse Z, dove valori negativi rappresentano spostamenti verso il basso.*
Cont.: *nome breve della condizione o combinazione di carico a cui si riferisce lo spostamento.*
uz: *spostamento verticale del nodo calcolato dal solutore ad elementi finiti. Lo spostamento è dotato di segno. [m]*
Press.: *pressione sul terreno corrispondente allo spostamento. Valori positivi indicano trazione, valori negativi indicano compressione. [daN/m²]*
Cedimento elastico: *cedimento teorico elastico massimo.*
Cont.: *nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico elastico massimo.*
v.: *valore del cedimento teorico elastico massimo. [m]*
Cedimento edometrico: *cedimento teorico edometrico massimo.*
Cont.: *nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico edometrico massimo.*
v.: *valore del cedimento teorico edometrico massimo. [m]*
Cedimento di consolidazione: *cedimento teorico di consolidazione massimo.*
Cont.: *nome breve della combinazione di carico in cui è stato calcolato il cedimento teorico di consolidazione massimo.*
v.: *valore del cedimento teorico di consolidazione massimo. [m]*

Spostamento estremo minimo -0.0019811 al nodo di indice 451, di coordinate x = -8.33, y = 5.87, z = -1.98, nel contesto SLD 11.
Spostamento estremo massimo -0.0008422 al nodo di indice 67, di coordinate x = -9.33, y = -2.78, z = -1.98, nel contesto SLD 7.

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
5	SLD 12	-9.2E-04	-2771.9	SLD 5	-1.6E-03	-4863.7						
13	SLD 12	-9.3E-04	-2804.2	SLD 5	-1.5E-03	-4391.6						
15	SLD 12	-9.4E-04	-2808.1	SLD 5	-1.5E-03	-4372.9						
23	SLD 12	-8.8E-04	-2646.9	SLD 5	-1.4E-03	-4213.6						
25	SLD 7	-8.8E-04	-2649.3	SLD 10	-1.4E-03	-4229.3						
33	SLD 7	-9.3E-04	-2792.4	SLD 10	-1.5E-03	-4365.4						
35	SLD 7	-9.2E-04	-2773.4	SLD 10	-1.4E-03	-4348						
43	SLD 7	-9.3E-04	-2775.8	SLD 10	-1.6E-03	-4909.5						
45	SLD 7	-9.2E-04	-2756.1	SLD 10	-1.6E-03	-4724.7						
46	SLD 12	-9.1E-04	-2744.9	SLD 5	-1.6E-03	-4676.2						
47	SLD 12	-8.9E-04	-2669.1	SLD 5	-1.5E-03	-4450.2						
48	SLD 12	-8.7E-04	-2617.1	SLD 5	-1.4E-03	-4265.3						
49	SLD 12	-8.6E-04	-2594.4	SLD 5	-1.4E-03	-4133.3						
50	SLD 12	-8.7E-04	-2601	SLD 5	-1.4E-03	-4056.7						
51	SLD 12	-8.8E-04	-2631.7	SLD 5	-1.3E-03	-4029.4						
52	SLD 12	-8.9E-04	-2676.1	SLD 5	-1.3E-03	-4037.2						
53	SLD 12	-9.1E-04	-2717.4	SLD 5	-1.4E-03	-4056.8						
54	SLD 12	-9.1E-04	-2733.5	SLD 5	-1.4E-03	-4056.3						
55	SLD 12	-9.1E-04	-2721.6	SLD 5	-1.3E-03	-4024.9						
56	SLD 12	-8.9E-04	-2682.4	SLD 5	-1.3E-03	-3968.9						
57	SLD 12	-8.8E-04	-2640.7	SLD 5	-1.3E-03	-3920.5						
58	SLD 12	-8.7E-04	-2612.4	SLD 5	-1.3E-03	-3899.3						
59	SLD 12	-8.7E-04	-2605	SLD 5	-1.3E-03	-3911.8						
60	SLD 12	-8.7E-04	-2617.8	SLD 5	-1.3E-03	-3951.4						
61	SLD 12	-8.8E-04	-2641	SLD 5	-1.3E-03	-3998.7						
62	SLD 7	-8.8E-04	-2652.7	SLD 10	-1.3E-03	-4025.1						
63	SLD 7	-8.8E-04	-2645.2	SLD 10	-1.5E-03	-4433						
64	SLD 7	-8.8E-04	-2648.8	SLD 10	-1.3E-03	-4026						
65	SLD 7	-8.6E-04	-2566.1	SLD 10	-1.4E-03	-4196.6						
66	SLD 7	-0.00088	-2639.9	SLD 10	-1.3E-03	-4005.4						
67	SLD 7	-8.4E-04	-2526.7	SLD 10	-1.3E-03	-4031.5						
68	SLD 7	-8.8E-04	-2637.3	SLD 10	-1.3E-03	-3984.4						
69	SLD 7	-8.4E-04	-2527.7	SLD 10	-1.3E-03	-3941.3						
70	SLD 7	-8.8E-04	-2646.6	SLD 10	-1.3E-03	-3976.4						
71	SLD 7	-8.5E-04	-2563.1	SLD 10	-1.3E-03	-3919.2						
72	SLD 7	-8.9E-04	-2667.3	SLD 10	-1.3E-03	-3985.8						
73	SLD 7	-8.7E-04	-2620.6	SLD 10	-1.3E-03	-3947.8						

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
74	SLD 7	-9.0E-04	-2693.8	SLD 10	-1.3E-03	-4008						
75	SLD 7	-9.0E-04	-2714.3	SLD 10	-1.3E-03	-4029.6						
76	SLD 7	-8.9E-04	-2679.8	SLD 10	-1.3E-03	-3998.2						
77	SLD 7	-9.0E-04	-2711.8	SLD 10	-1.3E-03	-4029.1						
79	SLD 12	-9.0E-04	-2693.3	SLD 5	-1.5E-03	-4510.2						
80	SLD 12	-8.9E-04	-2661.7	SLD 5	-1.3E-03	-4005.1						
82	SLD 7	-8.9E-04	-2663.8	SLD 10	-1.3E-03	-4020.2						
83	SLD 12	-9.1E-04	-2730.7	SLD 5	-1.3E-03	-4029.9						
85	SLD 12	-9.1E-04	-2734.5	SLD 5	-1.3E-03	-4011						
86	SLD 7	-9.1E-04	-2720.2	SLD 10	-1.3E-03	-4001.2						
88	SLD 7	-9.0E-04	-2701.4	SLD 10	-1.3E-03	-3984.1						
89	SLD 7	-8.9E-04	-2677.1	SLD 10	-1.5E-03	-4481.1						
92	SLD 12	-8.8E-04	-2650.1	SLD 5	-1.4E-03	-4218.9						
93	SLD 12	-9.0E-04	-2708.5	SLD 5	-1.3E-03	-3854.4						
95	SLD 7	-9.0E-04	-2709.9	SLD 10	-1.3E-03	-3867.7						
96	SLD 12	-8.9E-04	-2682.6	SLD 5	-1.2E-03	-3726.8						
98	SLD 12	-9.0E-04	-2685.8	SLD 5	-1.2E-03	-3707.6						
99	SLD 7	-8.9E-04	-2671.7	SLD 10	-1.2E-03	-3694.4						
101	SLD 7	-8.8E-04	-2653.5	SLD 10	-1.2E-03	-3678						
102	SLD 7	-8.8E-04	-2627.4	SLD 10	-1.4E-03	-4139.4						
105	SLD 12	-8.8E-04	-2648.6	SLD 5	-1.3E-03	-3998.1						
106	SLD 12	-9.3E-04	-2779.7	SLD 5	-1.2E-03	-3745.6						
108	SLD 11	-9.3E-04	-2780.6	SLD 6	-1.3E-03	-3757.1						
109	SLD 12	-8.8E-04	-2642.4	SLD 5	-1.2E-03	-3475.2						
111	SLD 12	-8.8E-04	-2645.2	SLD 5	-1.2E-03	-3455.6						
112	SLD 7	-8.8E-04	-2629.6	SLD 10	-1.1E-03	-3438.7						
114	SLD 7	-8.7E-04	-2611.9	SLD 10	-1.1E-03	-3423						
115	SLD 3	-8.8E-04	-2631.1	SLD 14	-1.3E-03	-3891.1						
118	SLD 16	-8.9E-04	-2678.6	SLD 1	-1.3E-03	-3861.2						
119	SLD 12	-9.6E-04	-2870.3	SLD 5	-1.2E-03	-3666.6						
121	SLD 11	-9.6E-04	-2870.6	SLD 6	-1.2E-03	-3676.3						
122	SLD 3	-8.8E-04	-2626.7	SLD 14	-1.3E-03	-3796.8						
125	SLD 16	-9.0E-04	-2709.9	SLD 1	-1.3E-03	-3835.6						
126	SLD 12	-9.9E-04	-2977.4	SLE RA 19	-0.00122	-3660						
128	SLD 11	-9.9E-04	-2977.1	SLE RA 19	-1.2E-03	-3664.4						
129	SLD 3	-8.9E-04	-2675	SLD 14	-1.3E-03	-3787.4						
132	SLD 16	-9.3E-04	-2782.4	SLD 1	-1.3E-03	-3874.6						
133	SLD 12	-1.0E-03	-3099.3	SLE RA 19	-1.2E-03	-3707.7						
135	SLD 11	-1.0E-03	-3098.3	SLE RA 19	-1.2E-03	-3710.9						
136	SLD 3	-9.2E-04	-2770.6	SLD 14	-1.3E-03	-3853.6						
139	SLD 16	-9.6E-04	-2891.6	SLD 1	-1.3E-03	-3971						
140	SLE RA 1	-1.1E-03	-3228.6	SLE RA 19	-1.3E-03	-3771.5						
142	SLE RA 1	-1.1E-03	-3230.2	SLE RA 19	-1.3E-03	-3773.5						
144	SLD 16	-1.0E-03	-3030.8	SLD 1	-1.4E-03	-4114.2						
145	SLD 3	-9.7E-04	-2905.1	SLD 14	-1.3E-03	-3982						
147	SLE RA 1	-1.1E-03	-3289	SLE RA 19	-1.3E-03	-3846.6						
149	SLE RA 1	-1.1E-03	-3289.6	SLE RA 19	-1.3E-03	-3847.4						
150	SLD 16	-1.0E-03	-3026.1	SLE RA 19	-1.2E-03	-3664.9						
152	SLD 16	-1.0E-03	-3009.9	SLE RA 19	-1.2E-03	-3597.7						
153	SLD 3	-9.9E-04	-2967.2	SLE RA 19	-1.2E-03	-3536.2						
155	SLD 3	-9.9E-04	-2976.4	SLE RA 19	-1.2E-03	-3596.9						
157	SLD 16	-1.1E-03	-3189.3	SLD 1	-1.4E-03	-4288.4						
158	SLD 4	-1.0E-03	-3062.6	SLD 13	-1.4E-03	-4155						
160	SLE RA 1	-1.1E-03	-3352.4	SLE RA 19	-1.3E-03	-3924.7						
162	SLE RA 1	-1.1E-03	-3352	SLE RA 19	-1.3E-03	-3924.3						
163	SLD 16	-1.1E-03	-3204.6	SLE RA 19	-1.3E-03	-3870.5						
165	SLD 16	-1.1E-03	-3188	SLE RA 19	-1.3E-03	-3802.7						
166	SLD 3	-1.0E-03	-3140.4	SLE RA 19	-1.2E-03	-3733.4						
168	SLD 3	-0.00105	-3150.1	SLE RA 19	-1.3E-03	-3794.8						
170	SLD 16	-1.1E-03	-3349.9	SLD 1	-1.5E-03	-4469						
171	SLD 4	-1.1E-03	-3215.4	SLD 13	-1.4E-03	-4347						
173	SLE RA 2	-1.1E-03	-3406.7	SLE RA 18	-1.3E-03	-3991.1						
175	SLE RA 2	-1.1E-03	-3405.3	SLE RA 18	-1.3E-03	-3989.5						
176	SLD 16	-1.1E-03	-3358.3	SLE RA 19	-1.3E-03	-4043.3						
178	SLD 16	-1.1E-03	-3342	SLE RA 19	-1.3E-03	-3974.8						
179	SLD 3	-1.1E-03	-3292.1	SLE RA 19	-1.3E-03	-3899.5						
181	SLD 3	-1.1E-03	-3301.1	SLE RA 19	-1.3E-03	-3961.8						
183	SLD 13	-1.2E-03	-3481.8	SLD 4	-1.5E-03	-4624.3						
184	SLD 13	-1.2E-03	-3546	SLD 4	-1.6E-03	-4778.2						
185	SLD 13	-1.2E-03	-3507.1	SLD 4	-1.5E-03	-4633.5						
186	SLD 13	-1.2E-03	-3488.6	SLD 4	-1.5E-03	-4518.8						
187	SLD 13	-1.2E-03	-3478.4	SLD 4	-1.5E-03	-4418.1						
188	SLD 13	-1.2E-03	-3467.8	SLD 4	-0.00144	-4320						
189	SLD 13	-1.2E-03	-3452.4	SLE RA 19	-1.4E-03	-4255.2						
190	SLD 13	-1.1E-03	-3431.8	SLE RA 19	-1.4E-03	-4188.8						
191	SLD 13	-1.1E-03	-3409.4	SLE RA 19	-1.4E-03	-4120.9						
192	SLD 14	-1.1E-03	-3393.3	SLE RA 19	-1.4E-03	-4062.7						
193	SLD 14	-1.1E-03	-3388.9	SLE RA 19	-1.3E-03	-4025						
194	SLD 14	-1.1E-03	-3393.5	SLE RA 19	-1.3E-03	-3999.3						
195	SLE RA 1	-1.1E-03	-3400.9	SLE RA 19	-1.3E-03	-3978.1						
196	SLE RA 1	-1.1E-03	-3387.4	SLE RA 19	-1.3E-03	-3964.3						
197	SLE RA 1	-1.1E-03	-3392.9	SLE RA 19	-1.3E-03	-3972.9						
198	SLE RA 2	-1.1E-03	-3409	SLE RA 18	-1.3E-03	-3993						
199	SLE RA 2	-1.1E-03	-3420.7	SLE RA 18	-1.3E-03	-4008.1						
200	SLE RA 2	-1.1E-03	-3424.3	SLE RA 18	-1.3E-03	-4012.8						
201	SLE RA 2	-1.1E-03	-3422.8	SLE RA 18	-1.3E-03	-4011						

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
202	SLE RA 2	-1.1E-03	-3420.7	SLE RA 18	-1.3E-03	-4008.7						
203	SLE RA 2	-1.1E-03	-3411.3	SLE RA 18	-1.3E-03	-3997.4						
204	SLE RA 2	-1.1E-03	-3392.7	SLE RA 18	-1.3E-03	-3974.4						
205	SLE RA 1	-1.1E-03	-3368.8	SLE RA 19	-1.3E-03	-3945.1						
206	SLE RA 1	-1.1E-03	-3352.1	SLE RA 19	-1.3E-03	-3923.5						
207	SLD 1	-1.1E-03	-3349.4	SLE RA 19	-1.3E-03	-3931.2						
208	SLD 1	-1.1E-03	-3338.9	SLE RA 19	-1.3E-03	-3949.8						
209	SLD 2	-1.1E-03	-3338.3	SLE RA 19	-1.3E-03	-3982.5						
210	SLD 2	-1.1E-03	-3349.6	SLE RA 19	-1.3E-03	-4043.1						
211	SLD 2	-1.1E-03	-3366.4	SLE RA 19	-1.4E-03	-4113						
212	SLD 2	-1.1E-03	-3377	SLE RA 19	-1.4E-03	-4176.5						
213	SLD 2	-1.1E-03	-3376.2	SLD 15	-1.4E-03	-4234.8						
214	SLD 2	-1.1E-03	-3363.6	SLD 15	-0.00144	-4319.9						
215	SLD 2	-1.1E-03	-3343.2	SLD 15	-1.5E-03	-4398.9						
216	SLD 2	-1.1E-03	-3325.2	SLD 15	-1.5E-03	-4485.4						
217	SLD 2	-1.1E-03	-3325.9	SLD 15	-1.5E-03	-4601.6						
218	SLD 2	-1.1E-03	-3318.2	SLD 15	-1.5E-03	-4520.2						
221	SLD 13	-1.2E-03	-3542.8	SLD 4	-1.6E-03	-4731.4						
222	SLD 13	-1.2E-03	-3539.7	SLD 4	-1.6E-03	-4721						
230	SLD 13	-1.1E-03	-3435.7	SLE RA 19	-1.4E-03	-4147.3						
232	SLD 13	-1.1E-03	-3421.2	SLE RA 19	-1.4E-03	-4078.5						
236	SLE RA 1	-1.1E-03	-3411.3	SLE RA 19	-1.3E-03	-3989.3						
237	SLE RA 1	-1.1E-03	-3395.1	SLE RA 19	-1.3E-03	-3972						
241	SLE RA 2	-1.1E-03	-3434.9	SLE RA 18	-1.3E-03	-4023.8						
243	SLE RA 2	-1.1E-03	-3433.1	SLE RA 18	-1.3E-03	-4021.8						
247	SLE RA 1	-1.1E-03	-3373.2	SLE RA 19	-1.3E-03	-3947.1						
248	SLE RA 1	-1.1E-03	-3383	SLE RA 19	-1.3E-03	-3957.6						
251	SLD 2	-1.1E-03	-3372.3	SLE RA 19	-1.3E-03	-4000.9						
253	SLD 2	-1.1E-03	-3378.5	SLE RA 19	-1.4E-03	-4063.5						
261	SLD 2	-1.1E-03	-3343.9	SLD 15	-1.5E-03	-4564.2						
263	SLD 2	-1.1E-03	-3372.4	SLD 15	-1.6E-03	-4681.3						
264	SLD 2	-1.1E-03	-3373.1	SLD 15	-1.5E-03	-4566.7						
265	SLD 2	-1.1E-03	-3394.9	SLD 15	-1.5E-03	-4484.2						
266	SLD 2	-1.1E-03	-3419	SLD 15	-1.5E-03	-4409.1						
267	SLD 2	-1.1E-03	-3435.5	SLD 15	-1.4E-03	-4328.1						
268	SLD 2	-1.1E-03	-3440.1	SLE RA 18	-1.4E-03	-4264.3						
269	SLD 2	-1.1E-03	-3433.5	SLE RA 18	-1.4E-03	-4205.3						
270	SLD 2	-1.1E-03	-3420.8	SLE RA 18	-0.00138	-4139.9						
271	SLD 2	-1.1E-03	-3412	SLE RA 18	-1.4E-03	-4081.8						
272	SLD 2	-1.1E-03	-3408.9	SLE RA 18	-1.3E-03	-4043.6						
273	SLD 2	-1.1E-03	-3410.7	SLE RA 18	-1.3E-03	-4012.2						
274	SLD 13	-1.2E-03	-3595.3	SLD 4	-1.6E-03	-4873						
275	SLD 13	-1.2E-03	-3557	SLD 4	-1.6E-03	-4729.4						
276	SLD 13	-1.2E-03	-3541.1	SLD 4	-1.5E-03	-4617.7						
277	SLD 13	-1.2E-03	-3533.7	SLD 4	-1.5E-03	-4520.1						
278	SLD 13	-1.2E-03	-3525.9	SLD 4	-1.5E-03	-4425.1						
279	SLD 13	-1.2E-03	-3513.6	SLE RA 18	-1.4E-03	-4347.4						
280	SLD 13	-1.2E-03	-3496.1	SLE RA 18	-1.4E-03	-4284.4						
281	SLD 13	-1.2E-03	-3477	SLE RA 18	-1.4E-03	-4220						
282	SLD 13	-1.2E-03	-3462.9	SLE RA 18	-1.4E-03	-4163.6						
283	SLD 13	-1.2E-03	-3453.9	SLE RA 18	-1.4E-03	-4119.2						
284	SLD 13	-1.1E-03	-3447.7	SLE RA 18	-1.4E-03	-4078.7						
285	SLD 13	-1.1E-03	-3444.8	SLE RA 18	-1.3E-03	-4042.9						
286	SLE RA 2	-1.1E-03	-3435.1	SLE RA 18	-1.3E-03	-4014.4						
287	SLE RA 2	-1.1E-03	-3397.3	SLE RA 18	-1.3E-03	-3971.1						
288	SLE RA 2	-1.1E-03	-3418.2	SLE RA 18	-1.3E-03	-3998.7						
289	SLE RA 2	-1.1E-03	-3435.2	SLE RA 18	-1.3E-03	-4021						
290	SLE RA 2	-1.1E-03	-3444.1	SLE RA 18	-1.3E-03	-4032.9						
291	SLE RA 2	-1.1E-03	-3445.2	SLE RA 18	-1.3E-03	-4034.6						
292	SLE RA 2	-1.1E-03	-3441.1	SLE RA 18	-1.3E-03	-4029.6						
293	SLE RA 2	-1.1E-03	-3427.6	SLE RA 18	-1.3E-03	-4012.8						
294	SLE RA 2	-1.1E-03	-3404.8	SLE RA 18	-1.3E-03	-3984.1						
295	SLE RA 2	-1.1E-03	-3377.3	SLE RA 18	-1.3E-03	-3949.2						
296	SLE RA 2	-1.1E-03	-3413.7	SLE RA 18	-1.3E-03	-3991.9						
298	SLD 13	-1.2E-03	-3555.1	SLD 4	-1.6E-03	-4770.6						
300	SLD 13	-1.2E-03	-3497.3	SLD 4	-1.6E-03	-4715						
302	SLD 13	-1.1E-03	-3406.2	SLD 4	-1.5E-03	-4615.7						
303	SLD 2	-1.1E-03	-3223.3	SLD 15	-1.5E-03	-4407.9						
305	SLE RA 2	-1.1E-03	-3280.9	SLE RA 18	-1.3E-03	-3799.7						
307	SLE RA 1	-1.1E-03	-3291.8	SLE RA 19	-1.3E-03	-3813.9						
308	SLE RA 2	-1.1E-03	-3309.5	SLE RA 18	-1.3E-03	-3837.5						
310	SLE RA 2	-1.1E-03	-3297.4	SLE RA 18	-1.3E-03	-3823.7						
312	SLD 13	-1.1E-03	-3311.3	SLD 4	-1.5E-03	-4514.1						
313	SLD 2	-1.0E-03	-3149.8	SLD 15	-1.4E-03	-4316						
315	SLD 14	-1.1E-03	-3248.4	SLE RA 18	-1.3E-03	-3761.2						
317	SLE RA 2	-1.1E-03	-3272.8	SLE RA 18	-1.3E-03	-3779.7						
318	SLE RA 2	-1.1E-03	-3312.2	SLE RA 18	-1.3E-03	-3832						
320	SLE RA 2	-1.1E-03	-3296.9	SLE RA 18	-1.3E-03	-3814.4						
322	SLD 13	-1.1E-03	-3232.1	SLD 4	-1.5E-03	-4438.2						
323	SLD 2	-1.0E-03	-3099.4	SLD 15	-1.4E-03	-4268						
325	SLD 14	-1.1E-03	-3248.6	SLE RA 18	-1.3E-03	-3773.4						
327	SLD 10	-1.1E-03	-3289.2	SLE RA 18	-1.3E-03	-3796.5						
328	SLD 5	-0.00111	-3330	SLE RA 18	-1.3E-03	-3866.7						
330	SLD 5	-1.1E-03	-3304.7	SLE RA 18	-1.3E-03	-3845.1						
332	SLD 13	-1.1E-03	-3181.7	SLD 4	-1.5E-03	-4406.7						
333	SLD 2	-1.0E-03	-3086.1	SLD 15	-1.4E-03	-4283.9						

Nodo	spostamento nodale massimo			spostamento nodale minimo			Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Press.	Cont.	v.	Cont.	v.	Cont.	v.
335	SLD 9	-0.00108	-3240	SLE RA 18	-1.3E-03	-3834.5						
337	SLD 10	-1.1E-03	-3267	SLE RA 18	-1.3E-03	-3862.1						
339	SLD 13	-1.1E-03	-3169	SLD 4	-1.5E-03	-4433						
340	SLD 5	-1.1E-03	-3313.6	SLE RA 18	-1.3E-03	-3938.8						
342	SLD 5	-1.1E-03	-3285.3	SLE RA 18	-1.3E-03	-3913.2						
343	SLD 2	-1.0E-03	-3120.8	SLD 15	-1.5E-03	-4378.9						
346	SLD 9	-1.1E-03	-3198.8	SLD 8	-1.5E-03	-4528.6						
347	SLD 9	-1.1E-03	-3230.9	SLE RA 18	-1.3E-03	-3941.5						
349	SLD 9	-1.1E-03	-3262.6	SLE RA 18	-1.3E-03	-3973.5						
350	SLD 6	-1.1E-03	-3308.4	SLE RA 18	-1.3E-03	-4046.8						
352	SLD 6	-1.1E-03	-3275.5	SLE RA 18	-1.3E-03	-4017.1						
353	SLD 6	-1.1E-03	-3186.2	SLD 11	-1.5E-03	-4591.2						
356	SLD 9	-1.1E-03	-3229.2	SLD 8	-1.6E-03	-4748.9						
357	SLD 9	-1.1E-03	-3247.4	SLD 8	-1.4E-03	-4190.5						
359	SLD 9	-1.1E-03	-3282.6	SLD 8	-1.4E-03	-4218.8						
360	SLD 6	-1.1E-03	-3321.4	SLD 11	-1.4E-03	-4283.5						
362	SLD 6	-1.1E-03	-3285.3	SLD 11	-1.4E-03	-4259.5						
363	SLD 6	-1.1E-03	-3282.1	SLD 11	-1.6E-03	-4936.7						
366	SLD 9	-1.1E-03	-3312.6	SLD 8	-1.7E-03	-5051.6						
367	SLD 9	-1.1E-03	-3302.5	SLD 8	-1.5E-03	-4515.2						
369	SLD 9	-1.1E-03	-3341.1	SLD 8	-1.5E-03	-4548.2						
370	SLD 6	-1.1E-03	-3367.9	SLD 11	-1.5E-03	-4593.8						
372	SLD 6	-1.1E-03	-3328.6	SLD 11	-1.5E-03	-4565.5						
373	SLD 6	-1.1E-03	-3442.9	SLD 11	-1.8E-03	-5389.3						
376	SLD 9	-1.2E-03	-3450.3	SLD 8	-1.8E-03	-5440.7						
377	SLD 9	-1.2E-03	-3579.2	SLD 8	-1.9E-03	-5696.5						
378	SLD 9	-1.1E-03	-3371.1	SLD 8	-1.8E-03	-5300						
379	SLD 9	-1.1E-03	-3192.5	SLD 8	-1.7E-03	-4951.5						
380	SLD 9	-1.0E-03	-3054.5	SLD 8	-1.6E-03	-4669.8						
381	SLD 9	-9.9E-04	-2962.1	SLD 8	-1.5E-03	-4463.9						
382	SLD 9	-9.7E-04	-2916.5	SLD 8	-1.4E-03	-4336						
383	SLD 9	-9.7E-04	-2916.1	SLD 8	-1.4E-03	-4283.4						
384	SLD 9	-9.9E-04	-2956.5	SLD 8	-1.4E-03	-4299.3						
385	SLD 9	-1.0E-03	-3030.9	SLD 8	-1.5E-03	-4372.5						
386	SLD 9	-1.0E-03	-3128.9	SLD 8	-1.5E-03	-4486.7						
387	SLD 9	-1.1E-03	-3235.5	SLD 8	-1.5E-03	-4618.4						
388	SLD 9	-1.1E-03	-3329.3	SLD 8	-1.6E-03	-4734.7						
389	SLD 9	-1.1E-03	-3383	SLD 8	-1.6E-03	-4794.2						
390	SLD 9	-1.1E-03	-3402.7	SLD 8	-1.6E-03	-4804.3						
391	SLD 9	-1.1E-03	-3393.6	SLD 8	-1.6E-03	-4771.1						
392	SLD 9	-1.1E-03	-3378	SLD 8	-1.6E-03	-4728						
393	SLD 9	-1.1E-03	-3371.3	SLD 8	-1.6E-03	-4698.9						
394	SLD 6	-1.1E-03	-3375.8	SLD 11	-1.6E-03	-4700.4						
395	SLD 6	-1.1E-03	-3387.1	SLD 11	-1.6E-03	-4736.4						
396	SLD 6	-1.1E-03	-3405.3	SLD 11	-1.6E-03	-4787.1						
397	SLD 6	-1.1E-03	-3416.1	SLD 11	-1.6E-03	-4826.6						
398	SLD 6	-1.1E-03	-3396.9	SLD 11	-1.6E-03	-4820.8						
399	SLD 6	-1.1E-03	-3342.8	SLD 11	-1.6E-03	-4763.8						
400	SLD 6	-1.1E-03	-3248.1	SLD 11	-1.5E-03	-4647.6						
401	SLD 6	-1.0E-03	-3140.3	SLD 11	-1.5E-03	-4514.3						
402	SLD 6	-1.0E-03	-3041.3	SLD 11	-1.5E-03	-4397.7						
403	SLD 6	-9.9E-04	-2966.4	SLD 11	-1.4E-03	-4321.7						
404	SLD 6	-9.8E-04	-2926	SLD 11	-1.4E-03	-4303.1						
405	SLD 6	-9.8E-04	-2927.1	SLD 11	-1.5E-03	-4353.4						
406	SLD 6	-9.9E-04	-2974.1	SLD 11	-1.5E-03	-4479.7						
407	SLD 6	-1.0E-03	-3068.8	SLD 11	-1.6E-03	-4685.1						
408	SLD 6	-1.1E-03	-3210.2	SLD 11	-1.7E-03	-4967.6						
409	SLD 6	-1.1E-03	-3393.5	SLD 11	-1.8E-03	-5319.1						
410	SLD 6	-1.2E-03	-3608.4	SLD 11	-1.9E-03	-5721.6						
414	SLD 9	-1.2E-03	-3639.2	SLD 8	-2.0E-03	-5912.3						
426	SLD 9	-1.2E-03	-3499.6	SLD 8	-1.7E-03	-5178						
428	SLD 9	-1.2E-03	-3545.5	SLD 8	-1.7E-03	-5220.4						
437	SLD 6	-1.2E-03	-3547.2	SLD 11	-1.7E-03	-5234.1						
439	SLD 6	-1.2E-03	-3501.2	SLD 11	-1.7E-03	-5196.4						
451	SLD 6	-1.2E-03	-3665.2	SLD 11	-2.0E-03	-5943.3						

1.5 Baricentri delle rigidezze

Quota: *quota alla quale è stato valutato il baricentro delle rigidezze. esprimibile come livello, falda, piano orizzontale alla Z specificata. [m]*
Posizione: *posizione in pianta del baricentro delle rigidezze.*
X: *coordinata X. [m]*
Y: *coordinata Y. [m]*
Baricentro masse: *posizione in pianta del baricentro delle masse.*
X: *coordinata X. [m]*
Y: *coordinata Y. [m]*
Distanza: *distanza in pianta tra il baricentro delle rigidezze e il baricentro delle masse.*
X: *coordinata X. [m]*
Y: *coordinata Y. [m]*

Quota	Posizione		Baricentro masse		Distanza	
	X	Y	X	Y	X	Y
Rialzato	-14.41	1.23	-14.289	1.395	-0.12	-0.165
Primo	-14.333	1.597	-14.312	1.366	-0.021	0.232

1.6 Rigidezze di interpiano

Quota inferiore: *quota inferiore dell'interpiano per il quale è stata valutata la rigidezza relativa. esprimibile come livello, falda, piano orizzontale alla Z specificata. [m]*
Quota superiore: *quota superiore dell'interpiano per il quale è stata valutata la rigidezza relativa. esprimibile come livello, falda, piano orizzontale alla Z specificata. [m]*
KUx: *rigidezza relativa alla traslazione in direzione globale X. [daN/m]*
KUy: *rigidezza relativa alla traslazione in direzione globale Y. [daN/m]*

Quota inferiore	Quota superiore	KUx	KUy
Fondazione	Rialzato	167419272	82155161
Rialzato	Primo	89259912	61720796

1.7 Risposta modale

Modo: *identificativo del modo di vibrare.*
Periodo: *periodo. [s]*
Massa X: *massa partecipante in direzione globale X. Il valore è adimensionale.*
Massa Y: *massa partecipante in direzione globale Y. Il valore è adimensionale.*
Massa Z: *massa partecipante in direzione globale Z. Il valore è adimensionale.*
Massa rot. X: *massa rotazionale partecipante attorno la direzione globale X. Il valore è adimensionale.*
Massa rot. Y: *massa rotazionale partecipante attorno la direzione globale Y. Il valore è adimensionale.*
Massa rot. Z: *massa rotazionale partecipante attorno la direzione globale Z. Il valore è adimensionale.*
Massa sX: *massa partecipante in direzione Sisma X. Il valore è adimensionale.*
Massa sY: *massa partecipante in direzione Sisma Y. Il valore è adimensionale.*

Totale masse partecipanti:

Traslazione X: 0.999663
Traslazione Y: 0.999589
Traslazione Z: 0
Rotazione X: 0.969871
Rotazione Y: 0.9538
Rotazione Z: 0.901537

Modo	Periodo	Massa X	Massa Y	Massa Z	Massa rot. X	Massa rot. Y	Massa rot. Z	Massa sX	Massa sY
1	0.73169648	0.009240647	0.000004179	0	0.000003329	0.009637077	0.000390772	0.009240647	0.000004179
2	0.692039833	0.010103755	0.000017696	0	0.000016701	0.010548068	0.000365405	0.010103755	0.000017696
3	0.671601576	0.008780967	0.000003547	0	0.000004281	0.009667833	0.000044488	0.008780967	0.000003547
4	0.499589315	0.000511035	0.003026328	0	0.003199885	0.000540979	0.00788039	0.000511035	0.003026328
5	0.491418348	0.000079051	0.031957398	0	0.033799126	0.000082225	0.024300107	0.000079051	0.031957398
6	0.41789709	0.000266773	0.002158589	0	0.002190469	0.000287791	0.003578114	0.000266773	0.002158589
7	0.409440452	0.000319358	0.001765015	0	0.001835982	0.000333832	0.000562825	0.000319358	0.001765015
8	0.389374036	0.002188322	0.032695286	0	0.033723314	0.002359892	0.025171748	0.002188322	0.032695286
9	0.385905845	0.032260539	0.000008583	0	0.000008998	0.033069146	0.003691792	0.032260539	0.000008583
10	0.37391941	0.028114586	0.010776664	0	0.010997038	0.030066147	0.006549614	0.028114586	0.010776664
11	0.372878454	0.000911859	0.000972428	0	0.000978858	0.001151228	0.000127314	0.000911859	0.000972428
12	0.366831791	0.002387818	0.019565108	0	0.019887636	0.002252755	0.029558659	0.002387818	0.019565108
13	0.352259972	0.002708702	0.000143677	0	0.000161518	0.00292991	0.000530285	0.002708702	0.000143677
14	0.342610868	0.0097928	0.001365232	0	0.001402047	0.009775974	0.001088332	0.0097928	0.001365232
15	0.342086891	0.004009555	0.000746952	0	0.000839998	0.00385387	0.000867239	0.004009555	0.000746952
16	0.33348642	0.001617558	0.004846297	0	0.005141753	0.001625964	0.001849032	0.001617558	0.004846297
17	0.318040189	0.000000354	0.000266751	0	0.0003079	0.000798718	0.000471577	0.000000354	0.000266751
18	0.30597337	0.000020864	0.000057507	0	0.000045501	0.000640436	0.000026038	0.000020864	0.000057507
19	0.287527588	0.001207935	0.000599217	0	0.000637952	0.001138396	0.001687589	0.001207935	0.000599217
20	0.285874878	0.000038646	0.000059092	0	0.000065811	0.000493545	0.000075345	0.000038646	0.000059092
21	0.274807554	0.00041975	0.001567678	0	0.001639999	0.000424237	0.000552866	0.00041975	0.001567678
22	0.268160494	0.000000041	0.016369492	0	0.016659725	0.000002303	0.014461266	0.000000041	0.016369492
23	0.245406964	0.000420715	0.000018103	0	0.000015903	0.000404316	0.000402786	0.000420715	0.000018103
24	0.23213835	0.000004347	0.000085292	0	0.000103486	0.000061222	0.000098782	0.000004347	0.000085292
25	0.220506695	0.000013657	0.017405945	0	0.017675499	0.000011478	0.015327875	0.000013657	0.017405945
26	0.209082671	0.000009099	0.004087119	0	0.0040303	0.00000565	0.004028536	0.000009099	0.004087119
27	0.205207474	0.002940048	0.000177518	0	0.000213523	0.003061689	0.00005777	0.002940048	0.000177518
28	0.201247288	0.003016406	0.000681632	0	0.000678768	0.002831235	0.000183033	0.003016406	0.000681632
29	0.192857613	0.000820633	0.001381589	0	0.00124378	0.000865772	0.000411918	0.000820633	0.001381589
30	0.188749694	0.001606364	0.001114494	0	0.000991032	0.001747751	0.002146591	0.001606364	0.001114494
31	0.181702335	0.000968708	0.002360504	0	0.004959841	0.000757783	0.002208353	0.000968708	0.002360504
32	0.179530311	0.000663281	0.001194665	0	0.003354563	0.000496523	0.001467785	0.000663281	0.001194665
33	0.163594413	0.0070852	0.00650025	0	0.006036003	0.008140574	0.003167151	0.0070852	0.00650025
34	0.161793948	0.000290838	0.041114929	0	0.042065427	0.000376814	0.037491273	0.000290838	0.041114929
35	0.151733141	0.004639611	0.00417744	0	0.003298627	0.005290374	0.003874322	0.004639611	0.00417744
36	0.143583383	0.000256685	0.066719661	0	0.056395949	0.000324881	0.054820278	0.000256685	0.066719661
37	0.13768336	0.000605575	0.632802729	0	0.533877055	0.000255578	0.560097281	0.000605575	0.632802729
38	0.124093782	0.004789989	0.014159209	0	0.009103607	0.003390012	0.010004267	0.004789989	0.014159209

Modo	Periodo	Massa X	Massa Y	Massa Z	Massa rot. X	Massa rot. Y	Massa rot. Z	Massa sX	Massa sY
39	0.119127591	0.361138433	0.000021115	0	0.000063932	0.26712907	0.003306266	0.361138433	0.000021115
40	0.113545414	0.364557056	0.00019543	0	0.000129858	0.340139889	0.002564982	0.364557056	0.00019543
41	0.101004795	0.00000121	0.013158152	0	0.010774588	0.00026564	0.010924457	0.00000121	0.013158152
42	0.097593589	0.064935683	0.000225512	0	0.000194323	0.054752162	0.000195178	0.064935683	0.000225512
43	0.083479764	0.007051515	0.009087412	0	0.003574393	0.00739781	0.012141557	0.007051515	0.009087412
44	0.083178329	0.011785789	0.00391676	0	0.001171582	0.00615651	0.003940175	0.011785789	0.00391676
45	0.061677239	0.002391735	0.000327327	0	0.000356249	0.002289513	0.000570656	0.002391735	0.000327327
46	0.059888832	0.000201265	0.003431354	0	0.005645222	0.000337398	0.001831979	0.000201265	0.003431354
47	0.040530752	0.000040399	0.017272577	0	0.053914848	0.000163391	0.017014059	0.000040399	0.017272577
48	0.037562985	0.010710543	0.000293424	0	0.000820585	0.03210758	0.000714097	0.010710543	0.000293424
49	0.031434446	0.000262183	0.028638192	0	0.073626608	0.000674133	0.024036703	0.000262183	0.028638192
50	0.029742435	0.033474356	0.000067275	0	0.000267018	0.092390362	0.000222131	0.033474356	0.000067275
51	0.005654292	0.000000004	0.000000014	0	0.000281983	0.000006693	0.001013678	0.000000004	0.000000014
52	0.005145349	0.000000223	0.000000098	0	0.000142796	0.000080139	0.002695144	0.000000223	0.000000098
53	0.00370175	0.000000006	0.000000002	0	0.000006014	0.000076547	0.000500345	0.000000006	0.000000002
54	0.003259315	0.000000486	0.000000004	0	0.000131268	0.000070726	0.000013411	0.000000486	0.000000004
55	0.002678633	0.000000064	0.000000259	0	0.001178218	0.000060684	0.000233781	0.000000064	0.000000259

1.8 Equilibrio globale forze

Contributo: Nome attribuito al sistema risultante.
Fx: Componente X di forza del sistema risultante. [daN]
Fy: Componente Y di forza del sistema risultante. [daN]
Fz: Componente Z di forza del sistema risultante. [daN]
*Mx: Componente di momento attorno l'asse X del sistema risultante. [daN*m]*
*My: Componente di momento attorno l'asse Y del sistema risultante. [daN*m]*
*Mz: Componente di momento attorno l'asse Z del sistema risultante. [daN*m]*

Bilancio in condizione di carico: Pesi strutturali

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	-30.992	-0.09	-359594.78	-498665.16	-5152499.41	-26.43
Reazioni	30.992	0.09	359594.78	498665.16	5152499.41	26.43
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Permanenti portati

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-78662.006	-108128.49	-1125081.33	0
Reazioni	0	0	78662.006	108128.49	1125081.33	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Variabile A

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	-69585.517	-94164.52	-995240.96	0
Reazioni	0	0	69585.517	94164.52	995240.96	0
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Vento

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	-1275.723	0	3317.21	0	18254.67
Reazioni	0	1275.723	0	-3317.21	0	-18254.67
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Sisma X SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	100034.897	0	0	0	339937.36	-145879.85
Reazioni	-100034.897	0	0	0	-339937.36	145879.85
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Sisma Y SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	106376.512	0	-361487.35	0	-1522195.78
Reazioni	0	-106376.512	0	361487.35	0	1522195.78
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Eccentricità Y per sisma X SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	-27049.36
Reazioni	0	0	0	0	0	27049.36
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Eccentricità X per sisma Y SLV

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	28764.13

Contributo	Fx	Fy	Fz	Mx	My	Mz
Reazioni	0	0	0	0	0	-28764.13
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Sisma X SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	43798.011	0	0	0	148833.86	-63870.18
Reazioni	-43798.011	0	0	0	-148833.86	63870.18
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Sisma Y SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	46933.268	0	-159488.05	0	-671592.07
Reazioni	0	-46933.268	0	159488.05	0	671592.07
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Eccentricità Y per sisma X SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	-11842.95
Reazioni	0	0	0	0	0	11842.95
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Eccentricità X per sisma Y SLD

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	12690.72
Reazioni	0	0	0	0	0	-12690.72
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Rig Ux

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	1	0	0	0	4.49	-1.37
Reazioni	-1	0	0	0	-4.49	1.37
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Rig Uy

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	1	0	-4.49	0	-14.31
Reazioni	0	-1	0	4.49	0	14.31
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Rig Rz

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	0	0	0	0	0.01
Reazioni	0	0	0	0	0	-0.01
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

1.9 Risposta di spettro

Spettro: condizione elementare corrispondente allo spettro.
N.b.: nome breve della condizione elementare.
Fx: componente della forza lungo l'asse X. [daN]
Fy: componente della forza lungo l'asse Y. [daN]
Fz: componente della forza lungo l'asse Z. [daN]
*Mx: componente della coppia attorno all'asse X. [daN*m]*
*My: componente della coppia attorno all'asse Y. [daN*m]*
*Mz: componente della coppia attorno all'asse Z. [daN*m]*
Max X: massima reazione lungo l'asse X.
Valore: valore massimo della reazione. [daN]
Angolo: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]
Max Y: massima reazione lungo l'asse Y.
Valore: valore massimo della reazione. [daN]
Angolo: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]
Max Z: massima reazione lungo l'asse Z.
Valore: valore massimo della reazione. [daN]
Angolo: angolo d'ingresso del sisma che provoca il valore massimo della reazione. [deg]

Spettro	Fx	Fy	Fz	Mx	My	Mz	Max X		Max Y		Max Z	
N.b.							Valore	Angolo	Valore	Angolo	Valore	Angolo
SLV X	72985.57	2321.76	0	6007.1548	1.828E05	1.038E05	72990.92	178	77491.72	89	0	0
SLV Y	2321.76	77479.05	0	1.955E05	5226.5033	1.111E06	72990.92	178	77491.72	89	0	0
X SLD	31959.77	1020.9	0	2639.4872	8.004E04	4.551E04	31962.1	178	34130.61	89	0	0

Spettro	Fx	Fy	Fz	Mx	My	Mz	Max X		Max Y		Max Z	
N.b.							Valore	Angolo	Valore	Angolo	Valore	Angolo
Y SLD	1020.9	34124.91	0	8.610E04	2289.0744	4.892E05	31962.1	178	34130.61	89	0	0

1.10 Annotazioni solutore

Informazioni: *informazioni fornite dal solutore al termine del calcolo del modello.*

Informazioni

1.11 Statistiche soluzione

Tipo di equazioni	Lineari
Tecnica di soluzione	Intel MKL PARDISO
Numero equazioni	17571
Elemento min. diagonale	880.91371621
Elemento max diagonale	41491203795009.2
Rapporto max/min	47100190440.2626
Elementi non nulli	627106

SIDEL
INGEGNERIA

TABULATI DI CALCOLO – VERIFICHE
CIVICI 49-51
STATO DI PROGETTO

Sommario

1 Verifiche

1.1 Verifica regolarità strutturale

Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

Livello:
Descr: *descrizione livello.*
Quota: *quota livello. [m]*
Q: *quota livello. [m]*
Qinf: *quota livello precedente. [m]*
Comb: *combinazione.*
A1: *a1 (Distribuzione masse).*
A1n: *a1 numeratore (distanza tra centro massa vs. centro rigidezza [se presente] o centro dell'ingombro del piano). [m]*
A1d: *a1 denominatore (ingombro del piano nella medesima direzione [x o y globale]). [m]*
A1r: *a1 rapporto (distanza centro massa/rigidezza su ingombro del piano).*
A2: *a2 (Distribuzione rigidezze).*
A2n: *a2 numeratore (rigidezza max [x o y globale]).*
A2d: *a2 denominatore (rigidezza min [x o y globale]).*
A2r: *a2 rapporto (rigidezza max/min).*
A3: *a3 (Forma compatta).*
A3n: *a3 numeratore (area convessa). [m²]*
A3d: *a3 denominatore (area piano). [m²]*
A3r: *a3 rapporto (area convessa/area piano).*
B: *b (Rapporto lati).*
Bn: *b numeratore (lato max [x o y globale]). [m]*
Bd: *b denominatore (lato min [x o y globale]). [m]*
Br: *b rapporto (lato max/min).*
C: *c (Rapporto rigidezze piano).*
Cn: *c numeratore (rigidezza elementi verticali).*
Cd: *c denominatore (rigidezza piano).*
Cr: *c rapporto (rigidezza elementi verticali/rigidezza piano).*
E1: *e1 (Variazione masse).*
E1n: *e1 numeratore (massa max). [daN]*
E1d: *e1 denominatore (massa min). [daN]*
E1r: *e1 rapporto (massa max/min).*
E2: *e2 (Riduzione rigidezze).*
E2n: *e2 numeratore (rigidezza relativa alla traslazione KUmax). [daN/m]*
E2d: *e2 denominatore (rigidezza relativa alla traslazione KUmin). [daN/m]*
E2r: *e2 rapporto (variazione massima in decremento Kmax/Kmin).*
E3: *e3 (Incremento rigidezze).*
E3n: *e3 numeratore (rigidezza relativa alla traslazione KUmax). [daN/m]*
E3d: *e3 denominatore (rigidezza relativa alla traslazione KUmin). [daN/m]*
E3r: *e3 rapporto (variazione massima in incremento Kmax/Kmin).*
F: *f (Rapporto Capacità/Domanda).*
Fn: *f numeratore (rapporto capacità/domanda massimo [c/d max]). [daN]*
Fd: *f denominatore (rapporto capacità/domanda minimo [c/d min]). [daN]*
Fr: *f rapporto (variazione massima [rapporto (c/d max)/(c/d min)]).*
G1: *g1 (Rastremazione di piano).*
G1n: *g1 numeratore (L1). [m]*
G1d: *g1 denominatore (L2). [m]*
G1r: *g1 rapporto (L1/L2).*
G2: *g2 (Rastremazione totale).*
G2n: *g2 numeratore (L0). [m]*
G2d: *g2 denominatore (Li). [m]*
G2r: *g2 rapporto (L0/Li).*
Capacità/Domanda in X:
VrdX: *taglio resistente complessivo in direzione X. [daN]*
VedX: *taglio agente complessivo in direzione X). [daN]*
|Rd/Ed|: *|Rd/Ed| (rapporto capacità/domanda in termini di resistenza a taglio).*
Capacità/Domanda in Y:
VrdY: *taglio resistente complessivo in direzione Y. [daN]*
VedY: *taglio agente complessivo in direzione Y). [daN]*

Verifica regolarità strutturale

Controllo regolarità edificio secondo D.M. 17-01-18 (N.T.C.) §7.2.1 - §C7.2.1

Avvertenze

La seguente procedura valuta la regolarità della costruzione secondo quanto indicato nelle NTC 2018 §7.2.1.
Tali valutazioni sono a carattere puramente informativo e vengono condotte sulla base del modello e delle verifiche presenti alla sua generazione, con le limitazioni indicate nella manualistica.
In ogni caso l'impostazione di regolarità della costruzione, in pianta ed elevazione, va indicata nelle preferenze di analisi dall'utente utilizzatore del software.

Sintesi dei risultati

Orizzontamenti considerati nella valutazione
Livelli di fondazione o di struttura scatolare non dissipativa: Fondazione(L1),
Livelli di elevazione considerati: Rialzato(L2), Primo(L3),

Regolarità in pianta - NO
L'edificio risulta NON regolare in pianta, in base alle condizioni indicate in NTC 2018 §7.2.1
Ok - Criterio A1 (Distribuzione masse) rispettato, con rapporto massimo 0,03 (limite=0,2) al livello Primo
No - Criterio A2 (Distribuzione rigidezze) NON rispettato, con rapporto massimo 1674192.7/821551.6=2 (limite=1,2) al livello Rialzato
Ok - Criterio A3 (Forma compatta) rispettato, con rapporto massimo 1 (limite=1,05) al livello Rialzato
Ok - Criterio B (Rapporto lati) rispettato, con rapporto massimo 1,38 (limite=4) al livello Primo
Ok - Criterio C (Rapporto rigidezze piano) rispettato, con rapporto massimo 0 (limite=0,1) al livello Rialzato

Regolarità in altezza - NO
L'edificio risulta NON regolare in altezza, in base alle condizioni indicate in NTC 2018 §7.2.1
Ok - Criterio D (Altezza elementi sismoresistenti) rispettato, con rapporto massimo 1 (limite=1,01)
Ok - Criterio E1 (Variazione masse) rispettato, con rapporto massimo 1,02 (limite=1,25) tra il livello Primo ed il precedente
No - Criterio E2 (Riduzione rigidezze) NON rispettato, con rapporto massimo 1674192.7/892599.1=1.9 (limite=1,3) tra il livello Primo ed il precedente
Ok - Criterio E3 (Incremento rigidezze) rispettato, con rapporto massimo 1 (limite=1,1) tra il livello Primo ed il precedente
No - Criterio F (Rapporto Capacità/Domanda) NON rispettato, con rapporto massimo 67.2/25.1=2.7 (limite=1,3) tra il livello Primo ed il precedente
Ok - Criterio G1 (Rastremazione di piano) rispettato, con rapporto massimo 0,01 (limite=0,1) tra il livello Primo ed il precedente
Ok - Criterio G2 (Rastremazione totale) rispettato, con rapporto massimo 0,01 (limite=0,3) tra il livello Primo ed il precedente

Valori per piano

Verifiche di regolarità in pianta

Livello		A1			A2			A3			B			C		
Descr	Quota	A1n	A1d	A1r	A2n	A2d	A2r	A3n	A3d	A3r	Bn	Bd	Br	Cn	Cd	Cr
Rialzato	0.73	0.17	9.46	0.02	1674193	821552	2.04	121.4444	121.4442	1	12.84	9.46	1.36	0	+∞	0
Primo	4.49	0.23	9.26	0.03	892599	617208	1.45	118.1469	118.1469	1	12.76	9.26	1.38	0	+∞	0

Verifiche di regolarità in elevazione

Rapporto di regolarità per la condizione D (Altezza elementi sismoresistenti): 6.47/6.47=0.01.

Livello			E1			E2			E3			F			G1			G2		
Descr	Q	Qinf	E1n	E1d	E1r	E2n	E2d	E2r	E3n	E3d	E3r	Fn	Fd	Fr	G1n	G1d	G1r	G2n	G2d	G2r
Primo	4.49	0.73	89555	88169	1.02	167419272	89259912	1.88	167419272	167419272	1	67.2	25.1	2.68	0.12	9.46	0.01	0.12	9.46	0.01

Dettaglio delle resistenze di piano a taglio (per valutazione punto F)

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	|Rd/Ed|	VrdY	VedY	|Rd/Ed|
Rialzato	0.73	SLV 1	517039	-66739	7.7	655547	-20099	32.6
Rialzato	0.73	SLV 2	517062	-66739	7.7	648340	-20099	32.3
Rialzato	0.73	SLV 3	517883	-66387	7.8	655278	21698	30.2
Rialzato	0.73	SLV 4	517906	-66387	7.8	655325	21698	30.2
Rialzato	0.73	SLV 5	516207	-20578	25.1	642438	-69422	9.3
Rialzato	0.73	SLV 6	515962	-20578	25.1	642486	-69422	9.3
Rialzato	0.73	SLV 7	518634	-19404	26.7	655719	69901	9.4
Rialzato	0.73	SLV 8	518672	-19404	26.7	655768	69901	9.4
Rialzato	0.73	SLV 9	516273	19342	26.7	643086	-69902	9.2
Rialzato	0.73	SLV 10	516322	19342	26.7	643135	-69902	9.2
Rialzato	0.73	SLV 11	518613	20516	25.3	656368	69422	9.5
Rialzato	0.73	SLV 12	518652	20516	25.3	656417	69422	9.5
Rialzato	0.73	SLV 13	517427	66325	7.8	657710	-21698	30.3
Rialzato	0.73	SLV 14	517464	66325	7.8	657757	-21698	30.3
Rialzato	0.73	SLV 15	517964	66677	7.8	657440	20099	32.7
Rialzato	0.73	SLV 16	518001	66677	7.8	657487	20099	32.7
Primo	4.49	SLV 1	415462	-22438	18.5	433603	-5923	73.2
Primo	4.49	SLV 2	421280	-22438	18.8	454443	-5923	76.7
Primo	4.49	SLV 3	415314	-22696	18.3	435156	8437	51.6
Primo	4.49	SLV 4	417879	-22696	18.4	455392	8437	54
Primo	4.49	SLV 5	424724	-6340	67	420332	-23558	17.8
Primo	4.49	SLV 6	426282	-6340	67.2	411461	-23558	17.5
Primo	4.49	SLV 7	427811	-7200	59.4	410549	24312	16.9
Primo	4.49	SLV 8	424350	-7200	58.9	434572	24312	17.9
Primo	4.49	SLV 9	427983	7200	59.4	423375	-24312	17.4
Primo	4.49	SLV 10	424731	7200	59	426352	-24312	17.5
Primo	4.49	SLV 11	424564	6340	67	424160	23558	18
Primo	4.49	SLV 12	427818	6340	67.5	430828	23558	18.3
Primo	4.49	SLV 13	426138	22696	18.8	466070	-8437	55.2
Primo	4.49	SLV 14	426139	22696	18.8	466069	-8437	55.2
Primo	4.49	SLV 15	429439	22438	19.1	466074	5923	78.7
Primo	4.49	SLV 16	429440	22438	19.1	466073	5923	78.7

1.2 Verifiche travate C.A.

Le unità di misura elencate nel capitolo sono in [m, daN, deg] ove non espressamente specificato.

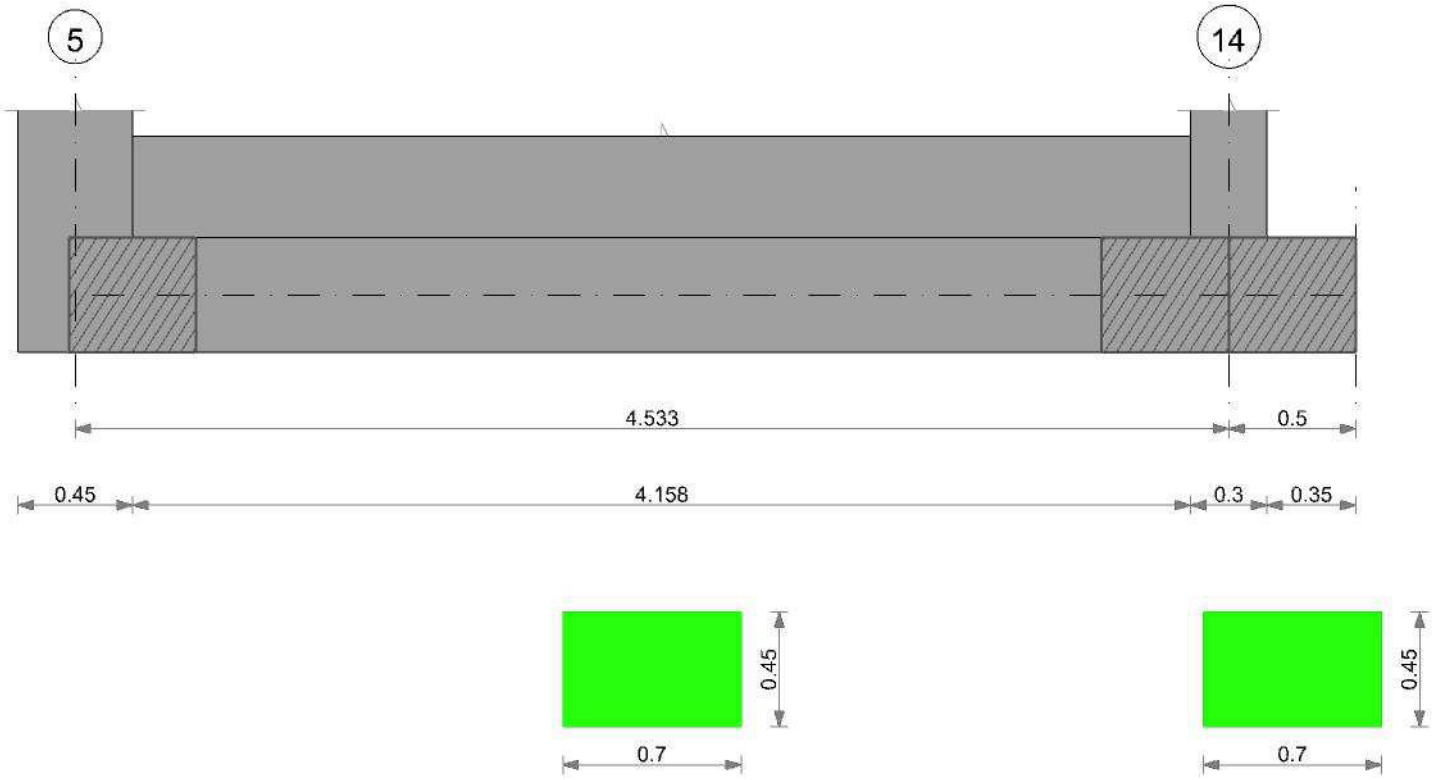
N°: *indice progressivo della sezione.*
Descrizione: *descrizione della sezione.*
Tipo: *tipo di sezione.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
Copriferro sup.: *distanza del bordo della staffa dalla superficie superiore del getto. [m]*
Copriferro inf.: *distanza del bordo della staffa dalla superficie inferiore del getto. [m]*
Copriferro lat.: *distanza del bordo della staffa dalle superfici laterali del getto. [m]*
x: *distanza da asse appoggio sinistro. [m]*
A sup.: *area efficace di armatura longitudinale superiore. [m²]*
C.b. sup.: *distanza dal bordo del baricentro dell'armatura longitudinale superiore. [m]*
A inf.: *area efficace di armatura longitudinale inferiore. [m²]*
C.b. inf.: *distanza dal bordo del baricentro dell'armatura longitudinale inferiore. [m]*
M+ela: *momento flettente desunto dal solutore che tende le fibre inferiori. [daN*m]*
Comb.: *combinazione.*
M+des: *momento flettente di progetto che tende le fibre inferiori. [daN*m]*
M+ult: *momento ultimo per trazione delle fibre inferiori. [daN*m]*
x/d: *rapporto tra posizione asse neutro e altezza utile.*
coeff: *coefficiente di sicurezza.*
M-ela: *momento flettente desunto dal solutore che tende le fibre superiori. [daN*m]*
M-des: *momento flettente di progetto che tende le fibre superiori. [daN*m]*
M-ult: *momento ultimo per trazione delle fibre superiori. [daN*m]*
Verifica: *stato di verifica.*
A st: *area di staffe per unità di lunghezza. [m²]*
A sl: *area di armatura longitudinale tesa per valutazione resistenza taglio in assenza di armature a taglio. [m²]*
A sag: *area equivalente di barre piegate per unità di lunghezza. [m²]*
Vela: *taglio elastico. [daN]*
Vdes: *taglio di progetto. [daN]*
Vrd: *resistenza a taglio della sezione senza armature. [daN]*
Vrcd: *sforzo di taglio che produce il cedimento delle bielle. [daN]*
Vrsd: *resistenza a taglio per la presenza delle armature. [daN]*
Vult: *taglio ultimo. [daN]*
cotgϑ: *cotg dell'angolo di inclinazione dei puntoni in calcestruzzo.*
Rara: *famiglia di combinazione di verifica.*
Mela: *momento elastico. [daN*m]*
Mdes: *momento di progetto. [daN*m]*
σ c: *tensione di compressione nel calcestruzzo. [daN/m²]*
σ c lim.: *tensione limite di compressione nel calcestruzzo. [daN/m²]*
σ f.: *tensione di trazione nell'acciaio. [daN/m²]*
σ f lim.: *tensione limite di trazione nell'acciaio. [daN/m²]*
σ c limite: *tensione di compressione limite nel calcestruzzo. [daN/m²]*
σ f: *tensione di trazione nell'acciaio. [daN/m²]*
σ f limite: *tensione di trazione limite nell'acciaio. [daN/m²]*
Quasi permanente: *famiglia di combinazione di verifica.*
σ FRP: *tensione di trazione nell'FRP. [daN/m²]*
σ FRP lim.: *tensione limite di trazione nell'FRP. [daN/m²]*
T gravità: *taglio dovuto ai carichi gravitazionali. [daN]*
T sisma: *taglio dovuto a sisma. [daN]*
T ultimo: *taglio ultimo. [daN]*
Comb.: *combinazione per indicatore minimo per taglio.*
Pga: *pga per taglio.*
Tr: *tempo di ritorno per taglio.*
Ind. taglio: *indicatore di rischio per taglio.*
M gravità: *momento dovuto ai carichi gravitazionali. [daN*m]*
M sisma: *momento dovuto a sisma. [daN*m]*
M ultimo: *momento ultimo. [daN*m]*
Comb.: *combinazione per indicatore minimo per momento.*
Pga: *pga per momento.*
Tr: *tempo di ritorno per momento.*
Ind. momento: *indicatore di rischio per momento.*
Ver: *stato di verifica.*
d: *altezza utile. [m]*
Af: *area di armatura inferiore per unità di lunghezza. [m]*
M: *momento flettente. [daN*m/m]*
Comb: *combinazione.*
Mult: *momento ultimo. [daN*m/m]*
V: *sforzo di taglio. [daN/m]*

Vult: sforzo di taglio ultimo. [daN/m]
Af: area di armatura. [m²]
Size X: misura dell'impronta al suolo lungo X. [m]
Size Y: misura dell'impronta al suolo lungo Y. [m]
Sis.: indicazione combinazione sismica.
Cnd: indicazione condizione di carico (BT breve termine o LT lungo termine).
Fx: componente orizzontale del carico lungo x. [daN]
Fy: componente orizzontale del carico lungo y. [daN]
Fz: componente verticale del carico. [daN]
IncX: inclinazione del carico lungo x. [deg]
IncY: inclinazione del carico lungo y. [deg]
Phi: angolo di attrito di progetto. [deg]
Ad: adesione di progetto. [daN/m²]
RPl: resistenza passiva laterale unitaria di progetto. [daN/m]
γR: coefficiente parziale sulla resistenza di progetto.
Rd: resistenza di progetto. [daN]
Ed: azione di progetto. [daN]
Rd/Ed: coefficiente di sicurezza allo scorrimento.
Aste: numero delle aste del tratto in verifica.
Size X: misura dell'impronta al suolo lungo la direzione X locale. [m]
Size Y: misura dell'impronta al suolo lungo la direzione Y locale. [m]
Type: indicazione del tipo di combinazione statica o sismica.
Cond: indicazione della condizione di carico (BT breve termine o LT lungo termine).
Rd/Ed: coefficiente di sicurezza alla capacità portante.
*Mx: momento risultante agente attorno x. [daN*m]*
*My: momento risultante agente attorno y. [daN*m]*
Inc.x: inclinazione del carico lungo x. [deg]
Inc.y: inclinazione del carico lungo y. [deg]
Ecc.x: eccentricità del carico lungo x. [m]
Ecc.y: eccentricità del carico lungo y. [m]
B': larghezza efficace. [m]
L': lunghezza efficace. [m]
qd: sovraccarico di progetto. [daN/m²]
γs: peso specifico di progetto del suolo. [daN/m³]
Fi: angolo di attrito di progetto. [deg]
Coes: coesione di progetto. [daN/m²]
Amax: accelerazione normalizzata max al suolo.
N:
Nq: fattore di capacità portante per il termine di sovraccarico.
Nc: fattore di capacità portante per il termine coesivo.
Ng: fattore di capacità portante per il termine attritivo.
S:
Sq: fattore correttivo di capacità portante per forma (shape), per il termine di sovraccarico.
Sc: fattore correttivo di capacità portante per forma (shape), per il termine coesivo.
Sg: fattore correttivo di capacità portante per forma (shape), per il termine attritivo.
D:
Dq: fattore correttivo di capacità portante per approfondimento (deep), per il termine di sovraccarico.
Dc: fattore correttivo di capacità portante per approfondimento (deep), per il termine coesivo.
Dg: fattore correttivo di capacità portante per approfondimento (deep), per il termine attritivo.
I:
Iq: fattore correttivo di capacità portante per inclinazione del carico, per il termine di sovraccarico.
Ic: fattore correttivo di capacità portante per inclinazione del carico, per il termine coesivo.
Ig: fattore correttivo di capacità portante per inclinazione del carico, per il termine attritivo.
B:
Bq: fattore correttivo di capacità portante per inclinazione della base, per il termine di sovraccarico.
Bc: fattore correttivo di capacità portante per inclinazione della base, per il termine coesivo.
Bg: fattore correttivo di capacità portante per inclinazione della base, per il termine attritivo.
G:
Gq: fattore correttivo di capacità portante per inclinazione del pendio, per il termine di sovraccarico.
Gc: fattore correttivo di capacità portante per inclinazione del pendio, per il termine coesivo.
Gg: fattore correttivo di capacità portante per inclinazione del pendio, per il termine attritivo.
P:
Pq: fattore correttivo di capacità portante per punzonamento, per il termine di sovraccarico.
Pc: fattore correttivo di capacità portante per punzonamento, per il termine coesivo.
Pg: fattore correttivo di capacità portante per punzonamento, per il termine attritivo.
E:
Eq: fattore correttivo di capacità portante per sisma (earthquake), per il termine di sovraccarico.
Ec: fattore correttivo di capacità portante per sisma (earthquake), per il termine coesivo.
Eg: fattore correttivo di capacità portante per sisma (earthquake), per il termine attritivo.
Tipo: tipologia di cedimento considerato (E = elastico, D = edometrico, Z = consolidazione primaria).
Assoluto: cedimento assoluto massimo.
Sa adm: cedimento assoluto ammissibile. [m]

***Sa**: cedimento assoluto massimo. [m]*
***Nodo**: nodo dove avviene il cedimento assoluto massimo.*
***Differenziale**: cedimento differenziale massimo.*
***Sd adm**: cedimento differenziale ammissibile. [m]*
***Sd**: cedimento differenziale massimo. [m]*
***Nodo I**: nodo dove avviene il cedimento differenziale massimo.*
***Nodo j**: nodo dove avviene il cedimento differenziale massimo.*
***Relativo**: cedimento relativo massimo.*
***Sr adm**: cedimento relativo ammissibile. [m]*
***Sr**: cedimento relativo massimo. [m]*
***Nodo**: nodo dove avviene il cedimento relativo massimo.*
***Rapp. inflessione**: rapporto di inflessione (cedimento relativo max su lunghezza complessiva tratta).*
***RI adm**: rapporto di inflessione ammissibile.*
***RI**: rapporto di inflessione (cedimento relativo max su lunghezza complessiva tratta).*
***Rotazione rigida**: rotazione rigida valutata tra primo ed ultimo punto.*
***RR adm**: rotazione rigida ammissibile. [deg]*
***RR**: rotazione rigida massima (tra primo ed ultimo punto). [deg]*
***Rotazione assoluta**: rotazione assoluta dei singoli tratti.*
***R Adm**: rotazione assoluta ammissibile. [deg]*
***R Max**: rotazione assoluta massima. [deg]*
***Nodo I**: dal nodo.*
***Nodo J**: al nodo.*
***Distorsione angolare positiva**: distorsione angolare positiva (concavità verso l'alto).*
***D+ adm**: distorsione angolare ammissibile. [deg]*
***D+**: distorsione angolare massima positiva (concavità verso l'alto). [deg]*
***Nodo**: nodo dove avviene la distorsione angolare massima positiva (concavità verso l'alto).*
***Distorsione angolare negativa**: distorsione angolare negativa (concavità verso il basso).*
***D- adm**: distorsione angolare ammissibile. [deg]*
***D-**: distorsione angolare massima negativa (concavità verso il basso). [deg]*
***Nodo**: nodo dove avviene la distorsione angolare massima negativa (concavità verso il basso).*

CORDOLO 1

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

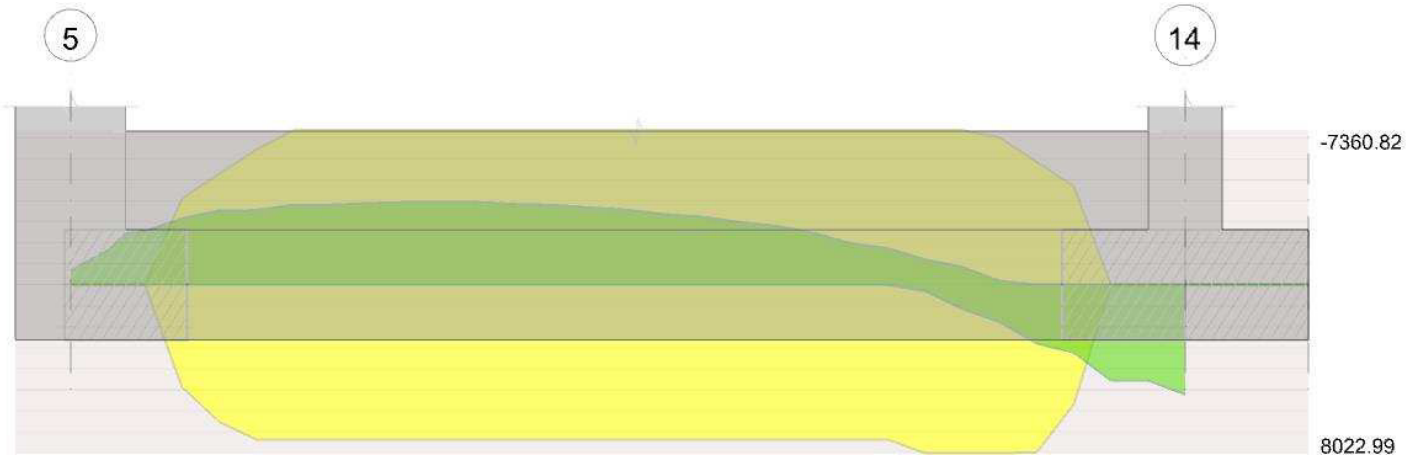
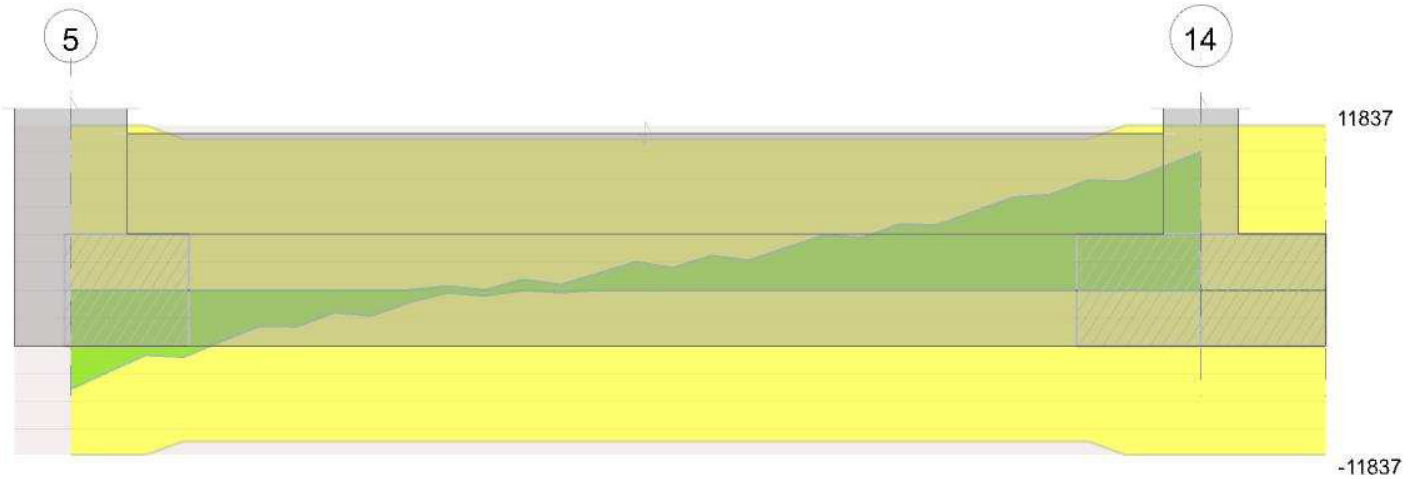


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 5 - 14, sezione R 70x45, aste 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1778	SLV 8	0.085	2626	4588	SLV 8	15877	Si
0.23	0.41	0.0002	1684	SLV 8	0.085	2626	4345	SLV 8	15877	Si
2.27	0.41	0.0002	1210	SLV 8	0.085	2626	3122	SLV 8	15877	Si
4.38	0.41	0.0002	1367	SLV 8	0.085	2626	3594	SLU 81	15877	Si
4.53	0.41	0.0002	1371	SLV 8	0.085	2626	3613	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000169	1196	SLE RA 18	34642	1494000	429555	36000000	1055	SLE QP 2	30552	1120500	Si
0.23	0.41	0.00000169	1135	SLE RA 18	32865	1494000	407528	36000000	1000	SLE QP 2	28956	1120500	Si
2.27	0.41	0.00000169	850	SLE RA 18	24628	1494000	305384	36000000	743	SLE QP 2	21523	1120500	Si
4.38	0.41	0.00000169	1012	SLE RA 18	29306	1494000	363391	36000000	886	SLE QP 2	25646	1120500	Si
4.53	0.41	0.00000169	1017	SLE RA 18	29453	1494000	365223	36000000	890	SLE QP 2	25775	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	27	19	159	SLV 8	0.36	1618	1.653	10.55	7.23	26.26	SLV 8	0.36	1618	1.653	Si
0.23	26	18	159	SLV 8	0.36	1618	1.653	10	6.84	26.26	SLV 8	0.36	1618	1.653	Si
2.27	19	12	159	SLV 8	0.36	1618	1.653	7.43	4.67	26.26	SLV 8	0.36	1618	1.653	Si
4.38	23	12	159	SLV 8	0.36	1618	1.653	8.86	4.82	26.26	SLV 8	0.36	1618	1.653	Si
4.53	23	12	159	SLV 8	0.36	1618	1.653	8.9	4.81	26.26	SLV 8	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.76	1.3	SLU 2	ST	LT	83	-128	-25540	0	0	19	0	0	1.1	7769	153	50.9	Si
4.76	1.3	SLV 9	SIS	LT	630	-4017	-17401	2	-13	19	0	0	1.1	5293	4066	1.3	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
1,2,3,4,5,6,7,8,9,10,11,12	4.76	1.3	SLU 81	ST	BT	2.3	220953	40208	5.5	Si
1,2,3,4,5,6,7,8,9,10,11,12	4.76	1.3	SLV 8	SIS	BT	2.3	190435	37681	5.05	Si
1,2,3,4,5,6,7,8,9,10,11,12	4.76	1.3	SLD 8	SIS	BT	2.3	206074	32003	6.44	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-42	-40208	-3622.25	-932.03	0	0	-0.02	-0.09	1.12	4.71	1496	2060	0	14430	
0	3948	-37681	-5620.47	-2432.71	0	6	-0.06	-0.15	1	4.63	1496	2060	0	14430	0.07
0	1720	-32003	-3799.67	-1434.82	0	3	-0.04	-0.12	1.06	4.67	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

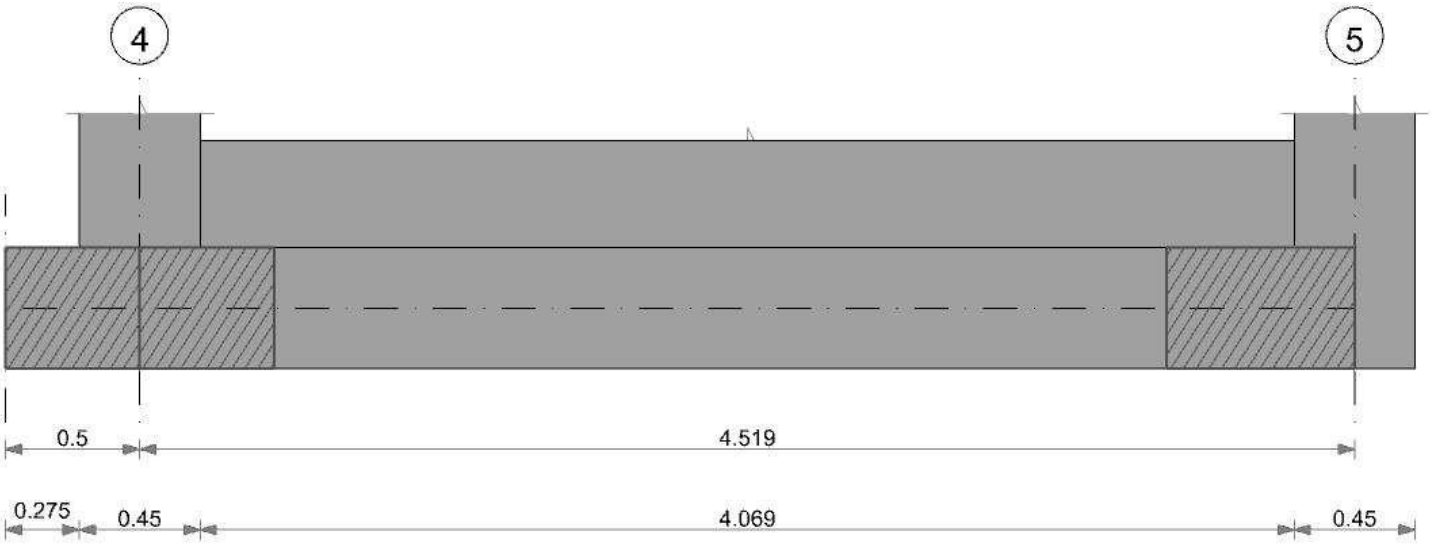
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	389	SLE RA 1	0.05	0	389	389	SLE RA 1	0.05	0	389	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	389	SLE RA 1	0.05	0	389	389	SLE RA 1	0.05	0	389	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	389	SLE RA 1	0.05	0	389	389	SLE RA 1	0.05	0	389	SLE RA 1	0.0033	0	SLE RA 1	Si

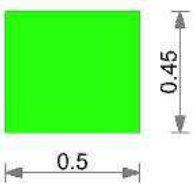
Verifiche geotecniche - Rotazioni assolute e differenziali

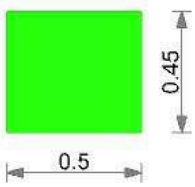
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	389	377	SLE RA 1	0.19	0	389	SLE RA 1	0.1	0	389	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	389	377	SLE RA 1	0.19	0	389	SLE RA 1	0.1	0	389	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	389	377	SLE RA 1	0.19	0	389	SLE RA 1	0.1	0	389	SLE RA 1	Si

CORDOLO 2

Geometria







Caratteristiche dei materiali

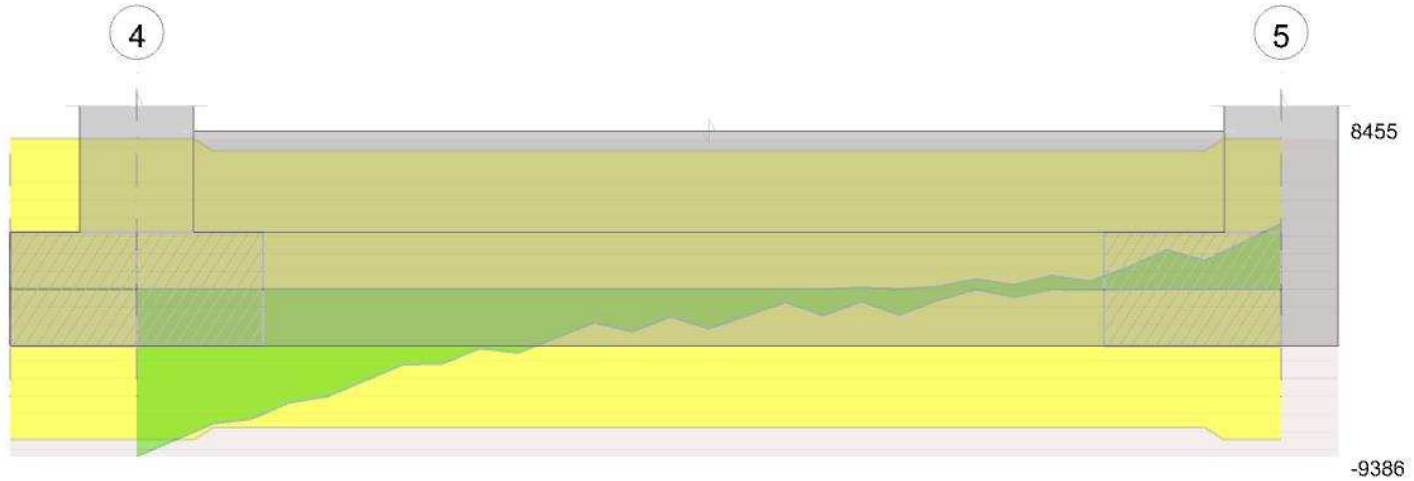
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 4 - 5, sezione R 50x45, aste 192, 193, 194, 195, 196, 197, 198, 199, 200, 201, 202, 203

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	717	SLU 81	0.017	2708	2606	SLU 81	15877	Si
0.23	0.41	0.0002	723	SLU 81	0.017	2708	2627	SLU 81	15877	Si
2.26	0.41	0.0002	634	SLU 81	0.017	2708	2307	SLU 81	15877	Si
4.29	0.41	0.0002	882	SLV 8	0.085	2634	3209	SLV 8	15877	Si
4.52	0.41	0.0002	943	SLV 8	0.085	2634	3429	SLV 8	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.0000017	521	SLE RA 18	15077	1494000	186953	36000000	456	SLE QP 2	13193	1120500	Si
0.23	0.41	0.0000017	525	SLE RA 18	15205	1494000	188545	36000000	460	SLE QP 2	13311	1120500	Si
2.26	0.41	0.0000017	461	SLE RA 18	13350	1494000	165538	36000000	404	SLE QP 2	11691	1120500	Si
4.29	0.41	0.0000017	591	SLE RA 18	17123	1494000	212319	36000000	521	SLE QP 2	15095	1120500	Si
4.52	0.41	0.0000017	626	SLE RA 18	18121	1494000	224695	36000000	552	SLE QP 2	15991	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	17	7	159	SLV 4	0.36	1618	1.653	4.56	2.05	26.34	SLV 4	0.36	1618	1.653	Si
0.23	17	8	159	SLV 4	0.36	1618	1.653	4.6	2.09	26.34	SLV 4	0.36	1618	1.653	Si
2.26	15	8	159	SLV 4	0.36	1618	1.653	4.04	2.11	26.34	SLV 4	0.36	1618	1.653	Si
4.29	19	13	159	SLV 8	0.36	1618	1.653	5.21	3.61	26.34	SLV 8	0.36	1618	1.653	Si
4.52	20	14	159	SLV 8	0.36	1618	1.653	5.52	3.91	26.34	SLV 8	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.74	1.1	SLU 39	ST	LT	261	-150	-29164	1	0	19	0	0	1.1	8871	301	29.48	Si
4.74	1.1	SLV 9	SIS	LT	-4354	-565	-17597	-14	-2	19	0	0	1.1	5353	4391	1.22	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
192,193,194,195,196,197,198,199,200,201,202,203	4.74	1.1	SLU 81	ST	BT	2.3	197349	35114	5.62	Si
192,193,194,195,196,197,198,199,200,201,202,203	4.74	1.1	SLV 3	SIS	BT	2.3	172369	31426	5.48	Si
192,193,194,195,196,197,198,199,200,201,202,203	4.74	1.1	SLD 3	SIS	BT	2.3	185336	27267	6.8	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-186	-35114	-2165.67	819.97	0	0	0.02	-0.06	0.98	4.7	1496	2060	0	14430	
0	2804	-31426	-3476.87	1817.25	0	5	0.06	-0.11	0.88	4.63	1496	2060	0	14430	0.07
0	1153	-27267	-2327.11	1123.86	0	2	0.04	-0.09	0.93	4.66	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

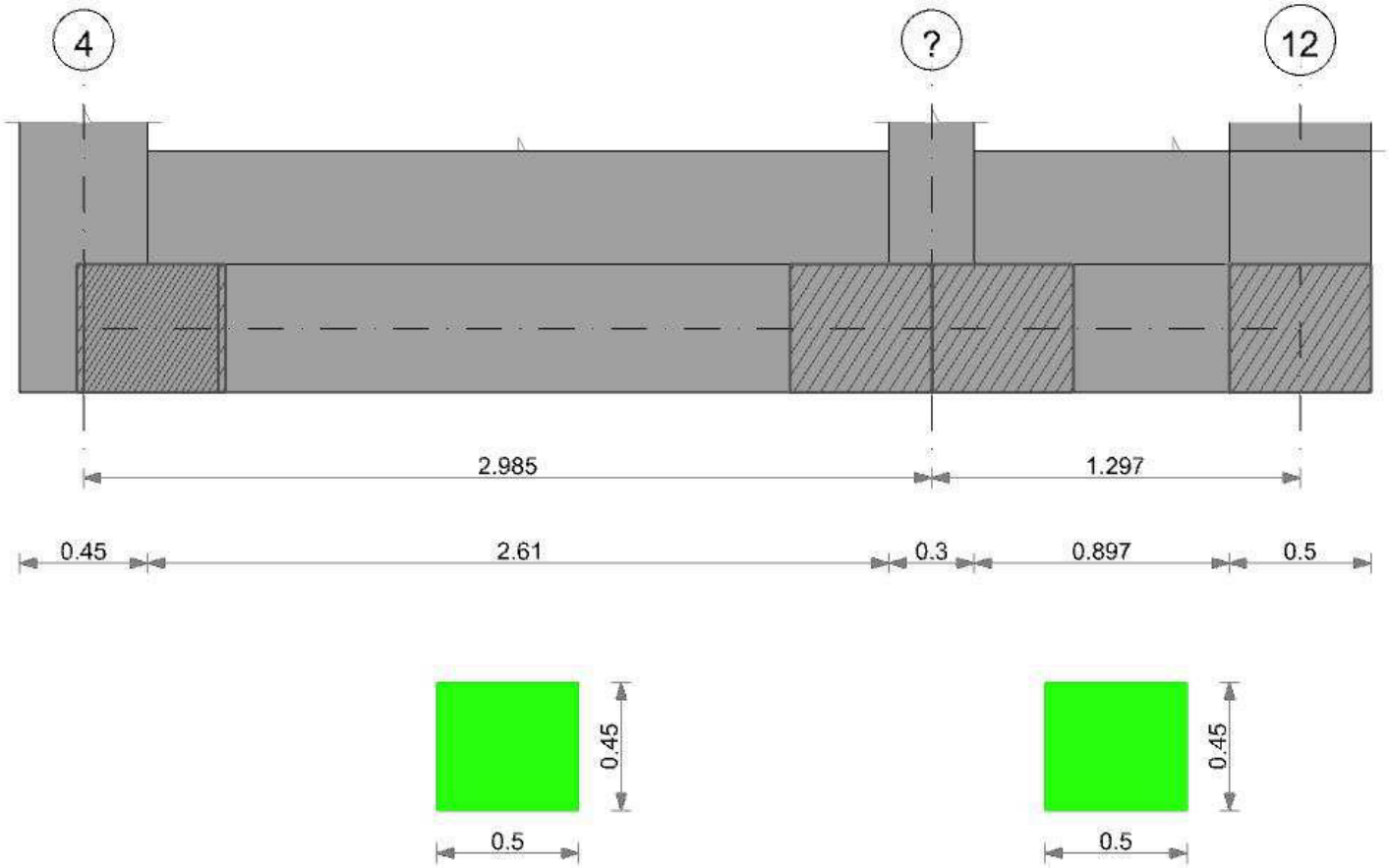
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	221	SLE RA 1	0.05	0	221	221	SLE RA 1	0.05	0	221	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	221	SLE RA 1	0.05	0	221	221	SLE RA 1	0.05	0	221	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	221	SLE RA 1	0.05	0	221	221	SLE RA 1	0.05	0	221	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	221	414	SLE RA 1	0.19	0	221	SLE RA 1	0.1	0	221	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	221	414	SLE RA 1	0.19	0	221	SLE RA 1	0.1	0	221	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	221	414	SLE RA 1	0.19	0	221	SLE RA 1	0.1	0	221	SLE RA 1	Si

CORDOLO 3

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

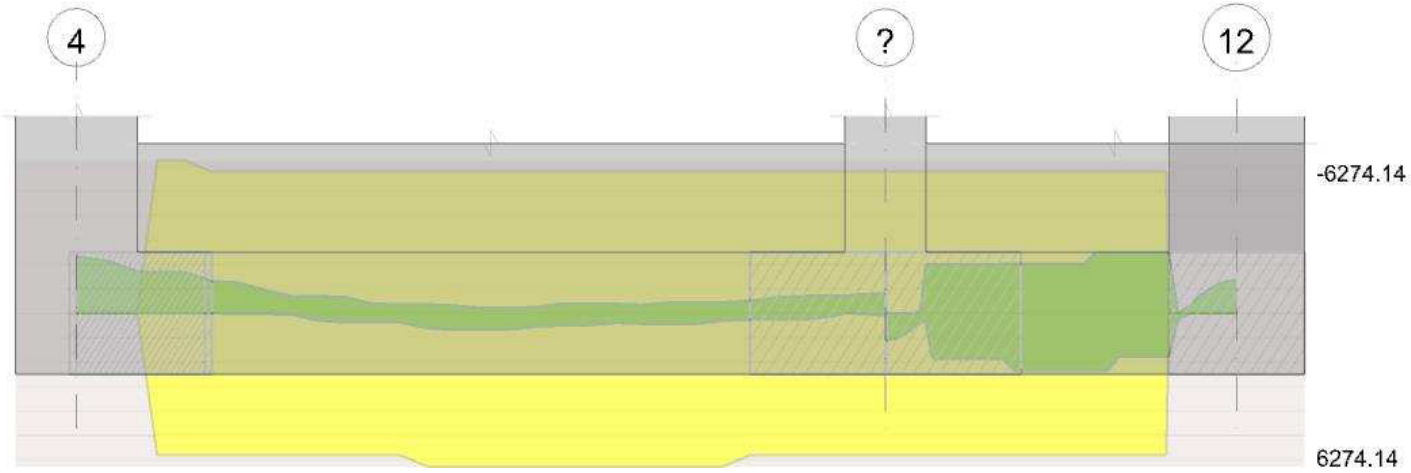
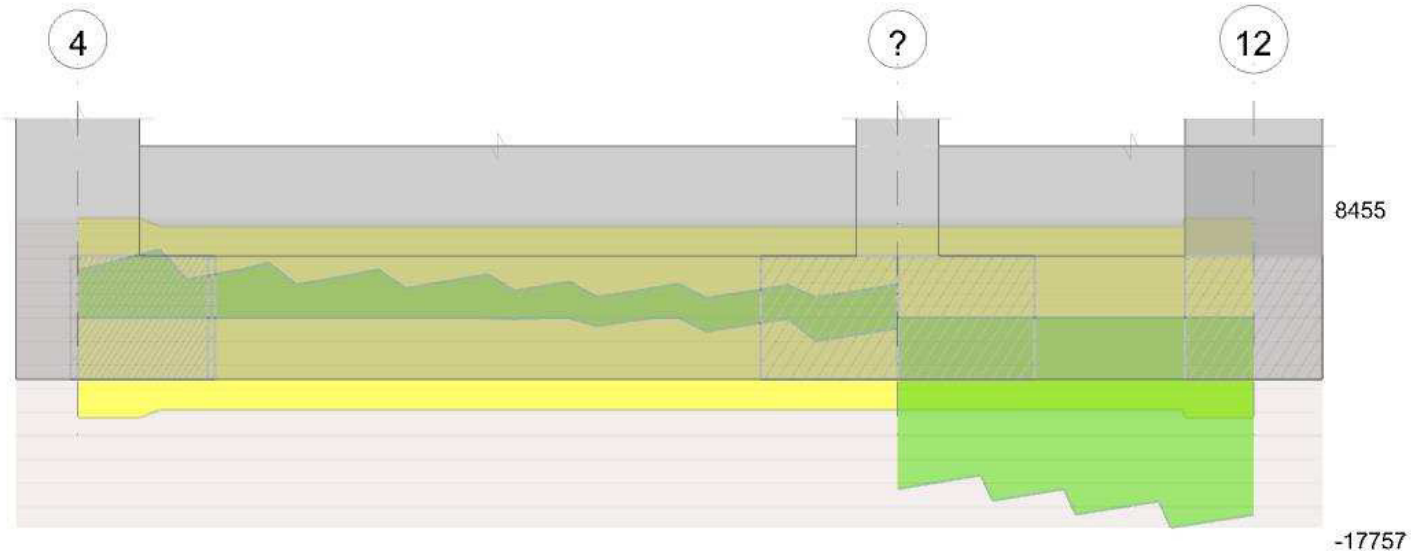


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 4 - ?, sezione R 50x45, aste 255, 254, 253, 252, 251, 250, 249, 248

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	806	SLU 81	0.017	2751	2804	SLU 81	15877	Si
0.23	0.41	0.0002	793	SLU 81	0.017	2751	2757	SLU 81	15877	Si
1.49	0.41	0.0002	748	SLU 81	0.017	2751	2602	SLU 81	15877	Si
2.84	0.41	0.0002	699	SLU 81	0.017	2751	2433	SLU 81	15877	Si
2.99	0.41	0.0002	695	SLU 81	0.019	3111	2417	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000172	586	SLE RA 18	16971	1494000	210442	36000000	514	SLE QP 2	14879	1120500	Si
0.23	0.41	0.00000172	576	SLE RA 18	16674	1494000	206754	36000000	504	SLE QP 2	14597	1120500	Si
1.49	0.41	0.00000172	542	SLE RA 18	15695	1494000	194621	36000000	471	SLE QP 2	13641	1120500	Si
2.84	0.41	0.00000172	506	SLE RA 18	14642	1494000	181557	36000000	437	SLE QP 2	12643	1120500	Si
2.99	0.41	0.00000195	502	SLE RA 18	14497	1494000	179765	36000000	434	SLE QP 2	12511	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	18	8	159	SLV 4	0.36	1618	1.653	5.14	2.41	26.75	SLV 4	0.36	1618	1.653	Si
0.23	18	8	159	SLV 4	0.36	1618	1.653	5.04	2.29	26.75	SLV 4	0.36	1618	1.653	Si

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
1.49	16	6	159	SLV 4	0.36	1618	1.653	4.71	1.7	26.75	SLV 4	0.36	1618	1.653	Si
2.84	15	4	159	SLV 4	0.36	1618	1.653	4.37	1.13	26.75	SLV 4	0.36	1618	1.653	Si
2.99	15	4	159	SLV 4	0.36	1618	1.653	4.34	1.07	30.21	SLV 4	0.36	1618	1.653	Si

Campata 2 tra i fili ? - 12, sezione R 50x45, aste 247, 246, 245, 244

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	695	SLU 81	0.019	3111	2417	SLU 81	15877	Si
0.15	0.41	0.0002	690	SLU 81	0.019	3111	2401	SLU 81	15877	Si
0.65	0.41	0.0002	676	SLU 81	0.019	3111	2351	SLU 81	15877	Si
1.05	0.41	0.0002	667	SLU 81	0.019	3111	2318	SLU 81	15877	Si
1.3	0.41	0.0002	662	SLU 81	0.019	3111	2301	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000195	502	SLE RA 18	14497	1494000	179765	36000000	434	SLE QP 2	12511	1120500	Si
0.15	0.41	0.00000195	499	SLE RA 18	14397	1494000	178517	36000000	430	SLE QP 2	12417	1120500	Si
0.65	0.41	0.00000195	488	SLE RA 18	14092	1494000	174746	36000000	420	SLE QP 2	12134	1120500	Si
1.05	0.41	0.00000195	481	SLE RA 18	13889	1494000	172224	36000000	414	SLE QP 2	11947	1120500	Si
1.3	0.41	0.00000195	478	SLE RA 18	13785	1494000	170940	36000000	411	SLE QP 2	11851	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	15	4	159	SLV 4	0.36	1618	1.653	4.34	1.07	30.21	SLV 4	0.36	1618	1.653	Si
0.15	15	4	159	SLV 4	0.36	1618	1.653	4.3	1.02	30.21	SLV 4	0.36	1618	1.653	Si
0.65	15	3	159	SLV 4	0.36	1618	1.653	4.2	0.83	30.21	SLV 4	0.36	1618	1.653	Si
1.05	14	2	159	SLV 4	0.36	1618	1.653	4.14	0.69	30.21	SLV 4	0.36	1618	1.653	Si
1.3	14	2	159	SLV 3	0.36	1618	1.653	4.11	0.61	30.21	SLV 3	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.76	1.1	SLU 43	ST	LT	230	38	-26164	1	0	19	0	0	1.1	7958	233	34.1	Si
4.76	1.1	SLV 16	SIS	LT	2943	1329	-18533	9	4	19	0	0	1.1	5637	3229	1.75	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
255,254,253,252,251,250,249,248,247,246,245,244	4.76	1.1	SLU 81	ST	BT	2.3	220544	32677	6.75	Si
255,254,253,252,251,250,249,248,247,246,245,244	4.76	1.1	SLV 4	SIS	BT	2.3	203074	26330	7.71	Si
255,254,253,252,251,250,249,248,247,246,245,244	4.76	1.1	SLD 4	SIS	BT	2.3	212019	24017	8.83	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	57	-32677	-133.81	-1343.31	0	0	-0.04	0	1.09	4.68	1496	2060	0	14430	
0	969	-26330	-558.45	-3949.18	0	2	-0.15	-0.02	1.06	4.46	1496	2060	0	14430	0.07
0	447	-24017	-295.65	-2268.7	0	1	-0.09	-0.01	1.08	4.57	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

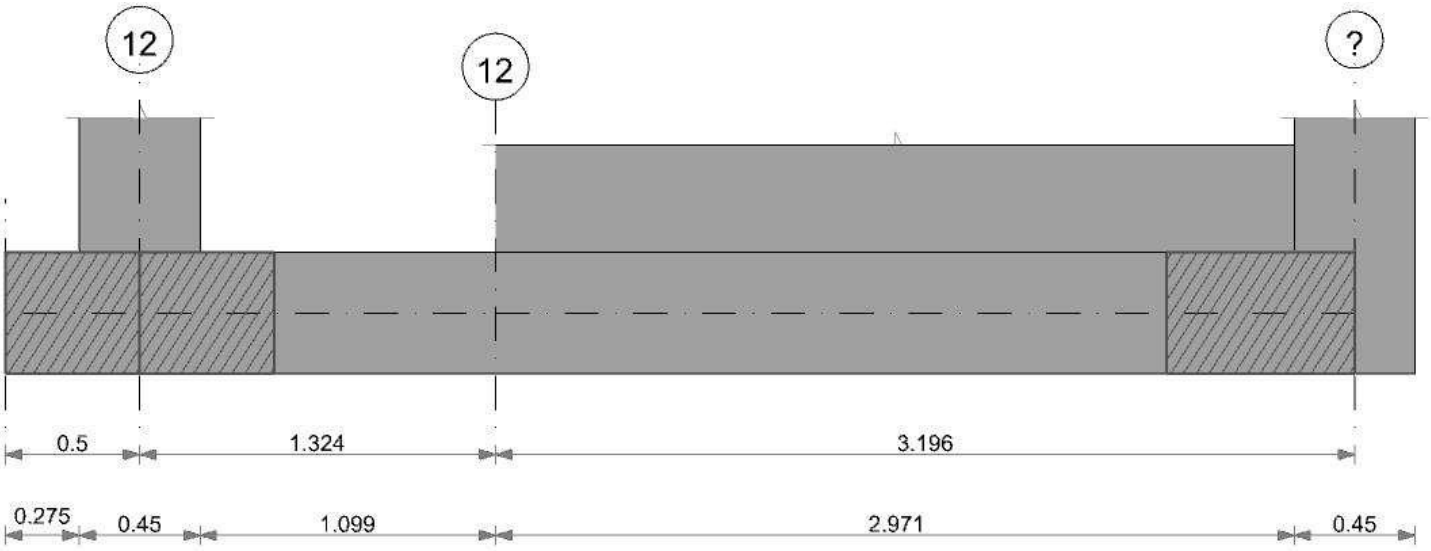
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	286	SLE RA 1	0.05	0	286	286	SLE RA 1	0.05	0	282	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	286	SLE RA 1	0.05	0	286	286	SLE RA 1	0.05	0	282	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	286	SLE RA 1	0.05	0	286	286	SLE RA 1	0.05	0	282	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	286	282	SLE RA 1	0.19	0	286	SLE RA 1	0.1	0	282	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	286	282	SLE RA 1	0.19	0	286	SLE RA 1	0.1	0	282	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	286	282	SLE RA 1	0.19	0	286	SLE RA 1	0.1	0	282	SLE RA 1	Si

CORDOLO 4

Geometria



Caratteristiche dei materiali

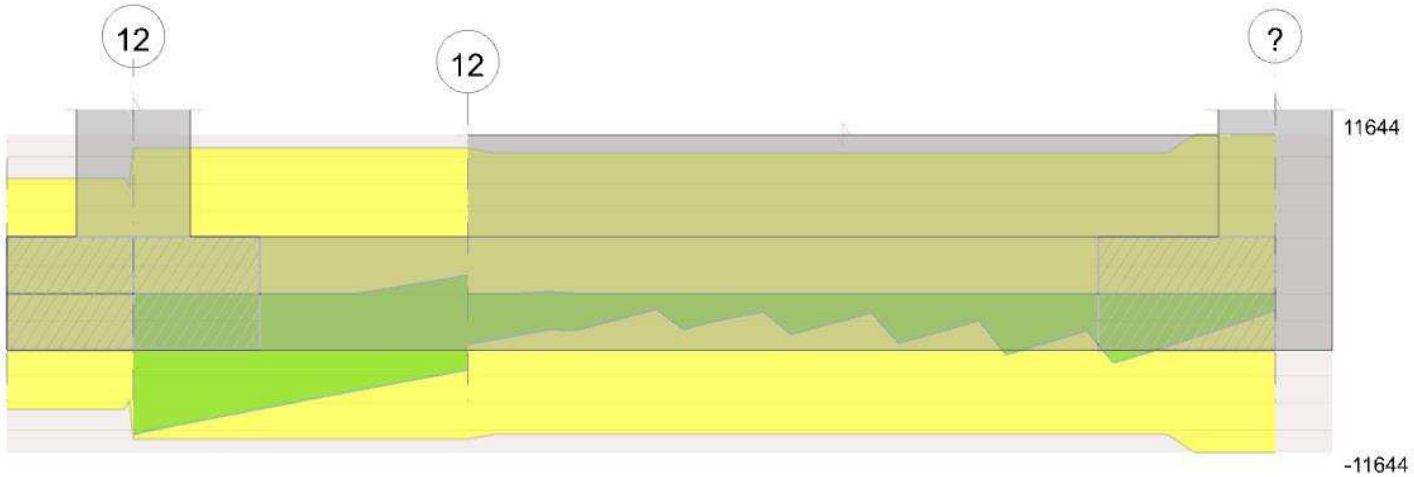
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 12 - 12, sezione R 50x45, asta 211

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.000221	0.052	0.00047	0.052	4658.93	SLU 81	4658.93	7177.8	0.102	1.54							Si
0.66	0.000458	0.052	0.000509	0.052	1174.29	SLU 81	2482.26	7751.9	0.112	3.12	591.78	SLU 2	-48.68	-7054.22	0.11	144.91	Si
1.32	0.000509	0.052	0.000509	0.052							-2235.9	SLU 81	-2235.9	-7755.45	0.113	3.47	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.000221	0.052	0.00047	0.052	5097.76	SLV 8	5097.76	6732	0.194	1.32							Si
0.66	0.000458	0.052	0.000509	0.052	1322.86	SLV 8	2787.26	7267.64	0.198	2.61	85.16	SLV 9	-65.19	-6566.19	0.188	100.72	Si
1.32	0.000509	0.052	0.000509	0.052	275.52	SLV 9	275.52	7266.79	0.197	26.37	-3113.39	SLV 8	-3113.39	-7266.79	0.197	2.33	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000076	0.00047	0	-10305	SLU 81	-10305	-7764	-63178	-10645	-10645	1	1.03	Si
0.23	0.0000076	0.00047	0	-9122	SLU 81	-9122	-7764	-63178	-10645	-10645	1	1.17	Si
0.66	0.0000076	0.000501	0	-6837	SLU 81	-6837	-7764	-63178	-10645	-10645	1	1.56	Si
1.32	0.0000076	0.000509	0	-3494	SLU 81	-3494	-7764	-63178	-10645	-10645	1	3.05	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000076	0.00047	0	-10240	SLV 8	-10240	-7764	-63178	-10645	-10645	1	1.04	Si
0.23	0.0000076	0.00047	0	-9431	SLV 8	-9431	-7764	-63178	-10645	-10645	1	1.13	Si
0.66	0.0000076	0.000501	0	-7857	SLV 8	-7857	-7764	-63178	-10645	-10645	1	1.35	Si
1.32	0.0000076	0.000509	0	1306	SLV 9	1306	7764	63178	10645	10645	1	8.15	Si
1.32	0.0000076	0.000509	0	-5567	SLV 8	-5567	-7764	-63178	-10645	-10645	1	1.91	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	4956.7	18	4114.64	239262	1494000	3484030	36000000	4289.02	2	3553.65	206641	1120500			Si
0.23	3369.44	18	3369.44	186937	1494000	2736435	36000000	2903.93	2	2903.93	161110	1120500			Si
0.66	840.91	18	1789.47	95398	1494000	1423966	36000000	704.01	2	1527.98	81457	1120500			Si
1.32	-1624.72	18	-1624.72	85937	1494000	1289059	36000000	-1418.93	2	-1418.93	75052	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0.23	-5775	-3656	-10645	SLV 8	0.32	1095	1.408	2903.93	2193.83	6732	SLV 8	0.36	1618	1.653	Si
0.66	-4299	-3558	-10645	SLV 8	0.36	1618	1.653	1527.98	1259.28	7267.64	SLV 8	0.36	1618	1.653	Si
1.32	-2131	-3436	-10645	SLV 8	0.36	1618	1.653	-1418.93	-1694.45	-7266.79	SLV 8	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 12 - 12, sezione R 50x45, asta 211

Campata 3 tra i fili 12 - ?, sezione R 50x45, aste 210, 209, 208, 207, 206, 205, 204

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	781	SLU 81	0.032	6029	2404	SLU 81	15877	Si
1.6	0.41	0.0004	812	SLU 81	0.031	5835	2498	SLU 81	15877	Si
2.97	0.41	0.0004	1005	SLV 8	0.124	5616	3108	SLU 81	15877	Si
3.2	0.41	0.0004	1082	SLV 8	0.124	5616	3328	SLV 8	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.0000038	565	SLE RA 18	15916	1494000	197354	36000000	488	SLE QP 2	13755	1120500	Si
1.6	0.41	0.00000367	589	SLE RA 18	16611	1494000	205971	36000000	513	SLE QP 2	14476	1120500	Si
2.97	0.41	0.00000367	734	SLE RA 18	20710	1494000	256799	36000000	643	SLE QP 2	18134	1120500	Si

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
3.2	0.41	0.00000367	775	SLE RA 18	21856	1494000	271018	36000000	679	SLE QP 2	19154	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	15	2	159	SLV 3	0.36	1618	1.653	4.88	0.75	58	SLV 3	0.36	1618	1.653	Si
1.6	16	5	159	SLV 8	0.36	1618	1.653	5.13	1.55	56.16	SLV 8	0.36	1618	1.653	Si
2.97	20	11	159	SLV 8	0.36	1618	1.653	6.43	3.62	56.16	SLV 8	0.36	1618	1.653	Si
3.2	21	12	159	SLV 8	0.36	1618	1.653	6.79	4.03	56.16	SLV 8	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
4.74	1.1	SLU 31	ST	LT	-379	-80	-25411	-1	0	19	0	0	1.1	7729	387	19.97	Si
4.74	1.1	SLV 14	SIS	LT	-833	-3179	-19475	-2	-9	19	0	0	1.1	5924	3286	1.8	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
211,210,209,208,207,206,205,204	4.74	1.1	SLU 81	ST	BT	2.3	220785	32103	6.88	Si
211,210,209,208,207,206,205,204	4.74	1.1	SLV 3	SIS	BT	2.3	191399	24383	7.85	Si
211,210,209,208,207,206,205,204	4.74	1.1	SLD 3	SIS	BT	2.3	208005	23005	9.04	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-101	-32103	72.61	1277.38	0	0	0.04	0	1.1	4.66	1496	2060	0	14430	
0	3031	-24383	-1409.98	2143.89	0	7	0.09	-0.06	0.98	4.57	1496	2060	0	14430	0.07
0	1286	-23005	-589.25	1470.8	0	3	0.06	-0.03	1.05	4.62	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

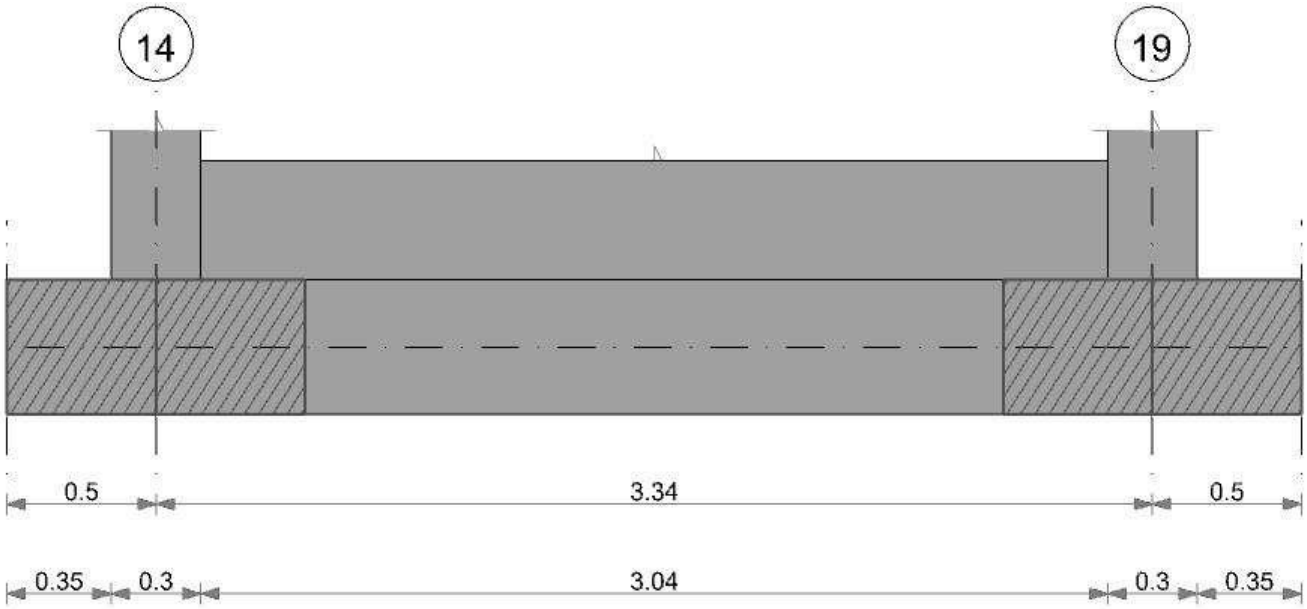
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	236	SLE RA 1	0.05	0	236	236	SLE RA 1	0.05	0	305	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	236	SLE RA 1	0.05	0	236	236	SLE RA 1	0.05	0	305	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	236	SLE RA 1	0.05	0	236	236	SLE RA 1	0.05	0	305	SLE RA 1	0.0033	0	SLE RA 1	Si

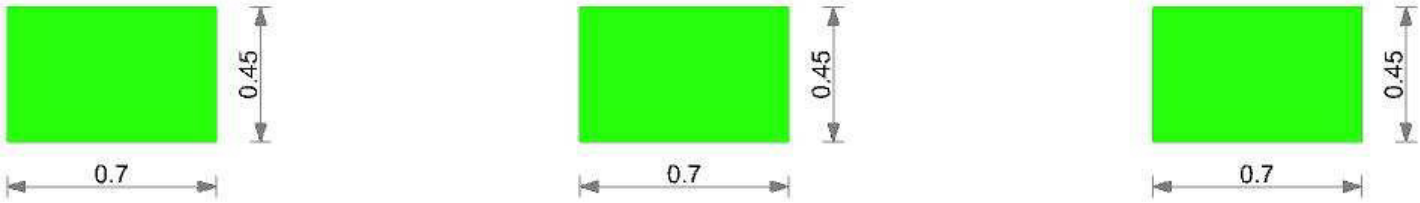
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	236	305	SLE RA 1	0.19	0	236	SLE RA 1	0.1	0	305	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	236	305	SLE RA 1	0.19	0	236	SLE RA 1	0.1	0	305	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	236	305	SLE RA 1	0.19	0	236	SLE RA 1	0.1	0	305	SLE RA 1	Si

CORDOLO 5

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

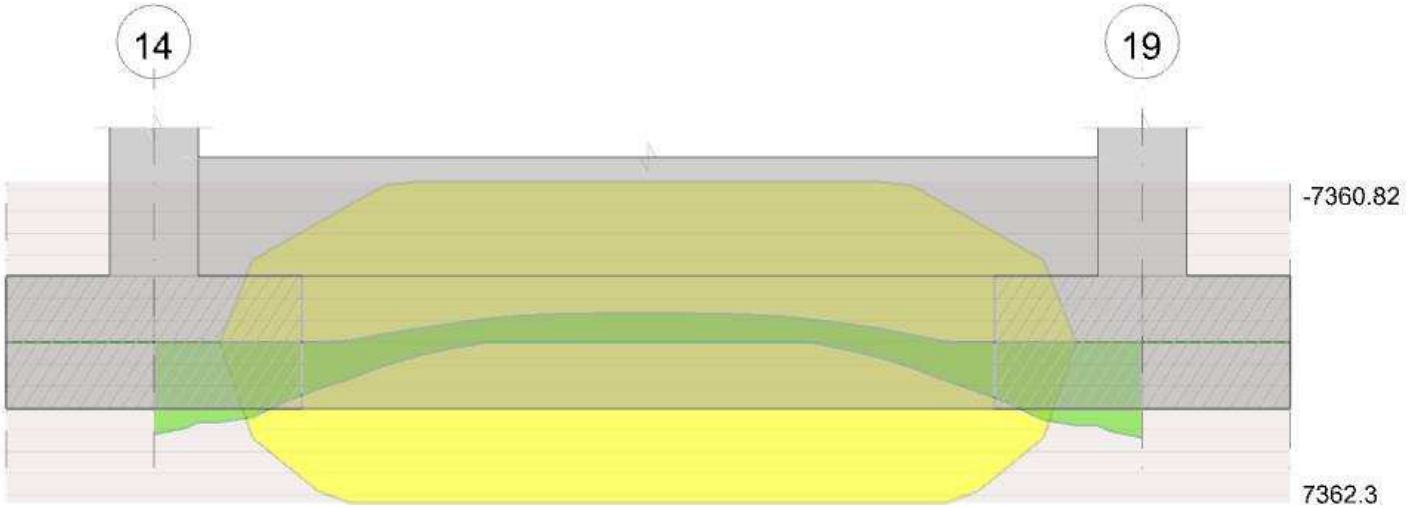
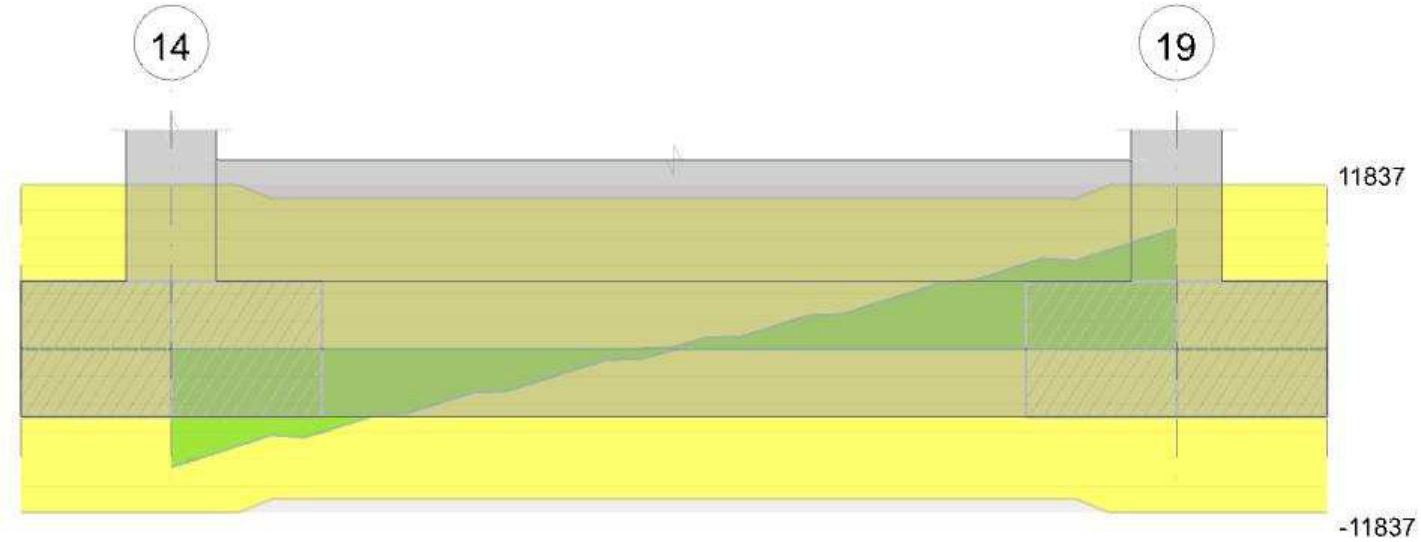


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 14 - 19, sezione R 70x45, aste 13, 14, 15, 16, 17, 18, 19, 20, 21

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1371	SLV 8	0.088	2803	3613	SLU 81	15877	Si
0.15	0.41	0.0002	1374	SLV 8	0.088	2803	3627	SLU 81	15877	Si
1.67	0.41	0.0002	1376	SLU 81	0.018	2883	3551	SLU 81	15877	Si
3.19	0.41	0.0002	1384	SLV 11	0.088	2803	3655	SLU 81	15877	Si
3.34	0.41	0.0002	1382	SLV 11	0.088	2803	3641	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000181	1017	SLE RA 18	29408	1494000	364661	36000000	890	SLE QP 2	25735	1120500	Si
0.15	0.41	0.00000181	1021	SLE RA 18	29527	1494000	366129	36000000	894	SLE QP 2	25839	1120500	Si
1.67	0.41	0.00000181	999	SLE RA 18	28898	1494000	358338	36000000	874	SLE QP 2	25259	1120500	Si
3.19	0.41	0.00000181	1029	SLE RA 18	29744	1494000	368824	36000000	899	SLE QP 2	26008	1120500	Si
3.34	0.41	0.00000181	1025	SLE RA 18	29634	1494000	367464	36000000	896	SLE QP 2	25911	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	23	12	159	SLV 8	0.36	1618	1.653	8.9	4.81	28.03	SLV 8	0.36	1618	1.653	Si
0.15	23	12	159	SLV 8	0.36	1618	1.653	8.94	4.81	28.03	SLV 8	0.36	1618	1.653	Si
1.67	23	12	159	SLV 11	0.36	1618	1.653	8.74	4.51	28.03	SLV 11	0.36	1618	1.653	Si
3.19	23	13	159	SLV 11	0.36	1618	1.653	8.99	4.85	28.03	SLV 11	0.36	1618	1.653	Si
3.34	23	13	159	SLV 11	0.36	1618	1.653	8.96	4.86	28.03	SLV 11	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
3.34	1.3	SLU 31	ST	LT	12	-356	-24267	0	-1	19	0	0	1.1	7381	356	20.74	Si
3.34	1.3	SLV 10	SIS	LT	1232	-2392	-14406	5	-9	19	0	0	1.1	4382	2691	1.63	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
13,14,15,16,17,18,19,20,21	3.34	1.3	SLU 81	ST	BT	2.3	171973	30769	5.59	Si
13,14,15,16,17,18,19,20,21	3.34	1.3	SLV 7	SIS	BT	2.3	154430	27517	5.61	Si
13,14,15,16,17,18,19,20,21	3.34	1.3	SLD 12	SIS	BT	2.3	163638	23829	6.87	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
16	-380	-30769	-1393.81	58.02	0	-1	0	-0.05	1.21	3.34	1496	2060	0	14430	
-1208	1896	-27517	-2550.89	-687.07	-3	4	-0.02	-0.09	1.11	3.29	1496	2060	0	14430	0.07
467	699	-23829	-1625.12	342.37	1	2	0.01	-0.07	1.16	3.31	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.07	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

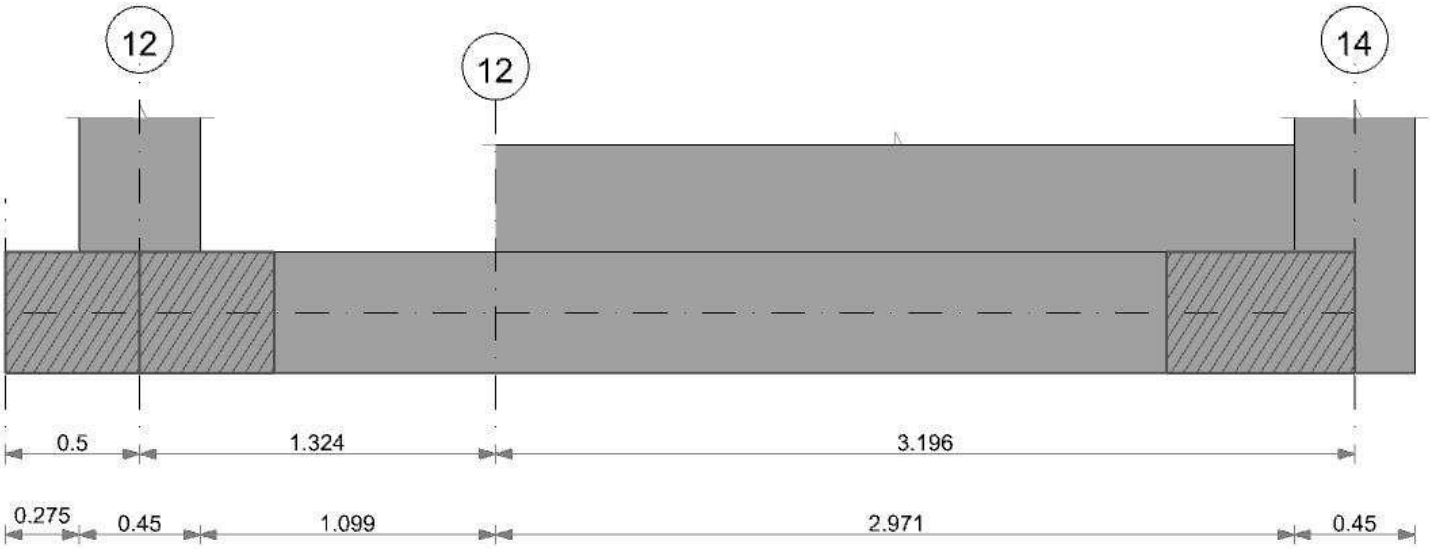
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	398	SLE RA 1	0.05	0	398	398	SLE RA 1	0.05	0	398	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	398	SLE RA 1	0.05	0	398	398	SLE RA 1	0.05	0	398	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	398	SLE RA 1	0.05	0	398	398	SLE RA 1	0.05	0	398	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	398	389	SLE RA 1	0.19	0	398	SLE RA 1	0.1	0	398	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	398	389	SLE RA 1	0.19	0	398	SLE RA 1	0.1	0	398	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	398	389	SLE RA 1	0.19	0	398	SLE RA 1	0.1	0	398	SLE RA 1	Si

CORDOLO 6

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

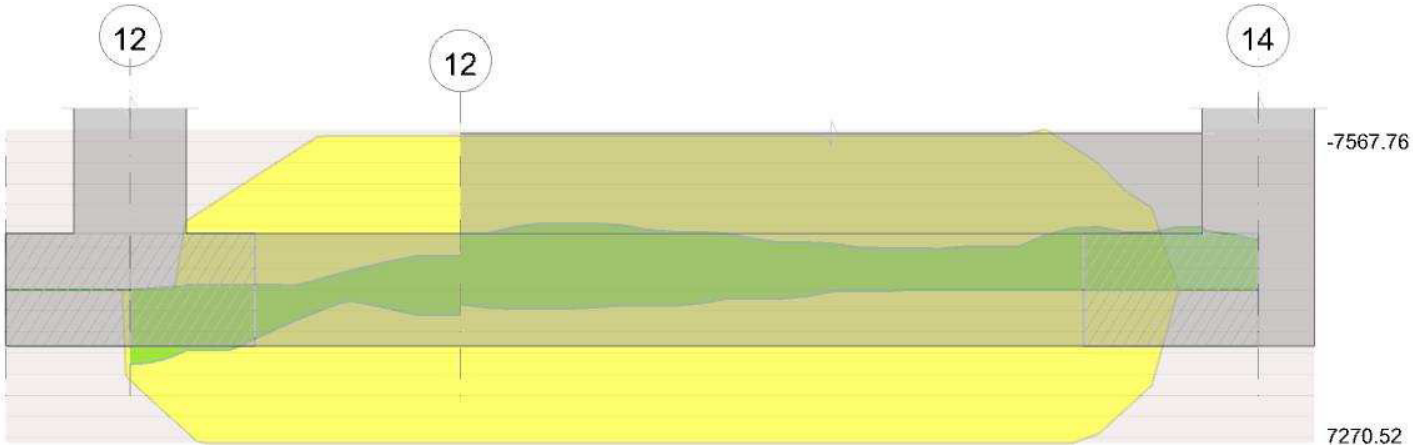
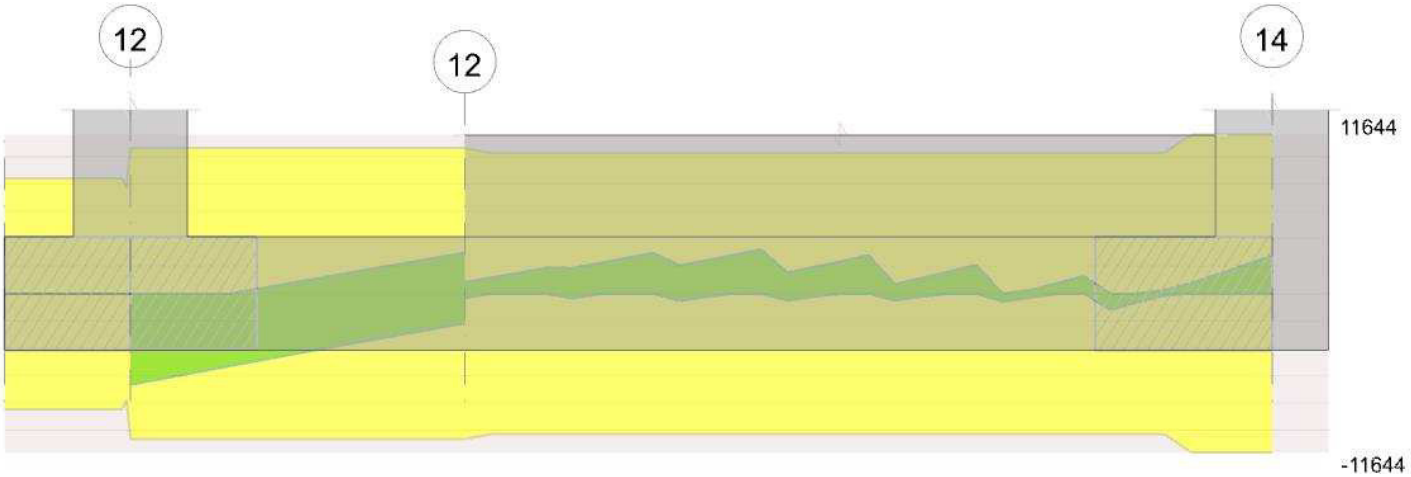


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 12 - 12, sezione R 50x45, asta 219

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0	0	0.000295	0.052	3559.89	SLU 81	2843.93	4499.97	0.051	1.58							Si
0.23	0.000221	0.052	0.00047	0.052	2259.53	SLU 81	2259.53	7177.8	0.102	3.18							Si
0.66	0.000458	0.052	0.000509	0.052	484.98	SLU 81	1093.15	7751.9	0.112	7.09	199.56	SLU 2	-33.06	-7054.22	0.11	213.41	Si
1.32	0.000509	0.052	0.000509	0.052							-345.21	SLU 81	-361.74	-7755.45	0.113	21.44	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0	0	0.000295	0.052	4272.23	SLV 8	3522.54	4303.81	0.158	1.22							Si
0.23	0.000221	0.052	0.00047	0.052	2860.24	SLV 8	2860.24	6732	0.194	2.35	-162.03	SLV 9	-212.31	-3244.85	0.136	15.28	Si
0.66	0.000458	0.052	0.000509	0.052	629.07	SLV 8	1461.3	7267.64	0.198	4.97	-108.61	SLV 9	-202.16	-6566.19	0.188	32.48	Si
1.32	0.000509	0.052	0.000509	0.052	1198.09	SLV 5	1198.09	7266.79	0.197	6.07	-1571.9	SLV 12	-1571.9	-7266.79	0.197	4.62	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000076	0.00047	0	-6368	SLU 81	-6368	-7764	-63178	-10645	-10645	1	1.67	Si
0.23	0.0000076	0.00047	0	-5195	SLU 81	-5195	-7764	-63178	-10645	-10645	1	2.05	Si
0.66	0.0000076	0.000501	0	-2934	SLU 81	-2934	-7764	-63178	-10645	-10645	1	3.63	Si
1.32	0.0000076	0.000509	0	662	SLU 44	662	7764	63178	10645	10645	1	16.09	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000076	0.00047	0	-6673	SLV 8	-6673	-7764	-63178	-10645	-10645	1	1.6	Si
0.23	0.0000076	0.00047	0	-5887	SLV 8	-5887	-7764	-63178	-10645	-10645	1	1.81	Si
0.66	0.0000076	0.000242	0	852	SLV 9	852	7764	63178	10645	10645	1	12.49	Si
0.66	0.0000076	0.000501	0	-4379	SLV 8	-4379	-7764	-63178	-10645	-10645	1	2.43	Si
1.32	0.0000076	0.000509	0	2986	SLV 5	2986	7764	63178	10645	10645	1	3.56	Si
1.32	0.0000076	0.000509	0	-2181	SLV 12	-2181	-7764	-63178	-10645	-10645	1	4.88	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	2556.89	18	2038.72	118549	1494000	1726270	36000000	2159.22	2	1711.75	99536	1120500			Si
0.23	1616.54	18	1616.54	89686	1494000	1312847	36000000	1349.1	2	1349.1	74848	1120500			Si
0.66	338.24	18	775.2	41326	1494000	616862	36000000	260.23	2	629.57	33563	1120500			Si
1.32	-241.29	18	-257	13594	1494000	203907	36000000	-186.91	2	-211.86	11206	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0.23	-3224	-2664	-10645	SLV 8	0.36	1618	1.653	1349.1	-1511.13	-3244.85	SLV 9	0.36	1618	1.653	Si
0.66	-1763	-2616	-10645	SLV 8	0.36	1618	1.653	629.57	831.73	7267.64	SLV 8	0.36	1618	1.653	Si
1.32	403	2583	10645	SLV 5	0.36	1618	1.653	-186.91	-1384.99	-7266.79	SLV 12	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 12 - 12, sezione R 50x45, asta 219

Campata 3 tra i fili 12 - 14, sezione R 50x45, aste 218, 217, 216, 215, 214, 213, 212

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	786	SLU 82	0.032	6029	2417	SLU 82	15877	Si
1.6	0.41	0.0004	821	SLU 81	0.031	5835	2526	SLU 81	15877	Si
2.97	0.41	0.0004	1013	SLV 8	0.124	5616	3152	SLU 81	15877	Si
3.2	0.41	0.0004	1090	SLV 8	0.124	5616	3354	SLV 8	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.0000038	568	SLE RA 19	16000	1494000	198405	36000000	491	SLE QP 2	13825	1120500	Si
1.6	0.41	0.00000367	595	SLE RA 18	16798	1494000	208290	36000000	519	SLE QP 2	14639	1120500	Si
2.97	0.41	0.00000367	744	SLE RA 18	21004	1494000	260447	36000000	652	SLE QP 2	18391	1120500	Si
3.2	0.41	0.00000367	785	SLE RA 18	22157	1494000	274745	36000000	688	SLE QP 2	19417	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	15	2	159	SLV 3	0.36	1618	1.653	4.91	0.6	58	SLV 3	0.36	1618	1.653	Si
1.6	16	5	159	SLV 7	0.36	1618	1.653	5.19	1.53	56.16	SLV 7	0.36	1618	1.653	Si
2.97	20	11	159	SLV 8	0.36	1618	1.653	6.52	3.61	56.16	SLV 8	0.36	1618	1.653	Si
3.2	21	12	159	SLV 8	0.36	1618	1.653	6.88	4.02	56.16	SLV 8	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.74	1.1	SLU 31	ST	LT	-375	-58	-25508	-1	0	19	0	0	1.1	7759	380	20.43	Si
4.74	1.1	SLV 14	SIS	LT	-891	-3166	-19895	-3	-9	19	0	0	1.1	6052	3289	1.84	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
219,218,217,216,215,214,213,212	4.74	1.1	SLU 81	ST	BT	2.3	220251	32220	6.84	Si
219,218,217,216,215,214,213,212	4.74	1.1	SLV 7	SIS	BT	2.3	198044	25159	7.87	Si
219,218,217,216,215,214,213,212	4.74	1.1	SLD 7	SIS	BT	2.3	210493	23389	9	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-73	-32220	68.91	1495.95	0	0	0.05	0	1.1	4.65	1496	2060	0	14430	
0	1071	-25159	-461.12	5335.64	0	2	0.21	-0.02	1.06	4.32	1496	2060	0	14430	0.07
0	439	-23389	-175.56	2956.27	0	1	0.13	-0.01	1.08	4.49	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

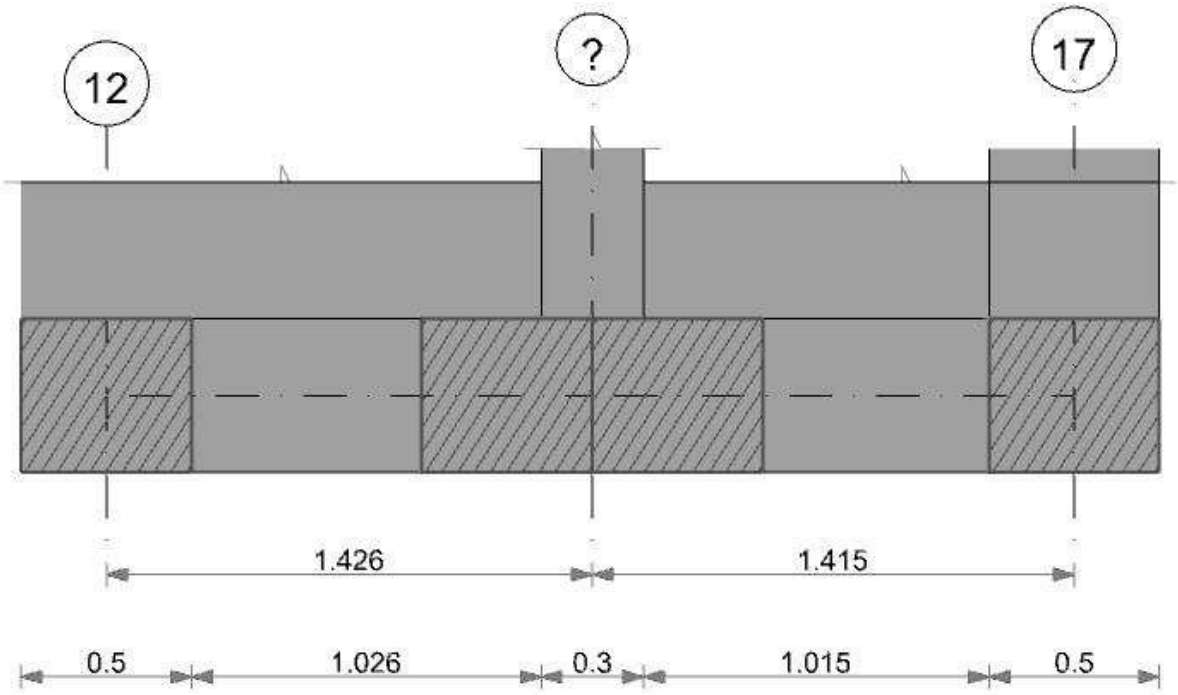
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	237	SLE RA 1	0.05	0	237	237	SLE RA 1	0.05	0	307	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	237	SLE RA 1	0.05	0	237	237	SLE RA 1	0.05	0	307	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	237	SLE RA 1	0.05	0	237	237	SLE RA 1	0.05	0	307	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	237	307	SLE RA 1	0.19	0	237	SLE RA 1	0.1	0	307	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	237	307	SLE RA 1	0.19	0	237	SLE RA 1	0.1	0	307	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	237	307	SLE RA 1	0.19	0	237	SLE RA 1	0.1	0	307	SLE RA 1	Si

CORDOLO 7

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

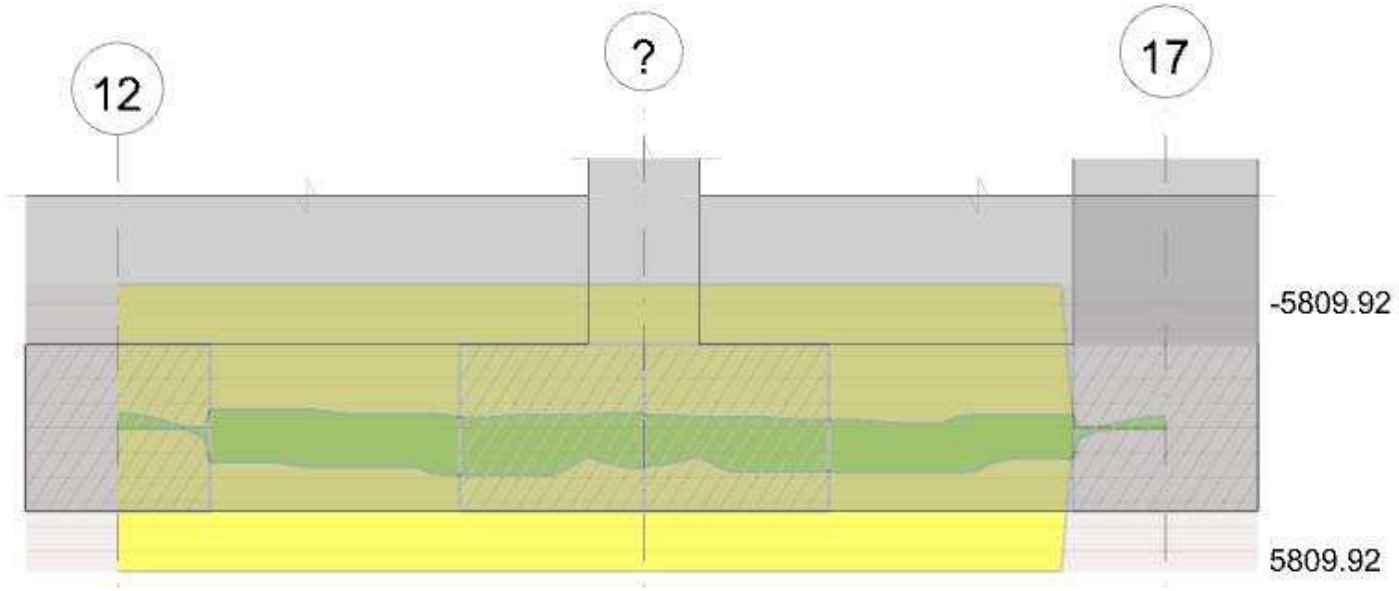
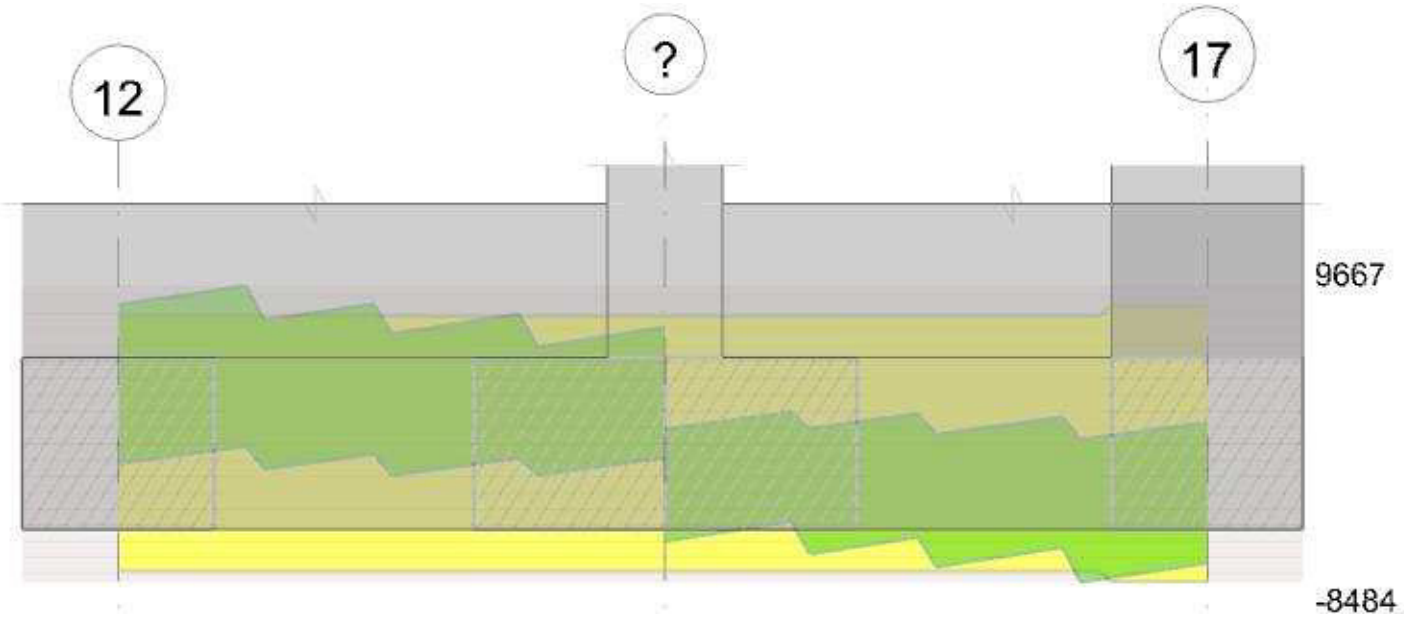


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 12 - ?, sezione R 50x45, aste 243, 242, 241, 240

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	652	SLU 81	0.018	2874	2268	SLU 81	15877	Si
0.25	0.41	0.0002	657	SLU 81	0.018	2874	2283	SLU 81	15877	Si
0.71	0.41	0.0002	663	SLU 81	0.018	2874	2308	SLU 81	15877	Si
1.28	0.41	0.0002	667	SLU 81	0.018	2874	2319	SLU 81	15877	Si
1.43	0.41	0.0002	667	SLU 81	0.018	2893	2318	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.0000018	471	SLE RA 18	13606	1494000	168716	36000000	404	SLE QP 2	11686	1120500	Si
0.25	0.41	0.0000018	474	SLE RA 18	13700	1494000	169883	36000000	407	SLE QP 2	11766	1120500	Si
0.71	0.41	0.0000018	479	SLE RA 18	13845	1494000	171672	36000000	411	SLE QP 2	11889	1120500	Si
1.28	0.41	0.0000018	481	SLE RA 18	13911	1494000	172491	36000000	413	SLE QP 2	11945	1120500	Si
1.43	0.41	0.00000181	481	SLE RA 18	13907	1494000	172450	36000000	413	SLE QP 2	11942	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	14	2	159	SLV 3	0.36	1618	1.653	4.04	0.46	27.93	SLV 3	0.36	1618	1.653	Si
0.25	14	0	14	SLV 16	0.36	1618	1.653	4.07	0.4	27.93	SLV 3	0.36	1618	1.653	Si
0.71	14	0	14	SLV 16	0.36	1618	1.653	4.11	0.38	27.93	SLV 7	0.36	1618	1.653	Si
1.28	14	0	37	SLV 16	0.36	1618	1.653	4.13	0.39	27.93	SLV 7	0.36	1618	1.653	Si
1.43	14	0	41	SLV 16	0.36	1618	1.653	4.13	0.39	28.12	SLV 7	0.36	1618	1.653	Si

Campata 2 tra i fili ? - 17, sezione R 50x45, aste 239, 238, 237, 236

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	667	SLU 81	0.018	2893	2318	SLU 81	15877	Si
0.15	0.41	0.0002	666	SLU 81	0.018	2893	2318	SLU 81	15877	Si
0.71	0.41	0.0002	662	SLU 81	0.018	2893	2301	SLU 81	15877	Si
1.16	0.41	0.0002	653	SLU 81	0.018	2893	2271	SLU 81	15877	Si
1.41	0.41	0.0002	647	SLU 81	0.018	2893	2251	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000181	481	SLE RA 18	13907	1494000	172450	36000000	413	SLE QP 2	11942	1120500	Si
0.15	0.41	0.00000181	481	SLE RA 18	13903	1494000	172392	36000000	413	SLE QP 2	11938	1120500	Si
0.71	0.41	0.00000181	477	SLE RA 18	13803	1494000	171156	36000000	410	SLE QP 2	11850	1120500	Si
1.16	0.41	0.00000181	471	SLE RA 18	13619	1494000	168874	36000000	404	SLE QP 2	11690	1120500	Si
1.41	0.41	0.00000181	467	SLE RA 18	13499	1494000	167387	36000000	401	SLE QP 2	11586	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	14	0	41	SLV 16	0.36	1618	1.653	4.13	0.39	28.12	SLV 7	0.36	1618	1.653	Si
0.15	14	1	75	SLV 16	0.36	1618	1.653	4.13	0.4	28.12	SLV 11	0.36	1618	1.653	Si
0.71	14	1	121	SLV 16	0.36	1618	1.653	4.1	0.39	28.12	SLV 12	0.36	1618	1.653	Si
1.16	14	1	156	SLV 16	0.36	1618	1.653	4.04	0.41	28.12	SLV 16	0.36	1618	1.653	Si
1.41	14	2	159	SLV 16	0.36	1618	1.653	4.01	0.47	28.12	SLV 16	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.34	1.1	SLU 31	ST	LT	23	-132	-16392	0	0	19	0	0	1.1	4986	134	37.13	Si
3.34	1.1	SLV 14	SIS	LT	1823	-589	-13833	8	-2	19	0	0	1.1	4208	1916	2.2	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
243,242,241,240,239,238,237,236	3.34	1.1	SLU 82	ST	BT	2.3	160144	20638	7.76	Si
243,242,241,240,239,238,237,236	3.34	1.1	SLV 12	SIS	BT	2.3	141471	14606	9.69	Si
243,242,241,240,239,238,237,236	3.34	1.1	SLD 12	SIS	BT	2.3	152474	14272	10.68	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-137	-20638	51.46	-6.22	0	0	0	0	1.1	3.34	1496	2060	0	14430	
0	1613	-14606	-778.7	359.15	0	6	0.02	-0.05	0.99	3.29	1496	2060	0	14430	0.07
0	672	-14272	-330.7	154.91	0	3	0.01	-0.02	1.05	3.32	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.07	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.06	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.06	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

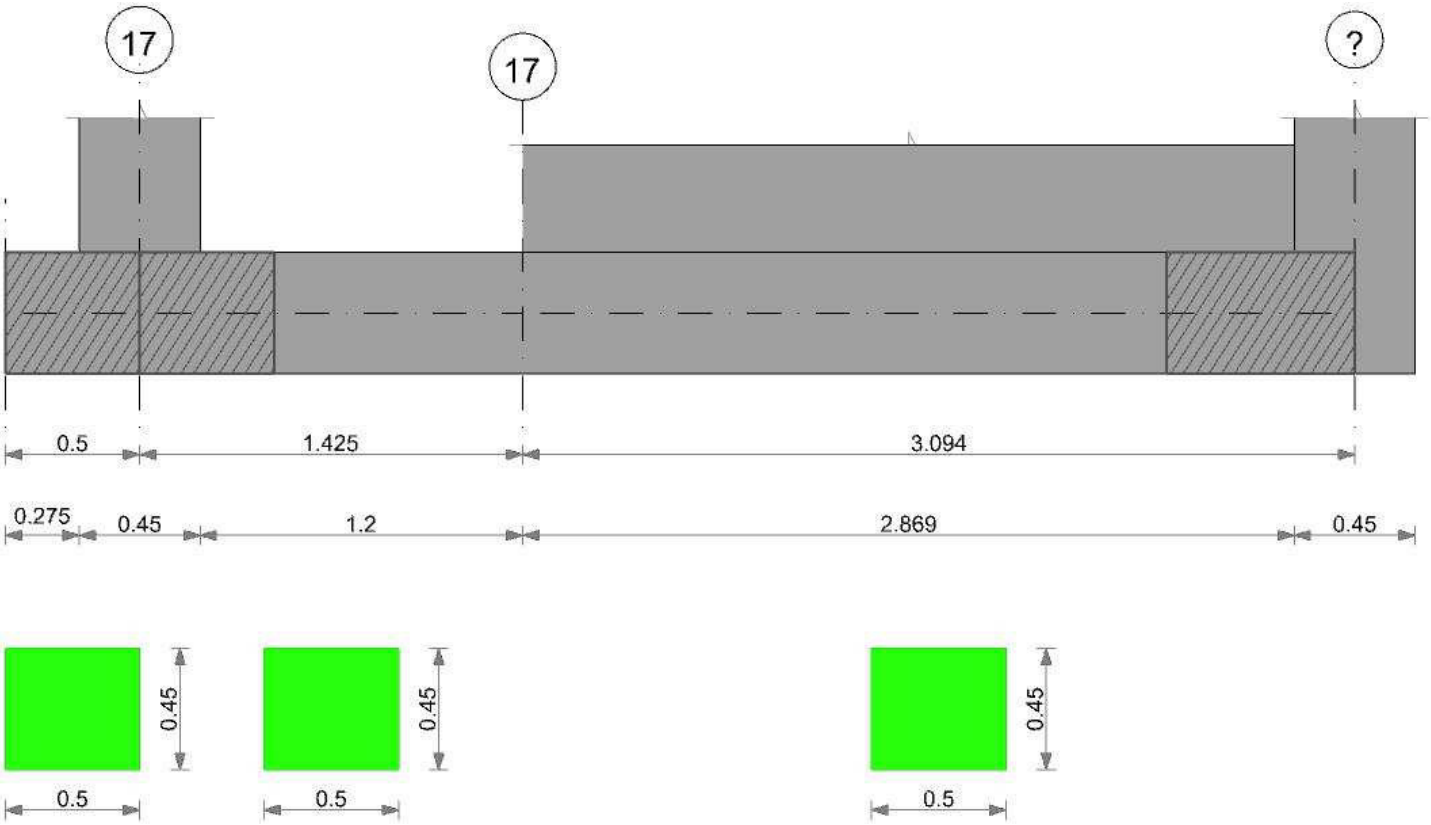
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	295	SLE RA 1	0.05	0	295	295	SLE RA 1	0.05	0	291	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	295	SLE RA 1	0.05	0	295	295	SLE RA 1	0.05	0	291	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	295	SLE RA 1	0.05	0	295	295	SLE RA 1	0.05	0	291	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	295	291	SLE RA 1	0.19	0	295	SLE RA 1	0.1	0	291	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	295	291	SLE RA 1	0.19	0	295	SLE RA 1	0.1	0	291	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	295	291	SLE RA 1	0.19	0	295	SLE RA 1	0.1	0	291	SLE RA 1	Si

CORDOLO 8

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

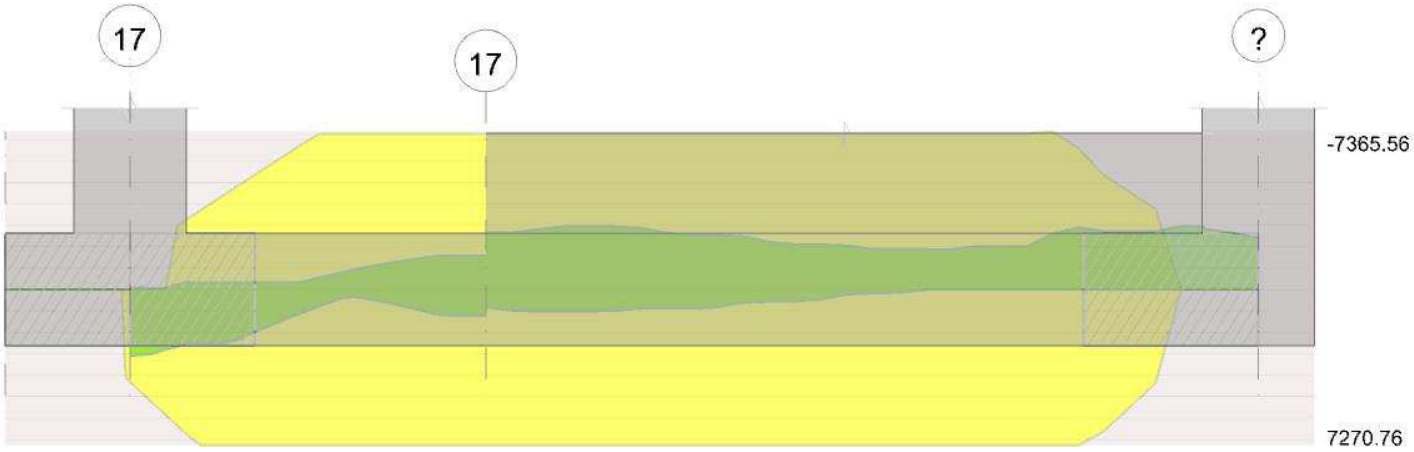
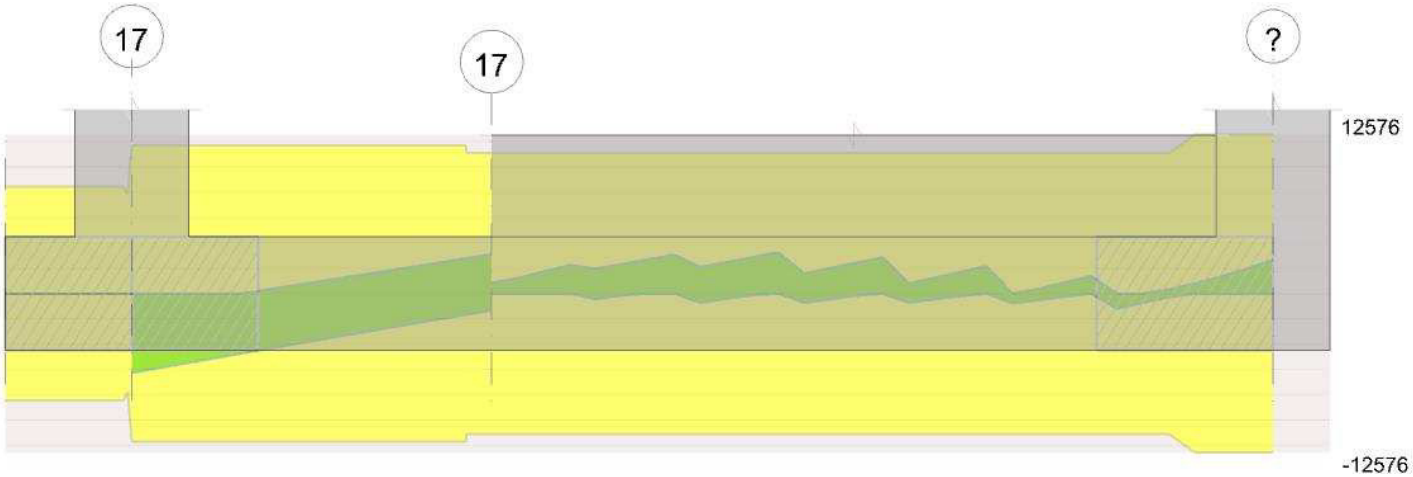


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 17 - 17, sezione R 50x45, asta 227

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0	0	0.000295	0.052	3111.19	SLU 81	2428.18	4499.97	0.051	1.85							Si
0.23	0.000221	0.052	0.00047	0.052	1875.18	SLU 81	1875.18	7177.8	0.102	3.83							Si
0.71	0.000486	0.052	0.000509	0.052	107.16	SLU 39	604.96	7753.88	0.113	12.82	-27.73	SLU 44	-256.92	-7433.41	0.112	28.93	Si
1.43	0.000509	0.052	0.000509	0.052							-335.61	SLU 81	-468.24	-7755.45	0.113	16.56	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.000221	0.052	0.00047	0.052	2494.85	SLV 11	2494.85	6732	0.194	2.7	-257.91	SLV 6	-328.31	-3244.85	0.136	9.88	Si
0.71	0.000486	0.052	0.000509	0.052	251.83	SLV 11	977.08	7267.25	0.198	7.44	-219.47	SLV 6	-413.12	-6945.43	0.193	16.81	Si
1.43	0.000509	0.052	0.000509	0.052	1213	SLV 10	1213	7266.79	0.197	5.99	-1581.51	SLV 7	-1581.51	-7266.79	0.197	4.59	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.00047	0	-6081	SLU 81	-6081	-7764	-63178	-11710	-11710	1	1.93	Si
0.23	0.0000084	0.00047	0	-4916	SLU 81	-4916	-7764	-63178	-11710	-11710	1	2.38	Si
0.71	0.0000084	0.000509	0	-2405	SLU 81	-2405	-7764	-63178	-11710	-11710	1	4.87	Si
1.43	0.0000079	0.000509	0	1236	SLU 73	1236	7764	63178	11122	11122	1	9	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.00047	0	-6264	SLV 11	-6264	-7764	-63178	-11710	-11710	1	1.87	Si
0.23	0.0000084	0.00047	0	-5470	SLV 7	-5470	-7764	-63178	-11710	-11710	1	2.14	Si
0.71	0.0000084	0.000279	0	857	SLV 10	857	7764	63178	11710	11710	1	13.67	Si
0.71	0.0000084	0.000509	0	-3759	SLV 7	-3759	-7764	-63178	-11710	-11710	1	3.12	Si
1.43	0.0000079	0.000509	0	3094	SLV 10	3094	7764	63178	11122	11122	1	3.59	Si
1.43	0.0000079	0.000509	0	-1330	SLV 7	-1330	-7764	-63178	-11122	-11122	1	8.36	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	2235.85	18	1740.87	101230	1494000	1474068	36000000	1893.28	2	1463.98	85129	1120500			Si
0.23	1340.74	18	1340.74	74384	1494000	1088858	36000000	1118.47	2	1118.47	62053	1120500			Si
0.71	53.52	18	423.13	22461	1494000	336164	36000000	16.18	2	329.78	17506	1120500			Si
0.71	-0.49	2	-194.91	10324	1494000	155203	36000000								Si
1.43	-235.27	18	-337.95	17875	1494000	268132	36000000	-184.25	2	-289.41	15308	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0.23	-3071	-2399	-11710	SLV 7	0.36	1618	1.653	1118.47	-1376.38	-3244.85	SLV 6	0.36	1618	1.653	Si
0.71	-1451	-2308	-11710	SLV 7	0.36	1618	1.653	329.78	647.3	7267.25	SLV 11	0.36	1618	1.653	Si
1.43	882	2212	11122	SLV 10	0.36	1618	1.653	-184.25	-1397.26	-7266.79	SLV 7	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 17 - 17, sezione R 50x45, asta 227

Campata 3 tra i fili 17 - ?, sezione R 50x45, aste 226, 225, 224, 223, 222, 221, 220

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	793	SLU 81	0.033	6296	2438	SLU 81	15877	Si
1.55	0.41	0.0004	843	SLU 81	0.033	6296	2595	SLU 81	15877	Si
2.87	0.41	0.0004	1019	SLV 11	0.128	6053	3171	SLU 81	15877	Si
3.09	0.41	0.0004	1095	SLV 11	0.128	6053	3368	SLV 11	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000397	573	SLE RA 18	16105	1494000	199700	36000000	495	SLE QP 2	13912	1120500	Si
1.55	0.41	0.00000397	611	SLE RA 18	17185	1494000	213090	36000000	532	SLE QP 2	14962	1120500	Si
2.87	0.41	0.00000397	749	SLE RA 18	21041	1494000	260912	36000000	655	SLE QP 2	18410	1120500	Si
3.09	0.41	0.00000397	788	SLE RA 18	22139	1494000	274529	36000000	690	SLE QP 2	19389	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	15	2	159	SLV 16	0.36	1618	1.653	4.95	0.52	60.53	SLV 16	0.36	1618	1.653	Si
1.55	16	5	159	SLV 12	0.36	1618	1.653	5.32	1.62	60.53	SLV 12	0.36	1618	1.653	Si
2.87	20	11	159	SLV 11	0.36	1618	1.653	6.55	3.64	60.53	SLV 11	0.36	1618	1.653	Si
3.09	21	12	159	SLV 11	0.36	1618	1.653	6.9	4.05	60.53	SLV 11	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.74	1.1	SLU 31	ST	LT	-339	4	-25693	-1	0	19	0	0	1.1	7815	339	23.04	Si
4.74	1.1	SLV 1	SIS	LT	-765	3105	-20215	-2	9	19	0	0	1.1	6149	3198	1.92	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
227,226,225,224,223,222,221,220	4.74	1.1	SLU 81	ST	BT	2.3	220291	32449	6.79	Si
227,226,225,224,223,222,221,220	4.74	1.1	SLV 12	SIS	BT	2.3	197767	25349	7.8	Si
227,226,225,224,223,222,221,220	4.74	1.1	SLD 12	SIS	BT	2.3	209913	23546	8.92	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	4	-32449	-37.41	1657.13	0	0	0.05	0	1.1	4.64	1496	2060	0	14430	
0	-1092	-25349	474.45	5407.69	0	-2	0.21	0.02	1.06	4.32	1496	2060	0	14430	0.07
0	-476	-23546	193.72	3044.12	0	-1	0.13	0.01	1.08	4.49	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

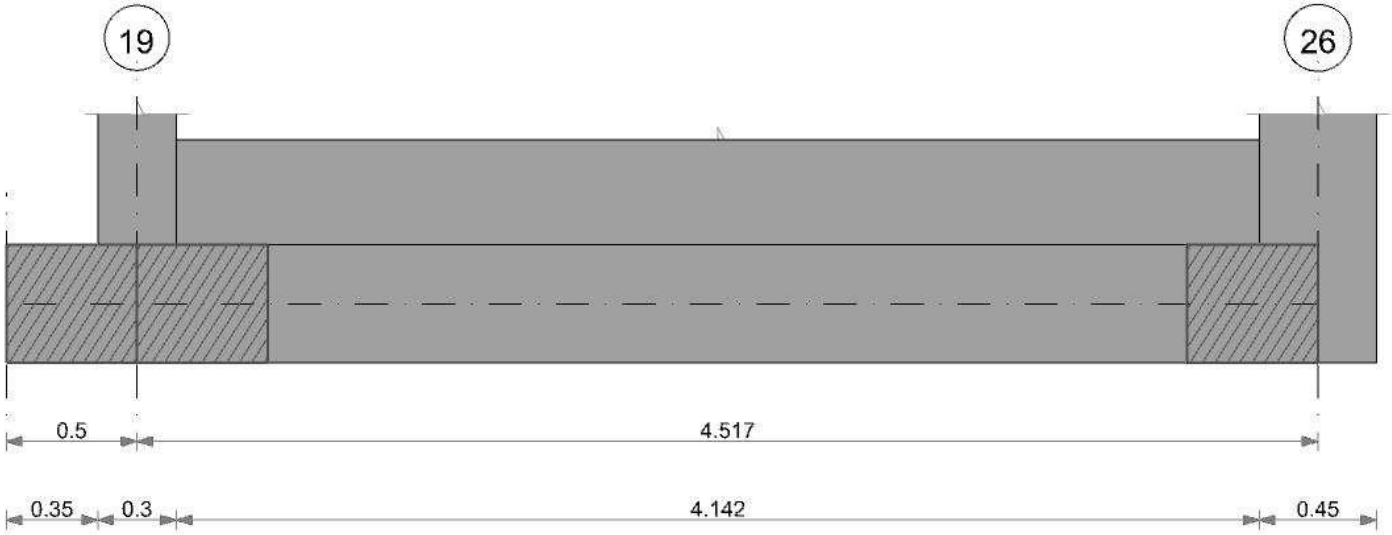
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	247	SLE RA 1	0.05	0	247	247	SLE RA 1	0.05	0	308	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	247	SLE RA 1	0.05	0	247	247	SLE RA 1	0.05	0	308	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	247	SLE RA 1	0.05	0	247	247	SLE RA 1	0.05	0	308	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	247	308	SLE RA 1	0.19	0	247	SLE RA 1	0.1	0	308	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	247	308	SLE RA 1	0.19	0	247	SLE RA 1	0.1	0	308	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	247	308	SLE RA 1	0.19	0	247	SLE RA 1	0.1	0	308	SLE RA 1	Si

