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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_06	TABULATI DI CALCOLO CIVICO 35 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						
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TABULATI DI CALCOLO
CIVICO 35
STATO DI PROGETTO

Sommario

1 Risultati numerici

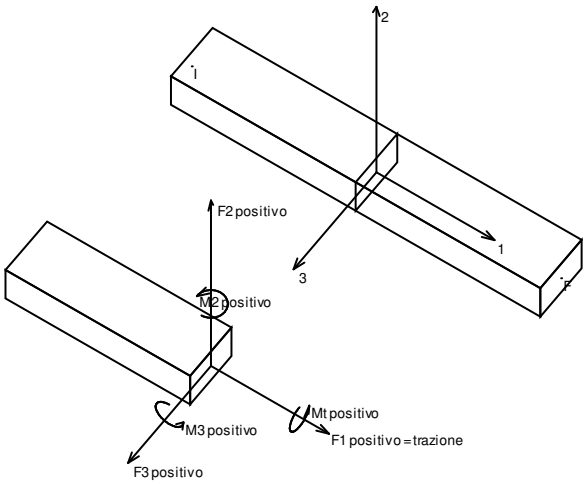
1.1 Sollecitazioni

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.



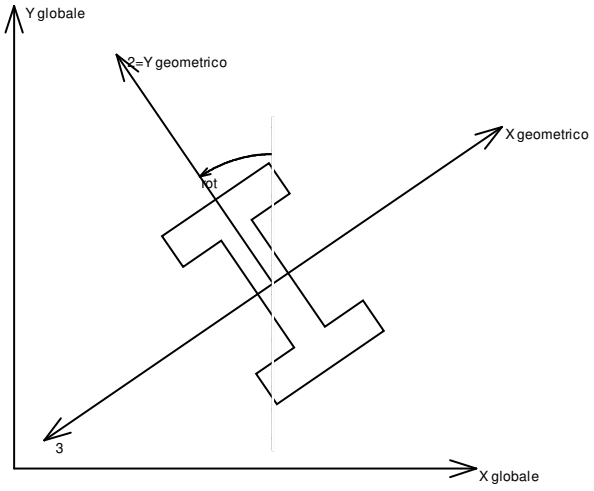
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando 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.

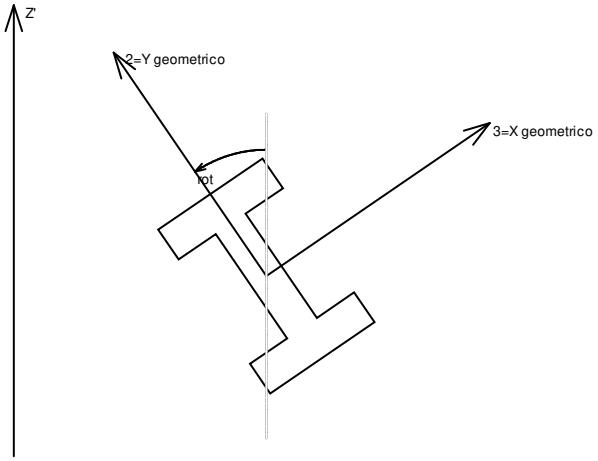
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

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).

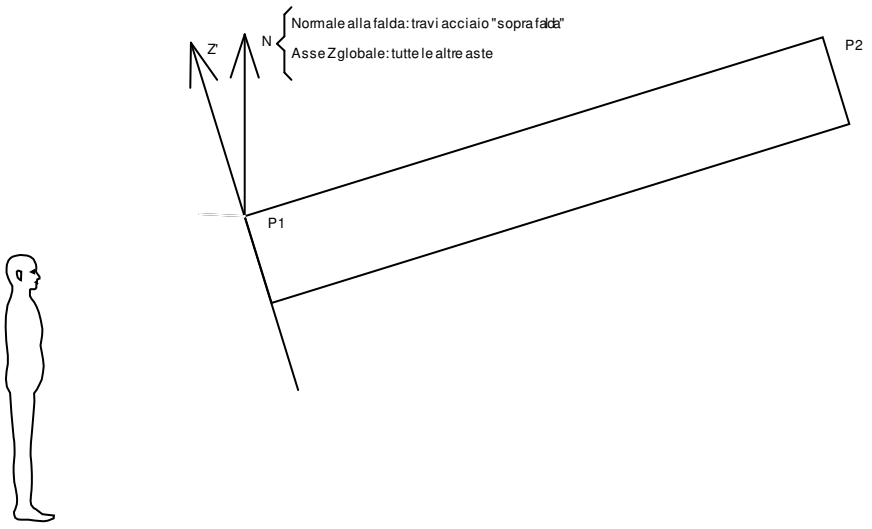
Sistema locale aste non verticali



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

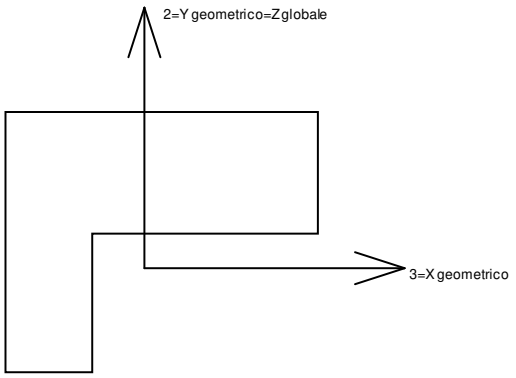
L'asse Z' è illustrato nella figura seguente dove:

- 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
1	SLV 10	31	-27.67	0.81	-1.37	-18855	-6448	1613	0.08	-1068.13	596.76
2	SLV 10	1	-27.67	0.81	-1.37	-16920	-4734	1564	3.47	-1437.31	-1267.71
3	SLV 10	1	-27.26	0.81	-1.37	-14562	-4439	1622	2.85	-1316.92	-1070.3
42	SLV 12	31	-30.01	1.31	-1.37	-12914	976	325	-4.38	892.51	-1633.56
142	SLV 8	31	-29.15	1.31	-1.37	-12210	-12667	-1929	-7.47	329	1984.25

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
146	SLV 10	31	-27.67	1.31	-1.37	11377	3672	1613	0.08	-1068.13	-1070.61
147	SLV 10	31	-27.26	1.31	-1.37	10309	3729	1817	1.01	-867.83	-1066.06
1	SLV Y	31	-27.67	0.81	-1.37	10158	1747	-656	-3.07	654.74	-189.96
2	SLV Y	31	-27.26	0.81	-1.37	9297	2255	-882	-4.14	538.57	-268.74
148	SLV 10	31	-26.86	1.31	-1.37	8758	3862	1918	1.58	-605.35	-955.9

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
76	SLU 82	1	-29.51	1.06	-1.37	-9134	7716	5127	-28.33	-4325.5	3776.01
67	SLV 13	1	-24.42	-2.92	-1.37	-2226	9621	10868	-227.22	-4244.66	-1928.58
129	SLV 12	31	-24.42	5.38	-1.37	-2077	-7990	-5277	333.42	-3502.08	-898.34
104	SLV 9	31	-24.67	-3.27	-1.37	-3268	-5657	-3050	259.08	-3441	-2230.31
130	SLV 12	1	-24.67	5.73	-1.37	-3032	4990	2725	-265.31	-3315.22	-2568.93

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
169	SLV 16	31	-34.11	-2.92	-1.37	3582	-978	13562	162.04	4962.72	302.23
75	SLV 9	31	-28.07	-2.92	-1.37	-6449	-11819	124	109.97	4091.74	7441.08
56	SLV 11	1	-33.86	-3.27	-1.37	5010	1300	-3461	-94.11	4039.47	-629.37
117	SLV 16	1	-29.76	5.38	-1.37	-3393	10770	-2944	-206.4	3894.2	5540.61
94	SLV 6	1	-24.67	1.06	-1.37	1311	6072	-2738	-144.9	3648.67	2830.43

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
44	SLU 81	31	-32.73	0.81	-1.37	-4361	498	503	-4.54	136.33	-5107.16
84	SLU 82	31	-29.51	5.73	-1.37	2110	2581	788	-0.55	530.88	-4866.35
37	SLU 81	1	-32.73	1.31	-1.37	-3075	-2524	502	1.22	-128.75	-4816.42
23	SLU 81	31	-27.82	-3.27	-1.37	3180	4191	-628	-2.68	-471.71	-4552.84
45	SLU 82	1	-32.73	0.81	-1.37	-3950	-889	528	1.25	-131.18	-4516.77

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
117	SLU 82	1	-29.76	5.38	-1.37	-5851	11755	-477	-247.48	2877.39	8624.79
75	SLU 81	31	-28.07	-2.92	-1.37	-5154	-12684	444	130.88	2180.44	8520.24
155	SLU 81	1	-28.07	-2.92	-1.37	-6520	11957	873	-206.16	-132.51	8469.79
141	SLU 81	31	-24.67	1.06	-1.37	-4329	-11329	157	152.07	1122.6	8212.6
34	SLU 82	31	-29.76	5.38	-1.37	-7962	-11469	-533	254.4	1076.91	7375.67

1.1.2 Sollecitazioni gusci

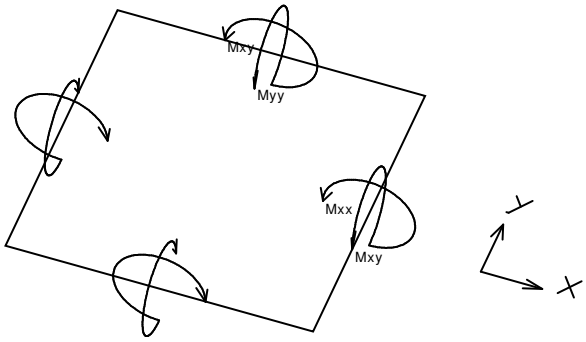
1.1.2.1 Convenzioni di segno gusci

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

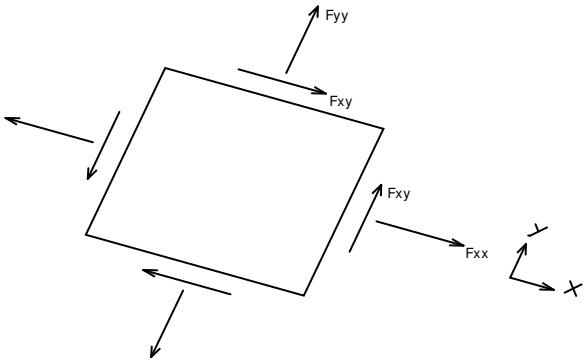
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione 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:

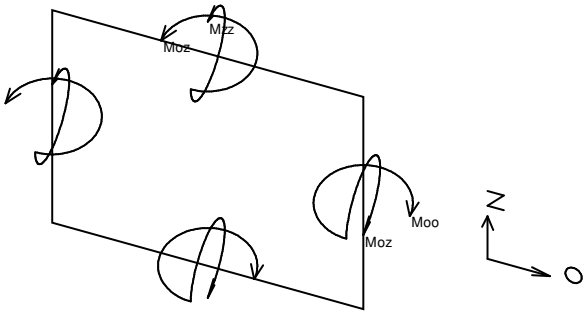
- Fxx: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fyy: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette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

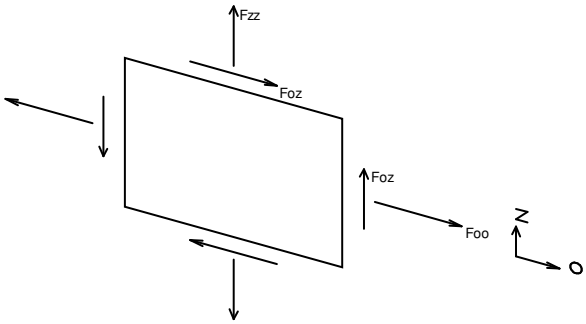
Convenzione di segno per gusci verticali

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
1329	SLV 12	1834	-337	35	-111	4559	280	-1672	776	-385
240	SLV 5	1043	-281	14	-187	-115	-2878	-3897	-867	833
233	SLV 9	1043	-278	8	-179	91	2053	-3403	891	818
1328	SLV 10	1832	-249	30	-67	721	-1793	-3752	-542	96
1179	SLV 8	1743	-240	-43	36	-3039	2052	-4260	532	-54

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
1329	SLV 5	1834	340	-35	113	3615	295	-999	-779	390
241	SLV 11	1043	276	8	191	-617	-645	-8397	1041	962
234	SLV 7	1043	274	-33	196	-720	741	-9001	-1088	985
1328	SLV 7	1832	249	-29	68	-2112	-3685	-7327	541	-95
1179	SLV 9	1743	237	42	-35	-6076	3273	-6248	-527	57

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
1111	SLV 12	1270	-123	21	-491	-1462	1506	-7089	144	-752
1112	SLV 12	1270	-122	-21	-488	-1374	687	-6989	-185	-730
275	SLV 7	1127	-64	-42	-431	-4255	-4622	-8069	219	849
227	SLV Y	1269	-107	53	-427	-163	423	-771	68	990
241	SLV Y	1271	-106	-124	-425	-322	541	-1105	472	1089

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
1111	SLV 5	1270	133	-27	530	-1249	-110	-6201	-194	855
1112	SLV 5	1270	131	28	526	-1200	-1232	-6133	236	825
227	SLV 5	1269	122	-62	489	-1097	1152	-4750	-76	-1222
234	SLV 5	1269	121	-129	483	-1390	2089	-4101	623	-1295
241	SLV 5	1271	117	132	468	-1323	-3535	-3758	-589	-1308

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
685	SLU 82	983	0	0	0	-76129	25407	-14682	-3	1
689	SLU 82	983	0	0	0	-41826	10779	11760	0	0
807	SLV 8	977	29	-8	18	-39221	12603	-17748	-66	107
682	SLU 82	999	0	0	0	-27074	8405	-5473	1	0
806	SLV Y	991	-4	-6	-2	-22318	970	-1193	26	-19

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
649	SLU 82	972	1	0	1	30891	18784	19028	4	6
807	SLV 9	991	-10	-6	7	29496	-5564	2322	115	78
806	SLV 9	991	-9	-11	10	28598	-779	1459	23	83
804	SLV 9	1003	-2	-14	-8	26828	-8146	7931	110	-116
325	SLV 16	1124	-68	-55	-122	25706	-4868	-851	-148	228

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
725	SLU 82	434	0	-1	-1	-2376	14585	-92779	0	3
724	SLU 82	434	0	0	0	5670	8405	-63618	-3	2
228	SLU 82	297	27	11	110	677	22748	-46306	33	707
235	SLU 82	297	27	-11	110	-719	-23731	-46297	-29	705
682	SLU 82	839	0	0	0	-6745	14734	-40253	0	-1

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
721	SLU 82	838	0	0	1	2648	14965	49645	0	4
658	SLV 15	435	0	0	-11	4751	10710	33289	7	-76
649	SLU 82	982	0	0	0	29586	28880	30027	4	6
657	SLU 82	972	0	0	1	13591	5652	26716	-1	7
940	SLV Y	107	-2	-2	-8	4846	1536	25121	20	-37

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
929	SLV 6	544	-50	-22	-63	-2023	-5290	-8065	-68	-321
1927	SLV 3	2090	-47	22	-30	3059	342	-2488	-56	89
935	SLV 10	414	-39	-9	-53	-2432	-6033	-11127	191	106
941	SLV 11	114	-21	-12	-18	4163	340	-4288	155	148
1928	SLV 13	2210	-18	14	-28	-1403	-957	1261	-87	28

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
929	SLV 11	685	86	-2	68	-8749	-3607	5840	-343	221
941	SLV 11	414	54	-6	63	9781	-1084	-7902	-46	331
935	SLV 7	414	52	-12	23	3051	6119	-7212	-232	109
1927	SLV 15	2087	43	-11	10	2159	515	-948	-8	-28
1928	SLV 13	2264	20	4	-11	-1099	76	3915	-27	-9

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
929	SLV 10	544	-43	-22	-65	-2527	-5379	-8181	-86	-322
935	SLV 10	414	-39	-9	-53	-2432	-6033	-11127	191	106
1927	SLV 3	2090	-47	22	-30	3059	342	-2488	-56	89
1928	SLV 14	2210	-18	14	-28	-1385	-954	1241	-87	28
941	SLU 82	114	-20	-12	-20	-3221	-3555	-9057	162	164

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
929	SLV 11	685	86	-2	68	-8749	-3607	5840	-343	221
941	SLV 11	414	54	-6	63	9781	-1084	-7902	-46	331
935	SLV 11	544	-10	7	40	4394	5902	-6843	46	22
1928	SLV 3	2210	18	-15	31	-824	-234	-940	84	-21
1927	SLV 14	2090	42	-20	25	-3257	-1095	-513	26	-56

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
929	SLV 11	462	-23	7	3	-11830	-2821	4260	-101	170
941	SLV 6	414	-1	18	5	-9729	-5975	-4154	102	6
1928	SLV 15	2274	5	0	-6	-5854	-737	3043	-35	-6
1927	SLV 2	2208	-16	1	7	-4114	-171	-2260	-27	90
935	SLV 10	544	18	5	0	-3644	-6230	-10427	1	166

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
941	SLV 11	414	54	-6	63	9781	-1084	-7902	-46	331
1927	SLV 15	2208	22	3	3	5627	-66	211	26	-59
935	SLV 7	544	-9	3	38	4468	5739	-6295	48	11
1928	SLV 2	2274	-4	0	4	3522	-206	-2875	24	20
929	SLV 6	462	18	-4	3	1227	-2573	-4595	117	-115

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
941	SLV 11	332	-19	12	-18	3125	-4840	-16692	-196	181
935	SLU 81	414	11	-17	-23	514	153	-14545	-36	170
929	SLV 6	685	3	22	14	-2224	-4854	-9459	-116	-251
1927	SLV 7	2087	11	-1	5	174	-156	-3991	-77	79
1928	SLV 2	2264	-10	-1	9	919	101	-3073	8	2

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
929	SLV Y	685	36	-11	26	-3068	731	7518	-117	247
1928	SLV 15	2264	19	5	-3	-2377	4	4441	-27	2
1927	SLV X	2208	19	1	-6	4414	448	1786	39	-80
935	SLV Y	544	-14	1	20	3995	6029	1784	23	-72
941	SLV 6	332	4	-5	13	-4530	-2307	1773	60	-41

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
1329	SLV 12	1834	-337	35	-111	4559	280	-1672	776	-385
240	SLV 5	1043	-281	14	-187	-115	-2878	-3897	-867	833
233	SLV 9	1043	-278	8	-179	91	2053	-3403	891	818
1328	SLV 10	1832	-249	30	-67	721	-1793	-3752	-542	96
1179	SLV 8	1743	-240	-43	36	-3039	2052	-4260	532	-54

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
1329	SLV 5	1834	340	-35	113	3615	295	-999	-779	390
241	SLV 11	1043	276	8	191	-617	-645	-8397	1041	962
234	SLV 7	1043	274	-33	196	-720	741	-9001	-1088	985
1328	SLV 7	1832	249	-29	68	-2112	-3685	-7327	541	-95
1179	SLV 9	1743	237	42	-35	-6076	3273	-6248	-527	57

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
1111	SLV 12	1270	-123	21	-491	-1462	1506	-7089	144	-752
1112	SLV 12	1270	-122	-21	-488	-1374	687	-6989	-185	-730
275	SLV 7	1127	-64	-42	-431	-4255	-4622	-8069	219	849
227	SLV Y	1269	-107	53	-427	-163	423	-771	68	990
241	SLV Y	1271	-106	-124	-425	-322	541	-1105	472	1089

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
1111	SLV 5	1270	133	-27	530	-1249	-110	-6201	-194	855
1112	SLV 5	1270	131	28	526	-1200	-1232	-6133	236	825
227	SLV 5	1269	122	-62	489	-1097	1152	-4750	-76	-1222
234	SLV 5	1269	121	-129	483	-1390	2089	-4101	623	-1295
241	SLV 5	1271	117	132	468	-1323	-3535	-3758	-589	-1308

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
685	SLU 82	983	0	0	0	-76129	25407	-14682	-3	1
689	SLU 82	983	0	0	0	-41826	10779	11760	0	0
807	SLV 8	977	29	-8	18	-39221	12603	-17748	-66	107
682	SLU 82	999	0	0	0	-27074	8405	-5473	1	0
806	SLV Y	991	-4	-6	-2	-22318	970	-1193	26	-19

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
649	SLU 82	972	1	0	1	30891	18784	19028	4	6
807	SLV 9	991	-10	-6	7	29496	-5564	2322	115	78
806	SLV 9	991	-9	-11	10	28598	-779	1459	23	83
804	SLV 9	1003	-2	-14	-8	26828	-8146	7931	110	-116
325	SLV 16	1124	-68	-55	-122	25706	-4868	-851	-148	228

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
725	SLU 82	434	0	-1	-1	-2376	14585	-92779	0	3
724	SLU 82	434	0	0	0	5670	8405	-63618	-3	2
228	SLU 82	297	27	11	110	677	22748	-46306	33	707
235	SLU 82	297	27	-11	110	-719	-23731	-46297	-29	705
682	SLU 82	839	0	0	0	-6745	14734	-40253	0	-1

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
721	SLU 82	838	0	0	1	2648	14965	49645	0	4
658	SLV 15	435	0	0	-11	4751	10710	33289	7	-76
649	SLU 82	982	0	0	0	29586	28880	30027	4	6
657	SLU 82	972	0	0	1	13591	5652	26716	-1	7
940	SLV Y	107	-2	-2	-8	4846	1536	25121	20	-37

1.1.3 Sollecitazioni gusci armati

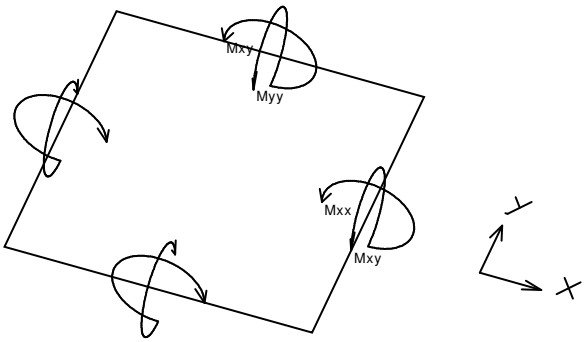
1.1.3.1 Convenzioni di segno gusci

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

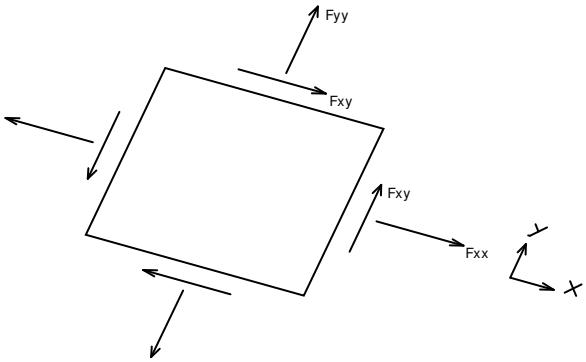
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione 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:

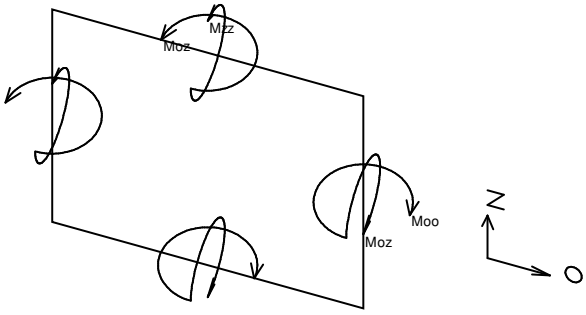
- Fxx: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Fyy: sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette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

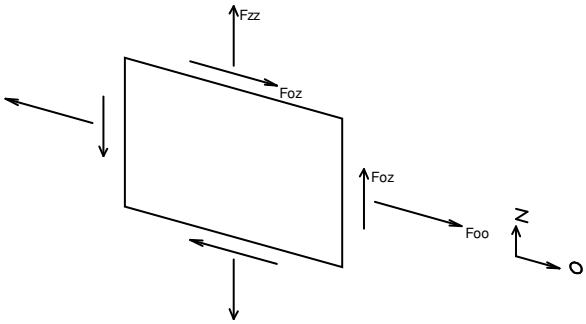
Convenzione di segno per gusci verticali

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

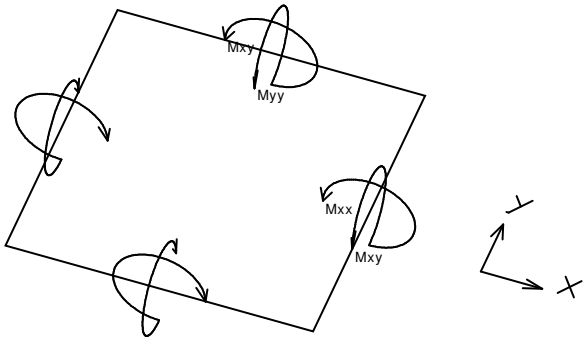
1.1.4.1 Convenzioni di segno gusci muratura

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

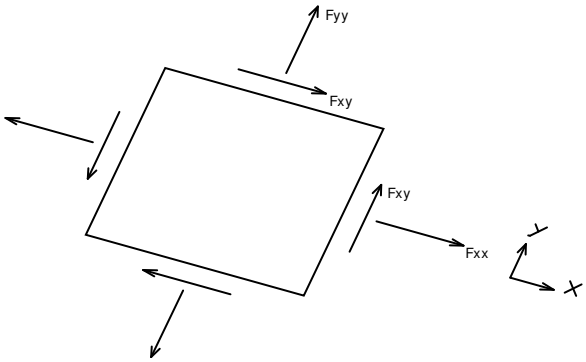
Il sistema di riferimento nel quale sono espressi i parametri di sollecitazione è così definito: origine appartenente al piano dell'elemento, asse x e y contenuti nel piano dell'elemento e terzo asse (z) ortogonale al piano dell'elemento a formare una terna destrogira. In particolare l'asse x ha proiezione 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.

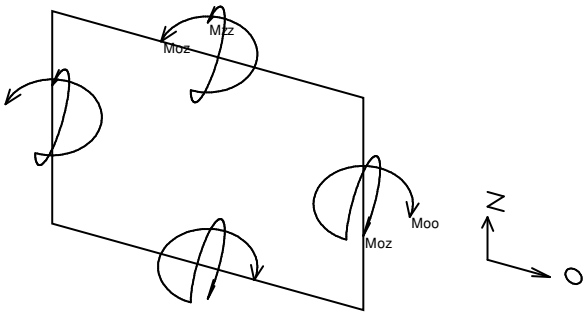


Si definiscono:

- 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).

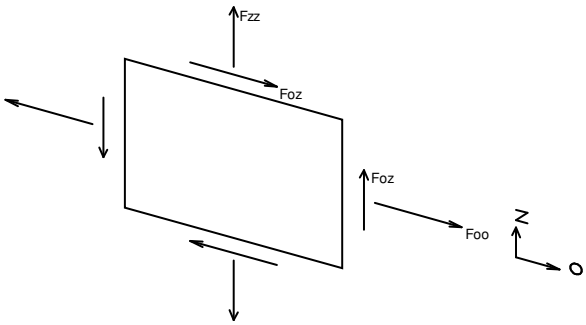
Convenzione di segno per gusci verticali

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);

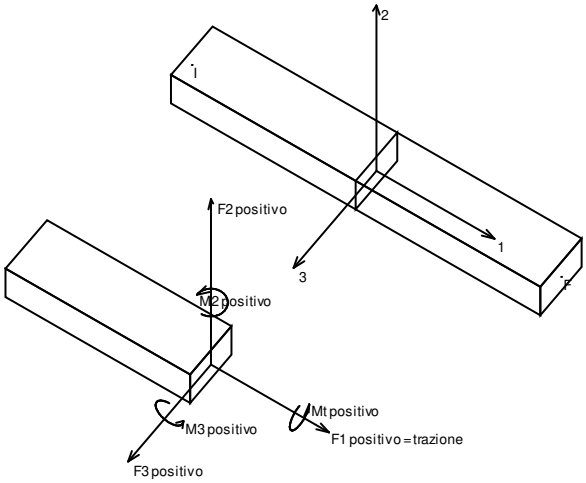
- Foo: sforzo tensionale distribuito [Forza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- Foz: sforzo tagliante distribuito [Forza/Lunghezza] applicato sui bordi (verso positivo indicato dalla freccia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



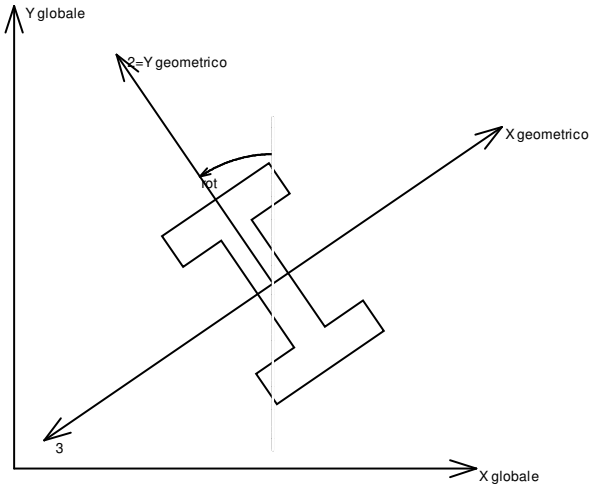
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando 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.

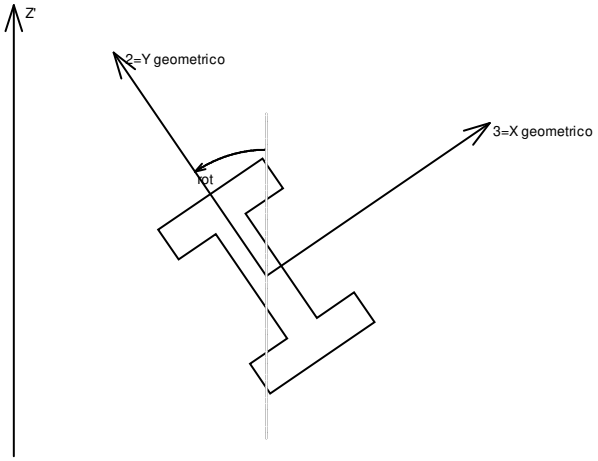
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

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).

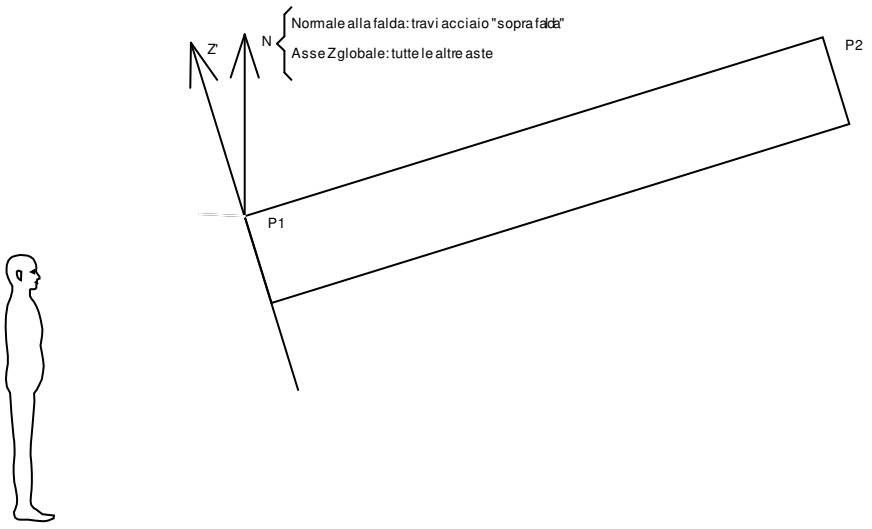
Sistema locale aste non verticali



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

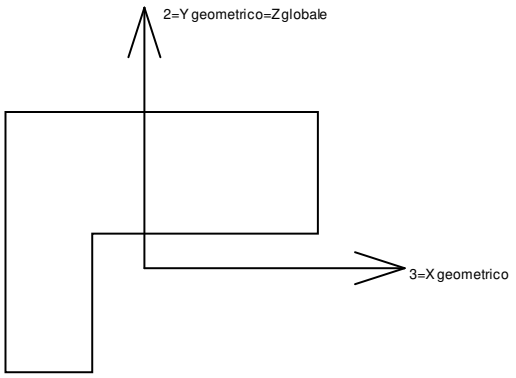
L'asse Z' è illustrato nella figura seguente dove:

- 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.



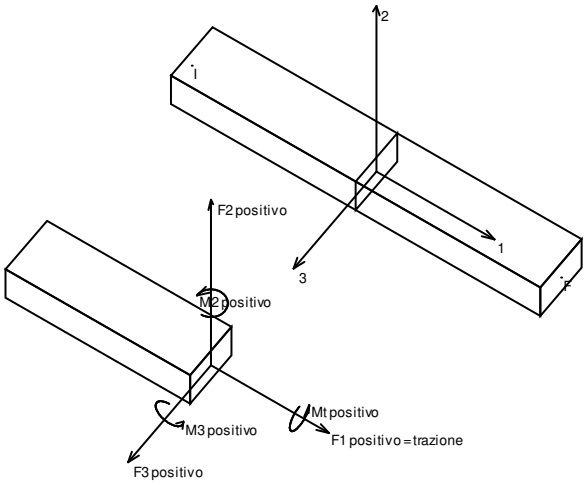
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli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



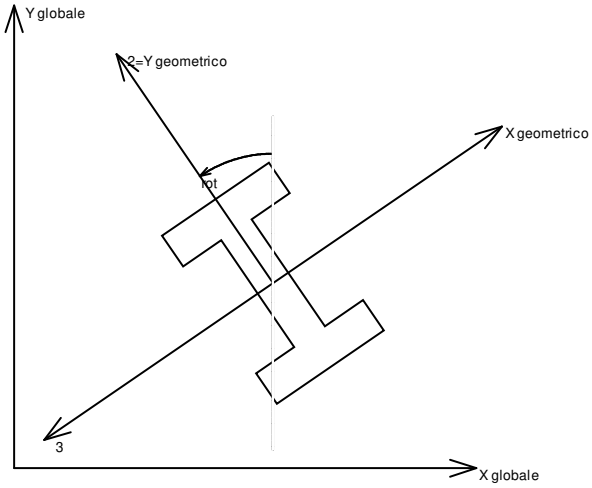
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando 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.

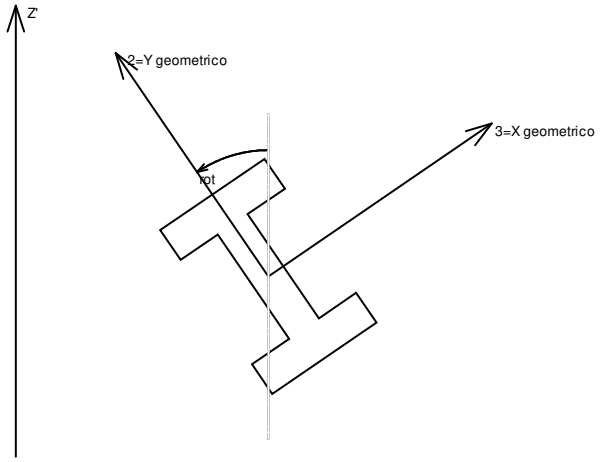
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

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).

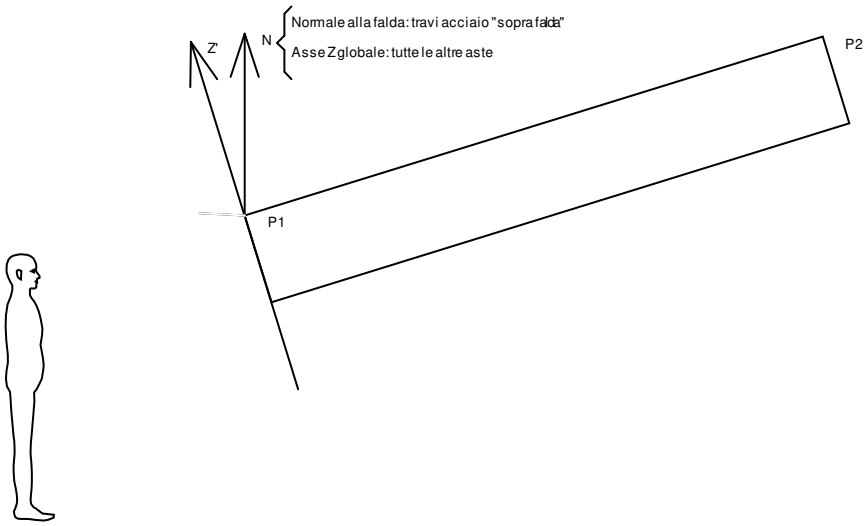
Sistema locale aste non verticali



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

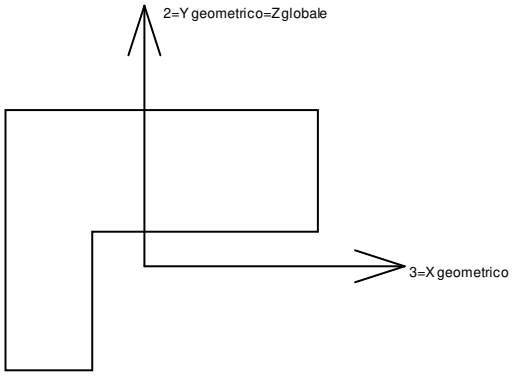
L'asse Z' è illustrato nella figura seguente dove:

- 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.



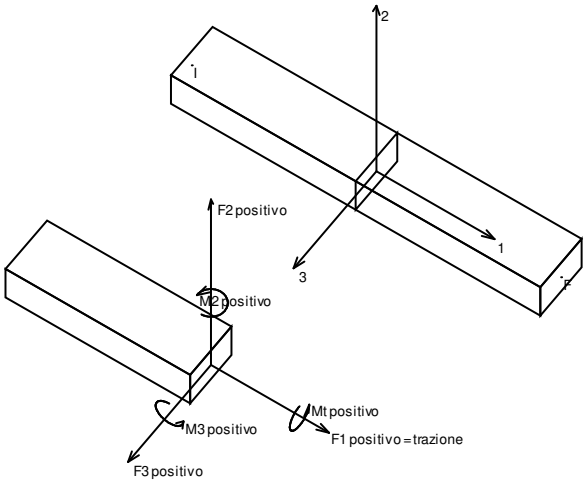
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. . Si sottolinea il fatto che gli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



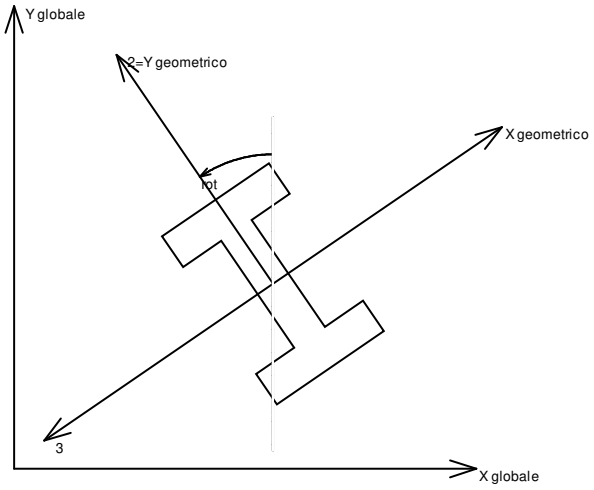
La convenzione sui segni per i parametri di sollecitazione delle aste è la seguente:
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando 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.

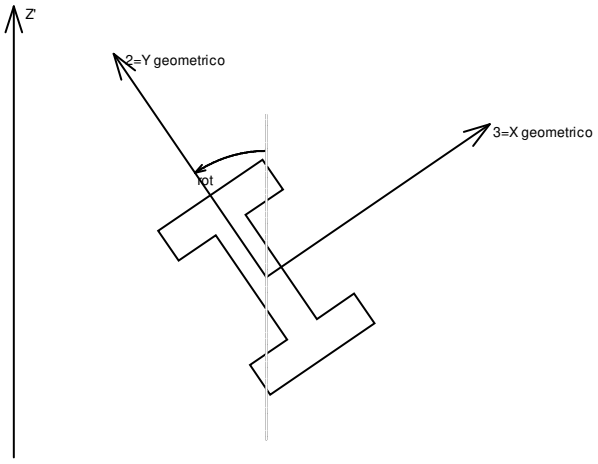
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

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).

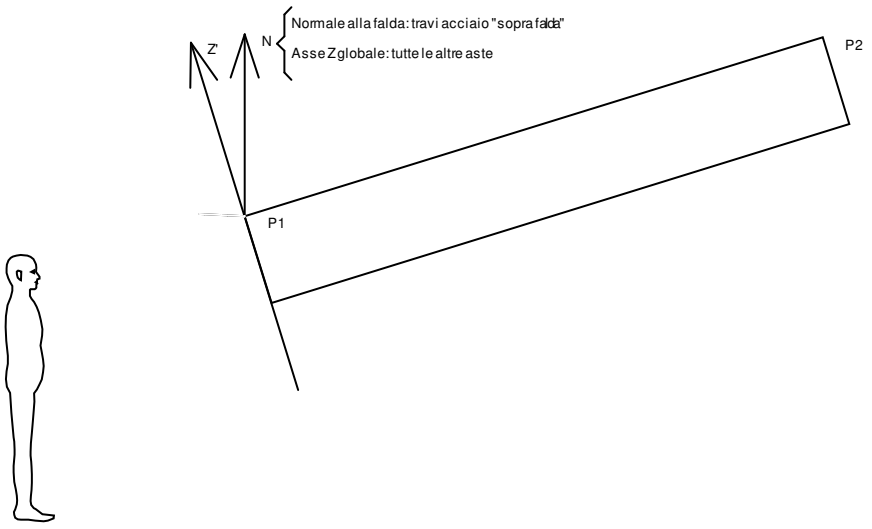
Sistema locale aste non verticali



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

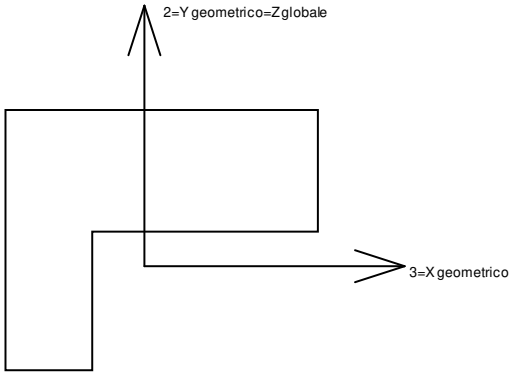
L'asse Z' è illustrato nella figura seguente dove:

- 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
84	SLV 15	-2030	-675	9462	3311	-102.69	677.92
107	SLV 15	-1654	-642	8912	-3314.01	-191.02	-660.77
297	SLV 16	-1444	-31	6761	-1608.13	-48.57	-361.46
149	SLV X	-1316	105	-954	-53.07	-183.2	108.9
21	SLV 15	-1241	-330	5375	1245.67	-32.15	298.41

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
84	SLV 2	1907	574	9112	3173.08	55.61	-678.01
107	SLV 2	1862	575	8536	-3178.06	64.07	693.98
149	SLV 4	1495	-316	7367	645.69	1291.09	-72.49
297	SLV 1	1280	313	5852	-1426.3	8.07	324.87
203	SLV 3	1278	-202	6182	-1087.9	-9.98	223.62

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
141	SLV 12	-117	-1610	5029	54.14	-873.82	-255.87
84	SLV 11	-895	-1580	8365	3000.47	-37.53	281.95
107	SLV 11	-612	-1521	8388	-3090.17	-125.57	-265.53
142	SLV 8	466	-1513	5698	39.56	942.14	259.52
139	SLV 12	-92	-1347	4398	25.14	-739.44	-242.37

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
84	SLV 6	772	1478	10209	3483.61	-9.54	-282.04
107	SLV 6	820	1454	9059	-3401.91	-1.37	298.74
141	SLV 5	250	1447	6786	-49.94	-1185.8	235.3
142	SLV 9	-314	1417	5189	-22.52	853.03	-232.04
149	SLV 9	-380	1324	6718	628.72	1155.63	-219.48

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
21	SLV Y	-108	-687	-2012	-384.61	5.69	24.67
141	SLV X	-904	-118	-1981	7.86	348.21	19.96
142	SLV X	-983	114	-1852	12.52	-307.16	19.85
139	SLV X	-708	-98	-1697	4.31	287.72	-17.59
4	SLV Y	44	-637	-1337	-280.75	227.98	-113.89

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
84	SLU 81	-95	-73	14019	4894.83	-31.52	0.38
107	SLU 81	156	-49	13199	-4906.87	-90.67	24.96
149	SLU 81	213	224	9952	923.46	1716.44	-52.28
297	SLU 82	-119	196	9629	-2315.83	-30.44	-26.61
141	SLU 81	103	-124	8951	4	-1559.45	-15.79

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	-56	-38	2755	631.51	-473.44	6.91
4	SLU 2	-56	-52	2724	625.05	-468.14	4.27
4	SLU 3	-56	-38	2755	631.51	-473.44	6.91
4	SLU 4	-56	-47	2736	627.63	-470.26	5.32
4	SLU 5	-56	-52	2724	625.05	-468.14	4.27
4	SLU 6	-56	-38	2755	631.51	-473.44	6.91
4	SLU 7	-56	-47	2736	627.63	-470.26	5.32
4	SLU 8	-56	-38	2755	631.51	-473.44	6.91

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
4	SLU 9	-56	-47	2736	627.63	-470.26	5.32
4	SLU 10	-65	-61	3254	744.86	-558.27	4.89
4	SLU 11	-65	-47	3285	751.32	-563.57	7.54
4	SLU 12	-65	-56	3266	747.44	-560.39	5.95
4	SLU 13	-65	-61	3254	744.86	-558.27	4.89
4	SLU 14	-65	-47	3285	751.32	-563.57	7.54
4	SLU 15	-65	-56	3266	747.44	-560.39	5.95
4	SLU 16	-65	-47	3285	751.32	-563.57	7.54
4	SLU 17	-65	-56	3266	747.44	-560.39	5.95
4	SLU 18	-69	-51	3512	802.67	-602.2	7.81
4	SLU 19	-69	-59	3494	798.79	-599.02	6.22
4	SLU 20	-69	-51	3512	802.67	-602.2	7.81
4	SLU 21	-69	-59	3494	798.79	-599.02	6.22
4	SLU 22	-63	-41	3143	719.41	-539.33	8.11
4	SLU 23	-63	-56	3112	712.95	-534.03	5.46
4	SLU 24	-63	-41	3143	719.41	-539.33	8.11
4	SLU 25	-63	-50	3124	715.53	-536.15	6.52
4	SLU 26	-63	-56	3112	712.95	-534.03	5.46
4	SLU 27	-63	-41	3143	719.41	-539.33	8.11
4	SLU 28	-63	-50	3124	715.53	-536.15	6.52
4	SLU 29	-63	-41	3143	719.41	-539.33	8.11
4	SLU 30	-63	-50	3124	715.53	-536.15	6.52
4	SLU 31	-72	-65	3642	832.76	-624.17	6.09
4	SLU 32	-72	-50	3673	839.22	-629.47	8.73
4	SLU 33	-72	-59	3655	835.34	-626.29	7.15
4	SLU 34	-72	-65	3642	832.76	-624.17	6.09
4	SLU 35	-72	-50	3673	839.22	-629.47	8.73
4	SLU 36	-72	-59	3655	835.34	-626.29	7.15
4	SLU 37	-72	-50	3673	839.22	-629.47	8.73
4	SLU 38	-72	-59	3655	835.34	-626.29	7.15
4	SLU 39	-76	-54	3900	890.57	-668.1	9
4	SLU 40	-76	-63	3882	886.69	-664.92	7.42
4	SLU 41	-76	-54	3900	890.57	-668.1	9
4	SLU 42	-76	-63	3882	886.69	-664.92	7.42
4	SLU 43	-70	-48	3448	790.82	-592.88	8.57
4	SLU 44	-70	-63	3418	784.36	-587.58	5.93
4	SLU 45	-70	-48	3448	790.82	-592.88	8.57
4	SLU 46	-70	-57	3430	786.95	-589.7	6.99
4	SLU 47	-70	-63	3418	784.36	-587.58	5.93
4	SLU 48	-70	-48	3448	790.82	-592.88	8.57
4	SLU 49	-70	-57	3430	786.95	-589.7	6.99
4	SLU 50	-70	-48	3448	790.82	-592.88	8.57
4	SLU 51	-70	-57	3430	786.95	-589.7	6.99
4	SLU 52	-79	-72	3948	904.18	-677.71	6.56
4	SLU 53	-79	-57	3978	910.63	-683.01	9.2
4	SLU 54	-79	-66	3960	906.76	-679.83	7.61
4	SLU 55	-79	-72	3948	904.18	-677.71	6.56
4	SLU 56	-79	-57	3978	910.63	-683.01	9.2
4	SLU 57	-79	-66	3960	906.76	-679.83	7.61
4	SLU 58	-79	-57	3978	910.63	-683.01	9.2
4	SLU 59	-79	-66	3960	906.76	-679.83	7.61
4	SLU 60	-83	-61	4206	961.98	-721.64	9.47
4	SLU 61	-83	-69	4187	958.11	-718.46	7.88
4	SLU 62	-83	-61	4206	961.98	-721.64	9.47
4	SLU 63	-83	-69	4187	958.11	-718.46	7.88
4	SLU 64	-77	-51	3836	878.72	-658.77	9.77
4	SLU 65	-77	-66	3806	872.26	-653.47	7.12
4	SLU 66	-77	-51	3836	878.72	-658.77	9.77
4	SLU 67	-77	-60	3818	874.85	-655.59	8.18
4	SLU 68	-77	-66	3806	872.26	-653.47	7.12
4	SLU 69	-77	-51	3836	878.72	-658.77	9.77
4	SLU 70	-77	-60	3818	874.85	-655.59	8.18
4	SLU 71	-77	-51	3836	878.72	-658.77	9.77
4	SLU 72	-77	-60	3818	874.85	-655.59	8.18
4	SLU 73	-86	-75	4336	992.07	-743.61	7.75
4	SLU 74	-86	-60	4366	998.53	-748.91	10.4
4	SLU 75	-86	-69	4348	994.66	-745.73	8.81
4	SLU 76	-86	-75	4336	992.07	-743.61	7.75
4	SLU 77	-86	-60	4366	998.53	-748.91	10.4
4	SLU 78	-86	-69	4348	994.66	-745.73	8.81
4	SLU 79	-86	-60	4366	998.53	-748.91	10.4
4	SLU 80	-86	-69	4348	994.66	-745.73	8.81
4	SLU 81	-90	-64	4594	1049.88	-787.54	10.67
4	SLU 82	-90	-73	4575	1046.01	-784.36	9.08
4	SLU 83	-90	-64	4594	1049.88	-787.54	10.67
4	SLU 84	-90	-73	4575	1046.01	-784.36	9.08
4	SLE RA 1	-58	-39	2866	656.62	-492.26	7.25
4	SLE RA 2	-58	-49	2845	652.31	-488.73	5.49
4	SLE RA 3	-58	-39	2866	656.62	-492.26	7.25
4	SLE RA 4	-58	-45	2853	654.04	-490.14	6.19
4	SLE RA 5	-58	-49	2845	652.31	-488.73	5.49
4	SLE RA 6	-58	-39	2866	656.62	-492.26	7.25
4	SLE RA 7	-58	-45	2853	654.04	-490.14	6.19
4	SLE RA 8	-58	-39	2866	656.62	-492.26	7.25
4	SLE RA 9	-58	-45	2853	654.04	-490.14	6.19
4	SLE RA 10	-64	-55	3199	732.19	-548.82	5.91
4	SLE RA 11	-64	-45	3219	736.5	-552.35	7.67

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
4	SLE RA 12	-64	-51	3207	733.91	-550.24	6.61
4	SLE RA 13	-64	-55	3199	732.19	-548.82	5.91
4	SLE RA 14	-64	-45	3219	736.5	-552.35	7.67
4	SLE RA 15	-64	-51	3207	733.91	-550.24	6.61
4	SLE RA 16	-64	-45	3219	736.5	-552.35	7.67
4	SLE RA 17	-64	-51	3207	733.91	-550.24	6.61
4	SLE RA 18	-66	-47	3371	770.73	-578.11	7.85
4	SLE RA 19	-66	-53	3358	768.14	-575.99	6.79
4	SLE RA 20	-66	-47	3371	770.73	-578.11	7.85
4	SLE RA 21	-66	-53	3358	768.14	-575.99	6.79
4	SLE FR 1	-58	-39	2866	656.62	-492.26	7.25
4	SLE FR 2	-58	-41	2862	655.76	-491.56	6.9
4	SLE FR 3	-58	-39	2866	656.62	-492.26	7.25
4	SLE FR 4	-60	-43	3013	689.99	-517.31	7.08
4	SLE FR 5	-60	-41	3017	690.85	-518.02	7.43
4	SLE FR 6	-62	-43	3118	713.67	-535.19	7.55
4	SLE QP 1	-58	-39	2866	656.62	-492.26	7.25
4	SLE QP 2	-60	-41	3017	690.85	-518.02	7.43
4	SLD 1	126	44	3662	834.31	-624.79	-22.13
4	SLD 2	177	-9	3652	832.25	-623.2	-44.08
4	SLD 3	138	-124	3310	760.46	-564.83	-52.12
4	SLD 4	189	-176	3301	758.41	-563.24	-74.07
4	SLD 5	-40	257	3748	846.62	-641.56	51.91
4	SLD 6	12	204	3738	844.53	-639.94	29.62
4	SLD 7	-2	-302	2575	600.48	-441.7	-48.08
4	SLD 8	50	-355	2565	598.39	-440.08	-70.36
4	SLD 9	-171	272	3469	783.32	-595.96	85.23
4	SLD 10	-119	219	3459	781.23	-594.34	62.94
4	SLD 11	-133	-287	2297	537.17	-396.1	-14.76
4	SLD 12	-81	-340	2287	535.09	-394.48	-37.05
4	SLD 13	-310	94	2734	623.3	-472.8	88.94
4	SLD 14	-259	41	2724	621.24	-471.2	66.98
4	SLD 15	-298	-74	2382	549.45	-412.84	58.94
4	SLD 16	-247	-126	2373	547.4	-411.24	36.99
4	SLV 1	364	152	4485	1017.36	-761.08	-59.73
4	SLV 2	479	33	4463	1012.7	-757.45	-109.52
4	SLV 3	390	-230	3682	848.91	-624.29	-128.07
4	SLV 4	506	-349	3660	844.25	-620.67	-177.85
4	SLV 5	-14	638	4682	1045.95	-799.69	108.71
4	SLV 6	103	518	4660	1041.22	-796.01	58.2
4	SLV 7	73	-635	2008	484.45	-343.74	-119.07
4	SLV 8	191	-755	1986	479.73	-340.06	-169.59
4	SLV 9	-312	673	4049	901.98	-695.97	184.45
4	SLV 10	-194	552	4027	897.25	-692.3	133.93
4	SLV 11	-224	-601	1375	340.48	-240.02	-43.33
4	SLV 12	-107	-721	1352	335.75	-236.35	-93.85
4	SLV 13	-627	266	2374	537.46	-415.37	192.71
4	SLV 14	-511	147	2352	532.8	-411.74	142.93
4	SLV 15	-600	-116	1572	369.01	-278.58	124.38
4	SLV 16	-485	-235	1550	364.35	-274.96	74.6
4	CRTFP Ux+	0	0	0	-0.01	0	0
4	CRTFP Ux-	0	0	0	0.01	0	0
4	CRTFP Uy+	0	0	0	-0.01	0.01	0
4	CRTFP Uy-	0	0	0	0.01	-0.01	0
6	SLU 1	-41	-27	1884	525.98	-48.84	13.69
6	SLU 2	-41	-37	1864	520.99	-48.32	13.48
6	SLU 3	-41	-27	1884	525.98	-48.84	13.69
6	SLU 4	-41	-33	1872	522.99	-48.53	13.56
6	SLU 5	-41	-37	1864	520.99	-48.32	13.48
6	SLU 6	-41	-27	1884	525.98	-48.84	13.69
6	SLU 7	-41	-33	1872	522.99	-48.53	13.56
6	SLU 8	-41	-27	1884	525.98	-48.84	13.69
6	SLU 9	-41	-33	1872	522.99	-48.53	13.56
6	SLU 10	-48	-44	2222	616.84	-57.48	15.7
6	SLU 11	-48	-33	2242	621.83	-58	15.91
6	SLU 12	-48	-39	2230	618.84	-57.69	15.79
6	SLU 13	-48	-44	2222	616.84	-57.48	15.7
6	SLU 14	-48	-33	2242	621.83	-58	15.91
6	SLU 15	-48	-39	2230	618.84	-57.69	15.79
6	SLU 16	-48	-33	2242	621.83	-58	15.91
6	SLU 17	-48	-39	2230	618.84	-57.69	15.79
6	SLU 18	-51	-36	2396	662.91	-61.92	16.87
6	SLU 19	-51	-42	2383	659.92	-61.61	16.74
6	SLU 20	-51	-36	2396	662.91	-61.92	16.87
6	SLU 21	-51	-42	2383	659.92	-61.61	16.74
6	SLU 22	-47	-30	2146	596.38	-55.53	15.53
6	SLU 23	-47	-40	2126	591.39	-55.01	15.32
6	SLU 24	-47	-30	2146	596.38	-55.53	15.53
6	SLU 25	-47	-36	2134	593.39	-55.22	15.4
6	SLU 26	-47	-40	2126	591.39	-55.01	15.32
6	SLU 27	-47	-30	2146	596.38	-55.53	15.53
6	SLU 28	-47	-36	2134	593.39	-55.22	15.4
6	SLU 29	-47	-30	2146	596.38	-55.53	15.53
6	SLU 30	-47	-36	2134	593.39	-55.22	15.4
6	SLU 31	-54	-46	2484	687.24	-64.17	17.54
6	SLU 32	-53	-36	2504	692.23	-64.69	17.76
6	SLU 33	-54	-42	2492	689.24	-64.38	17.63

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
6	SLU 34	-54	-46	2484	687.24	-64.17	17.54
6	SLU 35	-53	-36	2504	692.23	-64.69	17.76
6	SLU 36	-54	-42	2492	689.24	-64.38	17.63
6	SLU 37	-53	-36	2504	692.23	-64.69	17.76
6	SLU 38	-54	-42	2492	689.24	-64.38	17.63
6	SLU 39	-56	-39	2658	733.31	-68.61	18.71
6	SLU 40	-56	-45	2645	730.32	-68.3	18.58
6	SLU 41	-56	-39	2658	733.31	-68.61	18.71
6	SLU 42	-56	-45	2645	730.32	-68.3	18.58
6	SLU 43	-52	-34	2359	659.64	-61.2	17.16
6	SLU 44	-52	-45	2339	654.65	-60.68	16.95
6	SLU 45	-52	-34	2359	659.64	-61.2	17.16
6	SLU 46	-52	-41	2347	656.65	-60.89	17.04
6	SLU 47	-52	-45	2339	654.65	-60.68	16.95
6	SLU 48	-52	-34	2359	659.64	-61.2	17.16
6	SLU 49	-52	-41	2347	656.65	-60.89	17.04
6	SLU 50	-52	-34	2359	659.64	-61.2	17.16
6	SLU 51	-52	-41	2347	656.65	-60.89	17.04
6	SLU 52	-59	-51	2697	750.5	-69.84	19.18
6	SLU 53	-58	-41	2717	755.49	-70.36	19.39
6	SLU 54	-59	-47	2705	752.5	-70.05	19.26
6	SLU 55	-59	-51	2697	750.5	-69.84	19.18
6	SLU 56	-58	-41	2717	755.49	-70.36	19.39
6	SLU 57	-59	-47	2705	752.5	-70.05	19.26
6	SLU 58	-58	-41	2717	755.49	-70.36	19.39
6	SLU 59	-59	-47	2705	752.5	-70.05	19.26
6	SLU 60	-61	-43	2871	796.57	-74.28	20.34
6	SLU 61	-61	-49	2859	793.58	-73.97	20.22
6	SLU 62	-61	-43	2871	796.57	-74.28	20.34
6	SLU 63	-61	-49	2859	793.58	-73.97	20.22
6	SLU 64	-57	-37	2621	730.04	-67.89	19
6	SLU 65	-57	-47	2601	725.05	-67.37	18.79
6	SLU 66	-57	-37	2621	730.04	-67.89	19
6	SLU 67	-57	-43	2609	727.05	-67.58	18.88
6	SLU 68	-57	-47	2601	725.05	-67.37	18.79
6	SLU 69	-57	-37	2621	730.04	-67.89	19
6	SLU 70	-57	-43	2609	727.05	-67.58	18.88
6	SLU 71	-57	-37	2621	730.04	-67.89	19
6	SLU 72	-57	-43	2609	727.05	-67.58	18.88
6	SLU 73	-64	-53	2959	820.9	-76.53	21.02
6	SLU 74	-64	-43	2979	825.89	-77.05	21.23
6	SLU 75	-64	-49	2967	822.9	-76.74	21.1
6	SLU 76	-64	-53	2959	820.9	-76.53	21.02
6	SLU 77	-64	-43	2979	825.89	-77.05	21.23
6	SLU 78	-64	-49	2967	822.9	-76.74	21.1
6	SLU 79	-64	-43	2979	825.89	-77.05	21.23
6	SLU 80	-64	-49	2967	822.9	-76.74	21.1
6	SLU 81	-67	-46	3133	866.97	-80.97	22.18
6	SLU 82	-67	-52	3121	863.97	-80.66	22.06
6	SLU 83	-67	-46	3133	866.97	-80.97	22.18
6	SLU 84	-67	-52	3121	863.97	-80.66	22.06
6	SLE RA 1	-43	-28	1959	546.1	-50.75	14.21
6	SLE RA 2	-43	-35	1945	542.77	-50.41	14.07
6	SLE RA 3	-43	-28	1959	546.1	-50.75	14.21
6	SLE RA 4	-43	-32	1951	544.1	-50.55	14.13
6	SLE RA 5	-43	-35	1945	542.77	-50.41	14.07
6	SLE RA 6	-43	-28	1959	546.1	-50.75	14.21
6	SLE RA 7	-43	-32	1951	544.1	-50.55	14.13
6	SLE RA 8	-43	-28	1959	546.1	-50.75	14.21
6	SLE RA 9	-43	-32	1951	544.1	-50.55	14.13
6	SLE RA 10	-47	-39	2184	606.67	-56.51	15.56
6	SLE RA 11	-47	-32	2198	610	-56.86	15.7
6	SLE RA 12	-47	-36	2189	608	-56.65	15.61
6	SLE RA 13	-47	-39	2184	606.67	-56.51	15.56
6	SLE RA 14	-47	-32	2198	610	-56.86	15.7
6	SLE RA 15	-47	-36	2189	608	-56.65	15.61
6	SLE RA 16	-47	-32	2198	610	-56.86	15.7
6	SLE RA 17	-47	-36	2189	608	-56.65	15.61
6	SLE RA 18	-49	-34	2300	637.38	-59.47	16.33
6	SLE RA 19	-49	-38	2292	635.39	-59.27	16.25
6	SLE RA 20	-49	-34	2300	637.38	-59.47	16.33
6	SLE RA 21	-49	-38	2292	635.39	-59.27	16.25
6	SLE FR 1	-43	-28	1959	546.1	-50.75	14.21
6	SLE FR 2	-43	-29	1956	545.43	-50.68	14.19
6	SLE FR 3	-43	-28	1959	546.1	-50.75	14.21
6	SLE FR 4	-45	-31	2058	572.82	-53.3	14.82
6	SLE FR 5	-45	-30	2061	573.48	-53.37	14.85
6	SLE FR 6	-46	-31	2129	591.74	-55.11	15.27
6	SLE QP 1	-43	-28	1959	546.1	-50.75	14.21
6	SLE QP 2	-45	-30	2061	573.48	-53.37	14.85
6	SLD 1	101	30	2483	687.66	-63.66	-32.46
6	SLD 2	137	-6	2476	686.08	-63.51	-46.08
6	SLD 3	92	-88	2252	631.61	-57.84	-35.97
6	SLD 4	129	-124	2245	630.04	-57.7	-49.59
6	SLD 5	-1	180	2540	693.3	-65.33	10.85
6	SLD 6	36	144	2534	691.7	-65.18	-2.98
6	SLD 7	-30	-214	1770	506.49	-45.94	-0.85

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
6	SLD 8	7	-250	1764	504.89	-45.8	-14.68
6	SLD 9	-96	191	2358	642.08	-60.94	44.38
6	SLD 10	-59	154	2352	640.48	-60.79	30.55
6	SLD 11	-126	-203	1589	455.27	-41.56	32.68
6	SLD 12	-89	-240	1582	453.67	-41.41	18.85
6	SLD 13	-218	65	1877	516.93	-49.04	79.29
6	SLD 14	-182	29	1871	515.35	-48.9	65.67
6	SLD 15	-227	-54	1646	460.89	-43.23	75.78
6	SLD 16	-190	-89	1640	459.31	-43.08	62.16
6	SLV 1	287	106	3020	833.35	-76.79	-92.72
6	SLV 2	369	25	3006	829.77	-76.46	-123.61
6	SLV 3	266	-163	2493	705.46	-63.52	-100.75
6	SLV 4	349	-245	2480	701.88	-63.19	-131.64
6	SLV 5	56	449	3153	846.68	-80.63	5.8
6	SLV 6	140	366	3139	843.05	-80.3	-25.55
6	SLV 7	-11	-450	1397	420.39	-36.41	-20.97
6	SLV 8	72	-532	1383	416.77	-36.08	-52.32
6	SLV 9	-162	472	2740	730.2	-70.66	82.02
6	SLV 10	-78	390	2726	726.57	-70.33	50.67
6	SLV 11	-229	-426	983	303.92	-26.44	55.25
6	SLV 12	-145	-508	969	300.29	-26.11	23.9
6	SLV 13	-438	185	1643	445.08	-43.54	161.34
6	SLV 14	-356	104	1629	441.51	-43.22	130.45
6	SLV 15	-458	-84	1116	317.2	-30.28	153.31
6	SLV 16	-376	-165	1102	313.62	-29.95	122.42
6	CRTFP Ux+	0	0	0	0	0	0
6	CRTFP Ux-	0	0	0	0	0	0
6	CRTFP Uy+	0	0	0	-0.01	0	0
6	CRTFP Uy-	0	0	0	0.01	0	0
7	SLU 1	-48	-30	2035	493.76	5.04	17
7	SLU 2	-49	-41	2013	489.32	4.97	17.1
7	SLU 3	-48	-30	2035	493.76	5.04	17
7	SLU 4	-48	-36	2022	491.1	5	17.06
7	SLU 5	-49	-41	2013	489.32	4.97	17.1
7	SLU 6	-48	-30	2035	493.76	5.04	17
7	SLU 7	-48	-36	2022	491.1	5	17.06
7	SLU 8	-48	-30	2035	493.76	5.04	17
7	SLU 9	-48	-36	2022	491.1	5	17.06
7	SLU 10	-57	-47	2395	574.77	6.1	19.94
7	SLU 11	-56	-36	2416	579.21	6.17	19.84
7	SLU 12	-56	-42	2403	576.55	6.13	19.9
7	SLU 13	-57	-47	2395	574.77	6.1	19.94
7	SLU 14	-56	-36	2416	579.21	6.17	19.84
7	SLU 15	-56	-42	2403	576.55	6.13	19.9
7	SLU 16	-56	-36	2416	579.21	6.17	19.84
7	SLU 17	-56	-42	2403	576.55	6.13	19.9
7	SLU 18	-60	-38	2580	615.83	6.65	21.06
7	SLU 19	-60	-45	2567	613.17	6.61	21.12
7	SLU 20	-60	-38	2580	615.83	6.65	21.06
7	SLU 21	-60	-45	2567	613.17	6.61	21.12
7	SLU 22	-55	-32	2314	556.53	5.88	19.25
7	SLU 23	-55	-44	2292	552.09	5.81	19.35
7	SLU 24	-55	-32	2314	556.53	5.88	19.25
7	SLU 25	-55	-39	2301	553.87	5.84	19.31
7	SLU 26	-55	-44	2292	552.09	5.81	19.35
7	SLU 27	-55	-32	2314	556.53	5.88	19.25
7	SLU 28	-55	-39	2301	553.87	5.84	19.31
7	SLU 29	-55	-32	2314	556.53	5.88	19.25
7	SLU 30	-55	-39	2301	553.87	5.84	19.31
7	SLU 31	-63	-50	2674	637.54	6.94	22.2
7	SLU 32	-63	-39	2695	641.98	7.01	22.09
7	SLU 33	-63	-45	2682	639.32	6.97	22.15
7	SLU 34	-63	-50	2674	637.54	6.94	22.2
7	SLU 35	-63	-39	2695	641.98	7.01	22.09
7	SLU 36	-63	-45	2682	639.32	6.97	22.15
7	SLU 37	-63	-39	2695	641.98	7.01	22.09
7	SLU 38	-63	-45	2682	639.32	6.97	22.15
7	SLU 39	-66	-41	2859	678.6	7.5	23.31
7	SLU 40	-66	-48	2846	675.94	7.45	23.37
7	SLU 41	-66	-41	2859	678.6	7.5	23.31
7	SLU 42	-66	-48	2846	675.94	7.45	23.37
7	SLU 43	-61	-37	2550	620.37	6.26	21.32
7	SLU 44	-61	-49	2528	615.93	6.19	21.43
7	SLU 45	-61	-37	2550	620.37	6.26	21.32
7	SLU 46	-61	-44	2537	617.71	6.22	21.39
7	SLU 47	-61	-49	2528	615.93	6.19	21.43
7	SLU 48	-61	-37	2550	620.37	6.26	21.32
7	SLU 49	-61	-44	2537	617.71	6.22	21.39
7	SLU 50	-61	-37	2550	620.37	6.26	21.32
7	SLU 51	-61	-44	2537	617.71	6.22	21.39
7	SLU 52	-69	-55	2910	701.38	7.32	24.27
7	SLU 53	-69	-44	2931	705.82	7.39	24.17
7	SLU 54	-69	-50	2918	703.16	7.35	24.23
7	SLU 55	-69	-55	2910	701.38	7.32	24.27
7	SLU 56	-69	-44	2931	705.82	7.39	24.17
7	SLU 57	-69	-50	2918	703.16	7.35	24.23
7	SLU 58	-69	-44	2931	705.82	7.39	24.17

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
7	SLU 59	-69	-50	2918	703.16	7.35	24.23
7	SLU 60	-72	-46	3095	742.44	7.88	25.39
7	SLU 61	-72	-53	3082	739.78	7.83	25.45
7	SLU 62	-72	-46	3095	742.44	7.88	25.39
7	SLU 63	-72	-53	3082	739.78	7.83	25.45
7	SLU 64	-67	-40	2828	683.14	7.1	23.58
7	SLU 65	-67	-51	2807	678.7	7.03	23.68
7	SLU 66	-67	-40	2828	683.14	7.1	23.58
7	SLU 67	-67	-47	2816	680.48	7.06	23.64
7	SLU 68	-67	-51	2807	678.7	7.03	23.68
7	SLU 69	-67	-40	2828	683.14	7.1	23.58
7	SLU 70	-67	-47	2816	680.48	7.06	23.64
7	SLU 71	-67	-40	2828	683.14	7.1	23.58
7	SLU 72	-67	-47	2816	680.48	7.06	23.64
7	SLU 73	-75	-58	3188	764.15	8.16	26.52
7	SLU 74	-75	-47	3210	768.59	8.23	26.42
7	SLU 75	-75	-53	3197	765.93	8.19	26.48
7	SLU 76	-75	-58	3188	764.15	8.16	26.52
7	SLU 77	-75	-47	3210	768.59	8.23	26.42
7	SLU 78	-75	-53	3197	765.93	8.19	26.48
7	SLU 79	-75	-47	3210	768.59	8.23	26.42
7	SLU 80	-75	-53	3197	765.93	8.19	26.48
7	SLU 81	-78	-49	3373	805.21	8.72	27.64
7	SLU 82	-79	-56	3361	802.55	8.68	27.7
7	SLU 83	-78	-49	3373	805.21	8.72	27.64
7	SLU 84	-79	-56	3361	802.55	8.68	27.7
7	SLE RA 1	-50	-30	2114	511.7	5.28	17.64
7	SLE RA 2	-50	-38	2100	508.74	5.23	17.71
7	SLE RA 3	-50	-30	2114	511.7	5.28	17.64
7	SLE RA 4	-50	-35	2106	509.92	5.25	17.68
7	SLE RA 5	-50	-38	2100	508.74	5.23	17.71
7	SLE RA 6	-50	-30	2114	511.7	5.28	17.64
7	SLE RA 7	-50	-35	2106	509.92	5.25	17.68
7	SLE RA 8	-50	-30	2114	511.7	5.28	17.64
7	SLE RA 9	-50	-35	2106	509.92	5.25	17.68
7	SLE RA 10	-56	-42	2354	565.7	5.99	19.6
7	SLE RA 11	-55	-35	2369	568.66	6.03	19.54
7	SLE RA 12	-56	-39	2360	566.89	6.01	19.58
7	SLE RA 13	-56	-42	2354	565.7	5.99	19.6
7	SLE RA 14	-55	-35	2369	568.66	6.03	19.54
7	SLE RA 15	-56	-39	2360	566.89	6.01	19.58
7	SLE RA 16	-55	-35	2369	568.66	6.03	19.54
7	SLE RA 17	-56	-39	2360	566.89	6.01	19.58
7	SLE RA 18	-58	-36	2478	593.08	6.36	20.35
7	SLE RA 19	-58	-41	2469	591.3	6.33	20.39
7	SLE RA 20	-58	-36	2478	593.08	6.36	20.35
7	SLE RA 21	-58	-41	2469	591.3	6.33	20.39
7	SLE FR 1	-50	-30	2114	511.7	5.28	17.64
7	SLE FR 2	-50	-32	2112	511.11	5.27	17.65
7	SLE FR 3	-50	-30	2114	511.7	5.28	17.64
7	SLE FR 4	-52	-34	2221	535.52	5.59	18.47
7	SLE FR 5	-52	-32	2223	536.11	5.6	18.45
7	SLE FR 6	-54	-33	2296	552.39	5.82	18.99
7	SLE QP 1	-50	-30	2114	511.7	5.28	17.64
7	SLE QP 2	-52	-32	2223	536.11	5.6	18.45
7	SLD 1	117	32	2651	636.93	7.71	-40.97
7	SLD 2	159	-5	2645	635.59	7.67	-55.62
7	SLD 3	107	-96	2409	588.88	6.82	-37.26
7	SLD 4	149	-133	2403	587.54	6.78	-51.91
7	SLD 5	-1	195	2721	639.71	7.59	0.23
7	SLD 6	42	157	2714	638.36	7.55	-14.64
7	SLD 7	-35	-233	1914	479.54	4.64	12.61
7	SLD 8	8	-271	1908	478.18	4.6	-2.26
7	SLD 9	-112	206	2539	594.04	6.61	39.17
7	SLD 10	-70	169	2533	592.68	6.57	24.29
7	SLD 11	-147	-222	1733	433.87	3.65	51.55
7	SLD 12	-104	-259	1726	432.51	3.61	36.67
7	SLD 13	-254	69	2044	484.68	4.42	88.81
7	SLD 14	-212	32	2038	483.35	4.38	74.16
7	SLD 15	-264	-59	1802	436.63	3.53	92.53
7	SLD 16	-222	-96	1796	435.29	3.5	77.88
7	SLV 1	333	114	3196	765.6	10.4	-116.74
7	SLV 2	429	30	3182	762.57	10.31	-149.96
7	SLV 3	309	-179	2644	655.87	8.38	-108.18
7	SLV 4	405	-263	2630	652.84	8.29	-141.41
7	SLV 5	65	485	3357	772.47	10.14	-23.21
7	SLV 6	162	400	3343	769.4	10.05	-56.92
7	SLV 7	-14	-490	1518	406.69	3.4	5.32
7	SLV 8	83	-575	1504	403.62	3.31	-28.4
7	SLV 9	-188	511	2943	668.61	7.89	65.31
7	SLV 10	-91	426	2929	665.53	7.8	31.59
7	SLV 11	-267	-465	1104	302.83	1.16	93.83
7	SLV 12	-170	-550	1090	299.75	1.07	60.12
7	SLV 13	-510	199	1817	419.39	2.92	178.31
7	SLV 14	-414	115	1803	416.36	2.83	145.09
7	SLV 15	-534	-94	1265	309.65	0.9	186.87
7	SLV 16	-438	-178	1251	306.62	0.81	153.65

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
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	-49	-26	1897	393.74	4	17.17
8	SLU 2	-49	-36	1877	390.47	3.94	17.28
8	SLU 3	-49	-26	1897	393.74	4	17.17
8	SLU 4	-49	-32	1885	391.78	3.96	17.24
8	SLU 5	-49	-36	1877	390.47	3.94	17.28
8	SLU 6	-49	-26	1897	393.74	4	17.17
8	SLU 7	-49	-32	1885	391.78	3.96	17.24
8	SLU 8	-49	-26	1897	393.74	4	17.17
8	SLU 9	-49	-32	1885	391.78	3.96	17.24
8	SLU 10	-57	-41	2228	453.76	4.84	20.18
8	SLU 11	-57	-31	2247	457.02	4.9	20.07
8	SLU 12	-57	-37	2235	455.06	4.86	20.14
8	SLU 13	-57	-41	2228	453.76	4.84	20.18
8	SLU 14	-57	-31	2247	457.02	4.9	20.07
8	SLU 15	-57	-37	2235	455.06	4.86	20.14
8	SLU 16	-57	-31	2247	457.02	4.9	20.07
8	SLU 17	-57	-37	2235	455.06	4.86	20.14
8	SLU 18	-60	-33	2397	484.14	5.28	21.31
8	SLU 19	-61	-40	2386	482.18	5.25	21.38
8	SLU 20	-60	-33	2397	484.14	5.28	21.31
8	SLU 21	-61	-40	2386	482.18	5.25	21.38
8	SLU 22	-55	-29	2152	440.25	4.67	19.45
8	SLU 23	-55	-39	2133	436.99	4.61	19.56
8	SLU 24	-55	-29	2152	440.25	4.67	19.45
8	SLU 25	-55	-35	2141	438.29	4.63	19.52
8	SLU 26	-55	-39	2133	436.99	4.61	19.56
8	SLU 27	-55	-29	2152	440.25	4.67	19.45
8	SLU 28	-55	-35	2141	438.29	4.63	19.52
8	SLU 29	-55	-29	2152	440.25	4.67	19.45
8	SLU 30	-55	-35	2141	438.29	4.63	19.52
8	SLU 31	-64	-44	2483	500.27	5.51	22.46
8	SLU 32	-63	-34	2503	503.54	5.57	22.35
8	SLU 33	-63	-40	2491	501.58	5.53	22.41
8	SLU 34	-64	-44	2483	500.27	5.51	22.46
8	SLU 35	-63	-34	2503	503.54	5.57	22.35
8	SLU 36	-63	-40	2491	501.58	5.53	22.41
8	SLU 37	-63	-34	2503	503.54	5.57	22.35
8	SLU 38	-63	-40	2491	501.58	5.53	22.41
8	SLU 39	-67	-36	2653	530.66	5.95	23.59
8	SLU 40	-67	-42	2641	528.7	5.92	23.65
8	SLU 41	-67	-36	2653	530.66	5.95	23.59
8	SLU 42	-67	-42	2641	528.7	5.92	23.65
8	SLU 43	-61	-33	2378	495.91	4.96	21.55
8	SLU 44	-61	-43	2359	492.64	4.91	21.65
8	SLU 45	-61	-33	2378	495.91	4.96	21.55
8	SLU 46	-61	-39	2366	493.95	4.93	21.61
8	SLU 47	-61	-43	2359	492.64	4.91	21.65
8	SLU 48	-61	-33	2378	495.91	4.96	21.55
8	SLU 49	-61	-39	2366	493.95	4.93	21.61
8	SLU 50	-61	-33	2378	495.91	4.96	21.55
8	SLU 51	-61	-39	2366	493.95	4.93	21.61
8	SLU 52	-69	-48	2709	555.93	5.81	24.55
8	SLU 53	-69	-38	2729	559.19	5.86	24.44
8	SLU 54	-69	-44	2717	557.23	5.83	24.51
8	SLU 55	-69	-48	2709	555.93	5.81	24.55
8	SLU 56	-69	-38	2729	559.19	5.86	24.44
8	SLU 57	-69	-44	2717	557.23	5.83	24.51
8	SLU 58	-69	-38	2729	559.19	5.86	24.44
8	SLU 59	-69	-44	2717	557.23	5.83	24.51
8	SLU 60	-73	-40	2879	586.32	6.25	25.68
8	SLU 61	-73	-47	2867	584.36	6.22	25.75
8	SLU 62	-73	-40	2879	586.32	6.25	25.68
8	SLU 63	-73	-47	2867	584.36	6.22	25.75
8	SLU 64	-68	-36	2634	542.43	5.64	23.82
8	SLU 65	-68	-46	2614	539.16	5.58	23.93
8	SLU 66	-68	-36	2634	542.43	5.64	23.82
8	SLU 67	-68	-42	2622	540.47	5.6	23.89
8	SLU 68	-68	-46	2614	539.16	5.58	23.93
8	SLU 69	-68	-36	2634	542.43	5.64	23.82
8	SLU 70	-68	-42	2622	540.47	5.6	23.89
8	SLU 71	-68	-36	2634	542.43	5.64	23.82
8	SLU 72	-68	-42	2622	540.47	5.6	23.89
8	SLU 73	-76	-51	2965	602.45	6.48	26.83
8	SLU 74	-76	-41	2984	605.71	6.54	26.72
8	SLU 75	-76	-47	2972	603.75	6.5	26.78
8	SLU 76	-76	-51	2965	602.45	6.48	26.83
8	SLU 77	-76	-41	2984	605.71	6.54	26.72
8	SLU 78	-76	-47	2972	603.75	6.5	26.78
8	SLU 79	-76	-41	2984	605.71	6.54	26.72
8	SLU 80	-76	-47	2972	603.75	6.5	26.78
8	SLU 81	-79	-43	3134	632.83	6.92	27.96
8	SLU 82	-79	-49	3123	630.87	6.89	28.03
8	SLU 83	-79	-43	3134	632.83	6.92	27.96

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
8	SLU 84	-79	-49	3123	630.87	6.89	28.03
8	SLE RA 1	-51	-27	1970	407.03	4.19	17.83
8	SLE RA 2	-51	-34	1957	404.85	4.15	17.9
8	SLE RA 3	-51	-27	1970	407.03	4.19	17.83
8	SLE RA 4	-51	-31	1962	405.72	4.16	17.87
8	SLE RA 5	-51	-34	1957	404.85	4.15	17.9
8	SLE RA 6	-51	-27	1970	407.03	4.19	17.83
8	SLE RA 7	-51	-31	1962	405.72	4.16	17.87
8	SLE RA 8	-51	-27	1970	407.03	4.19	17.83
8	SLE RA 9	-51	-31	1962	405.72	4.16	17.87
8	SLE RA 10	-56	-37	2190	447.04	4.75	19.83
8	SLE RA 11	-56	-30	2203	449.22	4.79	19.76
8	SLE RA 12	-56	-34	2196	447.91	4.76	19.8
8	SLE RA 13	-56	-37	2190	447.04	4.75	19.83
8	SLE RA 14	-56	-30	2203	449.22	4.79	19.76
8	SLE RA 15	-56	-34	2196	447.91	4.76	19.8
8	SLE RA 16	-56	-30	2203	449.22	4.79	19.76
8	SLE RA 17	-56	-34	2196	447.91	4.76	19.8
8	SLE RA 18	-58	-32	2304	467.3	5.05	20.58
8	SLE RA 19	-58	-36	2296	465.99	5.02	20.63
8	SLE RA 20	-58	-32	2304	467.3	5.05	20.58
8	SLE RA 21	-58	-36	2296	465.99	5.02	20.63
8	SLE FR 1	-51	-27	1970	407.03	4.19	17.83
8	SLE FR 2	-51	-28	1967	406.59	4.18	17.84
8	SLE FR 3	-51	-27	1970	407.03	4.19	17.83
8	SLE FR 4	-53	-30	2067	424.67	4.44	18.67
8	SLE FR 5	-53	-28	2070	425.11	4.44	18.65
8	SLE FR 6	-54	-29	2137	437.16	4.62	19.2
8	SLE QP 1	-51	-27	1970	407.03	4.19	17.83
8	SLE QP 2	-53	-28	2070	425.11	4.44	18.65
8	SLD 1	117	64	2437	497.73	6.3	-40.87
8	SLD 2	159	32	2432	496.82	6.26	-55.54
8	SLD 3	106	-54	2220	464.51	5.55	-37.12
8	SLD 4	149	-87	2215	463.6	5.52	-51.79
8	SLD 5	-1	190	2511	497.6	6.14	0.36
8	SLD 6	42	157	2506	496.68	6.1	-14.54
8	SLD 7	-36	-204	1787	386.87	3.67	12.85
8	SLD 8	7	-237	1782	385.95	3.63	-2.04
8	SLD 9	-113	180	2357	464.27	5.26	39.35
8	SLD 10	-70	147	2353	463.35	5.22	24.45
8	SLD 11	-147	-214	1634	353.53	2.79	51.84
8	SLD 12	-104	-247	1629	352.61	2.75	36.95
8	SLD 13	-255	30	1925	386.61	3.37	89.09
8	SLD 14	-212	-3	1920	385.7	3.34	74.42
8	SLD 15	-265	-89	1708	353.39	2.63	92.84
8	SLD 16	-223	-121	1703	352.48	2.59	78.17
8	SLV 1	333	182	2905	590.48	8.65	-116.76
8	SLV 2	429	109	2894	588.42	8.57	-150.03
8	SLV 3	309	-87	2409	514.47	6.96	-108.12
8	SLV 4	405	-161	2399	512.41	6.88	-141.39
8	SLV 5	65	470	3076	590.75	8.3	-23.18
8	SLV 6	162	395	3065	588.65	8.22	-56.94
8	SLV 7	-15	-429	1424	337.36	2.66	5.61
8	SLV 8	83	-503	1413	335.27	2.58	-28.15
8	SLV 9	-189	446	2727	514.95	6.31	65.45
8	SLV 10	-91	372	2716	512.85	6.23	31.69
8	SLV 11	-268	-452	1075	261.56	0.67	94.25
8	SLV 12	-171	-527	1064	259.47	0.59	60.49
8	SLV 13	-511	104	1741	337.81	2.01	178.69
8	SLV 14	-415	31	1730	335.75	1.93	145.42
8	SLV 15	-535	-166	1246	261.8	0.32	187.33
8	SLV 16	-439	-239	1235	259.73	0.23	154.06
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	-49	-22	1791	319.15	2.92	17.31
9	SLU 2	-49	-31	1773	316.78	2.88	17.43
9	SLU 3	-49	-22	1791	319.15	2.92	17.31
9	SLU 4	-49	-28	1780	317.73	2.9	17.38
9	SLU 5	-49	-31	1773	316.78	2.88	17.43
9	SLU 6	-49	-22	1791	319.15	2.92	17.31
9	SLU 7	-49	-28	1780	317.73	2.9	17.38
9	SLU 8	-49	-22	1791	319.15	2.92	17.31
9	SLU 9	-49	-28	1780	317.73	2.9	17.38
9	SLU 10	-58	-35	2100	363.42	3.54	20.37
9	SLU 11	-57	-26	2118	365.79	3.59	20.26
9	SLU 12	-58	-32	2107	364.37	3.56	20.33
9	SLU 13	-58	-35	2100	363.42	3.54	20.37
9	SLU 14	-57	-26	2118	365.79	3.59	20.26
9	SLU 15	-58	-32	2107	364.37	3.56	20.33
9	SLU 16	-57	-26	2118	365.79	3.59	20.26
9	SLU 17	-58	-32	2107	364.37	3.56	20.33
9	SLU 18	-61	-28	2258	385.78	3.87	21.52
9	SLU 19	-61	-33	2247	384.36	3.85	21.59
9	SLU 20	-61	-28	2258	385.78	3.87	21.52
9	SLU 21	-61	-33	2247	384.36	3.85	21.59

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
9	SLU 22	-56	-25	2029	353.5	3.42	19.61
9	SLU 23	-56	-34	2011	351.13	3.37	19.73
9	SLU 24	-56	-25	2029	353.5	3.42	19.61
9	SLU 25	-56	-30	2018	352.08	3.39	19.68
9	SLU 26	-56	-34	2011	351.13	3.37	19.73
9	SLU 27	-56	-25	2029	353.5	3.42	19.61
9	SLU 28	-56	-30	2018	352.08	3.39	19.68
9	SLU 29	-56	-25	2029	353.5	3.42	19.61
9	SLU 30	-56	-30	2018	352.08	3.39	19.68
9	SLU 31	-64	-38	2337	397.78	4.04	22.67
9	SLU 32	-64	-28	2356	400.15	4.08	22.56
9	SLU 33	-64	-34	2345	398.72	4.06	22.63
9	SLU 34	-64	-38	2337	397.78	4.04	22.67
9	SLU 35	-64	-28	2356	400.15	4.08	22.56
9	SLU 36	-64	-34	2345	398.72	4.06	22.63
9	SLU 37	-64	-28	2356	400.15	4.08	22.56
9	SLU 38	-64	-34	2345	398.72	4.06	22.63
9	SLU 39	-67	-30	2495	420.14	4.37	23.82
9	SLU 40	-68	-35	2485	418.72	4.34	23.89
9	SLU 41	-67	-30	2495	420.14	4.37	23.82
9	SLU 42	-68	-35	2485	418.72	4.34	23.89
9	SLU 43	-62	-28	2247	403.12	3.63	21.72
9	SLU 44	-62	-37	2229	400.75	3.59	21.83
9	SLU 45	-62	-28	2247	403.12	3.63	21.72
9	SLU 46	-62	-34	2236	401.69	3.6	21.79
9	SLU 47	-62	-37	2229	400.75	3.59	21.83
9	SLU 48	-62	-28	2247	403.12	3.63	21.72
9	SLU 49	-62	-34	2236	401.69	3.6	21.79
9	SLU 50	-62	-28	2247	403.12	3.63	21.72
9	SLU 51	-62	-34	2236	401.69	3.6	21.79
9	SLU 52	-70	-41	2555	447.39	4.25	24.78
9	SLU 53	-70	-32	2574	449.76	4.3	24.67
9	SLU 54	-70	-37	2563	448.34	4.27	24.73
9	SLU 55	-70	-41	2555	447.39	4.25	24.78
9	SLU 56	-70	-32	2574	449.76	4.3	24.67
9	SLU 57	-70	-37	2563	448.34	4.27	24.73
9	SLU 58	-70	-32	2574	449.76	4.3	24.67
9	SLU 59	-70	-37	2563	448.34	4.27	24.73
9	SLU 60	-73	-34	2713	469.75	4.58	25.93
9	SLU 61	-74	-39	2703	468.33	4.55	26
9	SLU 62	-73	-34	2713	469.75	4.58	25.93
9	SLU 63	-74	-39	2703	468.33	4.55	26
9	SLU 64	-68	-30	2485	437.47	4.13	24.02
9	SLU 65	-68	-40	2467	435.1	4.08	24.13
9	SLU 66	-68	-30	2485	437.47	4.13	24.02
9	SLU 67	-68	-36	2474	436.05	4.1	24.09
9	SLU 68	-68	-40	2467	435.1	4.08	24.13
9	SLU 69	-68	-30	2485	437.47	4.13	24.02
9	SLU 70	-68	-36	2474	436.05	4.1	24.09
9	SLU 71	-68	-30	2485	437.47	4.13	24.02
9	SLU 72	-68	-36	2474	436.05	4.1	24.09
9	SLU 73	-77	-43	2793	481.74	4.74	27.08
9	SLU 74	-76	-34	2811	484.11	4.79	26.97
9	SLU 75	-77	-40	2800	482.69	4.76	27.03
9	SLU 76	-77	-43	2793	481.74	4.74	27.08
9	SLU 77	-76	-34	2811	484.11	4.79	26.97
9	SLU 78	-77	-40	2800	482.69	4.76	27.03
9	SLU 79	-76	-34	2811	484.11	4.79	26.97
9	SLU 80	-77	-40	2800	482.69	4.76	27.03
9	SLU 81	-80	-36	2951	504.1	5.07	28.23
9	SLU 82	-80	-41	2940	502.68	5.05	28.3
9	SLU 83	-80	-36	2951	504.1	5.07	28.23
9	SLU 84	-80	-41	2940	502.68	5.05	28.3
9	SLE RA 1	-51	-23	1859	328.96	3.06	17.97
9	SLE RA 2	-51	-29	1847	327.38	3.03	18.05
9	SLE RA 3	-51	-23	1859	328.96	3.06	17.97
9	SLE RA 4	-51	-27	1852	328.02	3.05	18.02
9	SLE RA 5	-51	-29	1847	327.38	3.03	18.05
9	SLE RA 6	-51	-23	1859	328.96	3.06	17.97
9	SLE RA 7	-51	-27	1852	328.02	3.05	18.02
9	SLE RA 8	-51	-23	1859	328.96	3.06	17.97
9	SLE RA 9	-51	-27	1852	328.02	3.05	18.02
9	SLE RA 10	-57	-32	2065	358.48	3.48	20.01
9	SLE RA 11	-56	-25	2077	360.06	3.51	19.94
9	SLE RA 12	-57	-29	2070	359.11	3.49	19.98
9	SLE RA 13	-57	-32	2065	358.48	3.48	20.01
9	SLE RA 14	-56	-25	2077	360.06	3.51	19.94
9	SLE RA 15	-57	-29	2070	359.11	3.49	19.98
9	SLE RA 16	-56	-25	2077	360.06	3.51	19.94
9	SLE RA 17	-57	-29	2070	359.11	3.49	19.98
9	SLE RA 18	-59	-27	2170	373.39	3.7	20.78
9	SLE RA 19	-59	-30	2163	372.44	3.68	20.82
9	SLE RA 20	-59	-27	2170	373.39	3.7	20.78
9	SLE RA 21	-59	-30	2163	372.44	3.68	20.82
9	SLE FR 1	-51	-23	1859	328.96	3.06	17.97
9	SLE FR 2	-51	-24	1857	328.65	3.06	17.99
9	SLE FR 3	-51	-23	1859	328.96	3.06	17.97

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
9	SLE FR 4	-53	-25	1950	341.98	3.25	18.83
9	SLE FR 5	-53	-24	1952	342.29	3.25	18.81
9	SLE FR 6	-55	-25	2015	351.18	3.38	19.37
9	SLE QP 1	-51	-23	1859	328.96	3.06	17.97
9	SLE QP 2	-53	-24	1952	342.29	3.25	18.81
9	SLD 1	117	60	2267	392.51	4.85	-40.77
9	SLD 2	159	32	2263	391.91	4.82	-55.47
9	SLD 3	106	-48	2070	370.48	4.26	-37
9	SLD 4	148	-76	2066	369.88	4.23	-51.69
9	SLD 5	-2	176	2347	390.98	4.63	0.46
9	SLD 6	41	147	2343	390.37	4.6	-14.45
9	SLD 7	-36	-186	1690	317.55	2.68	13.05
9	SLD 8	7	-214	1686	316.94	2.65	-1.86
9	SLD 9	-113	166	2218	367.64	3.86	39.49
9	SLD 10	-70	138	2215	367.03	3.83	24.57
9	SLD 11	-148	-195	1562	294.21	1.91	52.08
9	SLD 12	-105	-224	1558	293.6	1.88	37.16
9	SLD 13	-255	28	1839	314.7	2.28	89.31
9	SLD 14	-213	0	1835	314.1	2.25	74.62
9	SLD 15	-266	-80	1642	292.68	1.69	93.09
9	SLD 16	-223	-108	1638	292.07	1.66	78.4
9	SLV 1	333	168	2668	456.76	6.88	-116.76
9	SLV 2	429	104	2660	455.4	6.81	-150.07
9	SLV 3	309	-80	2219	406.08	5.55	-108.05
9	SLV 4	405	-143	2210	404.72	5.48	-141.36
9	SLV 5	65	431	2852	453.97	6.4	-23.16
9	SLV 6	162	367	2843	452.59	6.33	-56.96
9	SLV 7	-15	-393	1353	285.06	1.94	5.86
9	SLV 8	82	-457	1345	283.68	1.87	-27.94
9	SLV 9	-189	409	2560	400.9	4.64	65.57
9	SLV 10	-91	345	2551	399.52	4.57	31.76
9	SLV 11	-269	-415	1061	231.99	0.18	94.59
9	SLV 12	-171	-479	1053	230.61	0.11	60.78
9	SLV 13	-512	95	1695	279.86	1.03	178.99
9	SLV 14	-416	32	1686	278.5	0.96	145.68
9	SLV 15	-536	-152	1245	229.19	-0.3	187.7
9	SLV 16	-440	-216	1237	227.83	-0.38	154.38
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	-49	-18	1718	268.98	1.88	17.41
10	SLU 2	-50	-26	1701	267.24	1.85	17.53
10	SLU 3	-49	-18	1718	268.98	1.88	17.41
10	SLU 4	-49	-23	1708	267.94	1.86	17.48
10	SLU 5	-50	-26	1701	267.24	1.85	17.53
10	SLU 6	-49	-18	1718	268.98	1.88	17.41
10	SLU 7	-49	-23	1708	267.94	1.86	17.48
10	SLU 8	-49	-18	1718	268.98	1.88	17.41
10	SLU 9	-49	-23	1708	267.94	1.86	17.48
10	SLU 10	-58	-29	2011	302.56	2.29	20.53
10	SLU 11	-58	-20	2028	304.3	2.32	20.41
10	SLU 12	-58	-25	2018	303.26	2.3	20.48
10	SLU 13	-58	-29	2011	302.56	2.29	20.53
10	SLU 14	-58	-20	2028	304.3	2.32	20.41
10	SLU 15	-58	-25	2018	303.26	2.3	20.48
10	SLU 16	-58	-20	2028	304.3	2.32	20.41
10	SLU 17	-58	-25	2018	303.26	2.3	20.48
10	SLU 18	-61	-21	2160	319.44	2.51	21.69
10	SLU 19	-62	-26	2150	318.39	2.49	21.76
10	SLU 20	-61	-21	2160	319.44	2.51	21.69
10	SLU 21	-62	-26	2150	318.39	2.49	21.76
10	SLU 22	-56	-20	1943	295.11	2.2	19.73
10	SLU 23	-56	-28	1926	293.37	2.17	19.85
10	SLU 24	-56	-20	1943	295.11	2.2	19.73
10	SLU 25	-56	-25	1933	294.07	2.18	19.8
10	SLU 26	-56	-28	1926	293.37	2.17	19.85
10	SLU 27	-56	-20	1943	295.11	2.2	19.73
10	SLU 28	-56	-25	1933	294.07	2.18	19.8
10	SLU 29	-56	-20	1943	295.11	2.2	19.73
10	SLU 30	-56	-25	1933	294.07	2.18	19.8
10	SLU 31	-65	-31	2236	328.69	2.61	22.85
10	SLU 32	-64	-22	2253	330.43	2.64	22.73
10	SLU 33	-65	-27	2243	329.39	2.62	22.8
10	SLU 34	-65	-31	2236	328.69	2.61	22.85
10	SLU 35	-64	-22	2253	330.43	2.64	22.73
10	SLU 36	-65	-27	2243	329.39	2.62	22.8
10	SLU 37	-64	-22	2253	330.43	2.64	22.73
10	SLU 38	-65	-27	2243	329.39	2.62	22.8
10	SLU 39	-68	-23	2386	345.57	2.83	24.01
10	SLU 40	-68	-28	2376	344.52	2.81	24.08
10	SLU 41	-68	-23	2386	345.57	2.83	24.01
10	SLU 42	-68	-28	2376	344.52	2.81	24.08
10	SLU 43	-62	-23	2156	340.72	2.34	21.84
10	SLU 44	-62	-31	2139	338.98	2.3	21.96
10	SLU 45	-62	-23	2156	340.72	2.34	21.84
10	SLU 46	-62	-28	2146	339.67	2.32	21.91

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
10	SLU 47	-62	-31	2139	338.98	2.3	21.96
10	SLU 48	-62	-23	2156	340.72	2.34	21.84
10	SLU 49	-62	-28	2146	339.67	2.32	21.91
10	SLU 50	-62	-23	2156	340.72	2.34	21.84
10	SLU 51	-62	-28	2146	339.67	2.32	21.91
10	SLU 52	-71	-34	2449	374.29	2.74	24.96
10	SLU 53	-70	-25	2466	376.04	2.77	24.84
10	SLU 54	-70	-30	2456	374.99	2.75	24.91
10	SLU 55	-71	-34	2449	374.29	2.74	24.96
10	SLU 56	-70	-25	2466	376.04	2.77	24.84
10	SLU 57	-70	-30	2456	374.99	2.75	24.91
10	SLU 58	-70	-25	2466	376.04	2.77	24.84
10	SLU 59	-70	-30	2456	374.99	2.75	24.91
10	SLU 60	-74	-26	2599	391.17	2.96	26.12
10	SLU 61	-74	-31	2588	390.13	2.94	26.19
10	SLU 62	-74	-26	2599	391.17	2.96	26.12
10	SLU 63	-74	-31	2588	390.13	2.94	26.19
10	SLU 64	-68	-25	2381	366.85	2.66	24.16
10	SLU 65	-69	-33	2364	365.11	2.63	24.28
10	SLU 66	-68	-25	2381	366.85	2.66	24.16
10	SLU 67	-69	-30	2371	365.8	2.64	24.23
10	SLU 68	-69	-33	2364	365.11	2.63	24.28
10	SLU 69	-68	-25	2381	366.85	2.66	24.16
10	SLU 70	-69	-30	2371	365.8	2.64	24.23
10	SLU 71	-68	-25	2381	366.85	2.66	24.16
10	SLU 72	-69	-30	2371	365.8	2.64	24.23
10	SLU 73	-77	-35	2674	400.42	3.06	27.28
10	SLU 74	-77	-27	2691	402.17	3.09	27.16
10	SLU 75	-77	-32	2681	401.12	3.08	27.23
10	SLU 76	-77	-35	2674	400.42	3.06	27.28
10	SLU 77	-77	-27	2691	402.17	3.09	27.16
10	SLU 78	-77	-32	2681	401.12	3.08	27.23
10	SLU 79	-77	-27	2691	402.17	3.09	27.16
10	SLU 80	-77	-32	2681	401.12	3.08	27.23
10	SLU 81	-81	-28	2824	417.3	3.28	28.44
10	SLU 82	-81	-33	2814	416.26	3.26	28.51
10	SLU 83	-81	-28	2824	417.3	3.28	28.44
10	SLU 84	-81	-33	2814	416.26	3.26	28.51
10	SLE RA 1	-51	-18	1782	276.45	1.97	18.08
10	SLE RA 2	-51	-24	1771	275.29	1.95	18.15
10	SLE RA 3	-51	-18	1782	276.45	1.97	18.08
10	SLE RA 4	-51	-22	1776	275.75	1.96	18.12
10	SLE RA 5	-51	-24	1771	275.29	1.95	18.15
10	SLE RA 6	-51	-18	1782	276.45	1.97	18.08
10	SLE RA 7	-51	-22	1776	275.75	1.96	18.12
10	SLE RA 8	-51	-18	1782	276.45	1.97	18.08
10	SLE RA 9	-51	-22	1776	275.75	1.96	18.12
10	SLE RA 10	-57	-26	1978	298.83	2.24	20.15
10	SLE RA 11	-57	-20	1989	299.99	2.26	20.07
10	SLE RA 12	-57	-23	1982	299.3	2.25	20.12
10	SLE RA 13	-57	-26	1978	298.83	2.24	20.15
10	SLE RA 14	-57	-20	1989	299.99	2.26	20.07
10	SLE RA 15	-57	-23	1982	299.3	2.25	20.12
10	SLE RA 16	-57	-20	1989	299.99	2.26	20.07
10	SLE RA 17	-57	-23	1982	299.3	2.25	20.12
10	SLE RA 18	-59	-21	2077	310.09	2.39	20.93
10	SLE RA 19	-59	-24	2071	309.39	2.38	20.98
10	SLE RA 20	-59	-21	2077	310.09	2.39	20.93
10	SLE RA 21	-59	-24	2071	309.39	2.38	20.98
10	SLE FR 1	-51	-18	1782	276.45	1.97	18.08
10	SLE FR 2	-51	-20	1780	276.22	1.97	18.09
10	SLE FR 3	-51	-18	1782	276.45	1.97	18.08
10	SLE FR 4	-54	-20	1869	286.31	2.09	18.95
10	SLE FR 5	-54	-19	1871	286.54	2.1	18.93
10	SLE FR 6	-55	-20	1930	293.27	2.18	19.5
10	SLE QP 1	-51	-18	1782	276.45	1.97	18.08
10	SLE QP 2	-54	-19	1871	286.54	2.1	18.93
10	SLD 1	116	28	2140	319.8	3.46	-40.7
10	SLD 2	159	4	2137	319.41	3.43	-55.41
10	SLD 3	106	-72	1959	305.22	3.03	-36.9
10	SLD 4	148	-96	1956	304.83	3	-51.6
10	SLD 5	-2	154	2228	318.77	3.17	0.54
10	SLD 6	41	130	2225	318.38	3.14	-14.39
10	SLD 7	-37	-177	1623	270.17	1.73	13.21
10	SLD 8	6	-201	1620	269.78	1.71	-1.72
10	SLD 9	-113	163	2122	303.3	2.49	39.59
10	SLD 10	-70	139	2119	302.91	2.46	24.66
10	SLD 11	-148	-168	1516	254.7	1.06	52.26
10	SLD 12	-105	-192	1513	254.31	1.03	37.33
10	SLD 13	-255	57	1786	268.25	1.19	89.47
10	SLD 14	-213	33	1783	267.86	1.17	74.76
10	SLD 15	-266	-42	1604	253.67	0.76	93.27
10	SLD 16	-224	-66	1601	253.28	0.74	78.56
10	SLV 1	333	87	2485	362.57	5.19	-116.73
10	SLV 2	429	33	2478	361.69	5.13	-150.09
10	SLV 3	309	-139	2070	328.6	4.21	-107.97
10	SLV 4	405	-193	2063	327.73	4.15	-141.33

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
10	SLV 5	65	375	2686	361.17	4.54	-23.13
10	SLV 6	162	320	2680	360.29	4.48	-56.98
10	SLV 7	-16	-379	1304	247.96	1.27	6.07
10	SLV 8	82	-434	1297	247.07	1.2	-27.78
10	SLV 9	-189	395	2445	326.01	2.99	65.64
10	SLV 10	-91	341	2438	325.12	2.93	31.8
10	SLV 11	-270	-359	1062	212.79	-0.28	94.84
10	SLV 12	-172	-414	1055	211.91	-0.34	61
10	SLV 13	-512	155	1678	245.35	0.04	179.19
10	SLV 14	-416	101	1672	244.48	-0.02	145.84
10	SLV 15	-536	-71	1264	211.39	-0.94	187.95
10	SLV 16	-440	-125	1257	210.51	-1	154.6
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	-50	-14	1676	241.88	0.9	17.47
11	SLU 2	-50	-21	1660	240.51	0.88	17.59
11	SLU 3	-50	-14	1676	241.88	0.9	17.47
11	SLU 4	-50	-18	1666	241.06	0.89	17.55
11	SLU 5	-50	-21	1660	240.51	0.88	17.59
11	SLU 6	-50	-14	1676	241.88	0.9	17.47
11	SLU 7	-50	-18	1666	241.06	0.89	17.55
11	SLU 8	-50	-14	1676	241.88	0.9	17.47
11	SLU 9	-50	-18	1666	241.06	0.89	17.55
11	SLU 10	-58	-22	1959	269.56	1.1	20.64
11	SLU 11	-58	-15	1975	270.92	1.12	20.52
11	SLU 12	-58	-19	1966	270.11	1.11	20.59
11	SLU 13	-58	-22	1959	269.56	1.1	20.64
11	SLU 14	-58	-15	1975	270.92	1.12	20.52
11	SLU 15	-58	-19	1966	270.11	1.11	20.59
11	SLU 16	-58	-15	1975	270.92	1.12	20.52
11	SLU 17	-58	-19	1966	270.11	1.11	20.59
11	SLU 18	-62	-15	2104	283.37	1.22	21.82
11	SLU 19	-62	-20	2094	282.55	1.2	21.9
11	SLU 20	-62	-15	2104	283.37	1.22	21.82
11	SLU 21	-62	-20	2094	282.55	1.2	21.9
11	SLU 22	-56	-15	1894	263.53	1.06	19.81
11	SLU 23	-56	-22	1878	262.16	1.04	19.93
11	SLU 24	-56	-15	1894	263.53	1.06	19.81
11	SLU 25	-56	-19	1884	262.71	1.05	19.88
11	SLU 26	-56	-22	1878	262.16	1.04	19.93
11	SLU 27	-56	-15	1894	263.53	1.06	19.81
11	SLU 28	-56	-19	1884	262.71	1.05	19.88
11	SLU 29	-56	-15	1894	263.53	1.06	19.81
11	SLU 30	-56	-19	1884	262.71	1.05	19.88
11	SLU 31	-65	-24	2177	291.21	1.26	22.97
11	SLU 32	-65	-16	2193	292.58	1.28	22.85
11	SLU 33	-65	-21	2184	291.76	1.27	22.93
11	SLU 34	-65	-24	2177	291.21	1.26	22.97
11	SLU 35	-65	-16	2193	292.58	1.28	22.85
11	SLU 36	-65	-21	2184	291.76	1.27	22.93
11	SLU 37	-65	-16	2193	292.58	1.28	22.85
11	SLU 38	-65	-21	2184	291.76	1.27	22.93
11	SLU 39	-68	-17	2322	305.03	1.38	24.16
11	SLU 40	-69	-21	2312	304.21	1.36	24.23
11	SLU 41	-68	-17	2322	305.03	1.38	24.16
11	SLU 42	-69	-21	2312	304.21	1.36	24.23
11	SLU 43	-62	-17	2104	307.02	1.11	21.91
11	SLU 44	-62	-25	2087	305.65	1.09	22.04
11	SLU 45	-62	-17	2104	307.02	1.11	21.91
11	SLU 46	-62	-22	2094	306.2	1.1	21.99
11	SLU 47	-62	-25	2087	305.65	1.09	22.04
11	SLU 48	-62	-17	2104	307.02	1.11	21.91
11	SLU 49	-62	-22	2094	306.2	1.1	21.99
11	SLU 50	-62	-17	2104	307.02	1.11	21.91
11	SLU 51	-62	-22	2094	306.2	1.1	21.99
11	SLU 52	-71	-26	2387	334.7	1.31	25.08
11	SLU 53	-71	-18	2403	336.06	1.33	24.96
11	SLU 54	-71	-23	2394	335.24	1.32	25.03
11	SLU 55	-71	-26	2387	334.7	1.31	25.08
11	SLU 56	-71	-18	2403	336.06	1.33	24.96
11	SLU 57	-71	-23	2394	335.24	1.32	25.03
11	SLU 58	-71	-18	2403	336.06	1.33	24.96
11	SLU 59	-71	-23	2394	335.24	1.32	25.03
11	SLU 60	-74	-19	2532	348.51	1.43	26.27
11	SLU 61	-75	-23	2522	347.69	1.42	26.34
11	SLU 62	-74	-19	2532	348.51	1.43	26.27
11	SLU 63	-75	-23	2522	347.69	1.42	26.34
11	SLU 64	-69	-19	2322	328.67	1.27	24.25
11	SLU 65	-69	-26	2305	327.3	1.25	24.37
11	SLU 66	-69	-19	2322	328.67	1.27	24.25
11	SLU 67	-69	-23	2312	327.85	1.26	24.32
11	SLU 68	-69	-26	2305	327.3	1.25	24.37
11	SLU 69	-69	-19	2322	328.67	1.27	24.25
11	SLU 70	-69	-23	2312	327.85	1.26	24.32
11	SLU 71	-69	-19	2322	328.67	1.27	24.25

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
11	SLU 72	-69	-23	2312	327.85	1.26	24.32
11	SLU 73	-78	-27	2605	356.35	1.47	27.42
11	SLU 74	-77	-20	2621	357.72	1.49	27.29
11	SLU 75	-77	-24	2612	356.9	1.48	27.37
11	SLU 76	-78	-27	2605	356.35	1.47	27.42
11	SLU 77	-77	-20	2621	357.72	1.49	27.29
11	SLU 78	-77	-24	2612	356.9	1.48	27.37
11	SLU 79	-77	-20	2621	357.72	1.49	27.29
11	SLU 80	-77	-24	2612	356.9	1.48	27.37
11	SLU 81	-81	-20	2750	370.16	1.59	28.6
11	SLU 82	-81	-25	2740	369.35	1.58	28.67
11	SLU 83	-81	-20	2750	370.16	1.59	28.6
11	SLU 84	-81	-25	2740	369.35	1.58	28.67
11	SLE RA 1	-51	-14	1738	248.06	0.94	18.14
11	SLE RA 2	-52	-19	1727	247.15	0.93	18.22
11	SLE RA 3	-51	-14	1738	248.06	0.94	18.14
11	SLE RA 4	-52	-17	1731	247.52	0.94	18.19
11	SLE RA 5	-52	-19	1727	247.15	0.93	18.22
11	SLE RA 6	-51	-14	1738	248.06	0.94	18.14
11	SLE RA 7	-52	-17	1731	247.52	0.94	18.19
11	SLE RA 8	-51	-14	1738	248.06	0.94	18.14
11	SLE RA 9	-52	-17	1731	247.52	0.94	18.19
11	SLE RA 10	-57	-20	1927	266.52	1.08	20.25
11	SLE RA 11	-57	-15	1938	267.43	1.09	20.17
11	SLE RA 12	-57	-18	1931	266.88	1.08	20.22
11	SLE RA 13	-57	-20	1927	266.52	1.08	20.25
11	SLE RA 14	-57	-15	1938	267.43	1.09	20.17
11	SLE RA 15	-57	-18	1931	266.88	1.08	20.22
11	SLE RA 16	-57	-15	1938	267.43	1.09	20.17
11	SLE RA 17	-57	-18	1931	266.88	1.08	20.22
11	SLE RA 18	-60	-15	2023	275.73	1.16	21.04
11	SLE RA 19	-60	-18	2017	275.18	1.15	21.09
11	SLE RA 20	-60	-15	2023	275.73	1.16	21.04
11	SLE RA 21	-60	-18	2017	275.18	1.15	21.09
11	SLE FR 1	-51	-14	1738	248.06	0.94	18.14
11	SLE FR 2	-51	-15	1736	247.88	0.94	18.16
11	SLE FR 3	-51	-14	1738	248.06	0.94	18.14
11	SLE FR 4	-54	-15	1821	256.18	1	19.03
11	SLE FR 5	-54	-14	1824	256.36	1.01	19.01
11	SLE FR 6	-56	-15	1881	261.9	1.05	19.59
11	SLE QP 1	-51	-14	1738	248.06	0.94	18.14
11	SLE QP 2	-54	-14	1824	256.36	1.01	19.01
11	SLD 1	116	27	2055	277.61	2.16	-40.63
11	SLD 2	159	7	2053	277.37	2.14	-55.36
11	SLD 3	106	-64	1884	266.87	1.88	-36.81
11	SLD 4	148	-84	1882	266.64	1.86	-51.53
11	SLD 5	-2	144	2153	279.1	1.79	0.59
11	SLD 6	41	123	2151	278.86	1.76	-14.36
11	SLD 7	-37	-160	1583	243.32	0.85	13.32
11	SLD 8	6	-181	1581	243.08	0.83	-1.62
11	SLD 9	-113	152	2066	269.64	1.18	39.64
11	SLD 10	-70	132	2064	269.41	1.16	24.7
11	SLD 11	-149	-152	1496	233.86	0.25	52.38
11	SLD 12	-106	-172	1494	233.63	0.23	37.43
11	SLD 13	-256	55	1765	246.08	0.15	89.55
11	SLD 14	-213	35	1763	245.85	0.13	74.83
11	SLD 15	-266	-36	1594	235.35	-0.13	93.37
11	SLD 16	-224	-56	1592	235.12	-0.15	78.65
11	SLV 1	333	80	2351	305.23	3.64	-116.69
11	SLV 2	429	35	2346	304.7	3.59	-150.07
11	SLV 3	308	-128	1960	279.72	3	-107.88
11	SLV 4	405	-173	1955	279.2	2.95	-141.27
11	SLV 5	65	345	2576	309.89	2.78	-23.12
11	SLV 6	162	299	2571	309.36	2.73	-57
11	SLV 7	-17	-347	1274	224.87	0.66	6.23
11	SLV 8	81	-393	1269	224.34	0.6	-27.65
11	SLV 9	-189	365	2378	288.38	1.41	65.67
11	SLV 10	-91	318	2373	287.85	1.36	31.79
11	SLV 11	-270	-328	1076	203.36	-0.72	95.02
11	SLV 12	-173	-374	1071	202.83	-0.77	61.14
11	SLV 13	-512	144	1692	233.53	-0.93	179.29
11	SLV 14	-416	99	1687	233	-0.99	145.9
11	SLV 15	-537	-63	1301	208.02	-1.57	188.09
11	SLV 16	-441	-109	1296	207.5	-1.62	154.71
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	-50	-10	1662	236.42	-0.02	17.49
12	SLU 2	-50	-16	1647	235.2	-0.03	17.62
12	SLU 3	-50	-10	1662	236.42	-0.02	17.49
12	SLU 4	-50	-14	1653	235.69	-0.03	17.57
12	SLU 5	-50	-16	1647	235.2	-0.03	17.62
12	SLU 6	-50	-10	1662	236.42	-0.02	17.49
12	SLU 7	-50	-14	1653	235.69	-0.03	17.57
12	SLU 8	-50	-10	1662	236.42	-0.02	17.49
12	SLU 9	-50	-14	1653	235.69	-0.03	17.57

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
12	SLU 10	-59	-17	1943	262.77	0	20.71
12	SLU 11	-58	-10	1958	263.99	0.01	20.59
12	SLU 12	-59	-14	1949	263.26	0	20.66
12	SLU 13	-59	-17	1943	262.77	0	20.71
12	SLU 14	-58	-10	1958	263.99	0.01	20.59
12	SLU 15	-59	-14	1949	263.26	0	20.66
12	SLU 16	-58	-10	1958	263.99	0.01	20.59
12	SLU 17	-59	-14	1949	263.26	0	20.66
12	SLU 18	-62	-10	2085	275.8	0.02	21.91
12	SLU 19	-62	-14	2076	275.07	0.01	21.99
12	SLU 20	-62	-10	2085	275.8	0.02	21.91
12	SLU 21	-62	-14	2076	275.07	0.01	21.99
12	SLU 22	-56	-10	1878	257.13	-0.01	19.84
12	SLU 23	-57	-17	1862	255.91	-0.02	19.97
12	SLU 24	-56	-10	1878	257.13	-0.01	19.84
12	SLU 25	-56	-14	1868	256.4	-0.02	19.92
12	SLU 26	-57	-17	1862	255.91	-0.02	19.97
12	SLU 27	-56	-10	1878	257.13	-0.01	19.84
12	SLU 28	-56	-14	1868	256.4	-0.02	19.92
12	SLU 29	-56	-10	1878	257.13	-0.01	19.84
12	SLU 30	-56	-14	1868	256.4	-0.02	19.92
12	SLU 31	-65	-17	2158	283.48	0.01	23.06
12	SLU 32	-65	-10	2174	284.7	0.02	22.93
12	SLU 33	-65	-15	2164	283.97	0.01	23.01
12	SLU 34	-65	-17	2158	283.48	0.01	23.06
12	SLU 35	-65	-10	2174	284.7	0.02	22.93
12	SLU 36	-65	-15	2164	283.97	0.01	23.01
12	SLU 37	-65	-10	2174	284.7	0.02	22.93
12	SLU 38	-65	-15	2164	283.97	0.01	23.01
12	SLU 39	-69	-10	2301	296.51	0.03	24.26
12	SLU 40	-69	-15	2291	295.78	0.02	24.34
12	SLU 41	-69	-10	2301	296.51	0.03	24.26
12	SLU 42	-69	-15	2291	295.78	0.02	24.34
12	SLU 43	-62	-12	2087	300.24	-0.03	21.94
12	SLU 44	-63	-19	2072	299.03	-0.04	22.06
12	SLU 45	-62	-12	2087	300.24	-0.03	21.94
12	SLU 46	-62	-16	2078	299.51	-0.03	22.01
12	SLU 47	-63	-19	2072	299.03	-0.04	22.06
12	SLU 48	-62	-12	2087	300.24	-0.03	21.94
12	SLU 49	-62	-16	2078	299.51	-0.03	22.01
12	SLU 50	-62	-12	2087	300.24	-0.03	21.94
12	SLU 51	-62	-16	2078	299.51	-0.03	22.01
12	SLU 52	-71	-19	2368	326.59	-0.01	25.16
12	SLU 53	-71	-12	2383	327.81	0	25.03
12	SLU 54	-71	-16	2374	327.08	-0.01	25.11
12	SLU 55	-71	-19	2368	326.59	-0.01	25.16
12	SLU 56	-71	-12	2383	327.81	0	25.03
12	SLU 57	-71	-16	2374	327.08	-0.01	25.11
12	SLU 58	-71	-12	2383	327.81	0	25.03
12	SLU 59	-71	-16	2374	327.08	-0.01	25.11
12	SLU 60	-75	-12	2510	339.63	0.01	26.36
12	SLU 61	-75	-16	2501	338.9	0	26.43
12	SLU 62	-75	-12	2510	339.63	0.01	26.36
12	SLU 63	-75	-16	2501	338.9	0	26.43
12	SLU 64	-69	-13	2303	320.95	-0.02	24.28
12	SLU 65	-69	-20	2287	319.74	-0.03	24.41
12	SLU 66	-69	-13	2303	320.95	-0.02	24.28
12	SLU 67	-69	-17	2293	320.22	-0.02	24.36
12	SLU 68	-69	-20	2287	319.74	-0.03	24.41
12	SLU 69	-69	-13	2303	320.95	-0.02	24.28
12	SLU 70	-69	-17	2293	320.22	-0.02	24.36
12	SLU 71	-69	-13	2303	320.95	-0.02	24.28
12	SLU 72	-69	-17	2293	320.22	-0.02	24.36
12	SLU 73	-78	-20	2583	347.3	0	27.5
12	SLU 74	-78	-13	2599	348.52	0.01	27.38
12	SLU 75	-78	-17	2589	347.79	0	27.45
12	SLU 76	-78	-20	2583	347.3	0	27.5
12	SLU 77	-78	-13	2599	348.52	0.01	27.38
12	SLU 78	-78	-17	2589	347.79	0	27.45
12	SLU 79	-78	-13	2599	348.52	0.01	27.38
12	SLU 80	-78	-17	2589	347.79	0	27.45
12	SLU 81	-81	-13	2725	360.34	0.02	28.7
12	SLU 82	-82	-17	2716	359.61	0.01	28.78
12	SLU 83	-81	-13	2725	360.34	0.02	28.7
12	SLU 84	-82	-17	2716	359.61	0.01	28.78
12	SLE RA 1	-52	-10	1724	242.33	-0.02	18.16
12	SLE RA 2	-52	-14	1713	241.52	-0.02	18.25
12	SLE RA 3	-52	-10	1724	242.33	-0.02	18.16
12	SLE RA 4	-52	-12	1718	241.85	-0.02	18.21
12	SLE RA 5	-52	-14	1713	241.52	-0.02	18.25
12	SLE RA 6	-52	-10	1724	242.33	-0.02	18.16
12	SLE RA 7	-52	-12	1718	241.85	-0.02	18.21
12	SLE RA 8	-52	-10	1724	242.33	-0.02	18.16
12	SLE RA 9	-52	-12	1718	241.85	-0.02	18.21
12	SLE RA 10	-58	-14	1911	259.9	-0.01	20.31
12	SLE RA 11	-57	-10	1921	260.71	0	20.23
12	SLE RA 12	-57	-13	1915	260.23	0	20.28

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
12	SLE RA 13	-58	-14	1911	259.9	-0.01	20.31
12	SLE RA 14	-57	-10	1921	260.71	0	20.23
12	SLE RA 15	-57	-13	1915	260.23	0	20.28
12	SLE RA 16	-57	-10	1921	260.71	0	20.23
12	SLE RA 17	-57	-13	1915	260.23	0	20.28
12	SLE RA 18	-60	-10	2006	268.59	0.01	21.11
12	SLE RA 19	-60	-13	2000	268.1	0	21.16
12	SLE RA 20	-60	-10	2006	268.59	0.01	21.11
12	SLE RA 21	-60	-13	2000	268.1	0	21.16
12	SLE FR 1	-52	-10	1724	242.33	-0.02	18.16
12	SLE FR 2	-52	-11	1722	242.17	-0.02	18.18
12	SLE FR 3	-52	-10	1724	242.33	-0.02	18.16
12	SLE FR 4	-54	-11	1806	250.05	-0.01	19.07
12	SLE FR 5	-54	-10	1808	250.21	-0.01	19.05
12	SLE FR 6	-56	-10	1865	255.46	0	19.64
12	SLE QP 1	-52	-10	1724	242.33	-0.02	18.16
12	SLE QP 2	-54	-10	1808	250.21	-0.01	19.05
12	SLD 1	116	27	2008	263.47	0.98	-40.58
12	SLD 2	158	10	2006	263.36	0.96	-55.31
12	SLD 3	105	-57	1843	253.9	0.84	-36.74
12	SLD 4	148	-74	1841	253.79	0.82	-51.47
12	SLD 5	-2	135	2119	268.73	0.5	0.61
12	SLD 6	41	118	2118	268.63	0.49	-14.35
12	SLD 7	-38	-146	1569	236.85	0.04	13.4
12	SLD 8	5	-163	1567	236.74	0.02	-1.56
12	SLD 9	-113	143	2049	263.68	-0.04	39.65
12	SLD 10	-70	127	2048	263.57	-0.06	24.7
12	SLD 11	-149	-138	1499	231.8	-0.51	52.45
12	SLD 12	-106	-155	1498	231.69	-0.52	37.49
12	SLD 13	-256	54	1776	246.63	-0.84	89.57
12	SLD 14	-213	38	1774	246.52	-0.86	74.84
12	SLD 15	-266	-30	1611	237.06	-0.98	93.41
12	SLD 16	-224	-47	1609	236.96	-1	78.68
12	SLV 1	333	74	2263	281.04	2.24	-116.62
12	SLV 2	429	36	2259	280.8	2.19	-150.02
12	SLV 3	308	-118	1886	258.04	1.92	-107.77
12	SLV 4	404	-156	1882	257.8	1.88	-141.18
12	SLV 5	65	320	2518	294.42	1.16	-23.13
12	SLV 6	163	282	2514	294.18	1.12	-57.03
12	SLV 7	-17	-320	1261	217.77	0.1	6.36
12	SLV 8	80	-359	1258	217.52	0.06	-27.54
12	SLV 9	-188	339	2359	282.9	-0.08	65.64
12	SLV 10	-91	301	2356	282.66	-0.12	31.74
12	SLV 11	-271	-302	1103	206.24	-1.14	95.12
12	SLV 12	-173	-340	1099	206	-1.18	61.22
12	SLV 13	-512	136	1735	242.62	-1.89	179.28
12	SLV 14	-416	99	1731	242.38	-1.94	145.87
12	SLV 15	-537	-56	1358	219.63	-2.21	188.12
12	SLV 16	-441	-93	1354	219.39	-2.26	154.72
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
13	SLU 1	-50	-6	1676	251.28	-0.87	17.48
13	SLU 2	-50	-12	1660	250.01	-0.86	17.6
13	SLU 3	-50	-6	1676	251.28	-0.87	17.48
13	SLU 4	-50	-10	1667	250.52	-0.86	17.55
13	SLU 5	-50	-12	1660	250.01	-0.86	17.6
13	SLU 6	-50	-6	1676	251.28	-0.87	17.48
13	SLU 7	-50	-10	1667	250.52	-0.86	17.55
13	SLU 8	-50	-6	1676	251.28	-0.87	17.48
13	SLU 9	-50	-10	1667	250.52	-0.86	17.55
13	SLU 10	-59	-12	1958	280.62	-1.02	20.75
13	SLU 11	-59	-5	1974	281.9	-1.02	20.62
13	SLU 12	-59	-9	1965	281.13	-1.02	20.69
13	SLU 13	-59	-12	1958	280.62	-1.02	20.75
13	SLU 14	-59	-5	1974	281.9	-1.02	20.62
13	SLU 15	-59	-9	1965	281.13	-1.02	20.69
13	SLU 16	-59	-5	1974	281.9	-1.02	20.62
13	SLU 17	-59	-9	1965	281.13	-1.02	20.69
13	SLU 18	-62	-5	2102	295.02	-1.09	21.96
13	SLU 19	-63	-9	2092	294.25	-1.09	22.04
13	SLU 20	-62	-5	2102	295.02	-1.09	21.96
13	SLU 21	-63	-9	2092	294.25	-1.09	22.04
13	SLU 22	-56	-6	1893	274.38	-1	19.83
13	SLU 23	-57	-13	1878	273.11	-0.99	19.96
13	SLU 24	-56	-6	1893	274.38	-1	19.83
13	SLU 25	-57	-10	1884	273.62	-0.99	19.91
13	SLU 26	-57	-13	1878	273.11	-0.99	19.96
13	SLU 27	-56	-6	1893	274.38	-1	19.83
13	SLU 28	-57	-10	1884	273.62	-0.99	19.91
13	SLU 29	-56	-6	1893	274.38	-1	19.83
13	SLU 30	-57	-10	1884	273.62	-0.99	19.91
13	SLU 31	-66	-12	2176	303.72	-1.15	23.1
13	SLU 32	-65	-6	2191	305	-1.15	22.97
13	SLU 33	-65	-9	2182	304.23	-1.15	23.05
13	SLU 34	-66	-12	2176	303.72	-1.15	23.1