CORDOLO 9

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

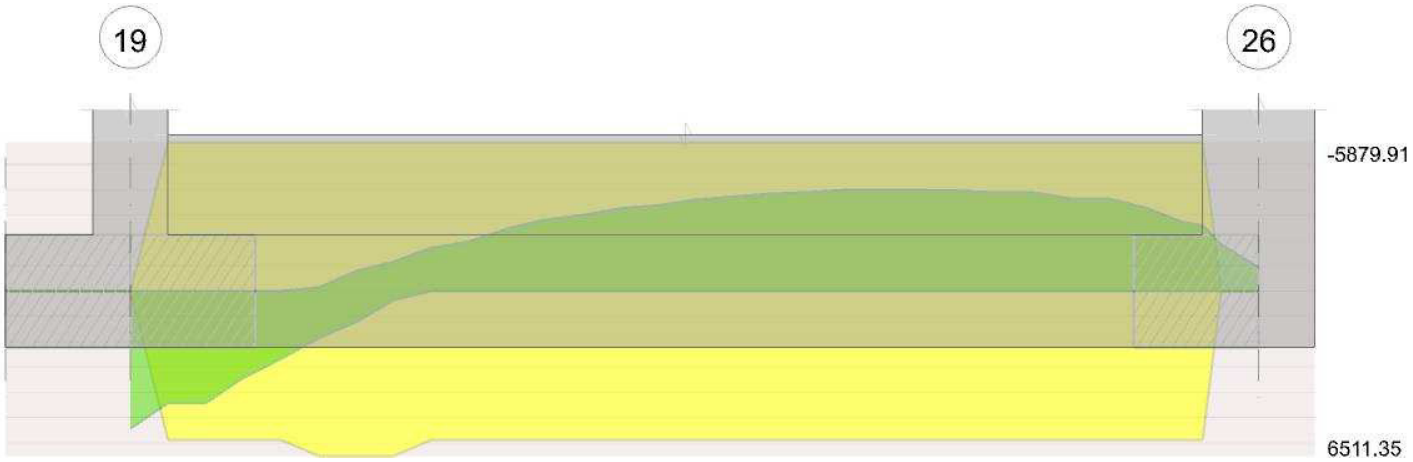


Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 19 - 26, sezione R 70x45, aste 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1382	SLV 11	0.085	2635	3641	SLU 81	15877	Si
0.15	0.41	0.0002	1378	SLV 11	0.085	2635	3624	SLU 81	15877	Si
2.26	0.41	0.0002	1218	SLV 11	0.085	2635	3142	SLV 11	15877	Si
4.29	0.41	0.0002	1689	SLV 11	0.085	2635	4358	SLV 11	15877	Si
4.52	0.41	0.0002	1784	SLV 11	0.085	2635	4605	SLV 11	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.0000017	1025	SLE RA 18	29678	1494000	368003	36000000	896	SLE QP 2	25949	1120500	Si
0.15	0.41	0.0000017	1020	SLE RA 18	29538	1494000	366266	36000000	892	SLE QP 2	25825	1120500	Si
2.26	0.41	0.0000017	857	SLE RA 18	24807	1494000	307603	36000000	748	SLE QP 2	21651	1120500	Si
4.29	0.41	0.0000017	1145	SLE RA 18	33143	1494000	410974	36000000	1007	SLE QP 2	29149	1120500	Si
4.52	0.41	0.0000017	1208	SLE RA 18	34970	1494000	433630	36000000	1063	SLE QP 2	30786	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	23	13	159	SLV 11	0.36	1618	1.653	8.96	4.86	26.35	SLV 11	0.36	1618	1.653	Si
0.15	23	13	159	SLV 11	0.36	1618	1.653	8.92	4.86	26.35	SLV 11	0.36	1618	1.653	Si
2.26	19	12	159	SLV 11	0.36	1618	1.653	7.48	4.7	26.35	SLV 11	0.36	1618	1.653	Si
4.29	26	18	159	SLV 11	0.36	1618	1.653	10.07	6.82	26.35	SLV 11	0.36	1618	1.653	Si
4.52	27	19	159	SLV 11	0.36	1618	1.653	10.63	7.21	26.35	SLV 11	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.74	1.3	SLU 2	ST	LT	-62	-49	-25545	0	0	19	0	0	1.1	7770	79	98.31	Si
4.74	1.3	SLV 6	SIS	LT	-623	-3792	-17396	-2	-12	19	0	0	1.1	5291	3843	1.38	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
22,23,24,25,26,27,28,29,30,31,32,33	4.74	1.3	SLU 81	ST	BT	2.3	219822	40282	5.46	Si
22,23,24,25,26,27,28,29,30,31,32,33	4.74	1.3	SLV 11	SIS	BT	2.3	190253	37707	5.05	Si
22,23,24,25,26,27,28,29,30,31,32,33	4.74	1.3	SLD 11	SIS	BT	2.3	205394	32021	6.41	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	80	-40282	-3664.97	945.69	0	0	0.02	-0.09	1.12	4.7	1496	2060	0	14430	
0	3893	-37707	-5599.13	2368.91	0	6	0.06	-0.15	1	4.62	1496	2060	0	14430	0.07
0	1743	-32021	-3806.92	1408.25	0	3	0.04	-0.12	1.06	4.65	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

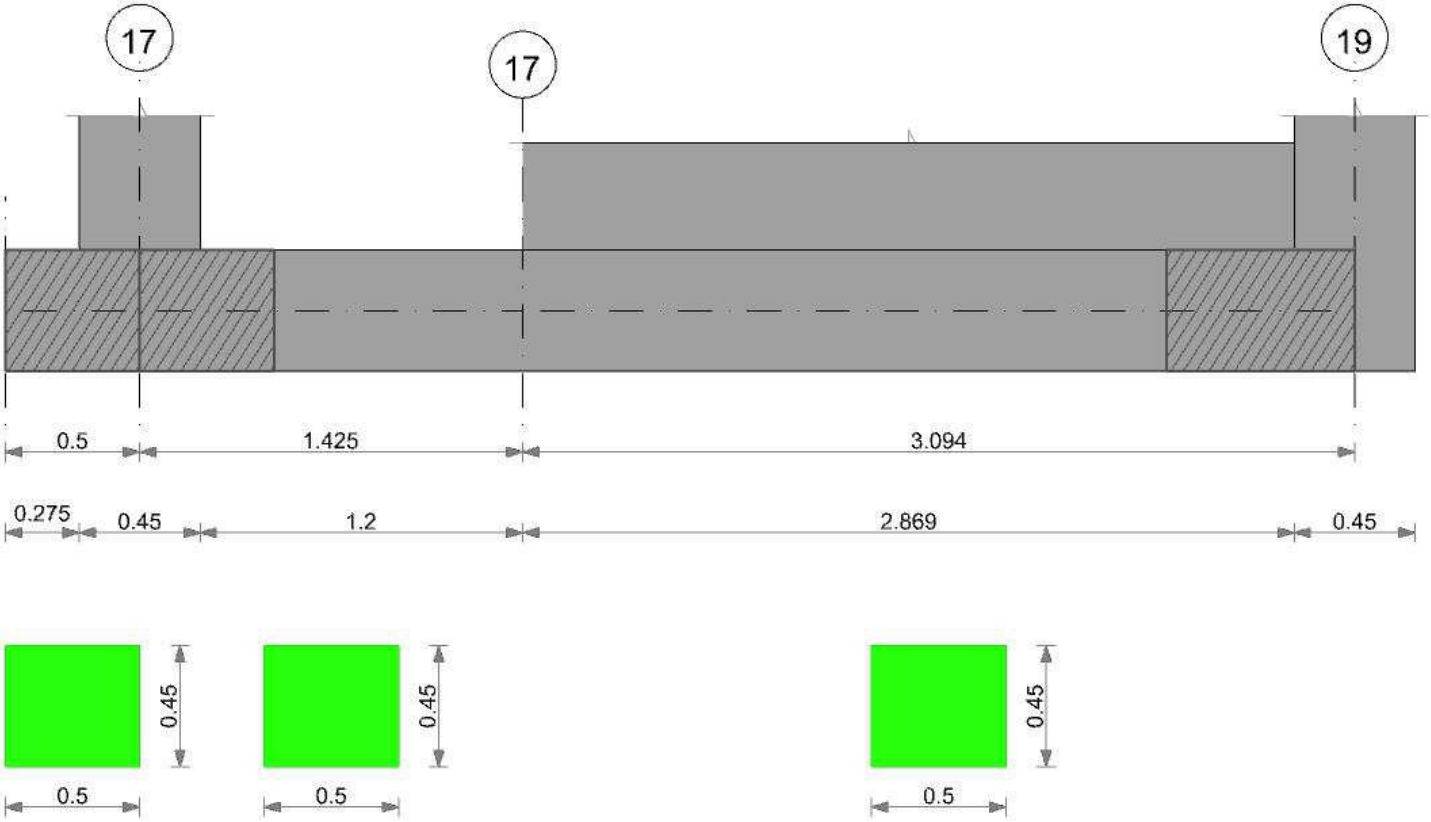
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	410	SLE RA 1	0.05	0	410	410	SLE RA 1	0.05	0	410	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	410	SLE RA 1	0.05	0	410	410	SLE RA 1	0.05	0	410	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	410	SLE RA 1	0.05	0	410	410	SLE RA 1	0.05	0	410	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	410	398	SLE RA 1	0.19	0	410	SLE RA 1	0.1	0	410	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	410	398	SLE RA 1	0.19	0	410	SLE RA 1	0.1	0	410	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	410	398	SLE RA 1	0.19	0	410	SLE RA 1	0.1	0	410	SLE RA 1	Si

CORDOLO 10

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

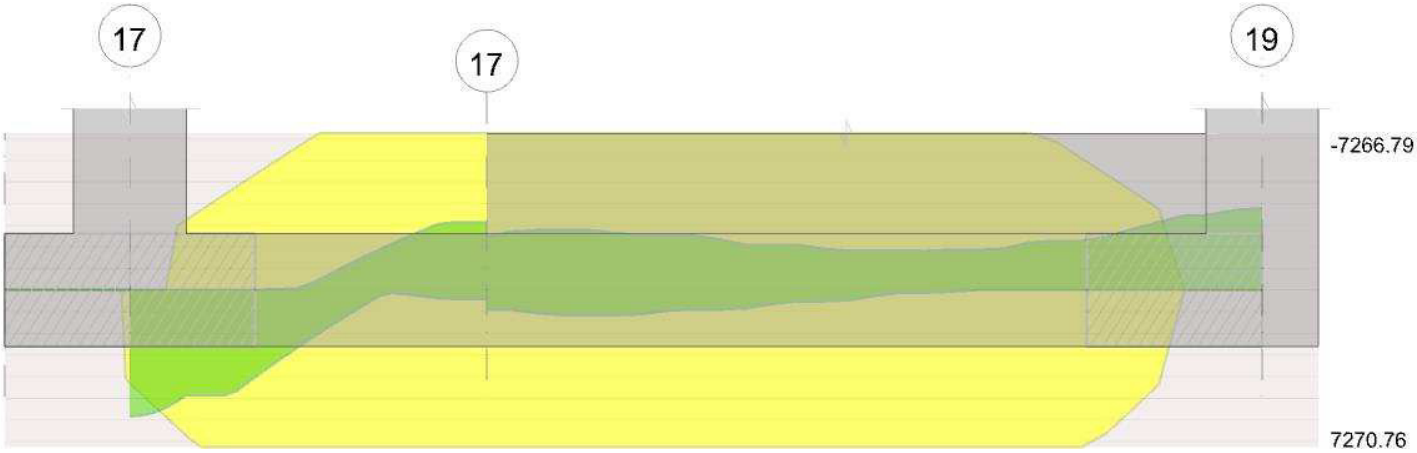
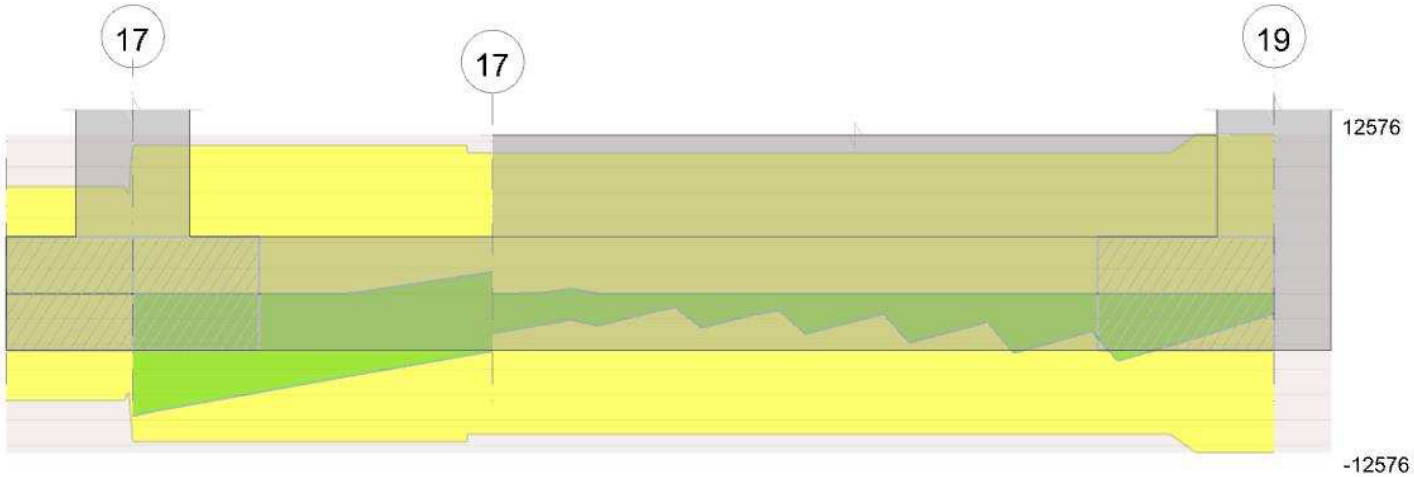


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 17 - 17, sezione R 50x45, asta 235

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.000221	0.052	0.00047	0.052	4362.36	SLU 81	4362.36	7177.8	0.102	1.65							Si
0.71	0.000486	0.052	0.000509	0.052	828.66	SLU 81	1983.68	7753.88	0.113	3.91	405	SLU 2	-178.22	-7433.41	0.112	41.71	Si
1.43	0.000509	0.052	0.000509	0.052							-2140.23	SLU 81	-2140.23	-7755.45	0.113	3.62	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.000221	0.052	0.00047	0.052	4855.54	SLV 11	4855.54	6732	0.194	1.39							Si
0.71	0.000486	0.052	0.000509	0.052	1001.14	SLV 11	2317.59	7267.25	0.198	3.14	-25.27	SLV 6	-257.9	-6945.43	0.193	26.93	Si
1.43	0.000509	0.052	0.000509	0.052	407.46	SLV 6	407.46	7266.79	0.197	17.83	-3117.44	SLV 11	-3117.44	-7266.79	0.197	2.33	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.00047	0	-9693	SLU 81	-9693	-7764	-63178	-11710	-11710	1	1.21	Si
0.23	0.0000084	0.00047	0	-8519	SLU 81	-8519	-7764	-63178	-11710	-11710	1	1.37	Si
0.71	0.0000084	0.000509	0	-5980	SLU 81	-5980	-7764	-63178	-11710	-11710	1	1.96	Si
1.43	0.0000079	0.000509	0	-2375	SLU 81	-2375	-7764	-63178	-11122	-11122	1	4.68	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.00047	0	-9594	SLV 11	-9594	-7764	-63178	-11710	-11710	1	1.22	Si
0.23	0.0000084	0.00047	0	-8788	SLV 11	-8788	-7764	-63178	-11710	-11710	1	1.33	Si
0.71	0.0000084	0.000509	0	-7030	SLV 11	-7030	-7764	-63178	-11710	-11710	1	1.67	Si
1.43	0.0000079	0.000509	0	1693	SLV 6	1693	7764	63178	11122	11122	1	6.57	Si
1.43	0.0000079	0.000509	0	-4542	SLV 11	-4542	-7764	-63178	-11122	-11122	1	2.45	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	4642.65	18	3850.93	223928	1494000	3260745	36000000	4020.07	2	3328.09	193525	1120500			Si
0.23	3154.87	18	3154.87	175032	1494000	2562173	36000000	2720.63	2	2720.63	150941	1120500			Si
0.71	590.56	18	1428.13	75811	1494000	1134609	36000000	487.93	2	1215.74	64536	1120500			Si
1.43	-1553.94	18	-1553.94	82193	1494000	1232897	36000000	-1354.99	2	-1354.99	71670	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0.23	-5400	-3389	-11710	SLV 11	0.36	1618	1.653	2720.63	2134.91	6732	SLV 11	0.36	1618	1.653	Si
0.71	-3761	-3270	-11710	SLV 11	0.36	1618	1.653	1215.74	1101.85	7267.25	SLV 11	0.36	1618	1.653	Si
1.43	-1424	-3118	-11122	SLV 11	0.36	1618	1.653	-1354.99	-1762.45	-7266.79	SLV 11	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 17 - 17, sezione R 50x45, asta 235

Campata 3 tra i fili 17 - 19, sezione R 50x45, aste 234, 233, 232, 231, 230, 229, 228

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	789	SLU 81	0.033	6296	2426	SLU 81	15877	Si
1.55	0.41	0.0004	835	SLU 81	0.033	6296	2569	SLU 81	15877	Si
2.87	0.41	0.0004	1012	SLV 11	0.128	6053	3130	SLU 81	15877	Si
3.09	0.41	0.0004	1088	SLV 11	0.128	6053	3347	SLV 11	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000397	570	SLE RA 18	16023	1494000	198685	36000000	492	SLE QP 2	13839	1120500	Si
1.55	0.41	0.00000397	605	SLE RA 18	17012	1494000	210944	36000000	527	SLE QP 2	14809	1120500	Si
2.87	0.41	0.00000397	739	SLE RA 18	20767	1494000	257511	36000000	646	SLE QP 2	18167	1120500	Si

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
3.09	0.41	0.00000397	778	SLE RA 18	21859	1494000	271049	36000000	681	SLE QP 2	19141	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	15	2	159	SLV 16	0.36	1618	1.653	4.92	0.68	60.53	SLV 16	0.36	1618	1.653	Si
1.55	16	5	159	SLV 11	0.36	1618	1.653	5.27	1.65	60.53	SLV 11	0.36	1618	1.653	Si
2.87	20	11	159	SLV 11	0.36	1618	1.653	6.46	3.66	60.53	SLV 11	0.36	1618	1.653	Si
3.09	21	13	159	SLV 11	0.36	1618	1.653	6.81	4.07	60.53	SLV 11	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
4.74	1.1	SLU 31	ST	LT	-335	26	-25613	-1	0	19	0	0	1.1	7791	336	23.16	Si
4.74	1.1	SLV 1	SIS	LT	-684	3113	-19779	-2	9	19	0	0	1.1	6016	3187	1.89	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
235,234,233,232,231,230,229,228	4.74	1.1	SLU 81	ST	BT	2.3	220812	32354	6.82	Si
235,234,233,232,231,230,229,228	4.74	1.1	SLV 12	SIS	BT	2.3	198722	25367	7.83	Si
235,234,233,232,231,230,229,228	4.74	1.1	SLD 12	SIS	BT	2.3	210687	23519	8.96	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	32	-32354	-40.89	1443.64	0	0	0.04	0	1.1	4.66	1496	2060	0	14430	
0	-1039	-25367	461.63	5207.4	0	-2	0.21	0.02	1.06	4.33	1496	2060	0	14430	0.07
0	-441	-23519	186.39	2878	0	-1	0.12	0.01	1.08	4.5	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

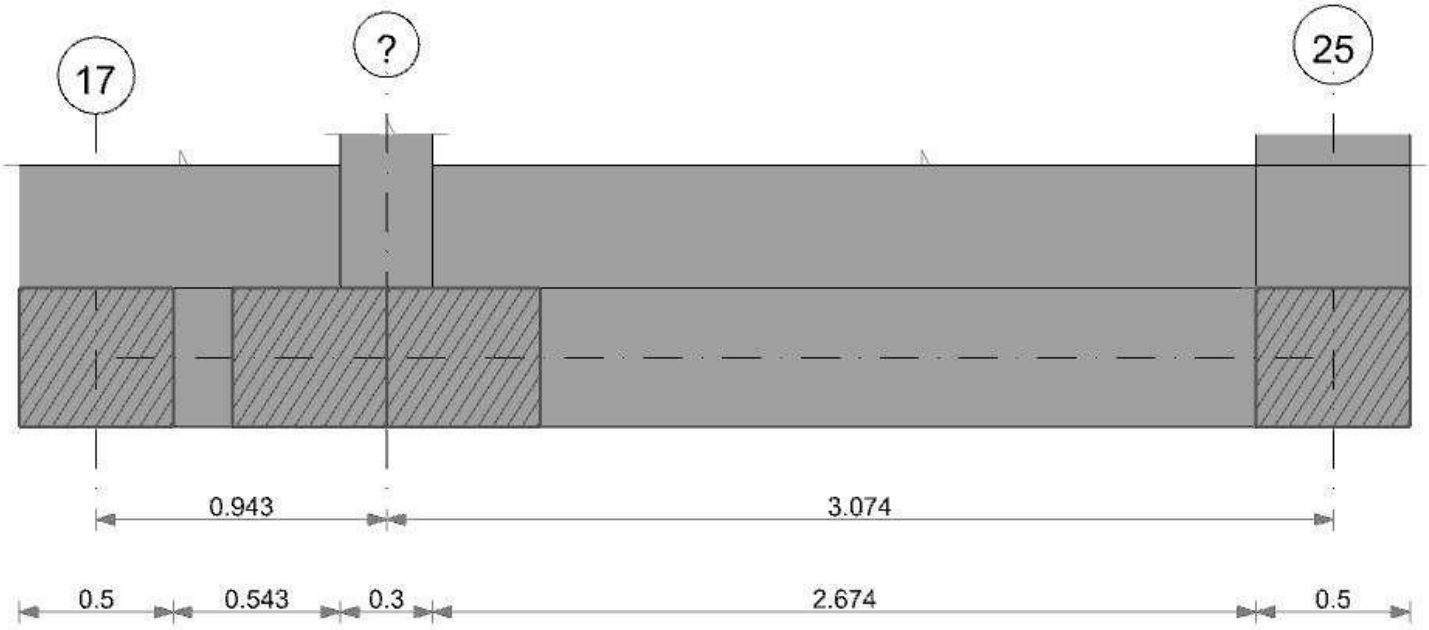
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	248	SLE RA 1	0.05	0	248	248	SLE RA 1	0.05	0	310	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	248	SLE RA 1	0.05	0	248	248	SLE RA 1	0.05	0	310	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	248	SLE RA 1	0.05	0	248	248	SLE RA 1	0.05	0	310	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	248	310	SLE RA 1	0.19	0	248	SLE RA 1	0.1	0	310	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	248	310	SLE RA 1	0.19	0	248	SLE RA 1	0.1	0	310	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	248	310	SLE RA 1	0.19	0	248	SLE RA 1	0.1	0	310	SLE RA 1	Si

CORDOLO 11

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

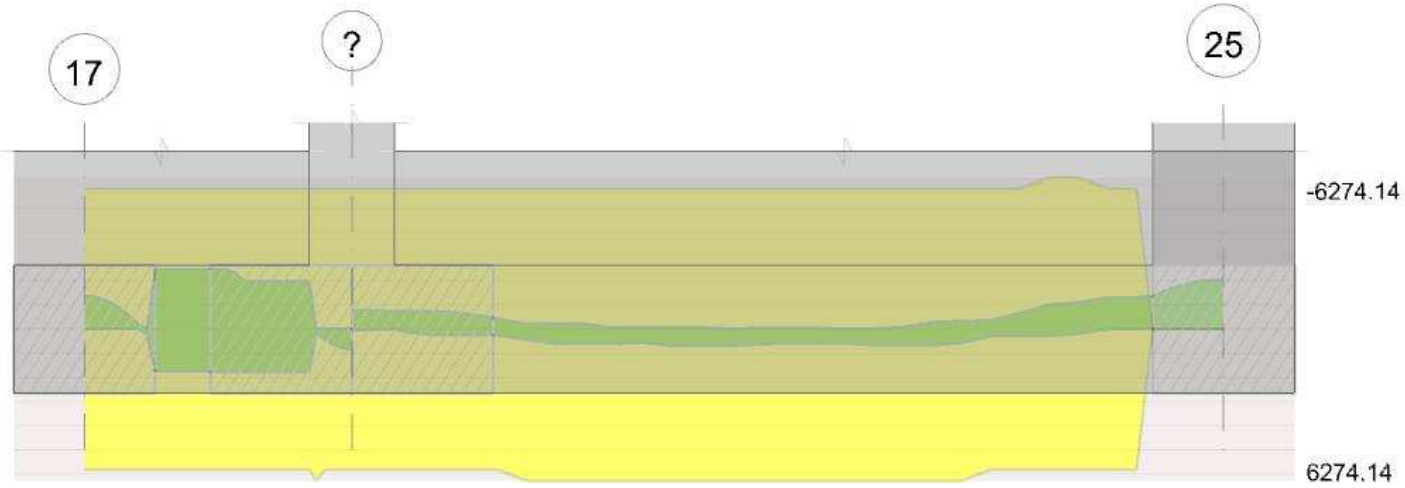
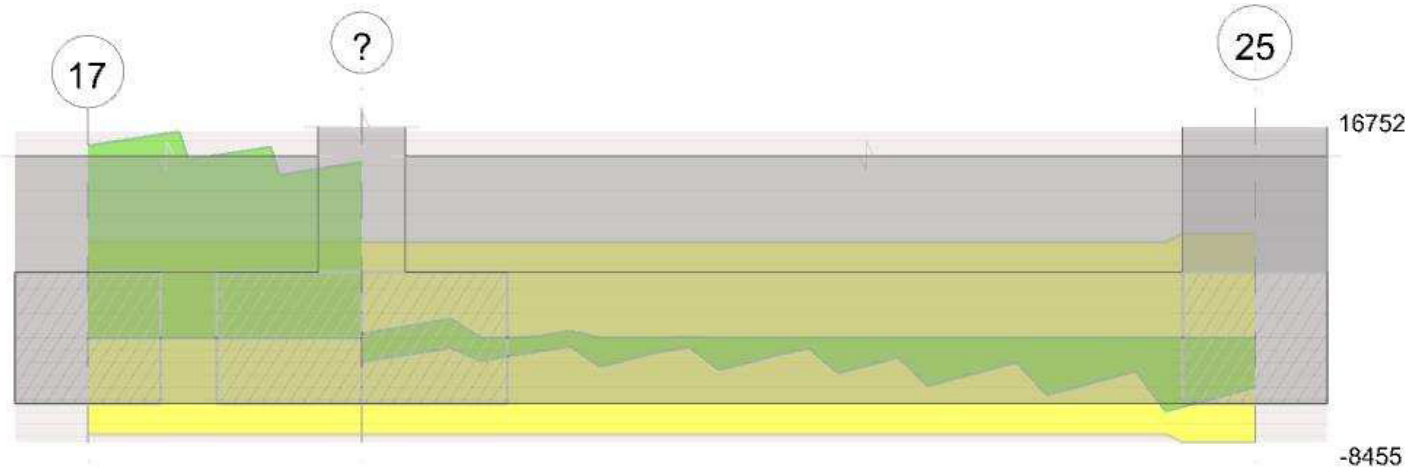


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 17 - ?, sezione R 50x45, aste 191, 190, 189

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	657	SLU 81	0.017	2692	2284	SLU 81	15877	Si
0.25	0.41	0.0002	660	SLU 81	0.017	2692	2297	SLU 81	15877	Si
0.47	0.41	0.0002	665	SLU 81	0.017	2692	2311	SLU 81	15877	Si
0.79	0.41	0.0002	673	SLU 81	0.017	2692	2339	SLU 81	15877	Si
0.94	0.41	0.0002	677	SLU 81	0.018	2897	2354	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000169	474	SLE RA 18	13726	1494000	170205	36000000	407	SLE QP 2	11790	1120500	Si
0.25	0.41	0.00000169	477	SLE RA 18	13802	1494000	171140	36000000	409	SLE QP 2	11859	1120500	Si
0.47	0.41	0.00000169	480	SLE RA 18	13892	1494000	172267	36000000	412	SLE QP 2	11942	1120500	Si
0.79	0.41	0.00000169	486	SLE RA 18	14066	1494000	174416	36000000	418	SLE QP 2	12101	1120500	Si
0.94	0.41	0.00000181	489	SLE RA 18	14132	1494000	175242	36000000	421	SLE QP 2	12163	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	14	2	159	SLV 15	0.36	1618	1.653	4.07	0.63	26.19	SLV 15	0.36	1618	1.653	Si
0.25	14	2	159	SLV 15	0.36	1618	1.653	4.09	0.71	26.19	SLV 15	0.36	1618	1.653	Si
0.47	14	3	159	SLV 15	0.36	1618	1.653	4.12	0.79	26.19	SLV 15	0.36	1618	1.653	Si
0.79	15	3	159	SLV 15	0.36	1618	1.653	4.18	0.91	26.19	SLV 15	0.36	1618	1.653	Si
0.94	15	3	159	SLV 15	0.36	1618	1.653	4.21	0.97	28.16	SLV 15	0.36	1618	1.653	Si

Campata 2 tra i fili ? - 25, sezione R 50x45, aste 188, 187, 186, 185, 184, 183, 182, 181

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	677	SLU 81	0.018	2897	2354	SLU 81	15877	Si
0.15	0.41	0.0002	681	SLU 81	0.018	2897	2370	SLU 81	15877	Si
1.54	0.41	0.0002	728	SLU 81	0.018	2897	2531	SLU 81	15877	Si
2.82	0.41	0.0002	749	SLU 81	0.018	2897	2607	SLU 81	15877	Si
3.07	0.41	0.0002	759	SLU 81	0.018	2897	2640	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000181	489	SLE RA 18	14132	1494000	175242	36000000	421	SLE QP 2	12163	1120500	Si
0.15	0.41	0.00000181	492	SLE RA 18	14231	1494000	176467	36000000	424	SLE QP 2	12254	1120500	Si
1.54	0.41	0.00000181	527	SLE RA 18	15225	1494000	188784	36000000	456	SLE QP 2	13176	1120500	Si
2.82	0.41	0.00000181	543	SLE RA 18	15712	1494000	194831	36000000	473	SLE QP 2	13672	1120500	Si
3.07	0.41	0.00000181	551	SLE RA 18	15919	1494000	197391	36000000	480	SLE QP 2	13870	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	15	3	159	SLV 15	0.36	1618	1.653	4.21	0.97	28.16	SLV 15	0.36	1618	1.653	Si
0.15	15	4	159	SLV 15	0.36	1618	1.653	4.24	1.04	28.16	SLV 15	0.36	1618	1.653	Si
1.54	16	6	159	SLV 15	0.36	1618	1.653	4.56	1.68	28.16	SLV 15	0.36	1618	1.653	Si
2.82	16	8	159	SLV 15	0.36	1618	1.653	4.73	2.33	28.16	SLV 15	0.36	1618	1.653	Si
3.07	17	9	159	SLV 15	0.36	1618	1.653	4.8	2.47	28.16	SLV 15	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.52	1.1	SLU 43	ST	LT	-144	92	-25390	0	0	19	0	0	1.1	7723	171	45.14	Si
4.52	1.1	SLV 3	SIS	LT	-2833	1424	-17915	-9	5	19	0	0	1.1	5449	3171	1.72	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
191,190,189,188,187,186,185,184,183,182,181	4.52	1.1	SLU 81	ST	BT	2.3	211552	31857	6.64	Si
191,190,189,188,187,186,185,184,183,182,181	4.52	1.1	SLV 15	SIS	BT	2.3	194756	25846	7.54	Si
191,190,189,188,187,186,185,184,183,182,181	4.52	1.1	SLD 15	SIS	BT	2.3	203338	23463	8.67	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	121	-31857	-40.12	1000.57	0	0	0.03	0	1.1	4.45	1496	2060	0	14430	
0	933	-25846	-427.26	3733.69	0	2	0.14	-0.02	1.07	4.23	1496	2060	0	14430	0.07
0	456	-23463	-203.79	2031.88	0	1	0.09	-0.01	1.08	4.34	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

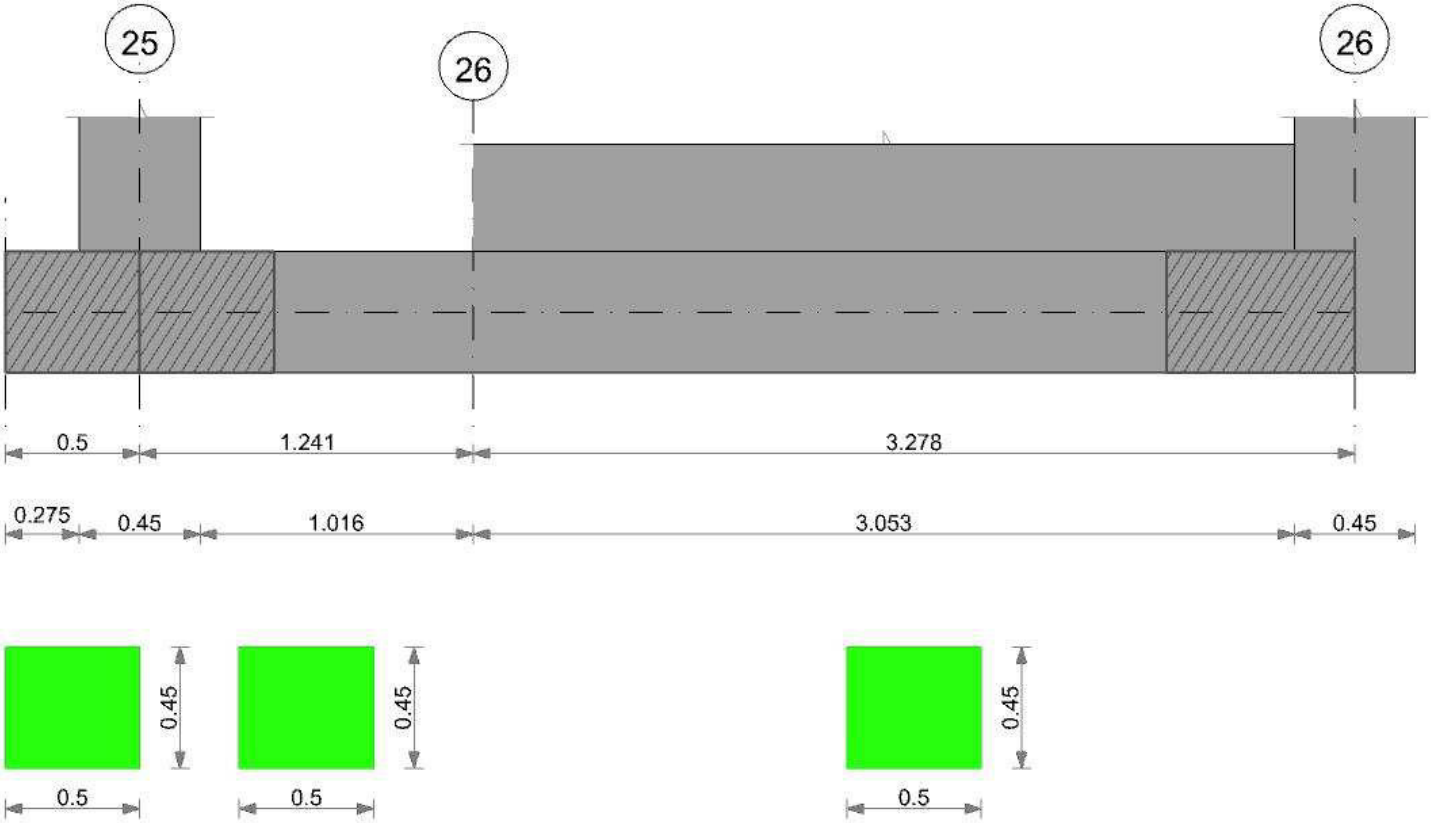
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	263	SLE RA 1	0.05	0	263	263	SLE RA 1	0.05	0	271	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	263	SLE RA 1	0.05	0	263	263	SLE RA 1	0.05	0	271	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	263	SLE RA 1	0.05	0	263	263	SLE RA 1	0.05	0	271	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	263	271	SLE RA 1	0.19	0	263	SLE RA 1	0.1	0	271	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	263	271	SLE RA 1	0.19	0	263	SLE RA 1	0.1	0	271	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	263	271	SLE RA 1	0.19	0	263	SLE RA 1	0.1	0	271	SLE RA 1	Si

CORDOLO 12

Geometria



Caratteristiche dei materiali

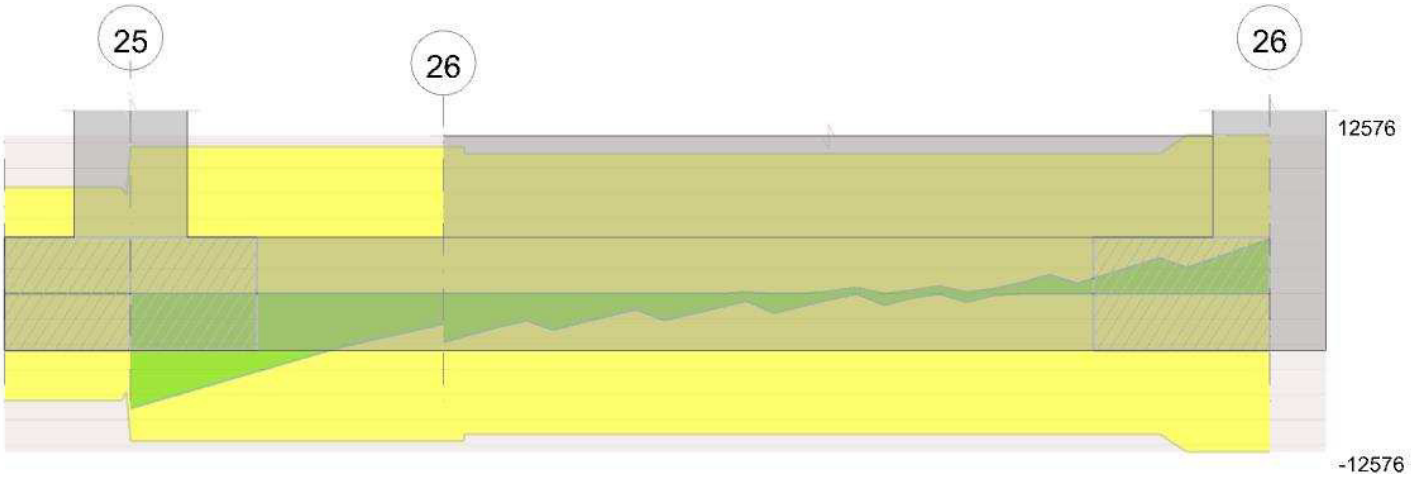
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 25 - 26, sezione R 50x45, asta 42

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.000221	0.052	0.00047	0.052	4552.18	SLU 81	4552.18	7177.8	0.102	1.58							Si
0.62	0.000436	0.052	0.000509	0.052	1934.77	SLU 81	3007.02	7750.15	0.112	2.58							Si
1.24	0.000509	0.052	0.000509	0.052	-172.41	SLU 2	93.08	7755.45	0.113	83.32	-352.42	SLU 81	-352.42	-7755.45	0.113	22.01	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.000221	0.052	0.00047	0.052	4317.68	SLV 15	4317.68	6732	0.194	1.56							Si
0.62	0.000436	0.052	0.000509	0.052	1785.49	SLV 15	2828.19	7268.02	0.198	2.57							Si
1.24	0.000509	0.052	0.000509	0.052	430.41	SLV 6	493.3	7266.79	0.197	14.73	-869.14	SLV 11	-869.14	-7266.79	0.197	8.36	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.00047	0	-9081	SLU 81	-9081	-7764	-63178	-11710	-11710	1	1.29	Si
0.23	0.0000084	0.00047	0	-7768	SLU 81	-7768	-7764	-63178	-11710	-11710	1	1.51	Si
0.62	0.0000084	0.00047	0	-5461	SLU 81	-5461	-7764	-63178	-11710	-11710	1	2.14	Si
1.24	0.0000084	0.000509	0	-1934	SLU 81	-1934	-7764	-63178	-11710	-11710	1	6.05	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000084	0.00047	0	-8662	SLV 15	-8662	-7764	-63178	-11710	-11710	1	1.35	Si
0.23	0.0000084	0.00047	0	-7460	SLV 15	-7460	-7764	-63178	-11710	-11710	1	1.57	Si
0.62	0.0000084	0.00047	0	-5346	SLV 15	-5346	-7764	-63178	-11710	-11710	1	2.19	Si
1.24	0.0000084	0.000509	0	-2380	SLV 11	-2380	-7764	-63178	-11710	-11710	1	4.92	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	4695.83	18	3951.26	229761	1494000	3345694	36000000	4134.47	2	3476.22	202138	1120500			Si
0.23	3313.97	18	3313.97	183859	1494000	2691386	36000000	2913.51	2	2913.51	161642	1120500			Si
0.62	1406.5	18	2187.58	117027	1494000	1743038	36000000	1231.88	2	1919.71	102697	1120500			Si
1.24	-254.55	18	-254.55	13464	1494000	201956	36000000	-219.36	2	-219.36	11603	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0.23	-5002	-2459	-11710	SLV 15	0.36	1618	1.653	2913.51	1404.17	6732	SLV 15	0.36	1618	1.653	Si
0.62	-3497	-1849	-11710	SLV 15	0.36	1618	1.653	1919.71	908.48	7268.02	SLV 15	0.36	1618	1.653	Si
1.24	-1195	-1185	-11710	SLV 11	0.36	1618	1.653	-219.36	-649.78	-7266.79	SLV 11	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 25 - 26, sezione R 50x45, asta 42

Campata 3 tra i fili 26 - 26, sezione R 50x45, aste 41, 40, 39, 38, 37, 36, 35, 34

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	704	SLU 81	0.035	6623	2447	SLU 81	16354	Si
1.64	0.41	0.0004	671	SLV 15	0.128	6053	2376	SLU 81	15877	Si
3.05	0.41	0.0004	964	SLV 11	0.128	6053	3355	SLV 11	15877	Si
3.28	0.41	0.0004	1036	SLV 11	0.128	6053	3604	SLV 11	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000418	510	SLE RA 18	14307	1494000	177409	36000000	445	SLE QP 2	12467	1120500	Si
1.64	0.41	0.00000397	496	SLE RA 18	13947	1494000	172942	36000000	434	SLE QP 2	12196	1120500	Si
3.05	0.41	0.00000397	649	SLE RA 18	18254	1494000	226353	36000000	572	SLE QP 2	16063	1120500	Si
3.28	0.41	0.00000397	690	SLE RA 18	19407	1494000	240641	36000000	608	SLE QP 2	17095	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	15	8	164	SLV 15	0.36	1618	1.653	4.45	2.23	63.64	SLV 15	0.36	1618	1.653	Si
1.64	15	8	159	SLV 15	0.36	1618	1.653	4.34	2.37	60.53	SLV 15	0.36	1618	1.653	Si
3.05	20	14	159	SLV 11	0.36	1618	1.653	5.72	3.93	60.53	SLV 11	0.36	1618	1.653	Si
3.28	21	15	159	SLV 11	0.36	1618	1.653	6.08	4.28	60.53	SLV 11	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
4.74	1.1	SLU 39	ST	LT	414	123	-28580	1	0	19	0	0	1.1	8693	432	20.13	Si
4.74	1.1	SLV 6	SIS	LT	-4026	631	-17196	-13	2	19	0	0	1.1	5231	4075	1.28	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
42,41,40,39,38,37,36,35,34	4.74	1.1	SLU 81	ST	BT	2.3	191480	34384	5.57	Si
42,41,40,39,38,37,36,35,34	4.74	1.1	SLV 16	SIS	BT	2.3	167533	30788	5.44	Si
42,41,40,39,38,37,36,35,34	4.74	1.1	SLD 16	SIS	BT	2.3	179994	26688	6.74	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	155	-34384	2471.09	1512.49	0	0	0.04	0.07	0.96	4.66	1496	2060	0	14430	
0	-2830	-30788	3690.66	2226.77	0	-5	0.07	0.12	0.86	4.6	1496	2060	0	14430	0.07
0	-1175	-26688	2534.9	1573.53	0	-3	0.06	0.09	0.91	4.63	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

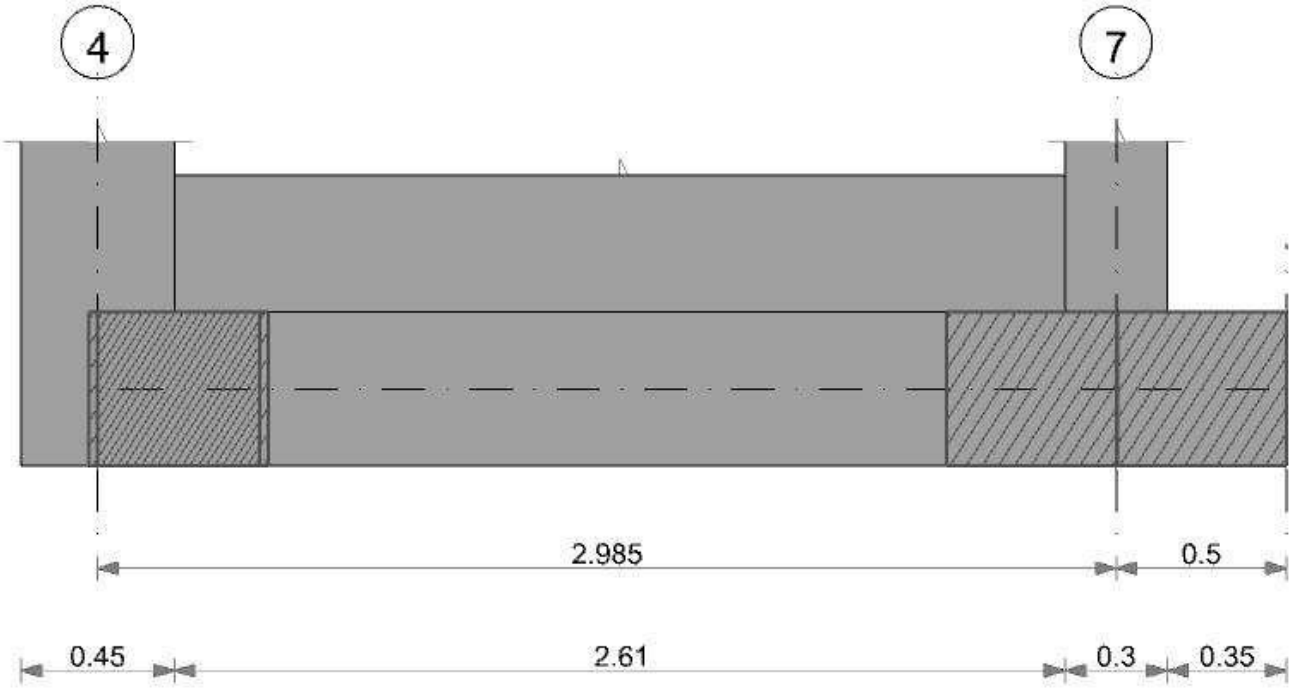
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	261	SLE RA 1	0.05	0	261	261	SLE RA 1	0.05	0	303	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	261	SLE RA 1	0.05	0	261	261	SLE RA 1	0.05	0	303	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	261	SLE RA 1	0.05	0	261	261	SLE RA 1	0.05	0	303	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	261	303	SLE RA 1	0.19	0	261	SLE RA 1	0.1	0	303	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	261	303	SLE RA 1	0.19	0	261	SLE RA 1	0.1	0	303	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	261	303	SLE RA 1	0.19	0	261	SLE RA 1	0.1	0	303	SLE RA 1	Si

CORDOLO 13

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

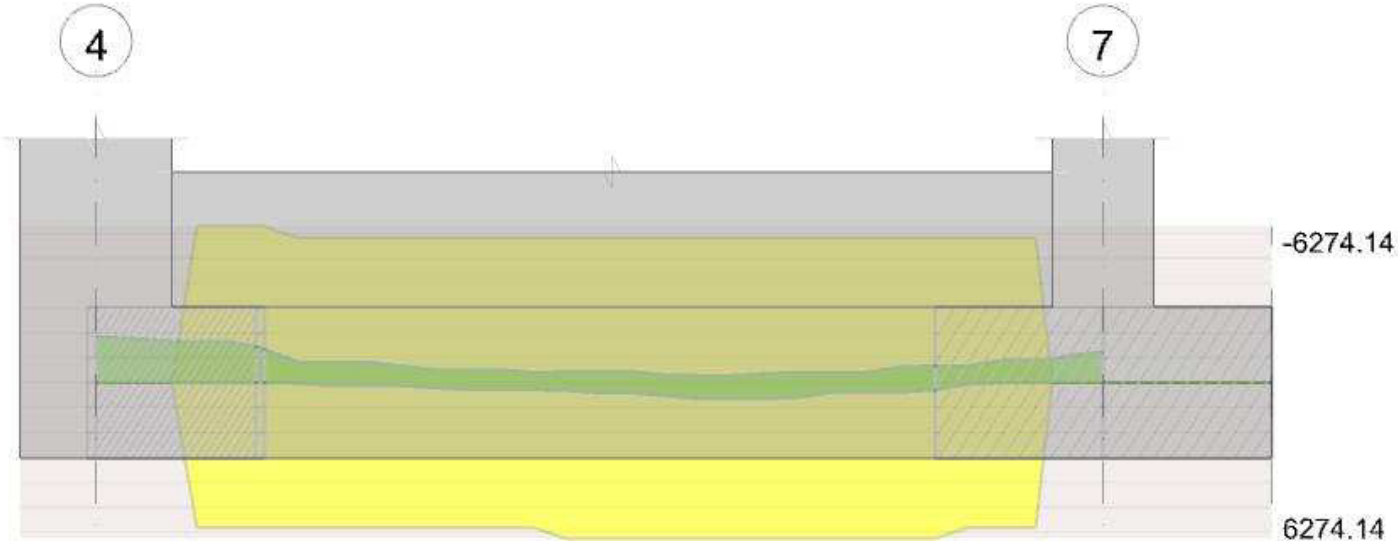
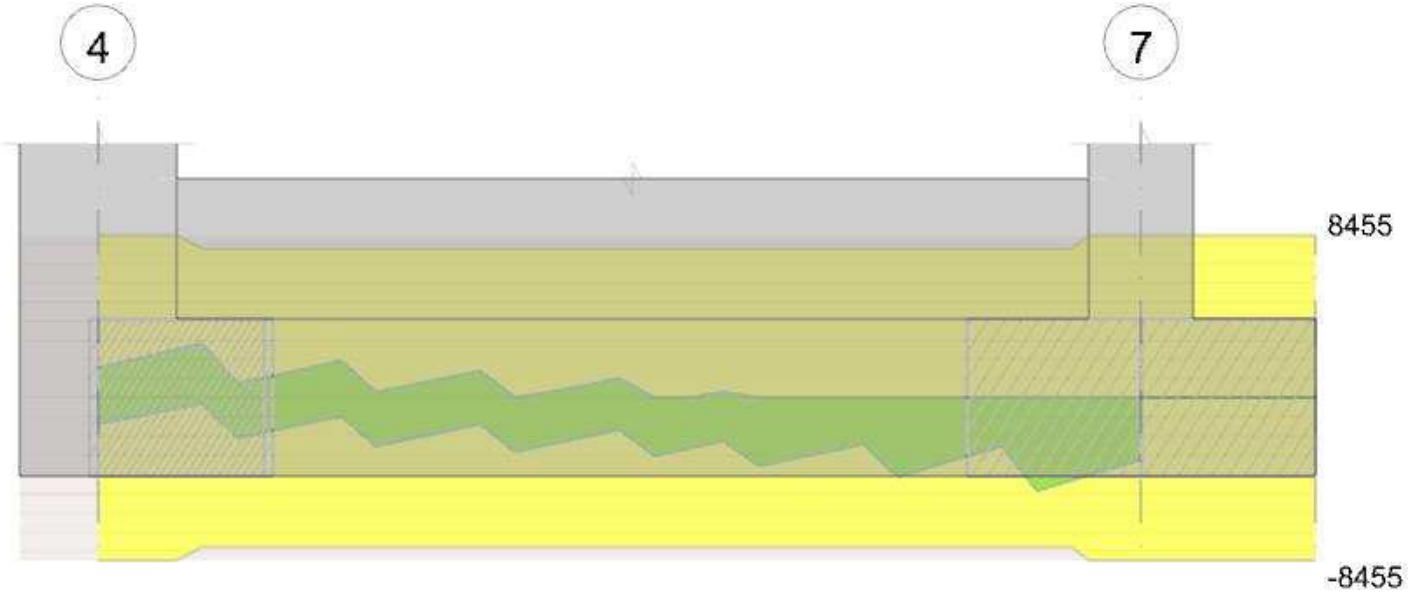


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 4 - 7, sezione R 50x45, aste 112, 113, 114, 115, 116, 117, 118, 119

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	789	SLU 82	0.017	2751	2743	SLU 82	15877	Si
0.23	0.41	0.0002	775	SLU 82	0.017	2751	2695	SLU 82	15877	Si
1.49	0.41	0.0002	728	SLU 82	0.017	2751	2533	SLU 82	15877	Si
2.84	0.41	0.0002	677	SLU 82	0.017	2751	2355	SLU 82	15877	Si
2.99	0.41	0.0002	672	SLU 82	0.017	2751	2338	SLU 82	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000172	573	SLE RA 19	16595	1494000	205779	36000000	502	SLE QP 2	14534	1120500	Si
0.23	0.41	0.00000172	563	SLE RA 19	16296	1494000	202069	36000000	492	SLE QP 2	14251	1120500	Si
1.49	0.41	0.00000172	527	SLE RA 19	15270	1494000	189348	36000000	458	SLE QP 2	13250	1120500	Si
2.84	0.41	0.00000172	489	SLE RA 19	14160	1494000	175588	36000000	421	SLE QP 2	12200	1120500	Si
2.99	0.41	0.00000172	486	SLE RA 19	14058	1494000	174324	36000000	418	SLE QP 2	12105	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	17	8	159	SLV 4	0.36	1618	1.653	5.02	2.33	26.75	SLV 4	0.36	1618	1.653	Si
0.23	17	8	159	SLV 4	0.36	1618	1.653	4.92	2.2	26.75	SLV 4	0.36	1618	1.653	Si
1.49	16	6	159	SLV 4	0.36	1618	1.653	4.58	1.61	26.75	SLV 4	0.36	1618	1.653	Si
2.84	15	4	159	SLV 3	0.36	1618	1.653	4.21	1.04	26.75	SLV 3	0.36	1618	1.653	Si
2.99	15	3	159	SLV 3	0.36	1618	1.653	4.18	0.99	26.75	SLV 3	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.21	1.1	SLU 43	ST	LT	139	76	-18179	0	0	19	0	0	1.1	5530	158	35.04	Si
3.21	1.1	SLV 16	SIS	LT	1919	1079	-12314	9	5	19	0	0	1.1	3746	2201	1.7	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
112,113,114,115,116,117,118,119	3.21	1.1	SLU 81	ST	BT	2.3	151391	22689	6.67	Si
112,113,114,115,116,117,118,119	3.21	1.1	SLV 4	SIS	BT	2.3	138400	18650	7.42	Si
112,113,114,115,116,117,118,119	3.21	1.1	SLD 4	SIS	BT	2.3	145110	16840	8.62	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
139	109	-22689	-127.05	-482.66	0	0	-0.02	-0.01	1.09	3.17	1496	2060	0	14430	
-1757	772	-18650	-435.17	-1842.27	-5	2	-0.1	-0.02	1.05	3.01	1496	2060	0	14430	0.07
-709	378	-16840	-238.24	-1001.99	-2	1	-0.06	-0.01	1.07	3.09	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.07	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

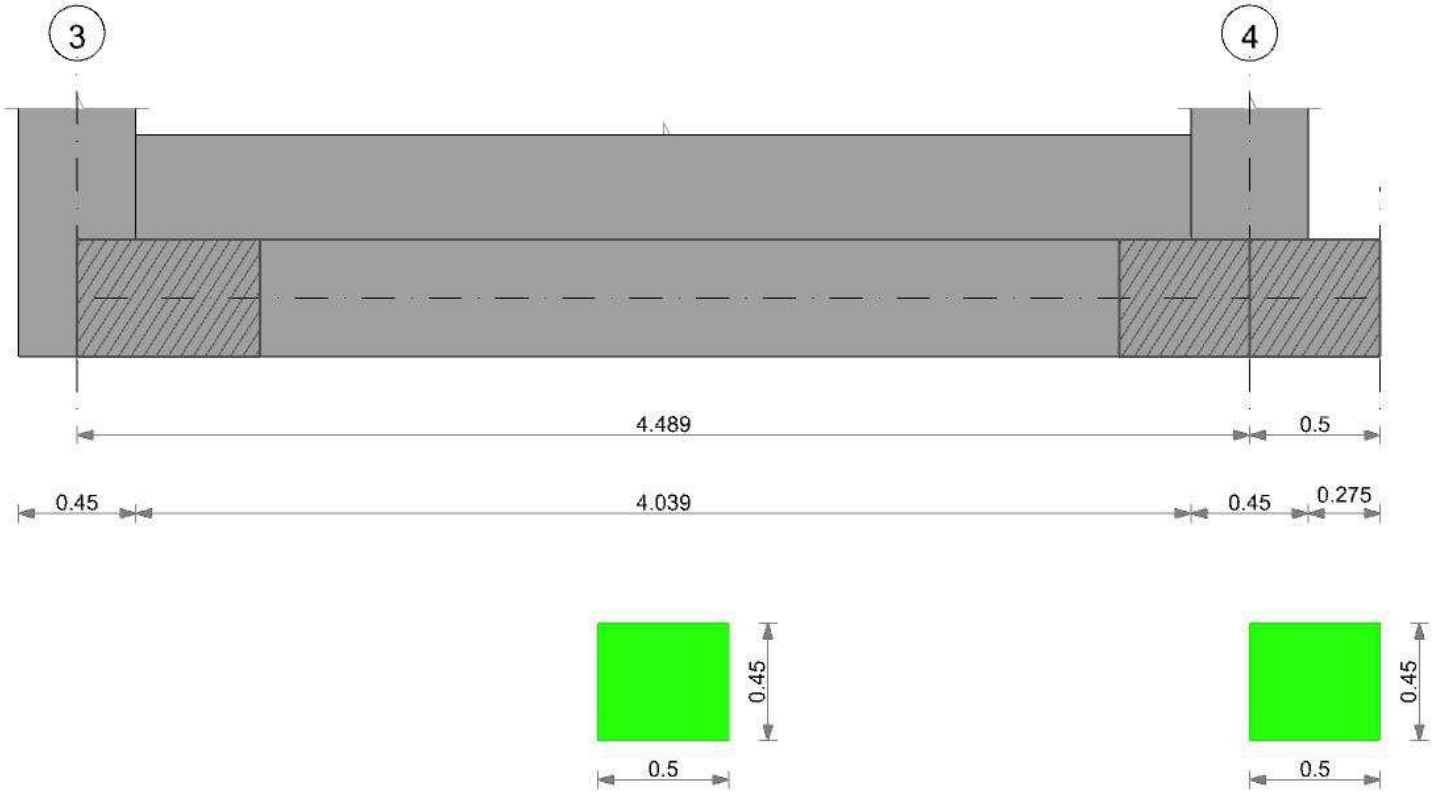
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	192	SLE RA 1	0.05	0	192	192	SLE RA 1	0.05	0	192	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	192	SLE RA 1	0.05	0	192	192	SLE RA 1	0.05	0	192	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	192	SLE RA 1	0.05	0	192	192	SLE RA 1	0.05	0	192	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	192	184	SLE RA 1	0.19	0	192	SLE RA 1	0.1	0	192	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	192	184	SLE RA 1	0.19	0	192	SLE RA 1	0.1	0	192	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	192	184	SLE RA 1	0.19	0	192	SLE RA 1	0.1	0	192	SLE RA 1	Si

CORDOLO 14

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

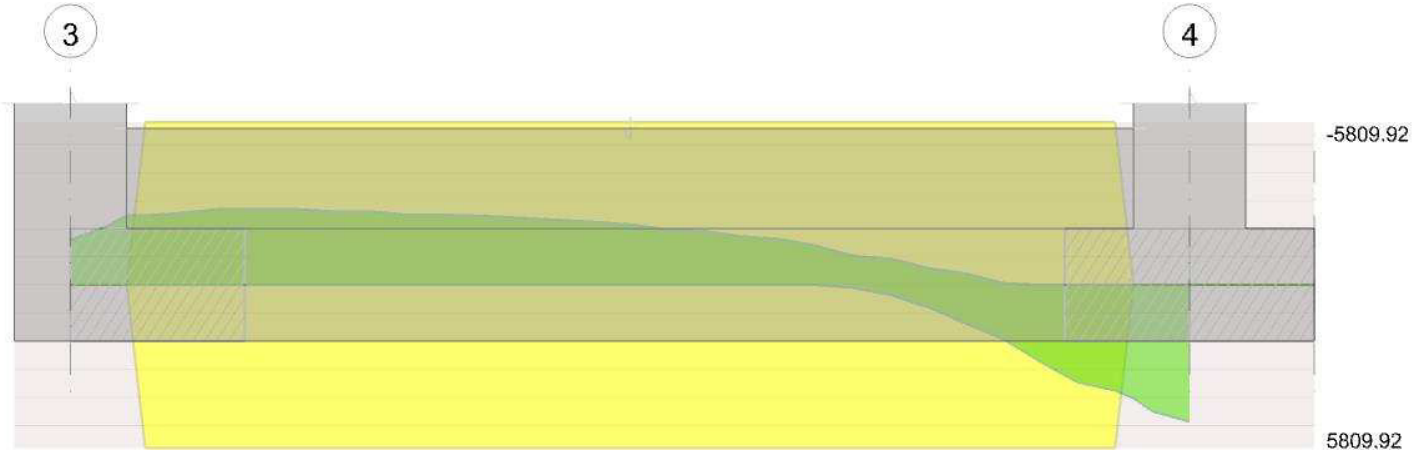
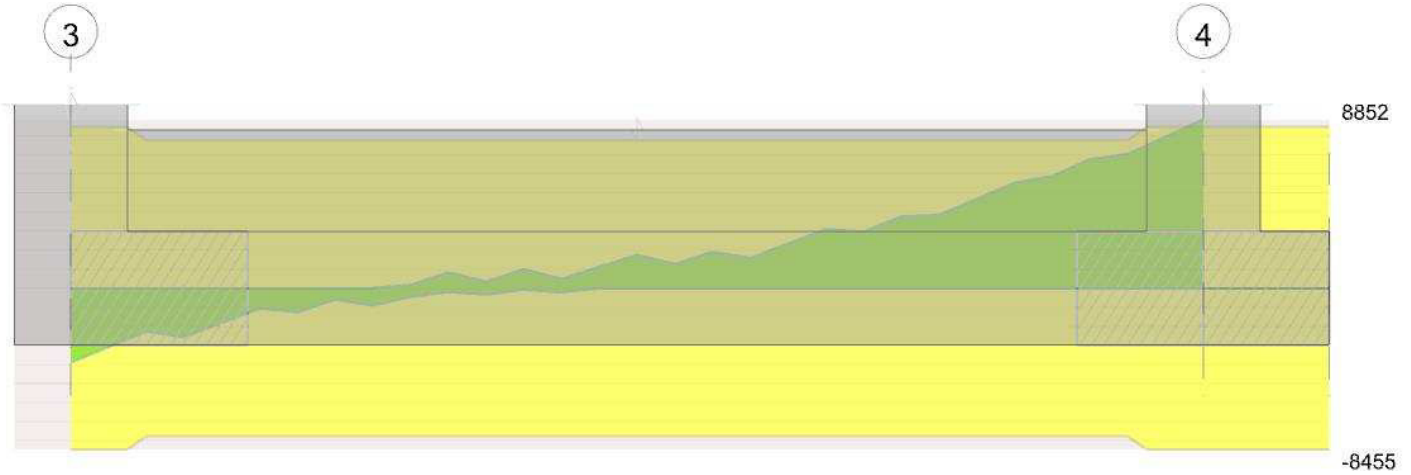


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 3 - 4, sezione R 50x45, aste 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	838	SLV 5	0.085	2650	2915	SLV 5	15877	Si
0.23	0.41	0.0002	784	SLV 5	0.085	2650	2728	SLV 5	15877	Si
2.24	0.41	0.0002	570	SLV 1	0.085	2650	2016	SLU 82	15877	Si
4.26	0.41	0.0002	772	SLU 82	0.017	2725	2687	SLU 82	15877	Si
4.49	0.41	0.0002	782	SLU 81	0.017	2725	2718	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000171	513	SLE RA 19	14846	1494000	184089	36000000	445	SLE QP 2	12889	1120500	Si
0.23	0.41	0.00000171	487	SLE RA 19	14114	1494000	175008	36000000	423	SLE QP 2	12243	1120500	Si
2.24	0.41	0.00000171	420	SLE RA 19	12164	1494000	150835	36000000	364	SLE QP 2	10547	1120500	Si
4.26	0.41	0.00000171	561	SLE RA 19	16248	1494000	201480	36000000	491	SLE QP 2	14208	1120500	Si
4.49	0.41	0.00000171	568	SLE RA 18	16442	1494000	203880	36000000	497	SLE QP 2	14385	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	15	14	159	SLV 5	0.36	1618	1.653	4.45	3.93	26.5	SLV 5	0.36	1618	1.653	Si
0.23	15	13	159	SLV 5	0.36	1618	1.653	4.23	3.61	26.5	SLV 5	0.36	1618	1.653	Si
2.24	13	7	159	SLV 1	0.36	1618	1.653	3.64	2.06	26.5	SLV 1	0.36	1618	1.653	Si
4.26	17	8	159	SLV 4	0.36	1618	1.653	4.91	2.19	26.5	SLV 4	0.36	1618	1.653	Si
4.49	17	8	159	SLV 4	0.36	1618	1.653	4.97	2.23	26.5	SLV 4	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.71	1.1	SLU 39	ST	LT	284	-74	-26036	1	0	19	0	0	1.1	7920	294	26.95	Si
4.71	1.1	SLV 12	SIS	LT	4874	-606	-16167	17	-2	19	0	0	1.1	4918	4912	1	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
100,101,102,103,104,105,106,107,108,109,110,111	4.71	1.1	SLU 82	ST	BT	2.3	194730	31459	6.19	Si
100,101,102,103,104,105,106,107,108,109,110,111	4.71	1.1	SLV 2	SIS	BT	2.3	175392	28203	6.22	Si
100,101,102,103,104,105,106,107,108,109,110,111	4.71	1.1	SLD 2	SIS	BT	2.3	186126	24459	7.61	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-100	-31459	-1844.49	1774.89	0	0	0.06	-0.06	0.98	4.6	1496	2060	0	14430	
0	2661	-28203	-3113.3	-121.12	0	5	0	-0.11	0.88	4.71	1496	2060	0	14430	0.07
0	1122	-24459	-2046.35	613.5	0	3	0.03	-0.08	0.93	4.66	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

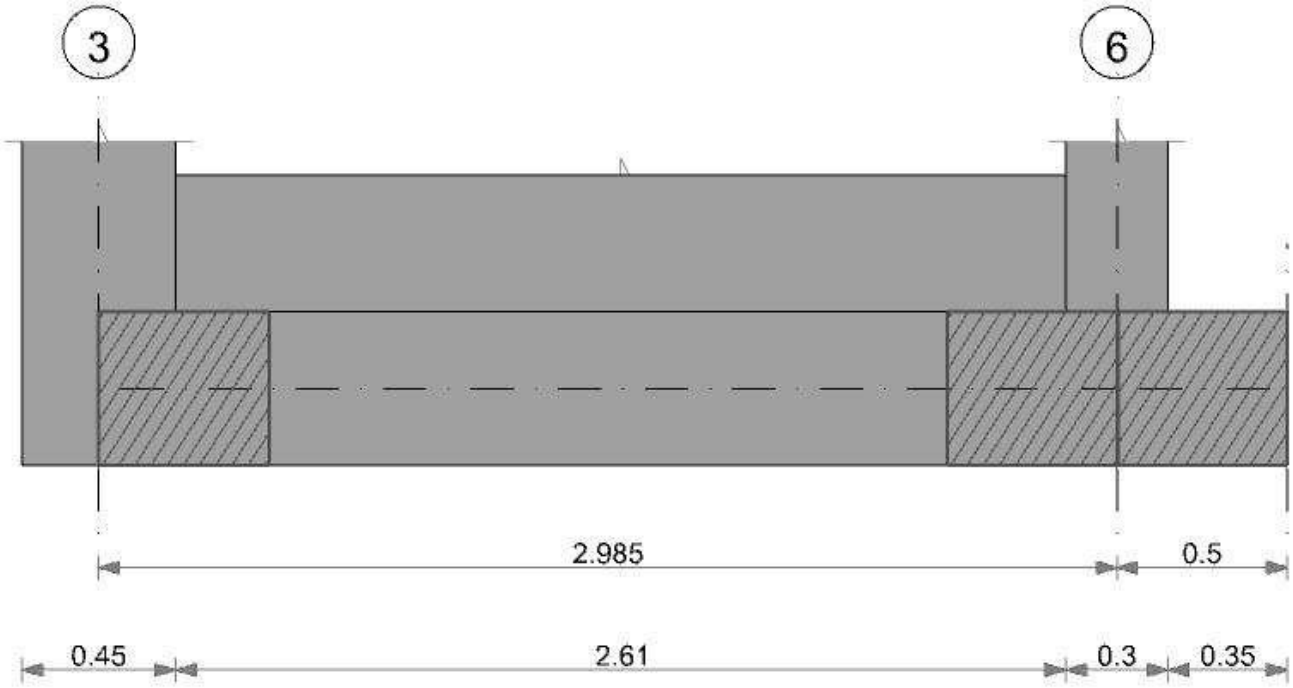
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	222	SLE RA 1	0.05	0	222	222	SLE RA 1	0.05	0	222	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	222	SLE RA 1	0.05	0	222	222	SLE RA 1	0.05	0	222	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	222	SLE RA 1	0.05	0	222	222	SLE RA 1	0.05	0	222	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	222	5	SLE RA 1	0.19	0	222	SLE RA 1	0.1	0	222	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	222	5	SLE RA 1	0.19	0	222	SLE RA 1	0.1	0	222	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	222	5	SLE RA 1	0.19	0	222	SLE RA 1	0.1	0	222	SLE RA 1	Si

CORDOLO 15

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

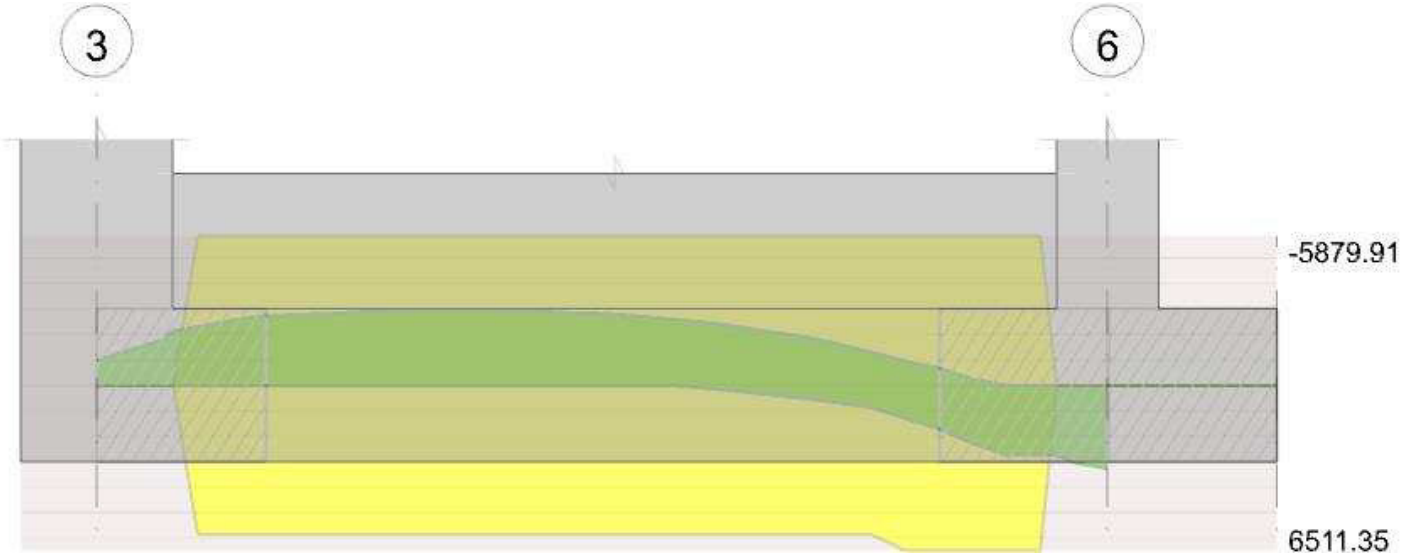
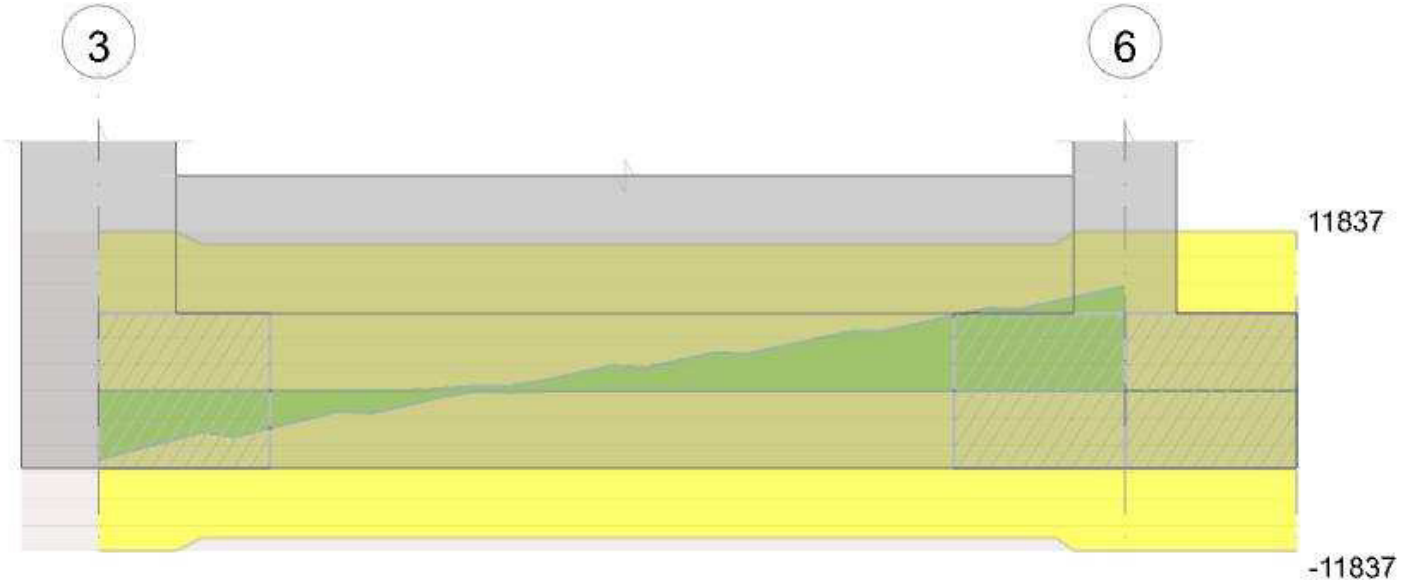


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 3 - 6, sezione R 70x45, aste 99, 98, 97, 96, 95, 94, 93, 92

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1436	SLV 5	0.086	2675	3705	SLV 5	15877	Si
0.23	0.41	0.0002	1376	SLV 5	0.086	2675	3551	SLV 5	15877	Si
1.49	0.41	0.0002	1159	SLV 5	0.086	2675	2990	SLV 5	15877	Si
2.84	0.41	0.0002	1136	SLV 5	0.086	2675	2930	SLV 5	15877	Si
2.99	0.41	0.0002	1133	SLV 5	0.086	2675	2924	SLV 5	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000172	894	SLE RA 19	25886	1494000	320986	36000000	776	SLE QP 2	22477	1120500	Si
0.23	0.41	0.00000172	863	SLE RA 19	24978	1494000	309724	36000000	748	SLE QP 2	21660	1120500	Si
1.49	0.41	0.00000172	768	SLE RA 19	22229	1494000	275639	36000000	662	SLE QP 2	19159	1120500	Si
2.84	0.41	0.00000172	793	SLE RA 19	22955	1494000	284642	36000000	682	SLE QP 2	19744	1120500	Si
2.99	0.41	0.00000172	793	SLE RA 19	22949	1494000	284570	36000000	682	SLE QP 2	19733	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	20	17	159	SLV 5	0.36	1618	1.653	7.76	6.59	26.75	SLV 5	0.36	1618	1.653	Si
0.23	19	16	159	SLV 5	0.36	1618	1.653	7.48	6.28	26.75	SLV 5	0.36	1618	1.653	Si
1.49	17	13	159	SLV 5	0.36	1618	1.653	6.62	4.97	26.75	SLV 5	0.36	1618	1.653	Si
2.84	18	12	159	SLV 5	0.36	1618	1.653	6.82	4.54	26.75	SLV 5	0.36	1618	1.653	Si
2.99	18	12	159	SLV 5	0.36	1618	1.653	6.82	4.51	26.75	SLV 5	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
3.21	1.3	SLU 39	ST	LT	-20	114	-19791	0	0	19	0	0	1.1	6020	116	52.07	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
99,98,97,96,95,94,93,92	3.21	1.3	SLU 82	ST	BT	2.3	164551	23960	6.87	Si
99,98,97,96,95,94,93,92	3.21	1.3	SLV 5	SIS	BT	2.3	139209	23069	6.03	Si
99,98,97,96,95,94,93,92	3.21	1.3	SLD 5	SIS	BT	2.3	151745	19323	7.85	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-18	93	-23960	1098.36	-328.18	0	0	-0.01	0.05	1.21	3.18	1496	2060	0	14430	
-355	-2795	-23069	2717.33	-1038.14	-1	-7	-0.05	0.12	1.06	3.12	1496	2060	0	14430	0.07
-160	-1185	-19323	1589.1	-586.64	0	-4	-0.03	0.08	1.14	3.15	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.08	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

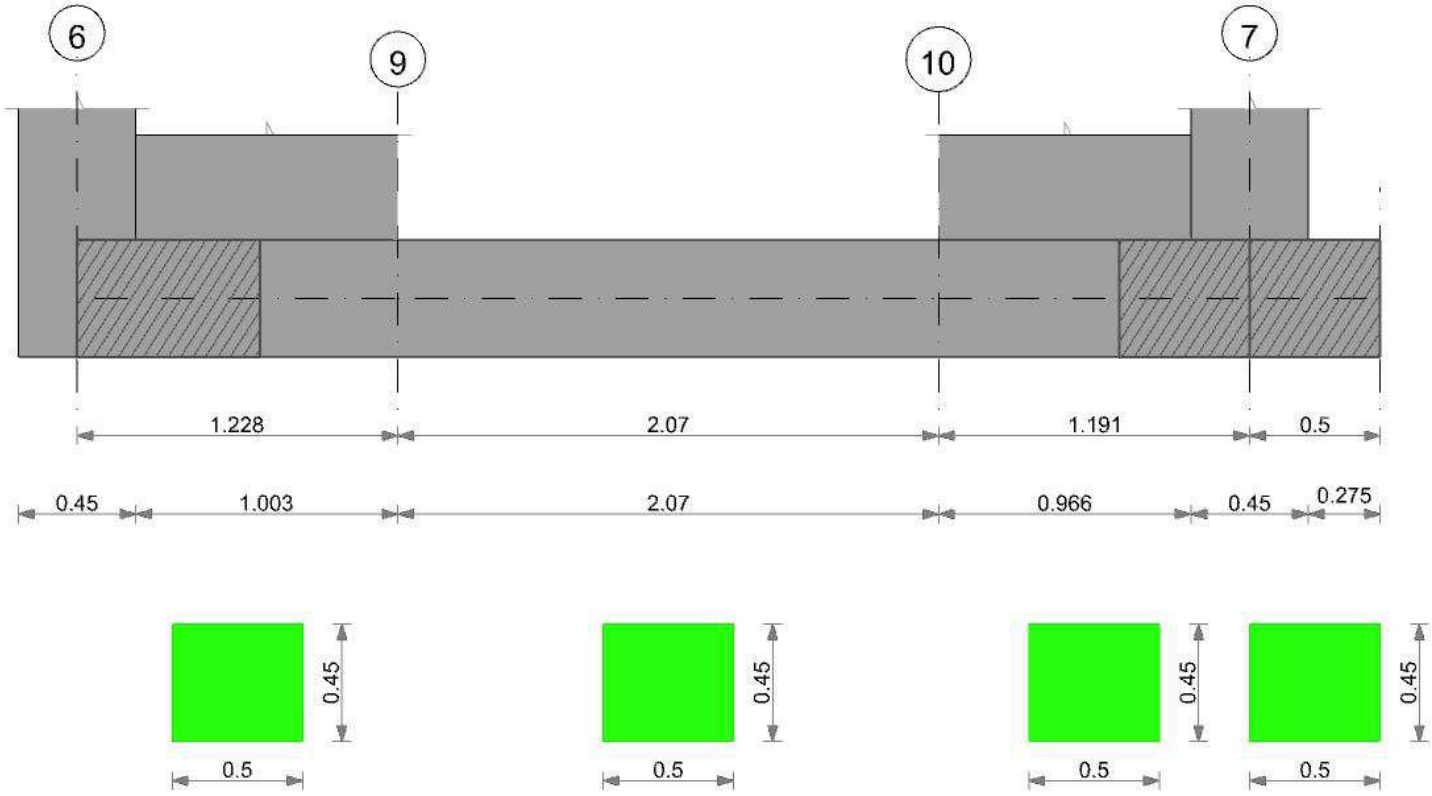
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	54	SLE RA 1	0.05	0	54	54	SLE RA 1	0.05	0	54	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	54	SLE RA 1	0.05	0	54	54	SLE RA 1	0.05	0	54	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	54	SLE RA 1	0.05	0	54	54	SLE RA 1	0.05	0	54	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	54	46	SLE RA 1	0.19	0	54	SLE RA 1	0.1	0	54	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	54	46	SLE RA 1	0.19	0	54	SLE RA 1	0.1	0	54	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	54	46	SLE RA 1	0.19	0	54	SLE RA 1	0.1	0	54	SLE RA 1	Si

CORDOLO 16

Geometria



Caratteristiche dei materiali

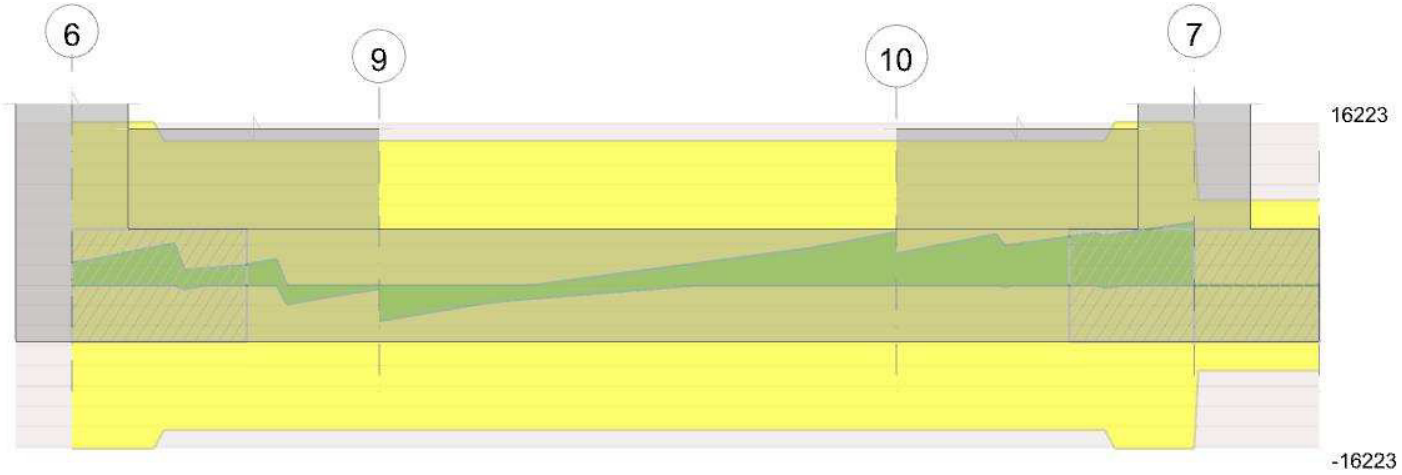
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 9 - 10, sezione R 50x45, asta 132

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-1607.82	SLU 82	-2174.48	-7755.45	0.113	3.57	Si
0.69	0.000509	0.052	0.000509	0.052							-3060.5	SLU 82	-3114.62	-7755.45	0.113	2.49	Si
1.04	0.000509	0.052	0.000509	0.052							-3049.27	SLU 82	-3113.72	-7755.45	0.113	2.49	Si
2.07	0.000509	0.052	0.000509	0.052	30.56	SLU 40	30.56	7755.45	0.113	253.74	-50.63	SLU 43	-860.52	-7755.45	0.113	9.01	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	306.77	SLV 12	306.77	7266.79	0.197	23.69	-2358.03	SLV 5	-2692.24	-7266.79	0.197	2.7	Si
0.55	0.000509	0.052	0.000509	0.052							-3019.87	SLV 5	-3026.72	-7266.79	0.197	2.4	Si
1.04	0.000509	0.052	0.000509	0.052							-2730.98	SLV 5	-2927.19	-7266.79	0.197	2.48	Si
2.07	0.000509	0.052	0.000509	0.052	502.09	SLV 5	502.09	7266.79	0.197	14.47	-544.51	SLV 12	-857.38	-7266.79	0.197	8.48	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000102	0.000509	0	-3566	SLU 81	-3566	-7764	-63178	-14348	-14348	1	4.02	Si
1.04	0.0000102	0.000509	0	742	SLU 82	742	7764	63178	14348	14348	1	19.34	Si
2.07	0.0000102	0.000509	0	5287	SLU 82	5287	7764	63178	14348	14348	1	2.71	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000102	0.000509	0	-2725	SLV 4	-2725	-7764	-63178	-14348	-14348	1	5.26	Si
1.04	0.0000102	0.000509	0	1403	SLV 5	1403	7764	63178	14348	14348	1	10.23	Si
1.04	0.0000102	0.000509	0	-484	SLV 12	-484	-7764	-63178	-14348	-14348	1	29.62	Si
2.07	0.0000102	0.000509	0	4878	SLV 5	4878	7764	63178	14348	14348	1	2.94	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-1172.33	19	-1587.31	83958	1494000	1259375	36000000	-1025.63	2	-1396.16	73848	1120500			Si
1.04	-2230.54	19	-2276.79	120427	1494000	1806411	36000000	-1979.7	2	-2017.74	106725	1120500			Si
2.07	1.79	19	1.79	95	1494000	1423	36000000								Si
2.07	-28.45	1	-635.56	33617	1494000	504256	36000000	-28.45	1	-578.95	30623	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	-2327	-398	-14348	SLV 4	0.36	1618	1.653	-1025.63	-1332.4	-7266.79	SLV 5	0.36	1618	1.653	Si
1.04	459	944	14348	SLV 5	0.36	1618	1.653	-2017.74	-909.45	-7266.79	SLV 5	0.36	1618	1.653	Si
2.07	3396	1482	14348	SLV 5	0.36	1618	1.653	-21.21	-523.3	-7266.79	SLV 12	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 6 - 9, sezione R 50x45, aste 135, 134, 133

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	896	SLV 5	0.145	7753	2768	SLV 5	18252	Si
0.23	0.41	0.0005	831	SLV 5	0.145	7753	2568	SLV 5	18252	Si
0.61	0.41	0.0005	731	SLV 5	0.145	7753	2259	SLV 5	18252	Si
1.23	0.41	0.0005	656	SLU 82	0.043	8090	2028	SLU 82	18252	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000512	601	SLE RA 19	16646	1494000	206414	36000000	518	SLE QP 2	14351	1120500	Si
0.23	0.41	0.00000512	571	SLE RA 19	15821	1494000	196178	36000000	492	SLE QP 2	13622	1120500	Si
0.61	0.41	0.00000512	528	SLE RA 19	14614	1494000	181215	36000000	453	SLE QP 2	12554	1120500	Si
1.23	0.41	0.00000512	474	SLE RA 19	13115	1494000	162629	36000000	405	SLE QP 2	11223	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	16	12	183	SLV 5	0.36	1618	1.653	5.18	3.78	77.53	SLV 5	0.36	1618	1.653	Si
0.23	15	10	183	SLV 5	0.36	1618	1.653	4.92	3.39	77.53	SLV 5	0.36	1618	1.653	Si
0.61	14	9	183	SLV 5	0.36	1618	1.653	4.53	2.78	77.53	SLV 5	0.36	1618	1.653	Si
1.23	13	6	183	SLV 5	0.36	1618	1.653	4.05	1.98	77.53	SLV 5	0.36	1618	1.653	Si

Campata 2 tra i fili 9 - 10, sezione R 50x45, asta 132

Campata 3 tra i fili 10 - 7, sezione R 50x45, aste 131, 130, 129

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	738	SLU 82	0.043	8090	2280	SLU 82	18252	Si
0.6	0.41	0.0005	824	SLU 82	0.043	8090	2544	SLU 82	18252	Si
0.97	0.41	0.0005	862	SLU 82	0.043	8090	2663	SLU 82	18252	Si
1.19	0.41	0.0005	876	SLU 82	0.043	8090	2707	SLU 82	18252	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000512	532	SLE RA 19	14740	1494000	182774	36000000	456	SLE QP 2	12628	1120500	Si
0.6	0.41	0.00000512	595	SLE RA 19	16472	1494000	204256	36000000	512	SLE QP 2	14169	1120500	Si
0.97	0.41	0.00000512	623	SLE RA 19	17253	1494000	213935	36000000	537	SLE QP 2	14872	1120500	Si
1.19	0.41	0.00000512	633	SLE RA 19	17539	1494000	217490	36000000	547	SLE QP 2	15135	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	14	4	183	SLV 1	0.36	1618	1.653	4.56	1.31	77.53	SLV 1	0.36	1618	1.653	Si
0.6	16	4	183	SLV 1	0.36	1618	1.653	5.12	1.34	77.53	SLV 1	0.36	1618	1.653	Si
0.97	17	4	183	SLV 3	0.36	1618	1.653	5.37	1.37	77.53	SLV 3	0.36	1618	1.653	Si
1.19	17	4	183	SLV 4	0.36	1618	1.653	5.47	1.42	77.53	SLV 4	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.71	1.1	SLU 2	ST	LT	-44	-36	-18673	0	0	19	0	0	1.1	5680	57	100.04	Si
4.71	1.1	SLV 15	SIS	LT	749	-2873	-16517	3	-10	19	0	0	1.1	5024	2969	1.69	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
135,134,133,132,131,130,129	4.71	1.1	SLU 82	ST	BT	2.3	220644	29157	7.57	Si
135,134,133,132,131,130,129	4.71	1.1	SLV 2	SIS	BT	2.3	196328	23254	8.44	Si
135,134,133,132,131,130,129	4.71	1.1	SLD 2	SIS	BT	2.3	210235	21363	9.84	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-32	-29157	-22.4	977.2	0	0	0.03	0	1.1	4.65	1496	2060	0	14430	
0	2812	-23254	-1363.4	-247.69	0	7	-0.01	-0.06	0.98	4.69	1496	2060	0	14430	0.07
0	1214	-21363	-604.24	236.65	0	3	0.01	-0.03	1.04	4.69	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

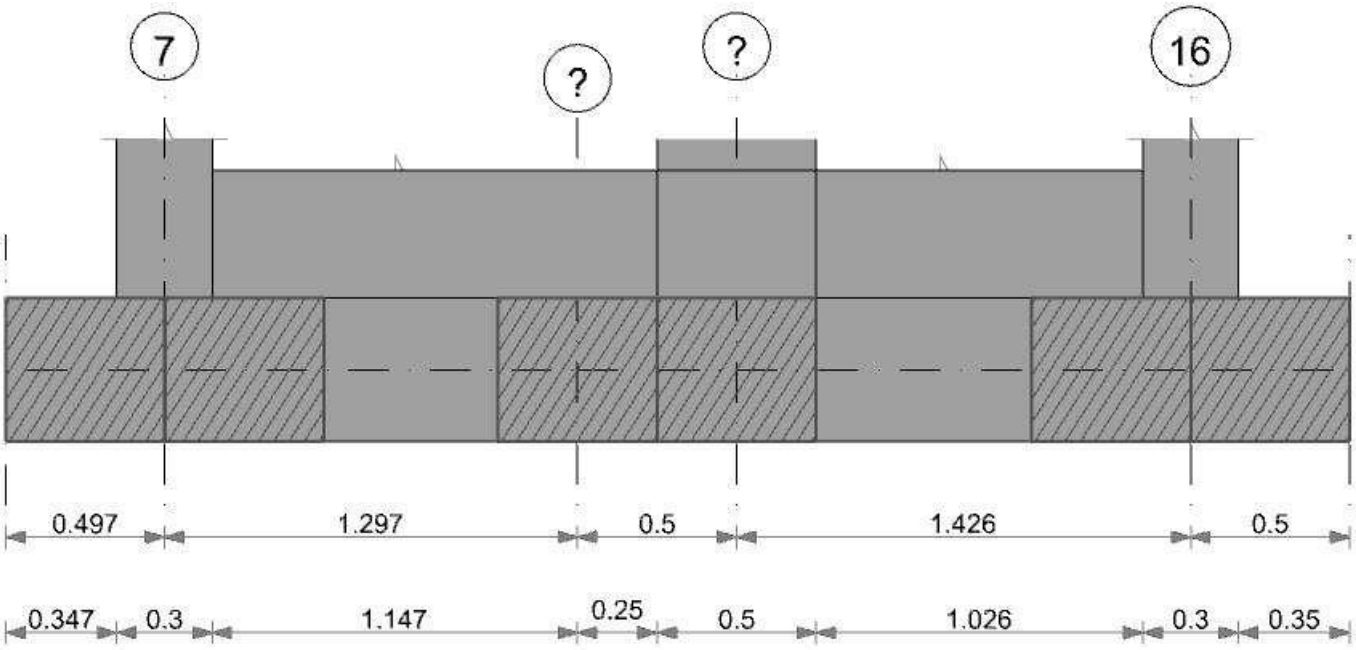
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0	230	SLE RA 1	0.05	0	230	230	SLE RA 1	0.05	0	150	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	230	SLE RA 1	0.05	0	230	230	SLE RA 1	0.05	0	150	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	230	SLE RA 1	0.05	0	230	230	SLE RA 1	0.05	0	150	SLE RA 1	0.0033	0	SLE RA 1	Si

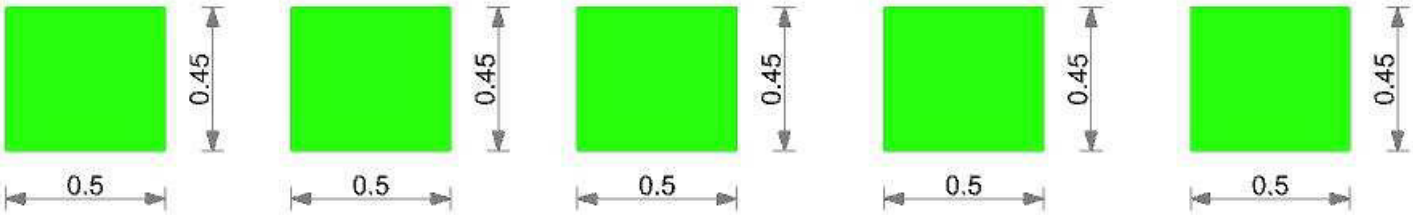
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	230	150	SLE RA 1	0.19	0	230	SLE RA 1	0.1	0	150	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	230	150	SLE RA 1	0.19	0	230	SLE RA 1	0.1	0	150	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	230	150	SLE RA 1	0.19	0	230	SLE RA 1	0.1	0	150	SLE RA 1	Si

CORDOLO 17

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

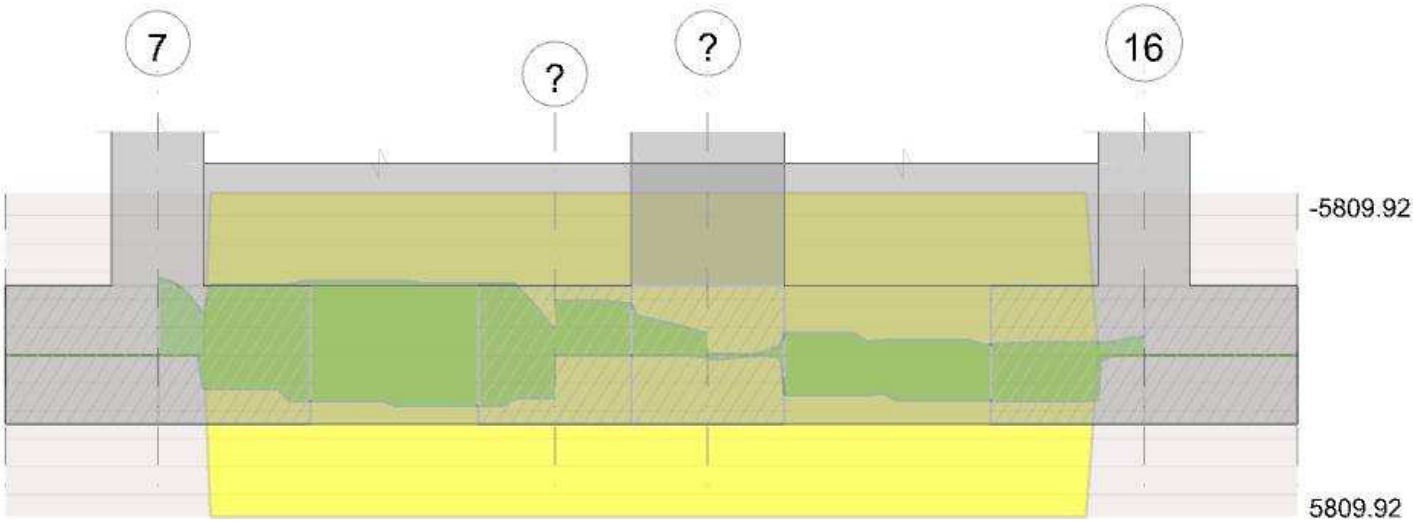
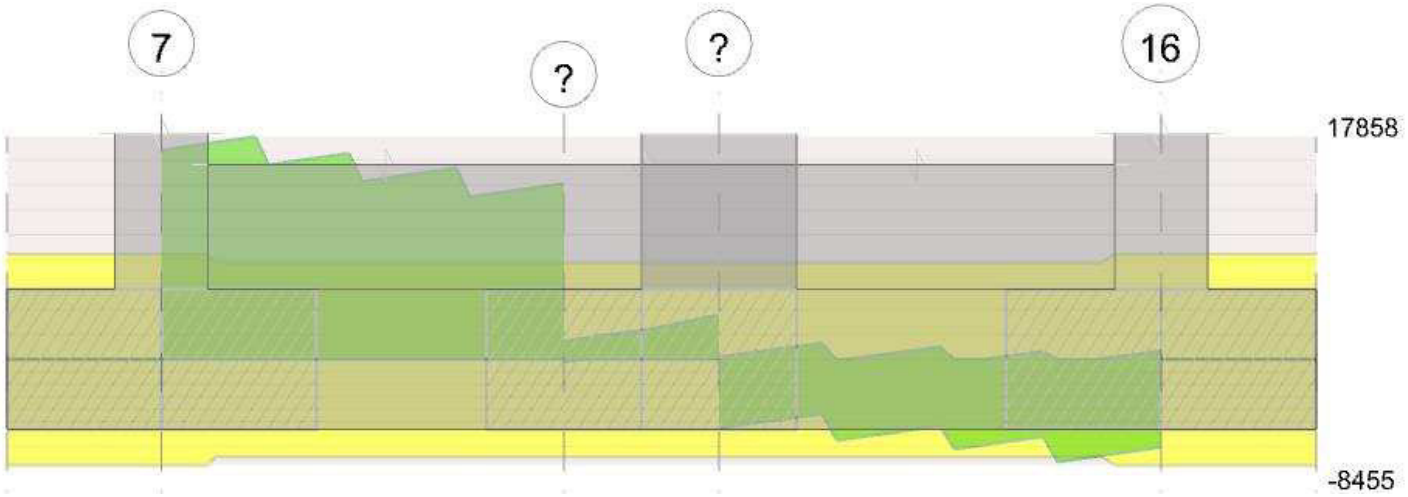


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 7 - ?, sezione R 50x45, aste 120, 121, 122, 123

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	672	SLU 82	0.019	3092	2338	SLU 82	15877	Si
0.15	0.41	0.0002	668	SLU 82	0.019	3092	2323	SLU 82	15877	Si
0.65	0.41	0.0002	658	SLU 82	0.019	3092	2290	SLU 82	15877	Si
1.3	0.41	0.0002	651	SLU 82	0.019	3209	2263	SLU 82	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000194	486	SLE RA 19	14018	1494000	173824	36000000	418	SLE QP 2	12070	1120500	Si
0.15	0.41	0.00000194	482	SLE RA 19	13925	1494000	172664	36000000	415	SLE QP 2	11982	1120500	Si
0.65	0.41	0.00000194	475	SLE RA 19	13716	1494000	170076	36000000	408	SLE QP 2	11782	1120500	Si
1.3	0.41	0.00000201	469	SLE RA 19	13535	1494000	167836	36000000	403	SLE QP 2	11609	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	15	3	159	SLV 3	0.36	1618	1.653	4.18	0.99	30.03	SLV 3	0.36	1618	1.653	Si
0.15	14	3	159	SLV 3	0.36	1618	1.653	4.15	0.93	30.03	SLV 3	0.36	1618	1.653	Si
0.65	14	3	159	SLV 3	0.36	1618	1.653	4.08	0.76	30.03	SLV 3	0.36	1618	1.653	Si
1.3	14	2	159	SLV 3	0.36	1618	1.653	4.03	0.55	31.14	SLV 3	0.36	1618	1.653	Si

Campata 3 tra i fili ? - ?, sezione R 50x45, asta 124

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	651	SLU 82	0.019	3209	2263	SLU 82	15877	Si
0.25	0.41	0.0002	650	SLU 82	0.019	3209	2261	SLU 82	15877	Si
0.5	0.41	0.0002	653	SLU 82	0.019	3209	2270	SLU 82	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000201	469	SLE RA 19	13535	1494000	167836	36000000	403	SLE QP 2	11609	1120500	Si
0.25	0.41	0.00000201	469	SLE RA 19	13523	1494000	167683	36000000	402	SLE QP 2	11595	1120500	Si
0.5	0.41	0.00000201	471	SLE RA 19	13576	1494000	168348	36000000	404	SLE QP 2	11640	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	14	2	159	SLV 3	0.36	1618	1.653	4.03	0.55	31.14	SLV 3	0.36	1618	1.653	Si
0.25	14	2	159	SLV 3	0.36	1618	1.653	4.02	0.48	31.14	SLV 3	0.36	1618	1.653	Si
0.5	14	1	159	SLV 3	0.36	1618	1.653	4.04	0.42	31.14	SLV 3	0.36	1618	1.653	Si

Campata 4 tra i fili ? - 16, sezione R 50x45, aste 125, 126, 127, 128

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	653	SLU 82	0.019	3209	2270	SLU 82	15877	Si
0.25	0.41	0.0002	656	SLU 82	0.018	2815	2281	SLU 82	15877	Si
0.71	0.41	0.0002	661	SLU 81	0.018	2815	2298	SLU 81	15877	Si
1.28	0.41	0.0002	662	SLU 81	0.018	2815	2301	SLU 81	15877	Si
1.43	0.41	0.0002	661	SLU 81	0.018	2815	2301	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000201	471	SLE RA 19	13576	1494000	168348	36000000	404	SLE QP 2	11640	1120500	Si
0.25	0.41	0.00000176	473	SLE RA 19	13687	1494000	169723	36000000	406	SLE QP 2	11736	1120500	Si
0.71	0.41	0.00000176	477	SLE RA 18	13790	1494000	170993	36000000	409	SLE QP 2	11825	1120500	Si
1.28	0.41	0.00000176	477	SLE RA 18	13808	1494000	171215	36000000	409	SLE QP 2	11841	1120500	Si
1.43	0.41	0.00000176	477	SLE RA 18	13804	1494000	171164	36000000	409	SLE QP 2	11838	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	14	1	159	SLV 3	0.36	1618	1.653	4.04	0.42	31.14	SLV 3	0.36	1618	1.653	Si
0.25	14	0	14	SLV 16	0.36	1618	1.653	4.06	0.36	27.37	SLV 3	0.36	1618	1.653	Si
0.71	14	0	14	SLV 16	0.36	1618	1.653	4.09	0.28	27.37	SLV 7	0.36	1618	1.653	Si
1.28	14	0	18	SLV 16	0.36	1618	1.653	4.09	0.28	27.37	SLV 7	0.36	1618	1.653	Si
1.43	14	0	17	SLV 16	0.36	1618	1.653	4.09	0.28	27.37	SLV 7	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.22	1.1	SLU 2	ST	LT	64	-129	-14305	0	-1	19	0	0	1.1	4351	144	30.23	Si
3.22	1.1	SLV 13	SIS	LT	2065	-646	-14329	8	-3	19	0	0	1.1	4359	2164	2.01	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
120,121,122,123,124,125,126,127,128	3.22	1.1	SLU 82	ST	BT	2.3	154864	22751	6.81	Si
120,121,122,123,124,125,126,127,128	3.22	1.1	SLV 8	SIS	BT	2.3	136319	15946	8.55	Si
120,121,122,123,124,125,126,127,128	3.22	1.1	SLD 8	SIS	BT	2.3	147169	15630	9.42	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
88	-173	-22751	40.4	32.99	0	0	0	0	1.1	3.22	1496	2060	0	14430	
-503	1814	-15946	-896.24	-253.09	-2	6	-0.02	-0.06	0.99	3.19	1496	2060	0	14430	0.07
-183	747	-15630	-387.03	-102.23	-1	3	-0.01	-0.02	1.05	3.21	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.07	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.06	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

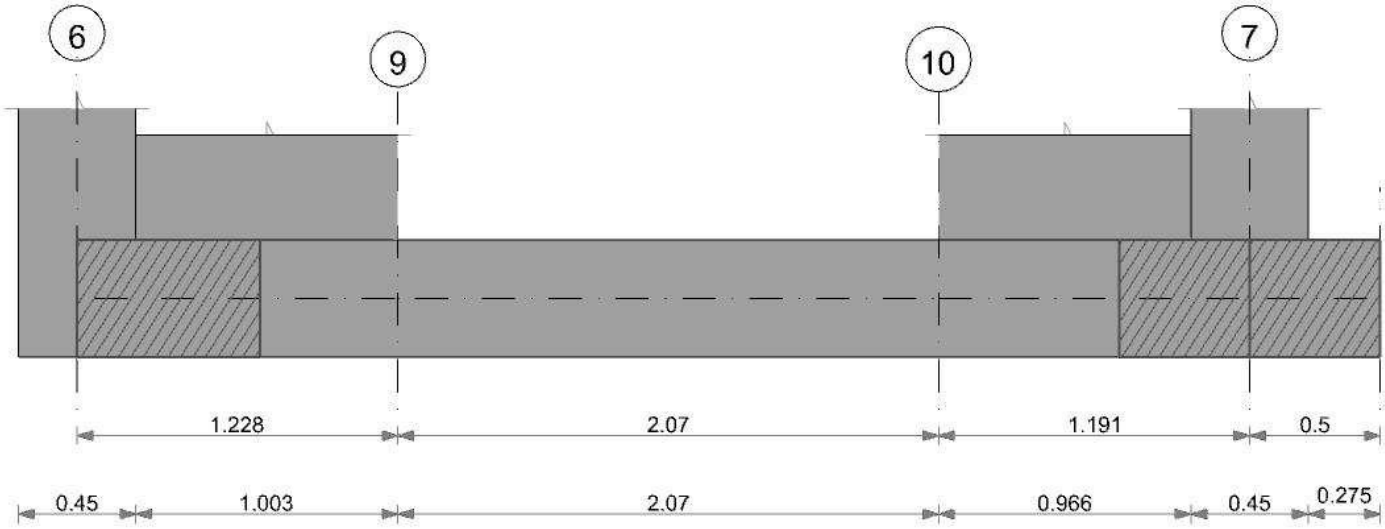
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	201	SLE RA 1	0.05	0	201	201	SLE RA 1	0.05	0	197	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	201	SLE RA 1	0.05	0	201	201	SLE RA 1	0.05	0	197	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	201	SLE RA 1	0.05	0	201	201	SLE RA 1	0.05	0	197	SLE RA 1	0.0033	0	SLE RA 1	Si

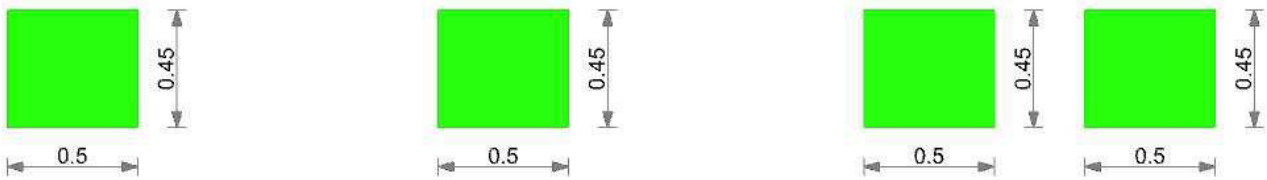
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	201	197	SLE RA 1	0.19	0	201	SLE RA 1	0.1	0	197	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	201	197	SLE RA 1	0.19	0	201	SLE RA 1	0.1	0	197	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	201	197	SLE RA 1	0.19	0	201	SLE RA 1	0.1	0	197	SLE RA 1	Si

CORDOLO 18

Geometria





Caratteristiche dei materiali

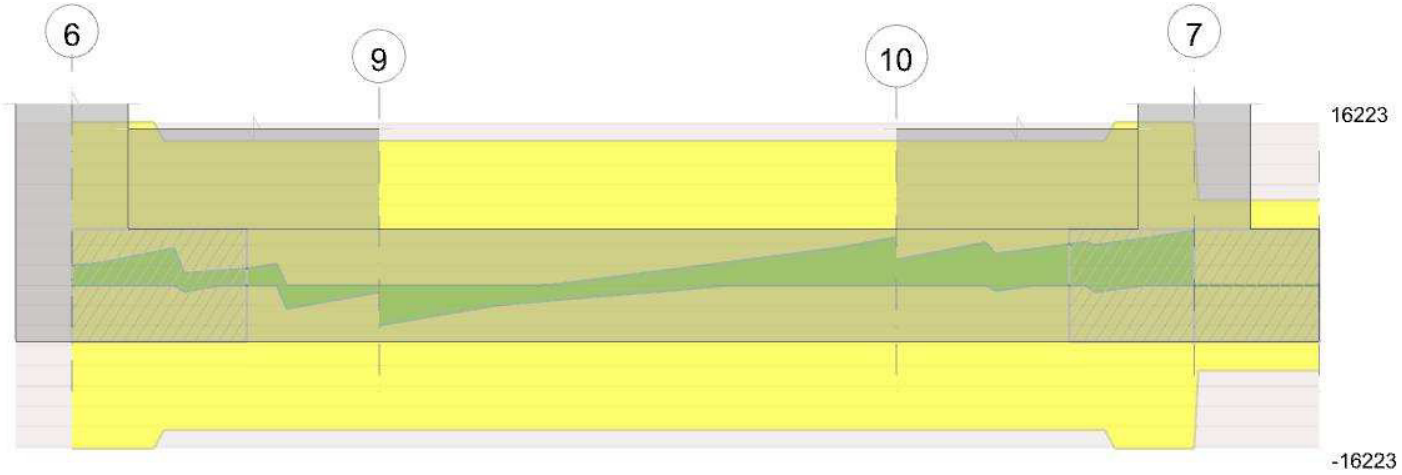
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 9 - 10, sezione R 50x45, asta 139

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-1169.38	SLU 82	-1808.73	-7755.45	0.113	4.29	Si
1.04	0.000509	0.052	0.000509	0.052							-3039.7	SLU 82	-3051.4	-7755.45	0.113	2.54	Si
1.1	0.000509	0.052	0.000509	0.052							-3008.59	SLU 82	-3051.4	-7755.45	0.113	2.54	Si
2.07	0.000509	0.052	0.000509	0.052							-472.67	SLU 81	-1246.92	-7755.45	0.113	6.22	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	616.28	SLV 12	616.28	7266.79	0.197	11.79	-2081.5	SLV 5	-2458.04	-7266.79	0.197	2.96	Si
0.62	0.000509	0.052	0.000509	0.052							-2902.73	SLV 5	-2911.38	-7266.79	0.197	2.5	Si
1.04	0.000509	0.052	0.000509	0.052							-2719.18	SLV 5	-2865.67	-7266.79	0.197	2.54	Si
2.07	0.000509	0.052	0.000509	0.052	214.22	SLV 9	214.22	7266.79	0.197	33.92	-898.26	SLV 8	-1190.64	-7266.79	0.197	6.1	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000102	0.000509	0	-3972	SLU 81	-3972	-7764	-63178	-14348	-14348	1	3.61	Si
1.04	0.0000102	0.000509	0	310	SLU 82	310	7764	63178	14348	14348	1	46.27	Si
2.07	0.0000102	0.000509	0	4771	SLU 82	4771	7764	63178	14348	14348	1	3.01	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000102	0.000509	0	-3045	SLV 4	-3045	-7764	-63178	-14348	-14348	1	4.71	Si
1.04	0.0000102	0.000509	0	1120	SLV 5	1120	7764	63178	14348	14348	1	12.81	Si
1.04	0.0000102	0.000509	0	-781	SLV 12	-781	-7764	-63178	-14348	-14348	1	18.38	Si
2.07	0.0000102	0.000509	0	4507	SLV 5	4507	7764	63178	14348	14348	1	3.18	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-849.4	19	-1317.82	69704	1494000	1045562	36000000	-732.61	2	-1151.4	60902	1120500			Si
1.04	-2223.32	19	-2231.35	118024	1494000	1770357	36000000	-1972.76	2	-1978.22	104635	1120500			Si
2.07	-356.53	18	-920.58	48693	1494000	730388	36000000	-342.02	2	-838.35	44343	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	-2595	-449	-14348	SLV 4	0.36	1618	1.653	-732.61	-1348.89	-7266.79	SLV 5	0.36	1618	1.653	Si
1.04	170	951	14348	SLV 5	0.36	1618	1.653	-1959.54	-906.13	-7266.79	SLV 5	0.36	1618	1.653	Si
2.07	3046	1460	14348	SLV 5	0.36	1618	1.653	-342.02	-556.24	-7266.79	SLV 8	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 6 - 9, sezione R 50x45, aste 142, 141, 140

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	896	SLV 5	0.145	7753	2758	SLV 5	18194	Si
0.23	0.41	0.0005	831	SLV 5	0.145	7753	2557	SLV 5	18194	Si
0.61	0.41	0.0005	730	SLV 5	0.145	7753	2260	SLU 82	18194	Si
1.23	0.41	0.0005	660	SLU 82	0.043	8090	2030	SLU 82	18194	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000512	605	SLE RA 19	16745	1494000	207636	36000000	521	SLE QP 2	14423	1120500	Si
0.23	0.41	0.00000512	575	SLE RA 19	15912	1494000	197313	36000000	494	SLE QP 2	13688	1120500	Si
0.61	0.41	0.00000512	531	SLE RA 19	14694	1494000	182202	36000000	455	SLE QP 2	12610	1120500	Si
1.23	0.41	0.00000512	476	SLE RA 19	13179	1494000	163416	36000000	407	SLE QP 2	11264	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	16	12	182	SLV 5	0.36	1618	1.653	5.21	3.75	77.53	SLV 5	0.36	1618	1.653	Si
0.23	15	10	182	SLV 5	0.36	1618	1.653	4.94	3.37	77.53	SLV 5	0.36	1618	1.653	Si
0.61	14	8	182	SLV 5	0.36	1618	1.653	4.55	2.75	77.53	SLV 5	0.36	1618	1.653	Si
1.23	13	6	182	SLV 5	0.36	1618	1.653	4.07	1.94	77.53	SLV 5	0.36	1618	1.653	Si

Campata 2 tra i fili 9 - 10, sezione R 50x45, asta 139

Campata 3 tra i fili 10 - 7, sezione R 50x45, aste 138, 137, 136

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	725	SLU 82	0.043	8090	2230	SLU 82	18194	Si
0.6	0.41	0.0005	811	SLU 82	0.043	8090	2495	SLU 82	18194	Si
0.97	0.41	0.0005	850	SLU 82	0.043	8090	2614	SLU 82	18194	Si
1.19	0.41	0.0005	864	SLU 82	0.043	8090	2658	SLU 82	18194	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000512	522	SLE RA 19	14465	1494000	179371	36000000	446	SLE QP 2	12361	1120500	Si
0.6	0.41	0.00000512	585	SLE RA 19	16206	1494000	200957	36000000	502	SLE QP 2	13909	1120500	Si
0.97	0.41	0.00000512	614	SLE RA 19	16990	1494000	210675	36000000	528	SLE QP 2	14615	1120500	Si
1.19	0.41	0.00000512	624	SLE RA 19	17278	1494000	214251	36000000	537	SLE QP 2	14880	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	14	3	182	SLV 1	0.36	1618	1.653	4.46	1.1	77.53	SLV 1	0.36	1618	1.653	Si
0.6	15	3	182	SLV 1	0.36	1618	1.653	5.02	1.12	77.53	SLV 1	0.36	1618	1.653	Si
0.97	16	4	182	SLV 3	0.36	1618	1.653	5.28	1.14	77.53	SLV 3	0.36	1618	1.653	Si
1.19	17	4	182	SLV 4	0.36	1618	1.653	5.37	1.19	77.53	SLV 4	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
4.71	1.1	SLU 2	ST	LT	-67	-36	-18504	0	0	19	0	0	1.1	5629	76	73.67	Si
4.71	1.1	SLV 15	SIS	LT	737	-2873	-16812	3	-10	19	0	0	1.1	5114	2966	1.72	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
142,141,140,139,138,137,136	4.71	1.1	SLU 82	ST	BT	2.3	221370	28916	7.66	Si
142,141,140,139,138,137,136	4.71	1.1	SLV 2	SIS	BT	2.3	194763	22610	8.61	Si
142,141,140,139,138,137,136	4.71	1.1	SLD 2	SIS	BT	2.3	210800	20982	10.05	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	-32	-28916	-22.4	739.15	0	0	0.03	0	1.1	4.66	1496	2060	0	14430	
0	2812	-22610	-1363.4	-481.34	0	7	-0.02	-0.06	0.98	4.67	1496	2060	0	14430	0.07
0	1214	-20982	-604.24	44.41	0	3	0	-0.03	1.04	4.71	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

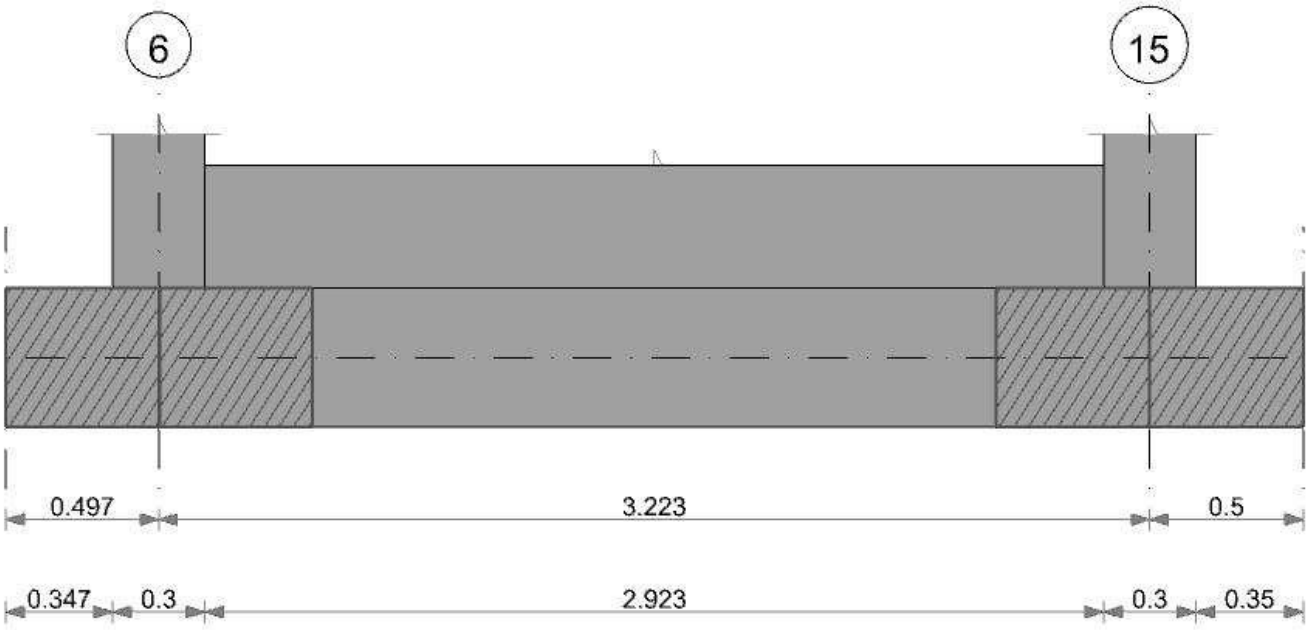
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	232	SLE RA 1	0.05	0	232	232	SLE RA 1	0.05	0	152	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	232	SLE RA 1	0.05	0	232	232	SLE RA 1	0.05	0	152	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	232	SLE RA 1	0.05	0	232	232	SLE RA 1	0.05	0	152	SLE RA 1	0.0033	0	SLE RA 1	Si

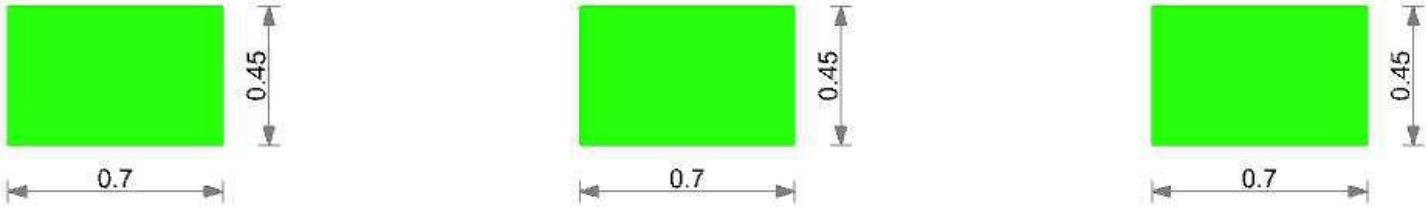
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	232	152	SLE RA 1	0.19	0	232	SLE RA 1	0.1	0	152	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	232	152	SLE RA 1	0.19	0	232	SLE RA 1	0.1	0	152	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	232	152	SLE RA 1	0.19	0	232	SLE RA 1	0.1	0	152	SLE RA 1	Si

CORDOLO 19

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 6 - 15, sezione R 70x45, aste 91, 90, 89, 88, 87, 86, 85, 84

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1133	SLV 5	0.085	2665	2924	SLV 5	15877	Si
0.15	0.41	0.0002	1130	SLV 5	0.085	2665	2915	SLV 5	15877	Si
1.61	0.41	0.0002	1079	SLV 5	0.085	2665	2784	SLV 5	15877	Si
3.07	0.41	0.0002	1130	SLV 5	0.085	2665	2917	SLV 5	15877	Si
3.22	0.41	0.0002	1133	SLV 10	0.085	2665	2923	SLV 10	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000172	793	SLE RA 19	22951	1494000	284595	36000000	682	SLE QP 2	19735	1120500	Si
0.15	0.41	0.00000172	792	SLE RA 19	22926	1494000	284279	36000000	681	SLE QP 2	19707	1120500	Si
1.61	0.41	0.00000172	748	SLE RA 19	21645	1494000	268393	36000000	640	SLE QP 2	18526	1120500	Si
3.07	0.41	0.00000172	776	SLE RA 19	22461	1494000	278512	36000000	664	SLE QP 2	19218	1120500	Si
3.22	0.41	0.00000172	777	SLE RA 19	22495	1494000	278938	36000000	665	SLE QP 2	19248	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	18	12	159	SLV 5	0.36	1618	1.653	6.82	4.51	26.65	SLV 5	0.36	1618	1.653	Si
0.15	18	12	159	SLV 5	0.36	1618	1.653	6.81	4.49	26.65	SLV 5	0.36	1618	1.653	Si
1.61	17	11	159	SLV 5	0.36	1618	1.653	6.4	4.39	26.65	SLV 5	0.36	1618	1.653	Si
3.07	17	12	159	SLV 5	0.36	1618	1.653	6.64	4.66	26.65	SLV 5	0.36	1618	1.653	Si
3.22	17	12	159	SLV 10	0.36	1618	1.653	6.65	4.68	26.65	SLV 10	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
3.22	1.3	SLU 2	ST	LT	-35	-39	-16040	0	0	19	0	0	1.1	4879	53	92.23	Si
3.22	1.3	SLV 11	SIS	LT	969	2212	-10825	5	12	19	0	0	1.1	3293	2415	1.36	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
91,90,89,88,87,86,85,84	3.22	1.3	SLU 82	ST	BT	2.3	167753	24994	6.71	Si
91,90,89,88,87,86,85,84	3.22	1.3	SLV 5	SIS	BT	2.3	149112	23245	6.41	Si
91,90,89,88,87,86,85,84	3.22	1.3	SLD 5	SIS	BT	2.3	158595	19752	8.03	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-57	-20	-24994	999.22	-123.24	0	0	0	0.04	1.22	3.21	1496	2060	0	14430	
-518	-2315	-23245	2253.63	-223.63	-1	-6	-0.01	0.1	1.11	3.2	1496	2060	0	14430	0.07
-248	-1011	-19752	1345.59	-151.03	-1	-3	-0.01	0.07	1.16	3.21	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.08	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	62	SLE RA 1	0.05	0	62	62	SLE RA 1	0.05	0	62	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	62	SLE RA 1	0.05	0	62	62	SLE RA 1	0.05	0	62	SLE RA 1	0.0033	0	SLE RA 1	Si

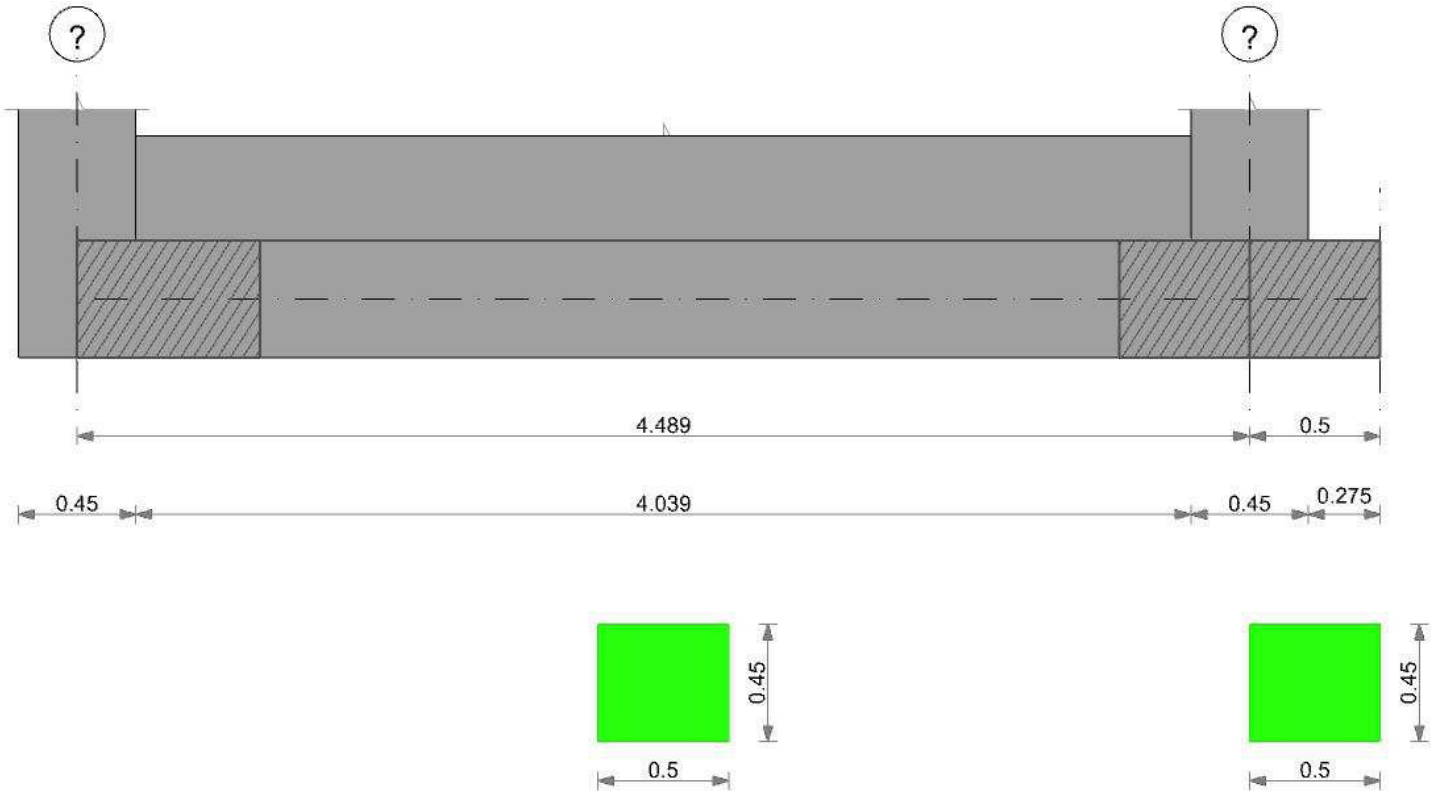
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
Z	0.05	0	62	SLE RA 1	0.05	0	62	62	SLE RA 1	0.05	0	62	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	62	54	SLE RA 1	0.19	0	62	SLE RA 1	0.1	0	62	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	62	54	SLE RA 1	0.19	0	62	SLE RA 1	0.1	0	62	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	62	54	SLE RA 1	0.19	0	62	SLE RA 1	0.1	0	62	SLE RA 1	Si

CORDOLO 20

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

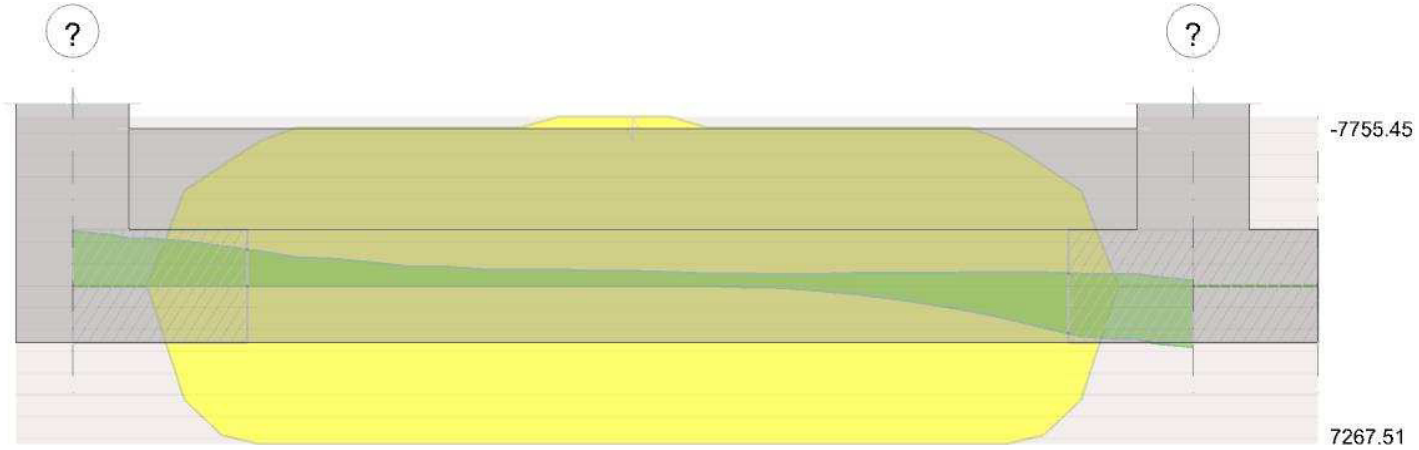
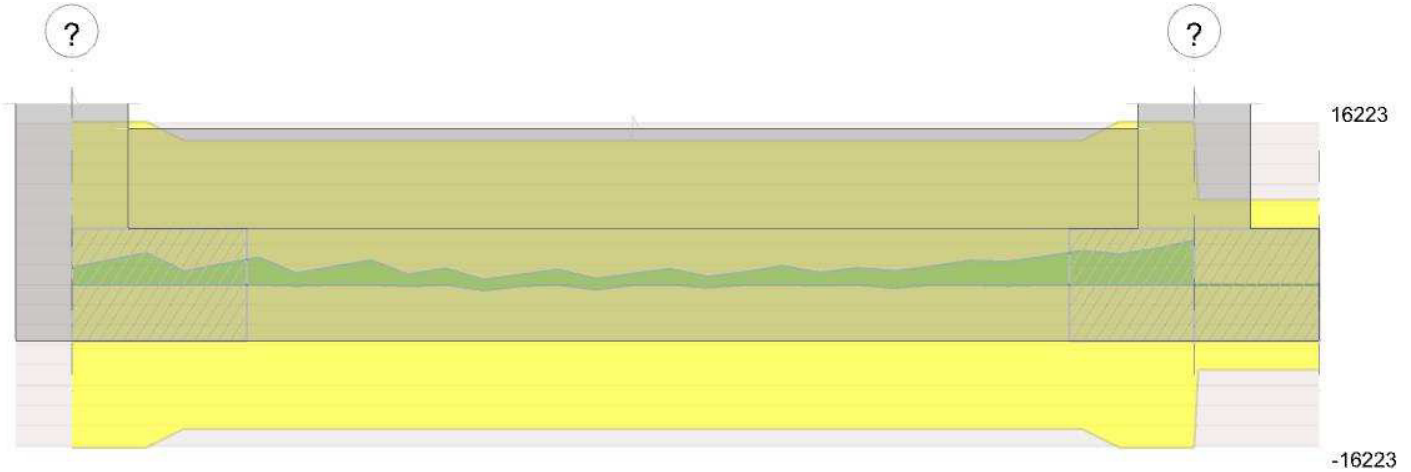


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili ? - ?, sezione R 50x45, aste 153, 152, 151, 150, 149, 148, 147, 146, 145, 144, 143

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	863	SLV 5	0.145	7753	2655	SLV 5	18194	Si
0.23	0.41	0.0005	820	SLV 5	0.145	7753	2523	SLV 5	18194	Si
2.24	0.41	0.0005	749	SLU 82	0.043	8090	2304	SLU 82	18194	Si
4.26	0.41	0.0005	845	SLU 81	0.043	8090	2601	SLU 81	18194	Si
4.49	0.41	0.0005	849	SLU 81	0.043	8090	2612	SLU 81	18194	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000512	569	SLE RA 19	15747	1494000	195257	36000000	487	SLE QP 2	13486	1120500	Si
0.23	0.41	0.00000512	554	SLE RA 19	15350	1494000	190343	36000000	474	SLE QP 2	13139	1120500	Si
2.24	0.41	0.00000512	540	SLE RA 19	14956	1494000	185456	36000000	462	SLE QP 2	12796	1120500	Si
4.26	0.41	0.00000512	610	SLE RA 18	16883	1494000	209353	36000000	523	SLE QP 2	14481	1120500	Si
4.49	0.41	0.00000512	612	SLE RA 18	16958	1494000	210281	36000000	526	SLE QP 2	14553	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	15	12	182	SLV 5	0.36	1618	1.653	4.87	3.76	77.53	SLV 5	0.36	1618	1.653	Si
0.23	15	11	182	SLV 5	0.36	1618	1.653	4.74	3.45	77.53	SLV 5	0.36	1618	1.653	Si
2.24	14	4	182	SLV 5	0.36	1618	1.653	4.62	1.33	77.53	SLV 5	0.36	1618	1.653	Si
4.26	16	0	16	SLV 16	0.36	1618	1.653	5.23	0	77.53	SLV 16	0.36	1618	1.653	Si
4.49	16	0	25	SLV 16	0.36	1618	1.653	5.26	0.03	77.53	SLV 16	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
4.71	1.1	SLU 31	ST	LT	-93	20	-24138	0	0	19	0	0	1.1	7342	95	77.55	Si
4.71	1.1	SLV 11	SIS	LT	2764	-1025	-17310	9	-3	19	0	0	1.1	5265	2948	1.79	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
153,152,151,150,149,148,147,146,145,144,143	4.71	1.1	SLU 82	ST	BT	2.3	221222	30350	7.29	Si
153,152,151,150,149,148,147,146,145,144,143	4.71	1.1	SLV 6	SIS	BT	2.3	198545	23899	8.31	Si
153,152,151,150,149,148,147,146,145,144,143	4.71	1.1	SLD 6	SIS	BT	2.3	213036	22053	9.66	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	26	-30350	-6.3	904.69	0	0	0.03	0	1.1	4.65	1496	2060	0	14430	
0	1063	-23899	-492.69	-4330.78	0	3	-0.18	-0.02	1.06	4.35	1496	2060	0	14430	0.07
0	477	-22053	-218.98	-1583.18	0	1	-0.07	-0.01	1.08	4.57	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

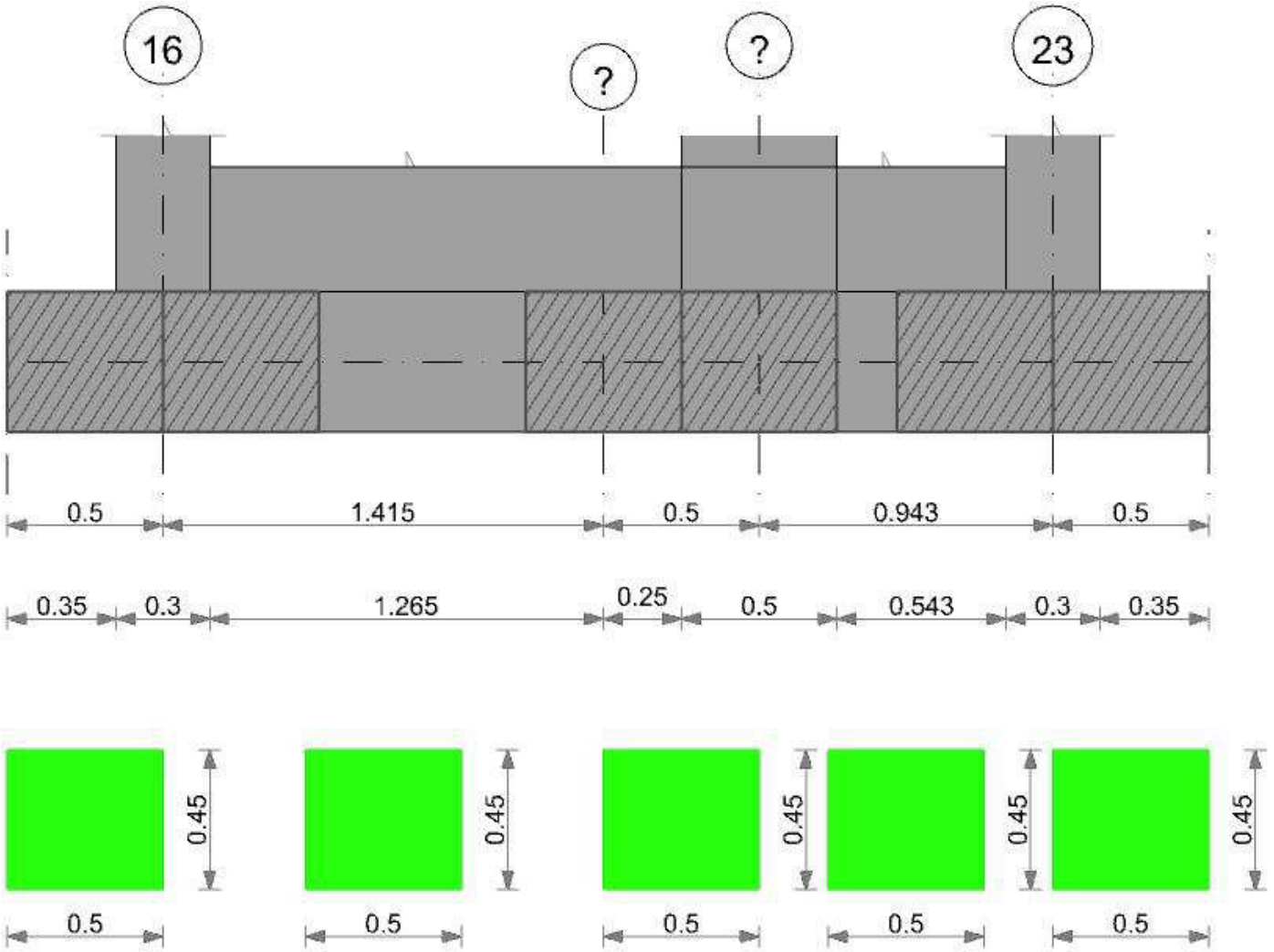
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	241	SLE RA 1	0.05	0	241	241	SLE RA 1	0.05	0	241	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	241	SLE RA 1	0.05	0	241	241	SLE RA 1	0.05	0	241	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	241	SLE RA 1	0.05	0	241	241	SLE RA 1	0.05	0	241	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	241	23	SLE RA 1	0.19	0	241	SLE RA 1	0.1	0	241	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	241	23	SLE RA 1	0.19	0	241	SLE RA 1	0.1	0	241	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	241	23	SLE RA 1	0.19	0	241	SLE RA 1	0.1	0	241	SLE RA 1	Si

CORDOLO 21

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000

Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

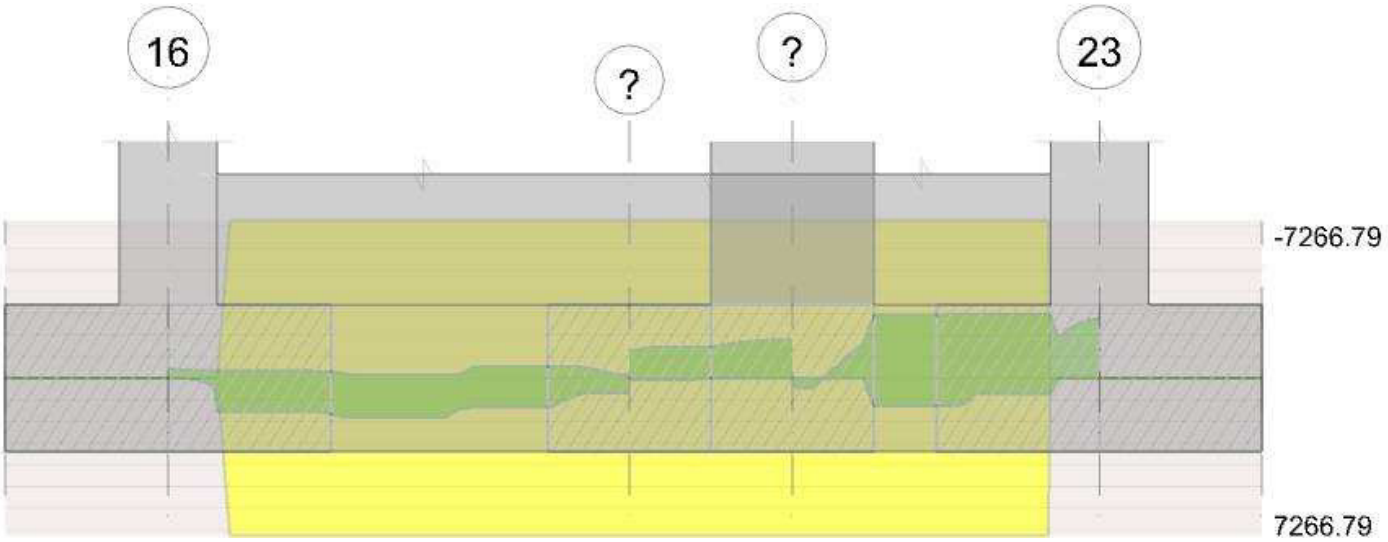
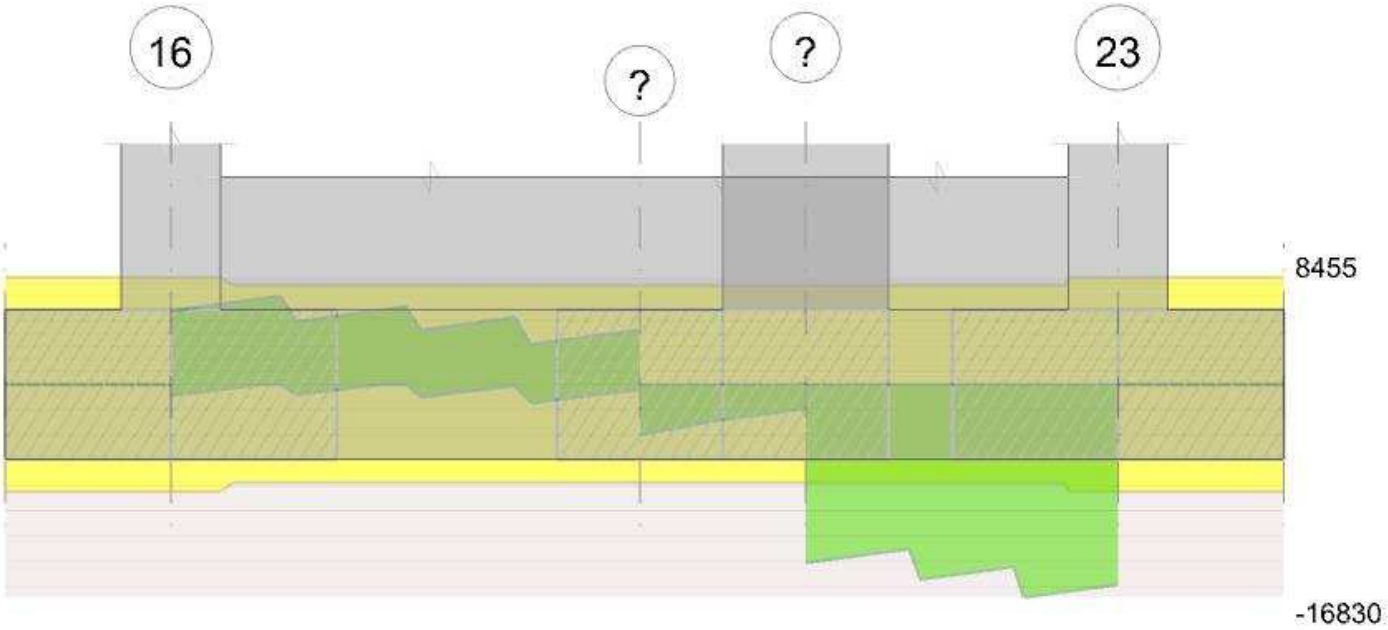


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 16 - ?, sezione R 50x45, aste 165, 166, 167, 168

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	661	SLU 81	0.018	2837	2301	SLU 81	15877	Si
0.15	0.41	0.0002	661	SLU 81	0.018	2837	2300	SLU 81	15877	Si
0.71	0.41	0.0002	658	SLU 81	0.018	2837	2290	SLU 81	15877	Si
1.41	0.41	0.0002	647	SLU 82	0.019	3209	2249	SLU 82	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000178	477	SLE RA 18	13801	1494000	171133	36000000	409	SLE QP 2	11835	1120500	Si
0.15	0.41	0.00000178	477	SLE RA 18	13799	1494000	171103	36000000	409	SLE QP 2	11833	1120500	Si
0.71	0.41	0.00000178	475	SLE RA 18	13736	1494000	170328	36000000	407	SLE QP 2	11776	1120500	Si
1.41	0.41	0.00000201	466	SLE RA 19	13444	1494000	166706	36000000	400	SLE QP 2	11521	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	14	0	17	SLV 16	0.36	1618	1.653	4.09	0.28	27.58	SLV 7	0.36	1618	1.653	Si
0.15	14	0	14	SLV 16	0.36	1618	1.653	4.09	0.28	27.58	SLV 7	0.36	1618	1.653	Si
0.71	14	1	116	SLV 16	0.36	1618	1.653	4.07	0.29	27.58	SLV 16	0.36	1618	1.653	Si
1.41	14	2	159	SLV 16	0.36	1618	1.653	4	0.46	31.14	SLV 16	0.36	1618	1.653	Si

Campata 3 tra i fili ? - ?, sezione R 50x45, asta 169

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	647	SLU 82	0.019	3209	2249	SLU 82	15877	Si
0.25	0.41	0.0002	642	SLU 82	0.019	3209	2235	SLU 82	15877	Si
0.5	0.41	0.0002	642	SLU 82	0.02	3402	2231	SLU 82	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000201	466	SLE RA 19	13444	1494000	166706	36000000	400	SLE QP 2	11521	1120500	Si
0.25	0.41	0.00000201	463	SLE RA 19	13359	1494000	165651	36000000	397	SLE QP 2	11447	1120500	Si
0.5	0.41	0.00000213	463	SLE RA 19	13319	1494000	165160	36000000	396	SLE QP 2	11415	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	14	2	159	SLV 16	0.36	1618	1.653	4	0.46	31.14	SLV 16	0.36	1618	1.653	Si
0.25	14	2	159	SLV 16	0.36	1618	1.653	3.97	0.52	31.14	SLV 16	0.36	1618	1.653	Si
0.5	14	2	159	SLV 16	0.36	1618	1.653	3.96	0.59	32.99	SLV 16	0.36	1618	1.653	Si

Campata 4 tra i fili ? - 23, sezione R 50x45, aste 170, 171, 172

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	642	SLU 82	0.02	3402	2231	SLU 82	15877	Si
0.25	0.41	0.0002	642	SLU 82	0.02	3402	2235	SLU 82	15877	Si
0.47	0.41	0.0002	645	SLU 82	0.02	3402	2243	SLU 82	15877	Si
0.79	0.41	0.0002	651	SLU 82	0.02	3402	2263	SLU 82	15877	Si
0.94	0.41	0.0002	655	SLU 82	0.02	3402	2277	SLU 82	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000213	463	SLE RA 19	13319	1494000	165160	36000000	396	SLE QP 2	11415	1120500	Si
0.25	0.41	0.00000213	463	SLE RA 19	13341	1494000	165425	36000000	397	SLE QP 2	11437	1120500	Si
0.47	0.41	0.00000213	465	SLE RA 19	13394	1494000	166090	36000000	399	SLE QP 2	11488	1120500	Si
0.79	0.41	0.00000213	469	SLE RA 19	13516	1494000	167596	36000000	403	SLE QP 2	11601	1120500	Si
0.94	0.41	0.00000213	472	SLE RA 19	13600	1494000	168641	36000000	406	SLE QP 2	11679	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	14	2	159	SLV 16	0.36	1618	1.653	3.96	0.59	32.99	SLV 16	0.36	1618	1.653	Si
0.25	14	2	159	SLV 16	0.36	1618	1.653	3.97	0.66	32.99	SLV 16	0.36	1618	1.653	Si
0.47	14	3	159	SLV 16	0.36	1618	1.653	3.99	0.74	32.99	SLV 16	0.36	1618	1.653	Si
0.79	14	3	159	SLV 16	0.36	1618	1.653	4.03	0.85	32.99	SLV 16	0.36	1618	1.653	Si
0.94	14	3	159	SLV 15	0.36	1618	1.653	4.06	0.91	32.99	SLV 15	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
2.86	1.1	SLU 2	ST	LT	-11	-109	-12592	0	0	19	0	0	1.1	3830	109	35	Si
2.86	1.1	SLV 3	SIS	LT	-1806	553	-12813	-8	2	19	0	0	1.1	3898	1889	2.06	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
165,166,167,168,169,170,171,172	2.86	1.1	SLU 82	ST	BT	2.3	137972	20035	6.89	Si
165,166,167,168,169,170,171,172	2.86	1.1	SLV 11	SIS	BT	2.3	121759	14049	8.67	Si
165,166,167,168,169,170,171,172	2.86	1.1	SLD 11	SIS	BT	2.3	131500	13766	9.55	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-11	-143	-20035	30.23	-90.98	0	0	0	0	1.1	2.85	1496	2060	0	14430	
475	1592	-14049	-791.88	163.15	2	6	0.01	-0.06	0.99	2.83	1496	2060	0	14430	0.07
202	659	-13766	-343.69	38.93	1	3	0	-0.02	1.05	2.85	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.08	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.07	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

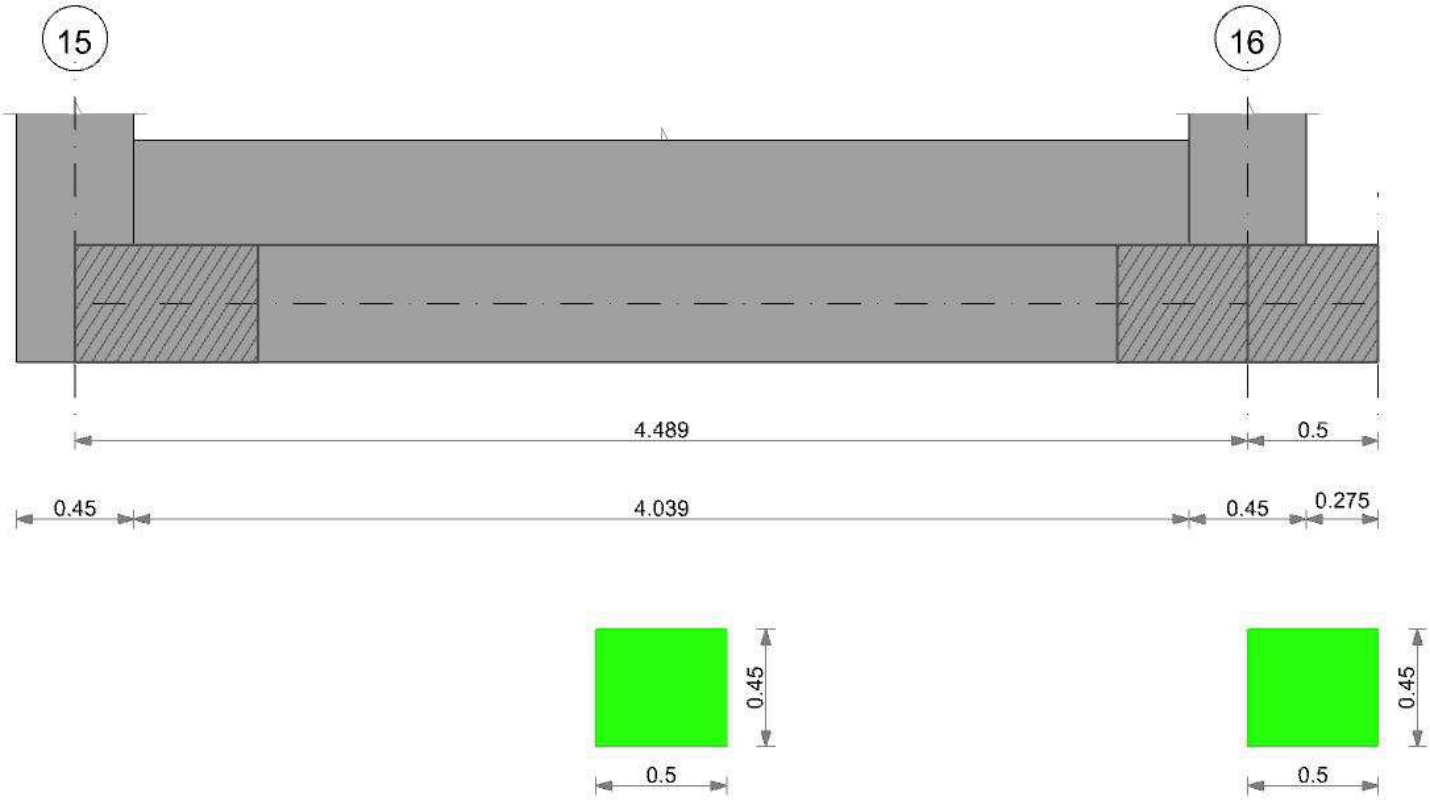
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	209	SLE RA 1	0.05	0	209	209	SLE RA 1	0.05	0	206	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	209	SLE RA 1	0.05	0	209	209	SLE RA 1	0.05	0	206	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	209	SLE RA 1	0.05	0	209	209	SLE RA 1	0.05	0	206	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	209	206	SLE RA 1	0.19	0	209	SLE RA 1	0.1	0	206	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	209	206	SLE RA 1	0.19	0	209	SLE RA 1	0.1	0	206	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	209	206	SLE RA 1	0.19	0	209	SLE RA 1	0.1	0	206	SLE RA 1	Si

CORDOLO 22

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

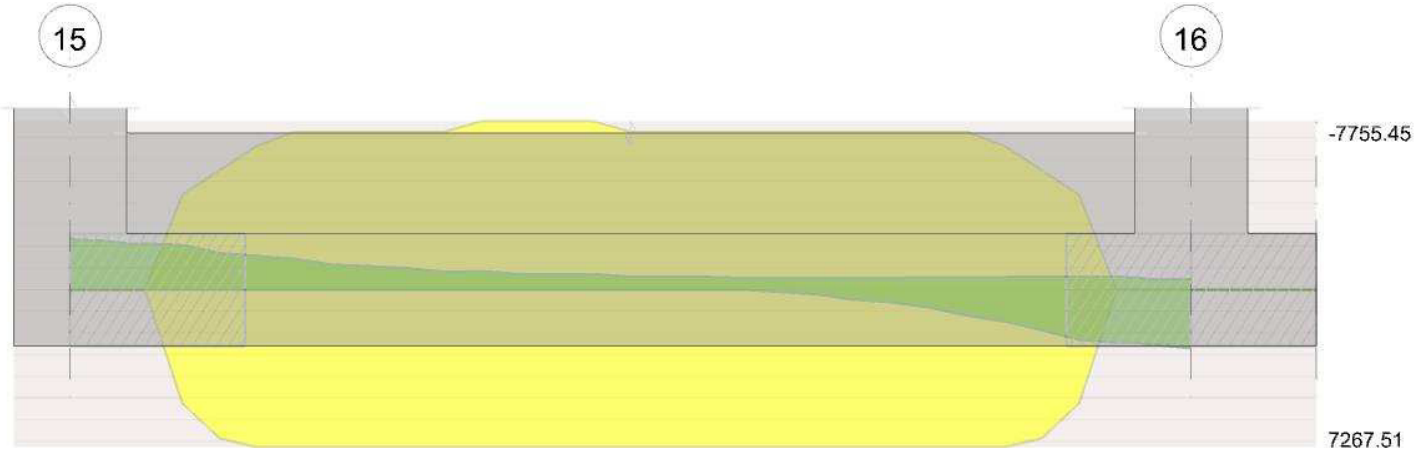
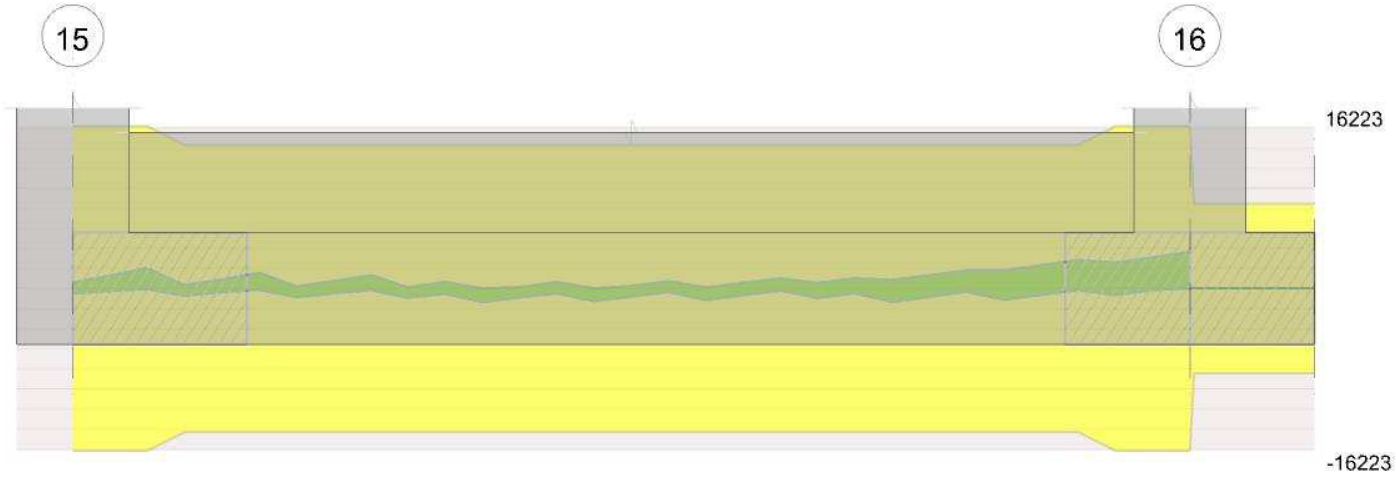


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 15 - 16, sezione R 50x45, aste 154, 155, 156, 157, 158, 159, 160, 161, 162, 163, 164

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	868	SLV 10	0.145	7753	2670	SLV 10	18194	Si
0.23	0.41	0.0005	825	SLV 10	0.145	7753	2538	SLV 10	18194	Si
2.24	0.41	0.0005	750	SLU 82	0.043	8090	2308	SLU 82	18194	Si
4.26	0.41	0.0005	845	SLU 81	0.043	8090	2599	SLU 81	18194	Si
4.49	0.41	0.0005	848	SLU 81	0.043	8090	2610	SLU 81	18194	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000512	571	SLE RA 19	15806	1494000	195998	36000000	489	SLE QP 2	13539	1120500	Si
0.23	0.41	0.00000512	556	SLE RA 19	15409	1494000	191072	36000000	476	SLE QP 2	13191	1120500	Si
2.24	0.41	0.00000512	541	SLE RA 19	14978	1494000	185733	36000000	463	SLE QP 2	12816	1120500	Si
4.26	0.41	0.00000512	609	SLE RA 18	16872	1494000	209217	36000000	523	SLE QP 2	14470	1120500	Si
4.49	0.41	0.00000512	612	SLE RA 18	16946	1494000	210135	36000000	525	SLE QP 2	14542	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	15	12	182	SLV 10	0.36	1618	1.653	4.89	3.79	77.53	SLV 10	0.36	1618	1.653	Si
0.23	15	11	182	SLV 10	0.36	1618	1.653	4.76	3.49	77.53	SLV 10	0.36	1618	1.653	Si
2.24	14	4	182	SLV 6	0.36	1618	1.653	4.63	1.35	77.53	SLV 6	0.36	1618	1.653	Si
4.26	16	1	90	SLV 16	0.36	1618	1.653	5.23	0.24	77.53	SLV 16	0.36	1618	1.653	Si
4.49	16	1	92	SLV 16	0.36	1618	1.653	5.25	0.25	77.53	SLV 16	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.71	1.1	SLU 31	ST	LT	-106	20	-24160	0	0	19	0	0	1.1	7349	108	67.88	Si
4.71	1.1	SLV 11	SIS	LT	2799	-1025	-17356	9	-3	19	0	0	1.1	5279	2981	1.77	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
154,155,156,157,158,159,160,161,162,163,164	4.71	1.1	SLU 82	ST	BT	2.3	221350	30376	7.29	Si
154,155,156,157,158,159,160,161,162,163,164	4.71	1.1	SLV 6	SIS	BT	2.3	198558	23887	8.31	Si
154,155,156,157,158,159,160,161,162,163,164	4.71	1.1	SLD 6	SIS	BT	2.3	212988	22058	9.66	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	26	-30376	-6.3	862.9	0	0	0.03	0	1.1	4.66	1496	2060	0	14430	
0	1063	-23887	-492.69	-4324.07	0	3	-0.18	-0.02	1.06	4.35	1496	2060	0	14430	0.07
0	477	-22058	-218.98	-1595.54	0	1	-0.07	-0.01	1.08	4.57	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