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
13	SLU 35	-65	-6	2191	305	-1.15	22.97
13	SLU 36	-65	-9	2182	304.23	-1.15	23.05
13	SLU 37	-65	-6	2191	305	-1.15	22.97
13	SLU 38	-65	-9	2182	304.23	-1.15	23.05
13	SLU 39	-69	-5	2319	318.12	-1.22	24.32
13	SLU 40	-69	-9	2310	317.35	-1.21	24.4
13	SLU 41	-69	-5	2319	318.12	-1.22	24.32
13	SLU 42	-69	-9	2310	317.35	-1.21	24.4
13	SLU 43	-62	-8	2104	318.75	-1.08	21.91
13	SLU 44	-63	-14	2089	317.47	-1.08	22.04
13	SLU 45	-62	-8	2104	318.75	-1.08	21.91
13	SLU 46	-62	-12	2095	317.98	-1.08	21.99
13	SLU 47	-63	-14	2089	317.47	-1.08	22.04
13	SLU 48	-62	-8	2104	318.75	-1.08	21.91
13	SLU 49	-62	-12	2095	317.98	-1.08	21.99
13	SLU 50	-62	-8	2104	318.75	-1.08	21.91
13	SLU 51	-62	-12	2095	317.98	-1.08	21.99
13	SLU 52	-71	-13	2387	348.09	-1.23	25.18
13	SLU 53	-71	-7	2402	349.36	-1.24	25.05
13	SLU 54	-71	-11	2393	348.6	-1.23	25.13
13	SLU 55	-71	-13	2387	348.09	-1.23	25.18
13	SLU 56	-71	-7	2402	349.36	-1.24	25.05
13	SLU 57	-71	-11	2393	348.6	-1.23	25.13
13	SLU 58	-71	-7	2402	349.36	-1.24	25.05
13	SLU 59	-71	-11	2393	348.6	-1.23	25.13
13	SLU 60	-75	-7	2530	362.48	-1.3	26.4
13	SLU 61	-75	-10	2521	361.72	-1.3	26.48
13	SLU 62	-75	-7	2530	362.48	-1.3	26.4
13	SLU 63	-75	-10	2521	361.72	-1.3	26.48
13	SLU 64	-69	-8	2322	341.85	-1.21	24.27
13	SLU 65	-69	-14	2306	340.57	-1.21	24.4
13	SLU 66	-69	-8	2322	341.85	-1.21	24.27
13	SLU 67	-69	-12	2312	341.08	-1.21	24.34
13	SLU 68	-69	-14	2306	340.57	-1.21	24.4
13	SLU 69	-69	-8	2322	341.85	-1.21	24.27
13	SLU 70	-69	-12	2312	341.08	-1.21	24.34
13	SLU 71	-69	-8	2322	341.85	-1.21	24.27
13	SLU 72	-69	-12	2312	341.08	-1.21	24.34
13	SLU 73	-78	-14	2604	371.19	-1.36	27.54
13	SLU 74	-78	-7	2620	372.46	-1.37	27.41
13	SLU 75	-78	-11	2610	371.7	-1.36	27.48
13	SLU 76	-78	-14	2604	371.19	-1.36	27.54
13	SLU 77	-78	-7	2620	372.46	-1.37	27.41
13	SLU 78	-78	-11	2610	371.7	-1.36	27.48
13	SLU 79	-78	-7	2620	372.46	-1.37	27.41
13	SLU 80	-78	-11	2610	371.7	-1.36	27.48
13	SLU 81	-82	-7	2747	385.58	-1.43	28.75
13	SLU 82	-82	-11	2738	384.82	-1.43	28.83
13	SLU 83	-82	-7	2747	385.58	-1.43	28.75
13	SLU 84	-82	-11	2738	384.82	-1.43	28.83
13	SLE RA 1	-52	-6	1738	257.88	-0.9	18.15
13	SLE RA 2	-52	-10	1728	257.03	-0.9	18.24
13	SLE RA 3	-52	-6	1738	257.88	-0.9	18.15
13	SLE RA 4	-52	-9	1732	257.37	-0.9	18.2
13	SLE RA 5	-52	-10	1728	257.03	-0.9	18.24
13	SLE RA 6	-52	-6	1738	257.88	-0.9	18.15
13	SLE RA 7	-52	-9	1732	257.37	-0.9	18.2
13	SLE RA 8	-52	-6	1738	257.88	-0.9	18.15
13	SLE RA 9	-52	-9	1732	257.37	-0.9	18.2
13	SLE RA 10	-58	-10	1926	277.44	-1	20.33
13	SLE RA 11	-57	-6	1937	278.29	-1.01	20.24
13	SLE RA 12	-58	-8	1931	277.78	-1.01	20.29
13	SLE RA 13	-58	-10	1926	277.44	-1	20.33
13	SLE RA 14	-57	-6	1937	278.29	-1.01	20.24
13	SLE RA 15	-58	-8	1931	277.78	-1.01	20.29
13	SLE RA 16	-57	-6	1937	278.29	-1.01	20.24
13	SLE RA 17	-58	-8	1931	277.78	-1.01	20.29
13	SLE RA 18	-60	-5	2022	287.04	-1.05	21.14
13	SLE RA 19	-60	-8	2016	286.53	-1.05	21.19
13	SLE RA 20	-60	-5	2022	287.04	-1.05	21.14
13	SLE RA 21	-60	-8	2016	286.53	-1.05	21.19
13	SLE FR 1	-52	-6	1738	257.88	-0.9	18.15
13	SLE FR 2	-52	-7	1736	257.71	-0.9	18.17
13	SLE FR 3	-52	-6	1738	257.88	-0.9	18.15
13	SLE FR 4	-54	-7	1821	266.46	-0.95	19.06
13	SLE FR 5	-54	-6	1823	266.63	-0.95	19.05
13	SLE FR 6	-56	-6	1880	272.46	-0.98	19.65
13	SLE QP 1	-52	-6	1738	257.88	-0.9	18.15
13	SLE QP 2	-54	-6	1823	266.63	-0.95	19.05
13	SLD 1	116	27	1995	275.04	-0.12	-40.54
13	SLD 2	158	13	1994	275.04	-0.14	-55.28
13	SLD 3	105	-52	1832	265.09	-0.08	-36.69
13	SLD 4	147	-66	1831	265.09	-0.09	-51.42
13	SLD 5	-2	128	2123	284.24	-0.76	0.6
13	SLD 6	41	115	2122	284.25	-0.78	-14.36
13	SLD 7	-38	-135	1579	251.07	-0.61	13.44
13	SLD 8	5	-148	1578	251.08	-0.62	-1.52

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
13	SLD 9	-113	137	2069	282.18	-1.27	39.61
13	SLD 10	-70	123	2068	282.19	-1.28	24.65
13	SLD 11	-149	-127	1525	249.01	-1.11	52.46
13	SLD 12	-106	-140	1524	249.02	-1.13	37.5
13	SLD 13	-256	54	1815	268.17	-1.8	89.52
13	SLD 14	-213	41	1814	268.17	-1.82	74.78
13	SLD 15	-266	-25	1652	258.22	-1.76	93.37
13	SLD 16	-224	-38	1651	258.22	-1.77	78.64
13	SLV 1	332	68	2216	286.55	0.93	-116.53
13	SLV 2	429	38	2213	286.56	0.89	-149.94
13	SLV 3	308	-112	1843	262.73	1.03	-107.65
13	SLV 4	404	-142	1841	262.74	1	-141.06
13	SLV 5	65	300	2507	308.73	-0.53	-23.15
13	SLV 6	163	270	2505	308.74	-0.57	-57.06
13	SLV 7	-18	-300	1265	229.33	-0.18	6.45
13	SLV 8	80	-331	1263	229.34	-0.21	-27.46
13	SLV 9	-188	319	2384	303.92	-1.68	65.55
13	SLV 10	-90	288	2382	303.93	-1.72	31.65
13	SLV 11	-271	-281	1142	224.52	-1.33	95.15
13	SLV 12	-173	-312	1140	224.53	-1.36	61.25
13	SLV 13	-512	130	1806	270.52	-2.89	179.16
13	SLV 14	-416	100	1803	270.53	-2.93	145.74
13	SLV 15	-537	-50	1433	246.7	-2.79	188.03
13	SLV 16	-441	-80	1431	246.71	-2.82	154.62
13	CRTFP Ux+	0	0	0	0	0	0
13	CRTFP Ux-	0	0	0	0	0	0
13	CRTFP Uy+	0	0	0	0	0	0
13	CRTFP Uy-	0	0	0	0	0	0
14	SLU 1	-50	-3	1714	285.08	-1.63	17.42
14	SLU 2	-50	-9	1699	283.55	-1.62	17.55
14	SLU 3	-50	-3	1714	285.08	-1.63	17.42
14	SLU 4	-50	-7	1705	284.16	-1.62	17.5
14	SLU 5	-50	-9	1699	283.55	-1.62	17.55
14	SLU 6	-50	-3	1714	285.08	-1.63	17.42
14	SLU 7	-50	-7	1705	284.16	-1.62	17.5
14	SLU 8	-50	-3	1714	285.08	-1.63	17.42
14	SLU 9	-50	-7	1705	284.16	-1.62	17.5
14	SLU 10	-59	-8	2004	321.42	-1.93	20.73
14	SLU 11	-59	-2	2020	322.94	-1.94	20.6
14	SLU 12	-59	-6	2010	322.03	-1.94	20.68
14	SLU 13	-59	-8	2004	321.42	-1.93	20.73
14	SLU 14	-59	-2	2020	322.94	-1.94	20.6
14	SLU 15	-59	-6	2010	322.03	-1.94	20.68
14	SLU 16	-59	-2	2020	322.94	-1.94	20.6
14	SLU 17	-59	-6	2010	322.03	-1.94	20.68
14	SLU 18	-63	-1	2150	339.17	-2.08	21.97
14	SLU 19	-63	-5	2141	338.26	-2.07	22.04
14	SLU 20	-63	-1	2150	339.17	-2.08	21.97
14	SLU 21	-63	-5	2141	338.26	-2.07	22.04
14	SLU 22	-56	-3	1937	313.67	-1.88	19.78
14	SLU 23	-57	-9	1922	312.14	-1.87	19.91
14	SLU 24	-56	-3	1937	313.67	-1.88	19.78
14	SLU 25	-56	-7	1928	312.75	-1.88	19.86
14	SLU 26	-57	-9	1922	312.14	-1.87	19.91
14	SLU 27	-56	-3	1937	313.67	-1.88	19.78
14	SLU 28	-56	-7	1928	312.75	-1.88	19.86
14	SLU 29	-56	-3	1937	313.67	-1.88	19.78
14	SLU 30	-56	-7	1928	312.75	-1.88	19.86
14	SLU 31	-66	-8	2227	350.01	-2.19	23.09
14	SLU 32	-65	-2	2243	351.53	-2.2	22.96
14	SLU 33	-66	-6	2233	350.62	-2.19	23.04
14	SLU 34	-66	-8	2227	350.01	-2.19	23.09
14	SLU 35	-65	-2	2243	351.53	-2.2	22.96
14	SLU 36	-66	-6	2233	350.62	-2.19	23.04
14	SLU 37	-65	-2	2243	351.53	-2.2	22.96
14	SLU 38	-66	-6	2233	350.62	-2.19	23.04
14	SLU 39	-69	-1	2373	367.76	-2.33	24.33
14	SLU 40	-69	-5	2364	366.84	-2.33	24.41
14	SLU 41	-69	-1	2373	367.76	-2.33	24.33
14	SLU 42	-69	-5	2364	366.84	-2.33	24.41
14	SLU 43	-62	-4	2152	360.8	-2.03	21.83
14	SLU 44	-62	-10	2136	359.27	-2.02	21.96
14	SLU 45	-62	-4	2152	360.8	-2.03	21.83
14	SLU 46	-62	-8	2143	359.88	-2.03	21.91
14	SLU 47	-62	-10	2136	359.27	-2.02	21.96
14	SLU 48	-62	-4	2152	360.8	-2.03	21.83
14	SLU 49	-62	-8	2143	359.88	-2.03	21.91
14	SLU 50	-62	-4	2152	360.8	-2.03	21.83
14	SLU 51	-62	-8	2143	359.88	-2.03	21.91
14	SLU 52	-72	-9	2442	397.14	-2.34	25.15
14	SLU 53	-71	-3	2457	398.66	-2.35	25.02
14	SLU 54	-71	-7	2448	397.75	-2.34	25.1
14	SLU 55	-72	-9	2442	397.14	-2.34	25.15
14	SLU 56	-71	-3	2457	398.66	-2.35	25.02
14	SLU 57	-71	-7	2448	397.75	-2.34	25.1
14	SLU 58	-71	-3	2457	398.66	-2.35	25.02
14	SLU 59	-71	-7	2448	397.75	-2.34	25.1

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
14	SLU 60	-75	-2	2588	414.89	-2.48	26.38
14	SLU 61	-75	-6	2579	413.98	-2.47	26.46
14	SLU 62	-75	-2	2588	414.89	-2.48	26.38
14	SLU 63	-75	-6	2579	413.98	-2.47	26.46
14	SLU 64	-69	-4	2375	389.39	-2.29	24.2
14	SLU 65	-69	-10	2360	387.86	-2.27	24.33
14	SLU 66	-69	-4	2375	389.39	-2.29	24.2
14	SLU 67	-69	-8	2366	388.47	-2.28	24.27
14	SLU 68	-69	-10	2360	387.86	-2.27	24.33
14	SLU 69	-69	-4	2375	389.39	-2.29	24.2
14	SLU 70	-69	-8	2366	388.47	-2.28	24.27
14	SLU 71	-69	-4	2375	389.39	-2.29	24.2
14	SLU 72	-69	-8	2366	388.47	-2.28	24.27
14	SLU 73	-78	-9	2665	425.73	-2.59	27.51
14	SLU 74	-78	-3	2680	427.25	-2.6	27.38
14	SLU 75	-78	-7	2671	426.34	-2.59	27.46
14	SLU 76	-78	-9	2665	425.73	-2.59	27.51
14	SLU 77	-78	-3	2680	427.25	-2.6	27.38
14	SLU 78	-78	-7	2671	426.34	-2.59	27.46
14	SLU 79	-78	-3	2680	427.25	-2.6	27.38
14	SLU 80	-78	-7	2671	426.34	-2.59	27.46
14	SLU 81	-82	-2	2811	443.48	-2.74	28.74
14	SLU 82	-82	-6	2802	442.57	-2.73	28.82
14	SLU 83	-82	-2	2811	443.48	-2.74	28.74
14	SLU 84	-82	-6	2802	442.57	-2.73	28.82
14	SLE RA 1	-51	-3	1778	293.25	-1.7	18.09
14	SLE RA 2	-52	-7	1768	292.23	-1.7	18.18
14	SLE RA 3	-51	-3	1778	293.25	-1.7	18.09
14	SLE RA 4	-52	-6	1772	292.63	-1.7	18.15
14	SLE RA 5	-52	-7	1768	292.23	-1.7	18.18
14	SLE RA 6	-51	-3	1778	293.25	-1.7	18.09
14	SLE RA 7	-52	-6	1772	292.63	-1.7	18.15
14	SLE RA 8	-51	-3	1778	293.25	-1.7	18.09
14	SLE RA 9	-52	-6	1772	292.63	-1.7	18.15
14	SLE RA 10	-58	-7	1971	317.47	-1.91	20.3
14	SLE RA 11	-58	-2	1982	318.49	-1.91	20.21
14	SLE RA 12	-58	-5	1975	317.88	-1.91	20.27
14	SLE RA 13	-58	-7	1971	317.47	-1.91	20.3
14	SLE RA 14	-58	-2	1982	318.49	-1.91	20.21
14	SLE RA 15	-58	-5	1975	317.88	-1.91	20.27
14	SLE RA 16	-58	-2	1982	318.49	-1.91	20.21
14	SLE RA 17	-58	-5	1975	317.88	-1.91	20.27
14	SLE RA 18	-60	-2	2069	329.31	-2	21.12
14	SLE RA 19	-60	-5	2062	328.7	-2	21.18
14	SLE RA 20	-60	-2	2069	329.31	-2	21.12
14	SLE RA 21	-60	-5	2062	328.7	-2	21.18
14	SLE FR 1	-51	-3	1778	293.25	-1.7	18.09
14	SLE FR 2	-52	-4	1776	293.04	-1.7	18.11
14	SLE FR 3	-51	-3	1778	293.25	-1.7	18.09
14	SLE FR 4	-54	-4	1863	303.86	-1.79	19.02
14	SLE FR 5	-54	-3	1865	304.06	-1.79	19
14	SLE FR 6	-56	-3	1923	311.28	-1.85	19.61
14	SLE QP 1	-51	-3	1778	293.25	-1.7	18.09
14	SLE QP 2	-54	-3	1865	304.06	-1.79	19
14	SLD 1	116	26	2015	306.95	-1.06	-40.52
14	SLD 2	158	16	2014	307.04	-1.07	-55.25
14	SLD 3	105	-49	1849	295.01	-0.92	-36.65
14	SLD 4	147	-59	1849	295.11	-0.94	-51.38
14	SLD 5	-2	123	2161	323	-1.77	0.55
14	SLD 6	41	113	2160	323.1	-1.78	-14.41
14	SLD 7	-38	-127	1610	283.21	-1.33	13.44
14	SLD 8	5	-138	1610	283.31	-1.34	-1.51
14	SLD 9	-113	132	2121	324.82	-2.25	39.52
14	SLD 10	-70	121	2120	324.92	-2.26	24.56
14	SLD 11	-149	-119	1570	285.03	-1.8	52.41
14	SLD 12	-106	-129	1570	285.13	-1.82	37.46
14	SLD 13	-255	53	1882	313.02	-2.65	89.39
14	SLD 14	-213	43	1881	313.12	-2.66	74.66
14	SLD 15	-266	-22	1717	301.08	-2.52	93.26
14	SLD 16	-224	-32	1716	301.18	-2.53	78.52
14	SLV 1	332	63	2206	310.86	-0.12	-116.42
14	SLV 2	428	40	2204	311.08	-0.15	-149.83
14	SLV 3	307	-108	1829	282.75	0.18	-107.51
14	SLV 4	403	-131	1827	282.97	0.15	-140.91
14	SLV 5	66	285	2540	348.66	-1.74	-23.21
14	SLV 6	163	261	2538	348.89	-1.77	-57.11
14	SLV 7	-18	-286	1283	254.95	-0.73	6.51
14	SLV 8	79	-309	1281	255.18	-0.76	-27.39
14	SLV 9	-187	303	2449	352.95	-2.83	65.39
14	SLV 10	-90	280	2448	353.17	-2.86	31.49
14	SLV 11	-271	-267	1192	259.24	-1.82	95.11
14	SLV 12	-174	-291	1191	259.47	-1.85	61.21
14	SLV 13	-511	125	1903	325.16	-3.74	178.92
14	SLV 14	-415	102	1902	325.38	-3.77	145.51
14	SLV 15	-536	-46	1526	297.04	-3.44	187.83
14	SLV 16	-440	-69	1525	297.27	-3.47	154.43
14	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
14	CRTFP Ux-	0	0	0	0	0	0
14	CRTFP Uy+	0	0	0	0	0	0
14	CRTFP Uy-	0	0	0	0	0	0
15	SLU 1	-49	-2	1774	335.96	-2.28	17.31
15	SLU 2	-50	-8	1758	334.01	-2.26	17.45
15	SLU 3	-49	-2	1774	335.96	-2.28	17.31
15	SLU 4	-50	-5	1765	334.79	-2.27	17.39
15	SLU 5	-50	-8	1758	334.01	-2.26	17.45
15	SLU 6	-49	-2	1774	335.96	-2.28	17.31
15	SLU 7	-50	-5	1765	334.79	-2.27	17.39
15	SLU 8	-49	-2	1774	335.96	-2.28	17.31
15	SLU 9	-50	-5	1765	334.79	-2.27	17.39
15	SLU 10	-59	-6	2075	382.88	-2.71	20.67
15	SLU 11	-59	0	2091	384.83	-2.73	20.53
15	SLU 12	-59	-4	2082	383.66	-2.72	20.61
15	SLU 13	-59	-6	2075	382.88	-2.71	20.67
15	SLU 14	-59	0	2091	384.83	-2.73	20.53
15	SLU 15	-59	-4	2082	383.66	-2.72	20.61
15	SLU 16	-59	0	2091	384.83	-2.73	20.53
15	SLU 17	-59	-4	2082	383.66	-2.72	20.61
15	SLU 18	-63	0	2227	405.77	-2.92	21.91
15	SLU 19	-63	-3	2217	404.61	-2.91	21.99
15	SLU 20	-63	0	2227	405.77	-2.92	21.91
15	SLU 21	-63	-3	2217	404.61	-2.91	21.99
15	SLU 22	-56	-2	2007	372.8	-2.64	19.68
15	SLU 23	-56	-7	1991	370.86	-2.62	19.81
15	SLU 24	-56	-2	2007	372.8	-2.64	19.68
15	SLU 25	-56	-5	1997	371.64	-2.63	19.76
15	SLU 26	-56	-7	1991	370.86	-2.62	19.81
15	SLU 27	-56	-2	2007	372.8	-2.64	19.68
15	SLU 28	-56	-5	1997	371.64	-2.63	19.76
15	SLU 29	-56	-2	2007	372.8	-2.64	19.68
15	SLU 30	-56	-5	1997	371.64	-2.63	19.76
15	SLU 31	-66	-6	2308	419.73	-3.07	23.03
15	SLU 32	-65	0	2324	421.67	-3.09	22.9
15	SLU 33	-66	-4	2314	420.5	-3.08	22.98
15	SLU 34	-66	-6	2308	419.73	-3.07	23.03
15	SLU 35	-65	0	2324	421.67	-3.09	22.9
15	SLU 36	-66	-4	2314	420.5	-3.08	22.98
15	SLU 37	-65	0	2324	421.67	-3.09	22.9
15	SLU 38	-66	-4	2314	420.5	-3.08	22.98
15	SLU 39	-69	1	2460	442.61	-3.28	24.28
15	SLU 40	-69	-3	2450	441.45	-3.27	24.36
15	SLU 41	-69	1	2460	442.61	-3.28	24.28
15	SLU 42	-69	-3	2450	441.45	-3.27	24.36
15	SLU 43	-62	-2	2227	424.11	-2.84	21.7
15	SLU 44	-62	-8	2211	422.17	-2.82	21.83
15	SLU 45	-62	-2	2227	424.11	-2.84	21.7
15	SLU 46	-62	-6	2217	422.95	-2.83	21.78
15	SLU 47	-62	-8	2211	422.17	-2.82	21.83
15	SLU 48	-62	-2	2227	424.11	-2.84	21.7
15	SLU 49	-62	-6	2217	422.95	-2.83	21.78
15	SLU 50	-62	-2	2227	424.11	-2.84	21.7
15	SLU 51	-62	-6	2217	422.95	-2.83	21.78
15	SLU 52	-71	-7	2528	471.04	-3.27	25.05
15	SLU 53	-71	-1	2544	472.98	-3.29	24.92
15	SLU 54	-71	-4	2534	471.82	-3.28	25
15	SLU 55	-71	-7	2528	471.04	-3.27	25.05
15	SLU 56	-71	-1	2544	472.98	-3.29	24.92
15	SLU 57	-71	-4	2534	471.82	-3.28	25
15	SLU 58	-71	-1	2544	472.98	-3.29	24.92
15	SLU 59	-71	-4	2534	471.82	-3.28	25
15	SLU 60	-75	0	2680	493.93	-3.49	26.3
15	SLU 61	-75	-4	2670	492.76	-3.47	26.38
15	SLU 62	-75	0	2680	493.93	-3.49	26.3
15	SLU 63	-75	-4	2670	492.76	-3.47	26.38
15	SLU 64	-69	-2	2460	460.96	-3.2	24.06
15	SLU 65	-69	-8	2443	459.01	-3.18	24.19
15	SLU 66	-69	-2	2460	460.96	-3.2	24.06
15	SLU 67	-69	-6	2450	459.79	-3.19	24.14
15	SLU 68	-69	-8	2443	459.01	-3.18	24.19
15	SLU 69	-69	-2	2460	460.96	-3.2	24.06
15	SLU 70	-69	-6	2450	459.79	-3.19	24.14
15	SLU 71	-69	-2	2460	460.96	-3.2	24.06
15	SLU 72	-69	-6	2450	459.79	-3.19	24.14
15	SLU 73	-78	-7	2760	507.88	-3.63	27.41
15	SLU 74	-78	-1	2776	509.83	-3.65	27.28
15	SLU 75	-78	-4	2767	508.66	-3.64	27.36
15	SLU 76	-78	-7	2760	507.88	-3.63	27.41
15	SLU 77	-78	-1	2776	509.83	-3.65	27.28
15	SLU 78	-78	-4	2767	508.66	-3.64	27.36
15	SLU 79	-78	-1	2776	509.83	-3.65	27.28
15	SLU 80	-78	-4	2767	508.66	-3.64	27.36
15	SLU 81	-82	0	2912	530.77	-3.85	28.66
15	SLU 82	-82	-3	2903	529.6	-3.83	28.74
15	SLU 83	-82	0	2912	530.77	-3.85	28.66
15	SLU 84	-82	-3	2903	529.6	-3.83	28.74

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
15	SLE RA 1	-51	-2	1841	346.49	-2.39	17.99
15	SLE RA 2	-52	-6	1830	345.19	-2.37	18.08
15	SLE RA 3	-51	-2	1841	346.49	-2.39	17.99
15	SLE RA 4	-51	-4	1834	345.71	-2.38	18.04
15	SLE RA 5	-52	-6	1830	345.19	-2.37	18.08
15	SLE RA 6	-51	-2	1841	346.49	-2.39	17.99
15	SLE RA 7	-51	-4	1834	345.71	-2.38	18.04
15	SLE RA 8	-51	-2	1841	346.49	-2.39	17.99
15	SLE RA 9	-51	-4	1834	345.71	-2.38	18.04
15	SLE RA 10	-58	-5	2041	377.77	-2.67	20.22
15	SLE RA 11	-57	-1	2052	379.06	-2.69	20.13
15	SLE RA 12	-58	-3	2046	378.29	-2.68	20.19
15	SLE RA 13	-58	-5	2041	377.77	-2.67	20.22
15	SLE RA 14	-57	-1	2052	379.06	-2.69	20.13
15	SLE RA 15	-58	-3	2046	378.29	-2.68	20.19
15	SLE RA 16	-57	-1	2052	379.06	-2.69	20.13
15	SLE RA 17	-58	-3	2046	378.29	-2.68	20.19
15	SLE RA 18	-60	0	2143	393.03	-2.81	21.05
15	SLE RA 19	-60	-3	2136	392.25	-2.81	21.11
15	SLE RA 20	-60	0	2143	393.03	-2.81	21.05
15	SLE RA 21	-60	-3	2136	392.25	-2.81	21.11
15	SLE FR 1	-51	-2	1841	346.49	-2.39	17.99
15	SLE FR 2	-51	-3	1839	346.23	-2.38	18.01
15	SLE FR 3	-51	-2	1841	346.49	-2.39	17.99
15	SLE FR 4	-54	-2	1929	360.19	-2.51	18.93
15	SLE FR 5	-54	-1	1931	360.45	-2.51	18.91
15	SLE FR 6	-56	-1	1992	369.76	-2.6	19.52
15	SLE QP 1	-51	-2	1841	346.49	-2.39	17.99
15	SLE QP 2	-54	-1	1931	360.45	-2.51	18.91
15	SLD 1	116	25	2062	362.36	-1.85	-40.52
15	SLD 2	158	17	2062	362.53	-1.86	-55.24
15	SLD 3	105	-48	1891	346.22	-1.62	-36.64
15	SLD 4	147	-55	1891	346.39	-1.63	-51.36
15	SLD 5	-1	119	2229	385.44	-2.66	0.45
15	SLD 6	41	112	2229	385.61	-2.67	-14.5
15	SLD 7	-38	-123	1661	331.64	-1.89	13.4
15	SLD 8	5	-130	1661	331.81	-1.9	-1.54
15	SLD 9	-113	128	2202	389.08	-3.13	39.36
15	SLD 10	-70	120	2202	389.25	-3.14	24.41
15	SLD 11	-149	-115	1634	335.28	-2.35	52.31
15	SLD 12	-106	-122	1633	335.46	-2.36	37.37
15	SLD 13	-255	53	1971	374.5	-3.4	89.17
15	SLD 14	-212	45	1971	374.67	-3.41	74.45
15	SLD 15	-266	-20	1801	358.36	-3.16	93.06
15	SLD 16	-224	-27	1801	358.53	-3.18	78.34
15	SLV 1	332	58	2230	365.06	-1.01	-116.31
15	SLV 2	428	42	2229	365.45	-1.04	-149.69
15	SLV 3	307	-107	1840	327.66	-0.48	-107.35
15	SLV 4	403	-124	1840	328.05	-0.51	-140.74
15	SLV 5	66	274	2612	418.41	-2.86	-23.31
15	SLV 6	163	257	2611	418.8	-2.88	-57.19
15	SLV 7	-19	-279	1314	293.76	-1.09	6.54
15	SLV 8	79	-296	1313	294.15	-1.12	-27.33
15	SLV 9	-187	293	2550	426.75	-3.91	65.15
15	SLV 10	-89	276	2549	427.14	-3.94	31.27
15	SLV 11	-271	-260	1252	302.09	-2.15	95
15	SLV 12	-174	-277	1251	302.49	-2.17	61.12
15	SLV 13	-510	121	2023	392.84	-4.52	178.55
15	SLV 14	-414	105	2022	393.23	-4.55	145.17
15	SLV 15	-536	-44	1634	355.45	-3.99	187.51
15	SLV 16	-440	-61	1633	355.84	-4.02	154.12
15	CRTFP Ux+	0	0	0	0	0	0
15	CRTFP Ux-	0	0	0	0	0	0
15	CRTFP Uy+	0	0	0	0	0	0
15	CRTFP Uy-	0	0	0	0	0	0
16	SLU 1	-49	-2	1852	401.11	-2.76	17.16
16	SLU 2	-49	-7	1835	398.61	-2.74	17.3
16	SLU 3	-49	-2	1852	401.11	-2.76	17.16
16	SLU 4	-49	-5	1842	399.61	-2.75	17.24
16	SLU 5	-49	-7	1835	398.61	-2.74	17.3
16	SLU 6	-49	-2	1852	401.11	-2.76	17.16
16	SLU 7	-49	-5	1842	399.61	-2.75	17.24
16	SLU 8	-49	-2	1852	401.11	-2.76	17.16
16	SLU 9	-49	-5	1842	399.61	-2.75	17.24
16	SLU 10	-59	-6	2167	461.55	-3.28	20.54
16	SLU 11	-58	0	2184	464.05	-3.31	20.41
16	SLU 12	-59	-4	2174	462.55	-3.29	20.49
16	SLU 13	-59	-6	2167	461.55	-3.28	20.54
16	SLU 14	-58	0	2184	464.05	-3.31	20.41
16	SLU 15	-59	-4	2174	462.55	-3.29	20.49
16	SLU 16	-58	0	2184	464.05	-3.31	20.41
16	SLU 17	-59	-4	2174	462.55	-3.29	20.49
16	SLU 18	-62	1	2326	491.02	-3.54	21.8
16	SLU 19	-63	-3	2316	489.52	-3.53	21.88
16	SLU 20	-62	1	2326	491.02	-3.54	21.8
16	SLU 21	-63	-3	2316	489.52	-3.53	21.88
16	SLU 22	-56	-1	2097	448.47	-3.2	19.52

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
16	SLU 23	-56	-7	2080	445.97	-3.17	19.65
16	SLU 24	-56	-1	2097	448.47	-3.2	19.52
16	SLU 25	-56	-5	2086	446.97	-3.18	19.6
16	SLU 26	-56	-7	2080	445.97	-3.17	19.65
16	SLU 27	-56	-1	2097	448.47	-3.2	19.52
16	SLU 28	-56	-5	2086	446.97	-3.18	19.6
16	SLU 29	-56	-1	2097	448.47	-3.2	19.52
16	SLU 30	-56	-5	2086	446.97	-3.18	19.6
16	SLU 31	-66	-6	2412	508.91	-3.72	22.9
16	SLU 32	-65	0	2429	511.4	-3.74	22.76
16	SLU 33	-65	-3	2419	509.91	-3.73	22.85
16	SLU 34	-66	-6	2412	508.91	-3.72	22.9
16	SLU 35	-65	0	2429	511.4	-3.74	22.76
16	SLU 36	-65	-3	2419	509.91	-3.73	22.85
16	SLU 37	-65	0	2429	511.4	-3.74	22.76
16	SLU 38	-65	-3	2419	509.91	-3.73	22.85
16	SLU 39	-69	1	2571	538.38	-3.98	24.16
16	SLU 40	-69	-3	2561	536.88	-3.96	24.24
16	SLU 41	-69	1	2571	538.38	-3.98	24.16
16	SLU 42	-69	-3	2561	536.88	-3.96	24.24
16	SLU 43	-61	-2	2323	505.2	-3.44	21.49
16	SLU 44	-62	-8	2307	502.71	-3.41	21.63
16	SLU 45	-61	-2	2323	505.2	-3.44	21.49
16	SLU 46	-62	-6	2313	503.71	-3.42	21.58
16	SLU 47	-62	-8	2307	502.71	-3.41	21.63
16	SLU 48	-61	-2	2323	505.2	-3.44	21.49
16	SLU 49	-62	-6	2313	503.71	-3.42	21.58
16	SLU 50	-61	-2	2323	505.2	-3.44	21.49
16	SLU 51	-62	-6	2313	503.71	-3.42	21.58
16	SLU 52	-71	-6	2639	565.64	-3.96	24.88
16	SLU 53	-71	-1	2656	568.14	-3.99	24.74
16	SLU 54	-71	-4	2646	566.64	-3.97	24.83
16	SLU 55	-71	-6	2639	565.64	-3.96	24.88
16	SLU 56	-71	-1	2656	568.14	-3.99	24.74
16	SLU 57	-71	-4	2646	566.64	-3.97	24.83
16	SLU 58	-71	-1	2656	568.14	-3.99	24.74
16	SLU 59	-71	-4	2646	566.64	-3.97	24.83
16	SLU 60	-75	0	2798	595.11	-4.22	26.14
16	SLU 61	-75	-3	2788	593.62	-4.21	26.22
16	SLU 62	-75	0	2798	595.11	-4.22	26.14
16	SLU 63	-75	-3	2788	593.62	-4.21	26.22
16	SLU 64	-68	-2	2568	552.56	-3.88	23.85
16	SLU 65	-69	-8	2551	550.06	-3.85	23.99
16	SLU 66	-68	-2	2568	552.56	-3.88	23.85
16	SLU 67	-68	-5	2558	551.06	-3.86	23.94
16	SLU 68	-69	-8	2551	550.06	-3.85	23.99
16	SLU 69	-68	-2	2568	552.56	-3.88	23.85
16	SLU 70	-68	-5	2558	551.06	-3.86	23.94
16	SLU 71	-68	-2	2568	552.56	-3.88	23.85
16	SLU 72	-68	-5	2558	551.06	-3.86	23.94
16	SLU 73	-78	-6	2884	613	-4.4	27.24
16	SLU 74	-78	0	2900	615.5	-4.42	27.1
16	SLU 75	-78	-4	2890	614	-4.41	27.19
16	SLU 76	-78	-6	2884	613	-4.4	27.24
16	SLU 77	-78	0	2900	615.5	-4.42	27.1
16	SLU 78	-78	-4	2890	614	-4.41	27.19
16	SLU 79	-78	0	2900	615.5	-4.42	27.1
16	SLU 80	-78	-4	2890	614	-4.41	27.19
16	SLU 81	-82	0	3043	642.47	-4.66	28.49
16	SLU 82	-82	-3	3033	640.97	-4.64	28.58
16	SLU 83	-82	0	3043	642.47	-4.66	28.49
16	SLU 84	-82	-3	3033	640.97	-4.64	28.58
16	SLE RA 1	-51	-2	1922	414.64	-2.89	17.83
16	SLE RA 2	-51	-5	1910	412.97	-2.87	17.92
16	SLE RA 3	-51	-2	1922	414.64	-2.89	17.83
16	SLE RA 4	-51	-4	1915	413.64	-2.88	17.89
16	SLE RA 5	-51	-5	1910	412.97	-2.87	17.92
16	SLE RA 6	-51	-2	1922	414.64	-2.89	17.83
16	SLE RA 7	-51	-4	1915	413.64	-2.88	17.89
16	SLE RA 8	-51	-2	1922	414.64	-2.89	17.83
16	SLE RA 9	-51	-4	1915	413.64	-2.88	17.89
16	SLE RA 10	-57	-4	2132	454.93	-3.23	20.09
16	SLE RA 11	-57	-1	2143	456.6	-3.25	20
16	SLE RA 12	-57	-3	2136	455.6	-3.24	20.05
16	SLE RA 13	-57	-4	2132	454.93	-3.23	20.09
16	SLE RA 14	-57	-1	2143	456.6	-3.25	20
16	SLE RA 15	-57	-3	2136	455.6	-3.24	20.05
16	SLE RA 16	-57	-1	2143	456.6	-3.25	20
16	SLE RA 17	-57	-3	2136	455.6	-3.24	20.05
16	SLE RA 18	-60	0	2238	474.58	-3.41	20.92
16	SLE RA 19	-60	-2	2231	473.58	-3.4	20.98
16	SLE RA 20	-60	0	2238	474.58	-3.41	20.92
16	SLE RA 21	-60	-2	2231	473.58	-3.4	20.98
16	SLE FR 1	-51	-2	1922	414.64	-2.89	17.83
16	SLE FR 2	-51	-2	1919	414.31	-2.88	17.85
16	SLE FR 3	-51	-2	1922	414.64	-2.89	17.83
16	SLE FR 4	-54	-2	2014	432.29	-3.04	18.78

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
16	SLE FR 5	-54	-1	2017	432.62	-3.04	18.76
16	SLE FR 6	-55	-1	2080	444.61	-3.15	19.38
16	SLE QP 1	-51	-2	1922	414.64	-2.89	17.83
16	SLE QP 2	-54	-1	2017	432.62	-3.04	18.76
16	SLD 1	116	23	2136	434.35	-2.43	-40.55
16	SLD 2	158	19	2136	434.56	-2.44	-55.26
16	SLD 3	105	-49	1957	411.84	-2.12	-36.65
16	SLD 4	147	-53	1957	412.06	-2.13	-51.35
16	SLD 5	-1	117	2323	467.2	-3.32	0.3
16	SLD 6	42	112	2324	467.42	-3.33	-14.63
16	SLD 7	-38	-123	1728	392.17	-2.29	13.32
16	SLD 8	5	-127	1728	392.39	-2.3	-1.61
16	SLD 9	-112	125	2306	472.85	-3.78	39.13
16	SLD 10	-69	120	2306	473.07	-3.79	24.2
16	SLD 11	-149	-114	1710	397.82	-2.75	52.15
16	SLD 12	-106	-119	1710	398.05	-2.76	37.22
16	SLD 13	-254	51	2076	453.19	-3.95	88.87
16	SLD 14	-212	47	2076	453.41	-3.97	74.17
16	SLD 15	-265	-21	1898	430.68	-3.65	92.78
16	SLD 16	-223	-25	1898	430.9	-3.66	78.07
16	SLV 1	332	54	2288	436.77	-1.64	-116.19
16	SLV 2	428	44	2289	437.27	-1.67	-149.54
16	SLV 3	306	-110	1881	385.09	-0.94	-107.19
16	SLV 4	402	-120	1881	385.59	-0.97	-140.54
16	SLV 5	67	267	2717	512.08	-3.68	-23.46
16	SLV 6	164	257	2717	512.58	-3.7	-57.3
16	SLV 7	-19	-278	1357	339.8	-1.34	6.54
16	SLV 8	78	-288	1357	340.3	-1.36	-27.3
16	SLV 9	-186	286	2676	524.94	-4.72	64.82
16	SLV 10	-88	276	2676	525.45	-4.74	30.98
16	SLV 11	-271	-259	1316	352.66	-2.38	94.82
16	SLV 12	-174	-269	1317	353.17	-2.4	60.98
16	SLV 13	-509	117	2153	479.66	-5.12	178.06
16	SLV 14	-413	107	2153	480.15	-5.14	144.71
16	SLV 15	-535	-46	1745	427.97	-4.41	187.06
16	SLV 16	-439	-56	1745	428.47	-4.44	153.71
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	-49	-3	1940	476.09	-2.96	16.94
17	SLU 2	-49	-9	1922	472.95	-2.93	17.09
17	SLU 3	-49	-3	1940	476.09	-2.96	16.94
17	SLU 4	-49	-6	1929	474.21	-2.94	17.03
17	SLU 5	-49	-9	1922	472.95	-2.93	17.09
17	SLU 6	-49	-3	1940	476.09	-2.96	16.94
17	SLU 7	-49	-6	1929	474.21	-2.94	17.03
17	SLU 8	-49	-3	1940	476.09	-2.96	16.94
17	SLU 9	-49	-6	1929	474.21	-2.94	17.03
17	SLU 10	-58	-7	2272	551.98	-3.51	20.35
17	SLU 11	-58	-2	2290	555.12	-3.54	20.21
17	SLU 12	-58	-5	2279	553.23	-3.53	20.3
17	SLU 13	-58	-7	2272	551.98	-3.51	20.35
17	SLU 14	-58	-2	2290	555.12	-3.54	20.21
17	SLU 15	-58	-5	2279	553.23	-3.53	20.3
17	SLU 16	-58	-2	2290	555.12	-3.54	20.21
17	SLU 17	-58	-5	2279	553.23	-3.53	20.3
17	SLU 18	-62	-1	2439	588.99	-3.79	21.61
17	SLU 19	-62	-5	2429	587.1	-3.78	21.7
17	SLU 20	-62	-1	2439	588.99	-3.79	21.61
17	SLU 21	-62	-5	2429	587.1	-3.78	21.7
17	SLU 22	-55	-3	2199	535.45	-3.43	19.29
17	SLU 23	-56	-8	2181	532.31	-3.4	19.44
17	SLU 24	-55	-3	2199	535.45	-3.43	19.29
17	SLU 25	-56	-6	2188	533.57	-3.41	19.38
17	SLU 26	-56	-8	2181	532.31	-3.4	19.44
17	SLU 27	-55	-3	2199	535.45	-3.43	19.29
17	SLU 28	-56	-6	2188	533.57	-3.41	19.38
17	SLU 29	-55	-3	2199	535.45	-3.43	19.29
17	SLU 30	-56	-6	2188	533.57	-3.41	19.38
17	SLU 31	-65	-7	2530	611.33	-3.98	22.7
17	SLU 32	-65	-2	2548	614.48	-4.01	22.56
17	SLU 33	-65	-5	2538	612.59	-3.99	22.65
17	SLU 34	-65	-7	2530	611.33	-3.98	22.7
17	SLU 35	-65	-2	2548	614.48	-4.01	22.56
17	SLU 36	-65	-5	2538	612.59	-3.99	22.65
17	SLU 37	-65	-2	2548	614.48	-4.01	22.56
17	SLU 38	-65	-5	2538	612.59	-3.99	22.65
17	SLU 39	-69	-1	2698	648.34	-4.26	23.96
17	SLU 40	-69	-4	2687	646.46	-4.24	24.05
17	SLU 41	-69	-1	2698	648.34	-4.26	23.96
17	SLU 42	-69	-4	2687	646.46	-4.24	24.05
17	SLU 43	-61	-4	2433	598.57	-3.69	21.22
17	SLU 44	-61	-9	2415	595.43	-3.66	21.36
17	SLU 45	-61	-4	2433	598.57	-3.69	21.22
17	SLU 46	-61	-7	2423	596.69	-3.67	21.31
17	SLU 47	-61	-9	2415	595.43	-3.66	21.36

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
17	SLU 48	-61	-4	2433	598.57	-3.69	21.22
17	SLU 49	-61	-7	2423	596.69	-3.67	21.31
17	SLU 50	-61	-4	2433	598.57	-3.69	21.22
17	SLU 51	-61	-7	2423	596.69	-3.67	21.31
17	SLU 52	-71	-8	2765	674.45	-4.24	24.63
17	SLU 53	-70	-2	2783	677.6	-4.27	24.49
17	SLU 54	-70	-6	2772	675.71	-4.26	24.57
17	SLU 55	-71	-8	2765	674.45	-4.24	24.63
17	SLU 56	-70	-2	2783	677.6	-4.27	24.49
17	SLU 57	-70	-6	2772	675.71	-4.26	24.57
17	SLU 58	-70	-2	2783	677.6	-4.27	24.49
17	SLU 59	-70	-6	2772	675.71	-4.26	24.57
17	SLU 60	-74	-2	2933	711.46	-4.52	25.89
17	SLU 61	-75	-5	2922	709.58	-4.5	25.97
17	SLU 62	-74	-2	2933	711.46	-4.52	25.89
17	SLU 63	-75	-5	2922	709.58	-4.5	25.97
17	SLU 64	-68	-3	2692	657.93	-4.16	23.57
17	SLU 65	-68	-9	2674	654.79	-4.13	23.71
17	SLU 66	-68	-3	2692	657.93	-4.16	23.57
17	SLU 67	-68	-7	2681	656.04	-4.14	23.66
17	SLU 68	-68	-9	2674	654.79	-4.13	23.71
17	SLU 69	-68	-3	2692	657.93	-4.16	23.57
17	SLU 70	-68	-7	2681	656.04	-4.14	23.66
17	SLU 71	-68	-3	2692	657.93	-4.16	23.57
17	SLU 72	-68	-7	2681	656.04	-4.14	23.66
17	SLU 73	-77	-8	3024	733.81	-4.71	26.98
17	SLU 74	-77	-2	3041	736.95	-4.74	26.84
17	SLU 75	-77	-6	3031	735.07	-4.72	26.92
17	SLU 76	-77	-8	3024	733.81	-4.71	26.98
17	SLU 77	-77	-2	3041	736.95	-4.74	26.84
17	SLU 78	-77	-6	3031	735.07	-4.72	26.92
17	SLU 79	-77	-2	3041	736.95	-4.74	26.84
17	SLU 80	-77	-6	3031	735.07	-4.72	26.92
17	SLU 81	-81	-2	3191	770.82	-4.99	28.24
17	SLU 82	-81	-5	3181	768.94	-4.97	28.32
17	SLU 83	-81	-2	3191	770.82	-4.99	28.24
17	SLU 84	-81	-5	3181	768.94	-4.97	28.32
17	SLE RA 1	-51	-3	2014	493.05	-3.1	17.61
17	SLE RA 2	-51	-7	2002	490.96	-3.08	17.71
17	SLE RA 3	-51	-3	2014	493.05	-3.1	17.61
17	SLE RA 4	-51	-5	2007	491.8	-3.08	17.67
17	SLE RA 5	-51	-7	2002	490.96	-3.08	17.71
17	SLE RA 6	-51	-3	2014	493.05	-3.1	17.61
17	SLE RA 7	-51	-5	2007	491.8	-3.08	17.67
17	SLE RA 8	-51	-3	2014	493.05	-3.1	17.61
17	SLE RA 9	-51	-5	2007	491.8	-3.08	17.67
17	SLE RA 10	-57	-6	2235	543.64	-3.46	19.89
17	SLE RA 11	-57	-2	2247	545.74	-3.48	19.79
17	SLE RA 12	-57	-4	2240	544.48	-3.47	19.85
17	SLE RA 13	-57	-6	2235	543.64	-3.46	19.89
17	SLE RA 14	-57	-2	2247	545.74	-3.48	19.79
17	SLE RA 15	-57	-4	2240	544.48	-3.47	19.85
17	SLE RA 16	-57	-2	2247	545.74	-3.48	19.79
17	SLE RA 17	-57	-4	2240	544.48	-3.47	19.85
17	SLE RA 18	-59	-2	2347	568.32	-3.65	20.73
17	SLE RA 19	-60	-4	2340	567.06	-3.64	20.78
17	SLE RA 20	-59	-2	2347	568.32	-3.65	20.73
17	SLE RA 21	-60	-4	2340	567.06	-3.64	20.78
17	SLE FR 1	-51	-3	2014	493.05	-3.1	17.61
17	SLE FR 2	-51	-3	2011	492.63	-3.09	17.63
17	SLE FR 3	-51	-3	2014	493.05	-3.1	17.61
17	SLE FR 4	-53	-3	2111	515.21	-3.26	18.57
17	SLE FR 5	-53	-2	2114	515.63	-3.26	18.55
17	SLE FR 6	-55	-2	2180	530.68	-3.37	19.17
17	SLE QP 1	-51	-3	2014	493.05	-3.1	17.61
17	SLE QP 2	-53	-2	2114	515.63	-3.26	18.55
17	SLD 1	116	20	2237	517.71	-2.67	-40.62
17	SLD 2	158	19	2237	517.95	-2.68	-55.3
17	SLD 3	105	-52	2048	487.34	-2.32	-36.7
17	SLD 4	147	-53	2048	487.59	-2.33	-51.38
17	SLD 5	-1	114	2437	562.22	-3.6	0.09
17	SLD 6	42	113	2437	562.47	-3.61	-14.82
17	SLD 7	-38	-126	1808	461.01	-2.45	13.18
17	SLD 8	5	-127	1808	461.26	-2.46	-1.72
17	SLD 9	-111	123	2419	570.01	-4.06	38.82
17	SLD 10	-68	121	2420	570.26	-4.07	23.91
17	SLD 11	-149	-117	1790	468.8	-2.91	51.91
17	SLD 12	-106	-119	1791	469.05	-2.92	37.01
17	SLD 13	-253	48	2179	543.67	-4.19	88.47
17	SLD 14	-211	47	2180	543.92	-4.2	73.79
17	SLD 15	-264	-24	1990	513.31	-3.85	92.4
17	SLD 16	-222	-25	1991	513.56	-3.86	77.72
17	SLV 1	331	50	2394	520.58	-1.91	-116.08
17	SLV 2	427	46	2395	521.14	-1.93	-149.37
17	SLV 3	305	-115	1963	451.13	-1.12	-107.03
17	SLV 4	401	-118	1964	451.69	-1.15	-140.32
17	SLV 5	67	263	2850	622.24	-4.04	-23.67

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
17	SLV 6	164	260	2851	622.81	-4.07	-57.46
17	SLV 7	-19	-284	1415	390.75	-1.41	6.5
17	SLV 8	78	-287	1416	391.32	-1.44	-27.28
17	SLV 9	-184	282	2811	639.94	-5.08	64.37
17	SLV 10	-87	279	2812	640.51	-5.11	30.59
17	SLV 11	-271	-265	1376	408.45	-2.45	94.55
17	SLV 12	-174	-268	1377	409.02	-2.48	60.77
17	SLV 13	-507	113	2263	579.57	-5.38	177.41
17	SLV 14	-412	110	2264	580.13	-5.4	144.12
17	SLV 15	-533	-51	1833	510.12	-4.59	186.46
17	SLV 16	-438	-54	1834	510.68	-4.61	153.17
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
17	CRTFP Uy-	0	0	0	0	0	0
18	SLU 1	-48	-5	2028	554.3	-2.73	16.66
18	SLU 2	-48	-11	2009	550.49	-2.7	16.81
18	SLU 3	-48	-5	2028	554.3	-2.73	16.66
18	SLU 4	-48	-9	2017	552.02	-2.71	16.75
18	SLU 5	-48	-11	2009	550.49	-2.7	16.81
18	SLU 6	-48	-5	2028	554.3	-2.73	16.66
18	SLU 7	-48	-9	2017	552.02	-2.71	16.75
18	SLU 8	-48	-5	2028	554.3	-2.73	16.66
18	SLU 9	-48	-9	2017	552.02	-2.71	16.75
18	SLU 10	-58	-11	2376	646.11	-3.22	20.09
18	SLU 11	-57	-5	2395	649.93	-3.25	19.93
18	SLU 12	-58	-8	2383	647.64	-3.23	20.02
18	SLU 13	-58	-11	2376	646.11	-3.22	20.09
18	SLU 14	-57	-5	2395	649.93	-3.25	19.93
18	SLU 15	-58	-8	2383	647.64	-3.23	20.02
18	SLU 16	-57	-5	2395	649.93	-3.25	19.93
18	SLU 17	-58	-8	2383	647.64	-3.23	20.02
18	SLU 18	-61	-5	2552	690.91	-3.47	21.34
18	SLU 19	-62	-8	2541	688.62	-3.45	21.43
18	SLU 20	-61	-5	2552	690.91	-3.47	21.34
18	SLU 21	-62	-8	2541	688.62	-3.45	21.43
18	SLU 22	-55	-5	2300	626.01	-3.15	18.99
18	SLU 23	-55	-11	2282	622.19	-3.12	19.14
18	SLU 24	-55	-5	2300	626.01	-3.15	18.99
18	SLU 25	-55	-9	2289	623.72	-3.13	19.08
18	SLU 26	-55	-11	2282	622.19	-3.12	19.14
18	SLU 27	-55	-5	2300	626.01	-3.15	18.99
18	SLU 28	-55	-9	2289	623.72	-3.13	19.08
18	SLU 29	-55	-5	2300	626.01	-3.15	18.99
18	SLU 30	-55	-9	2289	623.72	-3.13	19.08
18	SLU 31	-64	-11	2648	717.82	-3.64	22.42
18	SLU 32	-64	-5	2667	721.63	-3.67	22.27
18	SLU 33	-64	-9	2656	719.34	-3.65	22.36
18	SLU 34	-64	-11	2648	717.82	-3.64	22.42
18	SLU 35	-64	-5	2667	721.63	-3.67	22.27
18	SLU 36	-64	-9	2656	719.34	-3.65	22.36
18	SLU 37	-64	-5	2667	721.63	-3.67	22.27
18	SLU 38	-64	-9	2656	719.34	-3.65	22.36
18	SLU 39	-68	-5	2824	762.61	-3.89	23.67
18	SLU 40	-68	-8	2813	760.32	-3.87	23.76
18	SLU 41	-68	-5	2824	762.61	-3.89	23.67
18	SLU 42	-68	-8	2813	760.32	-3.87	23.76
18	SLU 43	-60	-7	2543	696.01	-3.4	20.86
18	SLU 44	-60	-13	2524	692.2	-3.37	21.01
18	SLU 45	-60	-7	2543	696.01	-3.4	20.86
18	SLU 46	-60	-10	2532	693.72	-3.38	20.95
18	SLU 47	-60	-13	2524	692.2	-3.37	21.01
18	SLU 48	-60	-7	2543	696.01	-3.4	20.86
18	SLU 49	-60	-10	2532	693.72	-3.38	20.95
18	SLU 50	-60	-7	2543	696.01	-3.4	20.86
18	SLU 51	-60	-10	2532	693.72	-3.38	20.95
18	SLU 52	-70	-12	2891	787.82	-3.89	24.28
18	SLU 53	-69	-6	2910	791.63	-3.92	24.13
18	SLU 54	-70	-10	2898	789.35	-3.9	24.22
18	SLU 55	-70	-12	2891	787.82	-3.89	24.28
18	SLU 56	-69	-6	2910	791.63	-3.92	24.13
18	SLU 57	-70	-10	2898	789.35	-3.9	24.22
18	SLU 58	-69	-6	2910	791.63	-3.92	24.13
18	SLU 59	-70	-10	2898	789.35	-3.9	24.22
18	SLU 60	-73	-6	3067	832.62	-4.14	25.54
18	SLU 61	-74	-10	3055	830.33	-4.13	25.63
18	SLU 62	-73	-6	3067	832.62	-4.14	25.54
18	SLU 63	-74	-10	3055	830.33	-4.13	25.63
18	SLU 64	-67	-7	2815	767.71	-3.82	23.19
18	SLU 65	-67	-13	2797	763.9	-3.79	23.34
18	SLU 66	-67	-7	2815	767.71	-3.82	23.19
18	SLU 67	-67	-10	2804	765.43	-3.8	23.28
18	SLU 68	-67	-13	2797	763.9	-3.79	23.34
18	SLU 69	-67	-7	2815	767.71	-3.82	23.19
18	SLU 70	-67	-10	2804	765.43	-3.8	23.28
18	SLU 71	-67	-7	2815	767.71	-3.82	23.19
18	SLU 72	-67	-10	2804	765.43	-3.8	23.28

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18	SLU 73	-77	-12	3163	859.52	-4.31	26.62
18	SLU 74	-76	-6	3182	863.34	-4.34	26.47
18	SLU 75	-76	-10	3171	861.05	-4.32	26.56
18	SLU 76	-77	-12	3163	859.52	-4.31	26.62
18	SLU 77	-76	-6	3182	863.34	-4.34	26.47
18	SLU 78	-76	-10	3171	861.05	-4.32	26.56
18	SLU 79	-76	-6	3182	863.34	-4.34	26.47
18	SLU 80	-76	-10	3171	861.05	-4.32	26.56
18	SLU 81	-80	-6	3339	904.32	-4.56	27.87
18	SLU 82	-80	-10	3328	902.03	-4.55	27.96
18	SLU 83	-80	-6	3339	904.32	-4.56	27.87
18	SLU 84	-80	-10	3328	902.03	-4.55	27.96
18	SLE RA 1	-50	-5	2106	574.79	-2.85	17.33
18	SLE RA 2	-50	-9	2093	572.25	-2.83	17.43
18	SLE RA 3	-50	-5	2106	574.79	-2.85	17.33
18	SLE RA 4	-50	-8	2098	573.27	-2.84	17.39
18	SLE RA 5	-50	-9	2093	572.25	-2.83	17.43
18	SLE RA 6	-50	-5	2106	574.79	-2.85	17.33
18	SLE RA 7	-50	-8	2098	573.27	-2.84	17.39
18	SLE RA 8	-50	-5	2106	574.79	-2.85	17.33
18	SLE RA 9	-50	-8	2098	573.27	-2.84	17.39
18	SLE RA 10	-56	-9	2338	636	-3.17	19.61
18	SLE RA 11	-56	-5	2350	638.54	-3.19	19.51
18	SLE RA 12	-56	-7	2343	637.01	-3.18	19.57
18	SLE RA 13	-56	-9	2338	636	-3.17	19.61
18	SLE RA 14	-56	-5	2350	638.54	-3.19	19.51
18	SLE RA 15	-56	-7	2343	637.01	-3.18	19.57
18	SLE RA 16	-56	-5	2350	638.54	-3.19	19.51
18	SLE RA 17	-56	-7	2343	637.01	-3.18	19.57
18	SLE RA 18	-59	-5	2455	665.86	-3.34	20.44
18	SLE RA 19	-59	-7	2447	664.33	-3.33	20.51
18	SLE RA 20	-59	-5	2455	665.86	-3.34	20.44
18	SLE RA 21	-59	-7	2447	664.33	-3.33	20.51
18	SLE FR 1	-50	-5	2106	574.79	-2.85	17.33
18	SLE FR 2	-50	-6	2103	574.28	-2.84	17.35
18	SLE FR 3	-50	-5	2106	574.79	-2.85	17.33
18	SLE FR 4	-53	-6	2208	601.6	-2.99	18.28
18	SLE FR 5	-53	-5	2210	602.11	-2.99	18.26
18	SLE FR 6	-54	-5	2280	620.33	-3.09	18.89
18	SLE QP 1	-50	-5	2106	574.79	-2.85	17.33
18	SLE QP 2	-53	-5	2210	602.11	-2.99	18.26
18	SLD 1	116	17	2266	604.6	-2.39	-40.74
18	SLD 2	158	19	2267	604.86	-2.4	-55.39
18	SLD 3	105	-56	2068	565.84	-2.06	-36.78
18	SLD 4	147	-55	2068	566.11	-2.07	-51.43
18	SLD 5	0	112	2529	661.54	-3.31	-0.2
18	SLD 6	43	114	2530	661.81	-3.32	-15.07
18	SLD 7	-38	-132	1866	532.36	-2.21	12.99
18	SLD 8	5	-130	1866	532.62	-2.22	-1.88
18	SLD 9	-110	120	2555	671.6	-3.77	38.41
18	SLD 10	-67	122	2555	671.86	-3.78	23.54
18	SLD 11	-148	-124	1891	542.41	-2.67	51.6
18	SLD 12	-105	-122	1892	542.68	-2.68	36.73
18	SLD 13	-252	44	2353	638.12	-3.92	87.95
18	SLD 14	-210	46	2353	638.38	-3.93	73.31
18	SLD 15	-263	-29	2154	599.36	-3.59	91.91
18	SLD 16	-221	-27	2154	599.62	-3.6	77.27
18	SLV 1	331	45	2339	608.02	-1.63	-115.98
18	SLV 2	427	49	2340	608.61	-1.65	-149.2
18	SLV 3	305	-122	1885	519.53	-0.88	-106.87
18	SLV 4	400	-118	1887	520.12	-0.9	-140.08
18	SLV 5	68	262	2937	737.88	-3.71	-23.97
18	SLV 6	165	266	2938	738.48	-3.74	-57.68
18	SLV 7	-19	-294	1424	442.92	-1.21	6.42
18	SLV 8	78	-291	1426	443.52	-1.24	-27.28
18	SLV 9	-183	280	2995	760.7	-4.75	63.8
18	SLV 10	-86	284	2997	761.31	-4.78	30.1
18	SLV 11	-270	-276	1482	465.74	-2.25	94.2
18	SLV 12	-173	-272	1484	466.34	-2.28	60.5
18	SLV 13	-505	107	2534	684.1	-5.09	176.6
18	SLV 14	-410	111	2536	684.69	-5.11	143.39
18	SLV 15	-532	-59	2080	595.61	-4.34	185.72
18	SLV 16	-436	-55	2082	596.21	-4.36	152.51
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	-43	-8	1901	566.62	33.97	14.96
19	SLU 2	-43	-13	1884	562.61	33.66	15.2
19	SLU 3	-43	-8	1901	566.62	33.97	14.96
19	SLU 4	-43	-11	1891	564.21	33.78	15.1
19	SLU 5	-43	-13	1884	562.61	33.66	15.2
19	SLU 6	-43	-8	1901	566.62	33.97	14.96
19	SLU 7	-43	-11	1891	564.21	33.78	15.1
19	SLU 8	-43	-8	1901	566.62	33.97	14.96
19	SLU 9	-43	-11	1891	564.21	33.78	15.1
19	SLU 10	-52	-14	2228	662.66	39.82	18.18

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
19	SLU 11	-51	-8	2245	666.67	40.13	17.93
19	SLU 12	-51	-12	2235	664.27	39.94	18.08
19	SLU 13	-52	-14	2228	662.66	39.82	18.18
19	SLU 14	-51	-8	2245	666.67	40.13	17.93
19	SLU 15	-51	-12	2235	664.27	39.94	18.08
19	SLU 16	-51	-8	2245	666.67	40.13	17.93
19	SLU 17	-51	-12	2235	664.27	39.94	18.08
19	SLU 18	-55	-8	2393	709.56	42.77	19.2
19	SLU 19	-55	-12	2382	707.15	42.58	19.35
19	SLU 20	-55	-8	2393	709.56	42.77	19.2
19	SLU 21	-55	-12	2382	707.15	42.58	19.35
19	SLU 22	-49	-8	2158	641.51	38.54	17.06
19	SLU 23	-49	-14	2140	637.5	38.23	17.31
19	SLU 24	-49	-8	2158	641.51	38.54	17.06
19	SLU 25	-49	-12	2147	639.1	38.35	17.21
19	SLU 26	-49	-14	2140	637.5	38.23	17.31
19	SLU 27	-49	-8	2158	641.51	38.54	17.06
19	SLU 28	-49	-12	2147	639.1	38.35	17.21
19	SLU 29	-49	-8	2158	641.51	38.54	17.06
19	SLU 30	-49	-12	2147	639.1	38.35	17.21
19	SLU 31	-58	-14	2484	737.55	44.38	20.29
19	SLU 32	-57	-9	2502	741.57	44.69	20.04
19	SLU 33	-57	-12	2491	739.16	44.51	20.19
19	SLU 34	-58	-14	2484	737.55	44.38	20.29
19	SLU 35	-57	-9	2502	741.57	44.69	20.04
19	SLU 36	-57	-12	2491	739.16	44.51	20.19
19	SLU 37	-57	-9	2502	741.57	44.69	20.04
19	SLU 38	-57	-12	2491	739.16	44.51	20.19
19	SLU 39	-61	-9	2649	784.45	47.33	21.31
19	SLU 40	-61	-12	2639	782.04	47.15	21.46
19	SLU 41	-61	-9	2649	784.45	47.33	21.31
19	SLU 42	-61	-12	2639	782.04	47.15	21.46
19	SLU 43	-53	-10	2384	710.92	42.6	18.72
19	SLU 44	-54	-15	2366	706.91	42.28	18.97
19	SLU 45	-53	-10	2384	710.92	42.6	18.72
19	SLU 46	-54	-13	2373	708.52	42.41	18.87
19	SLU 47	-54	-15	2366	706.91	42.28	18.97
19	SLU 48	-53	-10	2384	710.92	42.6	18.72
19	SLU 49	-54	-13	2373	708.52	42.41	18.87
19	SLU 50	-53	-10	2384	710.92	42.6	18.72
19	SLU 51	-54	-13	2373	708.52	42.41	18.87
19	SLU 52	-62	-16	2710	806.97	48.44	21.94
19	SLU 53	-62	-10	2728	810.98	48.75	21.69
19	SLU 54	-62	-14	2717	808.57	48.57	21.84
19	SLU 55	-62	-16	2710	806.97	48.44	21.94
19	SLU 56	-62	-10	2728	810.98	48.75	21.69
19	SLU 57	-62	-14	2717	808.57	48.57	21.84
19	SLU 58	-62	-10	2728	810.98	48.75	21.69
19	SLU 59	-62	-14	2717	808.57	48.57	21.84
19	SLU 60	-66	-10	2875	853.86	51.39	22.97
19	SLU 61	-66	-14	2865	851.46	51.21	23.12
19	SLU 62	-66	-10	2875	853.86	51.39	22.97
19	SLU 63	-66	-14	2865	851.46	51.21	23.12
19	SLU 64	-59	-11	2640	785.82	47.16	20.83
19	SLU 65	-60	-16	2623	781.81	46.85	21.08
19	SLU 66	-59	-11	2640	785.82	47.16	20.83
19	SLU 67	-60	-14	2630	783.41	46.97	20.98
19	SLU 68	-60	-16	2623	781.81	46.85	21.08
19	SLU 69	-59	-11	2640	785.82	47.16	20.83
19	SLU 70	-60	-14	2630	783.41	46.97	20.98
19	SLU 71	-59	-11	2640	785.82	47.16	20.83
19	SLU 72	-60	-14	2630	783.41	46.97	20.98
19	SLU 73	-68	-16	2967	881.86	53.01	24.05
19	SLU 74	-68	-11	2984	885.87	53.32	23.8
19	SLU 75	-68	-14	2974	883.47	53.13	23.95
19	SLU 76	-68	-16	2967	881.86	53.01	24.05
19	SLU 77	-68	-11	2984	885.87	53.32	23.8
19	SLU 78	-68	-14	2974	883.47	53.13	23.95
19	SLU 79	-68	-11	2984	885.87	53.32	23.8
19	SLU 80	-68	-14	2974	883.47	53.13	23.95
19	SLU 81	-72	-11	3132	928.75	55.96	25.08
19	SLU 82	-72	-14	3121	926.35	55.77	25.22
19	SLU 83	-72	-11	3132	928.75	55.96	25.08
19	SLU 84	-72	-14	3121	926.35	55.77	25.22
19	SLE RA 1	-44	-8	1975	588.01	35.27	15.56
19	SLE RA 2	-45	-12	1963	585.34	35.07	15.72
19	SLE RA 3	-44	-8	1975	588.01	35.27	15.56
19	SLE RA 4	-44	-10	1968	586.41	35.15	15.66
19	SLE RA 5	-45	-12	1963	585.34	35.07	15.72
19	SLE RA 6	-44	-8	1975	588.01	35.27	15.56
19	SLE RA 7	-44	-10	1968	586.41	35.15	15.66
19	SLE RA 8	-44	-8	1975	588.01	35.27	15.56
19	SLE RA 9	-44	-10	1968	586.41	35.15	15.66
19	SLE RA 10	-50	-12	2192	652.04	39.17	17.71
19	SLE RA 11	-50	-8	2204	654.72	39.38	17.54
19	SLE RA 12	-50	-10	2197	653.11	39.26	17.64
19	SLE RA 13	-50	-12	2192	652.04	39.17	17.71

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
19	SLE RA 14	-50	-8	2204	654.72	39.38	17.54
19	SLE RA 15	-50	-10	2197	653.11	39.26	17.64
19	SLE RA 16	-50	-8	2204	654.72	39.38	17.54
19	SLE RA 17	-50	-10	2197	653.11	39.26	17.64
19	SLE RA 18	-52	-8	2302	683.31	41.14	18.39
19	SLE RA 19	-53	-11	2295	681.7	41.01	18.49
19	SLE RA 20	-52	-8	2302	683.31	41.14	18.39
19	SLE RA 21	-53	-11	2295	681.7	41.01	18.49
19	SLE FR 1	-44	-8	1975	588.01	35.27	15.56
19	SLE FR 2	-44	-9	1972	587.48	35.23	15.59
19	SLE FR 3	-44	-8	1975	588.01	35.27	15.56
19	SLE FR 4	-47	-9	2071	616.07	36.99	16.44
19	SLE FR 5	-47	-8	2073	616.6	37.03	16.41
19	SLE FR 6	-48	-8	2138	635.66	38.21	16.97
19	SLE QP 1	-44	-8	1975	588.01	35.27	15.56
19	SLE QP 2	-47	-8	2073	616.6	37.03	16.41
19	SLD 1	106	12	2110	619	38.09	-37.23
19	SLD 2	144	16	2111	619.24	38.1	-50.58
19	SLD 3	95	-56	1922	576.92	34.77	-32.76
19	SLD 4	133	-52	1923	577.16	34.78	-46.11
19	SLD 5	1	99	2369	681.06	42.39	-1.69
19	SLD 6	40	104	2370	681.3	42.4	-15.24
19	SLD 7	-34	-127	1742	540.79	31.31	13.21
19	SLD 8	5	-123	1743	541.04	31.32	-0.34
19	SLD 9	-99	107	2403	692.17	42.74	33.15
19	SLD 10	-60	111	2404	692.41	42.75	19.6
19	SLD 11	-133	-120	1776	551.91	31.67	48.06
19	SLD 12	-95	-116	1777	552.15	31.68	34.51
19	SLD 13	-227	36	2222	656.04	39.29	78.92
19	SLD 14	-189	40	2223	656.28	39.3	65.57
19	SLD 15	-237	-32	2034	613.97	35.96	83.39
19	SLD 16	-199	-28	2035	614.2	35.97	70.05
19	SLV 1	300	37	2159	622.31	39.46	-105.64
19	SLV 2	387	47	2161	622.85	39.48	-135.91
19	SLV 3	276	-118	1730	526.3	31.88	-95.35
19	SLV 4	363	-108	1732	526.84	31.9	-125.62
19	SLV 5	63	237	2748	763.73	49.24	-24.99
19	SLV 6	151	247	2751	764.27	49.27	-55.7
19	SLV 7	-17	-280	1319	443.71	23.99	9.29
19	SLV 8	70	-270	1321	444.26	24.01	-21.42
19	SLV 9	-164	253	2825	788.94	50.06	54.24
19	SLV 10	-76	264	2827	789.49	50.08	23.52
19	SLV 11	-244	-263	1395	468.93	24.8	88.52
19	SLV 12	-156	-253	1397	469.48	24.82	57.8
19	SLV 13	-456	92	2413	706.36	42.17	158.44
19	SLV 14	-370	102	2415	706.9	42.19	128.17
19	SLV 15	-480	-63	1984	610.36	34.59	168.72
19	SLV 16	-394	-53	1987	610.9	34.61	138.45
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
21	SLU 1	-109	-30	5068	1159.73	-7.58	25.47
21	SLU 2	-111	-45	5018	1150.29	-7.46	25.72
21	SLU 3	-109	-30	5068	1159.73	-7.58	25.47
21	SLU 4	-110	-39	5038	1154.06	-7.51	25.62
21	SLU 5	-111	-45	5018	1150.29	-7.46	25.72
21	SLU 6	-109	-30	5068	1159.73	-7.58	25.47
21	SLU 7	-110	-39	5038	1154.06	-7.51	25.62
21	SLU 8	-109	-30	5068	1159.73	-7.58	25.47
21	SLU 9	-110	-39	5038	1154.06	-7.51	25.62
21	SLU 10	-133	-48	5933	1358.43	-7.6	30.91
21	SLU 11	-132	-33	5982	1367.87	-7.73	30.66
21	SLU 12	-133	-42	5953	1362.21	-7.65	30.81
21	SLU 13	-133	-48	5933	1358.43	-7.6	30.91
21	SLU 14	-132	-33	5982	1367.87	-7.73	30.66
21	SLU 15	-133	-42	5953	1362.21	-7.65	30.81
21	SLU 16	-132	-33	5982	1367.87	-7.73	30.66
21	SLU 17	-133	-42	5953	1362.21	-7.65	30.81
21	SLU 18	-141	-35	6374	1457.08	-7.79	32.88
21	SLU 19	-142	-44	6344	1451.41	-7.72	33.03
21	SLU 20	-141	-35	6374	1457.08	-7.79	32.88
21	SLU 21	-142	-44	6344	1451.41	-7.72	33.03
21	SLU 22	-125	-33	5752	1315.31	-8.13	29.12
21	SLU 23	-126	-48	5702	1305.87	-8.01	29.37
21	SLU 24	-125	-33	5752	1315.31	-8.13	29.12
21	SLU 25	-126	-42	5722	1309.64	-8.06	29.27
21	SLU 26	-126	-48	5702	1305.87	-8.01	29.37
21	SLU 27	-125	-33	5752	1315.31	-8.13	29.12
21	SLU 28	-126	-42	5722	1309.64	-8.06	29.27
21	SLU 29	-125	-33	5752	1315.31	-8.13	29.12
21	SLU 30	-126	-42	5722	1309.64	-8.06	29.27
21	SLU 31	-149	-51	6617	1514.01	-8.15	34.55
21	SLU 32	-147	-36	6666	1523.45	-8.28	34.3
21	SLU 33	-148	-45	6636	1517.79	-8.2	34.45
21	SLU 34	-149	-51	6617	1514.01	-8.15	34.55
21	SLU 35	-147	-36	6666	1523.45	-8.28	34.3

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
21	SLU 36	-148	-45	6636	1517.79	-8.2	34.45
21	SLU 37	-147	-36	6666	1523.45	-8.28	34.3
21	SLU 38	-148	-45	6636	1517.79	-8.2	34.45
21	SLU 39	-157	-38	7058	1612.66	-8.34	36.53
21	SLU 40	-158	-47	7028	1606.99	-8.27	36.67
21	SLU 41	-157	-38	7058	1612.66	-8.34	36.53
21	SLU 42	-158	-47	7028	1606.99	-8.27	36.67
21	SLU 43	-137	-38	6353	1454.31	-9.67	31.87
21	SLU 44	-138	-53	6304	1444.87	-9.54	32.12
21	SLU 45	-137	-38	6353	1454.31	-9.67	31.87
21	SLU 46	-138	-47	6324	1448.64	-9.59	32.02
21	SLU 47	-138	-53	6304	1444.87	-9.54	32.12
21	SLU 48	-137	-38	6353	1454.31	-9.67	31.87
21	SLU 49	-138	-47	6324	1448.64	-9.59	32.02
21	SLU 50	-137	-38	6353	1454.31	-9.67	31.87
21	SLU 51	-138	-47	6324	1448.64	-9.59	32.02
21	SLU 52	-161	-56	7219	1653.01	-9.69	37.3
21	SLU 53	-159	-41	7268	1662.45	-9.82	37.05
21	SLU 54	-160	-50	7238	1656.79	-9.74	37.2
21	SLU 55	-161	-56	7219	1653.01	-9.69	37.3
21	SLU 56	-159	-41	7268	1662.45	-9.82	37.05
21	SLU 57	-160	-50	7238	1656.79	-9.74	37.2
21	SLU 58	-159	-41	7268	1662.45	-9.82	37.05
21	SLU 59	-160	-50	7238	1656.79	-9.74	37.2
21	SLU 60	-169	-43	7660	1751.66	-9.88	39.27
21	SLU 61	-170	-52	7630	1745.99	-9.8	39.42
21	SLU 62	-169	-43	7660	1751.66	-9.88	39.27
21	SLU 63	-170	-52	7630	1745.99	-9.8	39.42
21	SLU 64	-153	-41	7037	1609.89	-10.22	35.51
21	SLU 65	-154	-56	6988	1600.44	-10.09	35.76
21	SLU 66	-153	-41	7037	1609.89	-10.22	35.51
21	SLU 67	-153	-50	7008	1604.22	-10.14	35.66
21	SLU 68	-154	-56	6988	1600.44	-10.09	35.76
21	SLU 69	-153	-41	7037	1609.89	-10.22	35.51
21	SLU 70	-153	-50	7008	1604.22	-10.14	35.66
21	SLU 71	-153	-41	7037	1609.89	-10.22	35.51
21	SLU 72	-153	-50	7008	1604.22	-10.14	35.66
21	SLU 73	-176	-59	7903	1808.59	-10.24	40.94
21	SLU 74	-175	-44	7952	1818.03	-10.37	40.7
21	SLU 75	-176	-53	7922	1812.36	-10.29	40.85
21	SLU 76	-176	-59	7903	1808.59	-10.24	40.94
21	SLU 77	-175	-44	7952	1818.03	-10.37	40.7
21	SLU 78	-176	-53	7922	1812.36	-10.29	40.85
21	SLU 79	-175	-44	7952	1818.03	-10.37	40.7
21	SLU 80	-176	-53	7922	1812.36	-10.29	40.85
21	SLU 81	-184	-46	8344	1907.23	-10.43	42.92
21	SLU 82	-185	-55	8314	1901.57	-10.35	43.07
21	SLU 83	-184	-46	8344	1907.23	-10.43	42.92
21	SLU 84	-185	-55	8314	1901.57	-10.35	43.07
21	SLE RA 1	-114	-31	5263	1204.18	-7.74	26.52
21	SLE RA 2	-115	-41	5230	1197.89	-7.66	26.68
21	SLE RA 3	-114	-31	5263	1204.18	-7.74	26.52
21	SLE RA 4	-114	-37	5243	1200.4	-7.69	26.61
21	SLE RA 5	-115	-41	5230	1197.89	-7.66	26.68
21	SLE RA 6	-114	-31	5263	1204.18	-7.74	26.52
21	SLE RA 7	-114	-37	5243	1200.4	-7.69	26.61
21	SLE RA 8	-114	-31	5263	1204.18	-7.74	26.52
21	SLE RA 9	-114	-37	5243	1200.4	-7.69	26.61
21	SLE RA 10	-130	-43	5840	1336.65	-7.75	30.14
21	SLE RA 11	-129	-33	5873	1342.94	-7.84	29.97
21	SLE RA 12	-129	-39	5853	1339.17	-7.79	30.07
21	SLE RA 13	-130	-43	5840	1336.65	-7.75	30.14
21	SLE RA 14	-129	-33	5873	1342.94	-7.84	29.97
21	SLE RA 15	-129	-39	5853	1339.17	-7.79	30.07
21	SLE RA 16	-129	-33	5873	1342.94	-7.84	29.97
21	SLE RA 17	-129	-39	5853	1339.17	-7.79	30.07
21	SLE RA 18	-135	-34	6134	1402.41	-7.88	31.45
21	SLE RA 19	-136	-40	6114	1398.64	-7.83	31.55
21	SLE RA 20	-135	-34	6134	1402.41	-7.88	31.45
21	SLE RA 21	-136	-40	6114	1398.64	-7.83	31.55
21	SLE FR 1	-114	-31	5263	1204.18	-7.74	26.52
21	SLE FR 2	-114	-33	5257	1202.92	-7.72	26.55
21	SLE FR 3	-114	-31	5263	1204.18	-7.74	26.52
21	SLE FR 4	-120	-34	5518	1262.39	-7.76	28.03
21	SLE FR 5	-120	-32	5524	1263.65	-7.78	28
21	SLE FR 6	-125	-32	5699	1303.3	-7.81	28.98
21	SLE QP 1	-114	-31	5263	1204.18	-7.74	26.52
21	SLE QP 2	-120	-32	5524	1263.65	-7.78	28
21	SLD 1	272	79	5585	1270.72	3.12	-67.58
21	SLD 2	373	99	5589	1271.31	2.95	-90.93
21	SLD 3	244	-102	5056	1169.54	4.61	-61.16
21	SLD 4	345	-82	5059	1170.12	4.44	-84.51
21	SLD 5	4	268	6344	1419.03	-6.72	-2.07
21	SLD 6	106	289	6348	1419.62	-6.89	-25.78
21	SLD 7	-90	-334	4580	1081.74	-1.73	19.34
21	SLD 8	12	-313	4583	1082.34	-1.9	-4.36
21	SLD 9	-253	250	6465	1444.97	-13.66	60.36

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
21	SLD 10	-151	271	6469	1445.56	-13.83	36.65
21	SLD 11	-347	-353	4701	1107.68	-8.67	81.77
21	SLD 12	-245	-332	4705	1108.27	-8.84	58.06
21	SLD 13	-585	18	5989	1357.18	-20.01	140.5
21	SLD 14	-485	38	5993	1357.76	-20.18	117.15
21	SLD 15	-613	-163	5460	1255.99	-18.51	146.93
21	SLD 16	-513	-142	5464	1256.58	-18.68	123.58
21	SLV 1	773	220	5665	1280.3	16.97	-189.47
21	SLV 2	1001	267	5673	1281.63	16.59	-242.42
21	SLV 3	708	-192	4458	1049.54	20.39	-174.67
21	SLV 4	936	-145	4466	1050.87	20	-227.62
21	SLV 5	165	652	7394	1618.16	-5.39	-40.76
21	SLV 6	396	699	7403	1619.51	-5.79	-94.5
21	SLV 7	-52	-721	3371	848.95	5.98	8.57
21	SLV 8	179	-674	3379	850.3	5.59	-45.17
21	SLV 9	-420	610	7670	1677	-21.16	101.16
21	SLV 10	-189	658	7678	1678.35	-21.55	47.43
21	SLV 11	-637	-763	3646	907.79	-9.78	150.49
21	SLV 12	-406	-715	3654	909.14	-10.17	96.76
21	SLV 13	-1176	82	6582	1476.43	-35.57	283.61
21	SLV 14	-949	128	6591	1477.76	-35.95	230.66
21	SLV 15	-1241	-330	5375	1245.67	-32.15	298.41
21	SLV 16	-1014	-284	5384	1247	-32.54	245.46
21	CRTFP Ux+	0	0	0	0	0	0
21	CRTFP Ux-	0	0	0	0	0	0
21	CRTFP Uy+	0	0	0	-0.01	0	0
21	CRTFP Uy-	0	0	0	0.01	0	0
23	SLU 1	-41	-14	1946	596.4	-35.51	14.08
23	SLU 2	-42	-20	1928	592.08	-35.17	14.12
23	SLU 3	-41	-14	1946	596.4	-35.51	14.08
23	SLU 4	-41	-18	1935	593.81	-35.3	14.1
23	SLU 5	-42	-20	1928	592.08	-35.17	14.12
23	SLU 6	-41	-14	1946	596.4	-35.51	14.08
23	SLU 7	-41	-18	1935	593.81	-35.3	14.1
23	SLU 8	-41	-14	1946	596.4	-35.51	14.08
23	SLU 9	-41	-18	1935	593.81	-35.3	14.1
23	SLU 10	-50	-22	2275	697.77	-41.4	17.06
23	SLU 11	-50	-16	2293	702.09	-41.74	17.01
23	SLU 12	-50	-20	2282	699.49	-41.53	17.04
23	SLU 13	-50	-22	2275	697.77	-41.4	17.06
23	SLU 14	-50	-16	2293	702.09	-41.74	17.01
23	SLU 15	-50	-20	2282	699.49	-41.53	17.04
23	SLU 16	-50	-16	2293	702.09	-41.74	17.01
23	SLU 17	-50	-20	2282	699.49	-41.53	17.04
23	SLU 18	-53	-17	2442	747.38	-44.41	18.27
23	SLU 19	-53	-21	2431	744.79	-44.2	18.3
23	SLU 20	-53	-17	2442	747.38	-44.41	18.27
23	SLU 21	-53	-21	2431	744.79	-44.2	18.3
23	SLU 22	-47	-16	2206	675.58	-40.2	16.13
23	SLU 23	-47	-22	2188	671.26	-39.86	16.17
23	SLU 24	-47	-16	2206	675.58	-40.2	16.13
23	SLU 25	-47	-20	2195	672.99	-40	16.15
23	SLU 26	-47	-22	2188	671.26	-39.86	16.17
23	SLU 27	-47	-16	2206	675.58	-40.2	16.13
23	SLU 28	-47	-20	2195	672.99	-40	16.15
23	SLU 29	-47	-16	2206	675.58	-40.2	16.13
23	SLU 30	-47	-20	2195	672.99	-40	16.15
23	SLU 31	-56	-24	2536	776.95	-46.09	19.11
23	SLU 32	-56	-18	2554	781.27	-46.43	19.06
23	SLU 33	-56	-21	2543	778.68	-46.23	19.09
23	SLU 34	-56	-24	2536	776.95	-46.09	19.11
23	SLU 35	-56	-18	2554	781.27	-46.43	19.06
23	SLU 36	-56	-21	2543	778.68	-46.23	19.09
23	SLU 37	-56	-18	2554	781.27	-46.43	19.06
23	SLU 38	-56	-21	2543	778.68	-46.23	19.09
23	SLU 39	-59	-19	2703	826.57	-49.1	20.32
23	SLU 40	-59	-22	2692	823.97	-48.9	20.35
23	SLU 41	-59	-19	2703	826.57	-49.1	20.32
23	SLU 42	-59	-22	2692	823.97	-48.9	20.35
23	SLU 43	-51	-18	2440	748.17	-44.55	17.59
23	SLU 44	-52	-24	2422	743.85	-44.21	17.64
23	SLU 45	-51	-18	2440	748.17	-44.55	17.59
23	SLU 46	-52	-22	2429	745.58	-44.35	17.62
23	SLU 47	-52	-24	2422	743.85	-44.21	17.64
23	SLU 48	-51	-18	2440	748.17	-44.55	17.59
23	SLU 49	-52	-22	2429	745.58	-44.35	17.62
23	SLU 50	-51	-18	2440	748.17	-44.55	17.59
23	SLU 51	-52	-22	2429	745.58	-44.35	17.62
23	SLU 52	-60	-26	2769	849.54	-50.44	20.58
23	SLU 53	-60	-20	2788	853.86	-50.78	20.53
23	SLU 54	-60	-24	2777	851.26	-50.58	20.56
23	SLU 55	-60	-26	2769	849.54	-50.44	20.58
23	SLU 56	-60	-20	2788	853.86	-50.78	20.53
23	SLU 57	-60	-24	2777	851.26	-50.58	20.56
23	SLU 58	-60	-20	2788	853.86	-50.78	20.53
23	SLU 59	-60	-24	2777	851.26	-50.58	20.56
23	SLU 60	-63	-21	2937	899.15	-53.45	21.79

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
23	SLU 61	-64	-24	2926	896.56	-53.25	21.82
23	SLU 62	-63	-21	2937	899.15	-53.45	21.79
23	SLU 63	-64	-24	2926	896.56	-53.25	21.82
23	SLU 64	-57	-20	2701	827.36	-49.24	19.64
23	SLU 65	-58	-26	2683	823.03	-48.91	19.69
23	SLU 66	-57	-20	2701	827.36	-49.24	19.64
23	SLU 67	-58	-23	2690	824.76	-49.04	19.67
23	SLU 68	-58	-26	2683	823.03	-48.91	19.69
23	SLU 69	-57	-20	2701	827.36	-49.24	19.64
23	SLU 70	-58	-23	2690	824.76	-49.04	19.67
23	SLU 71	-57	-20	2701	827.36	-49.24	19.64
23	SLU 72	-58	-23	2690	824.76	-49.04	19.67
23	SLU 73	-66	-28	3030	928.72	-55.14	22.63
23	SLU 74	-66	-22	3048	933.04	-55.47	22.58
23	SLU 75	-66	-25	3037	930.45	-55.27	22.61
23	SLU 76	-66	-28	3030	928.72	-55.14	22.63
23	SLU 77	-66	-22	3048	933.04	-55.47	22.58
23	SLU 78	-66	-25	3037	930.45	-55.27	22.61
23	SLU 79	-66	-22	3048	933.04	-55.47	22.58
23	SLU 80	-66	-25	3037	930.45	-55.27	22.61
23	SLU 81	-69	-22	3197	978.34	-58.14	23.84
23	SLU 82	-70	-26	3186	975.74	-57.94	23.87
23	SLU 83	-69	-22	3197	978.34	-58.14	23.84
23	SLU 84	-70	-26	3186	975.74	-57.94	23.87
23	SLE RA 1	-43	-15	2020	619.02	-36.85	14.66
23	SLE RA 2	-43	-19	2008	616.14	-36.62	14.69
23	SLE RA 3	-43	-15	2020	619.02	-36.85	14.66
23	SLE RA 4	-43	-17	2013	617.3	-36.71	14.68
23	SLE RA 5	-43	-19	2008	616.14	-36.62	14.69
23	SLE RA 6	-43	-15	2020	619.02	-36.85	14.66
23	SLE RA 7	-43	-17	2013	617.3	-36.71	14.68
23	SLE RA 8	-43	-15	2020	619.02	-36.85	14.66
23	SLE RA 9	-43	-17	2013	617.3	-36.71	14.68
23	SLE RA 10	-49	-20	2240	686.6	-40.78	16.65
23	SLE RA 11	-48	-16	2252	689.48	-41	16.62
23	SLE RA 12	-49	-18	2245	687.75	-40.87	16.64
23	SLE RA 13	-49	-20	2240	686.6	-40.78	16.65
23	SLE RA 14	-48	-16	2252	689.48	-41	16.62
23	SLE RA 15	-49	-18	2245	687.75	-40.87	16.64
23	SLE RA 16	-48	-16	2252	689.48	-41	16.62
23	SLE RA 17	-49	-18	2245	687.75	-40.87	16.64
23	SLE RA 18	-51	-17	2351	719.68	-42.78	17.46
23	SLE RA 19	-51	-19	2344	717.95	-42.65	17.48
23	SLE RA 20	-51	-17	2351	719.68	-42.78	17.46
23	SLE RA 21	-51	-19	2344	717.95	-42.65	17.48
23	SLE FR 1	-43	-15	2020	619.02	-36.85	14.66
23	SLE FR 2	-43	-16	2018	618.45	-36.8	14.67
23	SLE FR 3	-43	-15	2020	619.02	-36.85	14.66
23	SLE FR 4	-45	-16	2117	648.64	-38.58	15.51
23	SLE FR 5	-45	-15	2120	649.22	-38.63	15.5
23	SLE FR 6	-47	-16	2186	669.35	-39.81	16.06
23	SLE QP 1	-43	-15	2020	619.02	-36.85	14.66
23	SLE QP 2	-45	-15	2120	649.22	-38.63	15.5
23	SLD 1	108	28	2119	649	-38.05	-37.99
23	SLD 2	147	40	2121	649.26	-38.09	-51.13
23	SLD 3	97	-46	1924	602.74	-34.45	-34.89
23	SLD 4	136	-34	1926	603	-34.49	-48.03
23	SLD 5	3	105	2415	719.23	-43.89	-0.55
23	SLD 6	42	117	2416	719.49	-43.93	-13.89
23	SLD 7	-32	-140	1765	565.01	-31.91	9.79
23	SLD 8	7	-128	1766	565.28	-31.95	-3.55
23	SLD 9	-97	98	2473	733.16	-45.31	34.55
23	SLD 10	-58	110	2474	733.42	-45.35	21.21
23	SLD 11	-133	-148	1823	578.95	-33.32	44.89
23	SLD 12	-94	-136	1824	579.21	-33.36	31.56
23	SLD 13	-226	3	2313	695.44	-42.76	79.03
23	SLD 14	-188	15	2315	695.7	-42.8	65.89
23	SLD 15	-237	-70	2118	649.18	-39.17	82.13
23	SLD 16	-199	-59	2120	649.44	-39.21	68.99
23	SLV 1	304	84	2120	649	-37.33	-106.2
23	SLV 2	391	110	2124	649.59	-37.42	-135.99
23	SLV 3	279	-84	1676	543.51	-29.14	-99.04
23	SLV 4	366	-58	1679	544.1	-29.22	-128.84
23	SLV 5	66	260	2793	808.93	-50.64	-21.21
23	SLV 6	155	287	2796	809.53	-50.73	-51.44
23	SLV 7	-17	-300	1311	457.31	-23.31	2.63
23	SLV 8	72	-273	1314	457.9	-23.4	-27.6
23	SLV 9	-162	243	2925	840.54	-53.85	58.6
23	SLV 10	-74	270	2928	841.13	-53.94	28.37
23	SLV 11	-245	-317	1443	488.91	-26.52	82.44
23	SLV 12	-156	-290	1446	489.51	-26.61	52.21
23	SLV 13	-457	27	2560	754.34	-48.03	159.84
23	SLV 14	-369	54	2563	754.93	-48.12	130.05
23	SLV 15	-481	-141	2115	648.85	-39.83	166.99
23	SLV 16	-394	-114	2119	649.44	-39.92	137.2
23	CRTFP Ux+	0	0	0	0	0	0
23	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
23	CRTFP Uy+	0	0	0	0	0	0
23	CRTFP Uy-	0	0	0	0	0	0
24	SLU 1	-45	-16	2105	613.45	1.61	15.63
24	SLU 2	-45	-23	2085	608.99	1.61	15.8
24	SLU 3	-45	-16	2105	613.45	1.61	15.63
24	SLU 4	-45	-20	2093	610.78	1.61	15.73
24	SLU 5	-45	-23	2085	608.99	1.61	15.8
24	SLU 6	-45	-16	2105	613.45	1.61	15.63
24	SLU 7	-45	-20	2093	610.78	1.61	15.73
24	SLU 8	-45	-16	2105	613.45	1.61	15.63
24	SLU 9	-45	-20	2093	610.78	1.61	15.73
24	SLU 10	-54	-25	2456	715.92	2.09	19.09
24	SLU 11	-54	-18	2476	720.39	2.09	18.92
24	SLU 12	-54	-22	2464	717.71	2.09	19.02
24	SLU 13	-54	-25	2456	715.92	2.09	19.09
24	SLU 14	-54	-18	2476	720.39	2.09	18.92
24	SLU 15	-54	-22	2464	717.71	2.09	19.02
24	SLU 16	-54	-18	2476	720.39	2.09	18.92
24	SLU 17	-54	-22	2464	717.71	2.09	19.02
24	SLU 18	-58	-19	2635	766.21	2.3	20.33
24	SLU 19	-58	-23	2623	763.54	2.3	20.43
24	SLU 20	-58	-19	2635	766.21	2.3	20.33
24	SLU 21	-58	-23	2623	763.54	2.3	20.43
24	SLU 22	-51	-17	2384	693.8	1.94	17.92
24	SLU 23	-52	-24	2364	689.33	1.94	18.09
24	SLU 24	-51	-17	2384	693.8	1.94	17.92
24	SLU 25	-51	-22	2372	691.12	1.94	18.02
24	SLU 26	-52	-24	2364	689.33	1.94	18.09
24	SLU 27	-51	-17	2384	693.8	1.94	17.92
24	SLU 28	-51	-22	2372	691.12	1.94	18.02
24	SLU 29	-51	-17	2384	693.8	1.94	17.92
24	SLU 30	-51	-22	2372	691.12	1.94	18.02
24	SLU 31	-61	-27	2735	796.26	2.42	21.38
24	SLU 32	-60	-19	2755	800.73	2.42	21.21
24	SLU 33	-61	-24	2743	798.05	2.42	21.31
24	SLU 34	-61	-27	2735	796.26	2.42	21.38
24	SLU 35	-60	-19	2755	800.73	2.42	21.21
24	SLU 36	-61	-24	2743	798.05	2.42	21.31
24	SLU 37	-60	-19	2755	800.73	2.42	21.21
24	SLU 38	-61	-24	2743	798.05	2.42	21.31
24	SLU 39	-64	-20	2914	846.56	2.63	22.62
24	SLU 40	-65	-25	2902	843.88	2.63	22.72
24	SLU 41	-64	-20	2914	846.56	2.63	22.62
24	SLU 42	-65	-25	2902	843.88	2.63	22.72
24	SLU 43	-56	-20	2641	769.95	1.98	19.53
24	SLU 44	-56	-27	2621	765.48	1.98	19.7
24	SLU 45	-56	-20	2641	769.95	1.98	19.53
24	SLU 46	-56	-24	2629	767.27	1.98	19.63
24	SLU 47	-56	-27	2621	765.48	1.98	19.7
24	SLU 48	-56	-20	2641	769.95	1.98	19.53
24	SLU 49	-56	-24	2629	767.27	1.98	19.63
24	SLU 50	-56	-20	2641	769.95	1.98	19.53
24	SLU 51	-56	-24	2629	767.27	1.98	19.63
24	SLU 52	-66	-29	2992	872.41	2.46	22.99
24	SLU 53	-65	-22	3012	876.88	2.46	22.82
24	SLU 54	-65	-26	3000	874.2	2.46	22.92
24	SLU 55	-66	-29	2992	872.41	2.46	22.99
24	SLU 56	-65	-22	3012	876.88	2.46	22.82
24	SLU 57	-65	-26	3000	874.2	2.46	22.92
24	SLU 58	-65	-22	3012	876.88	2.46	22.82
24	SLU 59	-65	-26	3000	874.2	2.46	22.92
24	SLU 60	-69	-23	3171	922.71	2.67	24.23
24	SLU 61	-69	-27	3159	920.03	2.67	24.33
24	SLU 62	-69	-23	3171	922.71	2.67	24.23
24	SLU 63	-69	-27	3159	920.03	2.67	24.33
24	SLU 64	-62	-21	2920	850.29	2.31	21.82
24	SLU 65	-63	-29	2900	845.82	2.31	21.99
24	SLU 66	-62	-21	2920	850.29	2.31	21.82
24	SLU 67	-63	-26	2908	847.61	2.31	21.92
24	SLU 68	-63	-29	2900	845.82	2.31	21.99
24	SLU 69	-62	-21	2920	850.29	2.31	21.82
24	SLU 70	-63	-26	2908	847.61	2.31	21.92
24	SLU 71	-62	-21	2920	850.29	2.31	21.82
24	SLU 72	-63	-26	2908	847.61	2.31	21.92
24	SLU 73	-72	-31	3271	952.75	2.79	25.28
24	SLU 74	-72	-24	3291	957.22	2.79	25.11
24	SLU 75	-72	-28	3279	954.54	2.79	25.22
24	SLU 76	-72	-31	3271	952.75	2.79	25.28
24	SLU 77	-72	-24	3291	957.22	2.79	25.11
24	SLU 78	-72	-28	3279	954.54	2.79	25.22
24	SLU 79	-72	-24	3291	957.22	2.79	25.11
24	SLU 80	-72	-28	3279	954.54	2.79	25.22
24	SLU 81	-76	-24	3450	1003.05	3	26.52
24	SLU 82	-76	-29	3438	1000.37	3	26.63
24	SLU 83	-76	-24	3450	1003.05	3	26.52
24	SLU 84	-76	-29	3438	1000.37	3	26.63
24	SLE RA 1	-46	-16	2185	636.41	1.71	16.28

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
24	SLE RA 2	-47	-21	2172	633.43	1.7	16.4
24	SLE RA 3	-46	-16	2185	636.41	1.71	16.28
24	SLE RA 4	-47	-19	2177	634.62	1.7	16.35
24	SLE RA 5	-47	-21	2172	633.43	1.7	16.4
24	SLE RA 6	-46	-16	2185	636.41	1.71	16.28
24	SLE RA 7	-47	-19	2177	634.62	1.7	16.35
24	SLE RA 8	-46	-16	2185	636.41	1.71	16.28
24	SLE RA 9	-47	-19	2177	634.62	1.7	16.35
24	SLE RA 10	-53	-22	2419	704.72	2.02	18.59
24	SLE RA 11	-53	-18	2432	707.7	2.03	18.48
24	SLE RA 12	-53	-20	2424	705.91	2.02	18.54
24	SLE RA 13	-53	-22	2419	704.72	2.02	18.59
24	SLE RA 14	-53	-18	2432	707.7	2.03	18.48
24	SLE RA 15	-53	-20	2424	705.91	2.02	18.54
24	SLE RA 16	-53	-18	2432	707.7	2.03	18.48
24	SLE RA 17	-53	-20	2424	705.91	2.02	18.54
24	SLE RA 18	-55	-18	2538	738.25	2.16	19.42
24	SLE RA 19	-56	-21	2530	736.46	2.16	19.48
24	SLE RA 20	-55	-18	2538	738.25	2.16	19.42
24	SLE RA 21	-56	-21	2530	736.46	2.16	19.48
24	SLE FR 1	-46	-16	2185	636.41	1.71	16.28
24	SLE FR 2	-46	-17	2182	635.81	1.71	16.3
24	SLE FR 3	-46	-16	2185	636.41	1.71	16.28
24	SLE FR 4	-49	-18	2288	666.37	1.84	17.25
24	SLE FR 5	-49	-17	2291	666.96	1.84	17.22
24	SLE FR 6	-51	-17	2362	687.33	1.94	17.85
24	SLE QP 1	-46	-16	2185	636.41	1.71	16.28
24	SLE QP 2	-49	-17	2291	666.96	1.84	17.22
24	SLD 1	120	32	2267	663.63	2.74	-41.96
24	SLD 2	162	49	2269	663.97	2.73	-56.66
24	SLD 3	108	-53	2055	616.07	2.63	-37.87
24	SLD 4	150	-37	2057	616.42	2.62	-52.58
24	SLD 5	5	122	2606	737.97	2.28	-1.47
24	SLD 6	48	139	2608	738.31	2.27	-16.39
24	SLD 7	-35	-163	1897	579.45	1.92	12.14
24	SLD 8	8	-147	1899	579.79	1.91	-2.78
24	SLD 9	-106	113	2683	754.13	1.78	37.23
24	SLD 10	-63	130	2685	754.48	1.77	22.3
24	SLD 11	-146	-172	1974	595.61	1.42	50.84
24	SLD 12	-103	-155	1976	595.96	1.4	35.91
24	SLD 13	-249	3	2525	717.51	1.07	87.02
24	SLD 14	-206	20	2527	717.85	1.06	72.32
24	SLD 15	-261	-82	2313	669.95	0.96	91.1
24	SLD 16	-218	-66	2315	670.29	0.95	76.4
24	SLV 1	336	95	2238	659.66	3.88	-117.43
24	SLV 2	432	133	2243	660.44	3.85	-150.77
24	SLV 3	308	-100	1754	551.25	3.63	-108.02
24	SLV 4	404	-62	1758	552.03	3.6	-141.36
24	SLV 5	74	300	3009	828.92	2.85	-25.52
24	SLV 6	171	338	3014	829.71	2.81	-59.35
24	SLV 7	-18	-351	1393	467.54	2.01	5.83
24	SLV 8	79	-313	1398	468.33	1.98	-28
24	SLV 9	-178	280	3184	865.59	1.71	62.45
24	SLV 10	-80	318	3189	866.38	1.67	28.62
24	SLV 11	-269	-371	1568	504.21	0.87	93.8
24	SLV 12	-172	-333	1573	505	0.84	59.97
24	SLV 13	-502	29	2824	781.9	0.09	175.81
24	SLV 14	-406	66	2828	782.67	0.06	142.47
24	SLV 15	-530	-166	2339	673.48	-0.16	185.21
24	SLV 16	-434	-129	2344	674.26	-0.19	151.87
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	0	0
24	CRTFP Uy-	0	0	0	0	0	0
25	SLU 1	-44	-14	2056	568.04	1.53	15.49
25	SLU 2	-45	-22	2036	563.85	1.53	15.66
25	SLU 3	-44	-14	2056	568.04	1.53	15.49
25	SLU 4	-44	-19	2044	565.53	1.53	15.6
25	SLU 5	-45	-22	2036	563.85	1.53	15.66
25	SLU 6	-44	-14	2056	568.04	1.53	15.49
25	SLU 7	-44	-19	2044	565.53	1.53	15.6
25	SLU 8	-44	-14	2056	568.04	1.53	15.49
25	SLU 9	-44	-19	2044	565.53	1.53	15.6
25	SLU 10	-54	-24	2393	660.45	2.01	18.97
25	SLU 11	-53	-16	2412	664.64	2.02	18.8
25	SLU 12	-54	-20	2400	662.13	2.02	18.91
25	SLU 13	-54	-24	2393	660.45	2.01	18.97
25	SLU 14	-53	-16	2412	664.64	2.02	18.8
25	SLU 15	-54	-20	2400	662.13	2.02	18.91
25	SLU 16	-53	-16	2412	664.64	2.02	18.8
25	SLU 17	-54	-20	2400	662.13	2.02	18.91
25	SLU 18	-58	-17	2565	706.04	2.22	20.22
25	SLU 19	-58	-21	2553	703.52	2.22	20.32
25	SLU 20	-58	-17	2565	706.04	2.22	20.22
25	SLU 21	-58	-21	2553	703.52	2.22	20.32
25	SLU 22	-51	-15	2325	640.87	1.86	17.79
25	SLU 23	-51	-23	2305	636.68	1.86	17.96

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
25	SLU 24	-51	-15	2325	640.87	1.86	17.79
25	SLU 25	-51	-20	2313	638.35	1.86	17.9
25	SLU 26	-51	-23	2305	636.68	1.86	17.96
25	SLU 27	-51	-15	2325	640.87	1.86	17.79
25	SLU 28	-51	-20	2313	638.35	1.86	17.9
25	SLU 29	-51	-15	2325	640.87	1.86	17.79
25	SLU 30	-51	-20	2313	638.35	1.86	17.9
25	SLU 31	-61	-25	2661	733.27	2.34	21.27
25	SLU 32	-60	-17	2681	737.47	2.35	21.1
25	SLU 33	-60	-22	2669	734.95	2.35	21.21
25	SLU 34	-61	-25	2661	733.27	2.34	21.27
25	SLU 35	-60	-17	2681	737.47	2.35	21.1
25	SLU 36	-60	-22	2669	734.95	2.35	21.21
25	SLU 37	-60	-17	2681	737.47	2.35	21.1
25	SLU 38	-60	-22	2669	734.95	2.35	21.21
25	SLU 39	-64	-18	2834	778.86	2.55	22.52
25	SLU 40	-64	-22	2822	776.35	2.55	22.62
25	SLU 41	-64	-18	2834	778.86	2.55	22.52
25	SLU 42	-64	-22	2822	776.35	2.55	22.62
25	SLU 43	-55	-18	2581	713.49	1.88	19.35
25	SLU 44	-56	-25	2561	709.3	1.88	19.52
25	SLU 45	-55	-18	2581	713.49	1.88	19.35
25	SLU 46	-55	-22	2569	710.97	1.88	19.46
25	SLU 47	-56	-25	2561	709.3	1.88	19.52
25	SLU 48	-55	-18	2581	713.49	1.88	19.35
25	SLU 49	-55	-22	2569	710.97	1.88	19.46
25	SLU 50	-55	-18	2581	713.49	1.88	19.35
25	SLU 51	-55	-22	2569	710.97	1.88	19.46
25	SLU 52	-65	-27	2917	805.89	2.36	22.83
25	SLU 53	-64	-20	2937	810.09	2.36	22.66
25	SLU 54	-65	-24	2925	807.57	2.36	22.77
25	SLU 55	-65	-27	2917	805.89	2.36	22.83
25	SLU 56	-64	-20	2937	810.09	2.36	22.66
25	SLU 57	-65	-24	2925	807.57	2.36	22.77
25	SLU 58	-64	-20	2937	810.09	2.36	22.66
25	SLU 59	-65	-24	2925	807.57	2.36	22.77
25	SLU 60	-68	-20	3090	851.49	2.57	24.08
25	SLU 61	-69	-25	3078	848.97	2.57	24.18
25	SLU 62	-68	-20	3090	851.49	2.57	24.08
25	SLU 63	-69	-25	3078	848.97	2.57	24.18
25	SLU 64	-62	-19	2850	786.31	2.21	21.65
25	SLU 65	-62	-27	2830	782.12	2.21	21.82
25	SLU 66	-62	-19	2850	786.31	2.21	21.65
25	SLU 67	-62	-24	2838	783.8	2.21	21.76
25	SLU 68	-62	-27	2830	782.12	2.21	21.82
25	SLU 69	-62	-19	2850	786.31	2.21	21.65
25	SLU 70	-62	-24	2838	783.8	2.21	21.76
25	SLU 71	-62	-19	2850	786.31	2.21	21.65
25	SLU 72	-62	-24	2838	783.8	2.21	21.76
25	SLU 73	-72	-29	3186	878.72	2.69	25.13
25	SLU 74	-71	-21	3206	882.91	2.69	24.96
25	SLU 75	-71	-25	3194	880.4	2.69	25.07
25	SLU 76	-72	-29	3186	878.72	2.69	25.13
25	SLU 77	-71	-21	3206	882.91	2.69	24.96
25	SLU 78	-71	-25	3194	880.4	2.69	25.07
25	SLU 79	-71	-21	3206	882.91	2.69	24.96
25	SLU 80	-71	-25	3194	880.4	2.69	25.07
25	SLU 81	-75	-22	3359	924.31	2.9	26.38
25	SLU 82	-75	-26	3347	921.79	2.9	26.48
25	SLU 83	-75	-22	3359	924.31	2.9	26.38
25	SLU 84	-75	-26	3347	921.79	2.9	26.48
25	SLE RA 1	-46	-14	2133	588.85	1.63	16.15
25	SLE RA 2	-46	-20	2120	586.06	1.63	16.26
25	SLE RA 3	-46	-14	2133	588.85	1.63	16.15
25	SLE RA 4	-46	-17	2125	587.17	1.63	16.22
25	SLE RA 5	-46	-20	2120	586.06	1.63	16.26
25	SLE RA 6	-46	-14	2133	588.85	1.63	16.15
25	SLE RA 7	-46	-17	2125	587.17	1.63	16.22
25	SLE RA 8	-46	-14	2133	588.85	1.63	16.15
25	SLE RA 9	-46	-17	2125	587.17	1.63	16.22
25	SLE RA 10	-53	-21	2357	650.45	1.95	18.47
25	SLE RA 11	-52	-16	2370	653.25	1.95	18.36
25	SLE RA 12	-52	-19	2363	651.57	1.95	18.43
25	SLE RA 13	-53	-21	2357	650.45	1.95	18.47
25	SLE RA 14	-52	-16	2370	653.25	1.95	18.36
25	SLE RA 15	-52	-19	2363	651.57	1.95	18.43
25	SLE RA 16	-52	-16	2370	653.25	1.95	18.36
25	SLE RA 17	-52	-19	2363	651.57	1.95	18.43
25	SLE RA 18	-55	-16	2472	680.85	2.09	19.3
25	SLE RA 19	-55	-19	2464	679.17	2.09	19.37
25	SLE RA 20	-55	-16	2472	680.85	2.09	19.3
25	SLE RA 21	-55	-19	2464	679.17	2.09	19.37
25	SLE FR 1	-46	-14	2133	588.85	1.63	16.15
25	SLE FR 2	-46	-15	2130	588.29	1.63	16.17
25	SLE FR 3	-46	-14	2133	588.85	1.63	16.15
25	SLE FR 4	-49	-16	2232	615.89	1.77	17.12
25	SLE FR 5	-49	-15	2235	616.45	1.77	17.1

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
25	SLE FR 6	-50	-15	2303	634.85	1.86	17.73
25	SLE QP 1	-46	-14	2133	588.85	1.63	16.15
25	SLE QP 2	-49	-15	2235	616.45	1.77	17.1
25	SLD 1	120	37	2183	607.8	2.77	-42.09
25	SLD 2	163	57	2186	608.22	2.75	-56.79
25	SLD 3	108	-55	1973	563.62	2.68	-38
25	SLD 4	151	-35	1976	564.04	2.67	-52.71
25	SLD 5	5	133	2537	680.71	2.21	-1.6
25	SLD 6	48	153	2540	681.13	2.19	-16.52
25	SLD 7	-35	-173	1837	533.45	1.91	12.02
25	SLD 8	8	-153	1840	533.87	1.9	-2.91
25	SLD 9	-105	123	2630	699.03	1.64	37.1
25	SLD 10	-62	144	2633	699.45	1.62	22.17
25	SLD 11	-145	-183	1930	551.77	1.34	50.72
25	SLD 12	-102	-162	1933	552.19	1.32	35.79
25	SLD 13	-248	5	2494	668.86	0.87	86.9
25	SLD 14	-206	25	2496	669.28	0.85	72.2
25	SLD 15	-260	-87	2284	624.69	0.78	90.99
25	SLD 16	-218	-67	2286	625.1	0.76	76.28
25	SLV 1	336	103	2119	597.05	4.05	-117.57
25	SLV 2	432	149	2125	598	4.01	-150.91
25	SLV 3	308	-106	1640	496.35	3.85	-108.15
25	SLV 4	404	-60	1646	497.3	3.81	-141.5
25	SLV 5	75	322	2924	763.01	2.77	-25.66
25	SLV 6	172	368	2930	763.97	2.73	-59.49
25	SLV 7	-18	-376	1328	427.36	2.1	5.71
25	SLV 8	79	-329	1334	428.32	2.06	-28.12
25	SLV 9	-177	300	3135	804.58	1.47	62.32
25	SLV 10	-79	346	3141	805.54	1.43	28.48
25	SLV 11	-269	-398	1539	468.93	0.8	93.69
25	SLV 12	-172	-351	1545	469.89	0.76	59.85
25	SLV 13	-502	30	2823	735.6	-0.28	175.69
25	SLV 14	-405	76	2829	736.55	-0.32	142.35
25	SLV 15	-529	-179	2345	634.91	-0.48	185.1
25	SLV 16	-433	-133	2350	635.85	-0.52	151.76
25	CRTFP Ux+	0	0	0	0	0	0
25	CRTFP Ux-	0	0	0	0	0	0
25	CRTFP Uy+	0	0	0	0	0	0
25	CRTFP Uy-	0	0	0	0	0	0
26	SLU 1	-44	-11	2018	533.72	0.9	15.39
26	SLU 2	-44	-20	1999	529.67	0.91	15.56
26	SLU 3	-44	-11	2018	533.72	0.9	15.39
26	SLU 4	-44	-17	2007	531.29	0.91	15.49
26	SLU 5	-44	-20	1999	529.67	0.91	15.56
26	SLU 6	-44	-11	2018	533.72	0.9	15.39
26	SLU 7	-44	-17	2007	531.29	0.91	15.49
26	SLU 8	-44	-11	2018	533.72	0.9	15.39
26	SLU 9	-44	-17	2007	531.29	0.91	15.49
26	SLU 10	-54	-21	2342	617.84	1.28	18.88
26	SLU 11	-53	-13	2361	621.89	1.27	18.71
26	SLU 12	-53	-18	2350	619.46	1.27	18.82
26	SLU 13	-54	-21	2342	617.84	1.28	18.88
26	SLU 14	-53	-13	2361	621.89	1.27	18.71
26	SLU 15	-53	-18	2350	619.46	1.27	18.82
26	SLU 16	-53	-13	2361	621.89	1.27	18.71
26	SLU 17	-53	-18	2350	619.46	1.27	18.82
26	SLU 18	-57	-13	2508	659.67	1.43	20.14
26	SLU 19	-58	-18	2497	657.24	1.43	20.24
26	SLU 20	-57	-13	2508	659.67	1.43	20.14
26	SLU 21	-58	-18	2497	657.24	1.43	20.24
26	SLU 22	-50	-12	2279	600.48	1.14	17.69
26	SLU 23	-51	-21	2259	596.43	1.15	17.86
26	SLU 24	-50	-12	2279	600.48	1.14	17.69
26	SLU 25	-51	-17	2267	598.05	1.15	17.79
26	SLU 26	-51	-21	2259	596.43	1.15	17.86
26	SLU 27	-50	-12	2279	600.48	1.14	17.69
26	SLU 28	-51	-17	2267	598.05	1.15	17.79
26	SLU 29	-50	-12	2279	600.48	1.14	17.69
26	SLU 30	-51	-17	2267	598.05	1.15	17.79
26	SLU 31	-60	-22	2602	684.59	1.52	21.19
26	SLU 32	-60	-14	2622	688.64	1.51	21.02
26	SLU 33	-60	-19	2610	686.21	1.51	21.12
26	SLU 34	-60	-22	2602	684.59	1.52	21.19
26	SLU 35	-60	-14	2622	688.64	1.51	21.02
26	SLU 36	-60	-19	2610	686.21	1.51	21.12
26	SLU 37	-60	-14	2622	688.64	1.51	21.02
26	SLU 38	-60	-19	2610	686.21	1.51	21.12
26	SLU 39	-64	-14	2769	726.43	1.67	22.44
26	SLU 40	-64	-19	2757	724	1.67	22.54
26	SLU 41	-64	-14	2769	726.43	1.67	22.44
26	SLU 42	-64	-19	2757	724	1.67	22.54
26	SLU 43	-55	-15	2535	670.95	1.09	19.22
26	SLU 44	-55	-23	2515	666.9	1.1	19.39
26	SLU 45	-55	-15	2535	670.95	1.09	19.22
26	SLU 46	-55	-20	2523	668.52	1.09	19.32
26	SLU 47	-55	-23	2515	666.9	1.1	19.39
26	SLU 48	-55	-15	2535	670.95	1.09	19.22

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
26	SLU 49	-55	-20	2523	668.52	1.09	19.32
26	SLU 50	-55	-15	2535	670.95	1.09	19.22
26	SLU 51	-55	-20	2523	668.52	1.09	19.32
26	SLU 52	-65	-24	2858	755.06	1.47	22.71
26	SLU 53	-64	-16	2878	759.12	1.46	22.54
26	SLU 54	-64	-21	2866	756.68	1.46	22.64
26	SLU 55	-65	-24	2858	755.06	1.47	22.71
26	SLU 56	-64	-16	2878	759.12	1.46	22.54
26	SLU 57	-64	-21	2866	756.68	1.46	22.64
26	SLU 58	-64	-16	2878	759.12	1.46	22.54
26	SLU 59	-64	-21	2866	756.68	1.46	22.64
26	SLU 60	-68	-17	3025	796.9	1.62	23.97
26	SLU 61	-68	-22	3013	794.47	1.62	24.07
26	SLU 62	-68	-17	3025	796.9	1.62	23.97
26	SLU 63	-68	-22	3013	794.47	1.62	24.07
26	SLU 64	-61	-15	2795	737.71	1.33	21.52
26	SLU 65	-62	-24	2775	733.66	1.34	21.69
26	SLU 66	-61	-15	2795	737.71	1.33	21.52
26	SLU 67	-61	-20	2783	735.28	1.33	21.62
26	SLU 68	-62	-24	2775	733.66	1.34	21.69
26	SLU 69	-61	-15	2795	737.71	1.33	21.52
26	SLU 70	-61	-20	2783	735.28	1.33	21.62
26	SLU 71	-61	-15	2795	737.71	1.33	21.52
26	SLU 72	-61	-20	2783	735.28	1.33	21.62
26	SLU 73	-71	-25	3118	821.82	1.71	25.01
26	SLU 74	-71	-17	3138	825.87	1.7	24.84
26	SLU 75	-71	-22	3126	823.44	1.7	24.95
26	SLU 76	-71	-25	3118	821.82	1.71	25.01
26	SLU 77	-71	-17	3138	825.87	1.7	24.84
26	SLU 78	-71	-22	3126	823.44	1.7	24.95
26	SLU 79	-71	-17	3138	825.87	1.7	24.84
26	SLU 80	-71	-22	3126	823.44	1.7	24.95
26	SLU 81	-75	-17	3285	863.66	1.86	26.27
26	SLU 82	-75	-22	3273	861.23	1.86	26.37
26	SLU 83	-75	-17	3285	863.66	1.86	26.27
26	SLU 84	-75	-22	3273	861.23	1.86	26.37
26	SLE RA 1	-46	-12	2093	552.8	0.97	16.05
26	SLE RA 2	-46	-17	2080	550.1	0.98	16.16
26	SLE RA 3	-46	-12	2093	552.8	0.97	16.05
26	SLE RA 4	-46	-15	2085	551.18	0.97	16.12
26	SLE RA 5	-46	-17	2080	550.1	0.98	16.16
26	SLE RA 6	-46	-12	2093	552.8	0.97	16.05
26	SLE RA 7	-46	-15	2085	551.18	0.97	16.12
26	SLE RA 8	-46	-12	2093	552.8	0.97	16.05
26	SLE RA 9	-46	-15	2085	551.18	0.97	16.12
26	SLE RA 10	-52	-18	2308	608.87	1.22	18.38
26	SLE RA 11	-52	-13	2321	611.57	1.22	18.26
26	SLE RA 12	-52	-16	2314	609.95	1.22	18.33
26	SLE RA 13	-52	-18	2308	608.87	1.22	18.38
26	SLE RA 14	-52	-13	2321	611.57	1.22	18.26
26	SLE RA 15	-52	-16	2314	609.95	1.22	18.33
26	SLE RA 16	-52	-13	2321	611.57	1.22	18.26
26	SLE RA 17	-52	-16	2314	609.95	1.22	18.33
26	SLE RA 18	-55	-13	2419	636.76	1.32	19.21
26	SLE RA 19	-55	-16	2412	635.14	1.32	19.28
26	SLE RA 20	-55	-13	2419	636.76	1.32	19.21
26	SLE RA 21	-55	-16	2412	635.14	1.32	19.28
26	SLE FR 1	-46	-12	2093	552.8	0.97	16.05
26	SLE FR 2	-46	-13	2090	552.26	0.97	16.07
26	SLE FR 3	-46	-12	2093	552.8	0.97	16.05
26	SLE FR 4	-48	-13	2188	577.45	1.08	17.02
26	SLE FR 5	-48	-12	2191	577.99	1.08	17
26	SLE FR 6	-50	-12	2256	594.78	1.15	17.63
26	SLE QP 1	-46	-12	2093	552.8	0.97	16.05
26	SLE QP 2	-48	-12	2191	577.99	1.08	17
26	SLD 1	121	43	2108	561.62	2.16	-42.17
26	SLD 2	163	67	2111	562.14	2.14	-56.87
26	SLD 3	109	-56	1899	519.49	2.23	-38.08
26	SLD 4	151	-32	1902	520	2.21	-52.78
26	SLD 5	6	147	2482	636.8	1.3	-1.7
26	SLD 6	49	171	2486	637.32	1.28	-16.62
26	SLD 7	-35	-185	1785	496.34	1.54	11.93
26	SLD 8	8	-160	1788	496.87	1.52	-2.99
26	SLD 9	-105	136	2594	659.11	0.64	36.99
26	SLD 10	-62	161	2597	659.63	0.62	22.07
26	SLD 11	-145	-195	1896	518.65	0.87	50.61
26	SLD 12	-102	-171	1899	519.17	0.85	35.69
26	SLD 13	-247	8	2480	635.97	-0.06	86.78
26	SLD 14	-205	32	2483	636.49	-0.08	72.08
26	SLD 15	-260	-91	2270	593.84	0.01	90.86
26	SLD 16	-217	-67	2273	594.35	-0.01	76.17
26	SLV 1	336	114	2004	541.05	3.54	-117.63
26	SLV 2	432	169	2011	542.22	3.5	-150.96
26	SLV 3	308	-112	1527	445.02	3.7	-108.21
26	SLV 4	404	-58	1534	446.18	3.66	-141.54
26	SLV 5	75	350	2856	712.15	1.59	-25.76
26	SLV 6	173	406	2863	713.33	1.55	-59.58

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
26	SLV 7	-18	-405	1265	392.02	2.12	5.63
26	SLV 8	79	-350	1273	393.21	2.08	-28.19
26	SLV 9	-176	326	3109	762.77	0.08	62.19
26	SLV 10	-78	381	3116	763.95	0.03	28.36
26	SLV 11	-269	-430	1518	442.64	0.61	93.58
26	SLV 12	-172	-374	1526	443.83	0.56	59.76
26	SLV 13	-501	34	2847	709.79	-1.51	175.53
26	SLV 14	-405	88	2855	710.96	-1.55	142.2
26	SLV 15	-529	-193	2370	613.75	-1.35	184.95
26	SLV 16	-433	-138	2377	614.92	-1.39	151.62
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	-43	-9	2005	519.18	-0.07	15.31
27	SLU 2	-44	-18	1985	515.06	-0.05	15.48
27	SLU 3	-43	-9	2005	519.18	-0.07	15.31
27	SLU 4	-44	-14	1993	516.71	-0.06	15.41
27	SLU 5	-44	-18	1985	515.06	-0.05	15.48
27	SLU 6	-43	-9	2005	519.18	-0.07	15.31
27	SLU 7	-44	-14	1993	516.71	-0.06	15.41
27	SLU 8	-43	-9	2005	519.18	-0.07	15.31
27	SLU 9	-44	-14	1993	516.71	-0.06	15.41
27	SLU 10	-54	-19	2320	598.47	0.13	18.81
27	SLU 11	-53	-9	2340	602.59	0.11	18.64
27	SLU 12	-53	-15	2328	600.12	0.12	18.74
27	SLU 13	-54	-19	2320	598.47	0.13	18.81
27	SLU 14	-53	-9	2340	602.59	0.11	18.64
27	SLU 15	-53	-15	2328	600.12	0.12	18.74
27	SLU 16	-53	-9	2340	602.59	0.11	18.64
27	SLU 17	-53	-15	2328	600.12	0.12	18.74
27	SLU 18	-57	-10	2483	638.34	0.19	20.07
27	SLU 19	-57	-15	2471	635.86	0.2	20.17
27	SLU 20	-57	-10	2483	638.34	0.19	20.07
27	SLU 21	-57	-15	2471	635.86	0.2	20.17
27	SLU 22	-50	-9	2260	582.69	0.02	17.61
27	SLU 23	-51	-18	2240	578.57	0.04	17.78
27	SLU 24	-50	-9	2260	582.69	0.02	17.61
27	SLU 25	-50	-15	2248	580.22	0.03	17.71
27	SLU 26	-51	-18	2240	578.57	0.04	17.78
27	SLU 27	-50	-9	2260	582.69	0.02	17.61
27	SLU 28	-50	-15	2248	580.22	0.03	17.71
27	SLU 29	-50	-9	2260	582.69	0.02	17.61
27	SLU 30	-50	-15	2248	580.22	0.03	17.71
27	SLU 31	-60	-19	2575	661.98	0.22	21.11
27	SLU 32	-59	-10	2595	666.1	0.21	20.94
27	SLU 33	-60	-15	2583	663.63	0.22	21.04
27	SLU 34	-60	-19	2575	661.98	0.22	21.11
27	SLU 35	-59	-10	2595	666.1	0.21	20.94
27	SLU 36	-60	-15	2583	663.63	0.22	21.04
27	SLU 37	-59	-10	2595	666.1	0.21	20.94
27	SLU 38	-60	-15	2583	663.63	0.22	21.04
27	SLU 39	-64	-10	2738	701.85	0.28	22.37
27	SLU 40	-64	-16	2726	699.37	0.29	22.47
27	SLU 41	-64	-10	2738	701.85	0.28	22.37
27	SLU 42	-64	-16	2726	699.37	0.29	22.47
27	SLU 43	-54	-11	2520	653.16	-0.13	19.11
27	SLU 44	-55	-21	2499	649.04	-0.11	19.28
27	SLU 45	-54	-11	2520	653.16	-0.13	19.11
27	SLU 46	-55	-17	2507	650.69	-0.11	19.21
27	SLU 47	-55	-21	2499	649.04	-0.11	19.28
27	SLU 48	-54	-11	2520	653.16	-0.13	19.11
27	SLU 49	-55	-17	2507	650.69	-0.11	19.21
27	SLU 50	-54	-11	2520	653.16	-0.13	19.11
27	SLU 51	-55	-17	2507	650.69	-0.11	19.21
27	SLU 52	-64	-21	2834	732.45	0.07	22.61
27	SLU 53	-64	-12	2854	736.57	0.06	22.44
27	SLU 54	-64	-18	2842	734.1	0.07	22.54
27	SLU 55	-64	-21	2834	732.45	0.07	22.61
27	SLU 56	-64	-12	2854	736.57	0.06	22.44
27	SLU 57	-64	-18	2842	734.1	0.07	22.54
27	SLU 58	-64	-12	2854	736.57	0.06	22.44
27	SLU 59	-64	-18	2842	734.1	0.07	22.54
27	SLU 60	-68	-12	2997	772.32	0.13	23.87
27	SLU 61	-68	-18	2985	769.84	0.14	23.97
27	SLU 62	-68	-12	2997	772.32	0.13	23.87
27	SLU 63	-68	-18	2985	769.84	0.14	23.97
27	SLU 64	-61	-11	2775	716.67	-0.03	21.41
27	SLU 65	-61	-21	2754	712.55	-0.01	21.58
27	SLU 66	-61	-11	2775	716.67	-0.03	21.41
27	SLU 67	-61	-17	2762	714.2	-0.02	21.51
27	SLU 68	-61	-21	2754	712.55	-0.01	21.58
27	SLU 69	-61	-11	2775	716.67	-0.03	21.41
27	SLU 70	-61	-17	2762	714.2	-0.02	21.51
27	SLU 71	-61	-11	2775	716.67	-0.03	21.41
27	SLU 72	-61	-17	2762	714.2	-0.02	21.51
27	SLU 73	-71	-22	3089	795.96	0.17	24.91

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
27	SLU 74	-70	-12	3109	800.08	0.15	24.74
27	SLU 75	-71	-18	3097	797.61	0.16	24.85
27	SLU 76	-71	-22	3089	795.96	0.17	24.91
27	SLU 77	-70	-12	3109	800.08	0.15	24.74
27	SLU 78	-71	-18	3097	797.61	0.16	24.85
27	SLU 79	-70	-12	3109	800.08	0.15	24.74
27	SLU 80	-71	-18	3097	797.61	0.16	24.85
27	SLU 81	-74	-12	3252	835.83	0.23	26.17
27	SLU 82	-75	-18	3240	833.35	0.24	26.28
27	SLU 83	-74	-12	3252	835.83	0.23	26.17
27	SLU 84	-75	-18	3240	833.35	0.24	26.28
27	SLE RA 1	-45	-9	2078	537.33	-0.04	15.96
27	SLE RA 2	-46	-15	2065	534.58	-0.03	16.08
27	SLE RA 3	-45	-9	2078	537.33	-0.04	15.96
27	SLE RA 4	-46	-13	2070	535.68	-0.04	16.03
27	SLE RA 5	-46	-15	2065	534.58	-0.03	16.08
27	SLE RA 6	-45	-9	2078	537.33	-0.04	15.96
27	SLE RA 7	-46	-13	2070	535.68	-0.04	16.03
27	SLE RA 8	-45	-9	2078	537.33	-0.04	15.96
27	SLE RA 9	-46	-13	2070	535.68	-0.04	16.03
27	SLE RA 10	-52	-16	2288	590.18	0.09	18.3
27	SLE RA 11	-52	-9	2301	592.93	0.08	18.19
27	SLE RA 12	-52	-13	2293	591.28	0.08	18.25
27	SLE RA 13	-52	-16	2288	590.18	0.09	18.3
27	SLE RA 14	-52	-9	2301	592.93	0.08	18.19
27	SLE RA 15	-52	-13	2293	591.28	0.08	18.25
27	SLE RA 16	-52	-9	2301	592.93	0.08	18.19
27	SLE RA 17	-52	-13	2293	591.28	0.08	18.25
27	SLE RA 18	-54	-9	2397	616.76	0.13	19.14
27	SLE RA 19	-55	-13	2389	615.12	0.14	19.21
27	SLE RA 20	-54	-9	2397	616.76	0.13	19.14
27	SLE RA 21	-55	-13	2389	615.12	0.14	19.21
27	SLE FR 1	-45	-9	2078	537.33	-0.04	15.96
27	SLE FR 2	-45	-10	2076	536.78	-0.04	15.99
27	SLE FR 3	-45	-9	2078	537.33	-0.04	15.96
27	SLE FR 4	-48	-10	2171	560.61	0.01	16.94
27	SLE FR 5	-48	-9	2174	561.16	0.01	16.92
27	SLE FR 6	-50	-9	2238	577.05	0.04	17.55
27	SLE QP 1	-45	-9	2078	537.33	-0.04	15.96
27	SLE QP 2	-48	-9	2174	561.16	0.01	16.92
27	SLD 1	121	51	2056	534.42	1.24	-42.21
27	SLD 2	163	79	2060	535.08	1.21	-56.9
27	SLD 3	109	-57	1844	492.01	1.41	-38.12
27	SLD 4	151	-29	1848	492.67	1.38	-52.8
27	SLD 5	6	163	2459	617.23	0.13	-1.78
27	SLD 6	49	192	2463	617.9	0.1	-16.69
27	SLD 7	-35	-198	1752	475.84	0.69	11.87
27	SLD 8	8	-169	1756	476.51	0.67	-3.04
27	SLD 9	-104	151	2592	645.8	-0.66	36.87
27	SLD 10	-61	180	2596	646.47	-0.68	21.96
27	SLD 11	-145	-210	1885	504.41	-0.09	50.53
27	SLD 12	-102	-181	1889	505.08	-0.11	35.61
27	SLD 13	-247	11	2500	629.65	-1.37	86.64
27	SLD 14	-205	39	2503	630.31	-1.39	71.95
27	SLD 15	-259	-97	2288	587.23	-1.2	90.73
27	SLD 16	-217	-69	2292	587.89	-1.22	76.04
27	SLV 1	336	127	1908	500.66	2.8	-117.62
27	SLV 2	432	192	1916	502.15	2.74	-150.92
27	SLV 3	308	-119	1424	403.98	3.19	-108.18
27	SLV 4	404	-55	1433	405.48	3.13	-141.49
27	SLV 5	76	383	2824	689.09	0.27	-25.85
27	SLV 6	173	448	2833	690.61	0.22	-59.65
27	SLV 7	-18	-439	1213	366.85	1.57	5.6
27	SLV 8	79	-374	1222	368.37	1.52	-28.2
27	SLV 9	-175	356	3126	753.94	-1.5	62.03
27	SLV 10	-78	421	3135	755.46	-1.56	28.23
27	SLV 11	-269	-466	1515	431.71	-0.2	93.48
27	SLV 12	-172	-401	1524	433.23	-0.26	59.68
27	SLV 13	-500	37	2915	716.83	-3.12	175.32
27	SLV 14	-404	101	2923	718.33	-3.17	142.01
27	SLV 15	-528	-209	2431	620.16	-2.73	184.75
27	SLV 16	-432	-145	2440	621.66	-2.78	151.45
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	-43	-6	2025	530	-1.22	15.24
28	SLU 2	-44	-17	2004	525.54	-1.18	15.41
28	SLU 3	-43	-6	2025	530	-1.22	15.24
28	SLU 4	-44	-13	2012	527.32	-1.2	15.34
28	SLU 5	-44	-17	2004	525.54	-1.18	15.41
28	SLU 6	-43	-6	2025	530	-1.22	15.24
28	SLU 7	-44	-13	2012	527.32	-1.2	15.34
28	SLU 8	-43	-6	2025	530	-1.22	15.24
28	SLU 9	-44	-13	2012	527.32	-1.2	15.34
28	SLU 10	-53	-17	2336	608.97	-1.22	18.75
28	SLU 11	-53	-7	2357	613.44	-1.26	18.58

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
28	SLU 12	-53	-13	2345	610.76	-1.24	18.68
28	SLU 13	-53	-17	2336	608.97	-1.22	18.75
28	SLU 14	-53	-7	2357	613.44	-1.26	18.58
28	SLU 15	-53	-13	2345	610.76	-1.24	18.68
28	SLU 16	-53	-7	2357	613.44	-1.26	18.58
28	SLU 17	-53	-13	2345	610.76	-1.24	18.68
28	SLU 18	-57	-7	2500	649.19	-1.27	20.01
28	SLU 19	-57	-13	2487	646.52	-1.26	20.11
28	SLU 20	-57	-7	2500	649.19	-1.27	20.01
28	SLU 21	-57	-13	2487	646.52	-1.26	20.11
28	SLU 22	-50	-6	2279	593.93	-1.29	17.54
28	SLU 23	-50	-16	2258	589.47	-1.26	17.71
28	SLU 24	-50	-6	2279	593.93	-1.29	17.54
28	SLU 25	-50	-12	2267	591.25	-1.27	17.64
28	SLU 26	-50	-16	2258	589.47	-1.26	17.71
28	SLU 27	-50	-6	2279	593.93	-1.29	17.54
28	SLU 28	-50	-12	2267	591.25	-1.27	17.64
28	SLU 29	-50	-6	2279	593.93	-1.29	17.54
28	SLU 30	-50	-12	2267	591.25	-1.27	17.64
28	SLU 31	-60	-16	2591	672.9	-1.3	21.05
28	SLU 32	-59	-6	2612	677.37	-1.33	20.88
28	SLU 33	-60	-12	2599	674.69	-1.31	20.98
28	SLU 34	-60	-16	2591	672.9	-1.3	21.05
28	SLU 35	-59	-6	2612	677.37	-1.33	20.88
28	SLU 36	-60	-12	2599	674.69	-1.31	20.98
28	SLU 37	-59	-6	2612	677.37	-1.33	20.88
28	SLU 38	-60	-12	2599	674.69	-1.31	20.98
28	SLU 39	-63	-6	2754	713.12	-1.35	22.31
28	SLU 40	-64	-12	2742	710.45	-1.33	22.41
28	SLU 41	-63	-6	2754	713.12	-1.35	22.31
28	SLU 42	-64	-12	2742	710.45	-1.33	22.41
28	SLU 43	-54	-9	2545	667.08	-1.55	19.02
28	SLU 44	-55	-19	2524	662.62	-1.52	19.19
28	SLU 45	-54	-9	2545	667.08	-1.55	19.02
28	SLU 46	-54	-15	2532	664.4	-1.54	19.12
28	SLU 47	-55	-19	2524	662.62	-1.52	19.19
28	SLU 48	-54	-9	2545	667.08	-1.55	19.02
28	SLU 49	-54	-15	2532	664.4	-1.54	19.12
28	SLU 50	-54	-9	2545	667.08	-1.55	19.02
28	SLU 51	-54	-15	2532	664.4	-1.54	19.12
28	SLU 52	-64	-19	2856	746.06	-1.56	22.53
28	SLU 53	-64	-9	2877	750.52	-1.6	22.36
28	SLU 54	-64	-15	2865	747.84	-1.58	22.46
28	SLU 55	-64	-19	2856	746.06	-1.56	22.53
28	SLU 56	-64	-9	2877	750.52	-1.6	22.36
28	SLU 57	-64	-15	2865	747.84	-1.58	22.46
28	SLU 58	-64	-9	2877	750.52	-1.6	22.36
28	SLU 59	-64	-15	2865	747.84	-1.58	22.46
28	SLU 60	-68	-9	3020	786.28	-1.61	23.79
28	SLU 61	-68	-15	3007	783.6	-1.59	23.89
28	SLU 62	-68	-9	3020	786.28	-1.61	23.79
28	SLU 63	-68	-15	3007	783.6	-1.59	23.89
28	SLU 64	-61	-8	2799	731.01	-1.63	21.32
28	SLU 65	-61	-18	2778	726.55	-1.6	21.5
28	SLU 66	-61	-8	2799	731.01	-1.63	21.32
28	SLU 67	-61	-14	2787	728.33	-1.61	21.43
28	SLU 68	-61	-18	2778	726.55	-1.6	21.5
28	SLU 69	-61	-8	2799	731.01	-1.63	21.32
28	SLU 70	-61	-14	2787	728.33	-1.61	21.43
28	SLU 71	-61	-8	2799	731.01	-1.63	21.32
28	SLU 72	-61	-14	2787	728.33	-1.61	21.43
28	SLU 73	-71	-19	3111	809.98	-1.64	24.83
28	SLU 74	-70	-8	3132	814.45	-1.67	24.66
28	SLU 75	-70	-14	3119	811.77	-1.65	24.76
28	SLU 76	-71	-19	3111	809.98	-1.64	24.83
28	SLU 77	-70	-8	3132	814.45	-1.67	24.66
28	SLU 78	-70	-14	3119	811.77	-1.65	24.76
28	SLU 79	-70	-8	3132	814.45	-1.67	24.66
28	SLU 80	-70	-14	3119	811.77	-1.65	24.76
28	SLU 81	-74	-8	3274	850.21	-1.69	26.09
28	SLU 82	-75	-14	3262	847.53	-1.67	26.19
28	SLU 83	-74	-8	3274	850.21	-1.69	26.09
28	SLU 84	-75	-14	3262	847.53	-1.67	26.19
28	SLE RA 1	-45	-6	2097	548.26	-1.24	15.9
28	SLE RA 2	-46	-13	2083	545.29	-1.22	16.01
28	SLE RA 3	-45	-6	2097	548.26	-1.24	15.9
28	SLE RA 4	-45	-10	2089	546.48	-1.22	15.97
28	SLE RA 5	-46	-13	2083	545.29	-1.22	16.01
28	SLE RA 6	-45	-6	2097	548.26	-1.24	15.9
28	SLE RA 7	-45	-10	2089	546.48	-1.22	15.97
28	SLE RA 8	-45	-6	2097	548.26	-1.24	15.9
28	SLE RA 9	-45	-10	2089	546.48	-1.22	15.97
28	SLE RA 10	-52	-13	2305	600.91	-1.24	18.24
28	SLE RA 11	-52	-6	2319	603.89	-1.26	18.12
28	SLE RA 12	-52	-11	2311	602.1	-1.25	18.19
28	SLE RA 13	-52	-13	2305	600.91	-1.24	18.24
28	SLE RA 14	-52	-6	2319	603.89	-1.26	18.12

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
28	SLE RA 15	-52	-11	2311	602.1	-1.25	18.19
28	SLE RA 16	-52	-6	2319	603.89	-1.26	18.12
28	SLE RA 17	-52	-11	2311	602.1	-1.25	18.19
28	SLE RA 18	-54	-6	2414	627.73	-1.28	19.07
28	SLE RA 19	-54	-11	2406	625.94	-1.26	19.14
28	SLE RA 20	-54	-6	2414	627.73	-1.28	19.07
28	SLE RA 21	-54	-11	2406	625.94	-1.26	19.14
28	SLE FR 1	-45	-6	2097	548.26	-1.24	15.9
28	SLE FR 2	-45	-8	2095	547.67	-1.23	15.92
28	SLE FR 3	-45	-6	2097	548.26	-1.24	15.9
28	SLE FR 4	-48	-8	2190	571.51	-1.25	16.87
28	SLE FR 5	-48	-6	2192	572.1	-1.25	16.85
28	SLE FR 6	-50	-6	2256	588	-1.26	17.48
28	SLE QP 1	-45	-6	2097	548.26	-1.24	15.9
28	SLE QP 2	-48	-6	2192	572.1	-1.25	16.85
28	SLD 1	121	59	2036	532.11	0.12	-42.22
28	SLD 2	163	91	2040	533	0.09	-56.89
28	SLD 3	108	-59	1817	486.43	0.43	-38.11
28	SLD 4	151	-27	1821	487.33	0.4	-52.78
28	SLD 5	6	180	2476	629.06	-1.3	-1.86
28	SLD 6	49	213	2480	629.97	-1.33	-16.75
28	SLD 7	-35	-212	1746	476.81	-0.26	11.84
28	SLD 8	8	-179	1751	477.72	-0.29	-3.05
28	SLD 9	-104	167	2634	666.49	-2.21	36.75
28	SLD 10	-61	200	2639	667.4	-2.24	21.86
28	SLD 11	-145	-226	1904	514.24	-1.17	50.45
28	SLD 12	-102	-193	1909	515.15	-1.2	35.56
28	SLD 13	-247	14	2564	656.88	-2.9	86.48
28	SLD 14	-204	47	2568	657.78	-2.93	71.81
28	SLD 15	-259	-104	2345	611.21	-2.59	90.59
28	SLD 16	-217	-71	2349	612.1	-2.62	75.92
28	SLV 1	336	142	1837	481.48	1.86	-117.54
28	SLV 2	432	216	1848	483.51	1.8	-150.81
28	SLV 3	307	-127	1338	377.38	2.57	-108.08
28	SLV 4	403	-53	1348	379.41	2.51	-141.35
28	SLV 5	76	419	2839	702.08	-1.37	-25.94
28	SLV 6	173	494	2850	704.14	-1.43	-59.7
28	SLV 7	-19	-476	1175	355.07	1	5.62
28	SLV 8	79	-401	1186	357.13	0.93	-28.14
28	SLV 9	-175	389	3199	787.08	-3.43	61.84
28	SLV 10	-77	463	3210	789.13	-3.5	28.08
28	SLV 11	-269	-507	1535	440.07	-1.06	93.4
28	SLV 12	-172	-432	1546	442.13	-1.13	59.63
28	SLV 13	-499	40	3036	764.8	-5.01	175.05
28	SLV 14	-403	114	3047	766.83	-5.07	141.77
28	SLV 15	-528	-228	2537	660.7	-4.3	184.51
28	SLV 16	-432	-154	2548	662.72	-4.36	151.24
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	-43	-5	2079	569.04	-2.37	15.19
29	SLU 2	-44	-16	2057	563.94	-2.33	15.36
29	SLU 3	-43	-5	2079	569.04	-2.37	15.19
29	SLU 4	-44	-12	2066	565.98	-2.35	15.29
29	SLU 5	-44	-16	2057	563.94	-2.33	15.36
29	SLU 6	-43	-5	2079	569.04	-2.37	15.19
29	SLU 7	-44	-12	2066	565.98	-2.35	15.29
29	SLU 8	-43	-5	2079	569.04	-2.37	15.19
29	SLU 9	-44	-12	2066	565.98	-2.35	15.29
29	SLU 10	-53	-16	2394	652.72	-2.59	18.7
29	SLU 11	-53	-5	2416	657.82	-2.64	18.52
29	SLU 12	-53	-12	2403	654.76	-2.61	18.63
29	SLU 13	-53	-16	2394	652.72	-2.59	18.7
29	SLU 14	-53	-5	2416	657.82	-2.64	18.52
29	SLU 15	-53	-12	2403	654.76	-2.61	18.63
29	SLU 16	-53	-5	2416	657.82	-2.64	18.52
29	SLU 17	-53	-12	2403	654.76	-2.61	18.63
29	SLU 18	-57	-5	2561	695.87	-2.75	19.95
29	SLU 19	-57	-11	2547	692.81	-2.72	20.06
29	SLU 20	-57	-5	2561	695.87	-2.75	19.95
29	SLU 21	-57	-11	2547	692.81	-2.72	20.06
29	SLU 22	-50	-4	2339	637.48	-2.62	17.48
29	SLU 23	-50	-15	2317	632.38	-2.58	17.66
29	SLU 24	-50	-4	2339	637.48	-2.62	17.48
29	SLU 25	-50	-11	2326	634.42	-2.59	17.59
29	SLU 26	-50	-15	2317	632.38	-2.58	17.66
29	SLU 27	-50	-4	2339	637.48	-2.62	17.48
29	SLU 28	-50	-11	2326	634.42	-2.59	17.59
29	SLU 29	-50	-4	2339	637.48	-2.62	17.48
29	SLU 30	-50	-11	2326	634.42	-2.59	17.59
29	SLU 31	-60	-15	2654	721.16	-2.84	21
29	SLU 32	-59	-4	2676	726.26	-2.89	20.82
29	SLU 33	-60	-10	2663	723.2	-2.86	20.93
29	SLU 34	-60	-15	2654	721.16	-2.84	21
29	SLU 35	-59	-4	2676	726.26	-2.89	20.82
29	SLU 36	-60	-10	2663	723.2	-2.86	20.93

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
29	SLU 37	-59	-4	2676	726.26	-2.89	20.82
29	SLU 38	-60	-10	2663	723.2	-2.86	20.93
29	SLU 39	-63	-4	2820	764.31	-3	22.25
29	SLU 40	-64	-10	2807	761.25	-2.97	22.35
29	SLU 41	-63	-4	2820	764.31	-3	22.25
29	SLU 42	-64	-10	2807	761.25	-2.97	22.35
29	SLU 43	-54	-7	2614	716.29	-3	18.95
29	SLU 44	-55	-18	2592	711.19	-2.95	19.13
29	SLU 45	-54	-7	2614	716.29	-3	18.95
29	SLU 46	-54	-14	2601	713.23	-2.97	19.06
29	SLU 47	-55	-18	2592	711.19	-2.95	19.13
29	SLU 48	-54	-7	2614	716.29	-3	18.95
29	SLU 49	-54	-14	2601	713.23	-2.97	19.06
29	SLU 50	-54	-7	2614	716.29	-3	18.95
29	SLU 51	-54	-14	2601	713.23	-2.97	19.06
29	SLU 52	-64	-18	2929	799.97	-3.22	22.47
29	SLU 53	-64	-7	2951	805.07	-3.26	22.29
29	SLU 54	-64	-13	2938	802.01	-3.24	22.4
29	SLU 55	-64	-18	2929	799.97	-3.22	22.47
29	SLU 56	-64	-7	2951	805.07	-3.26	22.29
29	SLU 57	-64	-13	2938	802.01	-3.24	22.4
29	SLU 58	-64	-7	2951	805.07	-3.26	22.29
29	SLU 59	-64	-13	2938	802.01	-3.24	22.4
29	SLU 60	-68	-6	3095	843.12	-3.38	23.72
29	SLU 61	-68	-13	3082	840.06	-3.35	23.83
29	SLU 62	-68	-6	3095	843.12	-3.38	23.72
29	SLU 63	-68	-13	3082	840.06	-3.35	23.83
29	SLU 64	-61	-6	2874	784.73	-3.25	21.25
29	SLU 65	-61	-17	2851	779.63	-3.2	21.43
29	SLU 66	-61	-6	2874	784.73	-3.25	21.25
29	SLU 67	-61	-13	2860	781.67	-3.22	21.36
29	SLU 68	-61	-17	2851	779.63	-3.2	21.43
29	SLU 69	-61	-6	2874	784.73	-3.25	21.25
29	SLU 70	-61	-13	2860	781.67	-3.22	21.36
29	SLU 71	-61	-6	2874	784.73	-3.25	21.25
29	SLU 72	-61	-13	2860	781.67	-3.22	21.36
29	SLU 73	-71	-17	3188	868.41	-3.47	24.76
29	SLU 74	-70	-6	3211	873.51	-3.51	24.59
29	SLU 75	-70	-12	3197	870.45	-3.49	24.69
29	SLU 76	-71	-17	3188	868.41	-3.47	24.76
29	SLU 77	-70	-6	3211	873.51	-3.51	24.59
29	SLU 78	-70	-12	3197	870.45	-3.49	24.69
29	SLU 79	-70	-6	3211	873.51	-3.51	24.59
29	SLU 80	-70	-12	3197	870.45	-3.49	24.69
29	SLU 81	-74	-5	3355	911.56	-3.63	26.02
29	SLU 82	-75	-12	3342	908.5	-3.6	26.12
29	SLU 83	-74	-5	3355	911.56	-3.63	26.02
29	SLU 84	-75	-12	3342	908.5	-3.6	26.12
29	SLE RA 1	-45	-5	2153	588.6	-2.44	15.84
29	SLE RA 2	-46	-12	2139	585.2	-2.41	15.96
29	SLE RA 3	-45	-5	2153	588.6	-2.44	15.84
29	SLE RA 4	-45	-9	2145	586.56	-2.43	15.91
29	SLE RA 5	-46	-12	2139	585.2	-2.41	15.96
29	SLE RA 6	-45	-5	2153	588.6	-2.44	15.84
29	SLE RA 7	-45	-9	2145	586.56	-2.43	15.91
29	SLE RA 8	-45	-5	2153	588.6	-2.44	15.84
29	SLE RA 9	-45	-9	2145	586.56	-2.43	15.91
29	SLE RA 10	-52	-12	2363	644.38	-2.59	18.18
29	SLE RA 11	-52	-5	2378	647.78	-2.62	18.07
29	SLE RA 12	-52	-9	2369	645.74	-2.6	18.14
29	SLE RA 13	-52	-12	2363	644.38	-2.59	18.18
29	SLE RA 14	-52	-5	2378	647.78	-2.62	18.07
29	SLE RA 15	-52	-9	2369	645.74	-2.6	18.14
29	SLE RA 16	-52	-5	2378	647.78	-2.62	18.07
29	SLE RA 17	-52	-9	2369	645.74	-2.6	18.14
29	SLE RA 18	-54	-4	2474	673.15	-2.7	19.02
29	SLE RA 19	-54	-9	2466	671.11	-2.68	19.09
29	SLE RA 20	-54	-4	2474	673.15	-2.7	19.02
29	SLE RA 21	-54	-9	2466	671.11	-2.68	19.09
29	SLE FR 1	-45	-5	2153	588.6	-2.44	15.84
29	SLE FR 2	-45	-6	2150	587.92	-2.44	15.87
29	SLE FR 3	-45	-5	2153	588.6	-2.44	15.84
29	SLE FR 4	-48	-6	2247	613.28	-2.51	16.82
29	SLE FR 5	-48	-5	2250	613.96	-2.52	16.79
29	SLE FR 6	-50	-5	2314	630.87	-2.57	17.43
29	SLE QP 1	-45	-5	2153	588.6	-2.44	15.84
29	SLE QP 2	-48	-5	2250	613.96	-2.52	16.79
29	SLD 1	121	66	2049	557.6	-1.01	-42.19
29	SLD 2	163	103	2055	558.84	-1.04	-56.85
29	SLD 3	108	-62	1819	505.38	-0.55	-38.06
29	SLD 4	151	-25	1824	506.62	-0.58	-52.71
29	SLD 5	6	197	2537	675.82	-2.74	-1.93
29	SLD 6	49	234	2542	677.07	-2.77	-16.81
29	SLD 7	-35	-229	1769	501.74	-1.23	11.85
29	SLD 8	8	-191	1775	503	-1.26	-3.03
29	SLD 9	-104	182	2725	724.93	-3.78	36.62
29	SLD 10	-61	220	2730	726.18	-3.81	21.74

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
29	SLD 11	-145	-244	1957	550.85	-2.27	50.4
29	SLD 12	-102	-206	1962	552.11	-2.3	35.52
29	SLD 13	-246	16	2675	721.31	-4.46	86.3
29	SLD 14	-204	53	2680	722.54	-4.49	71.65
29	SLD 15	-259	-112	2445	669.08	-4	90.44
29	SLD 16	-216	-75	2450	670.32	-4.03	75.78
29	SLV 1	335	156	1796	486.2	0.92	-117.42
29	SLV 2	431	240	1808	488.99	0.85	-150.65
29	SLV 3	307	-136	1270	367.16	1.95	-107.89
29	SLV 4	403	-52	1283	369.96	1.88	-141.13
29	SLV 5	76	455	2905	755.17	-3.03	-26.03
29	SLV 6	174	540	2918	758.01	-3.1	-59.76
29	SLV 7	-19	-516	1155	358.38	0.41	5.71
29	SLV 8	78	-431	1168	361.22	0.34	-28.02
29	SLV 9	-174	421	3332	866.7	-5.38	61.61
29	SLV 10	-77	506	3344	869.54	-5.45	27.88
29	SLV 11	-269	-550	1581	469.91	-1.94	93.35
29	SLV 12	-172	-465	1594	472.75	-2.01	59.62
29	SLV 13	-499	42	3216	857.96	-6.92	174.72
29	SLV 14	-403	126	3229	860.76	-6.99	141.48
29	SLV 15	-527	-249	2691	738.93	-5.89	184.24
29	SLV 16	-431	-165	2704	741.73	-5.96	151.01
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	-37	-4	1860	544.55	49.8	13.16
30	SLU 2	-38	-15	1840	539.4	49.27	13.62
30	SLU 3	-37	-4	1860	544.55	49.8	13.16
30	SLU 4	-38	-11	1848	541.46	49.48	13.44
30	SLU 5	-38	-15	1840	539.4	49.27	13.62
30	SLU 6	-37	-4	1860	544.55	49.8	13.16
30	SLU 7	-38	-11	1848	541.46	49.48	13.44
30	SLU 8	-37	-4	1860	544.55	49.8	13.16
30	SLU 9	-38	-11	1848	541.46	49.48	13.44
30	SLU 10	-46	-14	2139	624.49	57.33	16.48
30	SLU 11	-46	-4	2159	629.64	57.86	16.02
30	SLU 12	-46	-10	2147	626.55	57.54	16.29
30	SLU 13	-46	-14	2139	624.49	57.33	16.48
30	SLU 14	-46	-4	2159	629.64	57.86	16.02
30	SLU 15	-46	-10	2147	626.55	57.54	16.29
30	SLU 16	-46	-4	2159	629.64	57.86	16.02
30	SLU 17	-46	-10	2147	626.55	57.54	16.29
30	SLU 18	-49	-4	2287	666.1	61.31	17.24
30	SLU 19	-49	-10	2275	663.01	61	17.52
30	SLU 20	-49	-4	2287	666.1	61.31	17.24
30	SLU 21	-49	-10	2275	663.01	61	17.52
30	SLU 22	-43	-3	2091	610.43	56.01	15.1
30	SLU 23	-43	-14	2071	605.29	55.48	15.56
30	SLU 24	-43	-3	2091	610.43	56.01	15.1
30	SLU 25	-43	-9	2079	607.35	55.69	15.38
30	SLU 26	-43	-14	2071	605.29	55.48	15.56
30	SLU 27	-43	-3	2091	610.43	56.01	15.1
30	SLU 28	-43	-9	2079	607.35	55.69	15.38
30	SLU 29	-43	-3	2091	610.43	56.01	15.1
30	SLU 30	-43	-9	2079	607.35	55.69	15.38
30	SLU 31	-52	-13	2370	690.38	63.54	18.42
30	SLU 32	-51	-3	2390	695.52	64.07	17.96
30	SLU 33	-51	-9	2378	692.43	63.75	18.23
30	SLU 34	-52	-13	2370	690.38	63.54	18.42
30	SLU 35	-51	-3	2390	695.52	64.07	17.96
30	SLU 36	-51	-9	2378	692.43	63.75	18.23
30	SLU 37	-51	-3	2390	695.52	64.07	17.96
30	SLU 38	-51	-9	2378	692.43	63.75	18.23
30	SLU 39	-55	-2	2518	731.99	67.52	19.18
30	SLU 40	-55	-9	2506	728.9	67.2	19.46
30	SLU 41	-55	-2	2518	731.99	67.52	19.18
30	SLU 42	-55	-9	2506	728.9	67.2	19.46
30	SLU 43	-47	-6	2339	685.32	62.61	16.45
30	SLU 44	-47	-16	2318	680.18	62.08	16.91
30	SLU 45	-47	-6	2339	685.32	62.61	16.45
30	SLU 46	-47	-12	2326	682.24	62.29	16.72
30	SLU 47	-47	-16	2318	680.18	62.08	16.91
30	SLU 48	-47	-6	2339	685.32	62.61	16.45
30	SLU 49	-47	-12	2326	682.24	62.29	16.72
30	SLU 50	-47	-6	2339	685.32	62.61	16.45
30	SLU 51	-47	-12	2326	682.24	62.29	16.72
30	SLU 52	-55	-16	2617	765.27	70.14	19.76
30	SLU 53	-55	-5	2638	770.41	70.67	19.3
30	SLU 54	-55	-12	2625	767.32	70.35	19.58
30	SLU 55	-55	-16	2617	765.27	70.14	19.76
30	SLU 56	-55	-5	2638	770.41	70.67	19.3
30	SLU 57	-55	-12	2625	767.32	70.35	19.58
30	SLU 58	-55	-5	2638	770.41	70.67	19.3
30	SLU 59	-55	-12	2625	767.32	70.35	19.58
30	SLU 60	-58	-5	2766	806.88	74.12	20.53
30	SLU 61	-59	-12	2754	803.79	73.81	20.8

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
30	SLU 62	-58	-5	2766	806.88	74.12	20.53
30	SLU 63	-59	-12	2754	803.79	73.81	20.8
30	SLU 64	-52	-5	2570	751.21	68.82	18.39
30	SLU 65	-53	-15	2550	746.06	68.29	18.85
30	SLU 66	-52	-5	2570	751.21	68.82	18.39
30	SLU 67	-53	-11	2558	748.12	68.5	18.66
30	SLU 68	-53	-15	2550	746.06	68.29	18.85
30	SLU 69	-52	-5	2570	751.21	68.82	18.39
30	SLU 70	-53	-11	2558	748.12	68.5	18.66
30	SLU 71	-52	-5	2570	751.21	68.82	18.39
30	SLU 72	-53	-11	2558	748.12	68.5	18.66
30	SLU 73	-61	-15	2849	831.15	76.35	21.7
30	SLU 74	-60	-4	2869	836.3	76.88	21.24
30	SLU 75	-61	-11	2857	833.21	76.56	21.52
30	SLU 76	-61	-15	2849	831.15	76.35	21.7
30	SLU 77	-60	-4	2869	836.3	76.88	21.24
30	SLU 78	-61	-11	2857	833.21	76.56	21.52
30	SLU 79	-60	-4	2869	836.3	76.88	21.24
30	SLU 80	-61	-11	2857	833.21	76.56	21.52
30	SLU 81	-64	-4	2997	872.76	80.33	22.47
30	SLU 82	-64	-10	2985	869.68	80.02	22.74
30	SLU 83	-64	-4	2997	872.76	80.33	22.47
30	SLU 84	-64	-10	2985	869.68	80.02	22.74
30	SLE RA 1	-39	-4	1926	563.37	51.57	13.72
30	SLE RA 2	-39	-11	1913	559.94	51.22	14.02
30	SLE RA 3	-39	-4	1926	563.37	51.57	13.72
30	SLE RA 4	-39	-8	1918	561.32	51.36	13.9
30	SLE RA 5	-39	-11	1913	559.94	51.22	14.02
30	SLE RA 6	-39	-4	1926	563.37	51.57	13.72
30	SLE RA 7	-39	-8	1918	561.32	51.36	13.9
30	SLE RA 8	-39	-4	1926	563.37	51.57	13.72
30	SLE RA 9	-39	-8	1918	561.32	51.36	13.9
30	SLE RA 10	-45	-11	2112	616.67	56.59	15.93
30	SLE RA 11	-44	-4	2125	620.1	56.95	15.62
30	SLE RA 12	-45	-8	2117	618.04	56.73	15.8
30	SLE RA 13	-45	-11	2112	616.67	56.59	15.93
30	SLE RA 14	-44	-4	2125	620.1	56.95	15.62
30	SLE RA 15	-45	-8	2117	618.04	56.73	15.8
30	SLE RA 16	-44	-4	2125	620.1	56.95	15.62
30	SLE RA 17	-45	-8	2117	618.04	56.73	15.8
30	SLE RA 18	-47	-3	2211	644.41	59.25	16.44
30	SLE RA 19	-47	-8	2203	642.35	59.04	16.62
30	SLE RA 20	-47	-3	2211	644.41	59.25	16.44
30	SLE RA 21	-47	-8	2203	642.35	59.04	16.62
30	SLE FR 1	-39	-4	1926	563.37	51.57	13.72
30	SLE FR 2	-39	-5	1923	562.69	51.5	13.78
30	SLE FR 3	-39	-4	1926	563.37	51.57	13.72
30	SLE FR 4	-41	-5	2009	587	53.81	14.59
30	SLE FR 5	-41	-4	2012	587.68	53.88	14.53
30	SLE FR 6	-43	-4	2068	603.89	55.41	15.08
30	SLE QP 1	-39	-4	1926	563.37	51.57	13.72
30	SLE QP 2	-41	-4	2012	587.68	53.88	14.53
30	SLD 1	104	61	1801	523.35	49.04	-36.85
30	SLD 2	140	96	1806	524.77	49.17	-50.49
30	SLD 3	93	-57	1590	470.52	43.51	-30.6
30	SLD 4	129	-22	1596	471.93	43.65	-44.23
30	SLD 5	6	182	2266	648.02	60.75	-5.49
30	SLD 6	42	218	2271	649.45	60.89	-19.33
30	SLD 7	-30	-211	1564	471.89	42.35	15.35
30	SLD 8	7	-175	1569	473.33	42.48	1.51
30	SLD 9	-89	168	2454	702.04	65.27	27.56
30	SLD 10	-52	204	2459	703.48	65.41	13.71
30	SLD 11	-125	-225	1752	525.92	46.87	48.4
30	SLD 12	-88	-189	1757	527.35	47	34.56
30	SLD 13	-212	14	2427	703.44	64.11	73.3
30	SLD 14	-175	50	2433	704.85	64.24	59.66
30	SLD 15	-223	-104	2217	650.6	58.58	79.55
30	SLD 16	-186	-68	2222	652.01	58.72	65.92
30	SLV 1	289	144	1534	441.8	42.91	-102.4
30	SLV 2	371	224	1546	445.01	43.21	-133.33
30	SLV 3	264	-125	1053	321.35	30.32	-88.06
30	SLV 4	346	-45	1066	324.56	30.62	-118.98
30	SLV 5	66	419	2592	725.46	69.57	-31.25
30	SLV 6	150	501	2605	728.72	69.88	-62.63
30	SLV 7	-17	-477	991	323.95	27.61	16.56
30	SLV 8	67	-395	1004	327.2	27.91	-14.82
30	SLV 9	-150	387	3019	848.16	79.84	43.89
30	SLV 10	-66	469	3032	851.42	80.14	12.51
30	SLV 11	-232	-509	1418	446.65	37.88	91.69
30	SLV 12	-148	-427	1431	449.91	38.18	60.31
30	SLV 13	-429	37	2957	850.81	77.13	148.05
30	SLV 14	-346	118	2970	854.02	77.43	117.13
30	SLV 15	-454	-232	2477	730.36	64.54	162.39
30	SLV 16	-371	-151	2489	733.57	64.84	131.47
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

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
30	CRTFP Uy-	0	0	0	0	0	0
32	SLU 1	-51	-6	2647	609.68	465.9	13.76
32	SLU 2	-52	-21	2616	603.42	460.63	16.7
32	SLU 3	-51	-6	2647	609.68	465.9	13.76
32	SLU 4	-52	-15	2628	605.93	462.74	15.52
32	SLU 5	-52	-21	2616	603.42	460.63	16.7
32	SLU 6	-51	-6	2647	609.68	465.9	13.76
32	SLU 7	-52	-15	2628	605.93	462.74	15.52
32	SLU 8	-51	-6	2647	609.68	465.9	13.76
32	SLU 9	-52	-15	2628	605.93	462.74	15.52
32	SLU 10	-63	-21	3041	700.13	535.61	19.35
32	SLU 11	-62	-6	3071	706.38	540.88	16.42
32	SLU 12	-63	-15	3053	702.63	537.72	18.18
32	SLU 13	-63	-21	3041	700.13	535.61	19.35
32	SLU 14	-62	-6	3071	706.38	540.88	16.42
32	SLU 15	-63	-15	3053	702.63	537.72	18.18
32	SLU 16	-62	-6	3071	706.38	540.88	16.42
32	SLU 17	-63	-15	3053	702.63	537.72	18.18
32	SLU 18	-67	-6	3253	747.82	573.02	17.55
32	SLU 19	-68	-15	3235	744.07	569.85	19.32
32	SLU 20	-67	-6	3253	747.82	573.02	17.55
32	SLU 21	-68	-15	3235	744.07	569.85	19.32
32	SLU 22	-59	-5	2976	684.73	523.93	15.33
32	SLU 23	-60	-20	2946	678.48	518.66	18.27
32	SLU 24	-59	-5	2976	684.73	523.93	15.33
32	SLU 25	-59	-14	2958	680.98	520.77	17.09
32	SLU 26	-60	-20	2946	678.48	518.66	18.27
32	SLU 27	-59	-5	2976	684.73	523.93	15.33
32	SLU 28	-59	-14	2958	680.98	520.77	17.09
32	SLU 29	-59	-5	2976	684.73	523.93	15.33
32	SLU 30	-59	-14	2958	680.98	520.77	17.09
32	SLU 31	-71	-19	3371	775.18	593.64	20.92
32	SLU 32	-70	-4	3401	781.43	598.91	17.98
32	SLU 33	-70	-13	3383	777.68	595.75	19.75
32	SLU 34	-71	-19	3371	775.18	593.64	20.92
32	SLU 35	-70	-4	3401	781.43	598.91	17.98
32	SLU 36	-70	-13	3383	777.68	595.75	19.75
32	SLU 37	-70	-4	3401	781.43	598.91	17.98
32	SLU 38	-70	-13	3383	777.68	595.75	19.75
32	SLU 39	-75	-4	3583	822.88	631.04	19.12
32	SLU 40	-75	-13	3565	819.12	627.88	20.89
32	SLU 41	-75	-4	3583	822.88	631.04	19.12
32	SLU 42	-75	-13	3565	819.12	627.88	20.89
32	SLU 43	-64	-9	3327	766.85	585.77	17.35
32	SLU 44	-65	-24	3297	760.6	580.51	20.29
32	SLU 45	-64	-9	3327	766.85	585.77	17.35
32	SLU 46	-64	-18	3309	763.1	582.61	19.12
32	SLU 47	-65	-24	3297	760.6	580.51	20.29
32	SLU 48	-64	-9	3327	766.85	585.77	17.35
32	SLU 49	-64	-18	3309	763.1	582.61	19.12
32	SLU 50	-64	-9	3327	766.85	585.77	17.35
32	SLU 51	-64	-18	3309	763.1	582.61	19.12
32	SLU 52	-76	-23	3722	857.3	655.49	22.95
32	SLU 53	-75	-8	3752	863.55	660.76	20.01
32	SLU 54	-76	-17	3734	859.8	657.59	21.77
32	SLU 55	-76	-23	3722	857.3	655.49	22.95
32	SLU 56	-75	-8	3752	863.55	660.76	20.01
32	SLU 57	-76	-17	3734	859.8	657.59	21.77
32	SLU 58	-75	-8	3752	863.55	660.76	20.01
32	SLU 59	-76	-17	3734	859.8	657.59	21.77
32	SLU 60	-80	-8	3934	904.99	692.89	21.15
32	SLU 61	-80	-17	3916	901.24	689.73	22.91
32	SLU 62	-80	-8	3934	904.99	692.89	21.15
32	SLU 63	-80	-17	3916	901.24	689.73	22.91
32	SLU 64	-71	-7	3657	841.9	643.8	18.92
32	SLU 65	-72	-22	3627	835.65	638.53	21.86
32	SLU 66	-71	-7	3657	841.9	643.8	18.92
32	SLU 67	-72	-16	3639	838.15	640.64	20.68
32	SLU 68	-72	-22	3627	835.65	638.53	21.86
32	SLU 69	-71	-7	3657	841.9	643.8	18.92
32	SLU 70	-72	-16	3639	838.15	640.64	20.68
32	SLU 71	-71	-7	3657	841.9	643.8	18.92
32	SLU 72	-72	-16	3639	838.15	640.64	20.68
32	SLU 73	-84	-22	4052	932.35	713.51	24.51
32	SLU 74	-83	-7	4082	938.6	718.78	21.58
32	SLU 75	-83	-16	4064	934.85	715.62	23.34
32	SLU 76	-84	-22	4052	932.35	713.51	24.51
32	SLU 77	-83	-7	4082	938.6	718.78	21.58
32	SLU 78	-83	-16	4064	934.85	715.62	23.34
32	SLU 79	-83	-7	4082	938.6	718.78	21.58
32	SLU 80	-83	-16	4064	934.85	715.62	23.34
32	SLU 81	-87	-6	4264	980.05	750.92	22.71
32	SLU 82	-88	-15	4246	976.3	747.76	24.48
32	SLU 83	-87	-6	4264	980.05	750.92	22.71
32	SLU 84	-88	-15	4246	976.3	747.76	24.48
32	SLE RA 1	-53	-6	2741	631.12	482.48	14.21
32	SLE RA 2	-54	-16	2721	626.95	478.97	16.17

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
32	SLE RA 3	-53	-6	2741	631.12	482.48	14.21
32	SLE RA 4	-54	-12	2729	628.62	480.37	15.38
32	SLE RA 5	-54	-16	2721	626.95	478.97	16.17
32	SLE RA 6	-53	-6	2741	631.12	482.48	14.21
32	SLE RA 7	-54	-12	2729	628.62	480.37	15.38
32	SLE RA 8	-53	-6	2741	631.12	482.48	14.21
32	SLE RA 9	-54	-12	2729	628.62	480.37	15.38
32	SLE RA 10	-61	-15	3004	691.42	528.95	17.94
32	SLE RA 11	-61	-6	3024	695.59	532.47	15.98
32	SLE RA 12	-61	-11	3012	693.09	530.36	17.15
32	SLE RA 13	-61	-15	3004	691.42	528.95	17.94
32	SLE RA 14	-61	-6	3024	695.59	532.47	15.98
32	SLE RA 15	-61	-11	3012	693.09	530.36	17.15
32	SLE RA 16	-61	-6	3024	695.59	532.47	15.98
32	SLE RA 17	-61	-11	3012	693.09	530.36	17.15
32	SLE RA 18	-64	-5	3145	723.22	553.89	16.74
32	SLE RA 19	-64	-11	3133	720.72	551.78	17.91
32	SLE RA 20	-64	-5	3145	723.22	553.89	16.74
32	SLE RA 21	-64	-11	3133	720.72	551.78	17.91
32	SLE FR 1	-53	-6	2741	631.12	482.48	14.21
32	SLE FR 2	-53	-8	2737	630.29	481.78	14.6
32	SLE FR 3	-53	-6	2741	631.12	482.48	14.21
32	SLE FR 4	-57	-8	2858	657.92	503.2	15.36
32	SLE FR 5	-56	-6	2862	658.75	503.9	14.97
32	SLE FR 6	-59	-6	2943	677.17	518.18	15.47
32	SLE QP 1	-53	-6	2741	631.12	482.48	14.21
32	SLE QP 2	-56	-6	2862	658.75	503.9	14.97
32	SLD 1	140	85	2537	580.71	452.47	-42.71
32	SLD 2	191	136	2545	582.52	453.89	-64.51
32	SLD 3	124	-81	2224	516.09	397.59	-9.51
32	SLD 4	174	-30	2233	517.91	399.02	-31.3
32	SLD 5	9	255	3235	732.69	571.19	-44.91
32	SLD 6	61	308	3244	734.53	572.63	-67.03
32	SLD 7	-45	-299	2194	517.31	388.27	65.79
32	SLD 8	6	-247	2203	519.15	389.72	43.66
32	SLD 9	-119	235	3521	798.35	618.08	-13.72
32	SLD 10	-67	288	3530	800.19	619.53	-35.85
32	SLD 11	-174	-319	2481	582.97	435.17	96.97
32	SLD 12	-122	-267	2489	584.81	436.62	74.84
32	SLD 13	-287	18	3491	799.59	608.79	61.24
32	SLD 14	-237	70	3500	801.41	610.21	39.44
32	SLD 15	-304	-148	3179	734.98	553.91	94.44
32	SLD 16	-253	-96	3188	736.79	555.34	72.65
32	SLV 1	391	201	2124	481.78	387.34	-116.52
32	SLV 2	506	318	2144	485.89	390.58	-165.94
32	SLV 3	353	-178	1412	334.46	262.23	-40.72
32	SLV 4	468	-61	1432	338.57	265.46	-90.15
32	SLV 5	94	590	3713	827.62	657.54	-121.77
32	SLV 6	211	708	3733	831.79	660.81	-171.93
32	SLV 7	-32	-674	1341	336.57	240.49	130.88
32	SLV 8	85	-556	1360	340.73	243.77	80.73
32	SLV 9	-198	544	4364	976.77	764.03	-50.79
32	SLV 10	-81	663	4383	980.93	767.31	-100.95
32	SLV 11	-323	-720	1991	485.71	346.99	201.86
32	SLV 12	-207	-601	2011	489.88	350.27	151.71
32	SLV 13	-581	50	4292	978.93	742.34	120.08
32	SLV 14	-466	167	4312	983.04	745.57	70.66
32	SLV 15	-619	-330	3581	831.61	617.23	195.88
32	SLV 16	-504	-213	3600	835.72	620.46	146.46
32	CRTFP Ux+	0	0	0	0.01	0	0
32	CRTFP Ux-	0	0	0	-0.01	0	0
32	CRTFP Uy+	0	0	0	-0.01	-0.01	0
32	CRTFP Uy-	0	0	0	0.01	0.01	0
58	SLU 1	-32	-23	1598	42.15	-305.73	-4.99
58	SLU 2	-32	-32	1581	41.74	-302.47	-7.18
58	SLU 3	-32	-23	1598	42.15	-305.73	-4.99
58	SLU 4	-32	-28	1588	41.91	-303.77	-6.31
58	SLU 5	-32	-32	1581	41.74	-302.47	-7.18
58	SLU 6	-32	-23	1598	42.15	-305.73	-4.99
58	SLU 7	-32	-28	1588	41.91	-303.77	-6.31
58	SLU 8	-32	-23	1598	42.15	-305.73	-4.99
58	SLU 9	-32	-28	1588	41.91	-303.77	-6.31
58	SLU 10	-38	-37	1886	49.7	-358.25	-8.39
58	SLU 11	-37	-29	1904	50.12	-361.51	-6.21
58	SLU 12	-38	-34	1893	49.87	-359.56	-7.52
58	SLU 13	-38	-37	1886	49.7	-358.25	-8.39
58	SLU 14	-37	-29	1904	50.12	-361.51	-6.21
58	SLU 15	-38	-34	1893	49.87	-359.56	-7.52
58	SLU 16	-37	-29	1904	50.12	-361.51	-6.21
58	SLU 17	-38	-34	1893	49.87	-359.56	-7.52
58	SLU 18	-40	-31	2034	53.53	-385.42	-6.73
58	SLU 19	-40	-36	2024	53.28	-383.47	-8.04
58	SLU 20	-40	-31	2034	53.53	-385.42	-6.73
58	SLU 21	-40	-36	2024	53.28	-383.47	-8.04
58	SLU 22	-36	-25	1822	48	-346.41	-5.44
58	SLU 23	-37	-34	1805	47.59	-343.15	-7.62
58	SLU 24	-36	-25	1822	48	-346.41	-5.44

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
58	SLU 25	-36	-31	1812	47.75	-344.45	-6.75
58	SLU 26	-37	-34	1805	47.59	-343.15	-7.62
58	SLU 27	-36	-25	1822	48	-346.41	-5.44
58	SLU 28	-36	-31	1812	47.75	-344.45	-6.75
58	SLU 29	-36	-25	1822	48	-346.41	-5.44
58	SLU 30	-36	-31	1812	47.75	-344.45	-6.75
58	SLU 31	-42	-40	2110	55.55	-398.93	-8.83
58	SLU 32	-42	-31	2127	55.96	-402.19	-6.65
58	SLU 33	-42	-36	2117	55.71	-400.24	-7.96
58	SLU 34	-42	-40	2110	55.55	-398.93	-8.83
58	SLU 35	-42	-31	2127	55.96	-402.19	-6.65
58	SLU 36	-42	-36	2117	55.71	-400.24	-7.96
58	SLU 37	-42	-31	2127	55.96	-402.19	-6.65
58	SLU 38	-42	-36	2117	55.71	-400.24	-7.96
58	SLU 39	-44	-33	2258	59.37	-426.1	-7.17
58	SLU 40	-44	-38	2248	59.12	-424.14	-8.48
58	SLU 41	-44	-33	2258	59.37	-426.1	-7.17
58	SLU 42	-44	-38	2248	59.12	-424.14	-8.48
58	SLU 43	-40	-29	2001	52.8	-383.5	-6.34
58	SLU 44	-40	-38	1984	52.39	-380.24	-8.53
58	SLU 45	-40	-29	2001	52.8	-383.5	-6.34
58	SLU 46	-40	-35	1991	52.55	-381.54	-7.65
58	SLU 47	-40	-38	1984	52.39	-380.24	-8.53
58	SLU 48	-40	-29	2001	52.8	-383.5	-6.34
58	SLU 49	-40	-35	1991	52.55	-381.54	-7.65
58	SLU 50	-40	-29	2001	52.8	-383.5	-6.34
58	SLU 51	-40	-35	1991	52.55	-381.54	-7.65
58	SLU 52	-46	-44	2289	60.35	-436.03	-9.74
58	SLU 53	-46	-35	2306	60.76	-439.28	-7.55
58	SLU 54	-46	-40	2296	60.51	-437.33	-8.86
58	SLU 55	-46	-44	2289	60.35	-436.03	-9.74
58	SLU 56	-46	-35	2306	60.76	-439.28	-7.55
58	SLU 57	-46	-40	2296	60.51	-437.33	-8.86
58	SLU 58	-46	-35	2306	60.76	-439.28	-7.55
58	SLU 59	-46	-40	2296	60.51	-437.33	-8.86
58	SLU 60	-48	-37	2437	64.17	-463.19	-8.07
58	SLU 61	-48	-42	2427	63.92	-461.24	-9.38
58	SLU 62	-48	-37	2437	64.17	-463.19	-8.07
58	SLU 63	-48	-42	2427	63.92	-461.24	-9.38
58	SLU 64	-45	-32	2225	58.64	-424.18	-6.78
58	SLU 65	-45	-40	2208	58.23	-420.92	-8.97
58	SLU 66	-45	-32	2225	58.64	-424.18	-6.78
58	SLU 67	-45	-37	2215	58.39	-422.22	-8.09
58	SLU 68	-45	-40	2208	58.23	-420.92	-8.97
58	SLU 69	-45	-32	2225	58.64	-424.18	-6.78
58	SLU 70	-45	-37	2215	58.39	-422.22	-8.09
58	SLU 71	-45	-32	2225	58.64	-424.18	-6.78
58	SLU 72	-45	-37	2215	58.39	-422.22	-8.09
58	SLU 73	-50	-46	2513	66.19	-476.7	-10.18
58	SLU 74	-50	-37	2530	66.6	-479.96	-7.99
58	SLU 75	-50	-42	2520	66.35	-478.01	-9.31
58	SLU 76	-50	-46	2513	66.19	-476.7	-10.18
58	SLU 77	-50	-37	2530	66.6	-479.96	-7.99
58	SLU 78	-50	-42	2520	66.35	-478.01	-9.31
58	SLU 79	-50	-37	2530	66.6	-479.96	-7.99
58	SLU 80	-50	-42	2520	66.35	-478.01	-9.31
58	SLU 81	-52	-39	2661	70.01	-503.87	-8.51
58	SLU 82	-52	-45	2651	69.77	-501.92	-9.83
58	SLU 83	-52	-39	2661	70.01	-503.87	-8.51
58	SLU 84	-52	-45	2651	69.77	-501.92	-9.83
58	SLE RA 1	-33	-24	1662	43.82	-317.35	-5.12
58	SLE RA 2	-33	-30	1651	43.55	-315.18	-6.58
58	SLE RA 3	-33	-24	1662	43.82	-317.35	-5.12
58	SLE RA 4	-33	-27	1655	43.66	-316.05	-5.99
58	SLE RA 5	-33	-30	1651	43.55	-315.18	-6.58
58	SLE RA 6	-33	-24	1662	43.82	-317.35	-5.12
58	SLE RA 7	-33	-27	1655	43.66	-316.05	-5.99
58	SLE RA 8	-33	-24	1662	43.82	-317.35	-5.12
58	SLE RA 9	-33	-27	1655	43.66	-316.05	-5.99
58	SLE RA 10	-37	-33	1854	48.86	-352.37	-7.39
58	SLE RA 11	-37	-27	1866	49.13	-354.54	-5.93
58	SLE RA 12	-37	-31	1859	48.97	-353.24	-6.8
58	SLE RA 13	-37	-33	1854	48.86	-352.37	-7.39
58	SLE RA 14	-37	-27	1866	49.13	-354.54	-5.93
58	SLE RA 15	-37	-31	1859	48.97	-353.24	-6.8
58	SLE RA 16	-37	-27	1866	49.13	-354.54	-5.93
58	SLE RA 17	-37	-31	1859	48.97	-353.24	-6.8
58	SLE RA 18	-38	-29	1953	51.41	-370.48	-6.27
58	SLE RA 19	-38	-33	1946	51.24	-369.18	-7.15
58	SLE RA 20	-38	-29	1953	51.41	-370.48	-6.27
58	SLE RA 21	-38	-33	1946	51.24	-369.18	-7.15
58	SLE FR 1	-33	-24	1662	43.82	-317.35	-5.12
58	SLE FR 2	-33	-25	1660	43.77	-316.92	-5.41
58	SLE FR 3	-33	-24	1662	43.82	-317.35	-5.12
58	SLE FR 4	-35	-27	1747	46.04	-332.85	-5.76
58	SLE FR 5	-35	-25	1749	46.1	-333.29	-5.47
58	SLE FR 6	-36	-26	1808	47.61	-343.91	-5.7

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
58	SLE QP 1	-33	-24	1662	43.82	-317.35	-5.12
58	SLE QP 2	-35	-25	1749	46.1	-333.29	-5.47
58	SLD 1	84	26	2114	55.37	-397.41	5.49
58	SLD 2	113	-5	2109	55.24	-396.43	-3.01
58	SLD 3	77	-75	1919	50.66	-360.64	-19.55
58	SLD 4	106	-106	1913	50.53	-359.66	-28.05
58	SLD 5	1	154	2157	56.07	-408.64	38.84
58	SLD 6	31	122	2151	55.94	-407.65	30.2
58	SLD 7	-23	-182	1506	40.36	-286.07	-44.62
58	SLD 8	7	-214	1501	40.23	-285.08	-53.26
58	SLD 9	-77	163	1998	51.96	-381.5	42.33
58	SLD 10	-47	131	1993	51.83	-380.5	33.69
58	SLD 11	-101	-173	1347	36.25	-258.92	-41.14
58	SLD 12	-71	-205	1342	36.12	-257.93	-49.77
58	SLD 13	-176	55	1586	41.67	-306.92	17.12
58	SLD 14	-147	24	1580	41.54	-305.94	8.61
58	SLD 15	-183	-45	1390	36.96	-270.15	-7.92
58	SLD 16	-154	-76	1385	36.83	-269.17	-16.42
58	SLV 1	236	91	2579	67.2	-479.26	19.49
58	SLV 2	302	20	2567	66.91	-477.04	0.2
58	SLV 3	220	-139	2134	56.45	-395.38	-37.58
58	SLV 4	286	-209	2122	56.16	-393.16	-56.87
58	SLV 5	47	383	2678	68.84	-505.1	95.46
58	SLV 6	115	311	2666	68.54	-502.85	75.89
58	SLV 7	-7	-382	1193	33	-225.48	-94.76
58	SLV 8	60	-454	1181	32.71	-223.23	-114.33
58	SLV 9	-130	403	2318	59.49	-443.34	103.4
58	SLV 10	-63	332	2305	59.19	-441.09	83.83
58	SLV 11	-185	-362	833	23.66	-163.73	-86.83
58	SLV 12	-117	-434	821	23.36	-161.48	-106.4
58	SLV 13	-356	159	1377	36.04	-273.41	45.93
58	SLV 14	-289	88	1365	35.75	-271.2	26.65
58	SLV 15	-372	-71	932	25.29	-189.53	-11.13
58	SLV 16	-306	-141	920	25	-187.32	-30.42
58	CRTFP Ux+	0	0	0	0	0	0
58	CRTFP Ux-	0	0	0	0	0	0
58	CRTFP Uy+	0	0	0	0	0	0
58	CRTFP Uy-	0	0	0	0	0	0
61	SLU 1	-29	-4	1540	40.71	304.5	1.65
61	SLU 2	-30	-13	1524	40.31	301.24	3.89
61	SLU 3	-29	-4	1540	40.71	304.5	1.65
61	SLU 4	-29	-9	1530	40.47	302.54	2.99
61	SLU 5	-30	-13	1524	40.31	301.24	3.89
61	SLU 6	-29	-4	1540	40.71	304.5	1.65
61	SLU 7	-29	-9	1530	40.47	302.54	2.99
61	SLU 8	-29	-4	1540	40.71	304.5	1.65
61	SLU 9	-29	-9	1530	40.47	302.54	2.99
61	SLU 10	-36	-12	1770	46.78	348.76	3.95
61	SLU 11	-36	-3	1787	47.18	352.02	1.72
61	SLU 12	-36	-9	1777	46.94	350.06	3.06
61	SLU 13	-36	-12	1770	46.78	348.76	3.95
61	SLU 14	-36	-3	1787	47.18	352.02	1.72
61	SLU 15	-36	-9	1777	46.94	350.06	3.06
61	SLU 16	-36	-3	1787	47.18	352.02	1.72
61	SLU 17	-36	-9	1777	46.94	350.06	3.06
61	SLU 18	-38	-3	1892	49.95	372.38	1.75
61	SLU 19	-39	-8	1882	49.71	370.43	3.09
61	SLU 20	-38	-3	1892	49.95	372.38	1.75
61	SLU 21	-39	-8	1882	49.71	370.43	3.09
61	SLU 22	-34	-3	1731	45.72	341.13	1.5
61	SLU 23	-34	-12	1715	45.32	337.86	3.74
61	SLU 24	-34	-3	1731	45.72	341.13	1.5
61	SLU 25	-34	-8	1721	45.48	339.17	2.84
61	SLU 26	-34	-12	1715	45.32	337.86	3.74
61	SLU 27	-34	-3	1731	45.72	341.13	1.5
61	SLU 28	-34	-8	1721	45.48	339.17	2.84
61	SLU 29	-34	-3	1731	45.72	341.13	1.5
61	SLU 30	-34	-8	1721	45.48	339.17	2.84
61	SLU 31	-41	-11	1961	51.8	385.38	3.81
61	SLU 32	-40	-2	1978	52.19	388.65	1.57
61	SLU 33	-40	-8	1968	51.95	386.69	2.91
61	SLU 34	-41	-11	1961	51.8	385.38	3.81
61	SLU 35	-40	-2	1978	52.19	388.65	1.57
61	SLU 36	-40	-8	1968	51.95	386.69	2.91
61	SLU 37	-40	-2	1978	52.19	388.65	1.57
61	SLU 38	-40	-8	1968	51.95	386.69	2.91
61	SLU 39	-43	-2	2084	54.97	409.01	1.6
61	SLU 40	-43	-7	2074	54.73	407.05	2.94
61	SLU 41	-43	-2	2084	54.97	409.01	1.6
61	SLU 42	-43	-7	2074	54.73	407.05	2.94
61	SLU 43	-36	-5	1937	51.2	383.29	2.19
61	SLU 44	-37	-14	1920	50.81	380.03	4.43
61	SLU 45	-36	-5	1937	51.2	383.29	2.19
61	SLU 46	-37	-10	1927	50.96	381.33	3.54
61	SLU 47	-37	-14	1920	50.81	380.03	4.43
61	SLU 48	-36	-5	1937	51.2	383.29	2.19
61	SLU 49	-37	-10	1927	50.96	381.33	3.54

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
61	SLU 50	-36	-5	1937	51.2	383.29	2.19
61	SLU 51	-37	-10	1927	50.96	381.33	3.54
61	SLU 52	-43	-14	2167	57.28	427.55	4.5
61	SLU 53	-43	-5	2183	57.67	430.81	2.26
61	SLU 54	-43	-10	2173	57.44	428.85	3.6
61	SLU 55	-43	-14	2167	57.28	427.55	4.5
61	SLU 56	-43	-5	2183	57.67	430.81	2.26
61	SLU 57	-43	-10	2173	57.44	428.85	3.6
61	SLU 58	-43	-5	2183	57.67	430.81	2.26
61	SLU 59	-43	-10	2173	57.44	428.85	3.6
61	SLU 60	-46	-5	2289	60.45	451.18	2.29
61	SLU 61	-46	-10	2279	60.21	449.22	3.63
61	SLU 62	-46	-5	2289	60.45	451.18	2.29
61	SLU 63	-46	-10	2279	60.21	449.22	3.63
61	SLU 64	-41	-4	2128	56.22	419.92	2.04
61	SLU 65	-41	-13	2111	55.82	416.66	4.28
61	SLU 66	-41	-4	2128	56.22	419.92	2.04
61	SLU 67	-41	-9	2118	55.98	417.96	3.39
61	SLU 68	-41	-13	2111	55.82	416.66	4.28
61	SLU 69	-41	-4	2128	56.22	419.92	2.04
61	SLU 70	-41	-9	2118	55.98	417.96	3.39
61	SLU 71	-41	-4	2128	56.22	419.92	2.04
61	SLU 72	-41	-9	2118	55.98	417.96	3.39
61	SLU 73	-48	-13	2358	62.29	464.17	4.35
61	SLU 74	-47	-4	2374	62.69	467.44	2.11
61	SLU 75	-48	-9	2364	62.45	465.48	3.46
61	SLU 76	-48	-13	2358	62.29	464.17	4.35
61	SLU 77	-47	-4	2374	62.69	467.44	2.11
61	SLU 78	-48	-9	2364	62.45	465.48	3.46
61	SLU 79	-47	-4	2374	62.69	467.44	2.11
61	SLU 80	-48	-9	2364	62.45	465.48	3.46
61	SLU 81	-50	-4	2480	65.46	487.8	2.14
61	SLU 82	-50	-9	2470	65.22	485.85	3.49
61	SLU 83	-50	-4	2480	65.46	487.8	2.14
61	SLU 84	-50	-9	2470	65.22	485.85	3.49
61	SLE RA 1	-30	-3	1595	42.14	314.96	1.61
61	SLE RA 2	-31	-9	1584	41.88	312.79	3.1
61	SLE RA 3	-30	-3	1595	42.14	314.96	1.61
61	SLE RA 4	-31	-7	1588	41.98	313.66	2.5
61	SLE RA 5	-31	-9	1584	41.88	312.79	3.1
61	SLE RA 6	-30	-3	1595	42.14	314.96	1.61
61	SLE RA 7	-31	-7	1588	41.98	313.66	2.5
61	SLE RA 8	-30	-3	1595	42.14	314.96	1.61
61	SLE RA 9	-31	-7	1588	41.98	313.66	2.5
61	SLE RA 10	-35	-9	1748	46.19	344.47	3.14
61	SLE RA 11	-35	-3	1759	46.46	346.64	1.65
61	SLE RA 12	-35	-7	1752	46.3	345.34	2.55
61	SLE RA 13	-35	-9	1748	46.19	344.47	3.14
61	SLE RA 14	-35	-3	1759	46.46	346.64	1.65
61	SLE RA 15	-35	-7	1752	46.3	345.34	2.55
61	SLE RA 16	-35	-3	1759	46.46	346.64	1.65
61	SLE RA 17	-35	-7	1752	46.3	345.34	2.55
61	SLE RA 18	-37	-3	1830	48.3	360.22	1.67
61	SLE RA 19	-37	-7	1823	48.15	358.92	2.57
61	SLE RA 20	-37	-3	1830	48.3	360.22	1.67
61	SLE RA 21	-37	-7	1823	48.15	358.92	2.57
61	SLE FR 1	-30	-3	1595	42.14	314.96	1.61
61	SLE FR 2	-31	-5	1593	42.09	314.53	1.9
61	SLE FR 3	-30	-3	1595	42.14	314.96	1.61
61	SLE FR 4	-32	-4	1663	43.94	328.11	1.92
61	SLE FR 5	-32	-3	1665	43.99	328.54	1.63
61	SLE FR 6	-34	-3	1712	45.22	337.59	1.64
61	SLE QP 1	-30	-3	1595	42.14	314.96	1.61
61	SLE QP 2	-32	-3	1665	43.99	328.54	1.63
61	SLD 1	85	51	1478	38.89	299.14	-11.94
61	SLD 2	114	82	1482	39.01	300.01	-20.32
61	SLD 3	77	-48	1305	34.8	265.12	13.03
61	SLD 4	106	-18	1310	34.91	265.99	4.65
61	SLD 5	6	153	1869	48.64	371.02	-37.32
61	SLD 6	35	184	1874	48.75	371.9	-45.82
61	SLD 7	-23	-179	1294	34.98	257.6	45.91
61	SLD 8	6	-148	1298	35.09	258.48	37.4
61	SLD 9	-71	141	2032	52.89	398.6	-34.15
61	SLD 10	-41	172	2037	53	399.48	-42.66
61	SLD 11	-100	-191	1457	39.23	285.19	49.07
61	SLD 12	-70	-160	1461	39.34	286.07	40.57
61	SLD 13	-170	11	2021	53.07	391.1	-1.4
61	SLD 14	-141	42	2026	53.18	391.96	-9.78
61	SLD 15	-179	-88	1848	48.97	357.07	23.57
61	SLD 16	-150	-58	1853	49.09	357.94	15.19
61	SLV 1	235	121	1240	32.43	261.93	-29.43
61	SLV 2	301	190	1250	32.69	263.89	-48.43
61	SLV 3	215	-106	846	23.09	184.35	27.51
61	SLV 4	281	-37	857	23.35	186.32	8.51
61	SLV 5	55	354	2131	54.6	425.51	-87.27
61	SLV 6	122	424	2142	54.86	427.5	-106.55
61	SLV 7	-12	-403	819	23.46	166.93	102.54

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
61	SLV 8	55	-333	829	23.72	168.92	83.27
61	SLV 9	-119	326	2501	64.26	488.16	-80.02
61	SLV 10	-53	397	2512	64.52	490.15	-99.29
61	SLV 11	-186	-430	1189	33.12	229.58	109.8
61	SLV 12	-119	-360	1200	33.38	231.57	90.52
61	SLV 13	-346	30	2474	64.63	470.76	-5.26
61	SLV 14	-280	100	2484	64.89	472.73	-24.26
61	SLV 15	-366	-197	2080	55.29	393.19	51.68
61	SLV 16	-300	-128	2091	55.55	395.15	32.69
61	CRTFP Ux+	0	0	0	0	0	0
61	CRTFP Ux-	0	0	0	0	0	0
61	CRTFP Uy+	0	0	0	0	0	0
61	CRTFP Uy-	0	0	0	0	0	0
63	SLU 1	-69	-20	3331	87.98	-6.61	0.37
63	SLU 2	-70	-30	3302	87.37	-6.48	0.35
63	SLU 3	-69	-20	3331	87.98	-6.61	0.37
63	SLU 4	-70	-26	3314	87.61	-6.53	0.36
63	SLU 5	-70	-30	3302	87.37	-6.48	0.35
63	SLU 6	-69	-20	3331	87.98	-6.61	0.37
63	SLU 7	-70	-26	3314	87.61	-6.53	0.36
63	SLU 8	-69	-20	3331	87.98	-6.61	0.37
63	SLU 9	-70	-26	3314	87.61	-6.53	0.36
63	SLU 10	-84	-32	3902	103.19	-6.2	0.4
63	SLU 11	-84	-22	3932	103.8	-6.33	0.43
63	SLU 12	-84	-28	3914	103.44	-6.25	0.41
63	SLU 13	-84	-32	3902	103.19	-6.2	0.4
63	SLU 14	-84	-22	3932	103.8	-6.33	0.43
63	SLU 15	-84	-28	3914	103.44	-6.25	0.41
63	SLU 16	-84	-22	3932	103.8	-6.33	0.43
63	SLU 17	-84	-28	3914	103.44	-6.25	0.41
63	SLU 18	-90	-23	4189	110.58	-6.2	0.45
63	SLU 19	-90	-29	4172	110.22	-6.13	0.44
63	SLU 20	-90	-23	4189	110.58	-6.2	0.45
63	SLU 21	-90	-29	4172	110.22	-6.13	0.44
63	SLU 22	-79	-22	3780	99.79	-6.92	0.42
63	SLU 23	-80	-32	3751	99.18	-6.8	0.39
63	SLU 24	-79	-22	3780	99.79	-6.92	0.42
63	SLU 25	-80	-28	3763	99.42	-6.85	0.4
63	SLU 26	-80	-32	3751	99.18	-6.8	0.39
63	SLU 27	-79	-22	3780	99.79	-6.92	0.42
63	SLU 28	-80	-28	3763	99.42	-6.85	0.4
63	SLU 29	-79	-22	3780	99.79	-6.92	0.42
63	SLU 30	-80	-28	3763	99.42	-6.85	0.4
63	SLU 31	-94	-34	4351	115	-6.51	0.45
63	SLU 32	-93	-24	4381	115.61	-6.64	0.47
63	SLU 33	-94	-30	4363	115.25	-6.57	0.46
63	SLU 34	-94	-34	4351	115	-6.51	0.45
63	SLU 35	-93	-24	4381	115.61	-6.64	0.47
63	SLU 36	-94	-30	4363	115.25	-6.57	0.46
63	SLU 37	-93	-24	4381	115.61	-6.64	0.47
63	SLU 38	-94	-30	4363	115.25	-6.57	0.46
63	SLU 39	-100	-25	4638	122.4	-6.52	0.5
63	SLU 40	-100	-31	4620	122.03	-6.45	0.49
63	SLU 41	-100	-25	4638	122.4	-6.52	0.5
63	SLU 42	-100	-31	4620	122.03	-6.45	0.49
63	SLU 43	-87	-25	4177	110.32	-8.48	0.46
63	SLU 44	-88	-35	4147	109.71	-8.35	0.44
63	SLU 45	-87	-25	4177	110.32	-8.48	0.46
63	SLU 46	-87	-31	4159	109.96	-8.4	0.45
63	SLU 47	-88	-35	4147	109.71	-8.35	0.44
63	SLU 48	-87	-25	4177	110.32	-8.48	0.46
63	SLU 49	-87	-31	4159	109.96	-8.4	0.45
63	SLU 50	-87	-25	4177	110.32	-8.48	0.46
63	SLU 51	-87	-31	4159	109.96	-8.4	0.45
63	SLU 52	-102	-38	4748	125.53	-8.07	0.5
63	SLU 53	-101	-28	4777	126.15	-8.2	0.52
63	SLU 54	-101	-34	4760	125.78	-8.12	0.51
63	SLU 55	-102	-38	4748	125.53	-8.07	0.5
63	SLU 56	-101	-28	4777	126.15	-8.2	0.52
63	SLU 57	-101	-34	4760	125.78	-8.12	0.51
63	SLU 58	-101	-28	4777	126.15	-8.2	0.52
63	SLU 59	-101	-34	4760	125.78	-8.12	0.51
63	SLU 60	-107	-29	5035	132.93	-8.08	0.55
63	SLU 61	-108	-35	5017	132.56	-8	0.53
63	SLU 62	-107	-29	5035	132.93	-8.08	0.55
63	SLU 63	-108	-35	5017	132.56	-8	0.53
63	SLU 64	-97	-27	4626	122.13	-8.8	0.51
63	SLU 65	-98	-37	4596	121.52	-8.67	0.49
63	SLU 66	-97	-27	4626	122.13	-8.8	0.51
63	SLU 67	-97	-33	4608	121.77	-8.72	0.5
63	SLU 68	-98	-37	4596	121.52	-8.67	0.49
63	SLU 69	-97	-27	4626	122.13	-8.8	0.51
63	SLU 70	-97	-33	4608	121.77	-8.72	0.5
63	SLU 71	-97	-27	4626	122.13	-8.8	0.51
63	SLU 72	-97	-33	4608	121.77	-8.72	0.5
63	SLU 73	-112	-40	5197	137.35	-8.39	0.55
63	SLU 74	-111	-30	5226	137.96	-8.52	0.57

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
63	SLU 75	-111	-36	5209	137.59	-8.44	0.55
63	SLU 76	-112	-40	5197	137.35	-8.39	0.55
63	SLU 77	-111	-30	5226	137.96	-8.52	0.57
63	SLU 78	-111	-36	5209	137.59	-8.44	0.55
63	SLU 79	-111	-30	5226	137.96	-8.52	0.57
63	SLU 80	-111	-36	5209	137.59	-8.44	0.55
63	SLU 81	-117	-31	5483	144.74	-8.4	0.59
63	SLU 82	-117	-37	5466	144.37	-8.32	0.58
63	SLU 83	-117	-31	5483	144.74	-8.4	0.59
63	SLU 84	-117	-37	5466	144.37	-8.32	0.58
63	SLE RA 1	-72	-21	3460	91.35	-6.7	0.38
63	SLE RA 2	-73	-27	3440	90.95	-6.61	0.37
63	SLE RA 3	-72	-21	3460	91.35	-6.7	0.38
63	SLE RA 4	-73	-25	3448	91.11	-6.65	0.37
63	SLE RA 5	-73	-27	3440	90.95	-6.61	0.37
63	SLE RA 6	-72	-21	3460	91.35	-6.7	0.38
63	SLE RA 7	-73	-25	3448	91.11	-6.65	0.37
63	SLE RA 8	-72	-21	3460	91.35	-6.7	0.38
63	SLE RA 9	-73	-25	3448	91.11	-6.65	0.37
63	SLE RA 10	-82	-29	3840	101.49	-6.42	0.41
63	SLE RA 11	-82	-22	3860	101.9	-6.51	0.42
63	SLE RA 12	-82	-26	3848	101.66	-6.46	0.41
63	SLE RA 13	-82	-29	3840	101.49	-6.42	0.41
63	SLE RA 14	-82	-22	3860	101.9	-6.51	0.42
63	SLE RA 15	-82	-26	3848	101.66	-6.46	0.41
63	SLE RA 16	-82	-22	3860	101.9	-6.51	0.42
63	SLE RA 17	-82	-26	3848	101.66	-6.46	0.41
63	SLE RA 18	-86	-23	4031	106.42	-6.43	0.44
63	SLE RA 19	-86	-27	4020	106.18	-6.38	0.43
63	SLE RA 20	-86	-23	4031	106.42	-6.43	0.44
63	SLE RA 21	-86	-27	4020	106.18	-6.38	0.43
63	SLE FR 1	-72	-21	3460	91.35	-6.7	0.38
63	SLE FR 2	-72	-22	3456	91.27	-6.68	0.38
63	SLE FR 3	-72	-21	3460	91.35	-6.7	0.38
63	SLE FR 4	-76	-23	3627	95.79	-6.6	0.4
63	SLE FR 5	-76	-21	3631	95.87	-6.62	0.4
63	SLE FR 6	-79	-22	3745	98.89	-6.56	0.41
63	SLE QP 1	-72	-21	3460	91.35	-6.7	0.38
63	SLE QP 2	-76	-21	3631	95.87	-6.62	0.4
63	SLD 1	187	53	3660	96.03	6.59	-5.88
63	SLD 2	251	67	3662	96.06	6.39	-6.49
63	SLD 3	169	-69	3345	89.48	8.17	-6.28
63	SLD 4	233	-55	3347	89.51	7.97	-6.89
63	SLD 5	7	182	4117	105.85	-4.98	-0.66
63	SLD 6	72	196	4119	105.88	-5.18	-1.28
63	SLD 7	-53	-226	3066	84.01	0.29	-1.99
63	SLD 8	12	-212	3068	84.03	0.08	-2.61
63	SLD 9	-165	169	4194	107.71	-13.32	3.41
63	SLD 10	-100	183	4196	107.74	-13.52	2.79
63	SLD 11	-225	-238	3143	85.87	-8.05	2.08
63	SLD 12	-159	-224	3145	85.9	-8.26	1.46
63	SLD 13	-386	12	3916	102.24	-21.2	7.69
63	SLD 14	-321	26	3918	102.27	-21.4	7.08
63	SLD 15	-404	-110	3600	95.69	-19.62	7.29
63	SLD 16	-339	-96	3602	95.72	-19.82	6.68
63	SLV 1	522	149	3699	96.27	23.38	-13.88
63	SLV 2	668	181	3703	96.34	22.92	-15.26
63	SLV 3	481	-130	2979	81.33	26.99	-14.79
63	SLV 4	627	-98	2984	81.39	26.53	-16.18
63	SLV 5	114	441	4740	118.64	-2.92	-2
63	SLV 6	262	473	4745	118.71	-3.39	-3.41
63	SLV 7	-24	-488	2343	68.82	9.09	-5.05
63	SLV 8	124	-456	2348	68.88	8.63	-6.45
63	SLV 9	-277	413	4914	122.86	-21.86	7.25
63	SLV 10	-128	445	4919	122.93	-22.33	5.84
63	SLV 11	-415	-516	2517	73.04	-9.85	4.21
63	SLV 12	-266	-484	2522	73.11	-10.31	2.8
63	SLV 13	-779	56	4278	110.36	-39.76	16.97
63	SLV 14	-633	87	4283	110.42	-40.22	15.59
63	SLV 15	-821	-223	3559	95.41	-36.16	16.06
63	SLV 16	-675	-192	3564	95.48	-36.62	14.67
63	CRTFP Ux+	0	0	0	0	0	0
63	CRTFP Ux-	0	0	0	0	0	0
63	CRTFP Uy+	0	0	0	0	0	0
63	CRTFP Uy-	0	0	0	0	0	0
65	SLU 1	-32	-28	1766	-2.9	-289.1	-7.15
65	SLU 2	-32	-38	1749	-2.81	-286.36	-9.72
65	SLU 3	-32	-28	1766	-2.9	-289.1	-7.15
65	SLU 4	-32	-34	1756	-2.84	-287.46	-8.69
65	SLU 5	-32	-38	1749	-2.81	-286.36	-9.72
65	SLU 6	-32	-28	1766	-2.9	-289.1	-7.15
65	SLU 7	-32	-34	1756	-2.84	-287.46	-8.69
65	SLU 8	-32	-28	1766	-2.9	-289.1	-7.15
65	SLU 9	-32	-34	1756	-2.84	-287.46	-8.69
65	SLU 10	-38	-44	2083	-3.47	-336.65	-11.35
65	SLU 11	-37	-34	2100	-3.57	-339.39	-8.78
65	SLU 12	-38	-40	2090	-3.51	-337.74	-10.32

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
65	SLU 13	-38	-44	2083	-3.47	-336.65	-11.35
65	SLU 14	-37	-34	2100	-3.57	-339.39	-8.78
65	SLU 15	-38	-40	2090	-3.51	-337.74	-10.32
65	SLU 16	-37	-34	2100	-3.57	-339.39	-8.78
65	SLU 17	-38	-40	2090	-3.51	-337.74	-10.32
65	SLU 18	-40	-37	2243	-3.85	-360.94	-9.48
65	SLU 19	-40	-43	2233	-3.8	-359.29	-11.02
65	SLU 20	-40	-37	2243	-3.85	-360.94	-9.48
65	SLU 21	-40	-43	2233	-3.8	-359.29	-11.02
65	SLU 22	-36	-30	2011	-3.37	-325.74	-7.84
65	SLU 23	-36	-41	1994	-3.28	-323.01	-10.41
65	SLU 24	-36	-30	2011	-3.37	-325.74	-7.84
65	SLU 25	-36	-36	2001	-3.32	-324.1	-9.38
65	SLU 26	-36	-41	1994	-3.28	-323.01	-10.41
65	SLU 27	-36	-30	2011	-3.37	-325.74	-7.84
65	SLU 28	-36	-36	2001	-3.32	-324.1	-9.38
65	SLU 29	-36	-30	2011	-3.37	-325.74	-7.84
65	SLU 30	-36	-36	2001	-3.32	-324.1	-9.38
65	SLU 31	-42	-47	2328	-3.94	-373.29	-12.04
65	SLU 32	-42	-37	2345	-4.04	-376.03	-9.47
65	SLU 33	-42	-43	2335	-3.98	-374.38	-11.01
65	SLU 34	-42	-47	2328	-3.94	-373.29	-12.04
65	SLU 35	-42	-37	2345	-4.04	-376.03	-9.47
65	SLU 36	-42	-43	2335	-3.98	-374.38	-11.01
65	SLU 37	-42	-37	2345	-4.04	-376.03	-9.47
65	SLU 38	-42	-43	2335	-3.98	-374.38	-11.01
65	SLU 39	-44	-39	2488	-4.32	-397.58	-10.17
65	SLU 40	-44	-46	2478	-4.27	-395.94	-11.71
65	SLU 41	-44	-39	2488	-4.32	-397.58	-10.17
65	SLU 42	-44	-46	2478	-4.27	-395.94	-11.71
65	SLU 43	-40	-35	2212	-3.61	-363.27	-9.06
65	SLU 44	-40	-45	2195	-3.52	-360.53	-11.62
65	SLU 45	-40	-35	2212	-3.61	-363.27	-9.06
65	SLU 46	-40	-41	2202	-3.55	-361.63	-10.6
65	SLU 47	-40	-45	2195	-3.52	-360.53	-11.62
65	SLU 48	-40	-35	2212	-3.61	-363.27	-9.06
65	SLU 49	-40	-41	2202	-3.55	-361.63	-10.6
65	SLU 50	-40	-35	2212	-3.61	-363.27	-9.06
65	SLU 51	-40	-41	2202	-3.55	-361.63	-10.6
65	SLU 52	-46	-52	2529	-4.18	-410.82	-13.26
65	SLU 53	-45	-41	2546	-4.28	-413.55	-10.69
65	SLU 54	-46	-48	2536	-4.22	-411.91	-12.23
65	SLU 55	-46	-52	2529	-4.18	-410.82	-13.26
65	SLU 56	-45	-41	2546	-4.28	-413.55	-10.69
65	SLU 57	-46	-48	2536	-4.22	-411.91	-12.23
65	SLU 58	-45	-41	2546	-4.28	-413.55	-10.69
65	SLU 59	-46	-48	2536	-4.22	-411.91	-12.23
65	SLU 60	-48	-44	2689	-4.56	-435.1	-11.39
65	SLU 61	-48	-50	2679	-4.51	-433.46	-12.93
65	SLU 62	-48	-44	2689	-4.56	-435.1	-11.39
65	SLU 63	-48	-50	2679	-4.51	-433.46	-12.93
65	SLU 64	-44	-38	2457	-4.08	-399.91	-9.75
65	SLU 65	-45	-48	2440	-3.99	-397.17	-12.31
65	SLU 66	-44	-38	2457	-4.08	-399.91	-9.75
65	SLU 67	-44	-44	2447	-4.03	-398.27	-11.29
65	SLU 68	-45	-48	2440	-3.99	-397.17	-12.31
65	SLU 69	-44	-38	2457	-4.08	-399.91	-9.75
65	SLU 70	-44	-44	2447	-4.03	-398.27	-11.29
65	SLU 71	-44	-38	2457	-4.08	-399.91	-9.75
65	SLU 72	-44	-44	2447	-4.03	-398.27	-11.29
65	SLU 73	-50	-54	2774	-4.65	-447.46	-13.95
65	SLU 74	-50	-44	2791	-4.75	-450.19	-11.38
65	SLU 75	-50	-50	2781	-4.69	-448.55	-12.92
65	SLU 76	-50	-54	2774	-4.65	-447.46	-13.95
65	SLU 77	-50	-44	2791	-4.75	-450.19	-11.38
65	SLU 78	-50	-50	2781	-4.69	-448.55	-12.92
65	SLU 79	-50	-44	2791	-4.75	-450.19	-11.38
65	SLU 80	-50	-50	2781	-4.69	-448.55	-12.92
65	SLU 81	-52	-47	2934	-5.03	-471.74	-12.08
65	SLU 82	-52	-53	2924	-4.98	-470.1	-13.62
65	SLU 83	-52	-47	2934	-5.03	-471.74	-12.08
65	SLU 84	-52	-53	2924	-4.98	-470.1	-13.62
65	SLE RA 1	-33	-28	1836	-3.04	-299.57	-7.35
65	SLE RA 2	-33	-35	1825	-2.97	-297.75	-9.06
65	SLE RA 3	-33	-28	1836	-3.04	-299.57	-7.35
65	SLE RA 4	-33	-32	1829	-3	-298.47	-8.37
65	SLE RA 5	-33	-35	1825	-2.97	-297.75	-9.06
65	SLE RA 6	-33	-28	1836	-3.04	-299.57	-7.35
65	SLE RA 7	-33	-32	1829	-3	-298.47	-8.37
65	SLE RA 8	-33	-28	1836	-3.04	-299.57	-7.35
65	SLE RA 9	-33	-32	1829	-3	-298.47	-8.37
65	SLE RA 10	-37	-39	2047	-3.42	-331.27	-10.14
65	SLE RA 11	-37	-33	2059	-3.48	-333.09	-8.43
65	SLE RA 12	-37	-37	2052	-3.44	-332	-9.46
65	SLE RA 13	-37	-39	2047	-3.42	-331.27	-10.14
65	SLE RA 14	-37	-33	2059	-3.48	-333.09	-8.43
65	SLE RA 15	-37	-37	2052	-3.44	-332	-9.46

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
65	SLE RA 16	-37	-33	2059	-3.48	-333.09	-8.43
65	SLE RA 17	-37	-37	2052	-3.44	-332	-9.46
65	SLE RA 18	-38	-34	2154	-3.67	-347.46	-8.9
65	SLE RA 19	-38	-39	2147	-3.63	-346.37	-9.93
65	SLE RA 20	-38	-34	2154	-3.67	-347.46	-8.9
65	SLE RA 21	-38	-39	2147	-3.63	-346.37	-9.93
65	SLE FR 1	-33	-28	1836	-3.04	-299.57	-7.35
65	SLE FR 2	-33	-30	1834	-3.02	-299.2	-7.69
65	SLE FR 3	-33	-28	1836	-3.04	-299.57	-7.35
65	SLE FR 4	-35	-32	1929	-3.21	-313.57	-8.15
65	SLE FR 5	-35	-30	1932	-3.23	-313.94	-7.81
65	SLE FR 6	-36	-31	1995	-3.35	-323.51	-8.12
65	SLE QP 1	-33	-28	1836	-3.04	-299.57	-7.35
65	SLE QP 2	-35	-30	1932	-3.23	-313.94	-7.81
65	SLD 1	101	29	2319	-4.43	-370.12	7.08
65	SLD 2	132	-7	2314	-4.4	-369.29	-1.86
65	SLD 3	93	-88	2123	-3.38	-339	-22.33
65	SLD 4	123	-125	2118	-3.35	-338.17	-31.27
65	SLD 5	9	179	2347	-5.19	-378.29	44.46
65	SLD 6	40	142	2341	-5.16	-377.45	35.38
65	SLD 7	-21	-213	1694	-1.69	-274.55	-53.58
65	SLD 8	10	-250	1689	-1.67	-273.7	-62.65
65	SLD 9	-79	190	2175	-4.79	-354.17	47.03
65	SLD 10	-48	153	2169	-4.76	-353.33	37.95
65	SLD 11	-109	-203	1522	-1.3	-250.42	-51.01
65	SLD 12	-78	-240	1517	-1.27	-249.58	-60.08
65	SLD 13	-192	64	1745	-3.1	-289.71	15.64
65	SLD 14	-162	28	1740	-3.07	-288.88	6.7
65	SLD 15	-201	-54	1550	-2.05	-258.58	-13.77
65	SLD 16	-171	-90	1544	-2.02	-257.75	-22.71
65	SLV 1	275	106	2813	-5.97	-441.85	26.07
65	SLV 2	344	23	2801	-5.9	-439.97	5.8
65	SLV 3	254	-163	2367	-3.58	-370.87	-40.96
65	SLV 4	323	-245	2354	-3.51	-368.99	-61.24
65	SLV 5	65	447	2878	-7.7	-460.64	111.27
65	SLV 6	135	364	2865	-7.63	-458.73	90.7
65	SLV 7	-4	-448	1389	0.27	-224.03	-112.18
65	SLV 8	66	-531	1377	0.34	-222.12	-132.76
65	SLV 9	-135	471	2486	-6.79	-405.75	117.13
65	SLV 10	-66	387	2474	-6.72	-403.84	96.56
65	SLV 11	-204	-424	998	1.18	-169.14	-106.32
65	SLV 12	-134	-508	986	1.24	-167.23	-126.89
65	SLV 13	-393	185	1509	-2.94	-258.89	45.61
65	SLV 14	-324	103	1497	-2.88	-257.01	25.34
65	SLV 15	-413	-84	1062	-0.55	-187.9	-21.42
65	SLV 16	-344	-166	1050	-0.49	-186.02	-41.7
65	CRTFP Ux+	0	0	0	0	0	0
65	CRTFP Ux-	0	0	0	0	0	0
65	CRTFP Uy+	0	0	0	0	0	0
65	CRTFP Uy-	0	0	0	0	0	0
68	SLU 1	-29	-4	1706	-2.69	290.19	0.88
68	SLU 2	-29	-15	1689	-2.59	287.47	3.49
68	SLU 3	-29	-4	1706	-2.69	290.19	0.88
68	SLU 4	-29	-11	1696	-2.63	288.56	2.45
68	SLU 5	-29	-15	1689	-2.59	287.47	3.49
68	SLU 6	-29	-4	1706	-2.69	290.19	0.88
68	SLU 7	-29	-11	1696	-2.63	288.56	2.45
68	SLU 8	-29	-4	1706	-2.69	290.19	0.88
68	SLU 9	-29	-11	1696	-2.63	288.56	2.45
68	SLU 10	-36	-14	1960	-3.06	331.01	3.33
68	SLU 11	-35	-4	1977	-3.16	333.73	0.73
68	SLU 12	-35	-10	1967	-3.1	332.1	2.29
68	SLU 13	-36	-14	1960	-3.06	331.01	3.33
68	SLU 14	-35	-4	1977	-3.16	333.73	0.73
68	SLU 15	-35	-10	1967	-3.1	332.1	2.29
68	SLU 16	-35	-4	1977	-3.16	333.73	0.73
68	SLU 17	-35	-10	1967	-3.1	332.1	2.29
68	SLU 18	-38	-4	2093	-3.36	352.39	0.66
68	SLU 19	-38	-10	2083	-3.31	350.76	2.23
68	SLU 20	-38	-4	2093	-3.36	352.39	0.66
68	SLU 21	-38	-10	2083	-3.31	350.76	2.23
68	SLU 22	-33	-3	1916	-3.06	323.62	0.55
68	SLU 23	-34	-14	1899	-2.97	320.9	3.16
68	SLU 24	-33	-3	1916	-3.06	323.62	0.55
68	SLU 25	-33	-9	1906	-3	321.99	2.11
68	SLU 26	-34	-14	1899	-2.97	320.9	3.16
68	SLU 27	-33	-3	1916	-3.06	323.62	0.55
68	SLU 28	-33	-9	1906	-3	321.99	2.11
68	SLU 29	-33	-3	1916	-3.06	323.62	0.55
68	SLU 30	-33	-9	1906	-3	321.99	2.11
68	SLU 31	-40	-13	2171	-3.44	364.44	3
68	SLU 32	-40	-3	2187	-3.54	367.16	0.39
68	SLU 33	-40	-9	2177	-3.48	365.53	1.96
68	SLU 34	-40	-13	2171	-3.44	364.44	3
68	SLU 35	-40	-3	2187	-3.54	367.16	0.39
68	SLU 36	-40	-9	2177	-3.48	365.53	1.96
68	SLU 37	-40	-3	2187	-3.54	367.16	0.39

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
68	SLU 38	-40	-9	2177	-3.48	365.53	1.96
68	SLU 39	-43	-3	2303	-3.74	385.82	0.33
68	SLU 40	-43	-9	2294	-3.68	384.19	1.89
68	SLU 41	-43	-3	2303	-3.74	385.82	0.33
68	SLU 42	-43	-9	2294	-3.68	384.19	1.89
68	SLU 43	-36	-6	2145	-3.36	365.79	1.26
68	SLU 44	-36	-17	2129	-3.26	363.07	3.87
68	SLU 45	-36	-6	2145	-3.36	365.79	1.26
68	SLU 46	-36	-12	2135	-3.3	364.16	2.82
68	SLU 47	-36	-17	2129	-3.26	363.07	3.87
68	SLU 48	-36	-6	2145	-3.36	365.79	1.26
68	SLU 49	-36	-12	2135	-3.3	364.16	2.82
68	SLU 50	-36	-6	2145	-3.36	365.79	1.26
68	SLU 51	-36	-12	2135	-3.3	364.16	2.82
68	SLU 52	-43	-16	2400	-3.74	406.61	3.71
68	SLU 53	-42	-6	2417	-3.84	409.33	1.11
68	SLU 54	-43	-12	2407	-3.78	407.7	2.67
68	SLU 55	-43	-16	2400	-3.74	406.61	3.71
68	SLU 56	-42	-6	2417	-3.84	409.33	1.11
68	SLU 57	-43	-12	2407	-3.78	407.7	2.67
68	SLU 58	-42	-6	2417	-3.84	409.33	1.11
68	SLU 59	-43	-12	2407	-3.78	407.7	2.67
68	SLU 60	-45	-6	2533	-4.04	427.99	1.04
68	SLU 61	-45	-12	2523	-3.98	426.36	2.6
68	SLU 62	-45	-6	2533	-4.04	427.99	1.04
68	SLU 63	-45	-12	2523	-3.98	426.36	2.6
68	SLU 64	-40	-5	2355	-3.74	399.22	0.93
68	SLU 65	-41	-15	2339	-3.64	396.5	3.53
68	SLU 66	-40	-5	2355	-3.74	399.22	0.93
68	SLU 67	-41	-11	2346	-3.68	397.59	2.49
68	SLU 68	-41	-15	2339	-3.64	396.5	3.53
68	SLU 69	-40	-5	2355	-3.74	399.22	0.93
68	SLU 70	-41	-11	2346	-3.68	397.59	2.49
68	SLU 71	-40	-5	2355	-3.74	399.22	0.93
68	SLU 72	-41	-11	2346	-3.68	397.59	2.49
68	SLU 73	-47	-15	2610	-4.12	440.04	3.38
68	SLU 74	-47	-4	2627	-4.21	442.76	0.77
68	SLU 75	-47	-11	2617	-4.16	441.13	2.34
68	SLU 76	-47	-15	2610	-4.12	440.04	3.38
68	SLU 77	-47	-4	2627	-4.21	442.76	0.77
68	SLU 78	-47	-11	2617	-4.16	441.13	2.34
68	SLU 79	-47	-4	2627	-4.21	442.76	0.77
68	SLU 80	-47	-11	2617	-4.16	441.13	2.34
68	SLU 81	-50	-4	2743	-4.42	461.42	0.71
68	SLU 82	-50	-11	2733	-4.36	459.79	2.27
68	SLU 83	-50	-4	2743	-4.42	461.42	0.71
68	SLU 84	-50	-11	2733	-4.36	459.79	2.27
68	SLE RA 1	-30	-4	1766	-2.79	299.74	0.79
68	SLE RA 2	-30	-11	1755	-2.73	297.93	2.52
68	SLE RA 3	-30	-4	1766	-2.79	299.74	0.79
68	SLE RA 4	-30	-8	1759	-2.75	298.66	1.83
68	SLE RA 5	-30	-11	1755	-2.73	297.93	2.52
68	SLE RA 6	-30	-4	1766	-2.79	299.74	0.79
68	SLE RA 7	-30	-8	1759	-2.75	298.66	1.83
68	SLE RA 8	-30	-4	1766	-2.79	299.74	0.79
68	SLE RA 9	-30	-8	1759	-2.75	298.66	1.83
68	SLE RA 10	-35	-11	1936	-3.04	326.96	2.42
68	SLE RA 11	-34	-4	1947	-3.11	328.77	0.68
68	SLE RA 12	-35	-8	1940	-3.07	327.68	1.73
68	SLE RA 13	-35	-11	1936	-3.04	326.96	2.42
68	SLE RA 14	-34	-4	1947	-3.11	328.77	0.68
68	SLE RA 15	-35	-8	1940	-3.07	327.68	1.73
68	SLE RA 16	-34	-4	1947	-3.11	328.77	0.68
68	SLE RA 17	-35	-8	1940	-3.07	327.68	1.73
68	SLE RA 18	-36	-4	2024	-3.25	341.21	0.64
68	SLE RA 19	-36	-8	2017	-3.21	340.12	1.68
68	SLE RA 20	-36	-4	2024	-3.25	341.21	0.64
68	SLE RA 21	-36	-8	2017	-3.21	340.12	1.68
68	SLE FR 1	-30	-4	1766	-2.79	299.74	0.79
68	SLE FR 2	-30	-5	1763	-2.78	299.38	1.13
68	SLE FR 3	-30	-4	1766	-2.79	299.74	0.79
68	SLE FR 4	-32	-5	1841	-2.92	311.82	1.09
68	SLE FR 5	-32	-4	1843	-2.93	312.18	0.74
68	SLE FR 6	-33	-4	1895	-3.02	320.48	0.71
68	SLE QP 1	-30	-4	1766	-2.79	299.74	0.79
68	SLE QP 2	-32	-4	1843	-2.93	312.18	0.74
68	SLD 1	102	60	1629	-2.82	285.16	-15.23
68	SLD 2	132	95	1634	-2.85	285.89	-24.03
68	SLD 3	94	-57	1459	-1.78	256.88	13.81
68	SLD 4	124	-21	1464	-1.81	257.61	5.02
68	SLD 5	10	179	2035	-4.47	346.71	-44.96
68	SLD 6	41	215	2040	-4.49	347.45	-53.89
68	SLD 7	-18	-209	1469	-1	252.44	51.86
68	SLD 8	13	-173	1473	-1.02	253.18	42.93
68	SLD 9	-77	165	2213	-4.84	371.19	-41.45
68	SLD 10	-46	201	2218	-4.86	371.93	-50.38
68	SLD 11	-105	-223	1647	-1.36	276.92	55.37

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
68	SLD 12	-74	-187	1652	-1.39	277.66	46.44
68	SLD 13	-188	13	2223	-4.05	366.76	-3.53
68	SLD 14	-158	49	2227	-4.07	367.49	-12.33
68	SLD 15	-196	-103	2053	-3.01	338.48	25.51
68	SLD 16	-166	-68	2058	-3.03	339.21	16.72
68	SLV 1	273	142	1357	-2.7	250.91	-35.74
68	SLV 2	342	222	1368	-2.75	252.55	-55.69
68	SLV 3	254	-124	970	-0.32	186.43	30.5
68	SLV 4	323	-43	981	-0.38	188.07	10.55
68	SLV 5	64	413	2281	-6.44	391	-103.53
68	SLV 6	134	496	2292	-6.5	392.67	-123.78
68	SLV 7	0	-472	990	1.48	176.08	117.26
68	SLV 8	70	-389	1001	1.42	177.75	97.02
68	SLV 9	-134	382	2685	-7.28	446.62	-95.53
68	SLV 10	-64	464	2696	-7.33	448.29	-115.78
68	SLV 11	-198	-504	1395	0.64	231.7	125.26
68	SLV 12	-128	-421	1406	0.58	233.37	105.02
68	SLV 13	-387	35	2706	-5.48	436.29	-9.07
68	SLV 14	-318	116	2716	-5.54	437.94	-29.02
68	SLV 15	-406	-230	2319	-3.1	371.82	57.17
68	SLV 16	-337	-149	2329	-3.16	373.46	37.22
68	CRTFP Ux+	0	0	0	0	0	0
68	CRTFP Ux-	0	0	0	0	0	0
68	CRTFP Uy+	0	0	0	0	0	0
68	CRTFP Uy-	0	0	0	0	0	0
70	SLU 1	-68	-22	3646	-6.43	-7.87	-2.36
70	SLU 2	-69	-34	3621	-6.15	-7.73	-2.4
70	SLU 3	-68	-22	3646	-6.43	-7.87	-2.36
70	SLU 4	-69	-29	3631	-6.27	-7.79	-2.38
70	SLU 5	-69	-34	3621	-6.15	-7.73	-2.4
70	SLU 6	-68	-22	3646	-6.43	-7.87	-2.36
70	SLU 7	-69	-29	3631	-6.27	-7.79	-2.38
70	SLU 8	-68	-22	3646	-6.43	-7.87	-2.36
70	SLU 9	-69	-29	3631	-6.27	-7.79	-2.38
70	SLU 10	-83	-36	4277	-7.34	-7.47	-2.89
70	SLU 11	-82	-25	4303	-7.62	-7.62	-2.85
70	SLU 12	-83	-32	4287	-7.45	-7.53	-2.87
70	SLU 13	-83	-36	4277	-7.34	-7.47	-2.89
70	SLU 14	-82	-25	4303	-7.62	-7.62	-2.85
70	SLU 15	-83	-32	4287	-7.45	-7.53	-2.87
70	SLU 16	-82	-25	4303	-7.62	-7.62	-2.85
70	SLU 17	-83	-32	4287	-7.45	-7.53	-2.87
70	SLU 18	-88	-26	4584	-8.12	-7.51	-3.06
70	SLU 19	-89	-33	4569	-7.96	-7.42	-3.08
70	SLU 20	-88	-26	4584	-8.12	-7.51	-3.06
70	SLU 21	-89	-33	4569	-7.96	-7.42	-3.08
70	SLU 22	-78	-25	4136	-7.35	-8.28	-2.71
70	SLU 23	-79	-36	4110	-7.07	-8.13	-2.75
70	SLU 24	-78	-25	4136	-7.35	-8.28	-2.71
70	SLU 25	-79	-32	4121	-7.18	-8.19	-2.73
70	SLU 26	-79	-36	4110	-7.07	-8.13	-2.75
70	SLU 27	-78	-25	4136	-7.35	-8.28	-2.71
70	SLU 28	-79	-32	4121	-7.18	-8.19	-2.73
70	SLU 29	-78	-25	4136	-7.35	-8.28	-2.71
70	SLU 30	-79	-32	4121	-7.18	-8.19	-2.73
70	SLU 31	-93	-39	4767	-8.25	-7.88	-3.24
70	SLU 32	-92	-27	4793	-8.53	-8.02	-3.2
70	SLU 33	-92	-34	4777	-8.36	-7.94	-3.22
70	SLU 34	-93	-39	4767	-8.25	-7.88	-3.24
70	SLU 35	-92	-27	4793	-8.53	-8.02	-3.2
70	SLU 36	-92	-34	4777	-8.36	-7.94	-3.22
70	SLU 37	-92	-27	4793	-8.53	-8.02	-3.2
70	SLU 38	-92	-34	4777	-8.36	-7.94	-3.22
70	SLU 39	-98	-28	5074	-9.04	-7.91	-3.41
70	SLU 40	-98	-35	5058	-8.87	-7.83	-3.43
70	SLU 41	-98	-28	5074	-9.04	-7.91	-3.41
70	SLU 42	-98	-35	5058	-8.87	-7.83	-3.43
70	SLU 43	-86	-28	4572	-8.05	-10.1	-2.95
70	SLU 44	-86	-40	4547	-7.77	-9.95	-2.99
70	SLU 45	-86	-28	4572	-8.05	-10.1	-2.95
70	SLU 46	-86	-35	4557	-7.88	-10.01	-2.97
70	SLU 47	-86	-40	4547	-7.77	-9.95	-2.99
70	SLU 48	-86	-28	4572	-8.05	-10.1	-2.95
70	SLU 49	-86	-35	4557	-7.88	-10.01	-2.97
70	SLU 50	-86	-28	4572	-8.05	-10.1	-2.95
70	SLU 51	-86	-35	4557	-7.88	-10.01	-2.97
70	SLU 52	-100	-42	5203	-8.95	-9.69	-3.48
70	SLU 53	-100	-31	5229	-9.23	-9.84	-3.44
70	SLU 54	-100	-38	5213	-9.06	-9.75	-3.46
70	SLU 55	-100	-42	5203	-8.95	-9.69	-3.48
70	SLU 56	-100	-31	5229	-9.23	-9.84	-3.44
70	SLU 57	-100	-38	5213	-9.06	-9.75	-3.46
70	SLU 58	-100	-31	5229	-9.23	-9.84	-3.44
70	SLU 59	-100	-38	5213	-9.06	-9.75	-3.46
70	SLU 60	-106	-32	5510	-9.74	-9.73	-3.65
70	SLU 61	-106	-39	5494	-9.57	-9.64	-3.67
70	SLU 62	-106	-32	5510	-9.74	-9.73	-3.65

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
70	SLU 63	-106	-39	5494	-9.57	-9.64	-3.67
70	SLU 64	-95	-31	5062	-8.97	-10.5	-3.3
70	SLU 65	-96	-42	5036	-8.69	-10.36	-3.34
70	SLU 66	-95	-31	5062	-8.97	-10.5	-3.3
70	SLU 67	-96	-37	5047	-8.8	-10.41	-3.32
70	SLU 68	-96	-42	5036	-8.69	-10.36	-3.34
70	SLU 69	-95	-31	5062	-8.97	-10.5	-3.3
70	SLU 70	-96	-37	5047	-8.8	-10.41	-3.32
70	SLU 71	-95	-31	5062	-8.97	-10.5	-3.3
70	SLU 72	-96	-37	5047	-8.8	-10.41	-3.32
70	SLU 73	-110	-44	5693	-9.87	-10.1	-3.82
70	SLU 74	-109	-33	5719	-10.15	-10.25	-3.79
70	SLU 75	-110	-40	5703	-9.98	-10.16	-3.81
70	SLU 76	-110	-44	5693	-9.87	-10.1	-3.82
70	SLU 77	-109	-33	5719	-10.15	-10.25	-3.79
70	SLU 78	-110	-40	5703	-9.98	-10.16	-3.81
70	SLU 79	-109	-33	5719	-10.15	-10.25	-3.79
70	SLU 80	-110	-40	5703	-9.98	-10.16	-3.81
70	SLU 81	-115	-34	6000	-10.66	-10.14	-4
70	SLU 82	-116	-41	5984	-10.49	-10.05	-4.02
70	SLU 83	-115	-34	6000	-10.66	-10.14	-4
70	SLU 84	-116	-41	5984	-10.49	-10.05	-4.02
70	SLE RA 1	-71	-23	3786	-6.7	-7.99	-2.46
70	SLE RA 2	-72	-31	3769	-6.51	-7.89	-2.49
70	SLE RA 3	-71	-23	3786	-6.7	-7.99	-2.46
70	SLE RA 4	-71	-28	3776	-6.58	-7.93	-2.48
70	SLE RA 5	-72	-31	3769	-6.51	-7.89	-2.49
70	SLE RA 6	-71	-23	3786	-6.7	-7.99	-2.46
70	SLE RA 7	-71	-28	3776	-6.58	-7.93	-2.48
70	SLE RA 8	-71	-23	3786	-6.7	-7.99	-2.46
70	SLE RA 9	-71	-28	3776	-6.58	-7.93	-2.48
70	SLE RA 10	-81	-32	4207	-7.3	-7.72	-2.81
70	SLE RA 11	-81	-25	4224	-7.48	-7.82	-2.79
70	SLE RA 12	-81	-29	4214	-7.37	-7.76	-2.8
70	SLE RA 13	-81	-32	4207	-7.3	-7.72	-2.81
70	SLE RA 14	-81	-25	4224	-7.48	-7.82	-2.79
70	SLE RA 15	-81	-29	4214	-7.37	-7.76	-2.8
70	SLE RA 16	-81	-25	4224	-7.48	-7.82	-2.79
70	SLE RA 17	-81	-29	4214	-7.37	-7.76	-2.8
70	SLE RA 18	-84	-25	4411	-7.82	-7.75	-2.93
70	SLE RA 19	-85	-30	4401	-7.71	-7.69	-2.94
70	SLE RA 20	-84	-25	4411	-7.82	-7.75	-2.93
70	SLE RA 21	-85	-30	4401	-7.71	-7.69	-2.94
70	SLE FR 1	-71	-23	3786	-6.7	-7.99	-2.46
70	SLE FR 2	-71	-24	3783	-6.66	-7.97	-2.47
70	SLE FR 3	-71	-23	3786	-6.7	-7.99	-2.46
70	SLE FR 4	-75	-25	3970	-7	-7.9	-2.61
70	SLE FR 5	-75	-24	3974	-7.03	-7.92	-2.6
70	SLE FR 6	-78	-24	4099	-7.26	-7.87	-2.7
70	SLE QP 1	-71	-23	3786	-6.7	-7.99	-2.46
70	SLE QP 2	-75	-24	3974	-7.03	-7.92	-2.6
70	SLD 1	222	62	3983	-7.83	7.19	-1.43
70	SLD 2	288	78	3984	-7.86	6.97	0.06
70	SLD 3	203	-78	3706	-4.82	8.99	-1.83
70	SLD 4	269	-62	3707	-4.86	8.76	-0.34
70	SLD 5	19	210	4396	-11.82	-6.03	-2.17
70	SLD 6	86	226	4398	-11.85	-6.26	-0.66
70	SLD 7	-44	-259	3473	-1.8	-0.04	-3.51
70	SLD 8	23	-243	3474	-1.83	-0.27	-2
70	SLD 9	-174	196	4474	-12.23	-15.57	-3.2
70	SLD 10	-106	212	4475	-12.27	-15.8	-1.69
70	SLD 11	-236	-274	3550	-2.21	-9.57	-4.54
70	SLD 12	-169	-257	3551	-2.25	-9.8	-3.03
70	SLD 13	-419	15	4241	-9.21	-24.6	-4.86
70	SLD 14	-353	31	4242	-9.24	-24.83	-3.37
70	SLD 15	-438	-126	3964	-6.2	-22.8	-5.26
70	SLD 16	-372	-110	3965	-6.24	-23.03	-3.77
70	SLV 1	600	173	3996	-8.86	26.41	0.08
70	SLV 2	750	209	3998	-8.94	25.89	3.46
70	SLV 3	557	-148	3364	-2	30.51	-0.85
70	SLV 4	707	-112	3366	-2.08	29.99	2.53
70	SLV 5	139	509	4938	-17.95	-3.66	-1.6
70	SLV 6	292	546	4941	-18.03	-4.18	1.82
70	SLV 7	-5	-561	2831	4.9	10.02	-4.69
70	SLV 8	147	-524	2834	4.82	9.49	-1.26
70	SLV 9	-298	477	5114	-18.89	-25.33	-3.95
70	SLV 10	-145	513	5117	-18.96	-25.85	-0.52
70	SLV 11	-442	-593	3007	3.96	-11.65	-7.03
70	SLV 12	-290	-556	3010	3.88	-12.18	-3.6
70	SLV 13	-857	65	4581	-11.98	-45.83	-7.74
70	SLV 14	-707	101	4584	-12.06	-46.34	-4.36
70	SLV 15	-901	-256	3949	-5.13	-41.72	-8.66
70	SLV 16	-750	-220	3952	-5.21	-42.24	-5.28
70	CRTFP Ux+	0	0	0	0	0	0
70	CRTFP Ux-	0	0	0	0	0	0
70	CRTFP Uy+	0	0	0	0	0	0
70	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
72	SLU 1	-23	-28	1693	-1.83	-240.64	-7.36
72	SLU 2	-24	-39	1678	-1.75	-238.79	-9.94
72	SLU 3	-23	-28	1693	-1.83	-240.64	-7.36
72	SLU 4	-23	-34	1684	-1.78	-239.53	-8.91
72	SLU 5	-24	-39	1678	-1.75	-238.79	-9.94
72	SLU 6	-23	-28	1693	-1.83	-240.64	-7.36
72	SLU 7	-23	-34	1684	-1.78	-239.53	-8.91
72	SLU 8	-23	-28	1693	-1.83	-240.64	-7.36
72	SLU 9	-23	-34	1684	-1.78	-239.53	-8.91
72	SLU 10	-28	-45	1995	-2.18	-278.44	-11.6
72	SLU 11	-27	-35	2009	-2.26	-280.29	-9.02
72	SLU 12	-28	-41	2001	-2.21	-279.18	-10.57
72	SLU 13	-28	-45	1995	-2.18	-278.44	-11.6
72	SLU 14	-27	-35	2009	-2.26	-280.29	-9.02
72	SLU 15	-28	-41	2001	-2.21	-279.18	-10.57
72	SLU 16	-27	-35	2009	-2.26	-280.29	-9.02
72	SLU 17	-28	-41	2001	-2.21	-279.18	-10.57
72	SLU 18	-29	-37	2145	-2.45	-297.28	-9.73
72	SLU 19	-29	-44	2136	-2.4	-296.17	-11.28
72	SLU 20	-29	-37	2145	-2.45	-297.28	-9.73
72	SLU 21	-29	-44	2136	-2.4	-296.17	-11.28
72	SLU 22	-26	-31	1925	-2.13	-269.52	-8.08
72	SLU 23	-27	-41	1911	-2.05	-267.67	-10.65
72	SLU 24	-26	-31	1925	-2.13	-269.52	-8.08
72	SLU 25	-26	-37	1917	-2.08	-268.41	-9.62
72	SLU 26	-27	-41	1911	-2.05	-267.67	-10.65
72	SLU 27	-26	-31	1925	-2.13	-269.52	-8.08
72	SLU 28	-26	-37	1917	-2.08	-268.41	-9.62
72	SLU 29	-26	-31	1925	-2.13	-269.52	-8.08
72	SLU 30	-26	-37	1917	-2.08	-268.41	-9.62
72	SLU 31	-31	-48	2228	-2.48	-307.32	-12.32
72	SLU 32	-30	-37	2242	-2.56	-309.17	-9.74
72	SLU 33	-30	-44	2233	-2.51	-308.06	-11.29
72	SLU 34	-31	-48	2228	-2.48	-307.32	-12.32
72	SLU 35	-30	-37	2242	-2.56	-309.17	-9.74
72	SLU 36	-30	-44	2233	-2.51	-308.06	-11.29
72	SLU 37	-30	-37	2242	-2.56	-309.17	-9.74
72	SLU 38	-30	-44	2233	-2.51	-308.06	-11.29
72	SLU 39	-32	-40	2378	-2.75	-326.17	-10.45
72	SLU 40	-32	-46	2369	-2.7	-325.06	-12
72	SLU 41	-32	-40	2378	-2.75	-326.17	-10.45
72	SLU 42	-32	-46	2369	-2.7	-325.06	-12
72	SLU 43	-29	-36	2121	-2.28	-302.93	-9.32
72	SLU 44	-30	-46	2106	-2.19	-301.08	-11.9
72	SLU 45	-29	-36	2121	-2.28	-302.93	-9.32
72	SLU 46	-29	-42	2112	-2.23	-301.82	-10.87
72	SLU 47	-30	-46	2106	-2.19	-301.08	-11.9
72	SLU 48	-29	-36	2121	-2.28	-302.93	-9.32
72	SLU 49	-29	-42	2112	-2.23	-301.82	-10.87
72	SLU 50	-29	-36	2121	-2.28	-302.93	-9.32
72	SLU 51	-29	-42	2112	-2.23	-301.82	-10.87
72	SLU 52	-34	-52	2423	-2.63	-340.73	-13.56
72	SLU 53	-33	-42	2437	-2.71	-342.58	-10.98
72	SLU 54	-33	-48	2428	-2.66	-341.47	-12.53
72	SLU 55	-34	-52	2423	-2.63	-340.73	-13.56
72	SLU 56	-33	-42	2437	-2.71	-342.58	-10.98
72	SLU 57	-33	-48	2428	-2.66	-341.47	-12.53
72	SLU 58	-33	-42	2437	-2.71	-342.58	-10.98
72	SLU 59	-33	-48	2428	-2.66	-341.47	-12.53
72	SLU 60	-35	-45	2573	-2.89	-359.57	-11.7
72	SLU 61	-35	-51	2564	-2.84	-358.46	-13.24
72	SLU 62	-35	-45	2573	-2.89	-359.57	-11.7
72	SLU 63	-35	-51	2564	-2.84	-358.46	-13.24
72	SLU 64	-32	-38	2353	-2.58	-331.81	-10.04
72	SLU 65	-32	-49	2339	-2.49	-329.96	-12.62
72	SLU 66	-32	-38	2353	-2.58	-331.81	-10.04
72	SLU 67	-32	-45	2345	-2.53	-330.7	-11.59
72	SLU 68	-32	-49	2339	-2.49	-329.96	-12.62
72	SLU 69	-32	-38	2353	-2.58	-331.81	-10.04
72	SLU 70	-32	-45	2345	-2.53	-330.7	-11.59
72	SLU 71	-32	-38	2353	-2.58	-331.81	-10.04
72	SLU 72	-32	-45	2345	-2.53	-330.7	-11.59
72	SLU 73	-37	-55	2656	-2.93	-369.61	-14.28
72	SLU 74	-36	-45	2670	-3.01	-371.46	-11.7
72	SLU 75	-36	-51	2661	-2.96	-370.35	-13.25
72	SLU 76	-37	-55	2656	-2.93	-369.61	-14.28
72	SLU 77	-36	-45	2670	-3.01	-371.46	-11.7
72	SLU 78	-36	-51	2661	-2.96	-370.35	-13.25
72	SLU 79	-36	-45	2670	-3.01	-371.46	-11.7
72	SLU 80	-36	-51	2661	-2.96	-370.35	-13.25
72	SLU 81	-38	-48	2806	-3.2	-388.46	-12.41
72	SLU 82	-38	-54	2797	-3.15	-387.35	-13.96
72	SLU 83	-38	-48	2806	-3.2	-388.46	-12.41
72	SLU 84	-38	-54	2797	-3.15	-387.35	-13.96
72	SLE RA 1	-24	-29	1759	-1.92	-248.89	-7.56
72	SLE RA 2	-24	-36	1750	-1.86	-247.66	-9.28
72	SLE RA 3	-24	-29	1759	-1.92	-248.89	-7.56

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
72	SLE RA 4	-24	-33	1753	-1.88	-248.15	-8.6
72	SLE RA 5	-24	-36	1750	-1.86	-247.66	-9.28
72	SLE RA 6	-24	-29	1759	-1.92	-248.89	-7.56
72	SLE RA 7	-24	-33	1753	-1.88	-248.15	-8.6
72	SLE RA 8	-24	-29	1759	-1.92	-248.89	-7.56
72	SLE RA 9	-24	-33	1753	-1.88	-248.15	-8.6
72	SLE RA 10	-27	-40	1961	-2.15	-274.09	-10.39
72	SLE RA 11	-27	-33	1970	-2.21	-275.33	-8.67
72	SLE RA 12	-27	-37	1964	-2.17	-274.59	-9.7
72	SLE RA 13	-27	-40	1961	-2.15	-274.09	-10.39
72	SLE RA 14	-27	-33	1970	-2.21	-275.33	-8.67
72	SLE RA 15	-27	-37	1964	-2.17	-274.59	-9.7
72	SLE RA 16	-27	-33	1970	-2.21	-275.33	-8.67
72	SLE RA 17	-27	-37	1964	-2.17	-274.59	-9.7
72	SLE RA 18	-28	-35	2061	-2.33	-286.65	-9.15
72	SLE RA 19	-28	-39	2055	-2.3	-285.91	-10.18
72	SLE RA 20	-28	-35	2061	-2.33	-286.65	-9.15
72	SLE RA 21	-28	-39	2055	-2.3	-285.91	-10.18
72	SLE FR 1	-24	-29	1759	-1.92	-248.89	-7.56
72	SLE FR 2	-24	-30	1757	-1.91	-248.64	-7.91
72	SLE FR 3	-24	-29	1759	-1.92	-248.89	-7.56
72	SLE FR 4	-25	-32	1848	-2.03	-259.97	-8.38
72	SLE FR 5	-25	-31	1850	-2.04	-260.22	-8.04
72	SLE FR 6	-26	-32	1910	-2.12	-267.77	-8.36
72	SLE QP 1	-24	-29	1759	-1.92	-248.89	-7.56
72	SLE QP 2	-25	-31	1850	-2.04	-260.22	-8.04
72	SLD 1	107	29	2204	-2.97	-302.41	6.92
72	SLD 2	133	-7	2199	-2.95	-301.84	-2.03
72	SLD 3	98	-89	2039	-2.05	-280.99	-22.62
72	SLD 4	124	-125	2034	-2.03	-280.43	-31.57
72	SLD 5	18	179	2208	-3.73	-305.56	44.45
72	SLD 6	45	142	2203	-3.7	-304.99	35.36
72	SLD 7	-11	-214	1658	-0.66	-234.17	-54.01
72	SLD 8	16	-251	1653	-0.63	-233.6	-63.1
72	SLD 9	-66	190	2046	-3.45	-286.84	47.03
72	SLD 10	-40	153	2042	-3.42	-286.27	37.93
72	SLD 11	-95	-204	1496	-0.38	-215.45	-51.44
72	SLD 12	-69	-241	1491	-0.36	-214.88	-60.53
72	SLD 13	-175	64	1665	-2.05	-240.01	15.49
72	SLD 14	-148	27	1660	-2.03	-239.45	6.54
72	SLD 15	-183	-54	1500	-1.13	-218.6	-14.05
72	SLD 16	-157	-91	1495	-1.11	-218.03	-23
72	SLV 1	275	105	2656	-4.17	-356.29	26
72	SLV 2	334	23	2646	-4.11	-355.01	5.7
72	SLV 3	255	-164	2279	-2.07	-307.46	-41.33
72	SLV 4	314	-246	2269	-2.01	-306.19	-61.64
72	SLV 5	74	448	2666	-5.88	-363.54	111.55
72	SLV 6	134	364	2656	-5.83	-362.25	90.95
72	SLV 7	7	-449	1411	1.12	-200.8	-112.89
72	SLV 8	68	-533	1401	1.18	-199.51	-133.5
72	SLV 9	-118	471	2299	-5.26	-320.93	117.42
72	SLV 10	-58	388	2288	-5.2	-319.64	96.81
72	SLV 11	-185	-426	1043	1.74	-158.19	-107.02
72	SLV 12	-124	-509	1033	1.8	-156.9	-127.63
72	SLV 13	-365	184	1430	-2.07	-214.25	45.56
72	SLV 14	-305	102	1420	-2.02	-212.98	25.25
72	SLV 15	-385	-85	1053	0.03	-165.43	-21.77
72	SLV 16	-325	-167	1043	0.08	-164.15	-42.08
72	CRTFP Ux+	0	0	0	0	0	0
72	CRTFP Ux-	0	0	0	0	0	0
72	CRTFP Uy+	0	0	0	0	0	0
72	CRTFP Uy-	0	0	0	0	0	0
75	SLU 1	-21	-5	1638	-1.65	244.46	0.86
75	SLU 2	-21	-15	1624	-1.56	242.66	3.47
75	SLU 3	-21	-5	1638	-1.65	244.46	0.86
75	SLU 4	-21	-11	1630	-1.6	243.38	2.43
75	SLU 5	-21	-15	1624	-1.56	242.66	3.47
75	SLU 6	-21	-5	1638	-1.65	244.46	0.86
75	SLU 7	-21	-11	1630	-1.6	243.38	2.43
75	SLU 8	-21	-5	1638	-1.65	244.46	0.86
75	SLU 9	-21	-11	1630	-1.6	243.38	2.43
75	SLU 10	-26	-15	1884	-1.84	277.94	3.31
75	SLU 11	-26	-4	1898	-1.93	279.74	0.69
75	SLU 12	-26	-10	1889	-1.87	278.66	2.26
75	SLU 13	-26	-15	1884	-1.84	277.94	3.31
75	SLU 14	-26	-4	1898	-1.93	279.74	0.69
75	SLU 15	-26	-10	1889	-1.87	278.66	2.26
75	SLU 16	-26	-4	1898	-1.93	279.74	0.69
75	SLU 17	-26	-10	1889	-1.87	278.66	2.26
75	SLU 18	-28	-4	2009	-2.04	294.86	0.62
75	SLU 19	-28	-10	2001	-1.99	293.78	2.19
75	SLU 20	-28	-4	2009	-2.04	294.86	0.62
75	SLU 21	-28	-10	2001	-1.99	293.78	2.19
75	SLU 22	-24	-3	1839	-1.87	271.37	0.52
75	SLU 23	-24	-14	1825	-1.79	269.57	3.13
75	SLU 24	-24	-3	1839	-1.87	271.37	0.52
75	SLU 25	-24	-10	1831	-1.82	270.29	2.09

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
75	SLU 26	-24	-14	1825	-1.79	269.57	3.13
75	SLU 27	-24	-3	1839	-1.87	271.37	0.52
75	SLU 28	-24	-10	1831	-1.82	270.29	2.09
75	SLU 29	-24	-3	1839	-1.87	271.37	0.52
75	SLU 30	-24	-10	1831	-1.82	270.29	2.09
75	SLU 31	-29	-13	2085	-2.07	304.85	2.97
75	SLU 32	-29	-3	2098	-2.15	306.65	0.35
75	SLU 33	-29	-9	2090	-2.1	305.57	1.92
75	SLU 34	-29	-13	2085	-2.07	304.85	2.97
75	SLU 35	-29	-3	2098	-2.15	306.65	0.35
75	SLU 36	-29	-9	2090	-2.1	305.57	1.92
75	SLU 37	-29	-3	2098	-2.15	306.65	0.35
75	SLU 38	-29	-9	2090	-2.1	305.57	1.92
75	SLU 39	-31	-3	2210	-2.27	321.77	0.28
75	SLU 40	-31	-9	2201	-2.22	320.69	1.85
75	SLU 41	-31	-3	2210	-2.27	321.77	0.28
75	SLU 42	-31	-9	2201	-2.22	320.69	1.85
75	SLU 43	-26	-6	2061	-2.06	308.57	1.23
75	SLU 44	-26	-17	2047	-1.98	306.77	3.85
75	SLU 45	-26	-6	2061	-2.06	308.57	1.23
75	SLU 46	-26	-13	2052	-2.01	307.49	2.8
75	SLU 47	-26	-17	2047	-1.98	306.77	3.85
75	SLU 48	-26	-6	2061	-2.06	308.57	1.23
75	SLU 49	-26	-13	2052	-2.01	307.49	2.8
75	SLU 50	-26	-6	2061	-2.06	308.57	1.23
75	SLU 51	-26	-13	2052	-2.01	307.49	2.8
75	SLU 52	-31	-16	2307	-2.26	342.05	3.68
75	SLU 53	-31	-6	2320	-2.34	343.85	1.06
75	SLU 54	-31	-12	2312	-2.29	342.77	2.63
75	SLU 55	-31	-16	2307	-2.26	342.05	3.68
75	SLU 56	-31	-6	2320	-2.34	343.85	1.06
75	SLU 57	-31	-12	2312	-2.29	342.77	2.63
75	SLU 58	-31	-6	2320	-2.34	343.85	1.06
75	SLU 59	-31	-12	2312	-2.29	342.77	2.63
75	SLU 60	-33	-6	2431	-2.46	358.97	0.99
75	SLU 61	-33	-12	2423	-2.41	357.89	2.56
75	SLU 62	-33	-6	2431	-2.46	358.97	0.99
75	SLU 63	-33	-12	2423	-2.41	357.89	2.56
75	SLU 64	-29	-5	2261	-2.29	335.48	0.89
75	SLU 65	-29	-16	2248	-2.2	333.68	3.51
75	SLU 66	-29	-5	2261	-2.29	335.48	0.89
75	SLU 67	-29	-11	2253	-2.24	334.4	2.46
75	SLU 68	-29	-16	2248	-2.2	333.68	3.51
75	SLU 69	-29	-5	2261	-2.29	335.48	0.89
75	SLU 70	-29	-11	2253	-2.24	334.4	2.46
75	SLU 71	-29	-5	2261	-2.29	335.48	0.89
75	SLU 72	-29	-11	2253	-2.24	334.4	2.46
75	SLU 73	-34	-15	2507	-2.48	368.96	3.34
75	SLU 74	-34	-5	2521	-2.57	370.76	0.72
75	SLU 75	-34	-11	2513	-2.52	369.68	2.29
75	SLU 76	-34	-15	2507	-2.48	368.96	3.34
75	SLU 77	-34	-5	2521	-2.57	370.76	0.72
75	SLU 78	-34	-11	2513	-2.52	369.68	2.29
75	SLU 79	-34	-5	2521	-2.57	370.76	0.72
75	SLU 80	-34	-11	2513	-2.52	369.68	2.29
75	SLU 81	-36	-5	2632	-2.69	385.88	0.65
75	SLU 82	-36	-11	2624	-2.64	384.8	2.22
75	SLU 83	-36	-5	2632	-2.69	385.88	0.65
75	SLU 84	-36	-11	2624	-2.64	384.8	2.22
75	SLE RA 1	-22	-4	1695	-1.71	252.15	0.76
75	SLE RA 2	-22	-11	1686	-1.66	250.95	2.5
75	SLE RA 3	-22	-4	1695	-1.71	252.15	0.76
75	SLE RA 4	-22	-8	1690	-1.68	251.43	1.81
75	SLE RA 5	-22	-11	1686	-1.66	250.95	2.5
75	SLE RA 6	-22	-4	1695	-1.71	252.15	0.76
75	SLE RA 7	-22	-8	1690	-1.68	251.43	1.81
75	SLE RA 8	-22	-4	1695	-1.71	252.15	0.76
75	SLE RA 9	-22	-8	1690	-1.68	251.43	1.81
75	SLE RA 10	-25	-11	1859	-1.84	274.47	2.39
75	SLE RA 11	-25	-4	1868	-1.9	275.67	0.65
75	SLE RA 12	-25	-8	1863	-1.86	274.95	1.7
75	SLE RA 13	-25	-11	1859	-1.84	274.47	2.39
75	SLE RA 14	-25	-4	1868	-1.9	275.67	0.65
75	SLE RA 15	-25	-8	1863	-1.86	274.95	1.7
75	SLE RA 16	-25	-4	1868	-1.9	275.67	0.65
75	SLE RA 17	-25	-8	1863	-1.86	274.95	1.7
75	SLE RA 18	-26	-4	1943	-1.98	285.75	0.6
75	SLE RA 19	-27	-8	1937	-1.94	285.03	1.65
75	SLE RA 20	-26	-4	1943	-1.98	285.75	0.6
75	SLE RA 21	-27	-8	1937	-1.94	285.03	1.65
75	SLE FR 1	-22	-4	1695	-1.71	252.15	0.76
75	SLE FR 2	-22	-6	1694	-1.7	251.91	1.11
75	SLE FR 3	-22	-4	1695	-1.71	252.15	0.76
75	SLE FR 4	-23	-6	1768	-1.78	261.99	1.06
75	SLE FR 5	-23	-4	1770	-1.79	262.23	0.71
75	SLE FR 6	-24	-4	1819	-1.85	268.95	0.68
75	SLE QP 1	-22	-4	1695	-1.71	252.15	0.76

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
75	SLE QP 2	-23	-4	1770	-1.79	262.23	0.71
75	SLD 1	107	60	1556	-1.85	239.54	-15.36
75	SLD 2	134	96	1560	-1.87	240.02	-24.17
75	SLD 3	100	-57	1416	-0.91	220.96	13.8
75	SLD 4	126	-21	1420	-0.94	221.45	5
75	SLD 5	18	179	1915	-3.22	283.42	-45.2
75	SLD 6	45	216	1919	-3.24	283.91	-54.14
75	SLD 7	-7	-210	1451	-0.11	221.51	52.03
75	SLD 8	20	-173	1455	-0.13	222	43.09
75	SLD 9	-66	165	2084	-3.46	302.46	-41.66
75	SLD 10	-39	201	2088	-3.48	302.95	-50.6
75	SLD 11	-91	-224	1620	-0.35	240.55	55.56
75	SLD 12	-64	-188	1624	-0.37	241.04	46.62
75	SLD 13	-172	13	2119	-2.65	303.01	-3.58
75	SLD 14	-146	49	2123	-2.67	303.49	-12.38
75	SLD 15	-180	-104	1979	-1.72	284.44	25.59
75	SLD 16	-154	-68	1984	-1.74	284.92	16.79
75	SLV 1	274	142	1284	-1.92	210.7	-36
75	SLV 2	334	223	1293	-1.97	211.8	-55.97
75	SLV 3	256	-124	967	0.2	168.36	30.52
75	SLV 4	316	-43	976	0.16	169.46	10.55
75	SLV 5	71	414	2102	-5.04	310.6	-104.05
75	SLV 6	132	497	2111	-5.09	311.71	-124.31
75	SLV 7	13	-473	1044	2.05	169.45	117.67
75	SLV 8	73	-391	1054	2	170.56	97.41
75	SLV 9	-120	382	2485	-5.59	353.89	-95.99
75	SLV 10	-59	464	2495	-5.64	355	-116.25
75	SLV 11	-178	-505	1428	1.51	212.74	125.74
75	SLV 12	-117	-423	1437	1.46	213.85	105.47
75	SLV 13	-362	35	2563	-3.74	355	-9.13
75	SLV 14	-303	116	2572	-3.79	356.1	-29.1
75	SLV 15	-380	-231	2246	-1.61	312.66	57.39
75	SLV 16	-320	-150	2255	-1.66	313.75	37.42
75	CRTFP Ux+	0	0	0	0	0	0
75	CRTFP Ux-	0	0	0	0	0	0
75	CRTFP Uy+	0	0	0	0	0	0
75	CRTFP Uy-	0	0	0	0	0	0
77	SLU 1	-54	-21	3468	-6.15	-8.24	-2.77
77	SLU 2	-54	-33	3450	-5.93	-8.1	-2.79
77	SLU 3	-54	-21	3468	-6.15	-8.24	-2.77
77	SLU 4	-54	-28	3457	-6.02	-8.15	-2.78
77	SLU 5	-54	-33	3450	-5.93	-8.1	-2.79
77	SLU 6	-54	-21	3468	-6.15	-8.24	-2.77
77	SLU 7	-54	-28	3457	-6.02	-8.15	-2.78
77	SLU 8	-54	-21	3468	-6.15	-8.24	-2.77
77	SLU 9	-54	-28	3457	-6.02	-8.15	-2.78
77	SLU 10	-65	-35	4073	-7.06	-7.91	-3.35
77	SLU 11	-65	-23	4092	-7.29	-8.06	-3.33
77	SLU 12	-65	-30	4081	-7.15	-7.97	-3.34
77	SLU 13	-65	-35	4073	-7.06	-7.91	-3.35
77	SLU 14	-65	-23	4092	-7.29	-8.06	-3.33
77	SLU 15	-65	-30	4081	-7.15	-7.97	-3.34
77	SLU 16	-65	-23	4092	-7.29	-8.06	-3.33
77	SLU 17	-65	-30	4081	-7.15	-7.97	-3.34
77	SLU 18	-70	-24	4359	-7.77	-7.98	-3.56
77	SLU 19	-70	-31	4348	-7.63	-7.89	-3.58
77	SLU 20	-70	-24	4359	-7.77	-7.98	-3.56
77	SLU 21	-70	-31	4348	-7.63	-7.89	-3.58
77	SLU 22	-62	-23	3933	-7.04	-8.69	-3.18
77	SLU 23	-62	-35	3914	-6.81	-8.55	-3.2
77	SLU 24	-62	-23	3933	-7.04	-8.69	-3.18
77	SLU 25	-62	-30	3922	-6.91	-8.61	-3.19
77	SLU 26	-62	-35	3914	-6.81	-8.55	-3.2
77	SLU 27	-62	-23	3933	-7.04	-8.69	-3.18
77	SLU 28	-62	-30	3922	-6.91	-8.61	-3.19
77	SLU 29	-62	-23	3933	-7.04	-8.69	-3.18
77	SLU 30	-62	-30	3922	-6.91	-8.61	-3.19
77	SLU 31	-73	-37	4538	-7.95	-8.36	-3.75
77	SLU 32	-72	-26	4556	-8.17	-8.51	-3.73
77	SLU 33	-73	-33	4545	-8.04	-8.42	-3.74
77	SLU 34	-73	-37	4538	-7.95	-8.36	-3.75
77	SLU 35	-72	-26	4556	-8.17	-8.51	-3.73
77	SLU 36	-73	-33	4545	-8.04	-8.42	-3.74
77	SLU 37	-72	-26	4556	-8.17	-8.51	-3.73
77	SLU 38	-73	-33	4545	-8.04	-8.42	-3.74
77	SLU 39	-77	-27	4824	-8.66	-8.43	-3.97
77	SLU 40	-77	-34	4813	-8.52	-8.34	-3.98
77	SLU 41	-77	-27	4824	-8.66	-8.43	-3.97
77	SLU 42	-77	-34	4813	-8.52	-8.34	-3.98
77	SLU 43	-68	-27	4350	-7.7	-10.56	-3.47
77	SLU 44	-68	-38	4331	-7.47	-10.41	-3.49
77	SLU 45	-68	-27	4350	-7.7	-10.56	-3.47
77	SLU 46	-68	-34	4339	-7.56	-10.47	-3.48
77	SLU 47	-68	-38	4331	-7.47	-10.41	-3.49
77	SLU 48	-68	-27	4350	-7.7	-10.56	-3.47
77	SLU 49	-68	-34	4339	-7.56	-10.47	-3.48
77	SLU 50	-68	-27	4350	-7.7	-10.56	-3.47