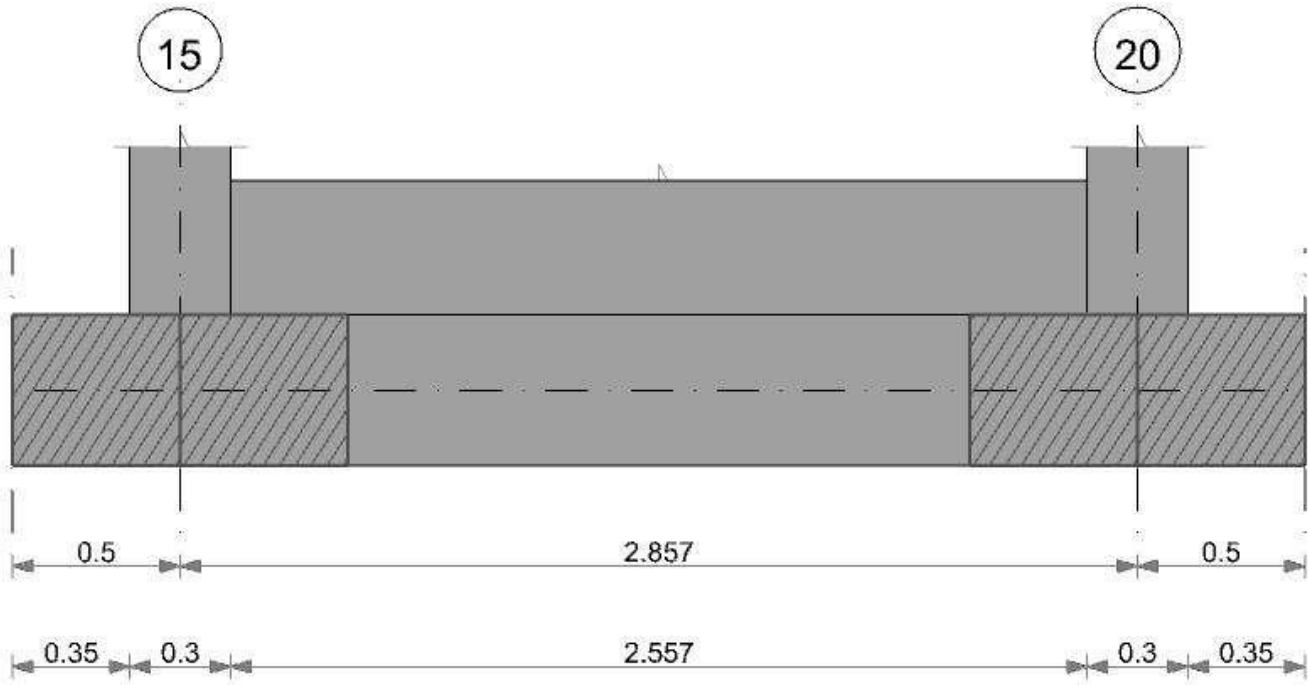
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0	243	SLE RA 1	0.05	0	243	243	SLE RA 1	0.05	0	243	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	243	SLE RA 1	0.05	0	243	243	SLE RA 1	0.05	0	243	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	243	SLE RA 1	0.05	0	243	243	SLE RA 1	0.05	0	243	SLE RA 1	0.0033	0	SLE RA 1	Si

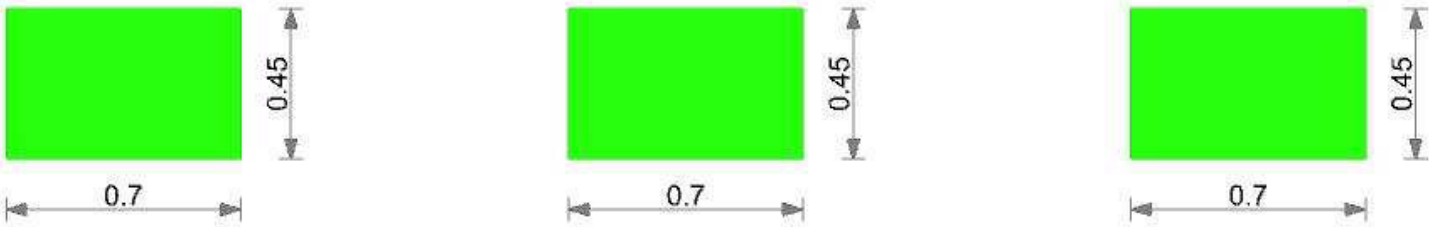
Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	243	25	SLE RA 1	0.19	0	243	SLE RA 1	0.1	0	243	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	243	25	SLE RA 1	0.19	0	243	SLE RA 1	0.1	0	243	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	243	25	SLE RA 1	0.19	0	243	SLE RA 1	0.1	0	243	SLE RA 1	Si

CORDOLO 23

Geometria





Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

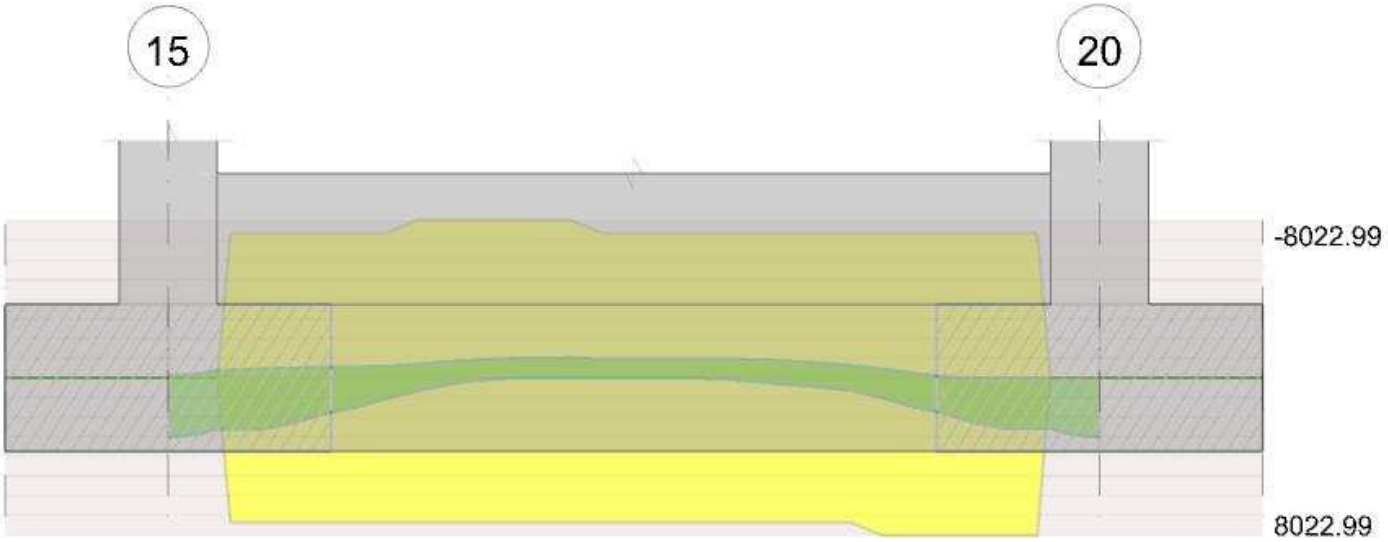
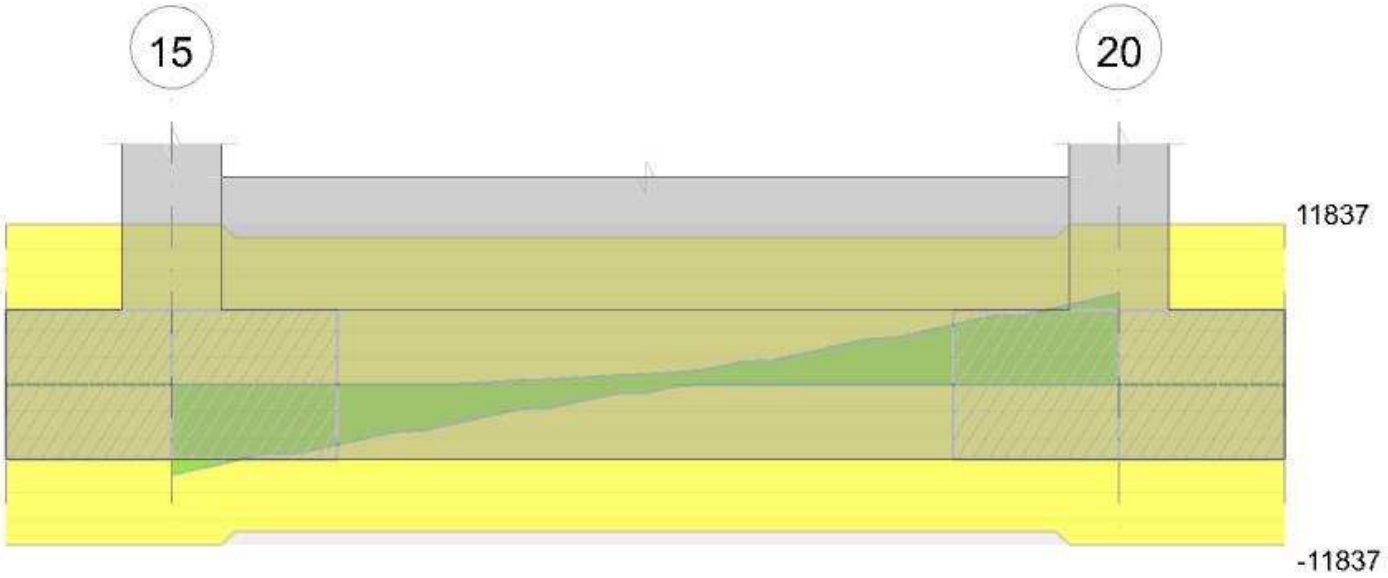


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 15 - 20, sezione R 70x45, aste 83, 82, 81, 80, 79, 78, 77, 76

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1133	SLV 10	0.086	2731	2923	SLV 10	15877	Si
0.15	0.41	0.0002	1135	SLV 10	0.086	2731	2929	SLV 10	15877	Si
1.43	0.41	0.0002	1110	SLV 10	0.086	2731	2865	SLV 10	15877	Si
2.71	0.41	0.0002	1125	SLV 10	0.086	2731	2903	SLV 10	15877	Si
2.86	0.41	0.0002	1124	SLV 10	0.086	2731	2900	SLV 10	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000176	777	SLE RA 19	22482	1494000	278776	36000000	665	SLE QP 2	19237	1120500	Si
0.15	0.41	0.00000176	778	SLE RA 19	22502	1494000	279022	36000000	665	SLE QP 2	19255	1120500	Si
1.43	0.41	0.00000176	767	SLE RA 19	22183	1494000	275074	36000000	657	SLE QP 2	18999	1120500	Si
2.71	0.41	0.00000176	787	SLE RA 19	22762	1494000	282250	36000000	676	SLE QP 2	19550	1120500	Si
2.86	0.41	0.00000176	785	SLE RA 19	22712	1494000	281635	36000000	674	SLE QP 2	19511	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	17	12	159	SLV 10	0.36	1618	1.653	6.65	4.68	27.31	SLV 10	0.36	1618	1.653	Si
0.15	17	12	159	SLV 10	0.36	1618	1.653	6.65	4.69	27.31	SLV 10	0.36	1618	1.653	Si
1.43	17	12	159	SLV 10	0.36	1618	1.653	6.57	4.53	27.31	SLV 10	0.36	1618	1.653	Si
2.71	17	12	159	SLV 10	0.36	1618	1.653	6.76	4.49	27.31	SLV 10	0.36	1618	1.653	Si

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
2.86	17	12	159	SLV 10	0.36	1618	1.653	6.74	4.49	27.31	SLV 10	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
2.86	1.3	SLU 2	ST	LT	-83	-39	-14314	0	0	19	0	0	1.1	4354	92	47.48	Si
2.86	1.3	SLV 11	SIS	LT	908	2036	-10072	5	11	19	0	0	1.1	3064	2229	1.37	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
83,82,81,80,79,78,77,76	2.86	1.3	SLU 82	ST	BT	2.3	151910	22326	6.8	Si
83,82,81,80,79,78,77,76	2.86	1.3	SLV 10	SIS	BT	2.3	135415	20828	6.5	Si
83,82,81,80,79,78,77,76	2.86	1.3	SLD 10	SIS	BT	2.3	143812	17666	8.14	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-118	-22	-22326	745.3	-7.48	0	0	0	0.03	1.23	2.86	1496	2060	0	14430	
184	-2025	-20828	1884.09	42.74	1	-6	0	0.09	1.12	2.85	1496	2060	0	14430	0.07
32	-887	-17666	1092.07	18.46	0	-3	0	0.06	1.18	2.86	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.09	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.08	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.08	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

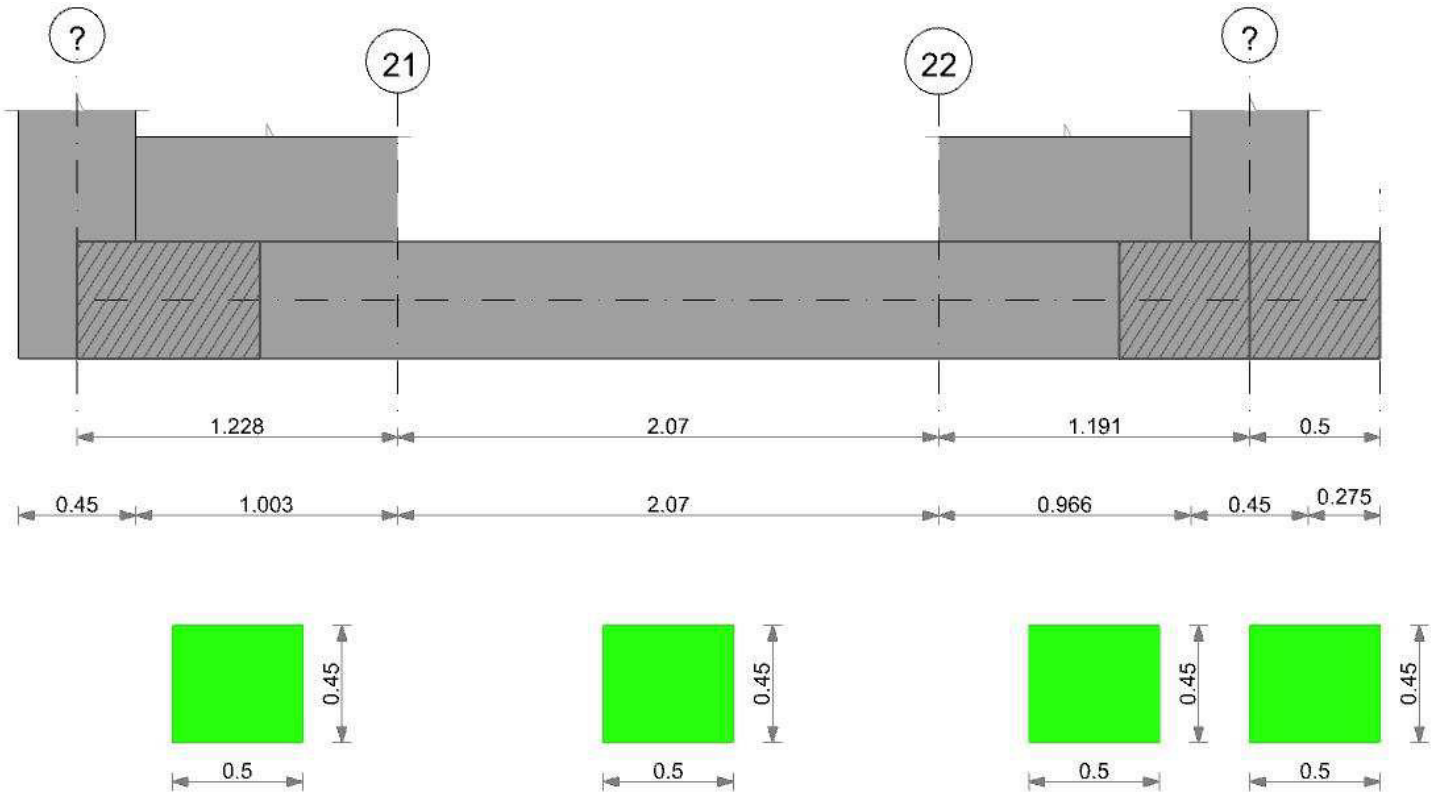
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	77	SLE RA 1	0.05	0	77	77	SLE RA 1	0.05	0	77	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	77	SLE RA 1	0.05	0	77	77	SLE RA 1	0.05	0	77	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	77	SLE RA 1	0.05	0	77	77	SLE RA 1	0.05	0	77	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	77	62	SLE RA 1	0.19	0	77	SLE RA 1	0.1	0	77	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	77	62	SLE RA 1	0.19	0	77	SLE RA 1	0.1	0	77	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	77	62	SLE RA 1	0.19	0	77	SLE RA 1	0.1	0	77	SLE RA 1	Si

CORDOLO 24

Geometria



Caratteristiche dei materiali

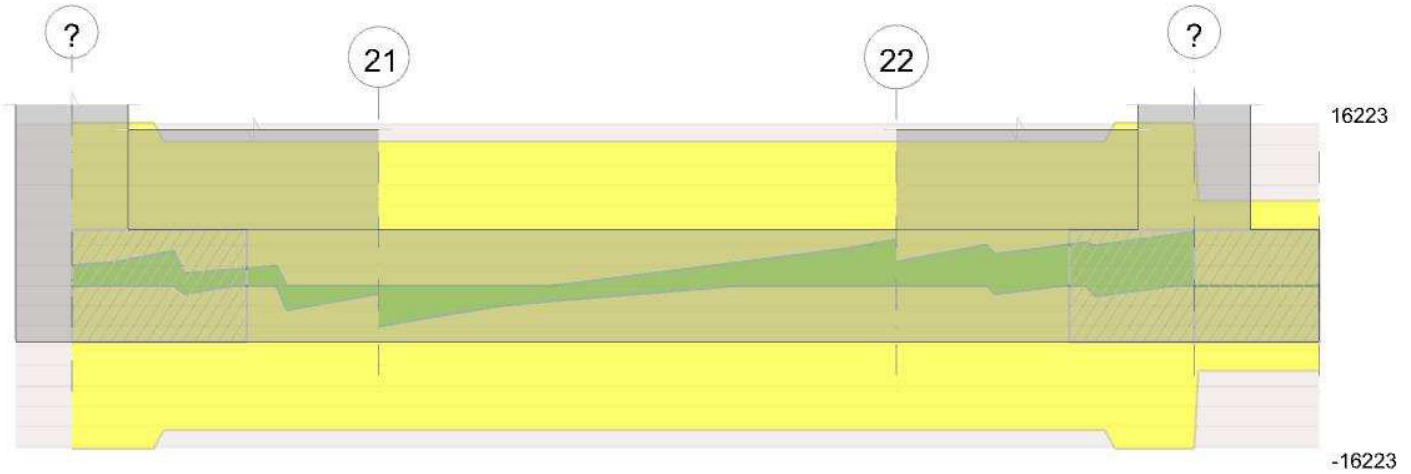
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 21 - 22, sezione R 50x45, asta 64

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-1038.69	SLU 82	-1690.98	-7755.45	0.113	4.59	Si
1.04	0.000509	0.052	0.000509	0.052							-2997.82	SLU 82	-3002.28	-7755.45	0.113	2.58	Si
1.1	0.000509	0.052	0.000509	0.052							-2974.18	SLU 82	-3002.28	-7755.45	0.113	2.58	Si
2.07	0.000509	0.052	0.000509	0.052							-575.11	SLU 81	-1318.65	-7755.45	0.113	5.88	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	687.04	SLV 7	687.04	7266.79	0.197	10.58	-1988.03	SLV 10	-2373.04	-7266.79	0.197	3.06	Si
0.62	0.000509	0.052	0.000509	0.052							-2842.08	SLV 10	-2855.05	-7266.79	0.197	2.55	Si
1.04	0.000509	0.052	0.000509	0.052							-2687.09	SLV 10	-2820.45	-7266.79	0.197	2.58	Si
2.07	0.000509	0.052	0.000509	0.052	131.89	SLV 6	131.89	7266.79	0.197	55.1	-940.06	SLV 11	-1212.62	-7266.79	0.197	5.99	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000102	0.000509	0	-4042	SLU 81	-4042	-7764	-63178	-14348	-14348	1	3.55	Si
1.04	0.0000102	0.000509	0	204	SLU 82	204	7764	63178	14348	14348	1	70.5	Si
2.07	0.0000102	0.000509	0	4590	SLU 82	4590	7764	63178	14348	14348	1	3.13	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000102	0.000509	0	-3060	SLV 15	-3060	-7764	-63178	-14348	-14348	1	4.69	Si
1.04	0.0000102	0.000509	0	1044	SLV 10	1044	7764	63178	14348	14348	1	13.75	Si
1.04	0.0000102	0.000509	0	-835	SLV 7	-835	-7764	-63178	-14348	-14348	1	17.19	Si
2.07	0.0000102	0.000509	0	4367	SLV 10	4367	7764	63178	14348	14348	1	3.29	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-754.64	19	-1232.15	65173	1494000	977593	36000000	-650.5	2	-1076.53	56941	1120500			Si
1.04	-2191.78	19	-2194.6	116080	1494000	1741203	36000000	-1942.81	2	-1943.85	102817	1120500			Si
2.07	-430.06	18	-971.63	51393	1494000	770894	36000000	-404.09	2	-880.47	46571	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	-2634	-426	-14348	SLV 15	0.36	1618	1.653	-650.5	-1337.54	-7266.79	SLV 10	0.36	1618	1.653	Si
1.04	104	939	14348	SLV 10	0.36	1618	1.653	-1918.47	-901.98	-7266.79	SLV 10	0.36	1618	1.653	Si
2.07	2929	1438	14348	SLV 10	0.36	1618	1.653	-404.09	-535.97	-7266.79	SLV 11	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili ? - 21, sezione R 50x45, aste 67, 66, 65

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	896	SLV 10	0.145	7753	2756	SLV 10	18194	Si
0.23	0.41	0.0005	830	SLV 10	0.145	7753	2554	SLV 10	18194	Si
0.61	0.41	0.0005	728	SLV 10	0.145	7753	2249	SLU 82	18194	Si
1.23	0.41	0.0005	655	SLU 82	0.043	8090	2016	SLU 82	18194	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000512	602	SLE RA 19	16677	1494000	206791	36000000	518	SLE QP 2	14355	1120500	Si
0.23	0.41	0.00000512	572	SLE RA 19	15844	1494000	196465	36000000	492	SLE QP 2	13619	1120500	Si
0.61	0.41	0.00000512	528	SLE RA 19	14619	1494000	181278	36000000	453	SLE QP 2	12535	1120500	Si
1.23	0.41	0.00000512	472	SLE RA 19	13082	1494000	162213	36000000	403	SLE QP 2	11168	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	16	12	182	SLV 10	0.36	1618	1.653	5.18	3.77	77.53	SLV 10	0.36	1618	1.653	Si
0.23	15	10	182	SLV 10	0.36	1618	1.653	4.92	3.38	77.53	SLV 10	0.36	1618	1.653	Si
0.61	14	8	182	SLV 10	0.36	1618	1.653	4.53	2.75	77.53	SLV 10	0.36	1618	1.653	Si
1.23	12	6	182	SLV 10	0.36	1618	1.653	4.03	1.94	77.53	SLV 10	0.36	1618	1.653	Si

Campata 2 tra i fili 21 - 22, sezione R 50x45, asta 64

Campata 3 tra i fili 22 - ?, sezione R 50x45, aste 63, 62, 61

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	708	SLU 82	0.043	8090	2177	SLU 82	18194	Si
0.6	0.41	0.0005	790	SLU 82	0.043	8090	2432	SLU 82	18194	Si
0.97	0.41	0.0005	828	SLU 82	0.043	8090	2547	SLU 82	18194	Si
1.19	0.41	0.0005	842	SLU 82	0.043	8090	2590	SLU 82	18194	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000512	509	SLE RA 19	14106	1494000	174911	36000000	434	SLE QP 2	12026	1120500	Si
0.6	0.41	0.00000512	570	SLE RA 19	15781	1494000	195687	36000000	488	SLE QP 2	13513	1120500	Si
0.97	0.41	0.00000512	597	SLE RA 19	16541	1494000	205103	36000000	513	SLE QP 2	14194	1120500	Si
1.19	0.41	0.00000512	608	SLE RA 19	16824	1494000	208619	36000000	522	SLE QP 2	14454	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	13	3	182	SLV 14	0.36	1618	1.653	4.34	1.03	77.53	SLV 14	0.36	1618	1.653	Si
0.6	15	3	182	SLV 14	0.36	1618	1.653	4.88	1.03	77.53	SLV 14	0.36	1618	1.653	Si
0.97	16	3	182	SLV 16	0.36	1618	1.653	5.13	1.04	77.53	SLV 16	0.36	1618	1.653	Si
1.19	16	3	182	SLV 15	0.36	1618	1.653	5.22	1.08	77.53	SLV 15	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.71	1.1	SLU 2	ST	LT	-78	72	-18325	0	0	19	0	0	1.1	5574	107	52.21	Si
4.71	1.1	SLV 4	SIS	LT	778	2900	-16758	3	10	19	0	0	1.1	5097	3003	1.7	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
67,66,65,64,63,62,61	4.71	1.1	SLU 82	ST	BT	2.3	221999	28657	7.75	Si
67,66,65,64,63,62,61	4.71	1.1	SLV 13	SIS	BT	2.3	194352	22296	8.72	Si
67,66,65,64,63,62,61	4.71	1.1	SLD 13	SIS	BT	2.3	211017	20741	10.17	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	88	-28657	-20.61	528.85	0	0	0.02	0	1.1	4.68	1496	2060	0	14430	
0	-2760	-22296	1321.6	-714	0	-7	-0.03	0.06	0.98	4.65	1496	2060	0	14430	0.07
0	-1169	-20741	568.97	-137.34	0	-3	-0.01	0.03	1.05	4.7	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

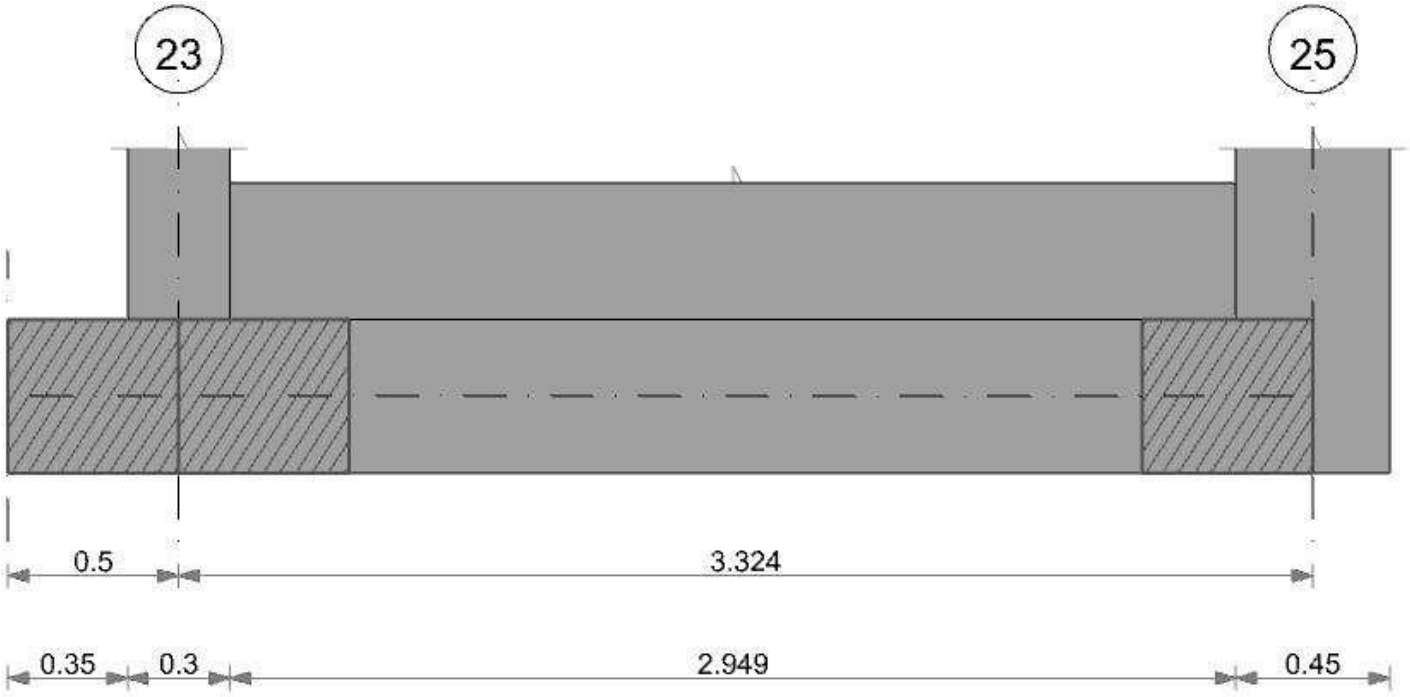
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	251	SLE RA 1	0.05	0	251	251	SLE RA 1	0.05	0	153	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	251	SLE RA 1	0.05	0	251	251	SLE RA 1	0.05	0	153	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	251	SLE RA 1	0.05	0	251	251	SLE RA 1	0.05	0	153	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	251	153	SLE RA 1	0.19	0	251	SLE RA 1	0.1	0	153	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	251	153	SLE RA 1	0.19	0	251	SLE RA 1	0.1	0	153	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	251	153	SLE RA 1	0.19	0	251	SLE RA 1	0.1	0	153	SLE RA 1	Si

CORDOLO 25

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

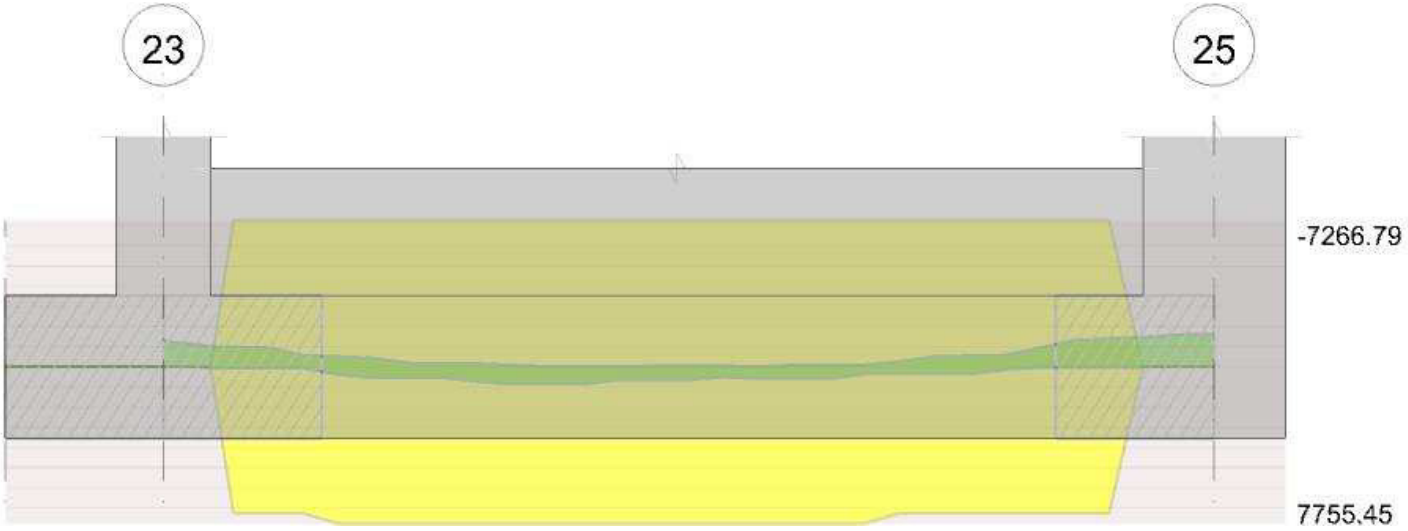
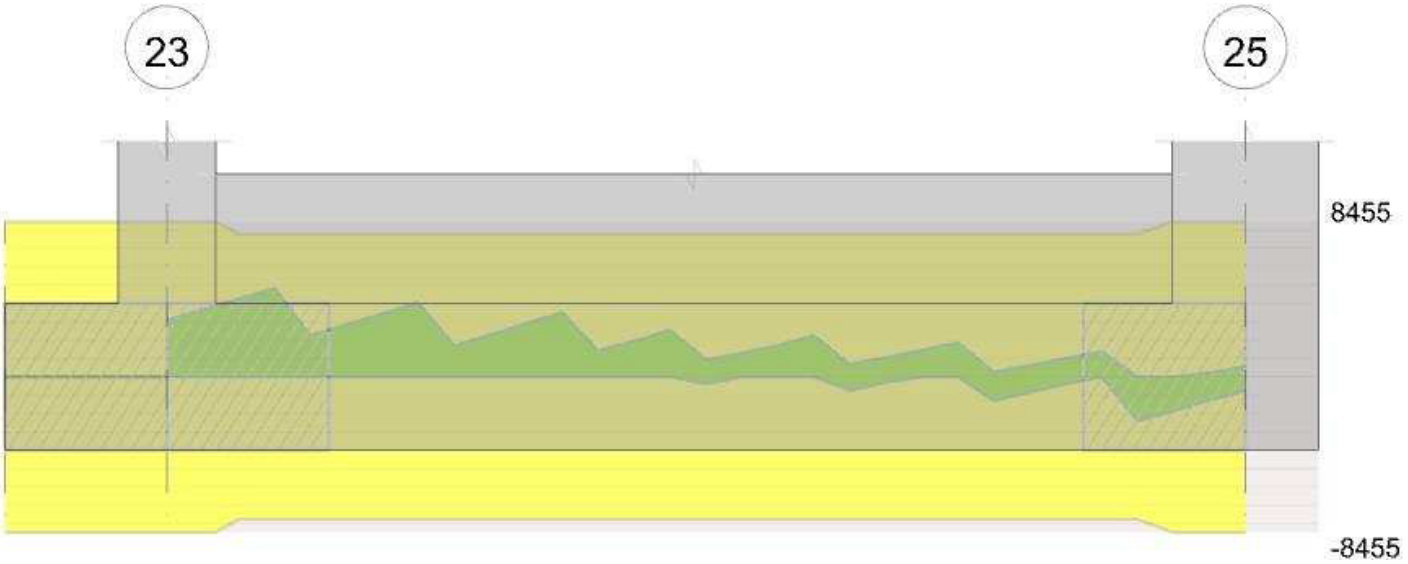


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 23 - 25, sezione R 50x45, aste 173, 174, 175, 176, 177, 178, 179, 180

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	655	SLU 82	0.017	2715	2277	SLU 82	15877	Si
0.15	0.41	0.0002	659	SLU 82	0.017	2715	2292	SLU 82	15877	Si
1.66	0.41	0.0002	709	SLU 82	0.017	2715	2466	SLU 82	15877	Si
3.1	0.41	0.0002	735	SLU 81	0.017	2715	2557	SLU 81	15877	Si
3.32	0.41	0.0002	744	SLU 81	0.017	2715	2586	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.0000017	472	SLE RA 19	13679	1494000	169615	36000000	406	SLE QP 2	11746	1120500	Si
0.15	0.41	0.0000017	476	SLE RA 19	13771	1494000	170765	36000000	409	SLE QP 2	11831	1120500	Si
1.66	0.41	0.0000017	513	SLE RA 19	14848	1494000	184115	36000000	443	SLE QP 2	12831	1120500	Si
3.1	0.41	0.0000017	533	SLE RA 18	15432	1494000	191356	36000000	463	SLE QP 2	13417	1120500	Si
3.32	0.41	0.0000017	539	SLE RA 18	15613	1494000	193604	36000000	469	SLE QP 2	13589	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	14	3	159	SLV 15	0.36	1618	1.653	4.06	0.91	26.4	SLV 15	0.36	1618	1.653	Si
0.15	14	3	159	SLV 15	0.36	1618	1.653	4.09	0.97	26.4	SLV 15	0.36	1618	1.653	Si
1.66	15	6	159	SLV 15	0.36	1618	1.653	4.43	1.62	26.4	SLV 15	0.36	1618	1.653	Si
3.1	16	8	159	SLV 15	0.36	1618	1.653	4.63	2.29	26.4	SLV 15	0.36	1618	1.653	Si
3.32	16	8	159	SLV 15	0.36	1618	1.653	4.69	2.41	26.4	SLV 15	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.55	1.1	SLU 43	ST	LT	-67	118	-19718	0	0	19	0	0	1.1	5998	136	44.11	Si
3.55	1.1	SLV 3	SIS	LT	-2063	1227	-13402	-9	5	19	0	0	1.1	4077	2401	1.7	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
173,174,175,176,177,178,179,180	3.55	1.1	SLU 81	ST	BT	2.3	166716	24712	6.75	Si
173,174,175,176,177,178,179,180	3.55	1.1	SLV 15	SIS	BT	2.3	153373	20370	7.53	Si
173,174,175,176,177,178,179,180	3.55	1.1	SLD 15	SIS	BT	2.3	160172	18346	8.73	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	158	-24712	-152.09	488.18	0	0	0.02	-0.01	1.09	3.51	1496	2060	0	14430	
0	810	-20370	-448.71	2196.71	0	2	0.11	-0.02	1.06	3.33	1496	2060	0	14430	0.07
0	415	-18346	-254.38	1157.13	0	1	0.06	-0.01	1.07	3.42	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.06	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.06	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.06	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

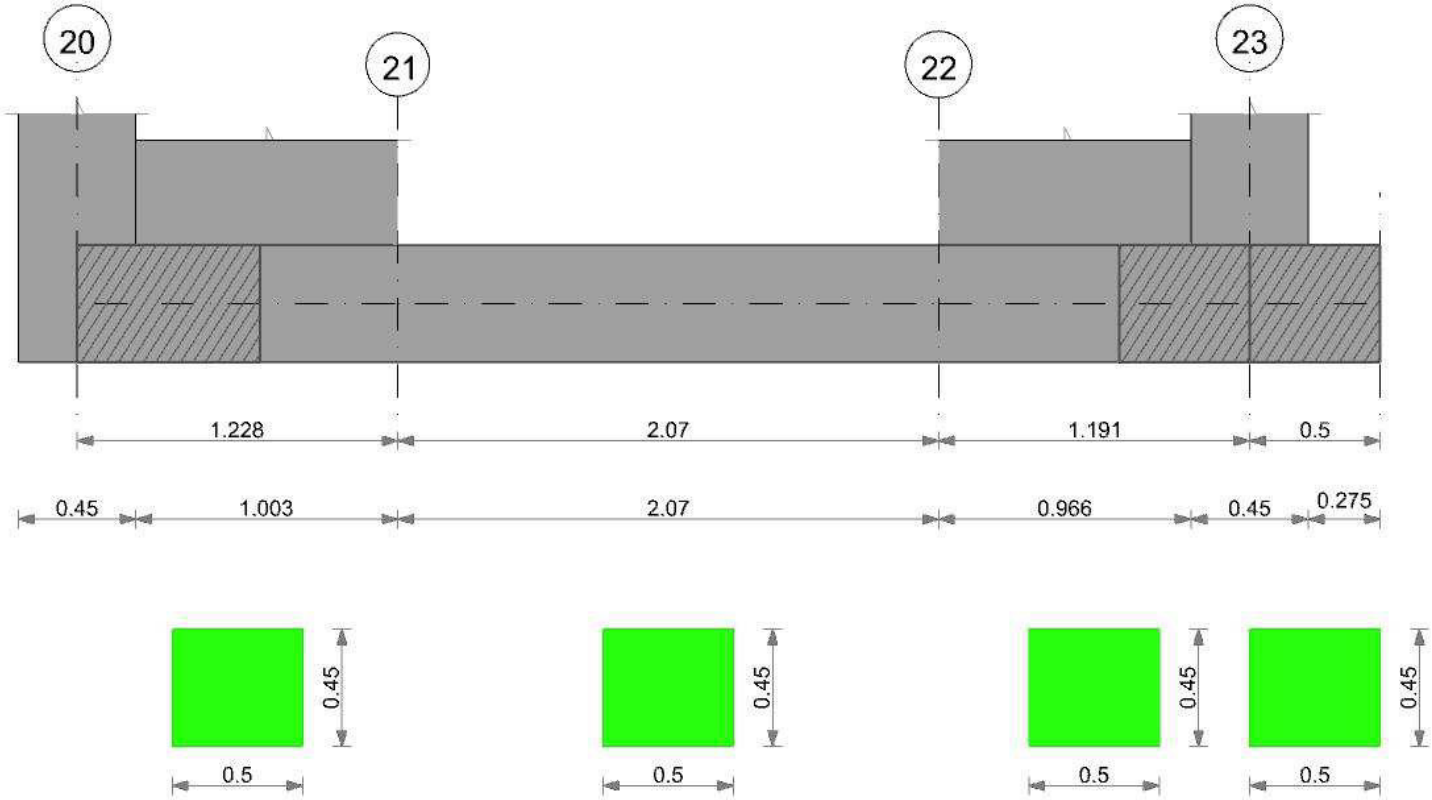
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	217	SLE RA 1	0.05	0	217	217	SLE RA 1	0.05	0	217	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	217	SLE RA 1	0.05	0	217	217	SLE RA 1	0.05	0	217	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	217	SLE RA 1	0.05	0	217	217	SLE RA 1	0.05	0	217	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	217	209	SLE RA 1	0.19	0	217	SLE RA 1	0.1	0	217	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	217	209	SLE RA 1	0.19	0	217	SLE RA 1	0.1	0	217	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	217	209	SLE RA 1	0.19	0	217	SLE RA 1	0.1	0	217	SLE RA 1	Si

CORDOLO 26

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

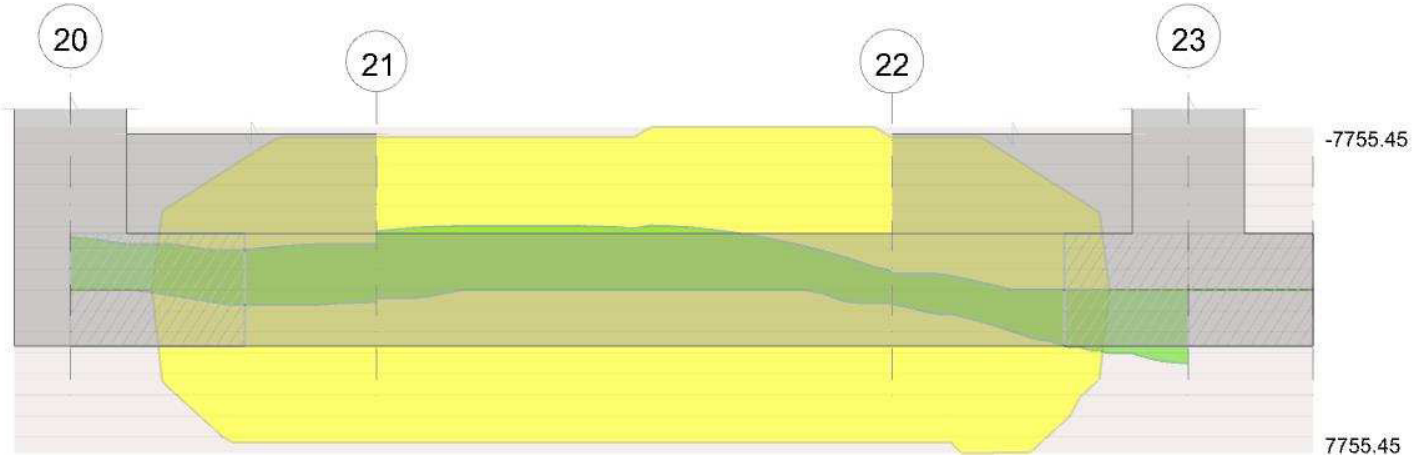


Diagramma verifica stato limite ultimo taglio

Output campate

Campata 2 tra i fili 21 - 22, sezione R 50x45, asta 57

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052							-1656.1	SLU 82	-2201.07	-7755.45	0.113	3.52	Si
0.83	0.000509	0.052	0.000509	0.052							-3081.01	SLU 82	-3081.01	-7755.45	0.113	2.52	Si
1.04	0.000509	0.052	0.000509	0.052							-3002.9	SLU 82	-3078.25	-7755.45	0.113	2.52	Si
2.07	0.000509	0.052	0.000509	0.052	83.92	SLU 40	83.92	7755.45	0.113	92.41	-20.46	SLU 43	-798.6	-7755.45	0.113	9.71	Si

Verifiche a flessione in famiglia SLV (domini sostanzialmente elastici)

La struttura oppure parte di essa, è stata dichiarata come non dissipativa pertanto la verifica a pressoflessione, per tutte o solo alcune sezioni, viene eseguita calcolando i momenti resistenti in campo sostanzialmente elastico secondo D.M. 17-01-2018 §7.4.1

Le dilatazioni ultime utilizzate sono le seguenti: εc2= 0.002, εyd= 0.0019

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0	0.000509	0.052	0.000509	0.052	379.15	SLV 7	379.15	7266.79	0.197	19.17	-2479.28	SLV 10	-2780.22	-7266.79	0.197	2.61	Si
0.55	0.000509	0.052	0.000509	0.052							-3046.13	SLV 10	-3046.13	-7266.79	0.197	2.39	Si
1.04	0.000509	0.052	0.000509	0.052							-2693.02	SLV 10	-2911.01	-7266.79	0.197	2.5	Si
2.07	0.000509	0.052	0.000509	0.052	616.34	SLV 10	616.34	7266.79	0.197	11.79	-594.98	SLV 7	-879.34	-7266.79	0.197	8.26	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000102	0.000509	0	-3441	SLU 81	-3441	-7764	-63178	-14348	-14348	1	4.17	Si
1.04	0.0000102	0.000509	0	796	SLU 82	796	7764	63178	14348	14348	1	18.03	Si
2.07	0.0000102	0.000509	0	5252	SLU 82	5252	7764	63178	14348	14348	1	2.73	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000102	0.000509	0	-2620	SLV 11	-2620	-7764	-63178	-14348	-14348	1	5.48	Si
1.04	0.0000102	0.000509	0	1518	SLV 10	1518	7764	63178	14348	14348	1	9.45	Si
1.04	0.0000102	0.000509	0	-540	SLV 7	-540	-7764	-63178	-14348	-14348	1	26.55	Si
2.07	0.0000102	0.000509	0	4909	SLV 10	4909	7764	63178	14348	14348	1	2.92	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ c	σ c lim.	σ f.	σ f lim.	Mela	Comb.	Mdes	σ c	σ c lim.	σ FRP	σ FRP lim.	
0	-1205.59	19	-1604.8	84884	1494000	1273255	36000000	-1050.06	2	-1406.94	74418	1120500			Si
1.04	-2195.64	19	-2249.58	118988	1494000	1784822	36000000	-1946.61	2	-1990.77	105299	1120500			Si
2.07	42.34	19	42.34	2239	1494000	33592	36000000	10.68	2	10.68	565	1120500			Si
2.07	-0.06	1	-591.36	31279	1494000	469187	36000000	-0.06	1	-542.05	28671	1120500			Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	-2246	-374	-14348	SLV 11	0.36	1618	1.653	-1050.06	-1429.21	-7266.79	SLV 10	0.36	1618	1.653	Si
1.04	489	1029	14348	SLV 10	0.36	1618	1.653	-1990.77	-920.24	-7266.79	SLV 10	0.36	1618	1.653	Si
2.07	3361	1548	14348	SLV 10	0.36	1618	1.653	10.68	605.66	7266.79	SLV 10	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 20 - 21, sezione R 50x45, aste 60, 59, 58

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	892	SLV 10	0.145	7753	2746	SLV 10	18194	Si
0.23	0.41	0.0005	827	SLV 10	0.145	7753	2543	SLV 10	18194	Si
0.61	0.41	0.0005	725	SLV 10	0.145	7753	2230	SLV 10	18194	Si
1.23	0.41	0.0005	649	SLU 82	0.043	8090	1997	SLU 82	18194	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000512	597	SLE RA 19	16544	1494000	205152	36000000	515	SLE QP 2	14249	1120500	Si
0.23	0.41	0.00000512	567	SLE RA 19	15712	1494000	194832	36000000	488	SLE QP 2	13513	1120500	Si
0.61	0.41	0.00000512	523	SLE RA 19	14491	1494000	179685	36000000	449	SLE QP 2	12433	1120500	Si
1.23	0.41	0.00000512	468	SLE RA 19	12959	1494000	160695	36000000	400	SLE QP 2	11071	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	16	12	182	SLV 10	0.36	1618	1.653	5.15	3.78	77.53	SLV 10	0.36	1618	1.653	Si
0.23	15	10	182	SLV 10	0.36	1618	1.653	4.88	3.39	77.53	SLV 10	0.36	1618	1.653	Si
0.61	14	8	182	SLV 10	0.36	1618	1.653	4.49	2.76	77.53	SLV 10	0.36	1618	1.653	Si
1.23	12	6	182	SLV 10	0.36	1618	1.653	4	1.95	77.53	SLV 10	0.36	1618	1.653	Si

Campata 2 tra i fili 21 - 22, sezione R 50x45, asta 57

Campata 3 tra i fili 22 - 23, sezione R 50x45, aste 56, 55, 54

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	725	SLU 82	0.043	8090	2230	SLU 82	18194	Si
0.6	0.41	0.0005	808	SLU 82	0.043	8090	2487	SLU 82	18194	Si
0.97	0.41	0.0005	846	SLU 82	0.043	8090	2602	SLU 82	18194	Si
1.19	0.41	0.0005	860	SLU 82	0.043	8090	2645	SLU 82	18194	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000512	522	SLE RA 19	14460	1494000	179310	36000000	446	SLE QP 2	12352	1120500	Si
0.6	0.41	0.00000512	583	SLE RA 19	16143	1494000	200171	36000000	500	SLE QP 2	13845	1120500	Si
0.97	0.41	0.00000512	610	SLE RA 19	16906	1494000	209634	36000000	525	SLE QP 2	14530	1120500	Si
1.19	0.41	0.00000512	621	SLE RA 19	17190	1494000	213158	36000000	534	SLE QP 2	14790	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	14	4	182	SLV 14	0.36	1618	1.653	4.46	1.25	77.53	SLV 14	0.36	1618	1.653	Si
0.6	15	4	182	SLV 14	0.36	1618	1.653	5	1.26	77.53	SLV 14	0.36	1618	1.653	Si
0.97	16	4	182	SLV 15	0.36	1618	1.653	5.25	1.28	77.53	SLV 15	0.36	1618	1.653	Si
1.19	16	4	182	SLV 15	0.36	1618	1.653	5.34	1.32	77.53	SLV 15	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	γR	Rd	Ed	Rd/Ed	Verifica
4.71	1.1	SLU 2	ST	LT	-75	72	-18415	0	0	19	0	0	1.1	5601	105	53.55	Si
4.71	1.1	SLV 4	SIS	LT	767	2900	-16420	3	10	19	0	0	1.1	4995	3000	1.67	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
60,59,58,57,56,55,54	4.71	1.1	SLU 82	ST	BT	2.3	221035	28784	7.68	Si
60,59,58,57,56,55,54	4.71	1.1	SLV 13	SIS	BT	2.3	196109	22823	8.59	Si
60,59,58,57,56,55,54	4.71	1.1	SLD 13	SIS	BT	2.3	211284	21025	10.05	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	88	-28784	-20.61	834.71	0	0	0.03	0	1.1	4.66	1496	2060	0	14430	
0	-2760	-22823	1321.6	-399.33	0	-7	-0.02	0.06	0.98	4.68	1496	2060	0	14430	0.07
0	-1169	-21025	568.97	112.11	0	-3	0.01	0.03	1.05	4.7	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.05	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

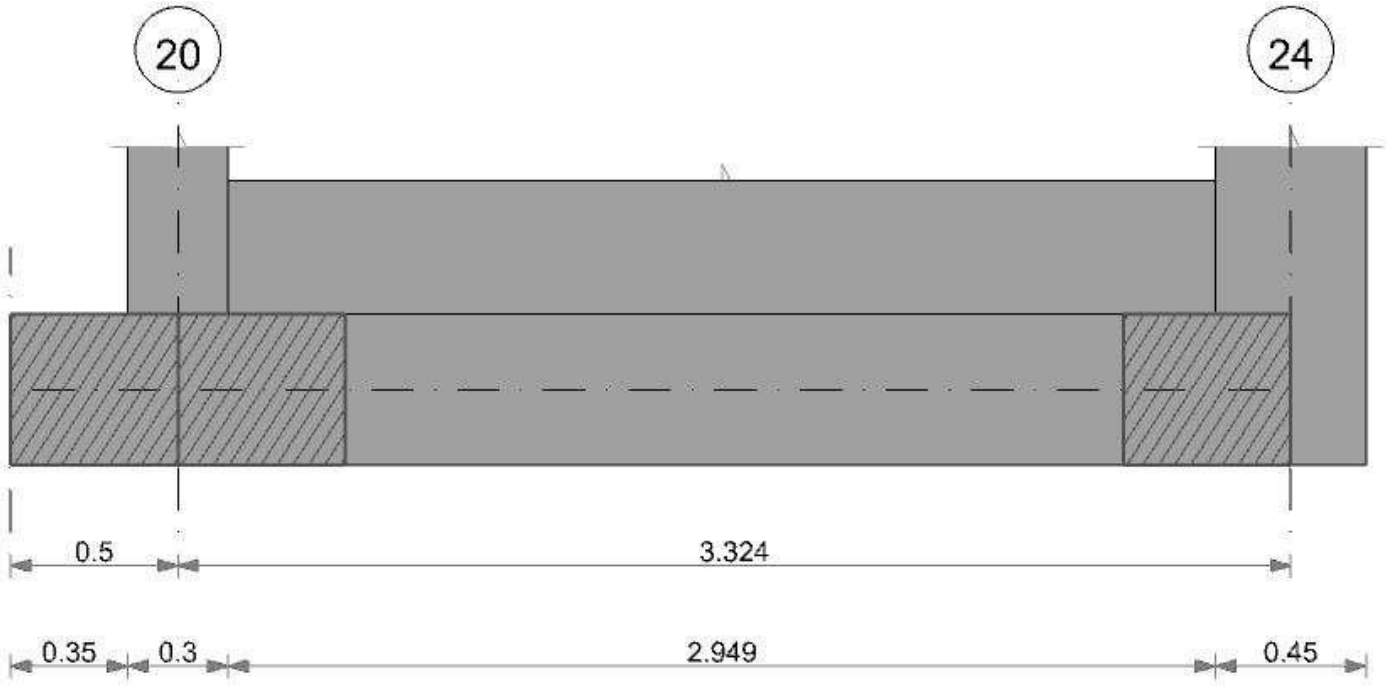
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	253	SLE RA 1	0.05	0	253	253	SLE RA 1	0.05	0	155	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	253	SLE RA 1	0.05	0	253	253	SLE RA 1	0.05	0	155	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	253	SLE RA 1	0.05	0	253	253	SLE RA 1	0.05	0	155	SLE RA 1	0.0033	0	SLE RA 1	Si

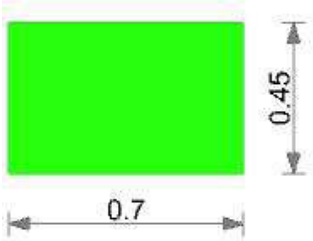
Verifiche geotecniche - Rotazioni assolute e differenziali

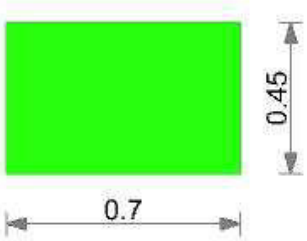
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	253	155	SLE RA 1	0.19	0	253	SLE RA 1	0.1	0	155	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	253	155	SLE RA 1	0.19	0	253	SLE RA 1	0.1	0	155	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	253	155	SLE RA 1	0.19	0	253	SLE RA 1	0.1	0	155	SLE RA 1	Si

CORDOLO 27

Geometria







Caratteristiche dei materiali

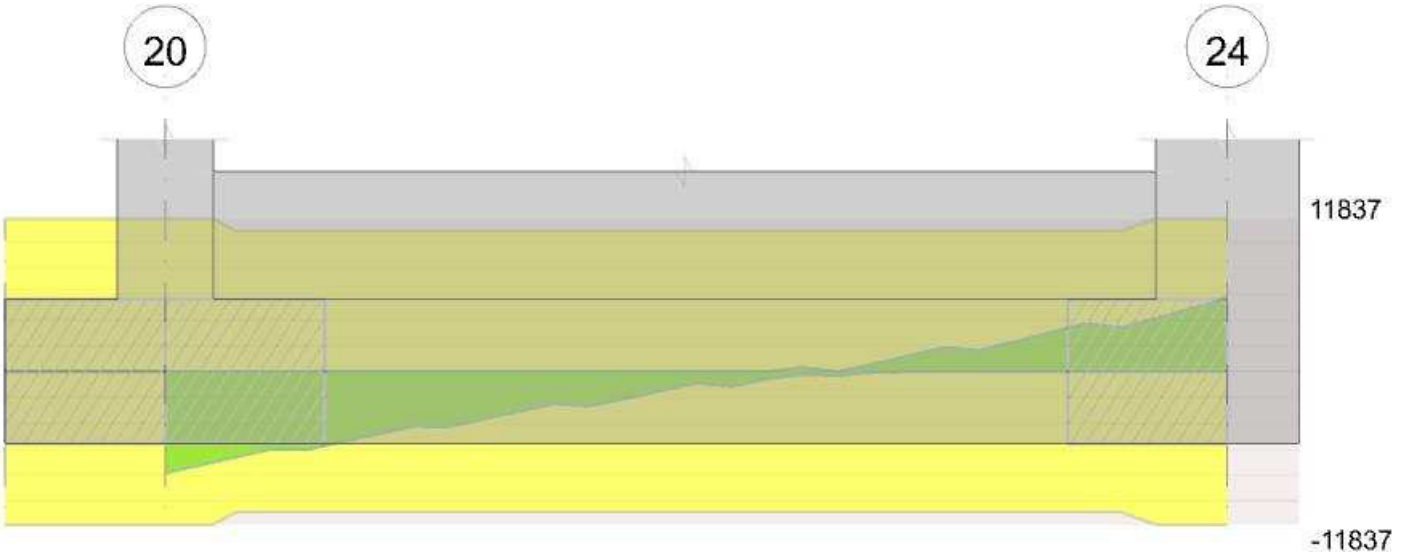
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 20 - 24, sezione R 70x45, aste 75, 74, 73, 72, 71, 70, 69, 68

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1124	SLV 10	0.085	2640	2900	SLV 10	15877	Si
0.15	0.41	0.0002	1122	SLV 10	0.085	2640	2896	SLV 10	15877	Si
1.66	0.41	0.0002	1116	SLV 10	0.085	2640	2880	SLV 10	15877	Si
3.1	0.41	0.0002	1389	SLV 10	0.085	2640	3585	SLV 10	15877	Si
3.32	0.41	0.0002	1457	SLV 10	0.085	2640	3761	SLV 10	15877	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.0000017	785	SLE RA 19	22733	1494000	281892	36000000	674	SLE QP 2	19529	1120500	Si
0.15	0.41	0.0000017	783	SLE RA 19	22664	1494000	281037	36000000	672	SLE QP 2	19473	1120500	Si
1.66	0.41	0.0000017	737	SLE RA 19	21329	1494000	264476	36000000	634	SLE QP 2	18345	1120500	Si
3.1	0.41	0.0000017	867	SLE RA 19	25119	1494000	311479	36000000	751	SLE QP 2	21760	1120500	Si
3.32	0.41	0.0000017	905	SLE RA 19	26219	1494000	325112	36000000	785	SLE QP 2	22743	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	17	12	159	SLV 10	0.36	1618	1.653	6.74	4.49	26.4	SLV 10	0.36	1618	1.653	Si
0.15	17	12	159	SLV 10	0.36	1618	1.653	6.72	4.5	26.4	SLV 10	0.36	1618	1.653	Si
1.66	16	12	159	SLV 10	0.36	1618	1.653	6.34	4.82	26.4	SLV 10	0.36	1618	1.653	Si
3.1	19	16	159	SLV 10	0.36	1618	1.653	7.51	6.38	26.4	SLV 10	0.36	1618	1.653	Si
3.32	20	17	159	SLV 10	0.36	1618	1.653	7.85	6.72	26.4	SLV 10	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
3.55	1.3	SLU 43	ST	LT	-176	110	-21316	0	0	19	0	0	1.1	6484	208	31.22	Si
3.55	1.3	SLV 7	SIS	LT	-389	3199	-10610	-2	17	19	0	0	1.1	3227	3222	1	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
75,74,73,72,71,70,69,68	3.55	1.3	SLU 82	ST	BT	2.3	178758	26272	6.8	Si
75,74,73,72,71,70,69,68	3.55	1.3	SLV 10	SIS	BT	2.3	151293	25301	5.98	Si
75,74,73,72,71,70,69,68	3.55	1.3	SLD 10	SIS	BT	2.3	165007	21187	7.79	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
-194	109	-26272	1383.08	385.71	0	0	0.01	0.05	1.19	3.52	1496	2060	0	14430	
107	-3003	-25301	3142.1	1234.33	0	-7	0.05	0.12	1.05	3.45	1496	2060	0	14430	0.07
-34	-1268	-21187	1877.3	691.31	0	-3	0.03	0.09	1.12	3.48	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.07	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.06	0	0	0.23	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.06	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

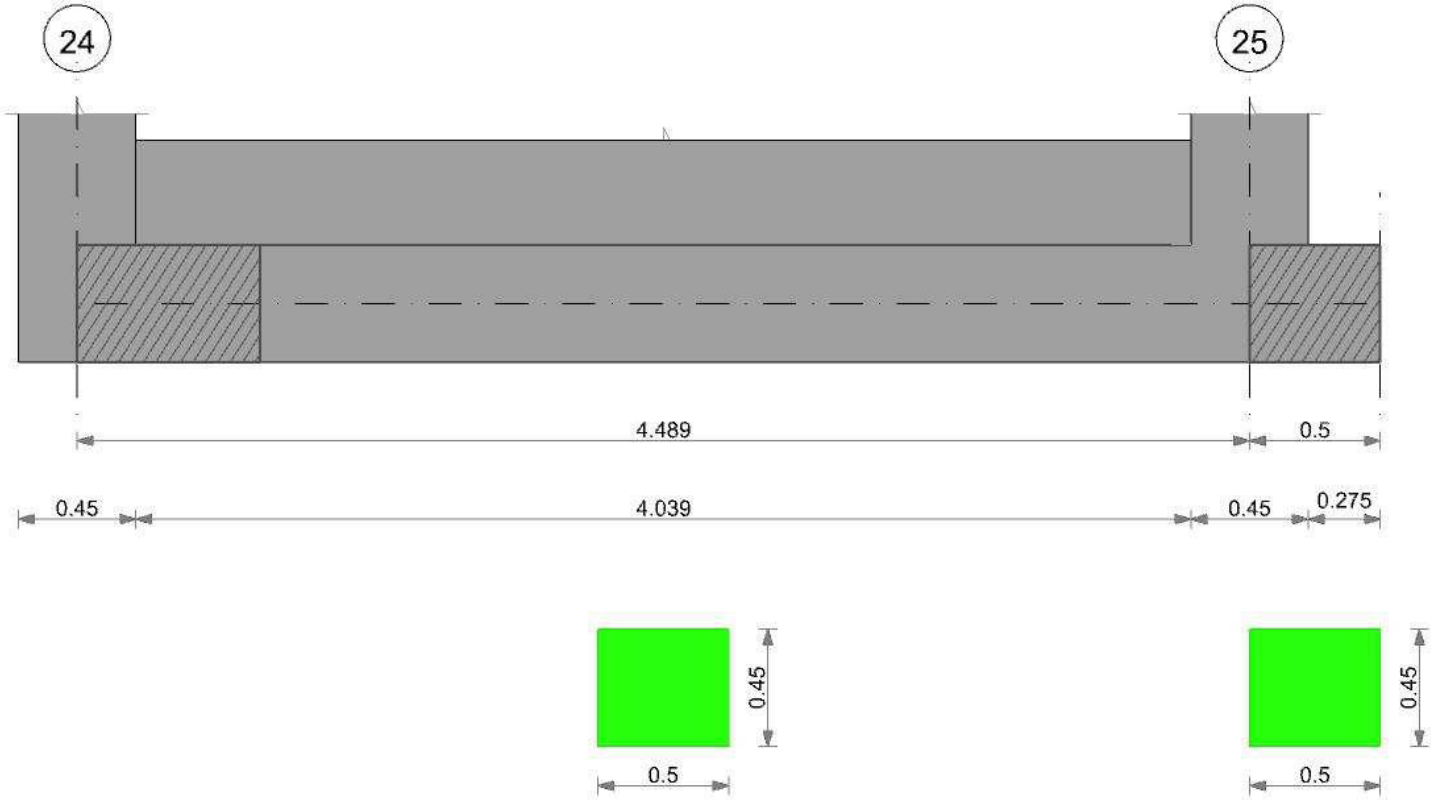
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	45	SLE RA 1	0.05	0	45	45	SLE RA 1	0.05	0	45	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	45	SLE RA 1	0.05	0	45	45	SLE RA 1	0.05	0	45	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	45	SLE RA 1	0.05	0	45	45	SLE RA 1	0.05	0	45	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	45	77	SLE RA 1	0.19	0	45	SLE RA 1	0.1	0	45	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	45	77	SLE RA 1	0.19	0	45	SLE RA 1	0.1	0	45	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	45	77	SLE RA 1	0.19	0	45	SLE RA 1	0.1	0	45	SLE RA 1	Si

CORDOLO 28

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

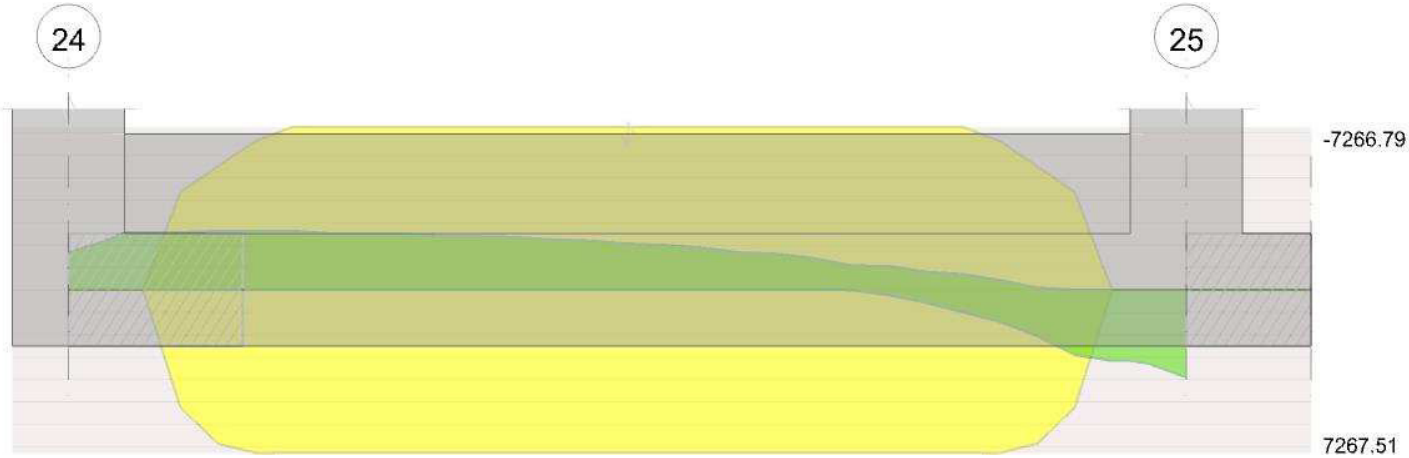
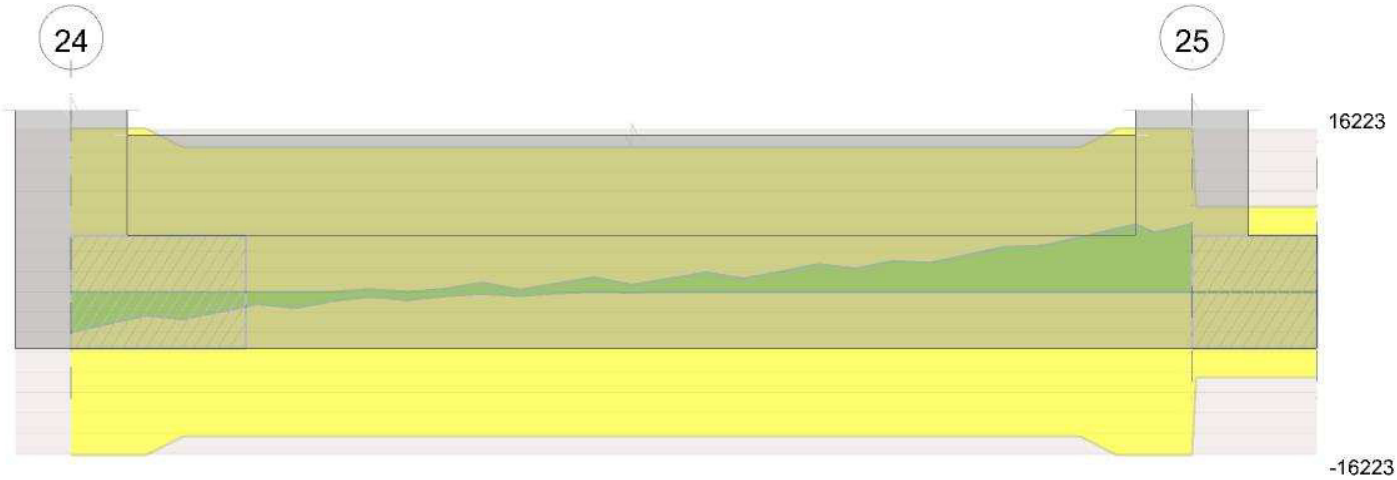


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 24 - 25, sezione R 50x45, aste 53, 52, 51, 50, 49, 48, 47, 46, 45, 44, 43

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0005	850	SLV 10	0.145	7753	2957	SLV 10	20039	Si
0.23	0.41	0.0005	793	SLV 10	0.145	7753	2758	SLV 10	20039	Si
2.24	0.41	0.0005	559	SLV 14	0.145	7753	1950	SLU 82	20039	Si
4.26	0.41	0.0005	731	SLU 81	0.043	8090	2542	SLU 81	20039	Si
4.49	0.41	0.0005	742	SLU 81	0.043	8090	2580	SLU 81	20039	Si

Verifiche delle tensioni di esercizio

			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000512	518	SLE RA 19	14340	1494000	177814	36000000	449	SLE QP 2	12441	1120500	Si
0.23	0.41	0.00000512	491	SLE RA 19	13587	1494000	168483	36000000	425	SLE QP 2	11776	1120500	Si
2.24	0.41	0.00000512	406	SLE RA 19	11232	1494000	139275	36000000	350	SLE QP 2	9701	1120500	Si
4.26	0.41	0.00000512	530	SLE RA 18	14667	1494000	181875	36000000	460	SLE QP 2	12751	1120500	Si
4.49	0.41	0.00000512	538	SLE RA 18	14890	1494000	184637	36000000	468	SLE QP 2	12951	1120500	Si

Verifiche di apertura delle fessure

La campata non presenta apertura delle fessure nella suola

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0	16	14	201	SLV 10	0.36	1618	1.653	4.49	4.01	77.53	SLV 10	0.36	1618	1.653	Si
0.23	15	13	200	SLV 10	0.36	1618	1.653	4.25	3.68	77.53	SLV 10	0.36	1618	1.653	Si
2.24	12	7	200	SLV 14	0.36	1618	1.653	3.5	2.08	77.53	SLV 14	0.36	1618	1.653	Si
4.26	16	8	200	SLV 15	0.36	1618	1.653	4.6	2.26	77.53	SLV 15	0.36	1618	1.653	Si
4.49	16	8	200	SLV 15	0.36	1618	1.653	4.68	2.3	77.53	SLV 15	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
4.71	1.1	SLU 39	ST	LT	379	71	-25576	1	0	19	0	0	1.1	7780	385	20.18	Si
4.71	1.1	SLV 7	SIS	LT	4858	535	-15900	17	2	19	0	0	1.1	4888	4888	0.99	Sì

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
53,52,51,50,49,48,47,46,45,44,43	4.71	1.1	SLU 82	ST	BT	2.3	191972	30868	6.22	Si
53,52,51,50,49,48,47,46,45,44,43	4.71	1.1	SLV 13	SIS	BT	2.3	169973	27876	6.1	Si
53,52,51,50,49,48,47,46,45,44,43	4.71	1.1	SLD 13	SIS	BT	2.3	183621	24070	7.63	Si

Verifiche geotecniche di capacità portante - parametri utilizzati nel calcolo di Rd

Fx	Fy	Fz	Mx	My	Inc.x	Inc.y	Ecc.x	Ecc.y	B'	L'	qd	γs	Fi	Coes	Amax
0	96	-30868	2126.19	1191.73	0	0	0.04	0.07	0.96	4.64	1496	2060	0	14430	
0	-2633	-27876	3341.7	-704.43	0	-5	-0.03	0.12	0.86	4.66	1496	2060	0	14430	0.07
0	-1110	-24070	2247.48	131.57	0	-3	0.01	0.09	0.91	4.7	1496	2060	0	14430	0.03

Verifiche geotecniche di capacità portante - fattori utilizzati nel calcolo di Rd

N			S			D			I			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Iq	Ic	Ig	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.04	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.02	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.04	0	0	0.27	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	261	SLE RA 1	0.05	0	261	261	SLE RA 1	0.05	0	261	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	261	SLE RA 1	0.05	0	261	261	SLE RA 1	0.05	0	261	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	261	SLE RA 1	0.05	0	261	261	SLE RA 1	0.05	0	261	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 1	0.19	0	261	43	SLE RA 1	0.19	0	261	SLE RA 1	0.1	0	261	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	261	43	SLE RA 1	0.19	0	261	SLE RA 1	0.1	0	261	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	261	43	SLE RA 1	0.19	0	261	SLE RA 1	0.1	0	261	SLE RA 1	Si

1.3 Verifica sismica globale

Le unità di misura elencate nel capitolo sono in [m] ove non espressamente specificato.

Desc.: *descrizione.*
Stato limite: *(muratura) V=Taglio; PF=Pressoflessione; PFFP=Pressoflessione fuori piano; R=Ribaltamento.*
Molt.: *moltiplicatore minimo della azione sismica che produce lo stato limite.*
Comb.: *combinazione.*
PGA: *accelerazione al suolo.*
iPGA (ζE): *indicatore di rischio sismico in termini di PGA ovvero rapporto tra l'azione sismica massima sopportabile dall'elemento e l'azione sismica massima che si utilizzerebbe nel progetto nuovo (§C8.3).*
TR: *tempo di ritorno.*
(TR/TRrif)^.41: *indicatore di rischio sismico in termini di periodo di ritorno.*
fa: *fattore di accelerazione.*
Stato limite: *(muratura) V=Taglio; PF=Presso flessione; PFFP=Pressoflessione fuori piano; R=Ribaltamento.*
Coeff.s.: *coefficiente minimo prodotto dallo stato limite.*
Verifica: *stato di verifica.*
Stato limite: *(C.A.) tipologia di verifica analizzata.*
Trave: *titolo della trave.*
Pressoflessione: *dati della verifica a pressoflessione.*
Coeff.s.: *coefficiente di sicurezza a flessione.*
iTR: *indicatore di rischio sismico in termini di tempo di ritorno.*
campata: *campata di riferimento.*
dist.: *ascissa relativa all'inizio della campata. [m]*
Taglio: *dati della verifica a taglio.*
Coeff.s.: *coefficiente di sicurezza a taglio.*
Maschio: *maschio.*
Stato limite: *(maschio muratura) V=Taglio; PF=Presso flessione; PFFP=Presso flessione fuori piano; R=Ribaltamento.*
Trave: *trave di collegamento in muratura.*
Stato limite: *(trave muratura) V=Taglio; F=Flessione.*
S. L.: *stato limite di riferimento.*
TR,C: *periodo di ritorno di capacità.*
PGA,C: *accelerazione di aggancio di capacità.*
TR,Rif: *periodo di ritorno di riferimento.*
PGA,Rif: *accelerazione di aggancio di riferimento.*
Tipo rottura: *tipo di rottura che fornisce il valore minimo degli elementi considerati.*
PAM: *perdita media annua attesa.*
Classe PAM: *classe di rischio PAM.*
IS-V: *indice di sicurezza.*
Classe IS-V: *classe di rischio IS-V.*

λ,SLR: frequenza media annua di superamento in Stato Limite di Ricostruzione.
λ,SLC: frequenza media annua di superamento in Stato Limite di Collasso.
λ,SLV: frequenza media annua di superamento in Stato Limite di salvaguardia della Vita.
λ,SLD: frequenza media annua di superamento in Stato Limite di Danno.
λ,SLO: frequenza media annua di superamento in Stato Limite di Operatività.
λ,SLID: frequenza media annua di superamento in Stato Limite di Inizio Danno.

Verifica di elementi dotati di indicatori di rischio sismico mediante analisi con fattore q

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.) § C8.7.1

Accelerazioni e tempi di ritorno

Accelerazione di aggancio SLO (ag/g_SLO*S*ST) PGA,SLOrif = 0.081
Accelerazione di aggancio SLD (ag/g_SLD*S*ST) PGA,SLDrif = 0.101
Accelerazione di aggancio SLV (ag/g_SLV*S*ST) PGA,SLVrif = 0.244
Tr,SLOrif = 30 anni
Tr,SLDrif = 50 anni
Tr,SLVrif = 475 anni

Moltiplicatori minimi delle condizioni sismiche

(Il valore di ζE corrisponde al valore di I.R. PGA secondo quanto riportato nella Circolare 7 21-01-19 §C8.3)

Indicatori minimi riferiti al solo materiale muratura

Desc.	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	fa
Maschio 22	PF	0.234	SLV 9	0.0513	0.2098	10	0.2054	0.2041
Maschio 15	V	3.387	SLV 7	0.3624	1.4833	1618	1.6529	1.4831
Maschio 23	PFFP	0.464	SLV 1	0.1073	0.4393	62	0.4339	0.4391
Maschio 31	R	1.654	SLV 14	0.3624	1.4833	1618	1.6529	1.4831
Trave di accoppiamento 16	PF	0.146	SLV 11	0.0309	0.1266	3	0.1254	0.1232
Trave di accoppiamento 4	V	0.733	SLV 15	0.1742	0.7131	194	0.6927	0.7116

Coefficienti di sicurezza riferiti al solo materiale muratura

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 1	PF SLU	12.279	SLU 44	Si
Maschio 1	V SLU	82.408	SLU 81	Si
Maschio 1	PF	3.24	SLV 12	Si
Maschio 1	V	6.259	SLV 12	Si
Maschio 1	PFFP	7.889	SLV 13	Si
Maschio 1	R	9.136	SLV 16	Si
Maschio 2	PF SLU	1.463	SLU 82	Si
Maschio 2	V SLU	2.454	SLU 81	Si
Maschio 2	PF	1.703	SLV 3	Si
Maschio 2	V	4.073	SLV 8	Si
Maschio 2	PFFP	19.991	SLV 15	Si
Maschio 2	R	9.021	SLV 3	Si
Maschio 3	PF SLU	1.098	SLU 82	Si
Maschio 3	V SLU	4.668	SLU 82	Si
Maschio 3	PF	0.593	SLV 12	No
Maschio 3	V	5.318	SLV 5	Si
Maschio 3	PFFP	6.152	SLV 12	Si
Maschio 3	R	8.904	SLV 1	Si
Maschio 4	PF SLU	5.965	SLU 39	Si
Maschio 4	V SLU	4.52	SLU 82	Si
Maschio 4	PF	1.705	SLV 8	Si
Maschio 4	V	4.893	SLV 5	Si
Maschio 4	PFFP	15.76	SLV 2	Si
Maschio 4	R	6.544	SLV 16	Si
Maschio 5	PF SLU	3.614	SLU 82	Si
Maschio 5	V SLU	9.146	SLU 73	Si
Maschio 5	PF	2.927	SLV 15	Si
Maschio 5	V	5.405	SLV 9	Si
Maschio 5	PFFP	5.836	SLV 12	Si
Maschio 5	R	3.461	SLV 1	Si
Maschio 6	PF SLU	9.444	SLU 44	Si
Maschio 6	V SLU	8.209	SLU 82	Si
Maschio 6	PF	3.388	SLV 15	Si
Maschio 6	V	4.158	SLV 13	Si
Maschio 6	PFFP	8.726	SLV 8	Si
Maschio 6	R	3.793	SLV 9	Si
Maschio 7	PF SLU	32.105	SLU 61	Si
Maschio 7	V SLU	103.112	SLU 82	Si
Maschio 7	PF	1.502	SLV 4	Si
Maschio 7	V	4.096	SLV 15	Si
Maschio 7	PFFP	6.609	SLV 11	Si
Maschio 7	R	4.598	SLV 9	Si
Maschio 8	PF SLU	7.58	SLU 43	Si
Maschio 8	V SLU	5.763	SLU 82	Si
Maschio 8	PF	2.806	SLV 4	Si
Maschio 8	V	3.89	SLV 2	Si
Maschio 8	PFFP	7.599	SLV 7	Si
Maschio 8	R	3.822	SLV 6	Si
Maschio 9	PF SLU	2.554	SLU 44	Si
Maschio 9	V SLU	8.486	SLU 73	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 9	PF	1.74	SLV 2	Si
Maschio 9	V	4.953	SLV 6	Si
Maschio 9	PFFP	4.295	SLV 7	Si
Maschio 9	R	5.319	SLV 10	Si
Maschio 10	PF SLU	110.477	SLU 43	Si
Maschio 10	V SLU	168.16	SLU 82	Si
Maschio 10	PF	6.065	SLV 2	Si
Maschio 10	V	5.307	SLV 14	Si
Maschio 10	PFFP	30.089	SLV 5	Si
Maschio 10	R	3.067	SLV 2	Si
Maschio 11	PF SLU	8.172	SLU 81	Si
Maschio 11	V SLU	10.701	SLU 73	Si
Maschio 11	PF	3.338	SLV 14	Si
Maschio 11	V	6.262	SLV 12	Si
Maschio 11	PFFP	6.762	SLV 9	Si
Maschio 11	R	4.094	SLV 8	Si
Maschio 12	PF SLU	6.424	SLU 44	Si
Maschio 12	V SLU	7.084	SLU 81	Si
Maschio 12	PF	3.903	SLV 14	Si
Maschio 12	V	3.655	SLV 16	Si
Maschio 12	PFFP	11.117	SLV 9	Si
Maschio 12	R	3.561	SLV 12	Si
Maschio 13	PF SLU	5.669	SLU 44	Si
Maschio 13	V SLU	7.765	SLU 81	Si
Maschio 13	PF	3.261	SLV 1	Si
Maschio 13	V	3.724	SLV 3	Si
Maschio 13	PFFP	9.832	SLV 6	Si
Maschio 13	R	3.66	SLV 11	Si
Maschio 14	PF SLU	6.54	SLU 81	Si
Maschio 14	V SLU	8.371	SLU 73	Si
Maschio 14	PF	2.786	SLV 1	Si
Maschio 14	V	5.854	SLV 7	Si
Maschio 14	PFFP	6.254	SLV 6	Si
Maschio 14	R	4.883	SLV 11	Si
Maschio 15	PF SLU	8.994	SLU 82	Si
Maschio 15	V SLU	8.54	SLU 81	Si
Maschio 15	PF	4.354	SLV 10	Si
Maschio 15	V	3.611	SLV 7	Si
Maschio 15	PFFP	10.546	SLV 11	Si
Maschio 15	R	5.017	SLV 2	Si
Maschio 16	PF SLU	8.994	SLU 39	Si
Maschio 16	V SLU	4.743	SLU 82	Si
Maschio 16	PF	2.039	SLV 7	Si
Maschio 16	V	4.862	SLV 10	Si
Maschio 16	PFFP	15.568	SLV 1	Si
Maschio 16	R	4.691	SLV 15	Si
Maschio 17	PF SLU	1.413	SLU 82	Si
Maschio 17	V SLU	2.479	SLU 81	Si
Maschio 17	PF	1.671	SLV 16	Si
Maschio 17	V	4.191	SLV 11	Si
Maschio 17	PFFP	22.529	SLV 3	Si
Maschio 17	R	8.662	SLV 16	Si
Maschio 18	PF SLU	1.1	SLU 82	Si
Maschio 18	V SLU	4.7	SLU 82	Si
Maschio 18	PF	0.469	SLV 7	No
Maschio 18	V	4.339	SLV 10	Si
Maschio 18	PFFP	5.703	SLV 7	Si
Maschio 18	R	9.004	SLV 14	Si
Maschio 19	PF SLU	5.658	SLU 44	Si
Maschio 19	V SLU	18.678	SLU 81	Si
Maschio 19	PF	2.163	SLV 7	Si
Maschio 19	V	7.427	SLV 7	Si
Maschio 19	PFFP	7.17	SLV 3	Si
Maschio 19	R	6.171	SLV 14	Si
Maschio 20	PF SLU	2.804	SLU 44	Si
Maschio 20	V SLU	100.063	SLU 44	Si
Maschio 20	PF	0.36	SLV 6	No
Maschio 20	V	12.27	SLV 10	Si
Maschio 20	PFFP	2.769	SLV 6	Si
Maschio 20	R	6.265	SLV 15	Si
Maschio 21	PF SLU	15.231	SLU 44	Si
Maschio 21	V SLU	167.402	SLU 73	Si
Maschio 21	PF	3.875	SLV 8	Si
Maschio 21	V	8.79	SLV 9	Si
Maschio 21	PFFP	0.836	SLV 5	No
Maschio 21	R	4.423	SLV 13	Si
Maschio 22	PF SLU	3.827	SLU 44	Si
Maschio 22	V SLU	36.663	SLU 82	Si
Maschio 22	PF	0	SLV 5	No
Maschio 22	V	6.555	SLV 7	Si
Maschio 22	PFFP	2.113	SLV 8	Si
Maschio 22	R	4.317	SLV 4	Si
Maschio 23	PF SLU	3.2	SLU 44	Si
Maschio 23	V SLU	54.762	SLU 44	Si
Maschio 23	PF	0.781	SLV 5	No
Maschio 23	V	11.41	SLV 5	Si
Maschio 23	PFFP	0	SLV 1	No
Maschio 23	R	7.452	SLV 12	Si
Maschio 24	PF SLU	3.821	SLU 39	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 24	V SLU	25.853	SLU 44	Si
Maschio 24	PF	0.446	SLV 9	No
Maschio 24	V	6.619	SLV 9	Si
Maschio 24	PFFP	1.055	SLV 12	Si
Maschio 24	R	2.548	SLV 4	Si
Maschio 25	PF SLU	3.334	SLU 44	Si
Maschio 25	V SLU	15.132	SLU 82	Si
Maschio 25	PF	2.106	SLV 13	Si
Maschio 25	V	7.978	SLV 13	Si
Maschio 25	PFFP	2.361	SLV 12	Si
Maschio 25	R	2.331	SLV 13	Si
Maschio 26	PF SLU	2.529	SLU 40	Si
Maschio 26	V SLU	18.484	SLU 40	Si
Maschio 26	PF	0.241	SLV 15	No
Maschio 26	V	7.079	SLV 2	Si
Maschio 26	PFFP	2.176	SLV 12	Si
Maschio 26	R	2.84	SLV 2	Si
Maschio 27	PF SLU	11.124	SLU 44	Si
Maschio 27	V SLU	59.955	SLU 82	Si
Maschio 27	PF	1.18	SLV 2	Si
Maschio 27	V	12.005	SLV 15	Si
Maschio 27	PFFP	2.63	SLV 3	Si
Maschio 27	R	2.228	SLV 15	Si
Maschio 28	PF SLU	3.051	SLU 39	Si
Maschio 28	V SLU	31.307	SLU 40	Si
Maschio 28	PF	0.274	SLV 4	No
Maschio 28	V	8.022	SLV 4	Si
Maschio 28	PFFP	2.33	SLV 8	Si
Maschio 28	R	2.805	SLV 13	Si
Maschio 29	PF SLU	3.479	SLU 44	Si
Maschio 29	V SLU	11.607	SLU 82	Si
Maschio 29	PF	2.207	SLV 2	Si
Maschio 29	V	7.35	SLV 2	Si
Maschio 29	PFFP	2.209	SLV 11	Si
Maschio 29	R	2.26	SLV 2	Si
Maschio 30	PF SLU	2.377	SLU 39	Si
Maschio 30	V SLU	20.408	SLU 39	Si
Maschio 30	PF	0	SLV 11	No
Maschio 30	V	7.205	SLV 11	Si
Maschio 30	PFFP	0	SLV 7	No
Maschio 30	R	2.764	SLV 15	Si
Maschio 31	PF SLU	53.611	SLU 40	Si
Maschio 31	V SLU	536.833	SLU 81	Si
Maschio 31	PF	6.294	SLV 3	Si
Maschio 31	V	6.799	SLV 13	Si
Maschio 31	PFFP	3.853	SLV 7	Si
Maschio 31	R	1.666	SLV 14	Si
Maschio 32	PF SLU	5.869	SLU 40	Si
Maschio 32	V SLU	20.016	SLU 40	Si
Maschio 32	PF	1.201	SLV 5	Si
Maschio 32	V	9.204	SLV 5	Si
Maschio 32	PFFP	1.168	SLV 9	Si
Maschio 32	R	2.412	SLV 1	Si
Maschio 33	PF SLU	4.607	SLU 44	Si
Maschio 33	V SLU	13.855	SLU 82	Si
Maschio 33	PF	2.091	SLV 16	Si
Maschio 33	V	7.832	SLV 16	Si
Maschio 33	PFFP	1.867	SLV 9	Si
Maschio 33	R	2.29	SLV 2	Si
Maschio 34	PF SLU	3.849	SLU 44	Si
Maschio 34	V SLU	13.516	SLU 82	Si
Maschio 34	PF	1.4	SLV 5	Si
Maschio 34	V	7.798	SLV 3	Si
Maschio 34	PFFP	1.443	SLV 6	Si
Maschio 34	R	2.265	SLV 3	Si
Maschio 35	PF SLU	6.253	SLU 39	Si
Maschio 35	V SLU	18.707	SLU 40	Si
Maschio 35	PF	1.721	SLV 10	Si
Maschio 35	V	7.703	SLV 14	Si
Maschio 35	PFFP	0.984	SLV 10	No
Maschio 35	R	2.537	SLV 14	Si
Maschio 36	PF SLU	6.601	SLU 43	Si
Maschio 36	V SLU	17.319	SLU 81	Si
Maschio 36	PF	2.972	SLV 12	Si
Maschio 36	V	7.551	SLV 12	Si
Maschio 36	PFFP	0	SLV 13	No
Maschio 36	R	6.629	SLV 1	Si
Maschio 37	PF SLU	7.025	SLU 82	Si
Maschio 37	V SLU	16.187	SLU 73	Si
Maschio 37	PF	4.354	SLV 3	Si
Maschio 37	V	6.633	SLV 6	Si
Maschio 37	PFFP	0.467	SLV 2	No
Maschio 37	R	6.462	SLV 15	Si
Maschio 38	PF SLU	25.215	SLU 10	Si
Maschio 38	V SLU	377.582	SLU 43	Si
Maschio 38	PF	3.639	SLV 7	Si
Maschio 38	V	8.829	SLV 7	Si
Maschio 38	PFFP	0.852	SLV 2	No
Maschio 38	R	4.376	SLV 15	Si

Verifica maschi in muratura

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
1	PF	2.425	SLV 16	0.362	1.483	1618	1.653	Si
	V	3.975	SLV 12	0.362	1.483	1618	1.653	Si
	PFFP	2.435	SLV 13	0.362	1.483	1618	1.653	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
2	PF	2.478	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
3	PF	0.914	SLV 12	0.221	0.906	365	0.898	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.406	SLV 12	0.339	1.389	1303	1.512	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
4	PF	1.929	SLV 8	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	3.842	SLV 16	0.362	1.483	1618	1.653	Si
5	PF	1.506	SLV 12	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.515	SLV 12	0.362	1.483	1618	1.653	Si
	R	2.464	SLV 1	0.362	1.483	1618	1.653	Si
6	PF	2.331	SLV 4	0.362	1.483	1618	1.653	Si
	V	3.733	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	2.124	SLV 8	0.362	1.483	1618	1.653	Si
	R	2.604	SLV 9	0.362	1.483	1618	1.653	Si
7	PF	1.424	SLV 4	0.344	1.408	1364	1.541	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.767	SLV 11	0.362	1.483	1618	1.653	Si
	R	3.137	SLV 9	0.362	1.483	1618	1.653	Si
8	PF	2.868	SLV 15	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.879	SLV 7	0.362	1.483	1618	1.653	Si
	R	2.638	SLV 6	0.362	1.483	1618	1.653	Si
9	PF	1.716	SLV 7	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.389	SLV 7	0.335	1.372	1252	1.488	Si
	R	3.275	SLV 10	0.362	1.483	1618	1.653	Si
10	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.393	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.949	SLV 2	0.362	1.483	1618	1.653	Si
11	PF	1.569	SLV 9	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.748	SLV 9	0.362	1.483	1618	1.653	Si
	R	2.66	SLV 8	0.362	1.483	1618	1.653	Si
12	PF	2.467	SLV 10	0.362	1.483	1618	1.653	Si
	V	3.542	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	2.232	SLV 9	0.362	1.483	1618	1.653	Si
	R	2.593	SLV 12	0.362	1.483	1618	1.653	Si
13	PF	1.854	SLV 5	0.362	1.483	1618	1.653	Si
	V	3.736	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.053	SLV 6	0.362	1.483	1618	1.653	Si
	R	2.547	SLV 11	0.362	1.483	1618	1.653	Si
14	PF	1.585	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.701	SLV 6	0.362	1.483	1618	1.653	Si
	R	3.002	SLV 11	0.362	1.483	1618	1.653	Si
15	PF	1.715	SLV 15	0.362	1.483	1618	1.653	Si
	V	3.387	SLV 7	0.362	1.483	1618	1.653	Si
	PFFP	2.47	SLV 11	0.362	1.483	1618	1.653	Si
	R	2.954	SLV 2	0.362	1.483	1618	1.653	Si
16	PF	1.995	SLV 2	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.526	SLV 1	0.362	1.483	1618	1.653	Si
	R	3.017	SLV 15	0.362	1.483	1618	1.653	Si
17	PF	2.507	SLV 7	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
18	PF	0.882	SLV 7	0.213	0.871	329	0.86	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.361	SLV 7	0.329	1.345	1173	1.449	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
19	PF	1.795	SLV 7	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.941	SLV 3	0.362	1.483	1618	1.653	Si
	R	3.601	SLV 14	0.362	1.483	1618	1.653	Si
20	PF	0.699	SLV 6	0.165	0.674	171	0.658	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.214	SLV 6	0.294	1.203	825	1.254	Si
	R	3.333	SLV 11	0.362	1.483	1618	1.653	Si
21	PF	2.528	SLV 4	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.84	SLV 5	0.201	0.825	285	0.811	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
22	PF	0.234	SLV 9	0.051	0.21	10	0.205	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.678	SLV 8	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	R	3.111	SLV 4	0.362	1.483	1618	1.653	Si
23	PF	0.873	SLV 5	0.21	0.86	318	0.848	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.464	SLV 1	0.107	0.439	62	0.434	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
24	PF	0.641	SLV 9	0.15	0.614	138	0.602	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.028	SLV 12	0.251	1.027	514	1.033	Si
	R	2.278	SLV 4	0.362	1.483	1618	1.653	Si
25	PF	1.637	SLV 8	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.783	SLV 12	0.362	1.483	1618	1.653	Si
	R	2.155	SLV 13	0.362	1.483	1618	1.653	Si
26	PF	0.655	SLV 15	0.155	0.633	148	0.62	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.669	SLV 12	0.362	1.483	1618	1.653	Si
	R	2.41	SLV 2	0.362	1.483	1618	1.653	Si
27	PF	1.185	SLV 2	0.287	1.177	772	1.22	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.81	SLV 3	0.362	1.483	1618	1.653	Si
	R	1.932	SLV 15	0.362	1.483	1618	1.653	Si
28	PF	0.621	SLV 4	0.146	0.598	129	0.586	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.681	SLV 8	0.362	1.483	1618	1.653	Si
	R	2.357	SLV 13	0.362	1.483	1618	1.653	Si
29	PF	1.439	SLV 11	0.347	1.421	1404	1.559	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.693	SLV 11	0.362	1.483	1618	1.653	Si
	R	2.068	SLV 2	0.362	1.483	1618	1.653	Si
30	PF	0.735	SLV 11	0.175	0.715	196	0.696	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.892	SLV 11	0.215	0.881	340	0.872	No
	R	2.593	SLV 15	0.362	1.483	1618	1.653	Si
31	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.904	SLV 7	0.362	1.483	1618	1.653	Si
	R	1.654	SLV 14	0.362	1.483	1618	1.653	Si
32	PF	1.082	SLV 5	0.263	1.078	594	1.096	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.101	SLV 9	0.268	1.096	625	1.119	Si
	R	2.189	SLV 1	0.362	1.483	1618	1.653	Si
33	PF	1.94	SLV 16	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.449	SLV 9	0.349	1.43	1435	1.573	Si
	R	2.182	SLV 2	0.362	1.483	1618	1.653	Si
34	PF	1.17	SLV 5	0.284	1.161	743	1.201	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.216	SLV 6	0.294	1.205	829	1.257	Si
	R	2.168	SLV 3	0.362	1.483	1618	1.653	Si
35	PF	1.252	SLV 10	0.303	1.24	903	1.301	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.989	SLV 10	0.241	0.988	459	0.986	No
	R	2.395	SLV 14	0.362	1.483	1618	1.653	Si
36	PF	1.671	SLV 15	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.515	SLV 15	0.12	0.49	81	0.484	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
37	PF	1.799	SLV 6	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.651	SLV 2	0.154	0.629	145	0.615	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
38	PF	2.567	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.876	SLV 2	0.211	0.865	323	0.854	No
	R	4.041	SLV 15	0.362	1.483	1618	1.653	Si

Verifica travi di collegamento in muratura

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
1	F	0.647	SLV 8	0.152	0.621	141	0.608	No
	V	3.728	SLV 12	0.362	1.483	1618	1.653	Si
2	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.1	SLV 9	0.362	1.483	1618	1.653	Si
3	F	0.659	SLV 9	0.155	0.633	148	0.62	No
	V	2.882	SLV 9	0.362	1.483	1618	1.653	Si
4	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.733	SLV 15	0.174	0.713	194	0.693	No
5	F	0.406	SLV 15	0.093	0.38	43	0.373	No
	V	1.665	SLV 15	0.362	1.483	1618	1.653	Si
6	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.975	SLV 4	0.238	0.972	441	0.97	No
7	F	0.566	SLV 4	0.132	0.542	103	0.534	No
	V	1.891	SLV 4	0.362	1.483	1618	1.653	Si
8	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.164	SLV 6	0.362	1.483	1618	1.653	Si
9	F	1.03	SLV 6	0.251	1.028	516	1.035	Si
	V	2.302	SLV 6	0.362	1.483	1618	1.653	Si
10	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.857	SLV 16	0.362	1.483	1618	1.653	Si
11	F	0.793	SLV 12	0.189	0.775	242	0.758	No

Trave	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	V	1.595	SLV 12	0.362	1.483	1618	1.653	Si
12	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.618	SLV 14	0.362	1.483	1618	1.653	Si
13	F	1.072	SLV 3	0.261	1.069	580	1.085	Si
	V	2.065	SLV 3	0.362	1.483	1618	1.653	Si
14	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.843	SLV 3	0.362	1.483	1618	1.653	Si
15	F	0.76	SLV 7	0.181	0.74	213	0.72	No
	V	1.515	SLV 7	0.362	1.483	1618	1.653	Si
16	F	0.146	SLV 11	0.031	0.127	3	0.125	No
	V	2.138	SLV 11	0.362	1.483	1618	1.653	Si
17	F	1.152	SLV 10	0.28	1.145	711	1.18	Si
	V	1.049	SLV 10	0.256	1.047	544	1.057	Si
18	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.041	SLV 5	0.362	1.483	1618	1.653	Si
19	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.16	SLV 13	0.362	1.483	1618	1.653	Si
20	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.269	SLV 9	0.362	1.483	1618	1.653	Si
21	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.195	SLV 13	0.29	1.186	791	1.233	Si
22	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
23	F	3.789	SLV 15	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
24	F	3.88	SLV 4	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
25	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.946	SLV 2	0.23	0.94	403	0.935	No
26	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
27	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.645	SLV 15	0.362	1.483	1618	1.653	Si
28	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.663	SLV 6	0.362	1.483	1618	1.653	Si
29	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.343	SLV 1	0.362	1.483	1618	1.653	Si
30	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.898	SLV 12	0.362	1.483	1618	1.653	Si
31	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.184	SLV 14	0.362	1.483	1618	1.653	Si
32	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
33	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.768	SLV 1	0.362	1.483	1618	1.653	Si
34	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si

Periodi di ritorno e accelerazioni di aggancio per gli Stati Limite

S. L.	TR,C	PGA,C	TR,Rif	PGA,Rif	Tipo rottura
Stato limite di salvaguardia della vita	3	0.031	475	0.244	flessione trave connessione in muratura

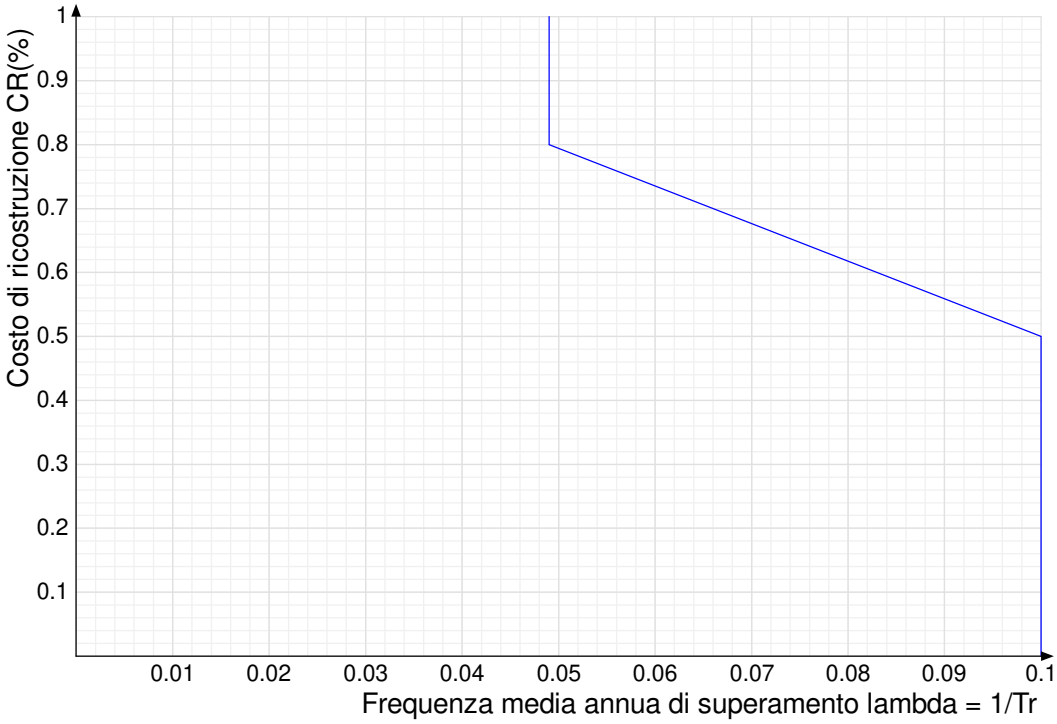
Coefficienti relativi alle Linee guida per la classificazione del rischio sismico delle costruzioni secondo il D.M. 24 09/01/2020

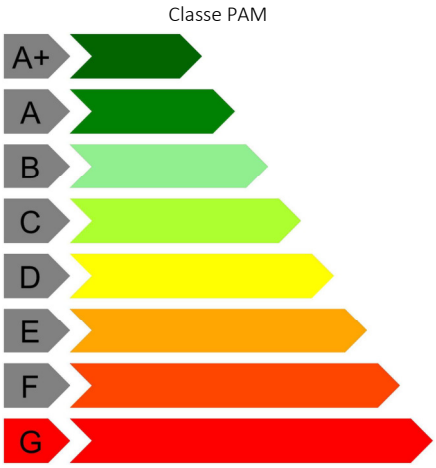
TR,C	TR,Rif	PAM	Classe PAM	IS-V	Classe IS-V	Tipo rottura
3	475	8.215	G	12.659	F	flessione trave connessione in muratura

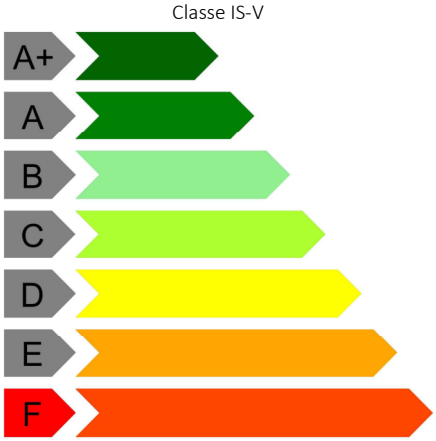
Coefficienti λ relativi alle Linee guida per la classificazione del rischio sismico delle costruzioni secondo il D.M. 24 09/01/2020

λ,SLR	λ,SLC	λ,SLV	λ,SLD	λ,SLO	λ,SLID
0.049	0.049	0.1	0.1	0.1	0.1

Andamento della curva che individua il PAM (Perdita Annuale Media Attesa)







1.4 Verifiche maschi in muratura

Le unità di misura elencate nel capitolo sono in [m, daN, s] ove non espressamente specificato.

X ini.: *coordinate del punto iniziale del maschio. [m]*
Y ini.: *coordinate del punto iniziale del maschio. [m]*
X fin.: *coordinate del punto finale del maschio. [m]*
Y fin.: *coordinate del punto finale del maschio. [m]*
Quota i.: *livello o falda inferiore.*
Quota.s: *livello o falda superiore.*
l: *lunghezza del maschio. [m]*
Sp.: *spessore. [m]*
h netta: *altezza netta (a filo solai). [m]*
h ini.: *altezza nel modello al punto iniziale. [m]*
h fin.: *altezza nel modello al punto finale. [m]*
a: *distanza tra irrigidimenti laterali. [m]*
a.s.,sx: *lunghezza di appoggio del solaio di sinistra. [m]*
a.s.,dx: *lunghezza di appoggio del solaio di destra. [m]*
fb: *resistenza normalizzata a compressione verticale dei blocchi. [daN/m²]*
fk: *resistenza caratteristica a compressione della muratura utilizzata. [daN/m²]*
fvk0: *resistenza caratteristica a taglio in assenza di carichi verticali. [daN/m²]*
fmedio: *resistenza media a compressione della muratura utilizzata. [daN/m²]*
τ0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.16]. [daN/m²]*
fv0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.17]. [daN/m²]*
μ: *coefficiente di attrito [C8.7.1.17].*
φ: *coefficiente di ammorsamento o ingranamento secondo Circolare 7 21-01-19 §C8.7.1.3.1.1.*
fv,lim: *valore massimo della resistenza a taglio che può essere impiegata nel calcolo. [daN/m²]*
E: *modulo di elasticità longitudinale della muratura utilizzato. [daN/m²]*
G: *modulo di elasticità tangenziale della muratura utilizzato. [daN/m²]*
FC: *fattore di confidenza della muratura.*
Materiale: *descrizione del materiale.*
Fu Verticale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
Fu Orizzontale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
tfv: *spessore di calcolo equivalente verticale di uno strato di rinforzo.*
tfo: *spessore di calcolo equivalente orizzontale di uno strato di rinforzo.*
E: *modulo di elasticità longitudinale. [daN/m²]*
εu: *dilatazione a rottura.*
Tipo fibra: *natura della fibra.*
materiale: *materiale fibra del rinforzo.*
lato applicazione: *lato di applicazione del rinforzo.*
esposizione: *condizione di esposizione secondo CNR-DT 215 §3.2.*
ancoraggio verticale iniziale: *grado di ancoraggio iniziale dei rinforzi verticali.*
ancoraggio verticale finale: *grado di ancoraggio finale dei rinforzi verticali.*
ancoraggio orizzontale iniziale: *grado di ancoraggio iniziale dei rinforzi orizzontali.*
ancoraggio orizzontale finale: *grado di ancoraggio finale dei rinforzi orizzontali.*
strati: *numero strati del rinforzo.*
verifica taglio: *tipo di verifica a taglio.*
εlim,conv / ε,CNR DT-200: *dati relativi ai parametri per il calcolo della deformazione di progetto.*
αt: *coefficiente che tiene conto della ridotta capacità estensionale delle fibre sollecitate a tagliosecondo CNR-DT 215 §4.1.1.*
α: *coeffiicente amplificativo tensione di distacco secondo CNR-DT 215 §3.1 ovvero secondo CNR-DT 200 R1/2013 §5.3.3.*
εlim,conv: *deformazione limite convenzionale del rinforzo FRCM.*
ε,fd: *deformazione di progetto del rinforzo FRCM ovvero CRM.*
γF,d: *fattore parziali di sicurezza per stato limite di distacco secondo CNR-DT 200 R1/2013 §3.4.1.*
connettori: *presenza di connettori per la prevenzione del distacco del rinforzo.*
tipo di muratura: *tipo di muratura per stato limite di distacco di estremità secondo CNR-DT 200 R1/2013 §5.3.2.*
CRM / Fibrenet?: *dati relativi ai parametri per il calcolo secondo metodo Fibrenet? ovvero se il materiale è di tipo CRM.*
CRM: *stabilisce se il rinforzo è di tipo CRM secondo le Linee Guida del C.S.L.P. Ottobre 2019.*
intonaco: *materiale intonaco FRCM ovvero CRM.*
spessore intonaco: *spessore intonaco. [m]*
tipo blocco fibrenet: *tipo blocco muratura per verifica a tglio tipo Fibrenet.*
Comb.: *combinazione.*
Quota: *quota della sezione di verifica. [m]*
M: *momento flettente nel piano. [daN*m]*
N: *sforzo normale. [daN]*
εm: *deformazione della muratura.*
εm_: *deformazione elastica della muratura.*
εmu: *deformazione ultima della muratura.*
df: *distanza tra il lembo compresso e la fibra tesa più lontana. [m]*
M0d: *momento resistente della sezione non rinforzata. [daN*m]*
M1d: *momento resistente della sezione rinforzata. [daN*m]*
MRd: *momento resistente della sezione. [daN*m]*
c.s.: *coefficiente di sicurezza.*
incremento > 50%: *incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.*
Verifica: *stato di verifica.*
Nmur: *aliquota di sforzo normale recepito dalla sola muratura. [daN]*

V: taglio nel piano. [daN]
df: distanza tra lembo compresso e baricentro dell'armatura tesa. [m]
l': lunghezza della parte compressa della parete. [m]
σN: tensione media nella zona compressa. [daN/m²]
fvd: resistenza a taglio di calcolo. [daN/m²]
Vt: resistenza a taglio della muratura non rinforzata. [daN]
Vt,f: resistenza a taglio del rinforzo (CNR DT215 4.1a). [daN]
Vt,c: resistenza a taglio per schiacciamento delle bielle (CNR DT215 4.1b). [daN]
Vt,c int.: contributo di resistenza a taglio delle bielle dell'intonaco se considerato. [daN]
Vt,R: resistenza a taglio della sezione rinforzata. [daN]
res. > 50%: incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.
fd: resistenza a compressione di calcolo. [daN/m²]
Sa: accelerazione massima, adimensionalizzata rispetto a g, che l'elemento strutturale subisce durante il sisma.
σ0: tensione media di compressione. [daN/m²]
*M: momento flettente fuori piano. [daN*m]*
*Mc: momento di collasso per azioni perpendicolari al piano. [daN*m]*
Coeff.s.: coefficiente di sicurezza.
N top: sforzo normale in sommità. [daN]
N base: sforzo normale al piede. [daN]
V orto: taglio fuori piano. [daN]
α0: moltiplicatore secondo [C8.7.1.1].
M: massa partecipante al cinematismo. [daN/(m/s²)]*
e: frazione di massa partecipante della muratura [C8.7.1.5].*
a0: accelerazione spettrale di attivazione del meccanismo [C8.7.1.8]. [m/s²]*
aLim: accelerazione limite [C7.2.11]. [m/s²]
Stato limite: pF_SLU=Presso flessione per azioni non sismiche; V_SLU=Taglio per azioni non sismiche; PF_SLV=Presso flessione per azioni sismiche; V_SLV=Taglio per azioni sismiche; PFFP_SLV=Presso flessione fuori piano per azioni sismiche; R_SLV=Ribaltamento per azioni sismiche.
Sa: accelerazione massima adimensionalizzata rispetto a quella di gravità.

Maschio 1

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-20.474	-3.134	-20.474	5.874	L1	L2	9.008	0.45	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	-1.98	9012.88	-33204	-0.000014	0.0004492	0.0035	9.0082	139529.02	149863.75	149863.75	16.63	No	Si
SLU 49	0.73	6126.4	-16028	-0.0000071	0.0004492	0.0035	9.0082	69855.88	78015.45	78015.45	12.73	No	Si
SLU 51	-1.98	9012.88	-33204	-0.000014	0.0004492	0.0035	9.0082	139529.02	149863.75	149863.75	16.63	No	Si
SLU 51	0.73	6126.4	-16028	-0.0000071	0.0004492	0.0035	9.0082	69855.88	78015.45	78015.45	12.73	No	Si
SLU 44	-1.98	8741.81	-33203	-0.0000139	0.0004492	0.0035	9.0082	139526.66	149861.27	149861.27	17.14	No	Si
SLU 44	0.73	6383.54	-16114	-0.0000072	0.0004492	0.0035	9.0082	70216.04	78382.21	78382.21	12.28	No	Si
SLU 2	-1.98	6846.28	-26511	-0.0000111	0.0004492	0.0035	9.0082	113016.71	122241.56	122241.56	17.86	No	Si
SLU 2	0.73	5209.67	-13157	-0.0000059	0.0004492	0.0035	9.0082	57685.93	65701.35	65701.35	12.61	No	Si
SLU 68	-1.98	9796.63	-36882	-0.0000155	0.0004492	0.0035	9.0082	153750	164857.69	164857.69	16.83	No	Si
SLU 68	0.73	6955.74	-18815	-0.0000083	0.0004492	0.0035	9.0082	81526.47	89912.25	89912.25	12.93	No	Si
SLU 47	-1.98	8741.81	-33203	-0.0000139	0.0004492	0.0035	9.0082	139526.66	149861.27	149861.27	17.14	No	Si
SLU 47	0.73	6383.54	-16114	-0.0000072	0.0004492	0.0035	9.0082	70216.04	78382.21	78382.21	12.28	No	Si
SLU 46	-1.98	9012.88	-33204	-0.000014	0.0004492	0.0035	9.0082	139529.02	149863.75	149863.75	16.63	No	Si
SLU 46	0.73	6126.4	-16028	-0.0000071	0.0004492	0.0035	9.0082	69855.88	78015.45	78015.45	12.73	No	Si
SLU 52	-1.98	10082.5	-38080	-0.000016	0.0004492	0.0035	9.0082	158330.19	169727.47	169727.47	16.83	No	Si
SLU 52	0.73	7380.03	-20145	-0.0000089	0.0004492	0.0035	9.0082	87043.64	95520.45	95520.45	12.94	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 65	-1.98	9796.63	-36882	-0.0000155	0.0004492	0.0035	9.0082	153750	164857.69	164857.69	16.83	No	Si
SLU 65	0.73	6955.74	-18815	-0.0000083	0.0004492	0.0035	9.0082	81526.47	89912.25	89912.25	12.93	No	Si
SLU 5	-1.98	6846.28	-26511	-0.0000111	0.0004492	0.0035	9.0082	113016.71	122241.56	122241.56	17.86	No	Si
SLU 5	0.73	5209.67	-13157	-0.0000059	0.0004492	0.0035	9.0082	57685.93	65701.35	65701.35	12.61	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	-1.98	19940.27	-39825	-0.0000189	0.0006738	0.0035	9.0082		179413.88	179413.88	9		Si
SLV 4	0.73	13461.02	-12995	-0.0000078	0.0006738	0.0035	9.0082		65379.36	65379.36	4.86		Si
SLV 12	-1.98	38613.24	-26885	-0.0000187	0.0006738	0.0035	9.0082		125097.24	125097.24	3.24		Si
SLV 12	0.73	13403.59	-16460	-0.000009	0.0006738	0.0035	9.0082		80377.12	80377.12	6		Si
SLV 7	-1.98	38510.64	-33159	-0.000021	0.0006738	0.0035	9.0082		151589.21	151589.21	3.94		Si
SLV 7	0.73	16614.26	-15039	-0.0000092	0.0006738	0.0035	9.0082		74231.62	74231.62	4.47		Si
SLV 10	-1.98	-22093.88	-24754	-0.000014	0.0006738	0.0035	9.0082		155980.53	155980.53	7.06		Si
SLV 10	0.73	-6584.22	-14695	-0.0000068	0.0006738	0.0035	9.0082		113213.01	113213.01	17.19		Si
SLV 15	-1.98	14688.63	-18728	-0.0000101	0.0006738	0.0035	9.0082		90177.65	90177.65	6.14		Si
SLV 15	0.73	2565.36	-17268	-0.0000067	0.0006738	0.0035	9.0082		83868.8	83868.8	32.69		Si
SLV 3	-1.98	18681.99	-39784	-0.0000186	0.0006738	0.0035	9.0082		179242.78	179242.78	9.59		Si
SLV 3	0.73	13417.51	-12890	-0.0000077	0.0006738	0.0035	9.0082		64921.77	64921.77	4.84		Si
SLV 8	-1.98	39811.25	-33202	-0.0000213	0.0006738	0.0035	9.0082		151768.82	151768.82	3.81		Si
SLV 8	0.73	16659.23	-15147	-0.0000093	0.0006738	0.0035	9.0082		74700.01	74700.01	4.48		Si
SLV 16	-1.98	15946.91	-18769	-0.0000104	0.0006738	0.0035	9.0082		90356.76	90356.76	5.67		Si
SLV 16	0.73	2608.87	-17373	-0.0000068	0.0006738	0.0035	9.0082		84321.94	84321.94	32.32		Si
SLV 11	-1.98	37312.63	-26842	-0.0000184	0.0006738	0.0035	9.0082		124914.86	124914.86	3.35		Si
SLV 11	0.73	13358.61	-16352	-0.0000089	0.0006738	0.0035	9.0082		79908.73	79908.73	5.98		Si
SLV 9	-1.98	-23394.48	-24711	-0.0000143	0.0006738	0.0035	9.0082		155799.84	155799.84	6.66		Si
SLV 9	0.73	-6629.19	-14587	-0.0000067	0.0006738	0.0035	9.0082		112746.79	112746.79	17.01		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	-1.98	12389.57	-43850	-35080	1539	9.0082	9.0082	-8654	9487	38458	88358	145680	45942	126817	No	82.41	Si
SLU 83	0.73	7736.44	-24360	-19488	1189	9.0082	9.0082	-4807	8974	36379	88358	145680	45942	124738	No	104.88	Si
SLU 74	-1.98	11814.99	-41760	-33408	1415	9.0082	9.0082	-8241	9432	38235	88358	145680	45942	126594	No	89.44	Si
SLU 74	0.73	7309.37	-22633	-18106	1088	9.0082	9.0082	-4467	8929	36195	88358	145680	45942	124553	No	114.47	Si
SLU 60	-1.98	11334.75	-40171	-32137	1335	9.0082	9.0082	-7928	9390	38066	88358	145680	45942	126424	No	94.68	Si
SLU 60	0.73	7164.24	-21658	-17327	1017	9.0082	9.0082	-4274	8903	36091	88358	145680	45942	124450	No	122.42	Si
SLU 62	-1.98	11334.75	-40171	-32137	1335	9.0082	9.0082	-7928	9390	38066	88358	145680	45942	126424	No	94.68	Si
SLU 62	0.73	7164.24	-21658	-17327	1017	9.0082	9.0082	-4274	8903	36091	88358	145680	45942	124450	No	122.42	Si
SLU 81	-1.98	12389.57	-43850	-35080	1539	9.0082	9.0082	-8654	9487	38458	88358	145680	45942	126817	No	82.41	Si
SLU 81	0.73	7736.44	-24360	-19488	1189	9.0082	9.0082	-4807	8974	36379	88358	145680	45942	124738	No	104.88	Si
SLU 37	-1.98	9919.46	-35067	-28054	1256	9.0082	9.0082	-6921	9256	37521	88358	145680	45942	125880	No	100.23	Si
SLU 37	0.73	6135.51	-19676	-15741	977	9.0082	9.0082	-3883	8851	35880	88358	145680	45942	124238	No	127.17	Si
SLU 79	-1.98	11814.99	-41760	-33408	1415	9.0082	9.0082	-8241	9432	38235	88358	145680	45942	126594	No	89.44	Si
SLU 79	0.73	7309.37	-22633	-18106	1088	9.0082	9.0082	-4467	8929	36195	88358	145680	45942	124553	No	114.47	Si
SLU 39	-1.98	10494.04	-37157	-29726	1380	9.0082	9.0082	-7333	9311	37744	88358	145680	45942	126103	No	91.41	Si
SLU 39	0.73	6562.58	-21403	-17123	1078	9.0082	9.0082	-4224	8897	36064	88358	145680	45942	124422	No	115.41	Si
SLU 41	-1.98	10494.04	-37157	-29726	1380	9.0082	9.0082	-7333	9311	37744	88358	145680	45942	126103	No	91.41	Si
SLU 41	0.73	6562.58	-21403	-17123	1078	9.0082	9.0082	-4224	8897	36064	88358	145680	45942	124422	No	115.41	Si
SLU 77	-1.98	11814.99	-41760	-33408	1415	9.0082	9.0082	-8241	9432	38235	88358	145680	45942	126594	No	89.44	Si
SLU 77	0.73	7309.37	-22633	-18106	1088	9.0082	9.0082	-4467	8929	36195	88358	145680	45942	124553	No	114.47	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	-1.98	469.86	-39144	-31315	-7589	9.0082	9.0082	-7725	14045	56934	88358	218520	45942	145293		19.15	Si
SLV 1	0.73	7421.16	-12361	-9888	-6998	9.0082	9.0082	-2439	12988	52649	88358	218520	45942	141007		20.15	Si
SLV 5	-1.98	-22196.48	-31028	-24822	-21090	9.0082	9.0082	-6123	13725	55636	88358	218520	45942	143994		6.83	Si
SLV 5	0.73	-3373.55	-13273	-10619	-19748	9.0082	9.0082	-2619	13024	52795	88358	218520	45942	141153		7.15	Si
SLV 12	-1.98	38613.24	-26885	-21508	22899	9.0082	9.0082	-5306	13561	54973	88358	218520	45942	143331		6.26	Si
SLV 12	0.73	13403.59	-16460	-13168	21117	9.0082	9.0082	-3248	13150	53305	88358	218520	45942	141663		6.71	Si
SLV 10	-1.98	-22093.88	-24754	-19803	-17705	9.0082	9.0082	-4885	13477	54632	88358	218520	45942	142990		8.08	Si
SLV 10	0.73	-6584.22	-14695	-11756	-16595	9.0082	9.0082	-2900	13080	53023	88358	218520	45942	141381		8.52	Si
SLV 7	-1.98	38510.64	-33159	-26527	19515	9.0082	9.0082	-6544	13809	55977	88358	218520	45942	144335		7.4	Si
SLV 7	0.73	16614.26	-15039	-12031	17964	9.0082	9.0082	-2968	13094	53078	88358	218520	45942	141436		7.87	Si
SLV 11	-1.98	37312.63	-26842	-21474	20162	9.0082	9.0082	-5297	13559	54966	88358	218520	45942	143325		7.11	Si
SLV 11	0.73	13358.61	-16352	-13082	18388	9.0082	9.0082	-3227	13145	53288	88358	218520	45942	141646		7.7	Si
SLV 16	-1.98	15946.91	-18769	-15015	9398	9.0082	9.0082	-3704	13241	53674	88358	218520	45942	142033		15.11	Si
SLV 16	0.73	2608.87	-17373	-13898	8367	9.0082	9.0082	-3429	13186	53451	88358	218520	45942	141809		16.95	Si
SLV 6	-1.98	-20895.87	-31071	-24857	-18353	9.0082	9.0082	-6132	13726	55643	88358	218520	45942	144001		7.85	Si
SLV 6	0.73	-3328.58	-13382	-10705	-17018	9.0082	9.0082	-2641	13028	52812	88358	218520	45942	141171		8.3	Si
SLV 9	-1.98	-23394.48	-24711	-19769	-20442	9.0082	9.0082	-4877	13475	54625	88358	218520	45942	142984		6.99	Si
SLV 9	0.73	-6629.19	-14587	-11669	-19325	9.0082	9.0082	-2879	13076	53005	88358	218520	45942	141364		7.32	Si
SLV 8	-1.98	39811.25	-33202	-26562	22251	9.0082	9.0082	-6552	13810	55984	88358	218520	45942	144342		6.49	Si
SLV 8	0.73	16659.23	-15147	-12118	20694	9.0082	9.0082	-2989	13098	53095	88358	218520	45942	141453		6.84	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.625 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-15598	0.24	567.74	3435.85	5521.73	4478.79	7.89	Si
SLV 14	-15681	0.24	567.74	3453.76	5541.62	4497.69	7.92	Si
SLV 15	-16214	0.24	567.74	3568.53	5669.21	4618.87	8.14	Si
SLV 16	-16297	0.24	567.74	3586.41	5689.1	4637.75	8.17	Si
SLV 9	-20156	0.24	567.74	4411.98	6611.01	5511.49	9.71	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 10	-20241	0.24	567.74	4430.25	6631.49	5530.87	9.74	Si
SLV 11	-22209	0.24	567.74	4847.68	7100.69	5974.19	10.52	Si
SLV 12	-22295	0.24	567.74	4865.84	7121.18	5993.51	10.56	Si
SLV 5	-24679	0.24	567.74	5368.41	7686.53	6527.47	11.5	Si
SLV 6	-24765	0.24	567.74	5386.45	7706.81	6546.63	11.53	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.08 Ta = 0.0273

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-17373	-18769	-146	1.964	3394.3	0.896	31.84159	3.48519	Si
SLV 15	-17268	-18728	-140	1.971	3384.2	0.896	31.96829	3.48519	Si
SLV 14	-16843	-18130	-118	2.002	3343.1	0.896	32.49114	3.48519	Si
SLV 13	-16738	-18088	-112	2.01	3332.9	0.895	32.62283	3.48519	Si
SLV 12	-16460	-26885	-725	2.007	3306.1	0.895	32.58991	3.15901	Si
SLV 11	-16352	-26842	-719	2.015	3295.6	0.895	32.7283	3.15901	Si
SLV 4	-12995	-39825	-1703	2.256	2975.3	0.891	36.80624	3.48519	Si
SLV 3	-12890	-39784	-1698	2.266	2965.4	0.891	36.97799	3.48519	Si
SLV 8	-15147	-33202	-1192	2.089	3179.8	0.893	33.99467	3.15901	Si
SLV 7	-15039	-33159	-1186	2.098	3169.4	0.893	34.14599	3.15901	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	12.279	SLU 44	Si
V_SLU	82.408	SLU 81	Si
PF_SLV	3.24	SLV 12	Si
V_SLV	6.259	SLV 12	Si
PFFP_SLV	7.889	SLV 13	Si
R_SLV	9.136	SLV 16	Si

Maschio 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-17.489	-3.134	-17.489	-1.906	L1	L2	1.228	0.3	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 79	-1.98	3321.15	-23608	-0.000175	0.0004492	0.0035	1.228	6893.27	10490.05	10490.05	3.16	No	Si
SLU 79	0.73	-1366.6	-2254	-0.0001723	0.0004492	0.0035	0.9824	1314.76	2050.86	2050.86	1.5	No	Si
SLU 83	-1.98	3497.65	-24896	-0.0001867	0.0004492	0.0035	1.228	6831.99	10794.53	10794.53	3.09	No	Si
SLU 83	0.73	-1463.1	-2413	-0.0001863	0.0004492	0.0035	0.9824	1401.93	2140.2	2140.2	1.46	No	Si
SLU 82	-1.98	3474.71	-24915	-0.0001862	0.0004492	0.0035	1.228	6830.74	10799.02	10799.02	3.11	No	Si
SLU 82	0.73	-1463.81	-2414	-0.0001864	0.0004492	0.0035	0.9824	1402.57	2140.86	2140.86	1.46	No	Si
SLU 81	-1.98	3497.65	-24896	-0.0001867	0.0004492	0.0035	1.228	6831.99	10794.53	10794.53	3.09	No	Si
SLU 81	0.73	-1463.1	-2413	-0.0001863	0.0004492	0.0035	0.9824	1401.93	2140.2	2140.2	1.46	No	Si
SLU 84	-1.98	3474.71	-24915	-0.0001862	0.0004492	0.0035	1.228	6830.74	10799.02	10799.02	3.11	No	Si
SLU 84	0.73	-1463.81	-2414	-0.0001864	0.0004492	0.0035	0.9824	1402.57	2140.86	2140.86	1.46	No	Si
SLU 76	-1.98	3282.93	-23640	-0.0001742	0.0004492	0.0035	1.228	6892.31	10497.54	10497.54	3.2	No	Si
SLU 76	0.73	-1367.78	-2256	-0.0001725	0.0004492	0.0035	0.9824	1315.83	2051.95	2051.95	1.5	No	Si
SLU 75	-1.98	3298.22	-23627	-0.0001745	0.0004492	0.0035	1.228	6892.69	10494.54	10494.54	3.18	No	Si
SLU 75	0.73	-1367.31	-2255	-0.0001724	0.0004492	0.0035	0.9824	1315.4	2051.51	2051.51	1.5	No	Si
SLU 78	-1.98	3298.22	-23627	-0.0001745	0.0004492	0.0035	1.228	6892.69	10494.54	10494.54	3.18	No	Si
SLU 78	0.73	-1367.31	-2255	-0.0001724	0.0004492	0.0035	0.9824	1315.4	2051.51	2051.51	1.5	No	Si
SLU 73	-1.98	3282.93	-23640	-0.0001742	0.0004492	0.0035	1.228	6892.31	10497.54	10497.54	3.2	No	Si
SLU 73	0.73	-1367.78	-2256	-0.0001725	0.0004492	0.0035	0.9824	1315.83	2051.95	2051.95	1.5	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	-1.98	3298.22	-23627	-0.0001745	0.0004492	0.0035	1.228	6892.69	10494.54	10494.54	3.18	No	Si
SLU 80	0.73	-1367.31	-2255	-0.0001724	0.0004492	0.0035	0.9824	1315.4	2051.51	2051.51	1.5	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	-1.98	1074.52	-18927	-0.0000958	0.0006738	0.0035	1.228		9664.02	9664.02	8.99		Si
SLV 6	0.73	-802.53	-1192	-0.0001314	0.0006738	0.0035	0.9824		1444.01	1444.01	1.8		Si
SLV 8	-1.98	3708.35	-14951	-0.0001345	0.0006738	0.0035	1.228		7887.72	7887.72	2.13		Si
SLV 8	0.73	-1073.99	-1913	-0.0000912	0.0006738	0.0035	0.9824		1864.52	1864.52	1.74		Si
SLV 1	-1.98	2084.17	-19179	-0.0001177	0.0006738	0.0035	1.228		9776.43	9776.43	4.69		Si
SLV 1	0.73	-974.29	-1582	-0.0001233	0.0006738	0.0035	0.9824		1671.83	1671.83	1.72		Si
SLV 2	-1.98	2152.43	-19199	-0.0001192	0.0006738	0.0035	1.228		9785.34	9785.34	4.55		Si
SLV 2	0.73	-971.6	-1578	-0.0001229	0.0006738	0.0035	0.9824		1669.28	1669.28	1.72		Si
SLV 5	-1.98	1003.96	-18906	-0.0000943	0.0006738	0.0035	1.228		9654.82	9654.82	9.62		Si
SLV 5	0.73	-805.3	-1197	-0.0001318	0.0006738	0.0035	0.9824		1446.67	1446.67	1.8		Si
SLV 11	-1.98	3503.04	-13505	-0.0001246	0.0006738	0.0035	1.228		7241.52	7241.52	2.07		Si
SLV 11	0.73	-1013.31	-1803	-0.0000862	0.0006738	0.0035	0.9824		1800.71	1800.71	1.78		Si
SLV 4	-1.98	2942.58	-18006	-0.0001303	0.0006738	0.0035	1.228		9252.45	9252.45	3.14		Si
SLV 4	0.73	-1053.04	-1794	-0.0001098	0.0006738	0.0035	0.9824		1795.44	1795.44	1.71		Si
SLV 7	-1.98	3637.8	-14931	-0.0001325	0.0006738	0.0035	1.228		7878.51	7878.51	2.17		Si
SLV 7	0.73	-1076.76	-1917	-0.0000915	0.0006738	0.0035	0.9824		1867.13	1867.13	1.73		Si
SLV 3	-1.98	2874.32	-17986	-0.0001288	0.0006738	0.0035	1.228		9243.54	9243.54	3.22		Si
SLV 3	0.73	-1055.72	-1798	-0.0001101	0.0006738	0.0035	0.9824		1797.99	1797.99	1.7		Si
SLV 12	-1.98	3573.59	-13525	-0.0001267	0.0006738	0.0035	1.228		7250.72	7250.72	2.03		Si
SLV 12	0.73	-1010.54	-1799	-0.0000858	0.0006738	0.0035	0.9824		1798.07	1798.07	1.78		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	-1.98	3298.22	-23627	-17183	5851	1.228	1.228	-46642	10833	3991	88358	13240	6263	19502	No	3.33	Si
SLU 78	0.73	-1367.31	-2255	-1640	5997	0.9824	0.0233	0	0	0	88358	10592	5010	15602	No	2.6	Si
SLU 80	-1.98	3298.22	-23627	-17183	5851	1.228	1.228	-46642	10833	3991	88358	13240	6263	19502	No	3.33	Si
SLU 80	0.73	-1367.31	-2255	-1640	5997	0.9824	0.0233	0	0	0	88358	10592	5010	15602	No	2.6	Si
SLU 77	-1.98	3321.15	-23608	-17169	5856	1.228	1.228	-46605	10833	3991	88358	13240	6263	19502	No	3.33	Si
SLU 77	0.73	-1366.6	-2254	-1639	6001	0.9824	0.0233	0	0	0	88358	10592	5010	15602	No	2.6	Si
SLU 75	-1.98	3298.22	-23627	-17183	5851	1.228	1.228	-46642	10833	3991	88358	13240	6263	19502	No	3.33	Si
SLU 75	0.73	-1367.31	-2255	-1640	5997	0.9824	0.0233	0	0	0	88358	10592	5010	15602	No	2.6	Si
SLU 74	-1.98	3321.15	-23608	-17169	5856	1.228	1.228	-46605	10833	3991	88358	13240	6263	19502	No	3.33	Si
SLU 74	0.73	-1366.6	-2254	-1639	6001	0.9824	0.0233	0	0	0	88358	10592	5010	15602	No	2.6	Si
SLU 84	-1.98	3474.71	-24915	-18120	6199	1.228	1.228	-49184	10833	3991	88358	13240	6263	19502	No	3.15	Si
SLU 84	0.73	-1463.81	-2414	-1755	6353	0.9824	0.0227	0	0	0	88358	10592	5010	15602	No	2.46	Si
SLU 79	-1.98	3321.15	-23608	-17169	5856	1.228	1.228	-46605	10833	3991	88358	13240	6263	19502	No	3.33	Si
SLU 79	0.73	-1366.6	-2254	-1639	6001	0.9824	0.0233	0	0	0	88358	10592	5010	15602	No	2.6	Si
SLU 81	-1.98	3497.65	-24896	-18106	6204	1.228	1.228	-49147	10833	3991	88358	13240	6263	19502	No	3.14	Si
SLU 81	0.73	-1463.1	-2413	-1755	6357	0.9824	0.0227	0	0	0	88358	10592	5010	15602	No	2.45	Si
SLU 82	-1.98	3474.71	-24915	-18120	6199	1.228	1.228	-49184	10833	3991	88358	13240	6263	19502	No	3.15	Si
SLU 82	0.73	-1463.81	-2414	-1755	6353	0.9824	0.0227	0	0	0	88358	10592	5010	15602	No	2.46	Si
SLU 83	-1.98	3497.65	-24896	-18106	6204	1.228	1.228	-49147	10833	3991	88358	13240	6263	19502	No	3.14	Si
SLU 83	0.73	-1463.1	-2413	-1755	6357	0.9824	0.0227	0	0	0	88358	10592	5010	15602	No	2.45	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	-1.98	2084.17	-19179	-13948	4596	1.228	1.228	-37861	16250	5987	88358	19859	6263	26122		5.68	Si
SLV 1	0.73	-974.29	-1582	-1151	4453	0.9824	0	0	0	0	88358	15887	5010	20898		4.69	Si
SLV 16	-1.98	2493.38	-13253	-9639	3371	1.228	1.228	-26163	16250	5987	88358	19859	6263	26122		7.75	Si
SLV 16	0.73	-841.55	-1413	-1028	3711	0.9824	0.0554	0	0	0	88358	15887	5010	20898		5.63	Si
SLV 15	-1.98	2425.13	-13233	-9624	3340	1.228	1.228	-26124	16250	5987	88358	19859	6263	26122		7.82	Si
SLV 15	0.73	-844.24	-1418	-1031	3682	0.9824	0.0553	0	0	0	88358	15887	5010	20898		5.68	Si
SLV 11	-1.98	3503.04	-13505	-9822	3707	1.228	1.0638	-26660	16250	5186	88358	19859	6263	26122		7.05	Si
SLV 11	0.73	-1013.31	-1803	-1311	4717	0.9824	0.1561	0	0	0	88358	15887	5010	20898		4.43	Si
SLV 8	-1.98	3708.35	-14951	-10874	4102	1.228	1.0979	-29515	16250	5352	88358	19859	6263	26122		6.37	Si
SLV 8	0.73	-1073.99	-1913	-1391	5130	0.9824	0.1576	0	0	0	88358	15887	5010	20898		4.07	Si
SLV 12	-1.98	3573.59	-13525	-9837	3739	1.228	1.0494	-26701	16250	5116	88358	19859	6263	26122		6.99	Si
SLV 12	0.73	-1010.54	-1799	-1308	4748	0.9824	0.1564	0	0	0	88358	15887	5010	20898		4.4	Si
SLV 4	-1.98	2942.58	-18006	-13095	4580	1.228	1.228	-35546	16250	5987	88358	19859	6263	26122		5.7	Si
SLV 4	0.73	-1053.04	-1794	-1305	4987	0.9824	0.0811	0	0	0	88358	15887	5010	20898		4.19	Si
SLV 2	-1.98	2152.43	-19199	-13963	4627	1.228	1.228	-37900	16250	5987	88358	19859	6263	26122		5.65	Si
SLV 2	0.73	-971.6	-1578	-1148	4482	0.9824	0	0	0	0	88358	15887	5010	20898		4.66	Si
SLV 7	-1.98	3637.8	-14931	-10859	4070	1.228	1.1111	-29475	16250	5417	88358	19859	6263	26122		6.42	Si
SLV 7	0.73	-1076.76	-1917	-1394	5100	0.9824	0.1573	0	0	0	88358	15887	5010	20898		4.1	Si
SLV 3	-1.98	2874.32	-17986	-13081	4549	1.228	1.228	-35506	16250	5987	88358	19859	6263	26122		5.74	Si
SLV 3	0.73	-1055.72	-1798	-1308	4958	0.9824	0.0809	0	0	0	88358	15887	5010	20898		4.21	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.625 Ta 0.04 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-6549	0.24	52.61	887.12	1216.14	1051.63	19.99	Si
SLV 16	-6567	0.24	52.61	889.21	1218.92	1054.06	20.04	Si
SLV 13	-6795	0.24	52.61	916.7	1255.47	1086.09	20.65	Si
SLV 14	-6813	0.24	52.61	918.78	1258.25	1088.51	20.69	Si
SLV 11	-6989	0.24	52.61	939.88	1286.52	1113.2	21.16	Si
SLV 12	-7007	0.24	52.61	942.01	1289.38	1115.7	21.21	Si
SLV 7	-7613	0.24	52.61	1013.14	1386.11	1199.62	22.8	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 8	-7630	0.24	52.61	1015.22	1388.97	1202.1	22.85	Si
SLV 9	-7809	0.24	52.61	1035.86	1417.47	1226.66	23.32	Si
SLV 10	-7827	0.24	52.61	1037.92	1420.34	1229.13	23.36	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.05 Ta = 0.0409

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 3	-1798	-17986	-63	2.608	329.9	0.9	42.1128	4.66809	Si
SLV 4	-1794	-18006	-63	2.612	329.4	0.9	42.1851	4.66809	Si
SLV 1	-1582	-19179	-73	2.827	308.8	0.896	45.82474	4.66809	Si
SLV 2	-1578	-19199	-72	2.832	308.4	0.896	45.90981	4.66809	Si
SLV 7	-1917	-14931	-6	2.521	341.5	0.902	40.61222	3.99544	Si
SLV 8	-1913	-14951	-5	2.525	341.1	0.902	40.68139	3.99544	Si
SLV 15	-1418	-13233	70	3.025	292.9	0.894	49.18077	4.66809	Si
SLV 16	-1413	-13253	70	3.03	292.5	0.894	49.27371	4.66809	Si
SLV 11	-1803	-13505	34	2.614	330.3	0.9	42.21071	3.99544	Si
SLV 12	-1799	-13525	35	2.618	329.9	0.9	42.28172	3.99544	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.463	SLU 82	Si
V_SLU	2.454	SLU 81	Si
PF_SLV	1.703	SLV 3	Si
V_SLV	4.073	SLV 8	Si
PFFP_SLV	19.991	SLV 15	Si
R_SLV	9.021	SLV 3	Si

Maschio 3

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-17.489	0.164	-17.489	1.355	L1	L2	1.191	0.3	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	-1.98	-2085.41	-12969	-0.0000983	0.0004492	0.0035	1.1909	5428.15	7083.47	7083.47	3.4	No	Si
SLU 76	0.73	1200.15	-2038	-0.0004197	0.0004492	0.0035	0.9527	1157.08	1331.24	1331.24	1.11	No	Si
SLU 73	-1.98	-2085.41	-12969	-0.0000983	0.0004492	0.0035	1.1909	5428.15	7083.47	7083.47	3.4	No	Si
SLU 73	0.73	1200.15	-2038	-0.0004197	0.0004492	0.0035	0.9527	1157.08	1331.24	1331.24	1.11	No	Si
SLU 82	-1.98	-2180.31	-13617	-0.0001035	0.0004492	0.0035	1.1909	5579.07	7336.83	7336.83	3.37	No	Si
SLU 82	0.73	1287.75	-2186	-0.0004724	0.0004492	0.0035	0.9527	1236.7	1413.78	1413.78	1.1	No	Si
SLU 78	-1.98	-2057.32	-12896	-0.0000973	0.0004492	0.0035	1.1909	5410.39	7054.87	7054.87	3.43	No	Si
SLU 78	0.73	1196.19	-2032	-0.0004175	0.0004492	0.0035	0.9527	1153.47	1327.52	1327.52	1.11	No	Si
SLU 83	-1.98	-2138.18	-13508	-0.000102	0.0004492	0.0035	1.1909	5554.32	7293.93	7293.93	3.41	No	Si
SLU 83	0.73	1281.82	-2176	-0.0004686	0.0004492	0.0035	0.9527	1231.32	1408.19	1408.19	1.1	No	Si
SLU 84	-1.98	-2180.31	-13617	-0.0001035	0.0004492	0.0035	1.1909	5579.07	7336.83	7336.83	3.37	No	Si
SLU 84	0.73	1287.75	-2186	-0.0004724	0.0004492	0.0035	0.9527	1236.7	1413.78	1413.78	1.1	No	Si
SLU 75	-1.98	-2057.32	-12896	-0.0000973	0.0004492	0.0035	1.1909	5410.39	7054.87	7054.87	3.43	No	Si
SLU 75	0.73	1196.19	-2032	-0.0004175	0.0004492	0.0035	0.9527	1153.47	1327.52	1327.52	1.11	No	Si
SLU 79	-1.98	-2015.18	-12786	-0.0000958	0.0004492	0.0035	1.1909	5383.48	7011.96	7011.96	3.48	No	Si
SLU 79	0.73	1190.26	-2022	-0.0004142	0.0004492	0.0035	0.9527	1148.06	1321.93	1321.93	1.11	No	Si
SLU 81	-1.98	-2138.18	-13508	-0.000102	0.0004492	0.0035	1.1909	5554.32	7293.93	7293.93	3.41	No	Si
SLU 81	0.73	1281.82	-2176	-0.0004686	0.0004492	0.0035	0.9527	1231.32	1408.19	1408.19	1.1	No	Si
SLU 80	-1.98	-2057.32	-12896	-0.0000973	0.0004492	0.0035	1.1909	5410.39	7054.87	7054.87	3.43	No	Si
SLU 80	0.73	1196.19	-2032	-0.0004175	0.0004492	0.0035	0.9527	1153.47	1327.52	1327.52	1.11	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	-1.98	-4110.54	-15998	-0.0001571	0.0006738	0.0035	1.1909		8689.27	8689.27	2.11		Si
SLV 6	0.73	1130.93	-1994	-0.00021	0.0006738	0.0035	1.1909		1317.53	1317.53	1.16		Si
SLV 2	-1.98	-2540.48	-12551	-0.0001031	0.0006738	0.0035	1.1909		7209.52	7209.52	2.84		Si
SLV 2	0.73	1016.62	-1756	-0.0002457	0.0006738	0.0035	0.9527		1181.99	1181.99	1.16		Si
SLV 1	-1.98	-2640.2	-12802	-0.0001064	0.0006738	0.0035	1.1909		7320.44	7320.44	2.77		Si
SLV 1	0.73	1029.2	-1777	-0.0002499	0.0006738	0.0035	0.9527		1194.15	1194.15	1.16		Si
SLV 5	-1.98	-4213.61	-16257	-0.0001611	0.0006738	0.0035	1.1909		8796.48	8796.48	2.09		Si
SLV 5	0.73	1143.93	-2016	-0.000214	0.0006738	0.0035	1.1909		1329.92	1329.92	1.16		Si
SLV 10	-1.98	-3855.69	-14865	-0.0001461	0.0006738	0.0035	1.1909		8220.63	8220.63	2.13		Si
SLV 10	0.73	1041.01	-1837	-0.0001897	0.0006738	0.0035	1.1909		1228.27	1228.27	1.18		Si
SLV 12	-1.98	1484.47	-1227	-0.0053437	0.0006738	0.0035	0.9527		880	880	0.59		No
SLV 12	0.73	414.06	-630	-0.0002394	0.0006738	0.0035	0.9527		535.49	535.49	1.29		Si
SLV 4	-1.98	-938.43	-8460	-0.0000522	0.0006738	0.0035	1.1909		5277.16	5277.16	5.62		Si
SLV 4	0.73	828.53	-1394	-0.0002662	0.0006738	0.0035	0.9527		975.15	975.15	1.18		Si
SLV 11	-1.98	1381.4	-1487	-0.0034442	0.0006738	0.0035	0.9527		1028.09	1028.09	0.74		No
SLV 11	0.73	427.06	-652	-0.000244	0.0006738	0.0035	0.9527		548.25	548.25	1.28		Si
SLV 9	-1.98	-3958.76	-15124	-0.00015	0.0006738	0.0035	1.1909		8327.84	8327.84	2.1		Si
SLV 9	0.73	1054.01	-1859	-0.0001936	0.0006738	0.0035	1.1909		1240.85	1240.85	1.18		Si
SLV 3	-1.98	-1038.15	-8710	-0.0000553	0.0006738	0.0035	1.1909		5398.67	5398.67	5.2		Si
SLV 3	0.73	841.11	-1415	-0.0002705	0.0006738	0.0035	0.9527		987.32	987.32	1.17		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	-1.98	-2180.31	-13617	-9904	-3279	1.1909	1.1909	-27720	10833	3870	88358	12839	6074	18913	No	5.77	Si
SLU 82	0.73	1287.75	-2186	-1590	-3242	0.9527	0.0194	0	0	0	88358	10271	4859	15130	No	4.67	Si
SLU 84	-1.98	-2180.31	-13617	-9904	-3279	1.1909	1.1909	-27720	10833	3870	88358	12839	6074	18913	No	5.77	Si
SLU 84	0.73	1287.75	-2186	-1590	-3242	0.9527	0.0194	0	0	0	88358	10271	4859	15130	No	4.67	Si
SLU 73	-1.98	-2085.41	-12969	-9432	-3101	1.1909	1.1909	-26401	10833	3870	88358	12839	6074	18913	No	6.1	Si
SLU 73	0.73	1200.15	-2038	-1482	-3065	0.9527	0.02	0	0	0	88358	10271	4859	15130	No	4.94	Si
SLU 75	-1.98	-2057.32	-12896	-9379	-3074	1.1909	1.1909	-26252	10833	3870	88358	12839	6074	18913	No	6.15	Si
SLU 75	0.73	1196.19	-2032	-1478	-3039	0.9527	0.0201	0	0	0	88358	10271	4859	15130	No	4.98	Si
SLU 78	-1.98	-2057.32	-12896	-9379	-3074	1.1909	1.1909	-26252	10833	3870	88358	12839	6074	18913	No	6.15	Si
SLU 78	0.73	1196.19	-2032	-1478	-3039	0.9527	0.0201	0	0	0	88358	10271	4859	15130	No	4.98	Si
SLU 80	-1.98	-2057.32	-12896	-9379	-3074	1.1909	1.1909	-26252	10833	3870	88358	12839	6074	18913	No	6.15	Si
SLU 80	0.73	1196.19	-2032	-1478	-3039	0.9527	0.0201	0	0	0	88358	10271	4859	15130	No	4.98	Si
SLU 76	-1.98	-2085.41	-12969	-9432	-3101	1.1909	1.1909	-26401	10833	3870	88358	12839	6074	18913	No	6.1	Si
SLU 76	0.73	1200.15	-2038	-1482	-3065	0.9527	0.02	0	0	0	88358	10271	4859	15130	No	4.94	Si
SLU 83	-1.98	-2138.18	-13508	-9824	-3239	1.1909	1.1909	-27497	10833	3870	88358	12839	6074	18913	No	5.84	Si
SLU 83	0.73	1281.82	-2176	-1583	-3203	0.9527	0.0195	0	0	0	88358	10271	4859	15130	No	4.72	Si
SLU 79	-1.98	-2015.18	-12786	-9299	-3035	1.1909	1.1909	-26028	10833	3870	88358	12839	6074	18913	No	6.23	Si
SLU 79	0.73	1190.26	-2022	-1470	-3000	0.9527	0.0201	0	0	0	88358	10271	4859	15130	No	5.04	Si
SLU 81	-1.98	-2138.18	-13508	-9824	-3239	1.1909	1.1909	-27497	10833	3870	88358	12839	6074	18913	No	5.84	Si
SLU 81	0.73	1281.82	-2176	-1583	-3203	0.9527	0.0195	0	0	0	88358	10271	4859	15130	No	4.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	-1.98	-938.43	-8460	-6153	-1756	1.1909	1.1909	-17221	15944	5696	88358	19259	6074	25333		14.43	Si
SLV 4	0.73	828.53	-1394	-1014	-1816	0.9527	0.0032	0	0	0	88358	15407	4859	20266		11.16	Si
SLV 14	-1.98	-1690.99	-8774	-6381	-2210	1.1909	1.1909	-17861	16072	5742	88358	19259	6074	25333		11.46	Si
SLV 14	0.73	716.87	-1231	-896	-2102	0.9527	0.0398	0	0	0	88358	15407	4859	20266		9.64	Si
SLV 10	-1.98	-3855.69	-14865	-10811	-4350	1.1909	1.0082	-36140	16250	4915	88358	19259	6074	25333		5.82	Si
SLV 10	0.73	1041.01	-1837	-1336	-4196	1.1909	0.0863	-45296	16250	421	88358	19259	6074	25333		6.04	Si
SLV 2	-1.98	-2540.48	-12551	-9128	-3273	1.1909	1.1791	-25549	16250	5748	88358	19259	6074	25333		7.74	Si
SLV 2	0.73	1016.62	-1756	-1277	-3264	0.9527	0.0495	0	0	0	88358	15407	4859	20266		6.21	Si
SLV 9	-1.98	-3958.76	-15124	-10999	-4444	1.1909	1.0011	-37020	16250	4880	88358	19259	6074	25333		5.7	Si
SLV 9	0.73	1054.01	-1859	-1352	-4290	1.1909	0.0854	-46131	16250	416	88358	19259	6074	25333		5.91	Si
SLV 5	-1.98	-4213.61	-16257	-11823	-4763	1.1909	1.0088	-39561	16250	4918	88358	19259	6074	25333		5.32	Si
SLV 5	0.73	1143.93	-2016	-1466	-4638	1.1909	0.0844	-50456	16250	411	88358	19259	6074	25333		5.46	Si
SLV 13	-1.98	-1790.7	-9025	-6564	-2301	1.1909	1.1909	-18372	16174	5779	88358	19259	6074	25333		11.01	Si
SLV 13	0.73	729.45	-1253	-911	-2193	0.9527	0.0394	0	0	0	88358	15407	4859	20266		9.24	Si
SLV 1	-1.98	-2640.2	-12802	-9310	-3364	1.1909	1.1676	-26060	16250	5692	88358	19259	6074	25333		7.53	Si
SLV 1	0.73	1029.2	-1777	-1293	-3355	0.9527	0.0491	0	0	0	88358	15407	4859	20266		6.04	Si
SLV 3	-1.98	-1038.15	-8710	-6335	-1847	1.1909	1.1909	-17731	16046	5733	88358	19259	6074	25333		13.71	Si
SLV 3	0.73	841.11	-1415	-1029	-1907	0.9527	0.0034	0	0	0	88358	15407	4859	20266		10.63	Si
SLV 6	-1.98	-4110.54	-15998	-11635	-4669	1.1909	1.0155	-38680	16250	4951	88358	19259	6074	25333		5.43	Si
SLV 6	0.73	1130.93	-1994	-1450	-4544	1.1909	0.0851	-49619	16250	415	88358	19259	6074	25333		5.57	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.625 Ta 0.04 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 12	-1550	0.24	51.02	227	400.7	313.85	6.15	Si
SLV 11	-1682	0.24	51.02	245.88	422.68	334.28	6.55	Si
SLV 8	-2213	0.24	51.02	320.71	510.3	415.51	8.14	Si
SLV 7	-2345	0.24	51.02	339.2	532.08	435.64	8.54	Si
SLV 16	-3149	0.24	51.02	449.59	664.18	556.89	10.92	Si
SLV 15	-3277	0.24	51.02	466.93	685.13	576.03	11.29	Si
SLV 14	-5180	0.24	51.02	715.54	994.58	855.06	16.76	Si
SLV 13	-5308	0.24	51.02	731.68	1015.26	873.47	17.12	Si
SLV 4	-5358	0.24	51.02	737.97	1023.35	880.66	17.26	Si
SLV 3	-5486	0.24	51.02	754	1044.03	899.02	17.62	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.05 Ta = 0.0409

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-1777	-12802	-62	2.576	323.2	0.901	41.56358	4.66809	Si
SLV 2	-1756	-12551	-62	2.596	321.1	0.9	41.9103	4.66809	Si
SLV 5	-2016	-16257	-34	2.377	346.7	0.905	38.18225	3.99544	Si
SLV 6	-1994	-15998	-34	2.395	344.5	0.904	38.4846	3.99544	Si
SLV 9	-1859	-15124	0	2.523	331.2	0.902	40.64948	3.99544	Si
SLV 10	-1837	-14865	0	2.543	329	0.902	40.98986	3.99544	Si
SLV 3	-1415	-8710	-53	2.979	288	0.895	48.39507	4.66809	Si
SLV 4	-1394	-8460	-53	3.006	285.9	0.894	48.8599	4.66809	Si
SLV 13	-1253	-9025	51	3.204	272.4	0.892	52.1904	4.66809	Si
SLV 14	-1231	-8774	51	3.235	270.4	0.892	52.72702	4.66809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.098	SLU 82	Si
V_SLU	4.668	SLU 82	Si
PF_SLV	0.593	SLV 12	No
V_SLV	5.318	SLV 5	Si
PFFP_SLV	6.152	SLV 12	Si
R_SLV	8.904	SLV 1	Si

Maschio 4

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.941	5.649	-15.941	2.678	L1	L2	2.971	0.3	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	-1.98	-6363.75	-29838	-0.0000702	0.0004492	0.0035	2.9706	32174.66	42057.63	42057.63	6.61	No	Si
SLU 73	0.52	-2742.64	-8571	-0.0000221	0.0004492	0.0035	2.9706	11728.56	17021.19	17021.19	6.21	No	Si
SLU 39	-1.98	-6438.47	-26371	-0.0000643	0.0004492	0.0035	2.9706	29683.28	38406.62	38406.62	5.97	No	Si
SLU 39	0.52	-2482.7	-7710	-0.0000199	0.0004492	0.0035	2.9706	10641.3	15854.62	15854.62	6.39	No	Si
SLU 40	-1.98	-6251.35	-26394	-0.0000637	0.0004492	0.0035	2.9706	29700.58	38431.08	38431.08	6.15	No	Si
SLU 40	0.52	-2556.47	-7772	-0.0000202	0.0004492	0.0035	2.9706	10719.54	15937.84	15937.84	6.23	No	Si
SLU 81	-1.98	-7225.3	-31216	-0.0000757	0.0004492	0.0035	2.9706	33074.14	43455.34	43455.34	6.01	No	Si
SLU 81	0.52	-2826.4	-8977	-0.000023	0.0004492	0.0035	2.9706	12234.77	17571.85	17571.85	6.22	No	Si
SLU 82	-1.98	-7038.17	-31239	-0.0000751	0.0004492	0.0035	2.9706	33088.46	43478.25	43478.25	6.18	No	Si
SLU 82	0.52	-2900.17	-9039	-0.0000234	0.0004492	0.0035	2.9706	12310.88	17655.08	17655.08	6.09	No	Si
SLU 76	-1.98	-6363.75	-29838	-0.0000702	0.0004492	0.0035	2.9706	32174.66	42057.63	42057.63	6.61	No	Si
SLU 76	0.52	-2742.64	-8571	-0.0000221	0.0004492	0.0035	2.9706	11728.56	17021.19	17021.19	6.21	No	Si
SLU 41	-1.98	-6438.47	-26371	-0.0000643	0.0004492	0.0035	2.9706	29683.28	38406.62	38406.62	5.97	No	Si
SLU 41	0.52	-2482.7	-7710	-0.0000199	0.0004492	0.0035	2.9706	10641.3	15854.62	15854.62	6.39	No	Si
SLU 83	-1.98	-7225.3	-31216	-0.0000757	0.0004492	0.0035	2.9706	33074.14	43455.34	43455.34	6.01	No	Si
SLU 83	0.52	-2826.4	-8977	-0.000023	0.0004492	0.0035	2.9706	12234.77	17571.85	17571.85	6.22	No	Si
SLU 42	-1.98	-6251.35	-26394	-0.0000637	0.0004492	0.0035	2.9706	29700.58	38431.08	38431.08	6.15	No	Si
SLU 42	0.52	-2556.47	-7772	-0.0000202	0.0004492	0.0035	2.9706	10719.54	15937.84	15937.84	6.23	No	Si
SLU 84	-1.98	-7038.17	-31239	-0.0000751	0.0004492	0.0035	2.9706	33088.46	43478.25	43478.25	6.18	No	Si
SLU 84	0.52	-2900.17	-9039	-0.0000234	0.0004492	0.0035	2.9706	12310.88	17655.08	17655.08	6.09	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	-1.98	-10749.81	-21621	-0.0000693	0.0006738	0.0035	2.9706		34066.09	34066.09	3.17		Si
SLV 4	0.52	-3178.73	-4443	-0.0000177	0.0006738	0.0035	2.9706		11449.03	11449.03	3.6		Si
SLV 11	-1.98	-18076.38	-20658	-0.0001096	0.0006738	0.0035	2.3765		32857.39	32857.39	1.82		Si
SLV 11	0.52	-1739.94	-7588	-0.0000172	0.0006738	0.0035	2.9706		15813.68	15813.68	9.09		Si
SLV 8	-1.98	-19587.89	-21091	-0.0001237	0.0006738	0.0035	2.3765		33400.97	33400.97	1.71		Si
SLV 8	0.52	-2552.08	-6580	-0.0000182	0.0006738	0.0035	2.9706		14426.84	14426.84	5.65		Si
SLV 10	-1.98	10595.4	-20344	-0.0000667	0.0006738	0.0035	2.9706		28535.42	28535.42	2.69		Si
SLV 10	0.52	-895.32	-4961	-0.0000105	0.0006738	0.0035	2.9706		12174.39	12174.39	13.6		Si
SLV 7	-1.98	-19218.41	-21179	-0.0001194	0.0006738	0.0035	2.3765		33511.02	33511.02	1.74		Si
SLV 7	0.52	-2535.62	-6553	-0.0000181	0.0006738	0.0035	2.9706		14388.77	14388.77	5.67		Si
SLV 6	-1.98	9453.36	-20865	-0.0000637	0.0006738	0.0035	2.9706		29185.53	29185.53	3.09		Si
SLV 6	0.52	-1691	-3925	-0.0000113	0.0006738	0.0035	2.9706		10721.85	10721.85	6.34		Si
SLV 12	-1.98	-18445.86	-20570	-0.0001134	0.0006738	0.0035	2.3765		32747.33	32747.33	1.78		Si
SLV 12	0.52	-1756.41	-7616	-0.0000173	0.0006738	0.0035	2.9706		15851.75	15851.75	9.03		Si
SLV 5	-1.98	9822.84	-20953	-0.0000651	0.0006738	0.0035	2.9706		29293.77	29293.77	2.98		Si
SLV 5	0.52	-1674.53	-3898	-0.0000113	0.0006738	0.0035	2.9706		10682.94	10682.94	6.38		Si
SLV 3	-1.98	-10392.36	-21706	-0.0000682	0.0006738	0.0035	2.9706		34170.04	34170.04	3.29		Si
SLV 3	0.52	-3162.8	-4416	-0.0000176	0.0006738	0.0035	2.9706		11411.39	11411.39	3.61		Si
SLV 9	-1.98	10964.87	-20432	-0.0000681	0.0006738	0.0035	2.9706		28645.51	28645.51	2.61		Si
SLV 9	0.52	-878.85	-4933	-0.0000104	0.0006738	0.0035	2.9706		12135.89	12135.89	13.81		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	-1.98	-6675.62	-29800	-21673	8927	2.9706	2.9706	-24319	10833	9655	88358	32027	15150	47177	No	5.28	Si
SLU 79	0.52	-2619.69	-8469	-6159	9812	2.9706	2.9706	-6911	9255	8248	88358	32027	15150	47177	No	4.81	Si
SLU 84	-1.98	-7038.17	-31239	-22719	9460	2.9706	2.9706	-25493	10833	9655	88358	32027	15150	47177	No	4.99	Si
SLU 84	0.52	-2900.17	-9039	-6574	10437	2.9706	2.9706	-7376	9317	8303	88358	32027	15150	47177	No	4.52	Si
SLU 73	-1.98	-6363.75	-29838	-21700	9050	2.9706	2.9706	-24350	10833	9655	88358	32027	15150	47177	No	5.21	Si
SLU 73	0.52	-2742.64	-8571	-6233	9984	2.9706	2.9706	-6995	9266	8258	88358	32027	15150	47177	No	4.73	Si
SLU 81	-1.98	-7225.3	-31216	-22703	9386	2.9706	2.9706	-25475	10833	9655	88358	32027	15150	47177	No	5.03	Si
SLU 81	0.52	-2826.4	-8977	-6529	10333	2.9706	2.9706	-7326	9310	8297	88358	32027	15150	47177	No	4.57	Si
SLU 82	-1.98	-7038.17	-31239	-22719	9460	2.9706	2.9706	-25493	10833	9655	88358	32027	15150	47177	No	4.99	Si
SLU 82	0.52	-2900.17	-9039	-6574	10437	2.9706	2.9706	-7376	9317	8303	88358	32027	15150	47177	No	4.52	Si
SLU 78	-1.98	-6488.49	-29823	-21689	9001	2.9706	2.9706	-24338	10833	9655	88358	32027	15150	47177	No	5.24	Si
SLU 78	0.52	-2693.46	-8530	-6204	9915	2.9706	2.9706	-6961	9261	8254	88358	32027	15150	47177	No	4.76	Si
SLU 83	-1.98	-7225.3	-31216	-22703	9386	2.9706	2.9706	-25475	10833	9655	88358	32027	15150	47177	No	5.03	Si
SLU 83	0.52	-2826.4	-8977	-6529	10333	2.9706	2.9706	-7326	9310	8297	88358	32027	15150	47177	No	4.57	Si
SLU 76	-1.98	-6363.75	-29838	-21700	9050	2.9706	2.9706	-24350	10833	9655	88358	32027	15150	47177	No	5.21	Si
SLU 76	0.52	-2742.64	-8571	-6233	9984	2.9706	2.9706	-6995	9266	8258	88358	32027	15150	47177	No	4.73	Si
SLU 75	-1.98	-6488.49	-29823	-21689	9001	2.9706	2.9706	-24338	10833	9655	88358	32027	15150	47177	No	5.24	Si
SLU 75	0.52	-2693.46	-8530	-6204	9915	2.9706	2.9706	-6961	9261	8254	88358	32027	15150	47177	No	4.76	Si
SLU 80	-1.98	-6488.49	-29823	-21689	9001	2.9706	2.9706	-24338	10833	9655	88358	32027	15150	47177	No	5.24	Si
SLU 80	0.52	-2693.46	-8530	-6204	9915	2.9706	2.9706	-6961	9261	8254	88358	32027	15150	47177	No	4.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	-1.98	9453.36	-20865	-15175	12615	2.9706	2.9706	-17028	15906	14175	88358	48040	15150	63191		5.01	Si
SLV 6	0.52	-1691	-3925	-2855	12700	2.9706	2.9706	-3203	13141	11711	88358	48040	15150	63191		4.98	Si
SLV 9	-1.98	10964.87	-20432	-14860	12449	2.9706	2.846	-16674	15835	13520	88358	48040	15150	63191		5.08	Si
SLV 9	0.52	-878.85	-4933	-3588	12411	2.9706	2.9706	-4026	13305	11857	88358	48040	15150	63191		5.09	Si
SLV 3	-1.98	-10392.36	-21706	-15786	5020	2.9706	2.9706	-17714	16043	14297	88358	48040	15150	63191		12.59	Si
SLV 3	0.52	-3162.8	-4416	-3212	5973	2.9706	2.3072	-4647	13429	9295	88358	48040	15150	63191		10.58	Si
SLV 4	-1.98	-10749.81	-21621	-15724	4807	2.9706	2.9644	-17644	16029	14255	88358	48040	15150	63191		13.14	Si
SLV 4	0.52	-3178.73	-4443	-3231	5766	2.9706	2.3094	-4671	13434	9307	88358	48040	15150	63191		10.96	Si
SLV 14	-1.98	1769.34	-19817	-14413	7333	2.9706	2.9706	-16172	15734	14022	88358	48040	15150	63191		8.62	Si
SLV 14	0.52	-268.14	-7098	-5162	7560	2.9706	2.9706	-5792	13658	12172	88358	48040	15150	63191		8.36	Si
SLV 13	-1.98	2126.8	-19902	-14474	7546	2.9706	2.9706	-16242	15748	14035	88358	48040	15150	63191		8.37	Si
SLV 13	0.52	-252.21	-7071	-5143	7767	2.9706	2.9706	-5770	13654	12168	88358	48040	15150	63191		8.14	Si
SLV 1	-1.98	-1679.98	-21638	-15737	8833	2.9706	2.9706	-17658	16032	14287	88358	48040	15150	63191		7.15	Si
SLV 1	0.52	-2904.47	-3619	-2632	9447	2.9706	2.0485	-4288	13358	8209	88358	48040	15150	63191		6.69	Si
SLV 2	-1.98	-2037.44	-21553	-15675	8621	2.9706	2.9706	-17589	16018	14275	88358	48040	15150	63191		7.33	Si
SLV 2	0.52	-2920.4	-3646	-2652	9239	2.9706	2.053	-4311	13362	8230	88358	48040	15150	63191		6.84	Si
SLV 5	-1.98	9822.84	-20953	-15238	12835	2.9706	2.9706	-17099	15920	14188	88358	48040	15150	63191		4.92	Si
SLV 5	0.52	-1674.53	-3898	-2835	12915	2.9706	2.9706	-3181	13136	11707	88358	48040	15150	63191		4.89	Si
SLV 10	-1.98	10595.4	-20344	-14796	12229	2.9706	2.8935	-16603	15821	13733	88358	48040	15150	63191		5.17	Si
SLV 10	0.52	-895.32	-4961	-3608	12196	2.9706	2.9706	-4048	13310	11861	88358	48040	15150	63191		5.18	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.625 Ta 0.04 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-11920	0.24	127.26	1657.55	2353.67	2005.61	15.76	Si
SLV 1	-11960	0.24	127.26	1662.6	2360.04	2011.32	15.81	Si
SLV 4	-12020	0.24	127.26	1670.36	2369.81	2020.08	15.87	Si
SLV 3	-12060	0.24	127.26	1675.4	2376.18	2025.79	15.92	Si
SLV 6	-12603	0.24	127.26	1744.52	2463.75	2104.14	16.53	Si
SLV 5	-12643	0.24	127.26	1749.69	2470.33	2110.01	16.58	Si
SLV 8	-12936	0.24	127.26	1786.72	2517.48	2152.1	16.91	Si
SLV 7	-12977	0.24	127.26	1791.87	2524.04	2157.96	16.96	Si
SLV 10	-13288	0.24	127.26	1831.03	2574.16	2202.6	17.31	Si
SLV 9	-13329	0.24	127.26	1836.15	2580.73	2208.44	17.35	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.05 Ta = 0.0409