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
77	SLU 51	-68	-34	4339	-7.56	-10.47	-3.48
77	SLU 52	-79	-41	4955	-8.6	-10.23	-4.04
77	SLU 53	-78	-29	4973	-8.83	-10.37	-4.02
77	SLU 54	-79	-36	4962	-8.69	-10.29	-4.03
77	SLU 55	-79	-41	4955	-8.6	-10.23	-4.04
77	SLU 56	-78	-29	4973	-8.83	-10.37	-4.02
77	SLU 57	-79	-36	4962	-8.69	-10.29	-4.03
77	SLU 58	-78	-29	4973	-8.83	-10.37	-4.02
77	SLU 59	-79	-36	4962	-8.69	-10.29	-4.03
77	SLU 60	-83	-30	5241	-9.31	-10.29	-4.26
77	SLU 61	-83	-37	5229	-9.18	-10.21	-4.27
77	SLU 62	-83	-30	5241	-9.31	-10.29	-4.26
77	SLU 63	-83	-37	5229	-9.18	-10.21	-4.27
77	SLU 64	-75	-29	4814	-8.59	-11.01	-3.87
77	SLU 65	-75	-40	4795	-8.36	-10.86	-3.89
77	SLU 66	-75	-29	4814	-8.59	-11.01	-3.87
77	SLU 67	-75	-36	4803	-8.45	-10.92	-3.88
77	SLU 68	-75	-40	4795	-8.36	-10.86	-3.89
77	SLU 69	-75	-29	4814	-8.59	-11.01	-3.87
77	SLU 70	-75	-36	4803	-8.45	-10.92	-3.88
77	SLU 71	-75	-29	4814	-8.59	-11.01	-3.87
77	SLU 72	-75	-36	4803	-8.45	-10.92	-3.88
77	SLU 73	-86	-43	5419	-9.49	-10.68	-4.45
77	SLU 74	-86	-31	5438	-9.72	-10.83	-4.42
77	SLU 75	-86	-38	5427	-9.58	-10.74	-4.44
77	SLU 76	-86	-43	5419	-9.49	-10.68	-4.45
77	SLU 77	-86	-31	5438	-9.72	-10.83	-4.42
77	SLU 78	-86	-38	5427	-9.58	-10.74	-4.44
77	SLU 79	-86	-31	5438	-9.72	-10.83	-4.42
77	SLU 80	-86	-38	5427	-9.58	-10.74	-4.44
77	SLU 81	-91	-32	5705	-10.2	-10.75	-4.66
77	SLU 82	-91	-39	5694	-10.06	-10.66	-4.67
77	SLU 83	-91	-32	5705	-10.2	-10.75	-4.66
77	SLU 84	-91	-39	5694	-10.06	-10.66	-4.67
77	SLE RA 1	-56	-22	3601	-6.41	-8.37	-2.89
77	SLE RA 2	-56	-29	3589	-6.26	-8.27	-2.9
77	SLE RA 3	-56	-22	3601	-6.41	-8.37	-2.89
77	SLE RA 4	-56	-26	3594	-6.32	-8.31	-2.9
77	SLE RA 5	-56	-29	3589	-6.26	-8.27	-2.9
77	SLE RA 6	-56	-22	3601	-6.41	-8.37	-2.89
77	SLE RA 7	-56	-26	3594	-6.32	-8.31	-2.9
77	SLE RA 8	-56	-22	3601	-6.41	-8.37	-2.89
77	SLE RA 9	-56	-26	3594	-6.32	-8.31	-2.9
77	SLE RA 10	-64	-31	4004	-7.01	-8.15	-3.27
77	SLE RA 11	-63	-23	4017	-7.16	-8.25	-3.26
77	SLE RA 12	-64	-28	4009	-7.07	-8.19	-3.27
77	SLE RA 13	-64	-31	4004	-7.01	-8.15	-3.27
77	SLE RA 14	-63	-23	4017	-7.16	-8.25	-3.26
77	SLE RA 15	-64	-28	4009	-7.07	-8.19	-3.27
77	SLE RA 16	-63	-23	4017	-7.16	-8.25	-3.26
77	SLE RA 17	-64	-28	4009	-7.07	-8.19	-3.27
77	SLE RA 18	-67	-24	4195	-7.49	-8.19	-3.42
77	SLE RA 19	-67	-29	4188	-7.39	-8.13	-3.42
77	SLE RA 20	-67	-24	4195	-7.49	-8.19	-3.42
77	SLE RA 21	-67	-29	4188	-7.39	-8.13	-3.42
77	SLE FR 1	-56	-22	3601	-6.41	-8.37	-2.89
77	SLE FR 2	-56	-23	3599	-6.38	-8.35	-2.89
77	SLE FR 3	-56	-22	3601	-6.41	-8.37	-2.89
77	SLE FR 4	-59	-24	3777	-6.7	-8.3	-3.05
77	SLE FR 5	-59	-22	3779	-6.73	-8.32	-3.05
77	SLE FR 6	-61	-23	3898	-6.95	-8.28	-3.15
77	SLE QP 1	-56	-22	3601	-6.41	-8.37	-2.89
77	SLE QP 2	-59	-22	3779	-6.73	-8.32	-3.05
77	SLD 1	231	64	3767	-7.31	6.84	-1.9
77	SLD 2	289	80	3768	-7.33	6.62	-0.39
77	SLD 3	214	-77	3568	-4.84	8.63	-2.19
77	SLD 4	272	-61	3568	-4.87	8.4	-0.68
77	SLD 5	34	211	4077	-10.63	-6.4	-2.8
77	SLD 6	92	228	4078	-10.66	-6.63	-1.27
77	SLD 7	-24	-258	3414	-2.42	-0.45	-3.77
77	SLD 8	34	-242	3414	-2.45	-0.67	-2.24
77	SLD 9	-153	197	4144	-11.02	-15.96	-3.86
77	SLD 10	-94	213	4145	-11.04	-16.19	-2.32
77	SLD 11	-211	-273	3481	-2.81	-10.01	-4.83
77	SLD 12	-152	-256	3481	-2.83	-10.24	-3.29
77	SLD 13	-390	16	3990	-8.6	-25.04	-5.41
77	SLD 14	-332	32	3990	-8.62	-25.26	-3.9
77	SLD 15	-407	-125	3791	-6.13	-23.25	-5.7
77	SLD 16	-350	-109	3791	-6.16	-23.48	-4.19
77	SLV 1	601	174	3753	-8.05	26.12	-0.43
77	SLV 2	732	210	3754	-8.11	25.61	3
77	SLV 3	561	-147	3299	-2.43	30.19	-1.11
77	SLV 4	692	-111	3300	-2.49	29.68	2.33
77	SLV 5	153	511	4460	-15.63	-3.98	-2.47
77	SLV 6	286	548	4461	-15.68	-4.5	1.02
77	SLV 7	19	-560	2946	3.1	9.59	-4.71
77	SLV 8	152	-523	2947	3.04	9.08	-1.23

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
77	SLV 9	-271	478	4612	-16.5	-25.71	-4.86
77	SLV 10	-138	515	4613	-16.56	-26.23	-1.38
77	SLV 11	-404	-593	3098	2.22	-12.14	-7.11
77	SLV 12	-271	-556	3099	2.16	-12.66	-3.62
77	SLV 13	-811	66	4259	-10.97	-46.32	-8.42
77	SLV 14	-680	102	4260	-11.03	-46.83	-4.99
77	SLV 15	-851	-255	3804	-5.36	-42.25	-9.09
77	SLV 16	-720	-219	3805	-5.41	-42.76	-5.66
77	CRTFP Ux+	0	0	0	0	0	0
77	CRTFP Ux-	0	0	0	0	0	0
77	CRTFP Uy+	0	0	0	0	0	0
77	CRTFP Uy-	0	0	0	0	0	0
79	SLU 1	-13	-29	1651	-0.84	-214.18	-7.51
79	SLU 2	-13	-39	1639	-0.76	-213	-10.1
79	SLU 3	-13	-29	1651	-0.84	-214.18	-7.51
79	SLU 4	-13	-35	1644	-0.79	-213.47	-9.07
79	SLU 5	-13	-39	1639	-0.76	-213	-10.1
79	SLU 6	-13	-29	1651	-0.84	-214.18	-7.51
79	SLU 7	-13	-35	1644	-0.79	-213.47	-9.07
79	SLU 8	-13	-29	1651	-0.84	-214.18	-7.51
79	SLU 9	-13	-35	1644	-0.79	-213.47	-9.07
79	SLU 10	-16	-46	1946	-0.98	-246.8	-11.78
79	SLU 11	-15	-35	1958	-1.05	-247.98	-9.19
79	SLU 12	-16	-41	1951	-1.01	-247.27	-10.75
79	SLU 13	-16	-46	1946	-0.98	-246.8	-11.78
79	SLU 14	-15	-35	1958	-1.05	-247.98	-9.19
79	SLU 15	-16	-41	1951	-1.01	-247.27	-10.75
79	SLU 16	-15	-35	1958	-1.05	-247.98	-9.19
79	SLU 17	-16	-41	1951	-1.01	-247.27	-10.75
79	SLU 18	-16	-38	2089	-1.14	-262.47	-9.91
79	SLU 19	-17	-44	2082	-1.1	-261.76	-11.46
79	SLU 20	-16	-38	2089	-1.14	-262.47	-9.91
79	SLU 21	-17	-44	2082	-1.1	-261.76	-11.46
79	SLU 22	-15	-31	1877	-0.98	-238.81	-8.25
79	SLU 23	-15	-42	1865	-0.91	-237.63	-10.84
79	SLU 24	-15	-31	1877	-0.98	-238.81	-8.25
79	SLU 25	-15	-38	1870	-0.94	-238.1	-9.8
79	SLU 26	-15	-42	1865	-0.91	-237.63	-10.84
79	SLU 27	-15	-31	1877	-0.98	-238.81	-8.25
79	SLU 28	-15	-38	1870	-0.94	-238.1	-9.8
79	SLU 29	-15	-31	1877	-0.98	-238.81	-8.25
79	SLU 30	-15	-38	1870	-0.94	-238.1	-9.8
79	SLU 31	-17	-48	2172	-1.12	-271.43	-12.52
79	SLU 32	-17	-38	2184	-1.19	-272.61	-9.93
79	SLU 33	-17	-44	2176	-1.15	-271.9	-11.48
79	SLU 34	-17	-48	2172	-1.12	-271.43	-12.52
79	SLU 35	-17	-38	2184	-1.19	-272.61	-9.93
79	SLU 36	-17	-44	2176	-1.15	-271.9	-11.48
79	SLU 37	-17	-38	2184	-1.19	-272.61	-9.93
79	SLU 38	-17	-44	2176	-1.15	-271.9	-11.48
79	SLU 39	-18	-41	2315	-1.29	-287.1	-10.65
79	SLU 40	-18	-47	2308	-1.24	-286.39	-12.2
79	SLU 41	-18	-41	2315	-1.29	-287.1	-10.65
79	SLU 42	-18	-47	2308	-1.24	-286.39	-12.2
79	SLU 43	-16	-36	2069	-1.04	-269.99	-9.52
79	SLU 44	-17	-47	2057	-0.96	-268.81	-12.1
79	SLU 45	-16	-36	2069	-1.04	-269.99	-9.52
79	SLU 46	-17	-43	2062	-0.99	-269.28	-11.07
79	SLU 47	-17	-47	2057	-0.96	-268.81	-12.1
79	SLU 48	-16	-36	2069	-1.04	-269.99	-9.52
79	SLU 49	-17	-43	2062	-0.99	-269.28	-11.07
79	SLU 50	-16	-36	2069	-1.04	-269.99	-9.52
79	SLU 51	-17	-43	2062	-0.99	-269.28	-11.07
79	SLU 52	-19	-53	2364	-1.18	-302.61	-13.78
79	SLU 53	-19	-43	2376	-1.25	-303.79	-11.2
79	SLU 54	-19	-49	2368	-1.21	-303.08	-12.75
79	SLU 55	-19	-53	2364	-1.18	-302.61	-13.78
79	SLU 56	-19	-43	2376	-1.25	-303.79	-11.2
79	SLU 57	-19	-49	2368	-1.21	-303.08	-12.75
79	SLU 58	-19	-43	2376	-1.25	-303.79	-11.2
79	SLU 59	-19	-49	2368	-1.21	-303.08	-12.75
79	SLU 60	-20	-46	2507	-1.34	-318.28	-11.91
79	SLU 61	-20	-52	2500	-1.3	-317.57	-13.47
79	SLU 62	-20	-46	2507	-1.34	-318.28	-11.91
79	SLU 63	-20	-52	2500	-1.3	-317.57	-13.47
79	SLU 64	-18	-39	2295	-1.18	-294.62	-10.25
79	SLU 65	-18	-49	2283	-1.11	-293.44	-12.84
79	SLU 66	-18	-39	2295	-1.18	-294.62	-10.25
79	SLU 67	-18	-45	2288	-1.14	-293.91	-11.81
79	SLU 68	-18	-49	2283	-1.11	-293.44	-12.84
79	SLU 69	-18	-39	2295	-1.18	-294.62	-10.25
79	SLU 70	-18	-45	2288	-1.14	-293.91	-11.81
79	SLU 71	-18	-39	2295	-1.18	-294.62	-10.25
79	SLU 72	-18	-45	2288	-1.14	-293.91	-11.81
79	SLU 73	-21	-56	2590	-1.32	-327.24	-14.52
79	SLU 74	-20	-46	2601	-1.4	-328.42	-11.93
79	SLU 75	-21	-52	2594	-1.35	-327.71	-13.48

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
79	SLU 76	-21	-56	2590	-1.32	-327.24	-14.52
79	SLU 77	-20	-46	2601	-1.4	-328.42	-11.93
79	SLU 78	-21	-52	2594	-1.35	-327.71	-13.48
79	SLU 79	-20	-46	2601	-1.4	-328.42	-11.93
79	SLU 80	-21	-52	2594	-1.35	-327.71	-13.48
79	SLU 81	-21	-48	2733	-1.49	-342.91	-12.65
79	SLU 82	-22	-55	2726	-1.44	-342.2	-14.2
79	SLU 83	-21	-48	2733	-1.49	-342.91	-12.65
79	SLU 84	-22	-55	2726	-1.44	-342.2	-14.2
79	SLE RA 1	-14	-30	1716	-0.88	-221.21	-7.73
79	SLE RA 2	-14	-36	1708	-0.83	-220.43	-9.45
79	SLE RA 3	-14	-30	1716	-0.88	-221.21	-7.73
79	SLE RA 4	-14	-34	1711	-0.85	-220.74	-8.76
79	SLE RA 5	-14	-36	1708	-0.83	-220.43	-9.45
79	SLE RA 6	-14	-30	1716	-0.88	-221.21	-7.73
79	SLE RA 7	-14	-34	1711	-0.85	-220.74	-8.76
79	SLE RA 8	-14	-30	1716	-0.88	-221.21	-7.73
79	SLE RA 9	-14	-34	1711	-0.85	-220.74	-8.76
79	SLE RA 10	-15	-41	1912	-0.97	-242.96	-10.57
79	SLE RA 11	-15	-34	1920	-1.02	-243.75	-8.84
79	SLE RA 12	-15	-38	1915	-0.99	-243.28	-9.88
79	SLE RA 13	-15	-41	1912	-0.97	-242.96	-10.57
79	SLE RA 14	-15	-34	1920	-1.02	-243.75	-8.84
79	SLE RA 15	-15	-38	1915	-0.99	-243.28	-9.88
79	SLE RA 16	-15	-34	1920	-1.02	-243.75	-8.84
79	SLE RA 17	-15	-38	1915	-0.99	-243.28	-9.88
79	SLE RA 18	-16	-36	2008	-1.08	-253.41	-9.32
79	SLE RA 19	-16	-40	2003	-1.05	-252.94	-10.36
79	SLE RA 20	-16	-36	2008	-1.08	-253.41	-9.32
79	SLE RA 21	-16	-40	2003	-1.05	-252.94	-10.36
79	SLE FR 1	-14	-30	1716	-0.88	-221.21	-7.73
79	SLE FR 2	-14	-31	1714	-0.87	-221.06	-8.07
79	SLE FR 3	-14	-30	1716	-0.88	-221.21	-7.73
79	SLE FR 4	-14	-33	1802	-0.93	-230.72	-8.55
79	SLE FR 5	-14	-31	1803	-0.94	-230.87	-8.21
79	SLE FR 6	-15	-33	1862	-0.98	-237.31	-8.52
79	SLE QP 1	-14	-30	1716	-0.88	-221.21	-7.73
79	SLE QP 2	-14	-31	1803	-0.94	-230.87	-8.21
79	SLD 1	113	29	2133	-1.61	-264.56	6.81
79	SLD 2	136	-8	2130	-1.59	-264.2	-2.16
79	SLD 3	105	-90	1995	-0.8	-250.38	-22.83
79	SLD 4	128	-126	1991	-0.78	-250.03	-31.8
79	SLD 5	28	179	2113	-2.37	-262.61	44.45
79	SLD 6	50	142	2110	-2.35	-262.24	35.34
79	SLD 7	2	-215	1652	0.32	-215.35	-54.33
79	SLD 8	25	-252	1649	0.34	-214.99	-63.43
79	SLD 9	-53	189	1958	-2.22	-246.76	47.02
79	SLD 10	-30	153	1954	-2.2	-246.39	37.92
79	SLD 11	-79	-205	1497	0.47	-199.5	-51.75
79	SLD 12	-56	-242	1493	0.5	-199.14	-60.86
79	SLD 13	-156	63	1615	-1.1	-211.72	15.39
79	SLD 14	-134	27	1612	-1.07	-211.36	6.42
79	SLD 15	-164	-55	1477	-0.29	-197.54	-14.25
79	SLD 16	-142	-91	1473	-0.27	-197.19	-23.22
79	SLV 1	275	105	2554	-2.47	-307.6	25.94
79	SLV 2	326	23	2546	-2.42	-306.79	5.61
79	SLV 3	258	-164	2239	-0.63	-275.3	-41.6
79	SLV 4	309	-247	2230	-0.58	-274.49	-61.94
79	SLV 5	81	448	2510	-4.21	-303.18	111.75
79	SLV 6	133	364	2501	-4.16	-302.36	91.11
79	SLV 7	23	-451	1458	1.93	-195.49	-113.39
79	SLV 8	74	-534	1450	1.98	-194.67	-134.03
79	SLV 9	-103	472	2157	-3.86	-267.07	117.62
79	SLV 10	-51	388	2148	-3.81	-266.25	96.98
79	SLV 11	-161	-427	1105	2.28	-159.39	-107.52
79	SLV 12	-109	-511	1097	2.33	-158.57	-128.16
79	SLV 13	-337	184	1376	-1.3	-187.26	45.53
79	SLV 14	-286	102	1368	-1.25	-186.45	25.19
79	SLV 15	-355	-85	1061	0.54	-154.95	-22.02
79	SLV 16	-304	-168	1052	0.6	-154.14	-42.35
79	CRTFP Ux+	0	0	0	0	0	0
79	CRTFP Ux-	0	0	0	0	0	0
79	CRTFP Uy+	0	0	0	0	0	0
79	CRTFP Uy-	0	0	0	0	0	0
82	SLU 1	-11	-5	1602	-0.65	220.74	0.86
82	SLU 2	-11	-15	1591	-0.57	219.66	3.48
82	SLU 3	-11	-5	1602	-0.65	220.74	0.86
82	SLU 4	-11	-11	1596	-0.6	220.09	2.43
82	SLU 5	-11	-15	1591	-0.57	219.66	3.48
82	SLU 6	-11	-5	1602	-0.65	220.74	0.86
82	SLU 7	-11	-11	1596	-0.6	220.09	2.43
82	SLU 8	-11	-5	1602	-0.65	220.74	0.86
82	SLU 9	-11	-11	1596	-0.6	220.09	2.43
82	SLU 10	-14	-15	1845	-0.65	250.79	3.31
82	SLU 11	-14	-4	1856	-0.73	251.88	0.69
82	SLU 12	-14	-11	1850	-0.69	251.23	2.26
82	SLU 13	-14	-15	1845	-0.65	250.79	3.31

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
82	SLU 14	-14	-4	1856	-0.73	251.88	0.69
82	SLU 15	-14	-11	1850	-0.69	251.23	2.26
82	SLU 16	-14	-4	1856	-0.73	251.88	0.69
82	SLU 17	-14	-11	1850	-0.69	251.23	2.26
82	SLU 18	-15	-4	1965	-0.77	265.22	0.61
82	SLU 19	-15	-10	1958	-0.72	264.57	2.19
82	SLU 20	-15	-4	1965	-0.77	265.22	0.61
82	SLU 21	-15	-10	1958	-0.72	264.57	2.19
82	SLU 22	-13	-4	1798	-0.73	244.31	0.52
82	SLU 23	-13	-14	1787	-0.65	243.22	3.14
82	SLU 24	-13	-4	1798	-0.73	244.31	0.52
82	SLU 25	-13	-10	1792	-0.68	243.66	2.09
82	SLU 26	-13	-14	1787	-0.65	243.22	3.14
82	SLU 27	-13	-4	1798	-0.73	244.31	0.52
82	SLU 28	-13	-10	1792	-0.68	243.66	2.09
82	SLU 29	-13	-4	1798	-0.73	244.31	0.52
82	SLU 30	-13	-10	1792	-0.68	243.66	2.09
82	SLU 31	-16	-14	2041	-0.74	274.35	2.97
82	SLU 32	-16	-3	2052	-0.81	275.44	0.35
82	SLU 33	-16	-9	2046	-0.77	274.79	1.92
82	SLU 34	-16	-14	2041	-0.74	274.35	2.97
82	SLU 35	-16	-3	2052	-0.81	275.44	0.35
82	SLU 36	-16	-9	2046	-0.77	274.79	1.92
82	SLU 37	-16	-3	2052	-0.81	275.44	0.35
82	SLU 38	-16	-9	2046	-0.77	274.79	1.92
82	SLU 39	-18	-3	2161	-0.85	288.79	0.27
82	SLU 40	-18	-9	2154	-0.8	288.13	1.85
82	SLU 41	-18	-3	2161	-0.85	288.79	0.27
82	SLU 42	-18	-9	2154	-0.8	288.13	1.85
82	SLU 43	-13	-7	2016	-0.81	278.89	1.23
82	SLU 44	-14	-17	2005	-0.73	277.8	3.86
82	SLU 45	-13	-7	2016	-0.81	278.89	1.23
82	SLU 46	-13	-13	2009	-0.76	278.24	2.81
82	SLU 47	-14	-17	2005	-0.73	277.8	3.86
82	SLU 48	-13	-7	2016	-0.81	278.89	1.23
82	SLU 49	-13	-13	2009	-0.76	278.24	2.81
82	SLU 50	-13	-7	2016	-0.81	278.89	1.23
82	SLU 51	-13	-13	2009	-0.76	278.24	2.81
82	SLU 52	-17	-17	2259	-0.82	308.94	3.69
82	SLU 53	-17	-6	2270	-0.9	310.02	1.06
82	SLU 54	-17	-12	2263	-0.85	309.37	2.64
82	SLU 55	-17	-17	2259	-0.82	308.94	3.69
82	SLU 56	-17	-6	2270	-0.9	310.02	1.06
82	SLU 57	-17	-12	2263	-0.85	309.37	2.64
82	SLU 58	-17	-6	2270	-0.9	310.02	1.06
82	SLU 59	-17	-12	2263	-0.85	309.37	2.64
82	SLU 60	-18	-6	2379	-0.93	323.37	0.99
82	SLU 61	-18	-12	2372	-0.89	322.71	2.56
82	SLU 62	-18	-6	2379	-0.93	323.37	0.99
82	SLU 63	-18	-12	2372	-0.89	322.71	2.56
82	SLU 64	-16	-5	2212	-0.89	302.45	0.89
82	SLU 65	-16	-16	2201	-0.82	301.37	3.52
82	SLU 66	-16	-5	2212	-0.89	302.45	0.89
82	SLU 67	-16	-12	2205	-0.85	301.8	2.47
82	SLU 68	-16	-16	2201	-0.82	301.37	3.52
82	SLU 69	-16	-5	2212	-0.89	302.45	0.89
82	SLU 70	-16	-12	2205	-0.85	301.8	2.47
82	SLU 71	-16	-5	2212	-0.89	302.45	0.89
82	SLU 72	-16	-12	2205	-0.85	301.8	2.47
82	SLU 73	-19	-16	2455	-0.9	332.5	3.35
82	SLU 74	-19	-5	2466	-0.98	333.59	0.72
82	SLU 75	-19	-11	2459	-0.93	332.93	2.3
82	SLU 76	-19	-16	2455	-0.9	332.5	3.35
82	SLU 77	-19	-5	2466	-0.98	333.59	0.72
82	SLU 78	-19	-11	2459	-0.93	332.93	2.3
82	SLU 79	-19	-5	2466	-0.98	333.59	0.72
82	SLU 80	-19	-11	2459	-0.93	332.93	2.3
82	SLU 81	-20	-5	2575	-1.02	346.93	0.65
82	SLU 82	-20	-11	2568	-0.97	346.28	2.22
82	SLU 83	-20	-5	2575	-1.02	346.93	0.65
82	SLU 84	-20	-11	2568	-0.97	346.28	2.22
82	SLE RA 1	-11	-4	1658	-0.67	227.48	0.76
82	SLE RA 2	-12	-11	1651	-0.62	226.75	2.51
82	SLE RA 3	-11	-4	1658	-0.67	227.48	0.76
82	SLE RA 4	-12	-9	1654	-0.64	227.04	1.81
82	SLE RA 5	-12	-11	1651	-0.62	226.75	2.51
82	SLE RA 6	-11	-4	1658	-0.67	227.48	0.76
82	SLE RA 7	-12	-9	1654	-0.64	227.04	1.81
82	SLE RA 8	-11	-4	1658	-0.67	227.48	0.76
82	SLE RA 9	-12	-9	1654	-0.64	227.04	1.81
82	SLE RA 10	-14	-11	1820	-0.67	247.51	2.4
82	SLE RA 11	-14	-4	1828	-0.73	248.23	0.65
82	SLE RA 12	-14	-8	1823	-0.7	247.8	1.7
82	SLE RA 13	-14	-11	1820	-0.67	247.51	2.4
82	SLE RA 14	-14	-4	1828	-0.73	248.23	0.65
82	SLE RA 15	-14	-8	1823	-0.7	247.8	1.7
82	SLE RA 16	-14	-4	1828	-0.73	248.23	0.65

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
82	SLE RA 17	-14	-8	1823	-0.7	247.8	1.7
82	SLE RA 18	-14	-4	1900	-0.75	257.13	0.6
82	SLE RA 19	-15	-8	1896	-0.72	256.69	1.65
82	SLE RA 20	-14	-4	1900	-0.75	257.13	0.6
82	SLE RA 21	-15	-8	1896	-0.72	256.69	1.65
82	SLE FR 1	-11	-4	1658	-0.67	227.48	0.76
82	SLE FR 2	-11	-6	1657	-0.66	227.33	1.11
82	SLE FR 3	-11	-4	1658	-0.67	227.48	0.76
82	SLE FR 4	-12	-6	1729	-0.68	236.23	1.06
82	SLE FR 5	-12	-4	1731	-0.69	236.37	0.71
82	SLE FR 6	-13	-4	1779	-0.71	242.3	0.68
82	SLE QP 1	-11	-4	1658	-0.67	227.48	0.76
82	SLE QP 2	-12	-4	1731	-0.69	236.37	0.71
82	SLD 1	115	60	1512	-0.91	214.57	-15.43
82	SLD 2	137	96	1515	-0.93	214.87	-24.25
82	SLD 3	107	-57	1400	-0.07	203.57	13.82
82	SLD 4	130	-21	1403	-0.09	203.87	5.01
82	SLD 5	29	179	1833	-2.02	246.41	-45.35
82	SLD 6	52	216	1837	-2.04	246.72	-54.3
82	SLD 7	4	-210	1461	0.77	209.74	52.17
82	SLD 8	27	-174	1464	0.75	210.04	43.22
82	SLD 9	-52	165	1997	-2.14	262.7	-41.8
82	SLD 10	-29	202	2001	-2.15	263.01	-50.75
82	SLD 11	-77	-224	1625	0.65	226.03	55.72
82	SLD 12	-54	-188	1628	0.63	226.33	46.77
82	SLD 13	-155	13	2058	-1.3	268.88	-3.59
82	SLD 14	-132	48	2062	-1.32	269.18	-12.4
82	SLD 15	-162	-104	1947	-0.46	257.87	25.67
82	SLD 16	-139	-68	1950	-0.48	258.18	16.85
82	SLV 1	276	142	1234	-1.18	186.79	-36.15
82	SLV 2	328	223	1241	-1.22	187.47	-56.14
82	SLV 3	259	-124	979	0.73	161.71	30.57
82	SLV 4	311	-43	987	0.68	162.39	10.57
82	SLV 5	82	415	1965	-3.72	259.29	-104.39
82	SLV 6	134	497	1973	-3.76	259.98	-124.68
82	SLV 7	24	-474	1116	2.64	175.69	118
82	SLV 8	77	-391	1124	2.6	176.39	97.71
82	SLV 9	-101	383	2338	-3.98	296.36	-96.29
82	SLV 10	-49	465	2346	-4.03	297.05	-116.58
82	SLV 11	-159	-506	1488	2.37	212.76	126.1
82	SLV 12	-107	-424	1496	2.33	213.46	105.81
82	SLV 13	-335	35	2475	-2.07	310.35	-9.15
82	SLV 14	-284	116	2483	-2.11	311.04	-29.14
82	SLV 15	-353	-232	2220	-0.16	285.27	57.57
82	SLV 16	-301	-151	2228	-0.2	285.96	37.57
82	CRTFP Ux+	0	0	0	0	0	0
82	CRTFP Ux-	0	0	0	0	0	0
82	CRTFP Uy+	0	0	0	0	0	0
82	CRTFP Uy-	0	0	0	0	0	0
84	SLU 1	-56	-47	8524	2975.69	-22.97	-0.12
84	SLU 2	-57	-78	8498	2968.54	-22.77	0.11
84	SLU 3	-56	-47	8524	2975.69	-22.97	-0.12
84	SLU 4	-56	-66	8509	2971.4	-22.85	0.02
84	SLU 5	-57	-78	8498	2968.54	-22.77	0.11
84	SLU 6	-56	-47	8524	2975.69	-22.97	-0.12
84	SLU 7	-56	-66	8509	2971.4	-22.85	0.02
84	SLU 8	-56	-47	8524	2975.69	-22.97	-0.12
84	SLU 9	-56	-66	8509	2971.4	-22.85	0.02
84	SLU 10	-69	-84	10032	3504.99	-23.24	0.59
84	SLU 11	-68	-53	10058	3512.14	-23.44	0.35
84	SLU 12	-69	-71	10043	3507.85	-23.32	0.49
84	SLU 13	-69	-84	10032	3504.99	-23.24	0.59
84	SLU 14	-68	-53	10058	3512.14	-23.44	0.35
84	SLU 15	-69	-71	10043	3507.85	-23.32	0.49
84	SLU 16	-68	-53	10058	3512.14	-23.44	0.35
84	SLU 17	-69	-71	10043	3507.85	-23.32	0.49
84	SLU 18	-73	-55	10716	3742.05	-23.64	0.56
84	SLU 19	-74	-74	10700	3737.75	-23.52	0.7
84	SLU 20	-73	-55	10716	3742.05	-23.64	0.56
84	SLU 21	-74	-74	10700	3737.75	-23.52	0.7
84	SLU 22	-63	-53	9659	3371.46	-24.49	-0.34
84	SLU 23	-64	-84	9633	3364.31	-24.29	-0.1
84	SLU 24	-63	-53	9659	3371.46	-24.49	-0.34
84	SLU 25	-64	-72	9643	3367.17	-24.37	-0.2
84	SLU 26	-64	-84	9633	3364.31	-24.29	-0.1
84	SLU 27	-63	-53	9659	3371.46	-24.49	-0.34
84	SLU 28	-64	-72	9643	3367.17	-24.37	-0.2
84	SLU 29	-63	-53	9659	3371.46	-24.49	-0.34
84	SLU 30	-64	-72	9643	3367.17	-24.37	-0.2
84	SLU 31	-76	-89	11167	3900.75	-24.75	0.37
84	SLU 32	-76	-59	11193	3907.91	-24.95	0.14
84	SLU 33	-76	-77	11177	3903.62	-24.83	0.28
84	SLU 34	-76	-89	11167	3900.75	-24.75	0.37
84	SLU 35	-76	-59	11193	3907.91	-24.95	0.14
84	SLU 36	-76	-77	11177	3903.62	-24.83	0.28
84	SLU 37	-76	-59	11193	3907.91	-24.95	0.14
84	SLU 38	-76	-77	11177	3903.62	-24.83	0.28

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
84	SLU 39	-81	-61	11851	4137.81	-25.15	0.34
84	SLU 40	-81	-79	11835	4133.52	-25.03	0.48
84	SLU 41	-81	-61	11851	4137.81	-25.15	0.34
84	SLU 42	-81	-79	11835	4133.52	-25.03	0.48
84	SLU 43	-70	-60	10693	3732.71	-29.34	-0.08
84	SLU 44	-71	-91	10666	3725.56	-29.14	0.15
84	SLU 45	-70	-60	10693	3732.71	-29.34	-0.08
84	SLU 46	-71	-78	10677	3728.42	-29.22	0.06
84	SLU 47	-71	-91	10666	3725.56	-29.14	0.15
84	SLU 48	-70	-60	10693	3732.71	-29.34	-0.08
84	SLU 49	-71	-78	10677	3728.42	-29.22	0.06
84	SLU 50	-70	-60	10693	3732.71	-29.34	-0.08
84	SLU 51	-71	-78	10677	3728.42	-29.22	0.06
84	SLU 52	-83	-96	12200	4262	-29.61	0.62
84	SLU 53	-82	-65	12227	4269.16	-29.81	0.39
84	SLU 54	-83	-84	12211	4264.86	-29.69	0.53
84	SLU 55	-83	-96	12200	4262	-29.61	0.62
84	SLU 56	-82	-65	12227	4269.16	-29.81	0.39
84	SLU 57	-83	-84	12211	4264.86	-29.69	0.53
84	SLU 58	-82	-65	12227	4269.16	-29.81	0.39
84	SLU 59	-83	-84	12211	4264.86	-29.69	0.53
84	SLU 60	-88	-67	12884	4499.06	-30.01	0.6
84	SLU 61	-88	-86	12868	4494.77	-29.89	0.73
84	SLU 62	-88	-67	12884	4499.06	-30.01	0.6
84	SLU 63	-88	-86	12868	4494.77	-29.89	0.73
84	SLU 64	-78	-65	11828	4128.48	-30.86	-0.3
84	SLU 65	-78	-96	11801	4121.32	-30.66	-0.07
84	SLU 66	-78	-65	11828	4128.48	-30.86	-0.3
84	SLU 67	-78	-84	11812	4124.19	-30.74	-0.16
84	SLU 68	-78	-96	11801	4121.32	-30.66	-0.07
84	SLU 69	-78	-65	11828	4128.48	-30.86	-0.3
84	SLU 70	-78	-84	11812	4124.19	-30.74	-0.16
84	SLU 71	-78	-65	11828	4128.48	-30.86	-0.3
84	SLU 72	-78	-84	11812	4124.19	-30.74	-0.16
84	SLU 73	-91	-102	13335	4657.77	-31.12	0.41
84	SLU 74	-90	-71	13362	4664.92	-31.33	0.18
84	SLU 75	-90	-89	13346	4660.63	-31.2	0.31
84	SLU 76	-91	-102	13335	4657.77	-31.12	0.41
84	SLU 77	-90	-71	13362	4664.92	-31.33	0.18
84	SLU 78	-90	-89	13346	4660.63	-31.2	0.31
84	SLU 79	-90	-71	13362	4664.92	-31.33	0.18
84	SLU 80	-90	-89	13346	4660.63	-31.2	0.31
84	SLU 81	-95	-73	14019	4894.83	-31.52	0.38
84	SLU 82	-95	-92	14003	4890.54	-31.4	0.52
84	SLU 83	-95	-73	14019	4894.83	-31.52	0.38
84	SLU 84	-95	-92	14003	4890.54	-31.4	0.52
84	SLE RA 1	-58	-49	8849	3088.77	-23.4	-0.18
84	SLE RA 2	-59	-70	8831	3084	-23.27	-0.03
84	SLE RA 3	-58	-49	8849	3088.77	-23.4	-0.18
84	SLE RA 4	-58	-61	8838	3085.91	-23.32	-0.09
84	SLE RA 5	-59	-70	8831	3084	-23.27	-0.03
84	SLE RA 6	-58	-49	8849	3088.77	-23.4	-0.18
84	SLE RA 7	-58	-61	8838	3085.91	-23.32	-0.09
84	SLE RA 8	-58	-49	8849	3088.77	-23.4	-0.18
84	SLE RA 9	-58	-61	8838	3085.91	-23.32	-0.09
84	SLE RA 10	-67	-73	9854	3441.63	-23.58	0.29
84	SLE RA 11	-66	-53	9871	3446.4	-23.72	0.13
84	SLE RA 12	-66	-65	9861	3443.54	-23.63	0.23
84	SLE RA 13	-67	-73	9854	3441.63	-23.58	0.29
84	SLE RA 14	-66	-53	9871	3446.4	-23.72	0.13
84	SLE RA 15	-66	-65	9861	3443.54	-23.63	0.23
84	SLE RA 16	-66	-53	9871	3446.4	-23.72	0.13
84	SLE RA 17	-66	-65	9861	3443.54	-23.63	0.23
84	SLE RA 18	-70	-54	10310	3599.67	-23.85	0.27
84	SLE RA 19	-70	-67	10299	3596.81	-23.77	0.36
84	SLE RA 20	-70	-54	10310	3599.67	-23.85	0.27
84	SLE RA 21	-70	-67	10299	3596.81	-23.77	0.36
84	SLE FR 1	-58	-49	8849	3088.77	-23.4	-0.18
84	SLE FR 2	-58	-53	8845	3087.82	-23.38	-0.15
84	SLE FR 3	-58	-49	8849	3088.77	-23.4	-0.18
84	SLE FR 4	-62	-55	9283	3241.09	-23.51	-0.02
84	SLE FR 5	-62	-51	9287	3242.04	-23.54	-0.05
84	SLE FR 6	-64	-52	9579	3344.22	-23.63	0.04
84	SLE QP 1	-58	-49	8849	3088.77	-23.4	-0.18
84	SLE QP 2	-62	-51	9287	3242.04	-23.54	-0.05
84	SLD 1	691	180	9210	3211.68	11.72	-266.53
84	SLD 2	804	223	9209	3211.48	11.3	-298.31
84	SLD 3	648	-197	8928	3135.83	14.44	-251.3
84	SLD 4	761	-154	8927	3135.63	14.02	-283.08
84	SLD 5	190	577	9691	3348.04	-16.92	-91.73
84	SLD 6	304	620	9691	3347.84	-17.35	-123.99
84	SLD 7	45	-683	8752	3095.21	-7.88	-40.96
84	SLD 8	160	-640	8752	3095.01	-8.31	-73.22
84	SLD 9	-283	538	9822	3389.07	-38.77	73.13
84	SLD 10	-168	582	9822	3388.87	-39.2	40.87
84	SLD 11	-428	-721	8883	3136.24	-29.72	123.89
84	SLD 12	-313	-678	8883	3136.04	-30.15	91.63

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
84	SLD 13	-884	53	9647	3348.45	-61.09	282.99
84	SLD 14	-771	96	9646	3348.25	-61.51	251.21
84	SLD 15	-928	-325	9365	3272.6	-58.38	298.22
84	SLD 16	-815	-282	9364	3272.4	-58.8	266.44
84	SLV 1	1651	476	9113	3173.53	56.57	-605.95
84	SLV 2	1907	574	9112	3173.08	55.61	-678.01
84	SLV 3	1551	-385	8470	3000.51	62.77	-571.1
84	SLV 4	1808	-288	8469	3000.06	61.82	-643.16
84	SLV 5	512	1379	10210	3484.06	-8.57	-208.92
84	SLV 6	772	1478	10209	3483.61	-9.54	-282.04
84	SLV 7	180	-1493	8067	2907.33	12.11	-92.75
84	SLV 8	440	-1394	8066	2906.88	11.13	-165.88
84	SLV 9	-563	1292	10508	3577.21	-58.21	165.79
84	SLV 10	-303	1391	10507	3576.76	-59.18	92.66
84	SLV 11	-895	-1580	8365	3000.47	-37.53	281.95
84	SLV 12	-635	-1481	8364	3000.02	-38.5	208.83
84	SLV 13	-1931	186	10105	3484.02	-108.89	643.07
84	SLV 14	-1674	284	10104	3483.57	-109.85	571.01
84	SLV 15	-2030	-675	9462	3311	-102.69	677.92
84	SLV 16	-1774	-578	9461	3310.56	-103.65	605.86
84	CRTFP Ux+	0	0	0	0	0	0.01
84	CRTFP Ux-	0	0	0	0	0	-0.01
84	CRTFP Uy+	0	0	0	-0.01	0	0
84	CRTFP Uy-	0	0	0	0.01	0	0
84	CRTFP Rz+	0	0	0	0	0	0
84	CRTFP Rz-	0	0	0	0	0	0
86	SLU 1	-3	-29	1639	0.05	-207.52	-7.61
86	SLU 2	-2	-39	1629	0.11	-206.83	-10.21
86	SLU 3	-3	-29	1639	0.05	-207.52	-7.61
86	SLU 4	-3	-35	1633	0.09	-207.1	-9.17
86	SLU 5	-2	-39	1629	0.11	-206.83	-10.21
86	SLU 6	-3	-29	1639	0.05	-207.52	-7.61
86	SLU 7	-3	-35	1633	0.09	-207.1	-9.17
86	SLU 8	-3	-29	1639	0.05	-207.52	-7.61
86	SLU 9	-3	-35	1633	0.09	-207.1	-9.17
86	SLU 10	-3	-46	1932	0.09	-239.07	-11.88
86	SLU 11	-3	-36	1942	0.02	-239.76	-9.29
86	SLU 12	-3	-42	1936	0.06	-239.35	-10.85
86	SLU 13	-3	-46	1932	0.09	-239.07	-11.88
86	SLU 14	-3	-36	1942	0.02	-239.76	-9.29
86	SLU 15	-3	-42	1936	0.06	-239.35	-10.85
86	SLU 16	-3	-36	1942	0.02	-239.76	-9.29
86	SLU 17	-3	-42	1936	0.06	-239.35	-10.85
86	SLU 18	-3	-38	2072	0.02	-253.58	-10.01
86	SLU 19	-3	-45	2066	0.05	-253.17	-11.57
86	SLU 20	-3	-38	2072	0.02	-253.58	-10.01
86	SLU 21	-3	-45	2066	0.05	-253.17	-11.57
86	SLU 22	-3	-32	1863	0.04	-231.03	-8.36
86	SLU 23	-3	-42	1853	0.11	-230.34	-10.96
86	SLU 24	-3	-32	1863	0.04	-231.03	-8.36
86	SLU 25	-3	-38	1857	0.08	-230.62	-9.92
86	SLU 26	-3	-42	1853	0.11	-230.34	-10.96
86	SLU 27	-3	-32	1863	0.04	-231.03	-8.36
86	SLU 28	-3	-38	1857	0.08	-230.62	-9.92
86	SLU 29	-3	-32	1863	0.04	-231.03	-8.36
86	SLU 30	-3	-38	1857	0.08	-230.62	-9.92
86	SLU 31	-3	-49	2156	0.09	-262.59	-12.63
86	SLU 32	-3	-38	2166	0.02	-263.28	-10.04
86	SLU 33	-3	-45	2160	0.06	-262.87	-11.6
86	SLU 34	-3	-49	2156	0.09	-262.59	-12.63
86	SLU 35	-3	-38	2166	0.02	-263.28	-10.04
86	SLU 36	-3	-45	2160	0.06	-262.87	-11.6
86	SLU 37	-3	-38	2166	0.02	-263.28	-10.04
86	SLU 38	-3	-45	2160	0.06	-262.87	-11.6
86	SLU 39	-4	-41	2295	0.01	-277.1	-10.76
86	SLU 40	-3	-47	2290	0.05	-276.69	-12.32
86	SLU 41	-4	-41	2295	0.01	-277.1	-10.76
86	SLU 42	-3	-47	2290	0.05	-276.69	-12.32
86	SLU 43	-3	-37	2054	0.06	-261.71	-9.64
86	SLU 44	-3	-47	2044	0.13	-261.02	-12.23
86	SLU 45	-3	-37	2054	0.06	-261.71	-9.64
86	SLU 46	-3	-43	2048	0.1	-261.29	-11.2
86	SLU 47	-3	-47	2044	0.13	-261.02	-12.23
86	SLU 48	-3	-37	2054	0.06	-261.71	-9.64
86	SLU 49	-3	-43	2048	0.1	-261.29	-11.2
86	SLU 50	-3	-37	2054	0.06	-261.71	-9.64
86	SLU 51	-3	-43	2048	0.1	-261.29	-11.2
86	SLU 52	-4	-54	2347	0.11	-293.26	-13.91
86	SLU 53	-4	-43	2357	0.04	-293.95	-11.32
86	SLU 54	-4	-50	2351	0.08	-293.54	-12.87
86	SLU 55	-4	-54	2347	0.11	-293.26	-13.91
86	SLU 56	-4	-43	2357	0.04	-293.95	-11.32
86	SLU 57	-4	-50	2351	0.08	-293.54	-12.87
86	SLU 58	-4	-43	2357	0.04	-293.95	-11.32
86	SLU 59	-4	-50	2351	0.08	-293.54	-12.87
86	SLU 60	-4	-46	2487	0.03	-307.77	-12.04
86	SLU 61	-4	-52	2481	0.07	-307.36	-13.59

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
86	SLU 62	-4	-46	2487	0.03	-307.77	-12.04
86	SLU 63	-4	-52	2481	0.07	-307.36	-13.59
86	SLU 64	-4	-40	2278	0.06	-285.22	-10.39
86	SLU 65	-3	-50	2268	0.12	-284.54	-12.98
86	SLU 66	-4	-40	2278	0.06	-285.22	-10.39
86	SLU 67	-3	-46	2272	0.1	-284.81	-11.95
86	SLU 68	-3	-50	2268	0.12	-284.54	-12.98
86	SLU 69	-4	-40	2278	0.06	-285.22	-10.39
86	SLU 70	-3	-46	2272	0.1	-284.81	-11.95
86	SLU 71	-4	-40	2278	0.06	-285.22	-10.39
86	SLU 72	-3	-46	2272	0.1	-284.81	-11.95
86	SLU 73	-4	-57	2571	0.1	-316.78	-14.66
86	SLU 74	-4	-46	2581	0.04	-317.47	-12.07
86	SLU 75	-4	-52	2575	0.07	-317.06	-13.62
86	SLU 76	-4	-57	2571	0.1	-316.78	-14.66
86	SLU 77	-4	-46	2581	0.04	-317.47	-12.07
86	SLU 78	-4	-52	2575	0.07	-317.06	-13.62
86	SLU 79	-4	-46	2581	0.04	-317.47	-12.07
86	SLU 80	-4	-52	2575	0.07	-317.06	-13.62
86	SLU 81	-4	-49	2710	0.03	-331.29	-12.79
86	SLU 82	-4	-55	2705	0.07	-330.88	-14.34
86	SLU 83	-4	-49	2710	0.03	-331.29	-12.79
86	SLU 84	-4	-55	2705	0.07	-330.88	-14.34
86	SLE RA 1	-3	-30	1703	0.05	-214.23	-7.83
86	SLE RA 2	-3	-37	1697	0.09	-213.78	-9.56
86	SLE RA 3	-3	-30	1703	0.05	-214.23	-7.83
86	SLE RA 4	-3	-34	1699	0.07	-213.96	-8.87
86	SLE RA 5	-3	-37	1697	0.09	-213.78	-9.56
86	SLE RA 6	-3	-30	1703	0.05	-214.23	-7.83
86	SLE RA 7	-3	-34	1699	0.07	-213.96	-8.87
86	SLE RA 8	-3	-30	1703	0.05	-214.23	-7.83
86	SLE RA 9	-3	-34	1699	0.07	-213.96	-8.87
86	SLE RA 10	-3	-41	1898	0.07	-235.27	-10.67
86	SLE RA 11	-3	-34	1905	0.03	-235.73	-8.95
86	SLE RA 12	-3	-38	1901	0.06	-235.46	-9.98
86	SLE RA 13	-3	-41	1898	0.07	-235.27	-10.67
86	SLE RA 14	-3	-34	1905	0.03	-235.73	-8.95
86	SLE RA 15	-3	-38	1901	0.06	-235.46	-9.98
86	SLE RA 16	-3	-34	1905	0.03	-235.73	-8.95
86	SLE RA 17	-3	-38	1901	0.06	-235.46	-9.98
86	SLE RA 18	-3	-36	1991	0.02	-244.95	-9.43
86	SLE RA 19	-3	-40	1988	0.05	-244.67	-10.46
86	SLE RA 20	-3	-36	1991	0.02	-244.95	-9.43
86	SLE RA 21	-3	-40	1988	0.05	-244.67	-10.46
86	SLE FR 1	-3	-30	1703	0.05	-214.23	-7.83
86	SLE FR 2	-3	-31	1702	0.05	-214.14	-8.17
86	SLE FR 3	-3	-30	1703	0.05	-214.23	-7.83
86	SLE FR 4	-3	-33	1788	0.05	-223.36	-8.65
86	SLE FR 5	-3	-32	1790	0.04	-223.45	-8.31
86	SLE FR 6	-3	-33	1847	0.03	-229.59	-8.63
86	SLE QP 1	-3	-30	1703	0.05	-214.23	-7.83
86	SLE QP 2	-3	-32	1790	0.04	-223.45	-8.31
86	SLD 1	121	28	2103	-0.43	-253.54	6.73
86	SLD 2	140	-8	2100	-0.41	-253.34	-2.25
86	SLD 3	114	-90	1988	0.28	-244.53	-22.95
86	SLD 4	133	-126	1985	0.3	-244.33	-31.94
86	SLD 5	37	179	2059	-1.19	-246.21	44.44
86	SLD 6	57	142	2056	-1.17	-246	35.32
86	SLD 7	16	-216	1676	1.18	-216.18	-54.51
86	SLD 8	35	-253	1673	1.2	-215.97	-63.63
86	SLD 9	-40	189	1906	-1.12	-230.92	47.02
86	SLD 10	-21	152	1903	-1.1	-230.71	37.9
86	SLD 11	-62	-205	1523	1.25	-200.89	-51.94
86	SLD 12	-43	-242	1520	1.27	-200.68	-61.06
86	SLD 13	-139	63	1594	-0.22	-202.57	15.32
86	SLD 14	-120	27	1591	-0.2	-202.36	6.34
86	SLD 15	-145	-56	1479	0.49	-193.56	-14.37
86	SLD 16	-126	-92	1476	0.51	-193.35	-23.35
86	SLV 1	278	105	2503	-1.04	-292	25.91
86	SLV 2	321	22	2496	-0.99	-291.53	5.54
86	SLV 3	263	-165	2241	0.58	-271.48	-41.75
86	SLV 4	306	-247	2234	0.63	-271.01	-62.13
86	SLV 5	89	448	2403	-2.76	-275.3	111.86
86	SLV 6	133	364	2396	-2.71	-274.83	91.19
86	SLV 7	39	-452	1530	2.64	-206.9	-113.69
86	SLV 8	83	-535	1523	2.69	-206.43	-134.36
86	SLV 9	-88	472	2056	-2.62	-240.47	117.74
86	SLV 10	-44	388	2049	-2.57	-239.99	97.07
86	SLV 11	-138	-428	1183	2.79	-172.07	-107.81
86	SLV 12	-94	-512	1176	2.84	-171.59	-128.48
86	SLV 13	-312	184	1345	-0.55	-175.89	45.51
86	SLV 14	-269	101	1338	-0.5	-175.42	25.14
86	SLV 15	-327	-86	1083	1.07	-155.37	-22.15
86	SLV 16	-284	-169	1076	1.12	-154.9	-42.53
86	CRTFP Ux+	0	0	0	0	0	0
86	CRTFP Ux-	0	0	0	0	0	0
86	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
86	CRTFP Uy-	0	0	0	0	0	0
89	SLU 1	0	-5	1597	0.28	217.29	0.88
89	SLU 2	0	-15	1588	0.35	216.74	3.52
89	SLU 3	0	-5	1597	0.28	217.29	0.88
89	SLU 4	0	-11	1592	0.32	216.96	2.46
89	SLU 5	0	-15	1588	0.35	216.74	3.52
89	SLU 6	0	-5	1597	0.28	217.29	0.88
89	SLU 7	0	-11	1592	0.32	216.96	2.46
89	SLU 8	0	-5	1597	0.28	217.29	0.88
89	SLU 9	0	-11	1592	0.32	216.96	2.46
89	SLU 10	-1	-15	1842	0.44	247.53	3.35
89	SLU 11	-1	-5	1851	0.37	248.07	0.71
89	SLU 12	-1	-11	1846	0.41	247.75	2.29
89	SLU 13	-1	-15	1842	0.44	247.53	3.35
89	SLU 14	-1	-5	1851	0.37	248.07	0.71
89	SLU 15	-1	-11	1846	0.41	247.75	2.29
89	SLU 16	-1	-5	1851	0.37	248.07	0.71
89	SLU 17	-1	-11	1846	0.41	247.75	2.29
89	SLU 18	-2	-4	1960	0.41	261.27	0.64
89	SLU 19	-2	-11	1954	0.45	260.94	2.22
89	SLU 20	-2	-4	1960	0.41	261.27	0.64
89	SLU 21	-2	-11	1954	0.45	260.94	2.22
89	SLU 22	-1	-4	1792	0.33	240.42	0.55
89	SLU 23	-1	-14	1784	0.4	239.87	3.18
89	SLU 24	-1	-4	1792	0.33	240.42	0.55
89	SLU 25	-1	-10	1787	0.38	240.09	2.13
89	SLU 26	-1	-14	1784	0.4	239.87	3.18
89	SLU 27	-1	-4	1792	0.33	240.42	0.55
89	SLU 28	-1	-10	1787	0.38	240.09	2.13
89	SLU 29	-1	-4	1792	0.33	240.42	0.55
89	SLU 30	-1	-10	1787	0.38	240.09	2.13
89	SLU 31	-2	-14	2038	0.49	270.66	3.01
89	SLU 32	-2	-3	2046	0.43	271.2	0.38
89	SLU 33	-2	-10	2041	0.47	270.88	1.96
89	SLU 34	-2	-14	2038	0.49	270.66	3.01
89	SLU 35	-2	-3	2046	0.43	271.2	0.38
89	SLU 36	-2	-10	2041	0.47	270.88	1.96
89	SLU 37	-2	-3	2046	0.43	271.2	0.38
89	SLU 38	-2	-10	2041	0.47	270.88	1.96
89	SLU 39	-2	-3	2155	0.46	284.4	0.3
89	SLU 40	-2	-10	2150	0.51	284.07	1.88
89	SLU 41	-2	-3	2155	0.46	284.4	0.3
89	SLU 42	-2	-10	2150	0.51	284.07	1.88
89	SLU 43	0	-7	2009	0.35	274.54	1.26
89	SLU 44	0	-17	2000	0.42	274	3.9
89	SLU 45	0	-7	2009	0.35	274.54	1.26
89	SLU 46	0	-13	2004	0.39	274.21	2.84
89	SLU 47	0	-17	2000	0.42	274	3.9
89	SLU 48	0	-7	2009	0.35	274.54	1.26
89	SLU 49	0	-13	2004	0.39	274.21	2.84
89	SLU 50	0	-7	2009	0.35	274.54	1.26
89	SLU 51	0	-13	2004	0.39	274.21	2.84
89	SLU 52	-1	-17	2254	0.51	304.78	3.73
89	SLU 53	-1	-6	2263	0.44	305.33	1.09
89	SLU 54	-1	-13	2258	0.48	305	2.67
89	SLU 55	-1	-17	2254	0.51	304.78	3.73
89	SLU 56	-1	-6	2263	0.44	305.33	1.09
89	SLU 57	-1	-13	2258	0.48	305	2.67
89	SLU 58	-1	-6	2263	0.44	305.33	1.09
89	SLU 59	-1	-13	2258	0.48	305	2.67
89	SLU 60	-1	-6	2372	0.48	318.52	1.02
89	SLU 61	-1	-13	2366	0.52	318.2	2.6
89	SLU 62	-1	-6	2372	0.48	318.52	1.02
89	SLU 63	-1	-13	2366	0.52	318.2	2.6
89	SLU 64	0	-6	2204	0.4	297.67	0.93
89	SLU 65	-1	-16	2196	0.47	297.13	3.56
89	SLU 66	0	-6	2204	0.4	297.67	0.93
89	SLU 67	0	-12	2199	0.44	297.34	2.51
89	SLU 68	-1	-16	2196	0.47	297.13	3.56
89	SLU 69	0	-6	2204	0.4	297.67	0.93
89	SLU 70	0	-12	2199	0.44	297.34	2.51
89	SLU 71	0	-6	2204	0.4	297.67	0.93
89	SLU 72	0	-12	2199	0.44	297.34	2.51
89	SLU 73	-2	-16	2450	0.56	327.91	3.39
89	SLU 74	-1	-5	2458	0.49	328.46	0.76
89	SLU 75	-2	-12	2453	0.53	328.13	2.34
89	SLU 76	-2	-16	2450	0.56	327.91	3.39
89	SLU 77	-1	-5	2458	0.49	328.46	0.76
89	SLU 78	-2	-12	2453	0.53	328.13	2.34
89	SLU 79	-1	-5	2458	0.49	328.46	0.76
89	SLU 80	-2	-12	2453	0.53	328.13	2.34
89	SLU 81	-2	-5	2567	0.53	341.65	0.69
89	SLU 82	-2	-11	2562	0.57	341.33	2.26
89	SLU 83	-2	-5	2567	0.53	341.65	0.69
89	SLU 84	-2	-11	2562	0.57	341.33	2.26
89	SLE RA 1	0	-5	1653	0.3	223.9	0.79
89	SLE RA 2	0	-12	1647	0.34	223.53	2.54

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
89	SLE RA 3	0	-5	1653	0.3	223.9	0.79
89	SLE RA 4	0	-9	1649	0.32	223.68	1.84
89	SLE RA 5	0	-12	1647	0.34	223.53	2.54
89	SLE RA 6	0	-5	1653	0.3	223.9	0.79
89	SLE RA 7	0	-9	1649	0.32	223.68	1.84
89	SLE RA 8	0	-5	1653	0.3	223.9	0.79
89	SLE RA 9	0	-9	1649	0.32	223.68	1.84
89	SLE RA 10	-1	-11	1816	0.4	244.06	2.43
89	SLE RA 11	-1	-4	1822	0.36	244.42	0.67
89	SLE RA 12	-1	-9	1819	0.38	244.2	1.73
89	SLE RA 13	-1	-11	1816	0.4	244.06	2.43
89	SLE RA 14	-1	-4	1822	0.36	244.42	0.67
89	SLE RA 15	-1	-9	1819	0.38	244.2	1.73
89	SLE RA 16	-1	-4	1822	0.36	244.42	0.67
89	SLE RA 17	-1	-9	1819	0.38	244.2	1.73
89	SLE RA 18	-1	-4	1895	0.38	253.22	0.63
89	SLE RA 19	-1	-8	1891	0.41	253	1.68
89	SLE RA 20	-1	-4	1895	0.38	253.22	0.63
89	SLE RA 21	-1	-8	1891	0.41	253	1.68
89	SLE FR 1	0	-5	1653	0.3	223.9	0.79
89	SLE FR 2	0	-6	1652	0.31	223.82	1.14
89	SLE FR 3	0	-5	1653	0.3	223.9	0.79
89	SLE FR 4	0	-6	1724	0.33	232.62	1.09
89	SLE FR 5	0	-5	1725	0.32	232.69	0.74
89	SLE FR 6	-1	-4	1774	0.34	238.56	0.71
89	SLE QP 1	0	-5	1653	0.3	223.9	0.79
89	SLE QP 2	0	-5	1725	0.32	232.69	0.74
89	SLD 1	124	60	1496	-0.18	208.56	-15.44
89	SLD 2	143	95	1499	-0.19	208.74	-24.27
89	SLD 3	116	-57	1408	0.58	203.27	13.87
89	SLD 4	135	-22	1411	0.56	203.44	5.04
89	SLD 5	42	179	1788	-0.96	233.42	-45.41
89	SLD 6	62	216	1791	-0.98	233.6	-54.37
89	SLD 7	15	-211	1497	1.55	215.77	52.29
89	SLD 8	35	-174	1500	1.53	215.94	43.33
89	SLD 9	-36	165	1951	-0.88	249.44	-41.85
89	SLD 10	-16	202	1954	-0.9	249.61	-50.81
89	SLD 11	-63	-225	1660	1.63	231.78	55.85
89	SLD 12	-43	-189	1663	1.61	231.96	46.89
89	SLD 13	-136	12	2039	0.09	261.94	-3.56
89	SLD 14	-117	48	2042	0.07	262.12	-12.39
89	SLD 15	-144	-105	1952	0.84	256.65	25.75
89	SLD 16	-125	-69	1955	0.82	256.82	16.92
89	SLV 1	282	142	1204	-0.82	177.77	-36.21
89	SLV 2	326	223	1210	-0.86	178.17	-56.22
89	SLV 3	264	-125	1005	0.9	165.71	30.63
89	SLV 4	308	-44	1011	0.86	166.1	10.62
89	SLV 5	97	415	1869	-2.61	234.37	-104.56
89	SLV 6	141	498	1875	-2.65	234.77	-124.87
89	SLV 7	35	-474	1205	3.11	194.16	118.23
89	SLV 8	80	-392	1211	3.07	194.56	97.92
89	SLV 9	-80	383	2239	-2.43	270.83	-96.44
89	SLV 10	-36	465	2246	-2.47	271.22	-116.75
89	SLV 11	-142	-507	1576	3.29	230.61	126.35
89	SLV 12	-98	-424	1582	3.25	231.01	106.04
89	SLV 13	-308	35	2439	-0.21	299.28	-9.14
89	SLV 14	-265	116	2446	-0.25	299.67	-29.15
89	SLV 15	-327	-232	2240	1.5	287.22	57.7
89	SLV 16	-283	-151	2247	1.46	287.61	37.68
89	CRTFP Ux+	0	0	0	0	0	0
89	CRTFP Ux-	0	0	0	0	0	0
89	CRTFP Uy+	0	0	0	0	0	0
89	CRTFP Uy-	0	0	0	0	0	0
90	SLU 1	7	-29	1652	0.78	-218.22	-7.65
90	SLU 2	8	-40	1645	0.84	-217.88	-10.25
90	SLU 3	7	-29	1652	0.78	-218.22	-7.65
90	SLU 4	7	-36	1648	0.82	-218.01	-9.21
90	SLU 5	8	-40	1645	0.84	-217.88	-10.25
90	SLU 6	7	-29	1652	0.78	-218.22	-7.65
90	SLU 7	7	-36	1648	0.82	-218.01	-9.21
90	SLU 8	7	-29	1652	0.78	-218.22	-7.65
90	SLU 9	7	-36	1648	0.82	-218.01	-9.21
90	SLU 10	9	-46	1949	0.98	-252.32	-11.91
90	SLU 11	9	-36	1957	0.92	-252.67	-9.32
90	SLU 12	9	-42	1953	0.96	-252.46	-10.87
90	SLU 13	9	-46	1949	0.98	-252.32	-11.91
90	SLU 14	9	-36	1957	0.92	-252.67	-9.32
90	SLU 15	9	-42	1953	0.96	-252.46	-10.87
90	SLU 16	9	-36	1957	0.92	-252.67	-9.32
90	SLU 17	9	-42	1953	0.96	-252.46	-10.87
90	SLU 18	9	-39	2088	0.99	-267.43	-10.03
90	SLU 19	9	-45	2083	1.02	-267.22	-11.58
90	SLU 20	9	-39	2088	0.99	-267.43	-10.03
90	SLU 21	9	-45	2083	1.02	-267.22	-11.58
90	SLU 22	8	-32	1878	0.9	-243.39	-8.41
90	SLU 23	9	-43	1870	0.95	-243.04	-11
90	SLU 24	8	-32	1878	0.9	-243.39	-8.41

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
90	SLU 25	8	-39	1873	0.93	-243.18	-9.96
90	SLU 26	9	-43	1870	0.95	-243.04	-11
90	SLU 27	8	-32	1878	0.9	-243.39	-8.41
90	SLU 28	8	-39	1873	0.93	-243.18	-9.96
90	SLU 29	8	-32	1878	0.9	-243.39	-8.41
90	SLU 30	8	-39	1873	0.93	-243.18	-9.96
90	SLU 31	10	-49	2175	1.1	-277.49	-12.66
90	SLU 32	10	-39	2183	1.04	-277.83	-10.07
90	SLU 33	10	-45	2178	1.07	-277.62	-11.63
90	SLU 34	10	-49	2175	1.1	-277.49	-12.66
90	SLU 35	10	-39	2183	1.04	-277.83	-10.07
90	SLU 36	10	-45	2178	1.07	-277.62	-11.63
90	SLU 37	10	-39	2183	1.04	-277.83	-10.07
90	SLU 38	10	-45	2178	1.07	-277.62	-11.63
90	SLU 39	10	-41	2313	1.1	-292.6	-10.78
90	SLU 40	10	-48	2309	1.13	-292.39	-12.34
90	SLU 41	10	-41	2313	1.1	-292.6	-10.78
90	SLU 42	10	-48	2309	1.13	-292.39	-12.34
90	SLU 43	9	-37	2071	0.98	-275.06	-9.69
90	SLU 44	9	-48	2063	1.04	-274.71	-12.28
90	SLU 45	9	-37	2071	0.98	-275.06	-9.69
90	SLU 46	9	-43	2066	1.02	-274.85	-11.25
90	SLU 47	9	-48	2063	1.04	-274.71	-12.28
90	SLU 48	9	-37	2071	0.98	-275.06	-9.69
90	SLU 49	9	-43	2066	1.02	-274.85	-11.25
90	SLU 50	9	-37	2071	0.98	-275.06	-9.69
90	SLU 51	9	-43	2066	1.02	-274.85	-11.25
90	SLU 52	11	-54	2368	1.18	-309.16	-13.95
90	SLU 53	10	-44	2376	1.12	-309.51	-11.35
90	SLU 54	11	-50	2371	1.16	-309.3	-12.91
90	SLU 55	11	-54	2368	1.18	-309.16	-13.95
90	SLU 56	10	-44	2376	1.12	-309.51	-11.35
90	SLU 57	11	-50	2371	1.16	-309.3	-12.91
90	SLU 58	10	-44	2376	1.12	-309.51	-11.35
90	SLU 59	11	-50	2371	1.16	-309.3	-12.91
90	SLU 60	11	-46	2506	1.18	-324.27	-12.07
90	SLU 61	11	-53	2502	1.22	-324.06	-13.62
90	SLU 62	11	-46	2506	1.18	-324.27	-12.07
90	SLU 63	11	-53	2502	1.22	-324.06	-13.62
90	SLU 64	10	-40	2296	1.09	-300.23	-10.45
90	SLU 65	10	-50	2288	1.15	-299.88	-13.04
90	SLU 66	10	-40	2296	1.09	-300.23	-10.45
90	SLU 67	10	-46	2292	1.13	-300.02	-12
90	SLU 68	10	-50	2288	1.15	-299.88	-13.04
90	SLU 69	10	-40	2296	1.09	-300.23	-10.45
90	SLU 70	10	-46	2292	1.13	-300.02	-12
90	SLU 71	10	-40	2296	1.09	-300.23	-10.45
90	SLU 72	10	-46	2292	1.13	-300.02	-12
90	SLU 73	12	-57	2593	1.29	-334.32	-14.7
90	SLU 74	11	-47	2601	1.23	-334.67	-12.11
90	SLU 75	12	-53	2596	1.27	-334.46	-13.66
90	SLU 76	12	-57	2593	1.29	-334.32	-14.7
90	SLU 77	11	-47	2601	1.23	-334.67	-12.11
90	SLU 78	12	-53	2596	1.27	-334.46	-13.66
90	SLU 79	11	-47	2601	1.23	-334.67	-12.11
90	SLU 80	12	-53	2596	1.27	-334.46	-13.66
90	SLU 81	12	-49	2732	1.29	-349.43	-12.82
90	SLU 82	12	-56	2727	1.33	-349.23	-14.37
90	SLU 83	12	-49	2732	1.29	-349.43	-12.82
90	SLU 84	12	-56	2727	1.33	-349.23	-14.37
90	SLE RA 1	8	-30	1717	0.82	-225.41	-7.87
90	SLE RA 2	8	-37	1712	0.85	-225.18	-9.6
90	SLE RA 3	8	-30	1717	0.82	-225.41	-7.87
90	SLE RA 4	8	-34	1714	0.84	-225.27	-8.91
90	SLE RA 5	8	-37	1712	0.85	-225.18	-9.6
90	SLE RA 6	8	-30	1717	0.82	-225.41	-7.87
90	SLE RA 7	8	-34	1714	0.84	-225.27	-8.91
90	SLE RA 8	8	-30	1717	0.82	-225.41	-7.87
90	SLE RA 9	8	-34	1714	0.84	-225.27	-8.91
90	SLE RA 10	9	-41	1915	0.95	-248.14	-10.71
90	SLE RA 11	8	-35	1920	0.91	-248.38	-8.98
90	SLE RA 12	9	-39	1917	0.93	-248.24	-10.01
90	SLE RA 13	9	-41	1915	0.95	-248.14	-10.71
90	SLE RA 14	8	-35	1920	0.91	-248.38	-8.98
90	SLE RA 15	9	-39	1917	0.93	-248.24	-10.01
90	SLE RA 16	8	-35	1920	0.91	-248.38	-8.98
90	SLE RA 17	9	-39	1917	0.93	-248.24	-10.01
90	SLE RA 18	9	-36	2007	0.95	-258.22	-9.45
90	SLE RA 19	9	-41	2004	0.97	-258.08	-10.49
90	SLE RA 20	9	-36	2007	0.95	-258.22	-9.45
90	SLE RA 21	9	-41	2004	0.97	-258.08	-10.49
90	SLE FR 1	8	-30	1717	0.82	-225.41	-7.87
90	SLE FR 2	8	-32	1716	0.82	-225.37	-8.22
90	SLE FR 3	8	-30	1717	0.82	-225.41	-7.87
90	SLE FR 4	8	-33	1803	0.86	-235.21	-8.69
90	SLE FR 5	8	-32	1804	0.86	-235.25	-8.34
90	SLE FR 6	8	-33	1862	0.88	-241.82	-8.66

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
90	SLE QP 1	8	-30	1717	0.82	-225.41	-7.87
90	SLE QP 2	8	-32	1804	0.86	-235.25	-8.34
90	SLD 1	123	28	2109	0.7	-266.06	6.71
90	SLD 2	139	-8	2106	0.72	-265.96	-2.29
90	SLD 3	129	-90	2015	1.33	-260.44	-22.99
90	SLD 4	145	-127	2012	1.35	-260.34	-31.99
90	SLD 5	27	179	2039	-0.15	-253.05	44.43
90	SLD 6	43	142	2037	-0.13	-252.95	35.3
90	SLD 7	49	-216	1725	1.95	-234.33	-54.57
90	SLD 8	65	-253	1723	1.97	-234.23	-63.7
90	SLD 9	-49	189	1885	-0.26	-236.28	47.01
90	SLD 10	-33	152	1883	-0.24	-236.18	37.88
90	SLD 11	-27	-206	1571	1.84	-217.56	-51.99
90	SLD 12	-11	-243	1569	1.86	-217.46	-61.12
90	SLD 13	-129	63	1596	0.36	-210.16	15.3
90	SLD 14	-114	26	1593	0.38	-210.07	6.3
90	SLD 15	-123	-56	1502	0.99	-204.55	-14.4
90	SLD 16	-107	-92	1499	1.01	-204.45	-23.4
90	SLV 1	269	105	2497	0.51	-305.38	25.9
90	SLV 2	305	22	2492	0.55	-305.16	5.5
90	SLV 3	284	-165	2282	1.95	-292.59	-41.8
90	SLV 4	320	-248	2277	1.99	-292.37	-62.2
90	SLV 5	51	448	2340	-1.44	-275.77	111.89
90	SLV 6	87	364	2334	-1.4	-275.54	91.19
90	SLV 7	100	-452	1624	3.35	-233.14	-113.76
90	SLV 8	137	-536	1618	3.39	-232.91	-134.46
90	SLV 9	-121	472	1990	-1.68	-237.59	117.77
90	SLV 10	-85	388	1984	-1.63	-237.37	97.08
90	SLV 11	-72	-428	1274	3.11	-194.97	-107.88
90	SLV 12	-35	-512	1268	3.16	-194.74	-128.58
90	SLV 13	-304	183	1331	-0.28	-178.14	45.51
90	SLV 14	-268	101	1325	-0.23	-177.92	25.11
90	SLV 15	-289	-87	1116	1.16	-165.35	-22.19
90	SLV 16	-253	-169	1111	1.2	-165.13	-42.59
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
93	SLU 1	11	-5	1619	1.09	232.05	0.93
93	SLU 2	11	-16	1612	1.15	231.9	3.57
93	SLU 3	11	-5	1619	1.09	232.05	0.93
93	SLU 4	11	-12	1614	1.13	231.96	2.51
93	SLU 5	11	-16	1612	1.15	231.9	3.57
93	SLU 6	11	-5	1619	1.09	232.05	0.93
93	SLU 7	11	-12	1614	1.13	231.96	2.51
93	SLU 8	11	-5	1619	1.09	232.05	0.93
93	SLU 9	11	-12	1614	1.13	231.96	2.51
93	SLU 10	12	-15	1871	1.4	265.76	3.4
93	SLU 11	12	-5	1878	1.34	265.92	0.77
93	SLU 12	12	-11	1874	1.37	265.83	2.35
93	SLU 13	12	-15	1871	1.4	265.76	3.4
93	SLU 14	12	-5	1878	1.34	265.92	0.77
93	SLU 15	12	-11	1874	1.37	265.83	2.35
93	SLU 16	12	-5	1878	1.34	265.92	0.77
93	SLU 17	12	-11	1874	1.37	265.83	2.35
93	SLU 18	13	-5	1989	1.44	280.43	0.7
93	SLU 19	13	-11	1985	1.48	280.34	2.28
93	SLU 20	13	-5	1989	1.44	280.43	0.7
93	SLU 21	13	-11	1985	1.48	280.34	2.28
93	SLU 22	12	-4	1818	1.26	257.38	0.61
93	SLU 23	12	-15	1811	1.32	257.22	3.24
93	SLU 24	12	-4	1818	1.26	257.38	0.61
93	SLU 25	12	-10	1814	1.3	257.28	2.19
93	SLU 26	12	-15	1811	1.32	257.22	3.24
93	SLU 27	12	-4	1818	1.26	257.38	0.61
93	SLU 28	12	-10	1814	1.3	257.28	2.19
93	SLU 29	12	-4	1818	1.26	257.38	0.61
93	SLU 30	12	-10	1814	1.3	257.28	2.19
93	SLU 31	13	-14	2070	1.57	291.09	3.08
93	SLU 32	13	-4	2077	1.51	291.24	0.44
93	SLU 33	13	-10	2073	1.55	291.15	2.02
93	SLU 34	13	-14	2070	1.57	291.09	3.08
93	SLU 35	13	-4	2077	1.51	291.24	0.44
93	SLU 36	13	-10	2073	1.55	291.15	2.02
93	SLU 37	13	-4	2077	1.51	291.24	0.44
93	SLU 38	13	-10	2073	1.55	291.15	2.02
93	SLU 39	14	-4	2188	1.61	305.76	0.37
93	SLU 40	13	-10	2184	1.65	305.67	1.95
93	SLU 41	14	-4	2188	1.61	305.76	0.37
93	SLU 42	13	-10	2184	1.65	305.67	1.95
93	SLU 43	15	-7	2036	1.36	292.98	1.32
93	SLU 44	14	-18	2029	1.42	292.83	3.96
93	SLU 45	15	-7	2036	1.36	292.98	1.32
93	SLU 46	14	-13	2032	1.4	292.89	2.9
93	SLU 47	14	-18	2029	1.42	292.83	3.96
93	SLU 48	15	-7	2036	1.36	292.98	1.32
93	SLU 49	14	-13	2032	1.4	292.89	2.9

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
93	SLU 50	15	-7	2036	1.36	292.98	1.32
93	SLU 51	14	-13	2032	1.4	292.89	2.9
93	SLU 52	15	-17	2288	1.67	326.7	3.79
93	SLU 53	16	-7	2295	1.61	326.85	1.16
93	SLU 54	15	-13	2291	1.64	326.76	2.74
93	SLU 55	15	-17	2288	1.67	326.7	3.79
93	SLU 56	16	-7	2295	1.61	326.85	1.16
93	SLU 57	15	-13	2291	1.64	326.76	2.74
93	SLU 58	16	-7	2295	1.61	326.85	1.16
93	SLU 59	15	-13	2291	1.64	326.76	2.74
93	SLU 60	16	-7	2406	1.71	341.36	1.09
93	SLU 61	16	-13	2402	1.75	341.27	2.67
93	SLU 62	16	-7	2406	1.71	341.36	1.09
93	SLU 63	16	-13	2402	1.75	341.27	2.67
93	SLU 64	16	-6	2235	1.53	318.31	1
93	SLU 65	15	-17	2228	1.59	318.16	3.63
93	SLU 66	16	-6	2235	1.53	318.31	1
93	SLU 67	15	-12	2231	1.57	318.22	2.58
93	SLU 68	15	-17	2228	1.59	318.16	3.63
93	SLU 69	16	-6	2235	1.53	318.31	1
93	SLU 70	15	-12	2231	1.57	318.22	2.58
93	SLU 71	16	-6	2235	1.53	318.31	1
93	SLU 72	15	-12	2231	1.57	318.22	2.58
93	SLU 73	16	-16	2488	1.84	352.02	3.47
93	SLU 74	16	-6	2494	1.78	352.17	0.83
93	SLU 75	16	-12	2490	1.81	352.08	2.41
93	SLU 76	16	-16	2488	1.84	352.02	3.47
93	SLU 77	16	-6	2494	1.78	352.17	0.83
93	SLU 78	16	-12	2490	1.81	352.08	2.41
93	SLU 79	16	-6	2494	1.78	352.17	0.83
93	SLU 80	16	-12	2490	1.81	352.08	2.41
93	SLU 81	17	-5	2605	1.88	366.69	0.76
93	SLU 82	17	-12	2601	1.92	366.6	2.35
93	SLU 83	17	-5	2605	1.88	366.69	0.76
93	SLU 84	17	-12	2601	1.92	366.6	2.35
93	SLE RA 1	12	-5	1675	1.14	239.29	0.84
93	SLE RA 2	11	-12	1671	1.18	239.18	2.59
93	SLE RA 3	12	-5	1675	1.14	239.29	0.84
93	SLE RA 4	12	-9	1673	1.16	239.22	1.89
93	SLE RA 5	11	-12	1671	1.18	239.18	2.59
93	SLE RA 6	12	-5	1675	1.14	239.29	0.84
93	SLE RA 7	12	-9	1673	1.16	239.22	1.89
93	SLE RA 8	12	-5	1675	1.14	239.29	0.84
93	SLE RA 9	12	-9	1673	1.16	239.22	1.89
93	SLE RA 10	12	-12	1844	1.34	261.76	2.49
93	SLE RA 11	12	-5	1848	1.3	261.86	0.73
93	SLE RA 12	12	-9	1846	1.33	261.8	1.78
93	SLE RA 13	12	-12	1844	1.34	261.76	2.49
93	SLE RA 14	12	-5	1848	1.3	261.86	0.73
93	SLE RA 15	12	-9	1846	1.33	261.8	1.78
93	SLE RA 16	12	-5	1848	1.3	261.86	0.73
93	SLE RA 17	12	-9	1846	1.33	261.8	1.78
93	SLE RA 18	13	-5	1922	1.37	271.54	0.68
93	SLE RA 19	12	-9	1920	1.4	271.48	1.74
93	SLE RA 20	13	-5	1922	1.37	271.54	0.68
93	SLE RA 21	12	-9	1920	1.4	271.48	1.74
93	SLE FR 1	12	-5	1675	1.14	239.29	0.84
93	SLE FR 2	12	-6	1675	1.15	239.27	1.19
93	SLE FR 3	12	-5	1675	1.14	239.29	0.84
93	SLE FR 4	12	-6	1749	1.22	248.94	1.14
93	SLE FR 5	12	-5	1750	1.21	248.96	0.79
93	SLE FR 6	12	-5	1799	1.26	255.41	0.76
93	SLE QP 1	12	-5	1675	1.14	239.29	0.84
93	SLE QP 2	12	-5	1750	1.21	248.96	0.79
93	SLD 1	135	60	1504	0.6	219.98	-15.4
93	SLD 2	151	95	1507	0.58	220.07	-24.23
93	SLD 3	126	-57	1439	1.28	217.99	13.93
93	SLD 4	142	-22	1441	1.26	218.08	5.1
93	SLD 5	57	179	1775	0	243.26	-45.38
93	SLD 6	73	216	1777	-0.02	243.35	-54.35
93	SLD 7	27	-211	1556	2.27	236.62	52.37
93	SLD 8	43	-175	1558	2.25	236.71	43.4
93	SLD 9	-19	165	1941	0.17	261.22	-41.82
93	SLD 10	-3	201	1943	0.15	261.31	-50.79
93	SLD 11	-49	-225	1722	2.44	254.58	55.94
93	SLD 12	-33	-189	1724	2.42	254.66	46.97
93	SLD 13	-118	12	2058	1.16	279.85	-3.51
93	SLD 14	-102	48	2060	1.14	279.93	-12.34
93	SLD 15	-127	-105	1992	1.84	277.86	25.82
93	SLD 16	-111	-69	1995	1.82	277.94	16.98
93	SLV 1	292	142	1193	-0.19	183.02	-36.18
93	SLV 2	328	223	1198	-0.22	183.21	-56.21
93	SLV 3	271	-125	1043	1.37	178.49	30.7
93	SLV 4	307	-44	1048	1.33	178.68	10.67
93	SLV 5	114	415	1807	-1.55	235.98	-104.57
93	SLV 6	151	498	1812	-1.59	236.18	-124.9
93	SLV 7	45	-475	1309	3.63	220.88	118.36

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
93	SLV 8	82	-393	1314	3.59	221.07	98.03
93	SLV 9	-58	383	2185	-1.17	276.85	-96.44
93	SLV 10	-21	465	2190	-1.21	277.05	-116.77
93	SLV 11	-127	-507	1687	4.01	261.74	126.49
93	SLV 12	-90	-425	1692	3.97	261.94	106.16
93	SLV 13	-283	34	2451	1.09	319.24	-9.08
93	SLV 14	-247	115	2456	1.05	319.44	-29.12
93	SLV 15	-304	-233	2301	2.64	314.71	57.8
93	SLV 16	-268	-152	2306	2.61	314.91	37.76
93	CRTFP Ux+	0	0	0	0	0	0
93	CRTFP Ux-	0	0	0	0	0	0
93	CRTFP Uy+	0	0	0	0	0	0
93	CRTFP Uy-	0	0	0	0	0	0
94	SLU 1	15	-30	1686	1.33	-243.42	-7.63
94	SLU 2	16	-40	1680	1.38	-243.29	-10.22
94	SLU 3	15	-30	1686	1.33	-243.42	-7.63
94	SLU 4	16	-36	1682	1.36	-243.34	-9.19
94	SLU 5	16	-40	1680	1.38	-243.29	-10.22
94	SLU 6	15	-30	1686	1.33	-243.42	-7.63
94	SLU 7	16	-36	1682	1.36	-243.34	-9.19
94	SLU 8	15	-30	1686	1.33	-243.42	-7.63
94	SLU 9	16	-36	1682	1.36	-243.34	-9.19
94	SLU 10	19	-46	1991	1.65	-283.07	-11.85
94	SLU 11	18	-36	1997	1.6	-283.2	-9.26
94	SLU 12	19	-42	1993	1.63	-283.12	-10.81
94	SLU 13	19	-46	1991	1.65	-283.07	-11.85
94	SLU 14	18	-36	1997	1.6	-283.2	-9.26
94	SLU 15	19	-42	1993	1.63	-283.12	-10.81
94	SLU 16	18	-36	1997	1.6	-283.2	-9.26
94	SLU 17	19	-42	1993	1.63	-283.12	-10.81
94	SLU 18	19	-39	2130	1.71	-300.24	-9.96
94	SLU 19	20	-45	2127	1.74	-300.17	-11.51
94	SLU 20	19	-39	2130	1.71	-300.24	-9.96
94	SLU 21	20	-45	2127	1.74	-300.17	-11.51
94	SLU 22	17	-33	1916	1.53	-272.54	-8.38
94	SLU 23	18	-43	1910	1.58	-272.41	-10.97
94	SLU 24	17	-33	1916	1.53	-272.54	-8.38
94	SLU 25	18	-39	1913	1.56	-272.46	-9.94
94	SLU 26	18	-43	1910	1.58	-272.41	-10.97
94	SLU 27	17	-33	1916	1.53	-272.54	-8.38
94	SLU 28	18	-39	1913	1.56	-272.46	-9.94
94	SLU 29	17	-33	1916	1.53	-272.54	-8.38
94	SLU 30	18	-39	1913	1.56	-272.46	-9.94
94	SLU 31	21	-49	2221	1.85	-312.19	-12.6
94	SLU 32	20	-39	2227	1.8	-312.32	-10.01
94	SLU 33	21	-45	2224	1.83	-312.24	-11.56
94	SLU 34	21	-49	2221	1.85	-312.19	-12.6
94	SLU 35	20	-39	2227	1.8	-312.32	-10.01
94	SLU 36	21	-45	2224	1.83	-312.24	-11.56
94	SLU 37	20	-39	2227	1.8	-312.32	-10.01
94	SLU 38	21	-45	2224	1.83	-312.24	-11.56
94	SLU 39	21	-42	2361	1.91	-329.36	-10.71
94	SLU 40	22	-48	2357	1.94	-329.29	-12.26
94	SLU 41	21	-42	2361	1.91	-329.36	-10.71
94	SLU 42	22	-48	2357	1.94	-329.29	-12.26
94	SLU 43	19	-38	2113	1.66	-306.46	-9.66
94	SLU 44	20	-48	2107	1.72	-306.33	-12.25
94	SLU 45	19	-38	2113	1.66	-306.46	-9.66
94	SLU 46	20	-44	2109	1.69	-306.38	-11.22
94	SLU 47	20	-48	2107	1.72	-306.33	-12.25
94	SLU 48	19	-38	2113	1.66	-306.46	-9.66
94	SLU 49	20	-44	2109	1.69	-306.38	-11.22
94	SLU 50	19	-38	2113	1.66	-306.46	-9.66
94	SLU 51	20	-44	2109	1.69	-306.38	-11.22
94	SLU 52	23	-54	2418	1.98	-346.11	-13.88
94	SLU 53	22	-44	2424	1.93	-346.24	-11.29
94	SLU 54	23	-50	2420	1.96	-346.16	-12.85
94	SLU 55	23	-54	2418	1.98	-346.11	-13.88
94	SLU 56	22	-44	2424	1.93	-346.24	-11.29
94	SLU 57	23	-50	2420	1.96	-346.16	-12.85
94	SLU 58	22	-44	2424	1.93	-346.24	-11.29
94	SLU 59	23	-50	2420	1.96	-346.16	-12.85
94	SLU 60	23	-47	2557	2.04	-363.29	-11.99
94	SLU 61	24	-53	2554	2.07	-363.21	-13.54
94	SLU 62	23	-47	2557	2.04	-363.29	-11.99
94	SLU 63	24	-53	2554	2.07	-363.21	-13.54
94	SLU 64	21	-40	2343	1.86	-335.58	-10.41
94	SLU 65	22	-51	2337	1.92	-335.45	-13
94	SLU 66	21	-40	2343	1.86	-335.58	-10.41
94	SLU 67	22	-47	2339	1.89	-335.5	-11.97
94	SLU 68	22	-51	2337	1.92	-335.45	-13
94	SLU 69	21	-40	2343	1.86	-335.58	-10.41
94	SLU 70	22	-47	2339	1.89	-335.5	-11.97
94	SLU 71	21	-40	2343	1.86	-335.58	-10.41
94	SLU 72	22	-47	2339	1.89	-335.5	-11.97
94	SLU 73	25	-57	2648	2.18	-375.23	-14.63
94	SLU 74	24	-47	2654	2.13	-375.36	-12.04

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
94	SLU 75	25	-53	2651	2.16	-375.28	-13.6
94	SLU 76	25	-57	2648	2.18	-375.23	-14.63
94	SLU 77	24	-47	2654	2.13	-375.36	-12.04
94	SLU 78	25	-53	2651	2.16	-375.28	-13.6
94	SLU 79	24	-47	2654	2.13	-375.36	-12.04
94	SLU 80	25	-53	2651	2.16	-375.28	-13.6
94	SLU 81	25	-49	2788	2.24	-392.41	-12.74
94	SLU 82	26	-56	2784	2.27	-392.33	-14.29
94	SLU 83	25	-49	2788	2.24	-392.41	-12.74
94	SLU 84	26	-56	2784	2.27	-392.33	-14.29
94	SLE RA 1	16	-30	1752	1.39	-251.74	-7.85
94	SLE RA 2	16	-37	1748	1.42	-251.65	-9.57
94	SLE RA 3	16	-30	1752	1.39	-251.74	-7.85
94	SLE RA 4	16	-35	1749	1.41	-251.69	-8.88
94	SLE RA 5	16	-37	1748	1.42	-251.65	-9.57
94	SLE RA 6	16	-30	1752	1.39	-251.74	-7.85
94	SLE RA 7	16	-35	1749	1.41	-251.69	-8.88
94	SLE RA 8	16	-30	1752	1.39	-251.74	-7.85
94	SLE RA 9	16	-35	1749	1.41	-251.69	-8.88
94	SLE RA 10	18	-42	1955	1.6	-278.17	-10.66
94	SLE RA 11	18	-35	1959	1.57	-278.26	-8.93
94	SLE RA 12	18	-39	1957	1.59	-278.21	-9.97
94	SLE RA 13	18	-42	1955	1.6	-278.17	-10.66
94	SLE RA 14	18	-35	1959	1.57	-278.26	-8.93
94	SLE RA 15	18	-39	1957	1.59	-278.21	-9.97
94	SLE RA 16	18	-35	1959	1.57	-278.26	-8.93
94	SLE RA 17	18	-39	1957	1.59	-278.21	-9.97
94	SLE RA 18	19	-36	2048	1.64	-289.62	-9.4
94	SLE RA 19	19	-41	2046	1.66	-289.57	-10.43
94	SLE RA 20	19	-36	2048	1.64	-289.62	-9.4
94	SLE RA 21	19	-41	2046	1.66	-289.57	-10.43
94	SLE FR 1	16	-30	1752	1.39	-251.74	-7.85
94	SLE FR 2	16	-32	1751	1.4	-251.72	-8.19
94	SLE FR 3	16	-30	1752	1.39	-251.74	-7.85
94	SLE FR 4	17	-34	1840	1.47	-263.09	-8.66
94	SLE FR 5	17	-32	1841	1.47	-263.11	-8.31
94	SLE FR 6	17	-33	1900	1.52	-270.68	-8.62
94	SLE QP 1	16	-30	1752	1.39	-251.74	-7.85
94	SLE QP 2	17	-32	1841	1.47	-263.11	-8.31
94	SLD 1	131	28	2143	1.47	-298.28	6.74
94	SLD 2	143	-8	2141	1.49	-298.26	-2.26
94	SLD 3	138	-90	2067	2.03	-294.49	-22.94
94	SLD 4	151	-127	2065	2.05	-294.46	-31.94
94	SLD 5	35	178	2047	0.61	-279.41	44.43
94	SLD 6	48	141	2045	0.62	-279.39	35.29
94	SLD 7	60	-216	1794	2.48	-266.78	-54.49
94	SLD 8	73	-253	1792	2.5	-266.76	-63.63
94	SLD 9	-39	189	1889	0.43	-259.45	47
94	SLD 10	-26	152	1887	0.45	-259.43	37.86
94	SLD 11	-14	-206	1636	2.31	-246.82	-51.91
94	SLD 12	-2	-243	1634	2.32	-246.8	-61.05
94	SLD 13	-117	62	1616	0.88	-231.75	15.32
94	SLD 14	-104	26	1615	0.9	-231.72	6.32
94	SLD 15	-110	-56	1541	1.44	-227.95	-14.36
94	SLD 16	-97	-92	1539	1.46	-227.93	-23.36
94	SLV 1	275	105	2527	1.47	-343.13	25.92
94	SLV 2	304	22	2523	1.51	-343.08	5.51
94	SLV 3	292	-165	2354	2.75	-334.49	-41.72
94	SLV 4	321	-248	2350	2.79	-334.44	-62.13
94	SLV 5	58	448	2311	-0.5	-300.24	111.84
94	SLV 6	88	364	2307	-0.45	-300.18	91.13
94	SLV 7	115	-452	1733	3.78	-271.43	-113.63
94	SLV 8	144	-536	1729	3.82	-271.38	-134.34
94	SLV 9	-110	471	1952	-0.89	-254.83	117.72
94	SLV 10	-81	388	1948	-0.85	-254.78	97
94	SLV 11	-54	-429	1374	3.38	-226.03	-107.75
94	SLV 12	-25	-512	1370	3.43	-225.97	-128.46
94	SLV 13	-287	183	1331	0.14	-191.77	45.51
94	SLV 14	-259	101	1327	0.18	-191.72	25.09
94	SLV 15	-271	-87	1158	1.42	-183.13	-22.13
94	SLV 16	-242	-169	1154	1.46	-183.08	-42.55
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	23	-5	1663	1.73	262.33	1
97	SLU 2	22	-16	1658	1.78	262.45	3.63
97	SLU 3	23	-5	1663	1.73	262.33	1
97	SLU 4	22	-12	1660	1.76	262.4	2.58
97	SLU 5	22	-16	1658	1.78	262.45	3.63
97	SLU 6	23	-5	1663	1.73	262.33	1
97	SLU 7	22	-12	1660	1.76	262.4	2.58
97	SLU 8	23	-5	1663	1.73	262.33	1
97	SLU 9	22	-12	1660	1.76	262.4	2.58
97	SLU 10	25	-16	1927	2.15	302.32	3.48
97	SLU 11	26	-5	1932	2.1	302.21	0.85
97	SLU 12	25	-11	1929	2.13	302.28	2.43

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
97	SLU 13	25	-16	1927	2.15	302.32	3.48
97	SLU 14	26	-5	1932	2.1	302.21	0.85
97	SLU 15	25	-11	1929	2.13	302.28	2.43
97	SLU 16	26	-5	1932	2.1	302.21	0.85
97	SLU 17	25	-11	1929	2.13	302.28	2.43
97	SLU 18	27	-5	2047	2.25	319.29	0.79
97	SLU 19	27	-11	2044	2.29	319.36	2.37
97	SLU 20	27	-5	2047	2.25	319.29	0.79
97	SLU 21	27	-11	2044	2.29	319.36	2.37
97	SLU 22	25	-4	1869	1.99	292.11	0.69
97	SLU 23	25	-15	1864	2.05	292.23	3.32
97	SLU 24	25	-4	1869	1.99	292.11	0.69
97	SLU 25	25	-11	1866	2.02	292.18	2.27
97	SLU 26	25	-15	1864	2.05	292.23	3.32
97	SLU 27	25	-4	1869	1.99	292.11	0.69
97	SLU 28	25	-11	1866	2.02	292.18	2.27
97	SLU 29	25	-4	1869	1.99	292.11	0.69
97	SLU 30	25	-11	1866	2.02	292.18	2.27
97	SLU 31	27	-14	2133	2.42	332.1	3.17
97	SLU 32	28	-4	2138	2.36	331.99	0.54
97	SLU 33	28	-10	2135	2.39	332.06	2.12
97	SLU 34	27	-14	2133	2.42	332.1	3.17
97	SLU 35	28	-4	2138	2.36	331.99	0.54
97	SLU 36	28	-10	2135	2.39	332.06	2.12
97	SLU 37	28	-4	2138	2.36	331.99	0.54
97	SLU 38	28	-10	2135	2.39	332.06	2.12
97	SLU 39	29	-4	2253	2.52	349.07	0.48
97	SLU 40	29	-10	2250	2.55	349.14	2.05
97	SLU 41	29	-4	2253	2.52	349.07	0.48
97	SLU 42	29	-10	2250	2.55	349.14	2.05
97	SLU 43	29	-7	2091	2.15	330.82	1.41
97	SLU 44	28	-18	2086	2.21	330.94	4.04
97	SLU 45	29	-7	2091	2.15	330.82	1.41
97	SLU 46	28	-14	2088	2.19	330.89	2.99
97	SLU 47	28	-18	2086	2.21	330.94	4.04
97	SLU 48	29	-7	2091	2.15	330.82	1.41
97	SLU 49	28	-14	2088	2.19	330.89	2.99
97	SLU 50	29	-7	2091	2.15	330.82	1.41
97	SLU 51	28	-14	2088	2.19	330.89	2.99
97	SLU 52	31	-18	2355	2.58	370.81	3.89
97	SLU 53	32	-7	2360	2.52	370.7	1.26
97	SLU 54	31	-13	2357	2.55	370.77	2.84
97	SLU 55	31	-18	2355	2.58	370.81	3.89
97	SLU 56	32	-7	2360	2.52	370.7	1.26
97	SLU 57	31	-13	2357	2.55	370.77	2.84
97	SLU 58	32	-7	2360	2.52	370.7	1.26
97	SLU 59	31	-13	2357	2.55	370.77	2.84
97	SLU 60	33	-7	2476	2.68	387.78	1.19
97	SLU 61	32	-13	2473	2.71	387.85	2.77
97	SLU 62	33	-7	2476	2.68	387.78	1.19
97	SLU 63	32	-13	2473	2.71	387.85	2.77
97	SLU 64	31	-6	2297	2.42	360.6	1.1
97	SLU 65	31	-17	2292	2.47	360.72	3.73
97	SLU 66	31	-6	2297	2.42	360.6	1.1
97	SLU 67	31	-13	2294	2.45	360.67	2.68
97	SLU 68	31	-17	2292	2.47	360.72	3.73
97	SLU 69	31	-6	2297	2.42	360.6	1.1
97	SLU 70	31	-13	2294	2.45	360.67	2.68
97	SLU 71	31	-6	2297	2.42	360.6	1.1
97	SLU 72	31	-13	2294	2.45	360.67	2.68
97	SLU 73	33	-16	2561	2.84	400.59	3.58
97	SLU 74	34	-6	2566	2.79	400.48	0.95
97	SLU 75	34	-12	2563	2.82	400.55	2.53
97	SLU 76	33	-16	2561	2.84	400.59	3.58
97	SLU 77	34	-6	2566	2.79	400.48	0.95
97	SLU 78	34	-12	2563	2.82	400.55	2.53
97	SLU 79	34	-6	2566	2.79	400.48	0.95
97	SLU 80	34	-12	2563	2.82	400.55	2.53
97	SLU 81	35	-6	2681	2.95	417.56	0.88
97	SLU 82	35	-12	2679	2.98	417.63	2.46
97	SLU 83	35	-6	2681	2.95	417.56	0.88
97	SLU 84	35	-12	2679	2.98	417.63	2.46
97	SLE RA 1	23	-5	1722	1.8	270.84	0.91
97	SLE RA 2	23	-12	1718	1.84	270.92	2.67
97	SLE RA 3	23	-5	1722	1.8	270.84	0.91
97	SLE RA 4	23	-9	1720	1.82	270.89	1.97
97	SLE RA 5	23	-12	1718	1.84	270.92	2.67
97	SLE RA 6	23	-5	1722	1.8	270.84	0.91
97	SLE RA 7	23	-9	1720	1.82	270.89	1.97
97	SLE RA 8	23	-5	1722	1.8	270.84	0.91
97	SLE RA 9	23	-9	1720	1.82	270.89	1.97
97	SLE RA 10	25	-12	1898	2.08	297.5	2.57
97	SLE RA 11	25	-5	1901	2.05	297.42	0.81
97	SLE RA 12	25	-9	1899	2.07	297.47	1.87
97	SLE RA 13	25	-12	1898	2.08	297.5	2.57
97	SLE RA 14	25	-5	1901	2.05	297.42	0.81
97	SLE RA 15	25	-9	1899	2.07	297.47	1.87

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
97	SLE RA 16	25	-5	1901	2.05	297.42	0.81
97	SLE RA 17	25	-9	1899	2.07	297.47	1.87
97	SLE RA 18	26	-5	1978	2.15	308.82	0.77
97	SLE RA 19	26	-9	1976	2.18	308.86	1.82
97	SLE RA 20	26	-5	1978	2.15	308.82	0.77
97	SLE RA 21	26	-9	1976	2.18	308.86	1.82
97	SLE FR 1	23	-5	1722	1.8	270.84	0.91
97	SLE FR 2	23	-6	1721	1.81	270.86	1.26
97	SLE FR 3	23	-5	1722	1.8	270.84	0.91
97	SLE FR 4	24	-6	1798	1.91	282.25	1.22
97	SLE FR 5	24	-5	1799	1.91	282.23	0.87
97	SLE FR 6	25	-5	1850	1.98	289.83	0.84
97	SLE QP 1	23	-5	1722	1.8	270.84	0.91
97	SLE QP 2	24	-5	1799	1.91	282.23	0.87
97	SLD 1	147	59	1534	1.19	244.17	-15.3
97	SLD 2	160	95	1536	1.17	244.2	-24.14
97	SLD 3	137	-58	1487	1.8	247.54	14
97	SLD 4	150	-22	1489	1.79	247.56	5.17
97	SLD 5	72	179	1789	0.76	265.7	-45.27
97	SLD 6	85	215	1791	0.74	265.73	-54.24
97	SLD 7	38	-211	1634	2.82	276.92	52.42
97	SLD 8	51	-175	1636	2.8	276.95	43.45
97	SLD 9	-3	165	1961	1.01	287.52	-41.71
97	SLD 10	10	201	1963	1	287.55	-50.68
97	SLD 11	-37	-225	1807	3.07	298.74	55.98
97	SLD 12	-23	-189	1808	3.05	298.77	47.01
97	SLD 13	-102	12	2108	2.03	316.9	-3.43
97	SLD 14	-89	48	2110	2.01	316.93	-12.26
97	SLD 15	-112	-105	2062	2.64	320.27	25.88
97	SLD 16	-99	-69	2064	2.63	320.3	17.04
97	SLV 1	304	142	1197	0.26	195.64	-36.06
97	SLV 2	333	223	1201	0.23	195.71	-56.1
97	SLV 3	281	-125	1091	1.67	203.33	30.77
97	SLV 4	310	-44	1095	1.64	203.4	10.73
97	SLV 5	132	415	1777	-0.71	244.57	-104.41
97	SLV 6	162	497	1781	-0.75	244.64	-124.75
97	SLV 7	56	-475	1425	3.99	270.2	118.37
97	SLV 8	86	-393	1429	3.95	270.27	98.03
97	SLV 9	-37	383	2168	-0.14	294.2	-96.29
97	SLV 10	-7	465	2173	-0.17	294.27	-116.63
97	SLV 11	-114	-507	1816	4.56	319.83	126.49
97	SLV 12	-84	-425	1820	4.52	319.9	106.15
97	SLV 13	-262	34	2502	2.18	361.07	-8.99
97	SLV 14	-232	115	2506	2.14	361.14	-29.03
97	SLV 15	-285	-233	2396	3.58	368.76	57.84
97	SLV 16	-255	-152	2400	3.55	368.83	37.8
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
98	SLU 1	21	-30	1733	1.62	-279.44	-7.54
98	SLU 2	22	-40	1728	1.67	-279.42	-10.12
98	SLU 3	21	-30	1733	1.62	-279.44	-7.54
98	SLU 4	22	-36	1730	1.65	-279.42	-9.09
98	SLU 5	22	-40	1728	1.67	-279.42	-10.12
98	SLU 6	21	-30	1733	1.62	-279.44	-7.54
98	SLU 7	22	-36	1730	1.65	-279.42	-9.09
98	SLU 8	21	-30	1733	1.62	-279.44	-7.54
98	SLU 9	22	-36	1730	1.65	-279.42	-9.09
98	SLU 10	26	-46	2049	2	-326.87	-11.7
98	SLU 11	25	-36	2053	1.95	-326.89	-9.12
98	SLU 12	25	-42	2051	1.98	-326.88	-10.67
98	SLU 13	26	-46	2049	2	-326.87	-11.7
98	SLU 14	25	-36	2053	1.95	-326.89	-9.12
98	SLU 15	25	-42	2051	1.98	-326.88	-10.67
98	SLU 16	25	-36	2053	1.95	-326.89	-9.12
98	SLU 17	25	-42	2051	1.98	-326.88	-10.67
98	SLU 18	27	-38	2191	2.09	-347.22	-9.79
98	SLU 19	27	-45	2188	2.12	-347.21	-11.34
98	SLU 20	27	-38	2191	2.09	-347.22	-9.79
98	SLU 21	27	-45	2188	2.12	-347.21	-11.34
98	SLU 22	24	-33	1970	1.87	-314.25	-8.28
98	SLU 23	25	-43	1966	1.91	-314.23	-10.86
98	SLU 24	24	-33	1970	1.87	-314.25	-8.28
98	SLU 25	24	-39	1967	1.9	-314.24	-9.83
98	SLU 26	25	-43	1966	1.91	-314.23	-10.86
98	SLU 27	24	-33	1970	1.87	-314.25	-8.28
98	SLU 28	24	-39	1967	1.9	-314.24	-9.83
98	SLU 29	24	-33	1970	1.87	-314.25	-8.28
98	SLU 30	24	-39	1967	1.9	-314.24	-9.83
98	SLU 31	28	-49	2286	2.25	-361.68	-12.43
98	SLU 32	28	-39	2291	2.2	-361.71	-9.85
98	SLU 33	28	-45	2288	2.23	-361.69	-11.4
98	SLU 34	28	-49	2286	2.25	-361.68	-12.43
98	SLU 35	28	-39	2291	2.2	-361.71	-9.85
98	SLU 36	28	-45	2288	2.23	-361.69	-11.4
98	SLU 37	28	-39	2291	2.2	-361.71	-9.85

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
98	SLU 38	28	-45	2288	2.23	-361.69	-11.4
98	SLU 39	29	-41	2428	2.34	-382.04	-10.53
98	SLU 40	30	-48	2425	2.37	-382.03	-12.08
98	SLU 41	29	-41	2428	2.34	-382.04	-10.53
98	SLU 42	30	-48	2425	2.37	-382.03	-12.08
98	SLU 43	26	-38	2171	2.02	-351.33	-9.55
98	SLU 44	27	-48	2166	2.07	-351.31	-12.13
98	SLU 45	26	-38	2171	2.02	-351.33	-9.55
98	SLU 46	27	-44	2168	2.05	-351.32	-11.1
98	SLU 47	27	-48	2166	2.07	-351.31	-12.13
98	SLU 48	26	-38	2171	2.02	-351.33	-9.55
98	SLU 49	27	-44	2168	2.05	-351.32	-11.1
98	SLU 50	26	-38	2171	2.02	-351.33	-9.55
98	SLU 51	27	-44	2168	2.05	-351.32	-11.1
98	SLU 52	31	-54	2487	2.4	-398.76	-13.71
98	SLU 53	30	-44	2492	2.35	-398.78	-11.13
98	SLU 54	31	-50	2489	2.38	-398.77	-12.68
98	SLU 55	31	-54	2487	2.4	-398.76	-13.71
98	SLU 56	30	-44	2492	2.35	-398.78	-11.13
98	SLU 57	31	-50	2489	2.38	-398.77	-12.68
98	SLU 58	30	-44	2492	2.35	-398.78	-11.13
98	SLU 59	31	-50	2489	2.38	-398.77	-12.68
98	SLU 60	32	-46	2629	2.49	-419.12	-11.8
98	SLU 61	33	-53	2626	2.52	-419.11	-13.35
98	SLU 62	32	-46	2629	2.49	-419.12	-11.8
98	SLU 63	33	-53	2626	2.52	-419.11	-13.35
98	SLU 64	29	-40	2408	2.27	-386.15	-10.29
98	SLU 65	30	-51	2404	2.32	-386.13	-12.87
98	SLU 66	29	-40	2408	2.27	-386.15	-10.29
98	SLU 67	30	-47	2406	2.3	-386.14	-11.84
98	SLU 68	30	-51	2404	2.32	-386.13	-12.87
98	SLU 69	29	-40	2408	2.27	-386.15	-10.29
98	SLU 70	30	-47	2406	2.3	-386.14	-11.84
98	SLU 71	29	-40	2408	2.27	-386.15	-10.29
98	SLU 72	30	-47	2406	2.3	-386.14	-11.84
98	SLU 73	34	-57	2725	2.65	-433.58	-14.44
98	SLU 74	33	-47	2729	2.6	-433.6	-11.86
98	SLU 75	34	-53	2726	2.63	-433.59	-13.41
98	SLU 76	34	-57	2725	2.65	-433.58	-14.44
98	SLU 77	33	-47	2729	2.6	-433.6	-11.86
98	SLU 78	34	-53	2726	2.63	-433.59	-13.41
98	SLU 79	33	-47	2729	2.6	-433.6	-11.86
98	SLU 80	34	-53	2726	2.63	-433.59	-13.41
98	SLU 81	35	-49	2867	2.74	-453.94	-12.54
98	SLU 82	35	-55	2864	2.77	-453.92	-14.09
98	SLU 83	35	-49	2867	2.74	-453.94	-12.54
98	SLU 84	35	-55	2864	2.77	-453.92	-14.09
98	SLE RA 1	22	-30	1800	1.69	-289.39	-7.75
98	SLE RA 2	22	-37	1797	1.72	-289.37	-9.47
98	SLE RA 3	22	-30	1800	1.69	-289.39	-7.75
98	SLE RA 4	22	-35	1799	1.71	-289.38	-8.78
98	SLE RA 5	22	-37	1797	1.72	-289.37	-9.47
98	SLE RA 6	22	-30	1800	1.69	-289.39	-7.75
98	SLE RA 7	22	-35	1799	1.71	-289.38	-8.78
98	SLE RA 8	22	-30	1800	1.69	-289.39	-7.75
98	SLE RA 9	22	-35	1799	1.71	-289.38	-8.78
98	SLE RA 10	25	-41	2011	1.94	-321	-10.52
98	SLE RA 11	24	-35	2014	1.91	-321.02	-8.8
98	SLE RA 12	25	-39	2012	1.93	-321.01	-9.83
98	SLE RA 13	25	-41	2011	1.94	-321	-10.52
98	SLE RA 14	24	-35	2014	1.91	-321.02	-8.8
98	SLE RA 15	25	-39	2012	1.93	-321.01	-9.83
98	SLE RA 16	24	-35	2014	1.91	-321.02	-8.8
98	SLE RA 17	25	-39	2012	1.93	-321.01	-9.83
98	SLE RA 18	26	-36	2106	2.01	-334.58	-9.25
98	SLE RA 19	26	-40	2104	2.03	-334.57	-10.28
98	SLE RA 20	26	-36	2106	2.01	-334.58	-9.25
98	SLE RA 21	26	-40	2104	2.03	-334.57	-10.28
98	SLE FR 1	22	-30	1800	1.69	-289.39	-7.75
98	SLE FR 2	22	-32	1800	1.7	-289.38	-8.1
98	SLE FR 3	22	-30	1800	1.69	-289.39	-7.75
98	SLE FR 4	23	-34	1891	1.79	-302.94	-8.55
98	SLE FR 5	23	-32	1892	1.79	-302.94	-8.2
98	SLE FR 6	24	-33	1953	1.85	-311.98	-8.5
98	SLE QP 1	22	-30	1800	1.69	-289.39	-7.75
98	SLE QP 2	23	-32	1892	1.79	-302.94	-8.2
98	SLD 1	137	28	2195	1.88	-345.2	6.83
98	SLD 2	147	-8	2194	1.9	-345.22	-2.17
98	SLD 3	145	-90	2136	2.39	-341.93	-22.78
98	SLD 4	155	-127	2134	2.4	-341.95	-31.79
98	SLD 5	41	178	2074	1.04	-320.57	44.44
98	SLD 6	51	141	2073	1.06	-320.6	35.3
98	SLD 7	69	-216	1875	2.73	-309.67	-54.27
98	SLD 8	79	-253	1873	2.74	-309.69	-63.41
98	SLD 9	-33	189	1911	0.83	-296.19	47
98	SLD 10	-23	152	1910	0.85	-296.22	37.86
98	SLD 11	-5	-206	1711	2.51	-285.29	-51.7

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
98	SLD 12	5	-243	1710	2.53	-285.32	-60.84
98	SLD 13	-109	62	1650	1.17	-263.94	15.38
98	SLD 14	-99	26	1649	1.19	-263.96	6.38
98	SLD 15	-101	-56	1590	1.67	-260.67	-14.23
98	SLD 16	-91	-92	1589	1.69	-260.69	-23.23
98	SLV 1	282	105	2582	2	-399.03	25.99
98	SLV 2	304	22	2579	2.04	-399.08	5.57
98	SLV 3	301	-165	2445	3.15	-391.57	-41.51
98	SLV 4	323	-247	2442	3.19	-391.62	-61.92
98	SLV 5	63	447	2307	0.09	-343.07	111.72
98	SLV 6	86	364	2305	0.13	-343.12	91
98	SLV 7	128	-452	1852	3.93	-318.19	-113.26
98	SLV 8	150	-535	1849	3.97	-318.25	-133.98
98	SLV 9	-104	471	1935	-0.4	-287.64	117.58
98	SLV 10	-82	387	1932	-0.36	-287.69	96.86
98	SLV 11	-40	-428	1480	3.44	-262.77	-107.4
98	SLV 12	-18	-512	1477	3.48	-262.82	-128.12
98	SLV 13	-277	183	1342	0.38	-214.27	45.52
98	SLV 14	-255	100	1339	0.42	-214.32	25.1
98	SLV 15	-258	-87	1205	1.53	-206.81	-21.98
98	SLV 16	-236	-169	1202	1.57	-206.86	-42.39
98	CRTFP Ux+	0	0	0	0	0	0
98	CRTFP Ux-	0	0	0	0	0	0
98	CRTFP Uy+	0	0	0	0	0	0
98	CRTFP Uy-	0	0	0	0	0	0
101	SLU 1	33	-6	1723	2.1	304.35	1.09
101	SLU 2	32	-16	1720	2.15	304.62	3.72
101	SLU 3	33	-6	1723	2.1	304.35	1.09
101	SLU 4	32	-12	1721	2.13	304.51	2.67
101	SLU 5	32	-16	1720	2.15	304.62	3.72
101	SLU 6	33	-6	1723	2.1	304.35	1.09
101	SLU 7	32	-12	1721	2.13	304.51	2.67
101	SLU 8	33	-6	1723	2.1	304.35	1.09
101	SLU 9	32	-12	1721	2.13	304.51	2.67
101	SLU 10	37	-16	2002	2.59	352.7	3.58
101	SLU 11	37	-5	2005	2.54	352.43	0.96
101	SLU 12	37	-12	2003	2.57	352.6	2.53
101	SLU 13	37	-16	2002	2.59	352.7	3.58
101	SLU 14	37	-5	2005	2.54	352.43	0.96
101	SLU 15	37	-12	2003	2.57	352.6	2.53
101	SLU 16	37	-5	2005	2.54	352.43	0.96
101	SLU 17	37	-12	2003	2.57	352.6	2.53
101	SLU 18	40	-5	2126	2.73	373.04	0.9
101	SLU 19	39	-11	2124	2.76	373.2	2.48
101	SLU 20	40	-5	2126	2.73	373.04	0.9
101	SLU 21	39	-11	2124	2.76	373.2	2.48
101	SLU 22	37	-5	1938	2.42	340.31	0.8
101	SLU 23	36	-15	1935	2.47	340.58	3.42
101	SLU 24	37	-5	1938	2.42	340.31	0.8
101	SLU 25	36	-11	1936	2.45	340.47	2.37
101	SLU 26	36	-15	1935	2.47	340.58	3.42
101	SLU 27	37	-5	1938	2.42	340.31	0.8
101	SLU 28	36	-11	1936	2.45	340.47	2.37
101	SLU 29	37	-5	1938	2.42	340.31	0.8
101	SLU 30	36	-11	1936	2.45	340.47	2.37
101	SLU 31	41	-15	2217	2.91	388.66	3.29
101	SLU 32	41	-4	2220	2.86	388.39	0.67
101	SLU 33	41	-11	2218	2.89	388.56	2.24
101	SLU 34	41	-15	2217	2.91	388.66	3.29
101	SLU 35	41	-4	2220	2.86	388.39	0.67
101	SLU 36	41	-11	2218	2.89	388.56	2.24
101	SLU 37	41	-4	2220	2.86	388.39	0.67
101	SLU 38	41	-11	2218	2.89	388.56	2.24
101	SLU 39	43	-4	2341	3.05	409	0.61
101	SLU 40	43	-10	2339	3.08	409.16	2.19
101	SLU 41	43	-4	2341	3.05	409	0.61
101	SLU 42	43	-10	2339	3.08	409.16	2.19
101	SLU 43	41	-8	2166	2.62	383.32	1.52
101	SLU 44	41	-18	2163	2.66	383.59	4.14
101	SLU 45	41	-8	2166	2.62	383.32	1.52
101	SLU 46	41	-14	2164	2.65	383.48	3.09
101	SLU 47	41	-18	2163	2.66	383.59	4.14
101	SLU 48	41	-8	2166	2.62	383.32	1.52
101	SLU 49	41	-14	2164	2.65	383.48	3.09
101	SLU 50	41	-8	2166	2.62	383.32	1.52
101	SLU 51	41	-14	2164	2.65	383.48	3.09
101	SLU 52	45	-18	2445	3.11	431.68	4.01
101	SLU 53	46	-7	2448	3.06	431.41	1.38
101	SLU 54	46	-14	2446	3.09	431.57	2.96
101	SLU 55	45	-18	2445	3.11	431.68	4.01
101	SLU 56	46	-7	2448	3.06	431.41	1.38
101	SLU 57	46	-14	2446	3.09	431.57	2.96
101	SLU 58	46	-7	2448	3.06	431.41	1.38
101	SLU 59	46	-14	2446	3.09	431.57	2.96
101	SLU 60	48	-7	2569	3.25	452.01	1.33
101	SLU 61	48	-13	2567	3.28	452.18	2.9
101	SLU 62	48	-7	2569	3.25	452.01	1.33

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
101	SLU 63	48	-13	2567	3.28	452.18	2.9
101	SLU 64	45	-7	2382	2.94	419.28	1.22
101	SLU 65	45	-17	2378	2.99	419.55	3.85
101	SLU 66	45	-7	2382	2.94	419.28	1.22
101	SLU 67	45	-13	2380	2.97	419.45	2.8
101	SLU 68	45	-17	2378	2.99	419.55	3.85
101	SLU 69	45	-7	2382	2.94	419.28	1.22
101	SLU 70	45	-13	2380	2.97	419.45	2.8
101	SLU 71	45	-7	2382	2.94	419.28	1.22
101	SLU 72	45	-13	2380	2.97	419.45	2.8
101	SLU 73	49	-17	2660	3.43	467.64	3.72
101	SLU 74	50	-6	2663	3.38	467.37	1.09
101	SLU 75	49	-13	2662	3.41	467.53	2.67
101	SLU 76	49	-17	2660	3.43	467.64	3.72
101	SLU 77	50	-6	2663	3.38	467.37	1.09
101	SLU 78	49	-13	2662	3.41	467.53	2.67
101	SLU 79	50	-6	2663	3.38	467.37	1.09
101	SLU 80	49	-13	2662	3.41	467.53	2.67
101	SLU 81	52	-6	2784	3.57	487.98	1.04
101	SLU 82	51	-12	2782	3.6	488.14	2.61
101	SLU 83	52	-6	2784	3.57	487.98	1.04
101	SLU 84	51	-12	2782	3.6	488.14	2.61
101	SLE RA 1	34	-5	1785	2.19	314.62	1.01
101	SLE RA 2	33	-12	1783	2.22	314.8	2.76
101	SLE RA 3	34	-5	1785	2.19	314.62	1.01
101	SLE RA 4	34	-9	1783	2.21	314.73	2.06
101	SLE RA 5	33	-12	1783	2.22	314.8	2.76
101	SLE RA 6	34	-5	1785	2.19	314.62	1.01
101	SLE RA 7	34	-9	1783	2.21	314.73	2.06
101	SLE RA 8	34	-5	1785	2.19	314.62	1.01
101	SLE RA 9	34	-9	1783	2.21	314.73	2.06
101	SLE RA 10	37	-12	1970	2.52	346.86	2.67
101	SLE RA 11	37	-5	1973	2.48	346.68	0.92
101	SLE RA 12	37	-9	1971	2.5	346.79	1.97
101	SLE RA 13	37	-12	1970	2.52	346.86	2.67
101	SLE RA 14	37	-5	1973	2.48	346.68	0.92
101	SLE RA 15	37	-9	1971	2.5	346.79	1.97
101	SLE RA 16	37	-5	1973	2.48	346.68	0.92
101	SLE RA 17	37	-9	1971	2.5	346.79	1.97
101	SLE RA 18	38	-5	2053	2.61	360.42	0.88
101	SLE RA 19	38	-9	2052	2.63	360.53	1.93
101	SLE RA 20	38	-5	2053	2.61	360.42	0.88
101	SLE RA 21	38	-9	2052	2.63	360.53	1.93
101	SLE FR 1	34	-5	1785	2.19	314.62	1.01
101	SLE FR 2	34	-7	1784	2.2	314.66	1.36
101	SLE FR 3	34	-5	1785	2.19	314.62	1.01
101	SLE FR 4	35	-7	1865	2.32	328.4	1.32
101	SLE FR 5	35	-5	1865	2.32	328.36	0.97
101	SLE FR 6	36	-5	1919	2.4	337.52	0.94
101	SLE QP 1	34	-5	1785	2.19	314.62	1.01
101	SLE QP 2	35	-5	1865	2.32	328.36	0.97
101	SLD 1	159	59	1579	1.55	280.6	-15.17
101	SLD 2	169	95	1580	1.53	280.6	-24.01
101	SLD 3	148	-58	1548	2.1	285.86	14.08
101	SLD 4	158	-22	1550	2.09	285.86	5.25
101	SLD 5	85	179	1825	1.25	306.06	-45.08
101	SLD 6	95	215	1826	1.23	306.07	-54.05
101	SLD 7	49	-211	1724	3.1	323.58	52.43
101	SLD 8	60	-175	1725	3.08	323.58	43.46
101	SLD 9	11	165	2006	1.55	333.14	-41.52
101	SLD 10	21	201	2007	1.53	333.14	-50.49
101	SLD 11	-25	-225	1904	3.4	350.65	55.99
101	SLD 12	-14	-189	1906	3.38	350.66	47.02
101	SLD 13	-88	12	2181	2.54	370.86	-3.31
101	SLD 14	-78	47	2182	2.53	370.86	-12.14
101	SLD 15	-99	-105	2151	3.1	376.12	25.94
101	SLD 16	-89	-70	2152	3.08	376.12	17.11
101	SLV 1	317	142	1214	0.57	219.76	-35.89
101	SLV 2	340	223	1217	0.54	219.76	-55.92
101	SLV 3	292	-125	1145	1.84	231.75	30.82
101	SLV 4	315	-44	1148	1.8	231.75	10.79
101	SLV 5	148	415	1774	-0.12	277.58	-104.1
101	SLV 6	172	497	1777	-0.15	277.59	-124.43
101	SLV 7	67	-475	1543	4.1	317.57	118.26
101	SLV 8	91	-393	1546	4.07	317.57	97.93
101	SLV 9	-20	382	2184	0.56	339.15	-95.99
101	SLV 10	3	464	2187	0.53	339.15	-116.32
101	SLV 11	-101	-507	1954	4.78	379.13	126.37
101	SLV 12	-78	-425	1957	4.75	379.14	106.04
101	SLV 13	-245	34	2583	2.83	424.97	-8.85
101	SLV 14	-222	115	2586	2.79	424.97	-28.88
101	SLV 15	-269	-233	2514	4.09	436.96	57.86
101	SLV 16	-246	-152	2517	4.06	436.97	37.83
101	CRTFP Ux+	0	0	0	0	0	0
101	CRTFP Ux-	0	0	0	0	0	0
101	CRTFP Uy+	0	0	0	0	0	0
101	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
102	SLU 1	24	-29	1783	1.53	-321.4	-7.37
102	SLU 2	24	-40	1780	1.57	-321.39	-9.94
102	SLU 3	24	-29	1783	1.53	-321.4	-7.37
102	SLU 4	24	-36	1781	1.55	-321.4	-8.91
102	SLU 5	24	-40	1780	1.57	-321.39	-9.94
102	SLU 6	24	-29	1783	1.53	-321.4	-7.37
102	SLU 7	24	-36	1781	1.55	-321.4	-8.91
102	SLU 8	24	-29	1783	1.53	-321.4	-7.37
102	SLU 9	24	-36	1781	1.55	-321.4	-8.91
102	SLU 10	29	-46	2111	1.89	-377.82	-11.45
102	SLU 11	28	-35	2114	1.85	-377.84	-8.87
102	SLU 12	28	-42	2112	1.87	-377.83	-10.42
102	SLU 13	29	-46	2111	1.89	-377.82	-11.45
102	SLU 14	28	-35	2114	1.85	-377.84	-8.87
102	SLU 15	28	-42	2112	1.87	-377.83	-10.42
102	SLU 16	28	-35	2114	1.85	-377.84	-8.87
102	SLU 17	28	-42	2112	1.87	-377.83	-10.42
102	SLU 18	30	-38	2256	1.99	-402.02	-9.52
102	SLU 19	30	-44	2254	2.01	-402.02	-11.06
102	SLU 20	30	-38	2256	1.99	-402.02	-9.52
102	SLU 21	30	-44	2254	2.01	-402.02	-11.06
102	SLU 22	27	-32	2028	1.77	-362.91	-8.08
102	SLU 23	27	-43	2025	1.81	-362.9	-10.65
102	SLU 24	27	-32	2028	1.77	-362.91	-8.08
102	SLU 25	27	-38	2026	1.79	-362.9	-9.63
102	SLU 26	27	-43	2025	1.81	-362.9	-10.65
102	SLU 27	27	-32	2028	1.77	-362.91	-8.08
102	SLU 28	27	-38	2026	1.79	-362.9	-9.63
102	SLU 29	27	-32	2028	1.77	-362.91	-8.08
102	SLU 30	27	-38	2026	1.79	-362.9	-9.63
102	SLU 31	32	-48	2356	2.13	-419.33	-12.16
102	SLU 32	31	-38	2359	2.09	-419.35	-9.58
102	SLU 33	32	-44	2357	2.11	-419.34	-11.13
102	SLU 34	32	-48	2356	2.13	-419.33	-12.16
102	SLU 35	31	-38	2359	2.09	-419.35	-9.58
102	SLU 36	32	-44	2357	2.11	-419.34	-11.13
102	SLU 37	31	-38	2359	2.09	-419.35	-9.58
102	SLU 38	32	-44	2357	2.11	-419.34	-11.13
102	SLU 39	33	-41	2501	2.23	-443.53	-10.23
102	SLU 40	33	-47	2499	2.25	-443.53	-11.77
102	SLU 41	33	-41	2501	2.23	-443.53	-10.23
102	SLU 42	33	-47	2499	2.25	-443.53	-11.77
102	SLU 43	30	-37	2233	1.9	-403.59	-9.34
102	SLU 44	30	-48	2230	1.95	-403.58	-11.91
102	SLU 45	30	-37	2233	1.9	-403.59	-9.34
102	SLU 46	30	-43	2232	1.93	-403.58	-10.88
102	SLU 47	30	-48	2230	1.95	-403.58	-11.91
102	SLU 48	30	-37	2233	1.9	-403.59	-9.34
102	SLU 49	30	-43	2232	1.93	-403.58	-10.88
102	SLU 50	30	-37	2233	1.9	-403.59	-9.34
102	SLU 51	30	-43	2232	1.93	-403.58	-10.88
102	SLU 52	35	-54	2561	2.27	-460.01	-13.41
102	SLU 53	34	-43	2564	2.23	-460.03	-10.84
102	SLU 54	35	-49	2563	2.25	-460.02	-12.38
102	SLU 55	35	-54	2561	2.27	-460.01	-13.41
102	SLU 56	34	-43	2564	2.23	-460.03	-10.84
102	SLU 57	35	-49	2563	2.25	-460.02	-12.38
102	SLU 58	34	-43	2564	2.23	-460.03	-10.84
102	SLU 59	35	-49	2563	2.25	-460.02	-12.38
102	SLU 60	36	-46	2706	2.36	-484.21	-11.49
102	SLU 61	36	-52	2704	2.39	-484.21	-13.03
102	SLU 62	36	-46	2706	2.36	-484.21	-11.49
102	SLU 63	36	-52	2704	2.39	-484.21	-13.03
102	SLU 64	33	-40	2479	2.14	-445.1	-10.05
102	SLU 65	33	-50	2476	2.19	-445.09	-12.62
102	SLU 66	33	-40	2479	2.14	-445.1	-10.05
102	SLU 67	33	-46	2477	2.17	-445.09	-11.59
102	SLU 68	33	-50	2476	2.19	-445.09	-12.62
102	SLU 69	33	-40	2479	2.14	-445.1	-10.05
102	SLU 70	33	-46	2477	2.17	-445.09	-11.59
102	SLU 71	33	-40	2479	2.14	-445.1	-10.05
102	SLU 72	33	-46	2477	2.17	-445.09	-11.59
102	SLU 73	38	-56	2807	2.51	-501.52	-14.12
102	SLU 74	37	-46	2810	2.47	-501.54	-11.55
102	SLU 75	38	-52	2808	2.49	-501.53	-13.1
102	SLU 76	38	-56	2807	2.51	-501.52	-14.12
102	SLU 77	37	-46	2810	2.47	-501.54	-11.55
102	SLU 78	38	-52	2808	2.49	-501.53	-13.1
102	SLU 79	37	-46	2810	2.47	-501.54	-11.55
102	SLU 80	38	-52	2808	2.49	-501.53	-13.1
102	SLU 81	39	-49	2952	2.6	-525.72	-12.2
102	SLU 82	39	-55	2950	2.63	-525.71	-13.74
102	SLU 83	39	-49	2952	2.6	-525.72	-12.2
102	SLU 84	39	-55	2950	2.63	-525.71	-13.74
102	SLE RA 1	24	-30	1853	1.6	-333.26	-7.57
102	SLE RA 2	25	-37	1851	1.62	-333.25	-9.29
102	SLE RA 3	24	-30	1853	1.6	-333.26	-7.57

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
102	SLE RA 4	25	-34	1852	1.61	-333.26	-8.6
102	SLE RA 5	25	-37	1851	1.62	-333.25	-9.29
102	SLE RA 6	24	-30	1853	1.6	-333.26	-7.57
102	SLE RA 7	25	-34	1852	1.61	-333.26	-8.6
102	SLE RA 8	24	-30	1853	1.6	-333.26	-7.57
102	SLE RA 9	25	-34	1852	1.61	-333.26	-8.6
102	SLE RA 10	28	-41	2071	1.84	-370.88	-10.29
102	SLE RA 11	27	-34	2073	1.81	-370.89	-8.58
102	SLE RA 12	28	-38	2072	1.83	-370.88	-9.61
102	SLE RA 13	28	-41	2071	1.84	-370.88	-10.29
102	SLE RA 14	27	-34	2073	1.81	-370.89	-8.58
102	SLE RA 15	28	-38	2072	1.83	-370.88	-9.61
102	SLE RA 16	27	-34	2073	1.81	-370.89	-8.58
102	SLE RA 17	28	-38	2072	1.83	-370.88	-9.61
102	SLE RA 18	29	-36	2168	1.9	-387.01	-9.01
102	SLE RA 19	29	-40	2167	1.92	-387	-10.03
102	SLE RA 20	29	-36	2168	1.9	-387.01	-9.01
102	SLE RA 21	29	-40	2167	1.92	-387	-10.03
102	SLE FR 1	24	-30	1853	1.6	-333.26	-7.57
102	SLE FR 2	25	-32	1852	1.6	-333.26	-7.92
102	SLE FR 3	24	-30	1853	1.6	-333.26	-7.57
102	SLE FR 4	26	-33	1947	1.69	-349.39	-8.35
102	SLE FR 5	26	-32	1947	1.69	-349.39	-8
102	SLE FR 6	27	-33	2010	1.75	-360.14	-8.29
102	SLE QP 1	24	-30	1853	1.6	-333.26	-7.57
102	SLE QP 2	26	-32	1947	1.69	-349.39	-8
102	SLD 1	141	28	2254	1.78	-399.94	7
102	SLD 2	148	-8	2253	1.8	-399.98	-2
102	SLD 3	150	-90	2208	2.24	-396.39	-22.51
102	SLD 4	156	-126	2207	2.25	-396.44	-31.51
102	SLD 5	45	178	2109	1.02	-369.91	44.47
102	SLD 6	52	141	2108	1.04	-369.96	35.33
102	SLD 7	74	-215	1956	2.54	-358.1	-53.89
102	SLD 8	81	-252	1955	2.55	-358.14	-63.03
102	SLD 9	-29	189	1939	0.82	-340.63	47.02
102	SLD 10	-22	152	1939	0.84	-340.68	37.88
102	SLD 11	0	-205	1786	2.34	-328.82	-51.34
102	SLD 12	7	-242	1786	2.36	-328.86	-60.48
102	SLD 13	-105	62	1687	1.13	-302.34	15.5
102	SLD 14	-98	26	1687	1.14	-302.38	6.5
102	SLD 15	-96	-56	1641	1.58	-298.79	-14.01
102	SLD 16	-90	-92	1641	1.6	-298.84	-23.01
102	SLV 1	288	105	2645	1.9	-464.3	26.12
102	SLV 2	303	23	2643	1.93	-464.4	5.72
102	SLV 3	307	-164	2540	2.93	-456.22	-41.14
102	SLV 4	323	-247	2538	2.97	-456.32	-61.54
102	SLV 5	69	447	2316	0.17	-396.08	111.53
102	SLV 6	85	363	2314	0.2	-396.19	90.83
102	SLV 7	134	-451	1967	3.62	-369.14	-112.66
102	SLV 8	150	-534	1965	3.66	-369.25	-133.37
102	SLV 9	-99	470	1930	-0.28	-329.53	117.36
102	SLV 10	-83	387	1928	-0.24	-329.63	96.66
102	SLV 11	-33	-427	1580	3.17	-302.59	-106.84
102	SLV 12	-17	-511	1579	3.21	-302.69	-127.54
102	SLV 13	-272	183	1357	0.41	-242.45	45.53
102	SLV 14	-256	100	1355	0.45	-242.55	25.13
102	SLV 15	-252	-86	1252	1.45	-234.37	-21.73
102	SLV 16	-236	-169	1250	1.48	-234.47	-42.13
102	CRTFP Ux+	0	0	0	0	0	0
102	CRTFP Ux-	0	0	0	0	0	0
102	CRTFP Uy+	0	0	0	0	0	0
102	CRTFP Uy-	0	0	0	0	0	0
105	SLU 1	41	-6	1789	2.06	352.7	1.19
105	SLU 2	40	-16	1787	2.1	353.01	3.81
105	SLU 3	41	-6	1789	2.06	352.7	1.19
105	SLU 4	41	-12	1788	2.09	352.88	2.76
105	SLU 5	40	-16	1787	2.1	353.01	3.81
105	SLU 6	41	-6	1789	2.06	352.7	1.19
105	SLU 7	41	-12	1788	2.09	352.88	2.76
105	SLU 8	41	-6	1789	2.06	352.7	1.19
105	SLU 9	41	-12	1788	2.09	352.88	2.76
105	SLU 10	46	-16	2083	2.54	410.49	3.7
105	SLU 11	47	-5	2085	2.5	410.18	1.08
105	SLU 12	47	-12	2084	2.52	410.36	2.65
105	SLU 13	46	-16	2083	2.54	410.49	3.7
105	SLU 14	47	-5	2085	2.5	410.18	1.08
105	SLU 15	47	-12	2084	2.52	410.36	2.65
105	SLU 16	47	-5	2085	2.5	410.18	1.08
105	SLU 17	47	-12	2084	2.52	410.36	2.65
105	SLU 18	50	-5	2212	2.68	434.81	1.04
105	SLU 19	49	-12	2211	2.71	435	2.61
105	SLU 20	50	-5	2212	2.68	434.81	1.04
105	SLU 21	49	-12	2211	2.71	435	2.61
105	SLU 22	46	-5	2015	2.38	395.81	0.92
105	SLU 23	45	-15	2013	2.42	396.12	3.54
105	SLU 24	46	-5	2015	2.38	395.81	0.92
105	SLU 25	45	-11	2013	2.41	396	2.49

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
105	SLU 26	45	-15	2013	2.42	396.12	3.54
105	SLU 27	46	-5	2015	2.38	395.81	0.92
105	SLU 28	45	-11	2013	2.41	396	2.49
105	SLU 29	46	-5	2015	2.38	395.81	0.92
105	SLU 30	45	-11	2013	2.41	396	2.49
105	SLU 31	51	-15	2308	2.86	453.6	3.43
105	SLU 32	52	-4	2310	2.82	453.29	0.82
105	SLU 33	52	-11	2309	2.84	453.48	2.39
105	SLU 34	51	-15	2308	2.86	453.6	3.43
105	SLU 35	52	-4	2310	2.82	453.29	0.82
105	SLU 36	52	-11	2309	2.84	453.48	2.39
105	SLU 37	52	-4	2310	2.82	453.29	0.82
105	SLU 38	52	-11	2309	2.84	453.48	2.39
105	SLU 39	54	-4	2437	3	477.93	0.77
105	SLU 40	54	-11	2436	3.03	478.11	2.34
105	SLU 41	54	-4	2437	3	477.93	0.77
105	SLU 42	54	-11	2436	3.03	478.11	2.34
105	SLU 43	51	-8	2249	2.57	443.72	1.64
105	SLU 44	51	-18	2247	2.61	444.03	4.26
105	SLU 45	51	-8	2249	2.57	443.72	1.64
105	SLU 46	51	-14	2248	2.6	443.91	3.21
105	SLU 47	51	-18	2247	2.61	444.03	4.26
105	SLU 48	51	-8	2249	2.57	443.72	1.64
105	SLU 49	51	-14	2248	2.6	443.91	3.21
105	SLU 50	51	-8	2249	2.57	443.72	1.64
105	SLU 51	51	-14	2248	2.6	443.91	3.21
105	SLU 52	57	-18	2543	3.05	501.51	4.15
105	SLU 53	58	-7	2544	3.01	501.2	1.53
105	SLU 54	57	-14	2543	3.03	501.39	3.1
105	SLU 55	57	-18	2543	3.05	501.51	4.15
105	SLU 56	58	-7	2544	3.01	501.2	1.53
105	SLU 57	57	-14	2543	3.03	501.39	3.1
105	SLU 58	58	-7	2544	3.01	501.2	1.53
105	SLU 59	57	-14	2543	3.03	501.39	3.1
105	SLU 60	60	-7	2671	3.19	525.84	1.49
105	SLU 61	60	-14	2670	3.22	526.02	3.06
105	SLU 62	60	-7	2671	3.19	525.84	1.49
105	SLU 63	60	-14	2670	3.22	526.02	3.06
105	SLU 64	56	-7	2474	2.89	486.84	1.37
105	SLU 65	56	-17	2472	2.93	487.15	3.99
105	SLU 66	56	-7	2474	2.89	486.84	1.37
105	SLU 67	56	-13	2473	2.92	487.02	2.94
105	SLU 68	56	-17	2472	2.93	487.15	3.99
105	SLU 69	56	-7	2474	2.89	486.84	1.37
105	SLU 70	56	-13	2473	2.92	487.02	2.94
105	SLU 71	56	-7	2474	2.89	486.84	1.37
105	SLU 72	56	-13	2473	2.92	487.02	2.94
105	SLU 73	62	-17	2768	3.37	544.63	3.88
105	SLU 74	62	-6	2770	3.33	544.32	1.27
105	SLU 75	62	-13	2769	3.35	544.5	2.84
105	SLU 76	62	-17	2768	3.37	544.63	3.88
105	SLU 77	62	-6	2770	3.33	544.32	1.27
105	SLU 78	62	-13	2769	3.35	544.5	2.84
105	SLU 79	62	-6	2770	3.33	544.32	1.27
105	SLU 80	62	-13	2769	3.35	544.5	2.84
105	SLU 81	65	-6	2897	3.51	568.95	1.22
105	SLU 82	65	-13	2895	3.54	569.14	2.79
105	SLU 83	65	-6	2897	3.51	568.95	1.22
105	SLU 84	65	-13	2895	3.54	569.14	2.79
105	SLE RA 1	42	-5	1854	2.15	365.01	1.12
105	SLE RA 2	42	-12	1852	2.18	365.22	2.86
105	SLE RA 3	42	-5	1854	2.15	365.01	1.12
105	SLE RA 4	42	-10	1853	2.17	365.14	2.16
105	SLE RA 5	42	-12	1852	2.18	365.22	2.86
105	SLE RA 6	42	-5	1854	2.15	365.01	1.12
105	SLE RA 7	42	-10	1853	2.17	365.14	2.16
105	SLE RA 8	42	-5	1854	2.15	365.01	1.12
105	SLE RA 9	42	-10	1853	2.17	365.14	2.16
105	SLE RA 10	46	-12	2049	2.47	403.54	2.79
105	SLE RA 11	46	-5	2051	2.44	403.33	1.04
105	SLE RA 12	46	-9	2050	2.46	403.46	2.09
105	SLE RA 13	46	-12	2049	2.47	403.54	2.79
105	SLE RA 14	46	-5	2051	2.44	403.33	1.04
105	SLE RA 15	46	-9	2050	2.46	403.46	2.09
105	SLE RA 16	46	-5	2051	2.44	403.33	1.04
105	SLE RA 17	46	-9	2050	2.46	403.46	2.09
105	SLE RA 18	48	-5	2135	2.57	419.76	1.01
105	SLE RA 19	48	-9	2134	2.58	419.88	2.06
105	SLE RA 20	48	-5	2135	2.57	419.76	1.01
105	SLE RA 21	48	-9	2134	2.58	419.88	2.06
105	SLE FR 1	42	-5	1854	2.15	365.01	1.12
105	SLE FR 2	42	-7	1853	2.16	365.06	1.46
105	SLE FR 3	42	-5	1854	2.15	365.01	1.12
105	SLE FR 4	44	-7	1938	2.28	381.48	1.43
105	SLE FR 5	44	-5	1938	2.28	381.44	1.08
105	SLE FR 6	45	-5	1994	2.36	392.39	1.06
105	SLE QP 1	42	-5	1854	2.15	365.01	1.12

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
105	SLE QP 2	44	-5	1938	2.28	381.44	1.08
105	SLD 1	169	59	1631	1.57	323.51	-14.99
105	SLD 2	176	95	1632	1.56	323.5	-23.82
105	SLD 3	159	-58	1612	2.06	329.74	14.16
105	SLD 4	166	-22	1612	2.05	329.74	5.34
105	SLD 5	94	178	1876	1.33	354.6	-44.8
105	SLD 6	102	215	1877	1.32	354.6	-53.76
105	SLD 7	61	-211	1810	2.96	375.39	52.38
105	SLD 8	68	-175	1810	2.94	375.38	43.43
105	SLD 9	20	164	2066	1.61	387.49	-41.26
105	SLD 10	27	200	2067	1.6	387.49	-50.22
105	SLD 11	-14	-225	1999	3.24	408.28	55.93
105	SLD 12	-6	-189	2000	3.22	408.27	46.97
105	SLD 13	-78	12	2264	2.51	433.14	-3.17
105	SLD 14	-71	47	2265	2.5	433.13	-11.99
105	SLD 15	-88	-105	2244	3	439.37	25.99
105	SLD 16	-81	-70	2245	2.98	439.37	17.16
105	SLV 1	329	142	1241	0.67	249.72	-35.63
105	SLV 2	345	223	1243	0.64	249.72	-55.64
105	SLV 3	306	-125	1196	1.78	263.96	30.86
105	SLV 4	322	-44	1198	1.75	263.96	10.85
105	SLV 5	159	414	1797	0.12	320.33	-103.62
105	SLV 6	175	496	1799	0.09	320.33	-123.93
105	SLV 7	81	-474	1646	3.82	367.79	118.01
105	SLV 8	98	-392	1648	3.8	367.78	97.71
105	SLV 9	-10	381	2228	0.76	395.09	-95.54
105	SLV 10	7	464	2230	0.73	395.09	-115.84
105	SLV 11	-87	-507	2077	4.46	442.55	126.1
105	SLV 12	-71	-425	2079	4.43	442.54	105.79
105	SLV 13	-234	33	2678	2.8	498.92	-8.68
105	SLV 14	-218	114	2680	2.77	498.91	-28.69
105	SLV 15	-257	-233	2633	3.91	513.16	57.81
105	SLV 16	-241	-152	2635	3.88	513.15	37.8
105	CRTFP Ux+	0	0	0	0	0	0
105	CRTFP Ux-	0	0	0	0	0	0
105	CRTFP Uy+	0	0	0	0	0	0
105	CRTFP Uy-	0	0	0	0	0	0
107	SLU 1	95	-31	7997	-2977.31	-60.15	15.15
107	SLU 2	95	-61	7986	-2972.34	-60.6	14.65
107	SLU 3	95	-31	7997	-2977.31	-60.15	15.15
107	SLU 4	95	-49	7990	-2974.33	-60.42	14.85
107	SLU 5	95	-61	7986	-2972.34	-60.6	14.65
107	SLU 6	95	-31	7997	-2977.31	-60.15	15.15
107	SLU 7	95	-49	7990	-2974.33	-60.42	14.85
107	SLU 8	95	-31	7997	-2977.31	-60.15	15.15
107	SLU 9	95	-49	7990	-2974.33	-60.42	14.85
107	SLU 10	111	-65	9452	-3514.58	-66.86	17.13
107	SLU 11	111	-35	9464	-3519.54	-66.4	17.62
107	SLU 12	111	-53	9457	-3516.56	-66.68	17.32
107	SLU 13	111	-65	9452	-3514.58	-66.86	17.13
107	SLU 14	111	-35	9464	-3519.54	-66.4	17.62
107	SLU 15	111	-53	9457	-3516.56	-66.68	17.32
107	SLU 16	111	-35	9464	-3519.54	-66.4	17.62
107	SLU 17	111	-53	9457	-3516.56	-66.68	17.32
107	SLU 18	118	-36	10092	-3751.92	-69.08	18.68
107	SLU 19	118	-54	10085	-3748.95	-69.36	18.38
107	SLU 20	118	-36	10092	-3751.92	-69.08	18.68
107	SLU 21	118	-54	10085	-3748.95	-69.36	18.38
107	SLU 22	109	-36	9074	-3375.63	-65.54	17.78
107	SLU 23	108	-66	9062	-3370.67	-65.99	17.28
107	SLU 24	109	-36	9074	-3375.63	-65.54	17.78
107	SLU 25	109	-54	9067	-3372.65	-65.81	17.48
107	SLU 26	108	-66	9062	-3370.67	-65.99	17.28
107	SLU 27	109	-36	9074	-3375.63	-65.54	17.78
107	SLU 28	109	-54	9067	-3372.65	-65.81	17.48
107	SLU 29	109	-36	9074	-3375.63	-65.54	17.78
107	SLU 30	109	-54	9067	-3372.65	-65.81	17.48
107	SLU 31	124	-69	10529	-3912.9	-72.25	19.76
107	SLU 32	125	-39	10540	-3917.86	-71.79	20.25
107	SLU 33	125	-57	10534	-3914.89	-72.07	19.96
107	SLU 34	124	-69	10529	-3912.9	-72.25	19.76
107	SLU 35	125	-39	10540	-3917.86	-71.79	20.25
107	SLU 36	125	-57	10534	-3914.89	-72.07	19.96
107	SLU 37	125	-39	10540	-3917.86	-71.79	20.25
107	SLU 38	125	-57	10534	-3914.89	-72.07	19.96
107	SLU 39	132	-41	11169	-4150.25	-74.48	21.31
107	SLU 40	132	-59	11162	-4147.27	-74.75	21.02
107	SLU 41	132	-41	11169	-4150.25	-74.48	21.31
107	SLU 42	132	-59	11162	-4147.27	-74.75	21.02
107	SLU 43	119	-39	10027	-3733.93	-76.34	18.79
107	SLU 44	118	-69	10015	-3728.97	-76.8	18.29
107	SLU 45	119	-39	10027	-3733.93	-76.34	18.79
107	SLU 46	119	-57	10020	-3730.95	-76.61	18.49
107	SLU 47	118	-69	10015	-3728.97	-76.8	18.29
107	SLU 48	119	-39	10027	-3733.93	-76.34	18.79
107	SLU 49	119	-57	10020	-3730.95	-76.61	18.49
107	SLU 50	119	-39	10027	-3733.93	-76.34	18.79

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
107	SLU 51	119	-57	10020	-3730.95	-76.61	18.49
107	SLU 52	135	-73	11482	-4271.2	-83.05	20.77
107	SLU 53	135	-43	11494	-4276.16	-82.6	21.26
107	SLU 54	135	-61	11487	-4273.19	-82.87	20.97
107	SLU 55	135	-73	11482	-4271.2	-83.05	20.77
107	SLU 56	135	-43	11494	-4276.16	-82.6	21.26
107	SLU 57	135	-61	11487	-4273.19	-82.87	20.97
107	SLU 58	135	-43	11494	-4276.16	-82.6	21.26
107	SLU 59	135	-61	11487	-4273.19	-82.87	20.97
107	SLU 60	142	-44	12122	-4508.55	-85.28	22.32
107	SLU 61	142	-62	12115	-4505.57	-85.55	22.03
107	SLU 62	142	-44	12122	-4508.55	-85.28	22.32
107	SLU 63	142	-62	12115	-4505.57	-85.55	22.03
107	SLU 64	133	-44	11104	-4132.26	-81.73	21.42
107	SLU 65	132	-74	11092	-4127.29	-82.19	20.93
107	SLU 66	133	-44	11104	-4132.26	-81.73	21.42
107	SLU 67	133	-62	11097	-4129.28	-82.01	21.12
107	SLU 68	132	-74	11092	-4127.29	-82.19	20.93
107	SLU 69	133	-44	11104	-4132.26	-81.73	21.42
107	SLU 70	133	-62	11097	-4129.28	-82.01	21.12
107	SLU 71	133	-44	11104	-4132.26	-81.73	21.42
107	SLU 72	133	-62	11097	-4129.28	-82.01	21.12
107	SLU 73	148	-77	12559	-4669.52	-88.45	23.4
107	SLU 74	149	-47	12570	-4674.49	-87.99	23.9
107	SLU 75	149	-65	12563	-4671.51	-88.26	23.6
107	SLU 76	148	-77	12559	-4669.52	-88.45	23.4
107	SLU 77	149	-47	12570	-4674.49	-87.99	23.9
107	SLU 78	149	-65	12563	-4671.51	-88.26	23.6
107	SLU 79	149	-47	12570	-4674.49	-87.99	23.9
107	SLU 80	149	-65	12563	-4671.51	-88.26	23.6
107	SLU 81	156	-49	13199	-4906.87	-90.67	24.96
107	SLU 82	156	-67	13192	-4903.89	-90.94	24.66
107	SLU 83	156	-49	13199	-4906.87	-90.67	24.96
107	SLU 84	156	-67	13192	-4903.89	-90.94	24.66
107	SLE RA 1	99	-33	8305	-3091.11	-61.69	15.9
107	SLE RA 2	99	-53	8297	-3087.81	-61.99	15.57
107	SLE RA 3	99	-33	8305	-3091.11	-61.69	15.9
107	SLE RA 4	99	-45	8300	-3089.13	-61.87	15.7
107	SLE RA 5	99	-53	8297	-3087.81	-61.99	15.57
107	SLE RA 6	99	-33	8305	-3091.11	-61.69	15.9
107	SLE RA 7	99	-45	8300	-3089.13	-61.87	15.7
107	SLE RA 8	99	-33	8305	-3091.11	-61.69	15.9
107	SLE RA 9	99	-45	8300	-3089.13	-61.87	15.7
107	SLE RA 10	109	-55	9275	-3449.29	-66.16	17.22
107	SLE RA 11	110	-35	9282	-3452.6	-65.86	17.55
107	SLE RA 12	110	-47	9278	-3450.62	-66.04	17.35
107	SLE RA 13	109	-55	9275	-3449.29	-66.16	17.22
107	SLE RA 14	110	-35	9282	-3452.6	-65.86	17.55
107	SLE RA 15	110	-47	9278	-3450.62	-66.04	17.35
107	SLE RA 16	110	-35	9282	-3452.6	-65.86	17.55
107	SLE RA 17	110	-47	9278	-3450.62	-66.04	17.35
107	SLE RA 18	115	-36	9701	-3607.53	-67.64	18.26
107	SLE RA 19	114	-48	9697	-3605.54	-67.83	18.06
107	SLE RA 20	115	-36	9701	-3607.53	-67.64	18.26
107	SLE RA 21	114	-48	9697	-3605.54	-67.83	18.06
107	SLE FR 1	99	-33	8305	-3091.11	-61.69	15.9
107	SLE FR 2	99	-37	8303	-3090.45	-61.75	15.83
107	SLE FR 3	99	-33	8305	-3091.11	-61.69	15.9
107	SLE FR 4	104	-38	8722	-3245.38	-63.53	16.54
107	SLE FR 5	104	-34	8724	-3246.04	-63.47	16.61
107	SLE FR 6	107	-34	9003	-3349.32	-64.67	17.08
107	SLE QP 1	99	-33	8305	-3091.11	-61.69	15.9
107	SLE QP 2	104	-34	8724	-3246.04	-63.47	16.61
107	SLD 1	824	191	8641	-3216.02	-7.24	287.07
107	SLD 2	877	233	8641	-3215.98	-7.37	314.61
107	SLD 3	782	-176	8527	-3165.07	-14.15	270.75
107	SLD 4	836	-134	8527	-3165.03	-14.28	298.29
107	SLD 5	365	577	8871	-3314.32	-36.07	112.65
107	SLD 6	419	619	8870	-3314.29	-36.2	140.61
107	SLD 7	225	-649	8493	-3144.48	-59.12	58.25
107	SLD 8	279	-607	8493	-3144.45	-59.25	86.21
107	SLD 9	-71	539	8954	-3347.63	-67.7	-53
107	SLD 10	-17	582	8954	-3347.59	-67.83	-25.04
107	SLD 11	-211	-686	8577	-3177.79	-90.74	-107.4
107	SLD 12	-157	-644	8577	-3177.75	-90.88	-79.44
107	SLD 13	-628	67	8920	-3327.05	-112.66	-265.08
107	SLD 14	-574	109	8920	-3327.01	-112.8	-237.54
107	SLD 15	-670	-301	8807	-3276.09	-119.58	-281.4
107	SLD 16	-616	-259	8807	-3276.06	-119.71	-253.86
107	SLV 1	1741	480	8536	-3178.14	64.37	631.53
107	SLV 2	1862	575	8536	-3178.06	64.07	693.98
107	SLV 3	1646	-359	8277	-3061.91	48.59	594.21
107	SLV 4	1766	-264	8277	-3061.83	48.29	656.66
107	SLV 5	697	1358	9059	-3401.99	-1.07	235.37
107	SLV 6	820	1454	9059	-3401.91	-1.37	298.74
107	SLV 7	378	-1436	8198	-3014.54	-53.69	110.96
107	SLV 8	501	-1340	8198	-3014.45	-53.99	174.34

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
107	SLV 9	-293	1273	9250	-3477.62	-72.95	-141.13
107	SLV 10	-170	1369	9249	-3477.54	-73.25	-77.75
107	SLV 11	-612	-1521	8388	-3090.17	-125.57	-265.53
107	SLV 12	-489	-1425	8388	-3090.09	-125.88	-202.15
107	SLV 13	-1558	196	9170	-3430.25	-175.23	-623.44
107	SLV 14	-1438	291	9170	-3430.17	-175.53	-560.99
107	SLV 15	-1654	-642	8912	-3314.01	-191.02	-660.77
107	SLV 16	-1533	-547	8912	-3313.93	-191.32	-598.31
107	CRTFP Ux+	0	0	0	0	0	-0.01
107	CRTFP Ux-	0	0	0	0	0	0.01
107	CRTFP Uy+	0	0	0	0.01	0	0
107	CRTFP Uy-	0	0	0	-0.01	0	0
107	CRTFP Rz+	0	0	0	0	0	0
107	CRTFP Rz-	0	0	0	0	0	0
109	SLU 1	19	-25	1560	-42.94	-309.4	-5.59
109	SLU 2	20	-34	1558	-42.87	-309.31	-7.77
109	SLU 3	19	-25	1560	-42.94	-309.4	-5.59
109	SLU 4	20	-30	1559	-42.9	-309.35	-6.9
109	SLU 5	20	-34	1558	-42.87	-309.31	-7.77
109	SLU 6	19	-25	1560	-42.94	-309.4	-5.59
109	SLU 7	20	-30	1559	-42.9	-309.35	-6.9
109	SLU 8	19	-25	1560	-42.94	-309.4	-5.59
109	SLU 9	20	-30	1559	-42.9	-309.35	-6.9
109	SLU 10	24	-38	1849	-50.85	-365	-8.88
109	SLU 11	23	-30	1851	-50.92	-365.09	-6.7
109	SLU 12	24	-35	1850	-50.88	-365.04	-8.01
109	SLU 13	24	-38	1849	-50.85	-365	-8.88
109	SLU 14	23	-30	1851	-50.92	-365.09	-6.7
109	SLU 15	24	-35	1850	-50.88	-365.04	-8.01
109	SLU 16	23	-30	1851	-50.92	-365.09	-6.7
109	SLU 17	24	-35	1850	-50.88	-365.04	-8.01
109	SLU 18	25	-32	1975	-54.34	-388.96	-7.17
109	SLU 19	25	-37	1974	-54.3	-388.91	-8.48
109	SLU 20	25	-32	1975	-54.34	-388.96	-7.17
109	SLU 21	25	-37	1974	-54.3	-388.91	-8.48
109	SLU 22	22	-27	1775	-48.85	-350.47	-6.1
109	SLU 23	23	-36	1774	-48.78	-350.38	-8.28
109	SLU 24	22	-27	1775	-48.85	-350.47	-6.1
109	SLU 25	22	-32	1774	-48.81	-350.41	-7.4
109	SLU 26	23	-36	1774	-48.78	-350.38	-8.28
109	SLU 27	22	-27	1775	-48.85	-350.47	-6.1
109	SLU 28	22	-32	1774	-48.81	-350.41	-7.4
109	SLU 29	22	-27	1775	-48.85	-350.47	-6.1
109	SLU 30	22	-32	1774	-48.81	-350.41	-7.4
109	SLU 31	26	-41	2064	-56.76	-406.07	-9.38
109	SLU 32	26	-32	2066	-56.83	-406.16	-7.21
109	SLU 33	26	-37	2065	-56.79	-406.1	-8.51
109	SLU 34	26	-41	2064	-56.76	-406.07	-9.38
109	SLU 35	26	-32	2066	-56.83	-406.16	-7.21
109	SLU 36	26	-37	2065	-56.79	-406.1	-8.51
109	SLU 37	26	-32	2066	-56.83	-406.16	-7.21
109	SLU 38	26	-37	2065	-56.79	-406.1	-8.51
109	SLU 39	28	-34	2190	-60.25	-430.02	-7.68
109	SLU 40	28	-39	2189	-60.21	-429.97	-8.99
109	SLU 41	28	-34	2190	-60.25	-430.02	-7.68
109	SLU 42	28	-39	2189	-60.21	-429.97	-8.99
109	SLU 43	24	-31	1954	-53.8	-388.14	-7.09
109	SLU 44	25	-40	1952	-53.73	-388.05	-9.27
109	SLU 45	24	-31	1954	-53.8	-388.14	-7.09
109	SLU 46	25	-37	1953	-53.76	-388.09	-8.4
109	SLU 47	25	-40	1952	-53.73	-388.05	-9.27
109	SLU 48	24	-31	1954	-53.8	-388.14	-7.09
109	SLU 49	25	-37	1953	-53.76	-388.09	-8.4
109	SLU 50	24	-31	1954	-53.8	-388.14	-7.09
109	SLU 51	25	-37	1953	-53.76	-388.09	-8.4
109	SLU 52	29	-45	2243	-61.71	-443.74	-10.38
109	SLU 53	28	-36	2245	-61.78	-443.83	-8.2
109	SLU 54	29	-42	2244	-61.74	-443.78	-9.51
109	SLU 55	29	-45	2243	-61.71	-443.74	-10.38
109	SLU 56	28	-36	2245	-61.78	-443.83	-8.2
109	SLU 57	29	-42	2244	-61.74	-443.78	-9.51
109	SLU 58	28	-36	2245	-61.78	-443.83	-8.2
109	SLU 59	29	-42	2244	-61.74	-443.78	-9.51
109	SLU 60	30	-38	2369	-65.2	-467.7	-8.68
109	SLU 61	30	-44	2368	-65.16	-467.65	-9.98
109	SLU 62	30	-38	2369	-65.2	-467.7	-8.68
109	SLU 63	30	-44	2368	-65.16	-467.65	-9.98
109	SLU 64	27	-34	2170	-59.71	-429.21	-7.6
109	SLU 65	28	-42	2168	-59.64	-429.12	-9.78
109	SLU 66	27	-34	2170	-59.71	-429.21	-7.6
109	SLU 67	27	-39	2169	-59.67	-429.15	-8.91
109	SLU 68	28	-42	2168	-59.64	-429.12	-9.78
109	SLU 69	27	-34	2170	-59.71	-429.21	-7.6
109	SLU 70	27	-39	2169	-59.67	-429.15	-8.91
109	SLU 71	27	-34	2170	-59.71	-429.21	-7.6
109	SLU 72	27	-39	2169	-59.67	-429.15	-8.91
109	SLU 73	31	-47	2458	-67.62	-484.81	-10.89

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
109	SLU 74	31	-39	2460	-67.69	-484.9	-8.71
109	SLU 75	31	-44	2459	-67.65	-484.84	-10.02
109	SLU 76	31	-47	2458	-67.62	-484.81	-10.89
109	SLU 77	31	-39	2460	-67.69	-484.9	-8.71
109	SLU 78	31	-44	2459	-67.65	-484.84	-10.02
109	SLU 79	31	-39	2460	-67.69	-484.9	-8.71
109	SLU 80	31	-44	2459	-67.65	-484.84	-10.02
109	SLU 81	32	-41	2585	-71.11	-508.76	-9.18
109	SLU 82	33	-46	2584	-71.07	-508.71	-10.49
109	SLU 83	32	-41	2585	-71.11	-508.76	-9.18
109	SLU 84	33	-46	2584	-71.07	-508.71	-10.49
109	SLE RA 1	20	-25	1622	-44.63	-321.13	-5.73
109	SLE RA 2	21	-31	1620	-44.58	-321.08	-7.19
109	SLE RA 3	20	-25	1622	-44.63	-321.13	-5.73
109	SLE RA 4	20	-29	1621	-44.6	-321.1	-6.61
109	SLE RA 5	21	-31	1620	-44.58	-321.08	-7.19
109	SLE RA 6	20	-25	1622	-44.63	-321.13	-5.73
109	SLE RA 7	20	-29	1621	-44.6	-321.1	-6.61
109	SLE RA 8	20	-25	1622	-44.63	-321.13	-5.73
109	SLE RA 9	20	-29	1621	-44.6	-321.1	-6.61
109	SLE RA 10	23	-35	1814	-49.9	-358.2	-7.93
109	SLE RA 11	23	-29	1815	-49.95	-358.26	-6.47
109	SLE RA 12	23	-32	1815	-49.92	-358.23	-7.34
109	SLE RA 13	23	-35	1814	-49.9	-358.2	-7.93
109	SLE RA 14	23	-29	1815	-49.95	-358.26	-6.47
109	SLE RA 15	23	-32	1815	-49.92	-358.23	-7.34
109	SLE RA 16	23	-29	1815	-49.95	-358.26	-6.47
109	SLE RA 17	23	-32	1815	-49.92	-358.23	-7.34
109	SLE RA 18	24	-30	1898	-52.23	-374.17	-6.79
109	SLE RA 19	24	-34	1898	-52.2	-374.14	-7.66
109	SLE RA 20	24	-30	1898	-52.23	-374.17	-6.79
109	SLE RA 21	24	-34	1898	-52.2	-374.14	-7.66
109	SLE FR 1	20	-25	1622	-44.63	-321.13	-5.73
109	SLE FR 2	20	-27	1621	-44.62	-321.12	-6.02
109	SLE FR 3	20	-25	1622	-44.63	-321.13	-5.73
109	SLE FR 4	21	-28	1704	-46.9	-337.03	-6.34
109	SLE FR 5	21	-27	1705	-46.91	-337.04	-6.05
109	SLE FR 6	22	-28	1760	-48.43	-347.65	-6.26
109	SLE QP 1	20	-25	1622	-44.63	-321.13	-5.73
109	SLE QP 2	21	-27	1705	-46.91	-337.04	-6.05
109	SLD 1	122	25	1969	-54.3	-386.86	14.58
109	SLD 2	126	-6	1968	-54.28	-386.9	6.96
109	SLD 3	129	-76	1939	-53.24	-383.18	-10.53
109	SLD 4	132	-107	1939	-53.22	-383.22	-18.15
109	SLD 5	40	153	1829	-50.74	-357.56	40.95
109	SLD 6	44	121	1829	-50.73	-357.6	33.21
109	SLD 7	62	-184	1730	-47.2	-345.29	-42.75
109	SLD 8	66	-215	1730	-47.19	-345.33	-50.49
109	SLD 9	-23	162	1679	-46.64	-328.76	38.39
109	SLD 10	-20	130	1679	-46.62	-328.8	30.65
109	SLD 11	-1	-175	1581	-43.1	-316.49	-45.31
109	SLD 12	3	-207	1580	-43.08	-316.53	-53.05
109	SLD 13	-90	54	1470	-40.6	-290.87	6.05
109	SLD 14	-86	23	1470	-40.59	-290.91	-1.57
109	SLD 15	-83	-47	1441	-39.54	-287.19	-19.06
109	SLD 16	-79	-78	1441	-39.53	-287.23	-26.68
109	SLV 1	250	91	2305	-63.71	-450.29	40.96
109	SLV 2	258	20	2304	-63.67	-450.37	23.67
109	SLV 3	265	-140	2237	-61.28	-441.9	-16.28
109	SLV 4	274	-210	2237	-61.25	-441.98	-33.56
109	SLV 5	64	383	1988	-55.64	-383.72	101.04
109	SLV 6	72	311	1987	-55.6	-383.79	83.5
109	SLV 7	115	-385	1762	-47.56	-355.75	-89.75
109	SLV 8	123	-456	1761	-47.52	-355.83	-107.29
109	SLV 9	-80	403	1648	-46.3	-318.26	95.19
109	SLV 10	-72	331	1647	-46.26	-318.34	77.65
109	SLV 11	-30	-365	1422	-38.22	-290.3	-95.6
109	SLV 12	-21	-437	1422	-38.19	-290.37	-113.14
109	SLV 13	-231	157	1173	-32.58	-232.11	21.46
109	SLV 14	-223	86	1172	-32.54	-232.19	4.18
109	SLV 15	-216	-74	1105	-30.15	-223.72	-35.77
109	SLV 16	-208	-144	1104	-30.12	-223.8	-53.06
109	CRTFP Ux+	0	0	0	0	0	0
109	CRTFP Ux-	0	0	0	0	0	0
109	CRTFP Uy+	0	0	0	0	0	0
109	CRTFP Uy-	0	0	0	0	0	0
112	SLU 1	39	-5	1579	-43.14	341.28	2.21
112	SLU 2	39	-14	1578	-43.1	341.48	4.44
112	SLU 3	39	-5	1579	-43.14	341.28	2.21
112	SLU 4	39	-10	1579	-43.11	341.4	3.55
112	SLU 5	39	-14	1578	-43.1	341.48	4.44
112	SLU 6	39	-5	1579	-43.14	341.28	2.21
112	SLU 7	39	-10	1579	-43.11	341.4	3.55
112	SLU 8	39	-5	1579	-43.14	341.28	2.21
112	SLU 9	39	-10	1579	-43.11	341.4	3.55
112	SLU 10	45	-13	1841	-50.24	398.3	4.54
112	SLU 11	45	-4	1842	-50.28	398.1	2.31

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
112	SLU 12	45	-10	1842	-50.25	398.22	3.65
112	SLU 13	45	-13	1841	-50.24	398.3	4.54
112	SLU 14	45	-4	1842	-50.28	398.1	2.31
112	SLU 15	45	-10	1842	-50.25	398.22	3.65
112	SLU 16	45	-4	1842	-50.28	398.1	2.31
112	SLU 17	45	-10	1842	-50.25	398.22	3.65
112	SLU 18	47	-4	1955	-53.34	422.45	2.35
112	SLU 19	47	-10	1954	-53.31	422.57	3.69
112	SLU 20	47	-4	1955	-53.34	422.45	2.35
112	SLU 21	47	-10	1954	-53.31	422.57	3.69
112	SLU 22	44	-4	1779	-48.58	384.07	2.14
112	SLU 23	43	-13	1779	-48.54	384.27	4.37
112	SLU 24	44	-4	1779	-48.58	384.07	2.14
112	SLU 25	43	-9	1779	-48.55	384.19	3.48
112	SLU 26	43	-13	1779	-48.54	384.27	4.37
112	SLU 27	44	-4	1779	-48.58	384.07	2.14
112	SLU 28	43	-9	1779	-48.55	384.19	3.48
112	SLU 29	44	-4	1779	-48.58	384.07	2.14
112	SLU 30	43	-9	1779	-48.55	384.19	3.48
112	SLU 31	49	-13	2042	-55.68	441.09	4.46
112	SLU 32	49	-4	2042	-55.72	440.89	2.24
112	SLU 33	49	-9	2042	-55.69	441.01	3.57
112	SLU 34	49	-13	2042	-55.68	441.09	4.46
112	SLU 35	49	-4	2042	-55.72	440.89	2.24
112	SLU 36	49	-9	2042	-55.69	441.01	3.57
112	SLU 37	49	-4	2042	-55.72	440.89	2.24
112	SLU 38	49	-9	2042	-55.69	441.01	3.57
112	SLU 39	52	-4	2155	-58.78	465.25	2.28
112	SLU 40	52	-9	2155	-58.75	465.37	3.61
112	SLU 41	52	-4	2155	-58.78	465.25	2.28
112	SLU 42	52	-9	2155	-58.75	465.37	3.61
112	SLU 43	49	-6	1984	-54.21	428.99	2.91
112	SLU 44	49	-15	1983	-54.17	429.19	5.13
112	SLU 45	49	-6	1984	-54.21	428.99	2.91
112	SLU 46	49	-12	1984	-54.19	429.11	4.24
112	SLU 47	49	-15	1983	-54.17	429.19	5.13
112	SLU 48	49	-6	1984	-54.21	428.99	2.91
112	SLU 49	49	-12	1984	-54.19	429.11	4.24
112	SLU 50	49	-6	1984	-54.21	428.99	2.91
112	SLU 51	49	-12	1984	-54.19	429.11	4.24
112	SLU 52	55	-15	2246	-61.31	486.01	5.23
112	SLU 53	55	-6	2247	-61.35	485.81	3
112	SLU 54	55	-12	2247	-61.33	485.93	4.34
112	SLU 55	55	-15	2246	-61.31	486.01	5.23
112	SLU 56	55	-6	2247	-61.35	485.81	3
112	SLU 57	55	-12	2247	-61.33	485.93	4.34
112	SLU 58	55	-6	2247	-61.35	485.81	3
112	SLU 59	55	-12	2247	-61.33	485.93	4.34
112	SLU 60	57	-6	2360	-64.41	510.16	3.04
112	SLU 61	57	-11	2359	-64.39	510.28	4.38
112	SLU 62	57	-6	2360	-64.41	510.16	3.04
112	SLU 63	57	-11	2359	-64.39	510.28	4.38
112	SLU 64	54	-6	2184	-59.65	471.78	2.83
112	SLU 65	53	-15	2184	-59.61	471.98	5.06
112	SLU 66	54	-6	2184	-59.65	471.78	2.83
112	SLU 67	54	-11	2184	-59.63	471.9	4.17
112	SLU 68	53	-15	2184	-59.61	471.98	5.06
112	SLU 69	54	-6	2184	-59.65	471.78	2.83
112	SLU 70	54	-11	2184	-59.63	471.9	4.17
112	SLU 71	54	-6	2184	-59.65	471.78	2.83
112	SLU 72	54	-11	2184	-59.63	471.9	4.17
112	SLU 73	59	-14	2447	-66.75	528.8	5.16
112	SLU 74	60	-5	2447	-66.79	528.6	2.93
112	SLU 75	59	-11	2447	-66.77	528.72	4.26
112	SLU 76	59	-14	2447	-66.75	528.8	5.16
112	SLU 77	60	-5	2447	-66.79	528.6	2.93
112	SLU 78	59	-11	2447	-66.77	528.72	4.26
112	SLU 79	60	-5	2447	-66.79	528.6	2.93
112	SLU 80	59	-11	2447	-66.77	528.72	4.26
112	SLU 81	62	-5	2560	-69.85	552.96	2.97
112	SLU 82	62	-11	2560	-69.83	553.08	4.31
112	SLU 83	62	-5	2560	-69.85	552.96	2.97
112	SLU 84	62	-11	2560	-69.83	553.08	4.31
112	SLE RA 1	40	-5	1636	-44.69	353.5	2.19
112	SLE RA 2	40	-10	1636	-44.66	353.64	3.68
112	SLE RA 3	40	-5	1636	-44.69	353.5	2.19
112	SLE RA 4	40	-8	1636	-44.67	353.58	3.08
112	SLE RA 5	40	-10	1636	-44.66	353.64	3.68
112	SLE RA 6	40	-5	1636	-44.69	353.5	2.19
112	SLE RA 7	40	-8	1636	-44.67	353.58	3.08
112	SLE RA 8	40	-5	1636	-44.69	353.5	2.19
112	SLE RA 9	40	-8	1636	-44.67	353.58	3.08
112	SLE RA 10	44	-10	1811	-49.42	391.52	3.74
112	SLE RA 11	44	-4	1812	-49.45	391.38	2.26
112	SLE RA 12	44	-8	1811	-49.44	391.46	3.15
112	SLE RA 13	44	-10	1811	-49.42	391.52	3.74
112	SLE RA 14	44	-4	1812	-49.45	391.38	2.26

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
112	SLE RA 15	44	-8	1811	-49.44	391.46	3.15
112	SLE RA 16	44	-4	1812	-49.45	391.38	2.26
112	SLE RA 17	44	-8	1811	-49.44	391.46	3.15
112	SLE RA 18	46	-4	1887	-51.49	407.62	2.29
112	SLE RA 19	46	-8	1887	-51.48	407.7	3.18
112	SLE RA 20	46	-4	1887	-51.49	407.62	2.29
112	SLE RA 21	46	-8	1887	-51.48	407.7	3.18
112	SLE FR 1	40	-5	1636	-44.69	353.5	2.19
112	SLE FR 2	40	-6	1636	-44.69	353.53	2.49
112	SLE FR 3	40	-5	1636	-44.69	353.5	2.19
112	SLE FR 4	42	-6	1711	-46.73	369.77	2.52
112	SLE FR 5	42	-4	1711	-46.73	369.74	2.22
112	SLE FR 6	43	-4	1762	-48.09	380.56	2.24
112	SLE QP 1	40	-5	1636	-44.69	353.5	2.19
112	SLE QP 2	42	-4	1711	-46.73	369.74	2.22
112	SLD 1	150	51	1439	-39.31	312.97	0.26
112	SLD 2	154	81	1439	-39.33	312.99	-7.21
112	SLD 3	143	-49	1422	-38.84	318.23	25.04
112	SLD 4	147	-19	1423	-38.87	318.24	17.58
112	SLD 5	84	153	1654	-45.19	344.74	-33.3
112	SLD 6	88	184	1654	-45.21	344.75	-40.88
112	SLD 7	60	-180	1600	-43.66	362.25	49.34
112	SLD 8	64	-149	1600	-43.68	362.26	41.75
112	SLD 9	20	141	1822	-49.78	377.21	-37.31
112	SLD 10	24	172	1823	-49.8	377.23	-44.89
112	SLD 11	-4	-193	1768	-48.25	394.73	45.32
112	SLD 12	0	-162	1769	-48.27	394.74	37.74
112	SLD 13	-63	10	2000	-54.6	421.24	-13.14
112	SLD 14	-59	40	2000	-54.62	421.25	-20.6
112	SLD 15	-70	-90	1984	-54.14	426.49	11.65
112	SLD 16	-67	-60	1984	-54.16	426.5	4.19
112	SLV 1	289	121	1091	-29.85	240.7	-2.38
112	SLV 2	297	191	1092	-29.9	240.73	-19.31
112	SLV 3	272	-107	1054	-28.81	252.69	54.15
112	SLV 4	280	-37	1056	-28.86	252.72	37.22
112	SLV 5	138	354	1581	-43.24	312.83	-78.84
112	SLV 6	147	425	1582	-43.29	312.86	-96.03
112	SLV 7	82	-406	1458	-39.75	352.8	109.59
112	SLV 8	91	-335	1459	-39.8	352.83	92.4
112	SLV 9	-7	326	1964	-53.66	386.65	-87.96
112	SLV 10	2	397	1965	-53.71	386.67	-105.15
112	SLV 11	-63	-433	1841	-50.18	426.62	100.47
112	SLV 12	-55	-363	1842	-50.22	426.65	83.29
112	SLV 13	-196	28	2367	-64.61	486.76	-32.78
112	SLV 14	-188	98	2368	-64.65	486.79	-49.71
112	SLV 15	-213	-200	2330	-63.56	498.75	23.76
112	SLV 16	-205	-130	2331	-63.61	498.78	6.82
112	CRTFP Ux+	0	0	0	0	0	0
112	CRTFP Ux-	0	0	0	0	0	0
112	CRTFP Uy+	0	0	0	0	0	0
112	CRTFP Uy-	0	0	0	0	0	0
114	SLU 1	51	-6	2277	-62.34	-24.16	-0.88
114	SLU 2	51	-14	2275	-62.28	-24.36	-0.93
114	SLU 3	51	-6	2277	-62.34	-24.16	-0.88
114	SLU 4	51	-11	2276	-62.31	-24.28	-0.91
114	SLU 5	51	-14	2275	-62.28	-24.36	-0.93
114	SLU 6	51	-6	2277	-62.34	-24.16	-0.88
114	SLU 7	51	-11	2276	-62.31	-24.28	-0.91
114	SLU 8	51	-6	2277	-62.34	-24.16	-0.88
114	SLU 9	51	-11	2276	-62.31	-24.28	-0.91
114	SLU 10	59	-15	2701	-73.85	-27.02	-1.05
114	SLU 11	59	-7	2703	-73.92	-26.81	-1
114	SLU 12	59	-12	2702	-73.88	-26.94	-1.03
114	SLU 13	59	-15	2701	-73.85	-27.02	-1.05
114	SLU 14	59	-7	2703	-73.92	-26.81	-1
114	SLU 15	59	-12	2702	-73.88	-26.94	-1.03
114	SLU 16	59	-7	2703	-73.92	-26.81	-1
114	SLU 17	59	-12	2702	-73.88	-26.94	-1.03
114	SLU 18	63	-7	2885	-78.88	-27.95	-1.05
114	SLU 19	63	-12	2884	-78.84	-28.07	-1.08
114	SLU 20	63	-7	2885	-78.88	-27.95	-1.05
114	SLU 21	63	-12	2884	-78.84	-28.07	-1.08
114	SLU 22	57	-7	2590	-70.83	-26.37	-0.92
114	SLU 23	57	-15	2588	-70.76	-26.58	-0.98
114	SLU 24	57	-7	2590	-70.83	-26.37	-0.92
114	SLU 25	57	-12	2589	-70.79	-26.49	-0.96
114	SLU 26	57	-15	2588	-70.76	-26.58	-0.98
114	SLU 27	57	-7	2590	-70.83	-26.37	-0.92
114	SLU 28	57	-12	2589	-70.79	-26.49	-0.96
114	SLU 29	57	-7	2590	-70.83	-26.37	-0.92
114	SLU 30	57	-12	2589	-70.79	-26.49	-0.96
114	SLU 31	66	-16	3014	-82.34	-29.23	-1.09
114	SLU 32	66	-8	3015	-82.4	-29.03	-1.04
114	SLU 33	66	-13	3014	-82.36	-29.15	-1.07
114	SLU 34	66	-16	3014	-82.34	-29.23	-1.09
114	SLU 35	66	-8	3015	-82.4	-29.03	-1.04
114	SLU 36	66	-13	3014	-82.36	-29.15	-1.07

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
114	SLU 37	66	-8	3015	-82.4	-29.03	-1.04
114	SLU 38	66	-13	3014	-82.36	-29.15	-1.07
114	SLU 39	69	-8	3198	-87.36	-30.16	-1.09
114	SLU 40	70	-13	3197	-87.32	-30.29	-1.12
114	SLU 41	69	-8	3198	-87.36	-30.16	-1.09
114	SLU 42	70	-13	3197	-87.32	-30.29	-1.12
114	SLU 43	64	-7	2853	-78.14	-30.65	-1.13
114	SLU 44	64	-16	2851	-78.07	-30.85	-1.18
114	SLU 45	64	-7	2853	-78.14	-30.65	-1.13
114	SLU 46	64	-12	2852	-78.1	-30.77	-1.16
114	SLU 47	64	-16	2851	-78.07	-30.85	-1.18
114	SLU 48	64	-7	2853	-78.14	-30.65	-1.13
114	SLU 49	64	-12	2852	-78.1	-30.77	-1.16
114	SLU 50	64	-7	2853	-78.14	-30.65	-1.13
114	SLU 51	64	-12	2852	-78.1	-30.77	-1.16
114	SLU 52	72	-16	3277	-89.64	-33.51	-1.3
114	SLU 53	72	-8	3279	-89.71	-33.3	-1.25
114	SLU 54	72	-13	3278	-89.67	-33.43	-1.28
114	SLU 55	72	-16	3277	-89.64	-33.51	-1.3
114	SLU 56	72	-8	3279	-89.71	-33.3	-1.25
114	SLU 57	72	-13	3278	-89.67	-33.43	-1.28
114	SLU 58	72	-8	3279	-89.71	-33.3	-1.25
114	SLU 59	72	-13	3278	-89.67	-33.43	-1.28
114	SLU 60	76	-8	3461	-94.67	-34.44	-1.3
114	SLU 61	76	-13	3460	-94.63	-34.56	-1.33
114	SLU 62	76	-8	3461	-94.67	-34.44	-1.3
114	SLU 63	76	-13	3460	-94.63	-34.56	-1.33
114	SLU 64	70	-9	3166	-86.62	-32.86	-1.18
114	SLU 65	70	-17	3164	-86.56	-33.06	-1.23
114	SLU 66	70	-9	3166	-86.62	-32.86	-1.18
114	SLU 67	70	-14	3165	-86.58	-32.98	-1.21
114	SLU 68	70	-17	3164	-86.56	-33.06	-1.23
114	SLU 69	70	-9	3166	-86.62	-32.86	-1.18
114	SLU 70	70	-14	3165	-86.58	-32.98	-1.21
114	SLU 71	70	-9	3166	-86.62	-32.86	-1.18
114	SLU 72	70	-14	3165	-86.58	-32.98	-1.21
114	SLU 73	79	-17	3590	-98.13	-35.72	-1.34
114	SLU 74	79	-9	3591	-98.2	-35.52	-1.29
114	SLU 75	79	-14	3590	-98.16	-35.64	-1.32
114	SLU 76	79	-17	3590	-98.13	-35.72	-1.34
114	SLU 77	79	-9	3591	-98.2	-35.52	-1.29
114	SLU 78	79	-14	3590	-98.16	-35.64	-1.32
114	SLU 79	79	-9	3591	-98.2	-35.52	-1.29
114	SLU 80	79	-14	3590	-98.16	-35.64	-1.32
114	SLU 81	82	-10	3774	-103.15	-36.65	-1.34
114	SLU 82	82	-14	3773	-103.12	-36.77	-1.37
114	SLU 83	82	-10	3774	-103.15	-36.65	-1.34
114	SLU 84	82	-14	3773	-103.12	-36.77	-1.37
114	SLE RA 1	53	-6	2366	-64.77	-24.79	-0.9
114	SLE RA 2	53	-12	2365	-64.73	-24.93	-0.93
114	SLE RA 3	53	-6	2366	-64.77	-24.79	-0.9
114	SLE RA 4	53	-10	2366	-64.74	-24.87	-0.92
114	SLE RA 5	53	-12	2365	-64.73	-24.93	-0.93
114	SLE RA 6	53	-6	2366	-64.77	-24.79	-0.9
114	SLE RA 7	53	-10	2366	-64.74	-24.87	-0.92
114	SLE RA 8	53	-6	2366	-64.77	-24.79	-0.9
114	SLE RA 9	53	-10	2366	-64.74	-24.87	-0.92
114	SLE RA 10	58	-12	2649	-72.44	-26.7	-1.01
114	SLE RA 11	58	-7	2650	-72.48	-26.56	-0.97
114	SLE RA 12	58	-10	2649	-72.46	-26.64	-0.99
114	SLE RA 13	58	-12	2649	-72.44	-26.7	-1.01
114	SLE RA 14	58	-7	2650	-72.48	-26.56	-0.97
114	SLE RA 15	58	-10	2649	-72.46	-26.64	-0.99
114	SLE RA 16	58	-7	2650	-72.48	-26.56	-0.97
114	SLE RA 17	58	-10	2649	-72.46	-26.64	-0.99
114	SLE RA 18	61	-7	2772	-75.79	-27.32	-1.01
114	SLE RA 19	61	-10	2771	-75.76	-27.4	-1.03
114	SLE RA 20	61	-7	2772	-75.79	-27.32	-1.01
114	SLE RA 21	61	-10	2771	-75.76	-27.4	-1.03
114	SLE FR 1	53	-6	2366	-64.77	-24.79	-0.9
114	SLE FR 2	53	-7	2366	-64.76	-24.82	-0.9
114	SLE FR 3	53	-6	2366	-64.77	-24.79	-0.9
114	SLE FR 4	55	-8	2488	-68.07	-25.58	-0.94
114	SLE FR 5	55	-7	2488	-68.07	-25.55	-0.93
114	SLE FR 6	57	-7	2569	-70.28	-26.06	-0.95
114	SLE QP 1	53	-6	2366	-64.77	-24.79	-0.9
114	SLE QP 2	55	-7	2488	-68.07	-25.55	-0.93
114	SLD 1	243	55	2459	-67.4	-4.19	4.42
114	SLD 2	249	67	2459	-67.4	-4.22	5.38
114	SLD 3	254	-46	2444	-66.8	-7.13	3.87
114	SLD 4	260	-34	2444	-66.8	-7.16	4.84
114	SLD 5	93	161	2502	-68.79	-14.68	1.15
114	SLD 6	99	172	2501	-68.79	-14.71	2.14
114	SLD 7	129	-175	2453	-66.78	-24.47	-0.66
114	SLD 8	135	-163	2452	-66.78	-24.5	0.32
114	SLD 9	-25	150	2523	-69.37	-26.61	-2.18
114	SLD 10	-19	162	2523	-69.37	-26.64	-1.19

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
114	SLD 11	11	-185	2475	-67.36	-36.39	-4
114	SLD 12	17	-174	2474	-67.36	-36.42	-3.01
114	SLD 13	-150	21	2532	-69.35	-43.94	-6.7
114	SLD 14	-144	32	2532	-69.35	-43.98	-5.73
114	SLD 15	-139	-80	2517	-68.75	-46.88	-7.24
114	SLD 16	-133	-68	2517	-68.75	-46.91	-6.27
114	SLV 1	482	134	2422	-66.55	23.01	11.23
114	SLV 2	495	160	2422	-66.55	22.94	13.42
114	SLV 3	507	-95	2389	-65.18	16.31	9.98
114	SLV 4	520	-69	2388	-65.18	16.24	12.18
114	SLV 5	141	374	2519	-69.7	-0.8	3.83
114	SLV 6	154	401	2519	-69.7	-0.87	6.06
114	SLV 7	223	-391	2407	-65.12	-23.13	-0.34
114	SLV 8	237	-364	2407	-65.12	-23.2	1.89
114	SLV 9	-127	351	2569	-71.03	-27.9	-3.75
114	SLV 10	-113	378	2569	-71.03	-27.97	-1.52
114	SLV 11	-44	-414	2457	-66.45	-50.23	-7.91
114	SLV 12	-31	-388	2457	-66.45	-50.3	-5.68
114	SLV 13	-410	56	2588	-70.97	-67.34	-14.03
114	SLV 14	-397	82	2587	-70.97	-67.41	-11.83
114	SLV 15	-385	-173	2554	-69.6	-74.04	-15.28
114	SLV 16	-372	-147	2554	-69.6	-74.11	-13.08
114	CRTFP Ux+	0	0	0	0	0	0
114	CRTFP Ux-	0	0	0	0	0	0
114	CRTFP Uy+	0	0	0	0	0	0
114	CRTFP Uy-	0	0	0	0	0	0
139	SLU 1	47	-72	4700	-2.42	-793.6	-12.05
139	SLU 2	47	-98	4697	-1.87	-793.11	-16.74
139	SLU 3	47	-72	4700	-2.42	-793.6	-12.05
139	SLU 4	47	-88	4698	-2.09	-793.3	-14.87
139	SLU 5	47	-98	4697	-1.87	-793.11	-16.74
139	SLU 6	47	-72	4700	-2.42	-793.6	-12.05
139	SLU 7	47	-88	4698	-2.09	-793.3	-14.87
139	SLU 8	47	-72	4700	-2.42	-793.6	-12.05
139	SLU 9	47	-88	4698	-2.09	-793.3	-14.87
139	SLU 10	57	-112	5576	-2.1	-939.96	-19.09
139	SLU 11	56	-86	5578	-2.65	-940.45	-14.4
139	SLU 12	57	-102	5577	-2.32	-940.15	-17.22
139	SLU 13	57	-112	5576	-2.1	-939.96	-19.09
139	SLU 14	56	-86	5578	-2.65	-940.45	-14.4
139	SLU 15	57	-102	5577	-2.32	-940.15	-17.22
139	SLU 16	56	-86	5578	-2.65	-940.45	-14.4
139	SLU 17	57	-102	5577	-2.32	-940.15	-17.22
139	SLU 18	60	-92	5955	-2.74	-1003.39	-15.41
139	SLU 19	61	-108	5953	-2.42	-1003.09	-18.22
139	SLU 20	60	-92	5955	-2.74	-1003.39	-15.41
139	SLU 21	61	-108	5953	-2.42	-1003.09	-18.22
139	SLU 22	54	-79	5351	-2.49	-902.3	-13.19
139	SLU 23	54	-105	5349	-1.95	-901.81	-17.88
139	SLU 24	54	-79	5351	-2.49	-902.3	-13.19
139	SLU 25	54	-95	5350	-2.17	-902.01	-16
139	SLU 26	54	-105	5349	-1.95	-901.81	-17.88
139	SLU 27	54	-79	5351	-2.49	-902.3	-13.19
139	SLU 28	54	-95	5350	-2.17	-902.01	-16
139	SLU 29	54	-79	5351	-2.49	-902.3	-13.19
139	SLU 30	54	-95	5350	-2.17	-902.01	-16
139	SLU 31	64	-119	6227	-2.17	-1048.66	-20.23
139	SLU 32	63	-93	6230	-2.72	-1049.16	-15.54
139	SLU 33	63	-109	6228	-2.39	-1048.86	-18.35
139	SLU 34	64	-119	6227	-2.17	-1048.66	-20.23
139	SLU 35	63	-93	6230	-2.72	-1049.16	-15.54
139	SLU 36	63	-109	6228	-2.39	-1048.86	-18.35
139	SLU 37	63	-93	6230	-2.72	-1049.16	-15.54
139	SLU 38	63	-109	6228	-2.39	-1048.86	-18.35
139	SLU 39	67	-99	6606	-2.82	-1112.09	-16.54
139	SLU 40	68	-114	6605	-2.49	-1111.8	-19.36
139	SLU 41	67	-99	6606	-2.82	-1112.09	-16.54
139	SLU 42	68	-114	6605	-2.49	-1111.8	-19.36
139	SLU 43	58	-92	5886	-3.12	-994.41	-15.28
139	SLU 44	59	-118	5884	-2.57	-993.92	-19.97
139	SLU 45	58	-92	5886	-3.12	-994.41	-15.28
139	SLU 46	59	-107	5885	-2.79	-994.11	-18.09
139	SLU 47	59	-118	5884	-2.57	-993.92	-19.97
139	SLU 48	58	-92	5886	-3.12	-994.41	-15.28
139	SLU 49	59	-107	5885	-2.79	-994.11	-18.09
139	SLU 50	58	-92	5886	-3.12	-994.41	-15.28
139	SLU 51	59	-107	5885	-2.79	-994.11	-18.09
139	SLU 52	68	-132	6762	-2.8	-1140.77	-22.32
139	SLU 53	68	-106	6765	-3.35	-1141.26	-17.63
139	SLU 54	68	-121	6763	-3.02	-1140.96	-20.44
139	SLU 55	68	-132	6762	-2.8	-1140.77	-22.32
139	SLU 56	68	-106	6765	-3.35	-1141.26	-17.63
139	SLU 57	68	-121	6763	-3.02	-1140.96	-20.44
139	SLU 58	68	-106	6765	-3.35	-1141.26	-17.63
139	SLU 59	68	-121	6763	-3.02	-1140.96	-20.44
139	SLU 60	72	-112	7141	-3.45	-1204.2	-18.64
139	SLU 61	72	-127	7140	-3.12	-1203.9	-21.45

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
139	SLU 62	72	-112	7141	-3.45	-1204.2	-18.64
139	SLU 63	72	-127	7140	-3.12	-1203.9	-21.45
139	SLU 64	65	-99	6538	-3.2	-1103.11	-16.41
139	SLU 65	66	-125	6535	-2.65	-1102.62	-21.1
139	SLU 66	65	-99	6538	-3.2	-1103.11	-16.41
139	SLU 67	66	-114	6536	-2.87	-1102.82	-19.23
139	SLU 68	66	-125	6535	-2.65	-1102.62	-21.1
139	SLU 69	65	-99	6538	-3.2	-1103.11	-16.41
139	SLU 70	66	-114	6536	-2.87	-1102.82	-19.23
139	SLU 71	65	-99	6538	-3.2	-1103.11	-16.41
139	SLU 72	66	-114	6536	-2.87	-1102.82	-19.23
139	SLU 73	75	-138	7414	-2.87	-1249.47	-23.45
139	SLU 74	75	-112	7416	-3.42	-1249.96	-18.76
139	SLU 75	75	-128	7415	-3.09	-1249.67	-21.58
139	SLU 76	75	-138	7414	-2.87	-1249.47	-23.45
139	SLU 77	75	-112	7416	-3.42	-1249.96	-18.76
139	SLU 78	75	-128	7415	-3.09	-1249.67	-21.58
139	SLU 79	75	-112	7416	-3.42	-1249.96	-18.76
139	SLU 80	75	-128	7415	-3.09	-1249.67	-21.58
139	SLU 81	79	-118	7793	-3.52	-1312.9	-19.77
139	SLU 82	79	-134	7791	-3.19	-1312.61	-22.58
139	SLU 83	79	-118	7793	-3.52	-1312.9	-19.77
139	SLU 84	79	-134	7791	-3.19	-1312.61	-22.58
139	SLE RA 1	49	-74	4886	-2.44	-824.66	-12.38
139	SLE RA 2	49	-92	4884	-2.08	-824.33	-15.5
139	SLE RA 3	49	-74	4886	-2.44	-824.66	-12.38
139	SLE RA 4	49	-85	4885	-2.22	-824.46	-14.25
139	SLE RA 5	49	-92	4884	-2.08	-824.33	-15.5
139	SLE RA 6	49	-74	4886	-2.44	-824.66	-12.38
139	SLE RA 7	49	-85	4885	-2.22	-824.46	-14.25
139	SLE RA 8	49	-74	4886	-2.44	-824.66	-12.38
139	SLE RA 9	49	-85	4885	-2.22	-824.46	-14.25
139	SLE RA 10	55	-101	5470	-2.23	-922.23	-17.07
139	SLE RA 11	55	-84	5471	-2.59	-922.56	-13.94
139	SLE RA 12	55	-94	5471	-2.37	-922.36	-15.82
139	SLE RA 13	55	-101	5470	-2.23	-922.23	-17.07
139	SLE RA 14	55	-84	5471	-2.59	-922.56	-13.94
139	SLE RA 15	55	-94	5471	-2.37	-922.36	-15.82
139	SLE RA 16	55	-84	5471	-2.59	-922.56	-13.94
139	SLE RA 17	55	-94	5471	-2.37	-922.36	-15.82
139	SLE RA 18	58	-88	5722	-2.66	-964.52	-14.61
139	SLE RA 19	58	-98	5721	-2.44	-964.32	-16.49
139	SLE RA 20	58	-88	5722	-2.66	-964.52	-14.61
139	SLE RA 21	58	-98	5721	-2.44	-964.32	-16.49
139	SLE FR 1	49	-74	4886	-2.44	-824.66	-12.38
139	SLE FR 2	49	-78	4886	-2.37	-824.59	-13
139	SLE FR 3	49	-74	4886	-2.44	-824.66	-12.38
139	SLE FR 4	52	-82	5137	-2.43	-866.55	-13.67
139	SLE FR 5	51	-78	5137	-2.51	-866.62	-13.05
139	SLE FR 6	53	-81	5304	-2.55	-894.59	-13.49
139	SLE QP 1	49	-74	4886	-2.44	-824.66	-12.38
139	SLE QP 2	51	-78	5137	-2.51	-866.62	-13.05
139	SLD 1	353	160	5913	-7.94	-998.56	29.83
139	SLD 2	355	67	5914	-7.72	-998.62	13.52
139	SLD 3	371	-138	5853	-1.07	-987.8	-24.21
139	SLD 4	373	-231	5853	-0.85	-987.85	-40.52
139	SLD 5	115	479	5462	-14.64	-922.5	87.6
139	SLD 6	117	385	5462	-14.41	-922.56	71.05
139	SLD 7	173	-516	5259	8.26	-886.63	-92.52
139	SLD 8	175	-610	5260	8.49	-886.68	-109.08
139	SLD 9	-72	453	5014	-13.5	-846.55	82.98
139	SLD 10	-70	359	5014	-13.28	-846.6	66.42
139	SLD 11	-14	-541	4812	9.4	-810.67	-97.14
139	SLD 12	-12	-635	4812	9.62	-810.73	-113.7
139	SLD 13	-270	74	4421	-4.16	-745.38	14.42
139	SLD 14	-268	-18	4421	-3.94	-745.43	-1.89
139	SLD 15	-252	-224	4360	2.71	-734.61	-39.62
139	SLD 16	-250	-316	4360	2.93	-734.67	-55.92
139	SLV 1	737	464	6902	-14.9	-1166.55	84.62
139	SLV 2	742	254	6903	-14.4	-1166.67	47.64
139	SLV 3	777	-216	6764	0.76	-1142	-38.55
139	SLV 4	782	-426	6765	1.26	-1142.12	-75.53
139	SLV 5	195	1191	5876	-30.15	-993.79	216.28
139	SLV 6	200	978	5877	-29.64	-993.92	178.75
139	SLV 7	328	-1076	5415	22.04	-911.94	-194.29
139	SLV 8	333	-1289	5416	22.55	-912.07	-231.82
139	SLV 9	-230	1132	4858	-27.57	-821.16	205.72
139	SLV 10	-225	919	4859	-27.06	-821.29	168.19
139	SLV 11	-97	-1134	4397	24.63	-739.31	-204.84
139	SLV 12	-92	-1347	4398	25.14	-739.44	-242.37
139	SLV 13	-679	269	3509	-6.28	-591.11	49.44
139	SLV 14	-674	59	3510	-5.77	-591.24	12.46
139	SLV 15	-639	-411	3371	9.38	-566.56	-73.73
139	SLV 16	-634	-621	3372	9.89	-566.68	-110.71
139	CRTFP Ux+	0	0	0	0	0.01	0
139	CRTFP Ux-	0	0	0	0	-0.01	0
139	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
139	CRTFP Uy-	0	0	0	0	0	0
141	SLU 1	61	-75	5409	1.54	-943.36	-9.42
141	SLU 2	61	-107	5406	2.54	-942.69	-14.64
141	SLU 3	61	-75	5409	1.54	-943.36	-9.42
141	SLU 4	61	-94	5407	2.14	-942.96	-12.55
141	SLU 5	61	-107	5406	2.54	-942.69	-14.64
141	SLU 6	61	-75	5409	1.54	-943.36	-9.42
141	SLU 7	61	-94	5407	2.14	-942.96	-12.55
141	SLU 8	61	-75	5409	1.54	-943.36	-9.42
141	SLU 9	61	-94	5407	2.14	-942.96	-12.55
141	SLU 10	74	-121	6408	3.47	-1116.72	-16.65
141	SLU 11	73	-90	6412	2.47	-1117.38	-11.43
141	SLU 12	74	-109	6410	3.07	-1116.98	-14.56
141	SLU 13	74	-121	6408	3.47	-1116.72	-16.65
141	SLU 14	73	-90	6412	2.47	-1117.38	-11.43
141	SLU 15	74	-109	6410	3.07	-1116.98	-14.56
141	SLU 16	73	-90	6412	2.47	-1117.38	-11.43
141	SLU 17	74	-109	6410	3.07	-1116.98	-14.56
141	SLU 18	79	-97	6841	2.86	-1191.96	-12.3
141	SLU 19	79	-115	6839	3.46	-1191.56	-15.43
141	SLU 20	79	-97	6841	2.86	-1191.96	-12.3
141	SLU 21	79	-115	6839	3.46	-1191.56	-15.43
141	SLU 22	70	-83	6151	2.57	-1071.91	-10.43
141	SLU 23	70	-114	6147	3.57	-1071.24	-15.65
141	SLU 24	70	-83	6151	2.57	-1071.91	-10.43
141	SLU 25	70	-101	6149	3.17	-1071.51	-13.57
141	SLU 26	70	-114	6147	3.57	-1071.24	-15.65
141	SLU 27	70	-83	6151	2.57	-1071.91	-10.43
141	SLU 28	70	-101	6149	3.17	-1071.51	-13.57
141	SLU 29	70	-83	6151	2.57	-1071.91	-10.43
141	SLU 30	70	-101	6149	3.17	-1071.51	-13.57
141	SLU 31	83	-129	7150	4.49	-1245.27	-17.67
141	SLU 32	82	-98	7153	3.49	-1245.94	-12.45
141	SLU 33	83	-116	7151	4.09	-1245.54	-15.58
141	SLU 34	83	-129	7150	4.49	-1245.27	-17.67
141	SLU 35	82	-98	7153	3.49	-1245.94	-12.45
141	SLU 36	83	-116	7151	4.09	-1245.54	-15.58
141	SLU 37	82	-98	7153	3.49	-1245.94	-12.45
141	SLU 38	83	-116	7151	4.09	-1245.54	-15.58
141	SLU 39	88	-104	7583	3.88	-1320.52	-13.31
141	SLU 40	88	-123	7581	4.48	-1320.12	-16.44
141	SLU 41	88	-104	7583	3.88	-1320.52	-13.31
141	SLU 42	88	-123	7581	4.48	-1320.12	-16.44
141	SLU 43	76	-96	6778	1.66	-1182.29	-11.9
141	SLU 44	76	-127	6774	2.66	-1181.62	-17.12
141	SLU 45	76	-96	6778	1.66	-1182.29	-11.9
141	SLU 46	76	-114	6776	2.26	-1181.89	-15.03
141	SLU 47	76	-127	6774	2.66	-1181.62	-17.12
141	SLU 48	76	-96	6778	1.66	-1182.29	-11.9
141	SLU 49	76	-114	6776	2.26	-1181.89	-15.03
141	SLU 50	76	-96	6778	1.66	-1182.29	-11.9
141	SLU 51	76	-114	6776	2.26	-1181.89	-15.03
141	SLU 52	89	-142	7777	3.58	-1355.65	-19.13
141	SLU 53	88	-110	7780	2.58	-1356.31	-13.91
141	SLU 54	89	-129	7778	3.18	-1355.91	-17.04
141	SLU 55	89	-142	7777	3.58	-1355.65	-19.13
141	SLU 56	88	-110	7780	2.58	-1356.31	-13.91
141	SLU 57	89	-129	7778	3.18	-1355.91	-17.04
141	SLU 58	88	-110	7780	2.58	-1356.31	-13.91
141	SLU 59	89	-129	7778	3.18	-1355.91	-17.04
141	SLU 60	94	-117	8210	2.97	-1430.9	-14.77
141	SLU 61	94	-136	8208	3.57	-1430.5	-17.91
141	SLU 62	94	-117	8210	2.97	-1430.9	-14.77
141	SLU 63	94	-136	8208	3.57	-1430.5	-17.91
141	SLU 64	85	-103	7519	2.68	-1310.84	-12.91
141	SLU 65	86	-134	7516	3.68	-1310.18	-18.13
141	SLU 66	85	-103	7519	2.68	-1310.84	-12.91
141	SLU 67	85	-121	7517	3.28	-1310.44	-16.04
141	SLU 68	86	-134	7516	3.68	-1310.18	-18.13
141	SLU 69	85	-103	7519	2.68	-1310.84	-12.91
141	SLU 70	85	-121	7517	3.28	-1310.44	-16.04
141	SLU 71	85	-103	7519	2.68	-1310.84	-12.91
141	SLU 72	85	-121	7517	3.28	-1310.44	-16.04
141	SLU 73	98	-149	8518	4.6	-1484.2	-20.14
141	SLU 74	97	-118	8522	3.6	-1484.87	-14.93
141	SLU 75	98	-136	8520	4.2	-1484.47	-18.06
141	SLU 76	98	-149	8518	4.6	-1484.2	-20.14
141	SLU 77	97	-118	8522	3.6	-1484.87	-14.93
141	SLU 78	98	-136	8520	4.2	-1484.47	-18.06
141	SLU 79	97	-118	8522	3.6	-1484.87	-14.93
141	SLU 80	98	-136	8520	4.2	-1484.47	-18.06
141	SLU 81	103	-124	8951	4	-1559.45	-15.79
141	SLU 82	103	-143	8949	4.6	-1559.05	-18.92
141	SLU 83	103	-124	8951	4	-1559.45	-15.79
141	SLU 84	103	-143	8949	4.6	-1559.05	-18.92
141	SLE RA 1	63	-77	5621	1.84	-980.09	-9.71
141	SLE RA 2	64	-98	5619	2.5	-979.64	-13.19

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
141	SLE RA 3	63	-77	5621	1.84	-980.09	-9.71
141	SLE RA 4	64	-90	5620	2.24	-979.82	-11.8
141	SLE RA 5	64	-98	5619	2.5	-979.64	-13.19
141	SLE RA 6	63	-77	5621	1.84	-980.09	-9.71
141	SLE RA 7	64	-90	5620	2.24	-979.82	-11.8
141	SLE RA 8	63	-77	5621	1.84	-980.09	-9.71
141	SLE RA 9	64	-90	5620	2.24	-979.82	-11.8
141	SLE RA 10	72	-108	6287	3.12	-1095.66	-14.53
141	SLE RA 11	72	-87	6289	2.45	-1096.1	-11.05
141	SLE RA 12	72	-100	6288	2.85	-1095.84	-13.14
141	SLE RA 13	72	-108	6287	3.12	-1095.66	-14.53
141	SLE RA 14	72	-87	6289	2.45	-1096.1	-11.05
141	SLE RA 15	72	-100	6288	2.85	-1095.84	-13.14
141	SLE RA 16	72	-87	6289	2.45	-1096.1	-11.05
141	SLE RA 17	72	-100	6288	2.85	-1095.84	-13.14
141	SLE RA 18	75	-92	6576	2.71	-1145.82	-11.63
141	SLE RA 19	75	-104	6574	3.11	-1145.56	-13.71
141	SLE RA 20	75	-92	6576	2.71	-1145.82	-11.63
141	SLE RA 21	75	-104	6574	3.11	-1145.56	-13.71
141	SLE FR 1	63	-77	5621	1.84	-980.09	-9.71
141	SLE FR 2	63	-82	5621	1.97	-980	-10.41
141	SLE FR 3	63	-77	5621	1.84	-980.09	-9.71
141	SLE FR 4	67	-86	5907	2.23	-1029.72	-10.98
141	SLE FR 5	67	-82	5908	2.1	-1029.81	-10.29
141	SLE FR 6	69	-85	6098	2.28	-1062.96	-10.67
141	SLE QP 1	63	-77	5621	1.84	-980.09	-9.71
141	SLE QP 2	67	-82	5908	2.1	-1029.81	-10.29
141	SLD 1	452	204	6816	-8.02	-1189.78	20.07
141	SLD 2	455	96	6817	-7.62	-1189.83	2.9
141	SLD 3	475	-156	6741	4.93	-1176.21	-40.96
141	SLD 4	477	-264	6742	5.34	-1176.26	-58.12
141	SLD 5	148	589	6294	-20.73	-1098.36	97.51
141	SLD 6	150	480	6294	-20.31	-1098.41	80.08
141	SLD 7	222	-612	6044	22.45	-1053.13	-105.9
141	SLD 8	225	-722	6044	22.86	-1053.18	-123.33
141	SLD 9	-91	558	5771	-18.66	-1006.43	102.76
141	SLD 10	-88	449	5771	-18.25	-1006.49	85.33
141	SLD 11	-16	-643	5521	24.51	-961.2	-100.65
141	SLD 12	-14	-753	5521	24.93	-961.26	-118.08
141	SLD 13	-343	101	5073	-1.14	-883.35	37.55
141	SLD 14	-341	-7	5074	-0.73	-883.41	20.39
141	SLD 15	-321	-260	4998	11.82	-869.78	-23.47
141	SLD 16	-318	-367	4999	12.22	-869.84	-40.64
141	SLV 1	942	569	7973	-20.99	-1393.43	58.77
141	SLV 2	948	324	7974	-20.06	-1393.56	19.84
141	SLV 3	993	-253	7802	8.54	-1362.48	-80.32
141	SLV 4	999	-497	7803	9.47	-1362.6	-119.25
141	SLV 5	250	1447	6786	-49.94	-1185.8	235.3
141	SLV 6	256	1199	6787	-49	-1185.93	195.79
141	SLV 7	420	-1291	6217	48.48	-1082.61	-228.33
141	SLV 8	426	-1539	6217	49.42	-1082.74	-267.84
141	SLV 9	-292	1376	5598	-45.22	-976.87	247.27
141	SLV 10	-286	1128	5599	-44.28	-977	207.76
141	SLV 11	-123	-1362	5028	53.2	-873.69	-216.36
141	SLV 12	-117	-1610	5029	54.14	-873.82	-255.87
141	SLV 13	-865	333	4012	-5.27	-697.01	98.68
141	SLV 14	-859	89	4013	-4.34	-697.14	59.75
141	SLV 15	-814	-488	3841	24.26	-666.06	-40.41
141	SLV 16	-809	-732	3842	25.19	-666.18	-79.34
141	CRTFP Ux+	0	0	0	0	0.01	0
141	CRTFP Ux-	0	0	0	0	-0.01	0
141	CRTFP Uy+	0	0	0	0	0	0
141	CRTFP Uy-	0	0	0	0	0	0
142	SLU 1	69	-44	4992	6.84	822.7	12.67
142	SLU 2	70	-73	4987	7.35	822.04	17.92
142	SLU 3	69	-44	4992	6.84	822.7	12.67
142	SLU 4	70	-61	4989	7.15	822.3	15.82
142	SLU 5	70	-73	4987	7.35	822.04	17.92
142	SLU 6	69	-44	4992	6.84	822.7	12.67
142	SLU 7	70	-61	4989	7.15	822.3	15.82
142	SLU 8	69	-44	4992	6.84	822.7	12.67
142	SLU 9	70	-61	4989	7.15	822.3	15.82
142	SLU 10	84	-83	5898	10.13	972.93	20.43
142	SLU 11	83	-53	5903	9.61	973.59	15.18
142	SLU 12	84	-71	5900	9.92	973.2	18.33
142	SLU 13	84	-83	5898	10.13	972.93	20.43
142	SLU 14	83	-53	5903	9.61	973.59	15.18
142	SLU 15	84	-71	5900	9.92	973.2	18.33
142	SLU 16	83	-53	5903	9.61	973.59	15.18
142	SLU 17	84	-71	5900	9.92	973.2	18.33
142	SLU 18	90	-58	6293	10.8	1038.26	16.26
142	SLU 19	90	-75	6291	11.11	1037.86	19.41
142	SLU 20	90	-58	6293	10.8	1038.26	16.26
142	SLU 21	90	-75	6291	11.11	1037.86	19.41
142	SLU 22	80	-49	5662	9.96	933.92	13.9
142	SLU 23	80	-78	5658	10.48	933.26	19.15
142	SLU 24	80	-49	5662	9.96	933.92	13.9

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
142	SLU 25	80	-66	5659	10.27	933.52	17.05
142	SLU 26	80	-78	5658	10.48	933.26	19.15
142	SLU 27	80	-49	5662	9.96	933.92	13.9
142	SLU 28	80	-66	5659	10.27	933.52	17.05
142	SLU 29	80	-49	5662	9.96	933.92	13.9
142	SLU 30	80	-66	5659	10.27	933.52	17.05
142	SLU 31	94	-88	6569	13.25	1084.15	21.66
142	SLU 32	94	-58	6573	12.73	1084.81	16.41
142	SLU 33	94	-76	6571	13.04	1084.42	19.56
142	SLU 34	94	-88	6569	13.25	1084.15	21.66
142	SLU 35	94	-58	6573	12.73	1084.81	16.41
142	SLU 36	94	-76	6571	13.04	1084.42	19.56
142	SLU 37	94	-58	6573	12.73	1084.81	16.41
142	SLU 38	94	-76	6571	13.04	1084.42	19.56
142	SLU 39	100	-63	6964	13.92	1149.48	17.48
142	SLU 40	100	-80	6961	14.23	1149.08	20.64
142	SLU 41	100	-63	6964	13.92	1149.48	17.48
142	SLU 42	100	-80	6961	14.23	1149.08	20.64
142	SLU 43	86	-55	6259	7.82	1031.38	16.05
142	SLU 44	87	-84	6255	8.33	1030.72	21.3
142	SLU 45	86	-55	6259	7.82	1031.38	16.05
142	SLU 46	87	-73	6257	8.13	1030.98	19.2
142	SLU 47	87	-84	6255	8.33	1030.72	21.3
142	SLU 48	86	-55	6259	7.82	1031.38	16.05
142	SLU 49	87	-73	6257	8.13	1030.98	19.2
142	SLU 50	86	-55	6259	7.82	1031.38	16.05
142	SLU 51	87	-73	6257	8.13	1030.98	19.2
142	SLU 52	101	-94	7166	11.11	1181.61	23.81
142	SLU 53	101	-65	7170	10.59	1182.27	18.56
142	SLU 54	101	-82	7168	10.9	1181.87	21.71
142	SLU 55	101	-94	7166	11.11	1181.61	23.81
142	SLU 56	101	-65	7170	10.59	1182.27	18.56
142	SLU 57	101	-82	7168	10.9	1181.87	21.71
142	SLU 58	101	-65	7170	10.59	1182.27	18.56
142	SLU 59	101	-82	7168	10.9	1181.87	21.71
142	SLU 60	107	-69	7561	11.78	1246.94	19.64
142	SLU 61	107	-87	7558	12.09	1246.54	22.79
142	SLU 62	107	-69	7561	11.78	1246.94	19.64
142	SLU 63	107	-87	7558	12.09	1246.54	22.79
142	SLU 64	97	-60	6930	10.94	1142.6	17.28
142	SLU 65	97	-89	6925	11.46	1141.94	22.53
142	SLU 66	97	-60	6930	10.94	1142.6	17.28
142	SLU 67	97	-78	6927	11.25	1142.2	20.43
142	SLU 68	97	-89	6925	11.46	1141.94	22.53
142	SLU 69	97	-60	6930	10.94	1142.6	17.28
142	SLU 70	97	-78	6927	11.25	1142.2	20.43
142	SLU 71	97	-60	6930	10.94	1142.6	17.28
142	SLU 72	97	-78	6927	11.25	1142.2	20.43
142	SLU 73	112	-99	7836	14.23	1292.83	25.04
142	SLU 74	111	-70	7841	13.71	1293.49	19.79
142	SLU 75	111	-87	7838	14.02	1293.09	22.94
142	SLU 76	112	-99	7836	14.23	1292.83	25.04
142	SLU 77	111	-70	7841	13.71	1293.49	19.79
142	SLU 78	111	-87	7838	14.02	1293.09	22.94
142	SLU 79	111	-70	7841	13.71	1293.49	19.79
142	SLU 80	111	-87	7838	14.02	1293.09	22.94
142	SLU 81	117	-74	8231	14.9	1358.16	20.86
142	SLU 82	117	-92	8229	15.21	1357.76	24.02
142	SLU 83	117	-74	8231	14.9	1358.16	20.86
142	SLU 84	117	-92	8229	15.21	1357.76	24.02
142	SLE RA 1	72	-45	5183	7.73	854.48	13.02
142	SLE RA 2	73	-65	5180	8.07	854.04	16.52
142	SLE RA 3	72	-45	5183	7.73	854.48	13.02
142	SLE RA 4	72	-57	5181	7.94	854.21	15.12
142	SLE RA 5	73	-65	5180	8.07	854.04	16.52
142	SLE RA 6	72	-45	5183	7.73	854.48	13.02
142	SLE RA 7	72	-57	5181	7.94	854.21	15.12
142	SLE RA 8	72	-45	5183	7.73	854.48	13.02
142	SLE RA 9	72	-57	5181	7.94	854.21	15.12
142	SLE RA 10	82	-71	5788	9.92	954.63	18.2
142	SLE RA 11	82	-52	5791	9.58	955.07	14.69
142	SLE RA 12	82	-63	5789	9.79	954.81	16.8
142	SLE RA 13	82	-71	5788	9.92	954.63	18.2
142	SLE RA 14	82	-52	5791	9.58	955.07	14.69
142	SLE RA 15	82	-63	5789	9.79	954.81	16.8
142	SLE RA 16	82	-52	5791	9.58	955.07	14.69
142	SLE RA 17	82	-63	5789	9.79	954.81	16.8
142	SLE RA 18	86	-54	6051	10.37	998.18	15.41
142	SLE RA 19	86	-66	6049	10.58	997.92	17.51
142	SLE RA 20	86	-54	6051	10.37	998.18	15.41
142	SLE RA 21	86	-66	6049	10.58	997.92	17.51
142	SLE FR 1	72	-45	5183	7.73	854.48	13.02
142	SLE FR 2	72	-49	5183	7.8	854.39	13.72
142	SLE FR 3	72	-45	5183	7.73	854.48	13.02
142	SLE FR 4	76	-52	5443	8.59	897.5	14.44
142	SLE FR 5	76	-48	5444	8.52	897.59	13.74
142	SLE FR 6	79	-50	5617	9.05	926.33	14.22

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
142	SLE QP 1	72	-45	5183	7.73	854.48	13.02
142	SLE QP 2	76	-48	5444	8.52	897.59	13.74
142	SLD 1	495	124	6298	-1.64	1038.99	-34.41
142	SLD 2	498	28	6298	-1.41	1039.02	-16.26
142	SLD 3	519	-223	6219	7.45	1026.46	26.35
142	SLD 4	522	-320	6219	7.68	1026.5	44.5
142	SLD 5	164	565	5820	-8.4	958.99	-99.36
142	SLD 6	167	467	5820	-8.17	959.03	-80.93
142	SLD 7	245	-593	5556	21.91	917.24	103.2
142	SLD 8	248	-691	5556	22.14	917.28	121.62
142	SLD 9	-95	595	5331	-5.09	877.9	-94.15
142	SLD 10	-93	497	5331	-4.87	877.94	-75.72
142	SLD 11	-14	-563	5067	25.21	836.15	108.41
142	SLD 12	-12	-661	5067	25.44	836.18	126.84
142	SLD 13	-370	224	4668	9.37	768.68	-17.03
142	SLD 14	-367	128	4669	9.59	768.72	1.13
142	SLD 15	-345	-123	4589	18.46	756.16	43.74
142	SLD 16	-343	-220	4589	18.68	756.19	61.89
142	SLV 1	1028	344	7385	-14.62	1219	-95.95
142	SLV 2	1035	125	7386	-14.11	1219.08	-54.78
142	SLV 3	1083	-448	7205	6.11	1190.42	42.56
142	SLV 4	1090	-667	7205	6.62	1190.5	83.72
142	SLV 5	276	1349	6300	-30.03	1037.33	-243.95
142	SLV 6	282	1126	6300	-29.52	1037.42	-202.18
142	SLV 7	460	-1290	5698	39.05	942.06	217.75
142	SLV 8	466	-1513	5698	39.56	942.14	259.52
142	SLV 9	-314	1417	5189	-22.52	853.03	-232.04
142	SLV 10	-307	1195	5190	-22	853.12	-190.27
142	SLV 11	-130	-1222	4587	46.56	757.76	229.66
142	SLV 12	-123	-1444	4587	47.08	757.85	271.43
142	SLV 13	-937	572	3682	10.43	604.68	-56.25
142	SLV 14	-931	352	3683	10.94	604.76	-15.09
142	SLV 15	-882	-220	3501	31.15	576.1	82.26
142	SLV 16	-876	-439	3502	31.66	576.18	123.42
142	CRTFP Ux+	0	0	0	0	-0.01	0
142	CRTFP Ux-	0	0	0	0	0.01	0
142	CRTFP Uy+	0	0	0	0	0	0
142	CRTFP Uy-	0	0	0	0	0	0
143	SLU 1	39	-6	2462	4.77	2.86	2.37
143	SLU 2	39	-21	2459	4.99	2.87	2.6
143	SLU 3	39	-6	2462	4.77	2.86	2.37
143	SLU 4	39	-15	2460	4.9	2.87	2.51
143	SLU 5	39	-21	2459	4.99	2.87	2.6
143	SLU 6	39	-6	2462	4.77	2.86	2.37
143	SLU 7	39	-15	2460	4.9	2.87	2.51
143	SLU 8	39	-6	2462	4.77	2.86	2.37
143	SLU 9	39	-15	2460	4.9	2.87	2.51
143	SLU 10	47	-23	2904	6.88	3.46	2.99
143	SLU 11	47	-9	2907	6.66	3.46	2.76
143	SLU 12	47	-17	2905	6.79	3.46	2.89
143	SLU 13	47	-23	2904	6.88	3.46	2.99
143	SLU 14	47	-9	2907	6.66	3.46	2.76
143	SLU 15	47	-17	2905	6.79	3.46	2.89
143	SLU 16	47	-9	2907	6.66	3.46	2.76
143	SLU 17	47	-17	2905	6.79	3.46	2.89
143	SLU 18	50	-10	3097	7.47	3.71	2.92
143	SLU 19	51	-18	3096	7.6	3.72	3.06
143	SLU 20	50	-10	3097	7.47	3.71	2.92
143	SLU 21	51	-18	3096	7.6	3.72	3.06
143	SLU 22	45	-8	2788	6.9	3.31	2.55
143	SLU 23	45	-22	2786	7.12	3.31	2.78
143	SLU 24	45	-8	2788	6.9	3.31	2.55
143	SLU 25	45	-16	2787	7.03	3.31	2.68
143	SLU 26	45	-22	2786	7.12	3.31	2.78
143	SLU 27	45	-8	2788	6.9	3.31	2.55
143	SLU 28	45	-16	2787	7.03	3.31	2.68
143	SLU 29	45	-8	2788	6.9	3.31	2.55
143	SLU 30	45	-16	2787	7.03	3.31	2.68
143	SLU 31	53	-24	3231	9	3.91	3.17
143	SLU 32	53	-10	3233	8.79	3.9	2.93
143	SLU 33	53	-19	3232	8.92	3.91	3.07
143	SLU 34	53	-24	3231	9	3.91	3.17
143	SLU 35	53	-10	3233	8.79	3.9	2.93
143	SLU 36	53	-19	3232	8.92	3.91	3.07
143	SLU 37	53	-10	3233	8.79	3.9	2.93
143	SLU 38	53	-19	3232	8.92	3.91	3.07
143	SLU 39	56	-11	3424	9.6	4.16	3.1
143	SLU 40	56	-20	3422	9.73	4.16	3.24
143	SLU 41	56	-11	3424	9.6	4.16	3.1
143	SLU 42	56	-20	3422	9.73	4.16	3.24
143	SLU 43	49	-8	3088	5.47	3.57	3.02
143	SLU 44	49	-22	3086	5.69	3.58	3.25
143	SLU 45	49	-8	3088	5.47	3.57	3.02
143	SLU 46	49	-16	3087	5.6	3.57	3.15
143	SLU 47	49	-22	3086	5.69	3.58	3.25
143	SLU 48	49	-8	3088	5.47	3.57	3.02
143	SLU 49	49	-16	3087	5.6	3.57	3.15

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
143	SLU 50	49	-8	3088	5.47	3.57	3.02
143	SLU 51	49	-16	3087	5.6	3.57	3.15
143	SLU 52	57	-24	3531	7.58	4.17	3.64
143	SLU 53	57	-10	3533	7.36	4.17	3.4
143	SLU 54	57	-19	3532	7.49	4.17	3.54
143	SLU 55	57	-24	3531	7.58	4.17	3.64
143	SLU 56	57	-10	3533	7.36	4.17	3.4
143	SLU 57	57	-19	3532	7.49	4.17	3.54
143	SLU 58	57	-10	3533	7.36	4.17	3.4
143	SLU 59	57	-19	3532	7.49	4.17	3.54
143	SLU 60	60	-11	3724	8.17	4.42	3.57
143	SLU 61	60	-20	3722	8.3	4.42	3.71
143	SLU 62	60	-11	3724	8.17	4.42	3.57
143	SLU 63	60	-20	3722	8.3	4.42	3.71
143	SLU 64	54	-9	3415	7.6	4.01	3.19
143	SLU 65	55	-23	3412	7.82	4.02	3.43
143	SLU 66	54	-9	3415	7.6	4.01	3.19
143	SLU 67	55	-18	3413	7.73	4.02	3.33
143	SLU 68	55	-23	3412	7.82	4.02	3.43
143	SLU 69	54	-9	3415	7.6	4.01	3.19
143	SLU 70	55	-18	3413	7.73	4.02	3.33
143	SLU 71	54	-9	3415	7.6	4.01	3.19
143	SLU 72	55	-18	3413	7.73	4.02	3.33
143	SLU 73	63	-26	3857	9.7	4.61	3.81
143	SLU 74	62	-12	3860	9.49	4.61	3.58
143	SLU 75	63	-20	3858	9.62	4.61	3.72
143	SLU 76	63	-26	3857	9.7	4.61	3.81
143	SLU 77	62	-12	3860	9.49	4.61	3.58
143	SLU 78	63	-20	3858	9.62	4.61	3.72
143	SLU 79	62	-12	3860	9.49	4.61	3.58
143	SLU 80	63	-20	3858	9.62	4.61	3.72
143	SLU 81	66	-13	4050	10.3	4.86	3.75
143	SLU 82	66	-21	4049	10.43	4.87	3.89
143	SLU 83	66	-13	4050	10.3	4.86	3.75
143	SLU 84	66	-21	4049	10.43	4.87	3.89
143	SLE RA 1	41	-7	2555	5.38	2.99	2.42
143	SLE RA 2	41	-16	2553	5.52	2.99	2.57
143	SLE RA 3	41	-7	2555	5.38	2.99	2.42
143	SLE RA 4	41	-12	2554	5.47	2.99	2.51
143	SLE RA 5	41	-16	2553	5.52	2.99	2.57
143	SLE RA 6	41	-7	2555	5.38	2.99	2.42
143	SLE RA 7	41	-12	2554	5.47	2.99	2.51
143	SLE RA 8	41	-7	2555	5.38	2.99	2.42
143	SLE RA 9	41	-12	2554	5.47	2.99	2.51
143	SLE RA 10	46	-18	2850	6.78	3.39	2.83
143	SLE RA 11	46	-9	2852	6.64	3.39	2.68
143	SLE RA 12	46	-14	2851	6.72	3.39	2.77
143	SLE RA 13	46	-18	2850	6.78	3.39	2.83
143	SLE RA 14	46	-9	2852	6.64	3.39	2.68
143	SLE RA 15	46	-14	2851	6.72	3.39	2.77
143	SLE RA 16	46	-9	2852	6.64	3.39	2.68
143	SLE RA 17	46	-14	2851	6.72	3.39	2.77
143	SLE RA 18	48	-9	2979	7.18	3.56	2.79
143	SLE RA 19	48	-15	2978	7.26	3.56	2.88
143	SLE RA 20	48	-9	2979	7.18	3.56	2.79
143	SLE RA 21	48	-15	2978	7.26	3.56	2.88
143	SLE FR 1	41	-7	2555	5.38	2.99	2.42
143	SLE FR 2	41	-9	2555	5.41	2.99	2.45
143	SLE FR 3	41	-7	2555	5.38	2.99	2.42
143	SLE FR 4	43	-9	2682	5.95	3.16	2.56
143	SLE FR 5	43	-8	2682	5.92	3.16	2.53
143	SLE FR 6	44	-8	2767	6.28	3.27	2.6
143	SLE QP 1	41	-7	2555	5.38	2.99	2.42
143	SLE QP 2	43	-8	2682	5.92	3.16	2.53
143	SLD 1	268	74	3084	0.05	4.39	0.45
143	SLD 2	270	31	3084	0.14	4.39	1.57
143	SLD 3	281	-95	3043	4.63	4.47	2.75
143	SLD 4	283	-138	3043	4.73	4.47	3.87
143	SLD 5	90	289	2866	-2.83	3.41	-1.99
143	SLD 6	92	244	2866	-2.73	3.42	-0.85
143	SLD 7	134	-274	2727	12.45	3.67	5.68
143	SLD 8	135	-319	2727	12.55	3.67	6.82
143	SLD 9	-49	303	2637	-0.72	2.65	-1.76
143	SLD 10	-48	259	2637	-0.62	2.66	-0.63
143	SLD 11	-6	-260	2498	14.57	2.9	5.91
143	SLD 12	-4	-304	2498	14.67	2.91	7.04
143	SLD 13	-197	123	2322	7.11	1.85	1.19
143	SLD 14	-196	80	2322	7.2	1.85	2.31
143	SLD 15	-184	-46	2280	11.69	1.93	3.49
143	SLD 16	-182	-89	2280	11.79	1.93	4.61
143	SLV 1	555	179	3596	-7.45	5.96	-2.21
143	SLV 2	558	80	3596	-7.23	5.97	0.33
143	SLV 3	584	-207	3501	3	6.13	3.03
143	SLV 4	588	-305	3501	3.22	6.14	5.57
143	SLV 5	150	668	3101	-14.03	3.74	-7.76
143	SLV 6	154	567	3101	-13.8	3.74	-5.18
143	SLV 7	249	-616	2783	20.81	4.31	9.73

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
143	SLV 8	253	-716	2783	21.04	4.32	12.31
143	SLV 9	-167	701	2581	-9.21	2.01	-7.25
143	SLV 10	-163	601	2581	-8.98	2.01	-4.67
143	SLV 11	-68	-582	2263	25.63	2.58	10.24
143	SLV 12	-64	-683	2263	25.86	2.58	12.82
143	SLV 13	-502	290	1863	8.61	0.18	-0.52
143	SLV 14	-499	191	1863	8.84	0.19	2.02
143	SLV 15	-473	-95	1768	19.06	0.36	4.73
143	SLV 16	-469	-194	1768	19.29	0.36	7.27
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
144	SLU 1	40	5	2392	4.99	1.41	2.36
144	SLU 2	41	-7	2389	5.18	1.42	2.57
144	SLU 3	40	5	2392	4.99	1.41	2.36
144	SLU 4	41	-2	2390	5.11	1.42	2.49
144	SLU 5	41	-7	2389	5.18	1.42	2.57
144	SLU 6	40	5	2392	4.99	1.41	2.36
144	SLU 7	41	-2	2390	5.11	1.42	2.49
144	SLU 8	40	5	2392	4.99	1.41	2.36
144	SLU 9	41	-2	2390	5.11	1.42	2.49
144	SLU 10	49	-8	2819	7.15	1.72	2.96
144	SLU 11	49	5	2822	6.95	1.71	2.74
144	SLU 12	49	-3	2820	7.07	1.72	2.87
144	SLU 13	49	-8	2819	7.15	1.72	2.96
144	SLU 14	49	5	2822	6.95	1.71	2.74
144	SLU 15	49	-3	2820	7.07	1.72	2.87
144	SLU 16	49	5	2822	6.95	1.71	2.74
144	SLU 17	49	-3	2820	7.07	1.72	2.87
144	SLU 18	52	5	3006	7.8	1.84	2.91
144	SLU 19	52	-3	3004	7.91	1.85	3.04
144	SLU 20	52	5	3006	7.8	1.84	2.91
144	SLU 21	52	-3	3004	7.91	1.85	3.04
144	SLU 22	46	5	2707	7.2	1.63	2.54
144	SLU 23	47	-8	2704	7.4	1.63	2.75
144	SLU 24	46	5	2707	7.2	1.63	2.54
144	SLU 25	47	-3	2706	7.32	1.63	2.67
144	SLU 26	47	-8	2704	7.4	1.63	2.75
144	SLU 27	46	5	2707	7.2	1.63	2.54
144	SLU 28	47	-3	2706	7.32	1.63	2.67
144	SLU 29	46	5	2707	7.2	1.63	2.54
144	SLU 30	47	-3	2706	7.32	1.63	2.67
144	SLU 31	55	-9	3135	9.36	1.93	3.14
144	SLU 32	55	4	3137	9.17	1.93	2.92
144	SLU 33	55	-3	3136	9.28	1.93	3.05
144	SLU 34	55	-9	3135	9.36	1.93	3.14
144	SLU 35	55	4	3137	9.17	1.93	2.92
144	SLU 36	55	-3	3136	9.28	1.93	3.05
144	SLU 37	55	4	3137	9.17	1.93	2.92
144	SLU 38	55	-3	3136	9.28	1.93	3.05
144	SLU 39	58	4	3322	10.01	2.06	3.09
144	SLU 40	58	-4	3320	10.13	2.06	3.22
144	SLU 41	58	4	3322	10.01	2.06	3.09
144	SLU 42	58	-4	3320	10.13	2.06	3.22
144	SLU 43	51	7	3001	5.73	1.77	3
144	SLU 44	51	-6	2998	5.92	1.77	3.22
144	SLU 45	51	7	3001	5.73	1.77	3
144	SLU 46	51	0	2999	5.84	1.77	3.13
144	SLU 47	51	-6	2998	5.92	1.77	3.22
144	SLU 48	51	7	3001	5.73	1.77	3
144	SLU 49	51	0	2999	5.84	1.77	3.13
144	SLU 50	51	7	3001	5.73	1.77	3
144	SLU 51	51	0	2999	5.84	1.77	3.13
144	SLU 52	59	-6	3428	7.89	2.07	3.6
144	SLU 53	59	7	3431	7.69	2.06	3.39
144	SLU 54	59	-1	3429	7.81	2.07	3.52
144	SLU 55	59	-6	3428	7.89	2.07	3.6
144	SLU 56	59	7	3431	7.69	2.06	3.39
144	SLU 57	59	-1	3429	7.81	2.07	3.52
144	SLU 58	59	7	3431	7.69	2.06	3.39
144	SLU 59	59	-1	3429	7.81	2.07	3.52
144	SLU 60	62	7	3615	8.53	2.19	3.55
144	SLU 61	63	-1	3614	8.65	2.2	3.68
144	SLU 62	62	7	3615	8.53	2.19	3.55
144	SLU 63	63	-1	3614	8.65	2.2	3.68
144	SLU 64	57	7	3316	7.94	1.98	3.18
144	SLU 65	57	-6	3314	8.14	1.98	3.4
144	SLU 66	57	7	3316	7.94	1.98	3.18
144	SLU 67	57	-1	3315	8.06	1.98	3.31
144	SLU 68	57	-6	3314	8.14	1.98	3.4
144	SLU 69	57	7	3316	7.94	1.98	3.18
144	SLU 70	57	-1	3315	8.06	1.98	3.31
144	SLU 71	57	7	3316	7.94	1.98	3.18
144	SLU 72	57	-1	3315	8.06	1.98	3.31
144	SLU 73	65	-7	3744	10.1	2.28	3.79
144	SLU 74	65	6	3747	9.91	2.28	3.57

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
144	SLU 75	65	-2	3745	10.02	2.28	3.7
144	SLU 76	65	-7	3744	10.1	2.28	3.79
144	SLU 77	65	6	3747	9.91	2.28	3.57
144	SLU 78	65	-2	3745	10.02	2.28	3.7
144	SLU 79	65	6	3747	9.91	2.28	3.57
144	SLU 80	65	-2	3745	10.02	2.28	3.7
144	SLU 81	68	6	3931	10.75	2.41	3.73
144	SLU 82	69	-2	3929	10.86	2.41	3.86
144	SLU 83	68	6	3931	10.75	2.41	3.73
144	SLU 84	69	-2	3929	10.86	2.41	3.86
144	SLE RA 1	42	5	2482	5.62	1.48	2.41
144	SLE RA 2	42	-3	2480	5.75	1.48	2.55
144	SLE RA 3	42	5	2482	5.62	1.48	2.41
144	SLE RA 4	42	0	2481	5.7	1.48	2.49
144	SLE RA 5	42	-3	2480	5.75	1.48	2.55
144	SLE RA 6	42	5	2482	5.62	1.48	2.41
144	SLE RA 7	42	0	2481	5.7	1.48	2.49
144	SLE RA 8	42	5	2482	5.62	1.48	2.41
144	SLE RA 9	42	0	2481	5.7	1.48	2.49
144	SLE RA 10	48	-4	2767	7.06	1.68	2.81
144	SLE RA 11	48	5	2769	6.93	1.68	2.67
144	SLE RA 12	48	0	2767	7.01	1.68	2.75
144	SLE RA 13	48	-4	2767	7.06	1.68	2.81
144	SLE RA 14	48	5	2769	6.93	1.68	2.67
144	SLE RA 15	48	0	2767	7.01	1.68	2.75
144	SLE RA 16	48	5	2769	6.93	1.68	2.67
144	SLE RA 17	48	0	2767	7.01	1.68	2.75
144	SLE RA 18	50	5	2891	7.49	1.76	2.78
144	SLE RA 19	50	0	2890	7.57	1.76	2.86
144	SLE RA 20	50	5	2891	7.49	1.76	2.78
144	SLE RA 21	50	0	2890	7.57	1.76	2.86
144	SLE FR 1	42	5	2482	5.62	1.48	2.41
144	SLE FR 2	42	4	2481	5.65	1.48	2.44
144	SLE FR 3	42	5	2482	5.62	1.48	2.41
144	SLE FR 4	45	3	2604	6.21	1.56	2.55
144	SLE FR 5	45	5	2605	6.18	1.56	2.52
144	SLE FR 6	46	5	2687	6.56	1.62	2.59
144	SLE QP 1	42	5	2482	5.62	1.48	2.41
144	SLE QP 2	45	5	2605	6.18	1.56	2.52
144	SLD 1	270	80	2962	0.32	2.9	0.54
144	SLD 2	272	42	2962	0.41	2.9	1.63
144	SLD 3	283	-78	2921	4.7	2.98	2.7
144	SLD 4	285	-116	2921	4.79	2.98	3.79
144	SLD 5	92	280	2774	-2.25	1.84	-1.73
144	SLD 6	93	242	2774	-2.16	1.85	-0.63
144	SLD 7	135	-245	2638	12.35	2.11	5.45
144	SLD 8	137	-284	2637	12.44	2.11	6.56
144	SLD 9	-48	294	2572	-0.07	1.01	-1.52
144	SLD 10	-46	256	2572	0.02	1.02	-0.41
144	SLD 11	-4	-231	2436	14.53	1.28	5.66
144	SLD 12	-3	-270	2435	14.62	1.28	6.77
144	SLD 13	-196	126	2289	7.58	0.14	1.25
144	SLD 14	-194	88	2288	7.67	0.14	2.34
144	SLD 15	-183	-32	2248	11.96	0.22	3.4
144	SLD 16	-181	-70	2248	12.05	0.22	4.49
144	SLV 1	557	175	3416	-7.16	4.61	-1.98
144	SLV 2	561	89	3416	-6.96	4.61	0.49
144	SLV 3	587	-184	3323	2.82	4.79	2.93
144	SLV 4	590	-270	3323	3.03	4.79	5.4
144	SLV 5	152	632	2990	-13.04	2.2	-7.16
144	SLV 6	156	545	2990	-12.83	2.21	-4.66
144	SLV 7	251	-566	2679	20.25	2.8	9.21
144	SLV 8	255	-654	2678	20.45	2.81	11.72
144	SLV 9	-166	664	2531	-8.09	0.32	-6.68
144	SLV 10	-162	576	2531	-7.88	0.32	-4.18
144	SLV 11	-66	-534	2220	25.2	0.92	9.7
144	SLV 12	-63	-622	2219	25.4	0.92	12.2
144	SLV 13	-501	281	1887	9.34	-1.67	-0.37
144	SLV 14	-498	194	1886	9.54	-1.66	2.1
144	SLV 15	-472	-79	1793	19.32	-1.49	4.55
144	SLV 16	-468	-165	1793	19.53	-1.48	7.02
144	CRTFP Ux+	0	0	0	0	0	0
144	CRTFP Ux-	0	0	0	0	0	0
144	CRTFP Uy+	0	0	0	0	0	0
144	CRTFP Uy-	0	0	0	0	0	0
145	SLU 1	42	17	2359	5.21	0.58	2.28
145	SLU 2	43	5	2356	5.39	0.59	2.48
145	SLU 3	42	17	2359	5.21	0.58	2.28
145	SLU 4	42	10	2358	5.32	0.58	2.4
145	SLU 5	43	5	2356	5.39	0.59	2.48
145	SLU 6	42	17	2359	5.21	0.58	2.28
145	SLU 7	42	10	2358	5.32	0.58	2.4
145	SLU 8	42	17	2359	5.21	0.58	2.28
145	SLU 9	42	10	2358	5.32	0.58	2.4
145	SLU 10	51	7	2780	7.43	0.69	2.85
145	SLU 11	51	19	2783	7.26	0.68	2.66
145	SLU 12	51	11	2781	7.36	0.68	2.78

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
145	SLU 13	51	7	2780	7.43	0.69	2.85
145	SLU 14	51	19	2783	7.26	0.68	2.66
145	SLU 15	51	11	2781	7.36	0.68	2.78
145	SLU 16	51	19	2783	7.26	0.68	2.66
145	SLU 17	51	11	2781	7.36	0.68	2.78
145	SLU 18	54	19	2965	8.13	0.72	2.82
145	SLU 19	55	12	2963	8.24	0.73	2.94
145	SLU 20	54	19	2965	8.13	0.72	2.82
145	SLU 21	55	12	2963	8.24	0.73	2.94
145	SLU 22	48	18	2671	7.52	0.64	2.46
145	SLU 23	49	6	2668	7.69	0.65	2.66
145	SLU 24	48	18	2671	7.52	0.64	2.46
145	SLU 25	49	10	2669	7.62	0.64	2.58
145	SLU 26	49	6	2668	7.69	0.65	2.66
145	SLU 27	48	18	2671	7.52	0.64	2.46
145	SLU 28	49	10	2669	7.62	0.64	2.58
145	SLU 29	48	18	2671	7.52	0.64	2.46
145	SLU 30	49	10	2669	7.62	0.64	2.58
145	SLU 31	57	7	3091	9.73	0.75	3.03
145	SLU 32	57	19	3094	9.56	0.74	2.84
145	SLU 33	57	12	3092	9.66	0.74	2.96
145	SLU 34	57	7	3091	9.73	0.75	3.03
145	SLU 35	57	19	3094	9.56	0.74	2.84
145	SLU 36	57	12	3092	9.66	0.74	2.96
145	SLU 37	57	19	3094	9.56	0.74	2.84
145	SLU 38	57	12	3092	9.66	0.74	2.96
145	SLU 39	61	19	3276	10.44	0.78	3
145	SLU 40	61	12	3274	10.54	0.79	3.12
145	SLU 41	61	19	3276	10.44	0.78	3
145	SLU 42	61	12	3274	10.54	0.79	3.12
145	SLU 43	53	22	2960	5.99	0.73	2.91
145	SLU 44	53	10	2957	6.16	0.74	3.1
145	SLU 45	53	22	2960	5.99	0.73	2.91
145	SLU 46	53	15	2959	6.09	0.74	3.03
145	SLU 47	53	10	2957	6.16	0.74	3.1
145	SLU 48	53	22	2960	5.99	0.73	2.91
145	SLU 49	53	15	2959	6.09	0.74	3.03
145	SLU 50	53	22	2960	5.99	0.73	2.91
145	SLU 51	53	15	2959	6.09	0.74	3.03
145	SLU 52	62	12	3381	8.2	0.84	3.48
145	SLU 53	61	24	3384	8.03	0.83	3.28
145	SLU 54	62	16	3382	8.14	0.84	3.4
145	SLU 55	62	12	3381	8.2	0.84	3.48
145	SLU 56	61	24	3384	8.03	0.83	3.28
145	SLU 57	62	16	3382	8.14	0.84	3.4
145	SLU 58	61	24	3384	8.03	0.83	3.28
145	SLU 59	62	16	3382	8.14	0.84	3.4
145	SLU 60	65	24	3566	8.91	0.87	3.44
145	SLU 61	65	17	3564	9.01	0.88	3.56
145	SLU 62	65	24	3566	8.91	0.87	3.44
145	SLU 63	65	17	3564	9.01	0.88	3.56
145	SLU 64	59	23	3272	8.29	0.79	3.09
145	SLU 65	59	11	3269	8.46	0.8	3.28
145	SLU 66	59	23	3272	8.29	0.79	3.09
145	SLU 67	59	15	3270	8.4	0.8	3.2
145	SLU 68	59	11	3269	8.46	0.8	3.28
145	SLU 69	59	23	3272	8.29	0.79	3.09
145	SLU 70	59	15	3270	8.4	0.8	3.2
145	SLU 71	59	23	3272	8.29	0.79	3.09
145	SLU 72	59	15	3270	8.4	0.8	3.2
145	SLU 73	68	12	3692	10.51	0.9	3.66
145	SLU 74	68	24	3695	10.34	0.89	3.46
145	SLU 75	68	17	3693	10.44	0.9	3.58
145	SLU 76	68	12	3692	10.51	0.9	3.66
145	SLU 77	68	24	3695	10.34	0.89	3.46
145	SLU 78	68	17	3693	10.44	0.9	3.58
145	SLU 79	68	24	3695	10.34	0.89	3.46
145	SLU 80	68	17	3693	10.44	0.9	3.58
145	SLU 81	71	24	3877	11.21	0.94	3.62
145	SLU 82	71	17	3875	11.31	0.94	3.74
145	SLU 83	71	24	3877	11.21	0.94	3.62
145	SLU 84	71	17	3875	11.31	0.94	3.74
145	SLE RA 1	44	17	2448	5.87	0.6	2.33
145	SLE RA 2	44	9	2446	5.99	0.6	2.47
145	SLE RA 3	44	17	2448	5.87	0.6	2.33
145	SLE RA 4	44	12	2447	5.94	0.6	2.41
145	SLE RA 5	44	9	2446	5.99	0.6	2.47
145	SLE RA 6	44	17	2448	5.87	0.6	2.33
145	SLE RA 7	44	12	2447	5.94	0.6	2.41
145	SLE RA 8	44	17	2448	5.87	0.6	2.33
145	SLE RA 9	44	12	2447	5.94	0.6	2.41
145	SLE RA 10	50	10	2729	7.35	0.67	2.72
145	SLE RA 11	50	18	2731	7.23	0.66	2.58
145	SLE RA 12	50	13	2729	7.3	0.67	2.66
145	SLE RA 13	50	10	2729	7.35	0.67	2.72
145	SLE RA 14	50	18	2731	7.23	0.66	2.58
145	SLE RA 15	50	13	2729	7.3	0.67	2.66

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
145	SLE RA 16	50	18	2731	7.23	0.66	2.58
145	SLE RA 17	50	13	2729	7.3	0.67	2.66
145	SLE RA 18	52	19	2852	7.82	0.69	2.69
145	SLE RA 19	52	14	2850	7.89	0.69	2.77
145	SLE RA 20	52	19	2852	7.82	0.69	2.69
145	SLE RA 21	52	14	2850	7.89	0.69	2.77
145	SLE FR 1	44	17	2448	5.87	0.6	2.33
145	SLE FR 2	44	16	2448	5.9	0.6	2.36
145	SLE FR 3	44	17	2448	5.87	0.6	2.33
145	SLE FR 4	46	16	2569	6.48	0.63	2.47
145	SLE FR 5	46	18	2569	6.46	0.63	2.44
145	SLE FR 6	48	18	2650	6.85	0.64	2.51
145	SLE QP 1	44	17	2448	5.87	0.6	2.33
145	SLE QP 2	46	18	2569	6.46	0.63	2.44
145	SLD 1	272	86	2880	0.6	1.92	0.61
145	SLD 2	274	53	2880	0.68	1.93	1.66
145	SLD 3	285	-62	2840	4.77	2	2.57
145	SLD 4	287	-94	2840	4.85	2.01	3.62
145	SLD 5	94	273	2724	-1.65	0.89	-1.46
145	SLD 6	95	240	2723	-1.56	0.9	-0.38
145	SLD 7	137	-218	2589	12.24	1.16	5.07
145	SLD 8	139	-251	2589	12.32	1.16	6.14
145	SLD 9	-46	286	2549	0.59	0.09	-1.26
145	SLD 10	-45	253	2549	0.67	0.09	-0.19
145	SLD 11	-2	-205	2415	14.48	0.35	5.27
145	SLD 12	-1	-238	2415	14.56	0.36	6.34
145	SLD 13	-194	130	2299	8.06	-0.75	1.26
145	SLD 14	-193	97	2299	8.14	-0.75	2.32
145	SLD 15	-181	-18	2259	12.23	-0.67	3.22
145	SLD 16	-179	-51	2258	12.31	-0.67	4.28
145	SLV 1	560	173	3276	-6.87	3.57	-1.74
145	SLV 2	563	99	3275	-6.68	3.58	0.65
145	SLV 3	590	-163	3184	2.63	3.75	2.73
145	SLV 4	593	-237	3183	2.81	3.76	5.12
145	SLV 5	154	600	2921	-12.01	1.23	-6.44
145	SLV 6	158	525	2920	-11.82	1.24	-4.01
145	SLV 7	253	-519	2614	19.64	1.84	8.44
145	SLV 8	257	-595	2614	19.83	1.84	10.87
145	SLV 9	-164	630	2525	-6.92	-0.59	-5.99
145	SLV 10	-160	555	2524	-6.73	-0.58	-3.56
145	SLV 11	-65	-490	2218	24.73	0.01	8.89
145	SLV 12	-61	-565	2217	24.92	0.02	11.32
145	SLV 13	-500	273	1955	10.1	-2.51	-0.24
145	SLV 14	-497	198	1954	10.28	-2.5	2.16
145	SLV 15	-470	-63	1863	19.6	-2.33	4.23
145	SLV 16	-467	-138	1862	19.78	-2.32	6.62
145	CRTFP Ux+	0	0	0	0	0	0
145	CRTFP Ux-	0	0	0	0	0	0
145	CRTFP Uy+	0	0	0	0	0	0
145	CRTFP Uy-	0	0	0	0	0	0
146	SLU 1	44	28	2348	5.45	0.15	2.15
146	SLU 2	45	17	2344	5.6	0.16	2.32
146	SLU 3	44	28	2348	5.45	0.15	2.15
146	SLU 4	44	22	2346	5.54	0.15	2.25
146	SLU 5	45	17	2344	5.6	0.16	2.32
146	SLU 6	44	28	2348	5.45	0.15	2.15
146	SLU 7	44	22	2346	5.54	0.15	2.25
146	SLU 8	44	28	2348	5.45	0.15	2.15
146	SLU 9	44	22	2346	5.54	0.15	2.25
146	SLU 10	53	21	2767	7.72	0.11	2.67
146	SLU 11	53	32	2771	7.57	0.1	2.5
146	SLU 12	53	25	2769	7.66	0.1	2.6
146	SLU 13	53	21	2767	7.72	0.11	2.67
146	SLU 14	53	32	2771	7.57	0.1	2.5
146	SLU 15	53	25	2769	7.66	0.1	2.6
146	SLU 16	53	32	2771	7.57	0.1	2.5
146	SLU 17	53	25	2769	7.66	0.1	2.6
146	SLU 18	57	33	2952	8.48	0.07	2.65
146	SLU 19	57	26	2950	8.57	0.08	2.75
146	SLU 20	57	33	2952	8.48	0.07	2.65
146	SLU 21	57	26	2950	8.57	0.08	2.75
146	SLU 22	51	30	2659	7.84	0.1	2.32
146	SLU 23	51	19	2655	7.99	0.11	2.49
146	SLU 24	51	30	2659	7.84	0.1	2.32
146	SLU 25	51	23	2657	7.93	0.1	2.43
146	SLU 26	51	19	2655	7.99	0.11	2.49
146	SLU 27	51	30	2659	7.84	0.1	2.32
146	SLU 28	51	23	2657	7.93	0.1	2.43
146	SLU 29	51	30	2659	7.84	0.1	2.32
146	SLU 30	51	23	2657	7.93	0.1	2.43
146	SLU 31	60	22	3078	10.11	0.06	2.85
146	SLU 32	60	33	3082	9.96	0.05	2.67
146	SLU 33	60	26	3080	10.05	0.05	2.78
146	SLU 34	60	22	3078	10.11	0.06	2.85
146	SLU 35	60	33	3082	9.96	0.05	2.67
146	SLU 36	60	26	3080	10.05	0.05	2.78
146	SLU 37	60	33	3082	9.96	0.05	2.67

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
146	SLU 38	60	26	3080	10.05	0.05	2.78
146	SLU 39	63	34	3263	10.87	0.02	2.82
146	SLU 40	64	28	3261	10.96	0.03	2.93
146	SLU 41	63	34	3263	10.87	0.02	2.82
146	SLU 42	64	28	3261	10.96	0.03	2.93
146	SLU 43	55	36	2945	6.26	0.21	2.73
146	SLU 44	56	25	2942	6.41	0.22	2.9
146	SLU 45	55	36	2945	6.26	0.21	2.73
146	SLU 46	56	30	2943	6.35	0.21	2.84
146	SLU 47	56	25	2942	6.41	0.22	2.9
146	SLU 48	55	36	2945	6.26	0.21	2.73
146	SLU 49	56	30	2943	6.35	0.21	2.84
146	SLU 50	55	36	2945	6.26	0.21	2.73
146	SLU 51	56	30	2943	6.35	0.21	2.84
146	SLU 52	64	29	3365	8.53	0.17	3.26
146	SLU 53	64	40	3368	8.38	0.16	3.08
146	SLU 54	64	33	3366	8.47	0.16	3.19
146	SLU 55	64	29	3365	8.53	0.17	3.26
146	SLU 56	64	40	3368	8.38	0.16	3.08
146	SLU 57	64	33	3366	8.47	0.16	3.19
146	SLU 58	64	40	3368	8.38	0.16	3.08
146	SLU 59	64	33	3366	8.47	0.16	3.19
146	SLU 60	68	41	3550	9.29	0.13	3.23
146	SLU 61	68	34	3548	9.38	0.14	3.34
146	SLU 62	68	41	3550	9.29	0.13	3.23
146	SLU 63	68	34	3548	9.38	0.14	3.34
146	SLU 64	62	38	3256	8.65	0.16	2.91
146	SLU 65	62	27	3253	8.8	0.17	3.08
146	SLU 66	62	38	3256	8.65	0.16	2.91
146	SLU 67	62	31	3254	8.74	0.16	3.01
146	SLU 68	62	27	3253	8.8	0.17	3.08
146	SLU 69	62	38	3256	8.65	0.16	2.91
146	SLU 70	62	31	3254	8.74	0.16	3.01
146	SLU 71	62	38	3256	8.65	0.16	2.91
146	SLU 72	62	31	3254	8.74	0.16	3.01
146	SLU 73	71	30	3676	10.93	0.12	3.43
146	SLU 74	71	41	3679	10.78	0.11	3.26
146	SLU 75	71	34	3677	10.87	0.11	3.36
146	SLU 76	71	30	3676	10.93	0.12	3.43
146	SLU 77	71	41	3679	10.78	0.11	3.26
146	SLU 78	71	34	3677	10.87	0.11	3.36
146	SLU 79	71	41	3679	10.78	0.11	3.26
146	SLU 80	71	34	3677	10.87	0.11	3.36
146	SLU 81	74	42	3861	11.69	0.09	3.41
146	SLU 82	75	36	3859	11.78	0.09	3.51
146	SLU 83	74	42	3861	11.69	0.09	3.41
146	SLU 84	75	36	3859	11.78	0.09	3.51
146	SLE RA 1	46	29	2437	6.13	0.13	2.2
146	SLE RA 2	46	21	2434	6.23	0.14	2.31
146	SLE RA 3	46	29	2437	6.13	0.13	2.2
146	SLE RA 4	46	24	2435	6.19	0.14	2.27
146	SLE RA 5	46	21	2434	6.23	0.14	2.31
146	SLE RA 6	46	29	2437	6.13	0.13	2.2
146	SLE RA 7	46	24	2435	6.19	0.14	2.27
146	SLE RA 8	46	29	2437	6.13	0.13	2.2
146	SLE RA 9	46	24	2435	6.19	0.14	2.27
146	SLE RA 10	52	23	2716	7.64	0.11	2.55
146	SLE RA 11	52	31	2719	7.54	0.1	2.43
146	SLE RA 12	52	26	2717	7.6	0.1	2.5
146	SLE RA 13	52	23	2716	7.64	0.11	2.55
146	SLE RA 14	52	31	2719	7.54	0.1	2.43
146	SLE RA 15	52	26	2717	7.6	0.1	2.5
146	SLE RA 16	52	31	2719	7.54	0.1	2.43
146	SLE RA 17	52	26	2717	7.6	0.1	2.5
146	SLE RA 18	55	32	2839	8.15	0.08	2.53
146	SLE RA 19	55	27	2838	8.21	0.09	2.6
146	SLE RA 20	55	32	2839	8.15	0.08	2.53
146	SLE RA 21	55	27	2838	8.21	0.09	2.6
146	SLE FR 1	46	29	2437	6.13	0.13	2.2
146	SLE FR 2	46	27	2436	6.15	0.13	2.22
146	SLE FR 3	46	29	2437	6.13	0.13	2.2
146	SLE FR 4	49	28	2557	6.76	0.12	2.32
146	SLE FR 5	49	30	2557	6.74	0.12	2.3
146	SLE FR 6	50	30	2638	7.14	0.11	2.36
146	SLE QP 1	46	29	2437	6.13	0.13	2.2
146	SLE QP 2	49	30	2557	6.74	0.12	2.3
146	SLD 1	275	92	2827	0.89	1.19	0.62
146	SLD 2	276	64	2827	0.96	1.2	1.65
146	SLD 3	288	-46	2786	4.83	1.28	2.35
146	SLD 4	289	-74	2786	4.9	1.28	3.37
146	SLD 5	96	268	2700	-1.02	0.31	-1.18
146	SLD 6	98	240	2700	-0.95	0.31	-0.15
146	SLD 7	140	-193	2565	12.11	0.59	4.56
146	SLD 8	141	-221	2564	12.19	0.6	5.6
146	SLD 9	-44	280	2551	1.28	-0.36	-1
146	SLD 10	-42	252	2550	1.36	-0.36	0.03
146	SLD 11	0	-180	2415	14.42	-0.08	4.74