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-6759	-19885	-108	1.925	1036.7	0.916	30.54694	4.66809	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-6741	-19970	-109	1.928	1034.9	0.916	30.60958	4.66809	Si
SLV 14	-6146	-19817	-146	2.058	975.5	0.912	32.79338	4.66809	Si
SLV 13	-6128	-19902	-147	2.062	973.7	0.912	32.86584	4.66809	Si
SLV 12	-6340	-20570	133	2.014	994.9	0.913	32.04837	3.99544	Si
SLV 11	-6321	-20658	132	2.018	993	0.913	32.1238	3.99544	Si
SLV 8	-5368	-21091	303	2.244	898.2	0.907	35.95127	3.99544	Si
SLV 7	-5349	-21179	302	2.249	896.4	0.907	36.04666	3.99544	Si
SLV 4	-3519	-21621	457	2.927	717.3	0.894	47.56027	4.66809	Si
SLV 3	-3501	-21706	456	2.936	715.5	0.894	47.71979	4.66809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.965	SLU 39	Si
V_SLU	4.52	SLU 82	Si
PF_SLV	1.705	SLV 8	Si
V_SLV	4.893	SLV 5	Si
PFFP_SLV	15.76	SLV 2	Si
R_SLV	6.544	SLV 16	Si

Maschio 5

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.459	-3.134	-20.474	-3.134	L1	L2	1.015	0.45	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	0.02	-1107.67	-8657	-0.0000532	0.0003743	0.0035	1.0153	3577.02	4011.87	4011.87	3.62	No	Si
SLU 83	0.42	-155.26	-8804	-0.0000335	0.0003743	0.0035	1.0153	3623.73	4065.83	4065.83	26.19	No	Si
SLU 80	0.02	-1042.35	-8091	-0.0000496	0.0003743	0.0035	1.0153	3393.06	3803.61	3803.61	3.65	No	Si
SLU 80	0.42	-134.44	-8127	-0.0000306	0.0003743	0.0035	1.0153	3405.17	3817.68	3817.68	28.4	No	Si
SLU 81	0.02	-1107.67	-8657	-0.0000532	0.0003743	0.0035	1.0153	3577.02	4011.87	4011.87	3.62	No	Si
SLU 81	0.42	-155.26	-8804	-0.0000335	0.0003743	0.0035	1.0153	3623.73	4065.83	4065.83	26.19	No	Si
SLU 73	0.02	-1045.59	-8106	-0.0000497	0.0003743	0.0035	1.0153	3398.06	3809.42	3809.42	3.64	No	Si
SLU 73	0.42	-135.93	-8125	-0.0000307	0.0003743	0.0035	1.0153	3404.27	3816.63	3816.63	28.08	No	Si
SLU 84	0.02	-1112.53	-8680	-0.0000534	0.0003743	0.0035	1.0153	3584.25	4020.19	4020.19	3.61	No	Si
SLU 84	0.42	-157.5	-8800	-0.0000336	0.0003743	0.0035	1.0153	3622.44	4064.35	4064.35	25.81	No	Si
SLU 74	0.02	-1037.48	-8068	-0.0000494	0.0003743	0.0035	1.0153	3385.54	3794.9	3794.9	3.66	No	Si
SLU 74	0.42	-132.21	-8131	-0.0000306	0.0003743	0.0035	1.0153	3406.53	3819.25	3819.25	28.89	No	Si
SLU 78	0.02	-1042.35	-8091	-0.0000496	0.0003743	0.0035	1.0153	3393.06	3803.61	3803.61	3.65	No	Si
SLU 78	0.42	-134.44	-8127	-0.0000306	0.0003743	0.0035	1.0153	3405.17	3817.68	3817.68	28.4	No	Si
SLU 76	0.02	-1045.59	-8106	-0.0000497	0.0003743	0.0035	1.0153	3398.06	3809.42	3809.42	3.64	No	Si
SLU 76	0.42	-135.93	-8125	-0.0000307	0.0003743	0.0035	1.0153	3404.27	3816.63	3816.63	28.08	No	Si
SLU 82	0.02	-1112.53	-8680	-0.0000534	0.0003743	0.0035	1.0153	3584.25	4020.19	4020.19	3.61	No	Si
SLU 82	0.42	-157.5	-8800	-0.0000336	0.0003743	0.0035	1.0153	3622.44	4064.35	4064.35	25.81	No	Si
SLU 75	0.02	-1042.35	-8091	-0.0000496	0.0003743	0.0035	1.0153	3393.06	3803.61	3803.61	3.65	No	Si
SLU 75	0.42	-134.44	-8127	-0.0000306	0.0003743	0.0035	1.0153	3405.17	3817.68	3817.68	28.4	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	0.02	-1085.03	-8874	-0.0000523	0.0005615	0.0035	1.0153		4285.74	4285.74	3.95		Si
SLV 5	0.42	64.12	-7933	-0.0000281	0.0005615	0.0035	1.0153		3676.14	3676.14	57.33		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 10	0.02	-1022.23	-7769	-0.000047	0.0005615	0.0035	1.0153		3826.5	3826.5	3.74		Si
SLV 10	0.42	11.25	-6635	-0.0000225	0.0005615	0.0035	1.0153		3173.37	3173.37	282.05		Si
SLV 14	0.02	-770.32	-4724	-0.0000311	0.0005615	0.0035	1.0153		2496.56	2496.56	3.24		Si
SLV 14	0.42	-100.89	-3779	-0.0000146	0.0005615	0.0035	1.0153		2061.91	2061.91	20.44		Si
SLV 16	0.02	-552.72	-2924	-0.0000207	0.0005615	0.0035	1.0153		1666.03	1666.03	3.01		Si
SLV 16	0.42	-162.87	-2558	-0.0000117	0.0005615	0.0035	1.0153		1492.87	1492.87	9.17		Si
SLV 6	0.02	-1021.45	-8583	-0.0000499	0.0005615	0.0035	1.0153		4164.96	4164.96	4.08		Si
SLV 6	0.42	45.65	-7863	-0.0000275	0.0005615	0.0035	1.0153		3649.39	3649.39	79.93		Si
SLV 15	0.02	-614.23	-3205	-0.0000229	0.0005615	0.0035	1.0153		1797.55	1797.55	2.93		Si
SLV 15	0.42	-145	-2626	-0.0000116	0.0005615	0.0035	1.0153		1525.15	1525.15	10.52		Si
SLV 9	0.02	-1085.81	-8060	-0.0000494	0.0005615	0.0035	1.0153		3947.6	3947.6	3.64		Si
SLV 9	0.42	29.72	-6705	-0.0000231	0.0005615	0.0035	1.0153		3201.53	3201.53	107.72		Si
SLV 11	0.02	-360.49	-2059	-0.0000139	0.0005615	0.0035	1.0153		1253.46	1253.46	3.48		Si
SLV 11	0.42	-176.87	-2635	-0.0000122	0.0005615	0.0035	1.0153		1529.36	1529.36	8.65		Si
SLV 12	0.02	-296.91	-1768	-0.0000116	0.0005615	0.0035	1.0153		1112.79	1112.79	3.75		Si
SLV 12	0.42	-195.34	-2565	-0.0000123	0.0005615	0.0035	1.0153		1496	1496	7.66		Si
SLV 13	0.02	-831.83	-5006	-0.0000334	0.0005615	0.0035	1.0153		2625.59	2625.59	3.16		Si
SLV 13	0.42	-83.02	-3847	-0.0000145	0.0005615	0.0035	1.0153		2093.31	2093.31	25.21		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 68	0.02	-881.82	-6732	-5984	-1745	1.0153	1.0153	-13096	8691	3971	30925	13682	2589	16271	No	9.33	Si
SLU 68	0.42	-82.15	-6555	-5827	-1623	1.0153	1.0153	-12752	8645	3950	30925	13682	2589	16271	No	10.03	Si
SLU 80	0.02	-1042.35	-8091	-7192	-1752	1.0153	1.0153	-15740	9043	4132	30925	13682	2589	16271	No	9.29	Si
SLU 80	0.42	-134.44	-8127	-7224	-1603	1.0153	1.0153	-15811	9053	4136	30925	13682	2589	16271	No	10.15	Si
SLU 84	0.02	-1112.53	-8680	-7715	-1767	1.0153	1.0153	-16886	9196	4202	30925	13682	2589	16271	No	9.21	Si
SLU 84	0.42	-157.5	-8800	-7822	-1606	1.0153	1.0153	-17120	9227	4216	30925	13682	2589	16271	No	10.13	Si
SLU 73	0.02	-1045.59	-8106	-7205	-1779	1.0153	1.0153	-15769	9047	4134	30925	13682	2589	16271	No	9.15	Si
SLU 73	0.42	-135.93	-8125	-7222	-1630	1.0153	1.0153	-15806	9052	4136	30925	13682	2589	16271	No	9.98	Si
SLU 78	0.02	-1042.35	-8091	-7192	-1752	1.0153	1.0153	-15740	9043	4132	30925	13682	2589	16271	No	9.29	Si
SLU 78	0.42	-134.44	-8127	-7224	-1603	1.0153	1.0153	-15811	9053	4136	30925	13682	2589	16271	No	10.15	Si
SLU 76	0.02	-1045.59	-8106	-7205	-1779	1.0153	1.0153	-15769	9047	4134	30925	13682	2589	16271	No	9.15	Si
SLU 76	0.42	-135.93	-8125	-7222	-1630	1.0153	1.0153	-15806	9052	4136	30925	13682	2589	16271	No	9.98	Si
SLU 75	0.02	-1042.35	-8091	-7192	-1752	1.0153	1.0153	-15740	9043	4132	30925	13682	2589	16271	No	9.29	Si
SLU 75	0.42	-134.44	-8127	-7224	-1603	1.0153	1.0153	-15811	9053	4136	30925	13682	2589	16271	No	10.15	Si
SLU 82	0.02	-1112.53	-8680	-7715	-1767	1.0153	1.0153	-16886	9196	4202	30925	13682	2589	16271	No	9.21	Si
SLU 82	0.42	-157.5	-8800	-7822	-1606	1.0153	1.0153	-17120	9227	4216	30925	13682	2589	16271	No	10.13	Si
SLU 55	0.02	-918.63	-7102	-6313	-1732	1.0153	1.0153	-13817	8787	4015	30925	13682	2589	16271	No	9.39	Si
SLU 55	0.42	-90.04	-7001	-6223	-1601	1.0153	1.0153	-13620	8760	4003	30925	13682	2589	16271	No	10.17	Si
SLU 65	0.02	-881.82	-6732	-5984	-1745	1.0153	1.0153	-13096	8691	3971	30925	13682	2589	16271	No	9.33	Si
SLU 65	0.42	-82.15	-6555	-5827	-1623	1.0153	1.0153	-12752	8645	3950	30925	13682	2589	16271	No	10.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	0.02	-1085.81	-8060	-7165	-4276	1.0153	1.0153	-15681	13553	6192	30925	20523	2589	23112		5.41	Si
SLV 9	0.42	29.72	-6705	-5960	-4068	1.0153	1.0153	-13045	13026	5952	30925	20523	2589	23112		5.68	Si
SLV 1	0.02	-829.22	-7718	-6861	-1038	1.0153	1.0153	-15016	13420	6132	30925	20523	2589	23112		22.26	Si
SLV 1	0.42	31.66	-7940	-7058	-1256	1.0153	1.0153	-15446	13506	6171	30925	20523	2589	23112		18.4	Si
SLV 13	0.02	-831.83	-5006	-4450	-3440	1.0153	1.0153	-9738	12364	5649	30925	20523	2589	23112		6.72	Si
SLV 13	0.42	-83.02	-3847	-3420	-3017	1.0153	1.0153	-7485	11914	5443	30925	20523	2589	23112		7.66	Si
SLV 10	0.02	-1022.23	-7769	-6906	-3792	1.0153	1.0153	-15115	13440	6141	30925	20523	2589	23112		6.1	Si
SLV 10	0.42	11.25	-6635	-5898	-3586	1.0153	1.0153	-12908	12998	5939	30925	20523	2589	23112		6.45	Si
SLV 8	0.02	-296.13	-2582	-2295	1696	1.0153	1.0153	-5023	11421	5218	30925	20523	2589	23112		13.62	Si
SLV 8	0.42	-160.93	-3792	-3371	1684	1.0153	1.0153	-7378	11892	5434	30925	20523	2589	23112		13.72	Si
SLV 6	0.02	-1021.45	-8583	-7630	-3071	1.0153	1.0153	-16698	13756	6285	30925	20523	2589	23112		7.53	Si
SLV 6	0.42	45.65	-7863	-6989	-3057	1.0153	1.0153	-15296	13476	6157	30925	20523	2589	23112		7.56	Si
SLV 5	0.02	-1085.03	-8874	-7888	-3555	1.0153	1.0153	-17264	13870	6337	30925	20523	2589	23112		6.5	Si
SLV 5	0.42	64.12	-7933	-7052	-3540	1.0153	1.0153	-15433	13503	6170	30925	20523	2589	23112		6.53	Si
SLV 14	0.02	-770.32	-4724	-4199	-2971	1.0153	1.0153	-9191	12255	5599	30925	20523	2589	23112		7.78	Si
SLV 14	0.42	-100.89	-3779	-3359	-2551	1.0153	1.0153	-7352	11887	5431	30925	20523	2589	23112		9.06	Si
SLV 16	0.02	-552.72	-2924	-2599	-1541	1.0153	0.9559	-5688	11554	4970	30925	20523	2589	23112		15	Si
SLV 16	0.42	-162.87	-2558	-2274	-1128	1.0153	1.0153	-4977	11412	5214	30925	20523	2589	23112		20.49	Si
SLV 15	0.02	-614.23	-3205	-2849	-2009	1.0153	0.9482	-6236	11664	4977	30925	20523	2589	23112		11.5	Si
SLV 15	0.42	-145	-2626	-2335	-1595	1.0153	1.0153	-5109	11439	5226	30925	20523	2589	23112		14.49	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.625 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.24	3660	-1672	62.93	367.23	5.84	Si
SLV 11	179667	0.24	3981	-1819	62.93	398.61	6.33	Si
SLV 16	179667	0.24	4999	-2284	62.93	497.13	7.9	Si
SLV 8	179667	0.24	5144	-2350	62.93	511.04	8.12	Si
SLV 15	179667	0.24	5310	-2426	62.93	526.93	8.37	Si
SLV 7	179667	0.24	5466	-2497	62.93	541.77	8.61	Si
SLV 14	179667	0.24	7627	-3485	62.93	744.97	11.84	Si
SLV 13	179667	0.24	7938	-3627	62.93	773.67	12.29	Si
SLV 4	179667	0.24	9947	-4545	62.93	956.03	15.19	Si
SLV 3	179667	0.24	10258	-4687	62.93	983.75	15.63	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.08 Ta = 0.0273

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-7110	-5394	29	0.784	899.3	0.945	12.06381	3.48519	Si
SLV 2	-6949	-5331	29	0.798	883	0.944	12.29112	3.48519	Si
SLV 5	-7459	-5899	7	0.758	934.7	0.946	11.64375	3.15901	Si
SLV 6	-7292	-5833	6	0.772	917.8	0.946	11.8602	3.15901	Si
SLV 3	-5793	-4235	26	0.918	765.9	0.937	14.24998	3.48519	Si
SLV 9	-6438	-5171	-16	0.848	831.1	0.941	13.10439	3.15901	Si
SLV 4	-5632	-4171	25	0.938	749.6	0.935	14.57767	3.48519	Si
SLV 10	-6271	-5106	-17	0.866	814.3	0.94	13.38492	3.15901	Si
SLV 13	-3707	-2969	-47	1.275	555.7	0.918	20.18387	3.48519	Si
SLV 14	-3546	-2906	-47	1.317	539.5	0.917	20.87552	3.48519	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.614	SLU 82	Si
V_SLU	9.146	SLU 73	Si
PF_SLV	2.927	SLV 15	Si
V_SLV	5.405	SLV 9	Si
PFFP_SLV	5.836	SLV 12	Si
R_SLV	3.461	SLV 1	Si

Maschio 6

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-15.864	-3.134	-18.459	-3.134	L1	L2	2.595	0.45	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	0.02	-1005.76	-13039	-0.0000203	0.0003743	0.0035	2.595	15062.27	17317.32	17317.32	17.22	No	Si
SLU 47	0.42	1971.82	-16003	-0.0000274	0.0003743	0.0035	2.595	17969.09	18622.64	18622.64	9.44	No	Si
SLU 44	0.02	-1005.76	-13039	-0.0000203	0.0003743	0.0035	2.595	15062.27	17317.32	17317.32	17.22	No	Si
SLU 44	0.42	1971.82	-16003	-0.0000274	0.0003743	0.0035	2.595	17969.09	18622.64	18622.64	9.44	No	Si
SLU 48	0.02	-1023.29	-12965	-0.0000203	0.0003743	0.0035	2.595	14987.51	17238.15	17238.15	16.85	No	Si
SLU 48	0.42	1949.37	-15929	-0.0000272	0.0003743	0.0035	2.595	17898.55	18552.46	18552.46	9.52	No	Si
SLU 49	0.02	-1012.77	-13009	-0.0000203	0.0003743	0.0035	2.595	15032.38	17285.67	17285.67	17.07	No	Si
SLU 49	0.42	1962.84	-15973	-0.0000274	0.0003743	0.0035	2.595	17940.89	18594.56	18594.56	9.47	No	Si
SLU 55	0.02	-1010.03	-17048	-0.0000259	0.0003743	0.0035	2.595	18947.83	21514.21	21514.21	21.3	No	Si
SLU 55	0.42	2373.7	-20776	-0.0000354	0.0003743	0.0035	2.595	22245.88	23212.02	23212.02	9.78	No	Si
SLU 46	0.02	-1012.77	-13009	-0.0000203	0.0003743	0.0035	2.595	15032.38	17285.67	17285.67	17.07	No	Si
SLU 46	0.42	1962.84	-15973	-0.0000274	0.0003743	0.0035	2.595	17940.89	18594.56	18594.56	9.47	No	Si
SLU 50	0.02	-1023.29	-12965	-0.0000203	0.0003743	0.0035	2.595	14987.51	17238.15	17238.15	16.85	No	Si
SLU 50	0.42	1949.37	-15929	-0.0000272	0.0003743	0.0035	2.595	17898.55	18552.46	18552.46	9.52	No	Si
SLU 45	0.02	-1023.29	-12965	-0.0000203	0.0003743	0.0035	2.595	14987.51	17238.15	17238.15	16.85	No	Si
SLU 45	0.42	1949.37	-15929	-0.0000272	0.0003743	0.0035	2.595	17898.55	18552.46	18552.46	9.52	No	Si
SLU 43	0.02	-1023.29	-12965	-0.0000203	0.0003743	0.0035	2.595	14987.51	17238.15	17238.15	16.85	No	Si
SLU 43	0.42	1949.37	-15929	-0.0000272	0.0003743	0.0035	2.595	17898.55	18552.46	18552.46	9.52	No	Si
SLU 51	0.02	-1012.77	-13009	-0.0000203	0.0003743	0.0035	2.595	15032.38	17285.67	17285.67	17.07	No	Si
SLU 51	0.42	1962.84	-15973	-0.0000274	0.0003743	0.0035	2.595	17940.89	18594.56	18594.56	9.47	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	0.02	-4571.28	-12535	-0.0000303	0.0005615	0.0035	2.595		17145.86	17145.86	3.75		Si
SLV 16	0.42	-3.41	-14600	-0.0000192	0.0005615	0.0035	2.595		19483.45	19483.45	5717.37		Si
SLV 2	0.02	3647.32	-12101	-0.0000269	0.0005615	0.0035	2.595		15176.12	15176.12	4.16		Si
SLV 2	0.42	3715.21	-15625	-0.0000319	0.0005615	0.0035	2.595		19200.48	19200.48	5.17		Si
SLV 12	0.02	-2381.43	-9196	-0.0000192	0.0005615	0.0035	2.595		13227.09	13227.09	5.55		Si
SLV 12	0.42	431.72	-11460	-0.0000163	0.0005615	0.0035	2.595		14431.07	14431.07	33.43		Si
SLV 4	0.02	3186.76	-10007	-0.0000227	0.0005615	0.0035	2.595		12722.81	12722.81	3.99		Si
SLV 4	0.42	3141.64	-13325	-0.000027	0.0005615	0.0035	2.595		16589.42	16589.42	5.28		Si
SLV 13	0.02	-4815.9	-15272	-0.0000348	0.0005615	0.0035	2.595		20247.14	20247.14	4.2		Si
SLV 13	0.42	361.43	-17528	-0.0000242	0.0005615	0.0035	2.595		21316.79	21316.79	58.98		Si
SLV 15	0.02	-5276.46	-13178	-0.0000334	0.0005615	0.0035	2.595		17877.08	17877.08	3.39		Si
SLV 15	0.42	-212.13	-15228	-0.0000206	0.0005615	0.0035	2.595		20196.8	20196.8	95.21		Si
SLV 3	0.02	2481.57	-10650	-0.0000214	0.0005615	0.0035	2.595		13484.55	13484.55	5.43		Si
SLV 3	0.42	2932.92	-13954	-0.0000272	0.0005615	0.0035	2.595		17307.16	17307.16	5.9		Si
SLV 11	0.02	-3110.33	-9861	-0.0000223	0.0005615	0.0035	2.595		14008.13	14008.13	4.5		Si
SLV 11	0.42	215.97	-12109	-0.0000165	0.0005615	0.0035	2.595		15185.37	15185.37	70.31		Si
SLV 1	0.02	2942.14	-12745	-0.0000256	0.0005615	0.0035	2.595		15922.03	15922.03	5.41		Si
SLV 1	0.42	3506.48	-16254	-0.0000321	0.0005615	0.0035	2.595		19901.73	19901.73	5.68		Si
SLV 14	0.02	-4110.72	-14629	-0.0000318	0.0005615	0.0035	2.595		19516.78	19516.78	4.75		Si
SLV 14	0.42	570.15	-16900	-0.000024	0.0005615	0.0035	2.595		20619.68	20619.68	36.17		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	0.02	-1064.73	-19787	-17589	-4898	2.595	2.595	-15062	8953	10455	30925	34968	6617	41380	No	8.45	Si
SLU 80	0.42	2614.43	-24041	-21369	-4898	2.595	2.595	-18300	9384	10959	30925	34968	6617	41585	No	8.49	Si
SLU 79	0.02	-1075.25	-19743	-17549	-4891	2.595	2.595	-15028	8948	10449	30925	34968	6617	41375	No	8.46	Si
SLU 79	0.42	2600.95	-23996	-21330	-4891	2.595	2.595	-18266	9380	10953	30925	34968	6617	41585	No	8.5	Si
SLU 75	0.02	-1064.73	-19787	-17589	-4898	2.595	2.595	-15062	8953	10455	30925	34968	6617	41380	No	8.45	Si
SLU 75	0.42	2614.43	-24041	-21369	-4898	2.595	2.595	-18300	9384	10959	30925	34968	6617	41585	No	8.49	Si
SLU 82	0.02	-1066.56	-21505	-19116	-5066	2.595	2.595	-16370	9127	10658	30925	34968	6617	41584	No	8.21	Si
SLU 82	0.42	2786.66	-26086	-23188	-5066	2.595	2.595	-19857	9592	11201	30925	34968	6617	41585	No	8.21	Si
SLU 84	0.02	-1066.56	-21505	-19116	-5066	2.595	2.595	-16370	9127	10658	30925	34968	6617	41584	No	8.21	Si
SLU 84	0.42	2786.66	-26086	-23188	-5066	2.595	2.595	-19857	9592	11201	30925	34968	6617	41585	No	8.21	Si
SLU 83	0.02	-1077.08	-21461	-19077	-5059	2.595	2.595	-16336	9123	10653	30925	34968	6617	41578	No	8.22	Si
SLU 83	0.42	2773.19	-26041	-23148	-5059	2.595	2.595	-19823	9587	11196	30925	34968	6617	41585	No	8.22	Si
SLU 81	0.02	-1077.08	-21461	-19077	-5059	2.595	2.595	-16336	9123	10653	30925	34968	6617	41578	No	8.22	Si
SLU 81	0.42	2773.19	-26041	-23148	-5059	2.595	2.595	-19823	9587	11196	30925	34968	6617	41585	No	8.22	Si
SLU 76	0.02	-1057.72	-19817	-17615	-4903	2.595	2.595	-15084	8956	10458	30925	34968	6617	41383	No	8.44	Si
SLU 76	0.42	2623.41	-24070	-21396	-4903	2.595	2.595	-18322	9387	10962	30925	34968	6617	41585	No	8.48	Si
SLU 78	0.02	-1064.73	-19787	-17589	-4898	2.595	2.595	-15062	8953	10455	30925	34968	6617	41380	No	8.45	Si
SLU 78	0.42	2614.43	-24041	-21369	-4898	2.595	2.595	-18300	9384	10959	30925	34968	6617	41585	No	8.49	Si
SLU 73	0.02	-1057.72	-19817	-17615	-4903	2.595	2.595	-15084	8956	10458	30925	34968	6617	41383	No	8.44	Si
SLU 73	0.42	2623.41	-24070	-21396	-4903	2.595	2.595	-18322	9387	10962	30925	34968	6617	41585	No	8.48	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	0.02	3647.32	-12101	-10757	3835	2.595	2.595	-9211	12259	14315	30925	52452	6617	45241		11.8	Si
SLV 2	0.42	3715.21	-15625	-13889	3531	2.595	2.595	-11894	12795	14942	30925	52452	6617	45867		12.99	Si
SLV 12	0.02	-2381.43	-9196	-8174	-4633	2.595	2.595	-7000	11817	13799	30925	52452	6617	44724		9.65	Si
SLV 12	0.42	431.72	-11460	-10186	-4458	2.595	2.595	-8723	12161	14201	30925	52452	6617	45127		10.12	Si
SLV 15	0.02	-5276.46	-13178	-11714	-10854	2.595	2.595	-10031	12423	14507	30925	52452	6617	45432		4.19	Si
SLV 15	0.42	-212.13	-15228	-13536	-10550	2.595	2.595	-11592	12735	14871	30925	52452	6617	45797		4.34	Si
SLV 10	0.02	-846.22	-16177	-14379	-5170	2.595	2.595	-12314	12879	15040	30925	52452	6617	45965		8.89	Si
SLV 10	0.42	2343.59	-19127	-17001	-5180	2.595	2.595	-14559	13328	15564	30925	52452	6617	46490		8.98	Si
SLV 16	0.02	-4571.28	-12535	-11142	-9601	2.595	2.595	-9542	12325	14393	30925	52452	6617	45318		4.72	Si
SLV 16	0.42	-3.41	-14600	-12978	-9297	2.595	2.595	-11113	12639	14760	30925	52452	6617	45685		4.91	Si
SLV 11	0.02	-3110.33	-9861	-8766	-5928	2.595	2.595	-7506	11918	13917	30925	52452	6617	44843		7.56	Si
SLV 11	0.42	215.97	-12109	-10764	-5753	2.595	2.595	-9217	12260	14317	30925	52452	6617	45242		7.86	Si
SLV 4	0.02	3186.76	-10007	-8895	3997	2.595	2.595	-7617	11940	13943	30925	52452	6617	44869		11.23	Si
SLV 4	0.42	3141.64	-13325	-11845	3748	2.595	2.595	-10143	12445	14533	30925	52452	6617	45458		12.13	Si
SLV 14	0.02	-4110.72	-14629	-13004	-9763	2.595	2.595	-11136	12644	14765	30925	52452	6617	45690		4.68	Si
SLV 14	0.42	570.15	-16900	-15022	-9514	2.595	2.595	-12864	12989	15169	30925	52452	6617	46094		4.84	Si
SLV 9	0.02	-1575.12	-16842	-14970	-6465	2.595	2.595	-12820	12981	15158	30925	52452	6617	46084		7.13	Si
SLV 9	0.42	2127.84	-19776	-17579	-6475	2.595	2.595	-15054	13427	15680	30925	52452	6617	46605		7.2	Si
SLV 13	0.02	-4815.9	-15272	-13576	-11015	2.595	2.595	-11625	12742	14879	30925	52452	6617	45805		4.16	Si
SLV 13	0.42	361.43	-17528	-15581	-10767	2.595	2.595	-13342	13085	15280	30925	52452	6617	46206		4.29	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.625 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.24	5542	-6472	160.83	1403.39	8.73	Si
SLV 12	179667	0.24	5612	-6553	160.83	1420.28	8.83	Si
SLV 7	179667	0.24	5951	-6949	160.83	1502.66	9.34	Si
SLV 11	179667	0.24	6020	-7030	160.83	1519.45	9.45	Si
SLV 4	179667	0.24	7934	-9265	160.83	1976.36	12.29	Si
SLV 16	179667	0.24	8165	-9535	160.83	2030.7	12.63	Si
SLV 3	179667	0.24	8329	-9727	160.83	2069.16	12.87	Si
SLV 15	179667	0.24	8561	-9997	160.83	2123.18	13.2	Si
SLV 2	179667	0.24	10048	-11734	160.83	2466.35	15.33	Si
SLV 14	179667	0.24	10279	-12003	160.83	2519	15.66	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.

- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.08 Ta = 0.0273

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-16716	-12589	-1253	0.776	2150.9	0.941	11.98067	3.15901	Si
SLV 13	-15496	-8100	-433	0.867	2027.3	0.938	13.42502	3.48519	Si
SLV 10	-16015	-12366	-1254	0.802	2079.8	0.94	12.4005	3.15901	Si
SLV 5	-15985	-13226	-1232	0.804	2076.9	0.94	12.4364	3.15901	Si
SLV 14	-14817	-7884	-434	0.897	1958.7	0.937	13.91769	3.48519	Si
SLV 6	-15284	-13002	-1232	0.832	2005.9	0.938	12.89207	3.15901	Si
SLV 15	-13729	-4893	291	0.959	1848.7	0.934	14.92906	3.48519	Si
SLV 1	-13061	-10223	-362	0.991	1781.1	0.932	15.46656	3.48519	Si
SLV 16	-13051	-4677	291	0.996	1780.1	0.932	15.54589	3.48519	Si
SLV 2	-12382	-10007	-362	1.032	1712.6	0.929	16.13565	3.48519	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	9.444	SLU 44	Si
V_SLU	8.209	SLU 82	Si
PF_SLV	3.388	SLV 15	Si
V_SLV	4.158	SLV 13	Si
PFFP_SLV	8.726	SLV 8	Si
R_SLV	3.793	SLV 9	Si

Maschio 7

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.444	-3.134	-14.864	-3.134	L1	L2	1.42	0.45	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 63	0.02	121.23	-10627	-0.0000272	0.0003743	0.0035	1.42	6312.87	6567.07	6567.07	54.17	No	Si
SLU 63	0.42	195.02	-10041	-0.0000265	0.0003743	0.0035	1.42	6028.81	6261.22	6261.22	32.11	No	Si
SLU 61	0.02	121.23	-10627	-0.0000272	0.0003743	0.0035	1.42	6312.87	6567.07	6567.07	54.17	No	Si
SLU 61	0.42	195.02	-10041	-0.0000265	0.0003743	0.0035	1.42	6028.81	6261.22	6261.22	32.11	No	Si
SLU 82	0.02	129.95	-12388	-0.0000319	0.0003743	0.0035	1.42	7120.83	7499.59	7499.59	57.71	No	Si
SLU 82	0.42	223.21	-11799	-0.0000313	0.0003743	0.0035	1.42	6858.08	7185.1	7185.1	32.19	No	Si
SLU 84	0.02	129.95	-12388	-0.0000319	0.0003743	0.0035	1.42	7120.83	7499.59	7499.59	57.71	No	Si
SLU 84	0.42	223.21	-11799	-0.0000313	0.0003743	0.0035	1.42	6858.08	7185.1	7185.1	32.19	No	Si
SLU 73	0.02	122.59	-11359	-0.0000291	0.0003743	0.0035	1.42	6656.69	6951.64	6951.64	56.71	No	Si
SLU 73	0.42	203.67	-10770	-0.0000285	0.0003743	0.0035	1.42	6380.71	6641.63	6641.63	32.61	No	Si
SLU 81	0.02	129.86	-12367	-0.0000318	0.0003743	0.0035	1.42	7111.63	7488.38	7488.38	57.67	No	Si
SLU 81	0.42	222.49	-11778	-0.0000313	0.0003743	0.0035	1.42	6848.62	7173.98	7173.98	32.24	No	Si
SLU 76	0.02	122.59	-11359	-0.0000291	0.0003743	0.0035	1.42	6656.69	6951.64	6951.64	56.71	No	Si
SLU 76	0.42	203.67	-10770	-0.0000285	0.0003743	0.0035	1.42	6380.71	6641.63	6641.63	32.61	No	Si
SLU 60	0.02	121.13	-10606	-0.0000272	0.0003743	0.0035	1.42	6302.87	6556.11	6556.11	54.12	No	Si
SLU 60	0.42	194.3	-10020	-0.0000265	0.0003743	0.0035	1.42	6018.54	6250.35	6250.35	32.17	No	Si
SLU 62	0.02	121.13	-10606	-0.0000272	0.0003743	0.0035	1.42	6302.87	6556.11	6556.11	54.12	No	Si
SLU 62	0.42	194.3	-10020	-0.0000265	0.0003743	0.0035	1.42	6018.54	6250.35	6250.35	32.17	No	Si
SLU 83	0.02	129.86	-12367	-0.0000318	0.0003743	0.0035	1.42	7111.63	7488.38	7488.38	57.67	No	Si
SLU 83	0.42	222.49	-11778	-0.0000313	0.0003743	0.0035	1.42	6848.62	7173.98	7173.98	32.24	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	0.02	2872.96	-7797	-0.0000527	0.0005615	0.0035	1.42		5292.46	5292.46	1.84		Si
SLV 2	0.42	663.21	-7389	-0.0000244	0.0005615	0.0035	1.42		5036.94	5036.94	7.59		Si
SLV 13	0.02	-2683.59	-8097	-0.0000493	0.0005615	0.0035	1.42		5848.37	5848.37	2.18		Si
SLV 13	0.42	-392.54	-7588	-0.0000222	0.0005615	0.0035	1.42		5530.4	5530.4	14.09		Si
SLV 4	0.02	2851.37	-6196	-0.0000575	0.0005615	0.0035	1.42		4281.63	4281.63	1.5		Si
SLV 4	0.42	646.48	-5800	-0.0000204	0.0005615	0.0035	1.42		4028.21	4028.21	6.23		Si
SLV 8	0.02	1039.89	-4421	-0.000021	0.0005615	0.0035	1.42		3130.1	3130.1	3.01		Si
SLV 8	0.42	285.38	-4003	-0.0000124	0.0005615	0.0035	1.42		2853.95	2853.95	10		Si
SLV 15	0.02	-2705.18	-6496	-0.000051	0.0005615	0.0035	1.136		4842.04	4842.04	1.79		Si
SLV 15	0.42	-409.27	-5999	-0.0000185	0.0005615	0.0035	1.42		4524.61	4524.61	11.06		Si
SLV 1	0.02	2440.87	-7832	-0.0000451	0.0005615	0.0035	1.42		5314.63	5314.63	2.18		Si
SLV 1	0.42	587.07	-7424	-0.0000237	0.0005615	0.0035	1.42		5059.11	5059.11	8.62		Si
SLV 11	0.02	-944.07	-4537	-0.0000203	0.0005615	0.0035	1.42		3583.19	3583.19	3.8		Si
SLV 11	0.42	-87.21	-4089	-0.0000106	0.0005615	0.0035	1.42		3289.81	3289.81	37.72		Si
SLV 14	0.02	-2251.5	-8061	-0.0000429	0.0005615	0.0035	1.42		5826.24	5826.24	2.59		Si
SLV 14	0.42	-316.4	-7552	-0.0000213	0.0005615	0.0035	1.42		5508.37	5508.37	17.41		Si
SLV 3	0.02	2419.28	-6231	-0.0000444	0.0005615	0.0035	1.42		4304.2	4304.2	1.78		Si
SLV 3	0.42	570.34	-5836	-0.0000197	0.0005615	0.0035	1.42		4050.97	4050.97	7.1		Si
SLV 16	0.02	-2273.09	-6461	-0.0000413	0.0005615	0.0035	1.42		4819.51	4819.51	2.12		Si
SLV 16	0.42	-333.13	-5964	-0.0000176	0.0005615	0.0035	1.42		4502.01	4502.01	13.51		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	0.02	122.59	-11359	-10097	-190	1.42	1.42	-15801	9051	5784	30925	19135	3621	22756	No	119.61	Si
SLU 76	0.42	203.67	-10770	-9573	-190	1.42	1.42	-14981	8942	5714	30925	19135	3621	22756	No	119.61	Si
SLU 73	0.02	122.59	-11359	-10097	-190	1.42	1.42	-15801	9051	5784	30925	19135	3621	22756	No	119.61	Si
SLU 73	0.42	203.67	-10770	-9573	-190	1.42	1.42	-14981	8942	5714	30925	19135	3621	22756	No	119.61	Si
SLU 83	0.02	129.86	-12367	-10993	-219	1.42	1.42	-17204	9238	5903	30925	19135	3621	22756	No	103.85	Si
SLU 83	0.42	222.49	-11778	-10470	-219	1.42	1.42	-16384	9129	5833	30925	19135	3621	22756	No	103.85	Si
SLU 82	0.02	129.95	-12388	-11012	-221	1.42	1.42	-17233	9242	5906	30925	19135	3621	22756	No	103.11	Si
SLU 82	0.42	223.21	-11799	-10488	-221	1.42	1.42	-16413	9133	5836	30925	19135	3621	22756	No	103.11	Si
SLU 81	0.02	129.86	-12367	-10993	-219	1.42	1.42	-17204	9238	5903	30925	19135	3621	22756	No	103.85	Si
SLU 81	0.42	222.49	-11778	-10470	-219	1.42	1.42	-16384	9129	5833	30925	19135	3621	22756	No	103.85	Si
SLU 84	0.02	129.95	-12388	-11012	-221	1.42	1.42	-17233	9242	5906	30925	19135	3621	22756	No	103.11	Si
SLU 84	0.42	223.21	-11799	-10488	-221	1.42	1.42	-16413	9133	5836	30925	19135	3621	22756	No	103.11	Si
SLU 41	0.02	109.91	-11187	-9944	-216	1.42	1.42	-15561	9019	5763	30925	19135	3621	22756	No	105.53	Si
SLU 41	0.42	200.48	-10732	-9540	-216	1.42	1.42	-14929	8935	5709	30925	19135	3621	22756	No	105.53	Si
SLU 39	0.02	109.91	-11187	-9944	-216	1.42	1.42	-15561	9019	5763	30925	19135	3621	22756	No	105.53	Si
SLU 39	0.42	200.48	-10732	-9540	-216	1.42	1.42	-14929	8935	5709	30925	19135	3621	22756	No	105.53	Si
SLU 40	0.02	110.01	-11208	-9962	-217	1.42	1.42	-15591	9023	5766	30925	19135	3621	22756	No	104.77	Si
SLU 40	0.42	201.21	-10753	-9558	-217	1.42	1.42	-14958	8939	5712	30925	19135	3621	22756	No	104.77	Si
SLU 42	0.02	110.01	-11208	-9962	-217	1.42	1.42	-15591	9023	5766	30925	19135	3621	22756	No	104.77	Si
SLU 42	0.42	201.21	-10753	-9558	-217	1.42	1.42	-14958	8939	5712	30925	19135	3621	22756	No	104.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	0.02	-872.11	-9872	-8775	-2307	1.42	1.42	-13732	13163	8411	30925	28702	3621	32323		14.01	Si
SLV 9	0.42	-31.44	-9385	-8342	-2300	1.42	1.42	-13054	13028	8325	30925	28702	3621	32323		14.05	Si
SLV 1	0.02	2440.87	-7832	-6962	5226	1.42	1.195	-10895	12596	6773	30925	28702	3621	32323		6.19	Si
SLV 1	0.42	587.07	-7424	-6599	5208	1.42	1.42	-10328	12482	7976	30925	28702	3621	32323		6.21	Si
SLV 4	0.02	2851.37	-6196	-5508	6125	1.42	0.7495	-8619	12140	4094	30925	28702	3621	32323		5.28	Si
SLV 4	0.42	646.48	-5800	-5156	6107	1.42	1.42	-8068	12030	7687	30925	28702	3621	32323		5.29	Si
SLV 13	0.02	-2683.59	-8097	-7197	-6323	1.42	1.1357	-14178	13252	6773	30925	28702	3621	32323		5.11	Si
SLV 13	0.42	-392.54	-7588	-6745	-6304	1.42	1.42	-10555	12528	8005	30925	28702	3621	32323		5.13	Si
SLV 15	0.02	-2705.18	-6496	-5775	-6313	1.136	0.8808	0	0	0	30925	22961	2897	25858		4.1	Si
SLV 15	0.42	-409.27	-5999	-5332	-6295	1.42	1.42	-8345	12086	7723	30925	28702	3621	32323		5.13	Si
SLV 11	0.02	-944.07	-4537	-4033	-2275	1.42	1.42	-6311	11679	7463	30925	28702	3621	32323		14.21	Si
SLV 11	0.42	-87.21	-4089	-3635	-2271	1.42	1.42	-5688	11554	7383	30925	28702	3621	32323		14.24	Si
SLV 2	0.02	2872.96	-7797	-6930	6116	1.42	1.0245	-10845	12586	5803	30925	28702	3621	32323		5.29	Si
SLV 2	0.42	663.21	-7389	-6568	6098	1.42	1.42	-10278	12472	7970	30925	28702	3621	32323		5.3	Si
SLV 3	0.02	2419.28	-6231	-5539	5236	1.42	0.9653	-8668	12150	5278	30925	28702	3621	32323		6.17	Si
SLV 3	0.42	570.34	-5836	-5187	5217	1.42	1.42	-8118	12040	7694	30925	28702	3621	32323		6.2	Si
SLV 14	0.02	-2251.5	-8061	-7166	-5433	1.42	1.2921	-12388	12894	7497	30925	28702	3621	32323		5.95	Si
SLV 14	0.42	-316.4	-7552	-6713	-5415	1.42	1.42	-10506	12518	7999	30925	28702	3621	32323		5.97	Si
SLV 16	0.02	-2273.09	-6461	-5743	-5423	1.42	1.0746	-11945	12806	6192	30925	28702	3621	32323		5.96	Si
SLV 16	0.42	-333.13	-5964	-5301	-5406	1.42	1.42	-8296	12076	7716	30925	28702	3621	32323		5.98	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.625 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.24	4159	-2657	88.01	581.65	6.61	Si
SLV 12	179667	0.24	4243	-2711	88.01	593.12	6.74	Si
SLV 7	179667	0.24	4379	-2798	88.01	611.51	6.95	Si
SLV 8	179667	0.24	4463	-2852	88.01	622.95	7.08	Si
SLV 15	179667	0.24	6594	-4214	88.01	907.15	10.31	Si
SLV 16	179667	0.24	6676	-4266	88.01	917.88	10.43	Si
SLV 3	179667	0.24	7328	-4682	88.01	1002.97	11.4	Si
SLV 4	179667	0.24	7409	-4735	88.01	1013.59	11.52	Si
SLV 13	179667	0.24	8901	-5688	88.01	1205.11	13.69	Si
SLV 14	179667	0.24	8982	-5740	88.01	1215.48	13.81	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.08 Ta = 0.0273

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-7916	-9368	33	0.935	1052.4	0.936	14.52356	3.15901	Si
SLV 10	-7864	-9354	33	0.94	1047.1	0.935	14.60055	3.15901	Si
SLV 5	-7746	-9302	29	0.951	1035.1	0.935	14.78576	3.15901	Si
SLV 6	-7694	-9288	29	0.956	1029.9	0.935	14.86576	3.15901	Si
SLV 13	-6707	-6991	-6	1.063	930.2	0.929	16.63106	3.48519	Si
SLV 14	-6656	-6978	-6	1.069	925.1	0.929	16.73106	3.48519	Si
SLV 1	-6138	-6772	-17	1.134	872.9	0.925	17.81243	3.48519	Si
SLV 2	-6087	-6758	-17	1.141	867.8	0.925	17.92819	3.48519	Si
SLV 15	-5500	-4888	-42	1.225	808.8	0.921	19.34221	3.48519	Si
SLV 16	-5449	-4875	-42	1.234	803.7	0.92	19.48023	3.48519	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	32.105	SLU 61	Si
V_SLU	103.112	SLU 82	Si
PF_SLV	1.502	SLV 4	Si
V_SLV	4.096	SLV 15	Si
PFFP_SLV	6.609	SLV 11	Si
R_SLV	4.598	SLV 9	Si

Maschio 8

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.059	-3.134	-12.444	-3.134	L1	L2	2.385	0.45	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	0.02	1916.26	-13368	-0.0000263	0.0003743	0.0035	2.385	13991.42	14525.67	14525.67	7.58	No	Si
SLU 48	0.42	86.97	-14647	-0.0000215	0.0003743	0.0035	2.385	15125.4	15642.09	15642.09	179.86	No	Si
SLU 47	0.02	1922.38	-13443	-0.0000265	0.0003743	0.0035	2.385	14058.69	14590.6	14590.6	7.59	No	Si
SLU 47	0.42	79.72	-14721	-0.0000216	0.0003743	0.0035	2.385	15189.82	15706.95	15706.95	197.02	No	Si
SLU 51	0.02	1919.93	-13413	-0.0000264	0.0003743	0.0035	2.385	14031.8	14564.62	14564.62	7.59	No	Si
SLU 51	0.42	82.62	-14691	-0.0000215	0.0003743	0.0035	2.385	15164.07	15681	15681	189.79	No	Si
SLU 64	0.02	2069.06	-16099	-0.000031	0.0003743	0.0035	2.385	16369.86	16923.64	16923.64	8.18	No	Si
SLU 64	0.42	128.59	-17686	-0.0000262	0.0003743	0.0035	2.385	17676.71	18341.12	18341.12	142.63	No	Si
SLU 49	0.02	1919.93	-13413	-0.0000264	0.0003743	0.0035	2.385	14031.8	14564.62	14564.62	7.59	No	Si
SLU 49	0.42	82.62	-14691	-0.0000215	0.0003743	0.0035	2.385	15164.07	15681	15681	189.79	No	Si
SLU 44	0.02	1922.38	-13443	-0.0000265	0.0003743	0.0035	2.385	14058.69	14590.6	14590.6	7.59	No	Si
SLU 44	0.42	79.72	-14721	-0.0000216	0.0003743	0.0035	2.385	15189.82	15706.95	15706.95	197.02	No	Si
SLU 46	0.02	1919.93	-13413	-0.0000264	0.0003743	0.0035	2.385	14031.8	14564.62	14564.62	7.59	No	Si
SLU 46	0.42	82.62	-14691	-0.0000215	0.0003743	0.0035	2.385	15164.07	15681	15681	189.79	No	Si
SLU 43	0.02	1916.26	-13368	-0.0000263	0.0003743	0.0035	2.385	13991.42	14525.67	14525.67	7.58	No	Si
SLU 43	0.42	86.97	-14647	-0.0000215	0.0003743	0.0035	2.385	15125.4	15642.09	15642.09	179.86	No	Si
SLU 50	0.02	1916.26	-13368	-0.0000263	0.0003743	0.0035	2.385	13991.42	14525.67	14525.67	7.58	No	Si
SLU 50	0.42	86.97	-14647	-0.0000215	0.0003743	0.0035	2.385	15125.4	15642.09	15642.09	179.86	No	Si
SLU 45	0.02	1916.26	-13368	-0.0000263	0.0003743	0.0035	2.385	13991.42	14525.67	14525.67	7.58	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	0.42	86.97	-14647	-0.0000215	0.0003743	0.0035	2.385	15125.4	15642.09	15642.09	179.86	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	0.02	-2128.35	-10697	-0.0000229	0.0005615	0.0035	2.385		13606.23	13606.23	6.39		Si
SLV 15	0.42	-914.4	-12184	-0.0000206	0.0005615	0.0035	2.385		15173.69	15173.69	16.59		Si
SLV 1	0.02	4683.18	-14526	-0.0000378	0.0005615	0.0035	2.385		16393.08	16393.08	3.5		Si
SLV 1	0.42	934.82	-15599	-0.0000257	0.0005615	0.0035	2.385		17493.31	17493.31	18.71		Si
SLV 3	0.02	4624.62	-12409	-0.0000344	0.0005615	0.0035	2.385		14189.81	14189.81	3.07		Si
SLV 3	0.42	1279.1	-13429	-0.0000238	0.0005615	0.0035	2.385		15258.66	15258.66	11.93		Si
SLV 13	0.02	-2069.8	-12814	-0.0000258	0.0005615	0.0035	2.385		15828.56	15828.56	7.65		Si
SLV 13	0.42	-1258.69	-14354	-0.0000251	0.0005615	0.0035	2.385		17431.64	17431.64	13.85		Si
SLV 7	0.02	2181.7	-9330	-0.0000211	0.0005615	0.0035	2.385		10901.61	10901.61	5		Si
SLV 7	0.42	910.09	-10451	-0.0000181	0.0005615	0.0035	2.385		12109.76	12109.76	13.31		Si
SLV 8	0.02	2861.98	-9950	-0.0000244	0.0005615	0.0035	2.385		11570.34	11570.34	4.04		Si
SLV 8	0.42	1092.06	-11070	-0.0000197	0.0005615	0.0035	2.385		12774.68	12774.68	11.7		Si
SLV 6	0.02	3057.16	-17006	-0.0000356	0.0005615	0.0035	2.385		18915.32	18915.32	6.19		Si
SLV 6	0.42	-55.57	-18304	-0.0000265	0.0005615	0.0035	2.385		21411.52	21411.52	385.34		Si
SLV 4	0.02	5282.76	-13008	-0.0000378	0.0005615	0.0035	2.385		14820.88	14820.88	2.81		Si
SLV 4	0.42	1455.16	-14028	-0.0000253	0.0005615	0.0035	2.385		15878.98	15878.98	10.91		Si
SLV 5	0.02	2376.88	-16386	-0.0000322	0.0005615	0.0035	2.385		18289.61	18289.61	7.69		Si
SLV 5	0.42	-237.54	-17685	-0.0000262	0.0005615	0.0035	2.385		20792.27	20792.27	87.53		Si
SLV 2	0.02	5341.32	-15125	-0.0000412	0.0005615	0.0035	2.385		17009.45	17009.45	3.18		Si
SLV 2	0.42	1110.87	-16198	-0.0000272	0.0005615	0.0035	2.385		18099.42	18099.42	16.29		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	0.02	2242.41	-20089	-17857	6407	2.385	2.385	-16638	9163	9834	30925	32138	6082	38220	No	5.96	Si
SLU 78	0.42	153.88	-22120	-19662	6407	2.385	2.385	-18320	9387	10075	30925	32138	6082	38220	No	5.97	Si
SLU 73	0.02	2244.86	-20119	-17884	6421	2.385	2.385	-16663	9166	9838	30925	32138	6082	38220	No	5.95	Si
SLU 73	0.42	150.98	-22149	-19688	6420	2.385	2.385	-18344	9390	10078	30925	32138	6082	38220	No	5.95	Si
SLU 80	0.02	2242.41	-20089	-17857	6407	2.385	2.385	-16638	9163	9834	30925	32138	6082	38220	No	5.96	Si
SLU 80	0.42	153.88	-22120	-19662	6407	2.385	2.385	-18320	9387	10075	30925	32138	6082	38220	No	5.97	Si
SLU 76	0.02	2244.86	-20119	-17884	6421	2.385	2.385	-16663	9166	9838	30925	32138	6082	38220	No	5.95	Si
SLU 76	0.42	150.98	-22149	-19688	6420	2.385	2.385	-18344	9390	10078	30925	32138	6082	38220	No	5.95	Si
SLU 75	0.02	2242.41	-20089	-17857	6407	2.385	2.385	-16638	9163	9834	30925	32138	6082	38220	No	5.96	Si
SLU 75	0.42	153.88	-22120	-19662	6407	2.385	2.385	-18320	9387	10075	30925	32138	6082	38220	No	5.97	Si
SLU 84	0.02	2315.13	-21780	-19360	6632	2.385	2.385	-18039	9350	10035	30925	32138	6082	38220	No	5.76	Si
SLU 84	0.42	166.58	-24001	-21334	6632	2.385	2.385	-19878	9595	10298	30925	32138	6082	38220	No	5.76	Si
SLU 83	0.02	2311.45	-21735	-19320	6612	2.385	2.385	-18002	9345	10029	30925	32138	6082	38220	No	5.78	Si
SLU 83	0.42	170.92	-23957	-21295	6612	2.385	2.385	-19841	9590	10292	30925	32138	6082	38220	No	5.78	Si
SLU 81	0.02	2311.45	-21735	-19320	6612	2.385	2.385	-18002	9345	10029	30925	32138	6082	38220	No	5.78	Si
SLU 81	0.42	170.92	-23957	-21295	6612	2.385	2.385	-19841	9590	10292	30925	32138	6082	38220	No	5.78	Si
SLU 82	0.02	2315.13	-21780	-19360	6632	2.385	2.385	-18039	9350	10035	30925	32138	6082	38220	No	5.76	Si
SLU 82	0.42	166.58	-24001	-21334	6632	2.385	2.385	-19878	9595	10298	30925	32138	6082	38220	No	5.76	Si
SLU 79	0.02	2238.73	-20045	-17817	6388	2.385	2.385	-16601	9158	9829	30925	32138	6082	38220	No	5.98	Si
SLU 79	0.42	158.22	-22075	-19622	6387	2.385	2.385	-18283	9382	10069	30925	32138	6082	38220	No	5.98	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	0.02	350.98	-15872	-14109	3958	2.385	2.385	-13146	13046	14001	30925	48207	6082	44927		11.35	Si
SLV 9	0.42	-895.59	-17311	-15388	4026	2.385	2.385	-14337	13284	14257	30925	48207	6082	45183		11.22	Si
SLV 1	0.02	4683.18	-14526	-12912	10310	2.385	2.385	-12030	12823	13762	30925	48207	6082	44688		4.33	Si
SLV 1	0.42	934.82	-15599	-13866	10188	2.385	2.385	-12919	13001	13953	30925	48207	6082	44878		4.4	Si
SLV 7	0.02	2181.7	-9330	-8294	3940	2.385	2.385	-7727	11962	12838	30925	48207	6082	43764		11.11	Si
SLV 7	0.42	910.09	-10451	-9290	3871	2.385	2.385	-8656	12148	13038	30925	48207	6082	43963		11.36	Si
SLV 10	0.02	1031.27	-16492	-14660	5204	2.385	2.385	-13659	13148	14112	30925	48207	6082	45037		8.65	Si
SLV 10	0.42	-713.62	-17930	-15938	5272	2.385	2.385	-14850	13387	14367	30925	48207	6082	45293		8.59	Si
SLV 4	0.02	5282.76	-13008	-11563	10463	2.385	2.3592	-10774	12571	13346	30925	48207	6082	44272		4.23	Si
SLV 4	0.42	1455.16	-14028	-12469	10323	2.385	2.385	-11618	12740	13674	30925	48207	6082	44599		4.32	Si
SLV 5	0.02	2376.88	-16386	-14565	7447	2.385	2.385	-13571	13131	14093	30925	48207	6082	45018		6.04	Si
SLV 5	0.42	-237.54	-17685	-15720	7437	2.385	2.385	-14647	13346	14324	30925	48207	6082	45249		6.08	Si
SLV 3	0.02	4624.62	-12409	-11030	9258	2.385	2.385	-10277	12472	13386	30925	48207	6082	44311		4.79	Si
SLV 3	0.42	1279.1	-13429	-11937	9119	2.385	2.385	-11122	12641	13567	30925	48207	6082	44493		4.88	Si
SLV 8	0.02	2861.98	-9950	-8844	5185	2.385	2.385	-8241	12065	12949	30925	48207	6082	43874		8.46	Si
SLV 8	0.42	1092.06	-11070	-9840	5117	2.385	2.385	-9169	12250	13148	30925	48207	6082	44073		8.61	Si
SLV 2	0.02	5341.32	-15125	-13445	11515	2.385	2.385	-12527	12922	13869	30925	48207	6082	44794		3.89	Si
SLV 2	0.42	1110.87	-16198	-14398	11393	2.385	2.385	-13415	13100	14059	30925	48207	6082	44985		3.95	Si
SLV 6	0.02	3057.16	-17006	-15116	8693	2.385	2.385	-14084	13234	14203	30925	48207	6082	45128		5.19	Si
SLV 6	0.42	-55.57	-18304	-16270	8682	2.385	2.385	-15159	13449	14434	30925	48207	6082	45359		5.22	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.625 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.24	4803	-5155	147.82	1123.3	7.6	Si
SLV 11	179667	0.24	4814	-5167	147.82	1125.94	7.62	Si
SLV 8	179667	0.24	5213	-5595	147.82	1215.95	8.23	Si
SLV 12	179667	0.24	5225	-5608	147.82	1218.57	8.24	Si
SLV 3	179667	0.24	7549	-8102	147.82	1732.74	11.72	Si
SLV 15	179667	0.24	7587	-8143	147.82	1741.2	11.78	Si
SLV 4	179667	0.24	7946	-8528	147.82	1818.93	12.31	Si
SLV 16	179667	0.24	7985	-8570	147.82	1827.34	12.36	Si
SLV 1	179667	0.24	9908	-10634	147.82	2237.39	15.14	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.24	9947	-10676	147.82	2245.55	15.19	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.08 Ta = 0.0273

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-15455	-12261	-977	0.782	1986.1	0.942	12.07258	3.15901	Si
SLV 2	-14443	-7645	-280	0.865	1883.6	0.939	13.38147	3.48519	Si
SLV 5	-14799	-12043	-977	0.809	1919.7	0.94	12.50151	3.15901	Si
SLV 1	-13808	-7434	-280	0.895	1819.4	0.937	13.87521	3.48519	Si
SLV 10	-14622	-13006	-1000	0.815	1901.8	0.94	12.60279	3.15901	Si
SLV 9	-13966	-12787	-1000	0.844	1835.4	0.938	13.0758	3.15901	Si
SLV 4	-12752	-4436	295	0.95	1712.5	0.934	14.77592	3.48519	Si
SLV 3	-12117	-4225	295	0.987	1648.4	0.932	15.39119	3.48519	Si
SLV 14	-11667	-10127	-355	1.011	1603	0.93	15.79612	3.48519	Si
SLV 13	-11032	-9915	-355	1.054	1539	0.928	16.51092	3.48519	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.58	SLU 43	Si
V_SLU	5.763	SLU 82	Si
PF_SLV	2.806	SLV 4	Si
V_SLV	3.89	SLV 2	Si
PFFP_SLV	7.599	SLV 7	Si
R_SLV	3.822	SLV 6	Si

Maschio 9

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-8.084	-3.134	-9.059	-3.134	L1	L2	0.975	0.45	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 68	0.02	869.74	-4989	-0.0000369	0.0003743	0.0035	0.9746	2159.67	2242.34	2242.34	2.58	No	Si
SLU 68	0.42	271.11	-4336	-0.0000211	0.0003743	0.0035	0.9746	1907.85	2008.45	2008.45	7.41	No	Si
SLU 47	0.02	764.17	-4184	-0.0000316	0.0003743	0.0035	0.9746	1847.61	1951.49	1951.49	2.55	No	Si
SLU 47	0.42	198.27	-3506	-0.0000165	0.0003743	0.0035	0.9746	1574.51	1663.49	1663.49	8.39	No	Si
SLU 70	0.02	863.23	-4986	-0.0000367	0.0003743	0.0035	0.9746	2158.17	2240.91	2240.91	2.6	No	Si
SLU 70	0.42	269.98	-4342	-0.0000211	0.0003743	0.0035	0.9746	1910.29	2010.66	2010.66	7.45	No	Si
SLU 46	0.02	757.67	-4180	-0.0000314	0.0003743	0.0035	0.9746	1846.05	1949.81	1949.81	2.57	No	Si
SLU 46	0.42	197.14	-3513	-0.0000165	0.0003743	0.0035	0.9746	1577.06	1666.17	1666.17	8.45	No	Si
SLU 51	0.02	757.67	-4180	-0.0000314	0.0003743	0.0035	0.9746	1846.05	1949.81	1949.81	2.57	No	Si
SLU 51	0.42	197.14	-3513	-0.0000165	0.0003743	0.0035	0.9746	1577.06	1666.17	1666.17	8.45	No	Si
SLU 49	0.02	757.67	-4180	-0.0000314	0.0003743	0.0035	0.9746	1846.05	1949.81	1949.81	2.57	No	Si
SLU 49	0.42	197.14	-3513	-0.0000165	0.0003743	0.0035	0.9746	1577.06	1666.17	1666.17	8.45	No	Si
SLU 65	0.02	869.74	-4989	-0.0000369	0.0003743	0.0035	0.9746	2159.67	2242.34	2242.34	2.58	No	Si
SLU 65	0.42	271.11	-4336	-0.0000211	0.0003743	0.0035	0.9746	1907.85	2008.45	2008.45	7.41	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	0.02	764.17	-4184	-0.0000316	0.0003743	0.0035	0.9746	1847.61	1951.49	1951.49	2.55	No	Si
SLU 44	0.42	198.27	-3506	-0.0000165	0.0003743	0.0035	0.9746	1574.51	1663.49	1663.49	8.39	No	Si
SLU 72	0.02	863.23	-4986	-0.0000367	0.0003743	0.0035	0.9746	2158.17	2240.91	2240.91	2.6	No	Si
SLU 72	0.42	269.98	-4342	-0.0000211	0.0003743	0.0035	0.9746	1910.29	2010.66	2010.66	7.45	No	Si
SLU 67	0.02	863.23	-4986	-0.0000367	0.0003743	0.0035	0.9746	2158.17	2240.91	2240.91	2.6	No	Si
SLU 67	0.42	269.98	-4342	-0.0000211	0.0003743	0.0035	0.9746	1910.29	2010.66	2010.66	7.45	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	0.02	611.71	-2837	-0.0000236	0.0005615	0.0035	0.9746		1393.78	1393.78	2.28		Si
SLV 3	0.42	168.2	-2317	-0.0000116	0.0005615	0.0035	0.9746		1156.54	1156.54	6.88		Si
SLV 1	0.02	1008.77	-3917	-0.000039	0.0005615	0.0035	0.9746		1877.58	1877.58	1.86		Si
SLV 1	0.42	99.47	-3067	-0.0000127	0.0005615	0.0035	0.9746		1497.82	1497.82	15.06		Si
SLV 14	0.02	729.97	-5093	-0.0000336	0.0005615	0.0035	0.9746		2389.95	2389.95	3.27		Si
SLV 14	0.42	266.05	-4660	-0.000022	0.0005615	0.0035	0.9746		2202.75	2202.75	8.28		Si
SLV 5	0.02	1334.26	-5531	-0.0000519	0.0005615	0.0035	0.9746		2576.99	2576.99	1.93		Si
SLV 5	0.42	82.27	-4491	-0.0000174	0.0005615	0.0035	0.9746		2129.77	2129.77	25.89		Si
SLV 10	0.02	1330.96	-5999	-0.0000522	0.0005615	0.0035	0.9746		2772.24	2772.24	2.08		Si
SLV 10	0.42	122.88	-4985	-0.00002	0.0005615	0.0035	0.9746		2343.61	2343.61	19.07		Si
SLV 7	0.02	10.72	-1931	-0.0000069	0.0005615	0.0035	0.9746		978.73	978.73	91.27		Si
SLV 7	0.42	311.37	-1991	-0.0000135	0.0005615	0.0035	0.9746		1006.72	1006.72	3.23		Si
SLV 9	0.02	1217.77	-5837	-0.0000482	0.0005615	0.0035	0.9746		2706.78	2706.78	2.22		Si
SLV 9	0.42	136.07	-4962	-0.0000202	0.0005615	0.0035	0.9746		2333.57	2333.57	17.15		Si
SLV 4	0.02	721.22	-2993	-0.0000275	0.0005615	0.0035	0.9746		1464.43	1464.43	2.03		Si
SLV 4	0.42	155.44	-2339	-0.0000114	0.0005615	0.0035	0.9746		1166.85	1166.85	7.51		Si
SLV 6	0.02	1447.46	-5693	-0.0000566	0.0005615	0.0035	0.9746		2645.64	2645.64	1.83		Si
SLV 6	0.42	69.08	-4514	-0.0000172	0.0005615	0.0035	0.9746		2139.9	2139.9	30.98		Si
SLV 2	0.02	1118.28	-4073	-0.0000439	0.0005615	0.0035	0.9746		1946.16	1946.16	1.74		Si
SLV 2	0.42	86.71	-3089	-0.0000125	0.0005615	0.0035	0.9746		1507.99	1507.99	17.39		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	0.02	1050.88	-6542	-5815	1834	0.9746	0.9746	-13260	8712	3821	30925	13133	2485	15618	No	8.52	Si
SLU 84	0.42	403.74	-5957	-5295	1828	0.9746	0.9746	-12074	8554	3752	30925	13133	2485	15618	No	8.54	Si
SLU 68	0.02	869.74	-4989	-4435	1795	0.9746	0.939	-10113	8293	3504	30925	13133	2485	15618	No	8.7	Si
SLU 68	0.42	271.11	-4336	-3854	1791	0.9746	0.9746	-8789	8116	3560	30925	13133	2485	15618	No	8.72	Si
SLU 82	0.02	1050.88	-6542	-5815	1834	0.9746	0.9746	-13260	8712	3821	30925	13133	2485	15618	No	8.52	Si
SLU 82	0.42	403.74	-5957	-5295	1828	0.9746	0.9746	-12074	8554	3752	30925	13133	2485	15618	No	8.54	Si
SLU 75	0.02	994.59	-6075	-5400	1815	0.9746	0.9708	-12313	8586	3751	30925	13133	2485	15618	No	8.61	Si
SLU 75	0.42	363.61	-5473	-4865	1809	0.9746	0.9746	-11092	8423	3694	30925	13133	2485	15618	No	8.63	Si
SLU 83	0.02	1041.12	-6536	-5810	1795	0.9746	0.9746	-13248	8711	3820	30925	13133	2485	15618	No	8.7	Si
SLU 83	0.42	402.05	-5966	-5304	1789	0.9746	0.9746	-12093	8557	3753	30925	13133	2485	15618	No	8.73	Si
SLU 73	0.02	1001.09	-6079	-5404	1840	0.9746	0.9679	-12321	8587	3740	30925	13133	2485	15618	No	8.49	Si
SLU 73	0.42	364.73	-5467	-4859	1835	0.9746	0.9746	-11080	8422	3693	30925	13133	2485	15618	No	8.51	Si
SLU 80	0.02	994.59	-6075	-5400	1815	0.9746	0.9708	-12313	8586	3751	30925	13133	2485	15618	No	8.61	Si
SLU 80	0.42	363.61	-5473	-4865	1809	0.9746	0.9746	-11092	8423	3694	30925	13133	2485	15618	No	8.63	Si
SLU 81	0.02	1041.12	-6536	-5810	1795	0.9746	0.9746	-13248	8711	3820	30925	13133	2485	15618	No	8.7	Si
SLU 81	0.42	402.05	-5966	-5304	1789	0.9746	0.9746	-12093	8557	3753	30925	13133	2485	15618	No	8.73	Si
SLU 78	0.02	994.59	-6075	-5400	1815	0.9746	0.9708	-12313	8586	3751	30925	13133	2485	15618	No	8.61	Si
SLU 78	0.42	363.61	-5473	-4865	1809	0.9746	0.9746	-11092	8423	3694	30925	13133	2485	15618	No	8.63	Si
SLU 76	0.02	1001.09	-6079	-5404	1840	0.9746	0.9679	-12321	8587	3740	30925	13133	2485	15618	No	8.49	Si
SLU 76	0.42	364.73	-5467	-4859	1835	0.9746	0.9746	-11080	8422	3693	30925	13133	2485	15618	No	8.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	0.02	1330.96	-5999	-5332	3911	0.9746	0.7962	-12158	12848	4604	30925	19699	2485	22184		5.67	Si
SLV 10	0.42	122.88	-4985	-4432	3918	0.9746	0.9746	-10104	12438	5455	30925	19699	2485	22184		5.66	Si
SLV 2	0.02	1118.28	-4073	-3620	3301	0.9746	0.6382	-8255	12068	3466	30925	19699	2485	22184		6.72	Si
SLV 2	0.42	86.71	-3089	-2746	3253	0.9746	0.9746	-6261	11669	5118	30925	19699	2485	22184		6.82	Si
SLV 5	0.02	1334.26	-5531	-4917	3996	0.9746	0.7382	-11211	12659	4205	30925	19699	2485	22184		5.55	Si
SLV 5	0.42	82.27	-4491	-3992	3977	0.9746	0.9746	-9102	12237	5367	30925	19699	2485	22184		5.58	Si
SLV 6	0.02	1447.46	-5693	-5060	4479	0.9746	0.6991	-11538	12724	4003	30925	19699	2485	22184		4.95	Si
SLV 6	0.42	69.08	-4514	-4013	4460	0.9746	0.9746	-9150	12247	5371	30925	19699	2485	22184		4.97	Si
SLV 14	0.02	729.97	-5093	-4527	1405	0.9746	0.9746	-10322	12481	5474	30925	19699	2485	22184		15.79	Si
SLV 14	0.42	266.05	-4660	-4142	1445	0.9746	0.9746	-9444	12305	5397	30925	19699	2485	22184		15.35	Si
SLV 11	0.02	-105.77	-2237	-1988	-1813	0.9746	0.9746	-4533	11323	4966	30925	19699	2485	22184		12.24	Si
SLV 11	0.42	365.17	-2462	-2188	-1801	0.9746	0.9746	-4990	11415	5006	30925	19699	2485	22184		12.32	Si
SLV 12	0.02	7.43	-2398	-2132	-1329	0.9746	0.9746	-4861	11389	4995	30925	19699	2485	22184		16.69	Si
SLV 12	0.42	351.98	-2485	-2209	-1317	0.9746	0.9746	-5037	11424	5010	30925	19699	2485	22184		16.84	Si
SLV 4	0.02	721.22	-2993	-2660	1729	0.9746	0.7389	-6066	11630	3867	30925	19699	2485	22184		12.83	Si
SLV 4	0.42	155.44	-2339	-2079	1682	0.9746	0.9746	-4741	11365	4984	30925	19699	2485	22184		13.19	Si
SLV 1	0.02	1008.77	-3917	-3482	2833	0.9746	0.6892	-7939	12004	3723	30925	19699	2485	22184		7.83	Si
SLV 1	0.42	99.47	-3067	-2726	2785	0.9746	0.9746	-6216	11660	5114	30925	19699	2485	22184		7.97	Si
SLV 9	0.02	1217.77	-5837	-5189	3427	0.9746	0.836	-11831	12783	4809	30925	19699	2485	22184		6.47	Si
SLV 9	0.42	136.07	-4962	-4411	3435	0.9746	0.9746	-10057	12428	5451	30925	19699	2485	22184		6.46	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.625 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.24	2676	-1174	60.4	259.46	4.3	Si
SLV 8	179667	0.24	2962	-1299	60.4	286.61	4.74	Si
SLV 11	179667	0.24	3651	-1601	60.4	351.62	5.82	Si
SLV 12	179667	0.24	3936	-1726	60.4	378.42	6.26	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.24	4378	-1920	60.4	419.59	6.95	Si
SLV 4	179667	0.24	4654	-2041	60.4	445.25	7.37	Si
SLV 1	179667	0.24	6806	-2985	60.4	641.7	10.62	Si
SLV 2	179667	0.24	7083	-3106	60.4	666.49	11.03	Si
SLV 15	179667	0.24	7626	-3344	60.4	714.9	11.84	Si
SLV 16	179667	0.24	7902	-3466	60.4	739.4	12.24	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.08 Ta = 0.0273

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-4495	-5835	55	1.073	627.5	0.928	16.80295	3.15901	Si
SLV 9	-4390	-5768	55	1.092	616.9	0.927	17.12109	3.15901	Si
SLV 14	-3893	-5385	23	1.199	567	0.922	18.90422	3.48519	Si
SLV 13	-3791	-5321	22	1.223	556.8	0.921	19.29676	3.48519	Si
SLV 6	-4205	-5078	51	1.128	598.3	0.925	17.71923	3.15901	Si
SLV 5	-4100	-5011	51	1.149	587.7	0.924	18.07514	3.15901	Si
SLV 16	-3089	-4245	-8	1.419	486.5	0.913	22.59075	3.48519	Si
SLV 15	-2987	-4180	-9	1.452	476.3	0.912	23.15419	3.48519	Si
SLV 2	-2926	-2863	11	1.473	470.2	0.911	23.50047	3.48519	Si
SLV 1	-2824	-2799	10	1.509	460.1	0.909	24.11698	3.48519	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.554	SLU 44	Si
V_SLU	8.486	SLU 73	Si
PF_SLV	1.74	SLV 2	Si
V_SLV	4.953	SLV 6	Si
PFFP_SLV	4.295	SLV 7	Si
R_SLV	5.319	SLV 10	Si

Maschio 10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-8.084	1.355	-20.474	1.355	L1	L2	12.39	0.45	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	-1.98	6978.66	-144228	-0.0000394	0.0004492	0.0035	12.39	704328.79	771204.35	771204.35	110.51	No	Si
SLU 51	0.73	-5905.22	-103649	-0.0000281	0.0004492	0.0035	12.39	544412.7	665570.95	665570.95	112.71	No	Si
SLU 46	-1.98	6978.66	-144228	-0.0000394	0.0004492	0.0035	12.39	704328.79	771204.35	771204.35	110.51	No	Si
SLU 46	0.73	-5905.22	-103649	-0.0000281	0.0004492	0.0035	12.39	544412.7	665570.95	665570.95	112.71	No	Si
SLU 50	-1.98	6992.53	-144517	-0.0000395	0.0004492	0.0035	12.39	705363.11	772511.52	772511.52	110.48	No	Si
SLU 50	0.73	-5960.06	-103483	-0.0000281	0.0004492	0.0035	12.39	543696.4	664729.69	664729.69	111.53	No	Si
SLU 47	-1.98	6969.41	-144034	-0.0000394	0.0004492	0.0035	12.39	703638.39	770332.9	770332.9	110.53	No	Si
SLU 47	0.73	-5868.67	-103760	-0.0000281	0.0004492	0.0035	12.39	544889.95	666131.79	666131.79	113.51	No	Si
SLU 49	-1.98	6978.66	-144228	-0.0000394	0.0004492	0.0035	12.39	704328.79	771204.35	771204.35	110.51	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	0.73	-5905.22	-103649	-0.0000281	0.0004492	0.0035	12.39	544412.7	665570.95	665570.95	112.71	No	Si
SLU 43	-1.98	6992.53	-144517	-0.0000395	0.0004492	0.0035	12.39	705363.11	772511.52	772511.52	110.48	No	Si
SLU 43	0.73	-5960.06	-103483	-0.0000281	0.0004492	0.0035	12.39	543696.4	664729.69	664729.69	111.53	No	Si
SLU 45	-1.98	6992.53	-144517	-0.0000395	0.0004492	0.0035	12.39	705363.11	772511.52	772511.52	110.48	No	Si
SLU 45	0.73	-5960.06	-103483	-0.0000281	0.0004492	0.0035	12.39	543696.4	664729.69	664729.69	111.53	No	Si
SLU 44	-1.98	6969.41	-144034	-0.0000394	0.0004492	0.0035	12.39	703638.39	770332.9	770332.9	110.53	No	Si
SLU 44	0.73	-5868.67	-103760	-0.0000281	0.0004492	0.0035	12.39	544889.95	666131.79	666131.79	113.51	No	Si
SLU 1	-1.98	5362.51	-116334	-0.0000315	0.0004492	0.0035	12.39	597619.15	645379.71	645379.71	120.35	No	Si
SLU 1	0.73	-4158.59	-85001	-0.0000228	0.0004492	0.0035	12.39	460876.48	571142.44	571142.44	137.34	No	Si
SLU 48	-1.98	6992.53	-144517	-0.0000395	0.0004492	0.0035	12.39	705363.11	772511.52	772511.52	110.48	No	Si
SLU 48	0.73	-5960.06	-103483	-0.0000281	0.0004492	0.0035	12.39	543696.4	664729.69	664729.69	111.53	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	-1.98	-104474.31	-138115	-0.00005	0.0006738	0.0035	12.39		858907.92	858907.92	8.22		Si
SLV 15	0.73	-48185.69	-97278	-0.0000316	0.0006738	0.0035	12.39		648586.8	648586.8	13.46		Si
SLV 14	-1.98	-104712.42	-123675	-0.0000461	0.0006738	0.0035	12.39		786311.7	786311.7	7.51		Si
SLV 14	0.73	-55443.04	-98858	-0.0000329	0.0006738	0.0035	12.39		656832.97	656832.97	11.85		Si
SLV 6	-1.98	35891.23	-104983	-0.000032	0.0006738	0.0035	12.39		615666.21	615666.21	17.15		Si
SLV 6	0.73	-67.36	-101714	-0.0000265	0.0006738	0.0035	12.39		671731.04	671731.04	9971.91		Si
SLV 2	-1.98	115158.74	-120774	-0.0000466	0.0006738	0.0035	12.39		698399.17	698399.17	6.06		Si
SLV 2	0.73	42433.72	-100816	-0.0000318	0.0006738	0.0035	12.39		593449.17	593449.17	13.99		Si
SLV 1	-1.98	113389.09	-120809	-0.0000464	0.0006738	0.0035	12.39		698577.55	698577.55	6.16		Si
SLV 1	0.73	42627.39	-100589	-0.0000317	0.0006738	0.0035	12.39		592237.96	592237.96	13.89		Si
SLV 4	-1.98	117166.49	-135179	-0.0000508	0.0006738	0.0035	12.39		769024.37	769024.37	6.56		Si
SLV 4	0.73	49497.39	-99463	-0.0000323	0.0006738	0.0035	12.39		586233.52	586233.52	11.84		Si
SLV 3	-1.98	115396.84	-135214	-0.0000506	0.0006738	0.0035	12.39		769181.99	769181.99	6.67		Si
SLV 3	0.73	49691.07	-99236	-0.0000323	0.0006738	0.0035	12.39		585022.3	585022.3	11.77		Si
SLV 16	-1.98	-102704.67	-138080	-0.0000497	0.0006738	0.0035	12.39		858736.58	858736.58	8.36		Si
SLV 16	0.73	-48379.37	-97505	-0.0000316	0.0006738	0.0035	12.39		649772.04	649772.04	13.43		Si
SLV 5	-1.98	34062.05	-105019	-0.0000318	0.0006738	0.0035	12.39		615856.89	615856.89	18.08		Si
SLV 5	0.73	132.83	-101479	-0.0000265	0.0006738	0.0035	12.39		596981.91	596981.91	4494.41		Si
SLV 13	-1.98	-106482.06	-123710	-0.0000463	0.0006738	0.0035	12.39		786492.22	786492.22	7.39		Si
SLV 13	0.73	-55249.37	-98631	-0.0000328	0.0006738	0.0035	12.39		655647.73	655647.73	11.87		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	-1.98	6903.73	-201384	-161107	-885	12.39	12.39	-28896	10833	60401	88358	200369	63189	148759	No	168.16	Si
SLU 82	0.73	-184.61	-165108	-132087	-178	12.39	12.39	-23691	10833	60401	88358	200369	63189	148759	No	837.69	Si
SLU 75	-1.98	6907.6	-190114	-152091	-871	12.39	12.39	-27279	10833	60401	88358	200369	63189	148759	No	170.74	Si
SLU 75	0.73	-1416.14	-152811	-122249	-216	12.39	12.39	-21926	10833	60401	88358	200369	63189	148759	No	687.73	Si
SLU 76	-1.98	6898.35	-189921	-151937	-883	12.39	12.39	-27251	10833	60401	88358	200369	63189	148759	No	168.39	Si
SLU 76	0.73	-1379.58	-152922	-122337	-226	12.39	12.39	-21942	10833	60401	88358	200369	63189	148759	No	656.94	Si
SLU 78	-1.98	6907.6	-190114	-152091	-871	12.39	12.39	-27279	10833	60401	88358	200369	63189	148759	No	170.74	Si
SLU 78	0.73	-1416.14	-152811	-122249	-216	12.39	12.39	-21926	10833	60401	88358	200369	63189	148759	No	687.73	Si
SLU 83	-1.98	6917.6	-201674	-161339	-866	12.39	12.39	-28937	10833	60401	88358	200369	63189	148759	No	171.69	Si
SLU 83	0.73	-239.45	-164942	-131954	-162	12.39	12.39	-23667	10833	60401	88358	200369	63189	148759	No	916.14	Si
SLU 73	-1.98	6898.35	-189921	-151937	-883	12.39	12.39	-27251	10833	60401	88358	200369	63189	148759	No	168.39	Si
SLU 73	0.73	-1379.58	-152922	-122337	-226	12.39	12.39	-21942	10833	60401	88358	200369	63189	148759	No	656.94	Si
SLU 80	-1.98	6907.6	-190114	-152091	-871	12.39	12.39	-27279	10833	60401	88358	200369	63189	148759	No	170.74	Si
SLU 80	0.73	-1416.14	-152811	-122249	-216	12.39	12.39	-21926	10833	60401	88358	200369	63189	148759	No	687.73	Si
SLU 84	-1.98	6903.73	-201384	-161107	-885	12.39	12.39	-28896	10833	60401	88358	200369	63189	148759	No	168.16	Si
SLU 84	0.73	-184.61	-165108	-132087	-178	12.39	12.39	-23691	10833	60401	88358	200369	63189	148759	No	837.69	Si
SLU 81	-1.98	6917.6	-201674	-161339	-866	12.39	12.39	-28937	10833	60401	88358	200369	63189	148759	No	171.69	Si
SLU 81	0.73	-239.45	-164942	-131954	-162	12.39	12.39	-23667	10833	60401	88358	200369	63189	148759	No	916.14	Si
SLU 63	-1.98	6965.74	-181794	-145435	-855	12.39	12.39	-26085	10833	60401	88358	200369	63189	148759	No	173.96	Si
SLU 63	0.73	-1800.15	-144640	-115712	-228	12.39	12.39	-20754	10833	60401	88358	200369	63189	148759	No	652.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	-1.98	-102704.67	-138080	-110464	-33338	12.39	12.39	-19812	16250	90602	88358	300554	63189	178960		5.37	Si
SLV 16	0.73	-48379.37	-97505	-78004	-31131	12.39	12.39	-13991	15298	85294	88358	300554	63189	173653		5.58	Si
SLV 3	-1.98	115396.84	-135214	-108171	32242	12.39	12.39	-19401	16250	90602	88358	300554	63189	178960		5.55	Si
SLV 3	0.73	49691.07	-99236	-79389	31018	12.39	12.39	-14239	15348	85571	88358	300554	63189	173930		5.61	Si
SLV 9	-1.98	-31899.3	-105889	-84711	-10658	12.39	12.39	-15194	15539	86636	88358	300554	63189	174994		16.42	Si
SLV 9	0.73	-29230.2	-100891	-80713	-9942	12.39	12.39	-14476	15395	85836	88358	300554	63189	174195		17.52	Si
SLV 4	-1.98	117166.49	-135179	-108143	32089	12.39	12.39	-19396	16250	90602	88358	300554	63189	178960		5.58	Si
SLV 4	0.73	49497.39	-99463	-79570	30869	12.39	12.39	-14271	15354	85608	88358	300554	63189	173966		5.64	Si
SLV 14	-1.98	-104712.42	-123675	-98940	-33511	12.39	12.39	-17746	16049	89482	88358	300554	63189	177840		5.31	Si
SLV 14	0.73	-55443.04	-98858	-79087	-31437	12.39	12.39	-14185	15337	85511	88358	300554	63189	173869		5.53	Si
SLV 1	-1.98	113389.09	-120809	-96647	32068	12.39	12.39	-17334	15967	89023	88358	300554	63189	177381		5.53	Si
SLV 1	0.73	42627.39	-100589	-80471	30712	12.39	12.39	-14433	15387	85788	88358	300554	63189	174146		5.67	Si
SLV 10	-1.98	-30070.12	-105854	-84683	-10816	12.39	12.39	-15188	15538	86630	88358	300554	63189	174989		16.18	Si
SLV 10	0.73	-29430.39	-101126	-80901	-10095	12.39	12.39	-14510	15402	85874	88358	300554	63189	174232		17.26	Si
SLV 15	-1.98	-104474.31	-138115	-110492	-33185	12.39	12.39	-19817	16250	90602	88358	300554	63189	178960		5.39	Si
SLV 15	0.73	-48185.69	-97278	-77822	-30983	12.39	12.39	-13958	15292	85258	88358	300554	63189	173616		5.6	Si
SLV 2	-1.98	115158.74	-120774	-96619	31916	12.39	12.39	-17329	15966	89017	88358	300554	63189	177376		5.56	Si
SLV 2	0.73	42433.72	-100816	-80653	30564	12.39	12.39	-14466	15393	85824	88358	300554	63189	174183		5.7	Si
SLV 13	-1.98	-106482.06	-123710	-98968	-33358	12.39	12.39	-17751	16050	89487	88358	300554	63189	177846		5.33	Si
SLV 13	0.73	-55249.37	-98631	-78905	-31288	12.39	12.39	-14152	15330	85475	88358	300554	63189	173833		5.56	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.625 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 5	-101850	0.24	780.87	20632.29	26359.07	23495.68	30.09	Si
SLV 6	-101961	0.24	780.87	20652.25	26384.53	23518.39	30.12	Si
SLV 9	-102122	0.24	780.87	20681.16	26421.43	23551.29	30.16	Si
SLV 10	-102233	0.24	780.87	20701.1	26446.89	23573.99	30.19	Si
SLV 1	-107949	0.24	780.87	21722.74	27761.22	24741.98	31.69	Si
SLV 2	-108056	0.24	780.87	21741.76	27785.87	24763.81	31.71	Si
SLV 13	-108853	0.24	780.87	21883.06	27969.27	24926.16	31.92	Si
SLV 14	-108961	0.24	780.87	21902.04	27993.92	24947.98	31.95	Si
SLV 3	-113446	0.24	780.87	22691.61	29026.12	25858.87	33.12	Si
SLV 4	-113553	0.24	780.87	22710.37	29050.8	25880.58	33.14	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.08 Ta = 0.0273

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-100816	-120774	-254	0.699	12400	0.95	10.68982	3.48519	Si
SLV 4	-99463	-135179	1063	0.699	12262.6	0.95	10.69865	3.48519	Si
SLV 1	-100589	-120809	-254	0.7	12376.9	0.95	10.70944	3.48519	Si
SLV 3	-99236	-135214	1063	0.7	12239.5	0.95	10.71861	3.48519	Si
SLV 14	-98858	-123675	-617	0.706	12201.2	0.95	10.81255	3.48519	Si
SLV 13	-98631	-123710	-617	0.708	12178.1	0.949	10.83278	3.48519	Si
SLV 16	-97505	-138080	700	0.713	12063.8	0.949	10.92313	3.48519	Si
SLV 15	-97278	-138115	700	0.715	12040.7	0.949	10.94392	3.48519	Si
SLV 6	-101714	-104983	-1917	0.68	12491.1	0.951	10.39243	3.15901	Si
SLV 5	-101479	-105019	-1917	0.681	12467.2	0.95	10.41192	3.15901	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	110.477	SLU 43	Si
V_SLU	168.16	SLU 82	Si
PF_SLV	6.065	SLV 2	Si
V_SLV	5.307	SLV 14	Si
PFFP_SLV	30.089	SLV 5	Si
R_SLV	3.067	SLV 2	Si

Maschio 11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.729	5.874	-20.474	5.874	L1	L2	1.745	0.45	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 35	0.02	-1061.54	-10208	-0.0000275	0.0003743	0.0035	1.745	7769.27	8854.61	8854.61	8.34	No	Si
SLU 35	0.42	63.73	-10089	-0.0000203	0.0003743	0.0035	1.745	7691.88	7966.15	7966.15	124.99	No	Si
SLU 41	0.02	-1144.45	-11056	-0.0000298	0.0003743	0.0035	1.745	8312.24	9448.59	9448.59	8.26	No	Si
SLU 41	0.42	53.97	-11000	-0.0000221	0.0003743	0.0035	1.745	8276.91	8551.84	8551.84	158.44	No	Si
SLU 81	0.02	-1282.89	-12572	-0.0000339	0.0003743	0.0035	1.745	9244.08	10483.54	10483.54	8.17	No	Si
SLU 81	0.42	125.91	-12371	-0.0000254	0.0003743	0.0035	1.745	9123.62	9444.26	9444.26	75.01	No	Si
SLU 74	0.02	-1199.98	-11724	-0.0000316	0.0003743	0.0035	1.745	8729.17	9902.18	9902.18	8.25	No	Si
SLU 74	0.42	135.67	-11460	-0.0000236	0.0003743	0.0035	1.745	8565.84	8850.02	8850.02	65.23	No	Si
SLU 39	0.02	-1144.45	-11056	-0.0000298	0.0003743	0.0035	1.745	8312.24	9448.59	9448.59	8.26	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	0.42	53.97	-11000	-0.0000221	0.0003743	0.0035	1.745	8276.91	8551.84	8551.84	158.44	No	Si
SLU 37	0.02	-1061.54	-10208	-0.0000275	0.0003743	0.0035	1.745	7769.27	8854.61	8854.61	8.34	No	Si
SLU 37	0.42	63.73	-10089	-0.0000203	0.0003743	0.0035	1.745	7691.88	7966.15	7966.15	124.99	No	Si
SLU 32	0.02	-1061.54	-10208	-0.0000275	0.0003743	0.0035	1.745	7769.27	8854.61	8854.61	8.34	No	Si
SLU 32	0.42	63.73	-10089	-0.0000203	0.0003743	0.0035	1.745	7691.88	7966.15	7966.15	124.99	No	Si
SLU 83	0.02	-1282.89	-12572	-0.0000339	0.0003743	0.0035	1.745	9244.08	10483.54	10483.54	8.17	No	Si
SLU 83	0.42	125.91	-12371	-0.0000254	0.0003743	0.0035	1.745	9123.62	9444.26	9444.26	75.01	No	Si
SLU 77	0.02	-1199.98	-11724	-0.0000316	0.0003743	0.0035	1.745	8729.17	9902.18	9902.18	8.25	No	Si
SLU 77	0.42	135.67	-11460	-0.0000236	0.0003743	0.0035	1.745	8565.84	8850.02	8850.02	65.23	No	Si
SLU 79	0.02	-1199.98	-11724	-0.0000316	0.0003743	0.0035	1.745	8729.17	9902.18	9902.18	8.25	No	Si
SLU 79	0.42	135.67	-11460	-0.0000236	0.0003743	0.0035	1.745	8565.84	8850.02	8850.02	65.23	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	0.02	-1582.54	-11577	-0.0000334	0.0005615	0.0035	1.745		10135.27	10135.27	6.4		Si
SLV 12	0.42	-416.84	-10568	-0.0000235	0.0005615	0.0035	1.745		9380.85	9380.85	22.5		Si
SLV 15	0.02	-1800.9	-7555	-0.0000268	0.0005615	0.0035	1.745		7062.79	7062.79	3.92		Si
SLV 15	0.42	-307.94	-6444	-0.0000145	0.0005615	0.0035	1.745		6182.82	6182.82	20.08		Si
SLV 5	0.02	6.91	-3896	-0.0000076	0.0005615	0.0035	1.745		3463.13	3463.13	500.83		Si
SLV 5	0.42	679.03	-4312	-0.0000128	0.0005615	0.0035	1.745		3805.93	3805.93	5.6		Si
SLV 13	0.02	-1525.44	-5151	-0.0000201	0.0005615	0.0035	1.745		5155.41	5155.41	3.38		Si
SLV 13	0.42	-36.25	-4245	-0.0000084	0.0005615	0.0035	1.745		4417.32	4417.32	121.86		Si
SLV 9	0.02	-551.15	-3178	-0.0000098	0.0005615	0.0035	1.745		3537.59	3537.59	6.42		Si
SLV 9	0.42	495.25	-3096	-0.0000092	0.0005615	0.0035	1.745		2800.42	2800.42	5.65		Si
SLV 14	0.02	-1634.94	-5526	-0.0000216	0.0005615	0.0035	1.745		5458.03	5458.03	3.34		Si
SLV 14	0.42	-42.47	-4385	-0.0000087	0.0005615	0.0035	1.745		4531.77	4531.77	106.7		Si
SLV 6	0.02	-106.27	-4283	-0.000009	0.0005615	0.0035	1.745		4448.03	4448.03	41.86		Si
SLV 6	0.42	672.59	-4456	-0.0000131	0.0005615	0.0035	1.745		3923.72	3923.72	5.83		Si
SLV 10	0.02	-664.33	-3565	-0.0000113	0.0005615	0.0035	1.745		3858.16	3858.16	5.81		Si
SLV 10	0.42	488.81	-3241	-0.0000095	0.0005615	0.0035	1.745		2920.17	2920.17	5.97		Si
SLV 16	0.02	-1910.4	-7929	-0.0000283	0.0005615	0.0035	1.745		7354.87	7354.87	3.85		Si
SLV 16	0.42	-314.17	-6583	-0.0000149	0.0005615	0.0035	1.745		6293.27	6293.27	20.03		Si
SLV 11	0.02	-1469.36	-11190	-0.0000319	0.0005615	0.0035	1.745		9853.17	9853.17	6.71		Si
SLV 11	0.42	-410.41	-10424	-0.0000231	0.0005615	0.0035	1.745		9270.46	9270.46	22.59		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	0.02	-1103.25	-12376	-11001	-2575	1.745	1.745	-14010	8812	6920	30925	23514	4450	27964	No	10.86	Si
SLU 82	0.42	346.96	-12163	-10812	-2371	1.745	1.745	-13769	8780	6895	30925	23514	4450	27964	No	11.79	Si
SLU 55	0.02	-710.81	-9916	-8814	-2549	1.745	1.745	-11225	8441	6628	30925	23514	4450	27964	No	10.97	Si
SLU 55	0.42	575.61	-9531	-8472	-2377	1.745	1.745	-10789	8383	6583	30925	23514	4450	27964	No	11.76	Si
SLU 80	0.02	-1020.34	-11529	-10248	-2526	1.745	1.745	-13050	8684	6819	30925	23514	4450	27964	No	11.07	Si
SLU 80	0.42	356.72	-11253	-10002	-2336	1.745	1.745	-12738	8643	6787	30925	23514	4450	27964	No	11.97	Si
SLU 52	0.02	-710.81	-9916	-8814	-2549	1.745	1.745	-11225	8441	6628	30925	23514	4450	27964	No	10.97	Si
SLU 52	0.42	575.61	-9531	-8472	-2377	1.745	1.745	-10789	8383	6583	30925	23514	4450	27964	No	11.76	Si
SLU 75	0.02	-1020.34	-11529	-10248	-2526	1.745	1.745	-13050	8684	6819	30925	23514	4450	27964	No	11.07	Si
SLU 75	0.42	356.72	-11253	-10002	-2336	1.745	1.745	-12738	8643	6787	30925	23514	4450	27964	No	11.97	Si
SLU 78	0.02	-1020.34	-11529	-10248	-2526	1.745	1.745	-13050	8684	6819	30925	23514	4450	27964	No	11.07	Si
SLU 78	0.42	356.72	-11253	-10002	-2336	1.745	1.745	-12738	8643	6787	30925	23514	4450	27964	No	11.97	Si
SLU 63	0.02	-913.48	-10894	-9684	-2511	1.745	1.745	-12332	8589	6744	30925	23514	4450	27964	No	11.14	Si
SLU 63	0.42	418.49	-10580	-9404	-2328	1.745	1.745	-11976	8541	6707	30925	23514	4450	27964	No	12.01	Si
SLU 84	0.02	-1103.25	-12376	-11001	-2575	1.745	1.745	-14010	8812	6920	30925	23514	4450	27964	No	10.86	Si
SLU 84	0.42	346.96	-12163	-10812	-2371	1.745	1.745	-13769	8780	6895	30925	23514	4450	27964	No	11.79	Si
SLU 76	0.02	-900.58	-11398	-10132	-2613	1.745	1.745	-12902	8665	6804	30925	23514	4450	27964	No	10.7	Si
SLU 76	0.42	504.08	-11114	-9879	-2421	1.745	1.745	-12581	8622	6770	30925	23514	4450	27964	No	11.55	Si
SLU 73	0.02	-900.58	-11398	-10132	-2613	1.745	1.745	-12902	8665	6804	30925	23514	4450	27964	No	10.7	Si
SLU 73	0.42	504.08	-11114	-9879	-2421	1.745	1.745	-12581	8622	6770	30925	23514	4450	27964	No	11.55	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	0.02	334.78	-7543	-6705	2289	1.745	1.745	-8539	12124	9521	30925	35271	4450	39721		17.36	Si
SLV 1	0.42	576.35	-8297	-7375	1906	1.745	1.745	-9392	12295	9655	30925	35271	4450	39721		20.84	Si
SLV 16	0.02	-1910.4	-7929	-7048	-5837	1.745	1.745	-8976	12212	9589	30925	35271	4450	39721		6.81	Si
SLV 16	0.42	-314.17	-6583	-5852	-5207	1.745	1.745	-7452	11907	9350	30925	35271	4450	39721		7.63	Si
SLV 15	0.02	-1800.9	-7555	-6715	-5066	1.745	1.745	-8552	12127	9523	30925	35271	4450	39721		7.84	Si
SLV 15	0.42	-307.94	-6444	-5728	-4439	1.745	1.745	-7294	11876	9325	30925	35271	4450	39721		8.95	Si
SLV 13	0.02	-1525.44	-5151	-4579	-3043	1.745	1.7291	-5831	11583	9013	30925	35271	4450	39721		13.05	Si
SLV 13	0.42	-36.25	-4245	-3774	-2430	1.745	1.745	-4806	11378	8934	30925	35271	4450	39721		16.35	Si
SLV 12	0.02	-1582.54	-11577	-10291	-6343	1.745	1.745	-13105	13038	10238	30925	35271	4450	39721		6.26	Si
SLV 12	0.42	-416.84	-10568	-9394	-6046	1.745	1.745	-11963	12809	10059	30925	35271	4450	39721		6.57	Si
SLV 5	0.02	6.91	-3896	-3463	2795	1.745	1.745	-4410	11299	8872	30925	35271	4450	39721		14.21	Si
SLV 5	0.42	679.03	-4312	-3833	2745	1.745	1.745	-4881	11393	8946	30925	35271	4450	39721		14.47	Si
SLV 11	0.02	-1469.36	-11190	-9946	-5547	1.745	1.745	-12666	12950	10169	30925	35271	4450	39721		7.16	Si
SLV 11	0.42	-410.41	-10424	-9266	-5252	1.745	1.745	-11800	12777	10033	30925	35271	4450	39721		7.56	Si
SLV 14	0.02	-1634.94	-5526	-4912	-3814	1.745	1.7299	-6255	11668	9083	30925	35271	4450	39721		10.42	Si
SLV 14	0.42	-42.47	-4385	-3898	-3198	1.745	1.745	-4964	11409	8959	30925	35271	4450	39721		12.42	Si
SLV 7	0.02	-911.29	-11907	-10584	-3948	1.745	1.745	-13479	13112	10297	30925	35271	4450	39721		10.06	Si
SLV 7	0.42	-226.63	-11640	-10346	-3951	1.745	1.745	-13176	13052	10249	30925	35271	4450	39721		10.05	Si
SLV 8	0.02	-1024.47	-12294	-10928	-4744	1.745	1.745	-13917	13200	10365	30925	35271	4450	39721		8.37	Si
SLV 8	0.42	-233.06	-11784	-10475	-4745	1.745	1.745	-13339	13084	10275	30925	35271	4450	39721		8.37	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.625 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.24	4258	-3344	108.15	731.36	6.76	Si
SLV 10	179667	0.24	4494	-3529	108.15	770.66	7.13	Si
SLV 13	179667	0.24	5319	-4177	108.15	907.08	8.39	Si
SLV 5	179667	0.24	5468	-4294	108.15	931.49	8.61	Si
SLV 14	179667	0.24	5548	-4356	108.15	944.54	8.73	Si
SLV 6	179667	0.24	5704	-4479	108.15	970.13	8.97	Si
SLV 15	179667	0.24	7435	-5838	108.15	1249.7	11.56	Si
SLV 16	179667	0.24	7663	-6018	108.15	1286.05	11.89	Si
SLV 1	179667	0.24	9352	-7343	108.15	1551.1	14.34	Si
SLV 2	179667	0.24	9580	-7523	108.15	1586.43	14.67	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.08 Ta = 0.0273

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 8	-10877	-10456	-320	0.837	1409.5	0.94	12.93401	3.15901	Si
SLV 4	-9448	-9580	-312	0.932	1264.9	0.935	14.4971	3.48519	Si
SLV 7	-10656	-10339	-309	0.851	1387.1	0.939	13.16329	3.15901	Si
SLV 3	-9234	-9467	-301	0.949	1243.3	0.934	14.77938	3.48519	Si
SLV 12	-9877	-9378	-260	0.906	1308.3	0.936	14.05789	3.15901	Si
SLV 11	-9656	-9261	-249	0.922	1286	0.935	14.32999	3.15901	Si
SLV 2	-7227	-7754	-244	1.146	1040.9	0.924	18.03181	3.48519	Si
SLV 1	-7013	-7641	-234	1.172	1019.5	0.922	18.4749	3.48519	Si
SLV 16	-6116	-5989	-111	1.309	929.5	0.917	20.75855	3.48519	Si
SLV 15	-5903	-5876	-100	1.344	908.2	0.915	21.3437	3.48519	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.172	SLU 81	Si
V_SLU	10.701	SLU 73	Si
PF_SLV	3.338	SLV 14	Si
V_SLV	6.262	SLV 12	Si
PFFP_SLV	6.762	SLV 9	Si
R_SLV	4.094	SLV 8	Si

Maschio 12

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.839	5.874	-17.729	5.874	L1	L2	2.89	0.45	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	0.02	-3884.18	-18430	-0.0000318	0.0003743	0.0035	2.89	22924.86	25984.34	25984.34	6.69	No	Si
SLU 46	0.42	-2680.07	-19242	-0.0000298	0.0003743	0.0035	2.89	23763.54	26900.21	26900.21	10.04	No	Si
SLU 2	0.02	-3293.87	-14976	-0.000026	0.0003743	0.0035	2.89	19193.03	21942.23	21942.23	6.66	No	Si
SLU 2	0.42	-2412.43	-15663	-0.0000246	0.0003743	0.0035	2.89	19955.25	22754.37	22754.37	9.43	No	Si
SLU 49	0.02	-3884.18	-18430	-0.0000318	0.0003743	0.0035	2.89	22924.86	25984.34	25984.34	6.69	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	0.42	-2680.07	-19242	-0.0000298	0.0003743	0.0035	2.89	23763.54	26900.21	26900.21	10.04	No	Si
SLU 47	0.02	-4031.79	-18357	-0.0000321	0.0003743	0.0035	2.89	22847.91	25901.42	25901.42	6.42	No	Si
SLU 47	0.42	-2878.06	-19166	-0.0000302	0.0003743	0.0035	2.89	23685.99	26814.57	26814.57	9.32	No	Si
SLU 68	0.02	-4438.77	-21763	-0.0000375	0.0003743	0.0035	2.89	26278.64	29710.89	29710.89	6.69	No	Si
SLU 68	0.42	-3197.73	-22818	-0.0000357	0.0003743	0.0035	2.89	27289.86	30841.57	30841.57	9.64	No	Si
SLU 5	0.02	-3293.87	-14976	-0.000026	0.0003743	0.0035	2.89	19193.03	21942.23	21942.23	6.66	No	Si
SLU 5	0.42	-2412.43	-15663	-0.0000246	0.0003743	0.0035	2.89	19955.25	22754.37	22754.37	9.43	No	Si
SLU 51	0.02	-3884.18	-18430	-0.0000318	0.0003743	0.0035	2.89	22924.86	25984.34	25984.34	6.69	No	Si
SLU 51	0.42	-2680.07	-19242	-0.0000298	0.0003743	0.0035	2.89	23763.54	26900.21	26900.21	10.04	No	Si
SLU 52	0.02	-4616.29	-23077	-0.0000397	0.0003743	0.0035	2.89	27534.74	31121.24	31121.24	6.74	No	Si
SLU 52	0.42	-3375.55	-24236	-0.000038	0.0003743	0.0035	2.89	28611.13	32379.23	32379.23	9.59	No	Si
SLU 44	0.02	-4031.79	-18357	-0.0000321	0.0003743	0.0035	2.89	22847.91	25901.42	25901.42	6.42	No	Si
SLU 44	0.42	-2878.06	-19166	-0.0000302	0.0003743	0.0035	2.89	23685.99	26814.57	26814.57	9.32	No	Si
SLU 65	0.02	-4438.77	-21763	-0.0000375	0.0003743	0.0035	2.89	26278.64	29710.89	29710.89	6.69	No	Si
SLU 65	0.42	-3197.73	-22818	-0.0000357	0.0003743	0.0035	2.89	27289.86	30841.57	30841.57	9.64	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	0.02	-4943.25	-24012	-0.000041	0.0005615	0.0035	2.89		33547.54	33547.54	6.79		Si
SLV 12	0.42	-2379.82	-25218	-0.000036	0.0005615	0.0035	2.89		34937.91	34937.91	14.68		Si
SLV 16	0.02	-6281.4	-19270	-0.0000384	0.0005615	0.0035	2.89		27850.71	27850.71	4.43		Si
SLV 16	0.42	-1059.14	-20549	-0.0000269	0.0005615	0.0035	2.89		29393.75	29393.75	27.75		Si
SLV 13	0.02	-5328.49	-15228	-0.0000311	0.0005615	0.0035	2.89		22791.33	22791.33	4.28		Si
SLV 13	0.42	-678.28	-16380	-0.000021	0.0005615	0.0035	2.89		24246.72	24246.72	35.75		Si
SLV 9	0.02	-3031.08	-10813	-0.00002	0.0005615	0.0035	2.89		17076.53	17076.53	5.63		Si
SLV 9	0.42	-1152.7	-11542	-0.0000163	0.0005615	0.0035	2.89		18034.26	18034.26	15.65		Si
SLV 10	0.02	-3599.31	-10936	-0.0000216	0.0005615	0.0035	2.89		17238.19	17238.19	4.79		Si
SLV 10	0.42	-1171.77	-11641	-0.0000165	0.0005615	0.0035	2.89		18165.48	18165.48	15.5		Si
SLV 2	0.02	-684.57	-15815	-0.0000203	0.0005615	0.0035	2.89		23532.09	23532.09	34.37		Si
SLV 2	0.42	-3261.15	-16234	-0.0000272	0.0005615	0.0035	2.89		24062.64	24062.64	7.38		Si
SLV 14	0.02	-5878.22	-15347	-0.0000326	0.0005615	0.0035	2.89		22941.55	22941.55	3.9		Si
SLV 14	0.42	-696.73	-16476	-0.0000211	0.0005615	0.0035	2.89		24368.88	24368.88	34.98		Si
SLV 11	0.02	-4375.02	-23889	-0.0000394	0.0005615	0.0035	2.89		33405.9	33405.9	7.64		Si
SLV 11	0.42	-2360.75	-25119	-0.0000358	0.0005615	0.0035	2.89		34822.69	34822.69	14.75		Si
SLV 15	0.02	-5731.67	-19151	-0.0000369	0.0005615	0.0035	2.89		27705.62	27705.62	4.83		Si
SLV 15	0.42	-1040.7	-20453	-0.0000268	0.0005615	0.0035	2.89		29277.14	29277.14	28.13		Si
SLV 1	0.02	-134.84	-15696	-0.0000188	0.0005615	0.0035	2.89		23381.56	23381.56	173.4		Si
SLV 1	0.42	-3242.7	-16138	-0.000027	0.0005615	0.0035	2.89		23940.6	23940.6	7.38		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	0.02	-4654.23	-26668	-23705	-5897	2.89	2.89	-18227	9375	12192	30925	38943	7370	43117	No	7.31	Si
SLU 77	0.42	-3200.24	-28077	-24958	-5808	2.89	2.89	-19191	9503	12359	30925	38943	7370	43284	No	7.45	Si
SLU 82	0.02	-5126.15	-28581	-25405	-5929	2.89	2.89	-19535	9549	12419	30925	38943	7370	43344	No	7.31	Si
SLU 82	0.42	-3710.44	-30137	-26789	-5833	2.89	2.89	-20599	9691	12603	30925	38943	7370	43529	No	7.46	Si
SLU 81	0.02	-4904.73	-28691	-25503	-6121	2.89	2.89	-19610	9559	12432	30925	38943	7370	43357	No	7.08	Si
SLU 81	0.42	-3413.45	-30250	-26889	-6026	2.89	2.89	-20676	9701	12617	30925	38943	7370	43542	No	7.23	Si
SLU 83	0.02	-4904.73	-28691	-25503	-6121	2.89	2.89	-19610	9559	12432	30925	38943	7370	43357	No	7.08	Si
SLU 83	0.42	-3413.45	-30250	-26889	-6026	2.89	2.89	-20676	9701	12617	30925	38943	7370	43542	No	7.23	Si
SLU 80	0.02	-4875.66	-26557	-23607	-5706	2.89	2.89	-18152	9365	12179	30925	38943	7370	43104	No	7.55	Si
SLU 80	0.42	-3497.23	-27964	-24857	-5616	2.89	2.89	-19113	9493	12346	30925	38943	7370	43271	No	7.71	Si
SLU 78	0.02	-4875.66	-26557	-23607	-5706	2.89	2.89	-18152	9365	12179	30925	38943	7370	43104	No	7.55	Si
SLU 78	0.42	-3497.23	-27964	-24857	-5616	2.89	2.89	-19113	9493	12346	30925	38943	7370	43271	No	7.71	Si
SLU 74	0.02	-4654.23	-26668	-23705	-5897	2.89	2.89	-18227	9375	12192	30925	38943	7370	43117	No	7.31	Si
SLU 74	0.42	-3200.24	-28077	-24958	-5808	2.89	2.89	-19191	9503	12359	30925	38943	7370	43284	No	7.45	Si
SLU 75	0.02	-4875.66	-26557	-23607	-5706	2.89	2.89	-18152	9365	12179	30925	38943	7370	43104	No	7.55	Si
SLU 75	0.42	-3497.23	-27964	-24857	-5616	2.89	2.89	-19113	9493	12346	30925	38943	7370	43271	No	7.71	Si
SLU 79	0.02	-4654.23	-26668	-23705	-5897	2.89	2.89	-18227	9375	12192	30925	38943	7370	43117	No	7.31	Si
SLU 79	0.42	-3200.24	-28077	-24958	-5808	2.89	2.89	-19191	9503	12359	30925	38943	7370	43284	No	7.45	Si
SLU 84	0.02	-5126.15	-28581	-25405	-5929	2.89	2.89	-19535	9549	12419	30925	38943	7370	43344	No	7.31	Si
SLU 84	0.42	-3710.44	-30137	-26789	-5833	2.89	2.89	-20599	9691	12603	30925	38943	7370	43529	No	7.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	0.02	-5878.22	-15347	-13642	-11735	2.89	2.89	-10489	12515	16275	30925	58414	7370	47201		4.02	Si
SLV 14	0.42	-696.73	-16476	-14646	-11747	2.89	2.89	-11261	12669	16476	30925	58414	7370	47401		4.04	Si
SLV 11	0.02	-4375.02	-23889	-21235	-8068	2.89	2.89	-16328	13682	17794	30925	58414	7370	48719		6.04	Si
SLV 11	0.42	-2360.75	-25119	-22328	-7258	2.89	2.89	-17169	13850	18012	30925	58414	7370	48938		6.74	Si
SLV 16	0.02	-6281.4	-19270	-17129	-13105	2.89	2.89	-13171	13051	16973	30925	58414	7370	47898		3.65	Si
SLV 16	0.42	-1059.14	-20549	-18266	-12692	2.89	2.89	-14045	13226	17200	30925	58414	7370	48126		3.79	Si
SLV 12	0.02	-4943.25	-24012	-21344	-9421	2.89	2.89	-16412	13699	17816	30925	58414	7370	48741		5.17	Si
SLV 12	0.42	-2379.82	-25218	-22416	-8610	2.89	2.89	-17237	13864	18030	30925	58414	7370	48956		5.69	Si
SLV 13	0.02	-5328.49	-15228	-13536	-10426	2.89	2.89	-10408	12498	16254	30925	58414	7370	47179		4.53	Si
SLV 13	0.42	-678.28	-16380	-14560	-10438	2.89	2.89	-11196	12656	16459	30925	58414	7370	47384		4.54	Si
SLV 9	0.02	-3031.08	-10813	-9611	-3501	2.89	2.89	-7390	11895	15469	30925	58414	7370	46395		13.25	Si
SLV 9	0.42	-1152.7	-11542	-10259	-4107	2.89	2.89	-7889	11994	15599	30925	58414	7370	46524		11.33	Si
SLV 8	0.02	-3385.15	-24153	-21469	-4874	2.89	2.89	-16508	13718	17841	30925	58414	7370	48766		10.01	Si
SLV 8	0.42	-3149.14	-25146	-22352	-4148	2.89	2.89	-17187	13854	18017	30925	58414	7370	48943		11.8	Si
SLV 10	0.02	-3599.31	-10936	-9721	-4853	2.89	2.89	-7475	11912	15491	30925	58414	7370	46416		9.56	Si
SLV 10	0.42	-1171.77	-11641	-10348	-5460	2.89	2.89	-7957	12008	15616	30925	58414	7370	46542		8.52	Si
SLV 1	0.02	-134.84	-15696	-13952	4730	2.89	2.89	-10728	12562	16337	30925	58414	7370	47263		9.99	Si
SLV 1	0.42	-3242.7	-16138	-14345	4436	2.89	2.89	-11030	12623	16416	30925	58414	7370	47341		10.67	Si
SLV 15	0.02	-5731.67	-19151	-17023	-11796	2.89	2.89	-13089	13035	16951	30925	58414	7370	47877		4.06	Si
SLV 15	0.42	-1040.7	-20453	-18180	-11383	2.89	2.89	-13980	13213	17183	30925	58414	7370	48108		4.23	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.625 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.24	7139	-9284	179.12	1991.28	11.12	Si
SLV 10	179667	0.24	7237	-9412	179.12	2017.33	11.26	Si
SLV 5	179667	0.24	7713	-10031	179.12	2142.94	11.96	Si
SLV 6	179667	0.24	7811	-10159	179.12	2168.78	12.11	Si
SLV 13	179667	0.24	9506	-12362	179.12	2608.35	14.56	Si
SLV 14	179667	0.24	9601	-12486	179.12	2632.69	14.7	Si
SLV 1	179667	0.24	11419	-14851	179.12	3091.63	17.26	Si
SLV 2	179667	0.24	11515	-14975	179.12	3115.28	17.39	Si
SLV 15	179667	0.24	12107	-15745	179.12	3261.85	18.21	Si
SLV 16	179667	0.24	12202	-15869	179.12	3285.24	18.34	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.08 Ta = 0.0273

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-21380	-20424	-543	0.733	2675.6	0.947	11.24951	3.15901	Si
SLV 8	-21363	-21326	-540	0.733	2673.9	0.947	11.25828	3.15901	Si
SLV 11	-21274	-20344	-537	0.736	2664.9	0.947	11.29859	3.15901	Si
SLV 7	-21258	-21246	-534	0.736	2663.2	0.947	11.30743	3.15901	Si
SLV 16	-17281	-15196	-382	0.871	2260.2	0.939	13.48645	3.48519	Si
SLV 4	-17225	-18204	-374	0.873	2254.5	0.938	13.52827	3.48519	Si
SLV 15	-17179	-15119	-376	0.875	2249.9	0.938	13.55554	3.48519	Si
SLV 3	-17123	-18126	-368	0.878	2244.2	0.938	13.59778	3.48519	Si
SLV 14	-13753	-11618	-241	1.043	1903.6	0.929	16.31971	3.48519	Si
SLV 2	-13696	-14626	-233	1.047	1897.9	0.929	16.3805	3.48519	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.424	SLU 44	Si
V_SLU	7.084	SLU 81	Si
PF_SLV	3.903	SLV 14	Si
V_SLV	3.655	SLV 16	Si
PFFP_SLV	11.117	SLV 9	Si
R_SLV	3.561	SLV 12	Si

Maschio 13

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.859	5.874	-13.839	5.874	L1	L2	2.98	0.45	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	0.02	3920.53	-17204	-0.0000291	0.0003743	0.0035	2.98	22403.45	23212.3	23212.3	5.92	No	Si
SLU 46	0.42	2634.39	-17639	-0.0000266	0.0003743	0.0035	2.98	22886.33	23686.86	23686.86	8.99	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	0.02	4074.79	-17102	-0.0000294	0.0003743	0.0035	2.98	22290.28	23101.86	23101.86	5.67	No	Si
SLU 47	0.42	2844.31	-17534	-0.000027	0.0003743	0.0035	2.98	22770.87	23572.89	23572.89	8.29	No	Si
SLU 49	0.02	3920.53	-17204	-0.0000291	0.0003743	0.0035	2.98	22403.45	23212.3	23212.3	5.92	No	Si
SLU 49	0.42	2634.39	-17639	-0.0000266	0.0003743	0.0035	2.98	22886.33	23686.86	23686.86	8.99	No	Si
SLU 51	0.02	3920.53	-17204	-0.0000291	0.0003743	0.0035	2.98	22403.45	23212.3	23212.3	5.92	No	Si
SLU 51	0.42	2634.39	-17639	-0.0000266	0.0003743	0.0035	2.98	22886.33	23686.86	23686.86	8.99	No	Si
SLU 5	0.02	3336.82	-13965	-0.0000238	0.0003743	0.0035	2.98	18679.31	19613.72	19613.72	5.88	No	Si
SLU 5	0.42	2394.07	-14347	-0.0000221	0.0003743	0.0035	2.98	19130.37	20080.28	20080.28	8.39	No	Si
SLU 68	0.02	4504.66	-20393	-0.0000345	0.0003743	0.0035	2.98	25846.62	26721.55	26721.55	5.93	No	Si
SLU 68	0.42	3166.75	-21019	-0.000032	0.0003743	0.0035	2.98	26496.64	27419.12	27419.12	8.66	No	Si
SLU 55	0.02	4701.1	-21657	-0.0000365	0.0003743	0.0035	2.98	27150.79	28133.58	28133.58	5.98	No	Si
SLU 55	0.42	3354.78	-22366	-0.0000341	0.0003743	0.0035	2.98	27865.64	28929.22	28929.22	8.62	No	Si
SLU 2	0.02	3336.82	-13965	-0.0000238	0.0003743	0.0035	2.98	18679.31	19613.72	19613.72	5.88	No	Si
SLU 2	0.42	2394.07	-14347	-0.0000221	0.0003743	0.0035	2.98	19130.37	20080.28	20080.28	8.39	No	Si
SLU 44	0.02	4074.79	-17102	-0.0000294	0.0003743	0.0035	2.98	22290.28	23101.86	23101.86	5.67	No	Si
SLU 44	0.42	2844.31	-17534	-0.000027	0.0003743	0.0035	2.98	22770.87	23572.89	23572.89	8.29	No	Si
SLU 65	0.02	4504.66	-20393	-0.0000345	0.0003743	0.0035	2.98	25846.62	26721.55	26721.55	5.93	No	Si
SLU 65	0.42	3166.75	-21019	-0.000032	0.0003743	0.0035	2.98	26496.64	27419.12	27419.12	8.66	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	0.02	2221.41	-9557	-0.0000159	0.0005615	0.0035	2.98		14134.2	14134.2	6.36		Si
SLV 9	0.42	2325.77	-9460	-0.000016	0.0005615	0.0035	2.98		14000.03	14000.03	6.02		Si
SLV 4	0.02	5677.45	-17568	-0.0000333	0.0005615	0.0035	2.98		24840.54	24840.54	4.38		Si
SLV 4	0.42	524.74	-18716	-0.0000226	0.0005615	0.0035	2.98		26311.25	26311.25	50.14		Si
SLV 6	0.02	3169.37	-8845	-0.0000173	0.0005615	0.0035	2.98		13147.48	13147.48	4.15		Si
SLV 6	0.42	1306.79	-9063	-0.0000132	0.0005615	0.0035	2.98		13449.57	13449.57	10.29		Si
SLV 13	0.02	828.44	-15352	-0.0000194	0.0005615	0.0035	2.98		21945.31	21945.31	26.49		Si
SLV 13	0.42	3689.78	-15251	-0.0000259	0.0005615	0.0035	2.98		21812.79	21812.79	5.91		Si
SLV 1	0.02	5896.85	-13308	-0.0000288	0.0005615	0.0035	2.98		19230.15	19230.15	3.26		Si
SLV 1	0.42	373.44	-14146	-0.000017	0.0005615	0.0035	2.98		20348.86	20348.86	54.49		Si
SLV 5	0.02	3741.94	-8944	-0.0000187	0.0005615	0.0035	2.98		13284.49	13284.49	3.55		Si
SLV 5	0.42	1330.87	-9128	-0.0000134	0.0005615	0.0035	2.98		13540.53	13540.53	10.17		Si
SLV 2	0.02	5342.91	-13213	-0.0000274	0.0005615	0.0035	2.98		19102.58	19102.58	3.58		Si
SLV 2	0.42	350.15	-14083	-0.0000168	0.0005615	0.0035	2.98		20264.3	20264.3	57.87		Si
SLV 14	0.02	274.51	-15256	-0.000018	0.0005615	0.0035	2.98		21819.81	21819.81	79.49		Si
SLV 14	0.42	3666.49	-15188	-0.0000258	0.0005615	0.0035	2.98		21728.89	21728.89	5.93		Si
SLV 10	0.02	1648.85	-9458	-0.0000145	0.0005615	0.0035	2.98		13997.99	13997.99	8.49		Si
SLV 10	0.42	2301.69	-9394	-0.0000159	0.0005615	0.0035	2.98		13909.61	13909.61	6.04		Si
SLV 3	0.02	6231.38	-17664	-0.0000347	0.0005615	0.0035	2.98		24963	24963	4.01		Si
SLV 3	0.42	548.03	-18779	-0.0000228	0.0005615	0.0035	2.98		26392.32	26392.32	48.16		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	0.02	5013.75	-27154	-24137	5503	2.98	2.98	-17999	9344	12531	30925	40156	7599	43456	No	7.9	Si
SLU 83	0.42	3371.21	-28181	-25050	5612	2.98	2.98	-18680	9435	12653	30925	40156	7599	43578	No	7.77	Si
SLU 60	0.02	4583.88	-23863	-21212	5107	2.98	2.98	-15818	9053	12141	30925	40156	7599	43066	No	8.43	Si
SLU 60	0.42	3048.77	-24697	-21953	5205	2.98	2.98	-16370	9127	12240	30925	40156	7599	43165	No	8.29	Si
SLU 78	0.02	4976.72	-25049	-22266	5094	2.98	2.98	-16604	9158	12281	30925	40156	7599	43207	No	8.48	Si
SLU 78	0.42	3467.31	-25954	-23071	5197	2.98	2.98	-17204	9238	12389	30925	40156	7599	43314	No	8.33	Si
SLU 84	0.02	5245.14	-27002	-24001	5291	2.98	2.98	-17898	9331	12513	30925	40156	7599	43438	No	8.21	Si
SLU 84	0.42	3686.08	-28025	-24911	5400	2.98	2.98	-18576	9421	12634	30925	40156	7599	43559	No	8.07	Si
SLU 77	0.02	4745.33	-25201	-22401	5306	2.98	2.98	-16705	9172	12299	30925	40156	7599	43225	No	8.15	Si
SLU 77	0.42	3152.43	-26111	-23210	5408	2.98	2.98	-17308	9252	12407	30925	40156	7599	43333	No	8.01	Si
SLU 74	0.02	4745.33	-25201	-22401	5306	2.98	2.98	-16705	9172	12299	30925	40156	7599	43225	No	8.15	Si
SLU 74	0.42	3152.43	-26111	-23210	5408	2.98	2.98	-17308	9252	12407	30925	40156	7599	43333	No	8.01	Si
SLU 81	0.02	5013.75	-27154	-24137	5503	2.98	2.98	-17999	9344	12531	30925	40156	7599	43456	No	7.9	Si
SLU 81	0.42	3371.21	-28181	-25050	5612	2.98	2.98	-18680	9435	12653	30925	40156	7599	43578	No	7.77	Si
SLU 79	0.02	4745.33	-25201	-22401	5306	2.98	2.98	-16705	9172	12299	30925	40156	7599	43225	No	8.15	Si
SLU 79	0.42	3152.43	-26111	-23210	5408	2.98	2.98	-17308	9252	12407	30925	40156	7599	43333	No	8.01	Si
SLU 82	0.02	5245.14	-27002	-24001	5291	2.98	2.98	-17898	9331	12513	30925	40156	7599	43438	No	8.21	Si
SLU 82	0.42	3686.08	-28025	-24911	5400	2.98	2.98	-18576	9421	12634	30925	40156	7599	43559	No	8.07	Si
SLU 62	0.02	4583.88	-23863	-21212	5107	2.98	2.98	-15818	9053	12141	30925	40156	7599	43066	No	8.43	Si
SLU 62	0.42	3048.77	-24697	-21953	5205	2.98	2.98	-16370	9127	12240	30925	40156	7599	43165	No	8.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	0.02	274.51	-15256	-13561	-5351	2.98	2.98	-10113	12439	16681	30925	60233	7599	47606		8.9	Si
SLV 14	0.42	3666.49	-15188	-13500	-4800	2.98	2.98	-10067	12430	16669	30925	60233	7599	47594		9.92	Si
SLV 4	0.02	5677.45	-17568	-15616	11591	2.98	2.98	-11645	12746	17092	30925	60233	7599	48017		4.14	Si
SLV 4	0.42	524.74	-18716	-16636	11175	2.98	2.98	-12406	12898	17296	30925	60233	7599	48222		4.32	Si
SLV 5	0.02	3741.94	-8944	-7950	3615	2.98	2.98	-5928	11602	15559	30925	60233	7599	46484		12.86	Si
SLV 5	0.42	1330.87	-9128	-8114	4734	2.98	2.98	-6051	11627	15592	30925	60233	7599	46517		9.83	Si
SLV 3	0.02	6231.38	-17664	-15701	12897	2.98	2.98	-11708	12758	17109	30925	60233	7599	48034		3.72	Si
SLV 3	0.42	548.03	-18779	-16693	12482	2.98	2.98	-12448	12906	17307	30925	60233	7599	48233		3.86	Si
SLV 7	0.02	4857.04	-23462	-20855	9807	2.98	2.98	-15552	13527	18140	30925	60233	7599	49065		5	Si
SLV 7	0.42	1912.83	-24573	-21843	8732	2.98	2.98	-16288	13674	18337	30925	60233	7599	49263		5.64	Si
SLV 8	0.02	4284.47	-23363	-20767	8457	2.98	2.98	-15486	13514	18122	30925	60233	7599	49048		5.8	Si
SLV 8	0.42	1888.75	-24507	-21784	7381	2.98	2.98	-16245	13666	18326	30925	60233	7599	49251		6.67	Si
SLV 13	0.02	828.44	-15352	-13646	-4045	2.98	2.98	-10176	12452	16698	30925	60233	7599	47623		11.77	Si
SLV 13	0.42	3689.78	-15251	-13557	-3493	2.98	2.98	-10109	12439	16680	30925	60233	7599	47606		13.63	Si
SLV 2	0.02	5342.91	-13213	-11745	9733	2.98	2.98	-8758	12168	16318	30925	60233	7599	47243		4.85	Si
SLV 2	0.42	350.15	-14083	-12518	9976	2.98	2.98	-9335	12284	16472	30925	60233	7599	47398		4.75	Si
SLV 11	0.02	3336.52	-24075	-21400	5281	2.98	2.98	-15958	13608	18249	30925	60233	7599	49174		9.31	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	0.42	2907.73	-24904	-22137	4299	2.98	2.98	-16508	13718	18396	30925	60233	7599	49322		11.47	Si
SLV 1	0.02	5896.85	-13308	-11830	11040	2.98	2.98	-8821	12181	16335	30925	60233	7599	47260		4.28	Si
SLV 1	0.42	373.44	-14146	-12574	11283	2.98	2.98	-9377	12292	16484	30925	60233	7599	47409		4.2	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.625 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.24	6276	-8416	184.69	1815.87	9.83	Si
SLV 5	179667	0.24	6363	-8533	184.69	1839.93	9.96	Si
SLV 10	179667	0.24	6753	-9056	184.69	1947.41	10.54	Si
SLV 9	179667	0.24	6840	-9172	184.69	1971.3	10.67	Si
SLV 2	179667	0.24	8854	-11873	184.69	2516.65	13.63	Si
SLV 1	179667	0.24	8938	-11986	184.69	2539.07	13.75	Si
SLV 14	179667	0.24	10443	-14004	184.69	2935.45	15.89	Si
SLV 13	179667	0.24	10527	-14117	184.69	2957.34	16.01	Si
SLV 4	179667	0.24	11539	-15474	184.69	3218.63	17.43	Si
SLV 3	179667	0.24	11623	-15587	184.69	3240.16	17.54	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.08 Ta = 0.0273

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-21449	-21454	-464	0.752	2698.3	0.946	11.56275	3.15901	Si
SLV 12	-21380	-21381	-459	0.754	2691.3	0.946	11.59601	3.15901	Si
SLV 7	-21040	-20439	-494	0.762	2656.9	0.945	11.72546	3.15901	Si
SLV 8	-20971	-20366	-489	0.765	2649.9	0.945	11.75979	3.15901	Si
SLV 15	-16947	-18401	-260	0.912	2242.3	0.937	14.14575	3.48519	Si
SLV 16	-16880	-18330	-256	0.915	2235.5	0.936	14.19429	3.48519	Si
SLV 3	-15585	-15017	-361	0.966	2104.6	0.933	15.04556	3.48519	Si
SLV 4	-15518	-14947	-356	0.969	2097.9	0.933	15.10105	3.48519	Si
SLV 13	-12680	-14769	-116	1.142	1811.7	0.925	17.95209	3.48519	Si
SLV 14	-12614	-14699	-112	1.147	1805	0.924	18.03078	3.48519	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.669	SLU 44	Si
V_SLU	7.765	SLU 81	Si
PF_SLV	3.261	SLV 1	Si
V_SLV	3.724	SLV 3	Si
PFFP_SLV	9.832	SLV 6	Si
R_SLV	3.66	SLV 11	Si

Maschio 14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-8.084	5.874	-9.859	5.874	L1	L2	1.775	0.45	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	0.02	1252.59	-10251	-0.0000282	0.0003743	0.0035	1.7749	7950.52	8241.8	8241.8	6.58	No	Si
SLU 39	0.42	675.62	-9179	-0.0000222	0.0003743	0.0035	1.7749	7226.8	7550.84	7550.84	11.18	No	Si
SLU 41	0.02	1252.59	-10251	-0.0000282	0.0003743	0.0035	1.7749	7950.52	8241.8	8241.8	6.58	No	Si
SLU 41	0.42	675.62	-9179	-0.0000222	0.0003743	0.0035	1.7749	7226.8	7550.84	7550.84	11.18	No	Si
SLU 32	0.02	1158.82	-9476	-0.000026	0.0003743	0.0035	1.7749	7429.76	7741.36	7741.36	6.68	No	Si
SLU 32	0.42	607.13	-8420	-0.0000202	0.0003743	0.0035	1.7749	6698.47	7039.11	7039.11	11.59	No	Si
SLU 35	0.02	1158.82	-9476	-0.000026	0.0003743	0.0035	1.7749	7429.76	7741.36	7741.36	6.68	No	Si
SLU 35	0.42	607.13	-8420	-0.0000202	0.0003743	0.0035	1.7749	6698.47	7039.11	7039.11	11.59	No	Si
SLU 77	0.02	1307.79	-10889	-0.0000299	0.0003743	0.0035	1.7749	8369.8	8657.52	8657.52	6.62	No	Si
SLU 77	0.42	640.29	-9535	-0.0000227	0.0003743	0.0035	1.7749	7469.63	7779.08	7779.08	12.15	No	Si
SLU 83	0.02	1401.55	-11664	-0.0000321	0.0003743	0.0035	1.7749	8866.67	9165.67	9165.67	6.54	No	Si
SLU 83	0.42	708.78	-10294	-0.0000247	0.0003743	0.0035	1.7749	7979.47	8270.13	8270.13	11.67	No	Si
SLU 74	0.02	1307.79	-10889	-0.0000299	0.0003743	0.0035	1.7749	8369.8	8657.52	8657.52	6.62	No	Si
SLU 74	0.42	640.29	-9535	-0.0000227	0.0003743	0.0035	1.7749	7469.63	7779.08	7779.08	12.15	No	Si
SLU 37	0.02	1158.82	-9476	-0.000026	0.0003743	0.0035	1.7749	7429.76	7741.36	7741.36	6.68	No	Si
SLU 37	0.42	607.13	-8420	-0.0000202	0.0003743	0.0035	1.7749	6698.47	7039.11	7039.11	11.59	No	Si
SLU 81	0.02	1401.55	-11664	-0.0000321	0.0003743	0.0035	1.7749	8866.67	9165.67	9165.67	6.54	No	Si
SLU 81	0.42	708.78	-10294	-0.0000247	0.0003743	0.0035	1.7749	7979.47	8270.13	8270.13	11.67	No	Si
SLU 79	0.02	1307.79	-10889	-0.0000299	0.0003743	0.0035	1.7749	8369.8	8657.52	8657.52	6.62	No	Si
SLU 79	0.42	640.29	-9535	-0.0000227	0.0003743	0.0035	1.7749	7469.63	7779.08	7779.08	12.15	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	0.02	1996.34	-11302	-0.0000349	0.0005615	0.0035	1.7749		9458.92	9458.92	4.74		Si
SLV 7	0.42	1604.28	-8668	-0.000027	0.0005615	0.0035	1.7749		7417.55	7417.55	4.62		Si
SLV 2	0.02	1707.18	-5485	-0.0000215	0.0005615	0.0035	1.7749		4851.84	4851.84	2.84		Si
SLV 2	0.42	-83.39	-3860	-0.0000078	0.0005615	0.0035	1.7749		4169.23	4169.23	50		Si
SLV 5	0.02	524.24	-3208	-0.0000094	0.0005615	0.0035	1.7749		2948.68	2948.68	5.62		Si
SLV 5	0.42	-858.55	-2918	-0.000011	0.0005615	0.0035	1.7749		3375.63	3375.63	3.93		Si
SLV 1	0.02	1832.53	-5794	-0.0000229	0.0005615	0.0035	1.7749		5104.63	5104.63	2.79		Si
SLV 1	0.42	-52.57	-3939	-0.0000078	0.0005615	0.0035	1.7749		4234.82	4234.82	80.55		Si
SLV 8	0.02	1866.77	-10983	-0.0000334	0.0005615	0.0035	1.7749		9216.37	9216.37	4.94		Si
SLV 8	0.42	1572.43	-8587	-0.0000267	0.0005615	0.0035	1.7749		7353.46	7353.46	4.68		Si
SLV 4	0.02	2148.81	-7914	-0.0000291	0.0005615	0.0035	1.7749		6820.59	6820.59	3.17		Si
SLV 4	0.42	655.46	-5585	-0.0000148	0.0005615	0.0035	1.7749		4933.94	4933.94	7.53		Si
SLV 3	0.02	2274.16	-8223	-0.0000305	0.0005615	0.0035	1.7749		7065.73	7065.73	3.11		Si
SLV 3	0.42	686.28	-5664	-0.0000152	0.0005615	0.0035	1.7749		4998.02	4998.02	7.28		Si
SLV 11	0.02	1314.77	-11509	-0.0000308	0.0005615	0.0035	1.7749		9616.13	9616.13	7.31		Si
SLV 11	0.42	1651.85	-9517	-0.000029	0.0005615	0.0035	1.7749		8085.45	8085.45	4.89		Si
SLV 10	0.02	-286.9	-3095	-0.0000077	0.0005615	0.0035	1.7749		3525.45	3525.45	12.29		Si
SLV 10	0.42	-842.84	-3686	-0.0000124	0.0005615	0.0035	1.7749		4022.96	4022.96	4.77		Si
SLV 6	0.02	394.67	-2888	-0.000008	0.0005615	0.0035	1.7749		2677.25	2677.25	6.78		Si
SLV 6	0.42	-890.4	-2837	-0.0000111	0.0005615	0.0035	1.7749		3307.02	3307.02	3.71		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	0.02	1003.38	-10507	-9339	3374	1.7749	1.7749	-11693	8503	6792	30925	23917	4526	28443	No	8.43	Si
SLU 76	0.42	307.99	-9063	-8056	3398	1.7749	1.7749	-10086	8289	6621	30925	23917	4526	28443	No	8.37	Si
SLU 61	0.02	1011.94	-10054	-8937	3227	1.7749	1.7749	-11189	8436	6738	30925	23917	4526	28443	No	8.82	Si
SLU 61	0.42	352.22	-8644	-7684	3251	1.7749	1.7749	-9620	8227	6571	30925	23917	4526	28443	No	8.75	Si
SLU 75	0.02	1125.14	-10660	-9475	3267	1.7749	1.7749	-11863	8526	6810	30925	23917	4526	28443	No	8.71	Si
SLU 75	0.42	440.91	-9252	-8224	3292	1.7749	1.7749	-10296	8317	6643	30925	23917	4526	28443	No	8.64	Si
SLU 82	0.02	1218.91	-11435	-10164	3363	1.7749	1.7749	-12725	8641	6902	30925	23917	4526	28443	No	8.46	Si
SLU 82	0.42	509.4	-10012	-8899	3389	1.7749	1.7749	-11142	8430	6733	30925	23917	4526	28443	No	8.39	Si
SLU 52	0.02	796.41	-9126	-8112	3238	1.7749	1.7749	-10157	8299	6628	30925	23917	4526	28443	No	8.78	Si
SLU 52	0.42	150.81	-7696	-6841	3260	1.7749	1.7749	-8565	8086	6459	30925	23917	4526	28443	No	8.73	Si
SLU 73	0.02	1003.38	-10507	-9339	3374	1.7749	1.7749	-11693	8503	6792	30925	23917	4526	28443	No	8.43	Si
SLU 73	0.42	307.99	-9063	-8056	3398	1.7749	1.7749	-10086	8289	6621	30925	23917	4526	28443	No	8.37	Si
SLU 78	0.02	1125.14	-10660	-9475	3267	1.7749	1.7749	-11863	8526	6810	30925	23917	4526	28443	No	8.71	Si
SLU 78	0.42	440.91	-9252	-8224	3292	1.7749	1.7749	-10296	8317	6643	30925	23917	4526	28443	No	8.64	Si
SLU 80	0.02	1125.14	-10660	-9475	3267	1.7749	1.7749	-11863	8526	6810	30925	23917	4526	28443	No	8.71	Si
SLU 80	0.42	440.91	-9252	-8224	3292	1.7749	1.7749	-10296	8317	6643	30925	23917	4526	28443	No	8.64	Si
SLU 55	0.02	796.41	-9126	-8112	3238	1.7749	1.7749	-10157	8299	6628	30925	23917	4526	28443	No	8.78	Si
SLU 55	0.42	150.81	-7696	-6841	3260	1.7749	1.7749	-8565	8086	6459	30925	23917	4526	28443	No	8.73	Si
SLU 84	0.02	1218.91	-11435	-10164	3363	1.7749	1.7749	-12725	8641	6902	30925	23917	4526	28443	No	8.46	Si
SLU 84	0.42	509.4	-10012	-8899	3389	1.7749	1.7749	-11142	8430	6733	30925	23917	4526	28443	No	8.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	0.02	1832.53	-5794	-5150	4136	1.7749	1.7136	-6448	11706	9027	30925	35876	4526	39952		9.66	Si
SLV 1	0.42	-52.57	-3939	-3501	3974	1.7749	1.7749	-4383	11293	9020	30925	35876	4526	39946		10.05	Si
SLV 11	0.02	1314.77	-11509	-10231	5366	1.7749	1.7749	-12809	12978	10366	30925	35876	4526	40402		7.53	Si
SLV 11	0.42	1651.85	-9517	-8459	5443	1.7749	1.7749	-10591	12535	10012	30925	35876	4526	40402		7.42	Si
SLV 14	0.02	-564.72	-6175	-5489	-1730	1.7749	1.7749	-6872	11791	9418	30925	35876	4526	40343		23.32	Si
SLV 14	0.42	75.17	-6690	-5947	-1535	1.7749	1.7749	-7445	11906	9509	30925	35876	4526	40402		26.32	Si
SLV 3	0.02	2274.16	-8223	-7309	6233	1.7749	1.7749	-9151	12247	9782	30925	35876	4526	40402		6.48	Si
SLV 3	0.42	686.28	-5664	-5034	6075	1.7749	1.7749	-6303	11677	9327	30925	35876	4526	40252		6.63	Si
SLV 10	0.02	-286.9	-3095	-2751	-2398	1.7749	1.7749	-3445	11106	8870	30925	35876	4526	39796		16.6	Si
SLV 10	0.42	-842.84	-3686	-3276	-2332	1.7749	1.7749	-4102	11237	8975	30925	35876	4526	39901		17.11	Si
SLV 12	0.02	1185.2	-11190	-9947	4594	1.7749	1.7749	-12453	12907	10309	30925	35876	4526	40402		8.79	Si
SLV 12	0.42	1620	-9436	-8387	4671	1.7749	1.7749	-10501	12517	9997	30925	35876	4526	40402		8.65	Si
SLV 2	0.02	1707.18	-5485	-4876	3390	1.7749	1.7287	-6104	11638	9053	30925	35876	4526	39979		11.79	Si
SLV 2	0.42	-83.39	-3860	-3431	3227	1.7749	1.7749	-4296	11276	9006	30925	35876	4526	39932		12.37	Si
SLV 4	0.02	2148.81	-7914	-7034	5487	1.7749	1.7749	-8807	12178	9727	30925	35876	4526	40402		7.36	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	0.42	655.46	-5585	-4965	5328	1.7749	1.7749	-6216	11660	9313	30925	35876	4526	40238		7.55	Si
SLV 7	0.02	1996.34	-11302	-10047	6901	1.7749	1.7749	-12578	12932	10329	30925	35876	4526	40402		5.85	Si
SLV 7	0.42	1604.28	-8668	-7705	6871	1.7749	1.7749	-9646	12346	9861	30925	35876	4526	40402		5.88	Si
SLV 8	0.02	1866.77	-10983	-9763	6130	1.7749	1.7749	-12223	12861	10273	30925	35876	4526	40402		6.59	Si
SLV 8	0.42	1572.43	-8587	-7633	6099	1.7749	1.7749	-9556	12328	9847	30925	35876	4526	40402		6.62	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.625 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.24	3929	-3139	110.01	688	6.25	Si
SLV 5	179667	0.24	4097	-3273	110.01	716.58	6.51	Si
SLV 10	179667	0.24	4951	-3955	110.01	860.92	7.83	Si
SLV 9	179667	0.24	5119	-4089	110.01	889.1	8.08	Si
SLV 2	179667	0.24	5200	-4153	110.01	902.67	8.21	Si
SLV 1	179667	0.24	5362	-4283	110.01	929.83	8.45	Si
SLV 4	179667	0.24	7308	-5837	110.01	1250.51	11.37	Si
SLV 3	179667	0.24	7470	-5967	110.01	1276.87	11.61	Si
SLV 14	179667	0.24	8605	-6873	110.01	1459.34	13.27	Si
SLV 13	179667	0.24	8768	-7003	110.01	1485.2	13.5	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.08 Ta = 0.0273

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-9059	-10656	-155	0.989	1231	0.932	15.42554	3.15901	Si
SLV 12	-8905	-10547	-148	1.003	1215.4	0.931	15.6486	3.15901	Si
SLV 15	-7712	-9796	-164	1.115	1095.1	0.925	17.50744	3.48519	Si
SLV 16	-7562	-9691	-157	1.132	1080.1	0.925	17.78871	3.48519	Si
SLV 7	-8289	-9545	-136	1.059	1153.2	0.928	16.58382	3.15901	Si
SLV 8	-8134	-9436	-129	1.075	1137.7	0.928	16.84293	3.15901	Si
SLV 13	-5788	-7950	-152	1.373	902.2	0.914	21.83433	3.48519	Si
SLV 14	-5639	-7845	-145	1.399	887.3	0.913	22.27726	3.48519	Si
SLV 3	-5142	-6094	-100	1.498	837.9	0.909	23.93753	3.48519	Si
SLV 4	-4993	-5989	-93	1.529	823.1	0.908	24.46893	3.48519	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.54	SLU 81	Si
V_SLU	8.371	SLU 73	Si
PF_SLV	2.786	SLV 1	Si
V_SLV	5.854	SLV 7	Si
PFFP_SLV	6.254	SLV 6	Si
R_SLV	4.883	SLV 11	Si

Maschio 15

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.266	1.355	-14.266	-3.134	L1	L2	4.489	0.3	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 73	-1.98	8531.72	-39853	-0.000055	0.0004492	0.0035	4.4889	67783.85	77465.94	77465.94	9.08	No	Si
SLU 73	0.73	-841.47	-13275	-0.0000149	0.0004492	0.0035	4.4889	27391.73	39402.45	39402.45	46.83	No	Si
SLU 31	-1.98	7416.05	-33752	-0.0000465	0.0004492	0.0035	4.4889	60216.53	67623.79	67623.79	9.12	No	Si
SLU 31	0.73	-724.76	-11589	-0.0000129	0.0004492	0.0035	4.4889	24179.04	35947.76	35947.76	49.6	No	Si
SLU 81	-1.98	8809.08	-41779	-0.0000576	0.0004492	0.0035	4.4889	69962.66	80574.06	80574.06	9.15	No	Si
SLU 81	0.73	-754.93	-14251	-0.0000158	0.0004492	0.0035	4.4889	29216.07	41351.54	41351.54	54.78	No	Si
SLU 84	-1.98	8984.48	-41921	-0.0000581	0.0004492	0.0035	4.4889	70118.45	80801.99	80801.99	8.99	No	Si
SLU 84	0.73	-824.47	-14283	-0.0000159	0.0004492	0.0035	4.4889	29274.33	41412.65	41412.65	50.23	No	Si
SLU 83	-1.98	8809.08	-41779	-0.0000576	0.0004492	0.0035	4.4889	69962.66	80574.06	80574.06	9.15	No	Si
SLU 83	0.73	-754.93	-14251	-0.0000158	0.0004492	0.0035	4.4889	29216.07	41351.54	41351.54	54.78	No	Si
SLU 76	-1.98	8531.72	-39853	-0.000055	0.0004492	0.0035	4.4889	67783.85	77465.94	77465.94	9.08	No	Si
SLU 76	0.73	-841.47	-13275	-0.0000149	0.0004492	0.0035	4.4889	27391.73	39402.45	39402.45	46.83	No	Si
SLU 34	-1.98	7416.05	-33752	-0.0000465	0.0004492	0.0035	4.4889	60216.53	67623.79	67623.79	9.12	No	Si
SLU 34	0.73	-724.76	-11589	-0.0000129	0.0004492	0.0035	4.4889	24179.04	35947.76	35947.76	49.6	No	Si
SLU 40	-1.98	7868.81	-35820	-0.0000495	0.0004492	0.0035	4.4889	62895.26	70959.85	70959.85	9.02	No	Si
SLU 40	0.73	-707.77	-12597	-0.000014	0.0004492	0.0035	4.4889	26107.98	38011.98	38011.98	53.71	No	Si
SLU 82	-1.98	8984.48	-41921	-0.0000581	0.0004492	0.0035	4.4889	70118.45	80801.99	80801.99	8.99	No	Si
SLU 82	0.73	-824.47	-14283	-0.0000159	0.0004492	0.0035	4.4889	29274.33	41412.65	41412.65	50.23	No	Si
SLU 42	-1.98	7868.81	-35820	-0.0000495	0.0004492	0.0035	4.4889	62895.26	70959.85	70959.85	9.02	No	Si
SLU 42	0.73	-707.77	-12597	-0.000014	0.0004492	0.0035	4.4889	26107.98	38011.98	38011.98	53.71	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	-1.98	-6342.38	-16755	-0.0000261	0.0006738	0.0035	4.4889		46783.69	46783.69	7.38		Si
SLV 11	0.73	2289.8	-4655	-0.0000079	0.0006738	0.0035	4.4889		12269.8	12269.8	5.36		Si
SLV 14	-1.98	9357.73	-28781	-0.0000432	0.0006738	0.0035	4.4889		61403.31	61403.31	6.56		Si
SLV 14	0.73	-987.5	-5059	-0.0000065	0.0006738	0.0035	4.4889		22496.56	22496.56	22.78		Si
SLV 9	-1.98	17459.9	-36774	-0.0000636	0.0006738	0.0035	4.4889		76103.58	76103.58	4.36		Si
SLV 9	0.73	-3156.91	-9964	-0.0000146	0.0006738	0.0035	4.4889		32855.29	32855.29	10.41		Si
SLV 13	-1.98	9335.05	-28767	-0.0000431	0.0006738	0.0035	4.4889		61376.11	61376.11	6.57		Si
SLV 13	0.73	-1026.16	-5022	-0.0000065	0.0006738	0.0035	4.4889		22417.98	22417.98	21.85		Si
SLV 7	-1.98	-6518.58	-17613	-0.0000272	0.0006738	0.0035	4.4889		48492.38	48492.38	7.44		Si
SLV 7	0.73	2098.01	-7299	-0.0000103	0.0006738	0.0035	4.4889		17952.33	17952.33	8.56		Si
SLV 12	-1.98	-6318.94	-16770	-0.0000261	0.0006738	0.0035	4.4889		46812.89	46812.89	7.41		Si
SLV 12	0.73	2329.76	-4693	-0.000008	0.0006738	0.0035	4.4889		12351.95	12351.95	5.3		Si
SLV 10	-1.98	17483.34	-36789	-0.0000636	0.0006738	0.0035	4.4889		76127.49	76127.49	4.35		Si
SLV 10	0.73	-3116.95	-10002	-0.0000145	0.0006738	0.0035	4.4889		32934.78	32934.78	10.57		Si
SLV 6	-1.98	17307.14	-37647	-0.0000643	0.0006738	0.0035	4.4889		77526.38	77526.38	4.48		Si
SLV 6	0.73	-3308.74	-12646	-0.0000175	0.0006738	0.0035	4.4889		38431.31	38431.31	11.62		Si
SLV 5	-1.98	17283.7	-37632	-0.0000643	0.0006738	0.0035	4.4889		77502.47	77502.47	4.48		Si
SLV 5	0.73	-3348.7	-12608	-0.0000176	0.0006738	0.0035	4.4889		38352.84	38352.84	11.45		Si
SLV 8	-1.98	-6495.14	-17628	-0.0000272	0.0006738	0.0035	4.4889		48521.58	48521.58	7.47		Si
SLV 8	0.73	2137.98	-7337	-0.0000104	0.0006738	0.0035	4.4889		18034.47	18034.47	8.44		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	-1.98	8414.78	-39759	-28915	-7462	4.4889	4.4889	-21472	10833	14589	88358	48396	22893	71289	No	9.55	Si
SLU 78	0.73	-795.11	-13254	-9639	-7673	4.4889	4.4889	-7158	9288	12508	88358	48396	22893	71289	No	9.29	Si
SLU 83	-1.98	8809.08	-41779	-30385	-8124	4.4889	4.4889	-22563	10833	14589	88358	48396	22893	71289	No	8.77	Si
SLU 83	0.73	-754.93	-14251	-10365	-8347	4.4889	4.4889	-7696	9360	12604	88358	48396	22893	71289	No	8.54	Si
SLU 82	-1.98	8984.48	-41921	-30488	-7779	4.4889	4.4889	-22639	10833	14589	88358	48396	22893	71289	No	9.16	Si
SLU 82	0.73	-824.47	-14283	-10387	-8001	4.4889	4.4889	-7713	9362	12607	88358	48396	22893	71289	No	8.91	Si
SLU 77	-1.98	8239.39	-39617	-28813	-7808	4.4889	4.4889	-21395	10833	14589	88358	48396	22893	71289	No	9.13	Si
SLU 77	0.73	-725.56	-13223	-9617	-8019	4.4889	4.4889	-7141	9285	12504	88358	48396	22893	71289	No	8.89	Si
SLU 62	-1.98	7840.48	-37982	-27623	-7565	4.4889	4.4889	-20512	10833	14589	88358	48396	22893	71289	No	9.42	Si
SLU 62	0.73	-684.32	-12610	-9171	-7767	4.4889	4.4889	-6810	9241	12445	88358	48396	22893	71289	No	9.18	Si
SLU 60	-1.98	7840.48	-37982	-27623	-7565	4.4889	4.4889	-20512	10833	14589	88358	48396	22893	71289	No	9.42	Si
SLU 60	0.73	-684.32	-12610	-9171	-7767	4.4889	4.4889	-6810	9241	12445	88358	48396	22893	71289	No	9.18	Si
SLU 84	-1.98	8984.48	-41921	-30488	-7779	4.4889	4.4889	-22639	10833	14589	88358	48396	22893	71289	No	9.16	Si
SLU 84	0.73	-824.47	-14283	-10387	-8001	4.4889	4.4889	-7713	9362	12607	88358	48396	22893	71289	No	8.91	Si
SLU 74	-1.98	8239.39	-39617	-28813	-7808	4.4889	4.4889	-21395	10833	14589	88358	48396	22893	71289	No	9.13	Si
SLU 74	0.73	-725.56	-13223	-9617	-8019	4.4889	4.4889	-7141	9285	12504	88358	48396	22893	71289	No	8.89	Si
SLU 81	-1.98	8809.08	-41779	-30385	-8124	4.4889	4.4889	-22563	10833	14589	88358	48396	22893	71289	No	8.77	Si
SLU 81	0.73	-754.93	-14251	-10365	-8347	4.4889	4.4889	-7696	9360	12604	88358	48396	22893	71289	No	8.54	Si
SLU 79	-1.98	8239.39	-39617	-28813	-7808	4.4889	4.4889	-21395	10833	14589	88358	48396	22893	71289	No	9.13	Si
SLU 79	0.73	-725.56	-13223	-9617	-8019	4.4889	4.4889	-7141	9285	12504	88358	48396	22893	71289	No	8.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	-1.98	17483.34	-36789	-26756	15393	4.4889	4.4889	-19868	16250	21883	88358	72594	22893	95488		6.2	Si
SLV 10	0.73	-3116.95	-10002	-7274	14471	4.4889	4.4889	-5402	13580	18288	88358	72594	22893	95488		6.6	Si
SLV 8	-1.98	-6495.14	-17628	-12820	-26361	4.4889	4.4889	-9520	14404	19397	88358	72594	22893	95488		3.62	Si
SLV 8	0.73	2137.98	-7337	-5336	-25728	4.4889	4.4889	-3962	13292	17901	88358	72594	22893	95488		3.71	Si
SLV 5	-1.98	17283.7	-37632	-27369	15079	4.4889	4.4889	-20323	16250	21883	88358	72594	22893	95488		6.33	Si
SLV 5	0.73	-3348.7	-12608	-9169	14123	4.4889	4.4889	-6809	13862	18667	88358	72594	22893	95488		6.76	Si
SLV 7	-1.98	-6518.58	-17613	-12810	-26445	4.4889	4.4889	-9512	14402	19395	88358	72594	22893	95488		3.61	Si
SLV 7	0.73	2098.01	-7299	-5308	-25813	4.4889	4.4889	-3942	13288	17895	88358	72594	22893	95488		3.7	Si
SLV 4	-1.98	1629.72	-25635	-18644	-12097	4.4889	4.4889	-13844	15269	20562	88358	72594	22893	95488		7.89	Si
SLV 4	0.73	7.22	-12279	-8930	-12059	4.4889	4.4889	-6631	13826	18619	88358	72594	22893	95488		7.92	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	-1.98	-6318.94	-16770	-12196	-26131	4.4889	4.4889	-9057	14311	19273	88358	72594	22893	95488		3.65	Si
SLV 12	0.73	2329.76	-4693	-3413	-25465	4.4889	4.4889	-2534	13007	17516	88358	72594	22893	95488		3.75	Si
SLV 6	-1.98	17307.14	-37647	-27380	15163	4.4889	4.4889	-20331	16250	21883	88358	72594	22893	95488		6.3	Si
SLV 6	0.73	-3308.74	-12646	-9197	14208	4.4889	4.4889	-6830	13866	18673	88358	72594	22893	95488		6.72	Si
SLV 3	-1.98	1607.04	-25621	-18634	-12179	4.4889	4.4889	-13837	15267	20560	88358	72594	22893	95488		7.84	Si
SLV 3	0.73	-31.44	-12242	-8903	-12141	4.4889	4.4889	-6611	13822	18614	88358	72594	22893	95488		7.87	Si
SLV 11	-1.98	-6342.38	-16755	-12186	-26215	4.4889	4.4889	-9049	14310	19271	88358	72594	22893	95488		3.64	Si
SLV 11	0.73	2289.8	-4655	-3385	-25550	4.4889	4.4889	-2514	13003	17510	88358	72594	22893	95488		3.74	Si
SLV 9	-1.98	17459.9	-36774	-26745	15309	4.4889	4.4889	-19860	16250	21883	88358	72594	22893	95488		6.24	Si
SLV 9	0.73	-3156.91	-9964	-7247	14386	4.4889	4.4889	-5381	13576	18283	88358	72594	22893	95488		6.64	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.625 Ta 0.04 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	-11250	0.24	192.3	1610.55	2445.28	2027.91	10.55	Si
SLV 12	-11279	0.24	192.3	1614.6	2450.17	2032.39	10.57	Si
SLV 15	-12311	0.24	192.3	1754.6	2618.82	2186.71	11.37	Si
SLV 16	-12340	0.24	192.3	1758.48	2623.51	2191	11.39	Si
SLV 7	-13365	0.24	192.3	1896.23	2790.34	2343.29	12.19	Si
SLV 8	-13395	0.24	192.3	1900.21	2795.18	2347.7	12.21	Si
SLV 13	-15337	0.24	192.3	2157.53	3111	2634.27	13.7	Si
SLV 14	-15365	0.24	192.3	2161.31	3115.68	2638.5	13.72	Si
SLV 3	-19363	0.24	192.3	2676.62	3762.27	3219.44	16.74	Si
SLV 4	-19392	0.24	192.3	2680.26	3766.9	3223.58	16.76	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.05 Ta = 0.0409

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-13872	-31641	686	1.496	1934	0.928	23.41914	4.66809	Si
SLV 1	-13835	-31627	687	1.499	1930.3	0.928	23.46983	4.66809	Si
SLV 4	-12279	-25635	693	1.643	1773.6	0.923	25.8596	4.66809	Si
SLV 3	-12242	-25621	694	1.646	1769.9	0.923	25.9217	4.66809	Si
SLV 6	-12646	-37647	117	1.642	1810.6	0.924	25.81913	3.99544	Si
SLV 5	-12608	-37632	118	1.646	1806.7	0.924	25.88173	3.99544	Si
SLV 10	-10002	-36789	-363	1.939	1545.4	0.915	30.80798	3.99544	Si
SLV 9	-9964	-36774	-362	1.945	1541.6	0.915	30.90048	3.99544	Si
SLV 8	-7337	-17628	141	2.433	1280.7	0.904	39.13744	3.99544	Si
SLV 7	-7299	-17613	142	2.442	1277	0.903	39.28174	3.99544	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.994	SLU 82	Si
V_SLU	8.54	SLU 81	Si
PF_SLV	4.354	SLV 10	Si
V_SLV	3.611	SLV 7	Si
PFFP_SLV	10.546	SLV 11	Si
R_SLV	5.017	SLV 2	Si