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
146	SLD 12	1	-208	2415	14.49	-0.07	5.78
146	SLD 13	-192	133	2329	8.57	-1.04	1.22
146	SLD 14	-191	106	2328	8.64	-1.04	2.25
146	SLD 15	-179	-5	2288	12.51	-0.96	2.95
146	SLD 16	-177	-32	2288	12.58	-0.96	3.97
146	SLV 1	562	171	3170	-6.57	2.56	-1.51
146	SLV 2	566	108	3170	-6.41	2.57	0.8
146	SLV 3	592	-144	3078	2.41	2.75	2.42
146	SLV 4	596	-206	3077	2.58	2.76	4.74
146	SLV 5	156	572	2882	-10.94	0.55	-5.64
146	SLV 6	160	508	2882	-10.77	0.56	-3.28
146	SLV 7	256	-478	2573	19	1.2	7.47
146	SLV 8	259	-541	2572	19.17	1.21	9.82
146	SLV 9	-162	600	2543	-5.7	-0.97	-5.22
146	SLV 10	-158	537	2542	-5.53	-0.96	-2.87
146	SLV 11	-63	-449	2233	24.24	-0.33	7.88
146	SLV 12	-59	-513	2232	24.41	-0.32	10.23
146	SLV 13	-498	266	2038	10.9	-2.52	-0.14
146	SLV 14	-495	203	2037	11.06	-2.52	2.18
146	SLV 15	-469	-49	1945	19.88	-2.33	3.79
146	SLV 16	-465	-112	1944	20.04	-2.32	6.11
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
147	SLU 1	86	76	4224	-31.04	-614.2	16.39
147	SLU 2	86	59	4217	-30.83	-613.13	14.14
147	SLU 3	86	76	4224	-31.04	-614.2	16.39
147	SLU 4	86	66	4220	-30.92	-613.56	15.04
147	SLU 5	86	59	4217	-30.83	-613.13	14.14
147	SLU 6	86	76	4224	-31.04	-614.2	16.39
147	SLU 7	86	66	4220	-30.92	-613.56	15.04
147	SLU 8	86	76	4224	-31.04	-614.2	16.39
147	SLU 9	86	66	4220	-30.92	-613.56	15.04
147	SLU 10	103	68	4989	-34.56	-726.52	16.46
147	SLU 11	102	86	4996	-34.77	-727.58	18.71
147	SLU 12	103	76	4992	-34.64	-726.94	17.36
147	SLU 13	103	68	4989	-34.56	-726.52	16.46
147	SLU 14	102	86	4996	-34.77	-727.58	18.71
147	SLU 15	103	76	4992	-34.64	-726.94	17.36
147	SLU 16	102	86	4996	-34.77	-727.58	18.71
147	SLU 17	103	76	4992	-34.64	-726.94	17.36
147	SLU 18	109	90	5327	-36.37	-776.18	19.71
147	SLU 19	110	80	5323	-36.24	-775.54	18.36
147	SLU 20	109	90	5327	-36.37	-776.18	19.71
147	SLU 21	110	80	5323	-36.24	-775.54	18.36
147	SLU 22	98	81	4792	-32.22	-697.64	17.52
147	SLU 23	99	63	4786	-32.01	-696.58	15.27
147	SLU 24	98	81	4792	-32.22	-697.64	17.52
147	SLU 25	98	70	4788	-32.09	-697	16.17
147	SLU 26	99	63	4786	-32.01	-696.58	15.27
147	SLU 27	98	81	4792	-32.22	-697.64	17.52
147	SLU 28	98	70	4788	-32.09	-697	16.17
147	SLU 29	98	81	4792	-32.22	-697.64	17.52
147	SLU 30	98	70	4788	-32.09	-697	16.17
147	SLU 31	115	73	5558	-35.74	-809.96	17.6
147	SLU 32	115	91	5565	-35.94	-811.03	19.85
147	SLU 33	115	80	5561	-35.82	-810.39	18.5
147	SLU 34	115	73	5558	-35.74	-809.96	17.6
147	SLU 35	115	91	5565	-35.94	-811.03	19.85
147	SLU 36	115	80	5561	-35.82	-810.39	18.5
147	SLU 37	115	91	5565	-35.94	-811.03	19.85
147	SLU 38	115	80	5561	-35.82	-810.39	18.5
147	SLU 39	122	95	5896	-37.54	-859.62	20.85
147	SLU 40	122	84	5892	-37.42	-858.98	19.49
147	SLU 41	122	95	5896	-37.54	-859.62	20.85
147	SLU 42	122	84	5892	-37.42	-858.98	19.49
147	SLU 43	107	98	5296	-39.95	-769.85	20.92
147	SLU 44	108	80	5289	-39.74	-768.78	18.66
147	SLU 45	107	98	5296	-39.95	-769.85	20.92
147	SLU 46	107	87	5292	-39.82	-769.21	19.56
147	SLU 47	108	80	5289	-39.74	-768.78	18.66
147	SLU 48	107	98	5296	-39.95	-769.85	20.92
147	SLU 49	107	87	5292	-39.82	-769.21	19.56
147	SLU 50	107	98	5296	-39.95	-769.85	20.92
147	SLU 51	107	87	5292	-39.82	-769.21	19.56
147	SLU 52	124	90	6061	-43.47	-882.17	20.99
147	SLU 53	124	108	6068	-43.68	-883.23	23.24
147	SLU 54	124	97	6064	-43.55	-882.59	21.89
147	SLU 55	124	90	6061	-43.47	-882.17	20.99
147	SLU 56	124	108	6068	-43.68	-883.23	23.24
147	SLU 57	124	97	6064	-43.55	-882.59	21.89
147	SLU 58	124	108	6068	-43.68	-883.23	23.24
147	SLU 59	124	97	6064	-43.55	-882.59	21.89
147	SLU 60	131	112	6399	-45.27	-931.83	24.24
147	SLU 61	131	101	6395	-45.15	-931.19	22.88
147	SLU 62	131	112	6399	-45.27	-931.83	24.24

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
147	SLU 63	131	101	6395	-45.15	-931.19	22.88
147	SLU 64	119	102	5864	-41.13	-853.29	22.05
147	SLU 65	120	84	5858	-40.92	-852.23	19.8
147	SLU 66	119	102	5864	-41.13	-853.29	22.05
147	SLU 67	120	91	5860	-41	-852.65	20.7
147	SLU 68	120	84	5858	-40.92	-852.23	19.8
147	SLU 69	119	102	5864	-41.13	-853.29	22.05
147	SLU 70	120	91	5860	-41	-852.65	20.7
147	SLU 71	119	102	5864	-41.13	-853.29	22.05
147	SLU 72	120	91	5860	-41	-852.65	20.7
147	SLU 73	137	94	6630	-44.65	-965.61	22.12
147	SLU 74	136	112	6637	-44.85	-966.68	24.38
147	SLU 75	136	101	6633	-44.73	-966.04	23.02
147	SLU 76	137	94	6630	-44.65	-965.61	22.12
147	SLU 77	136	112	6637	-44.85	-966.68	24.38
147	SLU 78	136	101	6633	-44.73	-966.04	23.02
147	SLU 79	136	112	6637	-44.85	-966.68	24.38
147	SLU 80	136	101	6633	-44.73	-966.04	23.02
147	SLU 81	143	116	6968	-46.45	-1015.27	25.37
147	SLU 82	144	106	6964	-46.33	-1014.63	24.02
147	SLU 83	143	116	6968	-46.45	-1015.27	25.37
147	SLU 84	144	106	6964	-46.33	-1014.63	24.02
147	SLE RA 1	89	78	4386	-31.38	-638.04	16.71
147	SLE RA 2	90	66	4382	-31.24	-637.33	15.21
147	SLE RA 3	89	78	4386	-31.38	-638.04	16.71
147	SLE RA 4	89	70	4383	-31.29	-637.61	15.81
147	SLE RA 5	90	66	4382	-31.24	-637.33	15.21
147	SLE RA 6	89	78	4386	-31.38	-638.04	16.71
147	SLE RA 7	89	70	4383	-31.29	-637.61	15.81
147	SLE RA 8	89	78	4386	-31.38	-638.04	16.71
147	SLE RA 9	89	70	4383	-31.29	-637.61	15.81
147	SLE RA 10	101	72	4897	-33.72	-712.92	16.76
147	SLE RA 11	100	84	4901	-33.86	-713.63	18.26
147	SLE RA 12	100	77	4898	-33.78	-713.2	17.36
147	SLE RA 13	101	72	4897	-33.72	-712.92	16.76
147	SLE RA 14	100	84	4901	-33.86	-713.63	18.26
147	SLE RA 15	100	77	4898	-33.78	-713.2	17.36
147	SLE RA 16	100	84	4901	-33.86	-713.63	18.26
147	SLE RA 17	100	77	4898	-33.78	-713.2	17.36
147	SLE RA 18	105	87	5122	-34.93	-746.03	18.93
147	SLE RA 19	105	80	5119	-34.84	-745.6	18.03
147	SLE RA 20	105	87	5122	-34.93	-746.03	18.93
147	SLE RA 21	105	80	5119	-34.84	-745.6	18.03
147	SLE FR 1	89	78	4386	-31.38	-638.04	16.71
147	SLE FR 2	89	75	4385	-31.35	-637.9	16.41
147	SLE FR 3	89	78	4386	-31.38	-638.04	16.71
147	SLE FR 4	94	78	4606	-32.41	-670.29	17.08
147	SLE FR 5	94	80	4607	-32.44	-670.44	17.38
147	SLE FR 6	97	82	4754	-33.15	-692.03	17.82
147	SLE QP 1	89	78	4386	-31.38	-638.04	16.71
147	SLE QP 2	94	80	4607	-32.44	-670.44	17.38
147	SLD 1	500	178	5020	-46.05	-726.81	38.61
147	SLD 2	503	141	5019	-45.96	-726.66	35.62
147	SLD 3	523	-51	4942	-39.94	-714.92	8.63
147	SLD 4	526	-88	4941	-39.86	-714.77	5.64
147	SLD 5	179	470	4850	-45.81	-705.44	70.28
147	SLD 6	182	433	4849	-45.72	-705.28	67.25
147	SLD 7	257	-293	4589	-25.47	-665.8	-29.64
147	SLD 8	260	-331	4588	-25.38	-665.65	-32.68
147	SLD 9	-73	491	4626	-39.5	-675.22	67.43
147	SLD 10	-70	454	4625	-39.41	-675.07	64.4
147	SLD 11	6	-272	4365	-19.16	-635.59	-32.49
147	SLD 12	9	-309	4364	-19.07	-635.43	-35.52
147	SLD 13	-339	249	4273	-25.03	-626.1	29.11
147	SLD 14	-336	212	4272	-24.94	-625.95	26.13
147	SLD 15	-315	20	4194	-18.92	-614.21	-0.86
147	SLD 16	-312	-17	4193	-18.84	-614.06	-3.85
147	SLV 1	1017	303	5547	-63.39	-798.62	65.77
147	SLV 2	1023	219	5545	-63.19	-798.28	59
147	SLV 3	1070	-219	5368	-49.47	-771.48	-2.55
147	SLV 4	1077	-303	5366	-49.28	-771.14	-9.32
147	SLV 5	287	969	5161	-62.9	-750.18	137.94
147	SLV 6	294	883	5159	-62.7	-749.83	131.06
147	SLV 7	465	-771	4565	-16.51	-659.71	-89.8
147	SLV 8	472	-856	4563	-16.32	-659.36	-96.67
147	SLV 9	-284	1017	4651	-48.57	-681.51	131.43
147	SLV 10	-277	931	4649	-48.37	-681.16	124.55
147	SLV 11	-106	-722	4055	-2.18	-591.04	-96.31
147	SLV 12	-100	-808	4053	-1.98	-590.69	-103.18
147	SLV 13	-889	464	3848	-15.61	-569.73	44.08
147	SLV 14	-882	380	3846	-15.41	-569.39	37.3
147	SLV 15	-836	-58	3669	-1.69	-542.59	-24.24
147	SLV 16	-829	-142	3667	-1.49	-542.25	-31.02
147	CRTFP Ux+	0	0	0	0	0	0
147	CRTFP Ux-	0	0	0	0	0	0
147	CRTFP Uy+	0	0	0	0	0	0
147	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
149	SLU 1	128	145	5989	550.54	1035.73	-33.23
149	SLU 2	129	123	5977	549.1	1033.76	-29.18
149	SLU 3	128	145	5989	550.54	1035.73	-33.23
149	SLU 4	129	132	5982	549.68	1034.54	-30.8
149	SLU 5	129	123	5977	549.1	1033.76	-29.18
149	SLU 6	128	145	5989	550.54	1035.73	-33.23
149	SLU 7	129	132	5982	549.68	1034.54	-30.8
149	SLU 8	128	145	5989	550.54	1035.73	-33.23
149	SLU 9	129	132	5982	549.68	1034.54	-30.8
149	SLU 10	153	143	7109	656.62	1227.07	-34.22
149	SLU 11	153	165	7121	658.05	1229.04	-38.27
149	SLU 12	153	152	7114	657.19	1227.86	-35.84
149	SLU 13	153	143	7109	656.62	1227.07	-34.22
149	SLU 14	153	165	7121	658.05	1229.04	-38.27
149	SLU 15	153	152	7114	657.19	1227.86	-35.84
149	SLU 16	153	165	7121	658.05	1229.04	-38.27
149	SLU 17	153	152	7114	657.19	1227.86	-35.84
149	SLU 18	163	174	7606	704.13	1311.89	-40.43
149	SLU 19	163	160	7599	703.27	1310.71	-38
149	SLU 20	163	174	7606	704.13	1311.89	-40.43
149	SLU 21	163	160	7599	703.27	1310.71	-38
149	SLU 22	146	155	6824	632.96	1178.51	-36.09
149	SLU 23	147	133	6813	631.53	1176.54	-32.04
149	SLU 24	146	155	6824	632.96	1178.51	-36.09
149	SLU 25	147	141	6817	632.1	1177.33	-33.66
149	SLU 26	147	133	6813	631.53	1176.54	-32.04
149	SLU 27	146	155	6824	632.96	1178.51	-36.09
149	SLU 28	147	141	6817	632.1	1177.33	-33.66
149	SLU 29	146	155	6824	632.96	1178.51	-36.09
149	SLU 30	147	141	6817	632.1	1177.33	-33.66
149	SLU 31	171	153	7945	739.04	1369.85	-37.07
149	SLU 32	171	175	7956	740.48	1371.82	-41.13
149	SLU 33	171	161	7950	739.62	1370.64	-38.69
149	SLU 34	171	153	7945	739.04	1369.85	-37.07
149	SLU 35	171	175	7956	740.48	1371.82	-41.13
149	SLU 36	171	161	7950	739.62	1370.64	-38.69
149	SLU 37	171	175	7956	740.48	1371.82	-41.13
149	SLU 38	171	161	7950	739.62	1370.64	-38.69
149	SLU 39	181	183	8442	786.56	1454.67	-43.29
149	SLU 40	181	170	8435	785.7	1453.49	-40.85
149	SLU 41	181	183	8442	786.56	1454.67	-43.29
149	SLU 42	181	170	8435	785.7	1453.49	-40.85
149	SLU 43	161	185	7499	687.44	1297.49	-42.22
149	SLU 44	162	163	7487	686.01	1295.52	-38.17
149	SLU 45	161	185	7499	687.44	1297.49	-42.22
149	SLU 46	161	172	7492	686.58	1296.31	-39.79
149	SLU 47	162	163	7487	686.01	1295.52	-38.17
149	SLU 48	161	185	7499	687.44	1297.49	-42.22
149	SLU 49	161	172	7492	686.58	1296.31	-39.79
149	SLU 50	161	185	7499	687.44	1297.49	-42.22
149	SLU 51	161	172	7492	686.58	1296.31	-39.79
149	SLU 52	186	183	8619	793.52	1488.84	-43.21
149	SLU 53	185	205	8631	794.96	1490.81	-47.26
149	SLU 54	185	192	8624	794.1	1489.63	-44.83
149	SLU 55	186	183	8619	793.52	1488.84	-43.21
149	SLU 56	185	205	8631	794.96	1490.81	-47.26
149	SLU 57	185	192	8624	794.1	1489.63	-44.83
149	SLU 58	185	205	8631	794.96	1490.81	-47.26
149	SLU 59	185	192	8624	794.1	1489.63	-44.83
149	SLU 60	195	214	9116	841.04	1573.66	-49.42
149	SLU 61	196	201	9109	840.18	1572.48	-46.99
149	SLU 62	195	214	9116	841.04	1573.66	-49.42
149	SLU 63	196	201	9109	840.18	1572.48	-46.99
149	SLU 64	179	195	8334	769.86	1440.27	-45.08
149	SLU 65	180	173	8323	768.43	1438.3	-41.03
149	SLU 66	179	195	8334	769.86	1440.27	-45.08
149	SLU 67	179	182	8327	769	1439.09	-42.65
149	SLU 68	180	173	8323	768.43	1438.3	-41.03
149	SLU 69	179	195	8334	769.86	1440.27	-45.08
149	SLU 70	179	182	8327	769	1439.09	-42.65
149	SLU 71	179	195	8334	769.86	1440.27	-45.08
149	SLU 72	179	182	8327	769	1439.09	-42.65
149	SLU 73	204	193	9455	875.95	1631.62	-46.06
149	SLU 74	203	215	9467	877.38	1633.59	-50.12
149	SLU 75	203	202	9460	876.52	1632.41	-47.69
149	SLU 76	204	193	9455	875.95	1631.62	-46.06
149	SLU 77	203	215	9467	877.38	1633.59	-50.12
149	SLU 78	203	202	9460	876.52	1632.41	-47.69
149	SLU 79	203	215	9467	877.38	1633.59	-50.12
149	SLU 80	203	202	9460	876.52	1632.41	-47.69
149	SLU 81	213	224	9952	923.46	1716.44	-52.28
149	SLU 82	214	210	9945	922.6	1715.26	-49.84
149	SLU 83	213	224	9952	923.46	1716.44	-52.28
149	SLU 84	214	210	9945	922.6	1715.26	-49.84
149	SLE RA 1	134	148	6227	574.09	1076.52	-34.05
149	SLE RA 2	134	133	6220	573.13	1075.21	-31.35
149	SLE RA 3	134	148	6227	574.09	1076.52	-34.05

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
149	SLE RA 4	134	139	6223	573.51	1075.73	-32.43
149	SLE RA 5	134	133	6220	573.13	1075.21	-31.35
149	SLE RA 6	134	148	6227	574.09	1076.52	-34.05
149	SLE RA 7	134	139	6223	573.51	1075.73	-32.43
149	SLE RA 8	134	148	6227	574.09	1076.52	-34.05
149	SLE RA 9	134	139	6223	573.51	1075.73	-32.43
149	SLE RA 10	150	146	6975	644.81	1204.09	-34.71
149	SLE RA 11	150	161	6982	645.77	1205.4	-37.41
149	SLE RA 12	150	152	6978	645.19	1204.61	-35.79
149	SLE RA 13	150	146	6975	644.81	1204.09	-34.71
149	SLE RA 14	150	161	6982	645.77	1205.4	-37.41
149	SLE RA 15	150	152	6978	645.19	1204.61	-35.79
149	SLE RA 16	150	161	6982	645.77	1205.4	-37.41
149	SLE RA 17	150	152	6978	645.19	1204.61	-35.79
149	SLE RA 18	157	167	7306	676.48	1260.63	-38.85
149	SLE RA 19	157	158	7301	675.91	1259.84	-37.23
149	SLE RA 20	157	167	7306	676.48	1260.63	-38.85
149	SLE RA 21	157	158	7301	675.91	1259.84	-37.23
149	SLE FR 1	134	148	6227	574.09	1076.52	-34.05
149	SLE FR 2	134	145	6226	573.9	1076.26	-33.51
149	SLE FR 3	134	148	6227	574.09	1076.52	-34.05
149	SLE FR 4	141	151	6549	604.62	1131.49	-34.95
149	SLE FR 5	140	154	6551	604.81	1131.75	-35.49
149	SLE FR 6	145	157	6766	625.29	1168.58	-36.45
149	SLE QP 1	134	148	6227	574.09	1076.52	-34.05
149	SLE QP 2	140	154	6551	604.81	1131.75	-35.49
149	SLD 1	703	268	7030	633.49	1222.81	-114.93
149	SLD 2	704	238	7029	633.18	1222.54	-106.19
149	SLD 3	736	-23	6912	623.11	1202.18	-60.55
149	SLD 4	736	-53	6910	622.81	1201.9	-51.8
149	SLD 5	259	640	6875	629.25	1190.47	-144.93
149	SLD 6	260	610	6873	628.94	1190.19	-136.05
149	SLD 7	368	-330	6480	594.68	1121.68	36.34
149	SLD 8	369	-360	6478	594.37	1121.4	45.22
149	SLD 9	-88	667	6623	615.24	1142.11	-116.2
149	SLD 10	-87	638	6622	614.94	1141.83	-107.32
149	SLD 11	21	-303	6228	580.67	1073.32	65.07
149	SLD 12	22	-333	6227	580.36	1073.04	73.95
149	SLD 13	-456	360	6191	586.8	1061.61	-19.17
149	SLD 14	-455	331	6190	586.5	1061.33	-10.43
149	SLD 15	-423	69	6073	576.43	1040.97	35.21
149	SLD 16	-422	40	6071	576.13	1040.7	43.95
149	SLV 1	1418	413	7642	670.07	1338.82	-216.29
149	SLV 2	1420	347	7638	669.38	1338.19	-196.45
149	SLV 3	1493	-250	7371	646.38	1291.71	-92.33
149	SLV 4	1495	-316	7367	645.69	1291.09	-72.49
149	SLV 5	410	1261	7290	660.56	1265.55	-284.82
149	SLV 6	412	1194	7286	659.86	1264.91	-264.7
149	SLV 7	658	-950	6388	581.59	1108.52	128.38
149	SLV 8	660	-1017	6384	580.89	1107.88	148.5
149	SLV 9	-380	1324	6718	628.72	1155.63	-219.48
149	SLV 10	-377	1257	6714	628.02	1154.99	-199.35
149	SLV 11	-131	-887	5816	549.75	998.6	193.72
149	SLV 12	-129	-954	5812	549.05	997.96	213.85
149	SLV 13	-1214	623	5734	563.92	972.42	1.52
149	SLV 14	-1212	557	5731	563.23	971.8	21.35
149	SLV 15	-1139	-40	5464	540.23	925.32	125.48
149	SLV 16	-1137	-106	5460	539.54	924.69	145.31
149	CRTFP Ux+	0	0	0	0	0	0
149	CRTFP Ux-	0	0	0	0	0	0
149	CRTFP Uy+	0	0	0	0	0	0
149	CRTFP Uy-	0	0	0	0	0	0
150	SLU 1	117	99	4216	615.12	-57.26	-18.82
150	SLU 2	118	85	4209	614.27	-57.33	-19.13
150	SLU 3	117	99	4216	615.12	-57.26	-18.82
150	SLU 4	118	90	4212	614.61	-57.3	-19
150	SLU 5	118	85	4209	614.27	-57.33	-19.13
150	SLU 6	117	99	4216	615.12	-57.26	-18.82
150	SLU 7	118	90	4212	614.61	-57.3	-19
150	SLU 8	117	99	4216	615.12	-57.26	-18.82
150	SLU 9	118	90	4212	614.61	-57.3	-19
150	SLU 10	138	99	5020	734.43	-68.75	-22.23
150	SLU 11	137	113	5027	735.27	-68.68	-21.92
150	SLU 12	138	105	5023	734.77	-68.73	-22.1
150	SLU 13	138	99	5020	734.43	-68.75	-22.23
150	SLU 14	137	113	5027	735.27	-68.68	-21.92
150	SLU 15	138	105	5023	734.77	-68.73	-22.1
150	SLU 16	137	113	5027	735.27	-68.68	-21.92
150	SLU 17	138	105	5023	734.77	-68.73	-22.1
150	SLU 18	146	119	5374	786.77	-73.58	-23.25
150	SLU 19	147	111	5370	786.26	-73.62	-23.43
150	SLU 20	146	119	5374	786.77	-73.58	-23.25
150	SLU 21	147	111	5370	786.26	-73.62	-23.43
150	SLU 22	132	106	4813	705.23	-65.66	-21.05
150	SLU 23	133	92	4807	704.38	-65.73	-21.36
150	SLU 24	132	106	4813	705.23	-65.66	-21.05
150	SLU 25	132	97	4809	704.72	-65.71	-21.24

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
150	SLU 26	133	92	4807	704.38	-65.73	-21.36
150	SLU 27	132	106	4813	705.23	-65.66	-21.05
150	SLU 28	132	97	4809	704.72	-65.71	-21.24
150	SLU 29	132	106	4813	705.23	-65.66	-21.05
150	SLU 30	132	97	4809	704.72	-65.71	-21.24
150	SLU 31	153	106	5618	824.53	-77.16	-24.46
150	SLU 32	152	120	5624	825.38	-77.09	-24.15
150	SLU 33	153	112	5620	824.87	-77.13	-24.34
150	SLU 34	153	106	5618	824.53	-77.16	-24.46
150	SLU 35	152	120	5624	825.38	-77.09	-24.15
150	SLU 36	153	112	5620	824.87	-77.13	-24.34
150	SLU 37	152	120	5624	825.38	-77.09	-24.15
150	SLU 38	153	112	5620	824.87	-77.13	-24.34
150	SLU 39	161	126	5972	876.87	-81.98	-25.48
150	SLU 40	161	118	5968	876.37	-82.03	-25.67
150	SLU 41	161	126	5972	876.87	-81.98	-25.48
150	SLU 42	161	118	5968	876.37	-82.03	-25.67
150	SLU 43	147	127	5275	768.76	-71.56	-23.7
150	SLU 44	148	112	5269	767.92	-71.63	-24.01
150	SLU 45	147	127	5275	768.76	-71.56	-23.7
150	SLU 46	148	118	5272	768.25	-71.6	-23.88
150	SLU 47	148	112	5269	767.92	-71.63	-24.01
150	SLU 48	147	127	5275	768.76	-71.56	-23.7
150	SLU 49	148	118	5272	768.25	-71.6	-23.88
150	SLU 50	147	127	5275	768.76	-71.56	-23.7
150	SLU 51	148	118	5272	768.25	-71.6	-23.88
150	SLU 52	168	126	6080	888.07	-83.05	-27.11
150	SLU 53	167	141	6086	888.92	-82.98	-26.8
150	SLU 54	168	132	6082	888.41	-83.02	-26.98
150	SLU 55	168	126	6080	888.07	-83.05	-27.11
150	SLU 56	167	141	6086	888.92	-82.98	-26.8
150	SLU 57	168	132	6082	888.41	-83.02	-26.98
150	SLU 58	167	141	6086	888.92	-82.98	-26.8
150	SLU 59	168	132	6082	888.41	-83.02	-26.98
150	SLU 60	176	147	6434	940.41	-87.88	-28.13
150	SLU 61	177	138	6430	939.9	-87.92	-28.31
150	SLU 62	176	147	6434	940.41	-87.88	-28.13
150	SLU 63	177	138	6430	939.9	-87.92	-28.31
150	SLU 64	162	133	5873	858.87	-79.96	-25.93
150	SLU 65	163	119	5866	858.02	-80.03	-26.24
150	SLU 66	162	133	5873	858.87	-79.96	-25.93
150	SLU 67	163	125	5869	858.36	-80	-26.12
150	SLU 68	163	119	5866	858.02	-80.03	-26.24
150	SLU 69	162	133	5873	858.87	-79.96	-25.93
150	SLU 70	163	125	5869	858.36	-80	-26.12
150	SLU 71	162	133	5873	858.87	-79.96	-25.93
150	SLU 72	163	125	5869	858.36	-80	-26.12
150	SLU 73	183	133	6677	978.18	-91.46	-29.34
150	SLU 74	182	148	6684	979.02	-91.39	-29.03
150	SLU 75	183	139	6680	978.51	-91.43	-29.22
150	SLU 76	183	133	6677	978.18	-91.46	-29.34
150	SLU 77	182	148	6684	979.02	-91.39	-29.03
150	SLU 78	183	139	6680	978.51	-91.43	-29.22
150	SLU 79	182	148	6684	979.02	-91.39	-29.03
150	SLU 80	183	139	6680	978.51	-91.43	-29.22
150	SLU 81	191	154	7031	1030.52	-96.28	-30.36
150	SLU 82	191	145	7028	1030.01	-96.32	-30.55
150	SLU 83	191	154	7031	1030.52	-96.28	-30.36
150	SLU 84	191	145	7028	1030.01	-96.32	-30.55
150	SLE RA 1	121	101	4386	640.86	-59.66	-19.46
150	SLE RA 2	122	92	4382	640.3	-59.71	-19.66
150	SLE RA 3	121	101	4386	640.86	-59.66	-19.46
150	SLE RA 4	122	95	4384	640.53	-59.69	-19.58
150	SLE RA 5	122	92	4382	640.3	-59.71	-19.66
150	SLE RA 6	121	101	4386	640.86	-59.66	-19.46
150	SLE RA 7	122	95	4384	640.53	-59.69	-19.58
150	SLE RA 8	121	101	4386	640.86	-59.66	-19.46
150	SLE RA 9	122	95	4384	640.53	-59.69	-19.58
150	SLE RA 10	135	101	4923	720.4	-67.32	-21.73
150	SLE RA 11	135	111	4927	720.97	-67.28	-21.52
150	SLE RA 12	135	105	4924	720.63	-67.31	-21.65
150	SLE RA 13	135	101	4923	720.4	-67.32	-21.73
150	SLE RA 14	135	111	4927	720.97	-67.28	-21.52
150	SLE RA 15	135	105	4924	720.63	-67.31	-21.65
150	SLE RA 16	135	111	4927	720.97	-67.28	-21.52
150	SLE RA 17	135	105	4924	720.63	-67.31	-21.65
150	SLE RA 18	141	115	5159	755.3	-70.54	-22.41
150	SLE RA 19	141	109	5156	754.96	-70.57	-22.53
150	SLE RA 20	141	115	5159	755.3	-70.54	-22.41
150	SLE RA 21	141	109	5156	754.96	-70.57	-22.53
150	SLE FR 1	121	101	4386	640.86	-59.66	-19.46
150	SLE FR 2	121	99	4385	640.75	-59.67	-19.5
150	SLE FR 3	121	101	4386	640.86	-59.66	-19.46
150	SLE FR 4	127	103	4617	675.08	-62.93	-20.38
150	SLE FR 5	127	105	4618	675.19	-62.93	-20.34
150	SLE FR 6	131	108	4772	698.08	-65.1	-20.93
150	SLE QP 1	121	101	4386	640.86	-59.66	-19.46

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
150	SLE QP 2	127	105	4618	675.19	-62.93	-20.34
150	SLD 1	507	173	4877	704.56	-57.13	-74.43
150	SLD 2	507	166	4875	704.09	-57.11	-72.45
150	SLD 3	529	-17	4810	696.9	-58.09	-78.15
150	SLD 4	529	-24	4808	696.43	-58.06	-76.17
150	SLD 5	208	416	4798	695.78	-59.75	-31.64
150	SLD 6	207	409	4797	695.31	-59.72	-29.63
150	SLD 7	281	-217	4574	670.26	-62.93	-44.03
150	SLD 8	281	-225	4572	669.79	-62.9	-42.02
150	SLD 9	-27	435	4664	680.6	-62.95	1.34
150	SLD 10	-27	428	4662	680.13	-62.92	3.34
150	SLD 11	47	-199	4439	655.08	-66.13	-11.05
150	SLD 12	46	-206	4438	654.61	-66.1	-9.04
150	SLD 13	-275	235	4428	653.96	-67.79	35.49
150	SLD 14	-275	228	4426	653.49	-67.76	37.47
150	SLD 15	-253	45	4361	646.3	-68.74	31.77
150	SLD 16	-253	38	4359	645.83	-68.72	33.75
150	SLV 1	991	259	5207	741.96	-49.75	-143.24
150	SLV 2	991	243	5203	740.9	-49.69	-138.75
150	SLV 3	1041	-174	5053	724.49	-51.93	-151.68
150	SLV 4	1041	-190	5050	723.42	-51.87	-147.19
150	SLV 5	310	814	5029	722.11	-55.69	-46.02
150	SLV 6	310	798	5025	721.03	-55.63	-41.46
150	SLV 7	478	-630	4517	663.86	-62.95	-74.14
150	SLV 8	477	-646	4513	662.78	-62.89	-69.59
150	SLV 9	-223	857	4723	687.61	-62.96	28.91
150	SLV 10	-224	840	4719	686.53	-62.9	33.46
150	SLV 11	-56	-588	4211	629.36	-70.22	0.78
150	SLV 12	-56	-604	4207	628.28	-70.16	5.33
150	SLV 13	-787	400	4186	626.96	-73.98	106.51
150	SLV 14	-787	384	4183	625.9	-73.92	111
150	SLV 15	-736	-33	4033	609.49	-76.16	98.07
150	SLV 16	-737	-49	4029	608.43	-76.1	102.56
150	CRTFP Ux+	0	0	0	0	0	0
150	CRTFP Ux-	0	0	0	0	0	0
150	CRTFP Uy+	0	0	0	0	0	0
150	CRTFP Uy-	0	0	0	0	0	0
151	SLU 1	69	43	2524	18.36	-2.08	-3.14
151	SLU 2	70	34	2521	18.54	-2.1	-3.18
151	SLU 3	69	43	2524	18.36	-2.08	-3.14
151	SLU 4	70	37	2522	18.47	-2.09	-3.16
151	SLU 5	70	34	2521	18.54	-2.1	-3.18
151	SLU 6	69	43	2524	18.36	-2.08	-3.14
151	SLU 7	70	37	2522	18.47	-2.09	-3.16
151	SLU 8	69	43	2524	18.36	-2.08	-3.14
151	SLU 9	70	37	2522	18.47	-2.09	-3.16
151	SLU 10	82	40	3006	23.45	-2.48	-3.6
151	SLU 11	81	49	3009	23.26	-2.46	-3.56
151	SLU 12	82	44	3007	23.37	-2.48	-3.59
151	SLU 13	82	40	3006	23.45	-2.48	-3.6
151	SLU 14	81	49	3009	23.26	-2.46	-3.56
151	SLU 15	82	44	3007	23.37	-2.48	-3.59
151	SLU 16	81	49	3009	23.26	-2.46	-3.56
151	SLU 17	82	44	3007	23.37	-2.48	-3.59
151	SLU 18	86	51	3217	25.36	-2.63	-3.74
151	SLU 19	87	46	3215	25.48	-2.64	-3.77
151	SLU 20	86	51	3217	25.36	-2.63	-3.74
151	SLU 21	87	46	3215	25.48	-2.64	-3.77
151	SLU 22	78	45	2880	22.82	-2.36	-3.39
151	SLU 23	79	37	2877	23	-2.38	-3.43
151	SLU 24	78	45	2880	22.82	-2.36	-3.39
151	SLU 25	78	40	2878	22.93	-2.38	-3.42
151	SLU 26	79	37	2877	23	-2.38	-3.43
151	SLU 27	78	45	2880	22.82	-2.36	-3.39
151	SLU 28	78	40	2878	22.93	-2.38	-3.42
151	SLU 29	78	45	2880	22.82	-2.36	-3.39
151	SLU 30	78	40	2878	22.93	-2.38	-3.42
151	SLU 31	91	43	3362	27.91	-2.77	-3.85
151	SLU 32	90	52	3365	27.72	-2.75	-3.81
151	SLU 33	90	46	3363	27.83	-2.76	-3.84
151	SLU 34	91	43	3362	27.91	-2.77	-3.85
151	SLU 35	90	52	3365	27.72	-2.75	-3.81
151	SLU 36	90	46	3363	27.83	-2.76	-3.84
151	SLU 37	90	52	3365	27.72	-2.75	-3.81
151	SLU 38	90	46	3363	27.83	-2.76	-3.84
151	SLU 39	95	54	3573	29.83	-2.91	-3.99
151	SLU 40	95	49	3571	29.94	-2.92	-4.02
151	SLU 41	95	54	3573	29.83	-2.91	-3.99
151	SLU 42	95	49	3571	29.94	-2.92	-4.02
151	SLU 43	87	54	3159	22.33	-2.6	-3.99
151	SLU 44	88	46	3156	22.52	-2.63	-4.04
151	SLU 45	87	54	3159	22.33	-2.6	-3.99
151	SLU 46	87	49	3157	22.44	-2.62	-4.02
151	SLU 47	88	46	3156	22.52	-2.63	-4.04
151	SLU 48	87	54	3159	22.33	-2.6	-3.99
151	SLU 49	87	49	3157	22.44	-2.62	-4.02
151	SLU 50	87	54	3159	22.33	-2.6	-3.99

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
151	SLU 51	87	49	3157	22.44	-2.62	-4.02
151	SLU 52	100	52	3641	27.43	-3.01	-4.46
151	SLU 53	99	61	3644	27.24	-2.99	-4.42
151	SLU 54	99	55	3642	27.35	-3	-4.44
151	SLU 55	100	52	3641	27.43	-3.01	-4.46
151	SLU 56	99	61	3644	27.24	-2.99	-4.42
151	SLU 57	99	55	3642	27.35	-3	-4.44
151	SLU 58	99	61	3644	27.24	-2.99	-4.42
151	SLU 59	99	55	3642	27.35	-3	-4.44
151	SLU 60	104	63	3852	29.34	-3.15	-4.6
151	SLU 61	104	58	3850	29.45	-3.17	-4.62
151	SLU 62	104	63	3852	29.34	-3.15	-4.6
151	SLU 63	104	58	3850	29.45	-3.17	-4.62
151	SLU 64	96	57	3515	26.79	-2.89	-4.25
151	SLU 65	96	49	3512	26.98	-2.91	-4.29
151	SLU 66	96	57	3515	26.79	-2.89	-4.25
151	SLU 67	96	52	3513	26.91	-2.9	-4.27
151	SLU 68	96	49	3512	26.98	-2.91	-4.29
151	SLU 69	96	57	3515	26.79	-2.89	-4.25
151	SLU 70	96	52	3513	26.91	-2.9	-4.27
151	SLU 71	96	57	3515	26.79	-2.89	-4.25
151	SLU 72	96	52	3513	26.91	-2.9	-4.27
151	SLU 73	108	55	3997	31.89	-3.29	-4.71
151	SLU 74	108	63	4000	31.7	-3.27	-4.67
151	SLU 75	108	58	3998	31.81	-3.29	-4.69
151	SLU 76	108	55	3997	31.89	-3.29	-4.71
151	SLU 77	108	63	4000	31.7	-3.27	-4.67
151	SLU 78	108	58	3998	31.81	-3.29	-4.69
151	SLU 79	108	63	4000	31.7	-3.27	-4.67
151	SLU 80	108	58	3998	31.81	-3.29	-4.69
151	SLU 81	113	66	4208	33.8	-3.44	-4.85
151	SLU 82	113	61	4206	33.91	-3.45	-4.87
151	SLU 83	113	66	4208	33.8	-3.44	-4.85
151	SLU 84	113	61	4206	33.91	-3.45	-4.87
151	SLE RA 1	72	43	2626	19.63	-2.16	-3.21
151	SLE RA 2	72	38	2623	19.75	-2.17	-3.24
151	SLE RA 3	72	43	2626	19.63	-2.16	-3.21
151	SLE RA 4	72	40	2624	19.7	-2.17	-3.23
151	SLE RA 5	72	38	2623	19.75	-2.17	-3.24
151	SLE RA 6	72	43	2626	19.63	-2.16	-3.21
151	SLE RA 7	72	40	2624	19.7	-2.17	-3.23
151	SLE RA 8	72	43	2626	19.63	-2.16	-3.21
151	SLE RA 9	72	40	2624	19.7	-2.17	-3.23
151	SLE RA 10	80	42	2947	23.03	-2.43	-3.52
151	SLE RA 11	80	48	2949	22.9	-2.42	-3.49
151	SLE RA 12	80	44	2948	22.98	-2.42	-3.51
151	SLE RA 13	80	42	2947	23.03	-2.43	-3.52
151	SLE RA 14	80	48	2949	22.9	-2.42	-3.49
151	SLE RA 15	80	44	2948	22.98	-2.42	-3.51
151	SLE RA 16	80	48	2949	22.9	-2.42	-3.49
151	SLE RA 17	80	44	2948	22.98	-2.42	-3.51
151	SLE RA 18	83	49	3088	24.3	-2.53	-3.61
151	SLE RA 19	83	46	3086	24.38	-2.53	-3.63
151	SLE RA 20	83	49	3088	24.3	-2.53	-3.61
151	SLE RA 21	83	46	3086	24.38	-2.53	-3.63
151	SLE FR 1	72	43	2626	19.63	-2.16	-3.21
151	SLE FR 2	72	42	2625	19.66	-2.16	-3.22
151	SLE FR 3	72	43	2626	19.63	-2.16	-3.21
151	SLE FR 4	75	44	2764	21.06	-2.27	-3.34
151	SLE FR 5	75	45	2764	21.03	-2.27	-3.33
151	SLE FR 6	77	46	2857	21.97	-2.34	-3.41
151	SLE QP 1	72	43	2626	19.63	-2.16	-3.21
151	SLE QP 2	75	45	2764	21.03	-2.27	-3.33
151	SLD 1	297	83	2879	16.55	-0.91	-3.41
151	SLD 2	299	83	2878	16.38	-0.91	-2.52
151	SLD 3	310	-29	2847	19.32	-1.18	-3.61
151	SLD 4	312	-29	2846	19.16	-1.18	-2.72
151	SLD 5	122	225	2846	15.53	-1.45	-3.37
151	SLD 6	123	225	2845	15.36	-1.45	-2.46
151	SLD 7	165	-146	2742	24.79	-2.35	-4.04
151	SLD 8	166	-146	2741	24.62	-2.35	-3.14
151	SLD 9	-16	236	2787	17.44	-2.19	-3.52
151	SLD 10	-14	236	2786	17.27	-2.19	-2.62
151	SLD 11	27	-135	2683	26.7	-3.09	-4.2
151	SLD 12	29	-135	2682	26.53	-3.09	-3.3
151	SLD 13	-161	119	2682	22.91	-3.35	-3.94
151	SLD 14	-160	119	2681	22.74	-3.36	-3.05
151	SLD 15	-148	8	2650	25.69	-3.62	-4.14
151	SLD 16	-147	8	2650	25.52	-3.63	-3.25
151	SLV 1	580	131	3024	10.81	0.81	-3.5
151	SLV 2	583	131	3023	10.43	0.81	-1.48
151	SLV 3	609	-123	2953	17.16	0.2	-3.96
151	SLV 4	613	-123	2951	16.77	0.19	-1.95
151	SLV 5	181	455	2951	8.47	-0.41	-3.39
151	SLV 6	185	455	2950	8.09	-0.41	-1.35
151	SLV 7	278	-390	2713	29.63	-2.46	-4.95
151	SLV 8	282	-390	2711	29.25	-2.47	-2.91

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
151	SLV 9	-132	480	2817	12.82	-2.07	-3.76
151	SLV 10	-128	480	2815	12.43	-2.08	-1.71
151	SLV 11	-34	-365	2579	33.98	-4.13	-5.32
151	SLV 12	-30	-365	2577	33.59	-4.13	-3.27
151	SLV 13	-462	213	2577	25.29	-4.73	-4.71
151	SLV 14	-459	213	2575	24.91	-4.74	-2.7
151	SLV 15	-433	-40	2506	31.64	-5.35	-5.18
151	SLV 16	-429	-40	2504	31.26	-5.35	-3.17
151	CRTFP Ux+	0	0	0	0	0	0
151	CRTFP Ux-	0	0	0	0	0	0
151	CRTFP Uy+	0	0	0	0	0	0
151	CRTFP Uy-	0	0	0	0	0	0
152	SLU 1	71	26	2594	20.22	-1.99	-3.38
152	SLU 2	72	17	2591	20.46	-2.01	-3.43
152	SLU 3	71	26	2594	20.22	-1.99	-3.38
152	SLU 4	72	20	2592	20.36	-2	-3.41
152	SLU 5	72	17	2591	20.46	-2.01	-3.43
152	SLU 6	71	26	2594	20.22	-1.99	-3.38
152	SLU 7	72	20	2592	20.36	-2	-3.41
152	SLU 8	71	26	2594	20.22	-1.99	-3.38
152	SLU 9	72	20	2592	20.36	-2	-3.41
152	SLU 10	84	21	3088	25.78	-2.32	-3.9
152	SLU 11	83	30	3091	25.54	-2.3	-3.84
152	SLU 12	84	24	3089	25.68	-2.31	-3.88
152	SLU 13	84	21	3088	25.78	-2.32	-3.9
152	SLU 14	83	30	3091	25.54	-2.3	-3.84
152	SLU 15	84	24	3089	25.68	-2.31	-3.88
152	SLU 16	83	30	3091	25.54	-2.3	-3.84
152	SLU 17	84	24	3089	25.68	-2.31	-3.88
152	SLU 18	88	31	3304	27.82	-2.43	-4.04
152	SLU 19	89	26	3302	27.96	-2.44	-4.08
152	SLU 20	88	31	3304	27.82	-2.43	-4.04
152	SLU 21	89	26	3302	27.96	-2.44	-4.08
152	SLU 22	80	27	2959	24.87	-2.23	-3.65
152	SLU 23	81	18	2956	25.12	-2.25	-3.71
152	SLU 24	80	27	2959	24.87	-2.23	-3.65
152	SLU 25	80	22	2957	25.02	-2.24	-3.69
152	SLU 26	81	18	2956	25.12	-2.25	-3.71
152	SLU 27	80	27	2959	24.87	-2.23	-3.65
152	SLU 28	80	22	2957	25.02	-2.24	-3.69
152	SLU 29	80	27	2959	24.87	-2.23	-3.65
152	SLU 30	80	22	2957	25.02	-2.24	-3.69
152	SLU 31	93	22	3453	30.44	-2.55	-4.18
152	SLU 32	92	31	3456	30.19	-2.53	-4.12
152	SLU 33	92	26	3454	30.34	-2.55	-4.16
152	SLU 34	93	22	3453	30.44	-2.55	-4.18
152	SLU 35	92	31	3456	30.19	-2.53	-4.12
152	SLU 36	92	26	3454	30.34	-2.55	-4.16
152	SLU 37	92	31	3456	30.19	-2.53	-4.12
152	SLU 38	92	26	3454	30.34	-2.55	-4.16
152	SLU 39	97	33	3669	32.47	-2.67	-4.32
152	SLU 40	98	27	3667	32.62	-2.68	-4.36
152	SLU 41	97	33	3669	32.47	-2.67	-4.32
152	SLU 42	98	27	3667	32.62	-2.68	-4.36
152	SLU 43	89	33	3247	24.68	-2.51	-4.29
152	SLU 44	90	24	3244	24.93	-2.53	-4.35
152	SLU 45	89	33	3247	24.68	-2.51	-4.29
152	SLU 46	90	28	3245	24.83	-2.52	-4.33
152	SLU 47	90	24	3244	24.93	-2.53	-4.35
152	SLU 48	89	33	3247	24.68	-2.51	-4.29
152	SLU 49	90	28	3245	24.83	-2.52	-4.33
152	SLU 50	89	33	3247	24.68	-2.51	-4.29
152	SLU 51	90	28	3245	24.83	-2.52	-4.33
152	SLU 52	102	28	3741	30.25	-2.84	-4.82
152	SLU 53	101	37	3744	30	-2.82	-4.76
152	SLU 54	102	32	3742	30.15	-2.83	-4.8
152	SLU 55	102	28	3741	30.25	-2.84	-4.82
152	SLU 56	101	37	3744	30	-2.82	-4.76
152	SLU 57	102	32	3742	30.15	-2.83	-4.8
152	SLU 58	101	37	3744	30	-2.82	-4.76
152	SLU 59	102	32	3742	30.15	-2.83	-4.8
152	SLU 60	107	39	3957	32.28	-2.95	-4.96
152	SLU 61	107	33	3955	32.43	-2.96	-5
152	SLU 62	107	39	3957	32.28	-2.95	-4.96
152	SLU 63	107	33	3955	32.43	-2.96	-5
152	SLU 64	98	34	3612	29.34	-2.74	-4.57
152	SLU 65	99	26	3609	29.59	-2.77	-4.63
152	SLU 66	98	34	3612	29.34	-2.74	-4.57
152	SLU 67	99	29	3610	29.49	-2.76	-4.61
152	SLU 68	99	26	3609	29.59	-2.77	-4.63
152	SLU 69	98	34	3612	29.34	-2.74	-4.57
152	SLU 70	99	29	3610	29.49	-2.76	-4.61
152	SLU 71	98	34	3612	29.34	-2.74	-4.57
152	SLU 72	99	29	3610	29.49	-2.76	-4.61
152	SLU 73	111	30	4106	34.91	-3.07	-5.1
152	SLU 74	110	38	4109	34.66	-3.05	-5.04
152	SLU 75	111	33	4107	34.81	-3.06	-5.08

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
152	SLU 76	111	30	4106	34.91	-3.07	-5.1
152	SLU 77	110	38	4109	34.66	-3.05	-5.04
152	SLU 78	111	33	4107	34.81	-3.06	-5.08
152	SLU 79	110	38	4109	34.66	-3.05	-5.04
152	SLU 80	111	33	4107	34.81	-3.06	-5.08
152	SLU 81	116	40	4322	36.94	-3.18	-5.24
152	SLU 82	116	35	4320	37.09	-3.2	-5.28
152	SLU 83	116	40	4322	36.94	-3.18	-5.24
152	SLU 84	116	35	4320	37.09	-3.2	-5.28
152	SLE RA 1	74	26	2698	21.55	-2.06	-3.45
152	SLE RA 2	74	20	2696	21.71	-2.07	-3.49
152	SLE RA 3	74	26	2698	21.55	-2.06	-3.45
152	SLE RA 4	74	23	2697	21.65	-2.07	-3.48
152	SLE RA 5	74	20	2696	21.71	-2.07	-3.49
152	SLE RA 6	74	26	2698	21.55	-2.06	-3.45
152	SLE RA 7	74	23	2697	21.65	-2.07	-3.48
152	SLE RA 8	74	26	2698	21.55	-2.06	-3.45
152	SLE RA 9	74	23	2697	21.65	-2.07	-3.48
152	SLE RA 10	82	23	3028	25.26	-2.28	-3.81
152	SLE RA 11	82	29	3029	25.09	-2.26	-3.77
152	SLE RA 12	82	25	3028	25.19	-2.27	-3.79
152	SLE RA 13	82	23	3028	25.26	-2.28	-3.81
152	SLE RA 14	82	29	3029	25.09	-2.26	-3.77
152	SLE RA 15	82	25	3028	25.19	-2.27	-3.79
152	SLE RA 16	82	29	3029	25.09	-2.26	-3.77
152	SLE RA 17	82	25	3028	25.19	-2.27	-3.79
152	SLE RA 18	85	30	3171	26.61	-2.35	-3.9
152	SLE RA 19	85	26	3170	26.71	-2.36	-3.92
152	SLE RA 20	85	30	3171	26.61	-2.35	-3.9
152	SLE RA 21	85	26	3170	26.71	-2.36	-3.92
152	SLE FR 1	74	26	2698	21.55	-2.06	-3.45
152	SLE FR 2	74	25	2698	21.58	-2.06	-3.46
152	SLE FR 3	74	26	2698	21.55	-2.06	-3.45
152	SLE FR 4	77	26	2840	23.1	-2.15	-3.6
152	SLE FR 5	77	27	2840	23.07	-2.15	-3.59
152	SLE FR 6	79	28	2935	24.08	-2.21	-3.68
152	SLE QP 1	74	26	2698	21.55	-2.06	-3.45
152	SLE QP 2	77	27	2840	23.07	-2.15	-3.59
152	SLD 1	299	100	2905	18.62	-0.63	-3.58
152	SLD 2	301	104	2904	18.46	-0.63	-2.68
152	SLD 3	312	-13	2883	22.04	-0.9	-3.95
152	SLD 4	314	-8	2882	21.87	-0.9	-3.05
152	SLD 5	124	218	2893	16.61	-1.28	-3.34
152	SLD 6	125	222	2892	16.44	-1.28	-2.43
152	SLD 7	167	-157	2820	28	-2.19	-4.59
152	SLD 8	168	-152	2819	27.83	-2.19	-3.67
152	SLD 9	-14	207	2861	18.3	-2.1	-3.5
152	SLD 10	-12	211	2860	18.13	-2.11	-2.59
152	SLD 11	29	-168	2788	29.69	-3.02	-4.75
152	SLD 12	31	-163	2787	29.52	-3.02	-3.84
152	SLD 13	-160	63	2798	24.26	-3.39	-4.12
152	SLD 14	-158	67	2797	24.09	-3.39	-3.23
152	SLD 15	-147	-50	2776	27.68	-3.66	-4.5
152	SLD 16	-145	-45	2775	27.51	-3.67	-3.6
152	SLV 1	582	192	2988	12.94	1.3	-3.55
152	SLV 2	586	202	2986	12.56	1.3	-1.51
152	SLV 3	611	-64	2938	20.74	0.68	-4.4
152	SLV 4	615	-54	2936	20.36	0.68	-2.37
152	SLV 5	183	462	2961	8.33	-0.16	-3
152	SLV 6	187	472	2959	7.95	-0.17	-0.94
152	SLV 7	280	-392	2794	34.34	-2.25	-5.86
152	SLV 8	284	-382	2792	33.95	-2.25	-3.8
152	SLV 9	-130	437	2888	12.18	-2.04	-3.38
152	SLV 10	-126	447	2886	11.8	-2.05	-1.32
152	SLV 11	-32	-417	2721	38.19	-4.13	-6.24
152	SLV 12	-29	-407	2719	37.8	-4.13	-4.17
152	SLV 13	-461	108	2744	25.77	-4.97	-4.81
152	SLV 14	-457	118	2742	25.39	-4.97	-2.77
152	SLV 15	-431	-148	2694	33.58	-5.6	-5.67
152	SLV 16	-428	-138	2692	33.2	-5.6	-3.63
152	CRTFP Ux+	0	0	0	0	0	0
152	CRTFP Ux-	0	0	0	0	0	0
152	CRTFP Uy+	0	0	0	0	0	0
152	CRTFP Uy-	0	0	0	0	0	0
153	SLU 1	65	9	2379	19.73	42.89	-2.94
153	SLU 2	66	1	2377	20	42.85	-2.86
153	SLU 3	65	9	2379	19.73	42.89	-2.94
153	SLU 4	66	4	2378	19.89	42.87	-2.89
153	SLU 5	66	1	2377	20	42.85	-2.86
153	SLU 6	65	9	2379	19.73	42.89	-2.94
153	SLU 7	66	4	2378	19.89	42.87	-2.89
153	SLU 8	65	9	2379	19.73	42.89	-2.94
153	SLU 9	66	4	2378	19.89	42.87	-2.89
153	SLU 10	77	2	2830	25.13	51.1	-3.28
153	SLU 11	76	10	2832	24.86	51.14	-3.37
153	SLU 12	76	5	2831	25.02	51.12	-3.31
153	SLU 13	77	2	2830	25.13	51.1	-3.28

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
153	SLU 14	76	10	2832	24.86	51.14	-3.37
153	SLU 15	76	5	2831	25.02	51.12	-3.31
153	SLU 16	76	10	2832	24.86	51.14	-3.37
153	SLU 17	76	5	2831	25.02	51.12	-3.31
153	SLU 18	81	11	3026	27.06	54.68	-3.55
153	SLU 19	81	6	3025	27.22	54.66	-3.5
153	SLU 20	81	11	3026	27.06	54.68	-3.55
153	SLU 21	81	6	3025	27.22	54.66	-3.5
153	SLU 22	73	9	2712	24.08	48.95	-3.18
153	SLU 23	74	1	2710	24.35	48.91	-3.1
153	SLU 24	73	9	2712	24.08	48.95	-3.18
153	SLU 25	74	4	2711	24.25	48.93	-3.13
153	SLU 26	74	1	2710	24.35	48.91	-3.1
153	SLU 27	73	9	2712	24.08	48.95	-3.18
153	SLU 28	74	4	2711	24.25	48.93	-3.13
153	SLU 29	73	9	2712	24.08	48.95	-3.18
153	SLU 30	74	4	2711	24.25	48.93	-3.13
153	SLU 31	85	2	3163	29.48	57.16	-3.52
153	SLU 32	84	10	3165	29.21	57.2	-3.6
153	SLU 33	84	5	3164	29.38	57.18	-3.55
153	SLU 34	85	2	3163	29.48	57.16	-3.52
153	SLU 35	84	10	3165	29.21	57.2	-3.6
153	SLU 36	84	5	3164	29.38	57.18	-3.55
153	SLU 37	84	10	3165	29.21	57.2	-3.6
153	SLU 38	84	5	3164	29.38	57.18	-3.55
153	SLU 39	89	11	3359	31.41	60.74	-3.79
153	SLU 40	89	6	3358	31.57	60.71	-3.73
153	SLU 41	89	11	3359	31.41	60.74	-3.79
153	SLU 42	89	6	3358	31.57	60.71	-3.73
153	SLU 43	82	11	2978	24.15	53.68	-3.74
153	SLU 44	83	3	2977	24.43	53.64	-3.66
153	SLU 45	82	11	2978	24.15	53.68	-3.74
153	SLU 46	82	6	2977	24.32	53.66	-3.69
153	SLU 47	83	3	2977	24.43	53.64	-3.66
153	SLU 48	82	11	2978	24.15	53.68	-3.74
153	SLU 49	82	6	2977	24.32	53.66	-3.69
153	SLU 50	82	11	2978	24.15	53.68	-3.74
153	SLU 51	82	6	2977	24.32	53.66	-3.69
153	SLU 52	93	5	3430	29.56	61.89	-4.08
153	SLU 53	93	13	3431	29.28	61.94	-4.17
153	SLU 54	93	8	3430	29.45	61.91	-4.12
153	SLU 55	93	5	3430	29.56	61.89	-4.08
153	SLU 56	93	13	3431	29.28	61.94	-4.17
153	SLU 57	93	8	3430	29.45	61.91	-4.12
153	SLU 58	93	13	3431	29.28	61.94	-4.17
153	SLU 59	93	8	3430	29.45	61.91	-4.12
153	SLU 60	97	13	3625	31.48	65.47	-4.35
153	SLU 61	98	8	3624	31.65	65.45	-4.3
153	SLU 62	97	13	3625	31.48	65.47	-4.35
153	SLU 63	98	8	3624	31.65	65.45	-4.3
153	SLU 64	90	11	3312	28.51	59.74	-3.98
153	SLU 65	91	3	3310	28.78	59.7	-3.9
153	SLU 66	90	11	3312	28.51	59.74	-3.98
153	SLU 67	90	6	3311	28.67	59.72	-3.93
153	SLU 68	91	3	3310	28.78	59.7	-3.9
153	SLU 69	90	11	3312	28.51	59.74	-3.98
153	SLU 70	90	6	3311	28.67	59.72	-3.93
153	SLU 71	90	11	3312	28.51	59.74	-3.98
153	SLU 72	90	6	3311	28.67	59.72	-3.93
153	SLU 73	101	5	3763	33.91	67.95	-4.32
153	SLU 74	101	13	3764	33.64	67.99	-4.41
153	SLU 75	101	8	3763	33.8	67.97	-4.35
153	SLU 76	101	5	3763	33.91	67.95	-4.32
153	SLU 77	101	13	3764	33.64	67.99	-4.41
153	SLU 78	101	8	3763	33.8	67.97	-4.35
153	SLU 79	101	13	3764	33.64	67.99	-4.41
153	SLU 80	101	8	3763	33.8	67.97	-4.35
153	SLU 81	106	13	3958	35.84	71.53	-4.59
153	SLU 82	106	9	3958	36	71.5	-4.54
153	SLU 83	106	13	3958	35.84	71.53	-4.59
153	SLU 84	106	9	3958	36	71.5	-4.54
153	SLE RA 1	68	9	2474	20.97	44.62	-3.01
153	SLE RA 2	68	3	2473	21.15	44.6	-2.95
153	SLE RA 3	68	9	2474	20.97	44.62	-3.01
153	SLE RA 4	68	5	2473	21.08	44.61	-2.98
153	SLE RA 5	68	3	2473	21.15	44.6	-2.95
153	SLE RA 6	68	9	2474	20.97	44.62	-3.01
153	SLE RA 7	68	5	2473	21.08	44.61	-2.98
153	SLE RA 8	68	9	2474	20.97	44.62	-3.01
153	SLE RA 9	68	5	2473	21.08	44.61	-2.98
153	SLE RA 10	75	4	2775	24.57	50.1	-3.24
153	SLE RA 11	75	10	2776	24.39	50.12	-3.29
153	SLE RA 12	75	6	2775	24.5	50.11	-3.26
153	SLE RA 13	75	4	2775	24.57	50.1	-3.24
153	SLE RA 14	75	10	2776	24.39	50.12	-3.29
153	SLE RA 15	75	6	2775	24.5	50.11	-3.26
153	SLE RA 16	75	10	2776	24.39	50.12	-3.29

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
153	SLE RA 17	75	6	2775	24.5	50.11	-3.26
153	SLE RA 18	78	10	2905	25.86	52.48	-3.41
153	SLE RA 19	78	7	2905	25.97	52.47	-3.38
153	SLE RA 20	78	10	2905	25.86	52.48	-3.41
153	SLE RA 21	78	7	2905	25.97	52.47	-3.38
153	SLE FR 1	68	9	2474	20.97	44.62	-3.01
153	SLE FR 2	68	8	2474	21.01	44.62	-3
153	SLE FR 3	68	9	2474	20.97	44.62	-3.01
153	SLE FR 4	71	8	2603	22.47	46.98	-3.12
153	SLE FR 5	71	9	2603	22.44	46.98	-3.13
153	SLE FR 6	73	9	2690	23.41	48.55	-3.21
153	SLE QP 1	68	9	2474	20.97	44.62	-3.01
153	SLE QP 2	71	9	2603	22.44	46.98	-3.13
153	SLD 1	270	74	2617	18.47	48.37	-3.91
153	SLD 2	271	81	2616	18.32	48.35	-3.25
153	SLD 3	281	-29	2604	22.07	47.97	-2.48
153	SLD 4	283	-21	2604	21.93	47.95	-1.81
153	SLD 5	112	181	2626	15.83	48.01	-5.78
153	SLD 6	114	189	2626	15.68	48	-5.11
153	SLD 7	151	-160	2585	27.85	46.67	-0.99
153	SLD 8	152	-153	2585	27.7	46.66	-0.32
153	SLD 9	-11	171	2622	17.18	47.3	-5.94
153	SLD 10	-10	179	2622	17.02	47.29	-5.27
153	SLD 11	27	-171	2581	29.2	45.97	-1.16
153	SLD 12	29	-163	2581	29.04	45.95	-0.48
153	SLD 13	-141	40	2603	22.95	46.01	-4.45
153	SLD 14	-140	47	2603	22.8	46	-3.79
153	SLD 15	-130	-63	2591	26.56	45.61	-3.01
153	SLD 16	-128	-55	2590	26.41	45.6	-2.35
153	SLV 1	523	156	2633	13.39	50.13	-4.9
153	SLV 2	526	174	2632	13.05	50.11	-3.4
153	SLV 3	549	-78	2605	21.62	49.22	-1.63
153	SLV 4	552	-60	2604	21.28	49.19	-0.13
153	SLV 5	165	401	2655	7.36	49.32	-9.16
153	SLV 6	169	419	2654	7.01	49.3	-7.64
153	SLV 7	253	-377	2562	34.8	46.28	1.74
153	SLV 8	256	-360	2561	34.45	46.25	3.26
153	SLV 9	-115	378	2646	10.42	47.72	-9.53
153	SLV 10	-111	396	2645	10.08	47.69	-8
153	SLV 11	-27	-401	2553	37.86	44.67	1.37
153	SLV 12	-24	-383	2552	37.52	44.64	2.89
153	SLV 13	-411	78	2603	23.6	44.77	-6.13
153	SLV 14	-408	96	2602	23.26	44.74	-4.63
153	SLV 15	-385	-155	2575	31.83	43.86	-2.86
153	SLV 16	-381	-138	2574	31.49	43.83	-1.36
153	CRTFP Ux+	0	0	0	0	0	0
153	CRTFP Ux-	0	0	0	0	0	0
153	CRTFP Uy+	0	0	0	0	0	0
153	CRTFP Uy-	0	0	0	0	0	0
155	SLU 1	141	-12	5278	-182.9	-64.2	-0.06
155	SLU 2	142	-31	5275	-182.34	-64.37	-0.35
155	SLU 3	141	-12	5278	-182.9	-64.2	-0.06
155	SLU 4	141	-23	5276	-182.57	-64.3	-0.23
155	SLU 5	142	-31	5275	-182.34	-64.37	-0.35
155	SLU 6	141	-12	5278	-182.9	-64.2	-0.06
155	SLU 7	141	-23	5276	-182.57	-64.3	-0.23
155	SLU 8	141	-12	5278	-182.9	-64.2	-0.06
155	SLU 9	141	-23	5276	-182.57	-64.3	-0.23
155	SLU 10	165	-32	6270	-214.65	-74.67	-0.25
155	SLU 11	164	-13	6272	-215.2	-74.5	0.04
155	SLU 12	165	-24	6271	-214.87	-74.6	-0.13
155	SLU 13	165	-32	6270	-214.65	-74.67	-0.25
155	SLU 14	164	-13	6272	-215.2	-74.5	0.04
155	SLU 15	165	-24	6271	-214.87	-74.6	-0.13
155	SLU 16	164	-13	6272	-215.2	-74.5	0.04
155	SLU 17	165	-24	6271	-214.87	-74.6	-0.13
155	SLU 18	174	-14	6698	-229.04	-78.91	0.08
155	SLU 19	174	-25	6697	-228.71	-79.01	-0.09
155	SLU 20	174	-14	6698	-229.04	-78.91	0.08
155	SLU 21	174	-25	6697	-228.71	-79.01	-0.09
155	SLU 22	158	-14	6010	-205.91	-72.03	0.13
155	SLU 23	159	-33	6008	-205.35	-72.2	-0.16
155	SLU 24	158	-14	6010	-205.91	-72.03	0.13
155	SLU 25	159	-26	6009	-205.57	-72.13	-0.04
155	SLU 26	159	-33	6008	-205.35	-72.2	-0.16
155	SLU 27	158	-14	6010	-205.91	-72.03	0.13
155	SLU 28	159	-26	6009	-205.57	-72.13	-0.04
155	SLU 29	158	-14	6010	-205.91	-72.03	0.13
155	SLU 30	159	-26	6009	-205.57	-72.13	-0.04
155	SLU 31	182	-34	7002	-237.65	-82.5	-0.06
155	SLU 32	181	-16	7004	-238.21	-82.33	0.23
155	SLU 33	182	-27	7003	-237.87	-82.43	0.06
155	SLU 34	182	-34	7002	-237.65	-82.5	-0.06
155	SLU 35	181	-16	7004	-238.21	-82.33	0.23
155	SLU 36	182	-27	7003	-237.87	-82.43	0.06
155	SLU 37	181	-16	7004	-238.21	-82.33	0.23
155	SLU 38	182	-27	7003	-237.87	-82.43	0.06

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
155	SLU 39	191	-16	7430	-252.05	-86.74	0.27
155	SLU 40	192	-27	7429	-251.72	-86.85	0.1
155	SLU 41	191	-16	7430	-252.05	-86.74	0.27
155	SLU 42	192	-27	7429	-251.72	-86.85	0.1
155	SLU 43	177	-15	6610	-229.88	-80.77	-0.14
155	SLU 44	178	-33	6608	-229.33	-80.95	-0.43
155	SLU 45	177	-15	6610	-229.88	-80.77	-0.14
155	SLU 46	178	-26	6609	-229.55	-80.88	-0.31
155	SLU 47	178	-33	6608	-229.33	-80.95	-0.43
155	SLU 48	177	-15	6610	-229.88	-80.77	-0.14
155	SLU 49	178	-26	6609	-229.55	-80.88	-0.31
155	SLU 50	177	-15	6610	-229.88	-80.77	-0.14
155	SLU 51	178	-26	6609	-229.55	-80.88	-0.31
155	SLU 52	201	-35	7602	-261.63	-91.25	-0.33
155	SLU 53	200	-16	7604	-262.18	-91.07	-0.04
155	SLU 54	201	-27	7603	-261.85	-91.18	-0.21
155	SLU 55	201	-35	7602	-261.63	-91.25	-0.33
155	SLU 56	200	-16	7604	-262.18	-91.07	-0.04
155	SLU 57	201	-27	7603	-261.85	-91.18	-0.21
155	SLU 58	200	-16	7604	-262.18	-91.07	-0.04
155	SLU 59	201	-27	7603	-261.85	-91.18	-0.21
155	SLU 60	210	-16	8030	-276.03	-95.49	0
155	SLU 61	211	-28	8029	-275.69	-95.59	-0.17
155	SLU 62	210	-16	8030	-276.03	-95.49	0
155	SLU 63	211	-28	8029	-275.69	-95.59	-0.17
155	SLU 64	194	-17	7342	-252.89	-88.61	0.05
155	SLU 65	195	-36	7340	-252.33	-88.78	-0.24
155	SLU 66	194	-17	7342	-252.89	-88.61	0.05
155	SLU 67	195	-28	7341	-252.55	-88.71	-0.13
155	SLU 68	195	-36	7340	-252.33	-88.78	-0.24
155	SLU 69	194	-17	7342	-252.89	-88.61	0.05
155	SLU 70	195	-28	7341	-252.55	-88.71	-0.13
155	SLU 71	194	-17	7342	-252.89	-88.61	0.05
155	SLU 72	195	-28	7341	-252.55	-88.71	-0.13
155	SLU 73	219	-37	8334	-284.63	-99.08	-0.14
155	SLU 74	218	-18	8337	-285.19	-98.9	0.14
155	SLU 75	218	-30	8335	-284.86	-99.01	-0.03
155	SLU 76	219	-37	8334	-284.63	-99.08	-0.14
155	SLU 77	218	-18	8337	-285.19	-98.9	0.14
155	SLU 78	218	-30	8335	-284.86	-99.01	-0.03
155	SLU 79	218	-18	8337	-285.19	-98.9	0.14
155	SLU 80	218	-30	8335	-284.86	-99.01	-0.03
155	SLU 81	227	-19	8763	-299.03	-103.32	0.19
155	SLU 82	228	-30	8761	-298.7	-103.42	0.02
155	SLU 83	227	-19	8763	-299.03	-103.32	0.19
155	SLU 84	228	-30	8761	-298.7	-103.42	0.02
155	SLE RA 1	146	-13	5487	-189.47	-66.44	-0.01
155	SLE RA 2	146	-25	5485	-189.1	-66.55	-0.2
155	SLE RA 3	146	-13	5487	-189.47	-66.44	-0.01
155	SLE RA 4	146	-20	5486	-189.25	-66.51	-0.12
155	SLE RA 5	146	-25	5485	-189.1	-66.55	-0.2
155	SLE RA 6	146	-13	5487	-189.47	-66.44	-0.01
155	SLE RA 7	146	-20	5486	-189.25	-66.51	-0.12
155	SLE RA 8	146	-13	5487	-189.47	-66.44	-0.01
155	SLE RA 9	146	-20	5486	-189.25	-66.51	-0.12
155	SLE RA 10	162	-26	6148	-210.64	-73.42	-0.13
155	SLE RA 11	161	-13	6150	-211.01	-73.3	0.06
155	SLE RA 12	162	-21	6149	-210.78	-73.37	-0.05
155	SLE RA 13	162	-26	6148	-210.64	-73.42	-0.13
155	SLE RA 14	161	-13	6150	-211.01	-73.3	0.06
155	SLE RA 15	162	-21	6149	-210.78	-73.37	-0.05
155	SLE RA 16	161	-13	6150	-211.01	-73.3	0.06
155	SLE RA 17	162	-21	6149	-210.78	-73.37	-0.05
155	SLE RA 18	168	-14	6434	-220.24	-76.24	0.09
155	SLE RA 19	168	-21	6433	-220.01	-76.31	-0.03
155	SLE RA 20	168	-14	6434	-220.24	-76.24	0.09
155	SLE RA 21	168	-21	6433	-220.01	-76.31	-0.03
155	SLE FR 1	146	-13	5487	-189.47	-66.44	-0.01
155	SLE FR 2	146	-15	5487	-189.4	-66.46	-0.04
155	SLE FR 3	146	-13	5487	-189.47	-66.44	-0.01
155	SLE FR 4	152	-15	5771	-198.63	-69.4	-0.02
155	SLE FR 5	152	-13	5771	-198.7	-69.38	0.02
155	SLE FR 6	157	-13	5960	-204.85	-71.34	0.04
155	SLE QP 1	146	-13	5487	-189.47	-66.44	-0.01
155	SLE QP 2	152	-13	5771	-198.7	-69.38	0.02
155	SLD 1	583	127	5686	-200.69	-48.44	18.5
155	SLD 2	587	153	5685	-200.88	-48.46	20.88
155	SLD 3	607	-102	5672	-194.26	-51.16	15.18
155	SLD 4	612	-75	5671	-194.44	-51.18	17.56
155	SLD 5	242	366	5768	-208.99	-58.96	9.75
155	SLD 6	247	393	5767	-209.17	-58.98	12.17
155	SLD 7	325	-396	5720	-187.55	-68.04	-1.32
155	SLD 8	329	-369	5719	-187.73	-68.06	1.1
155	SLD 9	-25	343	5823	-209.67	-70.7	-1.05
155	SLD 10	-20	370	5822	-209.85	-70.72	1.37
155	SLD 11	58	-419	5775	-188.23	-79.78	-12.13
155	SLD 12	62	-392	5774	-188.41	-79.8	-9.71

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
155	SLD 13	-307	49	5871	-202.96	-87.58	-17.52
155	SLD 14	-303	76	5870	-203.14	-87.6	-15.13
155	SLD 15	-282	-179	5857	-196.53	-90.3	-20.84
155	SLD 16	-278	-153	5856	-196.71	-90.32	-18.46
155	SLV 1	1130	306	5579	-203.26	-21.76	42.06
155	SLV 2	1140	366	5576	-203.67	-21.81	47.46
155	SLV 3	1187	-215	5546	-188.58	-27.98	34.47
155	SLV 4	1196	-155	5544	-189	-28.03	39.87
155	SLV 5	357	852	5764	-222.19	-45.65	22.22
155	SLV 6	366	913	5762	-222.6	-45.7	27.7
155	SLV 7	545	-885	5655	-173.26	-66.37	-3.09
155	SLV 8	555	-825	5652	-173.67	-66.42	2.39
155	SLV 9	-250	799	5890	-223.73	-72.34	-2.35
155	SLV 10	-240	859	5888	-224.15	-72.39	3.13
155	SLV 11	-62	-938	5780	-174.8	-93.06	-27.65
155	SLV 12	-52	-878	5778	-175.22	-93.11	-22.17
155	SLV 13	-891	129	5998	-208.41	-110.73	-39.83
155	SLV 14	-882	189	5996	-208.82	-110.78	-34.42
155	SLV 15	-835	-392	5966	-193.73	-116.95	-47.42
155	SLV 16	-825	-332	5963	-194.14	-116.99	-42.01
155	CRTFP Ux+	0	0	0	0	0	0
155	CRTFP Ux-	0	0	0	0	0	0
155	CRTFP Uy+	0	0	0	0	0	0
155	CRTFP Uy-	0	0	0	0	0	0
157	SLU 1	78	-20	2888	22.61	-56.06	-2.31
157	SLU 2	78	-30	2887	22.98	-56.06	-2.64
157	SLU 3	78	-20	2888	22.61	-56.06	-2.31
157	SLU 4	78	-26	2888	22.83	-56.06	-2.51
157	SLU 5	78	-30	2887	22.98	-56.06	-2.64
157	SLU 6	78	-20	2888	22.61	-56.06	-2.31
157	SLU 7	78	-26	2888	22.83	-56.06	-2.51
157	SLU 8	78	-20	2888	22.61	-56.06	-2.31
157	SLU 9	78	-26	2888	22.83	-56.06	-2.51
157	SLU 10	91	-33	3426	28.83	-66.33	-2.96
157	SLU 11	90	-23	3426	28.46	-66.32	-2.63
157	SLU 12	91	-29	3426	28.68	-66.33	-2.83
157	SLU 13	91	-33	3426	28.83	-66.33	-2.96
157	SLU 14	90	-23	3426	28.46	-66.32	-2.63
157	SLU 15	91	-29	3426	28.68	-66.33	-2.83
157	SLU 16	90	-23	3426	28.46	-66.32	-2.63
157	SLU 17	91	-29	3426	28.68	-66.33	-2.83
157	SLU 18	96	-24	3657	30.97	-70.72	-2.77
157	SLU 19	96	-30	3656	31.19	-70.72	-2.96
157	SLU 20	96	-24	3657	30.97	-70.72	-2.77
157	SLU 21	96	-30	3656	31.19	-70.72	-2.96
157	SLU 22	87	-22	3285	27.48	-63.66	-2.51
157	SLU 23	88	-33	3285	27.85	-63.67	-2.83
157	SLU 24	87	-22	3285	27.48	-63.66	-2.51
157	SLU 25	87	-29	3285	27.7	-63.67	-2.7
157	SLU 26	88	-33	3285	27.85	-63.67	-2.83
157	SLU 27	87	-22	3285	27.48	-63.66	-2.51
157	SLU 28	87	-29	3285	27.7	-63.67	-2.7
157	SLU 29	87	-22	3285	27.48	-63.66	-2.51
157	SLU 30	87	-29	3285	27.7	-63.67	-2.7
157	SLU 31	100	-35	3823	33.7	-73.93	-3.15
157	SLU 32	100	-25	3823	33.33	-73.93	-2.82
157	SLU 33	100	-31	3823	33.55	-73.93	-3.02
157	SLU 34	100	-35	3823	33.7	-73.93	-3.15
157	SLU 35	100	-25	3823	33.33	-73.93	-2.82
157	SLU 36	100	-31	3823	33.55	-73.93	-3.02
157	SLU 37	100	-25	3823	33.33	-73.93	-2.82
157	SLU 38	100	-31	3823	33.55	-73.93	-3.02
157	SLU 39	105	-26	4054	35.83	-78.33	-2.96
157	SLU 40	105	-32	4054	36.06	-78.33	-3.16
157	SLU 41	105	-26	4054	35.83	-78.33	-2.96
157	SLU 42	105	-32	4054	36.06	-78.33	-3.16
157	SLU 43	98	-25	3618	27.72	-70.27	-2.94
157	SLU 44	98	-36	3618	28.09	-70.27	-3.27
157	SLU 45	98	-25	3618	27.72	-70.27	-2.94
157	SLU 46	98	-31	3618	27.94	-70.27	-3.14
157	SLU 47	98	-36	3618	28.09	-70.27	-3.27
157	SLU 48	98	-25	3618	27.72	-70.27	-2.94
157	SLU 49	98	-31	3618	27.94	-70.27	-3.14
157	SLU 50	98	-25	3618	27.72	-70.27	-2.94
157	SLU 51	98	-31	3618	27.94	-70.27	-3.14
157	SLU 52	111	-38	4156	33.94	-80.54	-3.59
157	SLU 53	110	-28	4156	33.57	-80.53	-3.26
157	SLU 54	111	-34	4156	33.79	-80.54	-3.46
157	SLU 55	111	-38	4156	33.94	-80.54	-3.59
157	SLU 56	110	-28	4156	33.57	-80.53	-3.26
157	SLU 57	111	-34	4156	33.79	-80.54	-3.46
157	SLU 58	110	-28	4156	33.57	-80.53	-3.26
157	SLU 59	111	-34	4156	33.79	-80.54	-3.46
157	SLU 60	116	-29	4387	36.08	-84.93	-3.4
157	SLU 61	116	-35	4387	36.3	-84.93	-3.59
157	SLU 62	116	-29	4387	36.08	-84.93	-3.4
157	SLU 63	116	-35	4387	36.3	-84.93	-3.59

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
157	SLU 64	107	-27	4016	32.59	-77.87	-3.13
157	SLU 65	108	-38	4015	32.96	-77.88	-3.46
157	SLU 66	107	-27	4016	32.59	-77.87	-3.13
157	SLU 67	108	-34	4015	32.81	-77.88	-3.33
157	SLU 68	108	-38	4015	32.96	-77.88	-3.46
157	SLU 69	107	-27	4016	32.59	-77.87	-3.13
157	SLU 70	108	-34	4015	32.81	-77.88	-3.33
157	SLU 71	107	-27	4016	32.59	-77.87	-3.13
157	SLU 72	108	-34	4015	32.81	-77.88	-3.33
157	SLU 73	120	-41	4553	38.81	-88.14	-3.78
157	SLU 74	120	-30	4554	38.44	-88.14	-3.45
157	SLU 75	120	-36	4553	38.66	-88.14	-3.65
157	SLU 76	120	-41	4553	38.81	-88.14	-3.78
157	SLU 77	120	-30	4554	38.44	-88.14	-3.45
157	SLU 78	120	-36	4553	38.66	-88.14	-3.65
157	SLU 79	120	-30	4554	38.44	-88.14	-3.45
157	SLU 80	120	-36	4553	38.66	-88.14	-3.65
157	SLU 81	125	-31	4784	40.95	-92.54	-3.59
157	SLU 82	125	-37	4784	41.17	-92.54	-3.78
157	SLU 83	125	-31	4784	40.95	-92.54	-3.59
157	SLU 84	125	-37	4784	41.17	-92.54	-3.78
157	SLE RA 1	80	-21	3002	24	-58.23	-2.37
157	SLE RA 2	81	-28	3001	24.25	-58.23	-2.59
157	SLE RA 3	80	-21	3002	24	-58.23	-2.37
157	SLE RA 4	81	-25	3001	24.15	-58.23	-2.5
157	SLE RA 5	81	-28	3001	24.25	-58.23	-2.59
157	SLE RA 6	80	-21	3002	24	-58.23	-2.37
157	SLE RA 7	81	-25	3001	24.15	-58.23	-2.5
157	SLE RA 8	80	-21	3002	24	-58.23	-2.37
157	SLE RA 9	81	-25	3001	24.15	-58.23	-2.5
157	SLE RA 10	89	-29	3360	28.15	-65.08	-2.8
157	SLE RA 11	89	-22	3360	27.9	-65.07	-2.58
157	SLE RA 12	89	-27	3360	28.05	-65.08	-2.71
157	SLE RA 13	89	-29	3360	28.15	-65.08	-2.8
157	SLE RA 14	89	-22	3360	27.9	-65.07	-2.58
157	SLE RA 15	89	-27	3360	28.05	-65.08	-2.71
157	SLE RA 16	89	-22	3360	27.9	-65.07	-2.58
157	SLE RA 17	89	-27	3360	28.05	-65.08	-2.71
157	SLE RA 18	92	-23	3514	29.57	-68.01	-2.67
157	SLE RA 19	93	-27	3514	29.72	-68.01	-2.8
157	SLE RA 20	92	-23	3514	29.57	-68.01	-2.67
157	SLE RA 21	93	-27	3514	29.72	-68.01	-2.8
157	SLE FR 1	80	-21	3002	24	-58.23	-2.37
157	SLE FR 2	80	-22	3002	24.05	-58.23	-2.41
157	SLE FR 3	80	-21	3002	24	-58.23	-2.37
157	SLE FR 4	84	-23	3155	25.72	-61.17	-2.5
157	SLE FR 5	84	-21	3155	25.67	-61.16	-2.46
157	SLE FR 6	86	-22	3258	26.78	-63.12	-2.52
157	SLE QP 1	80	-21	3002	24	-58.23	-2.37
157	SLE QP 2	84	-21	3155	25.67	-61.16	-2.46
157	SLD 1	312	54	3039	21.11	-57.19	-0.64
157	SLD 2	314	74	3039	20.94	-57.18	0.76
157	SLD 3	326	-72	3046	25.86	-57.52	-4.16
157	SLD 4	327	-53	3046	25.69	-57.51	-2.77
157	SLD 5	132	186	3110	17.16	-59.48	2.93
157	SLD 6	134	206	3110	16.98	-59.47	4.35
157	SLD 7	176	-236	3133	32.99	-60.57	-8.82
157	SLD 8	178	-216	3133	32.82	-60.57	-7.4
157	SLD 9	-10	173	3178	18.52	-61.76	2.48
157	SLD 10	-8	193	3177	18.35	-61.76	3.9
157	SLD 11	34	-249	3201	34.36	-62.86	-9.27
157	SLD 12	36	-229	3201	34.18	-62.85	-7.85
157	SLD 13	-159	10	3265	25.66	-64.82	-2.15
157	SLD 14	-158	30	3264	25.48	-64.81	-0.76
157	SLD 15	-146	-117	3272	30.4	-65.15	-5.68
157	SLD 16	-145	-97	3271	30.23	-65.14	-4.28
157	SLV 1	603	151	2891	15.27	-52.13	1.71
157	SLV 2	607	196	2890	14.87	-52.11	4.87
157	SLV 3	633	-137	2907	26.11	-52.88	-6.34
157	SLV 4	637	-93	2906	25.71	-52.86	-3.17
157	SLV 5	193	452	3052	6.25	-57.32	9.86
157	SLV 6	197	497	3051	5.85	-57.31	13.06
157	SLV 7	293	-510	3105	42.38	-59.82	-16.95
157	SLV 8	297	-464	3104	41.98	-59.81	-13.74
157	SLV 9	-129	422	3206	9.36	-62.52	8.82
157	SLV 10	-125	467	3205	8.96	-62.51	12.03
157	SLV 11	-29	-540	3259	45.49	-65.02	-17.98
157	SLV 12	-25	-495	3258	45.09	-65.01	-14.77
157	SLV 13	-469	50	3405	25.63	-69.47	-1.75
157	SLV 14	-465	95	3403	25.23	-69.45	1.42
157	SLV 15	-439	-238	3420	36.47	-70.22	-9.79
157	SLV 16	-435	-194	3419	36.08	-70.2	-6.62
157	CRTFP Ux+	0	0	0	0	0	0
157	CRTFP Ux-	0	0	0	0	0	0
157	CRTFP Uy+	0	0	0	0	0	0
157	CRTFP Uy-	0	0	0	0	0	0
158	SLU 1	87	-30	3272	23.13	-3.09	-1.24

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
158	SLU 2	88	-43	3272	23.57	-3.1	-1.43
158	SLU 3	87	-30	3272	23.13	-3.09	-1.24
158	SLU 4	88	-38	3272	23.39	-3.1	-1.35
158	SLU 5	88	-43	3272	23.57	-3.1	-1.43
158	SLU 6	87	-30	3272	23.13	-3.09	-1.24
158	SLU 7	88	-38	3272	23.39	-3.1	-1.35
158	SLU 8	87	-30	3272	23.13	-3.09	-1.24
158	SLU 9	88	-38	3272	23.39	-3.1	-1.35
158	SLU 10	102	-47	3874	29.57	-3.4	-1.58
158	SLU 11	101	-34	3874	29.13	-3.39	-1.39
158	SLU 12	101	-42	3874	29.4	-3.39	-1.5
158	SLU 13	102	-47	3874	29.57	-3.4	-1.58
158	SLU 14	101	-34	3874	29.13	-3.39	-1.39
158	SLU 15	101	-42	3874	29.4	-3.39	-1.5
158	SLU 16	101	-34	3874	29.13	-3.39	-1.39
158	SLU 17	101	-42	3874	29.4	-3.39	-1.5
158	SLU 18	107	-36	4132	31.7	-3.51	-1.45
158	SLU 19	107	-43	4132	31.97	-3.52	-1.57
158	SLU 20	107	-36	4132	31.7	-3.51	-1.45
158	SLU 21	107	-43	4132	31.97	-3.52	-1.57
158	SLU 22	98	-34	3718	28.11	-3.35	-1.29
158	SLU 23	98	-46	3717	28.55	-3.36	-1.48
158	SLU 24	98	-34	3718	28.11	-3.35	-1.29
158	SLU 25	98	-41	3718	28.37	-3.36	-1.41
158	SLU 26	98	-46	3717	28.55	-3.36	-1.48
158	SLU 27	98	-34	3718	28.11	-3.35	-1.29
158	SLU 28	98	-41	3718	28.37	-3.36	-1.41
158	SLU 29	98	-34	3718	28.11	-3.35	-1.29
158	SLU 30	98	-41	3718	28.37	-3.36	-1.41
158	SLU 31	112	-50	4320	34.55	-3.66	-1.63
158	SLU 32	112	-37	4320	34.11	-3.65	-1.44
158	SLU 33	112	-45	4320	34.38	-3.66	-1.56
158	SLU 34	112	-50	4320	34.55	-3.66	-1.63
158	SLU 35	112	-37	4320	34.11	-3.65	-1.44
158	SLU 36	112	-45	4320	34.38	-3.66	-1.56
158	SLU 37	112	-37	4320	34.11	-3.65	-1.44
158	SLU 38	112	-45	4320	34.38	-3.66	-1.56
158	SLU 39	118	-39	4578	36.68	-3.78	-1.51
158	SLU 40	118	-47	4578	36.95	-3.78	-1.62
158	SLU 41	118	-39	4578	36.68	-3.78	-1.51
158	SLU 42	118	-47	4578	36.95	-3.78	-1.62
158	SLU 43	110	-38	4101	28.36	-3.92	-1.59
158	SLU 44	110	-51	4101	28.8	-3.94	-1.78
158	SLU 45	110	-38	4101	28.36	-3.92	-1.59
158	SLU 46	110	-46	4101	28.63	-3.93	-1.71
158	SLU 47	110	-51	4101	28.8	-3.94	-1.78
158	SLU 48	110	-38	4101	28.36	-3.92	-1.59
158	SLU 49	110	-46	4101	28.63	-3.93	-1.71
158	SLU 50	110	-38	4101	28.36	-3.92	-1.59
158	SLU 51	110	-46	4101	28.63	-3.93	-1.71
158	SLU 52	124	-55	4703	34.81	-4.24	-1.93
158	SLU 53	124	-42	4703	34.36	-4.22	-1.74
158	SLU 54	124	-50	4703	34.63	-4.23	-1.86
158	SLU 55	124	-55	4703	34.81	-4.24	-1.93
158	SLU 56	124	-42	4703	34.36	-4.22	-1.74
158	SLU 57	124	-50	4703	34.63	-4.23	-1.86
158	SLU 58	124	-42	4703	34.36	-4.22	-1.74
158	SLU 59	124	-50	4703	34.63	-4.23	-1.86
158	SLU 60	130	-44	4961	36.94	-4.35	-1.81
158	SLU 61	130	-51	4961	37.2	-4.36	-1.92
158	SLU 62	130	-44	4961	36.94	-4.35	-1.81
158	SLU 63	130	-51	4961	37.2	-4.36	-1.92
158	SLU 64	120	-42	4547	33.34	-4.19	-1.64
158	SLU 65	121	-54	4546	33.78	-4.2	-1.83
158	SLU 66	120	-42	4547	33.34	-4.19	-1.64
158	SLU 67	121	-49	4546	33.6	-4.19	-1.76
158	SLU 68	121	-54	4546	33.78	-4.2	-1.83
158	SLU 69	120	-42	4547	33.34	-4.19	-1.64
158	SLU 70	121	-49	4546	33.6	-4.19	-1.76
158	SLU 71	120	-42	4547	33.34	-4.19	-1.64
158	SLU 72	121	-49	4546	33.6	-4.19	-1.76
158	SLU 73	135	-58	5148	39.78	-4.5	-1.99
158	SLU 74	134	-46	5149	39.34	-4.48	-1.79
158	SLU 75	134	-53	5148	39.61	-4.49	-1.91
158	SLU 76	135	-58	5148	39.78	-4.5	-1.99
158	SLU 77	134	-46	5149	39.34	-4.48	-1.79
158	SLU 78	134	-53	5148	39.61	-4.49	-1.91
158	SLU 79	134	-46	5149	39.34	-4.48	-1.79
158	SLU 80	134	-53	5148	39.61	-4.49	-1.91
158	SLU 81	140	-47	5407	41.91	-4.61	-1.86
158	SLU 82	140	-55	5406	42.18	-4.62	-1.97
158	SLU 83	140	-47	5407	41.91	-4.61	-1.86
158	SLU 84	140	-55	5406	42.18	-4.62	-1.97
158	SLE RA 1	90	-31	3399	24.55	-3.16	-1.25
158	SLE RA 2	91	-40	3399	24.85	-3.17	-1.38
158	SLE RA 3	90	-31	3399	24.55	-3.16	-1.25
158	SLE RA 4	90	-36	3399	24.73	-3.17	-1.33

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
158	SLE RA 5	91	-40	3399	24.85	-3.17	-1.38
158	SLE RA 6	90	-31	3399	24.55	-3.16	-1.25
158	SLE RA 7	90	-36	3399	24.73	-3.17	-1.33
158	SLE RA 8	90	-31	3399	24.55	-3.16	-1.25
158	SLE RA 9	90	-36	3399	24.73	-3.17	-1.33
158	SLE RA 10	100	-42	3801	28.85	-3.37	-1.48
158	SLE RA 11	99	-34	3801	28.55	-3.36	-1.35
158	SLE RA 12	100	-39	3801	28.73	-3.37	-1.43
158	SLE RA 13	100	-42	3801	28.85	-3.37	-1.48
158	SLE RA 14	99	-34	3801	28.55	-3.36	-1.35
158	SLE RA 15	100	-39	3801	28.73	-3.37	-1.43
158	SLE RA 16	99	-34	3801	28.55	-3.36	-1.35
158	SLE RA 17	100	-39	3801	28.73	-3.37	-1.43
158	SLE RA 18	103	-35	3973	30.27	-3.45	-1.4
158	SLE RA 19	104	-40	3973	30.44	-3.45	-1.47
158	SLE RA 20	103	-35	3973	30.27	-3.45	-1.4
158	SLE RA 21	104	-40	3973	30.44	-3.45	-1.47
158	SLE FR 1	90	-31	3399	24.55	-3.16	-1.25
158	SLE FR 2	90	-33	3399	24.61	-3.16	-1.28
158	SLE FR 3	90	-31	3399	24.55	-3.16	-1.25
158	SLE FR 4	94	-34	3571	26.32	-3.25	-1.32
158	SLE FR 5	94	-32	3571	26.27	-3.25	-1.3
158	SLE FR 6	97	-33	3686	27.41	-3.3	-1.32
158	SLE QP 1	90	-31	3399	24.55	-3.16	-1.25
158	SLE QP 2	94	-32	3571	26.27	-3.25	-1.3
158	SLD 1	346	54	3373	21.19	-0.76	-0.49
158	SLD 2	348	82	3372	20.99	-0.77	0.72
158	SLD 3	360	-93	3387	26.83	-1.01	-2.31
158	SLD 4	362	-66	3387	26.64	-1.02	-1.09
158	SLD 5	147	207	3490	16.25	-2.12	1.27
158	SLD 6	149	236	3489	16.05	-2.12	2.5
158	SLD 7	195	-284	3538	35.07	-2.96	-4.79
158	SLD 8	197	-256	3538	34.87	-2.96	-3.56
158	SLD 9	-9	191	3605	17.66	-3.53	0.96
158	SLD 10	-7	220	3604	17.46	-3.54	2.19
158	SLD 11	39	-300	3653	36.48	-4.37	-5.09
158	SLD 12	41	-272	3653	36.28	-4.38	-3.86
158	SLD 13	-174	1	3756	25.9	-5.48	-1.5
158	SLD 14	-172	29	3755	25.7	-5.48	-0.29
158	SLD 15	-160	-147	3770	31.54	-5.73	-3.31
158	SLD 16	-158	-119	3770	31.34	-5.73	-2.1
158	SLV 1	666	165	3120	14.68	2.4	0.55
158	SLV 2	671	228	3119	14.23	2.39	3.3
158	SLV 3	699	-172	3153	27.56	1.83	-3.59
158	SLV 4	704	-109	3152	27.12	1.82	-0.84
158	SLV 5	214	515	3386	3.4	-0.68	4.56
158	SLV 6	218	578	3385	2.95	-0.69	7.35
158	SLV 7	324	-607	3497	46.36	-2.6	-9.25
158	SLV 8	329	-543	3496	45.91	-2.6	-6.46
158	SLV 9	-140	478	3647	6.63	-3.89	3.87
158	SLV 10	-136	542	3646	6.17	-3.9	6.66
158	SLV 11	-30	-643	3758	49.58	-5.81	-9.94
158	SLV 12	-26	-579	3757	49.13	-5.82	-7.15
158	SLV 13	-515	44	3991	25.42	-8.31	-1.75
158	SLV 14	-511	107	3990	24.97	-8.32	1
158	SLV 15	-482	-293	4024	38.3	-8.89	-5.89
158	SLV 16	-478	-230	4023	37.86	-8.9	-3.14
158	CRTFP Ux+	0	0	0	0	0	0
158	CRTFP Ux-	0	0	0	0	0	0
158	CRTFP Uy+	0	0	0	0	0	0
158	CRTFP Uy-	0	0	0	0	0	0
159	SLU 1	89	-34	3364	21.36	-2.95	-0.4
159	SLU 2	89	-48	3364	21.85	-2.96	-0.63
159	SLU 3	89	-34	3364	21.36	-2.95	-0.4
159	SLU 4	89	-42	3364	21.65	-2.96	-0.54
159	SLU 5	89	-48	3364	21.85	-2.96	-0.63
159	SLU 6	89	-34	3364	21.36	-2.95	-0.4
159	SLU 7	89	-42	3364	21.65	-2.96	-0.54
159	SLU 8	89	-34	3364	21.36	-2.95	-0.4
159	SLU 9	89	-42	3364	21.65	-2.96	-0.54
159	SLU 10	103	-52	3974	27.41	-3.21	-0.64
159	SLU 11	103	-39	3974	26.93	-3.2	-0.41
159	SLU 12	103	-47	3974	27.22	-3.21	-0.55
159	SLU 13	103	-52	3974	27.41	-3.21	-0.64
159	SLU 14	103	-39	3974	26.93	-3.2	-0.41
159	SLU 15	103	-47	3974	27.22	-3.21	-0.55
159	SLU 16	103	-39	3974	26.93	-3.2	-0.41
159	SLU 17	103	-47	3974	27.22	-3.21	-0.55
159	SLU 18	109	-41	4235	29.31	-3.31	-0.42
159	SLU 19	109	-49	4236	29.6	-3.31	-0.56
159	SLU 20	109	-41	4235	29.31	-3.31	-0.42
159	SLU 21	109	-49	4236	29.6	-3.31	-0.56
159	SLU 22	99	-38	3817	25.96	-3.19	-0.35
159	SLU 23	100	-51	3817	26.44	-3.2	-0.58
159	SLU 24	99	-38	3817	25.96	-3.19	-0.35
159	SLU 25	100	-46	3817	26.25	-3.19	-0.49
159	SLU 26	100	-51	3817	26.44	-3.2	-0.58

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
159	SLU 27	99	-38	3817	25.96	-3.19	-0.35
159	SLU 28	100	-46	3817	26.25	-3.19	-0.49
159	SLU 29	99	-38	3817	25.96	-3.19	-0.35
159	SLU 30	100	-46	3817	26.25	-3.19	-0.49
159	SLU 31	114	-55	4427	32.01	-3.44	-0.6
159	SLU 32	113	-42	4427	31.52	-3.43	-0.37
159	SLU 33	114	-50	4427	31.81	-3.44	-0.51
159	SLU 34	114	-55	4427	32.01	-3.44	-0.6
159	SLU 35	113	-42	4427	31.52	-3.43	-0.37
159	SLU 36	114	-50	4427	31.81	-3.44	-0.51
159	SLU 37	113	-42	4427	31.52	-3.43	-0.37
159	SLU 38	114	-50	4427	31.81	-3.44	-0.51
159	SLU 39	119	-44	4689	33.91	-3.54	-0.38
159	SLU 40	120	-52	4689	34.2	-3.55	-0.51
159	SLU 41	119	-44	4689	33.91	-3.54	-0.38
159	SLU 42	120	-52	4689	34.2	-3.55	-0.51
159	SLU 43	112	-44	4217	26.2	-3.76	-0.53
159	SLU 44	112	-57	4217	26.68	-3.77	-0.76
159	SLU 45	112	-44	4217	26.2	-3.76	-0.53
159	SLU 46	112	-52	4217	26.49	-3.77	-0.67
159	SLU 47	112	-57	4217	26.68	-3.77	-0.76
159	SLU 48	112	-44	4217	26.2	-3.76	-0.53
159	SLU 49	112	-52	4217	26.49	-3.77	-0.67
159	SLU 50	112	-44	4217	26.2	-3.76	-0.53
159	SLU 51	112	-52	4217	26.49	-3.77	-0.67
159	SLU 52	126	-62	4828	32.25	-4.02	-0.78
159	SLU 53	125	-48	4828	31.76	-4.01	-0.55
159	SLU 54	126	-56	4828	32.05	-4.01	-0.69
159	SLU 55	126	-62	4828	32.25	-4.02	-0.78
159	SLU 56	125	-48	4828	31.76	-4.01	-0.55
159	SLU 57	126	-56	4828	32.05	-4.01	-0.69
159	SLU 58	125	-48	4828	31.76	-4.01	-0.55
159	SLU 59	126	-56	4828	32.05	-4.01	-0.69
159	SLU 60	131	-50	5089	34.15	-4.11	-0.56
159	SLU 61	132	-58	5089	34.44	-4.12	-0.69
159	SLU 62	131	-50	5089	34.15	-4.11	-0.56
159	SLU 63	132	-58	5089	34.44	-4.12	-0.69
159	SLU 64	122	-47	4670	30.79	-3.99	-0.49
159	SLU 65	123	-60	4671	31.28	-4	-0.72
159	SLU 66	122	-47	4670	30.79	-3.99	-0.49
159	SLU 67	123	-55	4671	31.08	-4	-0.63
159	SLU 68	123	-60	4671	31.28	-4	-0.72
159	SLU 69	122	-47	4670	30.79	-3.99	-0.49
159	SLU 70	123	-55	4671	31.08	-4	-0.63
159	SLU 71	122	-47	4670	30.79	-3.99	-0.49
159	SLU 72	123	-55	4671	31.08	-4	-0.63
159	SLU 73	137	-65	5281	36.84	-4.25	-0.73
159	SLU 74	136	-51	5281	36.36	-4.24	-0.5
159	SLU 75	136	-59	5281	36.65	-4.25	-0.64
159	SLU 76	137	-65	5281	36.84	-4.25	-0.73
159	SLU 77	136	-51	5281	36.36	-4.24	-0.5
159	SLU 78	136	-59	5281	36.65	-4.25	-0.64
159	SLU 79	136	-51	5281	36.36	-4.24	-0.5
159	SLU 80	136	-59	5281	36.65	-4.25	-0.64
159	SLU 81	142	-53	5542	38.74	-4.35	-0.51
159	SLU 82	142	-61	5542	39.03	-4.35	-0.65
159	SLU 83	142	-53	5542	38.74	-4.35	-0.51
159	SLU 84	142	-61	5542	39.03	-4.35	-0.65
159	SLE RA 1	92	-35	3493	22.68	-3.02	-0.39
159	SLE RA 2	92	-44	3493	23	-3.03	-0.54
159	SLE RA 3	92	-35	3493	22.68	-3.02	-0.39
159	SLE RA 4	92	-41	3493	22.87	-3.02	-0.48
159	SLE RA 5	92	-44	3493	23	-3.03	-0.54
159	SLE RA 6	92	-35	3493	22.68	-3.02	-0.39
159	SLE RA 7	92	-41	3493	22.87	-3.02	-0.48
159	SLE RA 8	92	-35	3493	22.68	-3.02	-0.39
159	SLE RA 9	92	-41	3493	22.87	-3.02	-0.48
159	SLE RA 10	101	-47	3900	26.71	-3.19	-0.55
159	SLE RA 11	101	-38	3900	26.39	-3.19	-0.4
159	SLE RA 12	101	-44	3900	26.58	-3.19	-0.49
159	SLE RA 13	101	-47	3900	26.71	-3.19	-0.55
159	SLE RA 14	101	-38	3900	26.39	-3.19	-0.4
159	SLE RA 15	101	-44	3900	26.58	-3.19	-0.49
159	SLE RA 16	101	-38	3900	26.39	-3.19	-0.4
159	SLE RA 17	101	-44	3900	26.58	-3.19	-0.49
159	SLE RA 18	105	-39	4074	27.98	-3.26	-0.4
159	SLE RA 19	105	-45	4074	28.17	-3.26	-0.49
159	SLE RA 20	105	-39	4074	27.98	-3.26	-0.4
159	SLE RA 21	105	-45	4074	28.17	-3.26	-0.49
159	SLE FR 1	92	-35	3493	22.68	-3.02	-0.39
159	SLE FR 2	92	-37	3493	22.74	-3.02	-0.42
159	SLE FR 3	92	-35	3493	22.68	-3.02	-0.39
159	SLE FR 4	96	-38	3667	24.33	-3.09	-0.42
159	SLE FR 5	96	-36	3667	24.27	-3.09	-0.39
159	SLE FR 6	98	-37	3784	25.33	-3.14	-0.39
159	SLE QP 1	92	-35	3493	22.68	-3.02	-0.39
159	SLE QP 2	96	-36	3667	24.27	-3.09	-0.39

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
159	SLD 1	347	55	3393	19.1	-0.58	-0.48
159	SLD 2	349	89	3393	18.89	-0.58	0.78
159	SLD 3	362	-104	3415	25.21	-0.79	-2.74
159	SLD 4	364	-69	3414	25	-0.79	-1.48
159	SLD 5	148	219	3553	13.52	-2.02	2.55
159	SLD 6	150	254	3553	13.31	-2.02	3.83
159	SLD 7	197	-309	3624	33.89	-2.72	-4.96
159	SLD 8	199	-274	3624	33.69	-2.72	-3.68
159	SLD 9	-8	201	3711	14.85	-3.46	2.91
159	SLD 10	-6	236	3711	14.64	-3.46	4.18
159	SLD 11	41	-327	3782	35.22	-4.16	-4.61
159	SLD 12	43	-292	3782	35.02	-4.17	-3.33
159	SLD 13	-173	-4	3921	23.53	-5.39	0.7
159	SLD 14	-171	31	3920	23.32	-5.39	1.96
159	SLD 15	-158	-162	3942	29.64	-5.6	-1.56
159	SLD 16	-156	-128	3942	29.44	-5.61	-0.3
159	SLV 1	668	172	3044	12.47	2.62	-0.59
159	SLV 2	672	250	3043	12	2.61	2.27
159	SLV 3	701	-189	3093	26.42	2.14	-5.74
159	SLV 4	705	-111	3092	25.95	2.13	-2.88
159	SLV 5	216	546	3407	-0.27	-0.64	6.33
159	SLV 6	220	626	3406	-0.74	-0.65	9.23
159	SLV 7	326	-658	3569	46.24	-2.25	-10.82
159	SLV 8	330	-579	3569	45.76	-2.26	-7.92
159	SLV 9	-139	506	3766	2.77	-3.92	7.14
159	SLV 10	-135	585	3766	2.3	-3.93	10.04
159	SLV 11	-29	-699	3929	49.27	-5.53	-10.01
159	SLV 12	-24	-619	3928	48.8	-5.54	-7.11
159	SLV 13	-514	38	4243	22.58	-8.31	2.1
159	SLV 14	-509	116	4242	22.12	-8.32	4.96
159	SLV 15	-481	-323	4292	36.53	-8.79	-3.05
159	SLV 16	-476	-245	4291	36.07	-8.8	-0.19
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
160	SLU 1	90	-34	3451	19.63	-2.81	0.26
160	SLU 2	90	-49	3451	20.16	-2.82	0
160	SLU 3	90	-34	3451	19.63	-2.81	0.26
160	SLU 4	90	-43	3451	19.95	-2.82	0.1
160	SLU 5	90	-49	3451	20.16	-2.82	0
160	SLU 6	90	-34	3451	19.63	-2.81	0.26
160	SLU 7	90	-43	3451	19.95	-2.82	0.1
160	SLU 8	90	-34	3451	19.63	-2.81	0.26
160	SLU 9	90	-43	3451	19.95	-2.82	0.1
160	SLU 10	104	-53	4068	25.29	-3.02	0.09
160	SLU 11	104	-38	4068	24.77	-3.01	0.35
160	SLU 12	104	-47	4068	25.08	-3.02	0.19
160	SLU 13	104	-53	4068	25.29	-3.02	0.09
160	SLU 14	104	-38	4068	24.77	-3.01	0.35
160	SLU 15	104	-47	4068	25.08	-3.02	0.19
160	SLU 16	104	-38	4068	24.77	-3.01	0.35
160	SLU 17	104	-47	4068	25.08	-3.02	0.19
160	SLU 18	110	-40	4332	26.97	-3.1	0.39
160	SLU 19	110	-49	4333	27.28	-3.1	0.23
160	SLU 20	110	-40	4332	26.97	-3.1	0.39
160	SLU 21	110	-49	4333	27.28	-3.1	0.23
160	SLU 22	101	-37	3911	23.85	-3.02	0.38
160	SLU 23	101	-52	3911	24.37	-3.03	0.12
160	SLU 24	101	-37	3911	23.85	-3.02	0.38
160	SLU 25	101	-46	3911	24.16	-3.03	0.22
160	SLU 26	101	-52	3911	24.37	-3.03	0.12
160	SLU 27	101	-37	3911	23.85	-3.02	0.38
160	SLU 28	101	-46	3911	24.16	-3.03	0.22
160	SLU 29	101	-37	3911	23.85	-3.02	0.38
160	SLU 30	101	-46	3911	24.16	-3.03	0.22
160	SLU 31	115	-56	4528	29.51	-3.23	0.21
160	SLU 32	115	-41	4528	28.99	-3.22	0.47
160	SLU 33	115	-50	4528	29.3	-3.23	0.31
160	SLU 34	115	-56	4528	29.51	-3.23	0.21
160	SLU 35	115	-41	4528	28.99	-3.22	0.47
160	SLU 36	115	-50	4528	29.3	-3.23	0.31
160	SLU 37	115	-41	4528	28.99	-3.22	0.47
160	SLU 38	115	-50	4528	29.3	-3.23	0.31
160	SLU 39	120	-43	4792	31.19	-3.31	0.51
160	SLU 40	121	-52	4792	31.5	-3.31	0.35
160	SLU 41	120	-43	4792	31.19	-3.31	0.51
160	SLU 42	121	-52	4792	31.5	-3.31	0.35
160	SLU 43	113	-44	4328	24.07	-3.59	0.3
160	SLU 44	114	-59	4329	24.6	-3.59	0.04
160	SLU 45	113	-44	4328	24.07	-3.59	0.3
160	SLU 46	114	-53	4329	24.39	-3.59	0.14
160	SLU 47	114	-59	4329	24.6	-3.59	0.04
160	SLU 48	113	-44	4328	24.07	-3.59	0.3
160	SLU 49	114	-53	4329	24.39	-3.59	0.14
160	SLU 50	113	-44	4328	24.07	-3.59	0.3
160	SLU 51	114	-53	4329	24.39	-3.59	0.14

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
160	SLU 52	128	-63	4946	29.73	-3.79	0.13
160	SLU 53	127	-48	4946	29.21	-3.79	0.39
160	SLU 54	127	-57	4946	29.52	-3.79	0.23
160	SLU 55	128	-63	4946	29.73	-3.79	0.13
160	SLU 56	127	-48	4946	29.21	-3.79	0.39
160	SLU 57	127	-57	4946	29.52	-3.79	0.23
160	SLU 58	127	-48	4946	29.21	-3.79	0.39
160	SLU 59	127	-57	4946	29.52	-3.79	0.23
160	SLU 60	133	-50	5210	31.41	-3.87	0.43
160	SLU 61	133	-59	5210	31.73	-3.88	0.27
160	SLU 62	133	-50	5210	31.41	-3.87	0.43
160	SLU 63	133	-59	5210	31.73	-3.88	0.27
160	SLU 64	124	-46	4788	28.29	-3.8	0.42
160	SLU 65	124	-61	4789	28.82	-3.8	0.16
160	SLU 66	124	-46	4788	28.29	-3.8	0.42
160	SLU 67	124	-55	4789	28.61	-3.8	0.26
160	SLU 68	124	-61	4789	28.82	-3.8	0.16
160	SLU 69	124	-46	4788	28.29	-3.8	0.42
160	SLU 70	124	-55	4789	28.61	-3.8	0.26
160	SLU 71	124	-46	4788	28.29	-3.8	0.42
160	SLU 72	124	-55	4789	28.61	-3.8	0.26
160	SLU 73	138	-65	5406	33.95	-4	0.25
160	SLU 74	138	-51	5405	33.43	-4	0.51
160	SLU 75	138	-59	5406	33.74	-4	0.35
160	SLU 76	138	-65	5406	33.95	-4	0.25
160	SLU 77	138	-51	5405	33.43	-4	0.51
160	SLU 78	138	-59	5406	33.74	-4	0.35
160	SLU 79	138	-51	5405	33.43	-4	0.51
160	SLU 80	138	-59	5406	33.74	-4	0.35
160	SLU 81	144	-52	5670	35.63	-4.08	0.55
160	SLU 82	144	-61	5670	35.94	-4.09	0.39
160	SLU 83	144	-52	5670	35.63	-4.08	0.55
160	SLU 84	144	-61	5670	35.94	-4.09	0.39
160	SLE RA 1	93	-35	3582	20.84	-2.87	0.3
160	SLE RA 2	93	-45	3582	21.19	-2.88	0.12
160	SLE RA 3	93	-35	3582	20.84	-2.87	0.3
160	SLE RA 4	93	-41	3582	21.05	-2.88	0.19
160	SLE RA 5	93	-45	3582	21.19	-2.88	0.12
160	SLE RA 6	93	-35	3582	20.84	-2.87	0.3
160	SLE RA 7	93	-41	3582	21.05	-2.88	0.19
160	SLE RA 8	93	-35	3582	20.84	-2.87	0.3
160	SLE RA 9	93	-41	3582	21.05	-2.88	0.19
160	SLE RA 10	103	-48	3994	24.61	-3.01	0.18
160	SLE RA 11	102	-38	3994	24.26	-3.01	0.35
160	SLE RA 12	102	-44	3994	24.47	-3.01	0.25
160	SLE RA 13	103	-48	3994	24.61	-3.01	0.18
160	SLE RA 14	102	-38	3994	24.26	-3.01	0.35
160	SLE RA 15	102	-44	3994	24.47	-3.01	0.25
160	SLE RA 16	102	-38	3994	24.26	-3.01	0.35
160	SLE RA 17	102	-44	3994	24.47	-3.01	0.25
160	SLE RA 18	106	-39	4170	25.73	-3.07	0.38
160	SLE RA 19	106	-45	4170	25.94	-3.07	0.28
160	SLE RA 20	106	-39	4170	25.73	-3.07	0.38
160	SLE RA 21	106	-45	4170	25.94	-3.07	0.28
160	SLE FR 1	93	-35	3582	20.84	-2.87	0.3
160	SLE FR 2	93	-37	3582	20.91	-2.88	0.26
160	SLE FR 3	93	-35	3582	20.84	-2.87	0.3
160	SLE FR 4	97	-38	3759	22.37	-2.93	0.29
160	SLE FR 5	97	-36	3759	22.3	-2.93	0.32
160	SLE FR 6	100	-37	3876	23.28	-2.97	0.34
160	SLE QP 1	93	-35	3582	20.84	-2.87	0.3
160	SLE QP 2	97	-36	3759	22.3	-2.93	0.32
160	SLD 1	349	61	3408	17.03	-0.39	0.31
160	SLD 2	350	103	3408	16.82	-0.39	1.62
160	SLD 3	363	-110	3435	23.61	-0.57	-2.3
160	SLD 4	365	-69	3435	23.4	-0.58	-0.99
160	SLD 5	150	239	3612	10.82	-1.88	3.81
160	SLD 6	152	281	3612	10.6	-1.89	5.14
160	SLD 7	198	-334	3703	32.75	-2.51	-4.89
160	SLD 8	200	-292	3703	32.53	-2.51	-3.57
160	SLD 9	-6	219	3814	12.07	-3.35	4.21
160	SLD 10	-4	261	3814	11.86	-3.36	5.53
160	SLD 11	42	-353	3905	34	-3.98	-4.49
160	SLD 12	44	-311	3905	33.79	-3.98	-3.17
160	SLD 13	-171	-4	4082	21.21	-5.28	1.64
160	SLD 14	-169	38	4082	21	-5.29	2.94
160	SLD 15	-157	-175	4110	27.79	-5.47	-0.98
160	SLD 16	-155	-134	4109	27.57	-5.48	0.33
160	SLV 1	669	187	2961	10.27	2.85	0.3
160	SLV 2	673	280	2961	9.79	2.84	3.27
160	SLV 3	702	-205	3024	25.28	2.43	-5.65
160	SLV 4	706	-111	3023	24.8	2.42	-2.69
160	SLV 5	217	591	3425	-3.9	-0.55	8.29
160	SLV 6	221	686	3424	-4.39	-0.56	11.3
160	SLV 7	327	-714	3633	46.14	-1.97	-11.56
160	SLV 8	331	-619	3633	45.65	-1.98	-8.55
160	SLV 9	-137	546	3885	-1.04	-3.89	9.2

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
160	SLV 10	-133	641	3884	-1.53	-3.9	12.2
160	SLV 11	-27	-759	4093	49	-5.31	-10.66
160	SLV 12	-23	-664	4092	48.51	-5.32	-7.65
160	SLV 13	-512	38	4494	19.81	-8.28	3.33
160	SLV 14	-508	132	4493	19.33	-8.29	6.29
160	SLV 15	-479	-353	4556	34.82	-8.71	-2.63
160	SLV 16	-475	-259	4556	34.34	-8.72	0.34
160	CRTFP Ux+	0	0	0	0	0	0
160	CRTFP Ux-	0	0	0	0	0	0
160	CRTFP Uy+	0	0	0	0	0	0
160	CRTFP Uy-	0	0	0	0	0	0
161	SLU 1	91	-31	3535	17.93	-2.74	0.74
161	SLU 2	91	-48	3535	18.49	-2.74	0.46
161	SLU 3	91	-31	3535	17.93	-2.74	0.74
161	SLU 4	91	-41	3535	18.27	-2.74	0.58
161	SLU 5	91	-48	3535	18.49	-2.74	0.46
161	SLU 6	91	-31	3535	17.93	-2.74	0.74
161	SLU 7	91	-41	3535	18.27	-2.74	0.58
161	SLU 8	91	-31	3535	17.93	-2.74	0.74
161	SLU 9	91	-41	3535	18.27	-2.74	0.58
161	SLU 10	105	-51	4158	23.21	-2.92	0.63
161	SLU 11	105	-35	4157	22.64	-2.91	0.91
161	SLU 12	105	-45	4158	22.98	-2.92	0.74
161	SLU 13	105	-51	4158	23.21	-2.92	0.63
161	SLU 14	105	-35	4157	22.64	-2.91	0.91
161	SLU 15	105	-45	4158	22.98	-2.92	0.74
161	SLU 16	105	-35	4157	22.64	-2.91	0.91
161	SLU 17	105	-45	4158	22.98	-2.92	0.74
161	SLU 18	111	-36	4424	24.66	-2.99	0.98
161	SLU 19	111	-46	4425	25	-2.99	0.81
161	SLU 20	111	-36	4424	24.66	-2.99	0.98
161	SLU 21	111	-46	4425	25	-2.99	0.81
161	SLU 22	102	-33	4001	21.78	-2.94	0.92
161	SLU 23	102	-50	4001	22.34	-2.94	0.64
161	SLU 24	102	-33	4001	21.78	-2.94	0.92
161	SLU 25	102	-43	4001	22.12	-2.94	0.75
161	SLU 26	102	-50	4001	22.34	-2.94	0.64
161	SLU 27	102	-33	4001	21.78	-2.94	0.92
161	SLU 28	102	-43	4001	22.12	-2.94	0.75
161	SLU 29	102	-33	4001	21.78	-2.94	0.92
161	SLU 30	102	-43	4001	22.12	-2.94	0.75
161	SLU 31	116	-53	4624	27.06	-3.12	0.8
161	SLU 32	116	-37	4623	26.49	-3.11	1.08
161	SLU 33	116	-46	4624	26.83	-3.12	0.91
161	SLU 34	116	-53	4624	27.06	-3.12	0.8
161	SLU 35	116	-37	4623	26.49	-3.11	1.08
161	SLU 36	116	-46	4624	26.83	-3.12	0.91
161	SLU 37	116	-37	4623	26.49	-3.11	1.08
161	SLU 38	116	-46	4624	26.83	-3.12	0.91
161	SLU 39	122	-38	4890	28.51	-3.19	1.15
161	SLU 40	122	-48	4891	28.85	-3.19	0.98
161	SLU 41	122	-38	4890	28.51	-3.19	1.15
161	SLU 42	122	-48	4891	28.85	-3.19	0.98
161	SLU 43	114	-40	4435	21.99	-3.5	0.91
161	SLU 44	115	-56	4436	22.55	-3.5	0.63
161	SLU 45	114	-40	4435	21.99	-3.5	0.91
161	SLU 46	115	-50	4436	22.33	-3.5	0.74
161	SLU 47	115	-56	4436	22.55	-3.5	0.63
161	SLU 48	114	-40	4435	21.99	-3.5	0.91
161	SLU 49	115	-50	4436	22.33	-3.5	0.74
161	SLU 50	114	-40	4435	21.99	-3.5	0.91
161	SLU 51	115	-50	4436	22.33	-3.5	0.74
161	SLU 52	129	-60	5058	27.27	-3.67	0.79
161	SLU 53	128	-43	5058	26.7	-3.67	1.07
161	SLU 54	129	-53	5058	27.04	-3.67	0.9
161	SLU 55	129	-60	5058	27.27	-3.67	0.79
161	SLU 56	128	-43	5058	26.7	-3.67	1.07
161	SLU 57	129	-53	5058	27.04	-3.67	0.9
161	SLU 58	128	-43	5058	26.7	-3.67	1.07
161	SLU 59	129	-53	5058	27.04	-3.67	0.9
161	SLU 60	134	-45	5325	28.72	-3.74	1.14
161	SLU 61	135	-55	5325	29.06	-3.74	0.98
161	SLU 62	134	-45	5325	28.72	-3.74	1.14
161	SLU 63	135	-55	5325	29.06	-3.74	0.98
161	SLU 64	125	-42	4901	25.84	-3.7	1.08
161	SLU 65	126	-58	4902	26.4	-3.7	0.8
161	SLU 66	125	-42	4901	25.84	-3.7	1.08
161	SLU 67	126	-52	4902	26.18	-3.7	0.91
161	SLU 68	126	-58	4902	26.4	-3.7	0.8
161	SLU 69	125	-42	4901	25.84	-3.7	1.08
161	SLU 70	126	-52	4902	26.18	-3.7	0.91
161	SLU 71	125	-42	4901	25.84	-3.7	1.08
161	SLU 72	126	-52	4902	26.18	-3.7	0.91
161	SLU 73	140	-62	5525	31.12	-3.87	0.97
161	SLU 74	139	-45	5524	30.55	-3.87	1.25
161	SLU 75	140	-55	5524	30.89	-3.87	1.08
161	SLU 76	140	-62	5525	31.12	-3.87	0.97

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
161	SLU 77	139	-45	5524	30.55	-3.87	1.25
161	SLU 78	140	-55	5524	30.89	-3.87	1.08
161	SLU 79	139	-45	5524	30.55	-3.87	1.25
161	SLU 80	140	-55	5524	30.89	-3.87	1.08
161	SLU 81	145	-47	5791	32.57	-3.94	1.32
161	SLU 82	146	-57	5791	32.91	-3.94	1.15
161	SLU 83	145	-47	5791	32.57	-3.94	1.32
161	SLU 84	146	-57	5791	32.91	-3.94	1.15
161	SLE RA 1	94	-32	3668	19.03	-2.8	0.79
161	SLE RA 2	94	-43	3668	19.41	-2.8	0.61
161	SLE RA 3	94	-32	3668	19.03	-2.8	0.79
161	SLE RA 4	94	-38	3668	19.25	-2.8	0.68
161	SLE RA 5	94	-43	3668	19.41	-2.8	0.61
161	SLE RA 6	94	-32	3668	19.03	-2.8	0.79
161	SLE RA 7	94	-38	3668	19.25	-2.8	0.68
161	SLE RA 8	94	-32	3668	19.03	-2.8	0.79
161	SLE RA 9	94	-38	3668	19.25	-2.8	0.68
161	SLE RA 10	104	-45	4083	22.55	-2.92	0.72
161	SLE RA 11	103	-34	4083	22.17	-2.91	0.9
161	SLE RA 12	103	-41	4083	22.4	-2.91	0.79
161	SLE RA 13	104	-45	4083	22.55	-2.92	0.72
161	SLE RA 14	103	-34	4083	22.17	-2.91	0.9
161	SLE RA 15	103	-41	4083	22.4	-2.91	0.79
161	SLE RA 16	103	-34	4083	22.17	-2.91	0.9
161	SLE RA 17	103	-41	4083	22.4	-2.91	0.79
161	SLE RA 18	107	-35	4261	23.52	-2.96	0.95
161	SLE RA 19	107	-42	4261	23.74	-2.96	0.84
161	SLE RA 20	107	-35	4261	23.52	-2.96	0.95
161	SLE RA 21	107	-42	4261	23.74	-2.96	0.84
161	SLE FR 1	94	-32	3668	19.03	-2.8	0.79
161	SLE FR 2	94	-34	3668	19.1	-2.8	0.76
161	SLE FR 3	94	-32	3668	19.03	-2.8	0.79
161	SLE FR 4	98	-35	3846	20.45	-2.85	0.8
161	SLE FR 5	98	-33	3846	20.37	-2.85	0.84
161	SLE FR 6	101	-33	3964	21.27	-2.88	0.87
161	SLE QP 1	94	-32	3668	19.03	-2.8	0.79
161	SLE QP 2	98	-33	3846	20.37	-2.85	0.84
161	SLD 1	349	72	3417	14.99	-0.26	0.88
161	SLD 2	351	121	3417	14.77	-0.26	2.23
161	SLD 3	364	-114	3450	22.03	-0.44	-1.98
161	SLD 4	366	-66	3450	21.81	-0.44	-0.63
161	SLD 5	151	264	3668	8.16	-1.8	4.71
161	SLD 6	153	313	3668	7.93	-1.81	6.08
161	SLD 7	199	-357	3777	31.63	-2.39	-4.82
161	SLD 8	201	-308	3777	31.4	-2.4	-3.46
161	SLD 9	-5	243	3915	9.34	-3.3	5.14
161	SLD 10	-3	292	3915	9.12	-3.31	6.51
161	SLD 11	43	-379	4024	32.82	-3.89	-4.4
161	SLD 12	45	-330	4024	32.59	-3.9	-3.03
161	SLD 13	-170	0	4241	18.94	-5.26	2.31
161	SLD 14	-168	48	4241	18.72	-5.26	3.66
161	SLD 15	-155	-186	4274	25.98	-5.43	-0.55
161	SLD 16	-153	-138	4274	25.76	-5.44	0.8
161	SLV 1	669	207	2872	8.08	3.04	0.95
161	SLV 2	674	317	2872	7.57	3.03	4.01
161	SLV 3	702	-218	2947	24.14	2.64	-5.57
161	SLV 4	706	-108	2947	23.64	2.62	-2.52
161	SLV 5	218	645	3440	-7.5	-0.47	9.68
161	SLV 6	222	756	3440	-8.01	-0.48	12.78
161	SLV 7	328	-773	3690	46.05	-1.81	-12.07
161	SLV 8	332	-661	3690	45.54	-1.82	-8.97
161	SLV 9	-136	596	4002	-4.79	-3.88	10.65
161	SLV 10	-132	707	4002	-5.3	-3.89	13.75
161	SLV 11	-26	-822	4252	48.76	-5.22	-11.1
161	SLV 12	-22	-711	4251	48.25	-5.23	-8
161	SLV 13	-511	43	4745	17.11	-8.32	4.2
161	SLV 14	-506	152	4745	16.61	-8.33	7.26
161	SLV 15	-478	-383	4820	33.18	-8.72	-2.33
161	SLV 16	-473	-273	4820	32.67	-8.74	0.73
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
162	SLU 1	92	-26	3619	16.25	-2.81	1.06
162	SLU 2	92	-44	3619	16.86	-2.81	0.77
162	SLU 3	92	-26	3619	16.25	-2.81	1.06
162	SLU 4	92	-37	3619	16.62	-2.81	0.88
162	SLU 5	92	-44	3619	16.86	-2.81	0.77
162	SLU 6	92	-26	3619	16.25	-2.81	1.06
162	SLU 7	92	-37	3619	16.62	-2.81	0.88
162	SLU 8	92	-26	3619	16.25	-2.81	1.06
162	SLU 9	92	-37	3619	16.62	-2.81	0.88
162	SLU 10	106	-46	4247	21.16	-2.99	0.98
162	SLU 11	106	-28	4246	20.55	-2.99	1.27
162	SLU 12	106	-39	4247	20.92	-2.99	1.09
162	SLU 13	106	-46	4247	21.16	-2.99	0.98
162	SLU 14	106	-28	4246	20.55	-2.99	1.27

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
162	SLU 15	106	-39	4247	20.92	-2.99	1.09
162	SLU 16	106	-28	4246	20.55	-2.99	1.27
162	SLU 17	106	-39	4247	20.92	-2.99	1.09
162	SLU 18	112	-29	4515	22.4	-3.07	1.36
162	SLU 19	112	-40	4516	22.76	-3.07	1.19
162	SLU 20	112	-29	4515	22.4	-3.07	1.36
162	SLU 21	112	-40	4516	22.76	-3.07	1.19
162	SLU 22	103	-27	4091	19.74	-3.02	1.26
162	SLU 23	103	-45	4091	20.35	-3.03	0.97
162	SLU 24	103	-27	4091	19.74	-3.02	1.26
162	SLU 25	103	-38	4091	20.1	-3.03	1.09
162	SLU 26	103	-45	4091	20.35	-3.03	0.97
162	SLU 27	103	-27	4091	19.74	-3.02	1.26
162	SLU 28	103	-38	4091	20.1	-3.03	1.09
162	SLU 29	103	-27	4091	19.74	-3.02	1.26
162	SLU 30	103	-38	4091	20.1	-3.03	1.09
162	SLU 31	117	-47	4719	24.65	-3.2	1.18
162	SLU 32	117	-29	4719	24.04	-3.2	1.47
162	SLU 33	117	-40	4719	24.41	-3.2	1.3
162	SLU 34	117	-47	4719	24.65	-3.2	1.18
162	SLU 35	117	-29	4719	24.04	-3.2	1.47
162	SLU 36	117	-40	4719	24.41	-3.2	1.3
162	SLU 37	117	-29	4719	24.04	-3.2	1.47
162	SLU 38	117	-40	4719	24.41	-3.2	1.3
162	SLU 39	122	-30	4988	25.88	-3.28	1.56
162	SLU 40	123	-41	4988	26.25	-3.28	1.39
162	SLU 41	122	-30	4988	25.88	-3.28	1.56
162	SLU 42	123	-41	4988	26.25	-3.28	1.39
162	SLU 43	115	-34	4542	19.93	-3.59	1.3
162	SLU 44	116	-52	4543	20.54	-3.59	1.01
162	SLU 45	115	-34	4542	19.93	-3.59	1.3
162	SLU 46	116	-45	4542	20.3	-3.59	1.13
162	SLU 47	116	-52	4543	20.54	-3.59	1.01
162	SLU 48	115	-34	4542	19.93	-3.59	1.3
162	SLU 49	116	-45	4542	20.3	-3.59	1.13
162	SLU 50	115	-34	4542	19.93	-3.59	1.3
162	SLU 51	116	-45	4542	20.3	-3.59	1.13
162	SLU 52	130	-54	5170	24.85	-3.76	1.23
162	SLU 53	129	-36	5170	24.24	-3.76	1.51
162	SLU 54	130	-47	5170	24.6	-3.76	1.34
162	SLU 55	130	-54	5170	24.85	-3.76	1.23
162	SLU 56	129	-36	5170	24.24	-3.76	1.51
162	SLU 57	130	-47	5170	24.6	-3.76	1.34
162	SLU 58	129	-36	5170	24.24	-3.76	1.51
162	SLU 59	130	-47	5170	24.6	-3.76	1.34
162	SLU 60	135	-37	5439	26.08	-3.84	1.61
162	SLU 61	136	-48	5439	26.45	-3.84	1.43
162	SLU 62	135	-37	5439	26.08	-3.84	1.61
162	SLU 63	136	-48	5439	26.45	-3.84	1.43
162	SLU 64	126	-35	5014	23.42	-3.8	1.51
162	SLU 65	127	-52	5015	24.03	-3.8	1.22
162	SLU 66	126	-35	5014	23.42	-3.8	1.51
162	SLU 67	127	-45	5015	23.79	-3.8	1.33
162	SLU 68	127	-52	5015	24.03	-3.8	1.22
162	SLU 69	126	-35	5014	23.42	-3.8	1.51
162	SLU 70	127	-45	5015	23.79	-3.8	1.33
162	SLU 71	126	-35	5014	23.42	-3.8	1.51
162	SLU 72	127	-45	5015	23.79	-3.8	1.33
162	SLU 73	141	-55	5643	28.33	-3.97	1.43
162	SLU 74	140	-37	5642	27.72	-3.97	1.72
162	SLU 75	141	-48	5642	28.09	-3.97	1.55
162	SLU 76	141	-55	5643	28.33	-3.97	1.43
162	SLU 77	140	-37	5642	27.72	-3.97	1.72
162	SLU 78	141	-48	5642	28.09	-3.97	1.55
162	SLU 79	140	-37	5642	27.72	-3.97	1.72
162	SLU 80	141	-48	5642	28.09	-3.97	1.55
162	SLU 81	146	-38	5911	29.56	-4.05	1.81
162	SLU 82	147	-49	5912	29.93	-4.05	1.64
162	SLU 83	146	-38	5911	29.56	-4.05	1.81
162	SLU 84	147	-49	5912	29.93	-4.05	1.64
162	SLE RA 1	95	-26	3753	17.25	-2.87	1.12
162	SLE RA 2	95	-38	3754	17.66	-2.87	0.92
162	SLE RA 3	95	-26	3753	17.25	-2.87	1.12
162	SLE RA 4	95	-34	3754	17.49	-2.87	1
162	SLE RA 5	95	-38	3754	17.66	-2.87	0.92
162	SLE RA 6	95	-26	3753	17.25	-2.87	1.12
162	SLE RA 7	95	-34	3754	17.49	-2.87	1
162	SLE RA 8	95	-26	3753	17.25	-2.87	1.12
162	SLE RA 9	95	-34	3754	17.49	-2.87	1
162	SLE RA 10	104	-40	4172	20.52	-2.99	1.06
162	SLE RA 11	104	-28	4172	20.12	-2.99	1.26
162	SLE RA 12	104	-35	4172	20.36	-2.99	1.14
162	SLE RA 13	104	-40	4172	20.52	-2.99	1.06
162	SLE RA 14	104	-28	4172	20.12	-2.99	1.26
162	SLE RA 15	104	-35	4172	20.36	-2.99	1.14
162	SLE RA 16	104	-28	4172	20.12	-2.99	1.26
162	SLE RA 17	104	-35	4172	20.36	-2.99	1.14

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
162	SLE RA 18	108	-29	4351	21.35	-3.04	1.32
162	SLE RA 19	108	-36	4352	21.59	-3.04	1.2
162	SLE RA 20	108	-29	4351	21.35	-3.04	1.32
162	SLE RA 21	108	-36	4352	21.59	-3.04	1.2
162	SLE FR 1	95	-26	3753	17.25	-2.87	1.12
162	SLE FR 2	95	-29	3753	17.33	-2.87	1.08
162	SLE FR 3	95	-26	3753	17.25	-2.87	1.12
162	SLE FR 4	99	-29	3933	18.56	-2.92	1.14
162	SLE FR 5	99	-27	3933	18.48	-2.92	1.18
162	SLE FR 6	101	-28	4052	19.3	-2.96	1.22
162	SLE QP 1	95	-26	3753	17.25	-2.87	1.12
162	SLE QP 2	99	-27	3933	18.48	-2.92	1.18
162	SLD 1	350	86	3425	12.96	-0.26	1.24
162	SLD 2	352	142	3425	12.73	-0.27	2.62
162	SLD 3	364	-116	3463	20.47	-0.44	-1.74
162	SLD 4	366	-60	3463	20.24	-0.44	-0.36
162	SLD 5	151	294	3723	5.53	-1.86	5.22
162	SLD 6	153	350	3723	5.29	-1.86	6.62
162	SLD 7	200	-381	3850	30.54	-2.44	-4.71
162	SLD 8	202	-324	3850	30.3	-2.45	-3.32
162	SLD 9	-4	270	4016	6.65	-3.4	5.67
162	SLD 10	-2	327	4016	6.42	-3.41	7.06
162	SLD 11	44	-405	4143	31.66	-3.99	-4.27
162	SLD 12	46	-348	4143	31.43	-3.99	-2.87
162	SLD 13	-169	6	4402	16.72	-5.41	2.71
162	SLD 14	-167	62	4403	16.49	-5.41	4.09
162	SLD 15	-154	-196	4440	24.22	-5.58	-0.27
162	SLD 16	-152	-140	4441	23.99	-5.59	1.11
162	SLV 1	669	232	2779	5.88	3.12	1.34
162	SLV 2	674	358	2779	5.36	3.11	4.46
162	SLV 3	702	-230	2865	23	2.72	-5.46
162	SLV 4	707	-104	2866	22.48	2.71	-2.34
162	SLV 5	218	705	3455	-11.08	-0.5	10.42
162	SLV 6	223	834	3455	-11.61	-0.51	13.59
162	SLV 7	328	-833	3744	45.98	-1.83	-12.25
162	SLV 8	333	-705	3744	45.45	-1.84	-9.08
162	SLV 9	-135	651	4121	-8.5	-4.01	11.43
162	SLV 10	-131	779	4121	-9.03	-4.02	14.6
162	SLV 11	-25	-888	4411	48.56	-5.34	-11.24
162	SLV 12	-21	-760	4411	48.03	-5.35	-8.07
162	SLV 13	-509	50	5000	14.48	-8.56	4.69
162	SLV 14	-505	176	5000	13.96	-8.57	7.81
162	SLV 15	-476	-412	5087	31.6	-8.96	-2.11
162	SLV 16	-472	-286	5087	31.07	-8.97	1.01
162	CRTFP Ux+	0	0	0	0	0	0
162	CRTFP Ux-	0	0	0	0	0	0
162	CRTFP Uy+	0	0	0	0	0	0
162	CRTFP Uy-	0	0	0	0	0	0
163	SLU 1	92	-20	3708	14.61	-3.15	1.2
163	SLU 2	93	-39	3709	15.26	-3.15	0.92
163	SLU 3	92	-20	3708	14.61	-3.15	1.2
163	SLU 4	93	-32	3708	15	-3.15	1.03
163	SLU 5	93	-39	3709	15.26	-3.15	0.92
163	SLU 6	92	-20	3708	14.61	-3.15	1.2
163	SLU 7	93	-32	3708	15	-3.15	1.03
163	SLU 8	92	-20	3708	14.61	-3.15	1.2
163	SLU 9	93	-32	3708	15	-3.15	1.03
163	SLU 10	107	-40	4343	19.15	-3.39	1.15
163	SLU 11	106	-21	4342	18.5	-3.39	1.43
163	SLU 12	107	-33	4342	18.89	-3.39	1.26
163	SLU 13	107	-40	4343	19.15	-3.39	1.15
163	SLU 14	106	-21	4342	18.5	-3.39	1.43
163	SLU 15	107	-33	4342	18.89	-3.39	1.26
163	SLU 16	106	-21	4342	18.5	-3.39	1.43
163	SLU 17	107	-33	4342	18.89	-3.39	1.26
163	SLU 18	112	-21	4614	20.17	-3.49	1.53
163	SLU 19	113	-33	4614	20.56	-3.49	1.36
163	SLU 20	112	-21	4614	20.17	-3.49	1.53
163	SLU 21	113	-33	4614	20.56	-3.49	1.36
163	SLU 22	103	-19	4187	17.73	-3.41	1.42
163	SLU 23	104	-39	4188	18.39	-3.41	1.13
163	SLU 24	103	-19	4187	17.73	-3.41	1.42
163	SLU 25	103	-31	4188	18.12	-3.41	1.25
163	SLU 26	104	-39	4188	18.39	-3.41	1.13
163	SLU 27	103	-19	4187	17.73	-3.41	1.42
163	SLU 28	103	-31	4188	18.12	-3.41	1.25
163	SLU 29	103	-19	4187	17.73	-3.41	1.42
163	SLU 30	103	-31	4188	18.12	-3.41	1.25
163	SLU 31	118	-40	4822	22.28	-3.65	1.36
163	SLU 32	117	-21	4821	21.63	-3.65	1.65
163	SLU 33	117	-32	4822	22.02	-3.65	1.48
163	SLU 34	118	-40	4822	22.28	-3.65	1.36
163	SLU 35	117	-21	4821	21.63	-3.65	1.65
163	SLU 36	117	-32	4822	22.02	-3.65	1.48
163	SLU 37	117	-21	4821	21.63	-3.65	1.65
163	SLU 38	117	-32	4822	22.02	-3.65	1.48
163	SLU 39	123	-21	5093	23.3	-3.75	1.75

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
163	SLU 40	123	-33	5093	23.69	-3.75	1.58
163	SLU 41	123	-21	5093	23.3	-3.75	1.75
163	SLU 42	123	-33	5093	23.69	-3.75	1.58
163	SLU 43	116	-26	4656	17.91	-4.01	1.49
163	SLU 44	117	-45	4657	18.57	-4.01	1.21
163	SLU 45	116	-26	4656	17.91	-4.01	1.49
163	SLU 46	117	-38	4657	18.31	-4.01	1.32
163	SLU 47	117	-45	4657	18.57	-4.01	1.21
163	SLU 48	116	-26	4656	17.91	-4.01	1.49
163	SLU 49	117	-38	4657	18.31	-4.01	1.32
163	SLU 50	116	-26	4656	17.91	-4.01	1.49
163	SLU 51	117	-38	4657	18.31	-4.01	1.32
163	SLU 52	131	-46	5291	22.46	-4.24	1.44
163	SLU 53	130	-27	5290	21.81	-4.24	1.72
163	SLU 54	131	-39	5290	22.2	-4.24	1.55
163	SLU 55	131	-46	5291	22.46	-4.24	1.44
163	SLU 56	130	-27	5290	21.81	-4.24	1.72
163	SLU 57	131	-39	5290	22.2	-4.24	1.55
163	SLU 58	130	-27	5290	21.81	-4.24	1.72
163	SLU 59	131	-39	5290	22.2	-4.24	1.55
163	SLU 60	136	-27	5562	23.48	-4.34	1.82
163	SLU 61	137	-39	5562	23.87	-4.34	1.65
163	SLU 62	136	-27	5562	23.48	-4.34	1.82
163	SLU 63	137	-39	5562	23.87	-4.34	1.65
163	SLU 64	127	-26	5135	21.04	-4.27	1.7
163	SLU 65	128	-45	5136	21.7	-4.27	1.42
163	SLU 66	127	-26	5135	21.04	-4.27	1.7
163	SLU 67	127	-37	5136	21.43	-4.27	1.53
163	SLU 68	128	-45	5136	21.7	-4.27	1.42
163	SLU 69	127	-26	5135	21.04	-4.27	1.7
163	SLU 70	127	-37	5136	21.43	-4.27	1.53
163	SLU 71	127	-26	5135	21.04	-4.27	1.7
163	SLU 72	127	-37	5136	21.43	-4.27	1.53
163	SLU 73	142	-46	5770	25.59	-4.5	1.65
163	SLU 74	141	-27	5769	24.94	-4.5	1.93
163	SLU 75	141	-38	5770	25.33	-4.5	1.76
163	SLU 76	142	-46	5770	25.59	-4.5	1.65
163	SLU 77	141	-27	5769	24.94	-4.5	1.93
163	SLU 78	141	-38	5770	25.33	-4.5	1.76
163	SLU 79	141	-27	5769	24.94	-4.5	1.93
163	SLU 80	141	-38	5770	25.33	-4.5	1.76
163	SLU 81	147	-27	6041	26.6	-4.6	2.03
163	SLU 82	147	-39	6041	27	-4.6	1.86
163	SLU 83	147	-27	6041	26.6	-4.6	2.03
163	SLU 84	147	-39	6041	27	-4.6	1.86
163	SLE RA 1	95	-20	3845	15.5	-3.22	1.26
163	SLE RA 2	96	-33	3845	15.93	-3.23	1.07
163	SLE RA 3	95	-20	3845	15.5	-3.22	1.26
163	SLE RA 4	96	-28	3845	15.76	-3.22	1.15
163	SLE RA 5	96	-33	3845	15.93	-3.23	1.07
163	SLE RA 6	95	-20	3845	15.5	-3.22	1.26
163	SLE RA 7	96	-28	3845	15.76	-3.22	1.15
163	SLE RA 8	95	-20	3845	15.5	-3.22	1.26
163	SLE RA 9	96	-28	3845	15.76	-3.22	1.15
163	SLE RA 10	105	-33	4268	18.53	-3.38	1.23
163	SLE RA 11	105	-20	4268	18.09	-3.38	1.42
163	SLE RA 12	105	-28	4268	18.36	-3.38	1.3
163	SLE RA 13	105	-33	4268	18.53	-3.38	1.23
163	SLE RA 14	105	-20	4268	18.09	-3.38	1.42
163	SLE RA 15	105	-28	4268	18.36	-3.38	1.3
163	SLE RA 16	105	-20	4268	18.09	-3.38	1.42
163	SLE RA 17	105	-28	4268	18.36	-3.38	1.3
163	SLE RA 18	109	-21	4449	19.21	-3.45	1.48
163	SLE RA 19	109	-29	4449	19.47	-3.45	1.37
163	SLE RA 20	109	-21	4449	19.21	-3.45	1.48
163	SLE RA 21	109	-29	4449	19.47	-3.45	1.37
163	SLE FR 1	95	-20	3845	15.5	-3.22	1.26
163	SLE FR 2	95	-22	3845	15.59	-3.22	1.23
163	SLE FR 3	95	-20	3845	15.5	-3.22	1.26
163	SLE FR 4	99	-23	4026	16.7	-3.29	1.29
163	SLE FR 5	99	-20	4026	16.61	-3.29	1.33
163	SLE FR 6	102	-20	4147	17.35	-3.34	1.37
163	SLE QP 1	95	-20	3845	15.5	-3.22	1.26
163	SLE QP 2	99	-20	4026	16.61	-3.29	1.33
163	SLD 1	350	102	3436	10.95	-0.51	1.38
163	SLD 2	352	165	3436	10.71	-0.52	2.77
163	SLD 3	365	-117	3480	18.91	-0.69	-1.56
163	SLD 4	367	-54	3480	18.68	-0.7	-0.18
163	SLD 5	152	325	3783	2.91	-2.18	5.32
163	SLD 6	154	389	3784	2.67	-2.19	6.72
163	SLD 7	200	-403	3928	29.47	-2.79	-4.5
163	SLD 8	202	-339	3928	29.23	-2.79	-3.1
163	SLD 9	-3	299	4124	3.99	-3.79	5.76
163	SLD 10	-1	363	4124	3.75	-3.8	7.16
163	SLD 11	45	-429	4269	30.55	-4.4	-4.07
163	SLD 12	47	-365	4269	30.31	-4.4	-2.66
163	SLD 13	-168	14	4573	14.55	-5.89	2.84

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
163	SLD 14	-166	77	4573	14.31	-5.89	4.22
163	SLD 15	-153	-205	4616	22.51	-6.07	-0.11
163	SLD 16	-151	-142	4616	22.27	-6.07	1.28
163	SLV 1	669	258	2685	3.68	3.03	1.46
163	SLV 2	673	401	2686	3.14	3.02	4.6
163	SLV 3	702	-241	2784	21.85	2.61	-5.26
163	SLV 4	706	-98	2785	21.31	2.6	-2.12
163	SLV 5	219	768	3474	-14.64	-0.76	10.44
163	SLV 6	223	913	3474	-15.19	-0.78	13.63
163	SLV 7	329	-893	3803	45.94	-2.14	-11.96
163	SLV 8	333	-748	3804	45.39	-2.16	-8.78
163	SLV 9	-134	708	4248	-12.17	-4.43	11.44
163	SLV 10	-130	853	4249	-12.72	-4.44	14.62
163	SLV 11	-24	-953	4578	48.41	-5.81	-10.97
163	SLV 12	-20	-808	4579	47.86	-5.82	-7.78
163	SLV 13	-508	58	5268	11.91	-9.19	4.78
163	SLV 14	-503	201	5268	11.37	-9.2	7.92
163	SLV 15	-475	-441	5367	30.09	-9.6	-1.94
163	SLV 16	-470	-298	5367	29.54	-9.61	1.2
163	CRTFP Ux+	0	0	0	0	0	0
163	CRTFP Ux-	0	0	0	0	0	0
163	CRTFP Uy+	0	0	0	0	0	0
163	CRTFP Uy-	0	0	0	0	0	0
164	SLU 1	80	-12	3278	11.37	89.03	1.31
164	SLU 2	80	-30	3278	11.97	89.04	1.59
164	SLU 3	80	-12	3278	11.37	89.03	1.31
164	SLU 4	80	-22	3278	11.73	89.03	1.48
164	SLU 5	80	-30	3278	11.97	89.04	1.59
164	SLU 6	80	-12	3278	11.37	89.03	1.31
164	SLU 7	80	-22	3278	11.73	89.03	1.48
164	SLU 8	80	-12	3278	11.37	89.03	1.31
164	SLU 9	80	-22	3278	11.73	89.03	1.48
164	SLU 10	92	-30	3832	15.03	104.24	1.77
164	SLU 11	92	-12	3831	14.43	104.23	1.49
164	SLU 12	92	-22	3831	14.79	104.24	1.66
164	SLU 13	92	-30	3832	15.03	104.24	1.77
164	SLU 14	92	-12	3831	14.43	104.23	1.49
164	SLU 15	92	-22	3831	14.79	104.24	1.66
164	SLU 16	92	-12	3831	14.43	104.23	1.49
164	SLU 17	92	-22	3831	14.79	104.24	1.66
164	SLU 18	97	-12	4068	15.74	110.74	1.56
164	SLU 19	97	-22	4069	16.1	110.75	1.74
164	SLU 20	97	-12	4068	15.74	110.74	1.56
164	SLU 21	97	-22	4069	16.1	110.75	1.74
164	SLU 22	89	-10	3698	13.8	100.52	1.44
164	SLU 23	90	-28	3699	14.4	100.53	1.73
164	SLU 24	89	-10	3698	13.8	100.52	1.44
164	SLU 25	89	-21	3699	14.16	100.53	1.61
164	SLU 26	90	-28	3699	14.4	100.53	1.73
164	SLU 27	89	-10	3698	13.8	100.52	1.44
164	SLU 28	89	-21	3699	14.16	100.53	1.61
164	SLU 29	89	-10	3698	13.8	100.52	1.44
164	SLU 30	89	-21	3699	14.16	100.53	1.61
164	SLU 31	102	-28	4252	17.46	115.74	1.91
164	SLU 32	101	-10	4251	16.86	115.72	1.62
164	SLU 33	101	-21	4252	17.22	115.73	1.79
164	SLU 34	102	-28	4252	17.46	115.74	1.91
164	SLU 35	101	-10	4251	16.86	115.72	1.62
164	SLU 36	101	-21	4252	17.22	115.73	1.79
164	SLU 37	101	-10	4251	16.86	115.72	1.62
164	SLU 38	101	-21	4252	17.22	115.73	1.79
164	SLU 39	106	-10	4489	18.17	122.24	1.7
164	SLU 40	107	-21	4489	18.53	122.25	1.87
164	SLU 41	106	-10	4489	18.17	122.24	1.7
164	SLU 42	107	-21	4489	18.53	122.25	1.87
164	SLU 43	100	-16	4117	13.95	111.79	1.65
164	SLU 44	101	-34	4118	14.55	111.8	1.94
164	SLU 45	100	-16	4117	13.95	111.79	1.65
164	SLU 46	101	-26	4118	14.31	111.8	1.82
164	SLU 47	101	-34	4118	14.55	111.8	1.94
164	SLU 48	100	-16	4117	13.95	111.79	1.65
164	SLU 49	101	-26	4118	14.31	111.8	1.82
164	SLU 50	100	-16	4117	13.95	111.79	1.65
164	SLU 51	101	-26	4118	14.31	111.8	1.82
164	SLU 52	113	-34	4671	17.61	127.01	2.12
164	SLU 53	113	-16	4671	17	127	1.83
164	SLU 54	113	-26	4671	17.37	127	2
164	SLU 55	113	-34	4671	17.61	127.01	2.12
164	SLU 56	113	-16	4671	17	127	1.83
164	SLU 57	113	-26	4671	17.37	127	2
164	SLU 58	113	-16	4671	17	127	1.83
164	SLU 59	113	-26	4671	17.37	127	2
164	SLU 60	118	-16	4908	18.31	133.51	1.91
164	SLU 61	118	-26	4908	18.68	133.52	2.08
164	SLU 62	118	-16	4908	18.31	133.51	1.91
164	SLU 63	118	-26	4908	18.68	133.52	2.08
164	SLU 64	110	-14	4538	16.38	123.29	1.79

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
164	SLU 65	110	-32	4538	16.98	123.3	2.07
164	SLU 66	110	-14	4538	16.38	123.29	1.79
164	SLU 67	110	-25	4538	16.74	123.29	1.96
164	SLU 68	110	-32	4538	16.98	123.3	2.07
164	SLU 69	110	-14	4538	16.38	123.29	1.79
164	SLU 70	110	-25	4538	16.74	123.29	1.96
164	SLU 71	110	-14	4538	16.38	123.29	1.79
164	SLU 72	110	-25	4538	16.74	123.29	1.96
164	SLU 73	122	-32	5091	20.04	138.5	2.25
164	SLU 74	122	-14	5091	19.43	138.49	1.97
164	SLU 75	122	-25	5091	19.79	138.5	2.14
164	SLU 76	122	-32	5091	20.04	138.5	2.25
164	SLU 77	122	-14	5091	19.43	138.49	1.97
164	SLU 78	122	-25	5091	19.79	138.5	2.14
164	SLU 79	122	-14	5091	19.43	138.49	1.97
164	SLU 80	122	-25	5091	19.79	138.5	2.14
164	SLU 81	127	-14	5328	20.74	145.01	2.04
164	SLU 82	127	-25	5328	21.11	145.01	2.22
164	SLU 83	127	-14	5328	20.74	145.01	2.04
164	SLU 84	127	-25	5328	21.11	145.01	2.22
164	SLE RA 1	82	-11	3398	12.06	92.31	1.34
164	SLE RA 2	83	-23	3398	12.46	92.32	1.54
164	SLE RA 3	82	-11	3398	12.06	92.31	1.34
164	SLE RA 4	83	-19	3398	12.3	92.31	1.46
164	SLE RA 5	83	-23	3398	12.46	92.32	1.54
164	SLE RA 6	82	-11	3398	12.06	92.31	1.34
164	SLE RA 7	83	-19	3398	12.3	92.31	1.46
164	SLE RA 8	82	-11	3398	12.06	92.31	1.34
164	SLE RA 9	83	-19	3398	12.3	92.31	1.46
164	SLE RA 10	91	-23	3767	14.5	102.45	1.66
164	SLE RA 11	90	-11	3767	14.1	102.45	1.46
164	SLE RA 12	91	-18	3767	14.34	102.45	1.58
164	SLE RA 13	91	-23	3767	14.5	102.45	1.66
164	SLE RA 14	90	-11	3767	14.1	102.45	1.46
164	SLE RA 15	91	-18	3767	14.34	102.45	1.58
164	SLE RA 16	90	-11	3767	14.1	102.45	1.46
164	SLE RA 17	91	-18	3767	14.34	102.45	1.58
164	SLE RA 18	94	-11	3925	14.98	106.79	1.52
164	SLE RA 19	94	-18	3925	15.22	106.79	1.63
164	SLE RA 20	94	-11	3925	14.98	106.79	1.52
164	SLE RA 21	94	-18	3925	15.22	106.79	1.63
164	SLE FR 1	82	-11	3398	12.06	92.31	1.34
164	SLE FR 2	83	-14	3398	12.14	92.31	1.38
164	SLE FR 3	82	-11	3398	12.06	92.31	1.34
164	SLE FR 4	86	-14	3556	13.02	96.66	1.43
164	SLE FR 5	86	-11	3556	12.94	96.65	1.4
164	SLE FR 6	88	-11	3662	13.52	99.55	1.43
164	SLE QP 1	82	-11	3398	12.06	92.31	1.34
164	SLE QP 2	86	-11	3556	12.94	96.65	1.4
164	SLD 1	302	100	2978	7.9	82.42	-0.59
164	SLD 2	303	160	2979	7.69	82.43	-1.15
164	SLD 3	314	-101	3020	15.17	83.47	2.75
164	SLD 4	316	-41	3021	14.95	83.47	2.19
164	SLD 5	131	305	3319	0.48	90.8	-4.07
164	SLD 6	133	366	3320	0.26	90.8	-4.64
164	SLD 7	173	-364	3459	24.71	94.28	7.08
164	SLD 8	174	-303	3459	24.49	94.29	6.51
164	SLD 9	-2	280	3653	1.38	99.02	-3.72
164	SLD 10	-1	342	3654	1.17	99.03	-4.29
164	SLD 11	39	-389	3793	25.61	102.5	7.43
164	SLD 12	41	-328	3793	25.4	102.51	6.87
164	SLD 13	-144	18	4092	10.92	109.83	0.6
164	SLD 14	-142	78	4092	10.71	109.84	0.04
164	SLD 15	-131	-183	4133	18.19	110.88	3.94
164	SLD 16	-130	-122	4134	17.97	110.88	3.38
164	SLV 1	576	242	2243	1.43	64.31	-3.14
164	SLV 2	580	379	2244	0.95	64.32	-4.41
164	SLV 3	604	-216	2339	18.01	66.69	4.49
164	SLV 4	608	-79	2339	17.53	66.7	3.22
164	SLV 5	189	710	3017	-15.49	83.33	-11.08
164	SLV 6	192	849	3018	-15.98	83.34	-12.37
164	SLV 7	283	-816	3335	39.78	91.28	14.35
164	SLV 8	287	-677	3336	39.29	91.29	13.06
164	SLV 9	-115	654	3776	-13.41	102.02	-10.27
164	SLV 10	-111	793	3777	-13.91	102.03	-11.56
164	SLV 11	-21	-872	4094	41.86	109.97	15.16
164	SLV 12	-17	-733	4095	41.36	109.98	13.87
164	SLV 13	-436	56	4773	8.35	126.6	-0.43
164	SLV 14	-432	193	4774	7.86	126.62	-1.7
164	SLV 15	-408	-402	4868	24.93	128.99	7.2
164	SLV 16	-404	-265	4869	24.44	129	5.93
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
166	SLU 1	117	-12	4890	6.41	889.43	3.24
166	SLU 2	117	-40	4890	6.93	889.54	8.22

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
166	SLU 3	117	-12	4890	6.41	889.43	3.24
166	SLU 4	117	-29	4890	6.72	889.5	6.23
166	SLU 5	117	-40	4890	6.93	889.54	8.22
166	SLU 6	117	-12	4890	6.41	889.43	3.24
166	SLU 7	117	-29	4890	6.72	889.5	6.23
166	SLU 8	117	-12	4890	6.41	889.43	3.24
166	SLU 9	117	-29	4890	6.72	889.5	6.23
166	SLU 10	135	-39	5709	8.94	1039.63	8.19
166	SLU 11	134	-11	5709	8.42	1039.52	3.21
166	SLU 12	135	-28	5709	8.73	1039.59	6.2
166	SLU 13	135	-39	5709	8.94	1039.63	8.19
166	SLU 14	134	-11	5709	8.42	1039.52	3.21
166	SLU 15	135	-28	5709	8.73	1039.59	6.2
166	SLU 16	134	-11	5709	8.42	1039.52	3.21
166	SLU 17	135	-28	5709	8.73	1039.59	6.2
166	SLU 18	142	-11	6060	9.28	1103.84	3.2
166	SLU 19	142	-27	6060	9.59	1103.91	6.19
166	SLU 20	142	-11	6060	9.28	1103.84	3.2
166	SLU 21	142	-27	6060	9.59	1103.91	6.19
166	SLU 22	130	-10	5514	8.01	1003.36	2.9
166	SLU 23	131	-37	5514	8.53	1003.47	7.87
166	SLU 24	130	-10	5514	8.01	1003.36	2.9
166	SLU 25	131	-26	5514	8.32	1003.43	5.88
166	SLU 26	131	-37	5514	8.53	1003.47	7.87
166	SLU 27	130	-10	5514	8.01	1003.36	2.9
166	SLU 28	131	-26	5514	8.32	1003.43	5.88
166	SLU 29	130	-10	5514	8.01	1003.36	2.9
166	SLU 30	131	-26	5514	8.32	1003.43	5.88
166	SLU 31	149	-36	6333	10.54	1153.56	7.85
166	SLU 32	148	-9	6333	10.02	1153.45	2.87
166	SLU 33	148	-25	6333	10.33	1153.51	5.86
166	SLU 34	149	-36	6333	10.54	1153.56	7.85
166	SLU 35	148	-9	6333	10.02	1153.45	2.87
166	SLU 36	148	-25	6333	10.33	1153.51	5.86
166	SLU 37	148	-9	6333	10.02	1153.45	2.87
166	SLU 38	148	-25	6333	10.33	1153.51	5.86
166	SLU 39	155	-8	6684	10.88	1217.77	2.86
166	SLU 40	156	-24	6684	11.19	1217.84	5.85
166	SLU 41	155	-8	6684	10.88	1217.77	2.86
166	SLU 42	156	-24	6684	11.19	1217.84	5.85
166	SLU 43	147	-17	6143	7.78	1117.2	4.33
166	SLU 44	148	-44	6143	8.31	1117.31	9.31
166	SLU 45	147	-17	6143	7.78	1117.2	4.33
166	SLU 46	147	-33	6143	8.1	1117.27	7.31
166	SLU 47	148	-44	6143	8.31	1117.31	9.31
166	SLU 48	147	-17	6143	7.78	1117.2	4.33
166	SLU 49	147	-33	6143	8.1	1117.27	7.31
166	SLU 50	147	-17	6143	7.78	1117.2	4.33
166	SLU 51	147	-33	6143	8.1	1117.27	7.31
166	SLU 52	165	-43	6962	10.31	1267.4	9.28
166	SLU 53	165	-16	6962	9.79	1267.29	4.3
166	SLU 54	165	-32	6962	10.1	1267.35	7.29
166	SLU 55	165	-43	6962	10.31	1267.4	9.28
166	SLU 56	165	-16	6962	9.79	1267.29	4.3
166	SLU 57	165	-32	6962	10.1	1267.35	7.29
166	SLU 58	165	-16	6962	9.79	1267.29	4.3
166	SLU 59	165	-32	6962	10.1	1267.35	7.29
166	SLU 60	172	-15	7313	10.65	1331.61	4.29
166	SLU 61	172	-32	7313	10.96	1331.68	7.28
166	SLU 62	172	-15	7313	10.65	1331.61	4.29
166	SLU 63	172	-32	7313	10.96	1331.68	7.28
166	SLU 64	161	-14	6767	9.38	1231.13	3.98
166	SLU 65	161	-41	6767	9.91	1231.24	8.96
166	SLU 66	161	-14	6767	9.38	1231.13	3.98
166	SLU 67	161	-31	6767	9.7	1231.19	6.97
166	SLU 68	161	-41	6767	9.91	1231.24	8.96
166	SLU 69	161	-14	6767	9.38	1231.13	3.98
166	SLU 70	161	-31	6767	9.7	1231.19	6.97
166	SLU 71	161	-14	6767	9.38	1231.13	3.98
166	SLU 72	161	-31	6767	9.7	1231.19	6.97
166	SLU 73	179	-40	7586	11.91	1381.33	8.94
166	SLU 74	178	-13	7586	11.39	1381.22	3.96
166	SLU 75	179	-29	7586	11.7	1381.28	6.95
166	SLU 76	179	-40	7586	11.91	1381.33	8.94
166	SLU 77	178	-13	7586	11.39	1381.22	3.96
166	SLU 78	179	-29	7586	11.7	1381.28	6.95
166	SLU 79	178	-13	7586	11.39	1381.22	3.96
166	SLU 80	179	-29	7586	11.7	1381.28	6.95
166	SLU 81	186	-13	7937	12.25	1445.54	3.95
166	SLU 82	186	-29	7937	12.56	1445.61	6.94
166	SLU 83	186	-13	7937	12.25	1445.54	3.95
166	SLU 84	186	-29	7937	12.56	1445.61	6.94
166	SLE RA 1	121	-11	5068	6.87	921.98	3.14
166	SLE RA 2	121	-30	5069	7.21	922.06	6.46
166	SLE RA 3	121	-11	5068	6.87	921.98	3.14
166	SLE RA 4	121	-22	5068	7.07	922.03	5.13
166	SLE RA 5	121	-30	5069	7.21	922.06	6.46

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
166	SLE RA 6	121	-11	5068	6.87	921.98	3.14
166	SLE RA 7	121	-22	5068	7.07	922.03	5.13
166	SLE RA 8	121	-11	5068	6.87	921.98	3.14
166	SLE RA 9	121	-22	5068	7.07	922.03	5.13
166	SLE RA 10	133	-29	5614	8.55	1022.12	6.44
166	SLE RA 11	132	-11	5614	8.2	1022.04	3.12
166	SLE RA 12	133	-22	5614	8.41	1022.09	5.12
166	SLE RA 13	133	-29	5614	8.55	1022.12	6.44
166	SLE RA 14	132	-11	5614	8.2	1022.04	3.12
166	SLE RA 15	133	-22	5614	8.41	1022.09	5.12
166	SLE RA 16	132	-11	5614	8.2	1022.04	3.12
166	SLE RA 17	133	-22	5614	8.41	1022.09	5.12
166	SLE RA 18	137	-10	5848	8.78	1064.92	3.12
166	SLE RA 19	138	-21	5848	8.99	1064.97	5.11
166	SLE RA 20	137	-10	5848	8.78	1064.92	3.12
166	SLE RA 21	138	-21	5848	8.99	1064.97	5.11
166	SLE FR 1	121	-11	5068	6.87	921.98	3.14
166	SLE FR 2	121	-15	5068	6.93	922	3.8
166	SLE FR 3	121	-11	5068	6.87	921.98	3.14
166	SLE FR 4	126	-15	5302	7.51	964.88	3.8
166	SLE FR 5	126	-11	5302	7.44	964.86	3.13
166	SLE FR 6	129	-11	5458	7.82	993.45	3.13
166	SLE QP 1	121	-11	5068	6.87	921.98	3.14
166	SLE QP 2	126	-11	5302	7.44	964.86	3.13
166	SLD 1	441	157	4388	3.36	810.47	-4.97
166	SLD 2	443	251	4388	3.18	810.55	-21.6
166	SLD 3	459	-148	4453	9.65	821.69	50.57
166	SLD 4	461	-54	4454	9.47	821.77	33.95
166	SLD 5	192	468	4928	-3.26	901.5	-77.6
166	SLD 6	194	563	4928	-3.45	901.58	-94.48
166	SLD 7	252	-548	5147	17.71	938.9	107.56
166	SLD 8	255	-453	5147	17.52	938.98	90.68
166	SLD 9	-4	430	5457	-2.64	990.75	-84.41
166	SLD 10	-1	526	5457	-2.83	990.83	-101.29
166	SLD 11	57	-585	5676	18.32	1028.15	100.74
166	SLD 12	60	-490	5676	18.14	1028.23	83.87
166	SLD 13	-210	32	6150	5.41	1107.96	-27.68
166	SLD 14	-208	126	6151	5.22	1108.04	-44.31
166	SLD 15	-192	-273	6216	11.7	1119.18	27.86
166	SLD 16	-189	-179	6217	11.52	1119.26	11.24
166	SLV 1	841	372	3223	-1.87	613.92	-15.48
166	SLV 2	847	585	3225	-2.29	614.1	-53.18
166	SLV 3	883	-323	3373	12.48	639.51	111.19
166	SLV 4	888	-110	3375	12.06	639.7	73.49
166	SLV 5	276	1082	4451	-16.97	820.7	-181.1
166	SLV 6	281	1298	4452	-17.39	820.89	-219.35
166	SLV 7	413	-1235	4950	30.86	906.01	241.14
166	SLV 8	419	-1019	4951	30.44	906.2	202.89
166	SLV 9	-168	997	5653	-15.56	1023.53	-196.62
166	SLV 10	-162	1212	5654	-15.98	1023.72	-234.88
166	SLV 11	-30	-1320	6152	32.27	1108.84	225.62
166	SLV 12	-25	-1104	6153	31.84	1109.03	187.36
166	SLV 13	-637	88	7230	2.82	1290.03	-67.23
166	SLV 14	-632	300	7231	2.4	1290.22	-104.93
166	SLV 15	-596	-607	7379	17.17	1315.62	59.45
166	SLV 16	-590	-395	7381	16.75	1315.81	21.75
166	CRTFP Ux+	0	0	0	0	0.01	0
166	CRTFP Ux-	0	0	0	0	-0.01	0
166	CRTFP Uy+	0	0	0	0	0	0
166	CRTFP Uy-	0	0	0	0	0	0
190	SLU 1	12	-23	1539	42.36	-306.74	-6.11
190	SLU 2	12	-32	1539	42.39	-306.4	-8.27
190	SLU 3	12	-23	1539	42.36	-306.74	-6.11
190	SLU 4	12	-28	1539	42.38	-306.53	-7.4
190	SLU 5	12	-32	1539	42.39	-306.4	-8.27
190	SLU 6	12	-23	1539	42.36	-306.74	-6.11
190	SLU 7	12	-28	1539	42.38	-306.53	-7.4
190	SLU 8	12	-23	1539	42.36	-306.74	-6.11
190	SLU 9	12	-28	1539	42.38	-306.53	-7.4
190	SLU 10	15	-36	1827	50.29	-361.93	-9.42
190	SLU 11	15	-28	1827	50.26	-362.27	-7.26
190	SLU 12	15	-33	1827	50.28	-362.07	-8.55
190	SLU 13	15	-36	1827	50.29	-361.93	-9.42
190	SLU 14	15	-28	1827	50.26	-362.27	-7.26
190	SLU 15	15	-33	1827	50.28	-362.07	-8.55
190	SLU 16	15	-28	1827	50.26	-362.27	-7.26
190	SLU 17	15	-33	1827	50.28	-362.07	-8.55
190	SLU 18	16	-29	1950	53.65	-386.07	-7.75
190	SLU 19	16	-35	1950	53.66	-385.87	-9.05
190	SLU 20	16	-29	1950	53.65	-386.07	-7.75
190	SLU 21	16	-35	1950	53.66	-385.87	-9.05
190	SLU 22	14	-25	1752	48.22	-347.96	-6.69
190	SLU 23	14	-34	1752	48.24	-347.62	-8.84
190	SLU 24	14	-25	1752	48.22	-347.96	-6.69
190	SLU 25	14	-31	1752	48.24	-347.75	-7.98
190	SLU 26	14	-34	1752	48.24	-347.62	-8.84
190	SLU 27	14	-25	1752	48.22	-347.96	-6.69

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
190	SLU 28	14	-31	1752	48.24	-347.75	-7.98
190	SLU 29	14	-25	1752	48.22	-347.96	-6.69
190	SLU 30	14	-31	1752	48.24	-347.75	-7.98
190	SLU 31	17	-38	2040	56.14	-403.15	-9.99
190	SLU 32	17	-30	2040	56.12	-403.49	-7.84
190	SLU 33	17	-35	2040	56.13	-403.28	-9.13
190	SLU 34	17	-38	2040	56.14	-403.15	-9.99
190	SLU 35	17	-30	2040	56.12	-403.49	-7.84
190	SLU 36	17	-35	2040	56.13	-403.28	-9.13
190	SLU 37	17	-30	2040	56.12	-403.49	-7.84
190	SLU 38	17	-35	2040	56.13	-403.28	-9.13
190	SLU 39	18	-32	2163	59.51	-427.29	-8.33
190	SLU 40	18	-37	2163	59.52	-427.08	-9.62
190	SLU 41	18	-32	2163	59.51	-427.29	-8.33
190	SLU 42	18	-37	2163	59.52	-427.08	-9.62
190	SLU 43	15	-30	1928	53.07	-384.63	-7.74
190	SLU 44	15	-38	1928	53.09	-384.29	-9.9
190	SLU 45	15	-30	1928	53.07	-384.63	-7.74
190	SLU 46	15	-35	1928	53.08	-384.42	-9.04
190	SLU 47	15	-38	1928	53.09	-384.29	-9.9
190	SLU 48	15	-30	1928	53.07	-384.63	-7.74
190	SLU 49	15	-35	1928	53.08	-384.42	-9.04
190	SLU 50	15	-30	1928	53.07	-384.63	-7.74
190	SLU 51	15	-35	1928	53.08	-384.42	-9.04
190	SLU 52	18	-43	2215	60.99	-439.82	-11.05
190	SLU 53	18	-34	2215	60.96	-440.16	-8.89
190	SLU 54	18	-39	2215	60.98	-439.96	-10.19
190	SLU 55	18	-43	2215	60.99	-439.82	-11.05
190	SLU 56	18	-34	2215	60.96	-440.16	-8.89
190	SLU 57	18	-39	2215	60.98	-439.96	-10.19
190	SLU 58	18	-34	2215	60.96	-440.16	-8.89
190	SLU 59	18	-39	2215	60.98	-439.96	-10.19
190	SLU 60	19	-36	2338	64.35	-463.96	-9.39
190	SLU 61	19	-41	2338	64.36	-463.76	-10.68
190	SLU 62	19	-36	2338	64.35	-463.96	-9.39
190	SLU 63	19	-41	2338	64.36	-463.76	-10.68
190	SLU 64	17	-32	2141	58.92	-425.84	-8.32
190	SLU 65	17	-40	2141	58.95	-425.51	-10.48
190	SLU 66	17	-32	2141	58.92	-425.84	-8.32
190	SLU 67	17	-37	2141	58.94	-425.64	-9.62
190	SLU 68	17	-40	2141	58.95	-425.51	-10.48
190	SLU 69	17	-32	2141	58.92	-425.84	-8.32
190	SLU 70	17	-37	2141	58.94	-425.64	-9.62
190	SLU 71	17	-32	2141	58.92	-425.84	-8.32
190	SLU 72	17	-37	2141	58.94	-425.64	-9.62
190	SLU 73	20	-45	2428	66.84	-481.04	-11.63
190	SLU 74	20	-36	2428	66.82	-481.38	-9.47
190	SLU 75	20	-41	2428	66.84	-481.17	-10.77
190	SLU 76	20	-45	2428	66.84	-481.04	-11.63
190	SLU 77	20	-36	2428	66.82	-481.38	-9.47
190	SLU 78	20	-41	2428	66.84	-481.17	-10.77
190	SLU 79	20	-36	2428	66.82	-481.38	-9.47
190	SLU 80	20	-41	2428	66.84	-481.17	-10.77
190	SLU 81	21	-38	2551	70.21	-505.18	-9.96
190	SLU 82	21	-43	2551	70.22	-504.97	-11.26
190	SLU 83	21	-38	2551	70.21	-505.18	-9.96
190	SLU 84	21	-43	2551	70.22	-504.97	-11.26
190	SLE RA 1	13	-24	1600	44.04	-318.51	-6.27
190	SLE RA 2	13	-30	1600	44.05	-318.29	-7.71
190	SLE RA 3	13	-24	1600	44.04	-318.51	-6.27
190	SLE RA 4	13	-27	1600	44.05	-318.38	-7.14
190	SLE RA 5	13	-30	1600	44.05	-318.29	-7.71
190	SLE RA 6	13	-24	1600	44.04	-318.51	-6.27
190	SLE RA 7	13	-27	1600	44.05	-318.38	-7.14
190	SLE RA 8	13	-24	1600	44.04	-318.51	-6.27
190	SLE RA 9	13	-27	1600	44.05	-318.38	-7.14
190	SLE RA 10	15	-33	1792	49.32	-355.31	-8.48
190	SLE RA 11	15	-27	1792	49.3	-355.54	-7.04
190	SLE RA 12	15	-30	1792	49.31	-355.4	-7.9
190	SLE RA 13	15	-33	1792	49.32	-355.31	-8.48
190	SLE RA 14	15	-27	1792	49.3	-355.54	-7.04
190	SLE RA 15	15	-30	1792	49.31	-355.4	-7.9
190	SLE RA 16	15	-27	1792	49.3	-355.54	-7.04
190	SLE RA 17	15	-30	1792	49.31	-355.4	-7.9
190	SLE RA 18	15	-28	1874	51.56	-371.4	-7.37
190	SLE RA 19	15	-31	1874	51.57	-371.27	-8.23
190	SLE RA 20	15	-28	1874	51.56	-371.4	-7.37
190	SLE RA 21	15	-31	1874	51.57	-371.27	-8.23
190	SLE FR 1	13	-24	1600	44.04	-318.51	-6.27
190	SLE FR 2	13	-25	1600	44.04	-318.47	-6.56
190	SLE FR 3	13	-24	1600	44.04	-318.51	-6.27
190	SLE FR 4	14	-26	1682	46.3	-334.34	-6.89
190	SLE FR 5	14	-25	1682	46.3	-334.38	-6.6
190	SLE FR 6	14	-26	1737	47.8	-344.96	-6.82
190	SLE QP 1	13	-24	1600	44.04	-318.51	-6.27
190	SLE QP 2	14	-25	1682	46.3	-334.38	-6.6
190	SLD 1	123	54	1917	52.69	-382.69	4.71

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
190	SLD 2	121	24	1918	52.71	-382.69	-2.86
190	SLD 3	115	-45	1932	53.09	-378.03	-20.01
190	SLD 4	113	-76	1932	53.11	-378.03	-27.58
190	SLD 5	59	161	1731	47.59	-355.94	36.99
190	SLD 6	57	130	1732	47.61	-355.94	29.31
190	SLD 7	33	-171	1778	48.94	-340.41	-45.42
190	SLD 8	31	-203	1779	48.97	-340.41	-53.1
190	SLD 9	-4	152	1586	43.62	-328.35	39.89
190	SLD 10	-6	121	1586	43.65	-328.35	32.21
190	SLD 11	-29	-180	1633	44.98	-312.82	-42.52
190	SLD 12	-32	-211	1633	45	-312.83	-50.2
190	SLD 13	-86	26	1432	39.48	-290.73	14.37
190	SLD 14	-88	-5	1433	39.5	-290.73	6.81
190	SLD 15	-94	-74	1447	39.88	-286.07	-10.35
190	SLD 16	-96	-105	1447	39.91	-286.08	-17.91
190	SLV 1	262	156	2217	60.82	-444.2	19.15
190	SLV 2	258	86	2218	60.87	-444.21	2
190	SLV 3	245	-71	2249	61.74	-433.57	-37.2
190	SLV 4	240	-141	2250	61.79	-433.57	-54.35
190	SLV 5	117	399	1794	49.23	-383.46	92.72
190	SLV 6	112	328	1795	49.28	-383.46	75.31
190	SLV 7	58	-359	1900	52.31	-348	-95.11
190	SLV 8	53	-429	1902	52.36	-348.01	-112.52
190	SLV 9	-26	379	1463	40.23	-320.75	99.31
190	SLV 10	-31	309	1464	40.28	-320.76	81.91
190	SLV 11	-84	-378	1570	43.31	-285.3	-88.52
190	SLV 12	-89	-449	1571	43.36	-285.31	-105.92
190	SLV 13	-213	91	1115	30.8	-235.19	41.14
190	SLV 14	-217	21	1116	30.85	-235.19	23.99
190	SLV 15	-230	-136	1147	31.72	-224.55	-15.21
190	SLV 16	-235	-206	1148	31.77	-224.56	-32.36
190	CRTFP Ux+	0	0	0	0	0	0
190	CRTFP Ux-	0	0	0	0	0	0
190	CRTFP Uy+	0	0	0	0	0	0
190	CRTFP Uy-	0	0	0	0	0	0
193	SLU 1	34	-4	1581	43.6	346.16	0.09
193	SLU 2	35	-13	1582	43.65	346.03	2.28
193	SLU 3	34	-4	1581	43.6	346.16	0.09
193	SLU 4	35	-9	1581	43.63	346.08	1.41
193	SLU 5	35	-13	1582	43.65	346.03	2.28
193	SLU 6	34	-4	1581	43.6	346.16	0.09
193	SLU 7	35	-9	1581	43.63	346.08	1.41
193	SLU 8	34	-4	1581	43.6	346.16	0.09
193	SLU 9	35	-9	1581	43.63	346.08	1.41
193	SLU 10	40	-12	1848	50.98	404.47	2.07
193	SLU 11	39	-3	1847	50.94	404.6	-0.12
193	SLU 12	40	-9	1847	50.96	404.52	1.2
193	SLU 13	40	-12	1848	50.98	404.47	2.07
193	SLU 14	39	-3	1847	50.94	404.6	-0.12
193	SLU 15	40	-9	1847	50.96	404.52	1.2
193	SLU 16	39	-3	1847	50.94	404.6	-0.12
193	SLU 17	40	-9	1847	50.96	404.52	1.2
193	SLU 18	42	-3	1961	54.08	429.64	-0.21
193	SLU 19	42	-9	1961	54.11	429.57	1.11
193	SLU 20	42	-3	1961	54.08	429.64	-0.21
193	SLU 21	42	-9	1961	54.11	429.57	1.11
193	SLU 22	38	-3	1783	49.19	390.5	-0.21
193	SLU 23	39	-12	1784	49.24	390.38	1.98
193	SLU 24	38	-3	1783	49.19	390.5	-0.21
193	SLU 25	39	-8	1784	49.22	390.42	1.1
193	SLU 26	39	-12	1784	49.24	390.38	1.98
193	SLU 27	38	-3	1783	49.19	390.5	-0.21
193	SLU 28	39	-8	1784	49.22	390.42	1.1
193	SLU 29	38	-3	1783	49.19	390.5	-0.21
193	SLU 30	39	-8	1784	49.22	390.42	1.1
193	SLU 31	44	-11	2050	56.57	448.82	1.77
193	SLU 32	43	-3	2049	56.52	448.94	-0.42
193	SLU 33	44	-8	2050	56.55	448.87	0.89
193	SLU 34	44	-11	2050	56.57	448.82	1.77
193	SLU 35	43	-3	2049	56.52	448.94	-0.42
193	SLU 36	44	-8	2050	56.55	448.87	0.89
193	SLU 37	43	-3	2049	56.52	448.94	-0.42
193	SLU 38	44	-8	2050	56.55	448.87	0.89
193	SLU 39	46	-2	2163	59.67	473.99	-0.51
193	SLU 40	46	-8	2164	59.69	473.91	0.8
193	SLU 41	46	-2	2163	59.67	473.99	-0.51
193	SLU 42	46	-8	2164	59.69	473.91	0.8
193	SLU 43	43	-5	1986	54.77	434.8	0.23
193	SLU 44	44	-14	1987	54.81	434.68	2.42
193	SLU 45	43	-5	1986	54.77	434.8	0.23
193	SLU 46	44	-10	1986	54.8	434.73	1.54
193	SLU 47	44	-14	1987	54.81	434.68	2.42
193	SLU 48	43	-5	1986	54.77	434.8	0.23
193	SLU 49	44	-10	1986	54.8	434.73	1.54
193	SLU 50	43	-5	1986	54.77	434.8	0.23
193	SLU 51	44	-10	1986	54.8	434.73	1.54
193	SLU 52	49	-14	2253	62.15	493.12	2.21

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
193	SLU 53	48	-5	2252	62.1	493.24	0.02
193	SLU 54	49	-10	2252	62.13	493.17	1.33
193	SLU 55	49	-14	2253	62.15	493.12	2.21
193	SLU 56	48	-5	2252	62.1	493.24	0.02
193	SLU 57	49	-10	2252	62.13	493.17	1.33
193	SLU 58	48	-5	2252	62.1	493.24	0.02
193	SLU 59	49	-10	2252	62.13	493.17	1.33
193	SLU 60	51	-5	2366	65.24	518.29	-0.08
193	SLU 61	51	-10	2366	65.27	518.21	1.24
193	SLU 62	51	-5	2366	65.24	518.29	-0.08
193	SLU 63	51	-10	2366	65.27	518.21	1.24
193	SLU 64	47	-4	2188	60.35	479.14	-0.08
193	SLU 65	48	-13	2189	60.4	479.02	2.11
193	SLU 66	47	-4	2188	60.35	479.14	-0.08
193	SLU 67	48	-10	2189	60.38	479.07	1.24
193	SLU 68	48	-13	2189	60.4	479.02	2.11
193	SLU 69	47	-4	2188	60.35	479.14	-0.08
193	SLU 70	48	-10	2189	60.38	479.07	1.24
193	SLU 71	47	-4	2188	60.35	479.14	-0.08
193	SLU 72	48	-10	2189	60.38	479.07	1.24
193	SLU 73	53	-13	2455	67.74	537.46	1.9
193	SLU 74	52	-4	2454	67.69	537.58	-0.29
193	SLU 75	53	-9	2455	67.72	537.51	1.02
193	SLU 76	53	-13	2455	67.74	537.46	1.9
193	SLU 77	52	-4	2454	67.69	537.58	-0.29
193	SLU 78	53	-9	2455	67.72	537.51	1.02
193	SLU 79	52	-4	2454	67.69	537.58	-0.29
193	SLU 80	53	-9	2455	67.72	537.51	1.02
193	SLU 81	54	-4	2568	70.83	562.63	-0.38
193	SLU 82	55	-9	2569	70.86	562.56	0.93
193	SLU 83	54	-4	2568	70.83	562.63	-0.38
193	SLU 84	55	-9	2569	70.86	562.56	0.93
193	SLE RA 1	35	-3	1639	45.2	358.83	0.01
193	SLE RA 2	36	-9	1639	45.23	358.74	1.47
193	SLE RA 3	35	-3	1639	45.2	358.83	0.01
193	SLE RA 4	36	-7	1639	45.22	358.78	0.88
193	SLE RA 5	36	-9	1639	45.23	358.74	1.47
193	SLE RA 6	35	-3	1639	45.2	358.83	0.01
193	SLE RA 7	36	-7	1639	45.22	358.78	0.88
193	SLE RA 8	35	-3	1639	45.2	358.83	0.01
193	SLE RA 9	36	-7	1639	45.22	358.78	0.88
193	SLE RA 10	39	-9	1817	50.12	397.7	1.33
193	SLE RA 11	39	-3	1816	50.09	397.79	-0.13
193	SLE RA 12	39	-7	1816	50.11	397.74	0.74
193	SLE RA 13	39	-9	1817	50.12	397.7	1.33
193	SLE RA 14	39	-3	1816	50.09	397.79	-0.13
193	SLE RA 15	39	-7	1816	50.11	397.74	0.74
193	SLE RA 16	39	-3	1816	50.09	397.79	-0.13
193	SLE RA 17	39	-7	1816	50.11	397.74	0.74
193	SLE RA 18	40	-3	1892	52.18	414.48	-0.19
193	SLE RA 19	41	-7	1892	52.2	414.43	0.68
193	SLE RA 20	40	-3	1892	52.18	414.48	-0.19
193	SLE RA 21	41	-7	1892	52.2	414.43	0.68
193	SLE FR 1	35	-3	1639	45.2	358.83	0.01
193	SLE FR 2	36	-5	1639	45.2	358.81	0.3
193	SLE FR 3	35	-3	1639	45.2	358.83	0.01
193	SLE FR 4	37	-5	1715	47.3	375.51	0.24
193	SLE FR 5	37	-3	1715	47.29	375.52	-0.05
193	SLE FR 6	38	-3	1765	48.69	386.65	-0.09
193	SLE QP 1	35	-3	1639	45.2	358.83	0.01
193	SLE QP 2	37	-3	1715	47.29	375.52	-0.05
193	SLD 1	140	11	1422	39.17	319.85	-13.38
193	SLD 2	138	41	1422	39.16	319.87	-20.79
193	SLD 3	148	-88	1450	40.15	323.22	11.1
193	SLD 4	146	-58	1450	40.14	323.24	3.68
193	SLD 5	57	140	1584	43.37	353.7	-38.52
193	SLD 6	55	170	1584	43.36	353.73	-46.05
193	SLD 7	83	-189	1678	46.64	364.93	43.07
193	SLD 8	81	-159	1678	46.63	364.96	35.54
193	SLD 9	-7	152	1751	47.96	386.09	-35.64
193	SLD 10	-9	183	1751	47.95	386.11	-43.17
193	SLD 11	19	-177	1846	51.22	397.32	45.94
193	SLD 12	17	-147	1846	51.21	397.34	38.41
193	SLD 13	-72	51	1980	54.44	427.8	-3.79
193	SLD 14	-74	81	1980	54.44	427.82	-11.21
193	SLD 15	-64	-48	2008	55.42	431.17	20.69
193	SLD 16	-66	-17	2008	55.42	431.19	13.27
193	SLV 1	272	29	1048	28.83	248.98	-30.54
193	SLV 2	267	97	1048	28.81	249.03	-47.36
193	SLV 3	289	-196	1113	31.07	256.66	25.28
193	SLV 4	285	-128	1113	31.05	256.71	8.46
193	SLV 5	82	323	1417	38.37	325.9	-87.84
193	SLV 6	77	393	1417	38.35	325.95	-104.91
193	SLV 7	141	-427	1632	45.83	351.49	98.21
193	SLV 8	136	-358	1632	45.81	351.54	81.15
193	SLV 9	-62	351	1797	48.78	399.51	-81.25
193	SLV 10	-67	420	1797	48.76	399.56	-98.32

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
193	SLV 11	-4	-399	2013	56.24	425.09	104.8
193	SLV 12	-9	-330	2012	56.22	425.14	87.74
193	SLV 13	-211	121	2317	63.54	494.34	-8.57
193	SLV 14	-215	190	2316	63.52	494.39	-25.39
193	SLV 15	-193	-104	2381	65.78	502.01	47.25
193	SLV 16	-198	-36	2381	65.76	502.06	30.43
193	CRTFP Ux+	0	0	0	0	0	0
193	CRTFP Ux-	0	0	0	0	0	0
193	CRTFP Uy+	0	0	0	0	0	0
193	CRTFP Uy-	0	0	0	0	0	0
194	SLU 1	13	-27	1761	-1.58	-319.58	-6.7
194	SLU 2	12	-37	1762	-1.54	-319.09	-9.24
194	SLU 3	13	-27	1761	-1.58	-319.58	-6.7
194	SLU 4	12	-33	1761	-1.56	-319.29	-8.22
194	SLU 5	12	-37	1762	-1.54	-319.09	-9.24
194	SLU 6	13	-27	1761	-1.58	-319.58	-6.7
194	SLU 7	12	-33	1761	-1.56	-319.29	-8.22
194	SLU 8	13	-27	1761	-1.58	-319.58	-6.7
194	SLU 9	12	-33	1761	-1.56	-319.29	-8.22
194	SLU 10	15	-42	2090	-1.86	-375.76	-10.44
194	SLU 11	15	-32	2089	-1.9	-376.25	-7.9
194	SLU 12	15	-38	2089	-1.88	-375.95	-9.43
194	SLU 13	15	-42	2090	-1.86	-375.76	-10.44
194	SLU 14	15	-32	2089	-1.9	-376.25	-7.9
194	SLU 15	15	-38	2089	-1.88	-375.95	-9.43
194	SLU 16	15	-32	2089	-1.9	-376.25	-7.9
194	SLU 17	15	-38	2089	-1.88	-375.95	-9.43
194	SLU 18	17	-34	2229	-2.04	-400.54	-8.42
194	SLU 19	16	-40	2230	-2.02	-400.24	-9.94
194	SLU 20	17	-34	2229	-2.04	-400.54	-8.42
194	SLU 21	16	-40	2230	-2.02	-400.24	-9.94
194	SLU 22	15	-29	2004	-1.83	-361.74	-7.29
194	SLU 23	15	-40	2005	-1.79	-361.24	-9.83
194	SLU 24	15	-29	2004	-1.83	-361.74	-7.29
194	SLU 25	15	-35	2005	-1.8	-361.44	-8.81
194	SLU 26	15	-40	2005	-1.79	-361.24	-9.83
194	SLU 27	15	-29	2004	-1.83	-361.74	-7.29
194	SLU 28	15	-35	2005	-1.8	-361.44	-8.81
194	SLU 29	15	-29	2004	-1.83	-361.74	-7.29
194	SLU 30	15	-35	2005	-1.8	-361.44	-8.81
194	SLU 31	17	-44	2333	-2.11	-417.91	-11.03
194	SLU 32	18	-34	2332	-2.15	-418.41	-8.49
194	SLU 33	18	-40	2333	-2.13	-418.11	-10.01
194	SLU 34	17	-44	2333	-2.11	-417.91	-11.03
194	SLU 35	18	-34	2332	-2.15	-418.41	-8.49
194	SLU 36	18	-40	2333	-2.13	-418.11	-10.01
194	SLU 37	18	-34	2332	-2.15	-418.41	-8.49
194	SLU 38	18	-40	2333	-2.13	-418.11	-10.01
194	SLU 39	19	-36	2472	-2.29	-442.69	-9.01
194	SLU 40	19	-42	2473	-2.26	-442.4	-10.53
194	SLU 41	19	-36	2472	-2.29	-442.69	-9.01
194	SLU 42	19	-42	2473	-2.26	-442.4	-10.53
194	SLU 43	16	-34	2206	-1.97	-401	-8.51
194	SLU 44	15	-44	2207	-1.93	-400.51	-11.05
194	SLU 45	16	-34	2206	-1.97	-401	-8.51
194	SLU 46	15	-40	2206	-1.95	-400.71	-10.03
194	SLU 47	15	-44	2207	-1.93	-400.51	-11.05
194	SLU 48	16	-34	2206	-1.97	-401	-8.51
194	SLU 49	15	-40	2206	-1.95	-400.71	-10.03
194	SLU 50	16	-34	2206	-1.97	-401	-8.51
194	SLU 51	15	-40	2206	-1.95	-400.71	-10.03
194	SLU 52	18	-49	2535	-2.25	-457.18	-12.25
194	SLU 53	18	-39	2534	-2.29	-457.67	-9.71
194	SLU 54	18	-45	2534	-2.27	-457.38	-11.24
194	SLU 55	18	-49	2535	-2.25	-457.18	-12.25
194	SLU 56	18	-39	2534	-2.29	-457.67	-9.71
194	SLU 57	18	-45	2534	-2.27	-457.38	-11.24
194	SLU 58	18	-39	2534	-2.29	-457.67	-9.71
194	SLU 59	18	-45	2534	-2.27	-457.38	-11.24
194	SLU 60	20	-41	2674	-2.43	-481.96	-10.23
194	SLU 61	19	-47	2675	-2.41	-481.66	-11.75
194	SLU 62	20	-41	2674	-2.43	-481.96	-10.23
194	SLU 63	19	-47	2675	-2.41	-481.66	-11.75
194	SLU 64	18	-37	2449	-2.22	-443.16	-9.1
194	SLU 65	18	-47	2450	-2.18	-442.67	-11.63
194	SLU 66	18	-37	2449	-2.22	-443.16	-9.1
194	SLU 67	18	-43	2449	-2.19	-442.86	-10.62
194	SLU 68	18	-47	2450	-2.18	-442.67	-11.63
194	SLU 69	18	-37	2449	-2.22	-443.16	-9.1
194	SLU 70	18	-43	2449	-2.19	-442.86	-10.62
194	SLU 71	18	-37	2449	-2.22	-443.16	-9.1
194	SLU 72	18	-43	2449	-2.19	-442.86	-10.62
194	SLU 73	20	-52	2778	-2.5	-499.33	-12.84
194	SLU 74	21	-41	2777	-2.54	-499.83	-10.3
194	SLU 75	21	-48	2777	-2.52	-499.53	-11.82
194	SLU 76	20	-52	2778	-2.5	-499.33	-12.84
194	SLU 77	21	-41	2777	-2.54	-499.83	-10.3

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
194	SLU 78	21	-48	2777	-2.52	-499.53	-11.82
194	SLU 79	21	-41	2777	-2.54	-499.83	-10.3
194	SLU 80	21	-48	2777	-2.52	-499.53	-11.82
194	SLU 81	22	-44	2917	-2.68	-524.11	-10.82
194	SLU 82	22	-50	2918	-2.65	-523.82	-12.34
194	SLU 83	22	-44	2917	-2.68	-524.11	-10.82
194	SLU 84	22	-50	2918	-2.65	-523.82	-12.34
194	SLE RA 1	13	-28	1830	-1.65	-331.63	-6.87
194	SLE RA 2	13	-34	1831	-1.62	-331.3	-8.56
194	SLE RA 3	13	-28	1830	-1.65	-331.63	-6.87
194	SLE RA 4	13	-32	1831	-1.63	-331.43	-7.88
194	SLE RA 5	13	-34	1831	-1.62	-331.3	-8.56
194	SLE RA 6	13	-28	1830	-1.65	-331.63	-6.87
194	SLE RA 7	13	-32	1831	-1.63	-331.43	-7.88
194	SLE RA 8	13	-28	1830	-1.65	-331.63	-6.87
194	SLE RA 9	13	-32	1831	-1.63	-331.43	-7.88
194	SLE RA 10	15	-38	2050	-1.84	-369.08	-9.36
194	SLE RA 11	15	-31	2049	-1.86	-369.41	-7.67
194	SLE RA 12	15	-35	2049	-1.85	-369.21	-8.69
194	SLE RA 13	15	-38	2050	-1.84	-369.08	-9.36
194	SLE RA 14	15	-31	2049	-1.86	-369.41	-7.67
194	SLE RA 15	15	-35	2049	-1.85	-369.21	-8.69
194	SLE RA 16	15	-31	2049	-1.86	-369.41	-7.67
194	SLE RA 17	15	-35	2049	-1.85	-369.21	-8.69
194	SLE RA 18	16	-32	2143	-1.96	-385.6	-8.01
194	SLE RA 19	16	-36	2143	-1.94	-385.4	-9.03
194	SLE RA 20	16	-32	2143	-1.96	-385.6	-8.01
194	SLE RA 21	16	-36	2143	-1.94	-385.4	-9.03
194	SLE FR 1	13	-28	1830	-1.65	-331.63	-6.87
194	SLE FR 2	13	-29	1830	-1.64	-331.56	-7.21
194	SLE FR 3	13	-28	1830	-1.65	-331.63	-6.87
194	SLE FR 4	14	-30	1924	-1.74	-347.75	-7.55
194	SLE FR 5	14	-29	1924	-1.74	-347.82	-7.21
194	SLE FR 6	15	-30	1986	-1.8	-358.61	-7.44
194	SLE QP 1	13	-28	1830	-1.65	-331.63	-6.87
194	SLE QP 2	14	-29	1924	-1.74	-347.82	-7.21
194	SLD 1	143	64	2188	-2.38	-396.07	15.96
194	SLD 2	138	28	2189	-2.37	-396.06	7.06
194	SLD 3	133	-53	2206	-1.92	-390.77	-13.19
194	SLD 4	128	-89	2207	-1.9	-390.77	-22.1
194	SLD 5	71	189	1976	-2.64	-370.33	47.14
194	SLD 6	66	152	1977	-2.63	-370.32	38.1
194	SLD 7	35	-200	2035	-1.09	-352.67	-50.04
194	SLD 8	30	-237	2036	-1.08	-352.66	-59.08
194	SLD 9	-2	179	1812	-2.41	-342.97	44.66
194	SLD 10	-7	142	1813	-2.39	-342.96	35.62
194	SLD 11	-37	-210	1871	-0.85	-325.31	-52.53
194	SLD 12	-43	-247	1872	-0.84	-325.3	-61.57
194	SLD 13	-99	31	1641	-1.58	-304.87	7.67
194	SLD 14	-105	-5	1642	-1.57	-304.86	-1.23
194	SLD 15	-110	-86	1659	-1.12	-299.57	-21.48
194	SLD 16	-115	-122	1660	-1.1	-299.56	-30.39
194	SLV 1	308	183	2524	-3.2	-457.56	45.58
194	SLV 2	296	101	2527	-3.16	-457.54	25.39
194	SLV 3	284	-83	2565	-2.13	-445.45	-20.87
194	SLV 4	272	-165	2567	-2.1	-445.42	-41.07
194	SLV 5	143	467	2042	-3.8	-399.12	116.63
194	SLV 6	131	385	2044	-3.76	-399.09	96.14
194	SLV 7	62	-420	2177	-0.26	-358.74	-104.88
194	SLV 8	51	-503	2179	-0.23	-358.72	-125.38
194	SLV 9	-22	445	1669	-3.25	-336.91	110.95
194	SLV 10	-34	362	1671	-3.22	-336.89	90.46
194	SLV 11	-103	-443	1804	0.28	-296.54	-110.56
194	SLV 12	-115	-526	1806	0.31	-296.52	-131.06
194	SLV 13	-244	107	1281	-1.38	-250.21	26.64
194	SLV 14	-255	25	1283	-1.35	-250.19	6.45
194	SLV 15	-268	-159	1321	-0.32	-238.1	-39.81
194	SLV 16	-280	-241	1323	-0.29	-238.08	-60.01
194	CRTFP Ux+	0	0	0	0	0	0
194	CRTFP Ux-	0	0	0	0	0	0
194	CRTFP Uy+	0	0	0	0	0	0
194	CRTFP Uy-	0	0	0	0	0	0
197	SLU 1	34	-4	1809	-1.7	364.09	1.23
197	SLU 2	35	-14	1811	-1.66	363.8	3.82
197	SLU 3	34	-4	1809	-1.7	364.09	1.23
197	SLU 4	34	-10	1810	-1.68	363.92	2.78
197	SLU 5	35	-14	1811	-1.66	363.8	3.82
197	SLU 6	34	-4	1809	-1.7	364.09	1.23
197	SLU 7	34	-10	1810	-1.68	363.92	2.78
197	SLU 8	34	-4	1809	-1.7	364.09	1.23
197	SLU 9	34	-10	1810	-1.68	363.92	2.78
197	SLU 10	40	-14	2115	-1.99	424.55	3.75
197	SLU 11	39	-3	2113	-2.02	424.84	1.15
197	SLU 12	39	-10	2114	-2	424.67	2.71
197	SLU 13	40	-14	2115	-1.99	424.55	3.75
197	SLU 14	39	-3	2113	-2.02	424.84	1.15
197	SLU 15	39	-10	2114	-2	424.67	2.71

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
197	SLU 16	39	-3	2113	-2.02	424.84	1.15
197	SLU 17	39	-10	2114	-2	424.67	2.71
197	SLU 18	41	-3	2243	-2.16	450.88	1.12
197	SLU 19	41	-10	2244	-2.14	450.71	2.68
197	SLU 20	41	-3	2243	-2.16	450.88	1.12
197	SLU 21	41	-10	2244	-2.14	450.71	2.68
197	SLU 22	37	-3	2040	-1.94	410.22	1.01
197	SLU 23	38	-13	2043	-1.91	409.94	3.6
197	SLU 24	37	-3	2040	-1.94	410.22	1.01
197	SLU 25	38	-9	2042	-1.92	410.05	2.56
197	SLU 26	38	-13	2043	-1.91	409.94	3.6
197	SLU 27	37	-3	2040	-1.94	410.22	1.01
197	SLU 28	38	-9	2042	-1.92	410.05	2.56
197	SLU 29	37	-3	2040	-1.94	410.22	1.01
197	SLU 30	38	-9	2042	-1.92	410.05	2.56
197	SLU 31	43	-13	2346	-2.23	470.69	3.53
197	SLU 32	42	-2	2344	-2.27	470.97	0.93
197	SLU 33	43	-9	2345	-2.25	470.8	2.49
197	SLU 34	43	-13	2346	-2.23	470.69	3.53
197	SLU 35	42	-2	2344	-2.27	470.97	0.93
197	SLU 36	43	-9	2345	-2.25	470.8	2.49
197	SLU 37	42	-2	2344	-2.27	470.97	0.93
197	SLU 38	43	-9	2345	-2.25	470.8	2.49
197	SLU 39	45	-2	2474	-2.41	497.01	0.9
197	SLU 40	45	-9	2476	-2.39	496.84	2.46
197	SLU 41	45	-2	2474	-2.41	497.01	0.9
197	SLU 42	45	-9	2476	-2.39	496.84	2.46
197	SLU 43	43	-5	2273	-2.12	457.49	1.67
197	SLU 44	44	-16	2275	-2.09	457.21	4.26
197	SLU 45	43	-5	2273	-2.12	457.49	1.67
197	SLU 46	43	-12	2274	-2.1	457.32	3.23
197	SLU 47	44	-16	2275	-2.09	457.21	4.26
197	SLU 48	43	-5	2273	-2.12	457.49	1.67
197	SLU 49	43	-12	2274	-2.1	457.32	3.23
197	SLU 50	43	-5	2273	-2.12	457.49	1.67
197	SLU 51	43	-12	2274	-2.1	457.32	3.23
197	SLU 52	48	-15	2578	-2.41	517.96	4.19
197	SLU 53	48	-5	2576	-2.44	518.25	1.59
197	SLU 54	48	-11	2577	-2.42	518.08	3.15
197	SLU 55	48	-15	2578	-2.41	517.96	4.19
197	SLU 56	48	-5	2576	-2.44	518.25	1.59
197	SLU 57	48	-11	2577	-2.42	518.08	3.15
197	SLU 58	48	-5	2576	-2.44	518.25	1.59
197	SLU 59	48	-11	2577	-2.42	518.08	3.15
197	SLU 60	50	-5	2706	-2.58	544.28	1.56
197	SLU 61	50	-11	2708	-2.56	544.11	3.12
197	SLU 62	50	-5	2706	-2.58	544.28	1.56
197	SLU 63	50	-11	2708	-2.56	544.11	3.12
197	SLU 64	46	-4	2504	-2.37	503.63	1.45
197	SLU 65	47	-15	2506	-2.33	503.34	4.04
197	SLU 66	46	-4	2504	-2.37	503.63	1.45
197	SLU 67	47	-11	2505	-2.35	503.46	3.01
197	SLU 68	47	-15	2506	-2.33	503.34	4.04
197	SLU 69	46	-4	2504	-2.37	503.63	1.45
197	SLU 70	47	-11	2505	-2.35	503.46	3.01
197	SLU 71	46	-4	2504	-2.37	503.63	1.45
197	SLU 72	47	-11	2505	-2.35	503.46	3.01
197	SLU 73	52	-14	2810	-2.66	564.1	3.97
197	SLU 74	51	-4	2808	-2.69	564.38	1.38
197	SLU 75	52	-10	2809	-2.67	564.21	2.93
197	SLU 76	52	-14	2810	-2.66	564.1	3.97
197	SLU 77	51	-4	2808	-2.69	564.38	1.38
197	SLU 78	52	-10	2809	-2.67	564.21	2.93
197	SLU 79	51	-4	2808	-2.69	564.38	1.38
197	SLU 80	52	-10	2809	-2.67	564.21	2.93
197	SLU 81	53	-4	2938	-2.83	590.42	1.34
197	SLU 82	54	-10	2939	-2.81	590.25	2.9
197	SLU 83	53	-4	2938	-2.83	590.42	1.34
197	SLU 84	54	-10	2939	-2.81	590.25	2.9
197	SLE RA 1	35	-4	1875	-1.77	377.27	1.16
197	SLE RA 2	35	-11	1877	-1.74	377.08	2.89
197	SLE RA 3	35	-4	1875	-1.77	377.27	1.16
197	SLE RA 4	35	-8	1876	-1.75	377.15	2.2
197	SLE RA 5	35	-11	1877	-1.74	377.08	2.89
197	SLE RA 6	35	-4	1875	-1.77	377.27	1.16
197	SLE RA 7	35	-8	1876	-1.75	377.15	2.2
197	SLE RA 8	35	-4	1875	-1.77	377.27	1.16
197	SLE RA 9	35	-8	1876	-1.75	377.15	2.2
197	SLE RA 10	39	-10	2079	-1.96	417.58	2.84
197	SLE RA 11	38	-3	2078	-1.98	417.77	1.11
197	SLE RA 12	38	-7	2079	-1.97	417.66	2.15
197	SLE RA 13	39	-10	2079	-1.96	417.58	2.84
197	SLE RA 14	38	-3	2078	-1.98	417.77	1.11
197	SLE RA 15	38	-7	2079	-1.97	417.66	2.15
197	SLE RA 16	38	-3	2078	-1.98	417.77	1.11
197	SLE RA 17	38	-7	2079	-1.97	417.66	2.15
197	SLE RA 18	40	-3	2164	-2.08	435.13	1.09

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
197	SLE RA 19	40	-7	2165	-2.06	435.01	2.13
197	SLE RA 20	40	-3	2164	-2.08	435.13	1.09
197	SLE RA 21	40	-7	2165	-2.06	435.01	2.13
197	SLE FR 1	35	-4	1875	-1.77	377.27	1.16
197	SLE FR 2	35	-5	1875	-1.76	377.23	1.51
197	SLE FR 3	35	-4	1875	-1.77	377.27	1.16
197	SLE FR 4	36	-5	1962	-1.86	394.59	1.49
197	SLE FR 5	36	-4	1962	-1.86	394.63	1.14
197	SLE FR 6	37	-3	2020	-1.92	406.2	1.13
197	SLE QP 1	35	-4	1875	-1.77	377.27	1.16
197	SLE QP 2	36	-4	1962	-1.86	394.63	1.14
197	SLD 1	157	13	1625	-1.62	341.26	-3
197	SLD 2	152	48	1625	-1.63	341.28	-11.73
197	SLD 3	168	-103	1668	-1.21	338.15	25.89
197	SLD 4	162	-68	1667	-1.23	338.17	17.16
197	SLD 5	58	164	1797	-2.39	383.33	-40.8
197	SLD 6	53	200	1796	-2.41	383.35	-49.66
197	SLD 7	94	-221	1938	-1.05	372.95	55.51
197	SLD 8	88	-186	1938	-1.06	372.98	46.65
197	SLD 9	-16	179	1986	-2.66	416.27	-44.36
197	SLD 10	-21	214	1986	-2.67	416.3	-53.23
197	SLD 11	20	-207	2128	-1.31	405.9	51.95
197	SLD 12	14	-171	2127	-1.32	405.93	43.08
197	SLD 13	-90	61	2257	-2.49	451.08	-14.88
197	SLD 14	-95	96	2256	-2.5	451.1	-23.61
197	SLD 15	-79	-55	2299	-2.09	447.97	14.02
197	SLD 16	-85	-20	2299	-2.1	447.99	5.28
197	SLV 1	310	34	1196	-1.31	273.32	-8.37
197	SLV 2	299	114	1195	-1.34	273.37	-28.18
197	SLV 3	335	-230	1293	-0.39	266.23	57.52
197	SLV 4	323	-150	1292	-0.42	266.28	37.71
197	SLV 5	86	380	1585	-3.08	368.96	-94.57
197	SLV 6	74	461	1584	-3.11	369.02	-114.66
197	SLV 7	167	-500	1909	-0.02	345.34	125.06
197	SLV 8	155	-419	1908	-0.04	345.39	104.97
197	SLV 9	-83	412	2016	-3.68	443.86	-102.68
197	SLV 10	-94	493	2015	-3.7	443.91	-122.78
197	SLV 11	-2	-468	2340	-0.61	420.23	116.95
197	SLV 12	-13	-387	2339	-0.64	420.29	96.85
197	SLV 13	-251	143	2632	-3.3	522.97	-35.43
197	SLV 14	-262	223	2631	-3.33	523.02	-55.23
197	SLV 15	-226	-121	2729	-2.38	515.88	30.46
197	SLV 16	-238	-41	2728	-2.41	515.93	10.66
197	CRTFP Ux+	0	0	0	0	0	0
197	CRTFP Ux-	0	0	0	0	0	0
197	CRTFP Uy+	0	0	0	0	0	0
197	CRTFP Uy-	0	0	0	0	0	0
198	SLU 1	11	-27	1707	-1.74	-276.54	-6.72
198	SLU 2	11	-37	1710	-1.7	-276.02	-9.27
198	SLU 3	11	-27	1707	-1.74	-276.54	-6.72
198	SLU 4	11	-33	1709	-1.72	-276.23	-8.25
198	SLU 5	11	-37	1710	-1.7	-276.02	-9.27
198	SLU 6	11	-27	1707	-1.74	-276.54	-6.72
198	SLU 7	11	-33	1709	-1.72	-276.23	-8.25
198	SLU 8	11	-27	1707	-1.74	-276.54	-6.72
198	SLU 9	11	-33	1709	-1.72	-276.23	-8.25
198	SLU 10	13	-42	2027	-2.06	-323.55	-10.43
198	SLU 11	14	-32	2024	-2.1	-324.07	-7.88
198	SLU 12	13	-38	2026	-2.07	-323.75	-9.41
198	SLU 13	13	-42	2027	-2.06	-323.55	-10.43
198	SLU 14	14	-32	2024	-2.1	-324.07	-7.88
198	SLU 15	13	-38	2026	-2.07	-323.75	-9.41
198	SLU 16	14	-32	2024	-2.1	-324.07	-7.88
198	SLU 17	13	-38	2026	-2.07	-323.75	-9.41
198	SLU 18	15	-34	2160	-2.25	-344.44	-8.38
198	SLU 19	14	-40	2162	-2.22	-344.12	-9.91
198	SLU 20	15	-34	2160	-2.25	-344.44	-8.38
198	SLU 21	14	-40	2162	-2.22	-344.12	-9.91
198	SLU 22	13	-29	1942	-2.02	-311.94	-7.3
198	SLU 23	13	-40	1944	-1.98	-311.42	-9.85
198	SLU 24	13	-29	1942	-2.02	-311.94	-7.3
198	SLU 25	13	-36	1944	-1.99	-311.63	-8.83
198	SLU 26	13	-40	1944	-1.98	-311.42	-9.85
198	SLU 27	13	-29	1942	-2.02	-311.94	-7.3
198	SLU 28	13	-36	1944	-1.99	-311.63	-8.83
198	SLU 29	13	-29	1942	-2.02	-311.94	-7.3
198	SLU 30	13	-36	1944	-1.99	-311.63	-8.83
198	SLU 31	15	-44	2262	-2.33	-358.95	-11.01
198	SLU 32	16	-34	2259	-2.37	-359.47	-8.46
198	SLU 33	16	-40	2261	-2.35	-359.15	-9.99
198	SLU 34	15	-44	2262	-2.33	-358.95	-11.01
198	SLU 35	16	-34	2259	-2.37	-359.47	-8.46
198	SLU 36	16	-40	2261	-2.35	-359.15	-9.99
198	SLU 37	16	-34	2259	-2.37	-359.47	-8.46
198	SLU 38	16	-40	2261	-2.35	-359.15	-9.99
198	SLU 39	17	-36	2395	-2.53	-379.84	-8.96
198	SLU 40	17	-42	2397	-2.5	-379.52	-10.49

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
198	SLU 41	17	-36	2395	-2.53	-379.84	-8.96
198	SLU 42	17	-42	2397	-2.5	-379.52	-10.49
198	SLU 43	14	-34	2139	-2.17	-347.36	-8.54
198	SLU 44	13	-45	2142	-2.13	-346.84	-11.09
198	SLU 45	14	-34	2139	-2.17	-347.36	-8.54
198	SLU 46	13	-41	2141	-2.15	-347.05	-10.07
198	SLU 47	13	-45	2142	-2.13	-346.84	-11.09
198	SLU 48	14	-34	2139	-2.17	-347.36	-8.54
198	SLU 49	13	-41	2141	-2.15	-347.05	-10.07
198	SLU 50	14	-34	2139	-2.17	-347.36	-8.54
198	SLU 51	13	-41	2141	-2.15	-347.05	-10.07
198	SLU 52	16	-49	2459	-2.48	-394.37	-12.25
198	SLU 53	16	-39	2456	-2.53	-394.89	-9.7
198	SLU 54	16	-45	2458	-2.5	-394.58	-11.23
198	SLU 55	16	-49	2459	-2.48	-394.37	-12.25
198	SLU 56	16	-39	2456	-2.53	-394.89	-9.7
198	SLU 57	16	-45	2458	-2.5	-394.58	-11.23
198	SLU 58	16	-39	2456	-2.53	-394.89	-9.7
198	SLU 59	16	-45	2458	-2.5	-394.58	-11.23
198	SLU 60	17	-41	2592	-2.68	-415.26	-10.2
198	SLU 61	17	-47	2594	-2.65	-414.95	-11.73
198	SLU 62	17	-41	2592	-2.68	-415.26	-10.2
198	SLU 63	17	-47	2594	-2.65	-414.95	-11.73
198	SLU 64	16	-37	2374	-2.45	-382.76	-9.12
198	SLU 65	15	-47	2376	-2.41	-382.24	-11.66
198	SLU 66	16	-37	2374	-2.45	-382.76	-9.12
198	SLU 67	16	-43	2375	-2.42	-382.45	-10.64
198	SLU 68	15	-47	2376	-2.41	-382.24	-11.66
198	SLU 69	16	-37	2374	-2.45	-382.76	-9.12
198	SLU 70	16	-43	2375	-2.42	-382.45	-10.64
198	SLU 71	16	-37	2374	-2.45	-382.76	-9.12
198	SLU 72	16	-43	2375	-2.42	-382.45	-10.64
198	SLU 73	18	-52	2693	-2.76	-429.77	-12.83
198	SLU 74	18	-41	2691	-2.8	-430.29	-10.28
198	SLU 75	18	-48	2692	-2.78	-429.98	-11.81
198	SLU 76	18	-52	2693	-2.76	-429.77	-12.83
198	SLU 77	18	-41	2691	-2.8	-430.29	-10.28
198	SLU 78	18	-48	2692	-2.78	-429.98	-11.81
198	SLU 79	18	-41	2691	-2.8	-430.29	-10.28
198	SLU 80	18	-48	2692	-2.78	-429.98	-11.81
198	SLU 81	20	-43	2827	-2.95	-450.66	-10.78
198	SLU 82	19	-50	2828	-2.93	-450.35	-12.3
198	SLU 83	20	-43	2827	-2.95	-450.66	-10.78
198	SLU 84	19	-50	2828	-2.93	-450.35	-12.3
198	SLE RA 1	12	-28	1774	-1.82	-286.65	-6.89
198	SLE RA 2	11	-35	1776	-1.79	-286.31	-8.58
198	SLE RA 3	12	-28	1774	-1.82	-286.65	-6.89
198	SLE RA 4	12	-32	1775	-1.81	-286.44	-7.9
198	SLE RA 5	11	-35	1776	-1.79	-286.31	-8.58
198	SLE RA 6	12	-28	1774	-1.82	-286.65	-6.89
198	SLE RA 7	12	-32	1775	-1.81	-286.44	-7.9
198	SLE RA 8	12	-28	1774	-1.82	-286.65	-6.89
198	SLE RA 9	12	-32	1775	-1.81	-286.44	-7.9
198	SLE RA 10	13	-38	1987	-2.03	-317.99	-9.36
198	SLE RA 11	13	-31	1986	-2.06	-318.34	-7.66
198	SLE RA 12	13	-35	1987	-2.04	-318.13	-8.68
198	SLE RA 13	13	-38	1987	-2.03	-317.99	-9.36
198	SLE RA 14	13	-31	1986	-2.06	-318.34	-7.66
198	SLE RA 15	13	-35	1987	-2.04	-318.13	-8.68
198	SLE RA 16	13	-31	1986	-2.06	-318.34	-7.66
198	SLE RA 17	13	-35	1987	-2.04	-318.13	-8.68
198	SLE RA 18	14	-32	2076	-2.16	-331.92	-7.99
198	SLE RA 19	14	-36	2077	-2.14	-331.71	-9.01
198	SLE RA 20	14	-32	2076	-2.16	-331.92	-7.99
198	SLE RA 21	14	-36	2077	-2.14	-331.71	-9.01
198	SLE FR 1	12	-28	1774	-1.82	-286.65	-6.89
198	SLE FR 2	12	-29	1775	-1.82	-286.58	-7.23
198	SLE FR 3	12	-28	1774	-1.82	-286.65	-6.89
198	SLE FR 4	12	-30	1865	-1.92	-300.16	-7.56
198	SLE FR 5	12	-29	1865	-1.92	-300.23	-7.22
198	SLE FR 6	13	-30	1925	-1.99	-309.29	-7.44
198	SLE QP 1	12	-28	1774	-1.82	-286.65	-6.89
198	SLE QP 2	12	-29	1865	-1.92	-300.23	-7.22
198	SLD 1	143	64	2111	-2.61	-339.14	16.02
198	SLD 2	135	28	2112	-2.59	-339.14	7.1
198	SLD 3	132	-53	2139	-2.1	-334.64	-13.24
198	SLD 4	124	-89	2141	-2.08	-334.63	-22.16
198	SLD 5	71	189	1895	-2.91	-318.74	47.31
198	SLD 6	63	153	1897	-2.89	-318.73	38.26
198	SLD 7	34	-201	1990	-1.21	-303.72	-50.21
198	SLD 8	26	-237	1991	-1.19	-303.72	-59.26
198	SLD 9	-1	179	1739	-2.65	-296.75	44.83
198	SLD 10	-9	143	1740	-2.64	-296.74	35.77
198	SLD 11	-39	-211	1833	-0.96	-281.73	-52.7
198	SLD 12	-47	-247	1835	-0.94	-281.73	-61.75
198	SLD 13	-99	31	1589	-1.76	-265.83	7.72
198	SLD 14	-107	-5	1591	-1.75	-265.83	-1.2

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
198	SLD 15	-110	-86	1618	-1.25	-261.33	-21.54
198	SLD 16	-118	-122	1619	-1.24	-261.33	-30.45
198	SLV 1	309	183	2424	-3.49	-388.75	45.71
198	SLV 2	291	101	2427	-3.45	-388.74	25.49
198	SLV 3	283	-84	2488	-2.32	-378.44	-20.97
198	SLV 4	265	-165	2492	-2.29	-378.43	-41.2
198	SLV 5	147	468	1933	-4.17	-342.43	117.03
198	SLV 6	129	385	1937	-4.13	-342.42	96.51
198	SLV 7	61	-421	2149	-0.29	-308.06	-105.26
198	SLV 8	43	-504	2152	-0.26	-308.05	-125.78
198	SLV 9	-18	446	1578	-3.59	-292.41	111.34
198	SLV 10	-36	363	1581	-3.55	-292.4	90.82
198	SLV 11	-104	-444	1793	0.28	-258.05	-110.94
198	SLV 12	-122	-526	1797	0.32	-258.04	-131.46
198	SLV 13	-240	107	1238	-1.56	-222.03	26.76
198	SLV 14	-258	25	1242	-1.52	-222.02	6.54
198	SLV 15	-266	-160	1303	-0.4	-211.72	-39.92
198	SLV 16	-284	-241	1306	-0.36	-211.71	-60.15
198	CRTFP Ux+	0	0	0	0	0	0
198	CRTFP Ux-	0	0	0	0	0	0
198	CRTFP Uy+	0	0	0	0	0	0
198	CRTFP Uy-	0	0	0	0	0	0
201	SLU 1	26	-4	1750	-1.98	315.98	1.19
201	SLU 2	27	-14	1753	-1.94	315.62	3.79
201	SLU 3	26	-4	1750	-1.98	315.98	1.19
201	SLU 4	26	-10	1752	-1.95	315.77	2.75
201	SLU 5	27	-14	1753	-1.94	315.62	3.79
201	SLU 6	26	-4	1750	-1.98	315.98	1.19
201	SLU 7	26	-10	1752	-1.95	315.77	2.75
201	SLU 8	26	-4	1750	-1.98	315.98	1.19
201	SLU 9	26	-10	1752	-1.95	315.77	2.75
201	SLU 10	30	-14	2045	-2.32	367.15	3.72
201	SLU 11	29	-3	2042	-2.36	367.51	1.11
201	SLU 12	30	-9	2044	-2.34	367.29	2.68
201	SLU 13	30	-14	2045	-2.32	367.15	3.72
201	SLU 14	29	-3	2042	-2.36	367.51	1.11
201	SLU 15	30	-9	2044	-2.34	367.29	2.68
201	SLU 16	29	-3	2042	-2.36	367.51	1.11
201	SLU 17	30	-9	2044	-2.34	367.29	2.68
201	SLU 18	31	-3	2167	-2.53	389.59	1.08
201	SLU 19	32	-9	2169	-2.51	389.38	2.64
201	SLU 20	31	-3	2167	-2.53	389.59	1.08
201	SLU 21	32	-9	2169	-2.51	389.38	2.64
201	SLU 22	28	-3	1972	-2.28	355.12	0.98
201	SLU 23	29	-13	1976	-2.24	354.76	3.58
201	SLU 24	28	-3	1972	-2.28	355.12	0.98
201	SLU 25	29	-9	1974	-2.25	354.9	2.54
201	SLU 26	29	-13	1976	-2.24	354.76	3.58
201	SLU 27	28	-3	1972	-2.28	355.12	0.98
201	SLU 28	29	-9	1974	-2.25	354.9	2.54
201	SLU 29	28	-3	1972	-2.28	355.12	0.98
201	SLU 30	29	-9	1974	-2.25	354.9	2.54
201	SLU 31	33	-13	2268	-2.62	406.29	3.51
201	SLU 32	32	-2	2265	-2.66	406.64	0.9
201	SLU 33	33	-8	2267	-2.64	406.43	2.46
201	SLU 34	33	-13	2268	-2.62	406.29	3.51
201	SLU 35	32	-2	2265	-2.66	406.64	0.9
201	SLU 36	33	-8	2267	-2.64	406.43	2.46
201	SLU 37	32	-2	2265	-2.66	406.64	0.9
201	SLU 38	33	-8	2267	-2.64	406.43	2.46
201	SLU 39	34	-2	2390	-2.83	428.73	0.87
201	SLU 40	34	-8	2392	-2.8	428.51	2.43
201	SLU 41	34	-2	2390	-2.83	428.73	0.87
201	SLU 42	34	-8	2392	-2.8	428.51	2.43
201	SLU 43	32	-5	2199	-2.47	397.35	1.62
201	SLU 44	33	-16	2202	-2.43	397	4.22
201	SLU 45	32	-5	2199	-2.47	397.35	1.62
201	SLU 46	33	-11	2201	-2.44	397.14	3.18
201	SLU 47	33	-16	2202	-2.43	397	4.22
201	SLU 48	32	-5	2199	-2.47	397.35	1.62
201	SLU 49	33	-11	2201	-2.44	397.14	3.18
201	SLU 50	32	-5	2199	-2.47	397.35	1.62
201	SLU 51	33	-11	2201	-2.44	397.14	3.18
201	SLU 52	37	-15	2494	-2.81	448.53	4.15
201	SLU 53	36	-5	2491	-2.85	448.88	1.54
201	SLU 54	37	-11	2493	-2.83	448.67	3.11
201	SLU 55	37	-15	2494	-2.81	448.53	4.15
201	SLU 56	36	-5	2491	-2.85	448.88	1.54
201	SLU 57	37	-11	2493	-2.83	448.67	3.11
201	SLU 58	36	-5	2491	-2.85	448.88	1.54
201	SLU 59	37	-11	2493	-2.83	448.67	3.11
201	SLU 60	38	-4	2616	-3.02	470.96	1.51
201	SLU 61	38	-11	2618	-3	470.75	3.07
201	SLU 62	38	-4	2616	-3.02	470.96	1.51
201	SLU 63	38	-11	2618	-3	470.75	3.07
201	SLU 64	35	-4	2421	-2.77	436.49	1.4
201	SLU 65	36	-15	2424	-2.73	436.14	4.01

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
201	SLU 66	35	-4	2421	-2.77	436.49	1.4
201	SLU 67	36	-10	2423	-2.74	436.28	2.97
201	SLU 68	36	-15	2424	-2.73	436.14	4.01
201	SLU 69	35	-4	2421	-2.77	436.49	1.4
201	SLU 70	36	-10	2423	-2.74	436.28	2.97
201	SLU 71	35	-4	2421	-2.77	436.49	1.4
201	SLU 72	36	-10	2423	-2.74	436.28	2.97
201	SLU 73	40	-14	2717	-3.11	487.66	3.93
201	SLU 74	39	-4	2713	-3.15	488.02	1.33
201	SLU 75	39	-10	2715	-3.13	487.81	2.89
201	SLU 76	40	-14	2717	-3.11	487.66	3.93
201	SLU 77	39	-4	2713	-3.15	488.02	1.33
201	SLU 78	39	-10	2715	-3.13	487.81	2.89
201	SLU 79	39	-4	2713	-3.15	488.02	1.33
201	SLU 80	39	-10	2715	-3.13	487.81	2.89
201	SLU 81	40	-3	2839	-3.32	510.1	1.3
201	SLU 82	41	-10	2841	-3.3	509.89	2.86
201	SLU 83	40	-3	2839	-3.32	510.1	1.3
201	SLU 84	41	-10	2841	-3.3	509.89	2.86
201	SLE RA 1	26	-3	1813	-2.06	327.16	1.13
201	SLE RA 2	27	-10	1816	-2.04	326.92	2.86
201	SLE RA 3	26	-3	1813	-2.06	327.16	1.13
201	SLE RA 4	27	-8	1815	-2.05	327.02	2.17
201	SLE RA 5	27	-10	1816	-2.04	326.92	2.86
201	SLE RA 6	26	-3	1813	-2.06	327.16	1.13
201	SLE RA 7	27	-8	1815	-2.05	327.02	2.17
201	SLE RA 8	26	-3	1813	-2.06	327.16	1.13
201	SLE RA 9	27	-8	1815	-2.05	327.02	2.17
201	SLE RA 10	29	-10	2011	-2.29	361.28	2.81
201	SLE RA 11	29	-3	2008	-2.32	361.51	1.08
201	SLE RA 12	29	-7	2010	-2.3	361.37	2.12
201	SLE RA 13	29	-10	2011	-2.29	361.28	2.81
201	SLE RA 14	29	-3	2008	-2.32	361.51	1.08
201	SLE RA 15	29	-7	2010	-2.3	361.37	2.12
201	SLE RA 16	29	-3	2008	-2.32	361.51	1.08
201	SLE RA 17	29	-7	2010	-2.3	361.37	2.12
201	SLE RA 18	30	-3	2092	-2.43	376.23	1.06
201	SLE RA 19	30	-7	2093	-2.42	376.09	2.1
201	SLE RA 20	30	-3	2092	-2.43	376.23	1.06
201	SLE RA 21	30	-7	2093	-2.42	376.09	2.1
201	SLE FR 1	26	-3	1813	-2.06	327.16	1.13
201	SLE FR 2	27	-5	1814	-2.06	327.11	1.47
201	SLE FR 3	26	-3	1813	-2.06	327.16	1.13
201	SLE FR 4	28	-5	1897	-2.17	341.83	1.45
201	SLE FR 5	27	-3	1897	-2.17	341.88	1.11
201	SLE FR 6	28	-3	1953	-2.25	351.7	1.09
201	SLE QP 1	26	-3	1813	-2.06	327.16	1.13
201	SLE QP 2	27	-3	1897	-2.17	341.88	1.11
201	SLD 1	149	13	1569	-1.9	298.25	-3.07
201	SLD 2	141	49	1568	-1.91	298.26	-11.81
201	SLD 3	160	-103	1623	-1.45	295.74	25.96
201	SLD 4	152	-68	1623	-1.46	295.75	17.21
201	SLD 5	50	165	1716	-2.77	332.6	-41.04
201	SLD 6	42	201	1715	-2.78	332.61	-49.92
201	SLD 7	87	-222	1898	-1.27	324.22	55.71
201	SLD 8	79	-186	1897	-1.28	324.24	46.83
201	SLD 9	-24	179	1897	-3.07	359.53	-44.62
201	SLD 10	-32	215	1896	-3.08	359.54	-53.5
201	SLD 11	13	-207	2079	-1.56	351.15	52.13
201	SLD 12	5	-172	2078	-1.58	351.16	43.25
201	SLD 13	-97	61	2171	-2.89	388.02	-15
201	SLD 14	-105	96	2170	-2.9	388.03	-23.75
201	SLD 15	-86	-55	2226	-2.44	385.5	14.02
201	SLD 16	-94	-20	2225	-2.45	385.51	5.28
201	SLV 1	303	35	1151	-1.55	242.68	-8.47
201	SLV 2	285	115	1149	-1.58	242.71	-28.31
201	SLV 3	328	-230	1276	-0.52	236.95	57.72
201	SLV 4	310	-150	1274	-0.55	236.97	37.88
201	SLV 5	78	381	1484	-3.54	320.81	-95.07
201	SLV 6	60	462	1482	-3.57	320.83	-115.19
201	SLV 7	162	-501	1901	-0.11	301.7	125.57
201	SLV 8	144	-420	1899	-0.14	301.72	105.44
201	SLV 9	-89	413	1895	-4.21	382.04	-103.23
201	SLV 10	-107	495	1893	-4.24	382.07	-123.35
201	SLV 11	-5	-469	2312	-0.78	362.93	117.41
201	SLV 12	-23	-387	2310	-0.81	362.96	97.28
201	SLV 13	-255	143	2520	-3.8	446.79	-35.67
201	SLV 14	-273	224	2518	-3.82	446.82	-55.5
201	SLV 15	-230	-121	2645	-2.77	441.06	30.52
201	SLV 16	-248	-41	2643	-2.79	441.08	10.69
201	CRTFP Ux+	0	0	0	0	0	0
201	CRTFP Ux-	0	0	0	0	0	0
201	CRTFP Uy+	0	0	0	0	0	0
201	CRTFP Uy-	0	0	0	0	0	0
203	SLU 1	112	132	5261	-917.73	-37.18	23.82
203	SLU 2	113	114	5250	-915.79	-37.88	23.93
203	SLU 3	112	132	5261	-917.73	-37.18	23.82

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
203	SLU 4	112	121	5254	-916.57	-37.6	23.88
203	SLU 5	113	114	5250	-915.79	-37.88	23.93
203	SLU 6	112	132	5261	-917.73	-37.18	23.82
203	SLU 7	112	121	5254	-916.57	-37.6	23.88
203	SLU 8	112	132	5261	-917.73	-37.18	23.82
203	SLU 9	112	121	5254	-916.57	-37.6	23.88
203	SLU 10	132	133	6273	-1093.42	-45.72	28.07
203	SLU 11	131	151	6284	-1095.36	-45.03	27.96
203	SLU 12	132	140	6277	-1094.19	-45.44	28.03
203	SLU 13	132	133	6273	-1093.42	-45.72	28.07
203	SLU 14	131	151	6284	-1095.36	-45.03	27.96
203	SLU 15	132	140	6277	-1094.19	-45.44	28.03
203	SLU 16	131	151	6284	-1095.36	-45.03	27.96
203	SLU 17	132	140	6277	-1094.19	-45.44	28.03
203	SLU 18	140	159	6722	-1171.48	-48.39	29.74
203	SLU 19	140	148	6715	-1170.32	-48.8	29.81
203	SLU 20	140	159	6722	-1171.48	-48.39	29.74
203	SLU 21	140	148	6715	-1170.32	-48.8	29.81
203	SLU 22	126	141	6035	-1051.24	-42.46	26.84
203	SLU 23	127	123	6024	-1049.3	-43.15	26.95
203	SLU 24	126	141	6035	-1051.24	-42.46	26.84
203	SLU 25	126	131	6029	-1050.07	-42.87	26.9
203	SLU 26	127	123	6024	-1049.3	-43.15	26.95
203	SLU 27	126	141	6035	-1051.24	-42.46	26.84
203	SLU 28	126	131	6029	-1050.07	-42.87	26.9
203	SLU 29	126	141	6035	-1051.24	-42.46	26.84
203	SLU 30	126	131	6029	-1050.07	-42.87	26.9
203	SLU 31	146	142	7047	-1226.92	-50.99	31.1
203	SLU 32	146	160	7058	-1228.86	-50.3	30.99
203	SLU 33	146	149	7051	-1227.7	-50.72	31.05
203	SLU 34	146	142	7047	-1226.92	-50.99	31.1
203	SLU 35	146	160	7058	-1228.86	-50.3	30.99
203	SLU 36	146	149	7051	-1227.7	-50.72	31.05
203	SLU 37	146	160	7058	-1228.86	-50.3	30.99
203	SLU 38	146	149	7051	-1227.7	-50.72	31.05
203	SLU 39	154	168	7496	-1304.99	-53.66	32.76
203	SLU 40	154	157	7490	-1303.83	-54.08	32.83
203	SLU 41	154	168	7496	-1304.99	-53.66	32.76
203	SLU 42	154	157	7490	-1303.83	-54.08	32.83
203	SLU 43	141	169	6574	-1147.28	-46.53	29.92
203	SLU 44	141	151	6563	-1145.34	-47.23	30.04
203	SLU 45	141	169	6574	-1147.28	-46.53	29.92
203	SLU 46	141	158	6567	-1146.11	-46.95	29.99
203	SLU 47	141	151	6563	-1145.34	-47.23	30.04
203	SLU 48	141	169	6574	-1147.28	-46.53	29.92
203	SLU 49	141	158	6567	-1146.11	-46.95	29.99
203	SLU 50	141	169	6574	-1147.28	-46.53	29.92
203	SLU 51	141	158	6567	-1146.11	-46.95	29.99
203	SLU 52	161	169	7585	-1322.96	-55.07	34.18
203	SLU 53	160	188	7597	-1324.9	-54.37	34.07
203	SLU 54	161	177	7590	-1323.74	-54.79	34.14
203	SLU 55	161	169	7585	-1322.96	-55.07	34.18
203	SLU 56	160	188	7597	-1324.9	-54.37	34.07
203	SLU 57	161	177	7590	-1323.74	-54.79	34.14
203	SLU 58	160	188	7597	-1324.9	-54.37	34.07
203	SLU 59	161	177	7590	-1323.74	-54.79	34.14
203	SLU 60	169	195	8035	-1401.03	-57.73	35.85
203	SLU 61	169	185	8028	-1399.87	-58.15	35.92
203	SLU 62	169	195	8035	-1401.03	-57.73	35.85
203	SLU 63	169	185	8028	-1399.87	-58.15	35.92
203	SLU 64	155	178	7348	-1280.78	-51.8	32.95
203	SLU 65	155	160	7337	-1278.84	-52.5	33.06
203	SLU 66	155	178	7348	-1280.78	-51.8	32.95
203	SLU 67	155	167	7342	-1279.62	-52.22	33.01
203	SLU 68	155	160	7337	-1278.84	-52.5	33.06
203	SLU 69	155	178	7348	-1280.78	-51.8	32.95
203	SLU 70	155	167	7342	-1279.62	-52.22	33.01
203	SLU 71	155	178	7348	-1280.78	-51.8	32.95
203	SLU 72	155	167	7342	-1279.62	-52.22	33.01
203	SLU 73	175	179	8360	-1456.47	-60.34	37.21
203	SLU 74	174	197	8371	-1458.41	-59.65	37.09
203	SLU 75	175	186	8364	-1457.25	-60.06	37.16
203	SLU 76	175	179	8360	-1456.47	-60.34	37.21
203	SLU 77	174	197	8371	-1458.41	-59.65	37.09
203	SLU 78	175	186	8364	-1457.25	-60.06	37.16
203	SLU 79	174	197	8371	-1458.41	-59.65	37.09
203	SLU 80	175	186	8364	-1457.25	-60.06	37.16
203	SLU 81	183	205	8809	-1534.54	-63.01	38.87
203	SLU 82	183	194	8802	-1533.37	-63.42	38.94
203	SLU 83	183	205	8809	-1534.54	-63.01	38.87
203	SLU 84	183	194	8802	-1533.37	-63.42	38.94
203	SLE RA 1	116	135	5482	-955.88	-38.69	24.68
203	SLE RA 2	116	123	5475	-954.58	-39.15	24.75
203	SLE RA 3	116	135	5482	-955.88	-38.69	24.68
203	SLE RA 4	116	128	5478	-955.1	-38.97	24.72
203	SLE RA 5	116	123	5475	-954.58	-39.15	24.75
203	SLE RA 6	116	135	5482	-955.88	-38.69	24.68

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
203	SLE RA 7	116	128	5478	-955.1	-38.97	24.72
203	SLE RA 8	116	135	5482	-955.88	-38.69	24.68
203	SLE RA 9	116	128	5478	-955.1	-38.97	24.72
203	SLE RA 10	129	135	6157	-1073	-44.38	27.52
203	SLE RA 11	129	147	6164	-1074.29	-43.92	27.44
203	SLE RA 12	129	140	6160	-1073.52	-44.2	27.49
203	SLE RA 13	129	135	6157	-1073	-44.38	27.52
203	SLE RA 14	129	147	6164	-1074.29	-43.92	27.44
203	SLE RA 15	129	140	6160	-1073.52	-44.2	27.49
203	SLE RA 16	129	147	6164	-1074.29	-43.92	27.44
203	SLE RA 17	129	140	6160	-1073.52	-44.2	27.49
203	SLE RA 18	135	153	6456	-1125.04	-46.16	28.63
203	SLE RA 19	135	145	6452	-1124.27	-46.44	28.67
203	SLE RA 20	135	153	6456	-1125.04	-46.16	28.63
203	SLE RA 21	135	145	6452	-1124.27	-46.44	28.67
203	SLE FR 1	116	135	5482	-955.88	-38.69	24.68
203	SLE FR 2	116	133	5481	-955.62	-38.78	24.69
203	SLE FR 3	116	135	5482	-955.88	-38.69	24.68
203	SLE FR 4	122	138	5773	-1006.37	-41.02	25.88
203	SLE FR 5	121	140	5775	-1006.63	-40.93	25.86
203	SLE FR 6	125	144	5969	-1040.46	-42.42	26.65
203	SLE QP 1	116	135	5482	-955.88	-38.69	24.68
203	SLE QP 2	121	140	5775	-1006.63	-40.93	25.86
203	SLD 1	601	229	6053	-1060.36	-23.74	107.93
203	SLD 2	574	213	6050	-1059.82	-23.45	106.55
203	SLD 3	631	-10	5954	-1042.41	-27.32	112.89
203	SLD 4	604	-26	5951	-1041.88	-27.03	111.51
203	SLD 5	229	535	6010	-1050.15	-30.45	43.45
203	SLD 6	203	519	6006	-1049.61	-30.16	42.05
203	SLD 7	329	-262	5679	-990.34	-42.38	60
203	SLD 8	303	-278	5676	-989.8	-42.09	58.6
203	SLD 9	-60	558	5874	-1023.45	-39.77	-6.87
203	SLD 10	-86	542	5870	-1022.91	-39.48	-8.27
203	SLD 11	40	-239	5543	-963.64	-51.7	9.68
203	SLD 12	14	-254	5539	-963.11	-51.42	8.28
203	SLD 13	-361	306	5599	-971.37	-54.83	-59.78
203	SLD 14	-388	291	5595	-970.84	-54.54	-61.17
203	SLD 15	-332	67	5499	-953.43	-58.41	-54.82
203	SLD 16	-358	52	5496	-952.9	-58.12	-56.2
203	SLV 1	1210	342	6409	-1128.84	-1.77	212.33
203	SLV 2	1151	307	6401	-1127.64	-1.13	209.2
203	SLV 3	1278	-202	6182	-1087.9	-9.98	223.62
203	SLV 4	1219	-238	6174	-1086.69	-9.33	220.49
203	SLV 5	366	1040	6311	-1105.82	-16.97	65.8
203	SLV 6	306	1004	6303	-1104.6	-16.32	62.62
203	SLV 7	593	-776	5556	-969.34	-44.32	103.44
203	SLV 8	533	-812	5548	-968.12	-43.66	100.26
203	SLV 9	-290	1093	6001	-1045.14	-38.2	-48.53
203	SLV 10	-350	1057	5993	-1043.91	-37.54	-51.71
203	SLV 11	-63	-723	5246	-908.65	-65.54	-10.89
203	SLV 12	-123	-759	5238	-907.43	-64.89	-14.07
203	SLV 13	-976	518	5375	-926.56	-72.53	-168.76
203	SLV 14	-1035	483	5367	-925.35	-71.88	-171.9
203	SLV 15	-908	-26	5148	-885.61	-80.73	-157.47
203	SLV 16	-967	-62	5140	-884.41	-80.09	-160.6
203	CRTFP Ux+	0	0	0	0	0	0
203	CRTFP Ux-	0	0	0	0	0	0
203	CRTFP Uy+	0	0	0	0	0	0
203	CRTFP Uy-	0	0	0	0	0	0
205	SLU 1	9	-27	1655	-1.55	-237.54	-6.77
205	SLU 2	9	-38	1659	-1.5	-237.07	-9.32
205	SLU 3	9	-27	1655	-1.55	-237.54	-6.77
205	SLU 4	9	-33	1657	-1.52	-237.26	-8.3
205	SLU 5	9	-38	1659	-1.5	-237.07	-9.32
205	SLU 6	9	-27	1655	-1.55	-237.54	-6.77
205	SLU 7	9	-33	1657	-1.52	-237.26	-8.3
205	SLU 8	9	-27	1655	-1.55	-237.54	-6.77
205	SLU 9	9	-33	1657	-1.52	-237.26	-8.3
205	SLU 10	11	-42	1965	-1.81	-276.29	-10.45
205	SLU 11	11	-32	1961	-1.86	-276.77	-7.9
205	SLU 12	11	-38	1964	-1.83	-276.48	-9.43
205	SLU 13	11	-42	1965	-1.81	-276.29	-10.45
205	SLU 14	11	-32	1961	-1.86	-276.77	-7.9
205	SLU 15	11	-38	1964	-1.83	-276.48	-9.43
205	SLU 16	11	-32	1961	-1.86	-276.77	-7.9
205	SLU 17	11	-38	1964	-1.83	-276.48	-9.43
205	SLU 18	12	-34	2093	-1.99	-293.58	-8.38
205	SLU 19	12	-40	2095	-1.96	-293.29	-9.91
205	SLU 20	12	-34	2093	-1.99	-293.58	-8.38
205	SLU 21	12	-40	2095	-1.96	-293.29	-9.91
205	SLU 22	11	-30	1881	-1.8	-266.75	-7.34
205	SLU 23	11	-40	1885	-1.75	-266.28	-9.89
205	SLU 24	11	-30	1881	-1.8	-266.75	-7.34
205	SLU 25	11	-36	1883	-1.77	-266.47	-8.87
205	SLU 26	11	-40	1885	-1.75	-266.28	-9.89
205	SLU 27	11	-30	1881	-1.8	-266.75	-7.34
205	SLU 28	11	-36	1883	-1.77	-266.47	-8.87

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
205	SLU 29	11	-30	1881	-1.8	-266.75	-7.34
205	SLU 30	11	-36	1883	-1.77	-266.47	-8.87
205	SLU 31	13	-44	2191	-2.06	-305.5	-11.02
205	SLU 32	13	-34	2188	-2.11	-305.98	-8.47
205	SLU 33	13	-40	2190	-2.08	-305.69	-10
205	SLU 34	13	-44	2191	-2.06	-305.5	-11.02
205	SLU 35	13	-34	2188	-2.11	-305.98	-8.47
205	SLU 36	13	-40	2190	-2.08	-305.69	-10
205	SLU 37	13	-34	2188	-2.11	-305.98	-8.47
205	SLU 38	13	-40	2190	-2.08	-305.69	-10
205	SLU 39	14	-36	2319	-2.24	-322.79	-8.95
205	SLU 40	14	-42	2321	-2.21	-322.5	-10.49
205	SLU 41	14	-36	2319	-2.24	-322.79	-8.95
205	SLU 42	14	-42	2321	-2.21	-322.5	-10.49
205	SLU 43	11	-35	2074	-1.93	-298.79	-8.6
205	SLU 44	11	-45	2077	-1.89	-298.32	-11.16
205	SLU 45	11	-35	2074	-1.93	-298.79	-8.6
205	SLU 46	11	-41	2076	-1.9	-298.51	-10.13
205	SLU 47	11	-45	2077	-1.89	-298.32	-11.16
205	SLU 48	11	-35	2074	-1.93	-298.79	-8.6
205	SLU 49	11	-41	2076	-1.9	-298.51	-10.13
205	SLU 50	11	-35	2074	-1.93	-298.79	-8.6
205	SLU 51	11	-41	2076	-1.9	-298.51	-10.13
205	SLU 52	13	-50	2384	-2.19	-337.54	-12.29
205	SLU 53	13	-39	2380	-2.24	-338.02	-9.73
205	SLU 54	13	-45	2382	-2.21	-337.73	-11.26
205	SLU 55	13	-50	2384	-2.19	-337.54	-12.29
205	SLU 56	13	-39	2380	-2.24	-338.02	-9.73
205	SLU 57	13	-45	2382	-2.21	-337.73	-11.26
205	SLU 58	13	-39	2380	-2.24	-338.02	-9.73
205	SLU 59	13	-45	2382	-2.21	-337.73	-11.26
205	SLU 60	14	-41	2511	-2.37	-354.83	-10.22
205	SLU 61	14	-47	2514	-2.34	-354.54	-11.75
205	SLU 62	14	-41	2511	-2.37	-354.83	-10.22
205	SLU 63	14	-47	2514	-2.34	-354.54	-11.75
205	SLU 64	13	-37	2300	-2.18	-328	-9.17
205	SLU 65	13	-47	2304	-2.13	-327.53	-11.73
205	SLU 66	13	-37	2300	-2.18	-328	-9.17
205	SLU 67	13	-43	2302	-2.15	-327.72	-10.71
205	SLU 68	13	-47	2304	-2.13	-327.53	-11.73
205	SLU 69	13	-37	2300	-2.18	-328	-9.17
205	SLU 70	13	-43	2302	-2.15	-327.72	-10.71
205	SLU 71	13	-37	2300	-2.18	-328	-9.17
205	SLU 72	13	-43	2302	-2.15	-327.72	-10.71
205	SLU 73	15	-52	2610	-2.44	-366.75	-12.86
205	SLU 74	15	-42	2606	-2.49	-367.22	-10.3
205	SLU 75	15	-48	2609	-2.46	-366.94	-11.84
205	SLU 76	15	-52	2610	-2.44	-366.75	-12.86
205	SLU 77	15	-42	2606	-2.49	-367.22	-10.3
205	SLU 78	15	-48	2609	-2.46	-366.94	-11.84
205	SLU 79	15	-42	2606	-2.49	-367.22	-10.3
205	SLU 80	15	-48	2609	-2.46	-366.94	-11.84
205	SLU 81	16	-44	2738	-2.62	-384.03	-10.79
205	SLU 82	16	-50	2740	-2.59	-383.75	-12.32
205	SLU 83	16	-44	2738	-2.62	-384.03	-10.79
205	SLU 84	16	-50	2740	-2.59	-383.75	-12.32
205	SLE RA 1	10	-28	1719	-1.62	-245.89	-6.93
205	SLE RA 2	9	-35	1722	-1.59	-245.57	-8.63
205	SLE RA 3	10	-28	1719	-1.62	-245.89	-6.93
205	SLE RA 4	10	-32	1721	-1.6	-245.7	-7.95
205	SLE RA 5	9	-35	1722	-1.59	-245.57	-8.63
205	SLE RA 6	10	-28	1719	-1.62	-245.89	-6.93
205	SLE RA 7	10	-32	1721	-1.6	-245.7	-7.95
205	SLE RA 8	10	-28	1719	-1.62	-245.89	-6.93
205	SLE RA 9	10	-32	1721	-1.6	-245.7	-7.95
205	SLE RA 10	11	-38	1926	-1.8	-271.72	-9.39
205	SLE RA 11	11	-31	1924	-1.83	-272.04	-7.68
205	SLE RA 12	11	-35	1925	-1.81	-271.85	-8.71
205	SLE RA 13	11	-38	1926	-1.8	-271.72	-9.39
205	SLE RA 14	11	-31	1924	-1.83	-272.04	-7.68
205	SLE RA 15	11	-35	1925	-1.81	-271.85	-8.71
205	SLE RA 16	11	-31	1924	-1.83	-272.04	-7.68
205	SLE RA 17	11	-35	1925	-1.81	-271.85	-8.71
205	SLE RA 18	12	-32	2011	-1.92	-283.24	-8.01
205	SLE RA 19	12	-36	2013	-1.9	-283.06	-9.03
205	SLE RA 20	12	-32	2011	-1.92	-283.24	-8.01
205	SLE RA 21	12	-36	2013	-1.9	-283.06	-9.03
205	SLE FR 1	10	-28	1719	-1.62	-245.89	-6.93
205	SLE FR 2	10	-29	1720	-1.62	-245.83	-7.27
205	SLE FR 3	10	-28	1719	-1.62	-245.89	-6.93
205	SLE FR 4	10	-31	1807	-1.7	-257.03	-7.59
205	SLE FR 5	10	-29	1807	-1.71	-257.1	-7.25
205	SLE FR 6	11	-30	1865	-1.77	-264.57	-7.47
205	SLE QP 1	10	-28	1719	-1.62	-245.89	-6.93
205	SLE QP 2	10	-29	1807	-1.71	-257.1	-7.25
205	SLD 1	142	64	2033	-2.36	-287.16	16.03
205	SLD 2	131	28	2035	-2.34	-287.18	7.1

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
205	SLD 3	131	-53	2076	-1.81	-284.03	-13.3
205	SLD 4	120	-89	2078	-1.79	-284.05	-22.22
205	SLD 5	70	189	1808	-2.75	-270.85	47.4
205	SLD 6	60	153	1810	-2.73	-270.88	38.34
205	SLD 7	34	-201	1953	-0.91	-260.42	-50.35
205	SLD 8	23	-238	1955	-0.89	-260.44	-59.41
205	SLD 9	-2	179	1659	-2.53	-253.75	44.9
205	SLD 10	-13	143	1661	-2.51	-253.77	35.84
205	SLD 11	-39	-211	1804	-0.69	-243.31	-52.84
205	SLD 12	-50	-248	1806	-0.67	-243.34	-61.9
205	SLD 13	-100	31	1536	-1.63	-230.14	7.71
205	SLD 14	-110	-5	1538	-1.61	-230.16	-1.21
205	SLD 15	-111	-87	1579	-1.08	-227.01	-21.61
205	SLD 16	-121	-123	1581	-1.06	-227.03	-30.53
205	SLV 1	310	183	2320	-3.19	-325.55	45.77
205	SLV 2	286	101	2325	-3.16	-325.6	25.54
205	SLV 3	284	-84	2419	-1.94	-318.36	-21.07
205	SLV 4	261	-166	2424	-1.9	-318.42	-41.3
205	SLV 5	147	469	1810	-4.08	-288.51	117.26
205	SLV 6	122	386	1814	-4.04	-288.56	96.73
205	SLV 7	63	-422	2139	0.12	-264.56	-105.54
205	SLV 8	39	-505	2143	0.15	-264.61	-126.08
205	SLV 9	-18	446	1471	-3.57	-249.58	111.57
205	SLV 10	-42	363	1475	-3.54	-249.63	91.03
205	SLV 11	-102	-444	1800	0.62	-225.63	-111.23
205	SLV 12	-126	-527	1804	0.66	-225.68	-131.77
205	SLV 13	-240	107	1190	-1.52	-195.77	26.79
205	SLV 14	-264	25	1195	-1.48	-195.83	6.56
205	SLV 15	-265	-160	1289	-0.27	-188.59	-40.05
205	SLV 16	-289	-242	1294	-0.23	-188.64	-60.28
205	CRTFP Ux+	0	0	0	0	0	0
205	CRTFP Ux-	0	0	0	0	0	0
205	CRTFP Uy+	0	0	0	0	0	0
205	CRTFP Uy-	0	0	0	0	0	0
208	SLU 1	17	-4	1689	-1.8	270.04	1.16
208	SLU 2	18	-14	1694	-1.76	269.7	3.77
208	SLU 3	17	-4	1689	-1.8	270.04	1.16
208	SLU 4	18	-10	1692	-1.78	269.84	2.73
208	SLU 5	18	-14	1694	-1.76	269.7	3.77
208	SLU 6	17	-4	1689	-1.8	270.04	1.16
208	SLU 7	18	-10	1692	-1.78	269.84	2.73
208	SLU 8	17	-4	1689	-1.8	270.04	1.16
208	SLU 9	18	-10	1692	-1.78	269.84	2.73
208	SLU 10	20	-14	1974	-2.12	312.27	3.7
208	SLU 11	20	-3	1970	-2.16	312.61	1.09
208	SLU 12	20	-9	1973	-2.14	312.4	2.65
208	SLU 13	20	-14	1974	-2.12	312.27	3.7
208	SLU 14	20	-3	1970	-2.16	312.61	1.09
208	SLU 15	20	-9	1973	-2.14	312.4	2.65
208	SLU 16	20	-3	1970	-2.16	312.61	1.09
208	SLU 17	20	-9	1973	-2.14	312.4	2.65
208	SLU 18	21	-3	2090	-2.32	330.85	1.05
208	SLU 19	21	-9	2093	-2.29	330.65	2.62
208	SLU 20	21	-3	2090	-2.32	330.85	1.05
208	SLU 21	21	-9	2093	-2.29	330.65	2.62
208	SLU 22	19	-3	1903	-2.09	302.35	0.96
208	SLU 23	20	-13	1907	-2.04	302.01	3.57
208	SLU 24	19	-3	1903	-2.09	302.35	0.96
208	SLU 25	19	-9	1905	-2.06	302.15	2.52
208	SLU 26	20	-13	1907	-2.04	302.01	3.57
208	SLU 27	19	-3	1903	-2.09	302.35	0.96
208	SLU 28	19	-9	1905	-2.06	302.15	2.52
208	SLU 29	19	-3	1903	-2.09	302.35	0.96
208	SLU 30	19	-9	1905	-2.06	302.15	2.52
208	SLU 31	22	-13	2188	-2.4	344.58	3.49
208	SLU 32	21	-2	2183	-2.44	344.92	0.88
208	SLU 33	22	-8	2186	-2.42	344.71	2.45
208	SLU 34	22	-13	2188	-2.4	344.58	3.49
208	SLU 35	21	-2	2183	-2.44	344.92	0.88
208	SLU 36	22	-8	2186	-2.42	344.71	2.45
208	SLU 37	21	-2	2183	-2.44	344.92	0.88
208	SLU 38	22	-8	2186	-2.42	344.71	2.45
208	SLU 39	22	-2	2303	-2.6	363.16	0.85
208	SLU 40	23	-8	2306	-2.57	362.96	2.42
208	SLU 41	22	-2	2303	-2.6	363.16	0.85
208	SLU 42	23	-8	2306	-2.57	362.96	2.42
208	SLU 43	22	-5	2123	-2.25	339.97	1.58
208	SLU 44	23	-15	2128	-2.2	339.64	4.19
208	SLU 45	22	-5	2123	-2.25	339.97	1.58
208	SLU 46	22	-11	2126	-2.22	339.77	3.15
208	SLU 47	23	-15	2128	-2.2	339.64	4.19
208	SLU 48	22	-5	2123	-2.25	339.97	1.58
208	SLU 49	22	-11	2126	-2.22	339.77	3.15
208	SLU 50	22	-5	2123	-2.25	339.97	1.58
208	SLU 51	22	-11	2126	-2.22	339.77	3.15
208	SLU 52	25	-15	2408	-2.56	382.2	4.12
208	SLU 53	24	-5	2403	-2.61	382.54	1.5

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
208	SLU 54	25	-11	2406	-2.58	382.34	3.07
208	SLU 55	25	-15	2408	-2.56	382.2	4.12
208	SLU 56	24	-5	2403	-2.61	382.54	1.5
208	SLU 57	25	-11	2406	-2.58	382.34	3.07
208	SLU 58	24	-5	2403	-2.61	382.54	1.5
208	SLU 59	25	-11	2406	-2.58	382.34	3.07
208	SLU 60	25	-4	2524	-2.76	400.78	1.47
208	SLU 61	26	-11	2526	-2.73	400.58	3.04
208	SLU 62	25	-4	2524	-2.76	400.78	1.47
208	SLU 63	26	-11	2526	-2.73	400.58	3.04
208	SLU 64	24	-4	2336	-2.53	372.28	1.37
208	SLU 65	24	-14	2341	-2.49	371.94	3.99
208	SLU 66	24	-4	2336	-2.53	372.28	1.37
208	SLU 67	24	-10	2339	-2.5	372.08	2.94
208	SLU 68	24	-14	2341	-2.49	371.94	3.99
208	SLU 69	24	-4	2336	-2.53	372.28	1.37
208	SLU 70	24	-10	2339	-2.5	372.08	2.94
208	SLU 71	24	-4	2336	-2.53	372.28	1.37
208	SLU 72	24	-10	2339	-2.5	372.08	2.94
208	SLU 73	27	-14	2621	-2.84	414.51	3.91
208	SLU 74	26	-4	2617	-2.89	414.85	1.3
208	SLU 75	26	-10	2620	-2.86	414.65	2.87
208	SLU 76	27	-14	2621	-2.84	414.51	3.91
208	SLU 77	26	-4	2617	-2.89	414.85	1.3
208	SLU 78	26	-10	2620	-2.86	414.65	2.87
208	SLU 79	26	-4	2617	-2.89	414.85	1.3
208	SLU 80	26	-10	2620	-2.86	414.65	2.87
208	SLU 81	27	-3	2737	-3.04	433.09	1.27
208	SLU 82	27	-10	2740	-3.01	432.89	2.83
208	SLU 83	27	-3	2737	-3.04	433.09	1.27
208	SLU 84	27	-10	2740	-3.01	432.89	2.83
208	SLE RA 1	18	-3	1750	-1.88	279.27	1.1
208	SLE RA 2	18	-10	1753	-1.85	279.05	2.84
208	SLE RA 3	18	-3	1750	-1.88	279.27	1.1
208	SLE RA 4	18	-7	1752	-1.87	279.14	2.15
208	SLE RA 5	18	-10	1753	-1.85	279.05	2.84
208	SLE RA 6	18	-3	1750	-1.88	279.27	1.1
208	SLE RA 7	18	-7	1752	-1.87	279.14	2.15
208	SLE RA 8	18	-3	1750	-1.88	279.27	1.1
208	SLE RA 9	18	-7	1752	-1.87	279.14	2.15
208	SLE RA 10	20	-10	1940	-2.09	307.42	2.79
208	SLE RA 11	19	-3	1937	-2.12	307.65	1.05
208	SLE RA 12	20	-7	1939	-2.11	307.51	2.1
208	SLE RA 13	20	-10	1940	-2.09	307.42	2.79
208	SLE RA 14	19	-3	1937	-2.12	307.65	1.05
208	SLE RA 15	20	-7	1939	-2.11	307.51	2.1
208	SLE RA 16	19	-3	1937	-2.12	307.65	1.05
208	SLE RA 17	20	-7	1939	-2.11	307.51	2.1
208	SLE RA 18	20	-3	2017	-2.23	319.81	1.03
208	SLE RA 19	20	-7	2019	-2.21	319.68	2.08
208	SLE RA 20	20	-3	2017	-2.23	319.81	1.03
208	SLE RA 21	20	-7	2019	-2.21	319.68	2.08
208	SLE FR 1	18	-3	1750	-1.88	279.27	1.1
208	SLE FR 2	18	-5	1751	-1.88	279.23	1.45
208	SLE FR 3	18	-3	1750	-1.88	279.27	1.1
208	SLE FR 4	19	-5	1831	-1.98	291.39	1.43
208	SLE FR 5	18	-3	1830	-1.99	291.43	1.08
208	SLE FR 6	19	-3	1884	-2.06	299.54	1.07
208	SLE QP 1	18	-3	1750	-1.88	279.27	1.1
208	SLE QP 2	18	-3	1830	-1.99	291.43	1.08
208	SLD 1	141	13	1510	-1.79	257.19	-3.12
208	SLD 2	131	49	1509	-1.8	257.18	-11.87
208	SLD 3	152	-103	1579	-1.29	255.1	26
208	SLD 4	141	-68	1578	-1.3	255.09	17.25
208	SLD 5	43	165	1630	-2.68	284.33	-41.21
208	SLD 6	33	201	1629	-2.7	284.32	-50.1
208	SLD 7	78	-222	1860	-1.01	277.37	55.85
208	SLD 8	67	-186	1859	-1.02	277.36	46.97
208	SLD 9	-30	180	1802	-2.95	305.51	-44.8
208	SLD 10	-41	216	1801	-2.96	305.5	-53.69
208	SLD 11	4	-208	2032	-1.28	298.54	52.26
208	SLD 12	-6	-172	2031	-1.29	298.53	43.38
208	SLD 13	-104	61	2083	-2.68	327.78	-15.09
208	SLD 14	-115	97	2082	-2.69	327.76	-23.84
208	SLD 15	-94	-55	2152	-2.17	325.69	14.03
208	SLD 16	-104	-20	2151	-2.19	325.67	5.28
208	SLV 1	297	35	1101	-1.54	213.53	-8.57
208	SLV 2	273	115	1099	-1.57	213.51	-28.41
208	SLV 3	321	-230	1259	-0.39	208.75	57.84
208	SLV 4	297	-150	1256	-0.42	208.72	37.99
208	SLV 5	75	382	1374	-3.58	275.32	-95.44
208	SLV 6	51	463	1371	-3.61	275.3	-115.57
208	SLV 7	153	-502	1899	0.24	259.39	125.92
208	SLV 8	129	-421	1896	0.21	259.36	105.78
208	SLV 9	-92	414	1765	-4.18	323.51	-103.62
208	SLV 10	-117	496	1762	-4.21	323.48	-123.75
208	SLV 11	-14	-469	2290	-0.37	307.57	117.74