Maschio 16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.601	5.649	-12.601	2.78	L1	L2	2.869	0.3	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	-1.98	-4092.51	-28099	-0.000062	0.0004492	0.0035	2.8693	29542.72	38320.95	38320.95	9.36	No	Si
SLU 40	0.52	-1964.02	-11104	-0.0000248	0.0004492	0.0035	2.8693	14248.55	19206.92	19206.92	9.78	No	Si
SLU 82	-1.98	-4544.07	-33151	-0.000073	0.0004492	0.0035	2.8693	32570.1	43203.92	43203.92	9.51	No	Si
SLU 82	0.52	-2246.21	-12829	-0.0000287	0.0004492	0.0035	2.8693	16160.28	21357.97	21357.97	9.51	No	Si
SLU 39	-1.98	-4260.16	-28094	-0.0000626	0.0004492	0.0035	2.8693	29539.29	38315.87	38315.87	8.99	No	Si
SLU 39	0.52	-1868.49	-11063	-0.0000244	0.0004492	0.0035	2.8693	14201.89	19155.52	19155.52	10.25	No	Si
SLU 76	-1.98	-4036.18	-31584	-0.0000682	0.0004492	0.0035	2.8693	31705.57	41756.9	41756.9	10.35	No	Si
SLU 76	0.52	-2163.31	-12078	-0.0000271	0.0004492	0.0035	2.8693	15338.46	20422.04	20422.04	9.44	No	Si
SLU 81	-1.98	-4711.72	-33146	-0.0000736	0.0004492	0.0035	2.8693	32567.38	43199.17	43199.17	9.17	No	Si
SLU 81	0.52	-2150.68	-12788	-0.0000282	0.0004492	0.0035	2.8693	16115.55	21306.58	21306.58	9.91	No	Si
SLU 73	-1.98	-4036.18	-31584	-0.0000682	0.0004492	0.0035	2.8693	31705.57	41756.9	41756.9	10.35	No	Si
SLU 73	0.52	-2163.31	-12078	-0.0000271	0.0004492	0.0035	2.8693	15338.46	20422.04	20422.04	9.44	No	Si
SLU 41	-1.98	-4260.16	-28094	-0.0000626	0.0004492	0.0035	2.8693	29539.29	38315.87	38315.87	8.99	No	Si
SLU 41	0.52	-1868.49	-11063	-0.0000244	0.0004492	0.0035	2.8693	14201.89	19155.52	19155.52	10.25	No	Si
SLU 84	-1.98	-4544.07	-33151	-0.000073	0.0004492	0.0035	2.8693	32570.1	43203.92	43203.92	9.51	No	Si
SLU 84	0.52	-2246.21	-12829	-0.0000287	0.0004492	0.0035	2.8693	16160.28	21357.97	21357.97	9.51	No	Si
SLU 83	-1.98	-4711.72	-33146	-0.0000736	0.0004492	0.0035	2.8693	32567.38	43199.17	43199.17	9.17	No	Si
SLU 83	0.52	-2150.68	-12788	-0.0000282	0.0004492	0.0035	2.8693	16115.55	21306.58	21306.58	9.91	No	Si
SLU 42	-1.98	-4092.51	-28099	-0.000062	0.0004492	0.0035	2.8693	29542.72	38320.95	38320.95	9.36	No	Si
SLU 42	0.52	-1964.02	-11104	-0.0000248	0.0004492	0.0035	2.8693	14248.55	19206.92	19206.92	9.78	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	-1.98	-16292.54	-22320	-0.0001022	0.0006738	0.0035	2.8693		33223.41	33223.41	2.04		Si
SLV 7	0.52	-1316.53	-10114	-0.0000207	0.0006738	0.0035	2.8693		18180.8	18180.8	13.81		Si
SLV 2	-1.98	1030.21	-18912	-0.0000343	0.0006738	0.0035	2.8693		25780.11	25780.11	25.02		Si
SLV 2	0.52	-2411.72	-3646	-0.0000145	0.0006738	0.0035	2.8693		9573.22	9573.22	3.97		Si
SLV 10	-1.98	10841.24	-21479	-0.0000733	0.0006738	0.0035	2.8693		28852.9	28852.9	2.66		Si
SLV 10	0.52	-1345.8	-6049	-0.0000142	0.0006738	0.0035	2.8693		12820.46	12820.46	9.53		Si
SLV 8	-1.98	-15868.53	-22421	-0.0000994	0.0006738	0.0035	2.8693		33340.15	33340.15	2.1		Si
SLV 8	0.52	-1359.34	-10042	-0.0000208	0.0006738	0.0035	2.8693		18088.96	18088.96	13.31		Si
SLV 12	-1.98	-15617.68	-24015	-0.0000986	0.0006738	0.0035	2.8693		35184.97	35184.97	2.25		Si
SLV 12	0.52	-774.82	-12135	-0.0000222	0.0006738	0.0035	2.8693		20758.58	20758.58	26.79		Si
SLV 11	-1.98	-16041.7	-23914	-0.000101	0.0006738	0.0035	2.8693		35068.23	35068.23	2.19		Si
SLV 11	0.52	-732.02	-12207	-0.0000222	0.0006738	0.0035	2.8693		20850.42	20850.42	28.48		Si
SLV 9	-1.98	10417.23	-21378	-0.0000715	0.0006738	0.0035	2.8693		28743.61	28743.61	2.76		Si
SLV 9	0.52	-1303	-6121	-0.0000142	0.0006738	0.0035	2.8693		12917.38	12917.38	9.91		Si
SLV 5	-1.98	10166.38	-19784	-0.000068	0.0006738	0.0035	2.8693		26836.44	26836.44	2.64		Si
SLV 5	0.52	-1887.52	-4028	-0.0000128	0.0006738	0.0035	2.8693		10093.42	10093.42	5.35		Si
SLV 6	-1.98	10590.4	-19885	-0.0000698	0.0006738	0.0035	2.8693		26957.13	26957.13	2.55		Si
SLV 6	0.52	-1930.32	-3956	-0.0000128	0.0006738	0.0035	2.8693		9995.52	9995.52	5.18		Si
SLV 1	-1.98	620	-18814	-0.0000327	0.0006738	0.0035	2.8693		25661.4	25661.4	41.39		Si
SLV 1	0.52	-2370.31	-3715	-0.0000143	0.0006738	0.0035	2.8693		9667.93	9667.93	4.08		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	-1.98	-4036.18	-31584	-22970	8400	2.8693	2.8693	-26685	10833	9325	88358	30935	14634	45569	No	5.42	Si
SLU 76	0.52	-2163.31	-12078	-8784	9219	2.8693	2.8693	-10205	9694	8345	88358	30935	14634	45569	No	4.94	Si
SLU 84	-1.98	-4544.07	-33151	-24110	8752	2.8693	2.8693	-28009	10833	9325	88358	30935	14634	45569	No	5.21	Si
SLU 84	0.52	-2246.21	-12829	-9330	9607	2.8693	2.8693	-10839	9779	8417	88358	30935	14634	45569	No	4.74	Si
SLU 83	-1.98	-4711.72	-33146	-24106	8674	2.8693	2.8693	-28004	10833	9325	88358	30935	14634	45569	No	5.25	Si
SLU 83	0.52	-2150.68	-12788	-9300	9501	2.8693	2.8693	-10804	9774	8413	88358	30935	14634	45569	No	4.8	Si
SLU 82	-1.98	-4544.07	-33151	-24110	8752	2.8693	2.8693	-28009	10833	9325	88358	30935	14634	45569	No	5.21	Si
SLU 82	0.52	-2246.21	-12829	-9330	9607	2.8693	2.8693	-10839	9779	8417	88358	30935	14634	45569	No	4.74	Si
SLU 75	-1.98	-4147.95	-31580	-22968	8348	2.8693	2.8693	-26682	10833	9325	88358	30935	14634	45569	No	5.46	Si
SLU 75	0.52	-2099.62	-12051	-8764	9148	2.8693	2.8693	-10182	9691	8342	88358	30935	14634	45569	No	4.98	Si
SLU 79	-1.98	-4315.6	-31575	-22964	8271	2.8693	2.8693	-26677	10833	9325	88358	30935	14634	45569	No	5.51	Si
SLU 79	0.52	-2004.08	-12010	-8734	9042	2.8693	2.8693	-10147	9686	8338	88358	30935	14634	45569	No	5.04	Si
SLU 78	-1.98	-4147.95	-31580	-22968	8348	2.8693	2.8693	-26682	10833	9325	88358	30935	14634	45569	No	5.46	Si
SLU 78	0.52	-2099.62	-12051	-8764	9148	2.8693	2.8693	-10182	9691	8342	88358	30935	14634	45569	No	4.98	Si
SLU 73	-1.98	-4036.18	-31584	-22970	8400	2.8693	2.8693	-26685	10833	9325	88358	30935	14634	45569	No	5.42	Si
SLU 73	0.52	-2163.31	-12078	-8784	9219	2.8693	2.8693	-10205	9694	8345	88358	30935	14634	45569	No	4.94	Si
SLU 81	-1.98	-4711.72	-33146	-24106	8674	2.8693	2.8693	-28004	10833	9325	88358	30935	14634	45569	No	5.25	Si
SLU 81	0.52	-2150.68	-12788	-9300	9501	2.8693	2.8693	-10804	9774	8413	88358	30935	14634	45569	No	4.8	Si
SLU 80	-1.98	-4147.95	-31580	-22968	8348	2.8693	2.8693	-26682	10833	9325	88358	30935	14634	45569	No	5.46	Si
SLU 80	0.52	-2099.62	-12051	-8764	9148	2.8693	2.8693	-10182	9691	8342	88358	30935	14634	45569	No	4.98	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	-1.98	1030.21	-18912	-13754	7017	2.8693	2.8693	-15978	15696	13511	88358	46402	14634	61036		8.7	Si
SLV 2	0.52	-2411.72	-3646	-2651	7385	2.8693	2.3194	-3816	13263	9229	88358	46402	14634	61036		8.26	Si
SLV 13	-1.98	1456.16	-24127	-17547	8336	2.8693	2.8693	-20384	16250	13988	88358	46402	14634	61036		7.32	Si
SLV 13	0.52	-421.91	-10692	-7776	8688	2.8693	2.8693	-9033	14307	12315	88358	46402	14634	61036		7.03	Si
SLV 15	-1.98	-6481.51	-24888	-18100	4492	2.8693	2.8693	-21027	16250	13988	88358	46402	14634	61036		13.59	Si
SLV 15	0.52	-250.62	-12517	-9104	5149	2.8693	2.8693	-10576	14615	12581	88358	46402	14634	61036		11.85	Si
SLV 14	-1.98	1866.38	-24224	-17618	8626	2.8693	2.8693	-20467	16250	13988	88358	46402	14634	61036		7.08	Si
SLV 14	0.52	-463.33	-10622	-7725	8974	2.8693	2.8693	-8974	14295	12305	88358	46402	14634	61036		6.8	Si
SLV 1	-1.98	620	-18814	-13683	6727	2.8693	2.8693	-15896	15679	13497	88358	46402	14634	61036		9.07	Si
SLV 1	0.52	-2370.31	-3715	-2702	7099	2.8693	2.3901	-3774	13255	9504	88358	46402	14634	61036		8.6	Si
SLV 6	-1.98	10590.4	-19885	-14462	12070	2.8693	2.7062	-16801	15860	12876	88358	46402	14634	61036		5.06	Si
SLV 6	0.52	-1930.32	-3956	-2877	12075	2.8693	2.8403	-3343	13169	11221	88358	46402	14634	61036		5.05	Si
SLV 5	-1.98	10166.38	-19784	-14389	11770	2.8693	2.7624	-16715	15843	13129	88358	46402	14634	61036		5.19	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	0.52	-1887.52	-4028	-2930	11779	2.8693	2.8693	-3403	13181	11346	88358	46402	14634	61036		5.18	Si
SLV 16	-1.98	-6071.3	-24985	-18171	4782	2.8693	2.8693	-21110	16250	13988	88358	46402	14634	61036		12.76	Si
SLV 16	0.52	-292.03	-12448	-9053	5435	2.8693	2.8693	-10517	14603	12571	88358	46402	14634	61036		11.23	Si
SLV 9	-1.98	10417.23	-21378	-15548	12253	2.8693	2.8421	-18062	16112	13738	88358	46402	14634	61036		4.98	Si
SLV 9	0.52	-1303	-6121	-4452	12255	2.8693	2.8693	-5172	13534	11650	88358	46402	14634	61036		4.98	Si
SLV 10	-1.98	10841.24	-21479	-15621	12553	2.8693	2.7898	-18147	16129	13499	88358	46402	14634	61036		4.86	Si
SLV 10	0.52	-1345.8	-6049	-4399	12551	2.8693	2.8693	-5111	13522	11640	88358	46402	14634	61036		4.86	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.625 Ta 0.04 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-11395	0.24	122.92	1585.82	2241.34	1913.58	15.57	Si
SLV 2	-11422	0.24	122.92	1589.26	2245.67	1917.47	15.6	Si
SLV 3	-12299	0.24	122.92	1701	2387.12	2044.06	16.63	Si
SLV 4	-12326	0.24	122.92	1704.4	2391.45	2047.92	16.66	Si
SLV 5	-12371	0.24	122.92	1710.16	2398.79	2054.48	16.71	Si
SLV 6	-12399	0.24	122.92	1713.67	2403.27	2058.47	16.75	Si
SLV 9	-14112	0.24	122.92	1927.41	2679.26	2303.33	18.74	Si
SLV 10	-14139	0.24	122.92	1930.82	2683.72	2307.27	18.77	Si
SLV 7	-15383	0.24	122.92	2082.47	2883.44	2482.95	20.2	Si
SLV 8	-15411	0.24	122.92	2085.82	2887.86	2486.84	20.23	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.05 Ta = 0.0409

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-9804	-24888	-171	1.405	1330.8	0.932	21.89844	4.66809	Si
SLV 16	-9759	-24985	-173	1.41	1326.2	0.932	21.98058	4.66809	Si
SLV 13	-8390	-24127	-112	1.592	1188.1	0.926	24.99377	4.66809	Si
SLV 14	-8345	-24224	-114	1.599	1183.6	0.926	25.10134	4.66809	Si
SLV 11	-9947	-23914	-10	1.402	1345.2	0.933	21.84389	3.99544	Si
SLV 12	-9900	-24015	-12	1.407	1340.5	0.933	21.92755	3.99544	Si
SLV 7	-8654	-22320	188	1.547	1214.8	0.927	24.25591	3.99544	Si
SLV 8	-8608	-22421	186	1.554	1210.1	0.927	24.36668	3.99544	Si
SLV 3	-5496	-19575	487	2.129	898.4	0.909	34.02818	4.66809	Si
SLV 4	-5451	-19673	485	2.141	893.9	0.909	34.24206	4.66809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	8.994	SLU 39	Si
V_SLU	4.743	SLU 82	Si
PF_SLV	2.039	SLV 7	Si
V_SLV	4.862	SLV 10	Si
PFFP_SLV	15.568	SLV 1	Si
R_SLV	4.691	SLV 15	Si

Maschio 17

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.408	-3.134	-11.408	-1.906	L1	L2	1.228	0.3	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 75	-1.98	3455.51	-23094	-0.0001754	0.0004492	0.0035	1.228	6905.1	10368.53	10368.53	3	No	Si
SLU 75	0.73	-1507.71	-2485	-0.0001931	0.0004492	0.0035	0.9824	1441.7	2181.21	2181.21	1.45	No	Si
SLU 82	-1.98	3642.32	-24356	-0.0001871	0.0004492	0.0035	1.228	6863.19	10666.86	10666.86	2.93	No	Si
SLU 82	0.73	-1613.47	-2659	-0.000209	0.0004492	0.0035	0.9824	1536.02	2279.05	2279.05	1.41	No	Si
SLU 78	-1.98	3455.51	-23094	-0.0001754	0.0004492	0.0035	1.228	6905.1	10368.53	10368.53	3	No	Si
SLU 78	0.73	-1507.71	-2485	-0.0001931	0.0004492	0.0035	0.9824	1441.7	2181.21	2181.21	1.45	No	Si
SLU 84	-1.98	3642.32	-24356	-0.0001871	0.0004492	0.0035	1.228	6863.19	10666.86	10666.86	2.93	No	Si
SLU 84	0.73	-1613.47	-2659	-0.000209	0.0004492	0.0035	0.9824	1536.02	2279.05	2279.05	1.41	No	Si
SLU 80	-1.98	3455.51	-23094	-0.0001754	0.0004492	0.0035	1.228	6905.1	10368.53	10368.53	3	No	Si
SLU 80	0.73	-1507.71	-2485	-0.0001931	0.0004492	0.0035	0.9824	1441.7	2181.21	2181.21	1.45	No	Si
SLU 76	-1.98	3439.67	-23103	-0.000175	0.0004492	0.0035	1.228	6904.96	10370.53	10370.53	3.01	No	Si
SLU 76	0.73	-1508.04	-2486	-0.0001931	0.0004492	0.0035	0.9824	1441.99	2181.51	2181.51	1.45	No	Si
SLU 73	-1.98	3439.67	-23103	-0.000175	0.0004492	0.0035	1.228	6904.96	10370.53	10370.53	3.01	No	Si
SLU 73	0.73	-1508.04	-2486	-0.0001931	0.0004492	0.0035	0.9824	1441.99	2181.51	2181.51	1.45	No	Si
SLU 79	-1.98	3479.28	-23081	-0.0001759	0.0004492	0.0035	1.228	6905.3	10365.54	10365.54	2.98	No	Si
SLU 79	0.73	-1507.22	-2484	-0.000193	0.0004492	0.0035	0.9824	1441.26	2180.75	2180.75	1.45	No	Si
SLU 81	-1.98	3666.08	-24343	-0.0001877	0.0004492	0.0035	1.228	6863.82	10663.87	10663.87	2.91	No	Si
SLU 81	0.73	-1612.98	-2658	-0.0002089	0.0004492	0.0035	0.9824	1535.59	2278.6	2278.6	1.41	No	Si
SLU 83	-1.98	3666.08	-24343	-0.0001877	0.0004492	0.0035	1.228	6863.82	10663.87	10663.87	2.91	No	Si
SLU 83	0.73	-1612.98	-2658	-0.0002089	0.0004492	0.0035	0.9824	1535.59	2278.6	2278.6	1.41	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	-1.98	2215.91	-18456	-0.0001172	0.0006738	0.0035	1.228		9453.45	9453.45	4.27		Si
SLV 13	0.73	-1025.77	-1671	-0.0001287	0.0006738	0.0035	0.9824		1723.48	1723.48	1.68		Si
SLV 10	-1.98	1069.33	-18145	-0.0000924	0.0006738	0.0035	1.228		9314.53	9314.53	8.71		Si
SLV 10	0.73	-895.2	-1323	-0.0001492	0.0006738	0.0035	0.9824		1520.35	1520.35	1.7		Si
SLV 11	-1.98	3836.25	-14822	-0.0001376	0.0006738	0.0035	1.228		7830	7830	2.04		Si
SLV 11	0.73	-1151.4	-2068	-0.0000943	0.0006738	0.0035	0.9824		1954.17	1954.17	1.7		Si
SLV 16	-1.98	2960.32	-17471	-0.0001282	0.0006738	0.0035	1.228		9013.7	9013.7	3.04		Si
SLV 16	0.73	-1118.95	-1921	-0.000113	0.0006738	0.0035	0.9824		1869.25	1869.25	1.67		Si
SLV 8	-1.98	3652.66	-13563	-0.0001291	0.0006738	0.0035	1.228		7267.58	7267.58	1.99		Si
SLV 8	0.73	-1122.22	-2003	-0.0000946	0.0006738	0.0035	0.9824		1916.5	1916.5	1.71		Si
SLV 7	-1.98	3720.25	-13553	-0.0001311	0.0006738	0.0035	1.228		7263.16	7263.16	1.95		Si
SLV 7	0.73	-1109.35	-1982	-0.000093	0.0006738	0.0035	0.9824		1904.33	1904.33	1.72		Si
SLV 15	-1.98	3025.71	-17462	-0.0001296	0.0006738	0.0035	1.228		9009.42	9009.42	2.98		Si
SLV 15	0.73	-1106.49	-1901	-0.0001114	0.0006738	0.0035	0.9824		1857.47	1857.47	1.68		Si
SLV 9	-1.98	1136.93	-18135	-0.0000937	0.0006738	0.0035	1.228		9310.1	9310.1	8.19		Si
SLV 9	0.73	-882.32	-1302	-0.0001475	0.0006738	0.0035	0.9824		1508.05	1508.05	1.71		Si
SLV 14	-1.98	2150.52	-18465	-0.0001159	0.0006738	0.0035	1.228		9457.73	9457.73	4.4		Si
SLV 14	0.73	-1038.22	-1691	-0.0001303	0.0006738	0.0035	0.9824		1735.37	1735.37	1.67		Si
SLV 12	-1.98	3768.65	-14832	-0.0001358	0.0006738	0.0035	1.228		7834.42	7834.42	2.08		Si
SLV 12	0.73	-1164.27	-2089	-0.0000958	0.0006738	0.0035	0.9824		1966.35	1966.35	1.69		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	-1.98	3479.28	-23081	-16787	5818	1.228	1.228	-45565	10833	3991	88358	13240	6263	19502	No	3.35	Si
SLU 79	0.73	-1507.22	-2484	-1807	5940	0.9824	0.022	0	0	0	88358	10592	5010	15602	No	2.63	Si
SLU 83	-1.98	3666.08	-24343	-17704	6165	1.228	1.228	-48056	10833	3991	88358	13240	6263	19502	No	3.16	Si
SLU 83	0.73	-1612.98	-2658	-1933	6294	0.9824	0.0214	0	0	0	88358	10592	5010	15602	No	2.48	Si
SLU 84	-1.98	3642.32	-24356	-17713	6159	1.228	1.228	-48081	10833	3991	88358	13240	6263	19502	No	3.17	Si
SLU 84	0.73	-1613.47	-2659	-1934	6288	0.9824	0.0214	0	0	0	88358	10592	5010	15602	No	2.48	Si
SLU 81	-1.98	3666.08	-24343	-17704	6165	1.228	1.228	-48056	10833	3991	88358	13240	6263	19502	No	3.16	Si
SLU 81	0.73	-1612.98	-2658	-1933	6294	0.9824	0.0214	0	0	0	88358	10592	5010	15602	No	2.48	Si
SLU 75	-1.98	3455.51	-23094	-16796	5812	1.228	1.228	-45590	10833	3991	88358	13240	6263	19502	No	3.36	Si
SLU 75	0.73	-1507.71	-2485	-1807	5934	0.9824	0.022	0	0	0	88358	10592	5010	15602	No	2.63	Si
SLU 82	-1.98	3642.32	-24356	-17713	6159	1.228	1.228	-48081	10833	3991	88358	13240	6263	19502	No	3.17	Si
SLU 82	0.73	-1613.47	-2659	-1934	6288	0.9824	0.0214	0	0	0	88358	10592	5010	15602	No	2.48	Si
SLU 78	-1.98	3455.51	-23094	-16796	5812	1.228	1.228	-45590	10833	3991	88358	13240	6263	19502	No	3.36	Si
SLU 78	0.73	-1507.71	-2485	-1807	5934	0.9824	0.022	0	0	0	88358	10592	5010	15602	No	2.63	Si
SLU 77	-1.98	3479.28	-23081	-16787	5818	1.228	1.228	-45565	10833	3991	88358	13240	6263	19502	No	3.35	Si
SLU 77	0.73	-1507.22	-2484	-1807	5940	0.9824	0.022	0	0	0	88358	10592	5010	15602	No	2.63	Si
SLU 80	-1.98	3455.51	-23094	-16796	5812	1.228	1.228	-45590	10833	3991	88358	13240	6263	19502	No	3.36	Si
SLU 80	0.73	-1507.71	-2485	-1807	5934	0.9824	0.022	0	0	0	88358	10592	5010	15602	No	2.63	Si
SLU 74	-1.98	3479.28	-23081	-16787	5818	1.228	1.228	-45565	10833	3991	88358	13240	6263	19502	No	3.35	Si
SLU 74	0.73	-1507.22	-2484	-1807	5940	0.9824	0.022	0	0	0	88358	10592	5010	15602	No	2.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	-1.98	2960.32	-17471	-12707	4483	1.228	1.228	-34491	16250	5987	88358	19859	6263	26122		5.83	Si
SLV 16	0.73	-1118.95	-1921	-1397	4852	0.9824	0.0946	0	0	0	88358	15887	5010	20898		4.31	Si
SLV 14	-1.98	2150.52	-18465	-13429	4467	1.228	1.228	-36453	16250	5987	88358	19859	6263	26122		5.85	Si
SLV 14	0.73	-1038.22	-1691	-1230	4397	0.9824	0.0003	0	0	0	88358	15887	5010	20898		4.75	Si
SLV 3	-1.98	2639.07	-13233	-9624	3443	1.228	1.228	-26123	16250	5987	88358	19859	6263	26122		7.59	Si
SLV 3	0.73	-966.32	-1613	-1173	3679	0.9824	0.0451	0	0	0	88358	15887	5010	20898		5.68	Si
SLV 15	-1.98	3025.71	-17462	-12700	4506	1.228	1.228	-34472	16250	5987	88358	19859	6263	26122		5.8	Si
SLV 15	0.73	-1106.49	-1901	-1382	4873	0.9824	0.0955	0	0	0	88358	15887	5010	20898		4.29	Si
SLV 8	-1.98	3652.66	-13563	-9864	3810	1.228	1.0341	-26775	16250	5041	88358	19859	6263	26122		6.86	Si
SLV 8	0.73	-1122.22	-2003	-1457	4606	0.9824	0.161	0	0	0	88358	15887	5010	20898		4.54	Si
SLV 4	-1.98	2573.67	-13242	-9631	3420	1.228	1.228	-26142	16250	5987	88358	19859	6263	26122		7.64	Si
SLV 4	0.73	-978.78	-1634	-1188	3658	0.9824	0.0446	0	0	0	88358	15887	5010	20898		5.71	Si
SLV 12	-1.98	3768.65	-14832	-10787	4128	1.228	1.0798	-29280	16250	5264	88358	19859	6263	26122		6.33	Si
SLV 12	0.73	-1164.27	-2089	-1519	4964	0.9824	0.17	0	0	0	88358	15887	5010	20898		4.21	Si
SLV 7	-1.98	3720.25	-13553	-9857	3833	1.228	1.0185	-26756	16250	4965	88358	19859	6263	26122		6.81	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	0.73	-1109.35	-1982	-1441	4628	0.9824	0.1626	0	0	0	88358	15887	5010	20898		4.52	Si
SLV 13	-1.98	2215.91	-18456	-13422	4490	1.228	1.228	-36434	16250	5987	88358	19859	6263	26122		5.82	Si
SLV 13	0.73	-1025.77	-1671	-1215	4419	0.9824	0.0002	0	0	0	88358	15887	5010	20898		4.73	Si
SLV 11	-1.98	3836.25	-14822	-10780	4152	1.228	1.0656	-29260	16250	5195	88358	19859	6263	26122		6.29	Si
SLV 11	0.73	-1151.4	-2068	-1504	4986	0.9824	0.1716	0	0	0	88358	15887	5010	20898		4.19	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.625 Ta 0.04 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-7508	0.24	52.61	1000.93	1369.35	1185.14	22.53	Si
SLV 4	-7513	0.24	52.61	1001.52	1370.14	1185.83	22.54	Si
SLV 1	-7732	0.24	52.61	1026.94	1405.12	1216.03	23.12	Si
SLV 2	-7737	0.24	52.61	1027.51	1405.92	1216.72	23.13	Si
SLV 7	-7946	0.24	52.61	1051.65	1439.42	1245.53	23.68	Si
SLV 8	-7951	0.24	52.61	1052.24	1440.24	1246.24	23.69	Si
SLV 11	-8546	0.24	52.61	1119.64	1534.69	1327.17	25.23	Si
SLV 12	-8551	0.24	52.61	1120.22	1535.51	1327.86	25.24	Si
SLV 5	-8692	0.24	52.61	1136	1557.86	1346.93	25.6	Si
SLV 6	-8698	0.24	52.61	1136.58	1558.68	1347.63	25.62	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.05 Ta = 0.0409

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-1921	-17471	27	2.51	341.9	0.902	40.43431	4.66809	Si
SLV 15	-1901	-17462	27	2.528	339.9	0.902	40.739	4.66809	Si
SLV 14	-1691	-18465	24	2.729	319.4	0.898	44.15039	4.66809	Si
SLV 13	-1671	-18456	24	2.75	317.4	0.898	44.51174	4.66809	Si
SLV 12	-2089	-14832	14	2.376	358.4	0.905	38.16713	3.99544	Si
SLV 11	-2068	-14822	13	2.393	356.4	0.905	38.44798	3.99544	Si
SLV 4	-1634	-13242	-22	2.79	313.8	0.897	45.19724	4.66809	Si
SLV 3	-1613	-13233	-22	2.813	311.8	0.897	45.57184	4.66809	Si
SLV 8	-2003	-13563	-1	2.45	349.9	0.903	39.40682	3.99544	Si
SLV 7	-1982	-13553	-1	2.467	347.9	0.903	39.70232	3.99544	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.413	SLU 82	Si
V_SLU	2.479	SLU 81	Si
PF_SLV	1.671	SLV 16	Si
V_SLV	4.191	SLV 11	Si
PFFP_SLV	22.529	SLV 3	Si
R_SLV	8.662	SLV 16	Si

Maschio 18

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.408	0.164	-11.408	1.355	L1	L2	1.191	0.3	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	-1.98	-2083.15	-13559	-0.000101	0.0004492	0.0035	1.1909	5565.91	7313.95	7313.95	3.51	No	Si
SLU 83	0.73	1264.32	-2147	-0.0004574	0.0004492	0.0035	0.9527	1215.49	1391.73	1391.73	1.1	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	-1.98	-2036.13	-13021	-0.0000974	0.0004492	0.0035	1.1909	5440.55	7103.57	7103.57	3.49	No	Si
SLU 76	0.73	1184.46	-2012	-0.0004109	0.0004492	0.0035	0.9527	1142.79	1316.49	1316.49	1.11	No	Si
SLU 73	-1.98	-2036.13	-13021	-0.0000974	0.0004492	0.0035	1.1909	5440.55	7103.57	7103.57	3.49	No	Si
SLU 73	0.73	1184.46	-2012	-0.0004109	0.0004492	0.0035	0.9527	1142.79	1316.49	1316.49	1.11	No	Si
SLU 79	-1.98	-1962.71	-12830	-0.0000949	0.0004492	0.0035	1.1909	5394.3	7029.14	7029.14	3.58	No	Si
SLU 79	0.73	1174.25	-1995	-0.0004054	0.0004492	0.0035	0.9527	1133.46	1306.87	1306.87	1.11	No	Si
SLU 82	-1.98	-2127.2	-13673	-0.0001026	0.0004492	0.0035	1.1909	5591.51	7358.6	7358.6	3.46	No	Si
SLU 82	0.73	1270.45	-2157	-0.0004612	0.0004492	0.0035	0.9527	1221.05	1397.51	1397.51	1.1	No	Si
SLU 80	-1.98	-2006.76	-12944	-0.0000964	0.0004492	0.0035	1.1909	5422.17	7073.8	7073.8	3.52	No	Si
SLU 80	0.73	1180.38	-2005	-0.0004087	0.0004492	0.0035	0.9527	1139.06	1312.64	1312.64	1.11	No	Si
SLU 84	-1.98	-2127.2	-13673	-0.0001026	0.0004492	0.0035	1.1909	5591.51	7358.6	7358.6	3.46	No	Si
SLU 84	0.73	1270.45	-2157	-0.0004612	0.0004492	0.0035	0.9527	1221.05	1397.51	1397.51	1.1	No	Si
SLU 75	-1.98	-2006.76	-12944	-0.0000964	0.0004492	0.0035	1.1909	5422.17	7073.8	7073.8	3.52	No	Si
SLU 75	0.73	1180.38	-2005	-0.0004087	0.0004492	0.0035	0.9527	1139.06	1312.64	1312.64	1.11	No	Si
SLU 81	-1.98	-2083.15	-13559	-0.000101	0.0004492	0.0035	1.1909	5565.91	7313.95	7313.95	3.51	No	Si
SLU 81	0.73	1264.32	-2147	-0.0004574	0.0004492	0.0035	0.9527	1215.49	1391.73	1391.73	1.1	No	Si
SLU 78	-1.98	-2006.76	-12944	-0.0000964	0.0004492	0.0035	1.1909	5422.17	7073.8	7073.8	3.52	No	Si
SLU 78	0.73	1180.38	-2005	-0.0004087	0.0004492	0.0035	0.9527	1139.06	1312.64	1312.64	1.11	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	-1.98	-2483.44	-12441	-0.0001014	0.0006738	0.0035	1.1909		7158.63	7158.63	2.88		Si
SLV 13	0.73	998.81	-1726	-0.0002387	0.0006738	0.0035	0.9527		1165.06	1165.06	1.17		Si
SLV 9	-1.98	-4182.63	-16223	-0.0001607	0.0006738	0.0035	1.1909		8782.44	8782.44	2.1		Si
SLV 9	0.73	1138.93	-2000	-0.0002243	0.0006738	0.0035	0.9527		1320.59	1320.59	1.16		Si
SLV 6	-1.98	-4070.76	-15490	-0.0001544	0.0006738	0.0035	1.1909		8479.3	8479.3	2.08		Si
SLV 6	0.73	1071.44	-1878	-0.0002136	0.0006738	0.0035	0.9527		1251.99	1251.99	1.17		Si
SLV 14	-1.98	-2589.2	-12708	-0.0001049	0.0006738	0.0035	1.1909		7279.26	7279.26	2.81		Si
SLV 14	0.73	1012.42	-1749	-0.0002433	0.0006738	0.0035	0.9527		1178.23	1178.23	1.16		Si
SLV 11	-1.98	1414.57	-2040	-0.001536	0.0006738	0.0035	0.9527		1343.14	1343.14	0.95		No
SLV 11	0.73	466.08	-734	-0.0002326	0.0006738	0.0035	0.9527		595.37	595.37	1.28		Si
SLV 7	-1.98	1635.76	-1031	-0.0071081	0.0006738	0.0035	0.9527		767.26	767.26	0.47		No
SLV 7	0.73	384.53	-588	-0.0002161	0.0006738	0.0035	0.9527		511.25	511.25	1.33		Si
SLV 5	-1.98	-3961.44	-15214	-0.0001503	0.0006738	0.0035	1.1909		8365.16	8365.16	2.11		Si
SLV 5	0.73	1057.37	-1855	-0.0002091	0.0006738	0.0035	0.9527		1238.38	1238.38	1.17		Si
SLV 8	-1.98	1526.44	-1307	-0.0053967	0.0006738	0.0035	0.9527		925.46	925.46	0.61		No
SLV 8	0.73	398.6	-612	-0.000221	0.0006738	0.0035	0.9527		525.1	525.1	1.32		Si
SLV 12	-1.98	1305.25	-2316	-0.0002281	0.0006738	0.0035	1.1909		1498.45	1498.45	1.15		Si
SLV 12	0.73	480.15	-757	-0.0002373	0.0006738	0.0035	0.9527		609.18	609.18	1.27		Si
SLV 10	-1.98	-4291.94	-16499	-0.0001642	0.0006738	0.0035	1.1909		8896.58	8896.58	2.07		Si
SLV 10	0.73	1153	-2024	-0.0002288	0.0006738	0.0035	0.9527		1334.01	1334.01	1.16		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	-1.98	-2083.15	-13559	-9861	-3233	1.1909	1.1909	-27601	10833	3870	88358	12839	6074	18913	No	5.85	Si
SLU 83	0.73	1264.32	-2147	-1561	-3179	0.9527	0.0196	0	0	0	88358	10271	4859	15130	No	4.76	Si
SLU 79	-1.98	-1962.71	-12830	-9331	-3028	1.1909	1.1909	-26118	10833	3870	88358	12839	6074	18913	No	6.25	Si
SLU 79	0.73	1174.25	-1995	-1451	-2976	0.9527	0.0203	0	0	0	88358	10271	4859	15130	No	5.08	Si
SLU 84	-1.98	-2127.2	-13673	-9944	-3274	1.1909	1.1909	-27834	10833	3870	88358	12839	6074	18913	No	5.78	Si
SLU 84	0.73	1270.45	-2157	-1569	-3219	0.9527	0.0196	0	0	0	88358	10271	4859	15130	No	4.7	Si
SLU 78	-1.98	-2006.76	-12944	-9414	-3069	1.1909	1.1909	-26350	10833	3870	88358	12839	6074	18913	No	6.16	Si
SLU 78	0.73	1180.38	-2005	-1458	-3017	0.9527	0.0202	0	0	0	88358	10271	4859	15130	No	5.01	Si
SLU 81	-1.98	-2083.15	-13559	-9861	-3233	1.1909	1.1909	-27601	10833	3870	88358	12839	6074	18913	No	5.85	Si
SLU 81	0.73	1264.32	-2147	-1561	-3179	0.9527	0.0196	0	0	0	88358	10271	4859	15130	No	4.76	Si
SLU 76	-1.98	-2036.13	-13021	-9469	-3096	1.1909	1.1909	-26505	10833	3870	88358	12839	6074	18913	No	6.11	Si
SLU 76	0.73	1184.46	-2012	-1463	-3044	0.9527	0.0202	0	0	0	88358	10271	4859	15130	No	4.97	Si
SLU 80	-1.98	-2006.76	-12944	-9414	-3069	1.1909	1.1909	-26350	10833	3870	88358	12839	6074	18913	No	6.16	Si
SLU 80	0.73	1180.38	-2005	-1458	-3017	0.9527	0.0202	0	0	0	88358	10271	4859	15130	No	5.01	Si
SLU 73	-1.98	-2036.13	-13021	-9469	-3096	1.1909	1.1909	-26505	10833	3870	88358	12839	6074	18913	No	6.11	Si
SLU 73	0.73	1184.46	-2012	-1463	-3044	0.9527	0.0202	0	0	0	88358	10271	4859	15130	No	4.97	Si
SLU 75	-1.98	-2006.76	-12944	-9414	-3069	1.1909	1.1909	-26350	10833	3870	88358	12839	6074	18913	No	6.16	Si
SLU 75	0.73	1180.38	-2005	-1458	-3017	0.9527	0.0202	0	0	0	88358	10271	4859	15130	No	5.01	Si
SLU 82	-1.98	-2127.2	-13673	-9944	-3274	1.1909	1.1909	-27834	10833	3870	88358	12839	6074	18913	No	5.78	Si
SLU 82	0.73	1270.45	-2157	-1569	-3219	0.9527	0.0196	0	0	0	88358	10271	4859	15130	No	4.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	-1.98	-4182.63	-16223	-11799	-4766	1.1909	1.0129	-39588	16250	4938	88358	19259	6074	25333		5.31	Si
SLV 9	0.73	1138.93	-2000	-1454	-4571	0.9527	0.0778	0	0	0	88358	15407	4859	20266		4.43	Si
SLV 1	-1.98	-1746.15	-9078	-6602	-2220	1.1909	1.1909	-18479	16196	5786	88358	19259	6074	25333		11.41	Si
SLV 1	0.73	726.96	-1243	-904	-2157	0.9527	0.0312	0	0	0	88358	15407	4859	20266		9.39	Si
SLV 14	-1.98	-2589.2	-12708	-9242	-3403	1.1909	1.1751	-25868	16250	5729	88358	19259	6074	25333		7.45	Si
SLV 14	0.73	1012.42	-1749	-1272	-3302	0.9527	0.0502	0	0	0	88358	15407	4859	20266		6.14	Si
SLV 2	-1.98	-1851.91	-9345	-6796	-2317	1.1909	1.1909	-19023	16250	5806	88358	19259	6074	25333		10.93	Si
SLV 2	0.73	740.57	-1266	-920	-2254	0.9527	0.0309	0	0	0	88358	15407	4859	20266		8.99	Si
SLV 16	-1.98	-910.04	-8453	-6147	-1824	1.1909	1.1909	-17206	15941	5695	88358	19259	6074	25333		13.89	Si
SLV 16	0.73	810.57	-1370	-996	-1816	0.9527	0.0108	0	0	0	88358	15407	4859	20266		11.16	Si
SLV 6	-1.98	-4070.76	-15490	-11266	-4541	1.1909	0.998	-38040	16250	4865	88358	19259	6074	25333		5.58	Si
SLV 6	0.73	1071.44	-1878	-1366	-4356	0.9527	0.0752	0	0	0	88358	15407	4859	20266		4.65	Si
SLV 10	-1.98	-4291.94	-16499	-11999	-4866	1.1909	1.006	-40265	16250	4904	88358	19259	6074	25333		5.21	Si
SLV 10	0.73	1153	-2024	-1472	-4671	0.9527	0.077	0	0	0	88358	15407	4859	20266		4.34	Si
SLV 13	-1.98	-2483.44	-12441	-9048	-3306	1.1909	1.1875	-25325	16250	5789	88358	19259	6074	25333		7.66	Si
SLV 13	0.73	998.81	-1726	-1256	-3206	0.9527	0.0506	0	0	0	88358	15407	4859	20266		6.32	Si
SLV 5	-1.98	-3961.44	-15214	-11065	-4441	1.1909	1.0052	-37104	16250	4900	88358	19259	6074	25333		5.7	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	0.73	1057.37	-1855	-1349	-4256	0.9527	0.076	0	0	0	88358	15407	4859	20266		4.76	Si
SLV 15	-1.98	-804.28	-8186	-5953	-1727	1.1909	1.1909	-16663	15833	5656	88358	19259	6074	25333		14.67	Si
SLV 15	0.73	796.96	-1346	-979	-1720	0.9527	0.0107	0	0	0	88358	15407	4859	20266		11.78	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.625 Ta 0.04 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-1402	0.24	51.02	205.78	376.12	290.95	5.7	Si
SLV 8	-1541	0.24	51.02	225.77	399.28	312.53	6.13	Si
SLV 11	-2005	0.24	51.02	291.56	476.14	383.85	7.52	Si
SLV 12	-2145	0.24	51.02	311.17	499.09	405.13	7.94	Si
SLV 3	-3180	0.24	51.02	453.77	669.24	561.51	11.01	Si
SLV 4	-3315	0.24	51.02	472.02	691.29	581.65	11.4	Si
SLV 15	-5190	0.24	51.02	716.85	996.25	856.55	16.79	Si
SLV 1	-5305	0.24	51.02	731.22	1014.68	872.95	17.11	Si
SLV 16	-5325	0.24	51.02	733.85	1018.05	875.95	17.17	Si
SLV 2	-5440	0.24	51.02	748.16	1036.48	892.32	17.49	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.05 Ta = 0.0409

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-1749	-12708	60	2.603	320.4	0.9	42.03238	4.66809	Si
SLV 13	-1726	-12441	60	2.626	318.2	0.9	42.41612	4.66809	Si
SLV 10	-2024	-16499	27	2.373	347.4	0.905	38.1199	3.99544	Si
SLV 9	-2000	-16223	27	2.393	345	0.904	38.44603	3.99544	Si
SLV 6	-1878	-15490	-7	2.503	333.1	0.902	40.31497	3.99544	Si
SLV 5	-1855	-15214	-7	2.524	330.7	0.902	40.67812	3.99544	Si
SLV 16	-1370	-8453	54	3.038	283.6	0.894	49.39205	4.66809	Si
SLV 15	-1346	-8186	55	3.069	281.4	0.893	49.91572	4.66809	Si
SLV 2	-1266	-9345	-52	3.184	273.6	0.892	51.85547	4.66809	Si
SLV 1	-1243	-9078	-52	3.218	271.4	0.892	52.42994	4.66809	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	1.1	SLU 82	Si
V_SLU	4.7	SLU 82	Si
PF_SLV	0.469	SLV 7	No
V_SLV	4.339	SLV 10	Si
PFFP_SLV	5.703	SLV 7	Si
R_SLV	9.004	SLV 14	Si

Maschio 19

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-8.084	-3.134	-8.084	1.596	L1	L2	4.73	0.45	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 5	-1.98	2916.92	-14564	-0.0000124	0.0004492	0.0035	4.7302	32517.08	35135.18	35135.18	12.05	No	Si
SLU 5	0.22	4431.55	-10361	-0.0000108	0.0004492	0.0035	4.7302	23529.38	25886.23	25886.23	5.84	No	Si
SLU 44	-1.98	3741.16	-18222	-0.0000157	0.0004492	0.0035	4.7302	40076.56	43032.55	43032.55	11.5	No	Si
SLU 44	0.22	5521.81	-12778	-0.0000134	0.0004492	0.0035	4.7302	28736.27	31241.76	31241.76	5.66	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 50	-1.98	4011.56	-18177	-0.0000159	0.0004492	0.0035	4.7302	39986.68	42937.88	42937.88	10.7	No	Si
SLU 50	0.22	5330.38	-12705	-0.0000132	0.0004492	0.0035	4.7302	28580.73	31080.18	31080.18	5.83	No	Si
SLU 45	-1.98	4011.56	-18177	-0.0000159	0.0004492	0.0035	4.7302	39986.68	42937.88	42937.88	10.7	No	Si
SLU 45	0.22	5330.38	-12705	-0.0000132	0.0004492	0.0035	4.7302	28580.73	31080.18	31080.18	5.83	No	Si
SLU 43	-1.98	4011.56	-18177	-0.0000159	0.0004492	0.0035	4.7302	39986.68	42937.88	42937.88	10.7	No	Si
SLU 43	0.22	5330.38	-12705	-0.0000132	0.0004492	0.0035	4.7302	28580.73	31080.18	31080.18	5.83	No	Si
SLU 49	-1.98	3849.32	-18204	-0.0000157	0.0004492	0.0035	4.7302	40040.61	42994.68	42994.68	11.17	No	Si
SLU 49	0.22	5445.24	-12749	-0.0000134	0.0004492	0.0035	4.7302	28674.07	31177.13	31177.13	5.73	No	Si
SLU 51	-1.98	3849.32	-18204	-0.0000157	0.0004492	0.0035	4.7302	40040.61	42994.68	42994.68	11.17	No	Si
SLU 51	0.22	5445.24	-12749	-0.0000134	0.0004492	0.0035	4.7302	28674.07	31177.13	31177.13	5.73	No	Si
SLU 47	-1.98	3741.16	-18222	-0.0000157	0.0004492	0.0035	4.7302	40076.56	43032.55	43032.55	11.5	No	Si
SLU 47	0.22	5521.81	-12778	-0.0000134	0.0004492	0.0035	4.7302	28736.27	31241.76	31241.76	5.66	No	Si
SLU 46	-1.98	3849.32	-18204	-0.0000157	0.0004492	0.0035	4.7302	40040.61	42994.68	42994.68	11.17	No	Si
SLU 46	0.22	5445.24	-12749	-0.0000134	0.0004492	0.0035	4.7302	28674.07	31177.13	31177.13	5.73	No	Si
SLU 48	-1.98	4011.56	-18177	-0.0000159	0.0004492	0.0035	4.7302	39986.68	42937.88	42937.88	10.7	No	Si
SLU 48	0.22	5330.38	-12705	-0.0000132	0.0004492	0.0035	4.7302	28580.73	31080.18	31080.18	5.83	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	-1.98	-6731.53	-16677	-0.0000171	0.0006738	0.0035	4.7302		51053.47	51053.47	7.58		Si
SLV 6	0.22	7140.18	-14078	-0.0000157	0.0006738	0.0035	4.7302		34435.5	34435.5	4.82		Si
SLV 5	-1.98	-5916.36	-16711	-0.0000164	0.0006738	0.0035	4.7302		51128.19	51128.19	8.64		Si
SLV 5	0.22	6549.93	-13882	-0.000015	0.0006738	0.0035	4.7302		33997.96	33997.96	5.19		Si
SLV 4	-1.98	5570.39	-9351	-0.0000111	0.0006738	0.0035	4.7302		23800.73	23800.73	4.27		Si
SLV 4	0.22	2528.76	-6076	-0.0000063	0.0006738	0.0035	4.7302		16344.25	16344.25	6.46		Si
SLV 10	-1.98	-6510.59	-20125	-0.0000193	0.0006738	0.0035	4.7302		58582.17	58582.17	9		Si
SLV 10	0.22	8065	-16819	-0.0000184	0.0006738	0.0035	4.7302		40521.26	40521.26	5.02		Si
SLV 3	-1.98	6359.03	-9384	-0.0000118	0.0006738	0.0035	4.7302		23875.68	23875.68	3.75		Si
SLV 3	0.22	1957.72	-5887	-0.0000056	0.0006738	0.0035	4.7302		15910.4	15910.4	8.13		Si
SLV 8	-1.98	12570.64	-11595	-0.0000194	0.0006738	0.0035	4.7302		28881.41	28881.41	2.3		Si
SLV 8	0.22	1720.41	-6693	-0.000006	0.0006738	0.0035	4.7302		17758.23	17758.23	10.32		Si
SLV 7	-1.98	13385.81	-11629	-0.0000205	0.0006738	0.0035	4.7302		28957.73	28957.73	2.16		Si
SLV 7	0.22	1130.16	-6497	-0.0000053	0.0006738	0.0035	4.7302		17309.79	17309.79	15.32		Si
SLV 12	-1.98	12791.58	-15043	-0.0000213	0.0006738	0.0035	4.7302		36594.36	36594.36	2.86		Si
SLV 12	0.22	2645.23	-9434	-0.0000086	0.0006738	0.0035	4.7302		23988.72	23988.72	9.07		Si
SLV 11	-1.98	13606.75	-15077	-0.0000221	0.0006738	0.0035	4.7302		36670.68	36670.68	2.7		Si
SLV 11	0.22	2054.99	-9239	-0.000008	0.0006738	0.0035	4.7302		23544.6	23544.6	11.46		Si
SLV 2	-1.98	-220.26	-10876	-0.0000075	0.0006738	0.0035	4.7302		38222.57	38222.57	173.53		Si
SLV 2	0.22	4154.69	-8292	-0.0000091	0.0006738	0.0035	4.7302		21394.25	21394.25	5.15		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	-1.98	5098.07	-24088	-19270	3369	4.7302	4.7302	-9053	9540	20308	88358	76496	24124	100620	No	29.86	Si
SLU 81	0.22	6890.48	-18717	-14973	5387	4.7302	4.7302	-7034	9271	19735	88358	76496	24124	100620	No	18.68	Si
SLU 84	-1.98	4935.83	-24115	-19292	3127	4.7302	4.7302	-9063	9542	20310	88358	76496	24124	100620	No	32.18	Si
SLU 84	0.22	7005.34	-18760	-15008	5174	4.7302	4.7302	-7051	9273	19739	88358	76496	24124	100620	No	19.45	Si
SLU 77	-1.98	4887.58	-22926	-18341	3229	4.7302	4.7302	-8617	9482	20184	88358	76496	24124	100620	No	31.16	Si
SLU 77	0.22	6581.5	-17499	-14000	5187	4.7302	4.7302	-6577	9210	19605	88358	76496	24124	100620	No	19.4	Si
SLU 78	-1.98	4725.33	-22953	-18362	2986	4.7302	4.7302	-8626	9484	20187	88358	76496	24124	100620	No	33.7	Si
SLU 78	0.22	6696.37	-17543	-14035	4973	4.7302	4.7302	-6593	9212	19609	88358	76496	24124	100620	No	20.23	Si
SLU 82	-1.98	4935.83	-24115	-19292	3127	4.7302	4.7302	-9063	9542	20310	88358	76496	24124	100620	No	32.18	Si
SLU 82	0.22	7005.34	-18760	-15008	5174	4.7302	4.7302	-7051	9273	19739	88358	76496	24124	100620	No	19.45	Si
SLU 60	-1.98	4713.2	-22050	-17640	3116	4.7302	4.7302	-8287	9438	20090	88358	76496	24124	100620	No	32.29	Si
SLU 60	0.22	6360.3	-16763	-13410	5030	4.7302	4.7302	-6300	9173	19526	88358	76496	24124	100620	No	20	Si
SLU 83	-1.98	5098.07	-24088	-19270	3369	4.7302	4.7302	-9053	9540	20308	88358	76496	24124	100620	No	29.86	Si
SLU 83	0.22	6890.48	-18717	-14973	5387	4.7302	4.7302	-7034	9271	19735	88358	76496	24124	100620	No	18.68	Si
SLU 79	-1.98	4887.58	-22926	-18341	3229	4.7302	4.7302	-8617	9482	20184	88358	76496	24124	100620	No	31.16	Si
SLU 79	0.22	6581.5	-17499	-14000	5187	4.7302	4.7302	-6577	9210	19605	88358	76496	24124	100620	No	19.4	Si
SLU 62	-1.98	4713.2	-22050	-17640	3116	4.7302	4.7302	-8287	9438	20090	88358	76496	24124	100620	No	32.29	Si
SLU 62	0.22	6360.3	-16763	-13410	5030	4.7302	4.7302	-6300	9173	19526	88358	76496	24124	100620	No	20	Si
SLU 74	-1.98	4887.58	-22926	-18341	3229	4.7302	4.7302	-8617	9482	20184	88358	76496	24124	100620	No	31.16	Si
SLU 74	0.22	6581.5	-17499	-14000	5187	4.7302	4.7302	-6577	9210	19605	88358	76496	24124	100620	No	19.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	-1.98	13385.81	-11629	-9303	14849	4.7302	3.6421	-4371	13374	21920	88358	114744	24124	110278		7.43	Si
SLV 7	0.22	1130.16	-6497	-5198	14489	4.7302	4.7302	-2442	12988	27647	88358	114744	24124	116005		8.01	Si
SLV 3	-1.98	6359.03	-9384	-7508	7052	4.7302	4.7302	-3527	13205	28109	88358	114744	24124	116467		16.52	Si
SLV 3	0.22	1957.72	-5887	-4709	7694	4.7302	4.7302	-2212	12942	27549	88358	114744	24124	115908		15.06	Si
SLV 15	-1.98	7095.49	-20878	-16702	5992	4.7302	4.7302	-7847	14069	29948	88358	114744	24124	118306		19.74	Si
SLV 15	0.22	5040.48	-15025	-12020	7037	4.7302	4.7302	-5647	13629	29011	88358	114744	24124	117370		16.68	Si
SLV 9	-1.98	-5695.42	-20159	-16127	-8732	4.7302	4.7302	-7576	14015	29833	88358	114744	24124	118191		13.54	Si
SLV 9	0.22	7474.76	-16624	-13299	-5714	4.7302	4.7302	-6248	13750	29267	88358	114744	24124	117626		20.58	Si
SLV 5	-1.98	-5916.36	-16711	-13369	-8414	4.7302	4.7302	-6281	13756	29281	88358	114744	24124	117639		13.98	Si
SLV 5	0.22	6549.93	-13882	-11106	-5517	4.7302	4.7302	-5217	13543	28829	88358	114744	24124	117187		21.24	Si
SLV 8	-1.98	12570.64	-11595	-9276	13271	4.7302	3.8429	-4358	13372	23123	88358	114744	24124	111482		8.4	Si
SLV 8	0.22	1720.41	-6693	-5354	13086	4.7302	4.7302	-2515	13003	27678	88358	114744	24124	116037		8.87	Si
SLV 11	-1.98	13606.75	-15077	-12062	14531	4.7302	4.3879	-5667	13633	26920	88358	114744	24124	115278		7.93	Si
SLV 11	0.22	2054.99	-9239	-7391	14292	4.7302	4.7302	-3472	13194	28086	88358	114744	24124	116444		8.15	Si
SLV 6	-1.98	-6731.53	-16677	-13341	-9992	4.7302	4.7302	-6268	13754	29276	88358	114744	24124	117634		11.77	Si
SLV 6	0.22	7140.18	-14078	-11262	-6920	4.7302	4.7302	-5291	13558	28860	88358	114744	24124	117218		16.94	Si
SLV 12	-1.98	12791.58	-15043	-12034	12953	4.7302	4.5443	-5654	13631	27874	88358	114744	24124	116232		8.97	Si
SLV 12	0.22	2645.23	-9434	-7547	12888	4.7302	4.7302	-3546	13209	28117	88358	114744	24124	116475		9.04	Si
SLV 10	-1.98	-6510.59	-20125	-16100	-10310	4.7302	4.7302	-7564	14013	29827	88358	114744	24124	118186		11.46	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 10	0.22	8065	-16819	-13456	-7117	4.7302	4.7302	-6321	13764	29298	88358	114744	24124	117657		16.53	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.625 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-7216	0.24	298.12	1593.56	2681.13	2137.34	7.17	Si
SLV 4	-7380	0.24	298.12	1629.04	2720.33	2174.69	7.29	Si
SLV 7	-8376	0.24	298.12	1844.23	2958.73	2401.48	8.06	Si
SLV 8	-8546	0.24	298.12	1880.68	2999.24	2439.96	8.18	Si
SLV 1	-9467	0.24	298.12	2078.43	3219.59	2649.01	8.89	Si
SLV 2	-9631	0.24	298.12	2113.49	3258.77	2686.13	9.01	Si
SLV 11	-11625	0.24	298.12	2537.63	3734.84	3136.24	10.52	Si
SLV 12	-11794	0.24	298.12	2573.45	3775.22	3174.34	10.65	Si
SLV 5	-15881	0.24	298.12	3427.68	4742.57	4085.13	13.7	Si
SLV 6	-16050	0.24	298.12	3462.67	4782.59	4122.63	13.83	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.08 Ta = 0.0273

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-15762	-22369	376	1.354	2438	0.915	21.50662	3.48519	Si
SLV 13	-15524	-22402	375	1.368	2414.2	0.914	21.75388	3.48519	Si
SLV 10	-15535	-20125	148	1.379	2415.3	0.914	21.91648	3.15901	Si
SLV 16	-13422	-20845	375	1.513	2204.9	0.909	24.20724	3.48519	Si
SLV 9	-15288	-20159	147	1.394	2390.7	0.914	22.18019	3.15901	Si
SLV 15	-13184	-20878	374	1.532	2181.3	0.908	24.52254	3.48519	Si
SLV 6	-12996	-16677	-48	1.565	2162.6	0.907	25.0636	3.15901	Si
SLV 5	-12750	-16711	-49	1.585	2138.2	0.907	25.40785	3.15901	Si
SLV 2	-7300	-10876	-277	2.222	1607.4	0.892	36.21861	3.48519	Si
SLV 1	-7062	-10909	-278	2.264	1584.8	0.891	36.91692	3.48519	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.658	SLU 44	Si
V_SLU	18.678	SLU 81	Si
PF_SLV	2.163	SLV 7	Si
V_SLV	7.427	SLV 7	Si
PFFP_SLV	7.17	SLV 3	Si
R_SLV	6.171	SLV 14	Si

Maschio 20

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-8.084	2.596	-8.084	5.874	L1	L2	3.278	0.45	2.71	2.71	2.71			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	-1.98	2967.62	-13763	-0.0000189	0.0004492	0.0035	3.278	20836.01	22388.64	22388.64	7.54	No	Si
SLU 48	0.22	4492.03	-7658	-0.0000156	0.0004492	0.0035	3.278	12018.82	13211.48	13211.48	2.94	No	Si
SLU 51	-1.98	2918.19	-13748	-0.0000188	0.0004492	0.0035	3.278	20814.47	22365.73	22365.73	7.66	No	Si
SLU 51	0.22	4706.17	-7809	-0.0000162	0.0004492	0.0035	3.278	12244.05	13441.57	13441.57	2.86	No	Si
SLU 44	-1.98	2885.23	-13738	-0.0000188	0.0004492	0.0035	3.278	20800.11	22350.46	22350.46	7.75	No	Si
SLU 44	0.22	4848.93	-7909	-0.0000165	0.0004492	0.0035	3.278	12393.97	13594.96	13594.96	2.8	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	-1.98	2918.19	-13748	-0.0000188	0.0004492	0.0035	3.278	20814.47	22365.73	22365.73	7.66	No	Si
SLU 49	0.22	4706.17	-7809	-0.0000162	0.0004492	0.0035	3.278	12244.05	13441.57	13441.57	2.86	No	Si
SLU 47	-1.98	2885.23	-13738	-0.0000188	0.0004492	0.0035	3.278	20800.11	22350.46	22350.46	7.75	No	Si
SLU 47	0.22	4848.93	-7909	-0.0000165	0.0004492	0.0035	3.278	12393.97	13594.96	13594.96	2.8	No	Si
SLU 46	-1.98	2918.19	-13748	-0.0000188	0.0004492	0.0035	3.278	20814.47	22365.73	22365.73	7.66	No	Si
SLU 46	0.22	4706.17	-7809	-0.0000162	0.0004492	0.0035	3.278	12244.05	13441.57	13441.57	2.86	No	Si
SLU 50	-1.98	2967.62	-13763	-0.0000189	0.0004492	0.0035	3.278	20836.01	22388.64	22388.64	7.54	No	Si
SLU 50	0.22	4492.03	-7658	-0.0000156	0.0004492	0.0035	3.278	12018.82	13211.48	13211.48	2.94	No	Si
SLU 2	-1.98	2320.95	-10962	-0.0000149	0.0004492	0.0035	3.278	16874.33	18226.07	18226.07	7.85	No	Si
SLU 2	0.22	3917.06	-6468	-0.0000134	0.0004492	0.0035	3.278	10220.92	11378.97	11378.97	2.9	No	Si
SLU 45	-1.98	2967.62	-13763	-0.0000189	0.0004492	0.0035	3.278	20836.01	22388.64	22388.64	7.54	No	Si
SLU 45	0.22	4492.03	-7658	-0.0000156	0.0004492	0.0035	3.278	12018.82	13211.48	13211.48	2.94	No	Si
SLU 5	-1.98	2320.95	-10962	-0.0000149	0.0004492	0.0035	3.278	16874.33	18226.07	18226.07	7.85	No	Si
SLU 5	0.22	3917.06	-6468	-0.0000134	0.0004492	0.0035	3.278	10220.92	11378.97	11378.97	2.9	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	-1.98	520.13	-6883	-0.0000076	0.0006738	0.0035	3.278		12105.61	12105.61	23.27		Si
SLV 2	0.22	3474.36	-2157	-0.0000893	0.0006738	0.0035	3.278		4617.11	4617.11	1.33		Si
SLV 8	-1.98	6313.16	-14414	-0.0000255	0.0006738	0.0035	3.278		23703.15	23703.15	3.75		Si
SLV 8	0.22	1506.27	-11279	-0.0000137	0.0006738	0.0035	3.278		18934.03	18934.03	12.57		Si
SLV 5	-1.98	-1383.33	-7183	-0.0000095	0.0006738	0.0035	3.278		17325.58	17325.58	12.52		Si
SLV 5	0.22	5450.17	-1062	-0.0016756	0.0006738	0.0035	2.6224		2858.48	2858.48	0.52		No
SLV 10	-1.98	-1253.45	-9531	-0.0000115	0.0006738	0.0035	3.278		20947.63	20947.63	16.71		Si
SLV 10	0.22	6611.42	-2475	-0.0012613	0.0006738	0.0035	2.6224		5125.03	5125.03	0.78		No
SLV 1	-1.98	863.39	-6932	-0.0000083	0.0006738	0.0035	3.278		12182.7	12182.7	14.11		Si
SLV 1	0.22	3066.32	-2605	-0.000012	0.0006738	0.0035	3.278		5333.08	5333.08	1.74		Si
SLV 13	-1.98	2478.99	-14928	-0.0000191	0.0006738	0.0035	3.278		24472.65	24472.65	9.87		Si
SLV 13	0.22	5531.26	-8855	-0.0000187	0.0006738	0.0035	3.278		15187.25	15187.25	2.75		Si
SLV 14	-1.98	2135.74	-14879	-0.0000184	0.0006738	0.0035	3.278		24399.17	24399.17	11.42		Si
SLV 14	0.22	5939.3	-8408	-0.0000193	0.0006738	0.0035	3.278		14495.42	14495.42	2.44		Si
SLV 6	-1.98	-1738.13	-7132	-0.00001	0.0006738	0.0035	3.278		17246.73	17246.73	9.92		Si
SLV 6	0.22	5871.94	-599	-0.0024528	0.0006738	0.0035	2.6224		2113.86	2113.86	0.36		No
SLV 9	-1.98	-898.65	-9582	-0.0000109	0.0006738	0.0035	3.278		21025.7	21025.7	23.4		Si
SLV 9	0.22	6189.65	-2937	-0.0007076	0.0006738	0.0035	2.6224		5864.95	5864.95	0.95		No
SLV 7	-1.98	6667.96	-14465	-0.0000262	0.0006738	0.0035	3.278		23779.1	23779.1	3.57		Si
SLV 7	0.22	1084.51	-11742	-0.0000134	0.0006738	0.0035	3.278		19638.25	19638.25	18.11		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 44	-1.98	2885.23	-13738	-10990	-697	3.278	3.278	-7450	9327	13758	88358	53012	16718	69730	No	100.06	Si
SLU 44	0.22	4848.93	-7909	-6327	-84	3.278	3.0778	-4289	8905	12334	88358	53012	16718	69730	No	831.79	Si
SLU 76	-1.98	3948.94	-17273	-13818	-687	3.278	3.278	-9368	9582	14135	88358	53012	16718	69730	No	101.51	Si
SLU 76	0.22	5856.22	-11026	-8821	-150	3.278	3.278	-5980	9131	13469	88358	53012	16718	69730	No	464.76	Si
SLU 65	-1.98	3342.33	-15257	-12205	-696	3.278	3.278	-8274	9437	13920	88358	53012	16718	69730	No	100.21	Si
SLU 65	0.22	5246.12	-9147	-7318	-110	3.278	3.1965	-4961	8995	12938	88358	53012	16718	69730	No	636.15	Si
SLU 68	-1.98	3342.33	-15257	-12205	-696	3.278	3.278	-8274	9437	13920	88358	53012	16718	69730	No	100.21	Si
SLU 68	0.22	5246.12	-9147	-7318	-110	3.278	3.1965	-4961	8995	12938	88358	53012	16718	69730	No	636.15	Si
SLU 49	-1.98	2918.19	-13748	-10998	-667	3.278	3.278	-7456	9327	13759	88358	53012	16718	69730	No	104.56	Si
SLU 49	0.22	4706.17	-7809	-6247	-68	3.278	3.109	-4235	8898	12449	88358	53012	16718	69730	No	1020.61	Si
SLU 52	-1.98	3491.85	-15754	-12603	-688	3.278	3.278	-8544	9472	13973	88358	53012	16718	69730	No	101.36	Si
SLU 52	0.22	5459.02	-9788	-7830	-124	3.278	3.2439	-5308	9041	13198	88358	53012	16718	69730	No	561.2	Si
SLU 73	-1.98	3948.94	-17273	-13818	-687	3.278	3.278	-9368	9582	14135	88358	53012	16718	69730	No	101.51	Si
SLU 73	0.22	5856.22	-11026	-8821	-150	3.278	3.278	-5980	9131	13469	88358	53012	16718	69730	No	464.76	Si
SLU 55	-1.98	3491.85	-15754	-12603	-688	3.278	3.278	-8544	9472	13973	88358	53012	16718	69730	No	101.36	Si
SLU 55	0.22	5459.02	-9788	-7830	-124	3.278	3.2439	-5308	9041	13198	88358	53012	16718	69730	No	561.2	Si
SLU 47	-1.98	2885.23	-13738	-10990	-697	3.278	3.278	-7450	9327	13758	88358	53012	16718	69730	No	100.06	Si
SLU 47	0.22	4848.93	-7909	-6327	-84	3.278	3.0778	-4289	8905	12334	88358	53012	16718	69730	No	831.79	Si
SLU 51	-1.98	2918.19	-13748	-10998	-667	3.278	3.278	-7456	9327	13759	88358	53012	16718	69730	No	104.56	Si
SLU 51	0.22	4706.17	-7809	-6247	-68	3.278	3.109	-4235	8898	12449	88358	53012	16718	69730	No	1020.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	-1.98	6313.16	-14414	-11531	5899	3.278	3.278	-7817	14063	20745	88358	79518	16718	96236		16.31	Si
SLV 8	0.22	1506.27	-11279	-9023	4745	3.278	3.278	-6117	13723	20244	88358	79518	16718	96236		20.28	Si
SLV 9	-1.98	-898.65	-9582	-7665	-6850	3.278	3.278	-5196	13539	19972	88358	79518	16718	96236		14.05	Si
SLV 9	0.22	6189.65	-2937	-2350	-4865	2.6224	0	0	0	0	88358	63615	13374	76989		15.82	Si
SLV 12	-1.98	6797.84	-16813	-13451	5567	3.278	3.278	-9118	14324	21129	88358	79518	16718	96236		17.29	Si
SLV 12	0.22	2245.75	-13154	-10523	4273	3.278	3.278	-7134	13927	20544	88358	79518	16718	96236		22.52	Si
SLV 10	-1.98	-1253.45	-9531	-7625	-7843	3.278	3.278	-5169	13534	19964	88358	79518	16718	96236		12.27	Si
SLV 10	0.22	6611.42	-2475	-1980	-5670	2.6224	0	0	0	0	88358	63615	13374	76989		13.58	Si
SLV 14	-1.98	2135.74	-14879	-11903	-3521	3.278	3.278	-8069	14114	20820	88358	79518	16718	96236		27.34	Si
SLV 14	0.22	5939.3	-8408	-6726	-2726	3.278	2.7979	-4560	13412	16886	88358	79518	16718	96236		35.3	Si
SLV 11	-1.98	7152.65	-16864	-13491	6561	3.278	3.278	-9146	14329	21137	88358	79518	16718	96236		14.67	Si
SLV 11	0.22	1823.99	-13617	-10894	5078	3.278	3.278	-7385	13977	20618	88358	79518	16718	96236		18.95	Si
SLV 7	-1.98	6667.96	-14465	-11572	6892	3.278	3.278	-7845	14069	20753	88358	79518	16718	96236		13.96	Si
SLV 7	0.22	1084.51	-11742	-9393	5549	3.278	3.278	-6368	13774	20318	88358	79518	16718	96236		17.34	Si
SLV 5	-1.98	-1383.33	-7183	-5746	-6518	3.278	3.278	-3895	13279	19588	88358	79518	16718	96236		14.76	Si
SLV 5	0.22	5450.17	-1062	-850	-4394	2.6224	0	0	0	0	88358	63615	13374	76989		17.52	Si
SLV 3	-1.98	3278.77	-9117	-7293	2570	3.278	3.278	-4944	13489	19898	88358	79518	16718	96236		37.45	Si
SLV 3	0.22	1756.62	-5809	-4647	2606	3.278	3.278	-3150	13130	19368	88358	79518	16718	96236		36.93	Si
SLV 6	-1.98	-1738.13	-7132	-5706	-7511	3.278	3.278	-3868	13274	19580	88358	79518	16718	96236		12.81	Si
SLV 6	0.22	5871.94	-599	-480	-5199	2.6224	0	0	0	0	88358	63615	13374	76989		14.81	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.625 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-1136	0.24	206.6	254.42	889.51	571.96	2.77	Si
SLV 5	-1587	0.24	206.6	355.01	1000.51	677.76	3.28	Si
SLV 2	-2848	0.24	206.6	634.01	1307.05	970.53	4.7	Si
SLV 10	-3167	0.24	206.6	704.27	1384.43	1044.35	5.06	Si
SLV 1	-3285	0.24	206.6	730.09	1412.9	1071.49	5.19	Si
SLV 9	-3619	0.24	206.6	803.34	1493.76	1148.55	5.56	Si
SLV 4	-6341	0.24	206.6	1393.25	2146.64	1769.94	8.57	Si
SLV 3	-6778	0.24	206.6	1486.78	2251.14	1868.96	9.05	Si
SLV 14	-9620	0.24	206.6	2087.51	2927.32	2507.42	12.14	Si
SLV 13	-10057	0.24	206.6	2178.67	3030.84	2604.75	12.61	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.625 Wa = 0.08 Ta = 0.0273

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-10661	-17113	320	1.373	1663.4	0.914	21.83444	3.48519	Si
SLV 11	-12186	-16864	27	1.267	1815.9	0.919	20.03098	3.15901	Si
SLV 16	-10149	-17064	320	1.421	1612.3	0.912	22.64612	3.48519	Si
SLV 12	-11656	-16813	27	1.308	1762.9	0.917	20.72112	3.15901	Si
SLV 7	-10348	-14465	-176	1.412	1632.2	0.913	22.48692	3.15901	Si
SLV 8	-9819	-14414	-176	1.465	1579.4	0.911	23.37284	3.15901	Si
SLV 13	-7524	-14928	367	1.732	1352.5	0.901	27.93215	3.48519	Si
SLV 14	-7012	-14879	367	1.812	1302.4	0.899	29.28548	3.48519	Si
SLV 3	-4537	-9117	-358	2.339	1064.6	0.89	38.19167	3.48519	Si
SLV 4	-4025	-9068	-358	2.491	1017	0.889	40.7118	3.48519	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.804	SLU 44	Si
V_SLU	100.063	SLU 44	Si
PF_SLV	0.36	SLV 6	No
V_SLV	12.27	SLV 10	Si
PFFP_SLV	2.769	SLV 6	Si
R_SLV	6.265	SLV 15	Si

Maschio 21

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-20.545	-3.134	-20.545	5.825	L2	L3	8.959	0.3	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 65	0.73	5317.92	-17669	-0.0000109	0.0004492	0.0035	8.9589	74888.32	83661.86	83661.86	15.73	No	Si
SLU 65	4.49	209.04	-333	-0.0000002	0.0004492	0.0035	8.9589	1489.86	9483.38	9483.38	45.37	No	Si
SLU 51	0.73	4746.87	-15406	-0.0000096	0.0004492	0.0035	8.9589	65773.76	74177.01	74177.01	15.63	No	Si
SLU 51	4.49	170.23	7	-0.0000082	0.0004492	0.0035	8.9589	0	7987.58	7987.58	46.92	No	Si
SLU 44	0.73	4889.02	-15475	-0.0000096	0.0004492	0.0035	8.9589	66053.62	74466.1	74466.1	15.23	No	Si
SLU 44	4.49	206.41	2	-0.0000091	0.0004492	0.0035	8.9589	0	8009.61	8009.61	38.8	No	Si
SLU 49	0.73	4746.87	-15406	-0.0000096	0.0004492	0.0035	8.9589	65773.76	74177.01	74177.01	15.63	No	Si
SLU 49	4.49	170.23	7	-0.0000082	0.0004492	0.0035	8.9589	0	7987.58	7987.58	46.92	No	Si
SLU 68	0.73	5317.92	-17669	-0.0000109	0.0004492	0.0035	8.9589	74888.32	83661.86	83661.86	15.73	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 68	4.49	209.04	-333	-0.0000002	0.0004492	0.0035	8.9589	1489.86	9483.38	9483.38	45.37	No	Si
SLU 5	0.73	3955.91	-12522	-0.0000078	0.0004492	0.0035	8.9589	53954.13	62069.43	62069.43	15.69	No	Si
SLU 5	4.49	180.34	-90	-0.0000001	0.0004492	0.0035	8.9589	400.93	8413.34	8413.34	46.65	No	Si
SLU 46	0.73	4746.87	-15406	-0.0000096	0.0004492	0.0035	8.9589	65773.76	74177.01	74177.01	15.63	No	Si
SLU 46	4.49	170.23	7	-0.0000082	0.0004492	0.0035	8.9589	0	7987.58	7987.58	46.92	No	Si
SLU 47	0.73	4889.02	-15475	-0.0000096	0.0004492	0.0035	8.9589	66053.62	74466.1	74466.1	15.23	No	Si
SLU 47	4.49	206.41	2	-0.0000091	0.0004492	0.0035	8.9589	0	8009.61	8009.61	38.8	No	Si
SLU 55	0.73	5629.78	-18863	-0.0000117	0.0004492	0.0035	8.9589	79642.68	88595.66	88595.66	15.74	No	Si
SLU 55	4.49	197.89	-613	-0.0000004	0.0004492	0.0035	8.9589	2740.66	10714.45	10714.45	54.14	No	Si
SLU 2	0.73	3955.91	-12522	-0.0000078	0.0004492	0.0035	8.9589	53954.13	62069.43	62069.43	15.69	No	Si
SLU 2	4.49	180.34	-90	-0.0000001	0.0004492	0.0035	8.9589	400.93	8413.34	8413.34	46.65	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	0.73	17185.76	-13488	-0.0000128	0.0006738	0.0035	8.9589		66593.77	66593.77	3.87		Si
SLV 8	4.49	-1505	-307	-0.0000039	0.0006738	0.0035	7.1671		50561.68	50561.68	33.6		Si
SLV 11	0.73	13528.26	-15934	-0.0000128	0.0006738	0.0035	8.9589		77029.36	77029.36	5.69		Si
SLV 11	4.49	-1126.83	-398	-0.0000007	0.0006738	0.0035	7.1671		50956.2	50956.2	45.22		Si
SLV 6	0.73	-5658.79	-11956	-0.0000081	0.0006738	0.0035	8.9589		100441.8	100441.8	17.75		Si
SLV 6	4.49	1303.26	-299	-0.0000051	0.0006738	0.0035	8.9589		9335.25	9335.25	7.16		Si
SLV 9	0.73	-9316.29	-14401	-0.0000106	0.0006738	0.0035	8.9589		110798.26	110798.26	11.89		Si
SLV 9	4.49	1681.43	-390	-0.0000057	0.0006738	0.0035	8.9589		9734.69	9734.69	5.79		Si
SLV 10	0.73	-8395.01	-14499	-0.0000103	0.0006738	0.0035	8.9589		111209.59	111209.59	13.25		Si
SLV 10	4.49	1289.13	-387	-0.000001	0.0006738	0.0035	8.9589		9722.03	9722.03	7.54		Si
SLV 4	0.73	12367.44	-9983	-0.0000094	0.0006738	0.0035	8.9589		51536.62	51536.62	4.17		Si
SLV 4	4.49	-499.24	-202	-0.0000003	0.0006738	0.0035	8.9589		50104.97	50104.97	100.36		Si
SLV 3	0.73	11476.15	-9888	-0.000009	0.0006738	0.0035	8.9589		51129.99	51129.99	4.46		Si
SLV 3	4.49	-119.71	-204	-0.0000001	0.0006738	0.0035	8.9589		50117.06	50117.06	418.66		Si
SLV 7	0.73	16264.48	-13390	-0.0000125	0.0006738	0.0035	8.9589		66173.46	66173.46	4.07		Si
SLV 7	4.49	-1112.7	-310	-0.000001	0.0006738	0.0035	7.1671		50574.18	50574.18	45.45		Si
SLV 5	0.73	-6580.06	-11858	-0.0000083	0.0006738	0.0035	8.9589		100027.44	100027.44	15.2		Si
SLV 5	4.49	1695.56	-302	-0.0000255	0.0006738	0.0035	8.9589		9347.9	9347.9	5.51		Si
SLV 12	0.73	14449.53	-16031	-0.0000132	0.0006738	0.0035	8.9589		77443.42	77443.42	5.36		Si
SLV 12	4.49	-1519.13	-395	-0.0000017	0.0006738	0.0035	7.1671		50943.71	50943.71	33.53		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 42	0.73	5300.91	-19487	-14172	-752	8.9589	8.9589	-5273	9036	24287	122342	96588	45690	142278	No	189.2	Si
SLU 42	4.49	134.62	-1299	-945	-582	8.9589	8.9589	-351	8380	22523	122342	96588	45690	142278	No	244.42	Si
SLU 76	0.73	6058.69	-21057	-15314	-850	8.9589	8.9589	-5698	9093	24439	122342	96588	45690	142278	No	167.4	Si
SLU 76	4.49	200.52	-948	-690	-605	8.9589	8.9589	-257	8368	22489	122342	96588	45690	142278	No	235.17	Si
SLU 84	0.73	6234.02	-22440	-16320	-759	8.9589	8.9589	-6072	9143	24573	122342	96588	45690	142278	No	187.52	Si
SLU 84	4.49	160.69	-1207	-878	-579	8.9589	8.9589	-327	8377	22514	122342	96588	45690	142278	No	245.93	Si
SLU 34	0.73	5125.58	-18104	-13166	-843	8.9589	8.9589	-4899	8987	24153	122342	96588	45690	142278	No	168.74	Si
SLU 34	4.49	174.45	-1040	-756	-609	8.9589	8.9589	-281	8371	22498	122342	96588	45690	142278	No	233.78	Si
SLU 52	0.73	5629.78	-18863	-13719	-738	8.9589	8.9589	-5104	9014	24226	122342	96588	45690	142278	No	192.73	Si
SLU 52	4.49	197.89	-613	-446	-500	8.9589	8.9589	-166	8355	22457	122342	96588	45690	142278	No	284.65	Si
SLU 82	0.73	6234.02	-22440	-16320	-759	8.9589	8.9589	-6072	9143	24573	122342	96588	45690	142278	No	187.52	Si
SLU 82	4.49	160.69	-1207	-878	-579	8.9589	8.9589	-327	8377	22514	122342	96588	45690	142278	No	245.93	Si
SLU 55	0.73	5629.78	-18863	-13719	-738	8.9589	8.9589	-5104	9014	24226	122342	96588	45690	142278	No	192.73	Si
SLU 55	4.49	197.89	-613	-446	-500	8.9589	8.9589	-166	8355	22457	122342	96588	45690	142278	No	284.65	Si
SLU 31	0.73	5125.58	-18104	-13166	-843	8.9589	8.9589	-4899	8987	24153	122342	96588	45690	142278	No	168.74	Si
SLU 31	4.49	174.45	-1040	-756	-609	8.9589	8.9589	-281	8371	22498	122342	96588	45690	142278	No	233.78	Si
SLU 40	0.73	5300.91	-19487	-14172	-752	8.9589	8.9589	-5273	9036	24287	122342	96588	45690	142278	No	189.2	Si
SLU 40	4.49	134.62	-1299	-945	-582	8.9589	8.9589	-351	8380	22523	122342	96588	45690	142278	No	244.42	Si
SLU 73	0.73	6058.69	-21057	-15314	-850	8.9589	8.9589	-5698	9093	24439	122342	96588	45690	142278	No	167.4	Si
SLU 73	4.49	200.52	-948	-690	-605	8.9589	8.9589	-257	8368	22489	122342	96588	45690	142278	No	235.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	0.73	-9316.29	-14401	-10474	-17978	8.9589	8.9589	-3897	13279	35691	122342	144882	45690	158033		8.79	Si
SLV 9	4.49	1681.43	-390	-284	-12210	8.9589	0.5147	-1493	12804	1977	122342	144882	45690	124320		10.18	Si
SLV 13	0.73	-4497.97	-17906	-13023	-6760	8.9589	8.9589	-4845	13469	36200	122342	144882	45690	158543		23.45	Si
SLV 13	4.49	675.67	-495	-360	-6596	8.9589	8.9589	-134	12527	33668	122342	144882	45690	156010		23.65	Si
SLV 7	0.73	16264.48	-13390	-9738	14668	8.9589	8.9589	-3623	13225	35544	122342	144882	45690	157886		10.76	Si
SLV 7	4.49	-1112.7	-310	-225	8991	7.1671	2.6611	0	0	0	122342	115906	36552	122342		13.61	Si
SLV 10	0.73	-8395.01	-14499	-10545	-15129	8.9589	8.9589	-3923	13285	35705	122342	144882	45690	158047		10.45	Si
SLV 10	4.49	1289.13	-387	-282	-9358	8.9589	3.4564	-105	12521	12983	122342	144882	45690	135326		14.46	Si
SLV 11	0.73	13528.26	-15934	-11588	14500	8.9589	8.9589	-4312	13362	35913	122342	144882	45690	158256		10.91	Si
SLV 11	4.49	-1126.83	-398	-289	7769	7.1671	4.9382	0	0	0	122342	115906	36552	122342		15.75	Si
SLV 12	0.73	14449.53	-16031	-11659	17349	8.9589	8.9589	-4338	13368	35928	122342	144882	45690	158270		9.12	Si
SLV 12	4.49	-1519.13	-395	-287	10621	7.1671	1.8953	0	0	0	122342	115906	36552	122342		11.52	Si
SLV 6	0.73	-5658.79	-11956	-8695	-14962	8.9589	8.9589	-3235	13147	35335	122342	144882	45690	157677		10.54	Si
SLV 6	4.49	1303.26	-299	-218	-8137	8.9589	0.3831	-1314	12770	1468	122342	144882	45690	123810		15.22	Si
SLV 5	0.73	-6580.06	-11858	-8624	-17811	8.9589	8.9589	-3209	13142	35321	122342	144882	45690	157663		8.85	Si
SLV 5	4.49	1695.56	-302	-220	-10988	8.9589	0	-4215	13841	0	122342	144882	45690	122342		11.13	Si
SLV 4	0.73	12367.44	-9983	-7260	6299	8.9589	8.9589	-2701	13040	35048	122342	144882	45690	157390		24.99	Si
SLV 4	4.49	-499.24	-202	-147	6228	8.9589	6.013	-81	12516	22578	122342	144882	45690	144920		23.27	Si
SLV 8	0.73	17185.76	-13488	-9809	17517	8.9589	8.9589	-3650	13230	35558	122342	144882	45690	157900		9.01	Si
SLV 8	4.49	-1505	-307	-223	11842	7.1671	0	0	0	0	122342	115906	36552	122342		10.33	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 2.61 Ta 0.08 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 5	-6865	0.46	1382.98	0	2311.15	1155.58	0.84	No
SLV 9	-6897	0.46	1382.98	0	2316.71	1158.36	0.84	No
SLV 6	-6922	0.46	1382.98	0	2320.93	1160.46	0.84	No
SLV 10	-6955	0.46	1382.98	0	2326.48	1163.24	0.84	No
SLV 1	-7082	0.46	1382.98	0	2348.23	1174.12	0.85	No
SLV 2	-7138	0.46	1382.98	0	2357.68	1178.84	0.85	No
SLV 13	-7191	0.46	1382.98	0	2366.73	1183.36	0.86	No
SLV 14	-7246	0.46	1382.98	0	2376.17	1188.09	0.86	No
SLV 3	-7301	0.46	1382.98	0	2385.39	1192.7	0.86	No
SLV 4	-7356	0.46	1382.98	0	2394.83	1197.41	0.87	No

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 13	-495	-17906	675	5.254	1859.2	0.976	78.23399	17.68601	Si
SLV 14	-493	-18001	675	5.256	1859.2	0.976	78.24727	17.68601	Si
SLV 15	-498	-18366	659	5.255	1859.2	0.976	78.24899	17.68601	Si
SLV 16	-495	-18461	659	5.256	1859.2	0.976	78.26228	17.68601	Si
SLV 3	-204	-9888	-678	5.417	1855.1	0.989	79.57664	17.68601	Si
SLV 4	-202	-9983	-678	5.419	1855.1	0.989	79.58909	17.68601	Si
SLV 1	-202	-9429	-662	5.42	1855.1	0.989	79.61256	17.68601	Si
SLV 2	-199	-9523	-662	5.422	1855.1	0.99	79.62501	17.68601	Si
SLV 9	-390	-14401	226	5.359	1857.4	0.981	79.428	14.28956	Si
SLV 10	-387	-14499	226	5.361	1857.3	0.981	79.4417	14.28956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.231	SLU 44	Si
V_SLU	167.402	SLU 73	Si
PF_SLV	3.875	SLV 8	Si
V_SLV	8.79	SLV 9	Si
PFFP_SLV	0.836	SLV 5	No
R_SLV	4.423	SLV 13	Si

Maschio 22

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.024	1.605	-16.024	1.355	L2	L3	0.25	0.15	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	0.73	10.62	-425	-0.0000225	0.0004492	0.0035	0.2	48.15	50.93	50.93	4.8	No	Si
SLU 45	2.83	-19.86	-671	-0.0000385	0.0004492	0.0035	0.2	71.55	79.02	79.02	3.98	No	Si
SLU 44	0.73	11.85	-414	-0.0000231	0.0004492	0.0035	0.2	47.08	49.73	49.73	4.2	No	Si
SLU 44	2.83	-21.04	-684	-0.0000399	0.0004492	0.0035	0.2	72.78	80.54	80.54	3.83	No	Si
SLU 49	0.73	11.36	-418	-0.0000229	0.0004492	0.0035	0.2	47.51	50.21	50.21	4.42	No	Si
SLU 49	2.83	-20.57	-679	-0.0000393	0.0004492	0.0035	0.2	72.29	79.94	79.94	3.89	No	Si
SLU 50	0.73	10.62	-425	-0.0000225	0.0004492	0.0035	0.2	48.15	50.93	50.93	4.8	No	Si
SLU 50	2.83	-19.86	-671	-0.0000385	0.0004492	0.0035	0.2	71.55	79.02	79.02	3.98	No	Si
SLU 2	0.73	9.12	-339	-0.0000184	0.0004492	0.0035	0.2	39.21	40.96	40.96	4.49	No	Si
SLU 2	2.83	-16.52	-556	-0.0000317	0.0004492	0.0035	0.2	61.04	65.9	65.9	3.99	No	Si
SLU 48	0.73	10.62	-425	-0.0000225	0.0004492	0.0035	0.2	48.15	50.93	50.93	4.8	No	Si
SLU 48	2.83	-19.86	-671	-0.0000385	0.0004492	0.0035	0.2	71.55	79.02	79.02	3.98	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	0.73	10.62	-425	-0.0000225	0.0004492	0.0035	0.2	48.15	50.93	50.93	4.8	No	Si
SLU 43	2.83	-19.86	-671	-0.0000385	0.0004492	0.0035	0.2	71.55	79.02	79.02	3.98	No	Si
SLU 51	0.73	11.36	-418	-0.0000229	0.0004492	0.0035	0.2	47.51	50.21	50.21	4.42	No	Si
SLU 51	2.83	-20.57	-679	-0.0000393	0.0004492	0.0035	0.2	72.29	79.94	79.94	3.89	No	Si
SLU 46	0.73	11.36	-418	-0.0000229	0.0004492	0.0035	0.2	47.51	50.21	50.21	4.42	No	Si
SLU 46	2.83	-20.57	-679	-0.0000393	0.0004492	0.0035	0.2	72.29	79.94	79.94	3.89	No	Si
SLU 47	0.73	11.85	-414	-0.0000231	0.0004492	0.0035	0.2	47.08	49.73	49.73	4.2	No	Si
SLU 47	2.83	-21.04	-684	-0.0000399	0.0004492	0.0035	0.2	72.78	80.54	80.54	3.83	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 9	0.73	122.39	160	0	0.0006738	0.0035	0.2		0	0	0		No
SLV 9	2.83	6.2	-1175	-0.0000442	0.0006738	0.0035	0.2		134.61	134.61	21.69		Si
SLV 10	0.73	121.12	148	0	0.0006738	0.0035	0.2		0	0	0		No
SLV 10	2.83	7.35	-1161	-0.0000447	0.0006738	0.0035	0.2		133.16	133.16	18.11		Si
SLV 12	0.73	-98.99	-898	-0.0004215	0.0006738	0.0035	0.2		104.81	104.81	1.06		Si
SLV 12	2.83	-41.14	-99	0	0.0006738	0.0035	0.2		12.19	12.19	0.3		No
SLV 5	0.73	113.3	67	0	0.0006738	0.0035	0.2		0	0	0		No
SLV 5	2.83	10.6	-1138	-0.0000466	0.0006738	0.0035	0.2		130.75	130.75	12.34		Si
SLV 7	0.73	-106.81	-979	-0.0004303	0.0006738	0.0035	0.2		113.74	113.74	1.06		Si
SLV 7	2.83	-37.9	-76	0	0.0006738	0.0035	0.2		9.4	9.4	0.25		No
SLV 8	0.73	-108.07	-990	-0.0004373	0.0006738	0.0035	0.2		115.03	115.03	1.06		Si
SLV 8	2.83	-36.75	-63	0	0.0006738	0.0035	0.2		7.71	7.71	0.21		No
SLV 13	0.73	55.93	-99	0	0.0006738	0.0035	0.2		12.18	12.18	0.22		No
SLV 13	2.83	-15.87	-846	-0.0000408	0.0006738	0.0035	0.2		99.02	99.02	6.24		Si
SLV 6	0.73	112.03	56	0	0.0006738	0.0035	0.2		0	0	0		No
SLV 6	2.83	11.75	-1125	-0.000047	0.0006738	0.0035	0.2		129.3	129.3	11.01		Si
SLV 11	0.73	-97.72	-886	-0.0004148	0.0006738	0.0035	0.2		103.52	103.52	1.06		Si
SLV 11	2.83	-42.29	-113	0	0.0006738	0.0035	0.2		13.86	13.86	0.33		No
SLV 14	0.73	54.7	-110	0	0.0006738	0.0035	0.2		13.56	13.56	0.25		No
SLV 14	2.83	-14.76	-833	-0.0000395	0.0006738	0.0035	0.2		97.54	97.54	6.61		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	0.73	8.8	-650	-371	56	0.2	0.25	0	0	0	122342	1078	1020	2098	No	37.67	Si
SLU 80	2.83	-20.36	-949	-542	45	0.2	0.25	0	0	0	122342	1078	1020	2098	No	46.8	Si
SLU 73	0.73	9.3	-646	-369	57	0.2	0.25	0	0	0	122342	1078	1020	2098	No	37.02	Si
SLU 73	2.83	-20.83	-954	-545	46	0.2	0.25	0	0	0	122342	1078	1020	2098	No	45.65	Si
SLU 81	0.73	7.43	-719	-411	56	0.2	0.25	0	0	0	122342	1078	1020	2098	No	37.62	Si
SLU 81	2.83	-19.47	-1014	-579	43	0.2	0.25	0	0	0	122342	1078	1020	2098	No	48.5	Si
SLU 76	0.73	9.3	-646	-369	57	0.2	0.25	0	0	0	122342	1078	1020	2098	No	37.02	Si
SLU 76	2.83	-20.83	-954	-545	46	0.2	0.25	0	0	0	122342	1078	1020	2098	No	45.65	Si
SLU 75	0.73	8.8	-650	-371	56	0.2	0.25	0	0	0	122342	1078	1020	2098	No	37.67	Si
SLU 75	2.83	-20.36	-949	-542	45	0.2	0.25	0	0	0	122342	1078	1020	2098	No	46.8	Si
SLU 83	0.73	7.43	-719	-411	56	0.2	0.25	0	0	0	122342	1078	1020	2098	No	37.62	Si
SLU 83	2.83	-19.47	-1014	-579	43	0.2	0.25	0	0	0	122342	1078	1020	2098	No	48.5	Si
SLU 82	0.73	8.17	-712	-407	57	0.2	0.25	0	0	0	122342	1078	1020	2098	No	36.66	Si
SLU 82	2.83	-20.17	-1022	-584	45	0.2	0.25	0	0	0	122342	1078	1020	2098	No	46.67	Si
SLU 61	0.73	9.24	-626	-358	55	0.2	0.25	0	0	0	122342	1078	1020	2098	No	38.38	Si
SLU 61	2.83	-19.96	-924	-528	44	0.2	0.25	0	0	0	122342	1078	1020	2098	No	47.47	Si
SLU 78	0.73	8.8	-650	-371	56	0.2	0.25	0	0	0	122342	1078	1020	2098	No	37.67	Si
SLU 78	2.83	-20.36	-949	-542	45	0.2	0.25	0	0	0	122342	1078	1020	2098	No	46.8	Si
SLU 84	0.73	8.17	-712	-407	57	0.2	0.25	0	0	0	122342	1078	1020	2098	No	36.66	Si
SLU 84	2.83	-20.17	-1022	-584	45	0.2	0.25	0	0	0	122342	1078	1020	2098	No	46.67	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	0.73	122.39	160	91	366	0.2	0	0	0	0	122342	1617	1020	2637		7.21	Si
SLV 9	2.83	6.2	-1175	-671	-334	0.2	0.25	0	0	0	122342	1617	1020	2637		7.9	Si
SLV 8	0.73	-108.07	-990	-566	-287	0.2	0.0476	0	0	0	122342	1617	1020	2637		9.2	Si
SLV 8	2.83	-36.75	-63	-36	399	0.2	0	0	0	0	122342	1617	1020	2637		6.6	Si
SLV 7	0.73	-106.81	-979	-559	-284	0.2	0.0476	0	0	0	122342	1617	1020	2637		9.27	Si
SLV 7	2.83	-37.9	-76	-44	402	0.2	0	0	0	0	122342	1617	1020	2637		6.56	Si
SLV 10	0.73	121.12	148	84	363	0.2	0	0	0	0	122342	1617	1020	2637		7.26	Si
SLV 10	2.83	7.35	-1161	-664	-337	0.2	0.25	0	0	0	122342	1617	1020	2637		7.84	Si
SLV 11	0.73	-97.72	-886	-507	-275	0.2	0.0443	0	0	0	122342	1617	1020	2637		9.58	Si
SLV 11	2.83	-42.29	-113	-65	384	0.2	0	0	0	0	122342	1617	1020	2637		6.86	Si
SLV 12	0.73	-98.99	-898	-513	-278	0.2	0.0444	0	0	0	122342	1617	1020	2637		9.5	Si
SLV 12	2.83	-41.14	-99	-57	382	0.2	0	0	0	0	122342	1617	1020	2637		6.91	Si
SLV 5	0.73	113.3	67	38	357	0.2	0	0	0	0	122342	1617	1020	2637		7.39	Si
SLV 5	2.83	10.6	-1138	-651	-316	0.2	0.25	0	0	0	122342	1617	1020	2637		8.35	Si
SLV 3	0.73	-40.39	-720	-412	-71	0.2	0.2068	0	0	0	122342	1617	1020	2637		37.33	Si
SLV 3	2.83	-15.78	-405	-231	172	0.2	0.25	0	0	0	122342	1617	1020	2637		15.35	Si
SLV 6	0.73	112.03	56	32	354	0.2	0	0	0	0	122342	1617	1020	2637		7.45	Si
SLV 6	2.83	11.75	-1125	-643	-319	0.2	0.25	0	0	0	122342	1617	1020	2637		8.28	Si
SLV 4	0.73	-41.62	-732	-418	-73	0.2	0.2044	0	0	0	122342	1617	1020	2637		36.12	Si
SLV 4	2.83	-14.67	-392	-224	169	0.2	0.25	0	0	0	122342	1617	1020	2637		15.6	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 2.61 Ta 0.16 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 8	-534	0.46	20.41	36.92	49.33	43.13	2.11	Si

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-547	0.46	20.41	37.79	50.58	44.19	2.17	Si
SLV 12	-551	0.46	20.41	38.02	50.91	44.46	2.18	Si
SLV 11	-565	0.46	20.41	38.88	52.16	45.52	2.23	Si
SLV 4	-582	0.46	20.41	39.97	53.75	46.86	2.3	Si
SLV 3	-596	0.46	20.41	40.8	54.96	47.88	2.35	Si
SLV 16	-640	0.46	20.41	43.53	59	51.27	2.51	Si
SLV 2	-641	0.46	20.41	43.6	59.09	51.34	2.52	Si
SLV 15	-653	0.46	20.41	44.34	60.19	52.27	2.56	Si
SLV 1	-654	0.46	20.41	44.41	60.28	52.34	2.56	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.03 Ta = 0.1574

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-155	-732	0	5.009	37.1	0.89	81.79906	18.9497	Si
SLV 3	-155	-720	0	5.011	37.1	0.89	81.8315	18.9497	Si
SLV 8	-150	-990	-1	5.089	36.7	0.89	83.14593	18.9497	Si
SLV 7	-150	-979	0	5.092	36.6	0.89	83.19321	18.9497	Si
SLV 2	-135	-418	1	5.378	35.3	0.889	87.92233	18.9497	Si
SLV 1	-135	-407	1	5.38	35.3	0.889	87.95342	18.9497	Si
SLV 12	-127	-898	0	5.564	34.5	0.889	90.96404	18.9497	Si
SLV 11	-127	-886	0	5.566	34.5	0.889	90.99846	18.9497	Si
SLV 6	-85	56	4	6.645	30.8	0.893	108.16618	18.9497	Si, Trazione
SLV 5	-85	67	4	6.648	30.8	0.893	108.21424	18.9497	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.827	SLU 44	Si
V_SLU	36.663	SLU 82	Si
PF_SLV	0	SLV 5	No
V_SLV	6.555	SLV 7	Si
PFFP_SLV	2.113	SLV 8	Si
R_SLV	4.317	SLV 4	Si

Maschio 23

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.024	5.825	-16.024	2.405	L2	L3	3.42	0.15	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	0.73	-2276.24	-4166	-0.0000197	0.0004492	0.0035	3.42	6650.34	13389.16	13389.16	5.88	No	Si
SLU 44	2.83	-2671.79	-1115	-0.0000978	0.0004492	0.0035	2.736	0	8548.49	8548.49	3.2	No	Si
SLU 51	0.73	-2232.03	-4133	-0.0000194	0.0004492	0.0035	3.42	6600.81	13337.13	13337.13	5.98	No	Si
SLU 51	2.83	-2608.09	-1151	-0.0000909	0.0004492	0.0035	2.736	0	8607.09	8607.09	3.3	No	Si
SLU 72	0.73	-2560.66	-4708	-0.0000222	0.0004492	0.0035	3.42	7445.53	14233.45	14233.45	5.56	No	Si
SLU 72	2.83	-2729.91	-1565	-0.0000636	0.0004492	0.0035	2.736	0	9277.32	9277.32	3.4	No	Si
SLU 70	0.73	-2560.66	-4708	-0.0000222	0.0004492	0.0035	3.42	7445.53	14233.45	14233.45	5.56	No	Si
SLU 70	2.83	-2729.91	-1565	-0.0000636	0.0004492	0.0035	2.736	0	9277.32	9277.32	3.4	No	Si
SLU 68	0.73	-2604.87	-4741	-0.0000225	0.0004492	0.0035	3.42	7494.01	14285.48	14285.48	5.48	No	Si
SLU 68	2.83	-2793.61	-1529	-0.0000724	0.0004492	0.0035	2.736	0	9219.16	9219.16	3.3	No	Si
SLU 46	0.73	-2232.03	-4133	-0.0000194	0.0004492	0.0035	3.42	6600.81	13337.13	13337.13	5.98	No	Si
SLU 46	2.83	-2608.09	-1151	-0.0000909	0.0004492	0.0035	2.736	0	8607.09	8607.09	3.3	No	Si
SLU 67	0.73	-2560.66	-4708	-0.0000222	0.0004492	0.0035	3.42	7445.53	14233.45	14233.45	5.56	No	Si
SLU 67	2.83	-2729.91	-1565	-0.0000636	0.0004492	0.0035	2.736	0	9277.32	9277.32	3.4	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	0.73	-2276.24	-4166	-0.0000197	0.0004492	0.0035	3.42	6650.34	13389.16	13389.16	5.88	No	Si
SLU 47	2.83	-2671.79	-1115	-0.0000978	0.0004492	0.0035	2.736	0	8548.49	8548.49	3.2	No	Si
SLU 49	0.73	-2232.03	-4133	-0.0000194	0.0004492	0.0035	3.42	6600.81	13337.13	13337.13	5.98	No	Si
SLU 49	2.83	-2608.09	-1151	-0.0000909	0.0004492	0.0035	2.736	0	8607.09	8607.09	3.3	No	Si
SLU 65	0.73	-2604.87	-4741	-0.0000225	0.0004492	0.0035	3.42	7494.01	14285.48	14285.48	5.48	No	Si
SLU 65	2.83	-2793.61	-1529	-0.0000724	0.0004492	0.0035	2.736	0	9219.16	9219.16	3.3	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	0.73	-3741.51	-1976	-0.0001035	0.0006738	0.0035	2.736		9937.42	9937.42	2.66		Si
SLV 4	2.83	-818.62	772	0.0022593	0.0006738	0.0035	2.736		5445.56	5445.56	6.65		Si
SLV 13	0.73	-255.55	-5434	-0.0000141	0.0006738	0.0035	3.42		15454.92	15454.92	60.48		Si
SLV 13	2.83	-3253.02	-3498	-0.0000246	0.0006738	0.0035	3.42		12383.95	12383.95	3.81		Si
SLV 1	0.73	-3143.36	-1322	-0.0001135	0.0006738	0.0035	2.736		8877.26	8877.26	2.82		Si
SLV 1	2.83	-2486.9	2251	-0.0000069	0.0006738	0.0035	2.736		2987.77	2987.77	1.2		Si
SLV 3	0.73	-3716.84	-1941	-0.0001048	0.0006738	0.0035	2.736		9881.1	9881.1	2.66		Si
SLV 3	2.83	-889.69	845	0.0023383	0.0006738	0.0035	2.736		5324.4	5324.4	5.98		Si
SLV 2	0.73	-3168.03	-1356	-0.0001128	0.0006738	0.0035	2.736		8934.09	8934.09	2.82		Si
SLV 2	2.83	-2415.83	2178	-0.0000135	0.0006738	0.0035	2.736		3109.85	3109.85	1.29		Si
SLV 10	0.73	-622.3	-3307	-0.0000105	0.0006738	0.0035	3.42		12078.64	12078.64	19.41		Si
SLV 10	2.83	-4776.02	80	-0.000252	0.0006738	0.0035	2.736		6585.71	6585.71	1.38		Si
SLV 5	0.73	-1463.14	-2037	-0.0000112	0.0006738	0.0035	3.42		10036.23	10036.23	6.86		Si
SLV 5	2.83	-4619.65	1880	-0.0002298	0.0006738	0.0035	2.736		3606.15	3606.15	0.78		No
SLV 6	0.73	-1488.64	-2073	-0.0000114	0.0006738	0.0035	3.42		10094.44	10094.44	6.78		Si
SLV 6	2.83	-4546.19	1805	-0.000227	0.0006738	0.0035	2.736		3732.08	3732.08	0.82		No
SLV 9	0.73	-596.8	-3271	-0.0000103	0.0006738	0.0035	3.42		12021.01	12021.01	20.14		Si
SLV 9	2.83	-4849.49	156	-0.0002569	0.0006738	0.0035	2.736		6461.35	6461.35	1.33		Si
SLV 14	0.73	-280.22	-5469	-0.0000143	0.0006738	0.0035	3.42		15509.34	15509.34	55.35		Si
SLV 14	2.83	-3181.94	-3571	-0.0000239	0.0006738	0.0035	3.42		12501.06	12501.06	3.93		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 49	0.73	-2232.03	-4133	-2361	562	3.42	3.42	-4603	8947	4590	122342	18436	17442	35878	No	63.82	Si
SLU 49	2.83	-2608.09	-1151	-658	301	2.736	0	0	0	0	122342	14749	13954	28702	No	95.23	Si
SLU 46	0.73	-2232.03	-4133	-2361	562	3.42	3.42	-4603	8947	4590	122342	18436	17442	35878	No	63.82	Si
SLU 46	2.83	-2608.09	-1151	-658	301	2.736	0	0	0	0	122342	14749	13954	28702	No	95.23	Si
SLU 52	0.73	-2808.38	-5037	-2878	599	3.42	3.42	-5611	9081	4659	122342	18436	17442	35878	No	59.88	Si
SLU 52	2.83	-2798.32	-1845	-1054	218	2.736	0.5797	0	0	0	122342	14749	13954	28702	No	131.57	Si
SLU 51	0.73	-2232.03	-4133	-2361	562	3.42	3.42	-4603	8947	4590	122342	18436	17442	35878	No	63.82	Si
SLU 51	2.83	-2608.09	-1151	-658	301	2.736	0	0	0	0	122342	14749	13954	28702	No	95.23	Si
SLU 2	0.73	-1863.13	-3376	-1929	541	3.42	3.42	-3760	8835	4532	122342	18436	17442	35878	No	66.38	Si
SLU 2	2.83	-2124.1	-946	-541	217	2.736	0	0	0	0	122342	14749	13954	28702	No	132.51	Si
SLU 68	0.73	-2604.87	-4741	-2709	590	3.42	3.42	-5281	9037	4636	122342	18436	17442	35878	No	60.77	Si
SLU 68	2.83	-2793.61	-1529	-874	223	2.736	0	0	0	0	122342	14749	13954	28702	No	128.51	Si
SLU 47	0.73	-2276.24	-4166	-2381	655	3.42	3.42	-4640	8952	4592	122342	18436	17442	35878	No	54.76	Si
SLU 47	2.83	-2671.79	-1115	-637	306	2.736	0	0	0	0	122342	14749	13954	28702	No	93.7	Si
SLU 55	0.73	-2808.38	-5037	-2878	599	3.42	3.42	-5611	9081	4659	122342	18436	17442	35878	No	59.88	Si
SLU 55	2.83	-2798.32	-1845	-1054	218	2.736	0.5797	0	0	0	122342	14749	13954	28702	No	131.57	Si
SLU 44	0.73	-2276.24	-4166	-2381	655	3.42	3.42	-4640	8952	4592	122342	18436	17442	35878	No	54.76	Si
SLU 44	2.83	-2671.79	-1115	-637	306	2.736	0	0	0	0	122342	14749	13954	28702	No	93.7	Si
SLU 65	0.73	-2604.87	-4741	-2709	590	3.42	3.42	-5281	9037	4636	122342	18436	17442	35878	No	60.77	Si
SLU 65	2.83	-2793.61	-1529	-874	223	2.736	0	0	0	0	122342	14749	13954	28702	No	128.51	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	0.73	-2533.93	-5373	-3070	-2982	3.42	3.42	-5985	13697	7027	122342	27654	17442	45096		15.12	Si
SLV 12	2.83	548.02	-4606	-2632	-2851	3.42	3.42	-5131	13526	6939	122342	27654	17442	45096		15.82	Si
SLV 1	0.73	-3143.36	-1322	-755	1420	2.736	0	0	0	0	122342	22123	13954	36077		25.41	Si
SLV 1	2.83	-2486.9	2251	1286	1122	2.736	1.8158	0	0	0	122342	22123	13954	36077		32.16	Si
SLV 7	0.73	-3374.77	-4103	-2345	-2809	3.42	2.6627	-5883	13677	5462	122342	27654	17442	45096		16.06	Si
SLV 7	2.83	704.39	-2806	-1603	-2746	3.42	3.42	-3125	13125	6733	122342	27654	17442	45096		16.42	Si
SLV 10	0.73	-622.3	-3307	-1890	3356	3.42	3.42	-3684	13237	6790	122342	27654	17442	45096		13.44	Si
SLV 10	2.83	-4776.02	80	46	3057	2.736	0	0	0	0	122342	22123	13954	36077		11.8	Si
SLV 5	0.73	-1463.14	-2037	-1164	3529	3.42	2.9754	-2611	13022	5812	122342	27654	17442	45096		12.78	Si
SLV 5	2.83	-4619.65	1880	1074	3162	2.736	0	0	0	0	122342	22123	13954	36077		11.41	Si
SLV 2	0.73	-3168.03	-1356	-775	1343	2.736	0	0	0	0	122342	22123	13954	36077		26.85	Si
SLV 2	2.83	-2415.83	2178	1245	1045	2.736	1.8023	0	0	0	122342	22123	13954	36077		34.53	Si
SLV 11	0.73	-2508.42	-5337	-3050	-2903	3.42	3.42	-5945	13689	7022	122342	27654	17442	45096		15.53	Si
SLV 11	2.83	474.56	-4530	-2589	-2771	3.42	3.42	-5046	13509	6930	122342	27654	17442	45096		16.27	Si
SLV 9	0.73	-596.8	-3271	-1869	3434	3.42	3.42	-3644	13229	6786	122342	27654	17442	45096		13.13	Si
SLV 9	2.83	-4849.49	156	89	3137	2.736	0	0	0	0	122342	22123	13954	36077		11.5	Si
SLV 6	0.73	-1488.64	-2073	-1185	3450	3.42	2.976	-2657	13031	5817	122342	27654	17442	45096		13.07	Si
SLV 6	2.83	-4546.19	1805	1031	3082	2.736	0	0	0	0	122342	22123	13954	36077		11.71	Si
SLV 8	0.73	-3400.27	-4139	-2365	-2887	3.42	2.6656	-5928	13686	5472	122342	27654	17442	45096		15.62	Si
SLV 8	2.83	777.85	-2881	-1646	-2826	3.42	3.42	-3210	13142	6742	122342	27654	17442	45096		15.96	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 2.61 Ta 0.16 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	1114	0.46	279.17	0	0	0	0	No
SLV 6	912	0.46	279.17	0	0	0	0	No
SLV 1	1181	0.46	279.17	0	0	0	0	No

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 5	982	0.46	279.17	0	0	0	0	No
SLV 3	-31	0.46	279.17	0	222.16	111.08	0.4	No
SLV 4	-98	0.46	279.17	0	229.13	114.56	0.41	No
SLV 9	-402	0.46	279.17	0	260.03	130.01	0.47	No
SLV 10	-472	0.46	279.17	0	267.01	133.51	0.48	No
SLV 7	-3057	0.46	279.17	0	513.21	256.61	0.92	No
SLV 8	-3127	0.46	279.17	0	519.67	259.83	0.93	No

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.03 Ta = 0.1574

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-391	-5373	-61	9.038	366.3	0.93	141.20412	18.9497	Si
SLV 16	-383	-6089	-106	9.052	365.9	0.931	141.29745	18.9497	Si
SLV 11	-381	-5337	-61	9.079	365.8	0.931	141.69963	18.9497	Si
SLV 15	-374	-6054	-106	9.093	365.4	0.932	141.77669	18.9497	Si
SLV 8	-240	-4139	-4	9.755	359.2	0.949	149.34927	18.9497	Si
SLV 14	-225	-5469	-86	9.789	358.6	0.952	149.49968	18.9497	Si
SLV 7	-231	-4103	-4	9.804	358.9	0.951	149.85658	18.9497	Si
SLV 13	-216	-5434	-86	9.837	358.3	0.953	149.98818	18.9497	Si
SLV 4	120	-1976	85	11.452	353.9	1	166.43172	18.9497	Si, Trazione
SLV 3	130	-1941	85	11.484	353.9	1	166.90393	18.9497	Si, Trazione

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.2	SLU 44	Si
V_SLU	54.762	SLU 44	Si
PF_SLV	0.781	SLV 5	No
V_SLV	11.41	SLV 5	Si
PFFP_SLV	0	SLV 1	No
R_SLV	7.452	SLV 12	Si

Maschio 24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-19.499	-3.134	-20.545	-3.134	L2	L3	1.046	0.3	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	1.73	-304.13	-4061	-0.0000282	0.0003743	0.0035	1.0456	1852.94	2164.53	2164.53	7.12	No	Si
SLU 39	3.63	-465.03	-3174	-0.0000283	0.0003743	0.0035	1.0456	1494.29	1776.93	1776.93	3.82	No	Si
SLU 40	1.73	-311.13	-4068	-0.0000285	0.0003743	0.0035	1.0456	1855.85	2167.73	2167.73	6.97	No	Si
SLU 40	3.63	-458.57	-3165	-0.000028	0.0003743	0.0035	1.0456	1490.56	1772.99	1772.99	3.87	No	Si
SLU 41	1.73	-304.13	-4061	-0.0000282	0.0003743	0.0035	1.0456	1852.94	2164.53	2164.53	7.12	No	Si
SLU 41	3.63	-465.03	-3174	-0.0000283	0.0003743	0.0035	1.0456	1494.29	1776.93	1776.93	3.82	No	Si
SLU 42	1.73	-311.13	-4068	-0.0000285	0.0003743	0.0035	1.0456	1855.85	2167.73	2167.73	6.97	No	Si
SLU 42	3.63	-458.57	-3165	-0.000028	0.0003743	0.0035	1.0456	1490.56	1772.99	1772.99	3.87	No	Si
SLU 44	1.73	-452	-3145	-0.0000277	0.0003743	0.0035	1.0456	1482.08	1764.02	1764.02	3.9	No	Si
SLU 44	3.63	116.08	-989	-0.0000078	0.0003743	0.0035	1.0456	500.96	575.76	575.76	4.96	No	Si
SLU 46	1.73	-447.33	-3140	-0.0000276	0.0003743	0.0035	1.0456	1479.99	1761.82	1761.82	3.94	No	Si
SLU 46	3.63	111.76	-995	-0.0000077	0.0003743	0.0035	1.0456	503.87	578.69	578.69	5.18	No	Si
SLU 48	1.73	-440.33	-3132	-0.0000274	0.0003743	0.0035	1.0456	1476.86	1758.5	1758.5	3.99	No	Si
SLU 48	3.63	105.3	-1004	-0.0000076	0.0003743	0.0035	1.0456	508.23	583.07	583.07	5.54	No	Si
SLU 47	1.73	-452	-3145	-0.0000277	0.0003743	0.0035	1.0456	1482.08	1764.02	1764.02	3.9	No	Si
SLU 47	3.63	116.08	-989	-0.0000078	0.0003743	0.0035	1.0456	500.96	575.76	575.76	4.96	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	1.73	-447.33	-3140	-0.0000276	0.0003743	0.0035	1.0456	1479.99	1761.82	1761.82	3.94	No	Si
SLU 51	3.63	111.76	-995	-0.0000077	0.0003743	0.0035	1.0456	503.87	578.69	578.69	5.18	No	Si
SLU 49	1.73	-447.33	-3140	-0.0000276	0.0003743	0.0035	1.0456	1479.99	1761.82	1761.82	3.94	No	Si
SLU 49	3.63	111.76	-995	-0.0000077	0.0003743	0.0035	1.0456	503.87	578.69	578.69	5.18	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	1.73	-900.8	-3061	-0.0000452	0.0005615	0.0035	0.8365		1756.13	1756.13	1.95		Si
SLV 14	3.63	519.05	-776	-0.0017146	0.0005615	0.0035	0.8365		471.44	471.44	0.91		No
SLV 4	1.73	446.97	-2278	-0.0000231	0.0005615	0.0035	1.0456		1215.87	1215.87	2.72		Si
SLV 4	3.63	-869.78	-2291	-0.0000542	0.0005615	0.0035	0.8365		1390.03	1390.03	1.6		Si
SLV 9	1.73	-1261.65	-5032	-0.0000633	0.0005615	0.0035	1.0456		2655.7	2655.7	2.1		Si
SLV 9	3.63	872.47	-614	-0.012331	0.0005615	0.0035	0.8365		389.31	389.31	0.45		No
SLV 13	1.73	-1106.53	-3459	-0.000058	0.0005615	0.0035	0.8365		1942.91	1942.91	1.76		Si
SLV 13	3.63	739.39	-557	-0.0098837	0.0005615	0.0035	0.8365		360.42	360.42	0.49		No
SLV 12	1.73	321.07	-575	-0.0003388	0.0005615	0.0035	0.8365		369.36	369.36	1.15		Si
SLV 12	3.63	-707.95	-1872	-0.0000434	0.0005615	0.0035	0.8365		1187.98	1187.98	1.68		Si
SLV 5	1.73	-980.63	-5162	-0.0000526	0.0005615	0.0035	1.0456		2712.54	2712.54	2.77		Si
SLV 5	3.63	577.56	-975	-0.0011078	0.0005615	0.0035	0.8365		572.64	572.64	0.99		No
SLV 7	1.73	389.44	-1116	-0.0000213	0.0005615	0.0035	1.0456		643.35	643.35	1.65		Si
SLV 7	3.63	-775.1	-2008	-0.0000494	0.0005615	0.0035	0.8365		1254.03	1254.03	1.62		Si
SLV 10	1.73	-1049	-4621	-0.000053	0.0005615	0.0035	1.0456		2473.17	2473.17	2.36		Si
SLV 10	3.63	644.71	-840	-0.0041631	0.0005615	0.0035	0.8365		503.97	503.97	0.78		No
SLV 15	1.73	-695.5	-2245	-0.0000353	0.0005615	0.0035	0.8365		1368.18	1368.18	1.97		Si
SLV 15	3.63	333.6	-867	-0.0000208	0.0005615	0.0035	1.0456		517.7	517.7	1.55		Si
SLV 8	1.73	602.09	-704	-0.0047452	0.0005615	0.0035	0.8365		435.02	435.02	0.72		No
SLV 8	3.63	-1002.86	-2234	-0.0001019	0.0005615	0.0035	0.8365		1362.92	1362.92	1.36		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 49	1.73	-447.33	-3140	-2644	-453	1.0456	1.0456	-8429	8068	2531	42820	9393	2666	12059	No	26.65	Si
SLU 49	3.63	111.76	-995	-838	-459	1.0456	1.0456	-2671	7301	2290	42820	9393	2666	12059	No	26.29	Si
SLU 48	1.73	-440.33	-3132	-2638	-441	1.0456	1.0456	-8409	8066	2530	42820	9393	2666	12059	No	27.35	Si
SLU 48	3.63	105.3	-1004	-845	-447	1.0456	1.0456	-2695	7304	2291	42820	9393	2666	12059	No	26.97	Si
SLU 50	1.73	-440.33	-3132	-2638	-441	1.0456	1.0456	-8409	8066	2530	42820	9393	2666	12059	No	27.35	Si
SLU 50	3.63	105.3	-1004	-845	-447	1.0456	1.0456	-2695	7304	2291	42820	9393	2666	12059	No	26.97	Si
SLU 51	1.73	-447.33	-3140	-2644	-453	1.0456	1.0456	-8429	8068	2531	42820	9393	2666	12059	No	26.65	Si
SLU 51	3.63	111.76	-995	-838	-459	1.0456	1.0456	-2671	7301	2290	42820	9393	2666	12059	No	26.29	Si
SLU 68	1.73	-445.2	-3578	-3013	-344	1.0456	1.0456	-9606	8225	2580	42820	9393	2666	12059	No	35.04	Si
SLU 68	3.63	-8.57	-1567	-1320	-351	1.0456	1.0456	-4207	7505	2354	42820	9393	2666	12059	No	34.33	Si
SLU 44	1.73	-452	-3145	-2648	-460	1.0456	1.0456	-8442	8070	2531	42820	9393	2666	12059	No	26.2	Si
SLU 44	3.63	116.08	-989	-833	-466	1.0456	1.0456	-2655	7298	2289	42820	9393	2666	12059	No	25.85	Si
SLU 47	1.73	-452	-3145	-2648	-460	1.0456	1.0456	-8442	8070	2531	42820	9393	2666	12059	No	26.2	Si
SLU 47	3.63	116.08	-989	-833	-466	1.0456	1.0456	-2655	7298	2289	42820	9393	2666	12059	No	25.85	Si
SLU 46	1.73	-447.33	-3140	-2644	-453	1.0456	1.0456	-8429	8068	2531	42820	9393	2666	12059	No	26.65	Si
SLU 46	3.63	111.76	-995	-838	-459	1.0456	1.0456	-2671	7301	2290	42820	9393	2666	12059	No	26.29	Si
SLU 43	1.73	-440.33	-3132	-2638	-441	1.0456	1.0456	-8409	8066	2530	42820	9393	2666	12059	No	27.35	Si
SLU 43	3.63	105.3	-1004	-845	-447	1.0456	1.0456	-2695	7304	2291	42820	9393	2666	12059	No	26.97	Si
SLU 45	1.73	-440.33	-3132	-2638	-441	1.0456	1.0456	-8409	8066	2530	42820	9393	2666	12059	No	27.35	Si
SLU 45	3.63	105.3	-1004	-845	-447	1.0456	1.0456	-2695	7304	2291	42820	9393	2666	12059	No	26.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	1.73	-695.5	-2245	-1891	-1066	0.8365	0.639	0	0	0	42820	11271	2133	13404		12.58	Si
SLV 15	3.63	333.6	-867	-730	-565	1.0456	0.4139	-2327	10882	1351	42820	14089	2666	16755		29.63	Si
SLV 8	1.73	602.09	-704	-593	1726	0.8365	0	0	0	0	42820	11271	2133	13404		7.77	Si
SLV 8	3.63	-1002.86	-2234	-1881	1613	0.8365	0.2216	0	0	0	42820	11271	2133	13404		8.31	Si
SLV 14	1.73	-900.8	-3061	-2577	-1509	0.8365	0.6854	0	0	0	42820	11271	2133	13404		8.88	Si
SLV 14	3.63	519.05	-776	-653	-1034	0.8365	0	0	0	0	42820	11271	2133	13404		12.96	Si
SLV 13	1.73	-1106.53	-3459	-2913	-1903	0.8365	0.6086	0	0	0	42820	11271	2133	13404		7.04	Si
SLV 13	3.63	739.39	-557	-469	-1428	0.8365	0	0	0	0	42820	11271	2133	13404		9.39	Si
SLV 5	1.73	-980.63	-5162	-4347	-1474	1.0456	0.9984	-13857	13188	3950	42820	14089	2666	16755		11.37	Si
SLV 5	3.63	577.56	-975	-821	-1669	0.8365	0	0	0	0	42820	11271	2133	13404		8.03	Si
SLV 7	1.73	389.44	-1116	-939	1319	1.0456	0.5211	-2995	11016	1722	42820	14089	2666	16755		12.71	Si
SLV 7	3.63	-775.1	-2008	-1691	1206	0.8365	0.4104	0	0	0	42820	11271	2133	13404		11.11	Si
SLV 9	1.73	-1261.65	-5032	-4238	-2126	1.0456	0.8163	-17449	13907	3405	42820	14089	2666	16755		7.88	Si
SLV 9	3.63	872.47	-614	-517	-2025	0.8365	0	0	0	0	42820	11271	2133	13404		6.62	Si
SLV 12	1.73	321.07	-575	-484	1073	0.8365	0	0	0	0	42820	11271	2133	13404		12.49	Si
SLV 12	3.63	-707.95	-1872	-1577	1257	0.8365	0.4341	0	0	0	42820	11271	2133	13404		10.67	Si
SLV 4	1.73	446.97	-2278	-1918	1503	1.0456	0.9796	-6115	11640	3421	42820	14089	2666	16755		11.15	Si
SLV 4	3.63	-869.78	-2291	-1929	1016	0.8365	0.4293	0	0	0	42820	11271	2133	13404		13.19	Si
SLV 10	1.73	-1049	-4621	-3891	-1719	1.0456	0.8873	-14722	13361	3557	42820	14089	2666	16755		9.75	Si
SLV 10	3.63	644.71	-840	-707	-1618	0.8365	0	0	0	0	42820	11271	2133	13404		8.28	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.61 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.46	3616	-1134	157.46	166.12	1.06	Si
SLV 11	179667	0.46	3927	-1232	157.46	180	1.14	Si
SLV 16	179667	0.46	3988	-1251	157.46	182.74	1.16	Si
SLV 15	179667	0.46	4288	-1345	157.46	196.1	1.25	Si
SLV 8	179667	0.46	4755	-1492	157.46	216.78	1.38	Si
SLV 7	179667	0.46	5066	-1589	157.46	230.43	1.46	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 14	179667	0.46	5441	-1707	157.46	246.9	1.57	Si
SLV 13	179667	0.46	5741	-1801	157.46	259.98	1.65	Si
SLV 4	179667	0.46	7785	-2442	157.46	347.61	2.21	Si
SLV 3	179667	0.46	8085	-2536	157.46	360.27	2.29	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-1112	-3878	11	2.757	293.1	0.889	45.07048	17.68601	Si
SLV 3	-1086	-4006	11	2.789	290.8	0.889	45.59915	17.68601	Si
SLV 2	-1067	-4836	17	2.811	289.1	0.889	45.95627	17.68601	Si
SLV 1	-1042	-4965	18	2.844	286.7	0.889	46.50439	17.68601	Si
SLV 16	-788	-959	-18	3.228	264.4	0.891	52.65599	17.68601	Si
SLV 15	-762	-1088	-18	3.273	262.2	0.892	53.35586	17.68601	Si
SLV 14	-743	-1918	-12	3.31	260.6	0.892	53.93984	17.68601	Si
SLV 13	-718	-2046	-12	3.358	258.5	0.893	54.66819	17.68601	Si
SLV 8	-1051	-1736	-6	2.837	287.6	0.889	46.39193	14.28956	Si
SLV 7	-1024	-1869	-6	2.873	285.2	0.889	46.97065	14.28956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.821	SLU 39	Si
V_SLU	25.853	SLU 44	Si
PF_SLV	0.446	SLV 9	No
V_SLV	6.619	SLV 9	Si
PFFP_SLV	1.055	SLV 12	Si
R_SLV	2.548	SLV 4	Si

Maschio 25

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-17.164	-3.134	-18.499	-3.134	L2	L3	1.335	0.3	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 2	2.73	-245.73	-3972	-0.0000191	0.0003743	0.0035	1.3352	2393.55	2928.01	2928.01	11.92	No	Si
SLU 2	3.63	544.91	-2975	-0.0000204	0.0003743	0.0035	1.3352	1841.17	1969.38	1969.38	3.61	No	Si
SLU 49	2.73	-301.71	-4750	-0.0000231	0.0003743	0.0035	1.3352	2801.64	3365.45	3365.45	11.15	No	Si
SLU 49	3.63	681.19	-3504	-0.0000248	0.0003743	0.0035	1.3352	2138.1	2281.58	2281.58	3.35	No	Si
SLU 45	2.73	-299.52	-4738	-0.0000231	0.0003743	0.0035	1.3352	2795.54	3358.9	3358.9	11.21	No	Si
SLU 45	3.63	674.37	-3491	-0.0000246	0.0003743	0.0035	1.3352	2131.19	2274.3	2274.3	3.37	No	Si
SLU 48	2.73	-299.52	-4738	-0.0000231	0.0003743	0.0035	1.3352	2795.54	3358.9	3358.9	11.21	No	Si
SLU 48	3.63	674.37	-3491	-0.0000246	0.0003743	0.0035	1.3352	2131.19	2274.3	2274.3	3.37	No	Si
SLU 47	2.73	-303.17	-4758	-0.0000232	0.0003743	0.0035	1.3352	2805.71	3369.83	3369.83	11.12	No	Si
SLU 47	3.63	685.73	-3512	-0.0000249	0.0003743	0.0035	1.3352	2142.71	2286.44	2286.44	3.33	No	Si
SLU 51	2.73	-301.71	-4750	-0.0000231	0.0003743	0.0035	1.3352	2801.64	3365.45	3365.45	11.15	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 51	3.63	681.19	-3504	-0.0000248	0.0003743	0.0035	1.3352	2138.1	2281.58	2281.58	3.35	No	Si
SLU 43	2.73	-299.52	-4738	-0.0000231	0.0003743	0.0035	1.3352	2795.54	3358.9	3358.9	11.21	No	Si
SLU 43	3.63	674.37	-3491	-0.0000246	0.0003743	0.0035	1.3352	2131.19	2274.3	2274.3	3.37	No	Si
SLU 46	2.73	-301.71	-4750	-0.0000231	0.0003743	0.0035	1.3352	2801.64	3365.45	3365.45	11.15	No	Si
SLU 46	3.63	681.19	-3504	-0.0000248	0.0003743	0.0035	1.3352	2138.1	2281.58	2281.58	3.35	No	Si
SLU 50	2.73	-299.52	-4738	-0.0000231	0.0003743	0.0035	1.3352	2795.54	3358.9	3358.9	11.21	No	Si
SLU 50	3.63	674.37	-3491	-0.0000246	0.0003743	0.0035	1.3352	2131.19	2274.3	2274.3	3.37	No	Si
SLU 44	2.73	-303.17	-4758	-0.0000232	0.0003743	0.0035	1.3352	2805.71	3369.83	3369.83	11.12	No	Si
SLU 44	3.63	685.73	-3512	-0.0000249	0.0003743	0.0035	1.3352	2142.71	2286.44	2286.44	3.33	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	2.73	237.77	-4038	-0.0000191	0.0005615	0.0035	1.3352		2649.32	2649.32	11.14		Si
SLV 4	3.63	-404.76	-2542	-0.0000162	0.0005615	0.0035	1.3352		2110.66	2110.66	5.21		Si
SLV 16	2.73	-564.53	-4771	-0.0000274	0.0005615	0.0035	1.3352		3453.61	3453.61	6.12		Si
SLV 16	3.63	855.89	-3912	-0.000029	0.0005615	0.0035	1.3352		2573.85	2573.85	3.01		Si
SLV 13	2.73	-789.58	-5827	-0.0000354	0.0005615	0.0035	1.3352		4068.05	4068.05	5.15		Si
SLV 13	3.63	1552.81	-5086	-0.0000474	0.0005615	0.0035	1.3352		3270.2	3270.2	2.11		Si
SLV 15	2.73	-681.1	-5062	-0.0000305	0.0005615	0.0035	1.3352		3624.3	3624.3	5.32		Si
SLV 15	3.63	1127.19	-4292	-0.0000355	0.0005615	0.0035	1.3352		2801.05	2801.05	2.48		Si
SLV 10	2.73	-516.8	-6166	-0.0000321	0.0005615	0.0035	1.3352		4259.43	4259.43	8.24		Si
SLV 10	3.63	1332.27	-5147	-0.0000424	0.0005615	0.0035	1.3352		3306	3306	2.48		Si
SLV 8	2.73	85.48	-3398	-0.0000141	0.0005615	0.0035	1.3352		2261.12	2261.12	26.45		Si
SLV 8	3.63	-464.65	-2088	-0.0000155	0.0005615	0.0035	1.3352		1827.11	1827.11	3.93		Si
SLV 14	2.73	-673.01	-5536	-0.0000323	0.0005615	0.0035	1.3352		3900.18	3900.18	5.8		Si
SLV 14	3.63	1281.51	-4706	-0.00004	0.0005615	0.0035	1.3352		3047.41	3047.41	2.38		Si
SLV 5	2.73	-396.6	-6247	-0.0000303	0.0005615	0.0035	1.3352		4304.67	4304.67	10.85		Si
SLV 5	3.63	1234.5	-5129	-0.0000404	0.0005615	0.0035	1.3352		3295.31	3295.31	2.67		Si
SLV 6	2.73	-276.11	-5946	-0.0000271	0.0005615	0.0035	1.3352		4136.42	4136.42	14.98		Si
SLV 6	3.63	954.08	-4736	-0.0000339	0.0005615	0.0035	1.3352		3065.05	3065.05	3.21		Si
SLV 9	2.73	-637.29	-6467	-0.0000353	0.0005615	0.0035	1.3352		4428.35	4428.35	6.95		Si
SLV 9	3.63	1612.7	-5540	-0.0000498	0.0005615	0.0035	1.3352		3534.37	3534.37	2.19		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	2.73	-449.64	-9137	-7695	-864	1.3352	1.3352	-19209	9506	3808	42820	11995	3405	15399	No	17.82	Si
SLU 81	3.63	852.74	-7355	-6193	-1007	1.3352	1.3352	-15462	9006	3607	42820	11995	3405	15399	No	15.3	Si
SLU 75	2.73	-420.08	-8179	-6888	-890	1.3352	1.3352	-17196	9237	3700	42820	11995	3405	15399	No	17.31	Si
SLU 75	3.63	822.88	-6514	-5485	-995	1.3352	1.3352	-13694	8770	3513	42820	11995	3405	15399	No	15.48	Si
SLU 84	2.73	-451.83	-9149	-7705	-875	1.3352	1.3352	-19234	9509	3809	42820	11995	3405	15399	No	17.61	Si
SLU 84	3.63	859.56	-7367	-6204	-1018	1.3352	1.3352	-15488	9010	3609	42820	11995	3405	15399	No	15.13	Si
SLU 82	2.73	-451.83	-9149	-7705	-875	1.3352	1.3352	-19234	9509	3809	42820	11995	3405	15399	No	17.61	Si
SLU 82	3.63	859.56	-7367	-6204	-1018	1.3352	1.3352	-15488	9010	3609	42820	11995	3405	15399	No	15.13	Si
SLU 73	2.73	-421.54	-8187	-6895	-897	1.3352	1.3352	-17213	9239	3701	42820	11995	3405	15399	No	17.17	Si
SLU 73	3.63	827.42	-6522	-5492	-1002	1.3352	1.3352	-13711	8773	3514	42820	11995	3405	15399	No	15.37	Si
SLU 76	2.73	-421.54	-8187	-6895	-897	1.3352	1.3352	-17213	9239	3701	42820	11995	3405	15399	No	17.17	Si
SLU 76	3.63	827.42	-6522	-5492	-1002	1.3352	1.3352	-13711	8773	3514	42820	11995	3405	15399	No	15.37	Si
SLU 80	2.73	-420.08	-8179	-6888	-890	1.3352	1.3352	-17196	9237	3700	42820	11995	3405	15399	No	17.31	Si
SLU 80	3.63	822.88	-6514	-5485	-995	1.3352	1.3352	-13694	8770	3513	42820	11995	3405	15399	No	15.48	Si
SLU 79	2.73	-417.89	-8168	-6878	-879	1.3352	1.3352	-17171	9234	3699	42820	11995	3405	15399	No	17.51	Si
SLU 79	3.63	816.06	-6501	-5475	-984	1.3352	1.3352	-13667	8767	3512	42820	11995	3405	15399	No	15.66	Si
SLU 78	2.73	-420.08	-8179	-6888	-890	1.3352	1.3352	-17196	9237	3700	42820	11995	3405	15399	No	17.31	Si
SLU 78	3.63	822.88	-6514	-5485	-995	1.3352	1.3352	-13694	8770	3513	42820	11995	3405	15399	No	15.48	Si
SLU 83	2.73	-449.64	-9137	-7695	-864	1.3352	1.3352	-19209	9506	3808	42820	11995	3405	15399	No	17.82	Si
SLU 83	3.63	852.74	-7355	-6193	-1007	1.3352	1.3352	-15462	9006	3607	42820	11995	3405	15399	No	15.3	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	2.73	-673.01	-5536	-4662	-2170	1.3352	1.3352	-11638	12744	5105	42820	17992	3405	21397		9.86	Si
SLV 14	3.63	1281.51	-4706	-3963	-1607	1.3352	1.1859	-9894	12395	4410	42820	17992	3405	21397		13.31	Si
SLV 15	2.73	-681.1	-5062	-4263	-2068	1.3352	1.3352	-10642	12545	5025	42820	17992	3405	21397		10.35	Si
SLV 15	3.63	1127.19	-4292	-3614	-1346	1.3352	1.2149	-9022	12221	4454	42820	17992	3405	21397		15.89	Si
SLV 16	2.73	-564.53	-4771	-4018	-1556	1.3352	1.3352	-10031	12423	4976	42820	17992	3405	21397		13.75	Si
SLV 16	3.63	855.89	-3912	-3294	-956	1.3352	1.3352	-8224	12061	4831	42820	17992	3405	21397		22.39	Si
SLV 6	2.73	-276.11	-5946	-5007	-1023	1.3352	1.3352	-12500	12917	5174	42820	17992	3405	21397		20.92	Si
SLV 6	3.63	954.08	-4736	-3988	-1377	1.3352	1.3352	-9957	12408	4970	42820	17992	3405	21397		15.54	Si
SLV 13	2.73	-789.58	-5827	-4907	-2682	1.3352	1.3352	-12249	12867	5154	42820	17992	3405	21397		7.98	Si
SLV 13	3.63	1552.81	-5086	-4283	-1998	1.3352	1.0869	-10692	12555	4094	42820	17992	3405	21397		10.71	Si
SLV 4	2.73	237.77	-4038	-3400	1298	1.3352	1.3352	-8489	12114	4853	42820	17992	3405	21397		16.49	Si
SLV 4	3.63	-404.76	-2542	-2141	558	1.3352	1.3352	-5344	11486	4601	42820	17992	3405	21397		38.34	Si
SLV 8	2.73	85.48	-3398	-2861	1024	1.3352	1.3352	-7143	11845	4745	42820	17992	3405	21397		20.9	Si
SLV 8	3.63	-464.65	-2088	-1759	795	1.3352	1.3352	-4390	11295	4524	42820	17992	3405	21397		26.92	Si
SLV 5	2.73	-396.6	-6247	-5260	-1552	1.3352	1.3352	-13133	13043	5225	42820	17992	3405	21397		13.78	Si
SLV 5	3.63	1234.5	-5129	-4319	-1780	1.3352	1.2807	-10782	12573	4831	42820	17992	3405	21397		12.02	Si
SLV 10	2.73	-516.8	-6166	-5192	-1879	1.3352	1.3352	-12963	13009	5211	42820	17992	3405	21397		11.39	Si
SLV 10	3.63	1332.27	-5147	-4334	-1831	1.3352	1.2263	-10821	12581	4628	42820	17992	3405	21397		11.69	Si
SLV 9	2.73	-637.29	-6467	-5446	-2408	1.3352	1.3352	-13595	13136	5262	42820	17992	3405	21397		8.88	Si
SLV 9	3.63	1612.7	-5540	-4665	-2235	1.3352	1.1295	-11646	12746	4319	42820	17992	3405	21397		9.58	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.61 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.46	8359	-3348	201.08	474.75	2.36	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.46	8471	-3393	201.08	480.74	2.39	Si
SLV 11	179667	0.46	8741	-3501	201.08	495.16	2.46	Si
SLV 7	179667	0.46	8854	-3546	201.08	501.12	2.49	Si
SLV 16	179667	0.46	9968	-3993	201.08	559.82	2.78	Si
SLV 15	179667	0.46	10338	-4141	201.08	579.1	2.88	Si
SLV 4	179667	0.46	10342	-4142	201.08	579.29	2.88	Si
SLV 3	179667	0.46	10712	-4291	201.08	598.46	2.98	Si
SLV 14	179667	0.46	11454	-4588	201.08	636.58	3.17	Si
SLV 13	179667	0.46	11824	-4736	201.08	655.42	3.26	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 13	-1654	-4758	-77	2.524	395.9	0.89	41.22872	17.68601	Si
SLV 14	-1604	-4716	-77	2.566	391.3	0.89	41.92867	17.68601	Si
SLV 15	-1549	-4022	51	2.623	386.2	0.889	42.86578	17.68601	Si
SLV 16	-1499	-3980	51	2.668	381.6	0.889	43.61601	17.68601	Si
SLV 1	-1454	-5892	-51	2.71	377.5	0.889	44.30766	17.68601	Si
SLV 2	-1404	-5850	-51	2.759	372.9	0.889	45.10481	17.68601	Si
SLV 3	-1349	-5157	78	2.804	367.9	0.889	45.84555	17.68601	Si
SLV 4	-1299	-5115	78	2.856	363.4	0.889	46.69616	17.68601	Si
SLV 9	-1707	-6014	-218	2.435	400.9	0.89	39.75445	14.28956	Si
SLV 10	-1655	-5970	-218	2.476	396.1	0.89	40.44164	14.28956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.334	SLU 44	Si
V_SLU	15.132	SLU 82	Si
PF_SLV	2.106	SLV 13	Si
V_SLV	7.978	SLV 13	Si
PFFP_SLV	2.361	SLV 12	Si
R_SLV	2.331	SLV 13	Si

Maschio 26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-16.104	-3.134	-16.664	-3.134	L2	L3	0.56	0.3	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 81	2.73	200.07	-4403	-0.0000621	0.0003743	0.0035	0.5598	914.99	1002.12	1002.12	5.01	No	Si
SLU 81	3.73	-315.55	-3152	-0.0000613	0.0003743	0.0035	0.5598	719.66	831.97	831.97	2.64	No	Si
SLU 42	2.73	196.2	-4125	-0.0000588	0.0003743	0.0035	0.5598	876.08	956.72	956.72	4.88	No	Si
SLU 42	3.73	-320.04	-3042	-0.0000609	0.0003743	0.0035	0.5598	699.96	809.23	809.23	2.53	No	Si
SLU 41	2.73	196.44	-4120	-0.0000588	0.0003743	0.0035	0.5598	875.29	955.83	955.83	4.87	No	Si
SLU 41	3.73	-319.4	-3038	-0.0000608	0.0003743	0.0035	0.5598	699.23	808.4	808.4	2.53	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	2.73	196.44	-4120	-0.0000588	0.0003743	0.0035	0.5598	875.29	955.83	955.83	4.87	No	Si
SLU 39	3.73	-319.4	-3038	-0.0000608	0.0003743	0.0035	0.5598	699.23	808.4	808.4	2.53	No	Si
SLU 34	2.73	164.34	-3589	-0.0000499	0.0003743	0.0035	0.5598	793.65	860.39	860.39	5.24	No	Si
SLU 34	3.73	-263.56	-2591	-0.0000502	0.0003743	0.0035	0.5598	615.26	712.19	712.19	2.7	No	Si
SLU 31	2.73	164.34	-3589	-0.0000499	0.0003743	0.0035	0.5598	793.65	860.39	860.39	5.24	No	Si
SLU 31	3.73	-263.56	-2591	-0.0000502	0.0003743	0.0035	0.5598	615.26	712.19	712.19	2.7	No	Si
SLU 84	2.73	199.82	-4408	-0.0000621	0.0003743	0.0035	0.5598	915.73	1003.02	1003.02	5.02	No	Si
SLU 84	3.73	-316.19	-3156	-0.0000614	0.0003743	0.0035	0.5598	720.37	832.79	832.79	2.63	No	Si
SLU 40	2.73	196.2	-4125	-0.0000588	0.0003743	0.0035	0.5598	876.08	956.72	956.72	4.88	No	Si
SLU 40	3.73	-320.04	-3042	-0.0000609	0.0003743	0.0035	0.5598	699.96	809.23	809.23	2.53	No	Si
SLU 83	2.73	200.07	-4403	-0.0000621	0.0003743	0.0035	0.5598	914.99	1002.12	1002.12	5.01	No	Si
SLU 83	3.73	-315.55	-3152	-0.0000613	0.0003743	0.0035	0.5598	719.66	831.97	831.97	2.64	No	Si
SLU 82	2.73	199.82	-4408	-0.0000621	0.0003743	0.0035	0.5598	915.73	1003.02	1003.02	5.02	No	Si
SLU 82	3.73	-316.19	-3156	-0.0000614	0.0003743	0.0035	0.5598	720.37	832.79	832.79	2.63	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	2.73	-75.68	-1752	-0.0000229	0.0005615	0.0035	0.5598		531	531	7.02		Si
SLV 14	3.73	237.34	-661	-0.0043493	0.0005615	0.0035	0.4478		199.24	199.24	0.84		No
SLV 6	2.73	140.79	-2944	-0.0000403	0.0005615	0.0035	0.5598		761.52	761.52	5.41		Si
SLV 6	3.73	-347.74	-2186	-0.0000618	0.0005615	0.0035	0.4478		637.63	637.63	1.83		Si
SLV 16	2.73	-62.08	-1468	-0.000019	0.0005615	0.0035	0.5598		458.49	458.49	7.39		Si
SLV 16	3.73	265.57	-458	-0.0111211	0.0005615	0.0035	0.4478		144.31	144.31	0.54		No
SLV 13	2.73	-122.77	-1653	-0.0000265	0.0005615	0.0035	0.5598		505.64	505.64	4.12		Si
SLV 13	3.73	340.92	-457	-0.0172123	0.0005615	0.0035	0.4478		144.23	144.23	0.42		No
SLV 15	2.73	-109.16	-1368	-0.0000226	0.0005615	0.0035	0.5598		433.1	433.1	3.97		Si
SLV 15	3.73	369.15	-254	-0.0242036	0.0005615	0.0035	0.4478		88.92	88.92	0.24		No
SLV 1	2.73	233.47	-2973	-0.0000497	0.0005615	0.0035	0.5598		767.6	767.6	3.29		Si
SLV 1	3.73	-505.84	-2435	-0.0001201	0.0005615	0.0035	0.4478		698.4	698.4	1.38		Si
SLV 2	2.73	280.56	-3073	-0.0000554	0.0005615	0.0035	0.5598		788.09	788.09	2.81		Si
SLV 2	3.73	-609.42	-2638	-0.0002016	0.0005615	0.0035	0.4478		746.89	746.89	1.23		Si
SLV 3	2.73	247.08	-2689	-0.0000484	0.0005615	0.0035	0.5598		707.69	707.69	2.86		Si
SLV 3	3.73	-477.61	-2232	-0.0001203	0.0005615	0.0035	0.4478		648.72	648.72	1.36		Si
SLV 8	2.73	186.14	-1996	-0.0000358	0.0005615	0.0035	0.5598		542.82	542.82	2.92		Si
SLV 8	3.73	-253.63	-1509	-0.0000455	0.0005615	0.0035	0.4478		469.09	469.09	1.85		Si
SLV 4	2.73	294.16	-2788	-0.0000543	0.0005615	0.0035	0.5598		728.89	728.89	2.48		Si
SLV 4	3.73	-581.19	-2435	-0.0002202	0.0005615	0.0035	0.4478		698.47	698.47	1.2		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	2.73	200.07	-4403	-3707	267	0.5598	0.5598	-22076	9888	1661	42820	5029	1428	6456	No	24.19	Si
SLU 83	3.73	-315.55	-3152	-2655	334	0.5598	0.5394	-15806	9052	1465	42820	5029	1428	6456	No	19.36	Si
SLU 84	2.73	199.82	-4408	-3712	266	0.5598	0.5598	-22103	9892	1661	42820	5029	1428	6456	No	24.23	Si
SLU 84	3.73	-316.19	-3156	-2658	335	0.5598	0.5392	-15827	9055	1465	42820	5029	1428	6456	No	19.26	Si
SLU 81	2.73	200.07	-4403	-3707	267	0.5598	0.5598	-22076	9888	1661	42820	5029	1428	6456	No	24.19	Si
SLU 81	3.73	-315.55	-3152	-2655	334	0.5598	0.5394	-15806	9052	1465	42820	5029	1428	6456	No	19.36	Si
SLU 31	2.73	164.34	-3589	-3022	226	0.5598	0.5598	-17994	9344	1569	42820	5029	1428	6456	No	28.59	Si
SLU 31	3.73	-263.56	-2591	-2182	283	0.5598	0.5345	-12990	8676	1391	42820	5029	1428	6456	No	22.82	Si
SLU 40	2.73	196.2	-4125	-3474	290	0.5598	0.5598	-20685	9702	1629	42820	5029	1428	6456	No	22.25	Si
SLU 40	3.73	-320.04	-3042	-2562	349	0.5598	0.5241	-15253	8978	1412	42820	5029	1428	6456	No	18.48	Si
SLU 42	2.73	196.2	-4125	-3474	290	0.5598	0.5598	-20685	9702	1629	42820	5029	1428	6456	No	22.25	Si
SLU 42	3.73	-320.04	-3042	-2562	349	0.5598	0.5241	-15253	8978	1412	42820	5029	1428	6456	No	18.48	Si
SLU 41	2.73	196.44	-4120	-3469	291	0.5598	0.5598	-20657	9699	1629	42820	5029	1428	6456	No	22.22	Si
SLU 41	3.73	-319.4	-3038	-2558	348	0.5598	0.5243	-15233	8975	1412	42820	5029	1428	6456	No	18.57	Si
SLU 34	2.73	164.34	-3589	-3022	226	0.5598	0.5598	-17994	9344	1569	42820	5029	1428	6456	No	28.59	Si
SLU 34	3.73	-263.56	-2591	-2182	283	0.5598	0.5345	-12990	8676	1391	42820	5029	1428	6456	No	22.82	Si
SLU 39	2.73	196.44	-4120	-3469	291	0.5598	0.5598	-20657	9699	1629	42820	5029	1428	6456	No	22.22	Si
SLU 39	3.73	-319.4	-3038	-2558	348	0.5598	0.5243	-15233	8975	1412	42820	5029	1428	6456	No	18.57	Si
SLU 82	2.73	199.82	-4408	-3712	266	0.5598	0.5598	-22103	9892	1661	42820	5029	1428	6456	No	24.23	Si
SLU 82	3.73	-316.19	-3156	-2658	335	0.5598	0.5392	-15827	9055	1465	42820	5029	1428	6456	No	19.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	2.73	-75.68	-1752	-1476	-526	0.5598	0.5598	-8786	12174	2044	42820	7543	1428	8971		17.07	Si
SLV 14	3.73	237.34	-661	-556	-517	0.4478	0	0	0	0	42820	6035	1142	7177		13.87	Si
SLV 4	2.73	294.16	-2788	-2348	844	0.5598	0.5232	-13981	13213	2074	42820	7543	1428	8971		10.63	Si
SLV 4	3.73	-581.19	-2435	-2050	929	0.4478	0.1236	0	0	0	42820	6035	1142	7177		7.73	Si
SLV 1	2.73	233.47	-2973	-2504	624	0.5598	0.5598	-14907	13398	2250	42820	7543	1428	8971		14.39	Si
SLV 1	3.73	-505.84	-2435	-2050	825	0.4478	0.2164	0	0	0	42820	6035	1142	7177		8.7	Si
SLV 16	2.73	-62.08	-1468	-1236	-488	0.5598	0.5598	-7360	11889	1997	42820	7543	1428	8971		18.38	Si
SLV 16	3.73	265.57	-458	-385	-603	0.4478	0	0	0	0	42820	6035	1142	7177		11.91	Si
SLV 6	2.73	140.79	-2944	-2479	299	0.5598	0.5598	-14761	13369	2245	42820	7543	1428	8971		30	Si
SLV 6	3.73	-347.74	-2186	-1841	581	0.4478	0.3625	0	0	0	42820	6035	1142	7177		12.36	Si
SLV 15	2.73	-109.16	-1368	-1152	-670	0.5598	0.5598	-6861	11789	1980	42820	7543	1428	8971		13.38	Si
SLV 15	3.73	369.15	-254	-214	-791	0.4478	0	0	0	0	42820	6035	1142	7177		9.07	Si
SLV 8	2.73	186.14	-1996	-1681	425	0.5598	0.5598	-10009	12418	2086	42820	7543	1428	8971		21.13	Si
SLV 8	3.73	-253.63	-1509	-1271	296	0.4478	0.3356	0	0	0	42820	6035	1142	7177		24.21	Si
SLV 2	2.73	280.56	-3073	-2587	806	0.5598	0.5598	-15407	13498	2267	42820	7543	1428	8971		11.13	Si
SLV 2	3.73	-609.42	-2638	-2221	1014	0.4478	0.1466	0	0	0	42820	6035	1142	7177		7.08	Si
SLV 13	2.73	-122.77	-1653	-1392	-708	0.5598	0.5598	-8287	12074	2028	42820	7543	1428	8971		12.67	Si
SLV 13	3.73	340.92	-457	-385	-706	0.4478	0	0	0	0	42820	6035	1142	7177		10.16	Si
SLV 3	2.73	247.08	-2689	-2264	661	0.5598	0.5598	-13482	13113	2202	42820	7543	1428	8971		13.57	Si
SLV 3	3.73	-477.61	-2232	-1879	740	0.4478	0.1976	0	0	0	42820	6035	1142	7177		9.7	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.61 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.46	7668	-1288	84.31	183.47	2.18	Si
SLV 11	179667	0.46	7740	-1300	84.31	185.1	2.2	Si
SLV 8	179667	0.46	7761	-1303	84.31	185.58	2.2	Si
SLV 7	179667	0.46	7834	-1316	84.31	187.21	2.22	Si
SLV 16	179667	0.46	9446	-1586	84.31	223.24	2.65	Si
SLV 15	179667	0.46	9516	-1598	84.31	224.78	2.67	Si
SLV 4	179667	0.46	9757	-1639	84.31	230.09	2.73	Si
SLV 3	179667	0.46	9827	-1650	84.31	231.62	2.75	Si
SLV 14	179667	0.46	11062	-1858	84.31	258.49	3.07	Si
SLV 13	179667	0.46	11132	-1870	84.31	259.99	3.08	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-471	-815	-12	3.075	145.8	0.89	50.22274	17.68601	Si
SLV 1	-455	-1174	-12	3.123	144.4	0.89	50.99288	17.68601	Si
SLV 4	-446	-466	10	3.152	143.6	0.89	51.446	17.68601	Si
SLV 3	-430	-824	10	3.202	142.2	0.891	52.24855	17.68601	Si
SLV 14	-255	-3302	-10	3.874	128.2	0.903	62.32761	17.68601	Si
SLV 13	-239	-3660	-10	3.952	127	0.906	63.41658	17.68601	Si
SLV 16	-230	-2952	12	3.993	126.3	0.907	63.97703	17.68601	Si
SLV 6	-425	-2087	-38	3.19	141.8	0.891	52.03417	14.28956	Si
SLV 15	-214	-3310	12	4.075	125.2	0.91	65.10549	17.68601	Si
SLV 5	-408	-2458	-38	3.244	140.4	0.892	52.8856	14.28956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.529	SLU 40	Si
V_SLU	18.484	SLU 40	Si
PF_SLV	0.241	SLV 15	No
V_SLV	7.079	SLV 2	Si
PFFP_SLV	2.176	SLV 12	Si
R_SLV	2.84	SLV 2	Si

Maschio 27

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-13.684	-3.134	-14.704	-3.134	L2	L3	1.02	0.3	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	0.73	87.31	-4265	-0.0000238	0.0003743	0.0035	1.02	1877.2	1961.63	1961.63	22.47	No	Si
SLU 48	3.73	-161.8	-3388	-0.0000215	0.0003743	0.0035	1.02	1540.1	1823.83	1823.83	11.27	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 45	0.73	87.31	-4265	-0.0000238	0.0003743	0.0035	1.02	1877.2	1961.63	1961.63	22.47	No	Si
SLU 45	3.73	-161.8	-3388	-0.0000215	0.0003743	0.0035	1.02	1540.1	1823.83	1823.83	11.27	No	Si
SLU 46	0.73	87.46	-4267	-0.0000238	0.0003743	0.0035	1.02	1878.11	1962.56	1962.56	22.44	No	Si
SLU 46	3.73	-163.03	-3386	-0.0000215	0.0003743	0.0035	1.02	1539.37	1823.06	1823.06	11.18	No	Si
SLU 49	0.73	87.46	-4267	-0.0000238	0.0003743	0.0035	1.02	1878.11	1962.56	1962.56	22.44	No	Si
SLU 49	3.73	-163.03	-3386	-0.0000215	0.0003743	0.0035	1.02	1539.37	1823.06	1823.06	11.18	No	Si
SLU 43	0.73	87.31	-4265	-0.0000238	0.0003743	0.0035	1.02	1877.2	1961.63	1961.63	22.47	No	Si
SLU 43	3.73	-161.8	-3388	-0.0000215	0.0003743	0.0035	1.02	1540.1	1823.83	1823.83	11.27	No	Si
SLU 44	0.73	87.56	-4269	-0.0000238	0.0003743	0.0035	1.02	1878.71	1963.18	1963.18	22.42	No	Si
SLU 44	3.73	-163.84	-3385	-0.0000215	0.0003743	0.0035	1.02	1538.89	1822.54	1822.54	11.12	No	Si
SLU 65	0.73	98.89	-5155	-0.0000288	0.0003743	0.0035	1.02	2194.05	2306.27	2306.27	23.32	No	Si
SLU 65	3.73	-192.09	-4435	-0.0000278	0.0003743	0.0035	1.02	1939.83	2262.21	2262.21	11.78	No	Si
SLU 51	0.73	87.46	-4267	-0.0000238	0.0003743	0.0035	1.02	1878.11	1962.56	1962.56	22.44	No	Si
SLU 51	3.73	-163.03	-3386	-0.0000215	0.0003743	0.0035	1.02	1539.37	1823.06	1823.06	11.18	No	Si
SLU 47	0.73	87.56	-4269	-0.0000238	0.0003743	0.0035	1.02	1878.71	1963.18	1963.18	22.42	No	Si
SLU 47	3.73	-163.84	-3385	-0.0000215	0.0003743	0.0035	1.02	1538.89	1822.54	1822.54	11.12	No	Si
SLU 50	0.73	87.31	-4265	-0.0000238	0.0003743	0.0035	1.02	1877.2	1961.63	1961.63	22.47	No	Si
SLU 50	3.73	-161.8	-3388	-0.0000215	0.0003743	0.0035	1.02	1540.1	1823.83	1823.83	11.27	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	0.73	-924.39	-3794	-0.0000481	0.0005615	0.0035	1.02		2046.34	2046.34	2.21		Si
SLV 16	3.73	1002.23	-4002	-0.0000523	0.0005615	0.0035	1.02		1972.88	1972.88	1.97		Si
SLV 14	0.73	-952.79	-4802	-0.0000522	0.0005615	0.0035	1.02		2488.16	2488.16	2.61		Si
SLV 14	3.73	1011.88	-3850	-0.0000529	0.0005615	0.0035	1.02		1905.17	1905.17	1.88		Si
SLV 13	0.73	-1175.27	-4829	-0.0000619	0.0005615	0.0035	1.02		2499.84	2499.84	2.13		Si
SLV 13	3.73	1336.44	-3843	-0.0000822	0.0005615	0.0035	1.02		1902.31	1902.31	1.42		Si
SLV 2	0.73	1303.83	-4633	-0.0000697	0.0005615	0.0035	1.02		2242.44	2242.44	1.72		Si
SLV 2	3.73	-1635.63	-3536	-0.0002535	0.0005615	0.0035	0.816		1929.59	1929.59	1.18		Si
SLV 4	0.73	1332.23	-3625	-0.0000888	0.0005615	0.0035	1.02		1804.28	1804.28	1.35		Si
SLV 4	3.73	-1645.27	-3689	-0.0002059	0.0005615	0.0035	0.816		1998.47	1998.47	1.21		Si
SLV 6	0.73	484.63	-5867	-0.0000435	0.0005615	0.0035	1.02		2712.34	2712.34	5.6		Si
SLV 6	3.73	-703.21	-3468	-0.0000378	0.0005615	0.0035	1.02		1898.86	1898.86	2.7		Si
SLV 1	0.73	1081.35	-4660	-0.0000571	0.0005615	0.0035	1.02		2253.57	2253.57	2.08		Si
SLV 1	3.73	-1311.07	-3530	-0.0000885	0.0005615	0.0035	0.816		1926.69	1926.69	1.47		Si
SLV 8	0.73	579.29	-2508	-0.00003	0.0005615	0.0035	1.02		1291.02	1291.02	2.23		Si
SLV 8	3.73	-735.36	-3976	-0.0000411	0.0005615	0.0035	1.02		2129.12	2129.12	2.9		Si
SLV 3	0.73	1109.74	-3652	-0.0000605	0.0005615	0.0035	1.02		1816.6	1816.6	1.64		Si
SLV 3	3.73	-1320.71	-3682	-0.0000843	0.0005615	0.0035	0.816		1995.56	1995.56	1.51		Si
SLV 15	0.73	-1146.88	-3821	-0.0000622	0.0005615	0.0035	0.816		2058.67	2058.67	1.8		Si
SLV 15	3.73	1326.79	-3996	-0.0000777	0.0005615	0.0035	1.02		1970.02	1970.02	1.48		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	0.73	124.22	-7451	-6275	78	1.02	1.02	-20506	9679	2962	42820	9163	2601	11764	No	150.36	Si
SLU 84	3.73	-263.43	-7350	-6189	196	1.02	1.02	-20227	9641	2950	42820	9163	2601	11764	No	59.95	Si
SLU 80	0.73	116.6	-6762	-5694	73	1.02	1.02	-18609	9426	2884	42820	9163	2601	11764	No	161.9	Si
SLU 80	3.73	-241.78	-6476	-5453	181	1.02	1.02	-17821	9321	2852	42820	9163	2601	11764	No	65.15	Si
SLU 76	0.73	116.69	-6764	-5696	73	1.02	1.02	-18613	9426	2884	42820	9163	2601	11764	No	161.41	Si
SLU 76	3.73	-242.6	-6475	-5452	181	1.02	1.02	-17818	9320	2852	42820	9163	2601	11764	No	65.05	Si
SLU 82	0.73	124.22	-7451	-6275	78	1.02	1.02	-20506	9679	2962	42820	9163	2601	11764	No	150.36	Si
SLU 82	3.73	-263.43	-7350	-6189	196	1.02	1.02	-20227	9641	2950	42820	9163	2601	11764	No	59.95	Si
SLU 79	0.73	116.45	-6760	-5692	72	1.02	1.02	-18602	9425	2884	42820	9163	2601	11764	No	162.65	Si
SLU 79	3.73	-240.56	-6478	-5455	180	1.02	1.02	-17826	9321	2852	42820	9163	2601	11764	No	65.3	Si
SLU 78	0.73	116.6	-6762	-5694	73	1.02	1.02	-18609	9426	2884	42820	9163	2601	11764	No	161.9	Si
SLU 78	3.73	-241.78	-6476	-5453	181	1.02	1.02	-17821	9321	2852	42820	9163	2601	11764	No	65.15	Si
SLU 83	0.73	124.08	-7449	-6273	78	1.02	1.02	-20499	9678	2961	42820	9163	2601	11764	No	151.01	Si
SLU 83	3.73	-262.21	-7352	-6191	196	1.02	1.02	-20232	9642	2950	42820	9163	2601	11764	No	60.08	Si
SLU 73	0.73	116.69	-6764	-5696	73	1.02	1.02	-18613	9426	2884	42820	9163	2601	11764	No	161.41	Si
SLU 73	3.73	-242.6	-6475	-5452	181	1.02	1.02	-17818	9320	2852	42820	9163	2601	11764	No	65.05	Si
SLU 75	0.73	116.6	-6762	-5694	73	1.02	1.02	-18609	9426	2884	42820	9163	2601	11764	No	161.9	Si
SLU 75	3.73	-241.78	-6476	-5453	181	1.02	1.02	-17821	9321	2852	42820	9163	2601	11764	No	65.15	Si
SLU 81	0.73	124.08	-7449	-6273	78	1.02	1.02	-20499	9678	2961	42820	9163	2601	11764	No	151.01	Si
SLU 81	3.73	-262.21	-7352	-6191	196	1.02	1.02	-20232	9642	2950	42820	9163	2601	11764	No	60.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	0.73	-1175.27	-4829	-4067	-1109	1.02	0.7999	-17084	13834	3320	42820	13745	2601	16346		14.74	Si
SLV 13	3.73	1336.44	-3843	-3236	-752	1.02	0.4868	-10576	12532	1830	42820	13745	2601	16346		21.73	Si
SLV 8	0.73	579.29	-2508	-2112	492	1.02	0.837	-6901	11797	2962	42820	13745	2601	16346		33.24	Si
SLV 8	3.73	-735.36	-3976	-3348	504	1.02	0.9752	-10942	12605	3688	42820	13745	2601	16346		32.42	Si
SLV 6	0.73	484.63	-5867	-4941	426	1.02	1.02	-16147	13646	4176	42820	13745	2601	16346		38.33	Si
SLV 6	3.73	-703.21	-3468	-2921	372	1.02	0.9217	-9544	12325	3408	42820	13745	2601	16346		43.92	Si
SLV 2	0.73	1303.83	-4633	-3901	1185	1.02	0.6857	-12749	12966	2667	42820	13745	2601	16346		13.79	Si
SLV 2	3.73	-1635.63	-3536	-2978	945	0.816	0.1424	0	0	0	42820	10996	2081	13076		13.83	Si
SLV 14	0.73	-952.79	-4802	-4044	-926	1.02	0.9348	-13215	13060	3662	42820	13745	2601	16346		17.65	Si
SLV 14	3.73	1011.88	-3850	-3242	-569	1.02	0.7415	-10594	12535	2788	42820	13745	2601	16346		28.71	Si
SLV 1	0.73	1081.35	-4660	-3924	1003	1.02	0.8338	-12824	12981	3247	42820	13745	2601	16346		16.3	Si
SLV 1	3.73	-1311.07	-3530	-2972	763	0.816	0.4157	0	0	0	42820	10996	2081	13076		17.15	Si
SLV 4	0.73	1332.23	-3625	-3052	1205	1.02	0.4274	-9975	12412	1592	42820	13745	2601	16346		13.57	Si
SLV 4	3.73	-1645.27	-3689	-3106	985	0.816	0.1919	0	0	0	42820	10996	2081	13076		13.27	Si
SLV 3	0.73	1109.74	-3652	-3075	1022	1.02	0.6184	-10050	12427	2305	42820	13745	2601	16346		15.99	Si
SLV 3	3.73	-1320.71	-3682	-3101	802	0.816	0.454	0	0	0	42820	10996	2081	13076		16.3	Si
SLV 16	0.73	-924.39	-3794	-3195	-907	1.02	0.7991	-13409	13099	3140	42820	13745	2601	16346		18.03	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	3.73	1002.23	-4002	-3370	-530	1.02	0.7787	-11014	12619	2948	42820	13745	2601	16346		30.86	Si
SLV 15	0.73	-1146.88	-3821	-3218	-1089	0.816	0.6296	0	0	0	42820	10996	2081	13076		12	Si
SLV 15	3.73	1326.79	-3996	-3365	-713	1.02	0.5338	-10996	12616	2020	42820	13745	2601	16346		22.94	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.61 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.46	9376	-2869	153.61	403.95	2.63	Si
SLV 4	179667	0.46	9390	-2874	153.61	404.52	2.63	Si
SLV 1	179667	0.46	10009	-3063	153.61	429.31	2.79	Si
SLV 2	179667	0.46	10023	-3067	153.61	429.88	2.8	Si
SLV 7	179667	0.46	11048	-3381	153.61	470.42	3.06	Si
SLV 8	179667	0.46	11063	-3385	153.61	471	3.07	Si
SLV 11	179667	0.46	13114	-4013	153.61	550.25	3.58	Si
SLV 12	179667	0.46	13129	-4017	153.61	550.8	3.59	Si
SLV 5	179667	0.46	13158	-4026	153.61	551.91	3.59	Si
SLV 6	179667	0.46	13172	-4031	153.61	552.47	3.6	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-1389	-3821	-10	2.416	314.2	0.891	39.4079	17.68601	Si
SLV 16	-1380	-3794	-10	2.425	313.4	0.891	39.55294	17.68601	Si
SLV 13	-1354	-4829	47	2.436	310.9	0.891	39.74323	17.68601	Si
SLV 14	-1345	-4802	47	2.444	310.1	0.891	39.89153	17.68601	Si
SLV 11	-1175	-2587	-93	2.609	294.3	0.889	42.63097	14.28956	Si
SLV 12	-1166	-2559	-93	2.619	293.4	0.889	42.80655	14.28956	Si
SLV 3	-660	-3652	-54	3.412	248.8	0.894	55.48938	17.68601	Si
SLV 9	-1057	-5946	99	2.75	283.5	0.889	44.95946	14.28956	Si
SLV 4	-651	-3625	-54	3.43	248.1	0.894	55.75752	17.68601	Si
SLV 10	-1048	-5918	99	2.762	282.6	0.889	45.15327	14.28956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	11.124	SLU 44	Si
V_SLU	59.955	SLU 82	Si
PF_SLV	1.18	SLV 2	Si
V_SLV	12.005	SLV 15	Si
PFFP_SLV	2.63	SLV 3	Si
R_SLV	2.228	SLV 15	Si

Maschio 28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-11.764	-3.134	-12.284	-3.134	L2	L3	0.52	0.3	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 35	2.73	-91.92	-3501	-0.0000458	0.0003743	0.0035	0.5202	710.02	830.13	830.13	9.03	No	Si
SLU 35	3.73	166.75	-2441	-0.0000432	0.0003743	0.0035	0.5202	537.45	561.43	561.43	3.37	No	Si
SLU 40	2.73	-116.43	-4033	-0.0000546	0.0003743	0.0035	0.5202	782.67	923.09	923.09	7.93	No	Si
SLU 40	3.73	212.69	-2881	-0.0000534	0.0003743	0.0035	0.5202	613.47	650.17	650.17	3.06	No	Si
SLU 42	2.73	-116.43	-4033	-0.0000546	0.0003743	0.0035	0.5202	782.67	923.09	923.09	7.93	No	Si
SLU 42	3.73	212.69	-2881	-0.0000534	0.0003743	0.0035	0.5202	613.47	650.17	650.17	3.06	No	Si
SLU 41	2.73	-117.1	-4028	-0.0000546	0.0003743	0.0035	0.5202	782.09	922.35	922.35	7.88	No	Si
SLU 41	3.73	212.96	-2879	-0.0000534	0.0003743	0.0035	0.5202	613.1	649.71	649.71	3.05	No	Si
SLU 39	2.73	-117.1	-4028	-0.0000546	0.0003743	0.0035	0.5202	782.09	922.35	922.35	7.88	No	Si
SLU 39	3.73	212.96	-2879	-0.0000534	0.0003743	0.0035	0.5202	613.1	649.71	649.71	3.05	No	Si
SLU 38	2.73	-91.25	-3506	-0.0000457	0.0003743	0.0035	0.5202	710.67	830.93	830.93	9.11	No	Si
SLU 38	3.73	166.48	-2444	-0.0000432	0.0003743	0.0035	0.5202	537.85	561.88	561.88	3.37	No	Si
SLU 33	2.73	-91.25	-3506	-0.0000457	0.0003743	0.0035	0.5202	710.67	830.93	830.93	9.11	No	Si
SLU 33	3.73	166.48	-2444	-0.0000432	0.0003743	0.0035	0.5202	537.85	561.88	561.88	3.37	No	Si
SLU 32	2.73	-91.92	-3501	-0.0000458	0.0003743	0.0035	0.5202	710.02	830.13	830.13	9.03	No	Si
SLU 32	3.73	166.75	-2441	-0.0000432	0.0003743	0.0035	0.5202	537.45	561.43	561.43	3.37	No	Si
SLU 37	2.73	-91.92	-3501	-0.0000458	0.0003743	0.0035	0.5202	710.02	830.13	830.13	9.03	No	Si
SLU 37	3.73	166.75	-2441	-0.0000432	0.0003743	0.0035	0.5202	537.45	561.43	561.43	3.37	No	Si
SLU 36	2.73	-91.25	-3506	-0.0000457	0.0003743	0.0035	0.5202	710.67	830.93	830.93	9.11	No	Si
SLU 36	3.73	166.48	-2444	-0.0000432	0.0003743	0.0035	0.5202	537.85	561.88	561.88	3.37	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	2.73	100.69	-1404	-0.0000246	0.0005615	0.0035	0.5202		363.11	363.11	3.61		Si
SLV 3	3.73	-286.13	-368	-0.00173	0.0005615	0.0035	0.4162		159.38	159.38	0.56		No
SLV 1	2.73	115.29	-1690	-0.0000291	0.0005615	0.0035	0.5202		430.18	430.18	3.73		Si
SLV 1	3.73	-261.32	-574	-0.0010007	0.0005615	0.0035	0.4162		210.66	210.66	0.81		No
SLV 4	2.73	146.71	-1287	-0.0000294	0.0005615	0.0035	0.5202		335.52	335.52	2.29		Si
SLV 4	3.73	-383.5	-153	-0.0044341	0.0005615	0.0035	0.4162		105.21	105.21	0.27		No
SLV 16	2.73	-176.46	-2658	-0.0000458	0.0005615	0.0035	0.5202		695.36	695.36	3.94		Si
SLV 16	3.73	366.54	-2119	-0.0000846	0.0005615	0.0035	0.5202		528.44	528.44	1.44		Si
SLV 2	2.73	161.31	-1573	-0.0000334	0.0005615	0.0035	0.5202		403.03	403.03	2.5		Si
SLV 2	3.73	-358.69	-359	-0.0028844	0.0005615	0.0035	0.4162		157.05	157.05	0.44		No
SLV 13	2.73	-207.89	-3061	-0.0000536	0.0005615	0.0035	0.5202		782.35	782.35	3.76		Si
SLV 13	3.73	488.72	-2539	-0.0001361	0.0005615	0.0035	0.5202		615.99	615.99	1.26		Si
SLV 8	2.73	17.35	-1431	-0.0000156	0.0005615	0.0035	0.5202		369.63	369.63	21.31		Si
SLV 8	3.73	-151.57	-598	-0.0001253	0.0005615	0.0035	0.4162		216.62	216.62	1.43		Si
SLV 9	2.73	-78.53	-2917	-0.0000373	0.0005615	0.0035	0.5202		751.19	751.19	9.57		Si
SLV 9	3.73	256.79	-2095	-0.0000516	0.0005615	0.0035	0.5202		523	523	2.04		Si
SLV 15	2.73	-222.49	-2775	-0.0000523	0.0005615	0.0035	0.5202		720.51	720.51	3.24		Si
SLV 15	3.73	463.92	-2334	-0.0001382	0.0005615	0.0035	0.5202		574.49	574.49	1.24		Si
SLV 14	2.73	-161.87	-2944	-0.0000471	0.0005615	0.0035	0.5202		757.17	757.17	4.68		Si
SLV 14	3.73	391.35	-2324	-0.0000884	0.0005615	0.0035	0.5202		572.58	572.58	1.46		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	2.73	2.09	-1925	-1621	173	0.5202	0.5202	-10388	8329	1300	42820	4673	1327	6000	No	34.71	Si
SLU 51	3.73	-9.04	-1007	-848	91	0.5202	0.5202	-5435	7669	1197	42820	4673	1327	6000	No	66.09	Si
SLU 50	2.73	1.42	-1921	-1617	171	0.5202	0.5202	-10363	8326	1299	42820	4673	1327	6000	No	35.12	Si
SLU 50	3.73	-8.78	-1005	-846	91	0.5202	0.5202	-5423	7667	1197	42820	4673	1327	6000	No	65.99	Si
SLU 42	2.73	-116.43	-4033	-3396	-79	0.5202	0.5202	-21760	9846	1537	42820	4673	1327	6000	No	76.12	Si
SLU 42	3.73	212.69	-2881	-2426	-192	0.5202	0.5202	-15546	9017	1407	42820	4673	1327	6000	No	31.31	Si
SLU 46	2.73	2.09	-1925	-1621	173	0.5202	0.5202	-10388	8329	1300	42820	4673	1327	6000	No	34.71	Si
SLU 46	3.73	-9.04	-1007	-848	91	0.5202	0.5202	-5435	7669	1197	42820	4673	1327	6000	No	66.09	Si
SLU 47	2.73	2.53	-1928	-1624	174	0.5202	0.5202	-10404	8332	1300	42820	4673	1327	6000	No	34.44	Si
SLU 47	3.73	-9.22	-1009	-849	91	0.5202	0.5202	-5443	7670	1197	42820	4673	1327	6000	No	66.15	Si
SLU 40	2.73	-116.43	-4033	-3396	-79	0.5202	0.5202	-21760	9846	1537	42820	4673	1327	6000	No	76.12	Si
SLU 40	3.73	212.69	-2881	-2426	-192	0.5202	0.5202	-15546	9017	1407	42820	4673	1327	6000	No	31.31	Si
SLU 39	2.73	-117.1	-4028	-3392	-81	0.5202	0.5202	-21735	9842	1536	42820	4673	1327	6000	No	74.23	Si
SLU 39	3.73	212.96	-2879	-2424	-192	0.5202	0.5202	-15534	9016	1407	42820	4673	1327	6000	No	31.33	Si
SLU 44	2.73	2.53	-1928	-1624	174	0.5202	0.5202	-10404	8332	1300	42820	4673	1327	6000	No	34.44	Si
SLU 44	3.73	-9.22	-1009	-849	91	0.5202	0.5202	-5443	7670	1197	42820	4673	1327	6000	No	66.15	Si
SLU 49	2.73	2.09	-1925	-1621	173	0.5202	0.5202	-10388	8329	1300	42820	4673	1327	6000	No	34.71	Si
SLU 49	3.73	-9.04	-1007	-848	91	0.5202	0.5202	-5435	7669	1197	42820	4673	1327	6000	No	66.09	Si
SLU 41	2.73	-117.1	-4028	-3392	-81	0.5202	0.5202	-21735	9842	1536	42820	4673	1327	6000	No	74.23	Si
SLU 41	3.73	212.96	-2879	-2424	-192	0.5202	0.5202	-15534	9016	1407	42820	4673	1327	6000	No	31.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	2.73	-222.49	-2775	-2337	-614	0.5202	0.5202	-14973	13411	2093	42820	7010	1327	8336		13.58	Si
SLV 15	3.73	463.92	-2334	-1965	-744	0.5202	0.1839	-12592	12935	714	42820	7010	1327	8336		11.2	Si
SLV 8	2.73	17.35	-1431	-1205	269	0.5202	0.5202	-7724	11961	1867	42820	7010	1327	8336		31.02	Si
SLV 8	3.73	-151.57	-598	-503	448	0.4162	0.0198	0	0	0	42820	5608	1061	6669		14.88	Si
SLV 14	2.73	-161.87	-2944	-2480	-401	0.5202	0.5202	-15888	13594	2122	42820	7010	1327	8336		20.8	Si
SLV 14	3.73	391.35	-2324	-1957	-653	0.5202	0.2752	-12542	12925	1067	42820	7010	1327	8336		12.77	Si
SLV 9	2.73	-78.53	-2917	-2456	-118	0.5202	0.5202	-15739	13565	2117	42820	7010	1327	8336		70.43	Si
SLV 9	3.73	256.79	-2095	-1764	-449	0.5202	0.4125	-11303	12677	1569	42820	7010	1327	8336		18.57	Si
SLV 3	2.73	100.69	-1404	-1182	551	0.5202	0.5202	-7575	11932	1862	42820	7010	1327	8336		15.13	Si
SLV 3	3.73	-286.13	-368	-310	652	0.4162	0	0	0	0	42820	5608	1061	6669		10.22	Si
SLV 16	2.73	-176.46	-2658	-2239	-443	0.5202	0.5202	-14345	13286	2073	42820	7010	1327	8336		18.83	Si
SLV 16	3.73	366.54	-2119	-1784	-565	0.5202	0.2613	-11433	12703	996	42820	7010	1327	8336		14.75	Si
SLV 2	2.73	161.31	-1573	-1325	764	0.5202	0.4727	-8490	12115	1718	42820	7010	1327	8336		10.91	Si
SLV 2	3.73	-358.69	-359	-302	743	0.4162	0	0	0	0	42820	5608	1061	6669		8.97	Si
SLV 13	2.73	-207.89	-3061	-2578	-572	0.5202	0.5202	-16517	13720	2141	42820	7010	1327	8336		14.57	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	3.73	488.72	-2539	-2138	-832	0.5202	0.2029	-13702	13157	801	42820	7010	1327	8336		10.02	Si
SLV 4	2.73	146.71	-1287	-1084	723	0.5202	0.4384	-6946	11806	1553	42820	7010	1327	8336		11.54	Si
SLV 4	3.73	-383.5	-153	-129	831	0.4162	0	0	0	0	42820	5608	1061	6669		8.02	Si
SLV 1	2.73	115.29	-1690	-1423	593	0.5202	0.5202	-9119	12240	1910	42820	7010	1327	8336		14.06	Si
SLV 1	3.73	-261.32	-574	-483	564	0.4162	0	0	0	0	42820	5608	1061	6669		11.82	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.61 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.46	8243	-1286	78.34	182.54	2.33	Si
SLV 7	179667	0.46	8261	-1289	78.34	182.92	2.33	Si
SLV 4	179667	0.46	9146	-1427	78.34	201.28	2.57	Si
SLV 3	179667	0.46	9164	-1430	78.34	201.65	2.57	Si
SLV 12	179667	0.46	9259	-1445	78.34	203.61	2.6	Si
SLV 11	179667	0.46	9277	-1448	78.34	203.98	2.6	Si
SLV 2	179667	0.46	10937	-1707	78.34	237.69	3.03	Si
SLV 1	179667	0.46	10955	-1710	78.34	238.05	3.04	Si
SLV 16	179667	0.46	12535	-1956	78.34	269.34	3.44	Si
SLV 15	179667	0.46	12552	-1959	78.34	269.69	3.44	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 13	-451	-1425	-11	3.036	136.6	0.89	49.60419	17.68601	Si
SLV 14	-430	-1741	-11	3.1	134.8	0.89	50.62244	17.68601	Si
SLV 15	-424	-1049	5	3.125	134.3	0.89	51.0274	17.68601	Si
SLV 16	-404	-1365	5	3.193	132.6	0.891	52.09563	17.68601	Si
SLV 1	-228	-3382	-5	3.925	118.4	0.905	63.05641	17.68601	Si
SLV 9	-404	-2544	-27	3.17	132.6	0.891	51.71884	14.28956	Si
SLV 2	-208	-3698	-5	4.033	117	0.908	64.5502	17.68601	Si
SLV 3	-202	-3006	11	4.057	116.6	0.909	64.8573	17.68601	Si
SLV 10	-383	-2871	-27	3.242	130.8	0.891	52.85545	14.28956	Si
SLV 4	-181	-3322	11	4.172	115.2	0.913	66.4082	17.68601	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.051	SLU 39	Si
V_SLU	31.307	SLU 40	Si
PF_SLV	0.274	SLV 4	No
V_SLV	8.022	SLV 4	Si
PFFP_SLV	2.33	SLV 8	Si
R_SLV	2.805	SLV 13	Si

Maschio 29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.099	-3.134	-11.264	-3.134	L2	L3	1.165	0.3	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 2	2.73	368.01	-3302	-0.0000225	0.0003743	0.0035	1.1648	1744.53	1864.23	1864.23	5.07	No	Si
SLU 2	3.63	-466.89	-2651	-0.0000218	0.0003743	0.0035	1.1648	1428.92	1799.47	1799.47	3.85	No	Si
SLU 48	2.73	450.23	-3914	-0.0000271	0.0003743	0.0035	1.1648	2028.67	2156.44	2156.44	4.79	No	Si
SLU 48	3.63	-576.77	-3111	-0.0000263	0.0003743	0.0035	1.1648	1653.45	2035.09	2035.09	3.53	No	Si
SLU 46	2.73	453.25	-3926	-0.0000272	0.0003743	0.0035	1.1648	2034.16	2161.81	2161.81	4.77	No	Si
SLU 46	3.63	-583.59	-3125	-0.0000265	0.0003743	0.0035	1.1648	1659.9	2041.83	2041.83	3.5	No	Si
SLU 43	2.73	450.23	-3914	-0.0000271	0.0003743	0.0035	1.1648	2028.67	2156.44	2156.44	4.79	No	Si
SLU 43	3.63	-576.77	-3111	-0.0000263	0.0003743	0.0035	1.1648	1653.45	2035.09	2035.09	3.53	No	Si
SLU 51	2.73	453.25	-3926	-0.0000272	0.0003743	0.0035	1.1648	2034.16	2161.81	2161.81	4.77	No	Si
SLU 51	3.63	-583.59	-3125	-0.0000265	0.0003743	0.0035	1.1648	1659.9	2041.83	2041.83	3.5	No	Si
SLU 47	2.73	455.26	-3934	-0.0000273	0.0003743	0.0035	1.1648	2037.81	2165.39	2165.39	4.76	No	Si
SLU 47	3.63	-588.14	-3133	-0.0000267	0.0003743	0.0035	1.1648	1664.2	2046.33	2046.33	3.48	No	Si
SLU 49	2.73	453.25	-3926	-0.0000272	0.0003743	0.0035	1.1648	2034.16	2161.81	2161.81	4.77	No	Si
SLU 49	3.63	-583.59	-3125	-0.0000265	0.0003743	0.0035	1.1648	1659.9	2041.83	2041.83	3.5	No	Si
SLU 45	2.73	450.23	-3914	-0.0000271	0.0003743	0.0035	1.1648	2028.67	2156.44	2156.44	4.79	No	Si
SLU 45	3.63	-576.77	-3111	-0.0000263	0.0003743	0.0035	1.1648	1653.45	2035.09	2035.09	3.53	No	Si
SLU 44	2.73	455.26	-3934	-0.0000273	0.0003743	0.0035	1.1648	2037.81	2165.39	2165.39	4.76	No	Si
SLU 44	3.63	-588.14	-3133	-0.0000267	0.0003743	0.0035	1.1648	1664.2	2046.33	2046.33	3.48	No	Si
SLU 50	2.73	450.23	-3914	-0.0000271	0.0003743	0.0035	1.1648	2028.67	2156.44	2156.44	4.79	No	Si
SLU 50	3.63	-576.77	-3111	-0.0000263	0.0003743	0.0035	1.1648	1653.45	2035.09	2035.09	3.53	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	2.73	551.65	-4148	-0.0000301	0.0005615	0.0035	1.1648		2344.93	2344.93	4.25		Si
SLV 3	3.63	-751.77	-3618	-0.0000323	0.0005615	0.0035	1.1648		2332.11	2332.11	3.1		Si
SLV 11	2.73	97.86	-2744	-0.0000139	0.0005615	0.0035	1.1648		1606.31	1606.31	16.41		Si
SLV 11	3.63	338.51	-1794	-0.000015	0.0005615	0.0035	1.1648		1090.74	1090.74	3.22		Si
SLV 15	2.73	55.05	-3196	-0.0000149	0.0005615	0.0035	1.1648		1847.36	1847.36	33.56		Si
SLV 15	3.63	332.95	-2074	-0.0000161	0.0005615	0.0035	1.1648		1244.2	1244.2	3.74		Si
SLV 9	2.73	467.24	-4975	-0.0000319	0.0005615	0.0035	1.1648		2764.14	2764.14	5.92		Si
SLV 9	3.63	-751.08	-4120	-0.0000344	0.0005615	0.0035	1.1648		2591.48	2591.48	3.45		Si
SLV 2	2.73	764.54	-5101	-0.0000392	0.0005615	0.0035	1.1648		2827	2827	3.7		Si
SLV 2	3.63	-1307.66	-4696	-0.0000524	0.0005615	0.0035	1.1648		2886.64	2886.64	2.21		Si
SLV 6	2.73	721.73	-5553	-0.0000403	0.0005615	0.0035	1.1648		3049.8	3049.8	4.23		Si
SLV 6	3.63	-1313.22	-4976	-0.000053	0.0005615	0.0035	1.1648		3028.75	3028.75	2.31		Si
SLV 4	2.73	653.73	-4431	-0.0000337	0.0005615	0.0035	1.1648		2489.18	2489.18	3.81		Si
SLV 4	3.63	-980.78	-3998	-0.0000398	0.0005615	0.0035	1.1648		2528.97	2528.97	2.58		Si
SLV 10	2.73	572.75	-5267	-0.0000356	0.0005615	0.0035	1.1648		2910.14	2910.14	5.08		Si
SLV 10	3.63	-987.8	-4513	-0.0000418	0.0005615	0.0035	1.1648		2793.18	2793.18	2.83		Si
SLV 1	2.73	662.47	-4818	-0.0000356	0.0005615	0.0035	1.1648		2685.65	2685.65	4.05		Si
SLV 1	3.63	-1078.65	-4315	-0.0000437	0.0005615	0.0035	1.1648		2691.58	2691.58	2.5		Si
SLV 5	2.73	616.22	-5260	-0.0000365	0.0005615	0.0035	1.1648		2906.77	2906.77	4.72		Si
SLV 5	3.63	-1076.5	-4583	-0.0000444	0.0005615	0.0035	1.1648		2828.75	2828.75	2.63		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	2.73	617.13	-6959	-5860	1122	1.1648	1.1648	-16770	9180	3208	42820	10464	2970	13434	No	11.98	Si
SLU 80	3.63	-695.01	-5772	-4861	1115	1.1648	1.1648	-13910	8799	3075	42820	10464	2970	13434	No	12.04	Si
SLU 73	2.73	619.15	-6967	-5867	1129	1.1648	1.1648	-16789	9183	3209	42820	10464	2970	13434	No	11.89	Si
SLU 73	3.63	-699.55	-5781	-4868	1123	1.1648	1.1648	-13932	8802	3076	42820	10464	2970	13434	No	11.96	Si
SLU 75	2.73	617.13	-6959	-5860	1122	1.1648	1.1648	-16770	9180	3208	42820	10464	2970	13434	No	11.98	Si
SLU 75	3.63	-695.01	-5772	-4861	1115	1.1648	1.1648	-13910	8799	3075	42820	10464	2970	13434	No	12.04	Si
SLU 68	2.73	518.37	-4962	-4178	1118	1.1648	1.1648	-11957	8539	2984	42820	10464	2970	13434	No	12.02	Si
SLU 68	3.63	-633.09	-4026	-3391	1025	1.1648	1.1648	-9703	8238	2879	42820	10464	2970	13434	No	13.1	Si
SLU 76	2.73	619.15	-6967	-5867	1129	1.1648	1.1648	-16789	9183	3209	42820	10464	2970	13434	No	11.89	Si
SLU 76	3.63	-699.55	-5781	-4868	1123	1.1648	1.1648	-13932	8802	3076	42820	10464	2970	13434	No	11.96	Si
SLU 83	2.73	657.3	-7806	-6573	1115	1.1648	1.1648	-18811	9453	3303	42820	10464	2970	13434	No	12.05	Si
SLU 83	3.63	-716.67	-6511	-5483	1146	1.1648	1.1648	-15690	9036	3158	42820	10464	2970	13434	No	11.72	Si
SLU 78	2.73	617.13	-6959	-5860	1122	1.1648	1.1648	-16770	9180	3208	42820	10464	2970	13434	No	11.98	Si
SLU 78	3.63	-695.01	-5772	-4861	1115	1.1648	1.1648	-13910	8799	3075	42820	10464	2970	13434	No	12.04	Si
SLU 81	2.73	657.3	-7806	-6573	1115	1.1648	1.1648	-18811	9453	3303	42820	10464	2970	13434	No	12.05	Si
SLU 81	3.63	-716.67	-6511	-5483	1146	1.1648	1.1648	-15690	9036	3158	42820	10464	2970	13434	No	11.72	Si
SLU 84	2.73	660.32	-7818	-6584	1127	1.1648	1.1648	-18841	9457	3304	42820	10464	2970	13434	No	11.92	Si
SLU 84	3.63	-723.49	-6524	-5494	1157	1.1648	1.1648	-15722	9041	3159	42820	10464	2970	13434	No	11.61	Si
SLU 82	2.73	660.32	-7818	-6584	1127	1.1648	1.1648	-18841	9457	3304	42820	10464	2970	13434	No	11.92	Si
SLU 82	3.63	-723.49	-6524	-5494	1157	1.1648	1.1648	-15722	9041	3159	42820	10464	2970	13434	No	11.61	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	2.73	764.54	-5101	-4295	2540	1.1648	1.1648	-12292	12875	4499	42820	15696	2970	18666		7.35	Si
SLV 2	3.63	-1307.66	-4696	-3954	1790	1.1648	0.9118	-14553	13327	3646	42820	15696	2970	18666		10.43	Si
SLV 5	2.73	616.22	-5260	-4430	1812	1.1648	1.1648	-12677	12952	4526	42820	15696	2970	18666		10.3	Si
SLV 5	3.63	-1076.5	-4583	-3859	1700	1.1648	1.0425	-12396	12896	4033	42820	15696	2970	18666		10.98	Si
SLV 10	2.73	572.75	-5267	-4436	1539	1.1648	1.1648	-12693	12955	4527	42820	15696	2970	18666		12.12	Si
SLV 10	3.63	-987.8	-4513	-3801	1686	1.1648	1.0906	-11677	12752	4172	42820	15696	2970	18666		11.07	Si
SLV 3	2.73	551.65	-4148	-3493	1590	1.1648	1.1648	-9997	12416	4339	42820	15696	2970	18666		11.74	Si
SLV 3	3.63	-751.77	-3618	-3046	927	1.1648	1.1238	-8718	12160	4100	42820	15696	2970	18666		20.14	Si
SLV 4	2.73	653.73	-4431	-3732	2038	1.1648	1.1648	-10679	12552	4386	42820	15696	2970	18666		9.16	Si
SLV 4	3.63	-980.78	-3998	-3367	1245	1.1648	1.0113	-11156	12648	3837	42820	15696	2970	18666		14.99	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	2.73	55.05	-3196	-2691	-860	1.1648	1.1648	-7702	11957	4178	42820	15696	2970	18666		21.69	Si
SLV 15	3.63	332.95	-2074	-1747	-219	1.1648	1.1648	-4999	11416	3989	42820	15696	2970	18666		85.11	Si
SLV 14	2.73	267.94	-4148	-3493	89	1.1648	1.1648	-9997	12416	4339	42820	15696	2970	18666		209.82	Si
SLV 14	3.63	-222.94	-3153	-2655	644	1.1648	1.1648	-7598	11936	4171	42820	15696	2970	18666		28.99	Si
SLV 6	2.73	721.73	-5553	-4676	2275	1.1648	1.1648	-13382	13093	4575	42820	15696	2970	18666		8.21	Si
SLV 6	3.63	-1313.22	-4976	-4190	2029	1.1648	0.9555	-14722	13361	3830	42820	15696	2970	18666		9.2	Si
SLV 9	2.73	467.24	-4975	-4189	1077	1.1648	1.1648	-11988	12814	4478	42820	15696	2970	18666		17.33	Si
SLV 9	3.63	-751.08	-4120	-3469	1356	1.1648	1.1648	-9928	12402	4334	42820	15696	2970	18666		13.76	Si
SLV 1	2.73	662.47	-4818	-4057	2092	1.1648	1.1648	-11610	12739	4451	42820	15696	2970	18666		8.92	Si
SLV 1	3.63	-1078.65	-4315	-3634	1471	1.1648	0.9973	-12216	12860	3848	42820	15696	2970	18666		12.69	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.61 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.46	7791	-2723	175.42	387.56	2.21	Si
SLV 7	179667	0.46	8024	-2804	175.42	398.5	2.27	Si
SLV 12	179667	0.46	8232	-2876	175.42	408.21	2.33	Si
SLV 8	179667	0.46	8464	-2958	175.42	419.08	2.39	Si
SLV 15	179667	0.46	9203	-3216	175.42	453.31	2.58	Si
SLV 16	179667	0.46	9629	-3365	175.42	472.88	2.7	Si
SLV 3	179667	0.46	9979	-3487	175.42	488.89	2.79	Si
SLV 4	179667	0.46	10405	-3636	175.42	508.23	2.9	Si
SLV 13	179667	0.46	10639	-3718	175.42	518.82	2.96	Si
SLV 14	179667	0.46	11065	-3867	175.42	537.97	3.07	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-1534	-3726	-45	2.449	353.9	0.891	39.97397	17.68601	Si
SLV 1	-1471	-3654	-45	2.506	348	0.89	40.92738	17.68601	Si
SLV 4	-1419	-3117	48	2.554	343.2	0.89	41.72103	17.68601	Si
SLV 3	-1356	-3045	48	2.616	337.4	0.889	42.75423	17.68601	Si
SLV 14	-1284	-4195	-49	2.692	330.7	0.889	44.01281	17.68601	Si
SLV 13	-1221	-4123	-49	2.762	324.9	0.889	45.15346	17.68601	Si
SLV 16	-1169	-3587	45	2.823	320.2	0.889	46.15193	17.68601	Si
SLV 15	-1106	-3515	45	2.899	314.6	0.889	47.39501	17.68601	Si
SLV 6	-1580	-4601	-156	2.369	358.3	0.891	38.63657	14.28956	Si
SLV 5	-1515	-4526	-156	2.425	352.2	0.89	39.5751	14.28956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.479	SLU 44	Si
V_SLU	11.607	SLU 82	Si
PF_SLV	2.207	SLV 2	Si
V_SLV	7.35	SLV 2	Si
PFFP_SLV	2.209	SLV 11	Si
R_SLV	2.26	SLV 2	Si

Maschio 30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-8.084	-3.134	-9.099	-3.134	L2	L3	1.015	0.3	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	εfd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 41	1.73	203.29	-2409	-0.0000178	0.0003743	0.0035	1.0149	1127.5	1216.53	1216.53	5.98	No	Si
SLU 41	3.63	574.17	-2742	-0.0000311	0.0003743	0.0035	1.0149	1268.2	1364.74	1364.74	2.38	No	Si
SLU 39	1.73	203.29	-2409	-0.0000178	0.0003743	0.0035	1.0149	1127.5	1216.53	1216.53	5.98	No	Si
SLU 39	3.63	574.17	-2742	-0.0000311	0.0003743	0.0035	1.0149	1268.2	1364.74	1364.74	2.38	No	Si
SLU 42	1.73	211.68	-2412	-0.0000181	0.0003743	0.0035	1.0149	1128.87	1217.97	1217.97	5.75	No	Si
SLU 42	3.63	567.13	-2730	-0.0000308	0.0003743	0.0035	1.0149	1263.45	1359.72	1359.72	2.4	No	Si
SLU 47	1.73	384.81	-1804	-0.0000205	0.0003743	0.0035	1.0149	862.13	940.78	940.78	2.44	No	Si
SLU 47	3.63	-53.46	-708	-0.000005	0.0003743	0.0035	1.0149	350.87	591.89	591.89	11.07	No	Si
SLU 43	1.73	370.83	-1799	-0.0000199	0.0003743	0.0035	1.0149	859.73	938.28	938.28	2.53	No	Si
SLU 43	3.63	-41.72	-727	-0.0000047	0.0003743	0.0035	1.0149	360.04	601.11	601.11	14.41	No	Si
SLU 44	1.73	384.81	-1804	-0.0000205	0.0003743	0.0035	1.0149	862.13	940.78	940.78	2.44	No	Si
SLU 44	3.63	-53.46	-708	-0.000005	0.0003743	0.0035	1.0149	350.87	591.89	591.89	11.07	No	Si
SLU 40	1.73	211.68	-2412	-0.0000181	0.0003743	0.0035	1.0149	1128.87	1217.97	1217.97	5.75	No	Si
SLU 40	3.63	567.13	-2730	-0.0000308	0.0003743	0.0035	1.0149	1263.45	1359.72	1359.72	2.4	No	Si
SLU 46	1.73	379.22	-1802	-0.0000202	0.0003743	0.0035	1.0149	861.17	939.78	939.78	2.48	No	Si
SLU 46	3.63	-48.76	-715	-0.0000049	0.0003743	0.0035	1.0149	354.53	595.58	595.58	12.21	No	Si
SLU 51	1.73	379.22	-1802	-0.0000202	0.0003743	0.0035	1.0149	861.17	939.78	939.78	2.48	No	Si
SLU 51	3.63	-48.76	-715	-0.0000049	0.0003743	0.0035	1.0149	354.53	595.58	595.58	12.21	No	Si
SLU 49	1.73	379.22	-1802	-0.0000202	0.0003743	0.0035	1.0149	861.17	939.78	939.78	2.48	No	Si
SLU 49	3.63	-48.76	-715	-0.0000049	0.0003743	0.0035	1.0149	354.53	595.58	595.58	12.21	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	1.73	-432.03	-233	-0.0005626	0.0005615	0.0035	0.8119		359.41	359.41	0.83		No
SLV 12	3.63	762.5	-1745	-0.000086	0.0005615	0.0035	1.0149		924.66	924.66	1.21		Si
SLV 16	1.73	-352.54	-791	-0.0000403	0.0005615	0.0035	0.8119		633.27	633.27	1.8		Si
SLV 16	3.63	695.06	-1720	-0.0000566	0.0005615	0.0035	1.0149		912.93	912.93	1.31		Si
SLV 1	1.73	878.01	-2534	-0.0000534	0.0005615	0.0035	1.0149		1296.05	1296.05	1.48		Si
SLV 1	3.63	-433.65	-576	-0.0002997	0.0005615	0.0035	0.8119		528.26	528.26	1.22		Si
SLV 6	1.73	1181.33	-3454	-0.0000719	0.0005615	0.0035	1.0149		1717.3	1717.3	1.45		Si
SLV 6	3.63	-725.35	-330	-0.0011768	0.0005615	0.0035	0.8119		407	407	0.56		No
SLV 5	1.73	957.51	-3091	-0.0000531	0.0005615	0.0035	1.0149		1552.8	1552.8	1.62		Si
SLV 5	3.63	-501.08	-551	-0.0004334	0.0005615	0.0035	0.8119		516.18	516.18	1.03		Si
SLV 7	1.73	-338.35	-243	-0.0003719	0.0005615	0.0035	0.8119		363.98	363.98	1.08		Si
SLV 7	3.63	690.28	-1659	-0.0000621	0.0005615	0.0035	1.0149		883.57	883.57	1.28		Si
SLV 11	1.73	-655.85	129	0.0177881	0.0005615	0.0035	0.8119		0	0	0		No
SLV 11	3.63	986.77	-1967	-0.0006701	0.0005615	0.0035	0.8119		1030.21	1030.21	1.04		Si
SLV 15	1.73	-569.07	-440	-0.0006592	0.0005615	0.0035	0.8119		461.3	461.3	0.81		No
SLV 15	3.63	912.03	-1935	-0.0001978	0.0005615	0.0035	1.0149		1015.11	1015.11	1.11		Si
SLV 2	1.73	1094.55	-2885	-0.000078	0.0005615	0.0035	1.0149		1458.25	1458.25	1.33		Si
SLV 2	3.63	-650.62	-362	-0.0009311	0.0005615	0.0035	0.8119		422.72	422.72	0.65		No
SLV 10	1.73	863.83	-3082	-0.0000458	0.0005615	0.0035	1.0149		1548.56	1548.56	1.79		Si
SLV 10	3.63	-428.87	-638	-0.0002502	0.0005615	0.0035	0.8119		558.5	558.5	1.3		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 40	1.73	211.68	-2412	-2032	-559	1.0149	1.0149	-6673	7834	2385	42820	9117	2588	11705	No	20.95	Si
SLU 40	3.63	567.13	-2730	-2299	-562	1.0149	0.8992	-7552	7951	2145	42820	9117	2588	11705	No	20.84	Si
SLU 37	1.73	220.05	-2196	-1849	-429	1.0149	1.0149	-6073	7754	2361	42820	9117	2588	11705	No	27.31	Si
SLU 37	3.63	445.38	-2282	-1922	-431	1.0149	0.9368	-6312	7786	2188	42820	9117	2588	11705	No	27.14	Si
SLU 82	1.73	302.7	-2762	-2326	-484	1.0149	1.0149	-7639	7963	2424	42820	9117	2588	11705	No	24.2	Si
SLU 82	3.63	520.57	-2762	-2326	-487	1.0149	0.9569	-7640	7963	2286	42820	9117	2588	11705	No	24.03	Si
SLU 35	1.73	220.05	-2196	-1849	-429	1.0149	1.0149	-6073	7754	2361	42820	9117	2588	11705	No	27.31	Si
SLU 35	3.63	445.38	-2282	-1922	-431	1.0149	0.9368	-6312	7786	2188	42820	9117	2588	11705	No	27.14	Si
SLU 41	1.73	203.29	-2409	-2029	-571	1.0149	1.0149	-6664	7833	2385	42820	9117	2588	11705	No	20.51	Si
SLU 41	3.63	574.17	-2742	-2309	-574	1.0149	0.894	-7583	7956	2134	42820	9117	2588	11705	No	20.41	Si
SLU 83	1.73	294.31	-2759	-2323	-496	1.0149	1.0149	-7631	7962	2424	42820	9117	2588	11705	No	23.61	Si
SLU 83	3.63	527.61	-2774	-2336	-499	1.0149	0.9516	-7671	7967	2275	42820	9117	2588	11705	No	23.45	Si
SLU 42	1.73	211.68	-2412	-2032	-559	1.0149	1.0149	-6673	7834	2385	42820	9117	2588	11705	No	20.95	Si
SLU 42	3.63	567.13	-2730	-2299	-562	1.0149	0.8992	-7552	7951	2145	42820	9117	2588	11705	No	20.84	Si
SLU 84	1.73	302.7	-2762	-2326	-484	1.0149	1.0149	-7639	7963	2424	42820	9117	2588	11705	No	24.2	Si
SLU 84	3.63	520.57	-2762	-2326	-487	1.0149	0.9569	-7640	7963	2286	42820	9117	2588	11705	No	24.03	Si
SLU 81	1.73	294.31	-2759	-2323	-496	1.0149	1.0149	-7631	7962	2424	42820	9117	2588	11705	No	23.61	Si
SLU 81	3.63	527.61	-2774	-2336	-499	1.0149	0.9516	-7671	7967	2275	42820	9117	2588	11705	No	23.45	Si
SLU 39	1.73	203.29	-2409	-2029	-571	1.0149	1.0149	-6664	7833	2385	42820	9117	2588	11705	No	20.51	Si
SLU 39	3.63	574.17	-2742	-2309	-574	1.0149	0.894	-7583	7956	2134	42820	9117	2588	11705	No	20.41	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	1.73	-352.54	-791	-666	-1397	0.8119	0.1845	0	0	0	42820	10940	2070	13011		9.31	Si
SLV 16	3.63	695.06	-1720	-1449	-807	1.0149	0.3103	-15683	13553	1262	42820	13675	2588	16263		20.16	Si
SLV 10	1.73	863.83	-3082	-2596	961	1.0149	0.6815	-8525	12122	2478	42820	13675	2588	16263		16.93	Si
SLV 10	3.63	-428.87	-638	-537	1147	0.8119	0	0	0	0	42820	10940	2070	13011		11.34	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	1.73	1181.33	-3454	-2909	1654	1.0149	0.4963	-9554	12327	1835	42820	13675	2588	16263		9.84	Si
SLV 6	3.63	-725.35	-330	-278	1482	0.8119	0	0	0	0	42820	10940	2070	13011		8.78	Si
SLV 12	1.73	-432.03	-233	-196	-1414	0.8119	0	0	0	0	42820	10940	2070	13011		9.2	Si
SLV 12	3.63	762.5	-1745	-1470	-1247	1.0149	0.2115	-23407	15100	958	42820	13675	2588	16263		13.04	Si
SLV 1	1.73	878.01	-2534	-2134	1245	1.0149	0.4829	-7009	11819	1712	42820	13675	2588	16263		13.06	Si
SLV 1	3.63	-433.65	-576	-485	650	0.8119	0	0	0	0	42820	10940	2070	13011		20.01	Si
SLV 5	1.73	957.51	-3091	-2603	1262	1.0149	0.5931	-8551	12127	2158	42820	13675	2588	16263		12.89	Si
SLV 5	3.63	-501.08	-551	-464	1091	0.8119	0	0	0	0	42820	10940	2070	13011		11.93	Si
SLV 2	1.73	1094.55	-2885	-2430	1624	1.0149	0.3841	-7980	12013	1384	42820	13675	2588	16263		10.01	Si
SLV 2	3.63	-650.62	-362	-304	1029	0.8119	0	0	0	0	42820	10940	2070	13011		12.64	Si
SLV 15	1.73	-569.07	-440	-370	-1776	0.8119	0	0	0	0	42820	10940	2070	13011		7.32	Si
SLV 15	3.63	912.03	-1935	-1629	-1186	1.0149	0.1083	-50054	16250	528	42820	13675	2588	16263		13.72	Si
SLV 7	1.73	-338.35	-243	-204	-1113	0.8119	0	0	0	0	42820	10940	2070	13011		11.69	Si
SLV 7	3.63	690.28	-1659	-1397	-1304	1.0149	0.2739	-17139	13845	1138	42820	13675	2588	16263		12.48	Si
SLV 11	1.73	-655.85	129	109	-1806	0.8119	0	0	0	0	42820	10940	2070	13011		7.21	Si
SLV 11	3.63	986.77	-1967	-1656	-1639	0.8119	0.0172	0	0	0	42820	10940	2070	13011		7.94	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.61 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.46	0	-921	152.84	0	0	No, e>t/2
SLV 11	179667	0.46	0	-867	152.84	0	0	No, e>t/2
SLV 8	179667	0.46	0	-998	152.84	0	0	No, e>t/2
SLV 12	179667	0.46	0	-944	152.84	0	0	No, e>t/2
SLV 15	179667	0.46	3798	-1156	152.84	169.12	1.11	Si
SLV 16	179667	0.46	4042	-1231	152.84	179.7	1.18	Si
SLV 3	179667	0.46	4387	-1336	152.84	194.59	1.27	Si
SLV 4	179667	0.46	4631	-1410	152.84	205.09	1.34	Si
SLV 13	179667	0.46	4785	-1457	152.84	211.69	1.39	Si
SLV 14	179667	0.46	5029	-1531	152.84	222.13	1.45	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-911	-1309	12	2.991	269.4	0.889	48.8765	17.68601	Si
SLV 16	-881	-1420	12	3.037	266.8	0.889	49.61912	17.68601	Si
SLV 13	-853	-1906	19	3.078	264.3	0.89	50.28015	17.68601	Si
SLV 3	-845	-917	-21	3.09	263.6	0.89	50.46626	17.68601	Si
SLV 14	-823	-2016	20	3.127	261.6	0.89	51.06138	17.68601	Si
SLV 4	-815	-1027	-21	3.14	261	0.89	51.25547	17.68601	Si
SLV 1	-787	-1513	-13	3.192	258.5	0.891	52.08786	17.68601	Si
SLV 2	-757	-1624	-13	3.245	256	0.891	52.92054	17.68601	Si
SLV 11	-957	-474	-8	2.925	273.5	0.889	47.81448	14.28956	Si
SLV 7	-937	-357	-18	2.949	271.7	0.889	48.20383	14.28956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	2.377	SLU 39	Si
V_SLU	20.408	SLU 39	Si
PF_SLV	0	SLV 11	No
V_SLV	7.205	SLV 11	Si
PFFP_SLV	0	SLV 7	No
R_SLV	2.764	SLV 15	Si

Maschio 31

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-8.084	1.355	-20.545	1.355	L2	L3	12.46	0.3	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 37	0.73	8102.19	-86881	-0.0000344	0.0004492	0.0035	12.4605	438327.08	488922.37	488922.37	60.34	No	Si
SLU 37	4.49	823.84	-50017	-0.0000188	0.0004492	0.0035	12.4605	277492.01	304569.79	304569.79	369.69	No	Si
SLU 36	0.73	8192	-87074	-0.0000345	0.0004492	0.0035	12.4605	439072.8	489796.06	489796.06	59.79	No	Si
SLU 36	4.49	830.68	-50028	-0.0000188	0.0004492	0.0035	12.4605	277544.97	304629.04	304629.04	366.72	No	Si
SLU 40	0.73	9785.96	-94783	-0.0000379	0.0004492	0.0035	12.4605	467976.95	524633.08	524633.08	53.61	No	Si
SLU 40	4.49	944.8	-59508	-0.0000225	0.0004492	0.0035	12.4605	322444.15	355569.96	355569.96	376.35	No	Si
SLU 41	0.73	9696.15	-94589	-0.0000378	0.0004492	0.0035	12.4605	467271.88	523759.39	523759.39	54.02	No	Si
SLU 41	4.49	937.96	-59497	-0.0000225	0.0004492	0.0035	12.4605	322394.01	355511.76	355511.76	379.03	No	Si
SLU 42	0.73	9785.96	-94783	-0.0000379	0.0004492	0.0035	12.4605	467976.95	524633.08	524633.08	53.61	No	Si
SLU 42	4.49	944.8	-59508	-0.0000225	0.0004492	0.0035	12.4605	322444.15	355569.96	355569.96	376.35	No	Si
SLU 33	0.73	8192	-87074	-0.0000345	0.0004492	0.0035	12.4605	439072.8	489796.06	489796.06	59.79	No	Si
SLU 33	4.49	830.68	-50028	-0.0000188	0.0004492	0.0035	12.4605	277544.97	304629.04	304629.04	366.72	No	Si
SLU 38	0.73	8192	-87074	-0.0000345	0.0004492	0.0035	12.4605	439072.8	489796.06	489796.06	59.79	No	Si
SLU 38	4.49	830.68	-50028	-0.0000188	0.0004492	0.0035	12.4605	277544.97	304629.04	304629.04	366.72	No	Si
SLU 31	0.73	8251.87	-87203	-0.0000346	0.0004492	0.0035	12.4605	439569.39	490378.51	490378.51	59.43	No	Si
SLU 31	4.49	835.24	-50035	-0.0000188	0.0004492	0.0035	12.4605	277580.28	304668.54	304668.54	364.77	No	Si
SLU 39	0.73	9696.15	-94589	-0.0000378	0.0004492	0.0035	12.4605	467271.88	523759.39	523759.39	54.02	No	Si
SLU 39	4.49	937.96	-59497	-0.0000225	0.0004492	0.0035	12.4605	322394.01	355511.76	355511.76	379.03	No	Si
SLU 34	0.73	8251.87	-87203	-0.0000346	0.0004492	0.0035	12.4605	439569.39	490378.51	490378.51	59.43	No	Si
SLU 34	4.49	835.24	-50035	-0.0000188	0.0004492	0.0035	12.4605	277580.28	304668.54	304668.54	364.77	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	0.73	-49112.53	-64340	-0.0000329	0.0006738	0.0035	12.4605		463946.8	463946.8	9.45		Si
SLV 16	4.49	1912.13	-26313	-0.00001	0.0006738	0.0035	12.4605		173572.93	173572.93	90.77		Si
SLV 2	0.73	56580.73	-69363	-0.0000362	0.0006738	0.0035	12.4605		416404.33	416404.33	7.36		Si
SLV 2	4.49	-1062.39	-26512	-0.00001	0.0006738	0.0035	12.4605		251727.03	251727.03	236.94		Si
SLV 4	0.73	63565.42	-66905	-0.0000366	0.0006738	0.0035	12.4605		403018.89	403018.89	6.34		Si
SLV 4	4.49	-1169.56	-26169	-0.0000099	0.0006738	0.0035	12.4605		249728.47	249728.47	213.52		Si
SLV 8	0.73	32272.47	-63142	-0.0000294	0.0006738	0.0035	12.4605		382536.45	382536.45	11.85		Si
SLV 8	4.49	-219.37	-25820	-0.0000096	0.0006738	0.0035	12.4605		247690.15	247690.15	1129.09		Si
SLV 13	0.73	-55831.87	-66569	-0.000035	0.0006738	0.0035	12.4605		476232.06	476232.06	8.53		Si
SLV 13	4.49	2219.76	-26650	-0.0000102	0.0006738	0.0035	12.4605		175559.38	175559.38	79.09		Si
SLV 1	0.73	56846.08	-69133	-0.0000362	0.0006738	0.0035	12.4605		415153.14	415153.14	7.3		Si
SLV 1	4.49	-861.93	-26507	-0.0000099	0.0006738	0.0035	12.4605		251695.73	251695.73	292.01		Si
SLV 7	0.73	32546.75	-62905	-0.0000293	0.0006738	0.0035	12.4605		381243.16	381243.16	11.71		Si
SLV 7	4.49	-12.17	-25814	-0.0000095	0.0006738	0.0035	12.4605		247657.8	247657.8	20350.8		Si
SLV 15	0.73	-48847.18	-64110	-0.0000328	0.0006738	0.0035	12.4605		462680.03	462680.03	9.47		Si
SLV 15	4.49	2112.59	-26307	-0.0000101	0.0006738	0.0035	12.4605		173541.33	173541.33	82.15		Si
SLV 14	0.73	-56097.22	-66798	-0.0000351	0.0006738	0.0035	12.4605		477498.83	477498.83	8.51		Si
SLV 14	4.49	2019.3	-26655	-0.0000102	0.0006738	0.0035	12.4605		175590.98	175590.98	86.96		Si
SLV 3	0.73	63830.76	-66675	-0.0000365	0.0006738	0.0035	12.4605		401767.7	401767.7	6.29		Si
SLV 3	4.49	-969.1	-26164	-0.0000098	0.0006738	0.0035	12.4605		249697.17	249697.17	257.66		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 66	0.73	4276.89	-82996	-60360	-198	12.4605	12.4605	-16147	10486	39199	122342	134339	63548	161542	No	815.48	Si
SLU 66	4.49	627.15	-29239	-21265	-289	12.4605	12.4605	-5689	9092	33986	122342	134339	63548	156329	No	541.5	Si
SLU 69	0.73	4276.89	-82996	-60360	-198	12.4605	12.4605	-16147	10486	39199	122342	134339	63548	161542	No	815.48	Si
SLU 69	4.49	627.15	-29239	-21265	-289	12.4605	12.4605	-5689	9092	33986	122342	134339	63548	156329	No	541.5	Si
SLU 79	0.73	7996.14	-100982	-73441	-187	12.4605	12.4605	-19647	10833	40497	122342	134339	63548	162839	No	870.17	Si
SLU 79	4.49	893.42	-51359	-37352	-294	12.4605	12.4605	-9992	9666	36131	122342	134339	63548	158474	No	538.21	Si
SLU 71	0.73	4276.89	-82996	-60360	-198	12.4605	12.4605	-16147	10486	39199	122342	134339	63548	161542	No	815.48	Si
SLU 71	4.49	627.15	-29239	-21265	-289	12.4605	12.4605	-5689	9092	33986	122342	134339	63548	156329	No	541.5	Si
SLU 77	0.73	7996.14	-100982	-73441	-187	12.4605	12.4605	-19647	10833	40497	122342	134339	63548	162839	No	870.17	Si
SLU 77	4.49	893.42	-51359	-37352	-294	12.4605	12.4605	-9992	9666	36131	122342	134339	63548	158474	No	538.21	Si
SLU 74	0.73	7996.14	-100982	-73441	-187	12.4605	12.4605	-19647	10833	40497	122342	134339	63548	162839	No	870.17	Si
SLU 74	4.49	893.42	-51359	-37352	-294	12.4605	12.4605	-9992	9666	36131	122342	134339	63548	158474	No	538.21	Si
SLU 64	0.73	4276.89	-82996	-60360	-198	12.4605	12.4605	-16147	10486	39199	122342	134339	63548	161542	No	815.48	Si
SLU 64	4.49	627.15	-29239	-21265	-289	12.4605	12.4605	-5689	9092	33986	122342	134339	63548	156329	No	541.5	Si
SLU 81	0.73	9590.1	-108690	-79048	-182	12.4605	12.4605	-21146	10833	40497	122342	134339	63548	162839	No	892.58	Si
SLU 81	4.49	1007.53	-60840	-44247	-297	12.4605	12.4605	-11837	9912	37051	122342	134339	63548	159393	No	536.83	Si
SLU 60	0.73	7379.77	-98475	-71618	-186	12.4605	12.4605	-19159	10833	40497	122342	134339	63548	162839	No	876.98	Si
SLU 60	4.49	855.56	-49910	-36298	-288	12.4605	12.4605	-9710	9628	35991	122342	134339	63548	158333	No	548.97	Si
SLU 83	0.73	9590.1	-108690	-79048	-182	12.4605	12.4605	-21146	10833	40497	122342	134339	63548	162839	No	892.58	Si
SLU 83	4.49	1007.53	-60840	-44247	-297	12.4605	12.4605	-11837	9912	37051	122342	134339	63548	159393	No	536.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	0.73	-55831.87	-66569	-48414	-26291	12.4605	12.4605	-12951	15090	56409	122342	201509	63548	178752		6.8	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	4.49	2219.76	-26650	-19382	-17014	12.4605	12.4605	-5185	13537	50603	122342	201509	63548	172946		10.17	Si
SLV 8	0.73	32272.47	-63142	-45922	8324	12.4605	12.4605	-12285	14957	55911	122342	201509	63548	178253		21.42	Si
SLV 8	4.49	-219.37	-25820	-18778	5515	12.4605	12.4605	-5023	13505	50482	122342	201509	63548	172825		31.33	Si
SLV 15	0.73	-48847.18	-64110	-46625	-26065	12.4605	12.4605	-12473	14995	56052	122342	201509	63548	178394		6.84	Si
SLV 15	4.49	2112.59	-26307	-19133	-16742	12.4605	12.4605	-5118	13524	50553	122342	201509	63548	172896		10.33	Si
SLV 16	0.73	-49112.53	-64340	-46792	-25278	12.4605	12.4605	-12518	15004	56085	122342	201509	63548	178428		7.06	Si
SLV 16	4.49	1912.13	-26313	-19136	-15957	12.4605	12.4605	-5119	13524	50554	122342	201509	63548	172896		10.84	Si
SLV 9	0.73	-24538.93	-70331	-51150	-8624	12.4605	12.4605	-13683	15237	56957	122342	201509	63548	179299		20.79	Si
SLV 9	4.49	1269.57	-27000	-19636	-5959	12.4605	12.4605	-5253	13551	50654	122342	201509	63548	172996		29.03	Si
SLV 14	0.73	-56097.22	-66798	-48581	-25504	12.4605	12.4605	-12996	15099	56443	122342	201509	63548	178785		7.01	Si
SLV 14	4.49	2019.3	-26655	-19386	-16228	12.4605	12.4605	-5186	13537	50604	122342	201509	63548	172946		10.66	Si
SLV 4	0.73	63565.42	-66905	-48658	25991	12.4605	12.4605	-13017	15103	56458	122342	201509	63548	178801		6.88	Si
SLV 4	4.49	-1169.56	-26169	-19032	16570	12.4605	12.4605	-5091	13518	50533	122342	201509	63548	172876		10.43	Si
SLV 1	0.73	56846.08	-69133	-50279	24978	12.4605	12.4605	-13450	15190	56783	122342	201509	63548	179125		7.17	Si
SLV 1	4.49	-861.93	-26507	-19278	15513	12.4605	12.4605	-5157	13531	50582	122342	201509	63548	172925		11.15	Si
SLV 3	0.73	63830.76	-66675	-48491	25205	12.4605	12.4605	-12972	15094	56425	122342	201509	63548	178767		7.09	Si
SLV 3	4.49	-969.1	-26164	-19028	15784	12.4605	12.4605	-5090	13518	50532	122342	201509	63548	172875		10.95	Si
SLV 2	0.73	56580.73	-69363	-50446	25765	12.4605	12.4605	-13495	15199	56816	122342	201509	63548	179158		6.95	Si
SLV 2	4.49	-1062.39	-26512	-19281	16298	12.4605	12.4605	-5158	13532	50583	122342	201509	63548	172925		10.61	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 2.61 Ta 0.08 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-43317	0.46	1923.52	6086.7	8735.85	7411.28	3.85	Si
SLV 11	-43361	0.46	1923.52	6092.52	8743.04	7417.78	3.86	Si
SLV 8	-43419	0.46	1923.52	6100.08	8752.38	7426.23	3.86	Si
SLV 12	-43463	0.46	1923.52	6105.89	8759.57	7432.73	3.86	Si
SLV 3	-45445	0.46	1923.52	6364.53	9080.45	7722.49	4.01	Si
SLV 4	-45543	0.46	1923.52	6377.38	9096.45	7736.92	4.02	Si
SLV 15	-45593	0.46	1923.52	6383.78	9104.42	7744.1	4.03	Si
SLV 16	-45691	0.46	1923.52	6396.62	9120.42	7758.52	4.03	Si
SLV 1	-47311	0.46	1923.52	6606.65	9382.12	7994.39	4.16	Si
SLV 2	-47410	0.46	1923.52	6619.42	9398.08	8008.75	4.16	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-26655	-66798	-237	1.827	4775	0.902	29.45638	17.68601	Si
SLV 13	-26650	-66569	-237	1.828	4774.5	0.902	29.46055	17.68601	Si
SLV 2	-26512	-69363	-214	1.835	4761	0.901	29.57702	17.68601	Si
SLV 1	-26507	-69133	-214	1.835	4760.4	0.901	29.58121	17.68601	Si
SLV 16	-26313	-64340	218	1.844	4741.4	0.901	29.73123	17.68601	Si
SLV 15	-26307	-64110	218	1.844	4740.9	0.901	29.73543	17.68601	Si
SLV 4	-26169	-66905	241	1.85	4727.3	0.901	29.83482	17.68601	Si
SLV 3	-26164	-66675	241	1.85	4726.8	0.901	29.83905	17.68601	Si
SLV 10	-27005	-70569	-759	1.798	4809.4	0.902	28.97665	14.28956	Si
SLV 9	-27000	-70331	-759	1.799	4808.9	0.902	28.98084	14.28956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	53.611	SLU 40	Si
V_SLU	536.833	SLU 81	Si
PF_SLV	6.294	SLV 3	Si
V_SLV	6.799	SLV 13	Si
PFFP_SLV	3.853	SLV 7	Si
R_SLV	1.666	SLV 14	Si

Maschio 32

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-18.769	5.825	-20.545	5.825	L2	L3	1.775	0.3	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	1.73	-92.59	-6806	-0.0000203	0.0003743	0.0035	1.7753	5283.4	6317.35	6317.35	68.23	No	Si
SLU 83	3.63	-767.93	-5170	-0.000022	0.0003743	0.0035	1.7753	4151.52	5096.86	5096.86	6.64	No	Si
SLU 40	1.73	99.08	-5840	-0.0000175	0.0003743	0.0035	1.7753	4625.83	4925.03	4925.03	49.71	No	Si
SLU 40	3.63	-839.49	-4948	-0.0000221	0.0003743	0.0035	1.7753	3991.17	4926.63	4926.63	5.87	No	Si
SLU 84	1.73	52.83	-6663	-0.0000195	0.0003743	0.0035	1.7753	5187.5	5453.37	5453.37	103.23	No	Si
SLU 84	3.63	-763.53	-5130	-0.0000219	0.0003743	0.0035	1.7753	4123.25	5066.64	5066.64	6.64	No	Si
SLU 31	1.73	181.39	-5205	-0.0000165	0.0003743	0.0035	1.7753	4177.18	4454.78	4454.78	24.56	No	Si
SLU 31	3.63	-642.71	-4169	-0.0000179	0.0003743	0.0035	1.7753	3416.42	4328.16	4328.16	6.73	No	Si
SLU 39	1.73	-46.33	-5984	-0.0000174	0.0003743	0.0035	1.7753	4725.59	5713.85	5713.85	123.32	No	Si
SLU 39	3.63	-843.9	-4987	-0.0000222	0.0003743	0.0035	1.7753	4019.67	4956.69	4956.69	5.87	No	Si
SLU 82	1.73	52.83	-6663	-0.0000195	0.0003743	0.0035	1.7753	5187.5	5453.37	5453.37	103.23	No	Si
SLU 82	3.63	-763.53	-5130	-0.0000219	0.0003743	0.0035	1.7753	4123.25	5066.64	5066.64	6.64	No	Si
SLU 42	1.73	99.08	-5840	-0.0000175	0.0003743	0.0035	1.7753	4625.83	4925.03	4925.03	49.71	No	Si
SLU 42	3.63	-839.49	-4948	-0.0000221	0.0003743	0.0035	1.7753	3991.17	4926.63	4926.63	5.87	No	Si
SLU 81	1.73	-92.59	-6806	-0.0000203	0.0003743	0.0035	1.7753	5283.4	6317.35	6317.35	68.23	No	Si
SLU 81	3.63	-767.93	-5170	-0.000022	0.0003743	0.0035	1.7753	4151.52	5096.86	5096.86	6.64	No	Si
SLU 34	1.73	181.39	-5205	-0.0000165	0.0003743	0.0035	1.7753	4177.18	4454.78	4454.78	24.56	No	Si
SLU 34	3.63	-642.71	-4169	-0.0000179	0.0003743	0.0035	1.7753	3416.42	4328.16	4328.16	6.73	No	Si
SLU 41	1.73	-46.33	-5984	-0.0000174	0.0003743	0.0035	1.7753	4725.59	5713.85	5713.85	123.32	No	Si
SLU 41	3.63	-843.9	-4987	-0.0000222	0.0003743	0.0035	1.7753	4019.67	4956.69	4956.69	5.87	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	1.73	-1081.4	-3526	-0.0000201	0.0005615	0.0035	1.7753		3857.34	3857.34	3.57		Si
SLV 14	3.63	557.75	-1501	-0.0000095	0.0005615	0.0035	1.7753		1477.28	1477.28	2.65		Si
SLV 2	1.73	1200.13	-3753	-0.0000219	0.0005615	0.0035	1.7753		3372.67	3372.67	2.81		Si
SLV 2	3.63	-1026.84	-3094	-0.0000184	0.0005615	0.0035	1.7753		3501.06	3501.06	3.41		Si
SLV 11	1.73	-1339.82	-5915	-0.0000295	0.0005615	0.0035	1.7753		5780.08	5780.08	4.31		Si
SLV 11	3.63	641.03	-2124	-0.0000119	0.0005615	0.0035	1.7753		2010.54	2010.54	3.14		Si
SLV 6	1.73	1129.73	-2214	-0.0000194	0.0005615	0.0035	1.7753		2086.99	2086.99	1.85		Si
SLV 6	3.63	-994.34	-2592	-0.000017	0.0005615	0.0035	1.7753		3081.67	3081.67	3.1		Si
SLV 15	1.73	-1410.21	-4376	-0.0000257	0.0005615	0.0035	1.7753		4544.97	4544.97	3.22		Si
SLV 15	3.63	673.54	-1622	-0.0000113	0.0005615	0.0035	1.7753		1580.98	1580.98	2.35		Si
SLV 1	1.73	1499.75	-3347	-0.0000253	0.0005615	0.0035	1.7753		3035.85	3035.85	2.02		Si
SLV 1	3.63	-1363.42	-3265	-0.000023	0.0005615	0.0035	1.7753		3642.95	3642.95	2.67		Si
SLV 9	1.73	754.98	-1726	-0.0000126	0.0005615	0.0035	1.7753		1670.34	1670.34	2.21		Si
SLV 9	3.63	-866.86	-2291	-0.0000148	0.0005615	0.0035	1.7753		2828.51	2828.51	3.26		Si
SLV 12	1.73	-1649.52	-6335	-0.0000337	0.0005615	0.0035	1.7753		6105.64	6105.64	3.7		Si
SLV 12	3.63	988.93	-1947	-0.0000169	0.0005615	0.0035	1.7753		1859.88	1859.88	1.88		Si
SLV 5	1.73	1439.44	-1794	-0.0000718	0.0005615	0.0035	1.7753		1728.82	1728.82	1.2		Si
SLV 5	3.63	-1342.24	-2769	-0.0000228	0.0005615	0.0035	1.7753		3229.38	3229.38	2.41		Si
SLV 16	1.73	-1709.84	-4783	-0.0000301	0.0005615	0.0035	1.7753		4873.38	4873.38	2.85		Si
SLV 16	3.63	1010.11	-1450	-0.0000252	0.0005615	0.0035	1.7753		1434.38	1434.38	1.42		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	1.73	52.83	-6663	-5611	931	1.7753	1.7753	-10534	8349	4447	42820	15949	4527	20476	No	21.99	Si
SLU 82	3.63	-763.53	-5130	-4320	931	1.7753	1.7753	-8112	8026	4275	42820	15949	4527	20476	No	21.99	Si
SLU 84	1.73	52.83	-6663	-5611	931	1.7753	1.7753	-10534	8349	4447	42820	15949	4527	20476	No	21.99	Si
SLU 84	3.63	-763.53	-5130	-4320	931	1.7753	1.7753	-8112	8026	4275	42820	15949	4527	20476	No	21.99	Si
SLU 81	1.73	-92.59	-6806	-5732	814	1.7753	1.7753	-10761	8379	4463	42820	15949	4527	20476	No	25.14	Si
SLU 81	3.63	-767.93	-5170	-4353	802	1.7753	1.7753	-8174	8034	4279	42820	15949	4527	20476	No	25.52	Si
SLU 40	1.73	99.08	-5840	-4918	1021	1.7753	1.7753	-9234	8176	4354	42820	15949	4527	20476	No	20.04	Si
SLU 40	3.63	-839.49	-4948	-4166	1023	1.7753	1.7753	-7823	7987	4254	42820	15949	4527	20476	No	20.02	Si
SLU 41	1.73	-46.33	-5984	-5039	905	1.7753	1.7753	-9461	8206	4371	42820	15949	4527	20476	No	22.63	Si
SLU 41	3.63	-843.9	-4987	-4200	894	1.7753	1.7753	-7885	7996	4259	42820	15949	4527	20476	No	22.9	Si
SLU 39	1.73	-46.33	-5984	-5039	905	1.7753	1.7753	-9461	8206	4371	42820	15949	4527	20476	No	22.63	Si
SLU 39	3.63	-843.9	-4987	-4200	894	1.7753	1.7753	-7885	7996	4259	42820	15949	4527	20476	No	22.9	Si
SLU 83	1.73	-92.59	-6806	-5732	814	1.7753	1.7753	-10761	8379	4463	42820	15949	4527	20476	No	25.14	Si
SLU 83	3.63	-767.93	-5170	-4353	802	1.7753	1.7753	-8174	8034	4279	42820	15949	4527	20476	No	25.52	Si
SLU 34	1.73	181.39	-5205	-4384	889	1.7753	1.7753	-8230	8042	4283	42820	15949	4527	20476	No	23.02	Si
SLU 34	3.63	-642.71	-4169	-3511	900	1.7753	1.7753	-6592	7823	4167	42820	15949	4527	20476	No	22.76	Si
SLU 42	1.73	99.08	-5840	-4918	1021	1.7753	1.7753	-9234	8176	4354	42820	15949	4527	20476	No	20.04	Si
SLU 42	3.63	-839.49	-4948	-4166	1023	1.7753	1.7753	-7823	7987	4254	42820	15949	4527	20476	No	20.02	Si
SLU 31	1.73	181.39	-5205	-4384	889	1.7753	1.7753	-8230	8042	4283	42820	15949	4527	20476	No	23.02	Si
SLU 31	3.63	-642.71	-4169	-3511	900	1.7753	1.7753	-6592	7823	4167	42820	15949	4527	20476	No	22.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	1.73	-965.06	-6404	-5393	-1666	1.7753	1.7753	-10125	12442	6626	42820	23923	4527	28450		17.08	Si
SLV 8	3.63	513.55	-2425	-2042	-1844	1.7753	1.7753	-3834	11183	5956	42820	23923	4527	28450		15.43	Si
SLV 1	1.73	1499.75	-3347	-2818	2886	1.7753	1.3186	-5292	11475	4539	42820	23923	4527	28450		9.86	Si
SLV 1	3.63	-1363.42	-3265	-2749	1790	1.7753	1.4103	-6516	11720	4958	42820	23923	4527	28450		15.9	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	1.73	-1410.21	-4376	-3685	-1928	1.7753	1.6963	-7265	11870	6040	42820	23923	4527	28450		14.75	Si
SLV 15	3.63	673.54	-1622	-1366	-847	1.7753	1.4169	-2564	10929	4646	42820	23923	4527	28450		33.59	Si
SLV 11	1.73	-1339.82	-5915	-4981	-2113	1.7753	1.7753	-9352	12287	6544	42820	23923	4527	28450		13.46	Si
SLV 11	3.63	641.03	-2124	-1788	-1664	1.7753	1.7575	-3358	11088	5846	42820	23923	4527	28450		17.1	Si
SLV 12	1.73	-1649.52	-6335	-5335	-2738	1.7753	1.7753	-10017	12420	6615	42820	23923	4527	28450		10.39	Si
SLV 12	3.63	988.93	-1947	-1639	-2289	1.7753	1.1391	-3078	11032	3770	42820	23923	4527	28450		12.43	Si
SLV 2	1.73	1200.13	-3753	-3161	2281	1.7753	1.7038	-5934	11604	5931	42820	23923	4527	28450		12.47	Si
SLV 2	3.63	-1026.84	-3094	-2605	1185	1.7753	1.6673	-5219	11461	5733	42820	23923	4527	28450		24.01	Si
SLV 9	1.73	754.98	-1726	-1453	2019	1.7753	1.3506	-2729	10962	4442	42820	23923	4527	28450		14.09	Si
SLV 9	3.63	-866.86	-2291	-1929	2182	1.7753	1.5277	-4216	11260	5161	42820	23923	4527	28450		13.04	Si
SLV 6	1.73	1129.73	-2214	-1865	2466	1.7753	1.1325	-3501	11117	3777	42820	23923	4527	28450		11.54	Si
SLV 6	3.63	-994.34	-2592	-2183	2002	1.7753	1.5121	-4821	11381	5163	42820	23923	4527	28450		14.21	Si
SLV 16	1.73	-1709.84	-4783	-4028	-2533	1.7753	1.5905	-8464	12110	5778	42820	23923	4527	28450		11.23	Si
SLV 16	3.63	1010.11	-1450	-1221	-1452	1.7753	0.5738	-7118	11840	2038	42820	23923	4527	28450		19.6	Si
SLV 5	1.73	1439.44	-1794	-1511	3091	1.7753	0.256	-19724	14368	1103	42820	23923	4527	28450		9.2	Si
SLV 5	3.63	-1342.24	-2769	-2331	2627	1.7753	1.2086	-6446	11706	4244	42820	23923	4527	28450		10.83	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.61 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.46	4015	-2138	267.36	312.32	1.17	Si
SLV 10	179667	0.46	4246	-2261	267.36	329.77	1.23	Si
SLV 5	179667	0.46	4439	-2364	267.36	344.36	1.29	Si
SLV 6	179667	0.46	4670	-2487	267.36	361.71	1.35	Si
SLV 13	179667	0.46	4896	-2607	267.36	378.58	1.42	Si
SLV 14	179667	0.46	5119	-2726	267.36	395.25	1.48	Si
SLV 15	179667	0.46	6072	-3234	267.36	465.8	1.74	Si
SLV 16	179667	0.46	6295	-3353	267.36	482.2	1.8	Si
SLV 1	179667	0.46	6311	-3361	267.36	483.34	1.81	Si
SLV 2	179667	0.46	6534	-3480	267.36	499.69	1.87	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-2038	-4711	-173	2.611	511.5	0.889	42.66429	17.68601	Si
SLV 2	-1995	-4938	-173	2.639	507.6	0.889	43.13572	17.68601	Si
SLV 3	-1993	-6592	-126	2.653	507.3	0.889	43.36891	17.68601	Si
SLV 4	-1951	-6818	-126	2.683	503.5	0.889	43.85287	17.68601	Si
SLV 13	-1615	-2018	127	2.942	473.1	0.889	48.08185	17.68601	Si
SLV 15	-1571	-3899	174	2.966	469.2	0.889	48.47203	17.68601	Si
SLV 14	-1573	-2244	127	2.978	469.4	0.889	48.66638	17.68601	Si
SLV 16	-1528	-4125	174	3.003	465.5	0.89	49.06706	17.68601	Si
SLV 5	-1943	-1571	-123	2.689	502.7	0.889	43.95796	14.28956	Si
SLV 6	-1899	-1805	-124	2.72	498.7	0.889	44.47079	14.28956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	5.869	SLU 40	Si
V_SLU	20.016	SLU 40	Si
PF_SLV	1.201	SLV 5	Si
V_SLV	9.204	SLV 5	Si
PFFP_SLV	1.168	SLV 9	Si
R_SLV	2.412	SLV 1	Si

Maschio 33

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.879	5.825	-17.769	5.825	L2	L3	2.89	0.3	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 68	1.73	-3603.66	-11918	-0.0000343	0.0003743	0.0035	2.89	14896.59	17715.68	17715.68	4.92	No	Si
SLU 68	3.63	506.34	-7883	-0.0000155	0.0003743	0.0035	2.89	10373.94	11074.65	11074.65	21.87	No	Si
SLU 44	1.73	-3365.28	-10061	-0.0000299	0.0003743	0.0035	2.89	12881.09	15504.88	15504.88	4.61	No	Si
SLU 44	3.63	493.7	-6039	-0.0000122	0.0003743	0.0035	2.89	8129.27	8717.84	8717.84	17.66	No	Si
SLU 47	1.73	-3365.28	-10061	-0.0000299	0.0003743	0.0035	2.89	12881.09	15504.88	15504.88	4.61	No	Si
SLU 47	3.63	493.7	-6039	-0.0000122	0.0003743	0.0035	2.89	8129.27	8717.84	8717.84	17.66	No	Si
SLU 49	1.73	-3197.81	-10097	-0.0000294	0.0003743	0.0035	2.89	12920.98	15547.38	15547.38	4.86	No	Si
SLU 49	3.63	553.8	-6039	-0.0000124	0.0003743	0.0035	2.89	8129.57	8718.14	8718.14	15.74	No	Si
SLU 46	1.73	-3197.81	-10097	-0.0000294	0.0003743	0.0035	2.89	12920.98	15547.38	15547.38	4.86	No	Si
SLU 46	3.63	553.8	-6039	-0.0000124	0.0003743	0.0035	2.89	8129.57	8718.14	8718.14	15.74	No	Si
SLU 65	1.73	-3603.66	-11918	-0.0000343	0.0003743	0.0035	2.89	14896.59	17715.68	17715.68	4.92	No	Si
SLU 65	3.63	506.34	-7883	-0.0000155	0.0003743	0.0035	2.89	10373.94	11074.65	11074.65	21.87	No	Si
SLU 5	1.73	-2748.17	-8208	-0.0000243	0.0003743	0.0035	2.89	10758.17	13231.68	13231.68	4.81	No	Si
SLU 5	3.63	348.43	-5132	-0.0000101	0.0003743	0.0035	2.89	6984.09	7531.06	7531.06	21.61	No	Si
SLU 51	1.73	-3197.81	-10097	-0.0000294	0.0003743	0.0035	2.89	12920.98	15547.38	15547.38	4.86	No	Si
SLU 51	3.63	553.8	-6039	-0.0000124	0.0003743	0.0035	2.89	8129.57	8718.14	8718.14	15.74	No	Si
SLU 2	1.73	-2748.17	-8208	-0.0000243	0.0003743	0.0035	2.89	10758.17	13231.68	13231.68	4.81	No	Si
SLU 2	3.63	348.43	-5132	-0.0000101	0.0003743	0.0035	2.89	6984.09	7531.06	7531.06	21.61	No	Si
SLU 7	1.73	-2580.69	-8244	-0.0000237	0.0003743	0.0035	2.89	10800.23	13276.41	13276.41	5.14	No	Si
SLU 7	3.63	408.53	-5132	-0.0000103	0.0003743	0.0035	2.89	6984.4	7531.38	7531.38	18.44	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	1.73	-5652.57	-12706	-0.0000427	0.0005615	0.0035	2.89		19179.02	19179.02	3.39		Si
SLV 12	3.63	3555.09	-6828	-0.0000245	0.0005615	0.0035	2.89		9907.13	9907.13	2.79		Si
SLV 1	1.73	1868.93	-9189	-0.0000226	0.0005615	0.0035	2.89		13003.38	13003.38	6.96		Si
SLV 1	3.63	-3072.81	-7535	-0.000024	0.0005615	0.0035	2.89		12567.72	12567.72	4.09		Si
SLV 5	1.73	688.17	-6871	-0.0000143	0.0005615	0.0035	2.89		9964.84	9964.84	14.48		Si
SLV 5	3.63	-2540.11	-6521	-0.0000203	0.0005615	0.0035	2.89		11239.17	11239.17	4.42		Si
SLV 8	1.73	-3624.21	-12898	-0.0000356	0.0005615	0.0035	2.89		19410.67	19410.67	5.36		Si
SLV 8	3.63	1994.51	-7430	-0.0000199	0.0005615	0.0035	2.89		10705.1	10705.1	5.37		Si
SLV 10	1.73	-2310.07	-6726	-0.0000198	0.0005615	0.0035	2.89		11507.29	11507.29	4.98		Si
SLV 10	3.63	-83.16	-5938	-0.0000105	0.0005615	0.0035	2.89		10472.91	10472.91	125.94		Si
SLV 14	1.73	-5830.59	-8595	-0.0000376	0.0005615	0.0035	2.89		13969.48	13969.48	2.4		Si
SLV 14	3.63	2996.32	-5546	-0.0000203	0.0005615	0.0035	2.89		8190.13	8190.13	2.73		Si
SLV 13	1.73	-4892.27	-8550	-0.0000327	0.0005615	0.0035	2.89		13909.63	13909.63	2.84		Si
SLV 13	3.63	2129.13	-5527	-0.0000171	0.0005615	0.0035	2.89		8163.63	8163.63	3.83		Si
SLV 16	1.73	-6833.34	-10389	-0.0000445	0.0005615	0.0035	2.89		16259.06	16259.06	2.38		Si
SLV 16	3.63	4087.79	-5813	-0.0000261	0.0005615	0.0035	2.89		8548.59	8548.59	2.09		Si
SLV 11	1.73	-4682.69	-12659	-0.0000391	0.0005615	0.0035	2.89		19122.84	19122.84	4.08		Si
SLV 11	3.63	2658.73	-6808	-0.0000212	0.0005615	0.0035	2.89		9879.95	9879.95	3.72		Si
SLV 15	1.73	-5895.02	-10344	-0.0000397	0.0005615	0.0035	2.89		16202.04	16202.04	2.75		Si
SLV 15	3.63	3220.6	-5793	-0.0000216	0.0005615	0.0035	2.89		8522.14	8522.14	2.65		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	1.73	-3899.81	-15279	-12867	-2375	2.89	2.89	-14840	8923	7736	42820	25962	7370	33331	No	14.03	Si
SLU 76	3.63	524.58	-11436	-9630	-2383	2.89	2.89	-11108	8425	7305	42820	25962	7370	33331	No	13.99	Si
SLU 81	1.73	-3608.05	-16809	-14155	-2303	2.89	2.89	-16326	9121	7908	42820	25962	7370	33331	No	14.47	Si
SLU 81	3.63	682.63	-12959	-10913	-2313	2.89	2.89	-12587	8623	7476	42820	25962	7370	33331	No	14.41	Si
SLU 83	1.73	-3608.05	-16809	-14155	-2303	2.89	2.89	-16326	9121	7908	42820	25962	7370	33331	No	14.47	Si
SLU 83	3.63	682.63	-12959	-10913	-2313	2.89	2.89	-12587	8623	7476	42820	25962	7370	33331	No	14.41	Si
SLU 75	1.73	-3732.34	-15315	-12897	-2313	2.89	2.89	-14875	8928	7740	42820	25962	7370	33331	No	14.41	Si
SLU 75	3.63	584.67	-11436	-9631	-2321	2.89	2.89	-11108	8426	7305	42820	25962	7370	33331	No	14.36	Si
SLU 73	1.73	-3899.81	-15279	-12867	-2375	2.89	2.89	-14840	8923	7736	42820	25962	7370	33331	No	14.03	Si
SLU 73	3.63	524.58	-11436	-9630	-2383	2.89	2.89	-11108	8425	7305	42820	25962	7370	33331	No	13.99	Si
SLU 61	1.73	-3620.89	-14898	-12546	-2258	2.89	2.89	-14470	8874	7694	42820	25962	7370	33331	No	14.76	Si
SLU 61	3.63	579.85	-11115	-9360	-2266	2.89	2.89	-10796	8384	7269	42820	25962	7370	33331	No	14.71	Si
SLU 78	1.73	-3732.34	-15315	-12897	-2313	2.89	2.89	-14875	8928	7740	42820	25962	7370	33331	No	14.41	Si
SLU 78	3.63	584.67	-11436	-9631	-2321	2.89	2.89	-11108	8426	7305	42820	25962	7370	33331	No	14.36	Si
SLU 80	1.73	-3732.34	-15315	-12897	-2313	2.89	2.89	-14875	8928	7740	42820	25962	7370	33331	No	14.41	Si
SLU 80	3.63	584.67	-11436	-9631	-2321	2.89	2.89	-11108	8426	7305	42820	25962	7370	33331	No	14.36	Si
SLU 82	1.73	-3859.26	-16755	-14110	-2396	2.89	2.89	-16274	9114	7902	42820	25962	7370	33331	No	13.91	Si
SLU 82	3.63	592.49	-12959	-10913	-2406	2.89	2.89	-12587	8623	7476	42820	25962	7370	33331	No	13.85	Si
SLU 84	1.73	-3859.26	-16755	-14110	-2396	2.89	2.89	-16274	9114	7902	42820	25962	7370	33331	No	13.91	Si
SLU 84	3.63	592.49	-12959	-10913	-2406	2.89	2.89	-12587	8623	7476	42820	25962	7370	33331	No	13.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	1.73	866.18	-10983	-9249	1992	2.89	2.89	-10667	12550	10881	42820	38943	7370	46312		23.25	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	3.63	-1981.33	-7802	-6570	1242	2.89	2.89	-7578	11932	10345	42820	38943	7370	46312		37.29	Si
SLV 14	1.73	-5830.59	-8595	-7238	-5159	2.89	2.2998	-10539	12525	8641	42820	38943	7370	46312		8.98	Si
SLV 14	3.63	2996.32	-5546	-4671	-4417	2.89	2.7143	-5387	11494	9360	42820	38943	7370	46312		10.48	Si
SLV 1	1.73	1868.93	-9189	-7738	2746	2.89	2.89	-8925	12202	10579	42820	38943	7370	46312		16.87	Si
SLV 1	3.63	-3072.81	-7535	-6346	1770	2.89	2.89	-7319	11880	10300	42820	38943	7370	46312		26.17	Si
SLV 10	1.73	-2310.07	-6726	-5664	-1861	2.89	2.89	-6533	11723	10164	42820	38943	7370	46312		24.89	Si
SLV 10	3.63	-83.16	-5938	-5001	-1983	2.89	2.89	-5768	11570	10031	42820	38943	7370	46312		23.36	Si
SLV 13	1.73	-4892.27	-8550	-7200	-4213	2.89	2.6183	-9197	12256	9627	42820	38943	7370	46312		10.99	Si
SLV 13	3.63	2129.13	-5527	-4654	-3471	2.89	2.89	-5368	11490	9962	42820	38943	7370	46312		13.34	Si
SLV 12	1.73	-5652.57	-12706	-10700	-4372	2.89	2.89	-12341	12885	11171	42820	38943	7370	46312		10.59	Si
SLV 12	3.63	3555.09	-6828	-5750	-3743	2.89	2.773	-6632	11743	9769	42820	38943	7370	46312		12.37	Si
SLV 16	1.73	-6833.34	-10389	-8748	-5913	2.89	2.3617	-12419	12901	9140	42820	38943	7370	46312		7.83	Si
SLV 16	3.63	4087.79	-5813	-4895	-4945	2.89	2.2254	-5646	11546	7708	42820	38943	7370	46312		9.37	Si
SLV 15	1.73	-5895.02	-10344	-8710	-4967	2.89	2.6252	-11108	12638	9954	42820	38943	7370	46312		9.32	Si
SLV 15	3.63	3220.6	-5793	-4879	-3999	2.89	2.6673	-5627	11542	9236	42820	38943	7370	46312		11.58	Si
SLV 8	1.73	-3624.21	-12898	-10861	-2285	2.89	2.89	-12527	12922	11204	42820	38943	7370	46312		20.27	Si
SLV 8	3.63	1994.51	-7430	-6257	-2170	2.89	2.89	-7217	11860	10283	42820	38943	7370	46312		21.34	Si
SLV 11	1.73	-4682.69	-12659	-10661	-3394	2.89	2.89	-12296	12876	11163	42820	38943	7370	46312		13.64	Si
SLV 11	3.63	2658.73	-6808	-5733	-2765	2.89	2.89	-6612	11739	10178	42820	38943	7370	46312		16.75	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.61 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.46	6528	-5660	435.23	812.73	1.87	Si
SLV 10	179667	0.46	6563	-5691	435.23	816.89	1.88	Si
SLV 5	179667	0.46	6825	-5917	435.23	847.89	1.95	Si
SLV 6	179667	0.46	6860	-5947	435.23	852.04	1.96	Si
SLV 13	179667	0.46	8428	-7307	435.23	1035.6	2.38	Si
SLV 14	179667	0.46	8462	-7337	435.23	1039.52	2.39	Si
SLV 1	179667	0.46	9416	-8164	435.23	1149.04	2.64	Si
SLV 2	179667	0.46	9450	-8193	435.23	1152.9	2.65	Si
SLV 15	179667	0.46	10352	-8976	435.23	1255.07	2.88	Si
SLV 16	179667	0.46	10386	-9005	435.23	1258.88	2.89	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-3727	-11694	-88	2.481	870.7	0.89	40.50842	17.68601	Si
SLV 4	-3751	-15817	-26	2.482	873	0.89	40.50984	17.68601	Si
SLV 1	-3713	-11633	-88	2.486	869.5	0.89	40.59193	17.68601	Si
SLV 3	-3738	-15756	-26	2.487	871.8	0.89	40.59308	17.68601	Si
SLV 16	-3268	-10886	91	2.661	828.1	0.889	43.50134	17.68601	Si
SLV 15	-3255	-10824	91	2.667	826.8	0.889	43.59668	17.68601	Si
SLV 14	-3244	-6762	29	2.682	825.8	0.889	43.83757	17.68601	Si
SLV 13	-3230	-6701	29	2.688	824.6	0.889	43.93396	17.68601	Si
SLV 8	-3611	-18903	87	2.525	859.9	0.89	41.22938	14.28956	Si
SLV 7	-3597	-18839	87	2.53	858.6	0.89	41.31864	14.28956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	4.607	SLU 44	Si
V_SLU	13.855	SLU 82	Si
PF_SLV	2.091	SLV 16	Si
V_SLV	7.832	SLV 16	Si
PFFP_SLV	1.867	SLV 9	Si
R_SLV	2.29	SLV 2	Si

Maschio 34

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-10.899	5.825	-13.879	5.825	L2	L3	2.98	0.3	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	1.73	3025.39	-8603	-0.0000249	0.0003743	0.0035	2.98	11607.44	12356.48	12356.48	4.08	No	Si
SLU 46	3.63	-613.24	-5766	-0.0000117	0.0003743	0.0035	2.98	8046.94	10661.29	10661.29	17.39	No	Si
SLU 49	1.73	3025.39	-8603	-0.0000249	0.0003743	0.0035	2.98	11607.44	12356.48	12356.48	4.08	No	Si
SLU 49	3.63	-613.24	-5766	-0.0000117	0.0003743	0.0035	2.98	8046.94	10661.29	10661.29	17.39	No	Si
SLU 47	1.73	3194.61	-8558	-0.0000254	0.0003743	0.0035	2.98	11551.95	12297.28	12297.28	3.85	No	Si
SLU 47	3.63	-553.35	-5763	-0.0000115	0.0003743	0.0035	2.98	8043.67	10657.96	10657.96	19.26	No	Si
SLU 4	1.73	2444.4	-7059	-0.0000202	0.0003743	0.0035	2.98	9702.47	10344.29	10344.29	4.23	No	Si
SLU 4	3.63	-454.98	-4920	-0.0000097	0.0003743	0.0035	2.98	6934.75	9527.35	9527.35	20.94	No	Si
SLU 2	1.73	2613.61	-7013	-0.0000207	0.0003743	0.0035	2.98	9644.66	10284.21	10284.21	3.93	No	Si
SLU 2	3.63	-395.09	-4918	-0.0000095	0.0003743	0.0035	2.98	6931.4	9523.88	9523.88	24.11	No	Si
SLU 51	1.73	3025.39	-8603	-0.0000249	0.0003743	0.0035	2.98	11607.44	12356.48	12356.48	4.08	No	Si
SLU 51	3.63	-613.24	-5766	-0.0000117	0.0003743	0.0035	2.98	8046.94	10661.29	10661.29	17.39	No	Si
SLU 44	1.73	3194.61	-8558	-0.0000254	0.0003743	0.0035	2.98	11551.95	12297.28	12297.28	3.85	No	Si
SLU 44	3.63	-553.35	-5763	-0.0000115	0.0003743	0.0035	2.98	8043.67	10657.96	10657.96	19.26	No	Si
SLU 65	1.73	3416.78	-10291	-0.0000292	0.0003743	0.0035	2.98	13599.45	14397.19	14397.19	4.21	No	Si
SLU 65	3.63	-568.48	-7605	-0.0000147	0.0003743	0.0035	2.98	10384.79	13110.5	13110.5	23.06	No	Si
SLU 5	1.73	2613.61	-7013	-0.0000207	0.0003743	0.0035	2.98	9644.66	10284.21	10284.21	3.93	No	Si
SLU 5	3.63	-395.09	-4918	-0.0000095	0.0003743	0.0035	2.98	6931.4	9523.88	9523.88	24.11	No	Si
SLU 68	1.73	3416.78	-10291	-0.0000292	0.0003743	0.0035	2.98	13599.45	14397.19	14397.19	4.21	No	Si
SLU 68	3.63	-568.48	-7605	-0.0000147	0.0003743	0.0035	2.98	10384.79	13110.5	13110.5	23.06	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	1.73	-1690.4	-10800	-0.0000239	0.0005615	0.0035	2.98		17534.25	17534.25	10.37		Si
SLV 16	3.63	2175.7	-6878	-0.0000188	0.0005615	0.0035	2.98		10276.24	10276.24	4.72		Si
SLV 5	1.73	3816.75	-3357	-0.0000318	0.0005615	0.0035	2.98		5344.02	5344.02	1.4		Si
SLV 5	3.63	-831.79	-4950	-0.000011	0.0005615	0.0035	2.98		9642.72	9642.72	11.59		Si
SLV 2	1.73	5417.3	-6238	-0.0000336	0.0005615	0.0035	2.98		9393.26	9393.26	1.73		Si
SLV 2	3.63	-2432.18	-6053	-0.0000182	0.0005615	0.0035	2.98		11174.56	11174.56	4.59		Si
SLV 3	1.73	6404.69	-9266	-0.0000389	0.0005615	0.0035	2.98		13513.14	13513.14	2.11		Si
SLV 3	3.63	-3854.93	-6987	-0.0000247	0.0005615	0.0035	2.98		12440.33	12440.33	3.23		Si
SLV 6	1.73	2843.82	-3310	-0.0000173	0.0005615	0.0035	2.98		5276.85	5276.85	1.86		Si
SLV 6	3.63	53.63	-4940	-0.0000084	0.0005615	0.0035	2.98		7584.13	7584.13	141.4		Si
SLV 9	1.73	1670.6	-3830	-0.0000119	0.0005615	0.0035	2.98		6017.02	6017.02	3.6		Si
SLV 9	3.63	720.42	-4920	-0.0000106	0.0005615	0.0035	2.98		7556.2	7556.2	10.49		Si
SLV 1	1.73	6358.56	-6283	-0.0000443	0.0005615	0.0035	2.98		9455.7	9455.7	1.49		Si
SLV 1	3.63	-3288.79	-6062	-0.0000212	0.0005615	0.0035	2.98		11187.57	11187.57	3.4		Si
SLV 14	1.73	-1736.52	-7817	-0.0000189	0.0005615	0.0035	2.98		13558.61	13558.61	7.81		Si
SLV 14	3.63	2741.84	-5954	-0.0000191	0.0005615	0.0035	2.98		9000.99	9000.99	3.28		Si
SLV 4	1.73	5463.42	-9221	-0.0000344	0.0005615	0.0035	2.98		13452.74	13452.74	2.46		Si
SLV 4	3.63	-2998.32	-6977	-0.0000217	0.0005615	0.0035	2.98		12427.62	12427.62	4.14		Si
SLV 10	1.73	697.67	-3784	-0.0000086	0.0005615	0.0035	2.98		5950.92	5950.92	8.53		Si
SLV 10	3.63	1605.84	-4910	-0.0000135	0.0005615	0.0035	2.98		7542.43	7542.43	4.7		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	1.73	3647.74	-14929	-12572	2543	2.98	2.98	-14062	8819	7885	42820	26770	7599	34369	No	13.52	Si
SLU 84	3.63	-665.41	-12709	-10702	2537	2.98	2.98	-11971	8541	7635	42820	26770	7599	34369	No	13.55	Si
SLU 73	1.73	3696.9	-13505	-11373	2515	2.98	2.98	-12721	8641	7725	42820	26770	7599	34369	No	13.66	Si
SLU 73	3.63	-594.41	-11176	-9411	2513	2.98	2.98	-10527	8348	7463	42820	26770	7599	34369	No	13.68	Si
SLU 75	1.73	3527.68	-13551	-11411	2454	2.98	2.98	-12764	8646	7730	42820	26770	7599	34369	No	14.01	Si
SLU 75	3.63	-654.3	-11179	-9414	2449	2.98	2.98	-10530	8348	7463	42820	26770	7599	34369	No	14.03	Si
SLU 81	1.73	3393.91	-14998	-12630	2451	2.98	2.98	-14127	8828	7892	42820	26770	7599	34369	No	14.02	Si
SLU 81	3.63	-755.24	-12713	-10706	2442	2.98	2.98	-11975	8541	7636	42820	26770	7599	34369	No	14.08	Si
SLU 80	1.73	3527.68	-13551	-11411	2454	2.98	2.98	-12764	8646	7730	42820	26770	7599	34369	No	14.01	Si
SLU 80	3.63	-654.3	-11179	-9414	2449	2.98	2.98	-10530	8348	7463	42820	26770	7599	34369	No	14.03	Si
SLU 83	1.73	3393.91	-14998	-12630	2451	2.98	2.98	-14127	8828	7892	42820	26770	7599	34369	No	14.02	Si
SLU 83	3.63	-755.24	-12713	-10706	2442	2.98	2.98	-11975	8541	7636	42820	26770	7599	34369	No	14.08	Si
SLU 76	1.73	3696.9	-13505	-11373	2515	2.98	2.98	-12721	8641	7725	42820	26770	7599	34369	No	13.66	Si
SLU 76	3.63	-594.41	-11176	-9411	2513	2.98	2.98	-10527	8348	7463	42820	26770	7599	34369	No	13.68	Si
SLU 61	1.73	3425.57	-13196	-11112	2395	2.98	2.98	-12430	8602	7690	42820	26770	7599	34369	No	14.35	Si
SLU 61	3.63	-650.29	-10867	-9151	2391	2.98	2.98	-10236	8309	7429	42820	26770	7599	34369	No	14.37	Si
SLU 82	1.73	3647.74	-14929	-12572	2543	2.98	2.98	-14062	8819	7885	42820	26770	7599	34369	No	13.52	Si
SLU 82	3.63	-665.41	-12709	-10702	2537	2.98	2.98	-11971	8541	7635	42820	26770	7599	34369	No	13.55	Si
SLU 78	1.73	3527.68	-13551	-11411	2454	2.98	2.98	-12764	8646	7730	42820	26770	7599	34369	No	14.01	Si
SLU 78	3.63	-654.3	-11179	-9414	2449	2.98	2.98	-10530	8348	7463	42820	26770	7599	34369	No	14.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	1.73	2997.56	-13253	-11160	2695	2.98	2.98	-12484	12913	11545	42820	40156	7599	47755		17.72	Si
SLV 8	3.63	-1833.5	-8021	-6754	3188	2.98	2.98	-7555	11928	10663	42820	40156	7599	47755		14.98	Si
SLV 2	1.73	5417.3	-6238	-5253	4979	2.98	1.8648	-5876	11592	6485	42820	40156	7599	47755		9.59	Si
SLV 2	3.63	-2432.18	-6053	-5097	3772	2.98	2.98	-5702	11557	10332	42820	40156	7599	47755		12.66	Si
SLV 1	1.73	6358.56	-6283	-5291	5921	2.98	1.4341	-5919	11600	4991	42820	40156	7599	47755		8.06	Si
SLV 1	3.63	-3288.79	-6062	-5105	4714	2.98	2.8426	-6002	11617	9907	42820	40156	7599	47755		10.13	Si
SLV 14	1.73	-1736.52	-7817	-6583	-2755	2.98	2.98	-7363	11889	10629	42820	40156	7599	47755		17.33	Si
SLV 14	3.63	2741.84	-5954	-5014	-2030	2.98	2.98	-5609	11538	10315	42820	40156	7599	47755		23.53	Si
SLV 3	1.73	6404.69	-9266	-7803	6124	2.98	2.3964	-8728	12162	8744	42820	40156	7599	47755		7.8	Si
SLV 3	3.63	-3854.93	-6987	-5884	5388	2.98	2.8148	-6988	11814	9976	42820	40156	7599	47755		8.86	Si
SLV 11	1.73	1824.35	-13773	-11599	1348	2.98	2.98	-12974	13011	11632	42820	40156	7599	47755		35.43	Si
SLV 11	3.63	-1166.72	-8001	-6738	2420	2.98	2.98	-7536	11924	10660	42820	40156	7599	47755		19.73	Si
SLV 16	1.73	-1690.4	-10800	-9095	-2553	2.98	2.98	-10173	12451	11131	42820	40156	7599	47755		18.71	Si
SLV 16	3.63	2175.7	-6878	-5792	-1355	2.98	2.98	-6479	11712	10471	42820	40156	7599	47755		35.24	Si
SLV 7	1.73	3970.49	-13300	-11200	3668	2.98	2.98	-12528	12922	11552	42820	40156	7599	47755		13.02	Si
SLV 7	3.63	-2718.92	-8031	-6763	4161	2.98	2.98	-7564	11930	10665	42820	40156	7599	47755		11.48	Si
SLV 4	1.73	5463.42	-9221	-7765	5182	2.98	2.6925	-8686	12154	9817	42820	40156	7599	47755		9.22	Si
SLV 4	3.63	-2998.32	-6977	-5876	4447	2.98	2.98	-6572	11731	10488	42820	40156	7599	47755		10.74	Si
SLV 5	1.73	3816.75	-3357	-2827	2994	2.98	1.0589	-3162	11049	3510	42820	40156	7599	46330		15.47	Si
SLV 5	3.63	-831.79	-4950	-4168	1912	2.98	2.98	-4662	11349	10146	42820	40156	7599	47755		24.98	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.61 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.46	4991	-4462	448.78	647.4	1.44	Si
SLV 5	179667	0.46	5025	-4492	448.78	651.68	1.45	Si
SLV 10	179667	0.46	5381	-4810	448.78	696.11	1.55	Si
SLV 9	179667	0.46	5415	-4841	448.78	700.36	1.56	Si
SLV 2	179667	0.46	6985	-6244	448.78	893.8	1.99	Si
SLV 1	179667	0.46	7018	-6274	448.78	897.83	2	Si
SLV 14	179667	0.46	8283	-7405	448.78	1050.56	2.34	Si
SLV 13	179667	0.46	8316	-7435	448.78	1054.51	2.35	Si
SLV 4	179667	0.46	9083	-8120	448.78	1145.56	2.55	Si
SLV 3	179667	0.46	9116	-8150	448.78	1149.46	2.56	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 3	-3911	-10520	111	2.454	904.3	0.891	40.05771	17.68601	Si
SLV 4	-3905	-10477	111	2.457	903.7	0.89	40.09486	17.68601	Si
SLV 1	-3718	-6540	47	2.533	886.2	0.89	41.36802	17.68601	Si
SLV 2	-3712	-6497	47	2.535	885.6	0.89	41.40733	17.68601	Si
SLV 15	-3681	-12786	-39	2.548	882.7	0.89	41.61566	17.68601	Si
SLV 16	-3675	-12743	-39	2.55	882.2	0.89	41.65561	17.68601	Si
SLV 13	-3488	-8806	-103	2.612	864.8	0.889	42.68804	17.68601	Si
SLV 14	-3482	-8763	-103	2.615	864.2	0.889	42.73003	17.68601	Si
SLV 7	-4056	-15958	134	2.402	917.9	0.891	39.17776	14.28956	Si
SLV 8	-4049	-15913	134	2.404	917.3	0.891	39.21463	14.28956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	3.849	SLU 44	Si
V_SLU	13.516	SLU 82	Si
PF_SLV	1.4	SLV 5	Si
V_SLV	7.798	SLV 3	Si
PFFP_SLV	1.443	SLV 6	Si
R_SLV	2.265	SLV 3	Si

Maschio 35

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-8.084	5.825	-9.899	5.825	L2	L3	1.815	0.3	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 44	1.73	99.66	-3420	-0.0000103	0.0003743	0.0035	1.8151	2912.59	3132.42	3132.42	31.43	No	Si
SLU 44	3.63	-325.5	-1351	-0.0000066	0.0003743	0.0035	1.8151	1196.33	2069.81	2069.81	6.36	No	Si
SLU 47	1.73	99.66	-3420	-0.0000103	0.0003743	0.0035	1.8151	2912.59	3132.42	3132.42	31.43	No	Si
SLU 47	3.63	-325.5	-1351	-0.0000066	0.0003743	0.0035	1.8151	1196.33	2069.81	2069.81	6.36	No	Si
SLU 40	1.73	85.23	-4920	-0.0000144	0.0003743	0.0035	1.8151	4068.72	4343.4	4343.4	50.96	No	Si
SLU 40	3.63	644.24	-4557	-0.0000185	0.0003743	0.0035	1.8151	3796.01	4055.09	4055.09	6.29	No	Si
SLU 39	1.73	237.04	-5110	-0.0000163	0.0003743	0.0035	1.8151	4210.02	4492.7	4492.7	18.95	No	Si
SLU 39	3.63	655.43	-4611	-0.0000187	0.0003743	0.0035	1.8151	3836.82	4098.21	4098.21	6.25	No	Si
SLU 42	1.73	85.23	-4920	-0.0000144	0.0003743	0.0035	1.8151	4068.72	4343.4	4343.4	50.96	No	Si
SLU 42	3.63	644.24	-4557	-0.0000185	0.0003743	0.0035	1.8151	3796.01	4055.09	4055.09	6.29	No	Si
SLU 49	1.73	200.87	-3547	-0.0000116	0.0003743	0.0035	1.8151	3013.14	3237.13	3237.13	16.12	No	Si
SLU 49	3.63	-318.04	-1387	-0.0000066	0.0003743	0.0035	1.8151	1227.32	2100.77	2100.77	6.61	No	Si
SLU 41	1.73	237.04	-5110	-0.0000163	0.0003743	0.0035	1.8151	4210.02	4492.7	4492.7	18.95	No	Si
SLU 41	3.63	655.43	-4611	-0.0000187	0.0003743	0.0035	1.8151	3836.82	4098.21	4098.21	6.25	No	Si
SLU 51	1.73	200.87	-3547	-0.0000116	0.0003743	0.0035	1.8151	3013.14	3237.13	3237.13	16.12	No	Si
SLU 51	3.63	-318.04	-1387	-0.0000066	0.0003743	0.0035	1.8151	1227.32	2100.77	2100.77	6.61	No	Si
SLU 50	1.73	352.68	-3737	-0.0000135	0.0003743	0.0035	1.8151	3162.98	3393.32	3393.32	9.62	No	Si
SLU 50	3.63	-306.84	-1441	-0.0000067	0.0003743	0.0035	1.8151	1273.72	2147.26	2147.26	7	No	Si
SLU 46	1.73	200.87	-3547	-0.0000116	0.0003743	0.0035	1.8151	3013.14	3237.13	3237.13	16.12	No	Si
SLU 46	3.63	-318.04	-1387	-0.0000066	0.0003743	0.0035	1.8151	1227.32	2100.77	2100.77	6.61	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	1.73	1797.84	-4938	-0.0000303	0.0005615	0.0035	1.8151		4446.07	4446.07	2.47		Si
SLV 3	3.63	-1079.35	-1467	-0.0000278	0.0005615	0.0035	1.4521		2174.38	2174.38	2.01		Si
SLV 14	1.73	-1275.39	-2035	-0.000024	0.0005615	0.0035	1.4521		2667.27	2667.27	2.09		Si
SLV 14	3.63	1083.43	-2648	-0.0000175	0.0005615	0.0035	1.8151		2514.85	2514.85	2.32		Si
SLV 4	1.73	1508.34	-4596	-0.0000264	0.0005615	0.0035	1.8151		4162.18	4162.18	2.76		Si
SLV 4	3.63	-762.24	-1636	-0.0000122	0.0005615	0.0035	1.8151		2320.94	2320.94	3.04		Si
SLV 13	1.73	-985.88	-2378	-0.0000159	0.0005615	0.0035	1.8151		2962.69	2962.69	3.01		Si
SLV 13	3.63	766.32	-2479	-0.0000136	0.0005615	0.0035	1.8151		2369.77	2369.77	3.09		Si
SLV 16	1.73	-700.39	-3108	-0.0000148	0.0005615	0.0035	1.8151		3588.29	3588.29	5.12		Si
SLV 16	3.63	835.85	-2711	-0.0000149	0.0005615	0.0035	1.8151		2569.47	2569.47	3.07		Si
SLV 10	1.73	-1178.03	-1298	-0.0000862	0.0005615	0.0035	1.4521		2027.16	2027.16	1.72		Si
SLV 10	3.63	818.28	-2200	-0.0000135	0.0005615	0.0035	1.8151		2129.43	2129.43	2.6		Si
SLV 8	1.73	1401.24	-5321	-0.0000274	0.0005615	0.0035	1.8151		4761.28	4761.28	3.4		Si
SLV 8	3.63	-486.41	-2089	-0.00001	0.0005615	0.0035	1.8151		2713.67	2713.67	5.58		Si
SLV 9	1.73	-878.79	-1652	-0.0000145	0.0005615	0.0035	1.4521		2335.07	2335.07	2.66		Si
SLV 9	3.63	490.5	-2026	-0.0000099	0.0005615	0.0035	1.8151		1977.83	1977.83	4.03		Si
SLV 1	1.73	1222.84	-3865	-0.0000217	0.0005615	0.0035	1.8151		3551.31	3551.31	2.9		Si
SLV 1	3.63	-831.77	-1404	-0.0000147	0.0005615	0.0035	1.4521		2119.18	2119.18	2.55		Si
SLV 7	1.73	1700.48	-5676	-0.0000312	0.0005615	0.0035	1.8151		5049.63	5049.63	2.97		Si
SLV 7	3.63	-814.2	-1915	-0.0000131	0.0005615	0.0035	1.8151		2563.43	2563.43	3.15		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	1.73	169.48	-5636	-4746	-988	1.8151	1.8151	-8715	8106	4414	42820	16306	4629	20934	No	21.18	Si
SLU 84	3.63	520.29	-4669	-3932	-1007	1.8151	1.8151	-7221	7907	4306	42820	16306	4629	20934	No	20.8	Si
SLU 42	1.73	85.23	-4920	-4143	-1102	1.8151	1.8151	-7608	7959	4334	42820	16306	4629	20934	No	19	Si
SLU 42	3.63	644.24	-4557	-3838	-1119	1.8151	1.8151	-7048	7884	4293	42820	16306	4629	20934	No	18.71	Si
SLU 33	1.73	91.4	-4460	-3756	-868	1.8151	1.8151	-6897	7864	4282	42820	16306	4629	20934	No	24.13	Si
SLU 33	3.63	453.18	-3824	-3220	-885	1.8151	1.8151	-5914	7733	4211	42820	16306	4629	20934	No	23.67	Si
SLU 31	1.73	-9.81	-4333	-3649	-956	1.8151	1.8151	-6701	7838	4268	42820	16306	4629	20934	No	21.89	Si
SLU 31	3.63	445.72	-3788	-3190	-981	1.8151	1.8151	-5858	7726	4207	42820	16306	4629	20934	No	21.34	Si
SLU 36	1.73	91.4	-4460	-3756	-868	1.8151	1.8151	-6897	7864	4282	42820	16306	4629	20934	No	24.13	Si
SLU 36	3.63	453.18	-3824	-3220	-885	1.8151	1.8151	-5914	7733	4211	42820	16306	4629	20934	No	23.67	Si
SLU 82	1.73	169.48	-5636	-4746	-988	1.8151	1.8151	-8715	8106	4414	42820	16306	4629	20934	No	21.18	Si
SLU 82	3.63	520.29	-4669	-3932	-1007	1.8151	1.8151	-7221	7907	4306	42820	16306	4629	20934	No	20.8	Si
SLU 41	1.73	237.04	-5110	-4303	-969	1.8151	1.8151	-7902	7998	4355	42820	16306	4629	20934	No	21.6	Si
SLU 41	3.63	655.43	-4611	-3883	-974	1.8151	1.8151	-7131	7895	4299	42820	16306	4629	20934	No	21.49	Si
SLU 39	1.73	237.04	-5110	-4303	-969	1.8151	1.8151	-7902	7998	4355	42820	16306	4629	20934	No	21.6	Si
SLU 39	3.63	655.43	-4611	-3883	-974	1.8151	1.8151	-7131	7895	4299	42820	16306	4629	20934	No	21.49	Si
SLU 40	1.73	85.23	-4920	-4143	-1102	1.8151	1.8151	-7608	7959	4334	42820	16306	4629	20934	No	19	Si
SLU 40	3.63	644.24	-4557	-3838	-1119	1.8151	1.8151	-7048	7884	4293	42820	16306	4629	20934	No	18.71	Si
SLU 34	1.73	-9.81	-4333	-3649	-956	1.8151	1.8151	-6701	7838	4268	42820	16306	4629	20934	No	21.89	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 34	3.63	445.72	-3788	-3190	-981	1.8151	1.8151	-5858	7726	4207	42820	16306	4629	20934	No	21.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 3	1.73	1797.84	-4938	-4159	2709	1.8151	1.6305	-7637	11944	5842	42820	24458	4629	29087		10.74	Si
SLV 3	3.63	-1079.35	-1467	-1235	1769	1.4521	0.5156	0	0	0	42820	19567	3703	23270		13.16	Si
SLV 4	1.73	1508.34	-4596	-3870	2146	1.8151	1.738	-7107	11838	6172	42820	24458	4629	29087		13.56	Si
SLV 4	3.63	-762.24	-1636	-1377	1206	1.8151	1.3246	-3470	11111	4415	42820	24458	4629	29087		24.13	Si
SLV 1	1.73	1222.84	-3865	-3255	1680	1.8151	1.7735	-5977	11612	6178	42820	24458	4629	29087		17.31	Si
SLV 1	3.63	-831.77	-1404	-1182	923	1.4521	0.9449	0	0	0	42820	19567	3703	23270		25.21	Si
SLV 9	1.73	-878.79	-1652	-1391	-2200	1.4521	1.1267	0	0	0	42820	19567	3703	23270		10.58	Si
SLV 9	3.63	490.5	-2026	-1706	-1645	1.8151	1.8151	-3133	11043	6013	42820	24458	4629	29087		17.68	Si
SLV 16	1.73	-700.39	-3108	-2618	-1992	1.8151	1.8151	-4807	11378	6196	42820	24458	4629	29087		14.6	Si
SLV 16	3.63	835.85	-2711	-2283	-1242	1.8151	1.7978	-4193	11255	6070	42820	24458	4629	29087		23.41	Si
SLV 13	1.73	-985.88	-2378	-2002	-2457	1.8151	1.4788	-4521	11321	5022	42820	24458	4629	29087		11.84	Si
SLV 13	3.63	766.32	-2479	-2088	-1525	1.8151	1.7953	-3834	11183	6023	42820	24458	4629	29087		19.08	Si
SLV 10	1.73	-1178.03	-1298	-1093	-2782	1.4521	0	0	0	0	42820	19567	3703	23270		8.36	Si
SLV 10	3.63	818.28	-2200	-1853	-2227	1.8151	1.6068	-3402	11097	5349	42820	24458	4629	29087		13.06	Si
SLV 7	1.73	1700.48	-5676	-4779	2471	1.8151	1.8151	-8777	12172	6628	42820	24458	4629	29087		11.77	Si
SLV 7	3.63	-814.2	-1915	-1612	1908	1.8151	1.447	-3719	11161	4845	42820	24458	4629	29087		15.24	Si
SLV 8	1.73	1401.24	-5321	-4481	1889	1.8151	1.8151	-8230	12063	6568	42820	24458	4629	29087		15.4	Si
SLV 8	3.63	-486.41	-2089	-1759	1326	1.8151	1.8151	-3231	11063	6024	42820	24458	4629	29087		21.94	Si
SLV 14	1.73	-1275.39	-2035	-1714	-3021	1.4521	0.8426	0	0	0	42820	19567	3703	23270		7.7	Si
SLV 14	3.63	1083.43	-2648	-2230	-2088	1.8151	1.4951	-4095	11236	5039	42820	24458	4629	29087		13.93	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 2.61 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.46	3366	-1833	273.35	268.91	0.98	No, M>Mu
SLV 6	179667	0.46	3444	-1875	273.35	274.96	1.01	Si
SLV 9	179667	0.46	3536	-1926	273.35	282.14	1.03	Si
SLV 5	179667	0.46	3614	-1968	273.35	288.18	1.05	Si
SLV 14	179667	0.46	4667	-2541	273.35	369.56	1.35	Si
SLV 13	179667	0.46	4831	-2631	273.35	382.13	1.4	Si
SLV 2	179667	0.46	4925	-2682	273.35	389.33	1.42	Si
SLV 1	179667	0.46	5090	-2771	273.35	401.86	1.47	Si
SLV 16	179667	0.46	5857	-3189	273.35	460.05	1.68	Si
SLV 15	179667	0.46	6021	-3279	273.35	472.42	1.73	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.
Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:
- Il rinforzo predisposto non è atto ad essere utilizzato per queste tipologie di verifiche.
- Non sono stati predisposti rinforzi di tipo rete e betoncino oppure FRP sia orizzontali che verticali.
- Non sono stati predisposti rinforzi di tipo rete e betoncino, FRP oppure FRCM su entrambi i lati.
- Si sono predisposti solamente FRP Diagonali che sono validi solo per la resistenza a taglio.

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-1893	-2197	-167	2.744	505.5	0.889	44.86171	17.68601	Si
SLV 16	-1887	-3269	-113	2.763	504.9	0.889	45.17874	17.68601	Si
SLV 13	-1861	-2367	-168	2.767	502.6	0.889	45.24052	17.68601	Si
SLV 15	-1855	-3439	-113	2.787	502	0.889	45.5608	17.68601	Si
SLV 4	-1738	-3768	169	2.86	491.5	0.889	46.76214	17.68601	Si
SLV 2	-1745	-2696	115	2.87	492.1	0.889	46.92669	17.68601	Si
SLV 3	-1707	-3938	169	2.886	488.6	0.889	47.17167	17.68601	Si
SLV 1	-1713	-2866	114	2.896	489.2	0.889	47.33711	17.68601	Si
SLV 10	-1849	-1118	-132	2.785	501.5	0.889	45.54143	14.28956	Si
SLV 9	-1817	-1293	-132	2.81	498.5	0.889	45.94281	14.28956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.253	SLU 39	Si
V_SLU	18.707	SLU 40	Si
PF_SLV	1.721	SLV 10	Si
V_SLV	7.703	SLV 14	Si
PFFP_SLV	0.984	SLV 10	No
R_SLV	2.537	SLV 14	Si

Maschio 36

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-14.234	1.355	-14.234	-3.134	L2	L3	4.489	0.15	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	0.73	-1568.78	-7413	-0.0000175	0.0004492	0.0035	4.4889	15138.78	27028.55	27028.55	17.23	No	Si
SLU 43	4.49	417.93	-314	-0.0000019	0.0004492	0.0035	4.4889	701.49	2758.98	2758.98	6.6	No	Si
SLU 51	0.73	-1578.96	-7434	-0.0000175	0.0004492	0.0035	4.4889	15178.4	27072.61	27072.61	17.15	No	Si
SLU 51	4.49	413.23	-315	-0.0000018	0.0004492	0.0035	4.4889	703.83	2761.27	2761.27	6.68	No	Si
SLU 46	0.73	-1578.96	-7434	-0.0000175	0.0004492	0.0035	4.4889	15178.4	27072.61	27072.61	17.15	No	Si
SLU 46	4.49	413.23	-315	-0.0000018	0.0004492	0.0035	4.4889	703.83	2761.27	2761.27	6.68	No	Si
SLU 48	0.73	-1568.78	-7413	-0.0000175	0.0004492	0.0035	4.4889	15138.78	27028.55	27028.55	17.23	No	Si
SLU 48	4.49	417.93	-314	-0.0000019	0.0004492	0.0035	4.4889	701.49	2758.98	2758.98	6.6	No	Si
SLU 47	0.73	-1585.75	-7449	-0.0000176	0.0004492	0.0035	4.4889	15204.8	27101.99	27101.99	17.09	No	Si
SLU 47	4.49	410.09	-315	-0.0000018	0.0004492	0.0035	4.4889	705.39	2762.8	2762.8	6.74	No	Si
SLU 71	0.73	-1639.31	-8642	-0.0000199	0.0004492	0.0035	4.4889	17359.73	29536.6	29536.6	18.02	No	Si
SLU 71	4.49	387.24	-516	-0.0000019	0.0004492	0.0035	4.4889	1151.33	3198.81	3198.81	8.26	No	Si
SLU 44	0.73	-1585.75	-7449	-0.0000176	0.0004492	0.0035	4.4889	15204.8	27101.99	27101.99	17.09	No	Si
SLU 44	4.49	410.09	-315	-0.0000018	0.0004492	0.0035	4.4889	705.39	2762.8	2762.8	6.74	No	Si
SLU 50	0.73	-1568.78	-7413	-0.0000175	0.0004492	0.0035	4.4889	15138.78	27028.55	27028.55	17.23	No	Si
SLU 50	4.49	417.93	-314	-0.0000019	0.0004492	0.0035	4.4889	701.49	2758.98	2758.98	6.6	No	Si
SLU 45	0.73	-1568.78	-7413	-0.0000175	0.0004492	0.0035	4.4889	15138.78	27028.55	27028.55	17.23	No	Si
SLU 45	4.49	417.93	-314	-0.0000019	0.0004492	0.0035	4.4889	701.49	2758.98	2758.98	6.6	No	Si
SLU 49	0.73	-1578.96	-7434	-0.0000175	0.0004492	0.0035	4.4889	15178.4	27072.61	27072.61	17.15	No	Si
SLU 49	4.49	413.23	-315	-0.0000018	0.0004492	0.0035	4.4889	703.83	2761.27	2761.27	6.68	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	0.73	-650.22	-2934	-0.0000069	0.0006738	0.0035	4.4889		17825.1	17825.1	27.41		Si
SLV 13	4.49	312.94	-47	-0.0000509	0.0006738	0.0035	3.5911		2172.91	2172.91	6.94		Si
SLV 16	0.73	-1452.66	-1801	-0.0000068	0.0006738	0.0035	4.4889		15419.42	15419.42	10.61		Si
SLV 16	4.49	628.04	14	-0.0001449	0.0006738	0.0035	3.5911		2040.98	2040.98	3.25		Si
SLV 14	0.73	-633.56	-2956	-0.0000069	0.0006738	0.0035	4.4889		17871.41	17871.41	28.21		Si
SLV 14	4.49	312.26	-45	-0.0000514	0.0006738	0.0035	3.5911		2168.93	2168.93	6.95		Si
SLV 11	0.73	-2576.25	-3617	-0.0000129	0.0006738	0.0035	4.4889		19272.77	19272.77	7.48		Si
SLV 11	4.49	867.48	-232	-0.0001024	0.0006738	0.0035	3.5911		2580.03	2580.03	2.97		Si
SLV 15	0.73	-1469.32	-1779	-0.0000068	0.0006738	0.0035	4.4889		15372.68	15372.68	10.46		Si
SLV 15	4.49	628.72	12	-0.0001443	0.0006738	0.0035	3.5911		2044.96	2044.96	3.25		Si
SLV 3	0.73	-1900.83	-10881	-0.0000246	0.0006738	0.0035	4.4889		34169.29	34169.29	17.98		Si
SLV 3	4.49	258.3	-880	-0.0000022	0.0006738	0.0035	4.4889		3996.56	3996.56	15.47		Si
SLV 8	0.73	-2688.48	-6371	-0.0000182	0.0006738	0.0035	4.4889		25028.75	25028.75	9.31		Si
SLV 8	4.49	755.66	-498	-0.0000037	0.0006738	0.0035	4.4889		3161.59	3161.59	4.18		Si
SLV 7	0.73	-2705.7	-6348	-0.0000182	0.0006738	0.0035	4.4889		24981.89	24981.89	9.23		Si
SLV 7	4.49	756.36	-500	-0.0000037	0.0006738	0.0035	4.4889		3165.69	3165.69	4.19		Si
SLV 4	0.73	-1884.17	-10903	-0.0000246	0.0006738	0.0035	4.4889		34212.69	34212.69	18.16		Si
SLV 4	4.49	257.62	-879	-0.0000022	0.0006738	0.0035	4.4889		3992.59	3992.59	15.5		Si
SLV 12	0.73	-2559.03	-3640	-0.0000129	0.0006738	0.0035	4.4889		19320.16	19320.16	7.55		Si
SLV 12	4.49	866.78	-231	-0.000103	0.0006738	0.0035	3.5911		2575.91	2575.91	2.97		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 77	0.73	-1715.22	-10535	-6020	-2666	4.4889	4.4889	-8941	9525	6414	122342	24198	22893	47091	No	17.66	Si
SLU 77	4.49	319.55	-901	-515	-2669	4.4889	4.4889	-765	8435	5680	122342	24198	22893	47091	No	17.64	Si
SLU 84	0.73	-1757.93	-11368	-6496	-2699	4.4889	4.4889	-9647	9620	6477	122342	24198	22893	47091	No	17.45	Si
SLU 84	4.49	285.84	-1068	-610	-2701	4.4889	4.4889	-906	8454	5692	122342	24198	22893	47091	No	17.44	Si
SLU 74	0.73	-1715.22	-10535	-6020	-2666	4.4889	4.4889	-8941	9525	6414	122342	24198	22893	47091	No	17.66	Si
SLU 74	4.49	319.55	-901	-515	-2669	4.4889	4.4889	-765	8435	5680	122342	24198	22893	47091	No	17.64	Si
SLU 80	0.73	-1725.4	-10557	-6032	-2648	4.4889	4.4889	-8959	9528	6415	122342	24198	22893	47091	No	17.78	Si
SLU 80	4.49	314.85	-902	-516	-2651	4.4889	4.4889	-766	8435	5680	122342	24198	22893	47091	No	17.77	Si
SLU 81	0.73	-1747.75	-11346	-6484	-2717	4.4889	4.4889	-9629	9617	6476	122342	24198	22893	47091	No	17.33	Si
SLU 81	4.49	290.55	-1067	-609	-2719	4.4889	4.4889	-905	8454	5692	122342	24198	22893	47091	No	17.32	Si
SLU 83	0.73	-1747.75	-11346	-6484	-2717	4.4889	4.4889	-9629	9617	6476	122342	24198	22893	47091	No	17.33	Si
SLU 83	4.49	290.55	-1067	-609	-2719	4.4889	4.4889	-905	8454	5692	122342	24198	22893	47091	No	17.32	Si
SLU 75	0.73	-1725.4	-10557	-6032	-2648	4.4889	4.4889	-8959	9528	6415	122342	24198	22893	47091	No	17.78	Si
SLU 75	4.49	314.85	-902	-516	-2651	4.4889	4.4889	-766	8435	5680	122342	24198	22893	47091	No	17.77	Si
SLU 79	0.73	-1715.22	-10535	-6020	-2666	4.4889	4.4889	-8941	9525	6414	122342	24198	22893	47091	No	17.66	Si
SLU 79	4.49	319.55	-901	-515	-2669	4.4889	4.4889	-765	8435	5680	122342	24198	22893	47091	No	17.64	Si
SLU 78	0.73	-1725.4	-10557	-6032	-2648	4.4889	4.4889	-8959	9528	6415	122342	24198	22893	47091	No	17.78	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	4.49	314.85	-902	-516	-2651	4.4889	4.4889	-766	8435	5680	122342	24198	22893	47091	No	17.77	Si
SLU 82	0.73	-1757.93	-11368	-6496	-2699	4.4889	4.4889	-9647	9620	6477	122342	24198	22893	47091	No	17.45	Si
SLU 82	4.49	285.84	-1068	-610	-2701	4.4889	4.4889	-906	8454	5692	122342	24198	22893	47091	No	17.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	0.73	154.09	-7466	-4267	3703	4.4889	4.4889	-6336	13767	9270	122342	36297	22893	59190		15.99	Si
SLV 9	4.49	-185.09	-427	-244	337	4.4889	4.4889	-362	12572	8466	122342	36297	22893	59190		175.78	Si
SLV 11	0.73	-2576.25	-3617	-2067	-7815	4.4889	4.4889	-3070	13114	8830	122342	36297	22893	59190		7.57	Si
SLV 11	4.49	867.48	-232	-133	-4526	3.5911	0	0	0	0	122342	29038	18315	47352		10.46	Si
SLV 6	0.73	41.86	-10220	-5840	3858	4.4889	4.4889	-8673	14235	9585	122342	36297	22893	59190		15.34	Si
SLV 6	4.49	-296.92	-693	-396	565	4.4889	4.4889	-588	12618	8496	122342	36297	22893	59190		104.71	Si
SLV 15	0.73	-1469.32	-1779	-1017	-3994	4.4889	4.256	-1594	12819	8183	122342	36297	22893	59190		14.82	Si
SLV 15	4.49	628.72	12	7	-3120	3.5911	0	0	0	0	122342	29038	18315	47352		15.18	Si
SLV 10	0.73	171.31	-7489	-4279	3678	4.4889	4.4889	-6356	13771	9273	122342	36297	22893	59190		16.09	Si
SLV 10	4.49	-185.79	-425	-243	312	4.4889	4.4889	-361	12572	8465	122342	36297	22893	59190		189.58	Si
SLV 7	0.73	-2705.7	-6348	-3627	-7635	4.4889	4.4889	-5387	13577	9142	122342	36297	22893	59190		7.75	Si
SLV 7	4.49	756.36	-500	-286	-4273	4.4889	2.1961	-424	12585	4146	122342	36297	22893	59190		13.85	Si
SLV 12	0.73	-2559.03	-3640	-2080	-7839	4.4889	4.4889	-3089	13118	8833	122342	36297	22893	59190		7.55	Si
SLV 12	4.49	866.78	-231	-132	-4551	3.5911	0	0	0	0	122342	29038	18315	47352		10.4	Si
SLV 5	0.73	24.64	-10197	-5827	3883	4.4889	4.4889	-8654	14231	9582	122342	36297	22893	59190		15.24	Si
SLV 5	4.49	-296.22	-695	-397	590	4.4889	4.4889	-590	12618	8496	122342	36297	22893	59190		100.36	Si
SLV 8	0.73	-2688.48	-6371	-3640	-7659	4.4889	4.4889	-5406	13581	9145	122342	36297	22893	59190		7.73	Si
SLV 8	4.49	755.66	-498	-285	-4298	4.4889	2.1832	-423	12585	4121	122342	36297	22893	59190		13.77	Si
SLV 16	0.73	-1452.66	-1801	-1029	-4018	4.4889	4.3137	-1592	12818	8294	122342	36297	22893	59190		14.73	Si
SLV 16	4.49	628.04	14	8	-3144	3.5911	0	0	0	0	122342	29038	18315	47352		15.06	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 2.61 Ta 0.16 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	2091	0.46	366.43	0	0	0	0	No
SLV 14	1495	0.46	366.43	0	0	0	0	No
SLV 15	2087	0.46	366.43	0	0	0	0	No
SLV 13	1491	0.46	366.43	0	0	0	0	No
SLV 12	-1416	0.46	366.43	0	421.57	210.79	0.58	No
SLV 11	-1421	0.46	366.43	0	422.03	211.01	0.58	No
SLV 10	-3401	0.46	366.43	0	611.36	305.68	0.83	No
SLV 9	-3406	0.46	366.43	0	611.8	305.9	0.83	No
SLV 8	-5018	0.46	366.43	361.01	761.96	561.49	1.53	Si
SLV 7	-5022	0.46	366.43	361.33	762.39	561.86	1.53	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.03 Ta = 0.1574

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-939	-12036	120	7.834	507.8	0.906	125.61348	18.9497	Si
SLV 2	-937	-12058	120	7.838	507.6	0.906	125.67457	18.9497	Si
SLV 3	-880	-10881	134	7.974	503.7	0.909	127.53162	18.9497	Si
SLV 4	-879	-10903	134	7.978	503.5	0.909	127.59396	18.9497	Si
SLV 5	-695	-10197	16	8.51	491.4	0.918	134.75342	18.9497	Si
SLV 6	-693	-10220	16	8.515	491.2	0.918	134.82218	18.9497	Si
SLV 7	-500	-6348	63	9.088	480.1	0.931	141.82221	18.9497	Si
SLV 8	-498	-6371	63	9.094	480	0.931	141.8942	18.9497	Si
SLV 9	-427	-7466	-59	9.334	476.4	0.938	144.67223	18.9497	Si
SLV 10	-425	-7489	-59	9.341	476.3	0.938	144.74553	18.9497	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	6.601	SLU 43	Si
V_SLU	17.319	SLU 81	Si
PF_SLV	2.972	SLV 12	Si
V_SLV	7.551	SLV 12	Si
PFFP_SLV	0	SLV 13	No
R_SLV	6.629	SLV 1	Si

Maschio 37

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-12.647	5.825	-12.647	1.355	L2	L3	4.47	0.15	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 83	0.73	-4958.03	-11772	-0.0000345	0.0004492	0.0035	4.47	22529.54	35471.66	35471.66	7.15	No	Si
SLU 83	4.49	61.18	-1288	-0.0000025	0.0004492	0.0035	4.47	2833.1	4831.94	4831.94	78.97	No	Si
SLU 82	0.73	-5063.35	-11822	-0.0000348	0.0004492	0.0035	4.47	22609.81	35569.21	35569.21	7.02	No	Si
SLU 82	4.49	65.46	-1279	-0.0000025	0.0004492	0.0035	4.47	2814.32	4813.25	4813.25	73.53	No	Si
SLU 84	0.73	-5063.35	-11822	-0.0000348	0.0004492	0.0035	4.47	22609.81	35569.21	35569.21	7.02	No	Si
SLU 84	4.49	65.46	-1279	-0.0000025	0.0004492	0.0035	4.47	2814.32	4813.25	4813.25	73.53	No	Si
SLU 73	0.73	-4780.27	-11075	-0.0000327	0.0004492	0.0035	4.47	21406.58	34124.19	34124.19	7.14	No	Si
SLU 73	4.49	-21.47	-1083	-0.000002	0.0004492	0.0035	4.47	2387.93	13849.47	13849.47	645.21	No	Si
SLU 80	0.73	-4710.05	-11041	-0.0000324	0.0004492	0.0035	4.47	21351.71	34059.15	34059.15	7.23	No	Si
SLU 80	4.49	-24.32	-1089	-0.000002	0.0004492	0.0035	4.47	2400.51	13861.79	13861.79	570.09	No	Si
SLU 78	0.73	-4710.05	-11041	-0.0000324	0.0004492	0.0035	4.47	21351.71	34059.15	34059.15	7.23	No	Si
SLU 78	4.49	-24.32	-1089	-0.000002	0.0004492	0.0035	4.47	2400.51	13861.79	13861.79	570.09	No	Si
SLU 76	0.73	-4780.27	-11075	-0.0000327	0.0004492	0.0035	4.47	21406.58	34124.19	34124.19	7.14	No	Si
SLU 76	4.49	-21.47	-1083	-0.000002	0.0004492	0.0035	4.47	2387.93	13849.47	13849.47	645.21	No	Si
SLU 81	0.73	-4958.03	-11772	-0.0000345	0.0004492	0.0035	4.47	22529.54	35471.66	35471.66	7.15	No	Si
SLU 81	4.49	61.18	-1288	-0.0000025	0.0004492	0.0035	4.47	2833.1	4831.94	4831.94	78.97	No	Si
SLU 75	0.73	-4710.05	-11041	-0.0000324	0.0004492	0.0035	4.47	21351.71	34059.15	34059.15	7.23	No	Si
SLU 75	4.49	-24.32	-1089	-0.000002	0.0004492	0.0035	4.47	2400.51	13861.79	13861.79	570.09	No	Si
SLU 40	0.73	-4458.58	-10294	-0.0000303	0.0004492	0.0035	4.47	20116.65	32614.13	32614.13	7.31	No	Si
SLU 40	4.49	170.3	-1245	-0.0000027	0.0004492	0.0035	4.47	2739.79	4739.09	4739.09	27.83	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	0.73	-4991.55	-4831	-0.000022	0.0006738	0.0035	4.47		21741.97	21741.97	4.36		Si
SLV 4	4.49	23.75	-191	-0.0000004	0.0006738	0.0035	4.47		2462.73	2462.73	103.71		Si
SLV 2	0.73	-2875.07	-3134	-0.000013	0.0006738	0.0035	4.47		18184.83	18184.83	6.32		Si
SLV 2	4.49	-419.92	-123	-0.0000092	0.0006738	0.0035	3.576		11785.95	11785.95	28.07		Si
SLV 16	0.73	-3135.04	-11414	-0.0000289	0.0006738	0.0035	4.47		35087.83	35087.83	11.19		Si
SLV 16	4.49	104.88	-1025	-0.0000021	0.0006738	0.0035	4.47		4277.74	4277.74	40.79		Si
SLV 15	0.73	-3174.05	-11491	-0.0000291	0.0006738	0.0035	4.47		35239.87	35239.87	11.1		Si
SLV 15	4.49	129.01	-1031	-0.0000022	0.0006738	0.0035	4.47		4291.23	4291.23	33.26		Si
SLV 8	0.73	-6810.35	-9114	-0.0000338	0.0006738	0.0035	4.47		30533.99	30533.99	4.48		Si
SLV 8	4.49	569.35	-562	-0.0000025	0.0006738	0.0035	4.47		3270.83	3270.83	5.74		Si
SLV 12	0.73	-6253.39	-11089	-0.0000361	0.0006738	0.0035	4.47		34443.71	34443.71	5.51		Si
SLV 12	4.49	593.69	-812	-0.0000029	0.0006738	0.0035	4.47		3815.04	3815.04	6.43		Si
SLV 1	0.73	-2914.08	-3210	-0.0000132	0.0006738	0.0035	4.47		18347.07	18347.07	6.3		Si
SLV 1	4.49	-395.79	-130	-0.000008	0.0006738	0.0035	3.576		11799.32	11799.32	29.81		Si
SLV 7	0.73	-6850.67	-9193	-0.000034	0.0006738	0.0035	4.47		30691.14	30691.14	4.48		Si
SLV 7	4.49	594.3	-568	-0.0000026	0.0006738	0.0035	4.47		3284.83	3284.83	5.53		Si
SLV 3	0.73	-5030.56	-4908	-0.0000222	0.0006738	0.0035	4.47		21902.59	21902.59	4.35		Si
SLV 3	4.49	47.88	-197	-0.0000005	0.0006738	0.0035	4.47		2476.32	2476.32	51.72		Si
SLV 11	0.73	-6293.71	-11168	-0.0000364	0.0006738	0.0035	4.47		34600.85	34600.85	5.5		Si
SLV 11	4.49	618.64	-819	-0.000003	0.0006738	0.0035	4.47		3829.04	3829.04	6.19		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	0.73	-5063.35	-11822	-6756	2763	4.47	4.47	-10075	9677	6488	122342	24096	22797	46893	No	16.97	Si
SLU 84	4.49	65.46	-1279	-731	2377	4.47	4.47	-1090	8479	5685	122342	24096	22797	46893	No	19.73	Si
SLU 73	0.73	-4780.27	-11075	-6329	2897	4.47	4.47	-9439	9592	6431	122342	24096	22797	46893	No	16.19	Si
SLU 73	4.49	-21.47	-1083	-619	2373	4.47	4.47	-923	8456	5670	122342	24096	22797	46893	No	19.76	Si
SLU 44	0.73	-3414.71	-8064	-4608	2867	4.47	4.47	-6873	9250	6202	122342	24096	22797	46893	No	16.36	Si
SLU 44	4.49	-331.85	-403	-230	2388	4.47	4.2349	-363	8382	5324	122342	24096	22797	46893	No	19.64	Si
SLU 52	0.73	-4239.09	-9886	-5649	2875	4.47	4.47	-8425	9457	6341	122342	24096	22797	46893	No	16.31	Si
SLU 52	4.49	-122.38	-848	-485	2367	4.47	4.47	-723	8430	5652	122342	24096	22797	46893	No	19.81	Si
SLU 47	0.73	-3414.71	-8064	-4608	2867	4.47	4.47	-6873	9250	6202	122342	24096	22797	46893	No	16.36	Si
SLU 47	4.49	-331.85	-403	-230	2388	4.47	4.2349	-363	8382	5324	122342	24096	22797	46893	No	19.64	Si
SLU 65	0.73	-3955.89	-9253	-5288	2888	4.47	4.47	-7886	9385	6292	122342	24096	22797	46893	No	16.23	Si
SLU 65	4.49	-230.94	-638	-364	2394	4.47	4.47	-544	8406	5636	122342	24096	22797	46893	No	19.59	Si
SLU 82	0.73	-5063.35	-11822	-6756	2763	4.47	4.47	-10075	9677	6488	122342	24096	22797	46893	No	16.97	Si
SLU 82	4.49	65.46	-1279	-731	2377	4.47	4.47	-1090	8479	5685	122342	24096	22797	46893	No	19.73	Si
SLU 55	0.73	-4239.09	-9886	-5649	2875	4.47	4.47	-8425	9457	6341	122342	24096	22797	46893	No	16.31	Si
SLU 55	4.49	-122.38	-848	-485	2367	4.47	4.47	-723	8430	5652	122342	24096	22797	46893	No	19.81	Si
SLU 68	0.73	-3955.89	-9253	-5288	2888	4.47	4.47	-7886	9385	6292	122342	24096	22797	46893	No	16.23	Si
SLU 68	4.49	-230.94	-638	-364	2394	4.47	4.47	-544	8406	5636	122342	24096	22797	46893	No	19.59	Si
SLU 76	0.73	-4780.27	-11075	-6329	2897	4.47	4.47	-9439	9592	6431	122342	24096	22797	46893	No	16.19	Si
SLU 76	4.49	-21.47	-1083	-619	2373	4.47	4.47	-923	8456	5670	122342	24096	22797	46893	No	19.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	0.73	-6850.67	-9193	-5253	-4926	4.47	4.4694	-7835	14067	9431	122342	36144	22797	58941		11.97	Si
SLV 7	4.49	594.3	-568	-325	-1922	4.47	3.5688	-484	12597	6743	122342	36144	22797	58941		30.66	Si
SLV 12	0.73	-6253.39	-11089	-6337	-4842	4.47	4.47	-9451	14390	9649	122342	36144	22797	58941		12.17	Si
SLV 12	4.49	593.69	-812	-464	-1867	4.47	4.47	-692	12638	8474	122342	36144	22797	58941		31.56	Si
SLV 10	0.73	801.55	-5431	-3104	8837	4.47	4.47	-4629	13426	9002	122342	36144	22797	58941		6.67	Si
SLV 10	4.49	-885.2	-586	-335	5639	3.576	2.1738	0	0	0	122342	28915	18238	47153		8.36	Si
SLV 2	0.73	-2875.07	-3134	-1791	4155	4.47	3.9525	-3021	13104	7769	122342	36144	22797	58941		14.19	Si
SLV 2	4.49	-419.92	-123	-70	3183	3.576	0	0	0	0	122342	28915	18238	47153		14.82	Si
SLV 11	0.73	-6293.71	-11168	-6382	-4976	4.47	4.47	-9518	14404	9658	122342	36144	22797	58941		11.85	Si
SLV 11	4.49	618.64	-819	-468	-2002	4.47	4.4379	-698	12640	8414	122342	36144	22797	58941		29.44	Si
SLV 1	0.73	-2914.08	-3210	-1835	4026	4.47	3.9819	-3073	13115	7833	122342	36144	22797	58941		14.64	Si
SLV 1	4.49	-395.79	-130	-74	3052	3.576	0	0	0	0	122342	28915	18238	47153		15.45	Si
SLV 9	0.73	761.23	-5511	-3149	8703	4.47	4.47	-4697	13439	9011	122342	36144	22797	58941		6.77	Si
SLV 9	4.49	-860.26	-593	-339	5504	3.576	2.3493	0	0	0	122342	28915	18238	47153		8.57	Si
SLV 5	0.73	204.27	-3536	-2020	8753	4.47	4.47	-3013	13103	8785	122342	36144	22797	58941		6.73	Si
SLV 5	4.49	-884.6	-342	-196	5584	3.576	0	0	0	0	122342	28915	18238	47153		8.44	Si
SLV 6	0.73	244.59	-3456	-1975	8887	4.47	4.47	-2946	13089	8776	122342	36144	22797	58941		6.63	Si
SLV 6	4.49	-909.54	-336	-192	5719	3.576	0	0	0	0	122342	28915	18238	47153		8.25	Si
SLV 8	0.73	-6810.35	-9114	-5208	-4792	4.47	4.4632	-7767	14053	9409	122342	36144	22797	58941		12.3	Si
SLV 8	4.49	569.35	-562	-321	-1788	4.47	3.666	-479	12596	6926	122342	36144	22797	58941		32.97	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 2.61 Ta 0.16 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-611	0.46	364.89	0	340.97	170.48	0.47	No
SLV 1	-651	0.46	364.89	0	345.04	172.52	0.47	No
SLV 4	-1152	0.46	364.89	0	395.41	197.71	0.54	No
SLV 3	-1192	0.46	364.89	0	399.33	199.66	0.55	No
SLV 6	-2514	0.46	364.89	0	527.38	263.69	0.72	No
SLV 5	-2555	0.46	364.89	0	531.29	265.64	0.73	No
SLV 8	-4319	0.46	364.89	0	696.83	348.41	0.95	No
SLV 7	-4360	0.46	364.89	0	700.64	350.32	0.96	No
SLV 10	-4688	0.46	364.89	0	731.12	365.56	1	Si
SLV 9	-4729	0.46	364.89	0	734.93	367.47	1.01	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.03 Ta = 0.1574

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-1031	-11491	-109	7.609	512.6	0.903	122.45546	18.9497	Si
SLV 16	-1025	-11414	-109	7.623	512.2	0.903	122.65964	18.9497	Si
SLV 13	-963	-9794	-132	7.761	507.7	0.905	124.59021	18.9497	Si
SLV 14	-957	-9717	-131	7.776	507.2	0.906	124.79943	18.9497	Si
SLV 11	-819	-11168	1	8.166	497.6	0.911	130.24312	18.9497	Si
SLV 12	-812	-11089	1	8.183	497.1	0.912	130.47089	18.9497	Si
SLV 9	-593	-5511	-74	8.784	483.3	0.924	138.14761	18.9497	Si
SLV 10	-586	-5431	-74	8.804	482.9	0.925	138.39158	18.9497	Si
SLV 7	-568	-9193	73	8.859	481.9	0.926	139.06441	18.9497	Si
SLV 8	-562	-9114	73	8.879	481.6	0.926	139.30869	18.9497	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	7.025	SLU 82	Si
V_SLU	16.187	SLU 73	Si
PF_SLV	4.354	SLV 3	Si
V_SLV	6.633	SLV 6	Si
PFFP_SLV	0.467	SLV 2	No
R_SLV	6.462	SLV 15	Si

Maschio 38

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-8.084	-3.134	-8.084	5.825	L2	L3	8.959	0.3	3.76	3.76	3.76			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

											εlim,conv / ε,CNR DT-200					CRM / Fibrenet?		
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Entrambi	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 13	0.73	3810.51	-20679	-0.000012	0.0004492	0.0035	8.9589	86799.01	96082.35	96082.35	25.22	No	Si
SLU 13	4.49	-32	-868	-0.0000005	0.0004492	0.0035	8.9589	3876.81	53011.3	53011.3	1656.44	No	Si
SLU 52	0.73	4233.64	-24294	-0.000014	0.0004492	0.0035	8.9589	100773.53	110882.88	110882.88	26.19	No	Si
SLU 52	4.49	-59.98	-798	-0.0000004	0.0004492	0.0035	8.9589	3564.19	52707.55	52707.55	878.76	No	Si
SLU 2	0.73	3026.17	-15921	-0.0000092	0.0004492	0.0035	8.9589	67858.98	76334.18	76334.18	25.22	No	Si
SLU 2	4.49	-4.73	-203	-0.0000001	0.0004492	0.0035	8.9589	906.73	50130.7	50130.7	10603.85	No	Si
SLU 34	0.73	4155.32	-23744	-0.0000137	0.0004492	0.0035	8.9589	98669.89	108653.94	108653.94	26.15	No	Si
SLU 34	4.49	-45.61	-1234	-0.0000006	0.0004492	0.0035	8.9589	5505.51	54595.92	54595.92	1197.04	No	Si
SLU 5	0.73	3026.17	-15921	-0.0000092	0.0004492	0.0035	8.9589	67858.98	76334.18	76334.18	25.22	No	Si
SLU 5	4.49	-4.73	-203	-0.0000001	0.0004492	0.0035	8.9589	906.73	50130.7	50130.7	10603.85	No	Si
SLU 31	0.73	4155.32	-23744	-0.0000137	0.0004492	0.0035	8.9589	98669.89	108653.94	108653.94	26.15	No	Si
SLU 31	4.49	-45.61	-1234	-0.0000006	0.0004492	0.0035	8.9589	5505.51	54595.92	54595.92	1197.04	No	Si
SLU 10	0.73	3810.51	-20679	-0.000012	0.0004492	0.0035	8.9589	86799.01	96082.35	96082.35	25.22	No	Si
SLU 10	4.49	-32	-868	-0.0000005	0.0004492	0.0035	8.9589	3876.81	53011.3	53011.3	1656.44	No	Si
SLU 23	0.73	3370.97	-18985	-0.0000109	0.0004492	0.0035	8.9589	80127.7	89100.11	89100.11	26.43	No	Si
SLU 23	4.49	-18.33	-568	-0.0000003	0.0004492	0.0035	8.9589	2542.06	51715.32	51715.32	2820.79	No	Si
SLU 26	0.73	3370.97	-18985	-0.0000109	0.0004492	0.0035	8.9589	80127.7	89100.11	89100.11	26.43	No	Si
SLU 26	4.49	-18.33	-568	-0.0000003	0.0004492	0.0035	8.9589	2542.06	51715.32	51715.32	2820.79	No	Si
SLU 55	0.73	4233.64	-24294	-0.000014	0.0004492	0.0035	8.9589	100773.53	110882.88	110882.88	26.19	No	Si
SLU 55	4.49	-59.98	-798	-0.0000004	0.0004492	0.0035	8.9589	3564.19	52707.55	52707.55	878.76	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 15	0.73	11778.57	-25203	-0.000017	0.0006738	0.0035	8.9589		115978.1	115978.1	9.85		Si
SLV 15	4.49	-356.88	-676	-0.0000005	0.0006738	0.0035	8.9589		52165.73	52165.73	146.17		Si
SLV 10	0.73	-17965.42	-18734	-0.0000158	0.0006738	0.0035	8.9589		128959.71	128959.71	7.18		Si
SLV 10	4.49	1181.85	-496	-0.0000007	0.0006738	0.0035	8.9589		10198.48	10198.48	8.63		Si
SLV 8	0.73	20436.96	-16521	-0.0000155	0.0006738	0.0035	8.9589		79517.52	79517.52	3.89		Si
SLV 8	4.49	-1076.62	-458	-0.0000007	0.0006738	0.0035	8.9589		51218.68	51218.68	47.57		Si
SLV 12	0.73	22104.19	-20702	-0.0000183	0.0006738	0.0035	8.9589		97209	97209	4.4		Si
SLV 12	4.49	-928.09	-569	-0.0000006	0.0006738	0.0035	8.9589		51698.85	51698.85	55.7		Si
SLV 5	0.73	-17849.98	-14871	-0.0000138	0.0006738	0.0035	8.9589		112770.45	112770.45	6.32		Si
SLV 5	4.49	687.12	-389	-0.0000004	0.0006738	0.0035	8.9589		9730.33	9730.33	14.16		Si
SLV 6	0.73	-19632.64	-14554	-0.0000142	0.0006738	0.0035	8.9589		111437.79	111437.79	5.68		Si
SLV 6	4.49	1033.31	-385	-0.0000007	0.0006738	0.0035	8.9589		9712.33	9712.33	9.4		Si
SLV 7	0.73	22219.62	-16839	-0.0000163	0.0006738	0.0035	8.9589		80863.08	80863.08	3.64		Si
SLV 7	4.49	-1422.82	-462	-0.000001	0.0006738	0.0035	7.1671		51236.47	51236.47	36.01		Si
SLV 11	0.73	23886.85	-21020	-0.0000191	0.0006738	0.0035	8.9589		98542.36	98542.36	4.13		Si
SLV 11	4.49	-1274.28	-573	-0.0000008	0.0006738	0.0035	8.9589		51716.63	51716.63	40.58		Si
SLV 3	0.73	6221.15	-11268	-0.0000079	0.0006738	0.0035	8.9589		57057.86	57057.86	9.17		Si
SLV 3	4.49	-852	-308	-0.0000005	0.0006738	0.0035	7.1671		50565.16	50565.16	59.35		Si
SLV 9	0.73	-16182.76	-19052	-0.0000154	0.0006738	0.0035	8.9589		130292.37	130292.37	8.05		Si
SLV 9	4.49	835.65	-500	-0.0000005	0.0006738	0.0035	8.9589		10216.48	10216.48	12.23		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 71	0.73	2572.42	-22231	-16168	288	8.9589	8.9589	-6016	9135	24553	122342	96588	45690	142278	No	493.8	Si
SLU 71	4.49	-150.39	-480	-349	333	8.9589	8.9589	-130	8351	22444	122342	96588	45690	142278	No	426.76	Si
SLU 50	0.73	2227.62	-19166	-13939	336	8.9589	8.9589	-5186	9025	24256	122342	96588	45690	142278	No	423.41	Si
SLU 50	4.49	-136.78	-114	-83	377	8.9589	8.9589	-31	8337	22408	122342	96588	45690	142278	No	377.58	Si
SLU 56	0.73	3011.96	-23925	-17400	258	8.9589	8.9589	-6474	9197	24717	122342	96588	45690	142278	No	551.83	Si
SLU 56	4.49	-164.06	-779	-567	307	8.9589	8.9589	-211	8361	22473	122342	96588	45690	142278	No	463.1	Si
SLU 58	0.73	3011.96	-23925	-17400	258	8.9589	8.9589	-6474	9197	24717	122342	96588	45690	142278	No	551.83	Si
SLU 58	4.49	-164.06	-779	-567	307	8.9589	8.9589	-211	8361	22473	122342	96588	45690	142278	No	463.1	Si
SLU 45	0.73	2227.62	-19166	-13939	336	8.9589	8.9589	-5186	9025	24256	122342	96588	45690	142278	No	423.41	Si
SLU 45	4.49	-136.78	-114	-83	377	8.9589	8.9589	-31	8337	22408	122342	96588	45690	142278	No	377.58	Si
SLU 66	0.73	2572.42	-22231	-16168	288	8.9589	8.9589	-6016	9135	24553	122342	96588	45690	142278	No	493.8	Si
SLU 66	4.49	-150.39	-480	-349	333	8.9589	8.9589	-130	8351	22444	122342	96588	45690	142278	No	426.76	Si
SLU 48	0.73	2227.62	-19166	-13939	336	8.9589	8.9589	-5186	9025	24256	122342	96588	45690	142278	No	423.41	Si
SLU 48	4.49	-136.78	-114	-83	377	8.9589	8.9589	-31	8337	22408	122342	96588	45690	142278	No	377.58	Si
SLU 69	0.73	2572.42	-22231	-16168	288	8.9589	8.9589	-6016	9135	24553	122342	96588	45690	142278	No	493.8	Si
SLU 69	4.49	-150.39	-480	-349	333	8.9589	8.9589	-130	8351	22444	122342	96588	45690	142278	No	426.76	Si
SLU 64	0.73	2572.42	-22231	-16168	288	8.9589	8.9589	-6016	9135	24553	122342	96588	45690	142278	No	493.8	Si
SLU 64	4.49	-150.39	-480	-349	333	8.9589	8.9589	-130	8351	22444	122342	96588	45690	142278	No	426.76	Si
SLU 43	0.73	2227.62	-19166	-13939	336	8.9589	8.9589	-5186	9025	24256	122342	96588	45690	142278	No	423.41	Si
SLU 43	4.49	-136.78	-114	-83	377	8.9589	8.9589	-31	8337	22408	122342	96588	45690	142278	No	377.58	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	0.73	11778.57	-25203	-18330	6407	8.9589	8.9589	-6820	13864	37262	122342	144882	45690	159604		24.91	Si

Comb.	Quota	M	N	Nmur	V	df	l'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 15	4.49	-356.88	-676	-492	4846	8.9589	8.9589	-183	12537	33694	122342	144882	45690	156037		32.2	Si
SLV 11	0.73	23886.85	-21020	-15287	17905	8.9589	8.9589	-5688	13638	36653	122342	144882	45690	158996		8.88	Si
SLV 11	4.49	-1274.28	-573	-417	11857	8.9589	6.7642	-205	12541	25449	122342	144882	45690	147791		12.46	Si
SLV 10	0.73	-17965.42	-18734	-13625	-17520	8.9589	8.9589	-5069	13514	36321	122342	144882	45690	158663		9.06	Si
SLV 10	4.49	1181.85	-496	-361	-11250	8.9589	6.287	-134	12527	23627	122342	144882	45690	145969		12.98	Si
SLV 9	0.73	-16182.76	-19052	-13856	-14698	8.9589	8.9589	-5155	13531	36367	122342	144882	45690	158709		10.8	Si
SLV 9	4.49	835.65	-500	-364	-8426	8.9589	8.4232	-135	12527	31655	122342	144882	45690	153998		18.28	Si
SLV 6	0.73	-19632.64	-14554	-10584	-17485	8.9589	8.9589	-3938	13288	35713	122342	144882	45690	158055		9.04	Si
SLV 6	4.49	1033.31	-385	-280	-11365	8.9589	5.3914	-104	12521	20251	122342	144882	45690	142594		12.55	Si
SLV 5	0.73	-17849.98	-14871	-10816	-14663	8.9589	8.9589	-4024	13305	35759	122342	144882	45690	158101		10.78	Si
SLV 5	4.49	687.12	-389	-283	-8541	8.9589	8.1436	-105	12521	30590	122342	144882	45690	152933		17.91	Si
SLV 7	0.73	22219.62	-16839	-12247	17940	8.9589	8.9589	-4557	13411	36045	122342	144882	45690	158388		8.83	Si
SLV 7	4.49	-1422.82	-462	-336	11742	7.1671	4.2038	0	0	0	122342	115906	36552	122342		10.42	Si
SLV 12	0.73	22104.19	-20702	-15056	15083	8.9589	8.9589	-5602	13620	36607	122342	144882	45690	158949		10.54	Si
SLV 12	4.49	-928.09	-569	-414	9033	8.9589	8.5424	-161	12532	32117	122342	144882	45690	154459		17.1	Si
SLV 8	0.73	20436.96	-16521	-12016	15118	8.9589	8.9589	-4471	13394	35999	122342	144882	45690	158341		10.47	Si
SLV 8	4.49	-1076.62	-458	-333	8919	8.9589	6.3882	-174	12535	24022	122342	144882	45690	146365		16.41	Si
SLV 3	0.73	6221.15	-11268	-8195	6524	8.9589	8.9589	-3049	13110	35235	122342	144882	45690	157577		24.15	Si
SLV 3	4.49	-852	-308	-224	4463	7.1671	5.1305	0	0	0	122342	115906	36552	122342		27.41	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 2.61 Ta 0.08 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-7127	0.46	1382.98	0	2355.92	1177.96	0.85	No
SLV 1	-7281	0.46	1382.98	0	2382.01	1191	0.86	No
SLV 4	-7591	0.46	1382.98	0	2434.71	1217.35	0.88	No
SLV 3	-7744	0.46	1382.98	0	2460.73	1230.37	0.89	No
SLV 6	-8641	0.46	1382.98	0	2611.86	1305.93	0.94	No
SLV 5	-8800	0.46	1382.98	0	2638.52	1319.26	0.95	No
SLV 8	-10186	0.46	1382.98	1496.24	2871.3	2183.77	1.58	Si
SLV 7	-10344	0.46	1382.98	1519.01	2897.88	2208.45	1.6	Si
SLV 10	-10404	0.46	1382.98	1527.7	2908.02	2217.86	1.6	Si
SLV 9	-10563	0.46	1382.98	1550.45	2934.59	2242.52	1.62	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 2.61 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-676	-25203	669	5.159	1863.2	0.969	77.38587	17.68601	Si
SLV 16	-672	-24896	669	5.161	1863.1	0.969	77.40486	17.68601	Si
SLV 13	-654	-24613	648	5.172	1862.6	0.97	77.52231	17.68601	Si
SLV 14	-650	-24305	648	5.174	1862.5	0.97	77.54129	17.68601	Si
SLV 3	-308	-11268	-643	5.362	1856.2	0.984	79.16088	17.68601	Si
SLV 4	-304	-10961	-643	5.364	1856.2	0.985	79.17907	17.68601	Si
SLV 1	-286	-10678	-663	5.372	1856	0.985	79.22888	17.68601	Si
SLV 2	-282	-10370	-663	5.374	1855.9	0.986	79.24701	17.68601	Si
SLV 11	-573	-21020	234	5.258	1860.8	0.973	78.55033	14.28956	Si
SLV 12	-569	-20702	234	5.261	1860.7	0.973	78.56998	14.28956	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	25.215	SLU 10	Si
V_SLU	377.582	SLU 43	Si
PF_SLV	3.639	SLV 7	Si
V_SLV	8.829	SLV 7	Si
PFFP_SLV	0.852	SLV 2	No
R_SLV	4.376	SLV 15	Si

1.5 Verifiche travi di accoppiamento in muratura

Le unità di misura elencate nel capitolo sono in [m, daN] ove non espressamente specificato.

***X ini.**: coordinata punto iniziale. [m]*
***Y ini.**: coordinata punto iniziale. [m]*
***Z ini.inf.**: coordinata punto iniziale. [m]*
***Z ini.sup.**: coordinata punto iniziale. [m]*
***H ini.**: altezza della sezione iniziale. [m]*
***X fin.**: coordinata punto finale. [m]*
***Y fin.**: coordinata punto finale. [m]*
***Z fin.inf.**: coordinata punto finale. [m]*
***Z fin.sup**: coordinata punto finale. [m]*
***H fin.**: altezza della sezione finale. [m]*
***Luce**: lunghezza della trave. [m]*
***Spessore**: spessore. [m]*
***R. Trazione**: resistenza a trazione dell'elemento teso disposto orizzontalmente. [daN]*
***fb_**: resistenza normalizzata a compressione in direzione orizzontale dei blocchi. [daN/m²]*

fhk: *resistenza caratteristica a compressione della muratura utilizzata in direzione orizzontale. [daN/m²]*
fvk0: *resistenza caratteristica a taglio in assenza di carichi verticali. [daN/m²]*
fhmedio: *resistenza media a compressione della muratura utilizzata in direzione orizzontale. [daN/m²]*
τ0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.16]. [daN/m²]*
fv0: *resistenza media a taglio in assenza di azioni normali [C8.7.1.17]. [daN/m²]*
μ: *coefficiente di attrito [C8.7.1.17].*
φ: *coefficiente di ammorsamento o ingranamento secondo Circolare 7 21-01-19 §C8.7.1.3.1.1.*
fvk,lim: *valore caratteristico massimo della resistenza a taglio che può essere impiegata nel calcolo (§11.10.3.3). [daN/m²]*
E: *modulo di elasticità longitudinale della muratura utilizzato. [daN/m²]*
G: *modulo di elasticità tangenziale della muratura utilizzato. [daN/m²]*
FC: *fattore di confidenza della muratura.*
Materiale: *descrizione del materiale.*
Fu Verticale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
Fu Orizzontale: *carico di rottura a trazione per unità di lunghezza della maglia verticale. [daN/m]*
tfv: *spessore di calcolo equivalente verticale di uno strato di rinforzo.*
tfo: *spessore di calcolo equivalente orizzontale di uno strato di rinforzo.*
E: *modulo di elasticità longitudinale. [daN/m²]*
εu: *dilatazione a rottura.*
Tipo fibra: *natura della fibra.*
materiale: *materiale fibra del rinforzo.*
lato applicazione: *lato di applicazione del rinforzo.*
esposizione: *condizione di esposizione secondo CNR-DT 215 §3.2.*
ancoraggio verticale iniziale: *grado di ancoraggio iniziale dei rinforzi verticali.*
ancoraggio verticale finale: *grado di ancoraggio finale dei rinforzi verticali.*
ancoraggio orizzontale iniziale: *grado di ancoraggio iniziale dei rinforzi orizzontali.*
ancoraggio orizzontale finale: *grado di ancoraggio finale dei rinforzi orizzontali.*
strati: *numero strati del rinforzo.*
verifica taglio: *tipo di verifica a taglio.*
εlim,conv / ε,CNR DT-200: *dati relativi ai parametri per il calcolo della deformazione di progetto.*
αt: *coefficiente che tiene conto della ridotta capacità estensionale delle fibre sollecitate a tagliosecondo CNR-DT 215 §4.1.1.*
α: *coeffiicente amplificativo tensione di distacco secondo CNR-DT 215 §3.1 ovvero secondo CNR-DT 200 R1/2013 §5.3.3.*
εlim,conv: *deformazione limite convenzionale del rinforzo FRCM.*
ε,fd: *deformazione di progetto del rinforzo FRCM ovvero CRM.*
γF,d: *fattore parziali di sicurezza per stato limite di distacco secondo CNR-DT 200 R1/2013 §3.4.1.*
connettori: *presenza di connettori per la prevenzione del distacco del rinforzo.*
tipo di muratura: *tipo di muratura per stato limite di distacco di estremità secondo CNR-DT 200 R1/2013 §5.3.2.*
CRM / Fibrenet?: *dati relativi ai parametri per il calcolo secondo metodo Fibrenet? ovvero se il materiale è di tipo CRM.*
CRM: *stabilisce se il rinforzo è di tipo CRM secondo le Linee Guida del C.S.L.P. Ottobre 2019.*
intonaco: *materiale intonaco FRCM ovvero CRM.*
spessore intonaco: *spessore intonaco. [m]*
tipo blocco fibrenet: *tipo blocco muratura per verifica a tglio tipo Fibrenet.*
Comb.: *combinazione.*
Sez.: *sezione di verifica.*
M: *momento flettente nel piano. [daN*m]*
N: *sforzo normale. [daN]*
εm: *deformazione della muratura.*
εm_: *deformazione elastica della muratura.*
εmu: *deformazione ultima della muratura.*
df: *distanza tra il lembo compresso e la fibra tesa più lontana. [m]*
M0d: *momento resistente della sezione non rinforzata. [daN*m]*
M1d: *momento resistente della sezione rinforzata. [daN*m]*
MRd: *momento resistente della sezione. [daN*m]*
incremento > 50%: *incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.*
c.s.: *coefficiente di sicurezza.*
Verifica: *stato di verifica.*
V: *taglio nel piano. [daN]*
df: *distanza tra lembo compresso e baricentro dell'armatura tesa. [m]*
fvd: *resistenza a taglio di calcolo. [daN/m²]*
Vt: *resistenza a taglio della muratura non rinforzata. [daN]*
Vt,f: *resistenza a taglio del rinforzo (CNR DT215 4.1a). [daN]*
Vt,c: *resistenza a taglio per schiacciamento delle bielle (CNR DT215 4.1b). [daN]*
Vt,c int.: *contributo di resistenza a taglio delle bielle dell'intonaco se considerato. [daN]*
Vt,R: *resistenza a taglio della sezione rinforzata. [daN]*
Stato limite: *pF_SLV=Presso flessione per azioni sismiche; V_SLV=Taglio per azioni sismiche.*
Coeff.s.: *coefficiente di sicurezza.*

Trave di accoppiamento 1

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-15.941	2.678	0.52	0.73	0.21	-15.941	1.58	0.52	0.73	0.21	1.099	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-129.84	-1541	-0.0020497	0.0002246	0.0035	0.21		165.83	165.83	No	1.28	Si
SLU 84	fin.	64.88	-290	-0.0007612	0.0002246	0.0035	0.21		164.52	164.52	No	2.54	Si
SLU 80	ini.	-121.11	-1424	-0.0018107	0.0002246	0.0035	0.21		165.83	165.83	No	1.37	Si
SLU 80	fin.	59.24	-263	-0.0006786	0.0002246	0.0035	0.21		164.52	164.52	No	2.78	Si
SLU 79	ini.	-122.66	-1450	-0.0018504	0.0002246	0.0035	0.21		165.83	165.83	No	1.35	Si
SLU 79	fin.	60.1	-266	-0.0006911	0.0002246	0.0035	0.21		164.52	164.52	No	2.74	Si
SLU 75	ini.	-121.11	-1424	-0.0018107	0.0002246	0.0035	0.21		165.83	165.83	No	1.37	Si
SLU 75	fin.	59.24	-263	-0.0006786	0.0002246	0.0035	0.21		164.52	164.52	No	2.78	Si
SLU 83	ini.	-131.39	-1567	-0.0020958	0.0002246	0.0035	0.21		165.83	165.83	No	1.26	Si
SLU 83	fin.	65.75	-292	-0.0007742	0.0002246	0.0035	0.21		164.52	164.52	No	2.5	Si
SLU 81	ini.	-131.39	-1567	-0.0020958	0.0002246	0.0035	0.21		165.83	165.83	No	1.26	Si
SLU 81	fin.	65.75	-292	-0.0007742	0.0002246	0.0035	0.21		164.52	164.52	No	2.5	Si
SLU 82	ini.	-129.84	-1541	-0.0020497	0.0002246	0.0035	0.21		165.83	165.83	No	1.28	Si
SLU 82	fin.	64.88	-290	-0.0007612	0.0002246	0.0035	0.21		164.52	164.52	No	2.54	Si
SLU 77	ini.	-122.66	-1450	-0.0018504	0.0002246	0.0035	0.21		165.83	165.83	No	1.35	Si
SLU 77	fin.	60.1	-266	-0.0006911	0.0002246	0.0035	0.21		164.52	164.52	No	2.74	Si
SLU 74	ini.	-122.66	-1450	-0.0018504	0.0002246	0.0035	0.21		165.83	165.83	No	1.35	Si
SLU 74	fin.	60.1	-266	-0.0006911	0.0002246	0.0035	0.21		164.52	164.52	No	2.74	Si
SLU 78	ini.	-121.11	-1424	-0.0018107	0.0002246	0.0035	0.21		165.83	165.83	No	1.37	Si
SLU 78	fin.	59.24	-263	-0.0006786	0.0002246	0.0035	0.21		164.52	164.52	No	2.78	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-121.11	553	0.21	0	158	1665	1132	536	1668	No	3.02	Si
SLU 78	fin.	59.24	123	0.21	0	87	1665	1132	536	1668	No	13.58	Si
SLU 77	ini.	-122.66	558	0.21	0	159	1665	1132	536	1668	No	2.99	Si
SLU 77	fin.	60.1	126	0.21	0	88	1665	1132	536	1668	No	13.21	Si
SLU 75	ini.	-121.11	553	0.21	0	158	1665	1132	536	1668	No	3.02	Si
SLU 75	fin.	59.24	123	0.21	0	87	1665	1132	536	1668	No	13.58	Si
SLU 82	ini.	-129.84	587	0.21	0	163	1665	1132	536	1668	No	2.84	Si
SLU 82	fin.	64.88	137	0.21	0	89	1665	1132	536	1668	No	12.15	Si
SLU 81	ini.	-131.39	592	0.21	0	164	1665	1132	536	1668	No	2.82	Si
SLU 81	fin.	65.75	141	0.21	0	90	1665	1132	536	1668	No	11.85	Si
SLU 79	ini.	-122.66	558	0.21	0	159	1665	1132	536	1668	No	2.99	Si
SLU 79	fin.	60.1	126	0.21	0	88	1665	1132	536	1668	No	13.21	Si
SLU 84	ini.	-129.84	587	0.21	0	163	1665	1132	536	1668	No	2.84	Si
SLU 84	fin.	64.88	137	0.21	0	89	1665	1132	536	1668	No	12.15	Si
SLU 83	ini.	-131.39	592	0.21	0	164	1665	1132	536	1668	No	2.82	Si
SLU 83	fin.	65.75	141	0.21	0	90	1665	1132	536	1668	No	11.85	Si
SLU 74	ini.	-122.66	558	0.21	0	159	1665	1132	536	1668	No	2.99	Si
SLU 74	fin.	60.1	126	0.21	0	88	1665	1132	536	1668	No	13.21	Si
SLU 80	ini.	-121.11	553	0.21	0	158	1665	1132	536	1668	No	3.02	Si
SLU 80	fin.	59.24	123	0.21	0	87	1665	1132	536	1668	No	13.58	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	42.24	1002	-0.0004265	0.0003369	0.0035	0.21		161.76	161.76		3.83	Si
SLV 10	fin.	-57.63	165	-0.0006113	0.0003369	0.0035	0.21		163.16	163.16		2.83	Si
SLV 12	ini.	-203.7	-2809	-0.0045811	0.0003369	0.0035	0.21		163.16	163.16		0.8	No
SLV 12	fin.	122.74	-495	-0.001732	0.0003369	0.0035	0.21		161.76	161.76		1.32	Si
SLV 3	ini.	-123.42	-1692	-0.0017256	0.0003369	0.0035	0.21		163.16	163.16		1.32	Si
SLV 3	fin.	84.96	-274	-0.0010122	0.0003369	0.0035	0.21		161.76	161.76		1.9	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	-207.66	-2929	-0.0047169	0.0003369	0.0035	0.21		163.16	163.16		0.79	No
SLV 8	fin.	135.13	-502	-0.0020542	0.0003369	0.0035	0.21		161.76	161.76		1.2	Si
SLV 11	ini.	-200.87	-2765	-0.0044827	0.0003369	0.0035	0.21		163.16	163.16		0.81	No
SLV 11	fin.	121.2	-490	-0.0016963	0.0003369	0.0035	0.21		161.76	161.76		1.33	Si
SLV 7	ini.	-204.83	-2885	-0.00462	0.0003369	0.0035	0.21		163.16	163.16		0.8	No
SLV 7	fin.	133.6	-497	-0.0020108	0.0003369	0.0035	0.21		161.76	161.76		1.21	Si
SLV 4	ini.	-126.16	-1735	-0.0017906	0.0003369	0.0035	0.21		163.16	163.16		1.29	Si
SLV 4	fin.	86.44	-279	-0.001036	0.0003369	0.0035	0.21		161.76	161.76		1.87	Si
SLV 15	ini.	-110.21	-1291	-0.0014439	0.0003369	0.0035	0.21		163.16	163.16		1.48	Si
SLV 15	fin.	43.64	-251	-0.000443	0.0003369	0.0035	0.21		161.76	161.76		3.71	Si
SLV 16	ini.	-112.95	-1334	-0.0014987	0.0003369	0.0035	0.21		163.16	163.16		1.44	Si
SLV 16	fin.	45.12	-256	-0.0004606	0.0003369	0.0035	0.21		161.76	161.76		3.59	Si
SLV 9	ini.	45.07	1046	-0.0004599	0.0003369	0.0035	0.21		161.76	161.76		3.59	Si
SLV 9	fin.	-59.17	170	-0.0006313	0.0003369	0.0035	0.21		163.16	163.16		2.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-39.17	306	0.21	0	112	1665	1698	536	1777		5.8	Si
SLV 14	fin.	-8.99	-46	0.21	0	98	1665	1698	536	1763		38.15	Si
SLV 4	ini.	-126.16	457	0.21	0	217	1665	1698	536	1882		4.12	Si
SLV 4	fin.	86.44	203	0.21	0	121	1665	1698	536	1786		8.78	Si
SLV 13	ini.	-36.43	297	0.21	0	108	1665	1698	536	1773		5.96	Si
SLV 13	fin.	-10.47	-52	0.21	0	98	1665	1698	536	1763		34.01	Si
SLV 3	ini.	-123.42	448	0.21	0	215	1665	1698	536	1880		4.2	Si
SLV 3	fin.	84.96	198	0.21	0	120	1665	1698	536	1785		9.02	Si
SLV 15	ini.	-110.21	561	0.21	0	193	1665	1698	536	1858		3.31	Si
SLV 15	fin.	43.64	127	0.21	0	118	1665	1698	536	1783		13.99	Si
SLV 11	ini.	-200.87	828	0.21	0	264	1665	1698	536	1930		2.33	Si
SLV 11	fin.	121.2	361	0.21	0	139	1665	1698	536	1804		4.99	Si
SLV 12	ini.	-203.7	838	0.21	0	266	1665	1698	536	1932		2.31	Si
SLV 12	fin.	122.74	367	0.21	0	139	1665	1698	536	1804		4.92	Si
SLV 7	ini.	-204.83	795	0.21	0	269	1665	1698	536	1935		2.43	Si
SLV 7	fin.	133.6	382	0.21	0	139	1665	1698	536	1805		4.72	Si
SLV 8	ini.	-207.66	804	0.21	0	271	1665	1698	536	1937		2.41	Si
SLV 8	fin.	135.13	388	0.21	0	140	1665	1698	536	1805		4.65	Si
SLV 16	ini.	-112.95	570	0.21	0	195	1665	1698	536	1860		3.26	Si
SLV 16	fin.	45.12	133	0.21	0	118	1665	1698	536	1784		13.4	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.786	SLV 8	No
V_SLV	2.305	SLV 12	Si
PF_SLU	1.262	SLU 81	Si
V_SLU	2.816	SLU 81	Si

Trave di accoppiamento 2

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.459	-3.134	-1.98	0.02	2	-19.459	-3.134	-1.98	0.02	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-748.13	-657	-0.0000762	0.0001872	0.0035	2		10737.13	10737.13	No	14.35	Si
SLU 83	fin.	1576.29	-2571	-0.000167	0.0001872	0.0035	2		10722.86	10722.86	No	6.8	Si
SLU 75	ini.	-783.25	-611	-0.0000799	0.0001872	0.0035	2		10737.13	10737.13	No	13.71	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	fin.	1518.17	-2500	-0.0001604	0.0001872	0.0035	2		10722.86	10722.86	No	7.06	Si
SLU 77	ini.	-757.29	-586	-0.0000772	0.0001872	0.0035	2		10737.13	10737.13	No	14.18	Si
SLU 77	fin.	1510.56	-2467	-0.0001595	0.0001872	0.0035	2		10722.86	10722.86	No	7.1	Si
SLU 81	ini.	-748.13	-657	-0.0000762	0.0001872	0.0035	2		10737.13	10737.13	No	14.35	Si
SLU 81	fin.	1576.29	-2571	-0.000167	0.0001872	0.0035	2		10722.86	10722.86	No	6.8	Si
SLU 80	ini.	-783.25	-611	-0.0000799	0.0001872	0.0035	2		10737.13	10737.13	No	13.71	Si
SLU 80	fin.	1518.17	-2500	-0.0001604	0.0001872	0.0035	2		10722.86	10722.86	No	7.06	Si
SLU 76	ini.	-800.55	-628	-0.0000817	0.0001872	0.0035	2		10737.13	10737.13	No	13.41	Si
SLU 76	fin.	1523.24	-2521	-0.000161	0.0001872	0.0035	2		10722.86	10722.86	No	7.04	Si
SLU 73	ini.	-800.55	-628	-0.0000817	0.0001872	0.0035	2		10737.13	10737.13	No	13.41	Si
SLU 73	fin.	1523.24	-2521	-0.000161	0.0001872	0.0035	2		10722.86	10722.86	No	7.04	Si
SLU 78	ini.	-783.25	-611	-0.0000799	0.0001872	0.0035	2		10737.13	10737.13	No	13.71	Si
SLU 78	fin.	1518.17	-2500	-0.0001604	0.0001872	0.0035	2		10722.86	10722.86	No	7.06	Si
SLU 82	ini.	-774.09	-682	-0.0000789	0.0001872	0.0035	2		10737.13	10737.13	No	13.87	Si
SLU 82	fin.	1583.89	-2604	-0.0001679	0.0001872	0.0035	2		10722.86	10722.86	No	6.77	Si
SLU 84	ini.	-774.09	-682	-0.0000789	0.0001872	0.0035	2		10737.13	10737.13	No	13.87	Si
SLU 84	fin.	1583.89	-2604	-0.0001679	0.0001872	0.0035	2		10722.86	10722.86	No	6.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-774.09	4461	2	0	1430	7930	13475	5100	9360	No	2.1	Si
SLU 84	fin.	1583.89	4428	2	0	1736	7930	13475	5100	9666	No	2.18	Si
SLU 78	ini.	-783.25	4412	2	0	1418	7930	13475	5100	9347	No	2.12	Si
SLU 78	fin.	1518.17	4281	2	0	1721	7930	13475	5100	9650	No	2.25	Si
SLU 82	ini.	-774.09	4461	2	0	1430	7930	13475	5100	9360	No	2.1	Si
SLU 82	fin.	1583.89	4428	2	0	1736	7930	13475	5100	9666	No	2.18	Si
SLU 81	ini.	-748.13	4426	2	0	1426	7930	13475	5100	9355	No	2.11	Si
SLU 81	fin.	1576.29	4381	2	0	1731	7930	13475	5100	9661	No	2.21	Si
SLU 80	ini.	-783.25	4412	2	0	1418	7930	13475	5100	9347	No	2.12	Si
SLU 80	fin.	1518.17	4281	2	0	1721	7930	13475	5100	9650	No	2.25	Si
SLU 73	ini.	-800.55	4435	2	0	1421	7930	13475	5100	9350	No	2.11	Si
SLU 73	fin.	1523.24	4313	2	0	1724	7930	13475	5100	9654	No	2.24	Si
SLU 76	ini.	-800.55	4435	2	0	1421	7930	13475	5100	9350	No	2.11	Si
SLU 76	fin.	1523.24	4313	2	0	1724	7930	13475	5100	9654	No	2.24	Si
SLU 77	ini.	-757.29	4378	2	0	1413	7930	13475	5100	9343	No	2.13	Si
SLU 77	fin.	1510.56	4234	2	0	1716	7930	13475	5100	9646	No	2.28	Si
SLU 83	ini.	-748.13	4426	2	0	1426	7930	13475	5100	9355	No	2.11	Si
SLU 83	fin.	1576.29	4381	2	0	1731	7930	13475	5100	9661	No	2.21	Si
SLU 75	ini.	-783.25	4412	2	0	1418	7930	13475	5100	9347	No	2.12	Si
SLU 75	fin.	1518.17	4281	2	0	1721	7930	13475	5100	9650	No	2.25	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-366.16	1031	-0.0000366	0.0002807	0.0035	2		15648.46	15648.46		42.74	Si
SLV 16	fin.	1203.31	-1273	-0.0001234	0.0002807	0.0035	2		15635.95	15635.95		12.99	Si
SLV 6	ini.	-1982.01	-2373	-0.0002086	0.0002807	0.0035	2		15648.46	15648.46		7.9	Si
SLV 6	fin.	1519.44	-3578	-0.0001575	0.0002807	0.0035	2		15635.95	15635.95		10.29	Si
SLV 14	ini.	-1336.03	-41	-0.0001375	0.0002807	0.0035	2		15648.46	15648.46		11.71	Si
SLV 14	fin.	1596.84	-2529	-0.000166	0.0002807	0.0035	2		15635.95	15635.95		9.79	Si
SLV 8	ini.	1250.88	1200	-0.0001285	0.0002807	0.0035	2		15635.95	15635.95		12.5	Si
SLV 8	fin.	207.67	607	-0.0000207	0.0002807	0.0035	2		15635.95	15635.95		75.29	Si
SLV 15	ini.	-585.89	1009	-0.0000589	0.0002807	0.0035	2		15648.46	15648.46		26.71	Si
SLV 15	fin.	1348.67	-1581	-0.000139	0.0002807	0.0035	2		15635.95	15635.95		11.59	Si
SLV 9	ini.	-2431.51	-1897	-0.0002604	0.0002807	0.0035	2		15648.46	15648.46		6.44	Si
SLV 9	fin.	1916.18	-4086	-0.0002014	0.0002807	0.0035	2		15635.95	15635.95		8.16	Si
SLV 12	ini.	1028.49	1699	-0.0001049	0.0002807	0.0035	2		15635.95	15635.95		15.2	Si
SLV 12	fin.	454.16	418	-0.0000455	0.0002807	0.0035	2		15635.95	15635.95		34.43	Si
SLV 5	ini.	-2209.13	-2397	-0.0002345	0.0002807	0.0035	2		15648.46	15648.46		7.08	Si
SLV 5	fin.	1669.69	-3897	-0.000174	0.0002807	0.0035	2		15635.95	15635.95		9.36	Si
SLV 10	ini.	-2204.4	-1874	-0.000234	0.0002807	0.0035	2		15648.46	15648.46		7.1	Si
SLV 10	fin.	1765.93	-3768	-0.0001846	0.0002807	0.0035	2		15635.95	15635.95		8.85	Si
SLV 13	ini.	-1555.75	-63	-0.0001613	0.0002807	0.0035	2		15648.46	15648.46		10.06	Si
SLV 13	fin.	1742.2	-2837	-0.000182	0.0002807	0.0035	2		15635.95	15635.95		8.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	-814.47	2291	2	0	2266	7930	20213	5100	10196		4.45	Si
SLV 1	fin.	920.54	2922	2	0	2344	7930	20213	5100	10274		3.52	Si
SLV 13	ini.	-1555.75	6222	2	0	1969	7930	20213	5100	9898		1.59	Si
SLV 13	fin.	1742.2	5593	2	0	2444	7930	20213	5100	10374		1.85	Si
SLV 9	ini.	-2431.51	6401	2	0	2294	7930	20213	5100	10224		1.6	Si
SLV 9	fin.	1916.18	6778	2	0	2630	7930	20213	5100	10560		1.56	Si
SLV 10	ini.	-2204.4	5749	2	0	2290	7930	20213	5100	10220		1.78	Si
SLV 10	fin.	1765.93	6101	2	0	2584	7930	20213	5100	10514		1.72	Si
SLV 15	ini.	-585.89	4899	2	0	1751	7930	20213	5100	9680		1.98	Si
SLV 15	fin.	1348.67	3785	2	0	2241	7930	20213	5100	10171		2.69	Si
SLV 14	ini.	-1336.03	5591	2	0	1964	7930	20213	5100	9894		1.77	Si
SLV 14	fin.	1596.84	4938	2	0	2396	7930	20213	5100	10325		2.09	Si
SLV 2	ini.	-594.75	1660	2	0	2262	7930	20213	5100	10192		6.14	Si
SLV 2	fin.	775.18	2267	2	0	2294	7930	20213	5100	10224		4.51	Si
SLV 16	ini.	-366.16	4268	2	0	1746	7930	20213	5100	9676		2.27	Si
SLV 16	fin.	1203.31	3130	2	0	2189	7930	20213	5100	10118		3.23	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	ini.	-1982.01	4570	2	0	2371	7930	20213	5100	10301		2.25	Si
SLV 6	fin.	1519.44	5300	2	0	2556	7930	20213	5100	10486		1.98	Si
SLV 5	ini.	-2209.13	5222	2	0	2375	7930	20213	5100	10305		1.97	Si
SLV 5	fin.	1669.69	5977	2	0	2603	7930	20213	5100	10532		1.76	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	6.436	SLV 9	Si
V_SLV	1.558	SLV 9	Si
PF_SLU	6.77	SLU 82	Si
V_SLU	2.098	SLU 82	Si

Trave di accoppiamento 3

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.459	-3.134	0.42	0.73	0.31	-19.459	-3.134	0.42	0.73	0.31	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 73	ini.	-363.57	-847	-0.0036992	0.0001872	0.0035	0.31		260.28	260.28	No	0.72	No
SLU 73	fin.	25.77	751	-0.000111	0.0001872	0.0035	0.31		258.05	258.05	No	10.01	Si
SLU 79	ini.	-360.12	-834	-0.00363	0.0001872	0.0035	0.31		260.28	260.28	No	0.72	No
SLU 79	fin.	22.57	738	-0.0000966	0.0001872	0.0035	0.31		258.05	258.05	No	11.43	Si
SLU 81	ini.	-378.32	-861	-0.0039846	0.0001872	0.0035	0.31		260.28	260.28	No	0.69	No
SLU 81	fin.	13.62	756	-0.0000574	0.0001872	0.0035	0.31		258.05	258.05	No	18.95	Si
SLU 84	ini.	-380.39	-869	-0.0040233	0.0001872	0.0035	0.31		260.28	260.28	No	0.68	No
SLU 84	fin.	15.54	764	-0.0000657	0.0001872	0.0035	0.31		258.05	258.05	No	16.61	Si
SLU 80	ini.	-362.19	-842	-0.0036716	0.0001872	0.0035	0.31		260.28	260.28	No	0.72	No
SLU 80	fin.	24.49	746	-0.0001053	0.0001872	0.0035	0.31		258.05	258.05	No	10.54	Si
SLU 83	ini.	-378.32	-861	-0.0039846	0.0001872	0.0035	0.31		260.28	260.28	No	0.69	No
SLU 83	fin.	13.62	756	-0.0000574	0.0001872	0.0035	0.31		258.05	258.05	No	18.95	Si
SLU 82	ini.	-380.39	-869	-0.0040233	0.0001872	0.0035	0.31		260.28	260.28	No	0.68	No
SLU 82	fin.	15.54	764	-0.0000657	0.0001872	0.0035	0.31		258.05	258.05	No	16.61	Si
SLU 78	ini.	-362.19	-842	-0.0036716	0.0001872	0.0035	0.31		260.28	260.28	No	0.72	No
SLU 78	fin.	24.49	746	-0.0001053	0.0001872	0.0035	0.31		258.05	258.05	No	10.54	Si
SLU 75	ini.	-362.19	-842	-0.0036716	0.0001872	0.0035	0.31		260.28	260.28	No	0.72	No
SLU 75	fin.	24.49	746	-0.0001053	0.0001872	0.0035	0.31		258.05	258.05	No	10.54	Si
SLU 76	ini.	-363.57	-847	-0.0036992	0.0001872	0.0035	0.31		260.28	260.28	No	0.72	No
SLU 76	fin.	25.77	751	-0.000111	0.0001872	0.0035	0.31		258.05	258.05	No	10.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-362.19	1422	0.31	0	218	2458	2089	791	2676	No	1.88	Si
SLU 75	fin.	24.49	-163	0.31	0	0	2458	2089	791	2458	No	15.1	Si
SLU 80	ini.	-362.19	1422	0.31	0	218	2458	2089	791	2676	No	1.88	Si
SLU 80	fin.	24.49	-163	0.31	0	0	2458	2089	791	2458	No	15.1	Si
SLU 78	ini.	-362.19	1422	0.31	0	218	2458	2089	791	2676	No	1.88	Si
SLU 78	fin.	24.49	-163	0.31	0	0	2458	2089	791	2458	No	15.1	Si
SLU 82	ini.	-380.39	1494	0.31	0	220	2458	2089	791	2678	No	1.79	Si
SLU 82	fin.	15.54	-205	0.31	0	0	2458	2089	791	2458	No	11.99	Si
SLU 84	ini.	-380.39	1494	0.31	0	220	2458	2089	791	2678	No	1.79	Si
SLU 84	fin.	15.54	-205	0.31	0	0	2458	2089	791	2458	No	11.99	Si
SLU 76	ini.	-363.57	1426	0.31	0	218	2458	2089	791	2676	No	1.88	Si
SLU 76	fin.	25.77	-159	0.31	0	0	2458	2089	791	2458	No	15.49	Si
SLU 83	ini.	-378.32	1487	0.31	0	219	2458	2089	791	2677	No	1.8	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	fin.	13.62	-211	0.31	0	0	2458	2089	791	2458	No	11.64	Si
SLU 73	ini.	-363.57	1426	0.31	0	218	2458	2089	791	2676	No	1.88	Si
SLU 73	fin.	25.77	-159	0.31	0	0	2458	2089	791	2458	No	15.49	Si
SLU 81	ini.	-378.32	1487	0.31	0	219	2458	2089	791	2677	No	1.8	Si
SLU 81	fin.	13.62	-211	0.31	0	0	2458	2089	791	2458	No	11.64	Si
SLU 79	ini.	-360.12	1415	0.31	0	217	2458	2089	791	2675	No	1.89	Si
SLU 79	fin.	22.57	-169	0.31	0	0	2458	2089	791	2458	No	14.55	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-365.15	-1061	-0.0034021	0.0002807	0.0035	0.31		378.78	378.78		1.04	Si
SLV 14	fin.	152.99	990	-0.0008159	0.0002807	0.0035	0.31		376.81	376.81		2.46	Si
SLV 9	ini.	-446.12	-1313	-0.0048201	0.0002807	0.0035	0.31		378.78	378.78		0.85	No
SLV 9	fin.	194	1217	-0.0011169	0.0002807	0.0035	0.31		376.81	376.81		1.94	Si
SLV 1	ini.	-224.03	-457	-0.0013581	0.0002807	0.0035	0.31		378.78	378.78		1.69	Si
SLV 1	fin.	-23.96	389	-0.0001012	0.0002807	0.0035	0.31		378.78	378.78		15.81	Si
SLV 2	ini.	-188.85	-321	-0.001069	0.0002807	0.0035	0.31		378.78	378.78		2.01	Si
SLV 2	fin.	-57.63	264	-0.0002555	0.0002807	0.0035	0.31		378.78	378.78		6.57	Si
SLV 15	ini.	-308.7	-876	-0.0023411	0.0002807	0.0035	0.31		378.78	378.78		1.23	Si
SLV 15	fin.	117.66	811	-0.0005872	0.0002807	0.0035	0.31		376.81	376.81		3.2	Si
SLV 5	ini.	-393.23	-1091	-0.0039318	0.0002807	0.0035	0.31		378.78	378.78		0.96	No
SLV 5	fin.	130.81	999	-0.0006693	0.0002807	0.0035	0.31		376.81	376.81		2.88	Si
SLV 16	ini.	-273.52	-741	-0.0018611	0.0002807	0.0035	0.31		378.78	378.78		1.38	Si
SLV 16	fin.	83.99	686	-0.0003929	0.0002807	0.0035	0.31		376.81	376.81		4.49	Si
SLV 6	ini.	-356.86	-951	-0.0032338	0.0002807	0.0035	0.31		378.78	378.78		1.06	Si
SLV 6	fin.	96.01	870	-0.0004596	0.0002807	0.0035	0.31		376.81	376.81		3.92	Si
SLV 10	ini.	-409.75	-1173	-0.0042208	0.0002807	0.0035	0.31		378.78	378.78		0.92	No
SLV 10	fin.	159.2	1088	-0.0008588	0.0002807	0.0035	0.31		376.81	376.81		2.37	Si
SLV 13	ini.	-400.33	-1196	-0.0040575	0.0002807	0.0035	0.31		378.78	378.78		0.95	No
SLV 13	fin.	186.65	1115	-0.0010598	0.0002807	0.0035	0.31		376.81	376.81		2.02	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-400.33	1476	0.31	0	321	2458	3133	791	2779		1.88	Si
SLV 13	fin.	186.65	421	0.31	0	0	2458	3133	791	2458		5.84	Si
SLV 9	ini.	-446.12	1638	0.31	0	331	2458	3133	791	2789		1.7	Si
SLV 9	fin.	194	452	0.31	0	0	2458	3133	791	2458		5.44	Si
SLV 14	ini.	-365.15	1361	0.31	0	310	2458	3133	791	2768		2.03	Si
SLV 14	fin.	152.99	310	0.31	0	0	2458	3133	791	2458		7.92	Si
SLV 6	ini.	-356.86	1347	0.31	0	301	2458	3133	791	2759		2.05	Si
SLV 6	fin.	96.01	143	0.31	0	0	2458	3133	791	2458		17.17	Si
SLV 15	ini.	-308.7	1167	0.31	0	294	2458	3133	791	2752		2.36	Si
SLV 15	fin.	117.66	201	0.31	0	0	2458	3133	791	2458		12.24	Si
SLV 2	ini.	-188.85	787	0.31	0	240	2458	3133	791	2698		3.43	Si
SLV 2	fin.	-57.63	-339	0.31	0	165	2458	3133	791	2623		7.75	Si
SLV 10	ini.	-409.75	1519	0.31	0	319	2458	3133	791	2777		1.83	Si
SLV 10	fin.	159.2	338	0.31	0	0	2458	3133	791	2458		7.28	Si
SLV 16	ini.	-273.52	1052	0.31	0	282	2458	3133	791	2740		2.6	Si
SLV 16	fin.	83.99	91	0.31	0	72	2458	3133	791	2530		27.92	Si
SLV 5	ini.	-393.23	1465	0.31	0	313	2458	3133	791	2771		1.89	Si
SLV 5	fin.	130.81	257	0.31	0	0	2458	3133	791	2458		9.56	Si
SLV 1	ini.	-224.03	901	0.31	0	254	2458	3133	791	2712		3.01	Si
SLV 1	fin.	-23.96	-228	0.31	0	144	2458	3133	791	2602		11.39	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.849	SLV 9	No
V_SLV	1.703	SLV 9	Si
PF_SLU	0.684	SLU 82	No
V_SLU	1.792	SLU 82	Si

Trave di accoppiamento 4

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.864	-3.134	-1.98	0.02	2	-15.864	-3.134	-1.98	0.02	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-1149.37	-1823	-0.0001192	0.0001872	0.0035	2		10737.13	10737.13	No	9.34	Si
SLU 74	fin.	2061.68	-3653	-0.0002244	0.0001872	0.0035	2		10722.86	10722.86	No	5.2	Si
SLU 84	ini.	-1160.96	-1974	-0.0001204	0.0001872	0.0035	2		10737.13	10737.13	No	9.25	Si
SLU 84	fin.	2189.87	-3900	-0.0002401	0.0001872	0.0035	2		10722.86	10722.86	No	4.9	Si
SLU 80	ini.	-1137.15	-1851	-0.0001178	0.0001872	0.0035	2		10737.13	10737.13	No	9.44	Si
SLU 80	fin.	2050.47	-3677	-0.000223	0.0001872	0.0035	2		10722.86	10722.86	No	5.23	Si
SLU 75	ini.	-1137.15	-1851	-0.0001178	0.0001872	0.0035	2		10737.13	10737.13	No	9.44	Si
SLU 75	fin.	2050.47	-3677	-0.000223	0.0001872	0.0035	2		10722.86	10722.86	No	5.23	Si
SLU 77	ini.	-1149.37	-1823	-0.0001192	0.0001872	0.0035	2		10737.13	10737.13	No	9.34	Si
SLU 77	fin.	2061.68	-3653	-0.0002244	0.0001872	0.0035	2		10722.86	10722.86	No	5.2	Si
SLU 82	ini.	-1160.96	-1974	-0.0001204	0.0001872	0.0035	2		10737.13	10737.13	No	9.25	Si
SLU 82	fin.	2189.87	-3900	-0.0002401	0.0001872	0.0035	2		10722.86	10722.86	No	4.9	Si
SLU 79	ini.	-1149.37	-1823	-0.0001192	0.0001872	0.0035	2		10737.13	10737.13	No	9.34	Si
SLU 79	fin.	2061.68	-3653	-0.0002244	0.0001872	0.0035	2		10722.86	10722.86	No	5.2	Si
SLU 83	ini.	-1173.18	-1947	-0.0001218	0.0001872	0.0035	2		10737.13	10737.13	No	9.15	Si
SLU 83	fin.	2201.08	-3875	-0.0002415	0.0001872	0.0035	2		10722.86	10722.86	No	4.87	Si
SLU 78	ini.	-1137.15	-1851	-0.0001178	0.0001872	0.0035	2		10737.13	10737.13	No	9.44	Si
SLU 78	fin.	2050.47	-3677	-0.000223	0.0001872	0.0035	2		10722.86	10722.86	No	5.23	Si
SLU 81	ini.	-1173.18	-1947	-0.0001218	0.0001872	0.0035	2		10737.13	10737.13	No	9.15	Si
SLU 81	fin.	2201.08	-3875	-0.0002415	0.0001872	0.0035	2		10722.86	10722.86	No	4.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-1173.18	6344	2	0	1638	7930	13475	5100	9568	No	1.51	Si
SLU 83	fin.	2201.08	4656	2	0	1912	7930	13475	5100	9841	No	2.11	Si
SLU 78	ini.	-1137.15	6071	2	0	1623	7930	13475	5100	9553	No	1.57	Si
SLU 78	fin.	2050.47	4335	2	0	1885	7930	13475	5100	9815	No	2.26	Si
SLU 84	ini.	-1160.96	6316	2	0	1642	7930	13475	5100	9572	No	1.52	Si
SLU 84	fin.	2189.87	4633	2	0	1915	7930	13475	5100	9845	No	2.12	Si
SLU 81	ini.	-1173.18	6344	2	0	1638	7930	13475	5100	9568	No	1.51	Si
SLU 81	fin.	2201.08	4656	2	0	1912	7930	13475	5100	9841	No	2.11	Si
SLU 82	ini.	-1160.96	6316	2	0	1642	7930	13475	5100	9572	No	1.52	Si
SLU 82	fin.	2189.87	4633	2	0	1915	7930	13475	5100	9845	No	2.12	Si
SLU 79	ini.	-1149.37	6099	2	0	1619	7930	13475	5100	9548	No	1.57	Si
SLU 79	fin.	2061.68	4358	2	0	1882	7930	13475	5100	9812	No	2.25	Si
SLU 77	ini.	-1149.37	6099	2	0	1619	7930	13475	5100	9548	No	1.57	Si
SLU 77	fin.	2061.68	4358	2	0	1882	7930	13475	5100	9812	No	2.25	Si
SLU 74	ini.	-1149.37	6099	2	0	1619	7930	13475	5100	9548	No	1.57	Si
SLU 74	fin.	2061.68	4358	2	0	1882	7930	13475	5100	9812	No	2.25	Si
SLU 75	ini.	-1137.15	6071	2	0	1623	7930	13475	5100	9553	No	1.57	Si
SLU 75	fin.	2050.47	4335	2	0	1885	7930	13475	5100	9815	No	2.26	Si
SLU 80	ini.	-1137.15	6071	2	0	1623	7930	13475	5100	9553	No	1.57	Si
SLU 80	fin.	2050.47	4335	2	0	1885	7930	13475	5100	9815	No	2.26	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 2	ini.	946.14	-2953	-0.0000962	0.0002807	0.0035	2		15635.95	15635.95		16.53	Si
SLV 2	fin.	-1741.89	-1520	-0.0001818	0.0002807	0.0035	2		15648.46	15648.46		8.98	Si
SLV 11	ini.	-2186.94	1299	-0.000232	0.0002807	0.0035	2		15648.46	15648.46		7.16	Si
SLV 11	fin.	3152.7	-1272	-0.0003484	0.0002807	0.0035	2		15635.95	15635.95		4.96	Si
SLV 15	ini.	-2637.71	516	-0.0002848	0.0002807	0.0035	2		15648.46	15648.46		5.93	Si
SLV 15	fin.	4504.16	-3438	-0.0005298	0.0002807	0.0035	2		15635.95	15635.95		3.47	Si
SLV 7	ini.	-1313.18	689	-0.0001351	0.0002807	0.0035	2		15648.46	15648.46		11.92	Si
SLV 7	fin.	1546.49	-472	-0.0001604	0.0002807	0.0035	2		15635.95	15635.95		10.11	Si
SLV 9	ini.	-571.28	-2965	-0.0000574	0.0002807	0.0035	2		15648.46	15648.46		27.39	Si
SLV 9	fin.	1681.64	-4809	-0.0001753	0.0002807	0.0035	2		15635.95	15635.95		9.3	Si
SLV 4	ini.	461.44	-1673	-0.0000463	0.0002807	0.0035	2		15635.95	15635.95		33.88	Si
SLV 4	fin.	-1300.57	-458	-0.0001337	0.0002807	0.0035	2		15648.46	15648.46		12.03	Si
SLV 14	ini.	-1966.4	-918	-0.0002069	0.0002807	0.0035	2		15648.46	15648.46		7.96	Si
SLV 14	fin.	3612.15	-4185	-0.0004076	0.0002807	0.0035	2		15635.95	15635.95		4.33	Si
SLV 13	ini.	-2153.01	-763	-0.0002281	0.0002807	0.0035	2		15648.46	15648.46		7.27	Si
SLV 13	fin.	4062.84	-4499	-0.0004682	0.0002807	0.0035	2		15635.95	15635.95		3.85	Si
SLV 16	ini.	-2451.1	361	-0.0002627	0.0002807	0.0035	2		15648.46	15648.46		6.38	Si
SLV 16	fin.	4053.47	-3124	-0.0004669	0.0002807	0.0035	2		15635.95	15635.95		3.86	Si
SLV 12	ini.	-1994.05	1139	-0.00021	0.0002807	0.0035	2		15648.46	15648.46		7.85	Si
SLV 12	fin.	2686.85	-948	-0.000291	0.0002807	0.0035	2		15635.95	15635.95		5.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-2451.1	10812	2	0	1885	7930	20213	5100	9815		0.91	No
SLV 16	fin.	4053.47	9218	2	0	2488	7930	20213	5100	10418		1.13	Si
SLV 13	ini.	-2153.01	10710	2	0	2099	7930	20213	5100	10028		0.94	No
SLV 13	fin.	4062.84	9359	2	0	2689	7930	20213	5100	10618		1.13	Si
SLV 9	ini.	-571.28	4831	2	0	2464	7930	20213	5100	10393		2.15	Si
SLV 9	fin.	1681.64	3792	2	0	2732	7930	20213	5100	10662		2.81	Si
SLV 12	ini.	-1994.05	7680	2	0	1722	7930	20213	5100	9652		1.26	Si
SLV 12	fin.	2686.85	5856	2	0	2132	7930	20213	5100	10061		1.72	Si
SLV 7	ini.	-1313.18	4946	2	0	1819	7930	20213	5100	9748		1.97	Si
SLV 7	fin.	1546.49	3169	2	0	2046	7930	20213	5100	9975		3.15	Si
SLV 15	ini.	-2637.71	11902	2	0	1854	7930	20213	5100	9784		0.82	No
SLV 15	fin.	4504.16	10320	2	0	2535	7930	20213	5100	10465		1.01	Si
SLV 11	ini.	-2186.94	8807	2	0	1687	7930	20213	5100	9616		1.09	Si
SLV 11	fin.	3152.7	6996	2	0	2189	7930	20213	5100	10118		1.45	Si
SLV 14	ini.	-1966.4	9619	2	0	2127	7930	20213	5100	10056		1.05	Si
SLV 14	fin.	3612.15	8257	2	0	2644	7930	20213	5100	10574		1.28	Si
SLV 8	ini.	-1120.29	3819	2	0	1852	7930	20213	5100	9781		2.56	Si
SLV 8	fin.	1080.64	2030	2	0	1985	7930	20213	5100	9914		4.89	Si
SLV 2	ini.	946.14	-3253	2	0	2462	7930	20213	5100	10391		3.19	Si
SLV 2	fin.	-1741.89	-4498	2	0	2231	7930	20213	5100	10161		2.26	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.471	SLV 15	Si
V_SLV	0.822	SLV 15	No
PF_SLU	4.872	SLU 81	Si
V_SLU	1.508	SLU 81	Si

Trave di accoppiamento 5

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.864	-3.134	0.42	0.73	0.31	-15.864	-3.134	0.42	0.73	0.31	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-354.02	-862	-0.0035045	0.0001872	0.0035	0.31		260.28	260.28	No	0.74	No
SLU 82	fin.	-6.58	535	-0.0000273	0.0001872	0.0035	0.31		260.28	260.28	No	39.54	Si
SLU 84	ini.	-354.02	-862	-0.0035045	0.0001872	0.0035	0.31		260.28	260.28	No	0.74	No
SLU 84	fin.	-6.58	535	-0.0000273	0.0001872	0.0035	0.31		260.28	260.28	No	39.54	Si
SLU 75	ini.	-331.83	-813	-0.0030224	0.0001872	0.0035	0.31		260.28	260.28	No	0.78	No
SLU 75	fin.	-1.03	516	-0.0000042	0.0001872	0.0035	0.31		260.28	260.28	No	253	Si
SLU 77	ini.	-333.21	-818	-0.0030523	0.0001872	0.0035	0.31		260.28	260.28	No	0.78	No
SLU 77	fin.	0.43	522	-0.0000018	0.0001872	0.0035	0.31		258.05	258.05	No	597.04	Si
SLU 78	ini.	-331.83	-813	-0.0030224	0.0001872	0.0035	0.31		260.28	260.28	No	0.78	No
SLU 78	fin.	-1.03	516	-0.0000042	0.0001872	0.0035	0.31		260.28	260.28	No	253	Si
SLU 83	ini.	-355.41	-866	-0.0035333	0.0001872	0.0035	0.31		260.28	260.28	No	0.73	No
SLU 83	fin.	-5.12	541	-0.0000212	0.0001872	0.0035	0.31		260.28	260.28	No	50.81	Si
SLU 80	ini.	-331.83	-813	-0.0030224	0.0001872	0.0035	0.31		260.28	260.28	No	0.78	No
SLU 80	fin.	-1.03	516	-0.0000042	0.0001872	0.0035	0.31		260.28	260.28	No	253	Si
SLU 81	ini.	-355.41	-866	-0.0035333	0.0001872	0.0035	0.31		260.28	260.28	No	0.73	No
SLU 81	fin.	-5.12	541	-0.0000212	0.0001872	0.0035	0.31		260.28	260.28	No	50.81	Si
SLU 74	ini.	-333.21	-818	-0.0030523	0.0001872	0.0035	0.31		260.28	260.28	No	0.78	No
SLU 74	fin.	0.43	522	-0.0000018	0.0001872	0.0035	0.31		258.05	258.05	No	597.04	Si
SLU 79	ini.	-333.21	-818	-0.0030523	0.0001872	0.0035	0.31		260.28	260.28	No	0.78	No

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	fin.	0.43	522	-0.0000018	0.0001872	0.0035	0.31		258.05	258.05	No	597.04	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-331.83	1288	0.31	0	215	2458	2089	791	2674	No	2.08	Si
SLU 78	fin.	-1.03	-215	0.31	0	16	2458	2089	791	2474	No	11.51	Si
SLU 80	ini.	-331.83	1288	0.31	0	215	2458	2089	791	2674	No	2.08	Si
SLU 80	fin.	-1.03	-215	0.31	0	16	2458	2089	791	2474	No	11.51	Si
SLU 81	ini.	-355.41	1376	0.31	0	220	2458	2089	791	2678	No	1.95	Si
SLU 81	fin.	-5.12	-239	0.31	0	0	2458	2089	791	2458	No	10.29	Si
SLU 84	ini.	-354.02	1371	0.31	0	219	2458	2089	791	2677	No	1.95	Si
SLU 84	fin.	-6.58	-243	0.31	0	0	2458	2089	791	2458	No	10.1	Si
SLU 82	ini.	-354.02	1371	0.31	0	219	2458	2089	791	2677	No	1.95	Si
SLU 82	fin.	-6.58	-243	0.31	0	0	2458	2089	791	2458	No	10.1	Si
SLU 75	ini.	-331.83	1288	0.31	0	215	2458	2089	791	2674	No	2.08	Si
SLU 75	fin.	-1.03	-215	0.31	0	16	2458	2089	791	2474	No	11.51	Si
SLU 83	ini.	-355.41	1376	0.31	0	220	2458	2089	791	2678	No	1.95	Si
SLU 83	fin.	-5.12	-239	0.31	0	0	2458	2089	791	2458	No	10.29	Si
SLU 79	ini.	-333.21	1293	0.31	0	216	2458	2089	791	2674	No	2.07	Si
SLU 79	fin.	0.43	-210	0.31	0	5	2458	2089	791	2463	No	11.71	Si
SLU 74	ini.	-333.21	1293	0.31	0	216	2458	2089	791	2674	No	2.07	Si
SLU 74	fin.	0.43	-210	0.31	0	5	2458	2089	791	2463	No	11.71	Si
SLU 77	ini.	-333.21	1293	0.31	0	216	2458	2089	791	2674	No	2.07	Si
SLU 77	fin.	0.43	-210	0.31	0	5	2458	2089	791	2463	No	11.71	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-496.18	-1748	-0.0055944	0.0002807	0.0035	0.31		378.78	378.78		0.76	No
SLV 14	fin.	271.71	1327	-0.0018567	0.0002807	0.0035	0.31		376.81	376.81		1.39	Si
SLV 2	ini.	165.49	1057	-0.0009032	0.0002807	0.0035	0.31		376.81	376.81		2.28	Si
SLV 2	fin.	-366.71	-1060	-0.0034333	0.0002807	0.0035	0.31		378.78	378.78		1.03	Si
SLV 11	ini.	-444.44	-1412	-0.0047933	0.0002807	0.0035	0.31		378.78	378.78		0.85	No
SLV 11	fin.	235.88	1298	-0.0014776	0.0002807	0.0035	0.31		376.81	376.81		1.6	Si
SLV 4	ini.	108.5	871	-0.0005321	0.0002807	0.0035	0.31		376.81	376.81		3.47	Si
SLV 4	fin.	-304.92	-777	-0.0022831	0.0002807	0.0035	0.31		378.78	378.78		1.24	Si
SLV 9	ini.	-254.49	-792	-0.0016495	0.0002807	0.0035	0.31		378.78	378.78		1.49	Si
SLV 9	fin.	29.89	357	-0.0001279	0.0002807	0.0035	0.31		376.81	376.81		12.6	Si
SLV 16	ini.	-553.16	-1934	-0.0064388	0.0002807	0.0035	0.31		378.78	378.78		0.68	No
SLV 16	fin.	333.5	1609	-0.0027985	0.0002807	0.0035	0.31		376.81	376.81		1.13	Si
SLV 13	ini.	-551.62	-1987	-0.0064165	0.0002807	0.0035	0.31		378.78	378.78		0.69	No
SLV 13	fin.	324.55	1518	-0.0026332	0.0002807	0.0035	0.31		376.81	376.81		1.16	Si
SLV 1	ini.	110.04	818	-0.0005412	0.0002807	0.0035	0.31		376.81	376.81		3.42	Si
SLV 1	fin.	-313.87	-868	-0.0024231	0.0002807	0.0035	0.31		378.78	378.78		1.21	Si
SLV 15	ini.	-608.61	-2173	-0.0072365	0.0002807	0.0035	0.31		378.78	378.78		0.62	No
SLV 15	fin.	386.34	1801	-0.0038447	0.0002807	0.0035	0.31		376.81	376.81		0.98	No
SLV 12	ini.	-387.13	-1165	-0.0038216	0.0002807	0.0035	0.31		378.78	378.78		0.98	No
SLV 12	fin.	181.26	1100	-0.0010188	0.0002807	0.0035	0.31		376.81	376.81		2.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	110.04	-193	0.31	0	0	2458	3133	791	2458		12.74	Si
SLV 1	fin.	-313.87	-1170	0.31	0	293	2458	3133	791	2752		2.35	Si
SLV 4	ini.	108.5	-176	0.31	0	0	2458	3133	791	2458		13.93	Si
SLV 4	fin.	-304.92	-1154	0.31	0	285	2458	3133	791	2743		2.38	Si
SLV 2	ini.	165.49	-368	0.31	0	0	2458	3133	791	2458		6.68	Si
SLV 2	fin.	-366.71	-1345	0.31	0	310	2458	3133	791	2768		2.06	Si
SLV 11	ini.	-444.44	1588	0.31	0	338	2458	3133	791	2796		1.76	Si
SLV 11	fin.	235.88	610	0.31	0	0	2458	3133	791	2458		4.03	Si
SLV 13	ini.	-551.62	1905	0.31	0	380	2458	3133	791	2838		1.49	Si
SLV 13	fin.	324.55	927	0.31	0	0	2458	3133	791	2458		2.65	Si
SLV 3	ini.	53.05	-1	0.31	0	89	2458	3133	791	2547		1752.74	Si
SLV 3	fin.	-252.08	-979	0.31	0	267	2458	3133	791	2725		2.78	Si
SLV 14	ini.	-496.18	1730	0.31	0	363	2458	3133	791	2821		1.63	Si
SLV 14	fin.	271.71	752	0.31	0	0	2458	3133	791	2458		3.27	Si
SLV 12	ini.	-387.13	1407	0.31	0	319	2458	3133	791	2777		1.97	Si
SLV 12	fin.	181.26	429	0.31	0	0	2458	3133	791	2458		5.72	Si
SLV 16	ini.	-553.16	1921	0.31	0	376	2458	3133	791	2834		1.48	Si
SLV 16	fin.	333.5	943	0.31	0	0	2458	3133	791	2458		2.61	Si
SLV 15	ini.	-608.61	2096	0.31	0	392	2458	3133	791	2851		1.36	Si
SLV 15	fin.	386.34	1118	0.31	0	0	2458	3133	791	2458		2.2	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.622	SLV 15	No
V_SLV	1.36	SLV 15	Si
PF_SLU	0.732	SLU 81	No
V_SLU	1.947	SLU 81	Si

Trave di accoppiamento 6

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.444	-3.134	-1.98	0.02	2	-13.444	-3.134	-1.98	0.02	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	1158.49	-3692	-0.0001203	0.0001872	0.0035	2		10722.86	10722.86	No	9.26	Si
SLU 83	fin.	-660.62	-2515	-0.000067	0.0001872	0.0035	2		10737.13	10737.13	No	16.25	Si
SLU 84	ini.	1146.86	-3722	-0.000119	0.0001872	0.0035	2		10722.86	10722.86	No	9.35	Si
SLU 84	fin.	-651.1	-2546	-0.000066	0.0001872	0.0035	2		10737.13	10737.13	No	16.49	Si
SLU 78	ini.	1070.99	-3519	-0.0001107	0.0001872	0.0035	2		10722.86	10722.86	No	10.01	Si
SLU 78	fin.	-661.84	-2383	-0.0000672	0.0001872	0.0035	2		10737.13	10737.13	No	16.22	Si
SLU 75	ini.	1070.99	-3519	-0.0001107	0.0001872	0.0035	2		10722.86	10722.86	No	10.01	Si
SLU 75	fin.	-661.84	-2383	-0.0000672	0.0001872	0.0035	2		10737.13	10737.13	No	16.22	Si
SLU 74	ini.	1082.61	-3490	-0.000112	0.0001872	0.0035	2		10722.86	10722.86	No	9.9	Si
SLU 74	fin.	-671.36	-2352	-0.0000681	0.0001872	0.0035	2		10737.13	10737.13	No	15.99	Si
SLU 81	ini.	1158.49	-3692	-0.0001203	0.0001872	0.0035	2		10722.86	10722.86	No	9.26	Si
SLU 81	fin.	-660.62	-2515	-0.000067	0.0001872	0.0035	2		10737.13	10737.13	No	16.25	Si
SLU 82	ini.	1146.86	-3722	-0.000119	0.0001872	0.0035	2		10722.86	10722.86	No	9.35	Si
SLU 82	fin.	-651.1	-2546	-0.000066	0.0001872	0.0035	2		10737.13	10737.13	No	16.49	Si
SLU 80	ini.	1070.99	-3519	-0.0001107	0.0001872	0.0035	2		10722.86	10722.86	No	10.01	Si
SLU 80	fin.	-661.84	-2383	-0.0000672	0.0001872	0.0035	2		10737.13	10737.13	No	16.22	Si
SLU 77	ini.	1082.61	-3490	-0.000112	0.0001872	0.0035	2		10722.86	10722.86	No	9.9	Si
SLU 77	fin.	-671.36	-2352	-0.0000681	0.0001872	0.0035	2		10737.13	10737.13	No	15.99	Si
SLU 79	ini.	1082.61	-3490	-0.000112	0.0001872	0.0035	2		10722.86	10722.86	No	9.9	Si
SLU 79	fin.	-671.36	-2352	-0.0000681	0.0001872	0.0035	2		10737.13	10737.13	No	15.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	1070.99	-2626	2	0	1864	7930	13475	5100	9794	No	3.73	Si
SLU 80	fin.	-661.84	-3575	2	0	1704	7930	13475	5100	9633	No	2.69	Si
SLU 84	ini.	1146.86	-2772	2	0	1891	7930	13475	5100	9821	No	3.54	Si
SLU 84	fin.	-651.1	-3656	2	0	1728	7930	13475	5100	9657	No	2.64	Si
SLU 82	ini.	1146.86	-2772	2	0	1891	7930	13475	5100	9821	No	3.54	Si
SLU 82	fin.	-651.1	-3656	2	0	1728	7930	13475	5100	9657	No	2.64	Si
SLU 74	ini.	1082.61	-2643	2	0	1860	7930	13475	5100	9790	No	3.7	Si
SLU 74	fin.	-671.36	-3600	2	0	1699	7930	13475	5100	9629	No	2.67	Si
SLU 78	ini.	1070.99	-2626	2	0	1864	7930	13475	5100	9794	No	3.73	Si
SLU 78	fin.	-661.84	-3575	2	0	1704	7930	13475	5100	9633	No	2.69	Si
SLU 75	ini.	1070.99	-2626	2	0	1864	7930	13475	5100	9794	No	3.73	Si
SLU 75	fin.	-661.84	-3575	2	0	1704	7930	13475	5100	9633	No	2.69	Si
SLU 81	ini.	1158.49	-2788	2	0	1887	7930	13475	5100	9817	No	3.52	Si
SLU 81	fin.	-660.62	-3680	2	0	1723	7930	13475	5100	9653	No	2.62	Si
SLU 77	ini.	1082.61	-2643	2	0	1860	7930	13475	5100	9790	No	3.7	Si
SLU 77	fin.	-671.36	-3600	2	0	1699	7930	13475	5100	9629	No	2.67	Si
SLU 79	ini.	1082.61	-2643	2	0	1860	7930	13475	5100	9790	No	3.7	Si
SLU 79	fin.	-671.36	-3600	2	0	1699	7930	13475	5100	9629	No	2.67	Si
SLU 83	ini.	1158.49	-2788	2	0	1887	7930	13475	5100	9817	No	3.52	Si
SLU 83	fin.	-660.62	-3680	2	0	1723	7930	13475	5100	9653	No	2.62	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	2536.09	-3639	-0.000273	0.0002807	0.0035	2		15635.95	15635.95		6.17	Si
SLV 3	fin.	-2231.2	30	-0.0002371	0.0002807	0.0035	2		15648.46	15648.46		7.01	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-1091.23	-1131	-0.0001114	0.0002807	0.0035	2		15648.46	15648.46		14.34	Si
SLV 14	fin.	1171.16	-3164	-0.00012	0.0002807	0.0035	2		15635.95	15635.95		13.35	Si
SLV 2	ini.	2340.52	-5404	-0.00025	0.0002807	0.0035	2		15635.95	15635.95		6.68	Si
SLV 2	fin.	-2073.25	-1172	-0.000219	0.0002807	0.0035	2		15648.46	15648.46		7.55	Si
SLV 1	ini.	2118.83	-4879	-0.0002244	0.0002807	0.0035	2		15635.95	15635.95		7.38	Si
SLV 1	fin.	-1839.53	-1282	-0.0001926	0.0002807	0.0035	2		15648.46	15648.46		8.51	Si
SLV 15	ini.	-895.67	634	-0.0000909	0.0002807	0.0035	2		15648.46	15648.46		17.47	Si
SLV 15	fin.	1013.22	-1962	-0.0001033	0.0002807	0.0035	2		15635.95	15635.95		15.43	Si
SLV 4	ini.	2757.78	-4164	-0.0002995	0.0002807	0.0035	2		15635.95	15635.95		5.67	Si
SLV 4	fin.	-2464.92	140	-0.0002643	0.0002807	0.0035	2		15648.46	15648.46		6.35	Si
SLV 7	ini.	1818.05	-688	-0.0001904	0.0002807	0.0035	2		15635.95	15635.95		8.6	Si
SLV 7	fin.	-1548.67	861	-0.0001605	0.0002807	0.0035	2		15648.46	15648.46		10.1	Si
SLV 12	ini.	1017.68	51	-0.0001038	0.0002807	0.0035	2		15635.95	15635.95		15.36	Si
SLV 12	fin.	-816.93	378	-0.0000827	0.0002807	0.0035	2		15648.46	15648.46		19.16	Si
SLV 8	ini.	2047.2	-1231	-0.0002162	0.0002807	0.0035	2		15635.95	15635.95		7.64	Si
SLV 8	fin.	-1790.25	975	-0.0001871	0.0002807	0.0035	2		15648.46	15648.46		8.74	Si
SLV 13	ini.	-1312.93	-606	-0.000135	0.0002807	0.0035	2		15648.46	15648.46		11.92	Si
SLV 13	fin.	1404.89	-3274	-0.0001451	0.0002807	0.0035	2		15635.95	15635.95		11.13	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-673.97	3642	2	0	1935	7930	20213	5100	9865		2.71	Si
SLV 16	fin.	779.49	2712	2	0	2287	7930	20213	5100	10216		3.77	Si
SLV 1	ini.	2118.83	-7281	2	0	2742	7930	20213	5100	10671		1.47	Si
SLV 1	fin.	-1839.53	-8007	2	0	2190	7930	20213	5100	10120		1.26	Si
SLV 3	ini.	2536.09	-7895	2	0	2565	7930	20213	5100	10495		1.33	Si
SLV 3	fin.	-2231.2	-8984	2	0	1951	7930	20213	5100	9880		1.1	Si
SLV 8	ini.	2047.2	-5294	2	0	2182	7930	20213	5100	10111		1.91	Si
SLV 8	fin.	-1790.25	-6741	2	0	1758	7930	20213	5100	9688		1.44	Si
SLV 4	ini.	2757.78	-8976	2	0	2641	7930	20213	5100	10571		1.18	Si
SLV 4	fin.	-2464.92	-10050	2	0	1929	7930	20213	5100	9859		0.98	No
SLV 13	ini.	-1312.93	5338	2	0	2070	7930	20213	5100	10000		1.87	Si
SLV 13	fin.	1404.89	4754	2	0	2511	7930	20213	5100	10440		2.2	Si
SLV 14	ini.	-1091.23	4256	2	0	2164	7930	20213	5100	10094		2.37	Si
SLV 14	fin.	1171.16	3688	2	0	2494	7930	20213	5100	10424		2.83	Si
SLV 15	ini.	-895.67	4724	2	0	1830	7930	20213	5100	9760		2.07	Si
SLV 15	fin.	1013.22	3778	2	0	2305	7930	20213	5100	10234		2.71	Si
SLV 7	ini.	1818.05	-4177	2	0	2085	7930	20213	5100	10015		2.4	Si
SLV 7	fin.	-1548.67	-5639	2	0	1782	7930	20213	5100	9712		1.72	Si
SLV 2	ini.	2340.52	-8362	2	0	2813	7930	20213	5100	10743		1.28	Si
SLV 2	fin.	-2073.25	-9073	2	0	2171	7930	20213	5100	10101		1.11	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.67	SLV 4	Si
V_SLV	0.981	SLV 4	No
PF_SLU	9.256	SLU 81	Si
V_SLU	2.623	SLU 81	Si

Trave di accoppiamento 7

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.444	-3.134	0.42	0.73	0.31	-13.444	-3.134	0.42	0.73	0.31	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-66.63	355	-0.0003133	0.0001872	0.0035	0.31		260.28	260.28	No	3.91	Si
SLU 83	fin.	-285.27	-507	-0.0021832	0.0001872	0.0035	0.31		260.28	260.28	No	0.91	No
SLU 79	ini.	-56.6	351	-0.0002596	0.0001872	0.0035	0.31		260.28	260.28	No	4.6	Si
SLU 79	fin.	-268.03	-484	-0.0019438	0.0001872	0.0035	0.31		260.28	260.28	No	0.97	No
SLU 78	ini.	-57.6	346	-0.0002648	0.0001872	0.0035	0.31		260.28	260.28	No	4.52	Si
SLU 78	fin.	-267.16	-481	-0.0019324	0.0001872	0.0035	0.31		260.28	260.28	No	0.97	No
SLU 77	ini.	-56.6	351	-0.0002596	0.0001872	0.0035	0.31		260.28	260.28	No	4.6	Si
SLU 77	fin.	-268.03	-484	-0.0019438	0.0001872	0.0035	0.31		260.28	260.28	No	0.97	No
SLU 80	ini.	-57.6	346	-0.0002648	0.0001872	0.0035	0.31		260.28	260.28	No	4.52	Si
SLU 80	fin.	-267.16	-481	-0.0019324	0.0001872	0.0035	0.31		260.28	260.28	No	0.97	No
SLU 75	ini.	-57.6	346	-0.0002648	0.0001872	0.0035	0.31		260.28	260.28	No	4.52	Si
SLU 75	fin.	-267.16	-481	-0.0019324	0.0001872	0.0035	0.31		260.28	260.28	No	0.97	No
SLU 81	ini.	-66.63	355	-0.0003133	0.0001872	0.0035	0.31		260.28	260.28	No	3.91	Si
SLU 81	fin.	-285.27	-507	-0.0021832	0.0001872	0.0035	0.31		260.28	260.28	No	0.91	No
SLU 82	ini.	-67.62	351	-0.0003188	0.0001872	0.0035	0.31		260.28	260.28	No	3.85	Si
SLU 82	fin.	-284.39	-505	-0.0021701	0.0001872	0.0035	0.31		260.28	260.28	No	0.92	No
SLU 74	ini.	-56.6	351	-0.0002596	0.0001872	0.0035	0.31		260.28	260.28	No	4.6	Si
SLU 74	fin.	-268.03	-484	-0.0019438	0.0001872	0.0035	0.31		260.28	260.28	No	0.97	No
SLU 84	ini.	-67.62	351	-0.0003188	0.0001872	0.0035	0.31		260.28	260.28	No	3.85	Si
SLU 84	fin.	-284.39	-505	-0.0021701	0.0001872	0.0035	0.31		260.28	260.28	No	0.92	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-57.6	414	0.31	0	78	2458	2089	791	2537	No	6.13	Si
SLU 78	fin.	-267.16	-1089	0.31	0	187	2458	2089	791	2645	No	2.43	Si
SLU 83	ini.	-66.63	455	0.31	0	76	2458	2089	791	2534	No	5.57	Si
SLU 83	fin.	-285.27	-1160	0.31	0	189	2458	2089	791	2647	No	2.28	Si
SLU 84	ini.	-67.62	458	0.31	0	77	2458	2089	791	2536	No	5.54	Si
SLU 84	fin.	-284.39	-1157	0.31	0	189	2458	2089	791	2647	No	2.29	Si
SLU 75	ini.	-57.6	414	0.31	0	78	2458	2089	791	2537	No	6.13	Si
SLU 75	fin.	-267.16	-1089	0.31	0	187	2458	2089	791	2645	No	2.43	Si
SLU 80	ini.	-57.6	414	0.31	0	78	2458	2089	791	2537	No	6.13	Si
SLU 80	fin.	-267.16	-1089	0.31	0	187	2458	2089	791	2645	No	2.43	Si
SLU 74	ini.	-56.6	411	0.31	0	77	2458	2089	791	2535	No	6.17	Si
SLU 74	fin.	-268.03	-1092	0.31	0	187	2458	2089	791	2645	No	2.42	Si
SLU 82	ini.	-67.62	458	0.31	0	77	2458	2089	791	2536	No	5.54	Si
SLU 82	fin.	-284.39	-1157	0.31	0	189	2458	2089	791	2647	No	2.29	Si
SLU 79	ini.	-56.6	411	0.31	0	77	2458	2089	791	2535	No	6.17	Si
SLU 79	fin.	-268.03	-1092	0.31	0	187	2458	2089	791	2645	No	2.42	Si
SLU 81	ini.	-66.63	455	0.31	0	76	2458	2089	791	2534	No	5.57	Si
SLU 81	fin.	-285.27	-1160	0.31	0	189	2458	2089	791	2647	No	2.28	Si
SLU 77	ini.	-56.6	411	0.31	0	77	2458	2089	791	2535	No	6.17	Si
SLU 77	fin.	-268.03	-1092	0.31	0	187	2458	2089	791	2645	No	2.42	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-341.67	-973	-0.0029232	0.0002807	0.0035	0.31		378.78	378.78		1.11	Si
SLV 15	fin.	138.09	962	-0.0007163	0.0002807	0.0035	0.31		376.81	376.81		2.73	Si
SLV 14	ini.	-331.34	-982	-0.002725	0.0002807	0.0035	0.31		378.78	378.78		1.14	Si
SLV 14	fin.	121.05	844	-0.000608	0.0002807	0.0035	0.31		376.81	376.81		3.11	Si
SLV 2	ini.	287.43	1496	-0.002056	0.0002807	0.0035	0.31		376.81	376.81		1.31	Si
SLV 2	fin.	-496.35	-1641	-0.0055971	0.0002807	0.0035	0.31		378.78	378.78		0.76	No
SLV 7	ini.	107.92	881	-0.0005287	0.0002807	0.0035	0.31		376.81	376.81		3.49	Si
SLV 7	fin.	-303.32	-759	-0.0022591	0.0002807	0.0035	0.31		378.78	378.78		1.25	Si
SLV 13	ini.	-383.03	-1185	-0.0037462	0.0002807	0.0035	0.31		378.78	378.78		0.99	No
SLV 13	fin.	173.21	1056	-0.000959	0.0002807	0.0035	0.31		376.81	376.81		2.18	Si
SLV 3	ini.	277.1	1505	-0.0019224	0.0002807	0.0035	0.31		376.81	376.81		1.36	Si
SLV 3	fin.	-479.31	-1523	-0.0053386	0.0002807	0.0035	0.31		378.78	378.78		0.79	No
SLV 16	ini.	-289.97	-770	-0.0020697	0.0002807	0.0035	0.31		378.78	378.78		1.31	Si
SLV 16	fin.	85.93	751	-0.0004034	0.0002807	0.0035	0.31		376.81	376.81		4.39	Si
SLV 4	ini.	328.8	1708	-0.0027102	0.0002807	0.0035	0.31		376.81	376.81		1.15	Si
SLV 4	fin.	-531.47	-1735	-0.0061201	0.0002807	0.0035	0.31		378.78	378.78		0.71	No
SLV 8	ini.	161.35	1090	-0.0008739	0.0002807	0.0035	0.31		376.81	376.81		2.34	Si
SLV 8	fin.	-357.23	-978	-0.0032415	0.0002807	0.0035	0.31		378.78	378.78		1.06	Si
SLV 1	ini.	235.74	1294	-0.0014763	0.0002807	0.0035	0.31		376.81	376.81		1.6	Si
SLV 1	fin.	-444.19	-1430	-0.0047893	0.0002807	0.0035	0.31		378.78	378.78		0.85	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-383.03	1390	0.31	0	320	2458	3133	791	2778		2	Si
SLV 13	fin.	173.21	412	0.31	0	0	2458	3133	791	2458		5.97	Si
SLV 16	ini.	-289.97	1097	0.31	0	285	2458	3133	791	2743		2.5	Si
SLV 16	fin.	85.93	120	0.31	0	42	2458	3133	791	2500		20.88	Si
SLV 8	ini.	161.35	-351	0.31	0	0	2458	3133	791	2458		7.01	Si
SLV 8	fin.	-357.23	-1327	0.31	0	303	2458	3133	791	2761		2.08	Si
SLV 2	ini.	287.43	-778	0.31	0	0	2458	3133	791	2458		3.16	Si
SLV 2	fin.	-496.35	-1756	0.31	0	355	2458	3133	791	2814		1.6	Si
SLV 14	ini.	-331.34	1222	0.31	0	303	2458	3133	791	2762		2.26	Si
SLV 14	fin.	121.05	244	0.31	0	0	2458	3133	791	2458		10.09	Si
SLV 3	ini.	277.1	-734	0.31	0	0	2458	3133	791	2458		3.35	Si
SLV 3	fin.	-479.31	-1712	0.31	0	347	2458	3133	791	2805		1.64	Si
SLV 4	ini.	328.8	-902	0.31	0	0	2458	3133	791	2458		2.72	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	fin.	-531.47	-1880	0.31	0	362	2458	3133	791	2820		1.5	Si
SLV 1	ini.	235.74	-610	0.31	0	0	2458	3133	791	2458		4.03	Si
SLV 1	fin.	-444.19	-1588	0.31	0	340	2458	3133	791	2798		1.76	Si
SLV 7	ini.	107.92	-177	0.31	0	0	2458	3133	791	2458		13.88	Si
SLV 7	fin.	-303.32	-1154	0.31	0	284	2458	3133	791	2742		2.38	Si
SLV 15	ini.	-341.67	1265	0.31	0	303	2458	3133	791	2761		2.18	Si
SLV 15	fin.	138.09	288	0.31	0	0	2458	3133	791	2458		8.54	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.713	SLV 4	No
V_SLV	1.501	SLV 4	Si
PF_SLU	0.912	SLU 81	No
V_SLU	2.283	SLU 81	Si

Trave di accoppiamento 8

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.059	-3.134	-1.98	0.02	2	-10.059	-3.134	-1.98	0.02	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	1330.28	-1912	-0.0001392	0.0001872	0.0035	2		10722.86	10722.86	No	8.06	Si
SLU 78	fin.	-915.21	-477	-0.0000939	0.0001872	0.0035	2		10737.13	10737.13	No	11.73	Si
SLU 80	ini.	1330.28	-1912	-0.0001392	0.0001872	0.0035	2		10722.86	10722.86	No	8.06	Si
SLU 80	fin.	-915.21	-477	-0.0000939	0.0001872	0.0035	2		10737.13	10737.13	No	11.73	Si
SLU 79	ini.	1321.76	-1884	-0.0001383	0.0001872	0.0035	2		10722.86	10722.86	No	8.11	Si
SLU 79	fin.	-890.48	-454	-0.0000912	0.0001872	0.0035	2		10737.13	10737.13	No	12.06	Si
SLU 73	ini.	1335.95	-1931	-0.0001399	0.0001872	0.0035	2		10722.86	10722.86	No	8.03	Si
SLU 73	fin.	-931.7	-492	-0.0000956	0.0001872	0.0035	2		10737.13	10737.13	No	11.52	Si
SLU 81	ini.	1363.57	-1965	-0.000143	0.0001872	0.0035	2		10722.86	10722.86	No	7.86	Si
SLU 81	fin.	-877.3	-515	-0.0000898	0.0001872	0.0035	2		10737.13	10737.13	No	12.24	Si
SLU 83	ini.	1363.57	-1965	-0.000143	0.0001872	0.0035	2		10722.86	10722.86	No	7.86	Si
SLU 83	fin.	-877.3	-515	-0.0000898	0.0001872	0.0035	2		10737.13	10737.13	No	12.24	Si
SLU 84	ini.	1372.08	-1993	-0.0001439	0.0001872	0.0035	2		10722.86	10722.86	No	7.82	Si
SLU 84	fin.	-902.03	-538	-0.0000925	0.0001872	0.0035	2		10737.13	10737.13	No	11.9	Si
SLU 82	ini.	1372.08	-1993	-0.0001439	0.0001872	0.0035	2		10722.86	10722.86	No	7.82	Si
SLU 82	fin.	-902.03	-538	-0.0000925	0.0001872	0.0035	2		10737.13	10737.13	No	11.9	Si
SLU 75	ini.	1330.28	-1912	-0.0001392	0.0001872	0.0035	2		10722.86	10722.86	No	8.06	Si
SLU 75	fin.	-915.21	-477	-0.0000939	0.0001872	0.0035	2		10737.13	10737.13	No	11.73	Si
SLU 76	ini.	1335.95	-1931	-0.0001399	0.0001872	0.0035	2		10722.86	10722.86	No	8.03	Si
SLU 76	fin.	-931.7	-492	-0.0000956	0.0001872	0.0035	2		10737.13	10737.13	No	11.52	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 70	ini.	1232.72	-2889	2	0	1603	7930	13475	5100	9533	No	3.3	Si
SLU 70	fin.	-945.96	-4046	2	0	1367	7930	13475	5100	9297	No	2.3	Si
SLU 78	ini.	1330.28	-3098	2	0	1633	7930	13475	5100	9562	No	3.09	Si
SLU 78	fin.	-915.21	-4054	2	0	1393	7930	13475	5100	9323	No	2.3	Si
SLU 75	ini.	1330.28	-3098	2	0	1633	7930	13475	5100	9562	No	3.09	Si
SLU 75	fin.	-915.21	-4054	2	0	1393	7930	13475	5100	9323	No	2.3	Si
SLU 67	ini.	1232.72	-2889	2	0	1603	7930	13475	5100	9533	No	3.3	Si
SLU 67	fin.	-945.96	-4046	2	0	1367	7930	13475	5100	9297	No	2.3	Si
SLU 72	ini.	1232.72	-2889	2	0	1603	7930	13475	5100	9533	No	3.3	Si
SLU 72	fin.	-945.96	-4046	2	0	1367	7930	13475	5100	9297	No	2.3	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 80	ini.	1330.28	-3098	2	0	1633	7930	13475	5100	9562	No	3.09	Si
SLU 80	fin.	-915.21	-4054	2	0	1393	7930	13475	5100	9323	No	2.3	Si
SLU 65	ini.	1238.4	-2918	2	0	1606	7930	13475	5100	9536	No	3.27	Si
SLU 65	fin.	-962.44	-4068	2	0	1370	7930	13475	5100	9300	No	2.29	Si
SLU 68	ini.	1238.4	-2918	2	0	1606	7930	13475	5100	9536	No	3.27	Si
SLU 68	fin.	-962.44	-4068	2	0	1370	7930	13475	5100	9300	No	2.29	Si
SLU 76	ini.	1335.95	-3126	2	0	1635	7930	13475	5100	9565	No	3.06	Si
SLU 76	fin.	-931.7	-4076	2	0	1396	7930	13475	5100	9326	No	2.29	Si
SLU 73	ini.	1335.95	-3126	2	0	1635	7930	13475	5100	9565	No	3.06	Si
SLU 73	fin.	-931.7	-4076	2	0	1396	7930	13475	5100	9326	No	2.29	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	81.47	563	-0.0000081	0.0002807	0.0035	2		15635.95	15635.95		191.92	Si
SLV 12	fin.	967.38	961	-0.0000985	0.0002807	0.0035	2		15635.95	15635.95		16.16	Si
SLV 9	ini.	1459.25	-3088	-0.0001509	0.0002807	0.0035	2		15635.95	15635.95		10.72	Si
SLV 9	fin.	-2052.12	-1801	-0.0002166	0.0002807	0.0035	2		15648.46	15648.46		7.63	Si
SLV 11	ini.	-97.06	841	-0.0000096	0.0002807	0.0035	2		15648.46	15648.46		161.22	Si
SLV 11	fin.	1242.6	1004	-0.0001276	0.0002807	0.0035	2		15635.95	15635.95		12.58	Si
SLV 6	ini.	2000.61	-3496	-0.0002109	0.0002807	0.0035	2		15635.95	15635.95		7.82	Si
SLV 6	fin.	-2639.63	-1527	-0.000285	0.0002807	0.0035	2		15648.46	15648.46		5.93	Si
SLV 3	ini.	1236.69	-821	-0.000127	0.0002807	0.0035	2		15635.95	15635.95		12.64	Si
SLV 3	fin.	-591.65	710	-0.0000595	0.0002807	0.0035	2		15648.46	15648.46		26.45	Si
SLV 1	ini.	1703.58	-2000	-0.0001777	0.0002807	0.0035	2		15635.95	15635.95		9.18	Si
SLV 1	fin.	-1580.07	-131	-0.000164	0.0002807	0.0035	2		15648.46	15648.46		9.9	Si
SLV 5	ini.	1822.08	-3218	-0.0001909	0.0002807	0.0035	2		15635.95	15635.95		8.58	Si
SLV 5	fin.	-2364.41	-1484	-0.0002525	0.0002807	0.0035	2		15648.46	15648.46		6.62	Si
SLV 4	ini.	1409.41	-1090	-0.0001455	0.0002807	0.0035	2		15635.95	15635.95		11.09	Si
SLV 4	fin.	-857.92	668	-0.000087	0.0002807	0.0035	2		15648.46	15648.46		18.24	Si
SLV 10	ini.	1637.78	-3366	-0.0001704	0.0002807	0.0035	2		15635.95	15635.95		9.55	Si
SLV 10	fin.	-2327.35	-1845	-0.0002482	0.0002807	0.0035	2		15648.46	15648.46		6.72	Si
SLV 2	ini.	1876.3	-2269	-0.0001969	0.0002807	0.0035	2		15635.95	15635.95		8.33	Si
SLV 2	fin.	-1846.33	-173	-0.0001934	0.0002807	0.0035	2		15648.46	15648.46		8.48	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	1637.78	-5312	2	0	2524	7930	20213	5100	10454		1.97	Si
SLV 10	fin.	-2327.35	-5409	2	0	2285	7930	20213	5100	10215		1.89	Si
SLV 4	ini.	1409.41	-3015	2	0	2157	7930	20213	5100	10087		3.35	Si
SLV 4	fin.	-857.92	-4387	2	0	1823	7930	20213	5100	9752		2.22	Si
SLV 6	ini.	2000.61	-6172	2	0	2544	7930	20213	5100	10474		1.7	Si
SLV 6	fin.	-2639.63	-6457	2	0	2232	7930	20213	5100	10162		1.57	Si
SLV 3	ini.	1236.69	-2347	2	0	2109	7930	20213	5100	10039		4.28	Si
SLV 3	fin.	-591.65	-3739	2	0	1814	7930	20213	5100	9744		2.61	Si
SLV 9	ini.	1459.25	-4621	2	0	2483	7930	20213	5100	10412		2.25	Si
SLV 9	fin.	-2052.12	-4740	2	0	2278	7930	20213	5100	10208		2.15	Si
SLV 5	ini.	1822.08	-5481	2	0	2502	7930	20213	5100	10432		1.9	Si
SLV 5	fin.	-2364.41	-5788	2	0	2225	7930	20213	5100	10154		1.75	Si
SLV 14	ini.	666.86	-2063	2	0	2284	7930	20213	5100	10213		4.95	Si
SLV 14	fin.	-805.38	-2408	2	0	2182	7930	20213	5100	10111		4.2	Si
SLV 11	ini.	-97.06	1762	2	0	1787	7930	20213	5100	9716		5.51	Si
SLV 11	fin.	1242.6	310	2	0	1752	7930	20213	5100	9681		31.21	Si
SLV 1	ini.	1703.58	-4262	2	0	2311	7930	20213	5100	10241		2.4	Si
SLV 1	fin.	-1580.07	-5254	2	0	1982	7930	20213	5100	9911		1.89	Si
SLV 2	ini.	1876.3	-4930	2	0	2354	7930	20213	5100	10284		2.09	Si
SLV 2	fin.	-1846.33	-5902	2	0	1990	7930	20213	5100	9919		1.68	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.928	SLV 6	Si
V_SLV	1.574	SLV 6	Si
PF_SLU	7.815	SLU 82	Si
V_SLU	2.286	SLU 65	Si

Trave di accoppiamento 9

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.059	-3.134	0.42	0.73	0.31	-10.059	-3.134	0.42	0.73	0.31	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 76	ini.	25.52	691	-0.0001099	0.0001872	0.0035	0.31		258.05	258.05	No	10.11	Si
SLU 76	fin.	-282.24	-1101	-0.0021388	0.0001872	0.0035	0.31		260.28	260.28	No	0.92	No
SLU 80	ini.	24.42	685	-0.000105	0.0001872	0.0035	0.31		258.05	258.05	No	10.57	Si
SLU 80	fin.	-281.07	-1095	-0.0021218	0.0001872	0.0035	0.31		260.28	260.28	No	0.93	No
SLU 84	ini.	17.51	686	-0.0000743	0.0001872	0.0035	0.31		258.05	258.05	No	14.73	Si
SLU 84	fin.	-294.55	-1133	-0.0023264	0.0001872	0.0035	0.31		260.28	260.28	No	0.88	No
SLU 79	ini.	22.78	675	-0.0000976	0.0001872	0.0035	0.31		258.05	258.05	No	11.33	Si
SLU 79	fin.	-279.31	-1085	-0.0020967	0.0001872	0.0035	0.31		260.28	260.28	No	0.93	No
SLU 81	ini.	15.87	676	-0.0000672	0.0001872	0.0035	0.31		258.05	258.05	No	16.26	Si
SLU 81	fin.	-292.79	-1124	-0.0022984	0.0001872	0.0035	0.31		260.28	260.28	No	0.89	No
SLU 78	ini.	24.42	685	-0.000105	0.0001872	0.0035	0.31		258.05	258.05	No	10.57	Si
SLU 78	fin.	-281.07	-1095	-0.0021218	0.0001872	0.0035	0.31		260.28	260.28	No	0.93	No
SLU 73	ini.	25.52	691	-0.0001099	0.0001872	0.0035	0.31		258.05	258.05	No	10.11	Si
SLU 73	fin.	-282.24	-1101	-0.0021388	0.0001872	0.0035	0.31		260.28	260.28	No	0.92	No
SLU 82	ini.	17.51	686	-0.0000743	0.0001872	0.0035	0.31		258.05	258.05	No	14.73	Si
SLU 82	fin.	-294.55	-1133	-0.0023264	0.0001872	0.0035	0.31		260.28	260.28	No	0.88	No
SLU 83	ini.	15.87	676	-0.0000672	0.0001872	0.0035	0.31		258.05	258.05	No	16.26	Si
SLU 83	fin.	-292.79	-1124	-0.0022984	0.0001872	0.0035	0.31		260.28	260.28	No	0.89	No
SLU 75	ini.	24.42	685	-0.000105	0.0001872	0.0035	0.31		258.05	258.05	No	10.57	Si
SLU 75	fin.	-281.07	-1095	-0.0021218	0.0001872	0.0035	0.31		260.28	260.28	No	0.93	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	24.42	166	0.31	0	0	2458	2089	791	2458	No	14.8	Si
SLU 75	fin.	-281.07	-1506	0.31	0	237	2458	2089	791	2695	No	1.79	Si
SLU 78	ini.	24.42	166	0.31	0	0	2458	2089	791	2458	No	14.8	Si
SLU 78	fin.	-281.07	-1506	0.31	0	237	2458	2089	791	2695	No	1.79	Si
SLU 77	ini.	22.78	173	0.31	0	0	2458	2089	791	2458	No	14.21	Si
SLU 77	fin.	-279.31	-1498	0.31	0	236	2458	2089	791	2695	No	1.8	Si
SLU 84	ini.	17.51	213	0.31	0	0	2458	2089	791	2458	No	11.55	Si
SLU 84	fin.	-294.55	-1583	0.31	0	240	2458	2089	791	2698	No	1.7	Si
SLU 76	ini.	25.52	161	0.31	0	0	2458	2089	791	2458	No	15.23	Si
SLU 76	fin.	-282.24	-1511	0.31	0	238	2458	2089	791	2696	No	1.78	Si
SLU 73	ini.	25.52	161	0.31	0	0	2458	2089	791	2458	No	15.23	Si
SLU 73	fin.	-282.24	-1511	0.31	0	238	2458	2089	791	2696	No	1.78	Si
SLU 81	ini.	15.87	220	0.31	0	0	2458	2089	791	2458	No	11.19	Si
SLU 81	fin.	-292.79	-1575	0.31	0	239	2458	2089	791	2697	No	1.71	Si
SLU 82	ini.	17.51	213	0.31	0	0	2458	2089	791	2458	No	11.55	Si
SLU 82	fin.	-294.55	-1583	0.31	0	240	2458	2089	791	2698	No	1.7	Si
SLU 83	ini.	15.87	220	0.31	0	0	2458	2089	791	2458	No	11.19	Si
SLU 83	fin.	-292.79	-1575	0.31	0	239	2458	2089	791	2697	No	1.71	Si
SLU 80	ini.	24.42	166	0.31	0	0	2458	2089	791	2458	No	14.8	Si
SLU 80	fin.	-281.07	-1506	0.31	0	237	2458	2089	791	2695	No	1.79	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 9	ini.	96.44	983	-0.000462	0.0002807	0.0035	0.31		376.81	376.81		3.91	Si
SLV 9	fin.	-295.03	-1287	-0.0021392	0.0002807	0.0035	0.31		378.78	378.78		1.28	Si
SLV 4	ini.	85.5	827	-0.0004011	0.0002807	0.0035	0.31		376.81	376.81		4.41	Si
SLV 4	fin.	-244.8	-1088	-0.0015514	0.0002807	0.0035	0.31		378.78	378.78		1.55	Si
SLV 5	ini.	142.31	1246	-0.000744	0.0002807	0.0035	0.31		376.81	376.81		2.65	Si
SLV 5	fin.	-341.7	-1558	-0.0029238	0.0002807	0.0035	0.31		378.78	378.78		1.11	Si
SLV 2	ini.	148.92	1237	-0.0007882	0.0002807	0.0035	0.31		376.81	376.81		2.53	Si
SLV 2	fin.	-328.98	-1529	-0.0026818	0.0002807	0.0035	0.31		378.78	378.78		1.15	Si
SLV 10	ini.	123.96	1148	-0.0006261	0.0002807	0.0035	0.31		376.81	376.81		3.04	Si
SLV 10	fin.	-326.59	-1461	-0.002639	0.0002807	0.0035	0.31		378.78	378.78		1.16	Si
SLV 14	ini.	-4	360	-0.0000165	0.0002807	0.0035	0.31		378.78	378.78		94.65	Si
SLV 14	fin.	-173.43	-628	-0.0009539	0.0002807	0.0035	0.31		378.78	378.78		2.18	Si
SLV 13	ini.	-30.63	200	-0.0001305	0.0002807	0.0035	0.31		378.78	378.78		12.37	Si
SLV 13	fin.	-142.89	-460	-0.0007429	0.0002807	0.0035	0.31		378.78	378.78		2.65	Si
SLV 1	ini.	122.29	1077	-0.0006158	0.0002807	0.0035	0.31		376.81	376.81		3.08	Si
SLV 1	fin.	-298.44	-1361	-0.0021875	0.0002807	0.0035	0.31		378.78	378.78		1.27	Si
SLV 6	ini.	169.84	1411	-0.0009345	0.0002807	0.0035	0.31		376.81	376.81		2.22	Si
SLV 6	fin.	-373.26	-1731	-0.0035614	0.0002807	0.0035	0.31		378.78	378.78		1.01	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	58.87	667	-0.0002631	0.0002807	0.0035	0.31		376.81	376.81		6.4	Si
SLV 3	fin.	-214.26	-920	-0.0012736	0.0002807	0.0035	0.31		378.78	378.78		1.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	122.29	-343	0.31	0	0	2458	3133	791	2458		7.16	Si
SLV 1	fin.	-298.44	-1493	0.31	0	334	2458	3133	791	2793		1.87	Si
SLV 2	ini.	148.92	-455	0.31	0	0	2458	3133	791	2458		5.4	Si
SLV 2	fin.	-328.98	-1627	0.31	0	347	2458	3133	791	2805		1.72	Si
SLV 6	ini.	169.84	-520	0.31	0	0	2458	3133	791	2458		4.73	Si
SLV 6	fin.	-373.26	-1844	0.31	0	362	2458	3133	791	2820		1.53	Si
SLV 9	ini.	96.44	-203	0.31	0	0	2458	3133	791	2458		12.09	Si
SLV 9	fin.	-295.03	-1504	0.31	0	329	2458	3133	791	2787		1.85	Si
SLV 4	ini.	85.5	-199	0.31	0	0	2458	3133	791	2458		12.34	Si
SLV 4	fin.	-244.8	-1242	0.31	0	312	2458	3133	791	2770		2.23	Si
SLV 5	ini.	142.31	-405	0.31	0	0	2458	3133	791	2458		6.07	Si
SLV 5	fin.	-341.7	-1705	0.31	0	349	2458	3133	791	2807		1.65	Si
SLV 14	ini.	-4	217	0.31	0	149	2458	3133	791	2607		12.04	Si
SLV 14	fin.	-173.43	-957	0.31	0	271	2458	3133	791	2729		2.85	Si
SLV 3	ini.	58.87	-88	0.31	0	78	2458	3133	791	2537		28.94	Si
SLV 3	fin.	-214.26	-1108	0.31	0	298	2458	3133	791	2756		2.49	Si
SLV 10	ini.	123.96	-319	0.31	0	0	2458	3133	791	2458		7.72	Si
SLV 10	fin.	-326.59	-1643	0.31	0	342	2458	3133	791	2800		1.7	Si
SLV 13	ini.	-30.63	328	0.31	0	175	2458	3133	791	2633		8.03	Si
SLV 13	fin.	-142.89	-823	0.31	0	255	2458	3133	791	2713		3.3	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.015	SLV 6	Si
V_SLV	1.529	SLV 6	Si
PF_SLU	0.884	SLU 82	No
V_SLU	1.705	SLU 82	Si

Trave di accoppiamento 10

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.729	5.874	-1.98	0.02	2	-18.729	5.874	-1.98	0.02	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-395.26	-1970	-0.0000397	0.0001872	0.0035	2		10737.13	10737.13	No	27.16	Si
SLU 84	fin.	2000.39	-3274	-0.000217	0.0001872	0.0035	2		10722.86	10722.86	No	5.36	Si
SLU 81	ini.	-438.23	-1895	-0.0000441	0.0001872	0.0035	2		10737.13	10737.13	No	24.5	Si
SLU 81	fin.	1993.3	-3210	-0.0002161	0.0001872	0.0035	2		10722.86	10722.86	No	5.38	Si
SLU 80	ini.	-407.29	-1831	-0.0000409	0.0001872	0.0035	2		10737.13	10737.13	No	26.36	Si
SLU 80	fin.	1910.06	-3124	-0.0002061	0.0001872	0.0035	2		10722.86	10722.86	No	5.61	Si
SLU 83	ini.	-438.23	-1895	-0.0000441	0.0001872	0.0035	2		10737.13	10737.13	No	24.5	Si
SLU 83	fin.	1993.3	-3210	-0.0002161	0.0001872	0.0035	2		10722.86	10722.86	No	5.38	Si
SLU 82	ini.	-395.26	-1970	-0.0000397	0.0001872	0.0035	2		10737.13	10737.13	No	27.16	Si
SLU 82	fin.	2000.39	-3274	-0.000217	0.0001872	0.0035	2		10722.86	10722.86	No	5.36	Si
SLU 75	ini.	-407.29	-1831	-0.0000409	0.0001872	0.0035	2		10737.13	10737.13	No	26.36	Si
SLU 75	fin.	1910.06	-3124	-0.0002061	0.0001872	0.0035	2		10722.86	10722.86	No	5.61	Si
SLU 77	ini.	-450.25	-1755	-0.0000453	0.0001872	0.0035	2		10737.13	10737.13	No	23.85	Si
SLU 77	fin.	1902.98	-3060	-0.0002052	0.0001872	0.0035	2		10722.86	10722.86	No	5.63	Si
SLU 73	ini.	-378.64	-1882	-0.000038	0.0001872	0.0035	2		10737.13	10737.13	No	28.36	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 73	fin.	1914.79	-3167	-0.0002067	0.0001872	0.0035	2		10722.86	10722.86	No	5.6	Si
SLU 78	ini.	-407.29	-1831	-0.0000409	0.0001872	0.0035	2		10737.13	10737.13	No	26.36	Si
SLU 78	fin.	1910.06	-3124	-0.0002061	0.0001872	0.0035	2		10722.86	10722.86	No	5.61	Si
SLU 76	ini.	-378.64	-1882	-0.000038	0.0001872	0.0035	2		10737.13	10737.13	No	28.36	Si
SLU 76	fin.	1914.79	-3167	-0.0002067	0.0001872	0.0035	2		10722.86	10722.86	No	5.6	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-407.29	2877	2	0	1620	7930	13475	5100	9550	No	3.32	Si
SLU 75	fin.	1910.06	4485	2	0	1810	7930	13475	5100	9740	No	2.17	Si
SLU 78	ini.	-407.29	2877	2	0	1620	7930	13475	5100	9550	No	3.32	Si
SLU 78	fin.	1910.06	4485	2	0	1810	7930	13475	5100	9740	No	2.17	Si
SLU 80	ini.	-407.29	2877	2	0	1620	7930	13475	5100	9550	No	3.32	Si
SLU 80	fin.	1910.06	4485	2	0	1810	7930	13475	5100	9740	No	2.17	Si
SLU 74	ini.	-450.25	2907	2	0	1608	7930	13475	5100	9538	No	3.28	Si
SLU 74	fin.	1902.98	4550	2	0	1801	7930	13475	5100	9731	No	2.14	Si
SLU 84	ini.	-395.26	2876	2	0	1642	7930	13475	5100	9571	No	3.33	Si
SLU 84	fin.	2000.39	4678	2	0	1831	7930	13475	5100	9760	No	2.09	Si
SLU 79	ini.	-450.25	2907	2	0	1608	7930	13475	5100	9538	No	3.28	Si
SLU 79	fin.	1902.98	4550	2	0	1801	7930	13475	5100	9731	No	2.14	Si
SLU 83	ini.	-438.23	2907	2	0	1630	7930	13475	5100	9559	No	3.29	Si
SLU 83	fin.	1993.3	4743	2	0	1822	7930	13475	5100	9752	No	2.06	Si
SLU 81	ini.	-438.23	2907	2	0	1630	7930	13475	5100	9559	No	3.29	Si
SLU 81	fin.	1993.3	4743	2	0	1822	7930	13475	5100	9752	No	2.06	Si
SLU 77	ini.	-450.25	2907	2	0	1608	7930	13475	5100	9538	No	3.28	Si
SLU 77	fin.	1902.98	4550	2	0	1801	7930	13475	5100	9731	No	2.14	Si
SLU 82	ini.	-395.26	2876	2	0	1642	7930	13475	5100	9571	No	3.33	Si
SLU 82	fin.	2000.39	4678	2	0	1831	7930	13475	5100	9760	No	2.09	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1530.14	-443	-0.0001585	0.0002807	0.0035	2		15648.46	15648.46		10.23	Si
SLV 16	fin.	2100.33	-3493	-0.0002223	0.0002807	0.0035	2		15635.95	15635.95		7.44	Si
SLV 12	ini.	-1702.57	-2529	-0.0001774	0.0002807	0.0035	2		15648.46	15648.46		9.19	Si
SLV 12	fin.	1838.73	-4568	-0.0001927	0.0002807	0.0035	2		15635.95	15635.95		8.5	Si
SLV 10	ini.	305.15	1010	-0.0000305	0.0002807	0.0035	2		15635.95	15635.95		51.24	Si
SLV 10	fin.	1340.34	-423	-0.0001381	0.0002807	0.0035	2		15635.95	15635.95		11.67	Si
SLV 11	ini.	-1483.49	-2577	-0.0001534	0.0002807	0.0035	2		15648.46	15648.46		10.55	Si
SLV 11	fin.	1689.73	-4170	-0.0001762	0.0002807	0.0035	2		15635.95	15635.95		9.25	Si
SLV 15	ini.	-1318.19	-489	-0.0001356	0.0002807	0.0035	2		15648.46	15648.46		11.87	Si
SLV 15	fin.	1956.18	-3107	-0.0002059	0.0002807	0.0035	2		15635.95	15635.95		7.99	Si
SLV 9	ini.	524.23	962	-0.0000526	0.0002807	0.0035	2		15635.95	15635.95		29.83	Si
SLV 9	fin.	1191.34	-24	-0.0001221	0.0002807	0.0035	2		15635.95	15635.95		13.12	Si
SLV 7	ini.	-1025.91	-3305	-0.0001045	0.0002807	0.0035	2		15648.46	15648.46		15.25	Si
SLV 7	fin.	1313.9	-3842	-0.0001353	0.0002807	0.0035	2		15635.95	15635.95		11.9	Si
SLV 8	ini.	-1244.99	-3257	-0.0001278	0.0002807	0.0035	2		15648.46	15648.46		12.57	Si
SLV 8	fin.	1462.9	-4241	-0.0001513	0.0002807	0.0035	2		15635.95	15635.95		10.69	Si
SLV 14	ini.	-927.83	619	-0.0000943	0.0002807	0.0035	2		15648.46	15648.46		16.87	Si
SLV 14	fin.	1950.81	-2249	-0.0002053	0.0002807	0.0035	2		15635.95	15635.95		8.02	Si
SLV 13	ini.	-715.87	573	-0.0000722	0.0002807	0.0035	2		15648.46	15648.46		21.86	Si
SLV 13	fin.	1806.66	-1864	-0.0001891	0.0002807	0.0035	2		15635.95	15635.95		8.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 8	ini.	-1244.99	2689	2	0	2508	7930	20213	5100	10438		3.88	Si
SLV 8	fin.	1462.9	4812	2	0	2652	7930	20213	5100	10582		2.2	Si
SLV 9	ini.	524.23	1766	2	0	1761	7930	20213	5100	9690		5.49	Si
SLV 9	fin.	1191.34	1593	2	0	1961	7930	20213	5100	9891		6.21	Si
SLV 10	ini.	305.15	2558	2	0	1751	7930	20213	5100	9680		3.78	Si
SLV 10	fin.	1340.34	2411	2	0	2037	7930	20213	5100	9966		4.13	Si
SLV 12	ini.	-1702.57	4674	2	0	2396	7930	20213	5100	10326		2.21	Si
SLV 12	fin.	1838.73	6600	2	0	2699	7930	20213	5100	10628		1.61	Si
SLV 15	ini.	-1318.19	5471	2	0	2049	7930	20213	5100	9978		1.82	Si
SLV 15	fin.	1956.18	6416	2	0	2485	7930	20213	5100	10415		1.62	Si
SLV 16	ini.	-1530.14	6237	2	0	2040	7930	20213	5100	9970		1.6	Si
SLV 16	fin.	2100.33	7207	2	0	2543	7930	20213	5100	10473		1.45	Si
SLV 7	ini.	-1025.91	1897	2	0	2515	7930	20213	5100	10445		5.51	Si
SLV 7	fin.	1313.9	3995	2	0	2595	7930	20213	5100	10524		2.63	Si
SLV 14	ini.	-927.83	5602	2	0	1833	7930	20213	5100	9763		1.74	Si
SLV 14	fin.	1950.81	5950	2	0	2351	7930	20213	5100	10281		1.73	Si
SLV 13	ini.	-715.87	4836	2	0	1842	7930	20213	5100	9772		2.02	Si
SLV 13	fin.	1806.66	5159	2	0	2289	7930	20213	5100	10218		1.98	Si
SLV 11	ini.	-1483.49	3882	2	0	2404	7930	20213	5100	10333		2.66	Si
SLV 11	fin.	1689.73	5783	2	0	2642	7930	20213	5100	10572		1.83	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	7.445	SLV 16	Si
V_SLV	1.453	SLV 16	Si
PF_SLU	5.36	SLU 82	Si
V_SLU	2.056	SLU 81	Si

Trave di accoppiamento 11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.729	5.874	0.42	0.73	0.31	-18.729	5.874	0.42	0.73	0.31	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-348.88	-1290	-0.0033952	0.0001872	0.0035	0.31		260.28	260.28	No	0.75	No
SLU 81	fin.	-38.32	590	-0.0001684	0.0001872	0.0035	0.31		260.28	260.28	No	6.79	Si
SLU 83	ini.	-348.88	-1290	-0.0033952	0.0001872	0.0035	0.31		260.28	260.28	No	0.75	No
SLU 83	fin.	-38.32	590	-0.0001684	0.0001872	0.0035	0.31		260.28	260.28	No	6.79	Si
SLU 78	ini.	-311.89	-1216	-0.0026246	0.0001872	0.0035	0.31		260.28	260.28	No	0.83	No
SLU 78	fin.	-16.99	574	-0.0000716	0.0001872	0.0035	0.31		260.28	260.28	No	15.32	Si
SLU 77	ini.	-329.57	-1236	-0.002974	0.0001872	0.0035	0.31		260.28	260.28	No	0.79	No
SLU 77	fin.	-29.01	583	-0.0001251	0.0001872	0.0035	0.31		260.28	260.28	No	8.97	Si
SLU 75	ini.	-311.89	-1216	-0.0026246	0.0001872	0.0035	0.31		260.28	260.28	No	0.83	No
SLU 75	fin.	-16.99	574	-0.0000716	0.0001872	0.0035	0.31		260.28	260.28	No	15.32	Si
SLU 84	ini.	-331.2	-1271	-0.0030089	0.0001872	0.0035	0.31		260.28	260.28	No	0.79	No
SLU 84	fin.	-26.3	580	-0.0001128	0.0001872	0.0035	0.31		260.28	260.28	No	9.9	Si
SLU 82	ini.	-331.2	-1271	-0.0030089	0.0001872	0.0035	0.31		260.28	260.28	No	0.79	No
SLU 82	fin.	-26.3	580	-0.0001128	0.0001872	0.0035	0.31		260.28	260.28	No	9.9	Si
SLU 79	ini.	-329.57	-1236	-0.002974	0.0001872	0.0035	0.31		260.28	260.28	No	0.79	No
SLU 79	fin.	-29.01	583	-0.0001251	0.0001872	0.0035	0.31		260.28	260.28	No	8.97	Si
SLU 74	ini.	-329.57	-1236	-0.002974	0.0001872	0.0035	0.31		260.28	260.28	No	0.79	No
SLU 74	fin.	-29.01	583	-0.0001251	0.0001872	0.0035	0.31		260.28	260.28	No	8.97	Si
SLU 80	ini.	-311.89	-1216	-0.0026246	0.0001872	0.0035	0.31		260.28	260.28	No	0.83	No
SLU 80	fin.	-16.99	574	-0.0000716	0.0001872	0.0035	0.31		260.28	260.28	No	15.32	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-329.57	1736	0.31	0	247	2458	2089	791	2705	No	1.56	Si
SLU 79	fin.	-29.01	-468	0.31	0	0	2458	2089	791	2458	No	5.26	Si
SLU 81	ini.	-348.88	1842	0.31	0	251	2458	2089	791	2709	No	1.47	Si
SLU 81	fin.	-38.32	-531	0.31	0	0	2458	2089	791	2458	No	4.63	Si
SLU 74	ini.	-329.57	1736	0.31	0	247	2458	2089	791	2705	No	1.56	Si
SLU 74	fin.	-29.01	-468	0.31	0	0	2458	2089	791	2458	No	5.26	Si
SLU 84	ini.	-331.2	1736	0.31	0	250	2458	2089	791	2708	No	1.56	Si
SLU 84	fin.	-26.3	-450	0.31	0	0	2458	2089	791	2458	No	5.46	Si
SLU 77	ini.	-329.57	1736	0.31	0	247	2458	2089	791	2705	No	1.56	Si
SLU 77	fin.	-29.01	-468	0.31	0	0	2458	2089	791	2458	No	5.26	Si
SLU 62	ini.	-311.41	1636	0.31	0	244	2458	2089	791	2702	No	1.65	Si
SLU 62	fin.	-21.39	-412	0.31	0	0	2458	2089	791	2458	No	5.96	Si
SLU 78	ini.	-311.89	1630	0.31	0	246	2458	2089	791	2704	No	1.66	Si
SLU 78	fin.	-16.99	-387	0.31	0	0	2458	2089	791	2458	No	6.35	Si
SLU 60	ini.	-311.41	1636	0.31	0	244	2458	2089	791	2702	No	1.65	Si
SLU 60	fin.	-21.39	-412	0.31	0	0	2458	2089	791	2458	No	5.96	Si
SLU 82	ini.	-331.2	1736	0.31	0	250	2458	2089	791	2708	No	1.56	Si
SLU 82	fin.	-26.3	-450	0.31	0	0	2458	2089	791	2458	No	5.46	Si
SLU 83	ini.	-348.88	1842	0.31	0	251	2458	2089	791	2709	No	1.47	Si
SLU 83	fin.	-38.32	-531	0.31	0	0	2458	2089	791	2458	No	4.63	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-391.18	-1357	-0.003895	0.0002807	0.0035	0.31		378.78	378.78		0.97	No
SLV 11	fin.	34	1159	-0.0001463	0.0002807	0.0035	0.31		376.81	376.81		11.08	Si
SLV 1	ini.	-62.69	171	-0.0002803	0.0002807	0.0035	0.31		378.78	378.78		6.04	Si
SLV 1	fin.	-172.94	-293	-0.0009504	0.0002807	0.0035	0.31		378.78	378.78		2.19	Si
SLV 12	ini.	-419.3	-1530	-0.0043824	0.0002807	0.0035	0.31		378.78	378.78		0.9	No
SLV 12	fin.	60.4	1312	-0.0002706	0.0002807	0.0035	0.31		376.81	376.81		6.24	Si
SLV 14	ini.	-293.59	-1712	-0.0021191	0.0002807	0.0035	0.31		378.78	378.78		1.29	Si
SLV 14	fin.	150.36	769	-0.000798	0.0002807	0.0035	0.31		376.81	376.81		2.51	Si
SLV 15	ini.	-357.1	-1736	-0.0032386	0.0002807	0.0035	0.31		378.78	378.78		1.06	Si
SLV 15	fin.	131.2	1018	-0.0006718	0.0002807	0.0035	0.31		376.81	376.81		2.87	Si
SLV 13	ini.	-266.38	-1544	-0.0017784	0.0002807	0.0035	0.31		378.78	378.78		1.42	Si
SLV 13	fin.	124.82	621	-0.0006315	0.0002807	0.0035	0.31		376.81	376.81		3.02	Si
SLV 16	ini.	-384.3	-1904	-0.0037698	0.0002807	0.0035	0.31		378.78	378.78		0.99	No
SLV 16	fin.	156.74	1166	-0.0008418	0.0002807	0.0035	0.31		376.81	376.81		2.4	Si
SLV 8	ini.	-358.19	-1016	-0.0032611	0.0002807	0.0035	0.31		378.78	378.78		1.06	Si
SLV 8	fin.	-28.93	1038	-0.0001229	0.0002807	0.0035	0.31		378.78	378.78		13.09	Si
SLV 4	ini.	-180.61	-188	-0.0010067	0.0002807	0.0035	0.31		378.78	378.78		2.1	Si
SLV 4	fin.	-141.02	252	-0.0007306	0.0002807	0.0035	0.31		378.78	378.78		2.69	Si
SLV 7	ini.	-330.07	-842	-0.0027017	0.0002807	0.0035	0.31		378.78	378.78		1.15	Si
SLV 7	fin.	-55.33	884	-0.0002444	0.0002807	0.0035	0.31		378.78	378.78		6.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-357.1	2073	0.31	0	362	2458	3133	791	2821		1.36	Si
SLV 15	fin.	131.2	234	0.31	0	0	2458	3133	791	2458		10.5	Si
SLV 14	ini.	-293.59	1727	0.31	0	361	2458	3133	791	2819		1.63	Si
SLV 14	fin.	150.36	606	0.31	0	28	2458	3133	791	2486		4.1	Si
SLV 11	ini.	-391.18	2096	0.31	0	334	2458	3133	791	2792		1.33	Si
SLV 11	fin.	34	-553	0.31	0	0	2458	3133	791	2458		4.45	Si
SLV 16	ini.	-384.3	2186	0.31	0	374	2458	3133	791	2832		1.3	Si
SLV 16	fin.	156.74	343	0.31	0	0	2458	3133	791	2458		7.17	Si
SLV 4	ini.	-180.61	727	0.31	0	225	2458	3133	791	2683		3.69	Si
SLV 4	fin.	-141.02	-1021	0.31	0	167	2458	3133	791	2625		2.57	Si
SLV 3	ini.	-153.4	614	0.31	0	205	2458	3133	791	2663		4.34	Si
SLV 3	fin.	-166.56	-1130	0.31	0	188	2458	3133	791	2647		2.34	Si
SLV 12	ini.	-419.3	2213	0.31	0	347	2458	3133	791	2805		1.27	Si
SLV 12	fin.	60.4	-440	0.31	0	0	2458	3133	791	2458		5.59	Si
SLV 7	ini.	-330.07	1658	0.31	0	291	2458	3133	791	2749		1.66	Si
SLV 7	fin.	-55.33	-962	0.31	0	0	2458	3133	791	2458		2.56	Si
SLV 8	ini.	-358.19	1775	0.31	0	306	2458	3133	791	2764		1.56	Si
SLV 8	fin.	-28.93	-849	0.31	0	0	2458	3133	791	2458		2.89	Si
SLV 13	ini.	-266.38	1614	0.31	0	348	2458	3133	791	2806		1.74	Si
SLV 13	fin.	124.82	497	0.31	0	92	2458	3133	791	2551		5.13	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.903	SLV 12	No
V_SLV	1.268	SLV 12	Si
PF_SLU	0.746	SLU 81	No
V_SLU	1.471	SLU 81	Si

Trave di accoppiamento 12

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-13.839	5.874	-1.98	0.02	2	-14.839	5.874	-1.98	0.02	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	638.13	-5376	-0.0000647	0.0001872	0.0035	2		10722.86	10722.86	No	16.8	Si
SLU 81	fin.	742.15	-5163	-0.0000756	0.0001872	0.0035	2		10722.86	10722.86	No	14.45	Si
SLU 75	ini.	595.36	-5060	-0.0000603	0.0001872	0.0035	2		10722.86	10722.86	No	18.01	Si
SLU 75	fin.	710.38	-4867	-0.0000723	0.0001872	0.0035	2		10722.86	10722.86	No	15.09	Si
SLU 80	ini.	595.36	-5060	-0.0000603	0.0001872	0.0035	2		10722.86	10722.86	No	18.01	Si
SLU 80	fin.	710.38	-4867	-0.0000723	0.0001872	0.0035	2		10722.86	10722.86	No	15.09	Si
SLU 73	ini.	604.73	-5047	-0.0000613	0.0001872	0.0035	2		10722.86	10722.86	No	17.73	Si
SLU 73	fin.	727.18	-4858	-0.0000741	0.0001872	0.0035	2		10722.86	10722.86	No	14.75	Si
SLU 79	ini.	581.3	-5080	-0.0000588	0.0001872	0.0035	2		10722.86	10722.86	No	18.45	Si
SLU 79	fin.	685.18	-4881	-0.0000697	0.0001872	0.0035	2		10722.86	10722.86	No	15.65	Si
SLU 83	ini.	638.13	-5376	-0.0000647	0.0001872	0.0035	2		10722.86	10722.86	No	16.8	Si
SLU 83	fin.	742.15	-5163	-0.0000756	0.0001872	0.0035	2		10722.86	10722.86	No	14.45	Si
SLU 76	ini.	604.73	-5047	-0.0000613	0.0001872	0.0035	2		10722.86	10722.86	No	17.73	Si
SLU 76	fin.	727.18	-4858	-0.0000741	0.0001872	0.0035	2		10722.86	10722.86	No	14.75	Si
SLU 84	ini.	652.19	-5356	-0.0000662	0.0001872	0.0035	2		10722.86	10722.86	No	16.44	Si
SLU 84	fin.	767.35	-5149	-0.0000783	0.0001872	0.0035	2		10722.86	10722.86	No	13.97	Si
SLU 82	ini.	652.19	-5356	-0.0000662	0.0001872	0.0035	2		10722.86	10722.86	No	16.44	Si
SLU 82	fin.	767.35	-5149	-0.0000783	0.0001872	0.0035	2		10722.86	10722.86	No	13.97	Si
SLU 78	ini.	595.36	-5060	-0.0000603	0.0001872	0.0035	2		10722.86	10722.86	No	18.01	Si
SLU 78	fin.	710.38	-4867	-0.0000723	0.0001872	0.0035	2		10722.86	10722.86	No	15.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 47	ini.	387.25	567	2	0	1909	7930	13475	5100	9839	No	17.35	Si
SLU 47	fin.	507.96	-217	2	0	1892	7930	13475	5100	9821	No	45.36	Si
SLU 43	ini.	363.82	529	2	0	1914	7930	13475	5100	9843	No	18.6	Si
SLU 43	fin.	465.96	-232	2	0	1895	7930	13475	5100	9824	No	42.4	Si
SLU 46	ini.	377.87	552	2	0	1911	7930	13475	5100	9841	No	17.83	Si
SLU 46	fin.	491.16	-223	2	0	1893	7930	13475	5100	9822	No	44.13	Si
SLU 48	ini.	363.82	529	2	0	1914	7930	13475	5100	9843	No	18.6	Si
SLU 48	fin.	465.96	-232	2	0	1895	7930	13475	5100	9824	No	42.4	Si
SLU 44	ini.	387.25	567	2	0	1909	7930	13475	5100	9839	No	17.35	Si
SLU 44	fin.	507.96	-217	2	0	1892	7930	13475	5100	9821	No	45.36	Si
SLU 45	ini.	363.82	529	2	0	1914	7930	13475	5100	9843	No	18.6	Si
SLU 45	fin.	465.96	-232	2	0	1895	7930	13475	5100	9824	No	42.4	Si
SLU 68	ini.	472.13	472	2	0	1974	7930	13475	5100	9904	No	20.97	Si
SLU 68	fin.	594.25	-141	2	0	1954	7930	13475	5100	9884	No	70.18	Si
SLU 49	ini.	377.87	552	2	0	1911	7930	13475	5100	9841	No	17.83	Si
SLU 49	fin.	491.16	-223	2	0	1893	7930	13475	5100	9822	No	44.13	Si
SLU 50	ini.	363.82	529	2	0	1914	7930	13475	5100	9843	No	18.6	Si
SLU 50	fin.	465.96	-232	2	0	1895	7930	13475	5100	9824	No	42.4	Si
SLU 51	ini.	377.87	552	2	0	1911	7930	13475	5100	9841	No	17.83	Si
SLU 51	fin.	491.16	-223	2	0	1893	7930	13475	5100	9822	No	44.13	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	2013.26	-3933	-0.0002124	0.0002807	0.0035	2		15635.95	15635.95		7.77	Si
SLV 1	fin.	-574.47	-609	-0.0000577	0.0002807	0.0035	2		15648.46	15648.46		27.24	Si
SLV 5	ini.	852.51	-1409	-0.0000865	0.0002807	0.0035	2		15635.95	15635.95		18.34	Si
SLV 5	fin.	143.51	-246	-0.0000143	0.0002807	0.0035	2		15635.95	15635.95		108.95	Si
SLV 16	ini.	-1284.49	-2995	-0.000132	0.0002807	0.0035	2		15648.46	15648.46		12.18	Si
SLV 16	fin.	1462.12	-6055	-0.0001513	0.0002807	0.0035	2		15635.95	15635.95		10.69	Si
SLV 7	ini.	1043.87	-6419	-0.0001065	0.0002807	0.0035	2		15635.95	15635.95		14.98	Si
SLV 7	fin.	65.74	-4906	-0.0000065	0.0002807	0.0035	2		15635.95	15635.95		237.85	Si
SLV 4	ini.	1851.13	-5208	-0.0001941	0.0002807	0.0035	2		15635.95	15635.95		8.45	Si
SLV 4	fin.	-515.45	-2411	-0.0000517	0.0002807	0.0035	2		15648.46	15648.46		30.36	Si
SLV 2	ini.	1793.72	-3705	-0.0001877	0.0002807	0.0035	2		15635.95	15635.95		8.72	Si
SLV 2	fin.	-492.12	-1013	-0.0000493	0.0002807	0.0035	2		15648.46	15648.46		31.8	Si
SLV 3	ini.	2070.66	-5436	-0.0002189	0.0002807	0.0035	2		15635.95	15635.95		7.55	Si
SLV 3	fin.	-597.8	-2007	-0.0000601	0.0002807	0.0035	2		15648.46	15648.46		26.18	Si
SLV 15	ini.	-1064.95	-3223	-0.0001086	0.0002807	0.0035	2		15648.46	15648.46		14.69	Si
SLV 15	fin.	1379.76	-5650	-0.0001423	0.0002807	0.0035	2		15635.95	15635.95		11.33	Si
SLV 13	ini.	-1122.36	-1720	-0.0001147	0.0002807	0.0035	2		15648.46	15648.46		13.94	Si
SLV 13	fin.	1403.09	-4252	-0.0001449	0.0002807	0.0035	2		15635.95	15635.95		11.14	Si
SLV 14	ini.	-1341.89	-1492	-0.0001381	0.0002807	0.0035	2		15648.46	15648.46		11.66	Si
SLV 14	fin.	1485.45	-4657	-0.0001538	0.0002807	0.0035	2		15635.95	15635.95		10.53	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	1851.13	-4715	2	0	2787	7930	20213	5100	10716		2.27	Si
SLV 4	fin.	-515.45	-4935	2	0	2377	7930	20213	5100	10307		2.09	Si
SLV 3	ini.	2070.66	-5630	2	0	2818	7930	20213	5100	10747		1.91	Si
SLV 3	fin.	-597.8	-5849	2	0	2312	7930	20213	5100	10242		1.75	Si
SLV 5	ini.	852.51	-1203	2	0	2212	7930	20213	5100	10142		8.43	Si
SLV 5	fin.	143.51	-2332	2	0	2003	7930	20213	5100	9933		4.26	Si
SLV 1	ini.	2013.26	-5299	2	0	2608	7930	20213	5100	10538		1.99	Si
SLV 1	fin.	-574.47	-5942	2	0	2071	7930	20213	5100	10000		1.68	Si
SLV 13	ini.	-1122.36	5345	2	0	2265	7930	20213	5100	10194		1.91	Si
SLV 13	fin.	1403.09	4724	2	0	2654	7930	20213	5100	10584		2.24	Si
SLV 2	ini.	1793.72	-4385	2	0	2575	7930	20213	5100	10504		2.4	Si
SLV 2	fin.	-492.12	-5027	2	0	2143	7930	20213	5100	10073		2	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-1064.95	5014	2	0	2503	7930	20213	5100	10433		2.08	Si
SLV 15	fin.	1379.76	4816	2	0	2846	7930	20213	5100	10776		2.24	Si
SLV 14	ini.	-1341.89	6259	2	0	2226	7930	20213	5100	10156		1.62	Si
SLV 14	fin.	1485.45	5639	2	0	2711	7930	20213	5100	10641		1.89	Si
SLV 16	ini.	-1284.49	5928	2	0	2468	7930	20213	5100	10398		1.75	Si
SLV 16	fin.	1462.12	5731	2	0	2899	7930	20213	5100	10829		1.89	Si
SLV 10	ini.	-315.1	2935	2	0	2053	7930	20213	5100	9982		3.4	Si
SLV 10	fin.	821.9	1813	2	0	2271	7930	20213	5100	10200		5.63	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	7.551	SLV 3	Si
V_SLV	1.623	SLV 14	Si
PF_SLU	13.974	SLU 82	Si
V_SLU	17.352	SLU 44	Si

Trave di accoppiamento 13

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-13.839	5.874	0.42	0.73	0.31	-14.839	5.874	0.42	0.73	0.31	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-215	-418	-0.0013706	0.0001872	0.0035	0.31		260.28	260.28	No	1.21	Si
SLU 81	fin.	-228.17	-473	-0.0014963	0.0001872	0.0035	0.31		260.28	260.28	No	1.14	Si
SLU 74	ini.	-199.42	-390	-0.0012318	0.0001872	0.0035	0.31		260.28	260.28	No	1.31	Si
SLU 74	fin.	-211.16	-438	-0.0013355	0.0001872	0.0035	0.31		260.28	260.28	No	1.23	Si
SLU 80	ini.	-193.88	-392	-0.0011845	0.0001872	0.0035	0.31		260.28	260.28	No	1.34	Si
SLU 80	fin.	-204.69	-434	-0.0012777	0.0001872	0.0035	0.31		260.28	260.28	No	1.27	Si
SLU 82	ini.	-209.45	-420	-0.0013201	0.0001872	0.0035	0.31		260.28	260.28	No	1.24	Si
SLU 82	fin.	-221.71	-469	-0.0014336	0.0001872	0.0035	0.31		260.28	260.28	No	1.17	Si
SLU 84	ini.	-209.45	-420	-0.0013201	0.0001872	0.0035	0.31		260.28	260.28	No	1.24	Si
SLU 84	fin.	-221.71	-469	-0.0014336	0.0001872	0.0035	0.31		260.28	260.28	No	1.17	Si
SLU 79	ini.	-199.42	-390	-0.0012318	0.0001872	0.0035	0.31		260.28	260.28	No	1.31	Si
SLU 79	fin.	-211.16	-438	-0.0013355	0.0001872	0.0035	0.31		260.28	260.28	No	1.23	Si
SLU 77	ini.	-199.42	-390	-0.0012318	0.0001872	0.0035	0.31		260.28	260.28	No	1.31	Si
SLU 77	fin.	-211.16	-438	-0.0013355	0.0001872	0.0035	0.31		260.28	260.28	No	1.23	Si
SLU 83	ini.	-215	-418	-0.0013706	0.0001872	0.0035	0.31		260.28	260.28	No	1.21	Si
SLU 83	fin.	-228.17	-473	-0.0014963	0.0001872	0.0035	0.31		260.28	260.28	No	1.14	Si
SLU 78	ini.	-193.88	-392	-0.0011845	0.0001872	0.0035	0.31		260.28	260.28	No	1.34	Si
SLU 78	fin.	-204.69	-434	-0.0012777	0.0001872	0.0035	0.31		260.28	260.28	No	1.27	Si
SLU 75	ini.	-193.88	-392	-0.0011845	0.0001872	0.0035	0.31		260.28	260.28	No	1.34	Si
SLU 75	fin.	-204.69	-434	-0.0012777	0.0001872	0.0035	0.31		260.28	260.28	No	1.27	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-215	1309	0.31	0	181	2458	2089	791	2639	No	2.02	Si
SLU 81	fin.	-228.17	-1375	0.31	0	186	2458	2089	791	2644	No	1.92	Si
SLU 74	ini.	-199.42	1217	0.31	0	178	2458	2089	791	2636	No	2.17	Si
SLU 74	fin.	-211.16	-1276	0.31	0	183	2458	2089	791	2641	No	2.07	Si
SLU 82	ini.	-209.45	1273	0.31	0	181	2458	2089	791	2639	No	2.07	Si
SLU 82	fin.	-221.71	-1336	0.31	0	186	2458	2089	791	2644	No	1.98	Si
SLU 80	ini.	-193.88	1181	0.31	0	178	2458	2089	791	2636	No	2.23	Si
SLU 80	fin.	-204.69	-1237	0.31	0	182	2458	2089	791	2640	No	2.13	Si
SLU 78	ini.	-193.88	1181	0.31	0	178	2458	2089	791	2636	No	2.23	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	fin.	-204.69	-1237	0.31	0	182	2458	2089	791	2640	No	2.13	Si
SLU 79	ini.	-199.42	1217	0.31	0	178	2458	2089	791	2636	No	2.17	Si
SLU 79	fin.	-211.16	-1276	0.31	0	183	2458	2089	791	2641	No	2.07	Si
SLU 75	ini.	-193.88	1181	0.31	0	178	2458	2089	791	2636	No	2.23	Si
SLU 75	fin.	-204.69	-1237	0.31	0	182	2458	2089	791	2640	No	2.13	Si
SLU 83	ini.	-215	1309	0.31	0	181	2458	2089	791	2639	No	2.02	Si
SLU 83	fin.	-228.17	-1375	0.31	0	186	2458	2089	791	2644	No	1.92	Si
SLU 77	ini.	-199.42	1217	0.31	0	178	2458	2089	791	2636	No	2.17	Si
SLU 77	fin.	-211.16	-1276	0.31	0	183	2458	2089	791	2641	No	2.07	Si
SLU 84	ini.	-209.45	1273	0.31	0	181	2458	2089	791	2639	No	2.07	Si
SLU 84	fin.	-221.71	-1336	0.31	0	186	2458	2089	791	2644	No	1.98	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-351.93	-1437	-0.0031322	0.0002807	0.0035	0.31		378.78	378.78		1.08	Si
SLV 16	fin.	26.12	847	-0.0001112	0.0002807	0.0035	0.31		376.81	376.81		14.42	Si
SLV 7	ini.	-160.16	125	-0.0008597	0.0002807	0.0035	0.31		378.78	378.78		2.36	Si
SLV 7	fin.	-311.22	-771	-0.0023807	0.0002807	0.0035	0.31		378.78	378.78		1.22	Si
SLV 15	ini.	-323.86	-1266	-0.0025909	0.0002807	0.0035	0.31		378.78	378.78		1.17	Si
SLV 15	fin.	-2.97	677	-0.0000122	0.0002807	0.0035	0.31		378.78	378.78		127.37	Si
SLV 1	ini.	93.11	921	-0.0004432	0.0002807	0.0035	0.31		376.81	376.81		4.05	Si
SLV 1	fin.	-298.81	-1416	-0.0021929	0.0002807	0.0035	0.31		378.78	378.78		1.27	Si
SLV 12	ini.	-296.46	-702	-0.0021593	0.0002807	0.0035	0.31		378.78	378.78		1.28	Si
SLV 12	fin.	-173.33	47	-0.0009532	0.0002807	0.0035	0.31		378.78	378.78		2.19	Si
SLV 8	ini.	-189.17	-52	-0.0010715	0.0002807	0.0035	0.31		378.78	378.78		2	Si
SLV 8	fin.	-281.15	-595	-0.0019546	0.0002807	0.0035	0.31		378.78	378.78		1.35	Si
SLV 14	ini.	-292.59	-1419	-0.0021052	0.0002807	0.0035	0.31		378.78	378.78		1.29	Si
SLV 14	fin.	89.68	894	-0.0004241	0.0002807	0.0035	0.31		376.81	376.81		4.2	Si
SLV 2	ini.	65.04	750	-0.0002937	0.0002807	0.0035	0.31		376.81	376.81		5.79	Si
SLV 2	fin.	-269.72	-1246	-0.0018165	0.0002807	0.0035	0.31		378.78	378.78		1.4	Si
SLV 3	ini.	33.77	903	-0.0001453	0.0002807	0.0035	0.31		376.81	376.81		11.16	Si
SLV 3	fin.	-362.37	-1463	-0.0033463	0.0002807	0.0035	0.31		378.78	378.78		1.05	Si
SLV 4	ini.	5.7	732	-0.0000236	0.0002807	0.0035	0.31		376.81	376.81		66.12	Si
SLV 4	fin.	-333.28	-1292	-0.002761	0.0002807	0.0035	0.31		378.78	378.78		1.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-323.86	1663	0.31	0	327	2458	3133	791	2785		1.68	Si
SLV 15	fin.	-2.97	-289	0.31	0	75	2458	3133	791	2533		8.76	Si
SLV 16	ini.	-351.93	1779	0.31	0	340	2458	3133	791	2798		1.57	Si
SLV 16	fin.	26.12	-166	0.31	0	0	2458	3133	791	2458		14.84	Si
SLV 11	ini.	-267.45	1522	0.31	0	261	2458	3133	791	2719		1.79	Si
SLV 11	fin.	-203.4	-1215	0.31	0	218	2458	3133	791	2676		2.2	Si
SLV 3	ini.	33.77	145	0.31	0	0	2458	3133	791	2458		16.96	Si
SLV 3	fin.	-362.37	-1825	0.31	0	342	2458	3133	791	2800		1.53	Si
SLV 1	ini.	93.11	-191	0.31	0	0	2458	3133	791	2458		12.84	Si
SLV 1	fin.	-298.81	-1495	0.31	0	339	2458	3133	791	2797		1.87	Si
SLV 14	ini.	-292.59	1443	0.31	0	339	2458	3133	791	2797		1.94	Si
SLV 14	fin.	89.68	165	0.31	0	0	2458	3133	791	2458		14.89	Si
SLV 4	ini.	5.7	262	0.31	0	53	2458	3133	791	2511		9.59	Si
SLV 4	fin.	-333.28	-1702	0.31	0	329	2458	3133	791	2787		1.64	Si
SLV 12	ini.	-296.46	1643	0.31	0	278	2458	3133	791	2736		1.67	Si
SLV 12	fin.	-173.33	-1087	0.31	0	196	2458	3133	791	2654		2.44	Si
SLV 8	ini.	-189.17	1187	0.31	0	209	2458	3133	791	2667		2.25	Si
SLV 8	fin.	-281.15	-1548	0.31	0	268	2458	3133	791	2726		1.76	Si
SLV 7	ini.	-160.16	1067	0.31	0	185	2458	3133	791	2644		2.48	Si
SLV 7	fin.	-311.22	-1676	0.31	0	285	2458	3133	791	2743		1.64	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.045	SLV 3	Si
V_SLV	1.534	SLV 3	Si
PF_SLU	1.141	SLU 81	Si
V_SLU	1.923	SLU 81	Si

Trave di accoppiamento 14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.859	5.874	-1.98	0.02	2	-10.859	5.874	-1.98	0.02	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	1751.1	-3218	-0.0001873	0.0001872	0.0035	2		10722.86	10722.86	No	6.12	Si
SLU 77	fin.	-730.51	-1779	-0.0000743	0.0001872	0.0035	2		10737.13	10737.13	No	14.7	Si
SLU 78	ini.	1755.75	-3287	-0.0001878	0.0001872	0.0035	2		10722.86	10722.86	No	6.11	Si
SLU 78	fin.	-694	-1852	-0.0000705	0.0001872	0.0035	2		10737.13	10737.13	No	15.47	Si
SLU 76	ini.	1758.84	-3334	-0.0001882	0.0001872	0.0035	2		10722.86	10722.86	No	6.1	Si
SLU 76	fin.	-669.65	-1900	-0.000068	0.0001872	0.0035	2		10737.13	10737.13	No	16.03	Si
SLU 75	ini.	1755.75	-3287	-0.0001878	0.0001872	0.0035	2		10722.86	10722.86	No	6.11	Si
SLU 75	fin.	-694	-1852	-0.0000705	0.0001872	0.0035	2		10737.13	10737.13	No	15.47	Si
SLU 84	ini.	1836.88	-3442	-0.0001974	0.0001872	0.0035	2		10722.86	10722.86	No	5.84	Si
SLU 84	fin.	-696.42	-1988	-0.0000708	0.0001872	0.0035	2		10737.13	10737.13	No	15.42	Si
SLU 80	ini.	1755.75	-3287	-0.0001878	0.0001872	0.0035	2		10722.86	10722.86	No	6.11	Si
SLU 80	fin.	-694	-1852	-0.0000705	0.0001872	0.0035	2		10737.13	10737.13	No	15.47	Si
SLU 82	ini.	1836.88	-3442	-0.0001974	0.0001872	0.0035	2		10722.86	10722.86	No	5.84	Si
SLU 82	fin.	-696.42	-1988	-0.0000708	0.0001872	0.0035	2		10737.13	10737.13	No	15.42	Si
SLU 83	ini.	1832.24	-3373	-0.0001968	0.0001872	0.0035	2		10722.86	10722.86	No	5.85	Si
SLU 83	fin.	-732.93	-1915	-0.0000746	0.0001872	0.0035	2		10737.13	10737.13	No	14.65	Si
SLU 73	ini.	1758.84	-3334	-0.0001882	0.0001872	0.0035	2		10722.86	10722.86	No	6.1	Si
SLU 73	fin.	-669.65	-1900	-0.000068	0.0001872	0.0035	2		10737.13	10737.13	No	16.03	Si
SLU 81	ini.	1832.24	-3373	-0.0001968	0.0001872	0.0035	2		10722.86	10722.86	No	5.85	Si
SLU 81	fin.	-732.93	-1915	-0.0000746	0.0001872	0.0035	2		10737.13	10737.13	No	14.65	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	ini.	1755.75	-5079	2	0	1833	7930	13475	5100	9762	No	1.92	Si
SLU 75	fin.	-694	-3470	2	0	1623	7930	13475	5100	9553	No	2.75	Si
SLU 74	ini.	1751.1	-5133	2	0	1823	7930	13475	5100	9753	No	1.9	Si
SLU 74	fin.	-730.51	-3490	2	0	1612	7930	13475	5100	9541	No	2.73	Si
SLU 80	ini.	1755.75	-5079	2	0	1833	7930	13475	5100	9762	No	1.92	Si
SLU 80	fin.	-694	-3470	2	0	1623	7930	13475	5100	9553	No	2.75	Si
SLU 83	ini.	1832.24	-5349	2	0	1844	7930	13475	5100	9774	No	1.83	Si
SLU 83	fin.	-732.93	-3512	2	0	1633	7930	13475	5100	9563	No	2.72	Si
SLU 78	ini.	1755.75	-5079	2	0	1833	7930	13475	5100	9762	No	1.92	Si
SLU 78	fin.	-694	-3470	2	0	1623	7930	13475	5100	9553	No	2.75	Si
SLU 77	ini.	1751.1	-5133	2	0	1823	7930	13475	5100	9753	No	1.9	Si
SLU 77	fin.	-730.51	-3490	2	0	1612	7930	13475	5100	9541	No	2.73	Si
SLU 84	ini.	1836.88	-5295	2	0	1854	7930	13475	5100	9783	No	1.85	Si
SLU 84	fin.	-696.42	-3492	2	0	1644	7930	13475	5100	9574	No	2.74	Si
SLU 81	ini.	1832.24	-5349	2	0	1844	7930	13475	5100	9774	No	1.83	Si
SLU 81	fin.	-732.93	-3512	2	0	1633	7930	13475	5100	9563	No	2.72	Si
SLU 82	ini.	1836.88	-5295	2	0	1854	7930	13475	5100	9783	No	1.85	Si
SLU 82	fin.	-696.42	-3492	2	0	1644	7930	13475	5100	9574	No	2.74	Si
SLU 79	ini.	1751.1	-5133	2	0	1823	7930	13475	5100	9753	No	1.9	Si
SLU 79	fin.	-730.51	-3490	2	0	1612	7930	13475	5100	9541	No	2.73	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	1131.81	143	-0.0001158	0.0002807	0.0035	2		15635.95	15635.95		13.81	Si
SLV 6	fin.	474.45	626	-0.0000476	0.0002807	0.0035	2		15635.95	15635.95		32.96	Si
SLV 7	ini.	1673.05	-5032	-0.0001743	0.0002807	0.0035	2		15635.95	15635.95		9.35	Si
SLV 7	fin.	-2049.28	-2214	-0.0002162	0.0002807	0.0035	2		15648.46	15648.46		7.64	Si
SLV 2	ini.	1699.81	-2003	-0.0001773	0.0002807	0.0035	2		15635.95	15635.95		9.2	Si
SLV 2	fin.	-877.04	492	-0.000089	0.0002807	0.0035	2		15648.46	15648.46		17.84	Si
SLV 4	ini.	1827.44	-3439	-0.0001915	0.0002807	0.0035	2		15635.95	15635.95		8.56	Si
SLV 4	fin.	-1566.07	-375	-0.0001624	0.0002807	0.0035	2		15648.46	15648.46		9.99	Si
SLV 3	ini.	1939.5	-3814	-0.000204	0.0002807	0.0035	2		15635.95	15635.95		8.06	Si
SLV 3	fin.	-1785.67	-326	-0.0001866	0.0002807	0.0035	2		15648.46	15648.46		8.76	Si
SLV 8	ini.	1557.22	-4645	-0.0001616	0.0002807	0.0035	2		15635.95	15635.95		10.04	Si
SLV 8	fin.	-1822.29	-2264	-0.0001907	0.0002807	0.0035	2		15648.46	15648.46		8.59	Si
SLV 1	ini.	1811.87	-2377	-0.0001897	0.0002807	0.0035	2		15635.95	15635.95		8.63	Si
SLV 1	fin.	-1096.65	541	-0.000112	0.0002807	0.0035	2		15648.46	15648.46		14.27	Si
SLV 11	ini.	1315.43	-4635	-0.0001354	0.0002807	0.0035	2		15635.95	15635.95		11.89	Si
SLV 11	fin.	-1583.05	-2965	-0.0001643	0.0002807	0.0035	2		15648.46	15648.46		9.89	Si
SLV 5	ini.	1247.64	-244	-0.0001282	0.0002807	0.0035	2		15635.95	15635.95		12.53	Si
SLV 5	fin.	247.46	676	-0.0000247	0.0002807	0.0035	2		15635.95	15635.95		63.19	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	1199.6	-4248	-0.000123	0.0002807	0.0035	2		15635.95	15635.95		13.03	Si
SLV 12	fin.	-1356.05	-3016	-0.0001397	0.0002807	0.0035	2		15648.46	15648.46		11.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 7	ini.	1673.05	-7013	2	0	2763	7930	20213	5100	10692		1.52	Si
SLV 7	fin.	-2049.28	-4562	2	0	2346	7930	20213	5100	10275		2.25	Si
SLV 5	ini.	1247.64	-2693	2	0	2003	7930	20213	5100	9933		3.69	Si
SLV 5	fin.	247.46	-3486	2	0	1821	7930	20213	5100	9751		2.8	Si
SLV 6	ini.	1131.81	-1910	2	0	1929	7930	20213	5100	9858		5.16	Si
SLV 6	fin.	474.45	-2727	2	0	1832	7930	20213	5100	9761		3.58	Si
SLV 2	ini.	1699.81	-5409	2	0	2311	7930	20213	5100	10241		1.89	Si
SLV 2	fin.	-877.04	-5458	2	0	1859	7930	20213	5100	9789		1.79	Si
SLV 3	ini.	1939.5	-7463	2	0	2591	7930	20213	5100	10520		1.41	Si
SLV 3	fin.	-1785.67	-6515	2	0	2019	7930	20213	5100	9948		1.53	Si
SLV 1	ini.	1811.87	-6167	2	0	2372	7930	20213	5100	10301		1.67	Si
SLV 1	fin.	-1096.65	-6193	2	0	1849	7930	20213	5100	9779		1.58	Si
SLV 8	ini.	1557.22	-6230	2	0	2709	7930	20213	5100	10639		1.71	Si
SLV 8	fin.	-1822.29	-3803	2	0	2354	7930	20213	5100	10283		2.7	Si
SLV 4	ini.	1827.44	-6705	2	0	2535	7930	20213	5100	10465		1.56	Si
SLV 4	fin.	-1566.07	-5781	2	0	2028	7930	20213	5100	9957		1.72	Si
SLV 11	ini.	1315.43	-5320	2	0	2708	7930	20213	5100	10637		2	Si
SLV 11	fin.	-1583.05	-2554	2	0	2464	7930	20213	5100	10393		4.07	Si
SLV 12	ini.	1199.6	-4537	2	0	2653	7930	20213	5100	10583		2.33	Si
SLV 12	fin.	-1356.05	-1795	2	0	2472	7930	20213	5100	10401		5.79	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	7.636	SLV 7	Si
V_SLV	1.41	SLV 3	Si
PF_SLU	5.838	SLU 82	Si
V_SLU	1.827	SLU 81	Si

Trave di accoppiamento 15

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.859	5.874	0.42	0.73	0.31	-10.859	5.874	0.42	0.73	0.31	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	10.32	738	-0.0000433	0.0001872	0.0035	0.31		258.05	258.05	No	25	Si
SLU 84	fin.	-343.62	-1362	-0.0032807	0.0001872	0.0035	0.31		260.28	260.28	No	0.76	No
SLU 79	ini.	4.47	730	-0.0000186	0.0001872	0.0035	0.31		258.05	258.05	No	57.74	Si
SLU 79	fin.	-341.7	-1322	-0.0032385	0.0001872	0.0035	0.31		260.28	260.28	No	0.76	No
SLU 82	ini.	10.32	738	-0.0000433	0.0001872	0.0035	0.31		258.05	258.05	No	25	Si
SLU 82	fin.	-343.62	-1362	-0.0032807	0.0001872	0.0035	0.31		260.28	260.28	No	0.76	No
SLU 74	ini.	4.47	730	-0.0000186	0.0001872	0.0035	0.31		258.05	258.05	No	57.74	Si
SLU 74	fin.	-341.7	-1322	-0.0032385	0.0001872	0.0035	0.31		260.28	260.28	No	0.76	No
SLU 81	ini.	-2.43	747	-0.00001	0.0001872	0.0035	0.31		260.28	260.28	No	107.22	Si
SLU 81	fin.	-361.64	-1382	-0.0036606	0.0001872	0.0035	0.31		260.28	260.28	No	0.72	No
SLU 80	ini.	17.22	722	-0.000073	0.0001872	0.0035	0.31		258.05	258.05	No	14.99	Si
SLU 80	fin.	-323.68	-1302	-0.002852	0.0001872	0.0035	0.31		260.28	260.28	No	0.8	No
SLU 78	ini.	17.22	722	-0.000073	0.0001872	0.0035	0.31		258.05	258.05	No	14.99	Si
SLU 78	fin.	-323.68	-1302	-0.002852	0.0001872	0.0035	0.31		260.28	260.28	No	0.8	No
SLU 83	ini.	-2.43	747	-0.00001	0.0001872	0.0035	0.31		260.28	260.28	No	107.22	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	fin.	-361.64	-1382	-0.0036606	0.0001872	0.0035	0.31		260.28	260.28	No	0.72	No
SLU 77	ini.	4.47	730	-0.0000186	0.0001872	0.0035	0.31		258.05	258.05	No	57.74	Si
SLU 77	fin.	-341.7	-1322	-0.0032385	0.0001872	0.0035	0.31		260.28	260.28	No	0.76	No
SLU 75	ini.	17.22	722	-0.000073	0.0001872	0.0035	0.31		258.05	258.05	No	14.99	Si
SLU 75	fin.	-323.68	-1302	-0.002852	0.0001872	0.0035	0.31		260.28	260.28	No	0.8	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	4.47	306	0.31	0	0	2458	2089	791	2458	No	8.02	Si
SLU 77	fin.	-341.7	-1778	0.31	0	253	2458	2089	791	2711	No	1.52	Si
SLU 82	ini.	10.32	273	0.31	0	0	2458	2089	791	2458	No	9	Si
SLU 82	fin.	-343.62	-1778	0.31	0	256	2458	2089	791	2714	No	1.53	Si
SLU 62	ini.	10.71	258	0.31	0	0	2458	2089	791	2458	No	9.54	Si
SLU 62	fin.	-322.93	-1676	0.31	0	250	2458	2089	791	2708	No	1.62	Si
SLU 81	ini.	-2.43	358	0.31	0	0	2458	2089	791	2458	No	6.86	Si
SLU 81	fin.	-361.64	-1886	0.31	0	257	2458	2089	791	2715	No	1.44	Si
SLU 84	ini.	10.32	273	0.31	0	0	2458	2089	791	2458	No	9	Si
SLU 84	fin.	-343.62	-1778	0.31	0	256	2458	2089	791	2714	No	1.53	Si
SLU 79	ini.	4.47	306	0.31	0	0	2458	2089	791	2458	No	8.02	Si
SLU 79	fin.	-341.7	-1778	0.31	0	253	2458	2089	791	2711	No	1.52	Si
SLU 74	ini.	4.47	306	0.31	0	0	2458	2089	791	2458	No	8.02	Si
SLU 74	fin.	-341.7	-1778	0.31	0	253	2458	2089	791	2711	No	1.52	Si
SLU 60	ini.	10.71	258	0.31	0	0	2458	2089	791	2458	No	9.54	Si
SLU 60	fin.	-322.93	-1676	0.31	0	250	2458	2089	791	2708	No	1.62	Si
SLU 83	ini.	-2.43	358	0.31	0	0	2458	2089	791	2458	No	6.86	Si
SLU 83	fin.	-361.64	-1886	0.31	0	257	2458	2089	791	2715	No	1.44	Si
SLU 78	ini.	17.22	221	0.31	0	0	2458	2089	791	2458	No	11.1	Si
SLU 78	fin.	-323.68	-1671	0.31	0	252	2458	2089	791	2710	No	1.62	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-14.2	904	-0.0000592	0.0002807	0.0035	0.31		378.78	378.78		26.68	Si
SLV 12	fin.	-341.29	-925	-0.0029157	0.0002807	0.0035	0.31		378.78	378.78		1.11	Si
SLV 11	ini.	10.87	1053	-0.0000454	0.0002807	0.0035	0.31		376.81	376.81		34.68	Si
SLV 11	fin.	-368.46	-1090	-0.0034678	0.0002807	0.0035	0.31		378.78	378.78		1.03	Si
SLV 16	ini.	-76.17	-120	-0.0003489	0.0002807	0.0035	0.31		378.78	378.78		4.97	Si
SLV 16	fin.	-169.77	-148	-0.0009275	0.0002807	0.0035	0.31		378.78	378.78		2.23	Si
SLV 4	ini.	85.2	1453	-0.0003994	0.0002807	0.0035	0.31		376.81	376.81		4.42	Si
SLV 4	fin.	-358.43	-1735	-0.003266	0.0002807	0.0035	0.31		378.78	378.78		1.06	Si
SLV 3	ini.	109.45	1597	-0.0005377	0.0002807	0.0035	0.31		376.81	376.81		3.44	Si
SLV 3	fin.	-384.71	-1894	-0.0037773	0.0002807	0.0035	0.31		378.78	378.78		0.98	No
SLV 1	ini.	104.38	1189	-0.0005079	0.0002807	0.0035	0.31		376.81	376.81		3.61	Si
SLV 1	fin.	-293.91	-1702	-0.0021235	0.0002807	0.0035	0.31		378.78	378.78		1.29	Si
SLV 15	ini.	-51.92	24	-0.0002282	0.0002807	0.0035	0.31		378.78	378.78		7.29	Si
SLV 15	fin.	-196.05	-307	-0.001125	0.0002807	0.0035	0.31		378.78	378.78		1.93	Si
SLV 2	ini.	80.14	1046	-0.0003721	0.0002807	0.0035	0.31		376.81	376.81		4.7	Si
SLV 2	fin.	-267.63	-1543	-0.0017925	0.0002807	0.0035	0.31		378.78	378.78		1.42	Si
SLV 8	ini.	34.21	1376	-0.0001473	0.0002807	0.0035	0.31		376.81	376.81		11.01	Si
SLV 8	fin.	-397.89	-1401	-0.0040147	0.0002807	0.0035	0.31		378.78	378.78		0.95	No
SLV 7	ini.	59.28	1525	-0.0002651	0.0002807	0.0035	0.31		376.81	376.81		6.36	Si
SLV 7	fin.	-425.05	-1566	-0.0044781	0.0002807	0.0035	0.31		378.78	378.78		0.89	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-14.2	882	0.31	0	0	2458	3133	791	2458		2.79	Si
SLV 12	fin.	-341.29	-1741	0.31	0	298	2458	3133	791	2757		1.58	Si
SLV 4	ini.	85.2	-318	0.31	0	0	2458	3133	791	2458		7.73	Si
SLV 4	fin.	-358.43	-2091	0.31	0	362	2458	3133	791	2820		1.35	Si
SLV 16	ini.	-76.17	1015	0.31	0	217	2458	3133	791	2675		2.64	Si
SLV 16	fin.	-169.77	-685	0.31	0	220	2458	3133	791	2679		3.91	Si
SLV 8	ini.	34.21	482	0.31	0	0	2458	3133	791	2458		5.1	Si
SLV 8	fin.	-397.89	-2163	0.31	0	337	2458	3133	791	2796		1.29	Si
SLV 11	ini.	10.87	775	0.31	0	0	2458	3133	791	2458		3.17	Si
SLV 11	fin.	-368.46	-1855	0.31	0	312	2458	3133	791	2771		1.49	Si
SLV 7	ini.	59.28	376	0.31	0	0	2458	3133	791	2458		6.54	Si
SLV 7	fin.	-425.05	-2277	0.31	0	350	2458	3133	791	2808		1.23	Si
SLV 2	ini.	80.14	-602	0.31	0	0	2458	3133	791	2458		4.08	Si
SLV 2	fin.	-267.63	-1605	0.31	0	348	2458	3133	791	2806		1.75	Si
SLV 3	ini.	109.45	-421	0.31	0	0	2458	3133	791	2458		5.85	Si
SLV 3	fin.	-384.71	-2201	0.31	0	374	2458	3133	791	2832		1.29	Si
SLV 15	ini.	-51.92	912	0.31	0	199	2458	3133	791	2657		2.91	Si
SLV 15	fin.	-196.05	-795	0.31	0	238	2458	3133	791	2697		3.39	Si
SLV 1	ini.	104.38	-704	0.31	0	0	2458	3133	791	2458		3.49	Si
SLV 1	fin.	-293.91	-1715	0.31	0	360	2458	3133	791	2818		1.64	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.891	SLV 7	No
V_SLV	1.233	SLV 7	Si
PF_SLU	0.72	SLU 81	No
V_SLU	1.44	SLU 81	Si

Trave di accoppiamento 16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.601	2.78	0.52	0.73	0.21	-12.601	1.58	0.52	0.73	0.21	1.2	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 74	ini.	-204.72	-1228	-0.0049698	0.0002246	0.0035	0.21		165.83	165.83	No	0.81	No
SLU 74	fin.	53.26	500	-0.0005947	0.0002246	0.0035	0.21		164.52	164.52	No	3.09	Si
SLU 81	ini.	-219.66	-1326	-0.0054831	0.0002246	0.0035	0.21		165.83	165.83	No	0.75	No
SLU 81	fin.	58.21	534	-0.000664	0.0002246	0.0035	0.21		164.52	164.52	No	2.83	Si
SLU 80	ini.	-202.36	-1207	-0.0048867	0.0002246	0.0035	0.21		165.83	165.83	No	0.82	No
SLU 80	fin.	52.28	498	-0.0005812	0.0002246	0.0035	0.21		164.52	164.52	No	3.15	Si
SLU 78	ini.	-202.36	-1207	-0.0048867	0.0002246	0.0035	0.21		165.83	165.83	No	0.82	No
SLU 78	fin.	52.28	498	-0.0005812	0.0002246	0.0035	0.21		164.52	164.52	No	3.15	Si
SLU 82	ini.	-217.3	-1305	-0.0054033	0.0002246	0.0035	0.21		165.83	165.83	No	0.76	No
SLU 82	fin.	57.22	532	-0.00065	0.0002246	0.0035	0.21		164.52	164.52	No	2.87	Si
SLU 75	ini.	-202.36	-1207	-0.0048867	0.0002246	0.0035	0.21		165.83	165.83	No	0.82	No
SLU 75	fin.	52.28	498	-0.0005812	0.0002246	0.0035	0.21		164.52	164.52	No	3.15	Si
SLU 79	ini.	-204.72	-1228	-0.0049698	0.0002246	0.0035	0.21		165.83	165.83	No	0.81	No
SLU 79	fin.	53.26	500	-0.0005947	0.0002246	0.0035	0.21		164.52	164.52	No	3.09	Si
SLU 84	ini.	-217.3	-1305	-0.0054033	0.0002246	0.0035	0.21		165.83	165.83	No	0.76	No
SLU 84	fin.	57.22	532	-0.00065	0.0002246	0.0035	0.21		164.52	164.52	No	2.87	Si
SLU 77	ini.	-204.72	-1228	-0.0049698	0.0002246	0.0035	0.21		165.83	165.83	No	0.81	No
SLU 77	fin.	53.26	500	-0.0005947	0.0002246	0.0035	0.21		164.52	164.52	No	3.09	Si
SLU 83	ini.	-219.66	-1326	-0.0054831	0.0002246	0.0035	0.21		165.83	165.83	No	0.75	No
SLU 83	fin.	58.21	534	-0.000664	0.0002246	0.0035	0.21		164.52	164.52	No	2.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-204.72	854	0.21	0	148	1665	1132	536	1668	No	1.95	Si
SLU 77	fin.	53.26	135	0.21	0	0	1665	1132	536	1665	No	12.33	Si
SLU 81	ini.	-219.66	913	0.21	0	153	1665	1132	536	1668	No	1.83	Si
SLU 81	fin.	58.21	153	0.21	0	0	1665	1132	536	1665	No	10.9	Si
SLU 75	ini.	-202.36	846	0.21	0	147	1665	1132	536	1668	No	1.97	Si
SLU 75	fin.	52.28	130	0.21	0	0	1665	1132	536	1665	No	12.76	Si
SLU 82	ini.	-217.3	905	0.21	0	152	1665	1132	536	1668	No	1.84	Si
SLU 82	fin.	57.22	148	0.21	0	0	1665	1132	536	1665	No	11.23	Si
SLU 79	ini.	-204.72	854	0.21	0	148	1665	1132	536	1668	No	1.95	Si
SLU 79	fin.	53.26	135	0.21	0	0	1665	1132	536	1665	No	12.33	Si
SLU 84	ini.	-217.3	905	0.21	0	152	1665	1132	536	1668	No	1.84	Si
SLU 84	fin.	57.22	148	0.21	0	0	1665	1132	536	1665	No	11.23	Si
SLU 83	ini.	-219.66	913	0.21	0	153	1665	1132	536	1668	No	1.83	Si
SLU 83	fin.	58.21	153	0.21	0	0	1665	1132	536	1665	No	10.9	Si
SLU 78	ini.	-202.36	846	0.21	0	147	1665	1132	536	1668	No	1.97	Si
SLU 78	fin.	52.28	130	0.21	0	0	1665	1132	536	1665	No	12.76	Si
SLU 80	ini.	-202.36	846	0.21	0	147	1665	1132	536	1668	No	1.97	Si
SLU 80	fin.	52.28	130	0.21	0	0	1665	1132	536	1665	No	12.76	Si
SLU 74	ini.	-204.72	854	0.21	0	148	1665	1132	536	1668	No	1.95	Si
SLU 74	fin.	53.26	135	0.21	0	0	1665	1132	536	1665	No	12.33	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-167.49	-1264	-0.0031983	0.0003369	0.0035	0.21		163.16	163.16		0.97	No
SLV 3	fin.	106.3	416	-0.0013843	0.0003369	0.0035	0.21		161.76	161.76		1.52	Si
SLV 4	ini.	-161.97	-1217	-0.0029608	0.0003369	0.0035	0.21		163.16	163.16		1.01	Si
SLV 4	fin.	104.12	410	-0.0013429	0.0003369	0.0035	0.21		161.76	161.76		1.55	Si
SLV 11	ini.	-326.63	-2431	-0.0084002	0.0003369	0.0035	0.21		163.16	163.16		0.5	No
SLV 11	fin.	98.22	560	-0.0012352	0.0003369	0.0035	0.21		161.76	161.76		1.65	Si
SLV 13	ini.	-108.33	-379	-0.0014072	0.0003369	0.0035	0.21		163.16	163.16		1.51	Si
SLV 13	fin.	-36.84	260	-0.0003618	0.0003369	0.0035	0.21		163.16	163.16		4.43	Si
SLV 12	ini.	-320.92	-2383	-0.0082335	0.0003369	0.0035	0.21		163.16	163.16		0.51	No
SLV 12	fin.	95.97	554	-0.0011956	0.0003369	0.0035	0.21		161.76	161.76		1.69	Si
SLV 14	ini.	-102.8	-333	-0.0013036	0.0003369	0.0035	0.21		163.16	163.16		1.59	Si
SLV 14	fin.	-39.02	254	-0.0003861	0.0003369	0.0035	0.21		163.16	163.16		4.18	Si
SLV 8	ini.	-306.05	-2361	-0.007794	0.0003369	0.0035	0.21		163.16	163.16		0.53	No
SLV 8	fin.	124.89	561	-0.0017834	0.0003369	0.0035	0.21		161.76	161.76		1.3	Si
SLV 16	ini.	-211.52	-1291	-0.0048475	0.0003369	0.0035	0.21		163.16	163.16		0.77	No
SLV 16	fin.	7.73	390	-0.0000704	0.0003369	0.0035	0.21		161.76	161.76		20.93	Si
SLV 7	ini.	-311.76	-2409	-0.0079636	0.0003369	0.0035	0.21		163.16	163.16		0.52	No
SLV 7	fin.	127.14	566	-0.0018393	0.0003369	0.0035	0.21		161.76	161.76		1.27	Si
SLV 15	ini.	-217.04	-1338	-0.005032	0.0003369	0.0035	0.21		163.16	163.16		0.75	No
SLV 15	fin.	9.91	395	-0.0000908	0.0003369	0.0035	0.21		161.76	161.76		16.33	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-108.33	394	0.21	0	130	1665	1698	536	1795		4.56	Si
SLV 13	fin.	-36.84	-201	0.21	0	50	1665	1698	536	1716		8.55	Si
SLV 8	ini.	-306.05	1206	0.21	0	247	1665	1698	536	1912		1.58	Si
SLV 8	fin.	124.89	474	0.21	0	0	1665	1698	536	1665		3.51	Si
SLV 7	ini.	-311.76	1227	0.21	0	249	1665	1698	536	1914		1.56	Si
SLV 7	fin.	127.14	484	0.21	0	0	1665	1698	536	1665		3.44	Si
SLV 11	ini.	-326.63	1233	0.21	0	250	1665	1698	536	1915		1.55	Si
SLV 11	fin.	98.22	377	0.21	0	0	1665	1698	536	1665		4.42	Si
SLV 12	ini.	-320.92	1212	0.21	0	248	1665	1698	536	1913		1.58	Si
SLV 12	fin.	95.97	367	0.21	0	0	1665	1698	536	1665		4.54	Si
SLV 4	ini.	-161.97	745	0.21	0	188	1665	1698	536	1854		2.49	Si
SLV 4	fin.	104.12	356	0.21	0	0	1665	1698	536	1665		4.68	Si
SLV 16	ini.	-211.52	764	0.21	0	193	1665	1698	536	1858		2.43	Si
SLV 16	fin.	7.73	-2	0.21	0	0	1665	1698	536	1665		1008.8	Si
SLV 15	ini.	-217.04	784	0.21	0	195	1665	1698	536	1861		2.37	Si
SLV 15	fin.	9.91	8	0.21	0	0	1665	1698	536	1665		208.19	Si
SLV 3	ini.	-167.49	765	0.21	0	191	1665	1698	536	1856		2.43	Si
SLV 3	fin.	106.3	365	0.21	0	0	1665	1698	536	1665		4.56	Si
SLV 1	ini.	-58.77	375	0.21	0	123	1665	1698	536	1788		4.77	Si
SLV 1	fin.	59.55	157	0.21	0	46	1665	1698	536	1711		10.91	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.5	SLV 11	No
V_SLV	1.554	SLV 11	Si
PF_SLU	0.755	SLU 81	No
V_SLU	1.826	SLU 81	Si

Trave di accoppiamento 17

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-8.084	1.596	0.22	0.73	0.51	-8.084	2.596	0.22	0.73	0.51	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 76	ini.	-347.74	-2319	-0.0006715	0.0002246	0.0035	0.51		653.93	653.93	No	1.88	Si
SLU 76	fin.	235.5	1164	-0.0004194	0.0002246	0.0035	0.51		650.1	650.1	No	2.76	Si
SLU 78	ini.	-342.79	-2292	-0.0006596	0.0002246	0.0035	0.51		653.93	653.93	No	1.91	Si
SLU 78	fin.	230.84	1139	-0.0004096	0.0002246	0.0035	0.51		650.1	650.1	No	2.82	Si
SLU 79	ini.	-335.36	-2253	-0.0006419	0.0002246	0.0035	0.51		653.93	653.93	No	1.95	Si
SLU 79	fin.	223.86	1101	-0.0003949	0.0002246	0.0035	0.51		650.1	650.1	No	2.9	Si
SLU 83	ini.	-346.59	-2324	-0.0006688	0.0002246	0.0035	0.51		653.93	653.93	No	1.89	Si
SLU 83	fin.	223.69	1093	-0.0003946	0.0002246	0.0035	0.51		650.1	650.1	No	2.91	Si
SLU 84	ini.	-354.02	-2364	-0.0006867	0.0002246	0.0035	0.51		653.93	653.93	No	1.85	Si
SLU 84	fin.	230.68	1131	-0.0004092	0.0002246	0.0035	0.51		650.1	650.1	No	2.82	Si
SLU 80	ini.	-342.79	-2292	-0.0006596	0.0002246	0.0035	0.51		653.93	653.93	No	1.91	Si
SLU 80	fin.	230.84	1139	-0.0004096	0.0002246	0.0035	0.51		650.1	650.1	No	2.82	Si
SLU 82	ini.	-354.02	-2364	-0.0006867	0.0002246	0.0035	0.51		653.93	653.93	No	1.85	Si
SLU 82	fin.	230.68	1131	-0.0004092	0.0002246	0.0035	0.51		650.1	650.1	No	2.82	Si
SLU 81	ini.	-346.59	-2324	-0.0006688	0.0002246	0.0035	0.51		653.93	653.93	No	1.89	Si
SLU 81	fin.	223.69	1093	-0.0003946	0.0002246	0.0035	0.51		650.1	650.1	No	2.91	Si
SLU 75	ini.	-342.79	-2292	-0.0006596	0.0002246	0.0035	0.51		653.93	653.93	No	1.91	Si
SLU 75	fin.	230.84	1139	-0.0004096	0.0002246	0.0035	0.51		650.1	650.1	No	2.82	Si
SLU 73	ini.	-347.74	-2319	-0.0006715	0.0002246	0.0035	0.51		653.93	653.93	No	1.88	Si
SLU 73	fin.	235.5	1164	-0.0004194	0.0002246	0.0035	0.51		650.1	650.1	No	2.76	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-354.02	3474	0.51	0	429	4044	4124	1301	4473	No	1.29	Si
SLU 84	fin.	230.68	771	0.51	0	0	4044	4124	1301	4044	No	5.25	Si
SLU 80	ini.	-342.79	3337	0.51	0	424	4044	4124	1301	4469	No	1.34	Si
SLU 80	fin.	230.84	815	0.51	0	0	4044	4124	1301	4044	No	4.96	Si
SLU 82	ini.	-354.02	3474	0.51	0	429	4044	4124	1301	4473	No	1.29	Si
SLU 82	fin.	230.68	771	0.51	0	0	4044	4124	1301	4044	No	5.25	Si
SLU 81	ini.	-346.59	3428	0.51	0	427	4044	4124	1301	4471	No	1.3	Si
SLU 81	fin.	223.69	724	0.51	0	0	4044	4124	1301	4044	No	5.58	Si
SLU 78	ini.	-342.79	3337	0.51	0	424	4044	4124	1301	4469	No	1.34	Si
SLU 78	fin.	230.84	815	0.51	0	0	4044	4124	1301	4044	No	4.96	Si
SLU 73	ini.	-347.74	3368	0.51	0	426	4044	4124	1301	4470	No	1.33	Si
SLU 73	fin.	235.5	846	0.51	0	0	4044	4124	1301	4044	No	4.78	Si
SLU 76	ini.	-347.74	3368	0.51	0	426	4044	4124	1301	4470	No	1.33	Si
SLU 76	fin.	235.5	846	0.51	0	0	4044	4124	1301	4044	No	4.78	Si
SLU 83	ini.	-346.59	3428	0.51	0	427	4044	4124	1301	4471	No	1.3	Si
SLU 83	fin.	223.69	724	0.51	0	0	4044	4124	1301	4044	No	5.58	Si
SLU 77	ini.	-335.36	3290	0.51	0	422	4044	4124	1301	4466	No	1.36	Si
SLU 77	fin.	223.86	768	0.51	0	0	4044	4124	1301	4044	No	5.26	Si
SLU 75	ini.	-342.79	3337	0.51	0	424	4044	4124	1301	4469	No	1.34	Si
SLU 75	fin.	230.84	815	0.51	0	0	4044	4124	1301	4044	No	4.96	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-371.39	-2287	-0.0006852	0.0003369	0.0035	0.51		659.32	659.32		1.78	Si
SLV 13	fin.	237.12	1210	-0.0004028	0.0003369	0.0035	0.51		655.3	655.3		2.76	Si
SLV 1	ini.	-260.79	-1756	-0.0004479	0.0003369	0.0035	0.51		659.32	659.32		2.53	Si
SLV 1	fin.	264	1383	-0.000456	0.0003369	0.0035	0.51		655.3	655.3		2.48	Si
SLV 16	ini.	-221.25	-1495	-0.0003709	0.0003369	0.0035	0.51		659.32	659.32		2.98	Si
SLV 16	fin.	80.08	330	-0.0001255	0.0003369	0.0035	0.51		655.3	655.3		8.18	Si
SLV 5	ini.	-525.28	-3133	-0.0010731	0.0003369	0.0035	0.51		659.32	659.32		1.26	Si
SLV 5	fin.	487.92	2631	-0.0009762	0.0003369	0.0035	0.51		655.3	655.3		1.34	Si
SLV 9	ini.	-558.46	-3292	-0.0011672	0.0003369	0.0035	0.51		659.32	659.32		1.18	Si
SLV 9	fin.	479.85	2579	-0.0009549	0.0003369	0.0035	0.51		655.3	655.3		1.37	Si
SLV 2	ini.	-304.8	-1989	-0.0005385	0.0003369	0.0035	0.51		659.32	659.32		2.16	Si
SLV 2	fin.	307.59	1629	-0.0005465	0.0003369	0.0035	0.51		655.3	655.3		2.13	Si
SLV 14	ini.	-415.41	-2519	-0.0007889	0.0003369	0.0035	0.51		659.32	659.32		1.59	Si
SLV 14	fin.	280.71	1455	-0.0004901	0.0003369	0.0035	0.51		655.3	655.3		2.33	Si
SLV 11	ini.	88.74	122	-0.0001396	0.0003369	0.0035	0.51		655.3	655.3		7.38	Si
SLV 11	fin.	-188.89	-1172	-0.0003109	0.0003369	0.0035	0.51		659.32	659.32		3.49	Si
SLV 6	ini.	-570.77	-3374	-0.0012033	0.0003369	0.0035	0.51		659.32	659.32		1.16	Si
SLV 6	fin.	532.98	2885	-0.0010994	0.0003369	0.0035	0.51		655.3	655.3		1.23	Si
SLV 10	ini.	-603.95	-3533	-0.0013038	0.0003369	0.0035	0.51		659.32	659.32		1.09	Si
SLV 10	fin.	524.91	2833	-0.0010768	0.0003369	0.0035	0.51		655.3	655.3		1.25	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-221.25	2337	0.51	0	489	4044	6186	1301	4533		1.94	Si
SLV 16	fin.	80.08	-90	0.51	0	287	4044	6186	1301	4331		48.13	Si
SLV 14	ini.	-415.41	3523	0.51	0	571	4044	6186	1301	4616		1.31	Si
SLV 14	fin.	280.71	1364	0.51	0	0	4044	6186	1301	4044		2.97	Si
SLV 13	ini.	-371.39	3256	0.51	0	554	4044	6186	1301	4598		1.41	Si
SLV 13	fin.	237.12	1042	0.51	0	83	4044	6186	1301	4127		3.96	Si
SLV 15	ini.	-177.23	2070	0.51	0	468	4044	6186	1301	4512		2.18	Si
SLV 15	fin.	36.49	-412	0.51	0	322	4044	6186	1301	4366		10.59	Si
SLV 6	ini.	-570.77	4299	0.51	0	632	4044	6186	1301	4676		1.09	Si
SLV 6	fin.	532.98	3297	0.51	0	0	4044	6186	1301	4044		1.23	Si
SLV 2	ini.	-304.8	2583	0.51	0	530	4044	6186	1301	4574		1.77	Si
SLV 2	fin.	307.59	1720	0.51	0	0	4044	6186	1301	4044		2.35	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-603.95	4581	0.51	0	643	4044	6186	1301	4687		1.02	Si
SLV 10	fin.	524.91	3190	0.51	0	0	4044	6186	1301	4044		1.27	Si
SLV 9	ini.	-558.46	4306	0.51	0	627	4044	6186	1301	4671		1.08	Si
SLV 9	fin.	479.85	2857	0.51	0	0	4044	6186	1301	4044		1.42	Si
SLV 5	ini.	-525.28	4024	0.51	0	616	4044	6186	1301	4660		1.16	Si
SLV 5	fin.	487.92	2964	0.51	0	0	4044	6186	1301	4044		1.36	Si
SLV 1	ini.	-260.79	2316	0.51	0	511	4044	6186	1301	4555		1.97	Si
SLV 1	fin.	264	1398	0.51	0	0	4044	6186	1301	4044		2.89	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.092	SLV 10	Si
V_SLV	1.023	SLV 10	Si
PF_SLU	1.847	SLU 82	Si
V_SLU	1.288	SLU 82	Si

Trave di accoppiamento 18

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-16.024	2.405	2.83	4.49	1.66	-16.024	1.605	2.83	4.49	1.66	0.8	0.15	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 49	ini.	604.56	778	-0.0000895	0.0002246	0.0035	1.66		10395.87	10395.87	No	17.2	Si
SLU 49	fin.	135.91	113	-0.0000196	0.0002246	0.0035	1.66		10395.87	10395.87	No	76.49	Si
SLU 44	ini.	613.16	787	-0.0000908	0.0002246	0.0035	1.66		10395.87	10395.87	No	16.95	Si
SLU 44	fin.	136.14	114	-0.0000197	0.0002246	0.0035	1.66		10395.87	10395.87	No	76.36	Si
SLU 48	ini.	591.65	766	-0.0000875	0.0002246	0.0035	1.66		10395.87	10395.87	No	17.57	Si
SLU 48	fin.	135.56	111	-0.0000196	0.0002246	0.0035	1.66		10395.87	10395.87	No	76.69	Si
SLU 51	ini.	604.56	778	-0.0000895	0.0002246	0.0035	1.66		10395.87	10395.87	No	17.2	Si
SLU 51	fin.	135.91	113	-0.0000196	0.0002246	0.0035	1.66		10395.87	10395.87	No	76.49	Si
SLU 68	ini.	590.82	687	-0.0000874	0.0002246	0.0035	1.66		10395.87	10395.87	No	17.6	Si
SLU 68	fin.	141.14	71	-0.0000204	0.0002246	0.0035	1.66		10395.87	10395.87	No	73.66	Si
SLU 43	ini.	591.65	766	-0.0000875	0.0002246	0.0035	1.66		10395.87	10395.87	No	17.57	Si
SLU 43	fin.	135.56	111	-0.0000196	0.0002246	0.0035	1.66		10395.87	10395.87	No	76.69	Si
SLU 46	ini.	604.56	778	-0.0000895	0.0002246	0.0035	1.66		10395.87	10395.87	No	17.2	Si
SLU 46	fin.	135.91	113	-0.0000196	0.0002246	0.0035	1.66		10395.87	10395.87	No	76.49	Si
SLU 50	ini.	591.65	766	-0.0000875	0.0002246	0.0035	1.66		10395.87	10395.87	No	17.57	Si
SLU 50	fin.	135.56	111	-0.0000196	0.0002246	0.0035	1.66		10395.87	10395.87	No	76.69	Si
SLU 45	ini.	591.65	766	-0.0000875	0.0002246	0.0035	1.66		10395.87	10395.87	No	17.57	Si
SLU 45	fin.	135.56	111	-0.0000196	0.0002246	0.0035	1.66		10395.87	10395.87	No	76.69	Si
SLU 47	ini.	613.16	787	-0.0000908	0.0002246	0.0035	1.66		10395.87	10395.87	No	16.95	Si
SLU 47	fin.	136.14	114	-0.0000197	0.0002246	0.0035	1.66		10395.87	10395.87	No	76.36	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 44	ini.	613.16	-992	1.66	0	201	6344	4474	4233	6545	No	6.6	Si
SLU 44	fin.	136.14	-1485	1.66	0	342	6344	4474	4233	6686	No	4.5	Si
SLU 45	ini.	591.65	-947	1.66	0	207	6344	4474	4233	6551	No	6.92	Si
SLU 45	fin.	135.56	-1440	1.66	0	343	6344	4474	4233	6687	No	4.64	Si
SLU 51	ini.	604.56	-974	1.66	0	203	6344	4474	4233	6547	No	6.72	Si
SLU 51	fin.	135.91	-1467	1.66	0	343	6344	4474	4233	6686	No	4.56	Si
SLU 49	ini.	604.56	-974	1.66	0	203	6344	4474	4233	6547	No	6.72	Si
SLU 49	fin.	135.91	-1467	1.66	0	343	6344	4474	4233	6686	No	4.56	Si
SLU 43	ini.	591.65	-947	1.66	0	207	6344	4474	4233	6551	No	6.92	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 43	fin.	135.56	-1440	1.66	0	343	6344	4474	4233	6687	No	4.64	Si
SLU 50	ini.	591.65	-947	1.66	0	207	6344	4474	4233	6551	No	6.92	Si
SLU 50	fin.	135.56	-1440	1.66	0	343	6344	4474	4233	6687	No	4.64	Si
SLU 47	ini.	613.16	-992	1.66	0	201	6344	4474	4233	6545	No	6.6	Si
SLU 47	fin.	136.14	-1485	1.66	0	342	6344	4474	4233	6686	No	4.5	Si
SLU 48	ini.	591.65	-947	1.66	0	207	6344	4474	4233	6551	No	6.92	Si
SLU 48	fin.	135.56	-1440	1.66	0	343	6344	4474	4233	6687	No	4.64	Si
SLU 65	ini.	590.82	-887	1.66	0	228	6344	4474	4233	6571	No	7.4	Si
SLU 65	fin.	141.14	-1408	1.66	0	349	6344	4474	4233	6693	No	4.75	Si
SLU 46	ini.	604.56	-974	1.66	0	203	6344	4474	4233	6547	No	6.72	Si
SLU 46	fin.	135.91	-1467	1.66	0	343	6344	4474	4233	6686	No	4.56	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	1915.24	3202	-0.0002981	0.0003369	0.0035	1.66		10662.35	10662.35		5.57	Si
SLV 6	fin.	930.65	1539	-0.0001385	0.0003369	0.0035	1.66		10662.35	10662.35		11.46	Si
SLV 12	ini.	-1110.46	-2339	-0.0001663	0.0003369	0.0035	1.66		10672.8	10672.8		9.61	Si
SLV 12	fin.	-721.77	-1484	-0.0001064	0.0003369	0.0035	1.66		10672.8	10672.8		14.79	Si
SLV 1	ini.	1295.6	1819	-0.0001958	0.0003369	0.0035	1.66		10662.35	10662.35		8.23	Si
SLV 1	fin.	593.64	524	-0.0000871	0.0003369	0.0035	1.66		10662.35	10662.35		17.96	Si
SLV 9	ini.	1677.12	2917	-0.000258	0.0003369	0.0035	1.66		10662.35	10662.35		6.36	Si
SLV 9	fin.	778.03	1525	-0.000115	0.0003369	0.0035	1.66		10662.35	10662.35		13.7	Si
SLV 7	ini.	-809.78	-1954	-0.0001198	0.0003369	0.0035	1.66		10672.8	10672.8		13.18	Si
SLV 7	fin.	-561.26	-1452	-0.0000822	0.0003369	0.0035	1.66		10672.8	10672.8		19.02	Si
SLV 2	ini.	1265.34	1770	-0.000191	0.0003369	0.0035	1.66		10662.35	10662.35		8.43	Si
SLV 2	fin.	589.83	516	-0.0000866	0.0003369	0.0035	1.66		10662.35	10662.35		18.08	Si
SLV 10	ini.	1645.84	2867	-0.0002528	0.0003369	0.0035	1.66		10662.35	10662.35		6.48	Si
SLV 10	fin.	774.09	1517	-0.0001144	0.0003369	0.0035	1.66		10662.35	10662.35		13.77	Si
SLV 8	ini.	-841.06	-2004	-0.0001245	0.0003369	0.0035	1.66		10672.8	10672.8		12.69	Si
SLV 8	fin.	-565.21	-1461	-0.0000828	0.0003369	0.0035	1.66		10672.8	10672.8		18.88	Si
SLV 5	ini.	1946.52	3252	-0.0003034	0.0003369	0.0035	1.66		10662.35	10662.35		5.48	Si
SLV 5	fin.	934.6	1548	-0.0001391	0.0003369	0.0035	1.66		10662.35	10662.35		11.41	Si
SLV 11	ini.	-1079.18	-2289	-0.0001614	0.0003369	0.0035	1.66		10672.8	10672.8		9.89	Si
SLV 11	fin.	-717.82	-1475	-0.0001058	0.0003369	0.0035	1.66		10672.8	10672.8		14.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	1295.6	-2175	1.66	0	0	6344	6711	4233	6344		2.92	Si
SLV 1	fin.	593.64	-2776	1.66	0	451	6344	6711	4233	6795		2.45	Si
SLV 9	ini.	1677.12	-2212	1.66	0	0	6344	6711	4233	6344		2.87	Si
SLV 9	fin.	778.03	-2966	1.66	0	179	6344	6711	4233	6522		2.2	Si
SLV 3	ini.	468.71	-1048	1.66	0	499	6344	6711	4233	6843		6.53	Si
SLV 3	fin.	144.89	-1417	1.66	0	598	6344	6711	4233	6941		4.9	Si
SLV 10	ini.	1645.84	-2135	1.66	0	0	6344	6711	4233	6344		2.97	Si
SLV 10	fin.	774.09	-2890	1.66	0	183	6344	6711	4233	6527		2.26	Si
SLV 12	ini.	-1110.46	1620	1.66	0	833	6344	6711	4233	7176		4.43	Si
SLV 12	fin.	-721.77	1639	1.66	0	740	6344	6711	4233	7083		4.32	Si
SLV 11	ini.	-1079.18	1543	1.66	0	827	6344	6711	4233	7171		4.65	Si
SLV 11	fin.	-717.82	1562	1.66	0	739	6344	6711	4233	7082		4.53	Si
SLV 6	ini.	1915.24	-2725	1.66	0	0	6344	6711	4233	6344		2.33	Si
SLV 6	fin.	930.65	-3534	1.66	0	172	6344	6711	4233	6516		1.84	Si
SLV 2	ini.	1265.34	-2101	1.66	0	0	6344	6711	4233	6344		3.02	Si
SLV 2	fin.	589.83	-2702	1.66	0	453	6344	6711	4233	6796		2.52	Si
SLV 5	ini.	1946.52	-2802	1.66	0	0	6344	6711	4233	6344		2.26	Si
SLV 5	fin.	934.6	-3610	1.66	0	167	6344	6711	4233	6511		1.8	Si
SLV 4	ini.	438.45	-974	1.66	0	507	6344	6711	4233	6851		7.03	Si
SLV 4	fin.	141.07	-1343	1.66	0	599	6344	6711	4233	6943		5.17	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.478	SLV 5	Si
V_SLV	1.803	SLV 5	Si
PF_SLU	16.955	SLU 44	Si
V_SLU	4.502	SLU 44	Si

Trave di accoppiamento 19

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.499	-3.134	0.73	1.73	1	-19.499	-3.134	0.73	1.73	1	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 43	ini.	-386.57	-128	-0.0001631	0.0001872	0.0035	1		3649.64	3649.64	No	9.44	Si
SLU 43	fin.	183.86	-904	-0.0000748	0.0001872	0.0035	1		3643.26	3643.26	No	19.82	Si
SLU 48	ini.	-386.57	-128	-0.0001631	0.0001872	0.0035	1		3649.64	3649.64	No	9.44	Si
SLU 48	fin.	183.86	-904	-0.0000748	0.0001872	0.0035	1		3643.26	3643.26	No	19.82	Si
SLU 47	ini.	-397.64	-117	-0.0001682	0.0001872	0.0035	1		3649.64	3649.64	No	9.18	Si
SLU 47	fin.	189.37	-918	-0.0000771	0.0001872	0.0035	1		3643.26	3643.26	No	19.24	Si
SLU 51	ini.	-393.21	-121	-0.0001661	0.0001872	0.0035	1		3649.64	3649.64	No	9.28	Si
SLU 51	fin.	187.17	-913	-0.0000762	0.0001872	0.0035	1		3643.26	3643.26	No	19.47	Si
SLU 46	ini.	-393.21	-121	-0.0001661	0.0001872	0.0035	1		3649.64	3649.64	No	9.28	Si
SLU 46	fin.	187.17	-913	-0.0000762	0.0001872	0.0035	1		3643.26	3643.26	No	19.47	Si
SLU 50	ini.	-386.57	-128	-0.0001631	0.0001872	0.0035	1		3649.64	3649.64	No	9.44	Si
SLU 50	fin.	183.86	-904	-0.0000748	0.0001872	0.0035	1		3643.26	3643.26	No	19.82	Si
SLU 45	ini.	-386.57	-128	-0.0001631	0.0001872	0.0035	1		3649.64	3649.64	No	9.44	Si
SLU 45	fin.	183.86	-904	-0.0000748	0.0001872	0.0035	1		3643.26	3643.26	No	19.82	Si
SLU 68	ini.	-384.26	-216	-0.0001621	0.0001872	0.0035	1		3649.64	3649.64	No	9.5	Si
SLU 68	fin.	173.86	-937	-0.0000706	0.0001872	0.0035	1		3643.26	3643.26	No	20.96	Si
SLU 49	ini.	-393.21	-121	-0.0001661	0.0001872	0.0035	1		3649.64	3649.64	No	9.28	Si
SLU 49	fin.	187.17	-913	-0.0000762	0.0001872	0.0035	1		3643.26	3643.26	No	19.47	Si
SLU 44	ini.	-397.64	-117	-0.0001682	0.0001872	0.0035	1		3649.64	3649.64	No	9.18	Si
SLU 44	fin.	189.37	-918	-0.0000771	0.0001872	0.0035	1		3643.26	3643.26	No	19.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 50	ini.	-386.57	1199	1	0	458	7930	4492	2550	7042	No	5.88	Si
SLU 50	fin.	183.86	856	1	0	577	7930	4492	2550	7042	No	8.23	Si
SLU 47	ini.	-397.64	1227	1	0	456	7930	4492	2550	7042	No	5.74	Si
SLU 47	fin.	189.37	880	1	0	579	7930	4492	2550	7042	No	8	Si
SLU 51	ini.	-393.21	1216	1	0	456	7930	4492	2550	7042	No	5.79	Si
SLU 51	fin.	187.17	871	1	0	578	7930	4492	2550	7042	No	8.09	Si
SLU 46	ini.	-393.21	1216	1	0	456	7930	4492	2550	7042	No	5.79	Si
SLU 46	fin.	187.17	871	1	0	578	7930	4492	2550	7042	No	8.09	Si
SLU 44	ini.	-397.64	1227	1	0	456	7930	4492	2550	7042	No	5.74	Si
SLU 44	fin.	189.37	880	1	0	579	7930	4492	2550	7042	No	8	Si
SLU 48	ini.	-386.57	1199	1	0	458	7930	4492	2550	7042	No	5.88	Si
SLU 48	fin.	183.86	856	1	0	577	7930	4492	2550	7042	No	8.23	Si
SLU 65	ini.	-384.26	1189	1	0	473	7930	4492	2550	7042	No	5.92	Si
SLU 65	fin.	173.86	809	1	0	582	7930	4492	2550	7042	No	8.71	Si
SLU 45	ini.	-386.57	1199	1	0	458	7930	4492	2550	7042	No	5.88	Si
SLU 45	fin.	183.86	856	1	0	577	7930	4492	2550	7042	No	8.23	Si
SLU 49	ini.	-393.21	1216	1	0	456	7930	4492	2550	7042	No	5.79	Si
SLU 49	fin.	187.17	871	1	0	578	7930	4492	2550	7042	No	8.09	Si
SLU 43	ini.	-386.57	1199	1	0	458	7930	4492	2550	7042	No	5.88	Si
SLU 43	fin.	183.86	856	1	0	577	7930	4492	2550	7042	No	8.23	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	474.15	-887	-0.0001989	0.0002807	0.0035	1		3664.83	3664.83		7.73	Si
SLV 4	fin.	-363.28	593	-0.0001498	0.0002807	0.0035	1		3671.29	3671.29		10.11	Si
SLV 15	ini.	-692.24	177	-0.0003	0.0002807	0.0035	1		3671.29	3671.29		5.3	Si
SLV 15	fin.	447.53	-1440	-0.0001871	0.0002807	0.0035	1		3664.83	3664.83		8.19	Si
SLV 14	ini.	-840.4	291	-0.0003738	0.0002807	0.0035	1		3671.29	3671.29		4.37	Si
SLV 14	fin.	500.12	-1709	-0.0002106	0.0002807	0.0035	1		3664.83	3664.83		7.33	Si
SLV 6	ini.	-582.76	71	-0.0002481	0.0002807	0.0035	1		3671.29	3671.29		6.3	Si
SLV 6	fin.	211.05	-1194	-0.0000855	0.0002807	0.0035	1		3664.83	3664.83		17.36	Si
SLV 16	ini.	-510.19	-12	-0.0002148	0.0002807	0.0035	1		3671.29	3671.29		7.2	Si
SLV 16	fin.	349.4	-1166	-0.0001441	0.0002807	0.0035	1		3664.83	3664.83		10.49	Si
SLV 13	ini.	-1022.45	479	-0.0004703	0.0002807	0.0035	1		3671.29	3671.29		3.59	Si
SLV 13	fin.	598.24	-1983	-0.0002557	0.0002807	0.0035	1		3664.83	3664.83		6.13	Si
SLV 5	ini.	-770.94	266	-0.0003386	0.0002807	0.0035	1		3671.29	3671.29		4.76	Si
SLV 5	fin.	312.47	-1477	-0.0001282	0.0002807	0.0035	1		3664.83	3664.83		11.73	Si
SLV 8	ini.	517.94	-937	-0.0002187	0.0002807	0.0035	1		3664.83	3664.83		7.08	Si
SLV 8	fin.	-291.32	615	-0.000119	0.0002807	0.0035	1		3671.29	3671.29		12.6	Si
SLV 9	ini.	-1066.24	528	-0.0004944	0.0002807	0.0035	1		3671.29	3671.29		3.44	Si
SLV 9	fin.	526.28	-2005	-0.0002225	0.0002807	0.0035	1		3664.83	3664.83		6.96	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-878.06	334	-0.0003932	0.0002807	0.0035	1		3671.29	3671.29		4.18	Si
SLV 10	fin.	424.86	-1722	-0.000177	0.0002807	0.0035	1		3664.83	3664.83		8.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-510.19	1750	1	0	654	7930	6738	2550	8584		4.9	Si
SLV 16	fin.	349.4	1232	1	0	839	7930	6738	2550	8769		7.12	Si
SLV 13	ini.	-1022.45	3082	1	0	558	7930	6738	2550	8487		2.75	Si
SLV 13	fin.	598.24	2699	1	0	948	7930	6738	2550	8878		3.29	Si
SLV 9	ini.	-1066.24	2954	1	0	547	7930	6738	2550	8477		2.87	Si
SLV 9	fin.	526.28	2882	1	0	951	7930	6738	2550	8880		3.08	Si
SLV 15	ini.	-692.24	2252	1	0	619	7930	6738	2550	8549		3.8	Si
SLV 15	fin.	447.53	1721	1	0	877	7930	6738	2550	8807		5.12	Si
SLV 10	ini.	-878.06	2436	1	0	588	7930	6738	2550	8518		3.5	Si
SLV 10	fin.	424.86	2376	1	0	915	7930	6738	2550	8844		3.72	Si
SLV 8	ini.	517.94	-1278	1	0	806	7930	6738	2550	8735		6.84	Si
SLV 8	fin.	-291.32	-1716	1	0	528	7930	6738	2550	8457		4.93	Si
SLV 4	ini.	474.15	-1406	1	0	798	7930	6738	2550	8728		6.21	Si
SLV 4	fin.	-363.28	-1534	1	0	533	7930	6738	2550	8462		5.52	Si
SLV 6	ini.	-582.76	1489	1	0	639	7930	6738	2550	8569		5.76	Si
SLV 6	fin.	211.05	1547	1	0	843	7930	6738	2550	8772		5.67	Si
SLV 14	ini.	-840.4	2580	1	0	597	7930	6738	2550	8526		3.3	Si
SLV 14	fin.	500.12	2210	1	0	913	7930	6738	2550	8843		4	Si
SLV 5	ini.	-770.94	2008	1	0	602	7930	6738	2550	8531		4.25	Si
SLV 5	fin.	312.47	2052	1	0	882	7930	6738	2550	8812		4.29	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.443	SLV 9	Si
V_SLV	2.754	SLV 13	Si
PF_SLU	9.178	SLU 44	Si
V_SLU	5.74	SLU 44	Si

Trave di accoppiamento 20

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-18.499	-3.134	3.63	4.49	0.86	-19.499	-3.134	3.63	4.49	0.86	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-221.18	-806	-0.0001241	0.0001872	0.0035	0.86		2705.05	2705.05	No	12.23	Si
SLU 84	fin.	245.58	344	-0.0001389	0.0001872	0.0035	0.86		2699.52	2699.52	No	10.99	Si
SLU 73	ini.	-229.02	-778	-0.0001288	0.0001872	0.0035	0.86		2705.05	2705.05	No	11.81	Si
SLU 73	fin.	241.86	391	-0.0001367	0.0001872	0.0035	0.86		2699.52	2699.52	No	11.16	Si
SLU 83	ini.	-217.39	-796	-0.0001219	0.0001872	0.0035	0.86		2705.05	2705.05	No	12.44	Si
SLU 83	fin.	242.85	336	-0.0001373	0.0001872	0.0035	0.86		2699.52	2699.52	No	11.12	Si
SLU 81	ini.	-217.39	-796	-0.0001219	0.0001872	0.0035	0.86		2705.05	2705.05	No	12.44	Si
SLU 81	fin.	242.85	336	-0.0001373	0.0001872	0.0035	0.86		2699.52	2699.52	No	11.12	Si
SLU 80	ini.	-226.49	-771	-0.0001273	0.0001872	0.0035	0.86		2705.05	2705.05	No	11.94	Si
SLU 80	fin.	240.04	386	-0.0001356	0.0001872	0.0035	0.86		2699.52	2699.52	No	11.25	Si
SLU 76	ini.	-229.02	-778	-0.0001288	0.0001872	0.0035	0.86		2705.05	2705.05	No	11.81	Si
SLU 76	fin.	241.86	391	-0.0001367	0.0001872	0.0035	0.86		2699.52	2699.52	No	11.16	Si
SLU 82	ini.	-221.18	-806	-0.0001241	0.0001872	0.0035	0.86		2705.05	2705.05	No	12.23	Si
SLU 82	fin.	245.58	344	-0.0001389	0.0001872	0.0035	0.86		2699.52	2699.52	No	10.99	Si
SLU 78	ini.	-226.49	-771	-0.0001273	0.0001872	0.0035	0.86		2705.05	2705.05	No	11.94	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	fin.	240.04	386	-0.0001356	0.0001872	0.0035	0.86		2699.52	2699.52	No	11.25	Si
SLU 65	ini.	-241.41	-697	-0.0001362	0.0001872	0.0035	0.86		2705.05	2705.05	No	11.21	Si
SLU 65	fin.	228.96	489	-0.000129	0.0001872	0.0035	0.86		2699.52	2699.52	No	11.79	Si
SLU 68	ini.	-241.41	-697	-0.0001362	0.0001872	0.0035	0.86		2705.05	2705.05	No	11.21	Si
SLU 68	fin.	228.96	489	-0.000129	0.0001872	0.0035	0.86		2699.52	2699.52	No	11.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 73	ini.	-229.02	2472	0.86	0	427	6819	3863	2193	6056	No	2.45	Si
SLU 73	fin.	241.86	-734	0.86	0	253	6819	3863	2193	6056	No	8.25	Si
SLU 83	ini.	-217.39	2656	0.86	0	429	6819	3863	2193	6056	No	2.28	Si
SLU 83	fin.	242.85	-1029	0.86	0	263	6819	3863	2193	6056	No	5.88	Si
SLU 84	ini.	-221.18	2671	0.86	0	430	6819	3863	2193	6056	No	2.27	Si
SLU 84	fin.	245.58	-1015	0.86	0	262	6819	3863	2193	6056	No	5.96	Si
SLU 81	ini.	-217.39	2656	0.86	0	429	6819	3863	2193	6056	No	2.28	Si
SLU 81	fin.	242.85	-1029	0.86	0	263	6819	3863	2193	6056	No	5.88	Si
SLU 75	ini.	-226.49	2463	0.86	0	426	6819	3863	2193	6056	No	2.46	Si
SLU 75	fin.	240.04	-743	0.86	0	254	6819	3863	2193	6056	No	8.15	Si
SLU 79	ini.	-222.69	2449	0.86	0	425	6819	3863	2193	6056	No	2.47	Si
SLU 79	fin.	237.31	-757	0.86	0	255	6819	3863	2193	6056	No	8	Si
SLU 80	ini.	-226.49	2463	0.86	0	426	6819	3863	2193	6056	No	2.46	Si
SLU 80	fin.	240.04	-743	0.86	0	254	6819	3863	2193	6056	No	8.15	Si
SLU 78	ini.	-226.49	2463	0.86	0	426	6819	3863	2193	6056	No	2.46	Si
SLU 78	fin.	240.04	-743	0.86	0	254	6819	3863	2193	6056	No	8.15	Si
SLU 82	ini.	-221.18	2671	0.86	0	430	6819	3863	2193	6056	No	2.27	Si
SLU 82	fin.	245.58	-1015	0.86	0	262	6819	3863	2193	6056	No	5.96	Si
SLU 76	ini.	-229.02	2472	0.86	0	427	6819	3863	2193	6056	No	2.45	Si
SLU 76	fin.	241.86	-734	0.86	0	253	6819	3863	2193	6056	No	8.25	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-568.07	-1456	-0.0003374	0.0002807	0.0035	0.86		2711.06	2711.06		4.77	Si
SLV 10	fin.	467.11	1239	-0.0002717	0.0002807	0.0035	0.86		2705.45	2705.45		5.79	Si
SLV 14	ini.	-467.66	-1166	-0.0002715	0.0002807	0.0035	0.86		2711.06	2711.06		5.8	Si
SLV 14	fin.	393.43	886	-0.0002253	0.0002807	0.0035	0.86		2705.45	2705.45		6.88	Si
SLV 5	ini.	-547.31	-1428	-0.0003235	0.0002807	0.0035	0.86		2711.06	2711.06		4.95	Si
SLV 5	fin.	455	1287	-0.0002639	0.0002807	0.0035	0.86		2705.45	2705.45		5.95	Si
SLV 8	ini.	334.29	651	-0.0001892	0.0002807	0.0035	0.86		2705.45	2705.45		8.09	Si
SLV 8	fin.	-213.94	-839	-0.0001182	0.0002807	0.0035	0.86		2711.06	2711.06		12.67	Si
SLV 15	ini.	-355.27	-876	-0.0002015	0.0002807	0.0035	0.86		2711.06	2711.06		7.63	Si
SLV 15	fin.	313.72	618	-0.0001769	0.0002807	0.0035	0.86		2705.45	2705.45		8.62	Si
SLV 6	ini.	-427.32	-1164	-0.0002459	0.0002807	0.0035	0.86		2711.06	2711.06		6.34	Si
SLV 6	fin.	359.55	995	-0.0002045	0.0002807	0.0035	0.86		2705.45	2705.45		7.52	Si
SLV 13	ini.	-583.75	-1421	-0.000348	0.0002807	0.0035	0.86		2711.06	2711.06		4.64	Si
SLV 13	fin.	485.77	1169	-0.0002837	0.0002807	0.0035	0.86		2705.45	2705.45		5.57	Si
SLV 4	ini.	229.98	352	-0.0001277	0.0002807	0.0035	0.86		2705.45	2705.45		11.76	Si
SLV 4	fin.	-137.15	-477	-0.0000748	0.0002807	0.0035	0.86		2711.06	2711.06		19.77	Si
SLV 9	ini.	-688.06	-1720	-0.0004209	0.0002807	0.0035	0.86		2711.06	2711.06		3.94	Si
SLV 9	fin.	562.56	1531	-0.0003344	0.0002807	0.0035	0.86		2705.45	2705.45		4.81	Si
SLV 16	ini.	-239.18	-622	-0.0001328	0.0002807	0.0035	0.86		2711.06	2711.06		11.33	Si
SLV 16	fin.	221.39	336	-0.0001227	0.0002807	0.0035	0.86		2705.45	2705.45		12.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-467.66	2521	0.86	0	640	6819	5794	2193	7460		2.96	Si
SLV 14	fin.	393.43	678	0.86	0	313	6819	5794	2193	7133		10.52	Si
SLV 8	ini.	334.29	-299	0.86	0	366	6819	5794	2193	7185		24.05	Si
SLV 8	fin.	-213.94	-2090	0.86	0	600	6819	5794	2193	7420		3.55	Si
SLV 6	ini.	-427.32	2596	0.86	0	640	6819	5794	2193	7459		2.87	Si
SLV 6	fin.	359.55	808	0.86	0	286	6819	5794	2193	7105		8.79	Si
SLV 15	ini.	-355.27	2092	0.86	0	605	6819	5794	2193	7424		3.55	Si
SLV 15	fin.	313.72	248	0.86	0	372	6819	5794	2193	7192		28.97	Si
SLV 16	ini.	-239.18	1653	0.86	0	572	6819	5794	2193	7391		4.47	Si
SLV 16	fin.	221.39	-191	0.86	0	426	6819	5794	2193	7246		37.85	Si
SLV 10	ini.	-568.07	3026	0.86	0	674	6819	5794	2193	7493		2.48	Si
SLV 10	fin.	467.11	1213	0.86	0	211	6819	5794	2193	7031		5.8	Si
SLV 13	ini.	-583.75	2961	0.86	0	670	6819	5794	2193	7489		2.53	Si
SLV 13	fin.	485.77	1118	0.86	0	235	6819	5794	2193	7054		6.31	Si
SLV 5	ini.	-547.31	3050	0.86	0	670	6819	5794	2193	7490		2.46	Si
SLV 5	fin.	455	1263	0.86	0	193	6819	5794	2193	7012		5.55	Si
SLV 12	ini.	193.54	131	0.86	0	422	6819	5794	2193	7242		55.3	Si
SLV 12	fin.	-106.37	-1685	0.86	0	568	6819	5794	2193	7388		4.38	Si
SLV 9	ini.	-688.06	3480	0.86	0	703	6819	5794	2193	7522		2.16	Si
SLV 9	fin.	562.56	1667	0.86	0	13	6819	5794	2193	6832		4.1	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.94	SLV 9	Si
V_SLV	2.162	SLV 9	Si
PF_SLU	10.993	SLU 82	Si
V_SLU	2.268	SLU 82	Si

Trave di accoppiamento 21

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-16.664	-3.134	0.73	2.73	2	-17.164	-3.134	0.73	2.73	2	0.5	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-333.39	-775	-0.0000334	0.0001872	0.0035	2		14219.44	14219.44	No	42.65	Si
SLU 80	fin.	-307.22	-658	-0.0000307	0.0001872	0.0035	2		14219.44	14219.44	No	46.28	Si
SLU 79	ini.	-332.59	-775	-0.0000333	0.0001872	0.0035	2		14219.44	14219.44	No	42.75	Si
SLU 79	fin.	-308.83	-659	-0.0000309	0.0001872	0.0035	2		14219.44	14219.44	No	46.04	Si
SLU 73	ini.	-333.92	-775	-0.0000334	0.0001872	0.0035	2		14219.44	14219.44	No	42.58	Si
SLU 73	fin.	-306.15	-657	-0.0000306	0.0001872	0.0035	2		14219.44	14219.44	No	46.45	Si
SLU 78	ini.	-333.39	-775	-0.0000334	0.0001872	0.0035	2		14219.44	14219.44	No	42.65	Si
SLU 78	fin.	-307.22	-658	-0.0000307	0.0001872	0.0035	2		14219.44	14219.44	No	46.28	Si
SLU 81	ini.	-333.32	-892	-0.0000334	0.0001872	0.0035	2		14219.44	14219.44	No	42.66	Si
SLU 81	fin.	-346.21	-763	-0.0000347	0.0001872	0.0035	2		14219.44	14219.44	No	41.07	Si
SLU 76	ini.	-333.92	-775	-0.0000334	0.0001872	0.0035	2		14219.44	14219.44	No	42.58	Si
SLU 76	fin.	-306.15	-657	-0.0000306	0.0001872	0.0035	2		14219.44	14219.44	No	46.45	Si
SLU 84	ini.	-334.12	-892	-0.0000335	0.0001872	0.0035	2		14219.44	14219.44	No	42.56	Si
SLU 84	fin.	-344.6	-761	-0.0000345	0.0001872	0.0035	2		14219.44	14219.44	No	41.26	Si
SLU 83	ini.	-333.32	-892	-0.0000334	0.0001872	0.0035	2		14219.44	14219.44	No	42.66	Si
SLU 83	fin.	-346.21	-763	-0.0000347	0.0001872	0.0035	2		14219.44	14219.44	No	41.07	Si
SLU 75	ini.	-333.39	-775	-0.0000334	0.0001872	0.0035	2		14219.44	14219.44	No	42.65	Si
SLU 75	fin.	-307.22	-658	-0.0000307	0.0001872	0.0035	2		14219.44	14219.44	No	46.28	Si
SLU 82	ini.	-334.12	-892	-0.0000335	0.0001872	0.0035	2		14219.44	14219.44	No	42.56	Si
SLU 82	fin.	-344.6	-761	-0.0000345	0.0001872	0.0035	2		14219.44	14219.44	No	41.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-333.32	-1611	2	0	1020	3965	8983	5100	4985	No	3.09	Si
SLU 83	fin.	-346.21	2320	2	0	999	3965	8983	5100	4964	No	2.14	Si
SLU 79	ini.	-332.59	-1371	2	0	1001	3965	8983	5100	4966	No	3.62	Si
SLU 79	fin.	-308.83	2189	2	0	983	3965	8983	5100	4948	No	2.26	Si
SLU 84	ini.	-334.12	-1611	2	0	1020	3965	8983	5100	4985	No	3.09	Si
SLU 84	fin.	-344.6	2328	2	0	999	3965	8983	5100	4964	No	2.13	Si
SLU 76	ini.	-333.92	-1372	2	0	1001	3965	8983	5100	4966	No	3.62	Si
SLU 76	fin.	-306.15	2203	2	0	983	3965	8983	5100	4947	No	2.25	Si
SLU 73	ini.	-333.92	-1372	2	0	1001	3965	8983	5100	4966	No	3.62	Si
SLU 73	fin.	-306.15	2203	2	0	983	3965	8983	5100	4947	No	2.25	Si
SLU 81	ini.	-333.32	-1611	2	0	1020	3965	8983	5100	4985	No	3.09	Si
SLU 81	fin.	-346.21	2320	2	0	999	3965	8983	5100	4964	No	2.14	Si
SLU 80	ini.	-333.39	-1372	2	0	1001	3965	8983	5100	4966	No	3.62	Si
SLU 80	fin.	-307.22	2198	2	0	983	3965	8983	5100	4947	No	2.25	Si
SLU 78	ini.	-333.39	-1372	2	0	1001	3965	8983	5100	4966	No	3.62	Si
SLU 78	fin.	-307.22	2198	2	0	983	3965	8983	5100	4947	No	2.25	Si
SLU 82	ini.	-334.12	-1611	2	0	1020	3965	8983	5100	4985	No	3.09	Si
SLU 82	fin.	-344.6	2328	2	0	999	3965	8983	5100	4964	No	2.13	Si
SLU 75	ini.	-333.39	-1372	2	0	1001	3965	8983	5100	4966	No	3.62	Si
SLU 75	fin.	-307.22	2198	2	0	983	3965	8983	5100	4947	No	2.25	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	91.27	-547	-0.0000091	0.0002807	0.0035	2		13920.08	13920.08		152.51	Si
SLV 8	fin.	-377.46	-329	-0.0000377	0.0002807	0.0035	2		13933.43	13933.43		36.91	Si
SLV 13	ini.	-945.69	-61	-0.0000961	0.0002807	0.0035	2		13933.43	13933.43		14.73	Si
SLV 13	fin.	-90.96	-477	-0.000009	0.0002807	0.0035	2		13933.43	13933.43		153.18	Si
SLV 9	ini.	-598.53	-325	-0.0000602	0.0002807	0.0035	2		13933.43	13933.43		23.28	Si
SLV 9	fin.	7.19	-408	-0.0000007	0.0002807	0.0035	2		13920.08	13920.08		1936.75	Si
SLV 11	ini.	-421.19	-264	-0.0000421	0.0002807	0.0035	2		13933.43	13933.43		33.08	Si
SLV 11	fin.	-316.21	-414	-0.0000315	0.0002807	0.0035	2		13933.43	13933.43		44.06	Si
SLV 10	ini.	-439.07	-399	-0.0000439	0.0002807	0.0035	2		13933.43	13933.43		31.73	Si
SLV 10	fin.	-40.51	-380	-0.000004	0.0002807	0.0035	2		13933.43	13933.43		343.98	Si
SLV 14	ini.	-791.42	-133	-0.0000801	0.0002807	0.0035	2		13933.43	13933.43		17.61	Si
SLV 14	fin.	-137.1	-451	-0.0000136	0.0002807	0.0035	2		13933.43	13933.43		101.63	Si
SLV 15	ini.	-892.49	-43	-0.0000906	0.0002807	0.0035	2		13933.43	13933.43		15.61	Si
SLV 15	fin.	-187.98	-479	-0.0000187	0.0002807	0.0035	2		13933.43	13933.43		74.12	Si
SLV 4	ini.	438.43	-811	-0.0000439	0.0002807	0.0035	2		13920.08	13920.08		31.75	Si
SLV 4	fin.	-279.31	-259	-0.0000278	0.0002807	0.0035	2		13933.43	13933.43		49.88	Si
SLV 16	ini.	-738.21	-115	-0.0000746	0.0002807	0.0035	2		13933.43	13933.43		18.87	Si
SLV 16	fin.	-234.12	-453	-0.0000233	0.0002807	0.0035	2		13933.43	13933.43		59.51	Si
SLV 2	ini.	385.23	-829	-0.0000385	0.0002807	0.0035	2		13920.08	13920.08		36.13	Si
SLV 2	fin.	-182.29	-257	-0.0000181	0.0002807	0.0035	2		13933.43	13933.43		76.43	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	230.95	-2552	2	0	1436	3965	13475	5100	5401		2.12	Si
SLV 1	fin.	-136.15	-464	2	0	1355	3965	13475	5100	5320		11.47	Si
SLV 15	ini.	-892.49	1619	2	0	1312	3965	13475	5100	5277		3.26	Si
SLV 15	fin.	-187.98	4176	2	0	1389	3965	13475	5100	5354		1.28	Si
SLV 4	ini.	438.43	-3107	2	0	1445	3965	13475	5100	5410		1.74	Si
SLV 4	fin.	-279.31	-1722	2	0	1351	3965	13475	5100	5316		3.09	Si
SLV 10	ini.	-439.07	-257	2	0	1375	3965	13475	5100	5340		20.81	Si
SLV 10	fin.	-40.51	2830	2	0	1372	3965	13475	5100	5337		1.89	Si
SLV 14	ini.	-791.42	1169	2	0	1328	3965	13475	5100	5293		4.53	Si
SLV 14	fin.	-137.1	4017	2	0	1384	3965	13475	5100	5349		1.33	Si
SLV 3	ini.	284.16	-2605	2	0	1433	3965	13475	5100	5398		2.07	Si
SLV 3	fin.	-233.17	-1014	2	0	1356	3965	13475	5100	5320		5.25	Si
SLV 16	ini.	-738.21	1116	2	0	1325	3965	13475	5100	5290		4.74	Si
SLV 16	fin.	-234.12	3467	2	0	1385	3965	13475	5100	5350		1.54	Si
SLV 9	ini.	-598.53	263	2	0	1363	3965	13475	5100	5327		20.28	Si
SLV 9	fin.	7.19	3563	2	0	1377	3965	13475	5100	5342		1.5	Si
SLV 2	ini.	385.23	-3055	2	0	1448	3965	13475	5100	5413		1.77	Si
SLV 2	fin.	-182.29	-1172	2	0	1351	3965	13475	5100	5315		4.53	Si
SLV 13	ini.	-945.69	1671	2	0	1316	3965	13475	5100	5280		3.16	Si
SLV 13	fin.	-90.96	4726	2	0	1389	3965	13475	5100	5354		1.13	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	14.734	SLV 13	Si
V_SLV	1.133	SLV 13	Si
PF_SLU	41.071	SLU 81	Si
V_SLU	2.132	SLU 82	Si

Trave di accoppiamento 22

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-16.664	-3.134	3.53	4.49	0.96	-17.164	-3.134	3.53	4.49	0.96	0.5	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-49.59	-542	-0.0000214	0.0001872	0.0035	0.96		3354.47	3354.47	No	67.65	Si
SLU 81	fin.	-93.75	-696	-0.0000408	0.0001872	0.0035	0.96		3354.47	3354.47	No	35.78	Si
SLU 31	ini.	-42.21	-457	-0.0000182	0.0001872	0.0035	0.96		3354.47	3354.47	No	79.48	Si
SLU 31	fin.	-81.1	-584	-0.0000353	0.0001872	0.0035	0.96		3354.47	3354.47	No	41.36	Si
SLU 40	ini.	-44.69	-543	-0.0000193	0.0001872	0.0035	0.96		3354.47	3354.47	No	75.06	Si
SLU 40	fin.	-105.07	-697	-0.0000459	0.0001872	0.0035	0.96		3354.47	3354.47	No	31.93	Si
SLU 34	ini.	-42.21	-457	-0.0000182	0.0001872	0.0035	0.96		3354.47	3354.47	No	79.48	Si
SLU 34	fin.	-81.1	-584	-0.0000353	0.0001872	0.0035	0.96		3354.47	3354.47	No	41.36	Si
SLU 41	ini.	-43.4	-538	-0.0000187	0.0001872	0.0035	0.96		3354.47	3354.47	No	77.3	Si
SLU 41	fin.	-104.62	-692	-0.0000457	0.0001872	0.0035	0.96		3354.47	3354.47	No	32.06	Si
SLU 82	ini.	-50.88	-547	-0.000022	0.0001872	0.0035	0.96		3354.47	3354.47	No	65.93	Si
SLU 82	fin.	-94.2	-701	-0.000041	0.0001872	0.0035	0.96		3354.47	3354.47	No	35.61	Si
SLU 83	ini.	-49.59	-542	-0.0000214	0.0001872	0.0035	0.96		3354.47	3354.47	No	67.65	Si
SLU 83	fin.	-93.75	-696	-0.0000408	0.0001872	0.0035	0.96		3354.47	3354.47	No	35.78	Si
SLU 84	ini.	-50.88	-547	-0.000022	0.0001872	0.0035	0.96		3354.47	3354.47	No	65.93	Si
SLU 84	fin.	-94.2	-701	-0.000041	0.0001872	0.0035	0.96		3354.47	3354.47	No	35.61	Si
SLU 39	ini.	-43.4	-538	-0.0000187	0.0001872	0.0035	0.96		3354.47	3354.47	No	77.3	Si
SLU 39	fin.	-104.62	-692	-0.0000457	0.0001872	0.0035	0.96		3354.47	3354.47	No	32.06	Si
SLU 42	ini.	-44.69	-543	-0.0000193	0.0001872	0.0035	0.96		3354.47	3354.47	No	75.06	Si
SLU 42	fin.	-105.07	-697	-0.0000459	0.0001872	0.0035	0.96		3354.47	3354.47	No	31.93	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 41	ini.	-43.4	516	0.96	0	506	3965	4312	2448	4471	No	8.66	Si
SLU 41	fin.	-104.62	-720	0.96	0	529	3965	4312	2448	4494	No	6.24	Si
SLU 39	ini.	-43.4	516	0.96	0	506	3965	4312	2448	4471	No	8.66	Si
SLU 39	fin.	-104.62	-720	0.96	0	529	3965	4312	2448	4494	No	6.24	Si
SLU 77	ini.	-46.24	562	0.96	0	493	3965	4312	2448	4458	No	7.93	Si
SLU 77	fin.	-69.47	-603	0.96	0	513	3965	4312	2448	4478	No	7.43	Si
SLU 83	ini.	-49.59	600	0.96	0	507	3965	4312	2448	4472	No	7.45	Si
SLU 83	fin.	-93.75	-725	0.96	0	530	3965	4312	2448	4495	No	6.2	Si
SLU 82	ini.	-50.88	603	0.96	0	508	3965	4312	2448	4473	No	7.42	Si
SLU 82	fin.	-94.2	-723	0.96	0	530	3965	4312	2448	4495	No	6.22	Si
SLU 40	ini.	-44.69	519	0.96	0	507	3965	4312	2448	4472	No	8.62	Si
SLU 40	fin.	-105.07	-717	0.96	0	530	3965	4312	2448	4495	No	6.26	Si
SLU 81	ini.	-49.59	600	0.96	0	507	3965	4312	2448	4472	No	7.45	Si
SLU 81	fin.	-93.75	-725	0.96	0	530	3965	4312	2448	4495	No	6.2	Si
SLU 79	ini.	-46.24	562	0.96	0	493	3965	4312	2448	4458	No	7.93	Si
SLU 79	fin.	-69.47	-603	0.96	0	513	3965	4312	2448	4478	No	7.43	Si
SLU 84	ini.	-50.88	603	0.96	0	508	3965	4312	2448	4473	No	7.42	Si
SLU 84	fin.	-94.2	-723	0.96	0	530	3965	4312	2448	4495	No	6.22	Si
SLU 42	ini.	-44.69	519	0.96	0	507	3965	4312	2448	4472	No	8.62	Si
SLU 42	fin.	-105.07	-717	0.96	0	530	3965	4312	2448	4495	No	6.26	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-87.88	-991	-0.0000381	0.0002807	0.0035	0.96		3379.17	3379.17		38.45	Si
SLV 3	fin.	-259	-1054	-0.0001149	0.0002807	0.0035	0.96		3379.17	3379.17		13.05	Si
SLV 6	ini.	-179.15	-1055	-0.0000786	0.0002807	0.0035	0.96		3379.17	3379.17		18.86	Si
SLV 6	fin.	-191.67	-1077	-0.0000842	0.0002807	0.0035	0.96		3379.17	3379.17		17.63	Si
SLV 16	ini.	97.88	804	-0.0000426	0.0002807	0.0035	0.96		3373	3373		34.46	Si
SLV 16	fin.	246.15	723	-0.0001092	0.0002807	0.0035	0.96		3373	3373		13.7	Si
SLV 13	ini.	29.64	728	-0.0000128	0.0002807	0.0035	0.96		3373	3373		113.79	Si
SLV 13	fin.	295.8	670	-0.0001321	0.0002807	0.0035	0.96		3373	3373		11.4	Si
SLV 15	ini.	100.86	990	-0.0000439	0.0002807	0.0035	0.96		3373	3373		33.44	Si
SLV 15	fin.	322.75	910	-0.0001447	0.0002807	0.0035	0.96		3373	3373		10.45	Si
SLV 4	ini.	-90.86	-1178	-0.0000394	0.0002807	0.0035	0.96		3379.17	3379.17		37.19	Si
SLV 4	fin.	-335.6	-1242	-0.0001505	0.0002807	0.0035	0.96		3379.17	3379.17		10.07	Si
SLV 14	ini.	26.66	542	-0.0000115	0.0002807	0.0035	0.96		3373	3373		126.5	Si
SLV 14	fin.	219.2	483	-0.0000968	0.0002807	0.0035	0.96		3373	3373		15.39	Si
SLV 2	ini.	-162.07	-1440	-0.0000709	0.0002807	0.0035	0.96		3379.17	3379.17		20.85	Si
SLV 2	fin.	-362.55	-1482	-0.0001632	0.0002807	0.0035	0.96		3379.17	3379.17		9.32	Si
SLV 5	ini.	-176.07	-863	-0.0000772	0.0002807	0.0035	0.96		3379.17	3379.17		19.19	Si
SLV 5	fin.	-112.49	-883	-0.0000489	0.0002807	0.0035	0.96		3379.17	3379.17		30.04	Si
SLV 1	ini.	-159.09	-1253	-0.0000696	0.0002807	0.0035	0.96		3379.17	3379.17		21.24	Si
SLV 1	fin.	-285.95	-1294	-0.0001273	0.0002807	0.0035	0.96		3379.17	3379.17		11.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	29.64	775	0.96	0	474	3965	6468	2448	4439		5.73	Si
SLV 13	fin.	295.8	136	0.96	0	488	3965	6468	2448	4453		32.84	Si
SLV 16	ini.	97.88	519	0.96	0	456	3965	6468	2448	4421		8.52	Si
SLV 16	fin.	246.15	-122	0.96	0	476	3965	6468	2448	4441		36.3	Si
SLV 3	ini.	-87.88	130	0.96	0	787	3965	6468	2448	4752		36.47	Si
SLV 3	fin.	-259	-579	0.96	0	796	3965	6468	2448	4761		8.22	Si
SLV 14	ini.	26.66	626	0.96	0	518	3965	6468	2448	4482		7.16	Si
SLV 14	fin.	219.2	-13	0.96	0	530	3965	6468	2448	4495		341.8	Si
SLV 2	ini.	-162.07	89	0.96	0	850	3965	6468	2448	4815		54.33	Si
SLV 2	fin.	-362.55	-618	0.96	0	855	3965	6468	2448	4820		7.79	Si
SLV 4	ini.	-90.86	-18	0.96	0	814	3965	6468	2448	4778		258.97	Si
SLV 4	fin.	-335.6	-728	0.96	0	823	3965	6468	2448	4787		6.58	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-119.45	714	0.96	0	673	3965	6468	2448	4638		6.5	Si
SLV 9	fin.	62.04	54	0.96	0	678	3965	6468	2448	4643		86.65	Si
SLV 10	ini.	-122.53	560	0.96	0	705	3965	6468	2448	4670		8.33	Si
SLV 10	fin.	-17.14	-100	0.96	0	710	3965	6468	2448	4675		46.67	Si
SLV 8	ini.	58.23	42	0.96	0	658	3965	6468	2448	4623		109.54	Si
SLV 8	fin.	-101.84	-646	0.96	0	675	3965	6468	2448	4640		7.19	Si
SLV 15	ini.	100.86	668	0.96	0	406	3965	6468	2448	4371		6.55	Si
SLV 15	fin.	322.75	26	0.96	0	428	3965	6468	2448	4393		166.22	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	9.32	SLV 2	Si
V_SLV	5.73	SLV 13	Si
PF_SLU	31.925	SLU 40	Si
V_SLU	6.202	SLU 81	Si

Trave di accoppiamento 23

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-14.704	-3.134	3.73	4.49	0.76	-16.104	-3.134	3.73	4.49	0.76	1.4	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-557.09	-1603	-0.0004638	0.0001872	0.0035	0.76		2121.58	2121.58	No	3.81	Si
SLU 82	fin.	-9.11	-606	-0.0000062	0.0001872	0.0035	0.76		2121.58	2121.58	No	232.78	Si
SLU 78	ini.	-506.19	-1457	-0.0004134	0.0001872	0.0035	0.76		2121.58	2121.58	No	4.19	Si
SLU 78	fin.	0.29	-488	-0.0000002	0.0001872	0.0035	0.76		2116.84	2116.84	No	7220.82	Si
SLU 77	ini.	-507.14	-1459	-0.0004143	0.0001872	0.0035	0.76		2121.58	2121.58	No	4.18	Si
SLU 77	fin.	1.39	-483	-0.0000009	0.0001872	0.0035	0.76		2116.84	2116.84	No	1528.11	Si
SLU 79	ini.	-507.14	-1459	-0.0004143	0.0001872	0.0035	0.76		2121.58	2121.58	No	4.18	Si
SLU 79	fin.	1.39	-483	-0.0000009	0.0001872	0.0035	0.76		2116.84	2116.84	No	1528.11	Si
SLU 75	ini.	-506.19	-1457	-0.0004134	0.0001872	0.0035	0.76		2121.58	2121.58	No	4.19	Si
SLU 75	fin.	0.29	-488	-0.0000002	0.0001872	0.0035	0.76		2116.84	2116.84	No	7220.82	Si
SLU 81	ini.	-558.04	-1605	-0.0004647	0.0001872	0.0035	0.76		2121.58	2121.58	No	3.8	Si
SLU 81	fin.	-8.02	-602	-0.0000055	0.0001872	0.0035	0.76		2121.58	2121.58	No	264.47	Si
SLU 80	ini.	-506.19	-1457	-0.0004134	0.0001872	0.0035	0.76		2121.58	2121.58	No	4.19	Si
SLU 80	fin.	0.29	-488	-0.0000002	0.0001872	0.0035	0.76		2116.84	2116.84	No	7220.82	Si
SLU 83	ini.	-558.04	-1605	-0.0004647	0.0001872	0.0035	0.76		2121.58	2121.58	No	3.8	Si
SLU 83	fin.	-8.02	-602	-0.0000055	0.0001872	0.0035	0.76		2121.58	2121.58	No	264.47	Si
SLU 84	ini.	-557.09	-1603	-0.0004638	0.0001872	0.0035	0.76		2121.58	2121.58	No	3.81	Si
SLU 84	fin.	-9.11	-606	-0.0000062	0.0001872	0.0035	0.76		2121.58	2121.58	No	232.78	Si
SLU 74	ini.	-507.14	-1459	-0.0004143	0.0001872	0.0035	0.76		2121.58	2121.58	No	4.18	Si
SLU 74	fin.	1.39	-483	-0.0000009	0.0001872	0.0035	0.76		2116.84	2116.84	No	1528.11	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-557.09	2705	0.76	0	367	6026	3414	1938	5352	No	1.98	Si
SLU 82	fin.	-9.11	-2097	0.76	0	285	6026	3414	1938	5352	No	2.55	Si
SLU 83	ini.	-558.04	2708	0.76	0	367	6026	3414	1938	5352	No	1.98	Si
SLU 83	fin.	-8.02	-2094	0.76	0	284	6026	3414	1938	5352	No	2.56	Si
SLU 40	ini.	-497.06	2481	0.76	0	354	6026	3414	1938	5352	No	2.16	Si
SLU 40	fin.	-20.41	-2074	0.76	0	287	6026	3414	1938	5352	No	2.58	Si
SLU 74	ini.	-507.14	2410	0.76	0	356	6026	3414	1938	5352	No	2.22	Si
SLU 74	fin.	1.39	-1752	0.76	0	273	6026	3414	1938	5352	No	3.05	Si
SLU 39	ini.	-498.02	2484	0.76	0	354	6026	3414	1938	5352	No	2.15	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 39	fin.	-19.32	-2070	0.76	0	286	6026	3414	1938	5352	No	2.58	Si
SLU 42	ini.	-497.06	2481	0.76	0	354	6026	3414	1938	5352	No	2.16	Si
SLU 42	fin.	-20.41	-2074	0.76	0	287	6026	3414	1938	5352	No	2.58	Si
SLU 77	ini.	-507.14	2410	0.76	0	356	6026	3414	1938	5352	No	2.22	Si
SLU 77	fin.	1.39	-1752	0.76	0	273	6026	3414	1938	5352	No	3.05	Si
SLU 41	ini.	-498.02	2484	0.76	0	354	6026	3414	1938	5352	No	2.15	Si
SLU 41	fin.	-19.32	-2070	0.76	0	286	6026	3414	1938	5352	No	2.58	Si
SLU 81	ini.	-558.04	2708	0.76	0	367	6026	3414	1938	5352	No	1.98	Si
SLU 81	fin.	-8.02	-2094	0.76	0	284	6026	3414	1938	5352	No	2.56	Si
SLU 84	ini.	-557.09	2705	0.76	0	367	6026	3414	1938	5352	No	1.98	Si
SLU 84	fin.	-9.11	-2097	0.76	0	285	6026	3414	1938	5352	No	2.55	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-470.96	-1251	-0.0003607	0.0002807	0.0035	0.76		2113.1	2113.1		4.49	Si
SLV 12	fin.	181.13	443	-0.0001287	0.0002807	0.0035	0.76		2108.14	2108.14		11.64	Si
SLV 11	ini.	-529.56	-1348	-0.0004132	0.0002807	0.0035	0.76		2113.1	2113.1		3.99	Si
SLV 11	fin.	297.31	832	-0.0002172	0.0002807	0.0035	0.76		2108.14	2108.14		7.09	Si
SLV 3	ini.	-96.03	-680	-0.0000668	0.0002807	0.0035	0.76		2113.1	2113.1		22.01	Si
SLV 3	fin.	-375.71	-1571	-0.0002797	0.0002807	0.0035	0.76		2113.1	2113.1		5.62	Si
SLV 15	ini.	-657.62	-1416	-0.0005346	0.0002807	0.0035	0.76		2113.1	2113.1		3.21	Si
SLV 15	fin.	566.84	1741	-0.0004487	0.0002807	0.0035	0.76		2108.14	2108.14		3.72	Si
SLV 1	ini.	-38.13	-519	-0.0000262	0.0002807	0.0035	0.76		2113.1	2113.1		55.42	Si
SLV 1	fin.	-425.83	-1780	-0.0003216	0.0002807	0.0035	0.76		2113.1	2113.1		4.96	Si
SLV 13	ini.	-599.73	-1255	-0.0004785	0.0002807	0.0035	0.76		2113.1	2113.1		3.52	Si
SLV 13	fin.	516.73	1532	-0.0004025	0.0002807	0.0035	0.76		2108.14	2108.14		4.08	Si
SLV 2	ini.	18.57	-425	-0.0000127	0.0002807	0.0035	0.76		2108.14	2108.14		113.55	Si
SLV 2	fin.	-538.23	-2156	-0.0004211	0.0002807	0.0035	0.76		2113.1	2113.1		3.93	Si
SLV 4	ini.	-39.33	-587	-0.0000271	0.0002807	0.0035	0.76		2113.1	2113.1		53.72	Si
SLV 4	fin.	-488.11	-1947	-0.0003759	0.0002807	0.0035	0.76		2113.1	2113.1		4.33	Si
SLV 14	ini.	-543.03	-1161	-0.0004255	0.0002807	0.0035	0.76		2113.1	2113.1		3.89	Si
SLV 14	fin.	404.32	1156	-0.0003042	0.0002807	0.0035	0.76		2108.14	2108.14		5.21	Si
SLV 16	ini.	-600.93	-1322	-0.0004797	0.0002807	0.0035	0.76		2113.1	2113.1		3.52	Si
SLV 16	fin.	454.44	1365	-0.0003471	0.0002807	0.0035	0.76		2108.14	2108.14		4.64	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-529.56	2108	0.76	0	467	6026	5121	1938	6493		3.08	Si
SLV 11	fin.	297.31	-162	0.76	0	205	6026	5121	1938	6232		38.39	Si
SLV 2	ini.	18.57	426	0.76	0	379	6026	5121	1938	6405		15.03	Si
SLV 2	fin.	-538.23	-2044	0.76	0	532	6026	5121	1938	6559		3.21	Si
SLV 7	ini.	-361.09	1628	0.76	0	447	6026	5121	1938	6474		3.98	Si
SLV 7	fin.	14.55	-736	0.76	0	350	6026	5121	1938	6376		8.66	Si
SLV 16	ini.	-600.93	2208	0.76	0	465	6026	5121	1938	6491		2.94	Si
SLV 16	fin.	454.44	47	0.76	0	0	6026	5121	1938	6026		129.16	Si
SLV 15	ini.	-657.62	2456	0.76	0	473	6026	5121	1938	6499		2.65	Si
SLV 15	fin.	566.84	295	0.76	0	0	6026	5121	1938	6026		20.43	Si
SLV 12	ini.	-470.96	1852	0.76	0	458	6026	5121	1938	6485		3.5	Si
SLV 12	fin.	181.13	-419	0.76	0	271	6026	5121	1938	6297		15.03	Si
SLV 4	ini.	-39.33	606	0.76	0	396	6026	5121	1938	6422		10.61	Si
SLV 4	fin.	-488.11	-1866	0.76	0	516	6026	5121	1938	6542		3.51	Si
SLV 13	ini.	-599.73	2277	0.76	0	459	6026	5121	1938	6485		2.85	Si
SLV 13	fin.	516.73	117	0.76	0	0	6026	5121	1938	6026		51.65	Si
SLV 1	ini.	-38.13	674	0.76	0	389	6026	5121	1938	6415		9.51	Si
SLV 1	fin.	-425.83	-1796	0.76	0	503	6026	5121	1938	6529		3.64	Si
SLV 14	ini.	-543.03	2028	0.76	0	450	6026	5121	1938	6477		3.19	Si
SLV 14	fin.	404.32	-132	0.76	0	126	6026	5121	1938	6153		46.76	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.213	SLV 15	Si
V_SLV	2.646	SLV 15	Si
PF_SLU	3.802	SLU 81	Si
V_SLU	1.976	SLU 81	Si

Trave di accoppiamento 24

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-12.284	-3.134	3.73	4.49	0.76	-13.684	-3.134	3.73	4.49	0.76	1.4	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 77	ini.	75.18	-144	-0.0000525	0.0001872	0.0035	0.76		2116.84	2116.84	No	28.16	Si
SLU 77	fin.	-573.1	-1732	-0.0004799	0.0001872	0.0035	0.76		2121.58	2121.58	No	3.7	Si
SLU 80	ini.	75.13	-145	-0.0000525	0.0001872	0.0035	0.76		2116.84	2116.84	No	28.17	Si
SLU 80	fin.	-572.59	-1730	-0.0004794	0.0001872	0.0035	0.76		2121.58	2121.58	No	3.71	Si
SLU 82	ini.	70.13	-237	-0.0000489	0.0001872	0.0035	0.76		2116.84	2116.84	No	30.18	Si
SLU 82	fin.	-628.58	-1898	-0.000537	0.0001872	0.0035	0.76		2121.58	2121.58	No	3.38	Si
SLU 75	ini.	75.13	-145	-0.0000525	0.0001872	0.0035	0.76		2116.84	2116.84	No	28.17	Si
SLU 75	fin.	-572.59	-1730	-0.0004794	0.0001872	0.0035	0.76		2121.58	2121.58	No	3.71	Si
SLU 78	ini.	75.13	-145	-0.0000525	0.0001872	0.0035	0.76		2116.84	2116.84	No	28.17	Si
SLU 78	fin.	-572.59	-1730	-0.0004794	0.0001872	0.0035	0.76		2121.58	2121.58	No	3.71	Si
SLU 83	ini.	70.18	-236	-0.0000489	0.0001872	0.0035	0.76		2116.84	2116.84	No	30.16	Si
SLU 83	fin.	-629.09	-1900	-0.0005375	0.0001872	0.0035	0.76		2121.58	2121.58	No	3.37	Si
SLU 84	ini.	70.13	-237	-0.0000489	0.0001872	0.0035	0.76		2116.84	2116.84	No	30.18	Si
SLU 84	fin.	-628.58	-1898	-0.000537	0.0001872	0.0035	0.76		2121.58	2121.58	No	3.38	Si
SLU 81	ini.	70.18	-236	-0.0000489	0.0001872	0.0035	0.76		2116.84	2116.84	No	30.16	Si
SLU 81	fin.	-629.09	-1900	-0.0005375	0.0001872	0.0035	0.76		2121.58	2121.58	No	3.37	Si
SLU 74	ini.	75.18	-144	-0.0000525	0.0001872	0.0035	0.76		2116.84	2116.84	No	28.16	Si
SLU 74	fin.	-573.1	-1732	-0.0004799	0.0001872	0.0035	0.76		2121.58	2121.58	No	3.7	Si
SLU 79	ini.	75.18	-144	-0.0000525	0.0001872	0.0035	0.76		2116.84	2116.84	No	28.16	Si
SLU 79	fin.	-573.1	-1732	-0.0004799	0.0001872	0.0035	0.76		2121.58	2121.58	No	3.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 42	ini.	47.74	1801	0.76	0	255	6026	3414	1938	5352	No	2.97	Si
SLU 42	fin.	-559.86	-2837	0.76	0	373	6026	3414	1938	5352	No	1.89	Si
SLU 84	ini.	70.13	1787	0.76	0	248	6026	3414	1938	5352	No	3	Si
SLU 84	fin.	-628.58	-3083	0.76	0	388	6026	3414	1938	5352	No	1.74	Si
SLU 77	ini.	75.18	1466	0.76	0	237	6026	3414	1938	5352	No	3.65	Si
SLU 77	fin.	-573.1	-2741	0.76	0	376	6026	3414	1938	5352	No	1.95	Si
SLU 81	ini.	70.18	1786	0.76	0	247	6026	3414	1938	5352	No	3	Si
SLU 81	fin.	-629.09	-3084	0.76	0	388	6026	3414	1938	5352	No	1.74	Si
SLU 82	ini.	70.13	1787	0.76	0	248	6026	3414	1938	5352	No	3	Si
SLU 82	fin.	-628.58	-3083	0.76	0	388	6026	3414	1938	5352	No	1.74	Si
SLU 40	ini.	47.74	1801	0.76	0	255	6026	3414	1938	5352	No	2.97	Si
SLU 40	fin.	-559.86	-2837	0.76	0	373	6026	3414	1938	5352	No	1.89	Si
SLU 83	ini.	70.18	1786	0.76	0	247	6026	3414	1938	5352	No	3	Si
SLU 83	fin.	-629.09	-3084	0.76	0	388	6026	3414	1938	5352	No	1.74	Si
SLU 41	ini.	47.79	1799	0.76	0	254	6026	3414	1938	5352	No	2.97	Si
SLU 41	fin.	-560.37	-2838	0.76	0	373	6026	3414	1938	5352	No	1.89	Si
SLU 39	ini.	47.79	1799	0.76	0	254	6026	3414	1938	5352	No	2.97	Si
SLU 39	fin.	-560.37	-2838	0.76	0	373	6026	3414	1938	5352	No	1.89	Si
SLU 74	ini.	75.18	1466	0.76	0	237	6026	3414	1938	5352	No	3.65	Si
SLU 74	fin.	-573.1	-2741	0.76	0	376	6026	3414	1938	5352	No	1.95	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	591.1	1806	-0.0004716	0.0002807	0.0035	0.76		2108.14	2108.14		3.57	Si
SLV 4	fin.	-664.84	-1909	-0.0005417	0.0002807	0.0035	0.76		2113.1	2113.1		3.18	Si
SLV 11	ini.	-52.76	-293	-0.0000364	0.0002807	0.0035	0.76		2113.1	2113.1		40.05	Si
SLV 11	fin.	-366.84	-1184	-0.0002724	0.0002807	0.0035	0.76		2113.1	2113.1		5.76	Si
SLV 1	ini.	439.72	1248	-0.0003344	0.0002807	0.0035	0.76		2108.14	2108.14		4.79	Si
SLV 1	fin.	-533.56	-1575	-0.0004168	0.0002807	0.0035	0.76		2113.1	2113.1		3.96	Si
SLV 3	ini.	483.79	1447	-0.0003729	0.0002807	0.0035	0.76		2108.14	2108.14		4.36	Si
SLV 3	fin.	-598.94	-1782	-0.0004778	0.0002807	0.0035	0.76		2113.1	2113.1		3.53	Si
SLV 12	ini.	58.16	78	-0.0000402	0.0002807	0.0035	0.76		2108.14	2108.14		36.25	Si
SLV 12	fin.	-434.96	-1315	-0.0003295	0.0002807	0.0035	0.76		2113.1	2113.1		4.86	Si
SLV 7	ini.	217.77	614	-0.000156	0.0002807	0.0035	0.76		2108.14	2108.14		9.68	Si
SLV 7	fin.	-508.65	-1571	-0.0003942	0.0002807	0.0035	0.76		2113.1	2113.1		4.15	Si
SLV 15	ini.	-418	-1579	-0.000315	0.0002807	0.0035	0.76		2113.1	2113.1		5.06	Si
SLV 15	fin.	-126.22	-492	-0.0000884	0.0002807	0.0035	0.76		2113.1	2113.1		16.74	Si
SLV 13	ini.	-462.06	-1778	-0.0003529	0.0002807	0.0035	0.76		2113.1	2113.1		4.57	Si
SLV 13	fin.	-60.85	-285	-0.000042	0.0002807	0.0035	0.76		2113.1	2113.1		34.73	Si
SLV 2	ini.	547.04	1607	-0.0004303	0.0002807	0.0035	0.76		2108.14	2108.14		3.85	Si
SLV 2	fin.	-599.47	-1702	-0.0004783	0.0002807	0.0035	0.76		2113.1	2113.1		3.52	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	328.69	985	-0.0002421	0.0002807	0.0035	0.76		2108.14	2108.14		6.41	Si
SLV 8	fin.	-576.78	-1702	-0.0004569	0.0002807	0.0035	0.76		2113.1	2113.1		3.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	ini.	181.8	578	0.76	0	289	6026	5121	1938	6315		10.93	Si
SLV 6	fin.	-358.85	-1719	0.76	0	437	6026	5121	1938	6463		3.76	Si
SLV 8	ini.	328.69	-51	0.76	0	172	6026	5121	1938	6199		120.51	Si
SLV 8	fin.	-576.78	-2348	0.76	0	496	6026	5121	1938	6523		2.78	Si
SLV 2	ini.	547.04	-321	0.76	0	0	6026	5121	1938	6026		18.78	Si
SLV 2	fin.	-599.47	-2565	0.76	0	496	6026	5121	1938	6523		2.54	Si
SLV 7	ini.	217.77	213	0.76	0	244	6026	5121	1938	6271		29.46	Si
SLV 7	fin.	-508.65	-2084	0.76	0	486	6026	5121	1938	6512		3.12	Si
SLV 1	ini.	439.72	-65	0.76	0	92	6026	5121	1938	6119		93.71	Si
SLV 1	fin.	-533.56	-2310	0.76	0	486	6026	5121	1938	6512		2.82	Si
SLV 12	ini.	58.16	534	0.76	0	321	6026	5121	1938	6347		11.89	Si
SLV 12	fin.	-434.96	-1808	0.76	0	464	6026	5121	1938	6490		3.59	Si
SLV 13	ini.	-462.06	1885	0.76	0	503	6026	5121	1938	6529		3.46	Si
SLV 13	fin.	-60.85	-509	0.76	0	364	6026	5121	1938	6390		12.56	Si
SLV 3	ini.	483.79	-254	0.76	0	0	6026	5121	1938	6026		23.73	Si
SLV 3	fin.	-598.94	-2498	0.76	0	503	6026	5121	1938	6529		2.61	Si
SLV 4	ini.	591.1	-510	0.76	0	0	6026	5121	1938	6026		11.82	Si
SLV 4	fin.	-664.84	-2754	0.76	0	513	6026	5121	1938	6540		2.37	Si
SLV 15	ini.	-418	1697	0.76	0	486	6026	5121	1938	6513		3.84	Si
SLV 15	fin.	-126.22	-697	0.76	0	386	6026	5121	1938	6412		9.19	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.178	SLV 4	Si
V_SLV	2.375	SLV 4	Si
PF_SLU	3.372	SLU 81	Si
V_SLU	1.735	SLU 81	Si

Trave di accoppiamento 25

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.264	-3.134	0.73	2.73	2	-11.764	-3.134	0.73	2.73	2	0.5	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	ini.	-313.07	-796	-0.0000313	0.0001872	0.0035	2		14219.44	14219.44	No	45.42	Si
SLU 79	fin.	-566.71	-561	-0.0000573	0.0001872	0.0035	2		14219.44	14219.44	No	25.09	Si
SLU 83	ini.	-353.84	-906	-0.0000355	0.0001872	0.0035	2		14219.44	14219.44	No	40.19	Si
SLU 83	fin.	-586.27	-660	-0.0000593	0.0001872	0.0035	2		14219.44	14219.44	No	24.25	Si
SLU 78	ini.	-310.96	-795	-0.0000311	0.0001872	0.0035	2		14219.44	14219.44	No	45.73	Si
SLU 78	fin.	-569.07	-560	-0.0000575	0.0001872	0.0035	2		14219.44	14219.44	No	24.99	Si
SLU 81	ini.	-353.84	-906	-0.0000355	0.0001872	0.0035	2		14219.44	14219.44	No	40.19	Si
SLU 81	fin.	-586.27	-660	-0.0000593	0.0001872	0.0035	2		14219.44	14219.44	No	24.25	Si
SLU 75	ini.	-310.96	-795	-0.0000311	0.0001872	0.0035	2		14219.44	14219.44	No	45.73	Si
SLU 75	fin.	-569.07	-560	-0.0000575	0.0001872	0.0035	2		14219.44	14219.44	No	24.99	Si
SLU 73	ini.	-309.55	-794	-0.000031	0.0001872	0.0035	2		14219.44	14219.44	No	45.94	Si
SLU 73	fin.	-570.64	-560	-0.0000577	0.0001872	0.0035	2		14219.44	14219.44	No	24.92	Si
SLU 76	ini.	-309.55	-794	-0.000031	0.0001872	0.0035	2		14219.44	14219.44	No	45.94	Si
SLU 76	fin.	-570.64	-560	-0.0000577	0.0001872	0.0035	2		14219.44	14219.44	No	24.92	Si
SLU 82	ini.	-351.73	-905	-0.0000352	0.0001872	0.0035	2		14219.44	14219.44	No	40.43	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	fin.	-588.63	-660	-0.0000595	0.0001872	0.0035	2		14219.44	14219.44	No	24.16	Si
SLU 84	ini.	-351.73	-905	-0.0000352	0.0001872	0.0035	2		14219.44	14219.44	No	40.43	Si
SLU 84	fin.	-588.63	-660	-0.0000595	0.0001872	0.0035	2		14219.44	14219.44	No	24.16	Si
SLU 80	ini.	-310.96	-795	-0.0000311	0.0001872	0.0035	2		14219.44	14219.44	No	45.73	Si
SLU 80	fin.	-569.07	-560	-0.0000575	0.0001872	0.0035	2		14219.44	14219.44	No	24.99	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-310.96	-3783	2	0	1005	3965	8983	5100	4969	No	1.31	Si
SLU 78	fin.	-569.07	-179	2	0	967	3965	8983	5100	4931	No	27.59	Si
SLU 82	ini.	-351.73	-4013	2	0	1022	3965	8983	5100	4987	No	1.24	Si
SLU 82	fin.	-588.63	-57	2	0	983	3965	8983	5100	4948	No	87.28	Si
SLU 76	ini.	-309.55	-3792	2	0	1005	3965	8983	5100	4969	No	1.31	Si
SLU 76	fin.	-570.64	-183	2	0	967	3965	8983	5100	4931	No	26.92	Si
SLU 75	ini.	-310.96	-3783	2	0	1005	3965	8983	5100	4969	No	1.31	Si
SLU 75	fin.	-569.07	-179	2	0	967	3965	8983	5100	4931	No	27.59	Si
SLU 81	ini.	-353.84	-4000	2	0	1022	3965	8983	5100	4987	No	1.25	Si
SLU 81	fin.	-586.27	-50	2	0	983	3965	8983	5100	4948	No	98.87	Si
SLU 79	ini.	-313.07	-3770	2	0	1005	3965	8983	5100	4970	No	1.32	Si
SLU 79	fin.	-566.71	-172	2	0	967	3965	8983	5100	4932	No	28.65	Si
SLU 84	ini.	-351.73	-4013	2	0	1022	3965	8983	5100	4987	No	1.24	Si
SLU 84	fin.	-588.63	-57	2	0	983	3965	8983	5100	4948	No	87.28	Si
SLU 73	ini.	-309.55	-3792	2	0	1005	3965	8983	5100	4969	No	1.31	Si
SLU 73	fin.	-570.64	-183	2	0	967	3965	8983	5100	4931	No	26.92	Si
SLU 80	ini.	-310.96	-3783	2	0	1005	3965	8983	5100	4969	No	1.31	Si
SLU 80	fin.	-569.07	-179	2	0	967	3965	8983	5100	4931	No	27.59	Si
SLU 83	ini.	-353.84	-4000	2	0	1022	3965	8983	5100	4987	No	1.25	Si
SLU 83	fin.	-586.27	-50	2	0	983	3965	8983	5100	4948	No	98.87	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	-78.17	-437	-0.0000077	0.0002807	0.0035	2		13933.43	13933.43		178.25	Si
SLV 4	fin.	-1125.32	-77	-0.000115	0.0002807	0.0035	2		13933.43	13933.43		12.38	Si
SLV 11	ini.	-407.13	-479	-0.0000407	0.0002807	0.0035	2		13933.43	13933.43		34.22	Si
SLV 11	fin.	-12.68	-384	-0.0000013	0.0002807	0.0035	2		13933.43	13933.43		1099.27	Si
SLV 5	ini.	-30.02	-446	-0.000003	0.0002807	0.0035	2		13933.43	13933.43		464.1	Si
SLV 5	fin.	-616.7	-261	-0.0000621	0.0002807	0.0035	2		13933.43	13933.43		22.59	Si
SLV 6	ini.	40.49	-446	-0.000004	0.0002807	0.0035	2		13920.08	13920.08		343.77	Si
SLV 6	fin.	-801.35	-211	-0.0000811	0.0002807	0.0035	2		13933.43	13933.43		17.39	Si
SLV 8	ini.	-266.37	-462	-0.0000265	0.0002807	0.0035	2		13933.43	13933.43		52.31	Si
SLV 8	fin.	-593.43	-216	-0.0000597	0.0002807	0.0035	2		13933.43	13933.43		23.48	Si
SLV 1	ini.	-54.33	-433	-0.0000054	0.0002807	0.0035	2		13933.43	13933.43		256.46	Si
SLV 1	fin.	-1009.06	-123	-0.0001028	0.0002807	0.0035	2		13933.43	13933.43		13.81	Si
SLV 10	ini.	-29.75	-462	-0.0000029	0.0002807	0.0035	2		13933.43	13933.43		468.38	Si
SLV 10	fin.	-405.24	-330	-0.0000405	0.0002807	0.0035	2		13933.43	13933.43		34.38	Si
SLV 3	ini.	-146.39	-438	-0.0000145	0.0002807	0.0035	2		13933.43	13933.43		95.18	Si
SLV 3	fin.	-946.68	-125	-0.0000962	0.0002807	0.0035	2		13933.43	13933.43		14.72	Si
SLV 7	ini.	-336.89	-462	-0.0000336	0.0002807	0.0035	2		13933.43	13933.43		41.36	Si
SLV 7	fin.	-408.78	-265	-0.0000409	0.0002807	0.0035	2		13933.43	13933.43		34.09	Si
SLV 2	ini.	13.89	-433	-0.0000014	0.0002807	0.0035	2		13920.08	13920.08		1002.16	Si
SLV 2	fin.	-1187.69	-75	-0.0001216	0.0002807	0.0035	2		13933.43	13933.43		11.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-100.26	-2450	2	0	1386	3965	13475	5100	5351		2.18	Si
SLV 9	fin.	-220.6	337	2	0	1372	3965	13475	5100	5337		15.85	Si
SLV 2	ini.	13.89	-5506	2	0	1381	3965	13475	5100	5346		0.97	No
SLV 2	fin.	-1187.69	-2960	2	0	1318	3965	13475	5100	5283		1.78	Si
SLV 3	ini.	-146.39	-4266	2	0	1382	3965	13475	5100	5347		1.25	Si
SLV 3	fin.	-946.68	-2204	2	0	1327	3965	13475	5100	5292		2.4	Si
SLV 5	ini.	-30.02	-3842	2	0	1384	3965	13475	5100	5348		1.39	Si
SLV 5	fin.	-616.7	-1031	2	0	1351	3965	13475	5100	5316		5.15	Si
SLV 1	ini.	-54.33	-4825	2	0	1381	3965	13475	5100	5346		1.11	Si
SLV 1	fin.	-1009.06	-2404	2	0	1327	3965	13475	5100	5292		2.2	Si
SLV 8	ini.	-266.37	-2682	2	0	1386	3965	13475	5100	5351		2	Si
SLV 8	fin.	-593.43	-940	2	0	1343	3965	13475	5100	5308		5.65	Si
SLV 15	ini.	-380.52	374	2	0	1392	3965	13475	5100	5356		14.33	Si
SLV 15	fin.	373.67	2356	2	0	1396	3965	13475	5100	5361		2.28	Si
SLV 10	ini.	-29.75	-3154	2	0	1386	3965	13475	5100	5351		1.7	Si
SLV 10	fin.	-405.24	-238	2	0	1363	3965	13475	5100	5328		22.38	Si
SLV 6	ini.	40.49	-4546	2	0	1384	3965	13475	5100	5348		1.18	Si
SLV 6	fin.	-801.35	-1606	2	0	1342	3965	13475	5100	5307		3.3	Si
SLV 4	ini.	-78.17	-4947	2	0	1382	3965	13475	5100	5347		1.08	Si
SLV 4	fin.	-1125.32	-2760	2	0	1318	3965	13475	5100	5283		1.91	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	11.732	SLV 2	Si
V_SLV	0.971	SLV 2	No
PF_SLU	24.157	SLU 82	Si
V_SLU	1.243	SLU 82	Si

Trave di accoppiamento 26

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-11.264	-3.134	3.53	4.49	0.96	-11.764	-3.134	3.53	4.49	0.96	0.5	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 44	ini.	80.32	10	-0.000035	0.0001872	0.0035	0.96		3348.32	3348.32	No	41.69	Si
SLU 44	fin.	-45.24	-17	-0.0000195	0.0001872	0.0035	0.96		3354.47	3354.47	No	74.15	Si
SLU 46	ini.	80.23	11	-0.0000349	0.0001872	0.0035	0.96		3348.32	3348.32	No	41.74	Si
SLU 46	fin.	-44.42	-15	-0.0000192	0.0001872	0.0035	0.96		3354.47	3354.47	No	75.52	Si
SLU 84	ini.	-0.64	-422	-0.0000003	0.0001872	0.0035	0.96		3354.47	3354.47	No	5270.43	Si
SLU 84	fin.	-63.23	-355	-0.0000274	0.0001872	0.0035	0.96		3354.47	3354.47	No	53.06	Si
SLU 47	ini.	80.32	10	-0.000035	0.0001872	0.0035	0.96		3348.32	3348.32	No	41.69	Si
SLU 47	fin.	-45.24	-17	-0.0000195	0.0001872	0.0035	0.96		3354.47	3354.47	No	74.15	Si
SLU 49	ini.	80.23	11	-0.0000349	0.0001872	0.0035	0.96		3348.32	3348.32	No	41.74	Si
SLU 49	fin.	-44.42	-15	-0.0000192	0.0001872	0.0035	0.96		3354.47	3354.47	No	75.52	Si
SLU 51	ini.	80.23	11	-0.0000349	0.0001872	0.0035	0.96		3348.32	3348.32	No	41.74	Si
SLU 51	fin.	-44.42	-15	-0.0000192	0.0001872	0.0035	0.96		3354.47	3354.47	No	75.52	Si
SLU 50	ini.	80.09	14	-0.0000349	0.0001872	0.0035	0.96		3348.32	3348.32	No	41.81	Si
SLU 50	fin.	-43.18	-12	-0.0000186	0.0001872	0.0035	0.96		3354.47	3354.47	No	77.69	Si
SLU 43	ini.	80.09	14	-0.0000349	0.0001872	0.0035	0.96		3348.32	3348.32	No	41.81	Si
SLU 43	fin.	-43.18	-12	-0.0000186	0.0001872	0.0035	0.96		3354.47	3354.47	No	77.69	Si
SLU 45	ini.	80.09	14	-0.0000349	0.0001872	0.0035	0.96		3348.32	3348.32	No	41.81	Si
SLU 45	fin.	-43.18	-12	-0.0000186	0.0001872	0.0035	0.96		3354.47	3354.47	No	77.69	Si
SLU 48	ini.	80.09	14	-0.0000349	0.0001872	0.0035	0.96		3348.32	3348.32	No	41.81	Si
SLU 48	fin.	-43.18	-12	-0.0000186	0.0001872	0.0035	0.96		3354.47	3354.47	No	77.69	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-0.78	546	0.96	0	488	3965	4312	2448	4453	No	8.16	Si
SLU 83	fin.	-61.99	-787	0.96	0	477	3965	4312	2448	4442	No	5.65	Si
SLU 75	ini.	18.02	419	0.96	0	473	3965	4312	2448	4438	No	10.6	Si
SLU 75	fin.	-59.52	-748	0.96	0	466	3965	4312	2448	4431	No	5.92	Si
SLU 76	ini.	18.12	416	0.96	0	473	3965	4312	2448	4438	No	10.66	Si
SLU 76	fin.	-60.35	-750	0.96	0	466	3965	4312	2448	4431	No	5.9	Si
SLU 84	ini.	-0.64	542	0.96	0	489	3965	4312	2448	4453	No	8.21	Si
SLU 84	fin.	-63.23	-790	0.96	0	478	3965	4312	2448	4443	No	5.62	Si
SLU 81	ini.	-0.78	546	0.96	0	488	3965	4312	2448	4453	No	8.16	Si
SLU 81	fin.	-61.99	-787	0.96	0	477	3965	4312	2448	4442	No	5.65	Si
SLU 79	ini.	17.88	422	0.96	0	473	3965	4312	2448	4438	No	10.52	Si
SLU 79	fin.	-58.29	-745	0.96	0	465	3965	4312	2448	4430	No	5.95	Si
SLU 80	ini.	18.02	419	0.96	0	473	3965	4312	2448	4438	No	10.6	Si
SLU 80	fin.	-59.52	-748	0.96	0	466	3965	4312	2448	4431	No	5.92	Si
SLU 82	ini.	-0.64	542	0.96	0	489	3965	4312	2448	4453	No	8.21	Si
SLU 82	fin.	-63.23	-790	0.96	0	478	3965	4312	2448	4443	No	5.62	Si
SLU 78	ini.	18.02	419	0.96	0	473	3965	4312	2448	4438	No	10.6	Si
SLU 78	fin.	-59.52	-748	0.96	0	466	3965	4312	2448	4431	No	5.92	Si
SLU 73	ini.	18.12	416	0.96	0	473	3965	4312	2448	4438	No	10.66	Si
SLU 73	fin.	-60.35	-750	0.96	0	466	3965	4312	2448	4431	No	5.9	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	250.53	576	-0.0001112	0.0002807	0.0035	0.96		3373	3373		13.46	Si
SLV 1	fin.	26.04	604	-0.0000112	0.0002807	0.0035	0.96		3373	3373		129.52	Si
SLV 3	ini.	281.99	814	-0.0001257	0.0002807	0.0035	0.96		3373	3373		11.96	Si
SLV 3	fin.	97.27	859	-0.0000423	0.0002807	0.0035	0.96		3373	3373		34.68	Si
SLV 10	ini.	-55.48	-686	-0.000024	0.0002807	0.0035	0.96		3379.17	3379.17		60.91	Si
SLV 10	fin.	-187.05	-718	-0.0000821	0.0002807	0.0035	0.96		3379.17	3379.17		18.07	Si
SLV 14	ini.	-204.17	-1043	-0.0000899	0.0002807	0.0035	0.96		3379.17	3379.17		16.55	Si
SLV 14	fin.	-175.75	-1076	-0.0000771	0.0002807	0.0035	0.96		3379.17	3379.17		19.23	Si
SLV 4	ini.	353.56	999	-0.0001592	0.0002807	0.0035	0.96		3373	3373		9.54	Si
SLV 4	fin.	100.47	1042	-0.0000437	0.0002807	0.0035	0.96		3373	3373		33.57	Si
SLV 15	ini.	-244.27	-990	-0.0001081	0.0002807	0.0035	0.96		3379.17	3379.17		13.83	Si
SLV 15	fin.	-107.72	-1003	-0.0000468	0.0002807	0.0035	0.96		3379.17	3379.17		31.37	Si
SLV 9	ini.	-129.45	-877	-0.0000564	0.0002807	0.0035	0.96		3379.17	3379.17		26.1	Si
SLV 9	fin.	-190.36	-907	-0.0000836	0.0002807	0.0035	0.96		3379.17	3379.17		17.75	Si
SLV 13	ini.	-275.73	-1228	-0.0001226	0.0002807	0.0035	0.96		3379.17	3379.17		12.26	Si
SLV 13	fin.	-178.95	-1258	-0.0000785	0.0002807	0.0035	0.96		3379.17	3379.17		18.88	Si
SLV 2	ini.	322.09	761	-0.0001444	0.0002807	0.0035	0.96		3373	3373		10.47	Si
SLV 2	fin.	29.24	787	-0.0000126	0.0002807	0.0035	0.96		3373	3373		115.35	Si
SLV 8	ini.	207.27	649	-0.0000914	0.0002807	0.0035	0.96		3373	3373		16.27	Si
SLV 8	fin.	111.88	691	-0.0000487	0.0002807	0.0035	0.96		3373	3373		30.15	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 9	ini.	-129.45	114	0.96	0	770	3965	6468	2448	4735		41.55	Si
SLV 9	fin.	-190.36	-532	0.96	0	774	3965	6468	2448	4739		8.92	Si
SLV 3	ini.	281.99	73	0.96	0	453	3965	6468	2448	4418		60.64	Si
SLV 3	fin.	97.27	-630	0.96	0	442	3965	6468	2448	4406		7	Si
SLV 6	ini.	102.4	-153	0.96	0	652	3965	6468	2448	4617		30.16	Si
SLV 6	fin.	-125.55	-817	0.96	0	655	3965	6468	2448	4619		5.65	Si
SLV 15	ini.	-244.27	483	0.96	0	787	3965	6468	2448	4752		9.83	Si
SLV 15	fin.	-107.72	-156	0.96	0	789	3965	6468	2448	4753		30.37	Si
SLV 8	ini.	207.27	198	0.96	0	493	3965	6468	2448	4458		22.53	Si
SLV 8	fin.	111.88	-492	0.96	0	483	3965	6468	2448	4448		9.05	Si
SLV 5	ini.	28.43	-9	0.96	0	685	3965	6468	2448	4650		504.75	Si
SLV 5	fin.	-128.86	-674	0.96	0	687	3965	6468	2448	4652		6.91	Si
SLV 1	ini.	250.53	-32	0.96	0	510	3965	6468	2448	4475		138.02	Si
SLV 1	fin.	26.04	-727	0.96	0	503	3965	6468	2448	4468		6.14	Si
SLV 4	ini.	353.56	-66	0.96	0	404	3965	6468	2448	4368		65.85	Si
SLV 4	fin.	100.47	-769	0.96	0	391	3965	6468	2448	4356		5.67	Si
SLV 10	ini.	-55.48	-30	0.96	0	741	3965	6468	2448	4706		157.23	Si
SLV 10	fin.	-187.05	-675	0.96	0	746	3965	6468	2448	4711		6.97	Si
SLV 2	ini.	322.09	-172	0.96	0	466	3965	6468	2448	4431		25.82	Si
SLV 2	fin.	29.24	-867	0.96	0	460	3965	6468	2448	4425		5.11	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	9.54	SLV 4	Si
V_SLV	5.106	SLV 2	Si
PF_SLU	41.688	SLU 44	Si
V_SLU	5.623	SLU 82	Si

Trave di accoppiamento 27

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.099	-3.134	0.73	1.73	1	-10.099	-3.134	0.73	1.73	1	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 44	ini.	338.71	-783	-0.0001418	0.0001872	0.0035	1		3643.26	3643.26	No	10.76	Si
SLU 44	fin.	-182.44	213	-0.0000741	0.0001872	0.0035	1		3649.64	3649.64	No	20	Si
SLU 49	ini.	335.18	-779	-0.0001402	0.0001872	0.0035	1		3643.26	3643.26	No	10.87	Si
SLU 49	fin.	-179.32	205	-0.0000728	0.0001872	0.0035	1		3649.64	3649.64	No	20.35	Si
SLU 51	ini.	335.18	-779	-0.0001402	0.0001872	0.0035	1		3643.26	3643.26	No	10.87	Si
SLU 51	fin.	-179.32	205	-0.0000728	0.0001872	0.0035	1		3649.64	3649.64	No	20.35	Si
SLU 68	ini.	325.3	-816	-0.0001358	0.0001872	0.0035	1		3643.26	3643.26	No	11.2	Si
SLU 68	fin.	-166.51	113	-0.0000675	0.0001872	0.0035	1		3649.64	3649.64	No	21.92	Si
SLU 43	ini.	329.89	-773	-0.0001379	0.0001872	0.0035	1		3643.26	3643.26	No	11.04	Si
SLU 43	fin.	-174.63	193	-0.0000708	0.0001872	0.0035	1		3649.64	3649.64	No	20.9	Si
SLU 50	ini.	329.89	-773	-0.0001379	0.0001872	0.0035	1		3643.26	3643.26	No	11.04	Si
SLU 50	fin.	-174.63	193	-0.0000708	0.0001872	0.0035	1		3649.64	3649.64	No	20.9	Si
SLU 45	ini.	329.89	-773	-0.0001379	0.0001872	0.0035	1		3643.26	3643.26	No	11.04	Si
SLU 45	fin.	-174.63	193	-0.0000708	0.0001872	0.0035	1		3649.64	3649.64	No	20.9	Si
SLU 48	ini.	329.89	-773	-0.0001379	0.0001872	0.0035	1		3643.26	3643.26	No	11.04	Si
SLU 48	fin.	-174.63	193	-0.0000708	0.0001872	0.0035	1		3649.64	3649.64	No	20.9	Si
SLU 46	ini.	335.18	-779	-0.0001402	0.0001872	0.0035	1		3643.26	3643.26	No	10.87	Si
SLU 46	fin.	-179.32	205	-0.0000728	0.0001872	0.0035	1		3649.64	3649.64	No	20.35	Si
SLU 47	ini.	338.71	-783	-0.0001418	0.0001872	0.0035	1		3643.26	3643.26	No	10.76	Si
SLU 47	fin.	-182.44	213	-0.0000741	0.0001872	0.0035	1		3649.64	3649.64	No	20	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 41	ini.	155.23	118	1	0	538	7930	4492	2550	7042	No	59.83	Si
SLU 41	fin.	-64.61	671	1	0	487	7930	4492	2550	7042	No	10.49	Si
SLU 42	ini.	160.53	99	1	0	538	7930	4492	2550	7042	No	71.01	Si
SLU 42	fin.	-69.29	660	1	0	485	7930	4492	2550	7042	No	10.67	Si
SLU 39	ini.	155.23	118	1	0	538	7930	4492	2550	7042	No	59.83	Si
SLU 39	fin.	-64.61	671	1	0	487	7930	4492	2550	7042	No	10.49	Si
SLU 81	ini.	234.9	-25	1	0	562	7930	4492	2550	7042	No	277.65	Si
SLU 81	fin.	-109.11	576	1	0	476	7930	4492	2550	7042	No	12.23	Si
SLU 82	ini.	240.19	-44	1	0	563	7930	4492	2550	7042	No	160.39	Si
SLU 82	fin.	-113.8	564	1	0	474	7930	4492	2550	7042	No	12.48	Si
SLU 84	ini.	240.19	-44	1	0	563	7930	4492	2550	7042	No	160.39	Si
SLU 84	fin.	-113.8	564	1	0	474	7930	4492	2550	7042	No	12.48	Si
SLU 83	ini.	234.9	-25	1	0	562	7930	4492	2550	7042	No	277.65	Si
SLU 83	fin.	-109.11	576	1	0	476	7930	4492	2550	7042	No	12.23	Si
SLU 20	ini.	168.65	-5	1	0	532	7930	4492	2550	7042	No	1377.12	Si
SLU 20	fin.	-80.54	513	1	0	471	7930	4492	2550	7042	No	13.72	Si
SLU 18	ini.	168.65	-5	1	0	532	7930	4492	2550	7042	No	1377.12	Si
SLU 18	fin.	-80.54	513	1	0	471	7930	4492	2550	7042	No	13.72	Si
SLU 40	ini.	160.53	99	1	0	538	7930	4492	2550	7042	No	71.01	Si
SLU 40	fin.	-69.29	660	1	0	485	7930	4492	2550	7042	No	10.67	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-458.94	321	-0.0001918	0.0002807	0.0035	1		3671.29	3671.29		8	Si
SLV 15	fin.	297.48	-1269	-0.0001218	0.0002807	0.0035	1		3664.83	3664.83		12.32	Si
SLV 2	ini.	919.09	-1543	-0.0004155	0.0002807	0.0035	1		3664.83	3664.83		3.99	Si
SLV 2	fin.	-528.8	1326	-0.0002233	0.0002807	0.0035	1		3671.29	3671.29		6.94	Si
SLV 10	ini.	589.01	-1136	-0.0002514	0.0002807	0.0035	1		3664.83	3664.83		6.22	Si
SLV 10	fin.	-419.14	718	-0.0001742	0.0002807	0.0035	1		3671.29	3671.29		8.76	Si
SLV 5	ini.	727.29	-1329	-0.0003176	0.0002807	0.0035	1		3664.83	3664.83		5.04	Si
SLV 5	fin.	-462	927	-0.0001932	0.0002807	0.0035	1		3671.29	3671.29		7.95	Si
SLV 9	ini.	435.49	-939	-0.0001817	0.0002807	0.0035	1		3664.83	3664.83		8.42	Si
SLV 9	fin.	-305.57	387	-0.0001251	0.0002807	0.0035	1		3671.29	3671.29		12.01	Si
SLV 1	ini.	770.58	-1353	-0.0003391	0.0002807	0.0035	1		3664.83	3664.83		4.76	Si
SLV 1	fin.	-418.92	1006	-0.0001741	0.0002807	0.0035	1		3671.29	3671.29		8.76	Si
SLV 4	ini.	662.25	-1170	-0.000286	0.0002807	0.0035	1		3664.83	3664.83		5.53	Si
SLV 4	fin.	-333.85	849	-0.0001372	0.0002807	0.0035	1		3671.29	3671.29		11	Si
SLV 3	ini.	513.73	-980	-0.0002168	0.0002807	0.0035	1		3664.83	3664.83		7.13	Si
SLV 3	fin.	-223.98	529	-0.0000907	0.0002807	0.0035	1		3671.29	3671.29		16.39	Si
SLV 11	ini.	-420.66	304	-0.0001749	0.0002807	0.0035	1		3671.29	3671.29		8.73	Si
SLV 11	fin.	344.26	-1201	-0.0001419	0.0002807	0.0035	1		3664.83	3664.83		10.65	Si
SLV 6	ini.	880.81	-1526	-0.0003954	0.0002807	0.0035	1		3664.83	3664.83		4.16	Si
SLV 6	fin.	-575.57	1258	-0.0002447	0.0002807	0.0035	1		3671.29	3671.29		6.38	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-458.94	2005	1	0	591	7930	6738	2550	8520		4.25	Si
SLV 15	fin.	297.48	2021	1	0	853	7930	6738	2550	8783		4.35	Si
SLV 10	ini.	589.01	-1547	1	0	835	7930	6738	2550	8764		5.66	Si
SLV 10	fin.	-419.14	-483	1	0	504	7930	6738	2550	8433		17.47	Si
SLV 4	ini.	662.25	-1570	1	0	840	7930	6738	2550	8769		5.59	Si
SLV 4	fin.	-333.85	-1493	1	0	472	7930	6738	2550	8401		5.63	Si
SLV 6	ini.	880.81	-2467	1	0	889	7930	6738	2550	8818		3.57	Si
SLV 6	fin.	-575.57	-1405	1	0	354	7930	6738	2550	8283		5.9	Si
SLV 5	ini.	727.29	-1940	1	0	862	7930	6738	2550	8791		4.53	Si
SLV 5	fin.	-462	-949	1	0	452	7930	6738	2550	8381		8.84	Si
SLV 11	ini.	-420.66	1996	1	0	594	7930	6738	2550	8524		4.27	Si
SLV 11	fin.	344.26	1481	1	0	844	7930	6738	2550	8773		5.93	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-202.1	1099	1	0	662	7930	6738	2550	8591		7.81	Si
SLV 13	fin.	102.54	1569	1	0	784	7930	6738	2550	8714		5.55	Si
SLV 16	ini.	-310.43	1495	1	0	628	7930	6738	2550	8557		5.72	Si
SLV 16	fin.	187.61	1580	1	0	807	7930	6738	2550	8737		5.53	Si
SLV 2	ini.	919.09	-2475	1	0	891	7930	6738	2550	8821		3.56	Si
SLV 2	fin.	-528.8	-1945	1	0	330	7930	6738	2550	8259		4.25	Si
SLV 1	ini.	770.58	-1965	1	0	865	7930	6738	2550	8795		4.47	Si
SLV 1	fin.	-418.92	-1504	1	0	430	7930	6738	2550	8360		5.56	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.987	SLV 2	Si
V_SLV	3.564	SLV 2	Si
PF_SLU	10.756	SLU 44	Si
V_SLU	10.491	SLU 39	Si

Trave di accoppiamento 28

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.099	-3.134	3.63	4.49	0.86	-10.099	-3.134	3.63	4.49	0.86	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 48	ini.	183.13	379	-0.000102	0.0001872	0.0035	0.86		2699.52	2699.52	No	14.74	Si
SLU 48	fin.	-177.66	-737	-0.0000986	0.0001872	0.0035	0.86		2705.05	2705.05	No	15.23	Si
SLU 46	ini.	186.66	388	-0.000104	0.0001872	0.0035	0.86		2699.52	2699.52	No	14.46	Si
SLU 46	fin.	-181.03	-747	-0.0001006	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.94	Si
SLU 44	ini.	189.01	394	-0.0001054	0.0001872	0.0035	0.86		2699.52	2699.52	No	14.28	Si
SLU 44	fin.	-183.28	-754	-0.0001019	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.76	Si
SLU 68	ini.	182.95	332	-0.0001019	0.0001872	0.0035	0.86		2699.52	2699.52	No	14.76	Si
SLU 68	fin.	-177.28	-837	-0.0000984	0.0001872	0.0035	0.86		2705.05	2705.05	No	15.26	Si
SLU 45	ini.	183.13	379	-0.000102	0.0001872	0.0035	0.86		2699.52	2699.52	No	14.74	Si
SLU 45	fin.	-177.66	-737	-0.0000986	0.0001872	0.0035	0.86		2705.05	2705.05	No	15.23	Si
SLU 47	ini.	189.01	394	-0.0001054	0.0001872	0.0035	0.86		2699.52	2699.52	No	14.28	Si
SLU 47	fin.	-183.28	-754	-0.0001019	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.76	Si
SLU 50	ini.	183.13	379	-0.000102	0.0001872	0.0035	0.86		2699.52	2699.52	No	14.74	Si
SLU 50	fin.	-177.66	-737	-0.0000986	0.0001872	0.0035	0.86		2705.05	2705.05	No	15.23	Si
SLU 43	ini.	183.13	379	-0.000102	0.0001872	0.0035	0.86		2699.52	2699.52	No	14.74	Si
SLU 43	fin.	-177.66	-737	-0.0000986	0.0001872	0.0035	0.86		2705.05	2705.05	No	15.23	Si
SLU 51	ini.	186.66	388	-0.000104	0.0001872	0.0035	0.86		2699.52	2699.52	No	14.46	Si
SLU 51	fin.	-181.03	-747	-0.0001006	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.94	Si
SLU 49	ini.	186.66	388	-0.000104	0.0001872	0.0035	0.86		2699.52	2699.52	No	14.46	Si
SLU 49	fin.	-181.03	-747	-0.0001006	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 76	ini.	166.76	770	0.86	0	288	6819	3863	2193	6056	No	7.86	Si
SLU 76	fin.	-149.62	-2517	0.86	0	448	6819	3863	2193	6056	No	2.41	Si
SLU 82	ini.	157.47	1039	0.86	0	299	6819	3863	2193	6056	No	5.83	Si
SLU 82	fin.	-135.52	-2745	0.86	0	453	6819	3863	2193	6056	No	2.21	Si
SLU 78	ini.	164.41	780	0.86	0	289	6819	3863	2193	6056	No	7.76	Si
SLU 78	fin.	-147.37	-2506	0.86	0	447	6819	3863	2193	6056	No	2.42	Si
SLU 80	ini.	164.41	780	0.86	0	289	6819	3863	2193	6056	No	7.76	Si
SLU 80	fin.	-147.37	-2506	0.86	0	447	6819	3863	2193	6056	No	2.42	Si
SLU 73	ini.	166.76	770	0.86	0	288	6819	3863	2193	6056	No	7.86	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 73	fin.	-149.62	-2517	0.86	0	448	6819	3863	2193	6056	No	2.41	Si
SLU 83	ini.	153.94	1054	0.86	0	301	6819	3863	2193	6056	No	5.74	Si
SLU 83	fin.	-132.14	-2730	0.86	0	451	6819	3863	2193	6056	No	2.22	Si
SLU 84	ini.	157.47	1039	0.86	0	299	6819	3863	2193	6056	No	5.83	Si
SLU 84	fin.	-135.52	-2745	0.86	0	453	6819	3863	2193	6056	No	2.21	Si
SLU 75	ini.	164.41	780	0.86	0	289	6819	3863	2193	6056	No	7.76	Si
SLU 75	fin.	-147.37	-2506	0.86	0	447	6819	3863	2193	6056	No	2.42	Si
SLU 81	ini.	153.94	1054	0.86	0	301	6819	3863	2193	6056	No	5.74	Si
SLU 81	fin.	-132.14	-2730	0.86	0	451	6819	3863	2193	6056	No	2.22	Si
SLU 79	ini.	160.88	796	0.86	0	291	6819	3863	2193	6056	No	7.61	Si
SLU 79	fin.	-144	-2491	0.86	0	446	6819	3863	2193	6056	No	2.43	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 6	ini.	528.67	1242	-0.0003118	0.0002807	0.0035	0.86		2705.45	2705.45		5.12	Si
SLV 6	fin.	-514.97	-1838	-0.0003021	0.0002807	0.0035	0.86		2711.06	2711.06		5.26	Si
SLV 5	ini.	419.6	957	-0.0002416	0.0002807	0.0035	0.86		2705.45	2705.45		6.45	Si
SLV 5	fin.	-422.84	-1575	-0.0002431	0.0002807	0.0035	0.86		2711.06	2711.06		6.41	Si
SLV 11	ini.	-262.85	-802	-0.0001465	0.0002807	0.0035	0.86		2711.06	2711.06		10.31	Si
SLV 11	fin.	264.05	545	-0.0001475	0.0002807	0.0035	0.86		2705.45	2705.45		10.25	Si
SLV 2	ini.	457.66	1016	-0.0002656	0.0002807	0.0035	0.86		2705.45	2705.45		5.91	Si
SLV 2	fin.	-450.84	-1525	-0.0002607	0.0002807	0.0035	0.86		2711.06	2711.06		6.01	Si
SLV 15	ini.	-191.84	-576	-0.0001056	0.0002807	0.0035	0.86		2711.06	2711.06		14.13	Si
SLV 15	fin.	199.92	232	-0.0001104	0.0002807	0.0035	0.86		2705.45	2705.45		13.53	Si
SLV 3	ini.	180.96	291	-0.0000996	0.0002807	0.0035	0.86		2705.45	2705.45		14.95	Si
SLV 3	fin.	-190.81	-720	-0.000105	0.0002807	0.0035	0.86		2711.06	2711.06		14.21	Si
SLV 4	ini.	286.48	566	-0.0001607	0.0002807	0.0035	0.86		2705.45	2705.45		9.44	Si
SLV 4	fin.	-279.94	-974	-0.0001565	0.0002807	0.0035	0.86		2711.06	2711.06		9.68	Si
SLV 10	ini.	416.83	981	-0.0002398	0.0002807	0.0035	0.86		2705.45	2705.45		6.49	Si
SLV 10	fin.	-397.75	-1553	-0.0002275	0.0002807	0.0035	0.86		2711.06	2711.06		6.82	Si
SLV 1	ini.	352.14	741	-0.0002	0.0002807	0.0035	0.86		2705.45	2705.45		7.68	Si
SLV 1	fin.	-361.71	-1270	-0.0002054	0.0002807	0.0035	0.86		2711.06	2711.06		7.5	Si
SLV 9	ini.	307.76	697	-0.0001733	0.0002807	0.0035	0.86		2705.45	2705.45		8.79	Si
SLV 9	fin.	-305.62	-1290	-0.0001717	0.0002807	0.0035	0.86		2711.06	2711.06		8.87	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	352.14	-589	0.86	0	347	6819	5794	2193	7166		12.17	Si
SLV 1	fin.	-361.71	-2436	0.86	0	652	6819	5794	2193	7472		3.07	Si
SLV 10	ini.	416.83	-1037	0.86	0	289	6819	5794	2193	7109		6.86	Si
SLV 10	fin.	-397.75	-2874	0.86	0	684	6819	5794	2193	7504		2.61	Si
SLV 6	ini.	528.67	-1442	0.86	0	210	6819	5794	2193	7029		4.87	Si
SLV 6	fin.	-514.97	-3283	0.86	0	715	6819	5794	2193	7535		2.29	Si
SLV 7	ini.	-151.01	1556	0.86	0	561	6819	5794	2193	7381		4.74	Si
SLV 7	fin.	146.83	-288	0.86	0	440	6819	5794	2193	7259		25.19	Si
SLV 4	ini.	286.48	-243	0.86	0	383	6819	5794	2193	7202		29.68	Si
SLV 4	fin.	-279.94	-2090	0.86	0	617	6819	5794	2193	7436		3.56	Si
SLV 11	ini.	-262.85	1961	0.86	0	595	6819	5794	2193	7415		3.78	Si
SLV 11	fin.	264.05	121	0.86	0	387	6819	5794	2193	7207		59.63	Si
SLV 9	ini.	307.76	-601	0.86	0	356	6819	5794	2193	7176		11.95	Si
SLV 9	fin.	-305.62	-2438	0.86	0	655	6819	5794	2193	7474		3.07	Si
SLV 3	ini.	180.96	179	0.86	0	434	6819	5794	2193	7254		40.42	Si
SLV 3	fin.	-190.81	-1668	0.86	0	585	6819	5794	2193	7404		4.44	Si
SLV 2	ini.	457.66	-1011	0.86	0	280	6819	5794	2193	7099		7.02	Si
SLV 2	fin.	-450.84	-2858	0.86	0	681	6819	5794	2193	7501		2.62	Si
SLV 5	ini.	419.6	-1006	0.86	0	295	6819	5794	2193	7115		7.07	Si
SLV 5	fin.	-422.84	-2847	0.86	0	687	6819	5794	2193	7506		2.64	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.117	SLV 6	Si
V_SLV	2.295	SLV 6	Si
PF_SLU	14.282	SLU 44	Si
V_SLU	2.206	SLU 82	Si

Trave di accoppiamento 29

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.769	5.825	0.73	1.73	1	-18.769	5.825	0.73	1.73	1	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 76	ini.	-101.83	-739	-0.0000408	0.0001872	0.0035	1		3649.64	3649.64	No	35.84	Si
SLU 76	fin.	429.09	-1296	-0.000183	0.0001872	0.0035	1		3643.26	3643.26	No	8.49	Si
SLU 65	ini.	-149.04	-554	-0.0000602	0.0001872	0.0035	1		3649.64	3649.64	No	24.49	Si
SLU 65	fin.	406.97	-1281	-0.0001727	0.0001872	0.0035	1		3643.26	3643.26	No	8.95	Si
SLU 55	ini.	-120.39	-633	-0.0000484	0.0001872	0.0035	1		3649.64	3649.64	No	30.31	Si
SLU 55	fin.	407.54	-1257	-0.000173	0.0001872	0.0035	1		3643.26	3643.26	No	8.94	Si
SLU 82	ini.	-87	-792	-0.0000348	0.0001872	0.0035	1		3649.64	3649.64	No	41.95	Si
SLU 82	fin.	421.93	-1286	-0.0001797	0.0001872	0.0035	1		3643.26	3643.26	No	8.63	Si
SLU 78	ini.	-107.24	-713	-0.000043	0.0001872	0.0035	1		3649.64	3649.64	No	34.03	Si
SLU 78	fin.	412.45	-1280	-0.0001753	0.0001872	0.0035	1		3643.26	3643.26	No	8.83	Si
SLU 75	ini.	-107.24	-713	-0.000043	0.0001872	0.0035	1		3649.64	3649.64	No	34.03	Si
SLU 75	fin.	412.45	-1280	-0.0001753	0.0001872	0.0035	1		3643.26	3643.26	No	8.83	Si
SLU 73	ini.	-101.83	-739	-0.0000408	0.0001872	0.0035	1		3649.64	3649.64	No	35.84	Si
SLU 73	fin.	429.09	-1296	-0.000183	0.0001872	0.0035	1		3643.26	3643.26	No	8.49	Si
SLU 84	ini.	-87	-792	-0.0000348	0.0001872	0.0035	1		3649.64	3649.64	No	41.95	Si
SLU 84	fin.	421.93	-1286	-0.0001797	0.0001872	0.0035	1		3643.26	3643.26	No	8.63	Si
SLU 80	ini.	-107.24	-713	-0.000043	0.0001872	0.0035	1		3649.64	3649.64	No	34.03	Si
SLU 80	fin.	412.45	-1280	-0.0001753	0.0001872	0.0035	1		3643.26	3643.26	No	8.83	Si
SLU 52	ini.	-120.39	-633	-0.0000484	0.0001872	0.0035	1		3649.64	3649.64	No	30.31	Si
SLU 52	fin.	407.54	-1257	-0.000173	0.0001872	0.0035	1		3643.26	3643.26	No	8.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 68	ini.	-149.04	1265	1	0	527	7930	4492	2550	7042	No	5.57	Si
SLU 68	fin.	406.97	541	1	0	627	7930	4492	2550	7042	No	13.01	Si
SLU 70	ini.	-154.45	1190	1	0	523	7930	4492	2550	7042	No	5.92	Si
SLU 70	fin.	390.32	656	1	0	625	7930	4492	2550	7042	No	10.73	Si
SLU 65	ini.	-149.04	1265	1	0	527	7930	4492	2550	7042	No	5.57	Si
SLU 65	fin.	406.97	541	1	0	627	7930	4492	2550	7042	No	13.01	Si
SLU 67	ini.	-154.45	1190	1	0	523	7930	4492	2550	7042	No	5.92	Si
SLU 67	fin.	390.32	656	1	0	625	7930	4492	2550	7042	No	10.73	Si
SLU 46	ini.	-173.02	1217	1	0	506	7930	4492	2550	7042	No	5.78	Si
SLU 46	fin.	368.77	663	1	0	620	7930	4492	2550	7042	No	10.62	Si
SLU 44	ini.	-167.61	1293	1	0	510	7930	4492	2550	7042	No	5.45	Si
SLU 44	fin.	385.42	548	1	0	622	7930	4492	2550	7042	No	12.85	Si
SLU 51	ini.	-173.02	1217	1	0	506	7930	4492	2550	7042	No	5.78	Si
SLU 51	fin.	368.77	663	1	0	620	7930	4492	2550	7042	No	10.62	Si
SLU 47	ini.	-167.61	1293	1	0	510	7930	4492	2550	7042	No	5.45	Si
SLU 47	fin.	385.42	548	1	0	622	7930	4492	2550	7042	No	12.85	Si
SLU 72	ini.	-154.45	1190	1	0	523	7930	4492	2550	7042	No	5.92	Si
SLU 72	fin.	390.32	656	1	0	625	7930	4492	2550	7042	No	10.73	Si
SLU 49	ini.	-173.02	1217	1	0	506	7930	4492	2550	7042	No	5.78	Si
SLU 49	fin.	368.77	663	1	0	620	7930	4492	2550	7042	No	10.62	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-339.05	-361	-0.0001394	0.0002807	0.0035	1		3671.29	3671.29		10.83	Si
SLV 13	fin.	425.34	-1589	-0.0001772	0.0002807	0.0035	1		3664.83	3664.83		8.62	Si
SLV 15	ini.	-549.78	156	-0.0002329	0.0002807	0.0035	1		3671.29	3671.29		6.68	Si
SLV 15	fin.	660.19	-2359	-0.0002851	0.0002807	0.0035	1		3664.83	3664.83		5.55	Si
SLV 8	ini.	-421.83	434	-0.0001754	0.0002807	0.0035	1		3671.29	3671.29		8.7	Si
SLV 8	fin.	624.4	-2055	-0.000268	0.0002807	0.0035	1		3664.83	3664.83		5.87	Si
SLV 1	ini.	464.62	-1158	-0.0001947	0.0002807	0.0035	1		3664.83	3664.83		7.89	Si
SLV 1	fin.	-172.32	815	-0.0000694	0.0002807	0.0035	1		3671.29	3671.29		21.3	Si
SLV 7	ini.	-270.78	238	-0.0001103	0.0002807	0.0035	1		3671.29	3671.29		13.56	Si
SLV 7	fin.	544.4	-1689	-0.0002308	0.0002807	0.0035	1		3664.83	3664.83		6.73	Si
SLV 12	ini.	-662.93	673	-0.0002859	0.0002807	0.0035	1		3671.29	3671.29		5.54	Si
SLV 12	fin.	803.69	-2777	-0.0003558	0.0002807	0.0035	1		3664.83	3664.83		4.56	Si
SLV 14	ini.	-485.19	-172	-0.0002035	0.0002807	0.0035	1		3671.29	3671.29		7.57	Si
SLV 14	fin.	502.73	-1943	-0.0002118	0.0002807	0.0035	1		3664.83	3664.83		7.29	Si
SLV 11	ini.	-511.88	478	-0.0002156	0.0002807	0.0035	1		3671.29	3671.29		7.17	Si
SLV 11	fin.	723.7	-2410	-0.0003159	0.0002807	0.0035	1		3664.83	3664.83		5.06	Si
SLV 16	ini.	-695.91	346	-0.0003017	0.0002807	0.0035	1		3671.29	3671.29		5.28	Si
SLV 16	fin.	737.58	-2713	-0.0003227	0.0002807	0.0035	1		3664.83	3664.83		4.97	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	431.64	-1486	-0.00018	0.0002807	0.0035	1		3664.83	3664.83		8.49	Si
SLV 5	fin.	-238.44	878	-0.0000968	0.0002807	0.0035	1		3671.29	3671.29		15.4	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-662.93	2049	1	0	514	7930	6737	2550	8444		4.12	Si
SLV 12	fin.	803.69	3085	1	0	1043	7930	6737	2550	8973		2.91	Si
SLV 11	ini.	-511.88	1549	1	0	558	7930	6737	2550	8488		5.48	Si
SLV 11	fin.	723.7	2573	1	0	1000	7930	6737	2550	8930		3.47	Si
SLV 13	ini.	-339.05	2035	1	0	715	7930	6737	2550	8645		4.25	Si
SLV 13	fin.	425.34	1708	1	0	897	7930	6737	2550	8827		5.17	Si
SLV 8	ini.	-421.83	1067	1	0	567	7930	6737	2550	8497		7.97	Si
SLV 8	fin.	624.4	1995	1	0	957	7930	6737	2550	8887		4.46	Si
SLV 2	ini.	318.49	-755	1	0	810	7930	6737	2550	8740		11.58	Si
SLV 2	fin.	-94.93	-1432	1	0	562	7930	6737	2550	8491		5.93	Si
SLV 1	ini.	464.62	-1239	1	0	838	7930	6737	2550	8767		7.08	Si
SLV 1	fin.	-172.32	-1928	1	0	480	7930	6737	2550	8410		4.36	Si
SLV 5	ini.	431.64	-460	1	0	883	7930	6737	2550	8813		19.14	Si
SLV 5	fin.	-238.44	-1819	1	0	464	7930	6737	2550	8394		4.61	Si
SLV 14	ini.	-485.19	2518	1	0	683	7930	6737	2550	8612		3.42	Si
SLV 14	fin.	502.73	2204	1	0	943	7930	6737	2550	8873		4.03	Si
SLV 15	ini.	-549.78	2343	1	0	623	7930	6737	2550	8552		3.65	Si
SLV 15	fin.	660.19	2698	1	0	994	7930	6737	2550	8924		3.31	Si
SLV 16	ini.	-695.91	2827	1	0	585	7930	6737	2550	8515		3.01	Si
SLV 16	fin.	737.58	3194	1	0	1036	7930	6737	2550	8966		2.81	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.56	SLV 12	Si
V_SLV	2.807	SLV 16	Si
PF_SLU	8.491	SLU 73	Si
V_SLU	5.447	SLU 44	Si

Trave di accoppiamento 30

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-17.769	5.825	3.63	4.49	0.86	-18.769	5.825	3.63	4.49	0.86	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-315.25	-1399	-0.0001814	0.0001872	0.0035	0.86		2705.05	2705.05	No	8.58	Si
SLU 84	fin.	91.11	88	-0.0000497	0.0001872	0.0035	0.86		2699.52	2699.52	No	29.63	Si
SLU 77	ini.	-298.96	-1292	-0.0001713	0.0001872	0.0035	0.86		2705.05	2705.05	No	9.05	Si
SLU 77	fin.	107.28	196	-0.0000587	0.0001872	0.0035	0.86		2699.52	2699.52	No	25.16	Si
SLU 83	ini.	-312.04	-1374	-0.0001794	0.0001872	0.0035	0.86		2705.05	2705.05	No	8.67	Si
SLU 83	fin.	102.47	145	-0.000056	0.0001872	0.0035	0.86		2699.52	2699.52	No	26.34	Si
SLU 82	ini.	-315.25	-1399	-0.0001814	0.0001872	0.0035	0.86		2705.05	2705.05	No	8.58	Si
SLU 82	fin.	91.11	88	-0.0000497	0.0001872	0.0035	0.86		2699.52	2699.52	No	29.63	Si
SLU 80	ini.	-302.16	-1316	-0.0001733	0.0001872	0.0035	0.86		2705.05	2705.05	No	8.95	Si
SLU 80	fin.	95.92	139	-0.0000524	0.0001872	0.0035	0.86		2699.52	2699.52	No	28.14	Si
SLU 78	ini.	-302.16	-1316	-0.0001733	0.0001872	0.0035	0.86		2705.05	2705.05	No	8.95	Si
SLU 78	fin.	95.92	139	-0.0000524	0.0001872	0.0035	0.86		2699.52	2699.52	No	28.14	Si
SLU 76	ini.	-304.29	-1333	-0.0001746	0.0001872	0.0035	0.86		2705.05	2705.05	No	8.89	Si
SLU 76	fin.	88.34	102	-0.0000481	0.0001872	0.0035	0.86		2699.52	2699.52	No	30.56	Si
SLU 81	ini.	-312.04	-1374	-0.0001794	0.0001872	0.0035	0.86		2705.05	2705.05	No	8.67	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	fin.	102.47	145	-0.000056	0.0001872	0.0035	0.86		2699.52	2699.52	No	26.34	Si
SLU 75	ini.	-302.16	-1316	-0.0001733	0.0001872	0.0035	0.86		2705.05	2705.05	No	8.95	Si
SLU 75	fin.	95.92	139	-0.0000524	0.0001872	0.0035	0.86		2699.52	2699.52	No	28.14	Si
SLU 73	ini.	-304.29	-1333	-0.0001746	0.0001872	0.0035	0.86		2705.05	2705.05	No	8.89	Si
SLU 73	fin.	88.34	102	-0.0000481	0.0001872	0.0035	0.86		2699.52	2699.52	No	30.56	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	-298.96	2547	0.86	0	484	6819	3863	2193	6056	No	2.38	Si
SLU 77	fin.	107.28	-539	0.86	0	289	6819	3863	2193	6056	No	11.24	Si
SLU 80	ini.	-302.16	2525	0.86	0	487	6819	3863	2193	6056	No	2.4	Si
SLU 80	fin.	95.92	-561	0.86	0	299	6819	3863	2193	6056	No	10.8	Si
SLU 75	ini.	-302.16	2525	0.86	0	487	6819	3863	2193	6056	No	2.4	Si
SLU 75	fin.	95.92	-561	0.86	0	299	6819	3863	2193	6056	No	10.8	Si
SLU 84	ini.	-315.25	2782	0.86	0	495	6819	3863	2193	6056	No	2.18	Si
SLU 84	fin.	91.11	-789	0.86	0	307	6819	3863	2193	6056	No	7.67	Si
SLU 82	ini.	-315.25	2782	0.86	0	495	6819	3863	2193	6056	No	2.18	Si
SLU 82	fin.	91.11	-789	0.86	0	307	6819	3863	2193	6056	No	7.67	Si
SLU 79	ini.	-298.96	2547	0.86	0	484	6819	3863	2193	6056	No	2.38	Si
SLU 79	fin.	107.28	-539	0.86	0	289	6819	3863	2193	6056	No	11.24	Si
SLU 81	ini.	-312.04	2804	0.86	0	492	6819	3863	2193	6056	No	2.16	Si
SLU 81	fin.	102.47	-767	0.86	0	298	6819	3863	2193	6056	No	7.89	Si
SLU 83	ini.	-312.04	2804	0.86	0	492	6819	3863	2193	6056	No	2.16	Si
SLU 83	fin.	102.47	-767	0.86	0	298	6819	3863	2193	6056	No	7.89	Si
SLU 74	ini.	-298.96	2547	0.86	0	484	6819	3863	2193	6056	No	2.38	Si
SLU 74	fin.	107.28	-539	0.86	0	289	6819	3863	2193	6056	No	11.24	Si
SLU 78	ini.	-302.16	2525	0.86	0	487	6819	3863	2193	6056	No	2.4	Si
SLU 78	fin.	95.92	-561	0.86	0	299	6819	3863	2193	6056	No	10.8	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-555.06	-2073	-0.0003287	0.0002807	0.0035	0.86		2711.06	2711.06		4.88	Si
SLV 12	fin.	396.27	1379	-0.0002271	0.0002807	0.0035	0.86		2705.45	2705.45		6.83	Si
SLV 1	ini.	94.39	159	-0.0000512	0.0002807	0.0035	0.86		2705.45	2705.45		28.66	Si
SLV 1	fin.	-182.58	-748	-0.0001003	0.0002807	0.0035	0.86		2711.06	2711.06		14.85	Si
SLV 11	ini.	-462.15	-1753	-0.0002679	0.0002807	0.0035	0.86		2711.06	2711.06		5.87	Si
SLV 11	fin.	309.61	1050	-0.0001744	0.0002807	0.0035	0.86		2705.45	2705.45		8.74	Si
SLV 5	ini.	133.72	321	-0.000073	0.0002807	0.0035	0.86		2705.45	2705.45		20.23	Si
SLV 5	fin.	-218.55	-938	-0.0001209	0.0002807	0.0035	0.86		2711.06	2711.06		12.4	Si
SLV 13	ini.	-280.87	-1092	-0.0001571	0.0002807	0.0035	0.86		2711.06	2711.06		9.65	Si
SLV 13	fin.	147.74	375	-0.0000809	0.0002807	0.0035	0.86		2705.45	2705.45		18.31	Si
SLV 7	ini.	-349.58	-1377	-0.000198	0.0002807	0.0035	0.86		2711.06	2711.06		7.76	Si
SLV 7	fin.	210.51	713	-0.0001165	0.0002807	0.0035	0.86		2705.45	2705.45		12.85	Si
SLV 8	ini.	-442.48	-1697	-0.0002555	0.0002807	0.0035	0.86		2711.06	2711.06		6.13	Si
SLV 8	fin.	297.18	1042	-0.000167	0.0002807	0.0035	0.86		2705.45	2705.45		9.1	Si
SLV 15	ini.	-425.86	-1601	-0.000245	0.0002807	0.0035	0.86		2711.06	2711.06		6.37	Si
SLV 15	fin.	276.45	870	-0.0001548	0.0002807	0.0035	0.86		2705.45	2705.45		9.79	Si
SLV 16	ini.	-515.74	-1911	-0.0003026	0.0002807	0.0035	0.86		2711.06	2711.06		5.26	Si
SLV 16	fin.	360.3	1189	-0.000205	0.0002807	0.0035	0.86		2705.45	2705.45		7.51	Si
SLV 14	ini.	-370.75	-1401	-0.0002109	0.0002807	0.0035	0.86		2711.06	2711.06		7.31	Si
SLV 14	fin.	231.58	694	-0.0001286	0.0002807	0.0035	0.86		2705.45	2705.45		11.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-515.74	2943	0.86	0	723	6819	5794	2193	7543		2.56	Si
SLV 16	fin.	360.3	1250	0.86	0	228	6819	5794	2193	7048		5.64	Si
SLV 8	ini.	-442.48	2736	0.86	0	700	6819	5794	2193	7520		2.75	Si
SLV 8	fin.	297.18	1032	0.86	0	273	6819	5794	2193	7092		6.87	Si
SLV 15	ini.	-425.86	2500	0.86	0	690	6819	5794	2193	7509		3	Si
SLV 15	fin.	276.45	807	0.86	0	317	6819	5794	2193	7136		8.85	Si
SLV 5	ini.	133.72	-5	0.86	0	429	6819	5794	2193	7248		1395.01	Si
SLV 5	fin.	-218.55	-1710	0.86	0	613	6819	5794	2193	7432		4.35	Si
SLV 7	ini.	-349.58	2278	0.86	0	665	6819	5794	2193	7484		3.29	Si
SLV 7	fin.	210.51	573	0.86	0	353	6819	5794	2193	7172		12.52	Si
SLV 1	ini.	94.39	256	0.86	0	457	6819	5794	2193	7276		28.47	Si
SLV 1	fin.	-182.58	-1455	0.86	0	588	6819	5794	2193	7408		5.09	Si
SLV 12	ini.	-555.06	3204	0.86	0	740	6819	5794	2193	7559		2.36	Si
SLV 12	fin.	396.27	1505	0.86	0	152	6819	5794	2193	6972		4.63	Si
SLV 11	ini.	-462.15	2745	0.86	0	706	6819	5794	2193	7526		2.74	Si
SLV 11	fin.	309.61	1046	0.86	0	271	6819	5794	2193	7090		6.78	Si
SLV 13	ini.	-280.87	1815	0.86	0	631	6819	5794	2193	7451		4.11	Si
SLV 13	fin.	147.74	122	0.86	0	419	6819	5794	2193	7239		59.39	Si
SLV 14	ini.	-370.75	2259	0.86	0	667	6819	5794	2193	7487		3.31	Si
SLV 14	fin.	231.58	566	0.86	0	357	6819	5794	2193	7176		12.69	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.884	SLV 12	Si
V_SLV	2.359	SLV 12	Si
PF_SLU	8.581	SLU 82	Si
V_SLU	2.16	SLU 81	Si

Trave di accoppiamento 31

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-13.879	5.825	0.73	1.73	1	-14.879	5.825	0.73	1.73	1	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	116.02	-1228	-0.0000467	0.0001872	0.0035	1		3643.26	3643.26	No	31.4	Si
SLU 80	fin.	183.59	-1206	-0.0000747	0.0001872	0.0035	1		3643.26	3643.26	No	19.85	Si
SLU 76	ini.	113.61	-1221	-0.0000457	0.0001872	0.0035	1		3643.26	3643.26	No	32.07	Si
SLU 76	fin.	183.59	-1193	-0.0000747	0.0001872	0.0035	1		3643.26	3643.26	No	19.84	Si
SLU 73	ini.	113.61	-1221	-0.0000457	0.0001872	0.0035	1		3643.26	3643.26	No	32.07	Si
SLU 73	fin.	183.59	-1193	-0.0000747	0.0001872	0.0035	1		3643.26	3643.26	No	19.84	Si
SLU 79	ini.	119.64	-1238	-0.0000482	0.0001872	0.0035	1		3643.26	3643.26	No	30.45	Si
SLU 79	fin.	183.57	-1226	-0.0000747	0.0001872	0.0035	1		3643.26	3643.26	No	19.85	Si
SLU 83	ini.	137.31	-1356	-0.0000555	0.0001872	0.0035	1		3643.26	3643.26	No	26.53	Si
SLU 83	fin.	200.43	-1334	-0.0000818	0.0001872	0.0035	1		3643.26	3643.26	No	18.18	Si
SLU 75	ini.	116.02	-1228	-0.0000467	0.0001872	0.0035	1		3643.26	3643.26	No	31.4	Si
SLU 75	fin.	183.59	-1206	-0.0000747	0.0001872	0.0035	1		3643.26	3643.26	No	19.85	Si
SLU 78	ini.	116.02	-1228	-0.0000467	0.0001872	0.0035	1		3643.26	3643.26	No	31.4	Si
SLU 78	fin.	183.59	-1206	-0.0000747	0.0001872	0.0035	1		3643.26	3643.26	No	19.85	Si
SLU 81	ini.	137.31	-1356	-0.0000555	0.0001872	0.0035	1		3643.26	3643.26	No	26.53	Si
SLU 81	fin.	200.43	-1334	-0.0000818	0.0001872	0.0035	1		3643.26	3643.26	No	18.18	Si
SLU 82	ini.	133.69	-1346	-0.000054	0.0001872	0.0035	1		3643.26	3643.26	No	27.25	Si
SLU 82	fin.	200.44	-1314	-0.0000818	0.0001872	0.0035	1		3643.26	3643.26	No	18.18	Si
SLU 84	ini.	133.69	-1346	-0.000054	0.0001872	0.0035	1		3643.26	3643.26	No	27.25	Si
SLU 84	fin.	200.44	-1314	-0.0000818	0.0001872	0.0035	1		3643.26	3643.26	No	18.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 77	ini.	119.64	93	1	0	621	7930	4492	2550	7042	No	75.95	Si
SLU 77	fin.	183.57	647	1	0	620	7930	4492	2550	7042	No	10.89	Si
SLU 84	ini.	133.69	102	1	0	635	7930	4492	2550	7042	No	69.16	Si
SLU 84	fin.	200.44	651	1	0	631	7930	4492	2550	7042	No	10.81	Si
SLU 39	ini.	129.02	16	1	0	618	7930	4492	2550	7042	No	427.5	Si
SLU 39	fin.	178.14	642	1	0	614	7930	4492	2550	7042	No	10.97	Si
SLU 79	ini.	119.64	93	1	0	621	7930	4492	2550	7042	No	75.95	Si
SLU 79	fin.	183.57	647	1	0	620	7930	4492	2550	7042	No	10.89	Si
SLU 74	ini.	119.64	93	1	0	621	7930	4492	2550	7042	No	75.95	Si
SLU 74	fin.	183.57	647	1	0	620	7930	4492	2550	7042	No	10.89	Si
SLU 83	ini.	137.31	63	1	0	636	7930	4492	2550	7042	No	112.13	Si
SLU 83	fin.	200.43	716	1	0	634	7930	4492	2550	7042	No	9.84	Si
SLU 81	ini.	137.31	63	1	0	636	7930	4492	2550	7042	No	112.13	Si
SLU 81	fin.	200.43	716	1	0	634	7930	4492	2550	7042	No	9.84	Si
SLU 41	ini.	129.02	16	1	0	618	7930	4492	2550	7042	No	427.5	Si
SLU 41	fin.	178.14	642	1	0	614	7930	4492	2550	7042	No	10.97	Si
SLU 82	ini.	133.69	102	1	0	635	7930	4492	2550	7042	No	69.16	Si
SLU 82	fin.	200.44	651	1	0	631	7930	4492	2550	7042	No	10.81	Si
SLU 62	ini.	117.49	81	1	0	617	7930	4492	2550	7042	No	87.33	Si
SLU 62	fin.	178.19	638	1	0	616	7930	4492	2550	7042	No	11.04	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	415.47	-1241	-0.0001729	0.0002807	0.0035	1		3664.83	3664.83		8.82	Si
SLV 7	fin.	68.77	-612	-0.0000274	0.0002807	0.0035	1		3664.83	3664.83		53.29	Si
SLV 12	ini.	-101.15	-547	-0.0000404	0.0002807	0.0035	1		3671.29	3671.29		36.29	Si
SLV 12	fin.	354.65	-1796	-0.0001464	0.0002807	0.0035	1		3664.83	3664.83		10.33	Si
SLV 3	ini.	781.75	-1734	-0.0003447	0.0002807	0.0035	1		3664.83	3664.83		4.69	Si
SLV 3	fin.	-239.03	680	-0.000097	0.0002807	0.0035	1		3671.29	3671.29		15.36	Si
SLV 1	ini.	728.1	-1668	-0.000318	0.0002807	0.0035	1		3664.83	3664.83		5.03	Si
SLV 1	fin.	-295.67	928	-0.0001209	0.0002807	0.0035	1		3671.29	3671.29		12.42	Si
SLV 16	ini.	-592.61	99	-0.0002527	0.0002807	0.0035	1		3671.29	3671.29		6.2	Si
SLV 16	fin.	530.28	-2509	-0.0002243	0.0002807	0.0035	1		3664.83	3664.83		6.91	Si
SLV 14	ini.	-646.26	164	-0.0002779	0.0002807	0.0035	1		3671.29	3671.29		5.68	Si
SLV 14	fin.	473.64	-2261	-0.0001987	0.0002807	0.0035	1		3664.83	3664.83		7.74	Si
SLV 15	ini.	-450.42	-97	-0.000188	0.0002807	0.0035	1		3671.29	3671.29		8.15	Si
SLV 15	fin.	455.19	-2199	-0.0001905	0.0002807	0.0035	1		3664.83	3664.83		8.05	Si
SLV 13	ini.	-504.07	-32	-0.000212	0.0002807	0.0035	1		3671.29	3671.29		7.28	Si
SLV 13	fin.	398.55	-1951	-0.0001655	0.0002807	0.0035	1		3664.83	3664.83		9.2	Si
SLV 2	ini.	585.9	-1473	-0.00025	0.0002807	0.0035	1		3664.83	3664.83		6.26	Si
SLV 2	fin.	-220.59	618	-0.0000893	0.0002807	0.0035	1		3671.29	3671.29		16.64	Si
SLV 4	ini.	639.55	-1538	-0.0002752	0.0002807	0.0035	1		3664.83	3664.83		5.73	Si
SLV 4	fin.	-163.94	370	-0.0000659	0.0002807	0.0035	1		3671.29	3671.29		22.39	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 15	ini.	-450.42	1739	1	0	670	7930	6738	2550	8599		4.94	Si
SLV 15	fin.	455.19	2551	1	0	975	7930	6738	2550	8905		3.49	Si
SLV 12	ini.	-101.15	354	1	0	746	7930	6738	2550	8675		24.5	Si
SLV 12	fin.	354.65	2440	1	0	924	7930	6738	2550	8854		3.63	Si
SLV 14	ini.	-646.26	2565	1	0	621	7930	6738	2550	8551		3.33	Si
SLV 14	fin.	473.64	2284	1	0	982	7930	6738	2550	8912		3.9	Si
SLV 1	ini.	728.1	-1983	1	0	908	7930	6738	2550	8837		4.46	Si
SLV 1	fin.	-295.67	-2198	1	0	451	7930	6738	2550	8381		3.81	Si
SLV 3	ini.	781.75	-2347	1	0	916	7930	6738	2550	8846		3.77	Si
SLV 3	fin.	-239.03	-1479	1	0	513	7930	6738	2550	8442		5.71	Si
SLV 11	ini.	45.82	-124	1	0	777	7930	6738	2550	8707		70.45	Si
SLV 11	fin.	277.03	1972	1	0	882	7930	6738	2550	8812		4.47	Si
SLV 4	ini.	639.55	-1885	1	0	890	7930	6738	2550	8820		4.68	Si
SLV 4	fin.	-163.94	-1026	1	0	580	7930	6738	2550	8510		8.29	Si
SLV 2	ini.	585.9	-1521	1	0	881	7930	6738	2550	8811		5.79	Si
SLV 2	fin.	-220.59	-1745	1	0	527	7930	6738	2550	8457		4.84	Si
SLV 13	ini.	-504.07	2103	1	0	658	7930	6738	2550	8588		4.08	Si
SLV 13	fin.	398.55	1832	1	0	944	7930	6738	2550	8874		4.84	Si
SLV 16	ini.	-592.61	2201	1	0	634	7930	6738	2550	8563		3.89	Si
SLV 16	fin.	530.28	3003	1	0	1012	7930	6738	2550	8942		2.98	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.688	SLV 3	Si
V_SLV	2.977	SLV 16	Si
PF_SLU	18.176	SLU 82	Si
V_SLU	9.84	SLU 81	Si

Trave di accoppiamento 32

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-13.879	5.825	3.63	4.49	0.86	-14.879	5.825	3.63	4.49	0.86	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 41	ini.	-187.43	-658	-0.0001043	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.43	Si
SLU 41	fin.	-134.31	-310	-0.0000738	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.14	Si
SLU 42	ini.	-184.77	-642	-0.0001027	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.64	Si
SLU 42	fin.	-130.64	-291	-0.0000717	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.71	Si
SLU 81	ini.	-205.12	-698	-0.0001146	0.0001872	0.0035	0.86		2705.05	2705.05	No	13.19	Si
SLU 81	fin.	-133.57	-300	-0.0000734	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.25	Si
SLU 83	ini.	-205.12	-698	-0.0001146	0.0001872	0.0035	0.86		2705.05	2705.05	No	13.19	Si
SLU 83	fin.	-133.57	-300	-0.0000734	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.25	Si
SLU 74	ini.	-183.72	-609	-0.0001021	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.72	Si
SLU 74	fin.	-109.44	-239	-0.0000598	0.0001872	0.0035	0.86		2705.05	2705.05	No	24.72	Si
SLU 82	ini.	-202.46	-682	-0.0001131	0.0001872	0.0035	0.86		2705.05	2705.05	No	13.36	Si
SLU 82	fin.	-129.9	-281	-0.0000713	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.82	Si
SLU 39	ini.	-187.43	-658	-0.0001043	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.43	Si
SLU 39	fin.	-134.31	-310	-0.0000738	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.14	Si
SLU 77	ini.	-183.72	-609	-0.0001021	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.72	Si
SLU 77	fin.	-109.44	-239	-0.0000598	0.0001872	0.0035	0.86		2705.05	2705.05	No	24.72	Si
SLU 40	ini.	-184.77	-642	-0.0001027	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.64	Si
SLU 40	fin.	-130.64	-291	-0.0000717	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.71	Si
SLU 84	ini.	-202.46	-682	-0.0001131	0.0001872	0.0035	0.86		2705.05	2705.05	No	13.36	Si
SLU 84	fin.	-129.9	-281	-0.0000713	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.82	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 40	ini.	-184.77	1540	0.86	0	410	6819	3863	2193	6056	No	3.93	Si
SLU 40	fin.	-130.64	-996	0.86	0	365	6819	3863	2193	6056	No	6.08	Si
SLU 84	ini.	-202.46	1674	0.86	0	415	6819	3863	2193	6056	No	3.62	Si
SLU 84	fin.	-129.9	-1059	0.86	0	363	6819	3863	2193	6056	No	5.72	Si
SLU 82	ini.	-202.46	1674	0.86	0	415	6819	3863	2193	6056	No	3.62	Si
SLU 82	fin.	-129.9	-1059	0.86	0	363	6819	3863	2193	6056	No	5.72	Si
SLU 39	ini.	-187.43	1538	0.86	0	412	6819	3863	2193	6056	No	3.94	Si
SLU 39	fin.	-134.31	-999	0.86	0	367	6819	3863	2193	6056	No	6.06	Si
SLU 81	ini.	-205.12	1672	0.86	0	417	6819	3863	2193	6056	No	3.62	Si
SLU 81	fin.	-133.57	-1061	0.86	0	366	6819	3863	2193	6056	No	5.71	Si
SLU 42	ini.	-184.77	1540	0.86	0	410	6819	3863	2193	6056	No	3.93	Si
SLU 42	fin.	-130.64	-996	0.86	0	365	6819	3863	2193	6056	No	6.08	Si
SLU 73	ini.	-179.29	1491	0.86	0	403	6819	3863	2193	6056	No	4.06	Si
SLU 73	fin.	-103.32	-920	0.86	0	353	6819	3863	2193	6056	No	6.58	Si
SLU 76	ini.	-179.29	1491	0.86	0	403	6819	3863	2193	6056	No	4.06	Si
SLU 76	fin.	-103.32	-920	0.86	0	353	6819	3863	2193	6056	No	6.58	Si
SLU 41	ini.	-187.43	1538	0.86	0	412	6819	3863	2193	6056	No	3.94	Si
SLU 41	fin.	-134.31	-999	0.86	0	367	6819	3863	2193	6056	No	6.06	Si
SLU 83	ini.	-205.12	1672	0.86	0	417	6819	3863	2193	6056	No	3.62	Si
SLU 83	fin.	-133.57	-1061	0.86	0	366	6819	3863	2193	6056	No	5.71	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-467.01	-1028	-0.000271	0.0002807	0.0035	0.86		2711.06	2711.06		5.81	Si
SLV 13	fin.	329.54	542	-0.0001863	0.0002807	0.0035	0.86		2705.45	2705.45		8.21	Si
SLV 4	ini.	244.37	341	-0.000136	0.0002807	0.0035	0.86		2705.45	2705.45		11.07	Si
SLV 4	fin.	-431.92	-744	-0.0002488	0.0002807	0.0035	0.86		2711.06	2711.06		6.28	Si
SLV 7	ini.	123.81	60	-0.0000675	0.0002807	0.0035	0.86		2705.45	2705.45		21.85	Si
SLV 7	fin.	-316.88	-610	-0.0001784	0.0002807	0.0035	0.86		2711.06	2711.06		8.56	Si
SLV 10	ini.	-346.45	-748	-0.0001961	0.0002807	0.0035	0.86		2711.06	2711.06		7.83	Si
SLV 10	fin.	214.5	408	-0.0001188	0.0002807	0.0035	0.86		2705.45	2705.45		12.61	Si
SLV 15	ini.	-433.11	-999	-0.0002495	0.0002807	0.0035	0.86		2711.06	2711.06		6.26	Si
SLV 15	fin.	284.15	418	-0.0001593	0.0002807	0.0035	0.86		2705.45	2705.45		9.52	Si
SLV 16	ini.	-548.58	-1228	-0.0003243	0.0002807	0.0035	0.86		2711.06	2711.06		4.94	Si
SLV 16	fin.	408.06	612	-0.0002344	0.0002807	0.0035	0.86		2705.45	2705.45		6.63	Si
SLV 14	ini.	-582.48	-1258	-0.0003472	0.0002807	0.0035	0.86		2711.06	2711.06		4.65	Si
SLV 14	fin.	453.45	735	-0.0002629	0.0002807	0.0035	0.86		2705.45	2705.45		5.97	Si
SLV 2	ini.	210.47	311	-0.0001165	0.0002807	0.0035	0.86		2705.45	2705.45		12.85	Si
SLV 2	fin.	-386.52	-620	-0.0002206	0.0002807	0.0035	0.86		2711.06	2711.06		7.01	Si
SLV 1	ini.	325.94	541	-0.0001842	0.0002807	0.0035	0.86		2705.45	2705.45		8.3	Si
SLV 1	fin.	-510.43	-813	-0.0002991	0.0002807	0.0035	0.86		2711.06	2711.06		5.31	Si
SLV 3	ini.	359.84	571	-0.0002047	0.0002807	0.0035	0.86		2705.45	2705.45		7.52	Si
SLV 3	fin.	-555.83	-937	-0.0003292	0.0002807	0.0035	0.86		2711.06	2711.06		4.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-467.01	2133	0.86	0	624	6819	5794	2193	7443		3.49	Si
SLV 13	fin.	329.54	709	0.86	0	388	6819	5794	2193	7207		10.17	Si
SLV 14	ini.	-582.48	2555	0.86	0	651	6819	5794	2193	7470		2.92	Si
SLV 14	fin.	453.45	1130	0.86	0	348	6819	5794	2193	7167		6.34	Si
SLV 15	ini.	-433.11	2041	0.86	0	620	6819	5794	2193	7439		3.65	Si
SLV 15	fin.	284.15	632	0.86	0	411	6819	5794	2193	7231		11.44	Si
SLV 3	ini.	359.84	-781	0.86	0	382	6819	5794	2193	7202		9.22	Si
SLV 3	fin.	-555.83	-2173	0.86	0	612	6819	5794	2193	7432		3.42	Si
SLV 2	ini.	210.47	-267	0.86	0	431	6819	5794	2193	7250		27.14	Si
SLV 2	fin.	-386.52	-1675	0.86	0	572	6819	5794	2193	7391		4.41	Si
SLV 10	ini.	-346.45	1682	0.86	0	588	6819	5794	2193	7408		4.4	Si
SLV 10	fin.	214.5	245	0.86	0	413	6819	5794	2193	7233		29.53	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	ini.	325.94	-688	0.86	0	388	6819	5794	2193	7207		10.47	Si
SLV 1	fin.	-510.43	-2096	0.86	0	597	6819	5794	2193	7416		3.54	Si
SLV 12	ini.	-233.43	1374	0.86	0	575	6819	5794	2193	7395		5.38	Si
SLV 12	fin.	63.19	-11	0.86	0	483	6819	5794	2193	7302		647.91	Si
SLV 4	ini.	244.37	-360	0.86	0	425	6819	5794	2193	7245		20.15	Si
SLV 4	fin.	-431.92	-1752	0.86	0	588	6819	5794	2193	7407		4.23	Si
SLV 16	ini.	-548.58	2462	0.86	0	647	6819	5794	2193	7467		3.03	Si
SLV 16	fin.	408.06	1053	0.86	0	374	6819	5794	2193	7193		6.83	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.654	SLV 14	Si
V_SLV	2.924	SLV 14	Si
PF_SLU	13.188	SLU 81	Si
V_SLU	3.617	SLU 82	Si

Trave di accoppiamento 33

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.899	5.825	0.73	1.73	1	-10.899	5.825	0.73	1.73	1	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	482.24	-1501	-0.0002081	0.0001872	0.0035	1		3643.26	3643.26	No	7.55	Si
SLU 84	fin.	-36.37	40	-0.0000144	0.0001872	0.0035	1		3649.64	3649.64	No	100.36	Si
SLU 65	ini.	487.92	-1415	-0.0002108	0.0001872	0.0035	1		3643.26	3643.26	No	7.47	Si
SLU 65	fin.	-60.38	254	-0.000024	0.0001872	0.0035	1		3649.64	3649.64	No	60.44	Si
SLU 76	ini.	489.01	-1502	-0.0002113	0.0001872	0.0035	1		3643.26	3643.26	No	7.45	Si
SLU 76	fin.	-33.57	101	-0.0000133	0.0001872	0.0035	1		3649.64	3649.64	No	108.72	Si
SLU 82	ini.	482.24	-1501	-0.0002081	0.0001872	0.0035	1		3643.26	3643.26	No	7.55	Si
SLU 82	fin.	-36.37	40	-0.0000144	0.0001872	0.0035	1		3649.64	3649.64	No	100.36	Si
SLU 78	ini.	481.77	-1464	-0.0002079	0.0001872	0.0035	1		3643.26	3643.26	No	7.56	Si
SLU 78	fin.	-47.86	106	-0.000019	0.0001872	0.0035	1		3649.64	3649.64	No	76.26	Si
SLU 73	ini.	489.01	-1502	-0.0002113	0.0001872	0.0035	1		3643.26	3643.26	No	7.45	Si
SLU 73	fin.	-33.57	101	-0.0000133	0.0001872	0.0035	1		3649.64	3649.64	No	108.72	Si
SLU 72	ini.	480.68	-1377	-0.0002073	0.0001872	0.0035	1		3643.26	3643.26	No	7.58	Si
SLU 72	fin.	-74.67	258	-0.0000298	0.0001872	0.0035	1		3649.64	3649.64	No	48.87	Si
SLU 68	ini.	487.92	-1415	-0.0002108	0.0001872	0.0035	1		3643.26	3643.26	No	7.47	Si
SLU 68	fin.	-60.38	254	-0.000024	0.0001872	0.0035	1		3649.64	3649.64	No	60.44	Si
SLU 75	ini.	481.77	-1464	-0.0002079	0.0001872	0.0035	1		3643.26	3643.26	No	7.56	Si
SLU 75	fin.	-47.86	106	-0.000019	0.0001872	0.0035	1		3649.64	3649.64	No	76.26	Si
SLU 80	ini.	481.77	-1464	-0.0002079	0.0001872	0.0035	1		3643.26	3643.26	No	7.56	Si
SLU 80	fin.	-47.86	106	-0.000019	0.0001872	0.0035	1		3649.64	3649.64	No	76.26	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 47	ini.	475.51	-790	1	0	634	7930	4492	2550	7042	No	8.91	Si
SLU 47	fin.	-71.66	-1459	1	0	372	7930	4492	2550	7042	No	4.83	Si
SLU 70	ini.	480.68	-837	1	0	639	7930	4492	2550	7042	No	8.41	Si
SLU 70	fin.	-74.67	-1278	1	0	385	7930	4492	2550	7042	No	5.51	Si
SLU 49	ini.	468.28	-848	1	0	629	7930	4492	2550	7042	No	8.31	Si
SLU 49	fin.	-85.95	-1318	1	0	371	7930	4492	2550	7042	No	5.34	Si
SLU 44	ini.	475.51	-790	1	0	634	7930	4492	2550	7042	No	8.91	Si
SLU 44	fin.	-71.66	-1459	1	0	372	7930	4492	2550	7042	No	4.83	Si
SLU 67	ini.	480.68	-837	1	0	639	7930	4492	2550	7042	No	8.41	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 67	fin.	-74.67	-1278	1	0	385	7930	4492	2550	7042	No	5.51	Si
SLU 46	ini.	468.28	-848	1	0	629	7930	4492	2550	7042	No	8.31	Si
SLU 46	fin.	-85.95	-1318	1	0	371	7930	4492	2550	7042	No	5.34	Si
SLU 72	ini.	480.68	-837	1	0	639	7930	4492	2550	7042	No	8.41	Si
SLU 72	fin.	-74.67	-1278	1	0	385	7930	4492	2550	7042	No	5.51	Si
SLU 68	ini.	487.92	-779	1	0	644	7930	4492	2550	7042	No	9.04	Si
SLU 68	fin.	-60.38	-1419	1	0	385	7930	4492	2550	7042	No	4.96	Si
SLU 51	ini.	468.28	-848	1	0	629	7930	4492	2550	7042	No	8.31	Si
SLU 51	fin.	-85.95	-1318	1	0	371	7930	4492	2550	7042	No	5.34	Si
SLU 65	ini.	487.92	-779	1	0	644	7930	4492	2550	7042	No	9.04	Si
SLU 65	fin.	-60.38	-1419	1	0	385	7930	4492	2550	7042	No	4.96	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	676.56	-1498	-0.0002929	0.0002807	0.0035	1		3664.83	3664.83		5.42	Si
SLV 12	fin.	-234.15	239	-0.000095	0.0002807	0.0035	1		3671.29	3671.29		15.68	Si
SLV 3	ini.	924.54	-1763	-0.0004184	0.0002807	0.0035	1		3664.83	3664.83		3.96	Si
SLV 3	fin.	-444.68	1498	-0.0001855	0.0002807	0.0035	1		3671.29	3671.29		8.26	Si
SLV 10	ini.	-304.67	-77	-0.0001247	0.0002807	0.0035	1		3671.29	3671.29		12.05	Si
SLV 10	fin.	329.29	-816	-0.0001354	0.0002807	0.0035	1		3664.83	3664.83		11.13	Si
SLV 1	ini.	630.17	-1337	-0.0002708	0.0002807	0.0035	1		3664.83	3664.83		5.82	Si
SLV 1	fin.	-275.64	1181	-0.0001124	0.0002807	0.0035	1		3671.29	3671.29		13.32	Si
SLV 2	ini.	500.58	-1129	-0.0002108	0.0002807	0.0035	1		3664.83	3664.83		7.32	Si
SLV 2	fin.	-196.88	875	-0.0000795	0.0002807	0.0035	1		3671.29	3671.29		18.65	Si
SLV 8	ini.	888.71	-1752	-0.0003995	0.0002807	0.0035	1		3664.83	3664.83		4.12	Si
SLV 8	fin.	-385.37	847	-0.0001594	0.0002807	0.0035	1		3671.29	3671.29		9.53	Si
SLV 11	ini.	810.51	-1712	-0.0003592	0.0002807	0.0035	1		3664.83	3664.83		4.52	Si
SLV 11	fin.	-315.56	556	-0.0001293	0.0002807	0.0035	1		3671.29	3671.29		11.63	Si
SLV 7	ini.	1022.65	-1966	-0.0004713	0.0002807	0.0035	1		3664.83	3664.83		3.58	Si
SLV 7	fin.	-466.78	1163	-0.0001953	0.0002807	0.0035	1		3671.29	3671.29		7.87	Si
SLV 4	ini.	794.95	-1555	-0.0003513	0.0002807	0.0035	1		3664.83	3664.83		4.61	Si
SLV 4	fin.	-365.92	1192	-0.000151	0.0002807	0.0035	1		3671.29	3671.29		10.03	Si
SLV 14	ini.	-206.56	-281	-0.0000835	0.0002807	0.0035	1		3671.29	3671.29		17.77	Si
SLV 14	fin.	307.19	-1150	-0.000126	0.0002807	0.0035	1		3664.83	3664.83		11.93	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 8	ini.	888.71	-1650	1	0	919	7930	6738	2550	8848		5.36	Si
SLV 8	fin.	-385.37	295	1	0	472	7930	6737	2550	8402		28.45	Si
SLV 4	ini.	794.95	-2288	1	0	893	7930	6738	2550	8822		3.86	Si
SLV 4	fin.	-365.92	-2064	1	0	375	7930	6737	2550	8305		4.02	Si
SLV 2	ini.	500.58	-1864	1	0	834	7930	6738	2550	8763		4.7	Si
SLV 2	fin.	-196.88	-2918	1	0	465	7930	6737	2550	8395		2.88	Si
SLV 9	ini.	-170.72	254	1	0	704	7930	6738	2550	8633		33.94	Si
SLV 9	fin.	247.88	-1849	1	0	738	7930	6737	2550	8668		4.69	Si
SLV 7	ini.	1022.65	-2124	1	0	946	7930	6738	2550	8876		4.18	Si
SLV 7	fin.	-466.78	-161	1	0	384	7930	6737	2550	8314		51.51	Si
SLV 6	ini.	-92.53	-236	1	0	710	7930	6738	2550	8640		36.67	Si
SLV 6	fin.	178.07	-2553	1	0	689	7930	6737	2550	8619		3.38	Si
SLV 5	ini.	41.42	-710	1	0	745	7930	6738	2550	8675		12.22	Si
SLV 5	fin.	96.66	-3010	1	0	632	7930	6737	2550	8562		2.84	Si
SLV 16	ini.	87.81	927	1	0	771	7930	6738	2550	8700		9.38	Si
SLV 16	fin.	138.15	1807	1	0	790	7930	6737	2550	8720		4.83	Si
SLV 3	ini.	924.54	-2747	1	0	920	7930	6738	2550	8849		3.22	Si
SLV 3	fin.	-444.68	-2506	1	0	260	7930	6737	2550	8190		3.27	Si
SLV 1	ini.	630.17	-2323	1	0	863	7930	6738	2550	8792		3.79	Si
SLV 1	fin.	-275.64	-3360	1	0	379	7930	6737	2550	8308		2.47	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.584	SLV 7	Si
V_SLV	2.472	SLV 1	Si
PF_SLU	7.45	SLU 73	Si
V_SLU	4.828	SLU 44	Si

Trave di accoppiamento 34

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup	H fin.	Luce	Spessore	R. Trazione
-9.899	5.825	3.63	4.49	0.86	-10.899	5.825	3.63	4.49	0.86	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fhmedio	τ0	fv0	μ	ϕ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	εu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									εlim,conv / ε,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	εlim,conv	ε,fd	γF,d	connettori	tipo di muratura	CRM	intonaco	spessore intonaco	tipo blocco fibrenet
GeoSteel G1200	Sinistro	Interna	100	100	100	100	1	CNR DT215	0.8			0.009				Si	GeoCalce F Antisismico	0.02	

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	161.3	354	-0.0000894	0.0001872	0.0035	0.86		2699.52	2699.52	No	16.74	Si
SLU 83	fin.	-401.76	-1604	-0.0002374	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.73	Si
SLU 75	ini.	150.6	351	-0.0000832	0.0001872	0.0035	0.86		2699.52	2699.52	No	17.93	Si
SLU 75	fin.	-391.37	-1537	-0.0002305	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.91	Si
SLU 82	ini.	150.43	298	-0.0000831	0.0001872	0.0035	0.86		2699.52	2699.52	No	17.95	Si
SLU 82	fin.	-406.23	-1632	-0.0002404	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.66	Si
SLU 80	ini.	150.6	351	-0.0000832	0.0001872	0.0035	0.86		2699.52	2699.52	No	17.93	Si
SLU 80	fin.	-391.37	-1537	-0.0002305	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.91	Si
SLU 77	ini.	161.47	407	-0.0000895	0.0001872	0.0035	0.86		2699.52	2699.52	No	16.72	Si
SLU 77	fin.	-386.9	-1509	-0.0002276	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.99	Si
SLU 73	ini.	143.35	315	-0.0000791	0.0001872	0.0035	0.86		2699.52	2699.52	No	18.83	Si
SLU 73	fin.	-394.34	-1555	-0.0002325	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.86	Si
SLU 81	ini.	161.3	354	-0.0000894	0.0001872	0.0035	0.86		2699.52	2699.52	No	16.74	Si
SLU 81	fin.	-401.76	-1604	-0.0002374	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.73	Si
SLU 84	ini.	150.43	298	-0.0000831	0.0001872	0.0035	0.86		2699.52	2699.52	No	17.95	Si
SLU 84	fin.	-406.23	-1632	-0.0002404	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.66	Si
SLU 76	ini.	143.35	315	-0.0000791	0.0001872	0.0035	0.86		2699.52	2699.52	No	18.83	Si
SLU 76	fin.	-394.34	-1555	-0.0002325	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.86	Si
SLU 78	ini.	150.6	351	-0.0000832	0.0001872	0.0035	0.86		2699.52	2699.52	No	17.93	Si
SLU 78	fin.	-391.37	-1537	-0.0002305	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.91	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 84	ini.	150.43	587	0.86	0	271	6819	3863	2193	6056	No	10.32	Si
SLU 84	fin.	-406.23	-3195	0.86	0	518	6819	3863	2193	6056	No	1.9	Si
SLU 83	ini.	161.3	569	0.86	0	260	6819	3863	2193	6056	No	10.65	Si
SLU 83	fin.	-401.76	-3213	0.86	0	516	6819	3863	2193	6056	No	1.88	Si
SLU 80	ini.	150.6	358	0.86	0	260	6819	3863	2193	6056	No	16.89	Si
SLU 80	fin.	-391.37	-2933	0.86	0	509	6819	3863	2193	6056	No	2.06	Si
SLU 75	ini.	150.6	358	0.86	0	260	6819	3863	2193	6056	No	16.89	Si
SLU 75	fin.	-391.37	-2933	0.86	0	509	6819	3863	2193	6056	No	2.06	Si
SLU 74	ini.	161.47	340	0.86	0	249	6819	3863	2193	6056	No	17.8	Si
SLU 74	fin.	-386.9	-2952	0.86	0	506	6819	3863	2193	6056	No	2.05	Si
SLU 78	ini.	150.6	358	0.86	0	260	6819	3863	2193	6056	No	16.89	Si
SLU 78	fin.	-391.37	-2933	0.86	0	509	6819	3863	2193	6056	No	2.06	Si
SLU 77	ini.	161.47	340	0.86	0	249	6819	3863	2193	6056	No	17.8	Si
SLU 77	fin.	-386.9	-2952	0.86	0	506	6819	3863	2193	6056	No	2.05	Si
SLU 82	ini.	150.43	587	0.86	0	271	6819	3863	2193	6056	No	10.32	Si
SLU 82	fin.	-406.23	-3195	0.86	0	518	6819	3863	2193	6056	No	1.9	Si
SLU 81	ini.	161.3	569	0.86	0	260	6819	3863	2193	6056	No	10.65	Si
SLU 81	fin.	-401.76	-3213	0.86	0	516	6819	3863	2193	6056	No	1.88	Si
SLU 79	ini.	161.47	340	0.86	0	249	6819	3863	2193	6056	No	17.8	Si
SLU 79	fin.	-386.9	-2952	0.86	0	506	6819	3863	2193	6056	No	2.05	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	108.73	249	-0.0000591	0.0002807	0.0035	0.86		2705.45	2705.45		24.88	Si
SLV 5	fin.	-207.8	-928	-0.0001147	0.0002807	0.0035	0.86		2711.06	2711.06		13.05	Si
SLV 1	ini.	283.86	1024	-0.0001591	0.0002807	0.0035	0.86		2705.45	2705.45		9.53	Si
SLV 1	fin.	-493.58	-1719	-0.0002881	0.0002807	0.0035	0.86		2711.06	2711.06		5.49	Si
SLV 3	ini.	342.13	1315	-0.0001939	0.0002807	0.0035	0.86		2705.45	2705.45		7.91	Si
SLV 3	fin.	-603.85	-1986	-0.0003618	0.0002807	0.0035	0.86		2711.06	2711.06		4.49	Si
SLV 4	ini.	273.33	1003	-0.0001529	0.0002807	0.0035	0.86		2705.45	2705.45		9.9	Si
SLV 4	fin.	-510.63	-1712	-0.0002993	0.0002807	0.0035	0.86		2711.06	2711.06		5.31	Si
SLV 12	ini.	139.05	517	-0.000076	0.0002807	0.0035	0.86		2705.45	2705.45		19.46	Si
SLV 12	fin.	-343	-1120	-0.0001941	0.0002807	0.0035	0.86		2711.06	2711.06		7.9	Si
SLV 7	ini.	302.99	1218	-0.0001705	0.0002807	0.0035	0.86		2705.45	2705.45		8.93	Si
SLV 7	fin.	-575.37	-1819	-0.0003424	0.0002807	0.0035	0.86		2711.06	2711.06		4.71	Si
SLV 11	ini.	210.17	840	-0.0001163	0.0002807	0.0035	0.86		2705.45	2705.45		12.87	Si
SLV 11	fin.	-439.35	-1404	-0.0002535	0.0002807	0.0035	0.86		2711.06	2711.06		6.17	Si
SLV 15	ini.	32.73	55	-0.0000176	0.0002807	0.0035	0.86		2705.45	2705.45		82.66	Si
SLV 15	fin.	-150.44	-604	-0.0000822	0.0002807	0.0035	0.86		2711.06	2711.06		18.02	Si
SLV 2	ini.	215.06	712	-0.0001191	0.0002807	0.0035	0.86		2705.45	2705.45		12.58	Si
SLV 2	fin.	-400.36	-1444	-0.0002291	0.0002807	0.0035	0.86		2711.06	2711.06		6.77	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 8	ini.	231.87	895	-0.0001288	0.0002807	0.0035	0.86		2705.45	2705.45		11.67	Si
SLV 8	fin.	-479.02	-1535	-0.0002787	0.0002807	0.0035	0.86		2711.06	2711.06		5.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 4	ini.	273.33	-974	0.86	0	283	6819	5794	2193	7103		7.29	Si
SLV 4	fin.	-510.63	-2812	0.86	0	702	6819	5794	2193	7521		2.68	Si
SLV 11	ini.	210.17	-799	0.86	0	324	6819	5794	2193	7144		8.94	Si
SLV 11	fin.	-439.35	-2579	0.86	0	668	6819	5794	2193	7487		2.9	Si
SLV 1	ini.	283.86	-906	0.86	0	278	6819	5794	2193	7097		7.83	Si
SLV 1	fin.	-493.58	-2787	0.86	0	703	6819	5794	2193	7522		2.7	Si
SLV 7	ini.	302.99	-1334	0.86	0	218	6819	5794	2193	7038		5.28	Si
SLV 7	fin.	-575.37	-3117	0.86	0	713	6819	5794	2193	7533		2.42	Si
SLV 12	ini.	139.05	-371	0.86	0	393	6819	5794	2193	7212		19.46	Si
SLV 12	fin.	-343	-2151	0.86	0	635	6819	5794	2193	7454		3.46	Si
SLV 3	ini.	342.13	-1388	0.86	0	182	6819	5794	2193	7001		5.04	Si
SLV 3	fin.	-603.85	-3226	0.86	0	731	6819	5794	2193	7550		2.34	Si
SLV 5	ini.	108.73	273	0.86	0	441	6819	5794	2193	7261		26.6	Si
SLV 5	fin.	-207.8	-1655	0.86	0	611	6819	5794	2193	7431		4.49	Si
SLV 15	ini.	32.73	395	0.86	0	474	6819	5794	2193	7293		18.47	Si
SLV 15	fin.	-150.44	-1434	0.86	0	570	6819	5794	2193	7389		5.15	Si
SLV 2	ini.	215.06	-492	0.86	0	353	6819	5794	2193	7172		14.57	Si
SLV 2	fin.	-400.36	-2373	0.86	0	672	6819	5794	2193	7492		3.16	Si
SLV 8	ini.	231.87	-906	0.86	0	311	6819	5794	2193	7130		7.87	Si
SLV 8	fin.	-479.02	-2689	0.86	0	682	6819	5794	2193	7502		2.79	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.49	SLV 3	Si
V_SLV	2.341	SLV 3	Si
PF_SLU	6.659	SLU 82	Si
V_SLU	1.885	SLU 81	Si