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
208	SLV 12	-38	-388	2287	-0.39	307.54	97.6
208	SLV 13	-260	144	2405	-3.55	374.14	-35.83
208	SLV 14	-284	224	2402	-3.58	374.11	-55.68
208	SLV 15	-237	-121	2562	-2.41	369.36	30.57
208	SLV 16	-261	-41	2560	-2.44	369.33	10.73
208	CRTFP Ux+	0	0	0	0	0	0
208	CRTFP Ux-	0	0	0	0	0	0
208	CRTFP Uy+	0	0	0	0	0	0
208	CRTFP Uy-	0	0	0	0	0	0
210	SLU 1	46	73	2865	1.79	-17.62	2.25
210	SLU 2	46	64	2860	1.86	-18.04	2.24
210	SLU 3	46	73	2865	1.79	-17.62	2.25
210	SLU 4	46	67	2862	1.83	-17.87	2.24
210	SLU 5	46	64	2860	1.86	-18.04	2.24
210	SLU 6	46	73	2865	1.79	-17.62	2.25
210	SLU 7	46	67	2862	1.83	-17.87	2.24
210	SLU 8	46	73	2865	1.79	-17.62	2.25
210	SLU 9	46	67	2862	1.83	-17.87	2.24
210	SLU 10	54	74	3421	2.27	-21.51	2.59
210	SLU 11	54	84	3425	2.19	-21.09	2.61
210	SLU 12	54	78	3423	2.24	-21.34	2.6
210	SLU 13	54	74	3421	2.27	-21.51	2.59
210	SLU 14	54	84	3425	2.19	-21.09	2.61
210	SLU 15	54	78	3423	2.24	-21.34	2.6
210	SLU 16	54	84	3425	2.19	-21.09	2.61
210	SLU 17	54	78	3423	2.24	-21.34	2.6
210	SLU 18	57	88	3666	2.37	-22.58	2.76
210	SLU 19	58	82	3663	2.41	-22.83	2.75
210	SLU 20	57	88	3666	2.37	-22.58	2.76
210	SLU 21	58	82	3663	2.41	-22.83	2.75
210	SLU 22	51	78	3294	2.17	-19.93	2.52
210	SLU 23	52	69	3290	2.24	-20.35	2.51
210	SLU 24	51	78	3294	2.17	-19.93	2.52
210	SLU 25	52	73	3292	2.21	-20.18	2.51
210	SLU 26	52	69	3290	2.24	-20.35	2.51
210	SLU 27	51	78	3294	2.17	-19.93	2.52
210	SLU 28	52	73	3292	2.21	-20.18	2.51
210	SLU 29	51	78	3294	2.17	-19.93	2.52
210	SLU 30	52	73	3292	2.21	-20.18	2.51
210	SLU 31	60	79	3851	2.65	-23.82	2.87
210	SLU 32	60	89	3855	2.57	-23.4	2.88
210	SLU 33	60	83	3852	2.62	-23.65	2.87
210	SLU 34	60	79	3851	2.65	-23.82	2.87
210	SLU 35	60	89	3855	2.57	-23.4	2.88
210	SLU 36	60	83	3852	2.62	-23.65	2.87
210	SLU 37	60	89	3855	2.57	-23.4	2.88
210	SLU 38	60	83	3852	2.62	-23.65	2.87
210	SLU 39	63	93	4096	2.75	-24.89	3.04
210	SLU 40	63	87	4093	2.79	-25.14	3.03
210	SLU 41	63	93	4096	2.75	-24.89	3.04
210	SLU 42	63	87	4093	2.79	-25.14	3.03
210	SLU 43	57	93	3577	2.19	-22.12	2.83
210	SLU 44	58	84	3572	2.27	-22.54	2.82
210	SLU 45	57	93	3577	2.19	-22.12	2.83
210	SLU 46	58	88	3574	2.24	-22.37	2.83
210	SLU 47	58	84	3572	2.27	-22.54	2.82
210	SLU 48	57	93	3577	2.19	-22.12	2.83
210	SLU 49	58	88	3574	2.24	-22.37	2.83
210	SLU 50	57	93	3577	2.19	-22.12	2.83
210	SLU 51	58	88	3574	2.24	-22.37	2.83
210	SLU 52	66	94	4133	2.67	-26.01	3.18
210	SLU 53	66	104	4137	2.6	-25.59	3.19
210	SLU 54	66	98	4135	2.64	-25.84	3.18
210	SLU 55	66	94	4133	2.67	-26.01	3.18
210	SLU 56	66	104	4137	2.6	-25.59	3.19
210	SLU 57	66	98	4135	2.64	-25.84	3.18
210	SLU 58	66	104	4137	2.6	-25.59	3.19
210	SLU 59	66	98	4135	2.64	-25.84	3.18
210	SLU 60	69	108	4378	2.77	-27.08	3.35
210	SLU 61	69	102	4375	2.82	-27.33	3.34
210	SLU 62	69	108	4378	2.77	-27.08	3.35
210	SLU 63	69	102	4375	2.82	-27.33	3.34
210	SLU 64	63	99	4006	2.57	-24.42	3.11
210	SLU 65	63	89	4002	2.65	-24.84	3.09
210	SLU 66	63	99	4006	2.57	-24.42	3.11
210	SLU 67	63	93	4004	2.62	-24.67	3.1
210	SLU 68	63	89	4002	2.65	-24.84	3.09
210	SLU 69	63	99	4006	2.57	-24.42	3.11
210	SLU 70	63	93	4004	2.62	-24.67	3.1
210	SLU 71	63	99	4006	2.57	-24.42	3.11
210	SLU 72	63	93	4004	2.62	-24.67	3.1
210	SLU 73	72	99	4563	3.05	-28.31	3.45
210	SLU 74	71	109	4567	2.98	-27.89	3.47
210	SLU 75	71	103	4564	3.02	-28.15	3.46
210	SLU 76	72	99	4563	3.05	-28.31	3.45
210	SLU 77	71	109	4567	2.98	-27.89	3.47
210	SLU 78	71	103	4564	3.02	-28.15	3.46

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
210	SLU 79	71	109	4567	2.98	-27.89	3.47
210	SLU 80	71	103	4564	3.02	-28.15	3.46
210	SLU 81	75	113	4808	3.15	-29.38	3.62
210	SLU 82	75	107	4805	3.2	-29.63	3.61
210	SLU 83	75	113	4808	3.15	-29.38	3.62
210	SLU 84	75	107	4805	3.2	-29.63	3.61
210	SLE RA 1	47	75	2987	1.89	-18.28	2.33
210	SLE RA 2	48	68	2984	1.94	-18.56	2.32
210	SLE RA 3	47	75	2987	1.89	-18.28	2.33
210	SLE RA 4	47	71	2986	1.92	-18.45	2.32
210	SLE RA 5	48	68	2984	1.94	-18.56	2.32
210	SLE RA 6	47	75	2987	1.89	-18.28	2.33
210	SLE RA 7	47	71	2986	1.92	-18.45	2.32
210	SLE RA 8	47	75	2987	1.89	-18.28	2.33
210	SLE RA 9	47	71	2986	1.92	-18.45	2.32
210	SLE RA 10	53	75	3358	2.22	-20.87	2.56
210	SLE RA 11	53	82	3361	2.17	-20.59	2.57
210	SLE RA 12	53	78	3359	2.2	-20.76	2.56
210	SLE RA 13	53	75	3358	2.22	-20.87	2.56
210	SLE RA 14	53	82	3361	2.17	-20.59	2.57
210	SLE RA 15	53	78	3359	2.2	-20.76	2.56
210	SLE RA 16	53	82	3361	2.17	-20.59	2.57
210	SLE RA 17	53	78	3359	2.2	-20.76	2.56
210	SLE RA 18	55	84	3521	2.28	-21.59	2.67
210	SLE RA 19	55	81	3520	2.31	-21.75	2.66
210	SLE RA 20	55	84	3521	2.28	-21.59	2.67
210	SLE RA 21	55	81	3520	2.31	-21.75	2.66
210	SLE FR 1	47	75	2987	1.89	-18.28	2.33
210	SLE FR 2	47	73	2987	1.9	-18.34	2.33
210	SLE FR 3	47	75	2987	1.89	-18.28	2.33
210	SLE FR 4	50	76	3147	2.02	-19.33	2.43
210	SLE FR 5	50	78	3148	2.01	-19.27	2.43
210	SLE FR 6	51	80	3254	2.09	-19.93	2.5
210	SLE QP 1	47	75	2987	1.89	-18.28	2.33
210	SLE QP 2	50	78	3148	2.01	-19.27	2.43
210	SLD 1	312	125	3261	1.08	-9.18	1.04
210	SLD 2	289	116	3259	1.08	-8.99	2.31
210	SLD 3	329	-3	3225	1.92	-11.07	0.81
210	SLD 4	306	-11	3223	1.92	-10.89	2.07
210	SLD 5	110	288	3237	0.46	-13.44	1.91
210	SLD 6	87	280	3235	0.46	-13.25	3.2
210	SLD 7	168	-137	3117	3.26	-19.75	1.14
210	SLD 8	144	-145	3115	3.25	-19.56	2.42
210	SLD 9	-45	300	3180	0.77	-18.98	2.44
210	SLD 10	-69	292	3178	0.76	-18.8	3.73
210	SLD 11	13	-124	3060	3.57	-25.29	1.66
210	SLD 12	-11	-133	3058	3.56	-25.11	2.95
210	SLD 13	-207	166	3072	2.11	-27.66	2.79
210	SLD 14	-230	158	3070	2.1	-27.48	4.06
210	SLD 15	-189	39	3036	2.95	-29.55	2.56
210	SLD 16	-213	31	3034	2.94	-29.37	3.82
210	SLV 1	646	185	3406	-0.11	3.73	-0.72
210	SLV 2	593	166	3401	-0.12	4.14	2.15
210	SLV 3	685	-105	3324	1.8	-0.61	-1.26
210	SLV 4	632	-124	3319	1.8	-0.2	1.61
210	SLV 5	188	557	3351	-1.53	-5.93	1.28
210	SLV 6	134	538	3346	-1.54	-5.51	4.19
210	SLV 7	319	-411	3078	4.86	-20.41	-0.52
210	SLV 8	265	-430	3072	4.85	-19.99	2.4
210	SLV 9	-166	585	3223	-0.83	-18.55	2.47
210	SLV 10	-220	566	3218	-0.84	-18.13	5.38
210	SLV 11	-35	-383	2949	5.56	-33.03	0.68
210	SLV 12	-89	-402	2944	5.55	-32.61	3.59
210	SLV 13	-533	279	2977	2.23	-38.34	3.25
210	SLV 14	-586	261	2972	2.22	-37.93	6.13
210	SLV 15	-494	-11	2895	4.14	-42.69	2.72
210	SLV 16	-547	-30	2889	4.13	-42.27	5.59
210	CRTFP Ux+	0	0	0	0	0	0
210	CRTFP Ux-	0	0	0	0	0	0
210	CRTFP Uy+	0	0	0	0	0	0
210	CRTFP Uy-	0	0	0	0	0	0
212	SLU 1	6	-28	1612	-1.12	-207.18	-6.83
212	SLU 2	6	-38	1617	-1.07	-206.85	-9.39
212	SLU 3	6	-28	1612	-1.12	-207.18	-6.83
212	SLU 4	6	-34	1615	-1.09	-206.98	-8.37
212	SLU 5	6	-38	1617	-1.07	-206.85	-9.39
212	SLU 6	6	-28	1612	-1.12	-207.18	-6.83
212	SLU 7	6	-34	1615	-1.09	-206.98	-8.37
212	SLU 8	6	-28	1612	-1.12	-207.18	-6.83
212	SLU 9	6	-34	1615	-1.09	-206.98	-8.37
212	SLU 10	8	-42	1916	-1.28	-239.61	-10.49
212	SLU 11	8	-32	1910	-1.33	-239.94	-7.94
212	SLU 12	8	-38	1914	-1.3	-239.74	-9.47
212	SLU 13	8	-42	1916	-1.28	-239.61	-10.49
212	SLU 14	8	-32	1910	-1.33	-239.94	-7.94
212	SLU 15	8	-38	1914	-1.3	-239.74	-9.47
212	SLU 16	8	-32	1910	-1.33	-239.94	-7.94

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
212	SLU 17	8	-38	1914	-1.3	-239.74	-9.47
212	SLU 18	9	-34	2038	-1.42	-253.98	-8.41
212	SLU 19	9	-40	2041	-1.39	-253.78	-9.94
212	SLU 20	9	-34	2038	-1.42	-253.98	-8.41
212	SLU 21	9	-40	2041	-1.39	-253.78	-9.94
212	SLU 22	8	-30	1832	-1.3	-231.52	-7.4
212	SLU 23	8	-40	1837	-1.25	-231.18	-9.96
212	SLU 24	8	-30	1832	-1.3	-231.52	-7.4
212	SLU 25	8	-36	1835	-1.27	-231.31	-8.94
212	SLU 26	8	-40	1837	-1.25	-231.18	-9.96
212	SLU 27	8	-30	1832	-1.3	-231.52	-7.4
212	SLU 28	8	-36	1835	-1.27	-231.31	-8.94
212	SLU 29	8	-30	1832	-1.3	-231.52	-7.4
212	SLU 30	8	-36	1835	-1.27	-231.31	-8.94
212	SLU 31	9	-45	2135	-1.46	-263.94	-11.07
212	SLU 32	10	-35	2130	-1.51	-264.27	-8.51
212	SLU 33	10	-41	2133	-1.48	-264.07	-10.04
212	SLU 34	9	-45	2135	-1.46	-263.94	-11.07
212	SLU 35	10	-35	2130	-1.51	-264.27	-8.51
212	SLU 36	10	-41	2133	-1.48	-264.07	-10.04
212	SLU 37	10	-35	2130	-1.51	-264.27	-8.51
212	SLU 38	10	-41	2133	-1.48	-264.07	-10.04
212	SLU 39	10	-36	2258	-1.6	-278.31	-8.98
212	SLU 40	10	-43	2261	-1.57	-278.11	-10.52
212	SLU 41	10	-36	2258	-1.6	-278.31	-8.98
212	SLU 42	10	-43	2261	-1.57	-278.11	-10.52
212	SLU 43	8	-35	2020	-1.39	-261	-8.68
212	SLU 44	8	-45	2026	-1.34	-260.66	-11.24
212	SLU 45	8	-35	2020	-1.39	-261	-8.68
212	SLU 46	8	-41	2024	-1.36	-260.8	-10.22
212	SLU 47	8	-45	2026	-1.34	-260.66	-11.24
212	SLU 48	8	-35	2020	-1.39	-261	-8.68
212	SLU 49	8	-41	2024	-1.36	-260.8	-10.22
212	SLU 50	8	-35	2020	-1.39	-261	-8.68
212	SLU 51	8	-41	2024	-1.36	-260.8	-10.22
212	SLU 52	9	-50	2324	-1.55	-293.42	-12.35
212	SLU 53	10	-40	2319	-1.6	-293.76	-9.79
212	SLU 54	9	-46	2322	-1.57	-293.56	-11.32
212	SLU 55	9	-50	2324	-1.55	-293.42	-12.35
212	SLU 56	10	-40	2319	-1.6	-293.76	-9.79
212	SLU 57	9	-46	2322	-1.57	-293.56	-11.32
212	SLU 58	10	-40	2319	-1.6	-293.76	-9.79
212	SLU 59	9	-46	2322	-1.57	-293.56	-11.32
212	SLU 60	10	-42	2447	-1.69	-307.8	-10.26
212	SLU 61	10	-48	2450	-1.66	-307.6	-11.8
212	SLU 62	10	-42	2447	-1.69	-307.8	-10.26
212	SLU 63	10	-48	2450	-1.66	-307.6	-11.8
212	SLU 64	9	-38	2240	-1.57	-285.33	-9.26
212	SLU 65	9	-48	2245	-1.52	-284.99	-11.81
212	SLU 66	9	-38	2240	-1.57	-285.33	-9.26
212	SLU 67	9	-44	2243	-1.54	-285.13	-10.79
212	SLU 68	9	-48	2245	-1.52	-284.99	-11.81
212	SLU 69	9	-38	2240	-1.57	-285.33	-9.26
212	SLU 70	9	-44	2243	-1.54	-285.13	-10.79
212	SLU 71	9	-38	2240	-1.57	-285.33	-9.26
212	SLU 72	9	-44	2243	-1.54	-285.13	-10.79
212	SLU 73	11	-52	2544	-1.73	-317.75	-12.92
212	SLU 74	11	-42	2538	-1.78	-318.09	-10.36
212	SLU 75	11	-48	2542	-1.75	-317.89	-11.9
212	SLU 76	11	-52	2544	-1.73	-317.75	-12.92
212	SLU 77	11	-42	2538	-1.78	-318.09	-10.36
212	SLU 78	11	-48	2542	-1.75	-317.89	-11.9
212	SLU 79	11	-42	2538	-1.78	-318.09	-10.36
212	SLU 80	11	-48	2542	-1.75	-317.89	-11.9
212	SLU 81	12	-44	2666	-1.87	-332.13	-10.84
212	SLU 82	12	-50	2669	-1.84	-331.93	-12.37
212	SLU 83	12	-44	2666	-1.87	-332.13	-10.84
212	SLU 84	12	-50	2669	-1.84	-331.93	-12.37
212	SLE RA 1	7	-28	1675	-1.17	-214.14	-7
212	SLE RA 2	7	-35	1678	-1.14	-213.91	-8.7
212	SLE RA 3	7	-28	1675	-1.17	-214.14	-7
212	SLE RA 4	7	-32	1677	-1.15	-214	-8.02
212	SLE RA 5	7	-35	1678	-1.14	-213.91	-8.7
212	SLE RA 6	7	-28	1675	-1.17	-214.14	-7
212	SLE RA 7	7	-32	1677	-1.15	-214	-8.02
212	SLE RA 8	7	-28	1675	-1.17	-214.14	-7
212	SLE RA 9	7	-32	1677	-1.15	-214	-8.02
212	SLE RA 10	8	-38	1877	-1.28	-235.75	-9.44
212	SLE RA 11	8	-31	1874	-1.31	-235.98	-7.73
212	SLE RA 12	8	-35	1876	-1.29	-235.84	-8.75
212	SLE RA 13	8	-38	1877	-1.28	-235.75	-9.44
212	SLE RA 14	8	-31	1874	-1.31	-235.98	-7.73
212	SLE RA 15	8	-35	1876	-1.29	-235.84	-8.75
212	SLE RA 16	8	-31	1874	-1.31	-235.98	-7.73
212	SLE RA 17	8	-35	1876	-1.29	-235.84	-8.75
212	SLE RA 18	9	-33	1959	-1.37	-245.34	-8.05
212	SLE RA 19	8	-37	1961	-1.35	-245.2	-9.07

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
212	SLE RA 20	9	-33	1959	-1.37	-245.34	-8.05
212	SLE RA 21	8	-37	1961	-1.35	-245.2	-9.07
212	SLE FR 1	7	-28	1675	-1.17	-214.14	-7
212	SLE FR 2	7	-30	1676	-1.16	-214.09	-7.34
212	SLE FR 3	7	-28	1675	-1.17	-214.14	-7
212	SLE FR 4	7	-31	1761	-1.22	-223.45	-7.65
212	SLE FR 5	7	-30	1760	-1.23	-223.5	-7.31
212	SLE FR 6	8	-31	1817	-1.27	-229.74	-7.52
212	SLE QP 1	7	-28	1675	-1.17	-214.14	-7
212	SLE QP 2	7	-30	1760	-1.23	-223.5	-7.31
212	SLD 1	142	64	1968	-1.8	-244.9	15.99
212	SLD 2	128	28	1970	-1.78	-244.98	7.06
212	SLD 3	131	-54	2028	-1.2	-246.51	-13.37
212	SLD 4	118	-90	2031	-1.18	-246.59	-22.3
212	SLD 5	68	189	1730	-2.31	-227.45	47.4
212	SLD 6	54	152	1732	-2.29	-227.52	38.34
212	SLD 7	34	-202	1932	-0.32	-232.82	-50.47
212	SLD 8	20	-238	1934	-0.31	-232.9	-59.53
212	SLD 9	-5	179	1586	-2.16	-214.1	44.91
212	SLD 10	-19	142	1589	-2.14	-214.17	35.85
212	SLD 11	-40	-212	1788	-0.17	-219.47	-52.96
212	SLD 12	-53	-248	1791	-0.15	-219.55	-62.02
212	SLD 13	-103	30	1489	-1.28	-200.4	7.67
212	SLD 14	-116	-6	1492	-1.26	-200.48	-1.25
212	SLD 15	-113	-87	1550	-0.68	-202.02	-21.69
212	SLD 16	-127	-123	1552	-0.67	-202.09	-30.61
212	SLV 1	312	183	2232	-2.52	-272.25	45.76
212	SLV 2	282	101	2238	-2.48	-272.42	25.53
212	SLV 3	289	-84	2370	-1.16	-275.97	-21.16
212	SLV 4	258	-166	2376	-1.12	-276.14	-41.4
212	SLV 5	145	469	1690	-3.7	-232.42	117.34
212	SLV 6	115	386	1696	-3.66	-232.59	96.81
212	SLV 7	67	-422	2151	0.84	-244.82	-105.73
212	SLV 8	36	-505	2156	0.88	-245	-126.27
212	SLV 9	-21	446	1364	-3.34	-202	111.65
212	SLV 10	-52	363	1370	-3.3	-202.17	91.11
212	SLV 11	-100	-445	1824	1.19	-214.41	-111.43
212	SLV 12	-131	-528	1830	1.23	-214.58	-131.97
212	SLV 13	-244	107	1144	-1.34	-170.85	26.77
212	SLV 14	-274	25	1150	-1.3	-171.02	6.54
212	SLV 15	-267	-160	1282	0.02	-174.58	-40.15
212	SLV 16	-297	-242	1288	0.06	-174.74	-60.39
212	CRTFP Ux+	0	0	0	0	0	0
212	CRTFP Ux-	0	0	0	0	0	0
212	CRTFP Uy+	0	0	0	0	0	0
212	CRTFP Uy-	0	0	0	0	0	0
215	SLU 1	9	-4	1639	-1.34	232.42	1.14
215	SLU 2	9	-14	1645	-1.28	232.21	3.76
215	SLU 3	9	-4	1639	-1.34	232.42	1.14
215	SLU 4	9	-10	1643	-1.31	232.29	2.71
215	SLU 5	9	-14	1645	-1.28	232.21	3.76
215	SLU 6	9	-4	1639	-1.34	232.42	1.14
215	SLU 7	9	-10	1643	-1.31	232.29	2.71
215	SLU 8	9	-4	1639	-1.34	232.42	1.14
215	SLU 9	9	-10	1643	-1.31	232.29	2.71
215	SLU 10	11	-14	1916	-1.55	267.33	3.68
215	SLU 11	10	-3	1910	-1.6	267.55	1.07
215	SLU 12	11	-9	1913	-1.57	267.42	2.63
215	SLU 13	11	-14	1916	-1.55	267.33	3.68
215	SLU 14	10	-3	1910	-1.6	267.55	1.07
215	SLU 15	11	-9	1913	-1.57	267.42	2.63
215	SLU 16	10	-3	1910	-1.6	267.55	1.07
215	SLU 17	11	-9	1913	-1.57	267.42	2.63
215	SLU 18	11	-3	2026	-1.72	282.6	1.03
215	SLU 19	11	-9	2029	-1.69	282.47	2.6
215	SLU 20	11	-3	2026	-1.72	282.6	1.03
215	SLU 21	11	-9	2029	-1.69	282.47	2.6
215	SLU 22	10	-3	1845	-1.55	259.03	0.94
215	SLU 23	10	-13	1851	-1.5	258.81	3.56
215	SLU 24	10	-3	1845	-1.55	259.03	0.94
215	SLU 25	10	-9	1848	-1.52	258.9	2.51
215	SLU 26	10	-13	1851	-1.5	258.81	3.56
215	SLU 27	10	-3	1845	-1.55	259.03	0.94
215	SLU 28	10	-9	1848	-1.52	258.9	2.51
215	SLU 29	10	-3	1845	-1.55	259.03	0.94
215	SLU 30	10	-9	1848	-1.52	258.9	2.51
215	SLU 31	11	-13	2121	-1.77	293.93	3.48
215	SLU 32	11	-2	2115	-1.82	294.15	0.87
215	SLU 33	11	-8	2119	-1.79	294.02	2.44
215	SLU 34	11	-13	2121	-1.77	293.93	3.48
215	SLU 35	11	-2	2115	-1.82	294.15	0.87
215	SLU 36	11	-8	2119	-1.79	294.02	2.44
215	SLU 37	11	-2	2115	-1.82	294.15	0.87
215	SLU 38	11	-8	2119	-1.79	294.02	2.44
215	SLU 39	12	-2	2231	-1.94	309.21	0.84
215	SLU 40	12	-8	2235	-1.9	309.07	2.41
215	SLU 41	12	-2	2231	-1.94	309.21	0.84

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
215	SLU 42	12	-8	2235	-1.9	309.07	2.41
215	SLU 43	12	-5	2061	-1.66	293.03	1.55
215	SLU 44	12	-15	2067	-1.61	292.81	4.17
215	SLU 45	12	-5	2061	-1.66	293.03	1.55
215	SLU 46	12	-11	2064	-1.63	292.9	3.12
215	SLU 47	12	-15	2067	-1.61	292.81	4.17
215	SLU 48	12	-5	2061	-1.66	293.03	1.55
215	SLU 49	12	-11	2064	-1.63	292.9	3.12
215	SLU 50	12	-5	2061	-1.66	293.03	1.55
215	SLU 51	12	-11	2064	-1.63	292.9	3.12
215	SLU 52	13	-15	2337	-1.88	327.94	4.09
215	SLU 53	13	-4	2331	-1.93	328.15	1.47
215	SLU 54	13	-11	2335	-1.9	328.02	3.04
215	SLU 55	13	-15	2337	-1.88	327.94	4.09
215	SLU 56	13	-4	2331	-1.93	328.15	1.47
215	SLU 57	13	-11	2335	-1.9	328.02	3.04
215	SLU 58	13	-4	2331	-1.93	328.15	1.47
215	SLU 59	13	-11	2335	-1.9	328.02	3.04
215	SLU 60	13	-4	2447	-2.05	343.21	1.44
215	SLU 61	14	-11	2451	-2.01	343.08	3.01
215	SLU 62	13	-4	2447	-2.05	343.21	1.44
215	SLU 63	14	-11	2451	-2.01	343.08	3.01
215	SLU 64	12	-4	2266	-1.88	319.63	1.35
215	SLU 65	13	-14	2272	-1.83	319.41	3.97
215	SLU 66	12	-4	2266	-1.88	319.63	1.35
215	SLU 67	13	-10	2270	-1.85	319.5	2.92
215	SLU 68	13	-14	2272	-1.83	319.41	3.97
215	SLU 69	12	-4	2266	-1.88	319.63	1.35
215	SLU 70	13	-10	2270	-1.85	319.5	2.92
215	SLU 71	12	-4	2266	-1.88	319.63	1.35
215	SLU 72	13	-10	2270	-1.85	319.5	2.92
215	SLU 73	14	-14	2543	-2.1	354.54	3.89
215	SLU 74	14	-4	2536	-2.15	354.76	1.28
215	SLU 75	14	-10	2540	-2.12	354.63	2.85
215	SLU 76	14	-14	2543	-2.1	354.54	3.89
215	SLU 77	14	-4	2536	-2.15	354.76	1.28
215	SLU 78	14	-10	2540	-2.12	354.63	2.85
215	SLU 79	14	-4	2536	-2.15	354.76	1.28
215	SLU 80	14	-10	2540	-2.12	354.63	2.85
215	SLU 81	14	-3	2652	-2.26	369.81	1.25
215	SLU 82	14	-10	2656	-2.23	369.68	2.81
215	SLU 83	14	-3	2652	-2.26	369.81	1.25
215	SLU 84	14	-10	2656	-2.23	369.68	2.81
215	SLE RA 1	9	-3	1698	-1.4	240.02	1.08
215	SLE RA 2	10	-10	1702	-1.36	239.88	2.83
215	SLE RA 3	9	-3	1698	-1.4	240.02	1.08
215	SLE RA 4	9	-7	1700	-1.38	239.94	2.13
215	SLE RA 5	10	-10	1702	-1.36	239.88	2.83
215	SLE RA 6	9	-3	1698	-1.4	240.02	1.08
215	SLE RA 7	9	-7	1700	-1.38	239.94	2.13
215	SLE RA 8	9	-3	1698	-1.4	240.02	1.08
215	SLE RA 9	9	-7	1700	-1.38	239.94	2.13
215	SLE RA 10	10	-10	1882	-1.54	263.3	2.78
215	SLE RA 11	10	-3	1878	-1.58	263.44	1.03
215	SLE RA 12	10	-7	1881	-1.56	263.35	2.08
215	SLE RA 13	10	-10	1882	-1.54	263.3	2.78
215	SLE RA 14	10	-3	1878	-1.58	263.44	1.03
215	SLE RA 15	10	-7	1881	-1.56	263.35	2.08
215	SLE RA 16	10	-3	1878	-1.58	263.44	1.03
215	SLE RA 17	10	-7	1881	-1.56	263.35	2.08
215	SLE RA 18	11	-3	1955	-1.65	273.48	1.01
215	SLE RA 19	11	-7	1958	-1.63	273.39	2.06
215	SLE RA 20	11	-3	1955	-1.65	273.48	1.01
215	SLE RA 21	11	-7	1958	-1.63	273.39	2.06
215	SLE FR 1	9	-3	1698	-1.4	240.02	1.08
215	SLE FR 2	9	-5	1699	-1.39	240	1.43
215	SLE FR 3	9	-3	1698	-1.4	240.02	1.08
215	SLE FR 4	10	-5	1776	-1.47	250.03	1.41
215	SLE FR 5	10	-3	1775	-1.47	250.06	1.06
215	SLE FR 6	10	-3	1827	-1.53	256.75	1.05
215	SLE QP 1	9	-3	1698	-1.4	240.02	1.08
215	SLE QP 2	10	-3	1775	-1.47	250.06	1.06
215	SLD 1	135	13	1458	-1.42	221.14	-3.17
215	SLD 2	122	49	1457	-1.44	221.09	-11.92
215	SLD 3	145	-103	1544	-0.86	223.76	26.01
215	SLD 4	131	-68	1542	-0.88	223.71	17.26
215	SLD 5	38	166	1552	-2.3	237.42	-41.33
215	SLD 6	25	202	1550	-2.32	237.37	-50.21
215	SLD 7	69	-222	1836	-0.44	246.17	55.93
215	SLD 8	55	-186	1834	-0.45	246.12	47.04
215	SLD 9	-36	180	1717	-2.5	254	-44.92
215	SLD 10	-50	216	1715	-2.51	253.95	-53.8
215	SLD 11	-5	-208	2001	-0.63	262.75	52.34
215	SLD 12	-19	-172	1999	-0.65	262.7	43.45
215	SLD 13	-112	61	2008	-2.07	276.41	-15.13
215	SLD 14	-125	97	2007	-2.08	276.36	-23.89
215	SLD 15	-103	-55	2094	-1.51	279.03	14.04

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
215	SLD 16	-116	-20	2092	-1.53	278.98	5.29
215	SLV 1	295	35	1055	-1.36	184.18	-8.65
215	SLV 2	265	115	1051	-1.39	184.06	-28.49
215	SLV 3	316	-231	1249	-0.09	190.17	57.89
215	SLV 4	286	-151	1245	-0.12	190.05	38.04
215	SLV 5	74	382	1265	-3.37	221.25	-95.67
215	SLV 6	44	463	1262	-3.4	221.13	-115.81
215	SLV 7	144	-503	1914	0.89	241.23	126.11
215	SLV 8	114	-421	1910	0.86	241.11	105.97
215	SLV 9	-94	415	1641	-3.81	259.01	-103.85
215	SLV 10	-125	496	1637	-3.84	258.9	-123.99
215	SLV 11	-24	-470	2289	0.45	278.99	117.93
215	SLV 12	-55	-388	2285	0.42	278.87	97.79
215	SLV 13	-267	144	2305	-2.83	310.07	-35.92
215	SLV 14	-297	224	2301	-2.86	309.95	-55.76
215	SLV 15	-246	-121	2500	-1.56	316.06	30.62
215	SLV 16	-276	-41	2496	-1.59	315.94	10.77
215	CRTFP Ux+	0	0	0	0	0	0
215	CRTFP Ux-	0	0	0	0	0	0
215	CRTFP Uy+	0	0	0	0	0	0
215	CRTFP Uy-	0	0	0	0	0	0
217	SLU 1	33	75	2922	1.95	-16.53	2.59
217	SLU 2	34	65	2920	2.08	-16.95	2.57
217	SLU 3	33	75	2922	1.95	-16.53	2.59
217	SLU 4	34	69	2921	2.03	-16.78	2.58
217	SLU 5	34	65	2920	2.08	-16.95	2.57
217	SLU 6	33	75	2922	1.95	-16.53	2.59
217	SLU 7	34	69	2921	2.03	-16.78	2.58
217	SLU 8	33	75	2922	1.95	-16.53	2.59
217	SLU 9	34	69	2921	2.03	-16.78	2.58
217	SLU 10	40	76	3493	2.47	-20.13	2.98
217	SLU 11	40	86	3495	2.34	-19.71	3
217	SLU 12	40	80	3494	2.42	-19.96	2.99
217	SLU 13	40	76	3493	2.47	-20.13	2.98
217	SLU 14	40	86	3495	2.34	-19.71	3
217	SLU 15	40	80	3494	2.42	-19.96	2.99
217	SLU 16	40	86	3495	2.34	-19.71	3
217	SLU 17	40	80	3494	2.42	-19.96	2.99
217	SLU 18	42	90	3740	2.5	-21.08	3.17
217	SLU 19	42	84	3739	2.58	-21.33	3.16
217	SLU 20	42	90	3740	2.5	-21.08	3.17
217	SLU 21	42	84	3739	2.58	-21.33	3.16
217	SLU 22	38	80	3362	2.24	-18.66	2.9
217	SLU 23	38	71	3360	2.38	-19.07	2.88
217	SLU 24	38	80	3362	2.24	-18.66	2.9
217	SLU 25	38	74	3361	2.32	-18.91	2.89
217	SLU 26	38	71	3360	2.38	-19.07	2.88
217	SLU 27	38	80	3362	2.24	-18.66	2.9
217	SLU 28	38	74	3361	2.32	-18.91	2.89
217	SLU 29	38	80	3362	2.24	-18.66	2.9
217	SLU 30	38	74	3361	2.32	-18.91	2.89
217	SLU 31	44	81	3933	2.76	-22.25	3.28
217	SLU 32	44	91	3935	2.63	-21.84	3.3
217	SLU 33	44	85	3934	2.71	-22.09	3.29
217	SLU 34	44	81	3933	2.76	-22.25	3.28
217	SLU 35	44	91	3935	2.63	-21.84	3.3
217	SLU 36	44	85	3934	2.71	-22.09	3.29
217	SLU 37	44	91	3935	2.63	-21.84	3.3
217	SLU 38	44	85	3934	2.71	-22.09	3.29
217	SLU 39	46	95	4180	2.8	-23.21	3.47
217	SLU 40	47	89	4179	2.87	-23.45	3.46
217	SLU 41	46	95	4180	2.8	-23.21	3.47
217	SLU 42	47	89	4179	2.87	-23.45	3.46
217	SLU 43	42	96	3647	2.44	-20.76	3.26
217	SLU 44	42	86	3646	2.57	-21.18	3.25
217	SLU 45	42	96	3647	2.44	-20.76	3.26
217	SLU 46	42	90	3646	2.52	-21.01	3.25
217	SLU 47	42	86	3646	2.57	-21.18	3.25
217	SLU 48	42	96	3647	2.44	-20.76	3.26
217	SLU 49	42	90	3646	2.52	-21.01	3.25
217	SLU 50	42	96	3647	2.44	-20.76	3.26
217	SLU 51	42	90	3646	2.52	-21.01	3.25
217	SLU 52	48	97	4219	2.95	-24.36	3.65
217	SLU 53	48	106	4220	2.82	-23.95	3.67
217	SLU 54	48	101	4219	2.9	-24.19	3.66
217	SLU 55	48	97	4219	2.95	-24.36	3.65
217	SLU 56	48	106	4220	2.82	-23.95	3.67
217	SLU 57	48	101	4219	2.9	-24.19	3.66
217	SLU 58	48	106	4220	2.82	-23.95	3.67
217	SLU 59	48	101	4219	2.9	-24.19	3.66
217	SLU 60	51	111	4466	2.99	-25.31	3.84
217	SLU 61	51	105	4465	3.07	-25.56	3.83
217	SLU 62	51	111	4466	2.99	-25.31	3.84
217	SLU 63	51	105	4465	3.07	-25.56	3.83
217	SLU 64	46	101	4087	2.73	-22.89	3.57
217	SLU 65	46	91	4086	2.86	-23.3	3.55
217	SLU 66	46	101	4087	2.73	-22.89	3.57

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
217	SLU 67	46	95	4086	2.81	-23.14	3.56
217	SLU 68	46	91	4086	2.86	-23.3	3.55
217	SLU 69	46	101	4087	2.73	-22.89	3.57
217	SLU 70	46	95	4086	2.81	-23.14	3.56
217	SLU 71	46	101	4087	2.73	-22.89	3.57
217	SLU 72	46	95	4086	2.81	-23.14	3.56
217	SLU 73	53	102	4659	3.25	-26.48	3.96
217	SLU 74	52	111	4660	3.12	-26.07	3.97
217	SLU 75	53	106	4659	3.19	-26.32	3.96
217	SLU 76	53	102	4659	3.25	-26.48	3.96
217	SLU 77	52	111	4660	3.12	-26.07	3.97
217	SLU 78	53	106	4659	3.19	-26.32	3.96
217	SLU 79	52	111	4660	3.12	-26.07	3.97
217	SLU 80	53	106	4659	3.19	-26.32	3.96
217	SLU 81	55	116	4906	3.28	-27.44	4.15
217	SLU 82	55	110	4905	3.36	-27.68	4.14
217	SLU 83	55	116	4906	3.28	-27.44	4.15
217	SLU 84	55	110	4905	3.36	-27.68	4.14
217	SLE RA 1	35	77	3047	2.03	-17.14	2.68
217	SLE RA 2	35	70	3046	2.12	-17.42	2.67
217	SLE RA 3	35	77	3047	2.03	-17.14	2.68
217	SLE RA 4	35	73	3047	2.09	-17.31	2.67
217	SLE RA 5	35	70	3046	2.12	-17.42	2.67
217	SLE RA 6	35	77	3047	2.03	-17.14	2.68
217	SLE RA 7	35	73	3047	2.09	-17.31	2.67
217	SLE RA 8	35	77	3047	2.03	-17.14	2.68
217	SLE RA 9	35	73	3047	2.09	-17.31	2.67
217	SLE RA 10	39	77	3428	2.38	-19.54	2.94
217	SLE RA 11	39	84	3429	2.29	-19.26	2.95
217	SLE RA 12	39	80	3429	2.35	-19.43	2.94
217	SLE RA 13	39	77	3428	2.38	-19.54	2.94
217	SLE RA 14	39	84	3429	2.29	-19.26	2.95
217	SLE RA 15	39	80	3429	2.35	-19.43	2.94
217	SLE RA 16	39	84	3429	2.29	-19.26	2.95
217	SLE RA 17	39	80	3429	2.35	-19.43	2.94
217	SLE RA 18	40	87	3593	2.4	-20.17	3.06
217	SLE RA 19	41	83	3592	2.46	-20.34	3.06
217	SLE RA 20	40	87	3593	2.4	-20.17	3.06
217	SLE RA 21	41	83	3592	2.46	-20.34	3.06
217	SLE FR 1	35	77	3047	2.03	-17.14	2.68
217	SLE FR 2	35	75	3047	2.05	-17.2	2.68
217	SLE FR 3	35	77	3047	2.03	-17.14	2.68
217	SLE FR 4	36	78	3211	2.16	-18.1	2.79
217	SLE FR 5	36	80	3211	2.14	-18.05	2.79
217	SLE FR 6	38	82	3320	2.22	-18.66	2.87
217	SLE QP 1	35	77	3047	2.03	-17.14	2.68
217	SLE QP 2	36	80	3211	2.14	-18.05	2.79
217	SLD 1	307	127	3289	1.03	-7.76	1.07
217	SLD 2	277	118	3287	1.03	-7.58	2.38
217	SLD 3	325	-1	3298	2.43	-9.56	0.8
217	SLD 4	295	-9	3295	2.44	-9.38	2.12
217	SLD 5	100	290	3222	-0.32	-12.3	2.21
217	SLD 6	70	282	3220	-0.32	-12.12	3.54
217	SLD 7	162	-135	3251	4.36	-18.29	1.32
217	SLD 8	131	-143	3248	4.36	-18.11	2.66
217	SLD 9	-58	302	3174	-0.07	-17.99	2.93
217	SLD 10	-89	294	3171	-0.07	-17.81	4.27
217	SLD 11	3	-123	3202	4.61	-23.98	2.04
217	SLD 12	-28	-131	3200	4.61	-23.8	3.38
217	SLD 13	-222	168	3127	1.85	-26.72	3.47
217	SLD 14	-253	160	3124	1.86	-26.54	4.79
217	SLD 15	-204	41	3135	3.26	-28.52	3.21
217	SLD 16	-234	32	3133	3.26	-28.34	4.52
217	SLV 1	651	187	3388	-0.4	5.38	-1.12
217	SLV 2	582	168	3383	-0.4	5.8	1.86
217	SLV 3	693	-104	3408	2.8	1.25	-1.73
217	SLV 4	624	-122	3403	2.81	1.67	1.25
217	SLV 5	182	559	3236	-3.48	-4.91	1.48
217	SLV 6	112	540	3231	-3.48	-4.49	4.51
217	SLV 7	321	-410	3302	7.2	-18.67	-0.56
217	SLV 8	251	-428	3297	7.21	-18.25	2.47
217	SLV 9	-179	588	3125	-2.92	-17.85	3.12
217	SLV 10	-249	569	3120	-2.91	-17.43	6.15
217	SLV 11	-39	-381	3191	7.77	-31.61	1.08
217	SLV 12	-109	-400	3186	7.77	-31.19	4.1
217	SLV 13	-551	281	3019	1.48	-37.77	4.34
217	SLV 14	-620	263	3014	1.49	-37.35	7.32
217	SLV 15	-509	-9	3039	4.69	-41.89	3.73
217	SLV 16	-578	-28	3034	4.69	-41.48	6.71
217	CRTFP Ux+	0	0	0	0	0	0
217	CRTFP Ux-	0	0	0	0	0	0
217	CRTFP Uy+	0	0	0	0	0	0
217	CRTFP Uy-	0	0	0	0	0	0
219	SLU 1	3	-28	1586	-0.52	-188.79	-6.91
219	SLU 2	3	-38	1593	-0.46	-188.7	-9.46
219	SLU 3	3	-28	1586	-0.52	-188.79	-6.91
219	SLU 4	3	-34	1590	-0.49	-188.74	-8.44

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
219	SLU 5	3	-38	1593	-0.46	-188.7	-9.46
219	SLU 6	3	-28	1586	-0.52	-188.79	-6.91
219	SLU 7	3	-34	1590	-0.49	-188.74	-8.44
219	SLU 8	3	-28	1586	-0.52	-188.79	-6.91
219	SLU 9	3	-34	1590	-0.49	-188.74	-8.44
219	SLU 10	4	-43	1887	-0.54	-217.57	-10.55
219	SLU 11	4	-33	1880	-0.6	-217.66	-7.99
219	SLU 12	4	-39	1884	-0.56	-217.61	-9.53
219	SLU 13	4	-43	1887	-0.54	-217.57	-10.55
219	SLU 14	4	-33	1880	-0.6	-217.66	-7.99
219	SLU 15	4	-39	1884	-0.56	-217.61	-9.53
219	SLU 16	4	-33	1880	-0.6	-217.66	-7.99
219	SLU 17	4	-39	1884	-0.56	-217.61	-9.53
219	SLU 18	5	-34	2005	-0.63	-230.03	-8.46
219	SLU 19	5	-41	2010	-0.59	-229.98	-9.99
219	SLU 20	5	-34	2005	-0.63	-230.03	-8.46
219	SLU 21	5	-41	2010	-0.59	-229.98	-9.99
219	SLU 22	4	-31	1801	-0.61	-210.1	-7.48
219	SLU 23	4	-41	1808	-0.55	-210.02	-10.04
219	SLU 24	4	-31	1801	-0.61	-210.1	-7.48
219	SLU 25	4	-37	1806	-0.57	-210.05	-9.02
219	SLU 26	4	-41	1808	-0.55	-210.02	-10.04
219	SLU 27	4	-31	1801	-0.61	-210.1	-7.48
219	SLU 28	4	-37	1806	-0.57	-210.05	-9.02
219	SLU 29	4	-31	1801	-0.61	-210.1	-7.48
219	SLU 30	4	-37	1806	-0.57	-210.05	-9.02
219	SLU 31	5	-45	2102	-0.62	-238.89	-11.13
219	SLU 32	5	-35	2095	-0.68	-238.97	-8.57
219	SLU 33	5	-41	2099	-0.64	-238.92	-10.1
219	SLU 34	5	-45	2102	-0.62	-238.89	-11.13
219	SLU 35	5	-35	2095	-0.68	-238.97	-8.57
219	SLU 36	5	-41	2099	-0.64	-238.92	-10.1
219	SLU 37	5	-35	2095	-0.68	-238.97	-8.57
219	SLU 38	5	-41	2099	-0.64	-238.92	-10.1
219	SLU 39	6	-37	2221	-0.71	-251.34	-9.04
219	SLU 40	6	-43	2225	-0.68	-251.29	-10.57
219	SLU 41	6	-37	2221	-0.71	-251.34	-9.04
219	SLU 42	6	-43	2225	-0.68	-251.29	-10.57
219	SLU 43	3	-36	1988	-0.65	-238.12	-8.78
219	SLU 44	3	-46	1995	-0.59	-238.03	-11.33
219	SLU 45	3	-36	1988	-0.65	-238.12	-8.78
219	SLU 46	3	-42	1992	-0.61	-238.06	-10.31
219	SLU 47	3	-46	1995	-0.59	-238.03	-11.33
219	SLU 48	3	-36	1988	-0.65	-238.12	-8.78
219	SLU 49	3	-42	1992	-0.61	-238.06	-10.31
219	SLU 50	3	-36	1988	-0.65	-238.12	-8.78
219	SLU 51	3	-42	1992	-0.61	-238.06	-10.31
219	SLU 52	5	-50	2289	-0.66	-266.9	-12.42
219	SLU 53	5	-40	2282	-0.72	-266.99	-9.87
219	SLU 54	5	-46	2286	-0.69	-266.94	-11.4
219	SLU 55	5	-50	2289	-0.66	-266.9	-12.42
219	SLU 56	5	-40	2282	-0.72	-266.99	-9.87
219	SLU 57	5	-46	2286	-0.69	-266.94	-11.4
219	SLU 58	5	-40	2282	-0.72	-266.99	-9.87
219	SLU 59	5	-46	2286	-0.69	-266.94	-11.4
219	SLU 60	5	-42	2407	-0.75	-279.36	-10.33
219	SLU 61	5	-48	2412	-0.72	-279.31	-11.87
219	SLU 62	5	-42	2407	-0.75	-279.36	-10.33
219	SLU 63	5	-48	2412	-0.72	-279.31	-11.87
219	SLU 64	4	-38	2203	-0.73	-259.43	-9.36
219	SLU 65	4	-48	2210	-0.67	-259.34	-11.91
219	SLU 66	4	-38	2203	-0.73	-259.43	-9.36
219	SLU 67	4	-44	2207	-0.7	-259.38	-10.89
219	SLU 68	4	-48	2210	-0.67	-259.34	-11.91
219	SLU 69	4	-38	2203	-0.73	-259.43	-9.36
219	SLU 70	4	-44	2207	-0.7	-259.38	-10.89
219	SLU 71	4	-38	2203	-0.73	-259.43	-9.36
219	SLU 72	4	-44	2207	-0.7	-259.38	-10.89
219	SLU 73	6	-53	2504	-0.75	-288.22	-13
219	SLU 74	6	-43	2497	-0.81	-288.3	-10.45
219	SLU 75	6	-49	2501	-0.77	-288.25	-11.98
219	SLU 76	6	-53	2504	-0.75	-288.22	-13
219	SLU 77	6	-43	2497	-0.81	-288.3	-10.45
219	SLU 78	6	-49	2501	-0.77	-288.25	-11.98
219	SLU 79	6	-43	2497	-0.81	-288.3	-10.45
219	SLU 80	6	-49	2501	-0.77	-288.25	-11.98
219	SLU 81	6	-44	2623	-0.84	-300.67	-10.91
219	SLU 82	6	-51	2627	-0.8	-300.62	-12.44
219	SLU 83	6	-44	2623	-0.84	-300.67	-10.91
219	SLU 84	6	-51	2627	-0.8	-300.62	-12.44
219	SLE RA 1	3	-29	1647	-0.55	-194.88	-7.07
219	SLE RA 2	3	-36	1652	-0.51	-194.82	-8.77
219	SLE RA 3	3	-29	1647	-0.55	-194.88	-7.07
219	SLE RA 4	3	-33	1650	-0.52	-194.84	-8.09
219	SLE RA 5	3	-36	1652	-0.51	-194.82	-8.77
219	SLE RA 6	3	-29	1647	-0.55	-194.88	-7.07
219	SLE RA 7	3	-33	1650	-0.52	-194.84	-8.09

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
219	SLE RA 8	3	-29	1647	-0.55	-194.88	-7.07
219	SLE RA 9	3	-33	1650	-0.52	-194.84	-8.09
219	SLE RA 10	4	-39	1848	-0.56	-214.07	-9.5
219	SLE RA 11	4	-32	1843	-0.6	-214.12	-7.8
219	SLE RA 12	4	-36	1846	-0.57	-214.09	-8.82
219	SLE RA 13	4	-39	1848	-0.56	-214.07	-9.5
219	SLE RA 14	4	-32	1843	-0.6	-214.12	-7.8
219	SLE RA 15	4	-36	1846	-0.57	-214.09	-8.82
219	SLE RA 16	4	-32	1843	-0.6	-214.12	-7.8
219	SLE RA 17	4	-36	1846	-0.57	-214.09	-8.82
219	SLE RA 18	4	-33	1927	-0.62	-222.37	-8.11
219	SLE RA 19	4	-37	1930	-0.59	-222.34	-9.13
219	SLE RA 20	4	-33	1927	-0.62	-222.37	-8.11
219	SLE RA 21	4	-37	1930	-0.59	-222.34	-9.13
219	SLE FR 1	3	-29	1647	-0.55	-194.88	-7.07
219	SLE FR 2	3	-30	1648	-0.54	-194.87	-7.41
219	SLE FR 3	3	-29	1647	-0.55	-194.88	-7.07
219	SLE FR 4	4	-31	1732	-0.56	-203.11	-7.72
219	SLE FR 5	4	-30	1731	-0.57	-203.13	-7.38
219	SLE FR 6	4	-31	1787	-0.58	-208.62	-7.59
219	SLE QP 1	3	-29	1647	-0.55	-194.88	-7.07
219	SLE QP 2	4	-30	1731	-0.57	-203.13	-7.38
219	SLD 1	142	63	1924	-1.03	-220.05	15.92
219	SLD 2	125	27	1927	-1.01	-220.2	7
219	SLD 3	132	-54	2004	-0.38	-223.13	-13.45
219	SLD 4	116	-90	2007	-0.36	-223.28	-22.36
219	SLD 5	66	189	1667	-1.7	-203.48	47.33
219	SLD 6	49	152	1670	-1.68	-203.64	38.28
219	SLD 7	33	-202	1933	0.47	-213.74	-50.55
219	SLD 8	17	-239	1936	0.49	-213.89	-59.6
219	SLD 9	-10	179	1526	-1.62	-192.36	44.84
219	SLD 10	-26	142	1530	-1.6	-192.51	35.78
219	SLD 11	-42	-212	1793	0.55	-202.61	-53.04
219	SLD 12	-59	-249	1796	0.57	-202.77	-62.1
219	SLD 13	-109	30	1456	-0.77	-182.97	7.6
219	SLD 14	-125	-6	1459	-0.75	-183.12	-1.32
219	SLD 15	-118	-87	1536	-0.12	-186.05	-21.76
219	SLD 16	-135	-123	1539	-0.1	-186.2	-30.68
219	SLV 1	318	182	2169	-1.63	-241.75	45.69
219	SLV 2	280	101	2176	-1.59	-242.1	25.47
219	SLV 3	295	-85	2351	-0.15	-248.75	-21.24
219	SLV 4	258	-167	2358	-0.1	-249.1	-41.46
219	SLV 5	145	468	1584	-3.15	-203.97	117.28
219	SLV 6	107	385	1591	-3.11	-204.33	96.76
219	SLV 7	71	-423	2191	1.79	-227.3	-105.82
219	SLV 8	33	-506	2198	1.84	-227.66	-126.35
219	SLV 9	-26	445	1265	-2.97	-178.59	111.58
219	SLV 10	-64	362	1272	-2.93	-178.95	91.06
219	SLV 11	-100	-445	1871	1.97	-201.92	-111.52
219	SLV 12	-138	-528	1879	2.02	-202.28	-132.04
219	SLV 13	-251	107	1105	-1.03	-157.15	26.7
219	SLV 14	-288	25	1112	-0.99	-157.5	6.47
219	SLV 15	-273	-161	1287	0.45	-164.15	-40.23
219	SLV 16	-310	-242	1294	0.5	-164.5	-60.46
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
222	SLU 1	1	-4	1607	-0.67	207.41	1.12
222	SLU 2	2	-14	1615	-0.61	207.44	3.74
222	SLU 3	1	-4	1607	-0.67	207.41	1.12
222	SLU 4	2	-10	1612	-0.64	207.43	2.69
222	SLU 5	2	-14	1615	-0.61	207.44	3.74
222	SLU 6	1	-4	1607	-0.67	207.41	1.12
222	SLU 7	2	-10	1612	-0.64	207.43	2.69
222	SLU 8	1	-4	1607	-0.67	207.41	1.12
222	SLU 9	2	-10	1612	-0.64	207.43	2.69
222	SLU 10	2	-14	1879	-0.75	237.51	3.66
222	SLU 11	2	-3	1871	-0.81	237.48	1.05
222	SLU 12	2	-9	1876	-0.77	237.5	2.62
222	SLU 13	2	-14	1879	-0.75	237.51	3.66
222	SLU 14	2	-3	1871	-0.81	237.48	1.05
222	SLU 15	2	-9	1876	-0.77	237.5	2.62
222	SLU 16	2	-3	1871	-0.81	237.48	1.05
222	SLU 17	2	-9	1876	-0.77	237.5	2.62
222	SLU 18	2	-3	1984	-0.87	250.37	1.02
222	SLU 19	2	-9	1989	-0.83	250.39	2.59
222	SLU 20	2	-3	1984	-0.87	250.37	1.02
222	SLU 21	2	-9	1989	-0.83	250.39	2.59
222	SLU 22	1	-3	1807	-0.79	230.09	0.93
222	SLU 23	1	-13	1815	-0.74	230.12	3.55
222	SLU 24	1	-3	1807	-0.79	230.09	0.93
222	SLU 25	1	-9	1812	-0.76	230.11	2.5
222	SLU 26	1	-13	1815	-0.74	230.12	3.55
222	SLU 27	1	-3	1807	-0.79	230.09	0.93
222	SLU 28	1	-9	1812	-0.76	230.11	2.5
222	SLU 29	1	-3	1807	-0.79	230.09	0.93

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
222	SLU 30	1	-9	1812	-0.76	230.11	2.5
222	SLU 31	2	-13	2079	-0.87	260.19	3.47
222	SLU 32	2	-2	2071	-0.93	260.16	0.86
222	SLU 33	2	-9	2076	-0.9	260.18	2.43
222	SLU 34	2	-13	2079	-0.87	260.19	3.47
222	SLU 35	2	-2	2071	-0.93	260.16	0.86
222	SLU 36	2	-9	2076	-0.9	260.18	2.43
222	SLU 37	2	-2	2071	-0.93	260.16	0.86
222	SLU 38	2	-9	2076	-0.9	260.18	2.43
222	SLU 39	2	-2	2184	-0.99	273.05	0.83
222	SLU 40	2	-8	2189	-0.96	273.07	2.4
222	SLU 41	2	-2	2184	-0.99	273.05	0.83
222	SLU 42	2	-8	2189	-0.96	273.07	2.4
222	SLU 43	2	-5	2021	-0.83	261.85	1.52
222	SLU 44	2	-15	2029	-0.77	261.88	4.14
222	SLU 45	2	-5	2021	-0.83	261.85	1.52
222	SLU 46	2	-11	2026	-0.8	261.87	3.09
222	SLU 47	2	-15	2029	-0.77	261.88	4.14
222	SLU 48	2	-5	2021	-0.83	261.85	1.52
222	SLU 49	2	-11	2026	-0.8	261.87	3.09
222	SLU 50	2	-5	2021	-0.83	261.85	1.52
222	SLU 51	2	-11	2026	-0.8	261.87	3.09
222	SLU 52	2	-15	2293	-0.91	291.96	4.07
222	SLU 53	2	-5	2285	-0.97	291.93	1.45
222	SLU 54	2	-11	2290	-0.93	291.94	3.02
222	SLU 55	2	-15	2293	-0.91	291.96	4.07
222	SLU 56	2	-5	2285	-0.97	291.93	1.45
222	SLU 57	2	-11	2290	-0.93	291.94	3.02
222	SLU 58	2	-5	2285	-0.97	291.93	1.45
222	SLU 59	2	-11	2290	-0.93	291.94	3.02
222	SLU 60	2	-4	2398	-1.03	304.82	1.42
222	SLU 61	2	-11	2403	-0.99	304.83	2.99
222	SLU 62	2	-4	2398	-1.03	304.82	1.42
222	SLU 63	2	-11	2403	-0.99	304.83	2.99
222	SLU 64	2	-4	2221	-0.95	284.54	1.33
222	SLU 65	2	-15	2229	-0.89	284.57	3.95
222	SLU 66	2	-4	2221	-0.95	284.54	1.33
222	SLU 67	2	-10	2226	-0.92	284.55	2.9
222	SLU 68	2	-15	2229	-0.89	284.57	3.95
222	SLU 69	2	-4	2221	-0.95	284.54	1.33
222	SLU 70	2	-10	2226	-0.92	284.55	2.9
222	SLU 71	2	-4	2221	-0.95	284.54	1.33
222	SLU 72	2	-10	2226	-0.92	284.55	2.9
222	SLU 73	2	-14	2493	-1.03	314.64	3.88
222	SLU 74	2	-4	2485	-1.09	314.61	1.26
222	SLU 75	2	-10	2489	-1.06	314.63	2.83
222	SLU 76	2	-14	2493	-1.03	314.64	3.88
222	SLU 77	2	-4	2485	-1.09	314.61	1.26
222	SLU 78	2	-10	2489	-1.06	314.63	2.83
222	SLU 79	2	-4	2485	-1.09	314.61	1.26
222	SLU 80	2	-10	2489	-1.06	314.63	2.83
222	SLU 81	2	-3	2598	-1.15	327.5	1.23
222	SLU 82	2	-10	2603	-1.12	327.52	2.8
222	SLU 83	2	-3	2598	-1.15	327.5	1.23
222	SLU 84	2	-10	2603	-1.12	327.52	2.8
222	SLE RA 1	1	-3	1664	-0.71	213.89	1.07
222	SLE RA 2	1	-10	1670	-0.67	213.91	2.81
222	SLE RA 3	1	-3	1664	-0.71	213.89	1.07
222	SLE RA 4	1	-7	1668	-0.68	213.9	2.11
222	SLE RA 5	1	-10	1670	-0.67	213.91	2.81
222	SLE RA 6	1	-3	1664	-0.71	213.89	1.07
222	SLE RA 7	1	-7	1668	-0.68	213.9	2.11
222	SLE RA 8	1	-3	1664	-0.71	213.89	1.07
222	SLE RA 9	1	-7	1668	-0.68	213.9	2.11
222	SLE RA 10	2	-10	1846	-0.76	233.96	2.76
222	SLE RA 11	2	-3	1840	-0.8	233.94	1.02
222	SLE RA 12	2	-7	1843	-0.78	233.95	2.06
222	SLE RA 13	2	-10	1846	-0.76	233.96	2.76
222	SLE RA 14	2	-3	1840	-0.8	233.94	1.02
222	SLE RA 15	2	-7	1843	-0.78	233.95	2.06
222	SLE RA 16	2	-3	1840	-0.8	233.94	1.02
222	SLE RA 17	2	-7	1843	-0.78	233.95	2.06
222	SLE RA 18	2	-3	1916	-0.84	242.53	1
222	SLE RA 19	2	-7	1919	-0.81	242.54	2.04
222	SLE RA 20	2	-3	1916	-0.84	242.53	1
222	SLE RA 21	2	-7	1919	-0.81	242.54	2.04
222	SLE FR 1	1	-3	1664	-0.71	213.89	1.07
222	SLE FR 2	1	-5	1665	-0.7	213.89	1.42
222	SLE FR 3	1	-3	1664	-0.71	213.89	1.07
222	SLE FR 4	1	-5	1741	-0.74	222.49	1.4
222	SLE FR 5	1	-3	1740	-0.75	222.48	1.05
222	SLE FR 6	2	-3	1790	-0.77	228.21	1.03
222	SLE QP 1	1	-3	1664	-0.71	213.89	1.07
222	SLE QP 2	1	-3	1740	-0.75	222.48	1.05
222	SLD 1	131	13	1421	-0.88	197.26	-3.19
222	SLD 2	115	49	1419	-0.9	197.15	-11.94
222	SLD 3	140	-103	1525	-0.26	202.15	26

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
222	SLD 4	124	-68	1523	-0.27	202.04	17.26
222	SLD 5	33	166	1488	-1.73	207.54	-41.38
222	SLD 6	17	202	1486	-1.75	207.43	-50.26
222	SLD 7	62	-222	1833	0.36	223.84	55.94
222	SLD 8	45	-187	1831	0.34	223.72	47.07
222	SLD 9	-42	180	1649	-1.84	221.24	-44.97
222	SLD 10	-59	216	1647	-1.85	221.13	-53.85
222	SLD 11	-14	-208	1994	0.26	237.53	52.35
222	SLD 12	-30	-172	1992	0.24	237.42	43.47
222	SLD 13	-121	61	1957	-1.22	242.92	-15.17
222	SLD 14	-137	97	1955	-1.24	242.81	-23.91
222	SLD 15	-112	-55	2061	-0.59	247.81	14.03
222	SLD 16	-129	-20	2059	-0.61	247.7	5.29
222	SLV 1	297	35	1015	-1.06	164.97	-8.69
222	SLV 2	260	115	1010	-1.09	164.72	-28.52
222	SLV 3	316	-231	1251	0.37	176.11	57.89
222	SLV 4	279	-151	1246	0.34	175.86	38.06
222	SLV 5	74	382	1165	-3	188.42	-95.77
222	SLV 6	36	464	1161	-3.03	188.17	-115.89
222	SLV 7	139	-503	1953	1.77	225.55	126.17
222	SLV 8	101	-421	1949	1.74	225.3	106.05
222	SLV 9	-98	415	1531	-3.23	219.66	-103.96
222	SLV 10	-136	496	1526	-3.26	219.41	-124.08
222	SLV 11	-33	-470	2319	1.54	256.8	117.99
222	SLV 12	-71	-389	2314	1.51	256.54	97.87
222	SLV 13	-276	144	2233	-1.83	269.11	-35.97
222	SLV 14	-313	225	2229	-1.86	268.86	-55.8
222	SLV 15	-257	-121	2470	-0.4	280.25	30.61
222	SLV 16	-294	-41	2465	-0.43	280	10.78
222	CRTFP Ux+	0	0	0	0	0	0
222	CRTFP Ux-	0	0	0	0	0	0
222	CRTFP Uy+	0	0	0	0	0	0
222	CRTFP Uy-	0	0	0	0	0	0
224	SLU 1	20	77	2984	2.14	-15.48	2.8
224	SLU 2	20	67	2987	2.31	-15.89	2.79
224	SLU 3	20	77	2984	2.14	-15.48	2.8
224	SLU 4	20	71	2986	2.24	-15.73	2.79
224	SLU 5	20	67	2987	2.31	-15.89	2.79
224	SLU 6	20	77	2984	2.14	-15.48	2.8
224	SLU 7	20	71	2986	2.24	-15.73	2.79
224	SLU 8	20	77	2984	2.14	-15.48	2.8
224	SLU 9	20	71	2986	2.24	-15.73	2.79
224	SLU 10	24	78	3572	2.68	-18.79	3.22
224	SLU 11	24	87	3568	2.51	-18.38	3.23
224	SLU 12	24	82	3570	2.61	-18.62	3.22
224	SLU 13	24	78	3572	2.68	-18.79	3.22
224	SLU 14	24	87	3568	2.51	-18.38	3.23
224	SLU 15	24	82	3570	2.61	-18.62	3.22
224	SLU 16	24	87	3568	2.51	-18.38	3.23
224	SLU 17	24	82	3570	2.61	-18.62	3.22
224	SLU 18	25	92	3819	2.67	-19.62	3.42
224	SLU 19	26	86	3821	2.77	-19.86	3.41
224	SLU 20	25	92	3819	2.67	-19.62	3.42
224	SLU 21	26	86	3821	2.77	-19.86	3.41
224	SLU 22	22	82	3432	2.35	-17.43	3.13
224	SLU 23	22	72	3435	2.53	-17.84	3.11
224	SLU 24	22	82	3432	2.35	-17.43	3.13
224	SLU 25	22	76	3434	2.46	-17.67	3.12
224	SLU 26	22	72	3435	2.53	-17.84	3.11
224	SLU 27	22	82	3432	2.35	-17.43	3.13
224	SLU 28	22	76	3434	2.46	-17.67	3.12
224	SLU 29	22	82	3432	2.35	-17.43	3.13
224	SLU 30	22	76	3434	2.46	-17.67	3.12
224	SLU 31	27	83	4019	2.9	-20.73	3.54
224	SLU 32	26	93	4016	2.72	-20.32	3.56
224	SLU 33	26	87	4018	2.83	-20.57	3.55
224	SLU 34	27	83	4019	2.9	-20.73	3.54
224	SLU 35	26	93	4016	2.72	-20.32	3.56
224	SLU 36	26	87	4018	2.83	-20.57	3.55
224	SLU 37	26	93	4016	2.72	-20.32	3.56
224	SLU 38	26	87	4018	2.83	-20.57	3.55
224	SLU 39	28	97	4267	2.88	-21.57	3.74
224	SLU 40	28	91	4269	2.99	-21.81	3.73
224	SLU 41	28	97	4267	2.88	-21.57	3.74
224	SLU 42	28	91	4269	2.99	-21.81	3.73
224	SLU 43	25	98	3725	2.7	-19.46	3.53
224	SLU 44	25	88	3729	2.88	-19.87	3.52
224	SLU 45	25	98	3725	2.7	-19.46	3.53
224	SLU 46	25	92	3727	2.81	-19.7	3.52
224	SLU 47	25	88	3729	2.88	-19.87	3.52
224	SLU 48	25	98	3725	2.7	-19.46	3.53
224	SLU 49	25	92	3727	2.81	-19.7	3.52
224	SLU 50	25	98	3725	2.7	-19.46	3.53
224	SLU 51	25	92	3727	2.81	-19.7	3.52
224	SLU 52	29	99	4313	3.25	-22.76	3.95
224	SLU 53	29	109	4310	3.08	-22.35	3.96
224	SLU 54	29	103	4312	3.18	-22.6	3.95

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
224	SLU 55	29	99	4313	3.25	-22.76	3.95
224	SLU 56	29	109	4310	3.08	-22.35	3.96
224	SLU 57	29	103	4312	3.18	-22.6	3.95
224	SLU 58	29	109	4310	3.08	-22.35	3.96
224	SLU 59	29	103	4312	3.18	-22.6	3.95
224	SLU 60	30	113	4560	3.24	-23.59	4.15
224	SLU 61	31	108	4562	3.34	-23.84	4.14
224	SLU 62	30	113	4560	3.24	-23.59	4.15
224	SLU 63	31	108	4562	3.34	-23.84	4.14
224	SLU 64	27	103	4173	2.92	-21.4	3.86
224	SLU 65	27	94	4177	3.09	-21.81	3.84
224	SLU 66	27	103	4173	2.92	-21.4	3.86
224	SLU 67	27	97	4175	3.02	-21.65	3.85
224	SLU 68	27	94	4177	3.09	-21.81	3.84
224	SLU 69	27	103	4173	2.92	-21.4	3.86
224	SLU 70	27	97	4175	3.02	-21.65	3.85
224	SLU 71	27	103	4173	2.92	-21.4	3.86
224	SLU 72	27	97	4175	3.02	-21.65	3.85
224	SLU 73	32	104	4761	3.46	-24.71	4.27
224	SLU 74	31	114	4758	3.29	-24.3	4.29
224	SLU 75	31	108	4760	3.39	-24.55	4.28
224	SLU 76	32	104	4761	3.46	-24.71	4.27
224	SLU 77	31	114	4758	3.29	-24.3	4.29
224	SLU 78	31	108	4760	3.39	-24.55	4.28
224	SLU 79	31	114	4758	3.29	-24.3	4.29
224	SLU 80	31	108	4760	3.39	-24.55	4.28
224	SLU 81	33	118	5008	3.45	-25.54	4.47
224	SLU 82	33	113	5010	3.55	-25.79	4.46
224	SLU 83	33	118	5008	3.45	-25.54	4.47
224	SLU 84	33	113	5010	3.55	-25.79	4.46
224	SLE RA 1	20	78	3112	2.2	-16.04	2.9
224	SLE RA 2	21	72	3114	2.31	-16.31	2.88
224	SLE RA 3	20	78	3112	2.2	-16.04	2.9
224	SLE RA 4	20	74	3113	2.27	-16.2	2.89
224	SLE RA 5	21	72	3114	2.31	-16.31	2.88
224	SLE RA 6	20	78	3112	2.2	-16.04	2.9
224	SLE RA 7	20	74	3113	2.27	-16.2	2.89
224	SLE RA 8	20	78	3112	2.2	-16.04	2.9
224	SLE RA 9	20	74	3113	2.27	-16.2	2.89
224	SLE RA 10	23	79	3504	2.56	-18.24	3.17
224	SLE RA 11	23	85	3501	2.45	-17.97	3.18
224	SLE RA 12	23	82	3503	2.52	-18.13	3.18
224	SLE RA 13	23	79	3504	2.56	-18.24	3.17
224	SLE RA 14	23	85	3501	2.45	-17.97	3.18
224	SLE RA 15	23	82	3503	2.52	-18.13	3.18
224	SLE RA 16	23	85	3501	2.45	-17.97	3.18
224	SLE RA 17	23	82	3503	2.52	-18.13	3.18
224	SLE RA 18	24	88	3668	2.55	-18.8	3.31
224	SLE RA 19	24	85	3670	2.62	-18.96	3.3
224	SLE RA 20	24	88	3668	2.55	-18.8	3.31
224	SLE RA 21	24	85	3670	2.62	-18.96	3.3
224	SLE FR 1	20	78	3112	2.2	-16.04	2.9
224	SLE FR 2	20	77	3112	2.22	-16.09	2.89
224	SLE FR 3	20	78	3112	2.2	-16.04	2.9
224	SLE FR 4	22	80	3279	2.33	-16.92	3.02
224	SLE FR 5	21	81	3279	2.3	-16.86	3.02
224	SLE FR 6	22	83	3390	2.37	-17.42	3.1
224	SLE QP 1	20	78	3112	2.2	-16.04	2.9
224	SLE QP 2	21	81	3279	2.3	-16.86	3.02
224	SLD 1	302	128	3327	1.02	-6.36	0.97
224	SLD 2	265	120	3325	1.02	-6.18	2.33
224	SLD 3	322	1	3377	2.85	-8.1	0.68
224	SLD 4	284	-7	3375	2.86	-7.91	2.04
224	SLD 5	89	292	3218	-0.87	-11.15	2.36
224	SLD 6	51	283	3216	-0.86	-10.96	3.73
224	SLD 7	155	-133	3385	5.25	-16.93	1.4
224	SLD 8	117	-142	3382	5.25	-16.75	2.77
224	SLD 9	-74	304	3175	-0.65	-16.98	3.27
224	SLD 10	-112	296	3173	-0.64	-16.8	4.64
224	SLD 11	-8	-121	3341	5.47	-22.77	2.3
224	SLD 12	-46	-129	3339	5.47	-22.58	3.68
224	SLD 13	-241	170	3182	1.75	-25.81	4
224	SLD 14	-279	162	3180	1.76	-25.63	5.35
224	SLD 15	-222	42	3232	3.58	-27.55	3.71
224	SLD 16	-259	34	3230	3.59	-27.37	5.07
224	SLV 1	659	189	3388	-0.63	7.06	-1.62
224	SLV 2	574	170	3384	-0.62	7.47	1.45
224	SLV 3	703	-102	3502	3.55	3.07	-2.29
224	SLV 4	618	-121	3498	3.56	3.48	0.79
224	SLV 5	176	561	3141	-4.92	-3.78	1.54
224	SLV 6	89	542	3136	-4.91	-3.37	4.66
224	SLV 7	324	-408	3520	9.01	-17.08	-0.68
224	SLV 8	238	-427	3515	9.03	-16.66	2.44
224	SLV 9	-195	589	3042	-4.42	-17.07	3.6
224	SLV 10	-281	570	3037	-4.41	-16.65	6.72
224	SLV 11	-46	-379	3422	9.52	-30.36	1.38
224	SLV 12	-133	-398	3417	9.53	-29.94	4.5

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
224	SLV 13	-575	283	3060	1.04	-37.21	5.25
224	SLV 14	-660	265	3055	1.06	-36.8	8.32
224	SLV 15	-531	-7	3174	5.22	-41.2	4.58
224	SLV 16	-616	-26	3169	5.24	-40.79	7.66
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
226	SLU 1	-1	-29	1581	0.21	-184.88	-6.99
226	SLU 2	-1	-39	1590	0.27	-185.19	-9.54
226	SLU 3	-1	-29	1581	0.21	-184.88	-6.99
226	SLU 4	-1	-35	1586	0.25	-185.07	-8.52
226	SLU 5	-1	-39	1590	0.27	-185.19	-9.54
226	SLU 6	-1	-29	1581	0.21	-184.88	-6.99
226	SLU 7	-1	-35	1586	0.25	-185.07	-8.52
226	SLU 8	-1	-29	1581	0.21	-184.88	-6.99
226	SLU 9	-1	-35	1586	0.25	-185.07	-8.52
226	SLU 10	-1	-43	1884	0.36	-213.32	-10.62
226	SLU 11	-1	-33	1875	0.29	-213.01	-8.06
226	SLU 12	-1	-39	1880	0.33	-213.19	-9.6
226	SLU 13	-1	-43	1884	0.36	-213.32	-10.62
226	SLU 14	-1	-33	1875	0.29	-213.01	-8.06
226	SLU 15	-1	-39	1880	0.33	-213.19	-9.6
226	SLU 16	-1	-33	1875	0.29	-213.01	-8.06
226	SLU 17	-1	-39	1880	0.33	-213.19	-9.6
226	SLU 18	-1	-35	2001	0.33	-225.07	-8.53
226	SLU 19	-1	-41	2006	0.37	-225.25	-10.06
226	SLU 20	-1	-35	2001	0.33	-225.07	-8.53
226	SLU 21	-1	-41	2006	0.37	-225.25	-10.06
226	SLU 22	-1	-31	1795	0.24	-205.46	-7.57
226	SLU 23	-1	-41	1804	0.3	-205.76	-10.12
226	SLU 24	-1	-31	1795	0.24	-205.46	-7.57
226	SLU 25	-1	-37	1801	0.28	-205.64	-9.1
226	SLU 26	-1	-41	1804	0.3	-205.76	-10.12
226	SLU 27	-1	-31	1795	0.24	-205.46	-7.57
226	SLU 28	-1	-37	1801	0.28	-205.64	-9.1
226	SLU 29	-1	-31	1795	0.24	-205.46	-7.57
226	SLU 30	-1	-37	1801	0.28	-205.64	-9.1
226	SLU 31	0	-46	2098	0.39	-233.89	-11.2
226	SLU 32	0	-35	2089	0.32	-233.58	-8.65
226	SLU 33	0	-41	2094	0.36	-233.77	-10.18
226	SLU 34	0	-46	2098	0.39	-233.89	-11.2
226	SLU 35	0	-35	2089	0.32	-233.58	-8.65
226	SLU 36	0	-41	2094	0.36	-233.77	-10.18
226	SLU 37	0	-35	2089	0.32	-233.58	-8.65
226	SLU 38	0	-41	2094	0.36	-233.77	-10.18
226	SLU 39	0	-37	2215	0.36	-245.64	-9.11
226	SLU 40	0	-43	2220	0.4	-245.82	-10.64
226	SLU 41	0	-37	2215	0.36	-245.64	-9.11
226	SLU 42	0	-43	2220	0.4	-245.82	-10.64
226	SLU 43	-2	-36	1981	0.26	-233.29	-8.88
226	SLU 44	-2	-46	1990	0.32	-233.6	-11.43
226	SLU 45	-2	-36	1981	0.26	-233.29	-8.88
226	SLU 46	-2	-42	1987	0.3	-233.48	-10.41
226	SLU 47	-2	-46	1990	0.32	-233.6	-11.43
226	SLU 48	-2	-36	1981	0.26	-233.29	-8.88
226	SLU 49	-2	-42	1987	0.3	-233.48	-10.41
226	SLU 50	-2	-36	1981	0.26	-233.29	-8.88
226	SLU 51	-2	-42	1987	0.3	-233.48	-10.41
226	SLU 52	-1	-51	2284	0.41	-261.73	-12.51
226	SLU 53	-1	-41	2275	0.34	-261.42	-9.96
226	SLU 54	-1	-47	2281	0.39	-261.61	-11.49
226	SLU 55	-1	-51	2284	0.41	-261.73	-12.51
226	SLU 56	-1	-41	2275	0.34	-261.42	-9.96
226	SLU 57	-1	-47	2281	0.39	-261.61	-11.49
226	SLU 58	-1	-41	2275	0.34	-261.42	-9.96
226	SLU 59	-1	-47	2281	0.39	-261.61	-11.49
226	SLU 60	-1	-43	2401	0.38	-273.48	-10.42
226	SLU 61	-1	-49	2407	0.42	-273.66	-11.95
226	SLU 62	-1	-43	2401	0.38	-273.48	-10.42
226	SLU 63	-1	-49	2407	0.42	-273.66	-11.95
226	SLU 64	-2	-39	2196	0.29	-253.87	-9.47
226	SLU 65	-1	-49	2205	0.35	-254.17	-12.02
226	SLU 66	-2	-39	2196	0.29	-253.87	-9.47
226	SLU 67	-2	-45	2201	0.33	-254.05	-11
226	SLU 68	-1	-49	2205	0.35	-254.17	-12.02
226	SLU 69	-2	-39	2196	0.29	-253.87	-9.47
226	SLU 70	-2	-45	2201	0.33	-254.05	-11
226	SLU 71	-2	-39	2196	0.29	-253.87	-9.47
226	SLU 72	-2	-45	2201	0.33	-254.05	-11
226	SLU 73	-1	-53	2499	0.44	-282.3	-13.1
226	SLU 74	-1	-43	2490	0.38	-281.99	-10.55
226	SLU 75	-1	-49	2495	0.42	-282.18	-12.08
226	SLU 76	-1	-53	2499	0.44	-282.3	-13.1
226	SLU 77	-1	-43	2490	0.38	-281.99	-10.55
226	SLU 78	-1	-49	2495	0.42	-282.18	-12.08
226	SLU 79	-1	-43	2490	0.38	-281.99	-10.55

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
226	SLU 80	-1	-49	2495	0.42	-282.18	-12.08
226	SLU 81	-1	-45	2616	0.41	-294.05	-11.01
226	SLU 82	-1	-51	2621	0.45	-294.23	-12.54
226	SLU 83	-1	-45	2616	0.41	-294.05	-11.01
226	SLU 84	-1	-51	2621	0.45	-294.23	-12.54
226	SLE RA 1	-1	-29	1642	0.21	-190.76	-7.15
226	SLE RA 2	-1	-36	1648	0.26	-190.97	-8.86
226	SLE RA 3	-1	-29	1642	0.21	-190.76	-7.15
226	SLE RA 4	-1	-33	1646	0.24	-190.88	-8.17
226	SLE RA 5	-1	-36	1648	0.26	-190.97	-8.86
226	SLE RA 6	-1	-29	1642	0.21	-190.76	-7.15
226	SLE RA 7	-1	-33	1646	0.24	-190.88	-8.17
226	SLE RA 8	-1	-29	1642	0.21	-190.76	-7.15
226	SLE RA 9	-1	-33	1646	0.24	-190.88	-8.17
226	SLE RA 10	-1	-39	1844	0.32	-209.72	-9.57
226	SLE RA 11	-1	-32	1838	0.27	-209.51	-7.87
226	SLE RA 12	-1	-36	1842	0.3	-209.64	-8.89
226	SLE RA 13	-1	-39	1844	0.32	-209.72	-9.57
226	SLE RA 14	-1	-32	1838	0.27	-209.51	-7.87
226	SLE RA 15	-1	-36	1842	0.3	-209.64	-8.89
226	SLE RA 16	-1	-32	1838	0.27	-209.51	-7.87
226	SLE RA 17	-1	-36	1842	0.3	-209.64	-8.89
226	SLE RA 18	-1	-33	1922	0.3	-217.55	-8.18
226	SLE RA 19	-1	-38	1925	0.33	-217.67	-9.2
226	SLE RA 20	-1	-33	1922	0.3	-217.55	-8.18
226	SLE RA 21	-1	-38	1925	0.33	-217.67	-9.2
226	SLE FR 1	-1	-29	1642	0.21	-190.76	-7.15
226	SLE FR 2	-1	-31	1643	0.22	-190.8	-7.49
226	SLE FR 3	-1	-29	1642	0.21	-190.76	-7.15
226	SLE FR 4	-1	-32	1727	0.25	-198.84	-7.8
226	SLE FR 5	-1	-30	1726	0.24	-198.8	-7.46
226	SLE FR 6	-1	-31	1782	0.26	-204.15	-7.67
226	SLE QP 1	-1	-29	1642	0.21	-190.76	-7.15
226	SLE QP 2	-1	-30	1726	0.24	-198.8	-7.46
226	SLD 1	133	63	1908	0.01	-212.78	15.81
226	SLD 2	114	27	1911	0.03	-213.05	6.9
226	SLD 3	143	-54	2009	0.72	-219.87	-13.52
226	SLD 4	123	-91	2013	0.74	-220.14	-22.43
226	SLD 5	32	188	1626	-0.93	-192.14	47.2
226	SLD 6	12	151	1629	-0.9	-192.41	38.16
226	SLD 7	64	-203	1963	1.46	-215.78	-50.59
226	SLD 8	44	-239	1967	1.48	-216.05	-59.64
226	SLD 9	-46	178	1485	-1.01	-181.54	44.71
226	SLD 10	-66	142	1489	-0.99	-181.81	35.67
226	SLD 11	-14	-212	1822	1.38	-205.18	-53.08
226	SLD 12	-34	-249	1826	1.4	-205.46	-62.13
226	SLD 13	-126	30	1439	-0.26	-177.45	7.51
226	SLD 14	-145	-7	1443	-0.24	-177.72	-1.4
226	SLD 15	-116	-88	1540	0.45	-184.55	-21.83
226	SLD 16	-136	-124	1544	0.47	-184.81	-30.74
226	SLV 1	304	182	2139	-0.3	-230.73	45.56
226	SLV 2	260	100	2147	-0.25	-231.34	25.35
226	SLV 3	326	-85	2369	1.34	-246.87	-21.31
226	SLV 4	282	-167	2378	1.38	-247.48	-41.52
226	SLV 5	73	468	1497	-2.42	-183.67	117.09
226	SLV 6	28	385	1506	-2.37	-184.29	96.58
226	SLV 7	146	-423	2265	3.03	-237.49	-105.82
226	SLV 8	101	-506	2274	3.08	-238.1	-126.32
226	SLV 9	-103	445	1178	-2.6	-159.49	111.4
226	SLV 10	-148	362	1186	-2.55	-160.11	90.9
226	SLV 11	-31	-446	1946	2.85	-213.3	-111.51
226	SLV 12	-76	-529	1955	2.9	-213.92	-132.01
226	SLV 13	-284	106	1074	-0.91	-150.11	26.59
226	SLV 14	-328	24	1083	-0.86	-150.72	6.39
226	SLV 15	-262	-161	1305	0.73	-166.25	-40.28
226	SLV 16	-307	-243	1313	0.78	-166.86	-60.48
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
229	SLU 1	-5	-4	1598	0.13	198	1.11
229	SLU 2	-6	-14	1608	0.2	198.43	3.72
229	SLU 3	-5	-4	1598	0.13	198	1.11
229	SLU 4	-5	-10	1604	0.17	198.26	2.67
229	SLU 5	-6	-14	1608	0.2	198.43	3.72
229	SLU 6	-5	-4	1598	0.13	198	1.11
229	SLU 7	-5	-10	1604	0.17	198.26	2.67
229	SLU 8	-5	-4	1598	0.13	198	1.11
229	SLU 9	-5	-10	1604	0.17	198.26	2.67
229	SLU 10	-6	-14	1870	0.21	226.45	3.64
229	SLU 11	-6	-3	1860	0.15	226.02	1.03
229	SLU 12	-6	-9	1866	0.19	226.28	2.6
229	SLU 13	-6	-14	1870	0.21	226.45	3.64
229	SLU 14	-6	-3	1860	0.15	226.02	1.03
229	SLU 15	-6	-9	1866	0.19	226.28	2.6
229	SLU 16	-6	-3	1860	0.15	226.02	1.03
229	SLU 17	-6	-9	1866	0.19	226.28	2.6

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
229	SLU 18	-6	-3	1973	0.15	238.03	1
229	SLU 19	-7	-9	1979	0.2	238.29	2.57
229	SLU 20	-6	-3	1973	0.15	238.03	1
229	SLU 21	-7	-9	1979	0.2	238.29	2.57
229	SLU 22	-6	-3	1796	0.12	219	0.93
229	SLU 23	-6	-13	1806	0.19	219.43	3.54
229	SLU 24	-6	-3	1796	0.12	219	0.93
229	SLU 25	-6	-9	1802	0.16	219.26	2.49
229	SLU 26	-6	-13	1806	0.19	219.43	3.54
229	SLU 27	-6	-3	1796	0.12	219	0.93
229	SLU 28	-6	-9	1802	0.16	219.26	2.49
229	SLU 29	-6	-3	1796	0.12	219	0.93
229	SLU 30	-6	-9	1802	0.16	219.26	2.49
229	SLU 31	-7	-13	2068	0.21	247.45	3.46
229	SLU 32	-7	-2	2058	0.14	247.02	0.85
229	SLU 33	-7	-9	2064	0.18	247.28	2.42
229	SLU 34	-7	-13	2068	0.21	247.45	3.46
229	SLU 35	-7	-2	2058	0.14	247.02	0.85
229	SLU 36	-7	-9	2064	0.18	247.28	2.42
229	SLU 37	-7	-2	2058	0.14	247.02	0.85
229	SLU 38	-7	-9	2064	0.18	247.28	2.42
229	SLU 39	-7	-2	2170	0.15	259.03	0.82
229	SLU 40	-7	-8	2176	0.19	259.29	2.39
229	SLU 41	-7	-2	2170	0.15	259.03	0.82
229	SLU 42	-7	-8	2176	0.19	259.29	2.39
229	SLU 43	-7	-5	2010	0.17	250.19	1.5
229	SLU 44	-7	-15	2020	0.24	250.63	4.11
229	SLU 45	-7	-5	2010	0.17	250.19	1.5
229	SLU 46	-7	-11	2016	0.21	250.45	3.07
229	SLU 47	-7	-15	2020	0.24	250.63	4.11
229	SLU 48	-7	-5	2010	0.17	250.19	1.5
229	SLU 49	-7	-11	2016	0.21	250.45	3.07
229	SLU 50	-7	-5	2010	0.17	250.19	1.5
229	SLU 51	-7	-11	2016	0.21	250.45	3.07
229	SLU 52	-8	-15	2282	0.26	278.65	4.04
229	SLU 53	-7	-5	2272	0.19	278.22	1.43
229	SLU 54	-8	-11	2278	0.23	278.48	2.99
229	SLU 55	-8	-15	2282	0.26	278.65	4.04
229	SLU 56	-7	-5	2272	0.19	278.22	1.43
229	SLU 57	-8	-11	2278	0.23	278.48	2.99
229	SLU 58	-7	-5	2272	0.19	278.22	1.43
229	SLU 59	-8	-11	2278	0.23	278.48	2.99
229	SLU 60	-8	-4	2384	0.2	290.22	1.4
229	SLU 61	-8	-11	2390	0.24	290.48	2.96
229	SLU 62	-8	-4	2384	0.2	290.22	1.4
229	SLU 63	-8	-11	2390	0.24	290.48	2.96
229	SLU 64	-7	-4	2208	0.16	271.2	1.32
229	SLU 65	-8	-15	2218	0.23	271.63	3.93
229	SLU 66	-7	-4	2208	0.16	271.2	1.32
229	SLU 67	-8	-10	2214	0.2	271.46	2.89
229	SLU 68	-8	-15	2218	0.23	271.63	3.93
229	SLU 69	-7	-4	2208	0.16	271.2	1.32
229	SLU 70	-8	-10	2214	0.2	271.46	2.89
229	SLU 71	-7	-4	2208	0.16	271.2	1.32
229	SLU 72	-8	-10	2214	0.2	271.46	2.89
229	SLU 73	-8	-14	2480	0.25	299.65	3.86
229	SLU 74	-8	-4	2470	0.18	299.22	1.25
229	SLU 75	-8	-10	2476	0.22	299.48	2.81
229	SLU 76	-8	-14	2480	0.25	299.65	3.86
229	SLU 77	-8	-4	2470	0.18	299.22	1.25
229	SLU 78	-8	-10	2476	0.22	299.48	2.81
229	SLU 79	-8	-4	2470	0.18	299.22	1.25
229	SLU 80	-8	-10	2476	0.22	299.48	2.81
229	SLU 81	-9	-4	2582	0.19	311.23	1.21
229	SLU 82	-9	-10	2588	0.23	311.49	2.78
229	SLU 83	-9	-4	2582	0.19	311.23	1.21
229	SLU 84	-9	-10	2588	0.23	311.49	2.78
229	SLE RA 1	-6	-3	1655	0.13	204	1.05
229	SLE RA 2	-6	-10	1662	0.17	204.29	2.79
229	SLE RA 3	-6	-3	1655	0.13	204	1.05
229	SLE RA 4	-6	-8	1659	0.15	204.17	2.1
229	SLE RA 5	-6	-10	1662	0.17	204.29	2.79
229	SLE RA 6	-6	-3	1655	0.13	204	1.05
229	SLE RA 7	-6	-8	1659	0.15	204.17	2.1
229	SLE RA 8	-6	-3	1655	0.13	204	1.05
229	SLE RA 9	-6	-8	1659	0.15	204.17	2.1
229	SLE RA 10	-6	-10	1836	0.18	222.97	2.75
229	SLE RA 11	-6	-3	1830	0.14	222.68	1.01
229	SLE RA 12	-6	-7	1834	0.17	222.85	2.05
229	SLE RA 13	-6	-10	1836	0.18	222.97	2.75
229	SLE RA 14	-6	-3	1830	0.14	222.68	1.01
229	SLE RA 15	-6	-7	1834	0.17	222.85	2.05
229	SLE RA 16	-6	-3	1830	0.14	222.68	1.01
229	SLE RA 17	-6	-7	1834	0.17	222.85	2.05
229	SLE RA 18	-6	-3	1904	0.14	230.68	0.98
229	SLE RA 19	-6	-7	1908	0.17	230.86	2.03
229	SLE RA 20	-6	-3	1904	0.14	230.68	0.98

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
229	SLE RA 21	-6	-7	1908	0.17	230.86	2.03
229	SLE FR 1	-6	-3	1655	0.13	204	1.05
229	SLE FR 2	-6	-5	1656	0.14	204.06	1.4
229	SLE FR 3	-6	-3	1655	0.13	204	1.05
229	SLE FR 4	-6	-5	1731	0.14	212.06	1.38
229	SLE FR 5	-6	-3	1730	0.13	212	1.03
229	SLE FR 6	-6	-3	1780	0.14	217.34	1.02
229	SLE QP 1	-6	-3	1655	0.13	204	1.05
229	SLE QP 2	-6	-3	1730	0.13	212	1.03
229	SLD 1	129	13	1402	-0.34	186.39	-3.21
229	SLD 2	110	48	1400	-0.35	186.2	-11.95
229	SLD 3	139	-103	1527	0.37	195.2	25.97
229	SLD 4	119	-68	1524	0.36	195	17.24
229	SLD 5	28	165	1444	-1.08	191.04	-41.38
229	SLD 6	8	201	1441	-1.09	190.84	-50.24
229	SLD 7	58	-222	1858	1.28	220.38	55.9
229	SLD 8	38	-187	1856	1.27	220.19	47.03
229	SLD 9	-50	180	1604	-1.01	203.82	-44.96
229	SLD 10	-70	216	1601	-1.02	203.62	-53.83
229	SLD 11	-20	-208	2019	1.36	233.17	52.31
229	SLD 12	-40	-172	2016	1.34	232.97	43.44
229	SLD 13	-131	61	1936	-0.09	229.01	-15.17
229	SLD 14	-150	97	1933	-0.11	228.81	-23.9
229	SLD 15	-122	-55	2060	0.61	237.81	14.01
229	SLD 16	-141	-20	2058	0.6	237.62	5.28
229	SLV 1	301	34	984	-0.94	153.57	-8.72
229	SLV 2	257	114	978	-0.97	153.12	-28.52
229	SLV 3	322	-231	1268	0.68	173.63	57.83
229	SLV 4	278	-151	1262	0.65	173.19	38.03
229	SLV 5	71	382	1078	-2.63	164.19	-95.74
229	SLV 6	26	463	1072	-2.66	163.75	-115.84
229	SLV 7	139	-503	2024	2.76	231.09	126.08
229	SLV 8	95	-421	2018	2.73	230.64	105.98
229	SLV 9	-106	415	1442	-2.46	193.37	-103.92
229	SLV 10	-151	496	1436	-2.5	192.92	-124.01
229	SLV 11	-38	-470	2388	2.92	260.26	117.91
229	SLV 12	-83	-388	2382	2.89	259.81	97.81
229	SLV 13	-289	144	2197	-0.38	250.82	-35.96
229	SLV 14	-334	225	2192	-0.42	250.38	-55.76
229	SLV 15	-269	-121	2481	1.23	270.88	30.59
229	SLV 16	-313	-41	2476	1.2	270.44	10.78
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	5	78	3053	2.44	-14.47	2.89
231	SLU 2	5	69	3062	2.65	-14.88	2.88
231	SLU 3	5	78	3053	2.44	-14.47	2.89
231	SLU 4	5	73	3059	2.57	-14.71	2.88
231	SLU 5	5	69	3062	2.65	-14.88	2.88
231	SLU 6	5	78	3053	2.44	-14.47	2.89
231	SLU 7	5	73	3059	2.57	-14.71	2.88
231	SLU 8	5	78	3053	2.44	-14.47	2.89
231	SLU 9	5	73	3059	2.57	-14.71	2.88
231	SLU 10	7	80	3658	3.04	-17.49	3.32
231	SLU 11	7	89	3649	2.83	-17.08	3.33
231	SLU 12	7	83	3655	2.96	-17.33	3.32
231	SLU 13	7	80	3658	3.04	-17.49	3.32
231	SLU 14	7	89	3649	2.83	-17.08	3.33
231	SLU 15	7	83	3655	2.96	-17.33	3.32
231	SLU 16	7	89	3649	2.83	-17.08	3.33
231	SLU 17	7	83	3655	2.96	-17.33	3.32
231	SLU 18	8	94	3905	3	-18.2	3.52
231	SLU 19	8	88	3910	3.12	-18.45	3.51
231	SLU 20	8	94	3905	3	-18.2	3.52
231	SLU 21	8	88	3910	3.12	-18.45	3.51
231	SLU 22	6	83	3507	2.61	-16.23	3.22
231	SLU 23	6	74	3516	2.82	-16.64	3.21
231	SLU 24	6	83	3507	2.61	-16.23	3.22
231	SLU 25	6	78	3512	2.74	-16.48	3.21
231	SLU 26	6	74	3516	2.82	-16.64	3.21
231	SLU 27	6	83	3507	2.61	-16.23	3.22
231	SLU 28	6	78	3512	2.74	-16.48	3.21
231	SLU 29	6	83	3507	2.61	-16.23	3.22
231	SLU 30	6	78	3512	2.74	-16.48	3.21
231	SLU 31	8	85	4112	3.21	-19.26	3.65
231	SLU 32	8	94	4103	3	-18.85	3.66
231	SLU 33	8	89	4108	3.13	-19.1	3.65
231	SLU 34	8	85	4112	3.21	-19.26	3.65
231	SLU 35	8	94	4103	3	-18.85	3.66
231	SLU 36	8	89	4108	3.13	-19.1	3.65
231	SLU 37	8	94	4103	3	-18.85	3.66
231	SLU 38	8	89	4108	3.13	-19.1	3.65
231	SLU 39	9	99	4358	3.17	-19.97	3.85
231	SLU 40	9	93	4364	3.29	-20.22	3.84
231	SLU 41	9	99	4358	3.17	-19.97	3.85
231	SLU 42	9	93	4364	3.29	-20.22	3.84

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
231	SLU 43	6	100	3814	3.12	-18.2	3.65
231	SLU 44	7	90	3823	3.32	-18.61	3.63
231	SLU 45	6	100	3814	3.12	-18.2	3.65
231	SLU 46	6	94	3819	3.24	-18.44	3.64
231	SLU 47	7	90	3823	3.32	-18.61	3.63
231	SLU 48	6	100	3814	3.12	-18.2	3.65
231	SLU 49	6	94	3819	3.24	-18.44	3.64
231	SLU 50	6	100	3814	3.12	-18.2	3.65
231	SLU 51	6	94	3819	3.24	-18.44	3.64
231	SLU 52	8	101	4419	3.71	-21.23	4.07
231	SLU 53	8	111	4410	3.51	-20.82	4.08
231	SLU 54	8	105	4415	3.63	-21.06	4.08
231	SLU 55	8	101	4419	3.71	-21.23	4.07
231	SLU 56	8	111	4410	3.51	-20.82	4.08
231	SLU 57	8	105	4415	3.63	-21.06	4.08
231	SLU 58	8	111	4410	3.51	-20.82	4.08
231	SLU 59	8	105	4415	3.63	-21.06	4.08
231	SLU 60	9	115	4665	3.67	-21.94	4.27
231	SLU 61	9	110	4671	3.8	-22.18	4.27
231	SLU 62	9	115	4665	3.67	-21.94	4.27
231	SLU 63	9	110	4671	3.8	-22.18	4.27
231	SLU 64	7	105	4267	3.29	-19.97	3.97
231	SLU 65	7	96	4276	3.49	-20.38	3.96
231	SLU 66	7	105	4267	3.29	-19.97	3.97
231	SLU 67	7	99	4273	3.41	-20.21	3.97
231	SLU 68	7	96	4276	3.49	-20.38	3.96
231	SLU 69	7	105	4267	3.29	-19.97	3.97
231	SLU 70	7	99	4273	3.41	-20.21	3.97
231	SLU 71	7	105	4267	3.29	-19.97	3.97
231	SLU 72	7	99	4273	3.41	-20.21	3.97
231	SLU 73	9	107	4872	3.88	-22.99	4.4
231	SLU 74	9	116	4863	3.68	-22.58	4.41
231	SLU 75	9	110	4869	3.8	-22.83	4.41
231	SLU 76	9	107	4872	3.88	-22.99	4.4
231	SLU 77	9	116	4863	3.68	-22.58	4.41
231	SLU 78	9	110	4869	3.8	-22.83	4.41
231	SLU 79	9	116	4863	3.68	-22.58	4.41
231	SLU 80	9	110	4869	3.8	-22.83	4.41
231	SLU 81	10	121	5119	3.85	-23.7	4.6
231	SLU 82	10	115	5124	3.97	-23.95	4.6
231	SLU 83	10	121	5119	3.85	-23.7	4.6
231	SLU 84	10	115	5124	3.97	-23.95	4.6
231	SLE RA 1	5	80	3183	2.49	-14.97	2.98
231	SLE RA 2	6	73	3189	2.63	-15.24	2.98
231	SLE RA 3	5	80	3183	2.49	-14.97	2.98
231	SLE RA 4	5	76	3187	2.57	-15.13	2.98
231	SLE RA 5	6	73	3189	2.63	-15.24	2.98
231	SLE RA 6	5	80	3183	2.49	-14.97	2.98
231	SLE RA 7	5	76	3187	2.57	-15.13	2.98
231	SLE RA 8	5	80	3183	2.49	-14.97	2.98
231	SLE RA 9	5	76	3187	2.57	-15.13	2.98
231	SLE RA 10	7	81	3586	2.89	-16.99	3.27
231	SLE RA 11	7	87	3580	2.75	-16.72	3.28
231	SLE RA 12	7	83	3584	2.83	-16.88	3.27
231	SLE RA 13	7	81	3586	2.89	-16.99	3.27
231	SLE RA 14	7	87	3580	2.75	-16.72	3.28
231	SLE RA 15	7	83	3584	2.83	-16.88	3.27
231	SLE RA 16	7	87	3580	2.75	-16.72	3.28
231	SLE RA 17	7	83	3584	2.83	-16.88	3.27
231	SLE RA 18	7	90	3750	2.86	-17.46	3.4
231	SLE RA 19	7	86	3754	2.95	-17.63	3.4
231	SLE RA 20	7	90	3750	2.86	-17.46	3.4
231	SLE RA 21	7	86	3754	2.95	-17.63	3.4
231	SLE FR 1	5	80	3183	2.49	-14.97	2.98
231	SLE FR 2	5	78	3184	2.52	-15.03	2.98
231	SLE FR 3	5	80	3183	2.49	-14.97	2.98
231	SLE FR 4	6	82	3354	2.63	-15.77	3.11
231	SLE FR 5	6	83	3353	2.6	-15.72	3.11
231	SLE FR 6	6	85	3467	2.68	-16.22	3.19
231	SLE QP 1	5	80	3183	2.49	-14.97	2.98
231	SLE QP 2	6	83	3353	2.6	-15.72	3.11
231	SLD 1	298	130	3367	1.18	-4.97	0.8
231	SLD 2	253	122	3365	1.19	-4.79	2.18
231	SLD 3	319	2	3477	3.31	-6.67	0.5
231	SLD 4	274	-6	3475	3.32	-6.49	1.88
231	SLD 5	78	293	3191	-1.06	-9.98	2.38
231	SLD 6	32	285	3189	-1.05	-9.8	3.78
231	SLD 7	148	-132	3558	6.04	-15.65	1.38
231	SLD 8	102	-140	3556	6.05	-15.46	2.78
231	SLD 9	-90	306	3150	-0.84	-15.97	3.44
231	SLD 10	-136	297	3148	-0.83	-15.79	4.84
231	SLD 11	-21	-119	3517	6.25	-21.64	2.44
231	SLD 12	-66	-127	3515	6.26	-21.45	3.85
231	SLD 13	-262	172	3231	1.89	-24.94	4.34
231	SLD 14	-307	163	3230	1.9	-24.76	5.72
231	SLD 15	-241	44	3342	4.02	-26.64	4.04
231	SLD 16	-286	36	3340	4.03	-26.46	5.42

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
231	SLV 1	670	190	3383	-0.65	8.75	-2.13
231	SLV 2	568	171	3379	-0.63	9.16	1.01
231	SLV 3	717	-101	3634	4.2	4.84	-2.82
231	SLV 4	615	-119	3630	4.23	5.25	0.32
231	SLV 5	169	562	2983	-5.75	-2.6	1.46
231	SLV 6	66	543	2978	-5.72	-2.18	4.64
231	SLV 7	328	-406	3820	10.44	-15.62	-0.83
231	SLV 8	224	-425	3816	10.46	-15.21	2.35
231	SLV 9	-213	591	2891	-5.26	-16.23	3.87
231	SLV 10	-316	572	2886	-5.23	-15.81	7.05
231	SLV 11	-54	-378	3728	10.93	-29.26	1.58
231	SLV 12	-158	-396	3724	10.95	-28.84	4.76
231	SLV 13	-604	285	3076	0.98	-36.69	5.9
231	SLV 14	-705	266	3072	1	-36.28	9.04
231	SLV 15	-556	-6	3327	5.84	-40.6	5.21
231	SLV 16	-658	-24	3323	5.86	-40.19	8.35
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	-7	-29	1600	1.04	-197.62	-7.07
233	SLU 2	-6	-39	1611	1.12	-198.5	-9.62
233	SLU 3	-7	-29	1600	1.04	-197.62	-7.07
233	SLU 4	-6	-35	1607	1.08	-198.15	-8.6
233	SLU 5	-6	-39	1611	1.12	-198.5	-9.62
233	SLU 6	-7	-29	1600	1.04	-197.62	-7.07
233	SLU 7	-6	-35	1607	1.08	-198.15	-8.6
233	SLU 8	-7	-29	1600	1.04	-197.62	-7.07
233	SLU 9	-6	-35	1607	1.08	-198.15	-8.6
233	SLU 10	-6	-44	1911	1.39	-229.52	-10.69
233	SLU 11	-7	-33	1900	1.31	-228.65	-8.15
233	SLU 12	-7	-39	1906	1.36	-229.17	-9.67
233	SLU 13	-6	-44	1911	1.39	-229.52	-10.69
233	SLU 14	-7	-33	1900	1.31	-228.65	-8.15
233	SLU 15	-7	-39	1906	1.36	-229.17	-9.67
233	SLU 16	-7	-33	1900	1.31	-228.65	-8.15
233	SLU 17	-7	-39	1906	1.36	-229.17	-9.67
233	SLU 18	-7	-35	2028	1.43	-241.94	-8.6
233	SLU 19	-7	-41	2035	1.48	-242.47	-10.13
233	SLU 20	-7	-35	2028	1.43	-241.94	-8.6
233	SLU 21	-7	-41	2035	1.48	-242.47	-10.13
233	SLU 22	-7	-31	1818	1.2	-220.09	-7.67
233	SLU 23	-7	-42	1829	1.28	-220.96	-10.21
233	SLU 24	-7	-31	1818	1.2	-220.09	-7.67
233	SLU 25	-7	-38	1824	1.25	-220.61	-9.2
233	SLU 26	-7	-42	1829	1.28	-220.96	-10.21
233	SLU 27	-7	-31	1818	1.2	-220.09	-7.67
233	SLU 28	-7	-38	1824	1.25	-220.61	-9.2
233	SLU 29	-7	-31	1818	1.2	-220.09	-7.67
233	SLU 30	-7	-38	1824	1.25	-220.61	-9.2
233	SLU 31	-7	-46	2128	1.55	-251.98	-11.29
233	SLU 32	-7	-36	2117	1.47	-251.11	-8.74
233	SLU 33	-7	-42	2124	1.52	-251.64	-10.27
233	SLU 34	-7	-46	2128	1.55	-251.98	-11.29
233	SLU 35	-7	-36	2117	1.47	-251.11	-8.74
233	SLU 36	-7	-42	2124	1.52	-251.64	-10.27
233	SLU 37	-7	-36	2117	1.47	-251.11	-8.74
233	SLU 38	-7	-42	2124	1.52	-251.64	-10.27
233	SLU 39	-7	-38	2245	1.59	-264.41	-9.2
233	SLU 40	-7	-44	2252	1.64	-264.93	-10.73
233	SLU 41	-7	-38	2245	1.59	-264.41	-9.2
233	SLU 42	-7	-44	2252	1.64	-264.93	-10.73
233	SLU 43	-8	-37	2006	1.29	-249.21	-8.99
233	SLU 44	-8	-47	2017	1.37	-250.08	-11.53
233	SLU 45	-8	-37	2006	1.29	-249.21	-8.99
233	SLU 46	-8	-43	2012	1.34	-249.73	-10.52
233	SLU 47	-8	-47	2017	1.37	-250.08	-11.53
233	SLU 48	-8	-37	2006	1.29	-249.21	-8.99
233	SLU 49	-8	-43	2012	1.34	-249.73	-10.52
233	SLU 50	-8	-37	2006	1.29	-249.21	-8.99
233	SLU 51	-8	-43	2012	1.34	-249.73	-10.52
233	SLU 52	-8	-51	2317	1.64	-281.1	-12.61
233	SLU 53	-9	-41	2305	1.57	-280.23	-10.06
233	SLU 54	-8	-47	2312	1.61	-280.76	-11.59
233	SLU 55	-8	-51	2317	1.64	-281.1	-12.61
233	SLU 56	-9	-41	2305	1.57	-280.23	-10.06
233	SLU 57	-8	-47	2312	1.61	-280.76	-11.59
233	SLU 58	-9	-41	2305	1.57	-280.23	-10.06
233	SLU 59	-8	-47	2312	1.61	-280.76	-11.59
233	SLU 60	-9	-43	2433	1.68	-293.53	-10.52
233	SLU 61	-8	-49	2440	1.73	-294.05	-12.05
233	SLU 62	-9	-43	2433	1.68	-293.53	-10.52
233	SLU 63	-8	-49	2440	1.73	-294.05	-12.05
233	SLU 64	-9	-39	2223	1.46	-271.67	-9.59
233	SLU 65	-8	-49	2234	1.53	-272.55	-12.13
233	SLU 66	-9	-39	2223	1.46	-271.67	-9.59
233	SLU 67	-9	-45	2230	1.5	-272.2	-11.11

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
233	SLU 68	-8	-49	2234	1.53	-272.55	-12.13
233	SLU 69	-9	-39	2223	1.46	-271.67	-9.59
233	SLU 70	-9	-45	2230	1.5	-272.2	-11.11
233	SLU 71	-9	-39	2223	1.46	-271.67	-9.59
233	SLU 72	-9	-45	2230	1.5	-272.2	-11.11
233	SLU 73	-9	-54	2534	1.81	-303.57	-13.2
233	SLU 74	-9	-44	2523	1.73	-302.7	-10.66
233	SLU 75	-9	-50	2529	1.78	-303.22	-12.19
233	SLU 76	-9	-54	2534	1.81	-303.57	-13.2
233	SLU 77	-9	-44	2523	1.73	-302.7	-10.66
233	SLU 78	-9	-50	2529	1.78	-303.22	-12.19
233	SLU 79	-9	-44	2523	1.73	-302.7	-10.66
233	SLU 80	-9	-50	2529	1.78	-303.22	-12.19
233	SLU 81	-9	-46	2651	1.85	-315.99	-11.12
233	SLU 82	-9	-52	2658	1.89	-316.52	-12.65
233	SLU 83	-9	-46	2651	1.85	-315.99	-11.12
233	SLU 84	-9	-52	2658	1.89	-316.52	-12.65
233	SLE RA 1	-7	-30	1662	1.08	-204.04	-7.24
233	SLE RA 2	-6	-36	1670	1.14	-204.62	-8.94
233	SLE RA 3	-7	-30	1662	1.08	-204.04	-7.24
233	SLE RA 4	-7	-34	1667	1.12	-204.39	-8.26
233	SLE RA 5	-6	-36	1670	1.14	-204.62	-8.94
233	SLE RA 6	-7	-30	1662	1.08	-204.04	-7.24
233	SLE RA 7	-7	-34	1667	1.12	-204.39	-8.26
233	SLE RA 8	-7	-30	1662	1.08	-204.04	-7.24
233	SLE RA 9	-7	-34	1667	1.12	-204.39	-8.26
233	SLE RA 10	-7	-39	1870	1.32	-225.31	-9.65
233	SLE RA 11	-7	-33	1862	1.27	-224.72	-7.96
233	SLE RA 12	-7	-37	1866	1.3	-225.07	-8.98
233	SLE RA 13	-7	-39	1870	1.32	-225.31	-9.65
233	SLE RA 14	-7	-33	1862	1.27	-224.72	-7.96
233	SLE RA 15	-7	-37	1866	1.3	-225.07	-8.98
233	SLE RA 16	-7	-33	1862	1.27	-224.72	-7.96
233	SLE RA 17	-7	-37	1866	1.3	-225.07	-8.98
233	SLE RA 18	-7	-34	1948	1.35	-233.59	-8.26
233	SLE RA 19	-7	-38	1952	1.38	-233.94	-9.28
233	SLE RA 20	-7	-34	1948	1.35	-233.59	-8.26
233	SLE RA 21	-7	-38	1952	1.38	-233.94	-9.28
233	SLE FR 1	-7	-30	1662	1.08	-204.04	-7.24
233	SLE FR 2	-7	-31	1664	1.1	-204.16	-7.58
233	SLE FR 3	-7	-30	1662	1.08	-204.04	-7.24
233	SLE FR 4	-7	-32	1749	1.17	-213.02	-7.89
233	SLE FR 5	-7	-31	1748	1.16	-212.91	-7.55
233	SLE FR 6	-7	-32	1805	1.22	-218.81	-7.75
233	SLE QP 1	-7	-30	1662	1.08	-204.04	-7.24
233	SLE QP 2	-7	-31	1748	1.16	-212.91	-7.55
233	SLD 1	135	62	1923	1.05	-226.23	15.69
233	SLD 2	112	26	1928	1.07	-226.66	6.79
233	SLD 3	145	-55	2048	1.85	-238.94	-13.59
233	SLD 4	122	-91	2052	1.87	-239.37	-22.49
233	SLD 5	29	187	1609	-0.09	-197.48	47.01
233	SLD 6	6	151	1614	-0.07	-197.92	37.98
233	SLD 7	62	-203	2026	2.57	-239.83	-50.59
233	SLD 8	39	-239	2030	2.59	-240.27	-59.62
233	SLD 9	-52	177	1465	-0.27	-185.54	44.53
233	SLD 10	-75	141	1470	-0.25	-185.98	35.49
233	SLD 11	-19	-213	1882	2.4	-227.89	-53.08
233	SLD 12	-43	-249	1886	2.42	-228.33	-62.11
233	SLD 13	-135	29	1443	0.46	-186.44	7.4
233	SLD 14	-158	-7	1448	0.48	-186.87	-1.5
233	SLD 15	-125	-88	1568	1.26	-199.15	-21.89
233	SLD 16	-148	-124	1573	1.28	-199.58	-30.78
233	SLV 1	315	181	2146	0.89	-243.28	45.38
233	SLV 2	263	99	2156	0.95	-244.26	25.2
233	SLV 3	338	-86	2430	2.72	-272.22	-21.36
233	SLV 4	285	-167	2440	2.77	-273.2	-41.54
233	SLV 5	75	467	1432	-1.7	-177.78	116.77
233	SLV 6	21	384	1442	-1.65	-178.77	96.29
233	SLV 7	149	-423	2381	4.38	-274.25	-105.71
233	SLV 8	96	-506	2391	4.43	-275.24	-126.19
233	SLV 9	-110	444	1105	-2.1	-150.57	111.09
233	SLV 10	-163	361	1115	-2.05	-151.56	90.61
233	SLV 11	-35	-445	2054	3.98	-247.04	-111.39
233	SLV 12	-88	-528	2064	4.03	-248.03	-131.87
233	SLV 13	-299	105	1055	-0.44	-152.61	26.44
233	SLV 14	-351	24	1065	-0.39	-153.59	6.26
233	SLV 15	-276	-161	1340	1.38	-181.55	-40.3
233	SLV 16	-329	-243	1350	1.43	-182.53	-60.48
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
236	SLU 1	-11	-4	1617	1.03	206.47	1.09
236	SLU 2	-11	-14	1629	1.11	207.5	3.69
236	SLU 3	-11	-4	1617	1.03	206.47	1.09
236	SLU 4	-11	-10	1624	1.08	207.09	2.65
236	SLU 5	-11	-14	1629	1.11	207.5	3.69

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
236	SLU 6	-11	-4	1617	1.03	206.47	1.09
236	SLU 7	-11	-10	1624	1.08	207.09	2.65
236	SLU 8	-11	-4	1617	1.03	206.47	1.09
236	SLU 9	-11	-10	1624	1.08	207.09	2.65
236	SLU 10	-13	-14	1894	1.3	236.93	3.62
236	SLU 11	-13	-3	1882	1.23	235.9	1.02
236	SLU 12	-13	-10	1889	1.27	236.52	2.58
236	SLU 13	-13	-14	1894	1.3	236.93	3.62
236	SLU 14	-13	-3	1882	1.23	235.9	1.02
236	SLU 15	-13	-10	1889	1.27	236.52	2.58
236	SLU 16	-13	-3	1882	1.23	235.9	1.02
236	SLU 17	-13	-10	1889	1.27	236.52	2.58
236	SLU 18	-13	-3	1996	1.31	248.51	0.99
236	SLU 19	-14	-9	2003	1.36	249.13	2.55
236	SLU 20	-13	-3	1996	1.31	248.51	0.99
236	SLU 21	-14	-9	2003	1.36	249.13	2.55
236	SLU 22	-12	-3	1816	1.15	228.38	0.92
236	SLU 23	-13	-13	1828	1.23	229.41	3.52
236	SLU 24	-12	-3	1816	1.15	228.38	0.92
236	SLU 25	-13	-9	1824	1.2	229	2.48
236	SLU 26	-13	-13	1828	1.23	229.41	3.52
236	SLU 27	-12	-3	1816	1.15	228.38	0.92
236	SLU 28	-13	-9	1824	1.2	229	2.48
236	SLU 29	-12	-3	1816	1.15	228.38	0.92
236	SLU 30	-13	-9	1824	1.2	229	2.48
236	SLU 31	-15	-13	2094	1.43	258.84	3.44
236	SLU 32	-14	-3	2081	1.35	257.81	0.84
236	SLU 33	-14	-9	2089	1.4	258.43	2.4
236	SLU 34	-15	-13	2094	1.43	258.84	3.44
236	SLU 35	-14	-3	2081	1.35	257.81	0.84
236	SLU 36	-14	-9	2089	1.4	258.43	2.4
236	SLU 37	-14	-3	2081	1.35	257.81	0.84
236	SLU 38	-14	-9	2089	1.4	258.43	2.4
236	SLU 39	-15	-2	2195	1.43	270.43	0.81
236	SLU 40	-15	-9	2202	1.48	271.04	2.37
236	SLU 41	-15	-2	2195	1.43	270.43	0.81
236	SLU 42	-15	-9	2202	1.48	271.04	2.37
236	SLU 43	-14	-5	2033	1.3	260.9	1.48
236	SLU 44	-14	-15	2045	1.38	261.93	4.08
236	SLU 45	-14	-5	2033	1.3	260.9	1.48
236	SLU 46	-14	-11	2040	1.34	261.52	3.04
236	SLU 47	-14	-15	2045	1.38	261.93	4.08
236	SLU 48	-14	-5	2033	1.3	260.9	1.48
236	SLU 49	-14	-11	2040	1.34	261.52	3.04
236	SLU 50	-14	-5	2033	1.3	260.9	1.48
236	SLU 51	-14	-11	2040	1.34	261.52	3.04
236	SLU 52	-16	-15	2311	1.57	291.36	4.01
236	SLU 53	-16	-5	2298	1.49	290.33	1.4
236	SLU 54	-16	-11	2306	1.54	290.95	2.96
236	SLU 55	-16	-15	2311	1.57	291.36	4.01
236	SLU 56	-16	-5	2298	1.49	290.33	1.4
236	SLU 57	-16	-11	2306	1.54	290.95	2.96
236	SLU 58	-16	-5	2298	1.49	290.33	1.4
236	SLU 59	-16	-11	2306	1.54	290.95	2.96
236	SLU 60	-16	-5	2412	1.58	302.94	1.37
236	SLU 61	-17	-11	2419	1.62	303.56	2.93
236	SLU 62	-16	-5	2412	1.58	302.94	1.37
236	SLU 63	-17	-11	2419	1.62	303.56	2.93
236	SLU 64	-15	-4	2233	1.42	282.81	1.3
236	SLU 65	-16	-15	2245	1.5	283.84	3.9
236	SLU 66	-15	-4	2233	1.42	282.81	1.3
236	SLU 67	-15	-11	2240	1.47	283.43	2.86
236	SLU 68	-16	-15	2245	1.5	283.84	3.9
236	SLU 69	-15	-4	2233	1.42	282.81	1.3
236	SLU 70	-15	-11	2240	1.47	283.43	2.86
236	SLU 71	-15	-4	2233	1.42	282.81	1.3
236	SLU 72	-15	-11	2240	1.47	283.43	2.86
236	SLU 73	-17	-14	2510	1.69	313.27	3.83
236	SLU 74	-17	-4	2498	1.62	312.24	1.23
236	SLU 75	-17	-10	2505	1.66	312.86	2.79
236	SLU 76	-17	-14	2510	1.69	313.27	3.83
236	SLU 77	-17	-4	2498	1.62	312.24	1.23
236	SLU 78	-17	-10	2505	1.66	312.86	2.79
236	SLU 79	-17	-4	2498	1.62	312.24	1.23
236	SLU 80	-17	-10	2505	1.66	312.86	2.79
236	SLU 81	-18	-4	2612	1.7	324.86	1.2
236	SLU 82	-18	-10	2619	1.75	325.47	2.76
236	SLU 83	-18	-4	2612	1.7	324.86	1.2
236	SLU 84	-18	-10	2619	1.75	325.47	2.76
236	SLE RA 1	-11	-3	1674	1.07	212.73	1.04
236	SLE RA 2	-12	-10	1682	1.12	213.42	2.78
236	SLE RA 3	-11	-3	1674	1.07	212.73	1.04
236	SLE RA 4	-12	-8	1678	1.1	213.14	2.08
236	SLE RA 5	-12	-10	1682	1.12	213.42	2.78
236	SLE RA 6	-11	-3	1674	1.07	212.73	1.04
236	SLE RA 7	-12	-8	1678	1.1	213.14	2.08
236	SLE RA 8	-11	-3	1674	1.07	212.73	1.04

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
236	SLE RA 9	-12	-8	1678	1.1	213.14	2.08
236	SLE RA 10	-13	-10	1859	1.25	233.04	2.73
236	SLE RA 11	-13	-3	1850	1.2	232.35	0.99
236	SLE RA 12	-13	-7	1855	1.23	232.76	2.03
236	SLE RA 13	-13	-10	1859	1.25	233.04	2.73
236	SLE RA 14	-13	-3	1850	1.2	232.35	0.99
236	SLE RA 15	-13	-7	1855	1.23	232.76	2.03
236	SLE RA 16	-13	-3	1850	1.2	232.35	0.99
236	SLE RA 17	-13	-7	1855	1.23	232.76	2.03
236	SLE RA 18	-13	-3	1926	1.25	240.76	0.97
236	SLE RA 19	-13	-7	1931	1.28	241.17	2.01
236	SLE RA 20	-13	-3	1926	1.25	240.76	0.97
236	SLE RA 21	-13	-7	1931	1.28	241.17	2.01
236	SLE FR 1	-11	-3	1674	1.07	212.73	1.04
236	SLE FR 2	-11	-5	1675	1.08	212.87	1.39
236	SLE FR 3	-11	-3	1674	1.07	212.73	1.04
236	SLE FR 4	-12	-5	1751	1.13	221.28	1.37
236	SLE FR 5	-12	-3	1749	1.12	221.14	1.02
236	SLE FR 6	-12	-3	1800	1.16	226.75	1.01
236	SLE QP 1	-11	-3	1674	1.07	212.73	1.04
236	SLE QP 2	-12	-3	1749	1.12	221.14	1.02
236	SLD 1	130	13	1405	0.43	190.65	-3.22
236	SLD 2	107	48	1402	0.41	190.34	-11.94
236	SLD 3	140	-103	1553	1.23	205.16	25.91
236	SLD 4	117	-68	1550	1.22	204.85	17.19
236	SLD 5	23	165	1422	-0.3	190.11	-41.31
236	SLD 6	0	201	1419	-0.32	189.79	-50.17
236	SLD 7	57	-222	1916	2.38	238.46	55.79
236	SLD 8	34	-186	1913	2.37	238.14	46.93
236	SLD 9	-58	180	1586	-0.12	204.14	-44.89
236	SLD 10	-81	216	1583	-0.14	203.83	-53.75
236	SLD 11	-24	-208	2079	2.56	252.49	52.21
236	SLD 12	-47	-172	2076	2.55	252.18	43.35
236	SLD 13	-141	61	1949	1.03	237.43	-15.15
236	SLD 14	-164	97	1946	1.01	237.12	-23.87
236	SLD 15	-131	-55	2097	1.83	251.94	13.98
236	SLD 16	-153	-20	2094	1.82	251.63	5.26
236	SLV 1	310	34	965	-0.46	151.62	-8.71
236	SLV 2	258	114	958	-0.5	150.91	-28.49
236	SLV 3	333	-231	1303	1.38	184.69	57.72
236	SLV 4	281	-151	1296	1.34	183.98	37.94
236	SLV 5	68	381	1004	-2.13	150.38	-95.58
236	SLV 6	15	463	997	-2.17	149.66	-115.65
236	SLV 7	145	-502	2130	4	260.61	125.85
236	SLV 8	92	-421	2124	3.96	259.9	105.78
236	SLV 9	-116	414	1375	-1.72	182.38	-103.74
236	SLV 10	-169	496	1368	-1.76	181.67	-123.81
236	SLV 11	-39	-469	2502	4.41	292.62	117.69
236	SLV 12	-92	-388	2495	4.37	291.9	97.62
236	SLV 13	-305	144	2203	0.9	258.3	-35.9
236	SLV 14	-357	224	2196	0.87	257.6	-55.68
236	SLV 15	-281	-121	2541	2.74	291.37	30.53
236	SLV 16	-333	-41	2534	2.7	290.67	10.75
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
238	SLU 1	-10	80	3136	2.99	-13.5	2.86
238	SLU 2	-9	70	3151	3.22	-13.91	2.85
238	SLU 3	-10	80	3136	2.99	-13.5	2.86
238	SLU 4	-9	74	3145	3.13	-13.75	2.85
238	SLU 5	-9	70	3151	3.22	-13.91	2.85
238	SLU 6	-10	80	3136	2.99	-13.5	2.86
238	SLU 7	-9	74	3145	3.13	-13.75	2.85
238	SLU 8	-10	80	3136	2.99	-13.5	2.86
238	SLU 9	-9	74	3145	3.13	-13.75	2.85
238	SLU 10	-10	81	3760	3.69	-16.26	3.28
238	SLU 11	-10	91	3744	3.46	-15.84	3.29
238	SLU 12	-10	85	3754	3.6	-16.09	3.28
238	SLU 13	-10	81	3760	3.69	-16.26	3.28
238	SLU 14	-10	91	3744	3.46	-15.84	3.29
238	SLU 15	-10	85	3754	3.6	-16.09	3.28
238	SLU 16	-10	91	3744	3.46	-15.84	3.29
238	SLU 17	-10	85	3754	3.6	-16.09	3.28
238	SLU 18	-10	95	4005	3.66	-16.85	3.47
238	SLU 19	-10	90	4015	3.8	-17.09	3.47
238	SLU 20	-10	95	4005	3.66	-16.85	3.47
238	SLU 21	-10	90	4015	3.8	-17.09	3.47
238	SLU 22	-10	85	3594	3.17	-15.09	3.18
238	SLU 23	-10	75	3610	3.4	-15.5	3.17
238	SLU 24	-10	85	3594	3.17	-15.09	3.18
238	SLU 25	-10	79	3604	3.31	-15.34	3.18
238	SLU 26	-10	75	3610	3.4	-15.5	3.17
238	SLU 27	-10	85	3594	3.17	-15.09	3.18
238	SLU 28	-10	79	3604	3.31	-15.34	3.18
238	SLU 29	-10	85	3594	3.17	-15.09	3.18
238	SLU 30	-10	79	3604	3.31	-15.34	3.18

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
238	SLU 31	-11	86	4219	3.87	-17.85	3.6
238	SLU 32	-11	96	4203	3.64	-17.43	3.61
238	SLU 33	-11	90	4213	3.78	-17.68	3.6
238	SLU 34	-11	86	4219	3.87	-17.85	3.6
238	SLU 35	-11	96	4203	3.64	-17.43	3.61
238	SLU 36	-11	90	4213	3.78	-17.68	3.6
238	SLU 37	-11	96	4203	3.64	-17.43	3.61
238	SLU 38	-11	90	4213	3.78	-17.68	3.6
238	SLU 39	-11	101	4464	3.84	-18.44	3.79
238	SLU 40	-11	95	4474	3.98	-18.68	3.79
238	SLU 41	-11	101	4464	3.84	-18.44	3.79
238	SLU 42	-11	95	4474	3.98	-18.68	3.79
238	SLU 43	-12	102	3919	3.83	-17	3.6
238	SLU 44	-12	92	3935	4.05	-17.42	3.6
238	SLU 45	-12	102	3919	3.83	-17	3.6
238	SLU 46	-12	96	3928	3.96	-17.25	3.6
238	SLU 47	-12	92	3935	4.05	-17.42	3.6
238	SLU 48	-12	102	3919	3.83	-17	3.6
238	SLU 49	-12	96	3928	3.96	-17.25	3.6
238	SLU 50	-12	102	3919	3.83	-17	3.6
238	SLU 51	-12	96	3928	3.96	-17.25	3.6
238	SLU 52	-12	103	4544	4.52	-19.76	4.03
238	SLU 53	-13	113	4528	4.3	-19.35	4.03
238	SLU 54	-12	107	4537	4.43	-19.6	4.03
238	SLU 55	-12	103	4544	4.52	-19.76	4.03
238	SLU 56	-13	113	4528	4.3	-19.35	4.03
238	SLU 57	-12	107	4537	4.43	-19.6	4.03
238	SLU 58	-13	113	4528	4.3	-19.35	4.03
238	SLU 59	-12	107	4537	4.43	-19.6	4.03
238	SLU 60	-13	117	4789	4.5	-20.35	4.22
238	SLU 61	-13	112	4798	4.63	-20.6	4.21
238	SLU 62	-13	117	4789	4.5	-20.35	4.22
238	SLU 63	-13	112	4798	4.63	-20.6	4.21
238	SLU 64	-13	107	4378	4.01	-18.59	3.92
238	SLU 65	-13	97	4393	4.23	-19.01	3.92
238	SLU 66	-13	107	4378	4.01	-18.59	3.92
238	SLU 67	-13	101	4387	4.14	-18.84	3.92
238	SLU 68	-13	97	4393	4.23	-19.01	3.92
238	SLU 69	-13	107	4378	4.01	-18.59	3.92
238	SLU 70	-13	101	4387	4.14	-18.84	3.92
238	SLU 71	-13	107	4378	4.01	-18.59	3.92
238	SLU 72	-13	101	4387	4.14	-18.84	3.92
238	SLU 73	-13	108	5002	4.7	-21.35	4.35
238	SLU 74	-13	118	4987	4.48	-20.94	4.35
238	SLU 75	-13	112	4996	4.61	-21.19	4.35
238	SLU 76	-13	108	5002	4.7	-21.35	4.35
238	SLU 77	-13	118	4987	4.48	-20.94	4.35
238	SLU 78	-13	112	4996	4.61	-21.19	4.35
238	SLU 79	-13	118	4987	4.48	-20.94	4.35
238	SLU 80	-13	112	4996	4.61	-21.19	4.35
238	SLU 81	-14	123	5248	4.68	-21.94	4.54
238	SLU 82	-13	117	5257	4.81	-22.19	4.54
238	SLU 83	-14	123	5248	4.68	-21.94	4.54
238	SLU 84	-13	117	5257	4.81	-22.19	4.54
238	SLE RA 1	-10	81	3267	3.04	-13.95	2.95
238	SLE RA 2	-10	75	3277	3.19	-14.23	2.95
238	SLE RA 3	-10	81	3267	3.04	-13.95	2.95
238	SLE RA 4	-10	77	3273	3.13	-14.12	2.95
238	SLE RA 5	-10	75	3277	3.19	-14.23	2.95
238	SLE RA 6	-10	81	3267	3.04	-13.95	2.95
238	SLE RA 7	-10	77	3273	3.13	-14.12	2.95
238	SLE RA 8	-10	81	3267	3.04	-13.95	2.95
238	SLE RA 9	-10	77	3273	3.13	-14.12	2.95
238	SLE RA 10	-10	82	3683	3.51	-15.79	3.23
238	SLE RA 11	-10	88	3673	3.36	-15.52	3.23
238	SLE RA 12	-10	85	3679	3.45	-15.68	3.23
238	SLE RA 13	-10	82	3683	3.51	-15.79	3.23
238	SLE RA 14	-10	88	3673	3.36	-15.52	3.23
238	SLE RA 15	-10	85	3679	3.45	-15.68	3.23
238	SLE RA 16	-10	88	3673	3.36	-15.52	3.23
238	SLE RA 17	-10	85	3679	3.45	-15.68	3.23
238	SLE RA 18	-10	92	3847	3.49	-16.19	3.36
238	SLE RA 19	-10	88	3853	3.58	-16.35	3.36
238	SLE RA 20	-10	92	3847	3.49	-16.19	3.36
238	SLE RA 21	-10	88	3853	3.58	-16.35	3.36
238	SLE FR 1	-10	81	3267	3.04	-13.95	2.95
238	SLE FR 2	-10	80	3269	3.07	-14.01	2.95
238	SLE FR 3	-10	81	3267	3.04	-13.95	2.95
238	SLE FR 4	-10	83	3443	3.21	-14.68	3.07
238	SLE FR 5	-10	84	3441	3.18	-14.62	3.07
238	SLE FR 6	-10	86	3557	3.27	-15.07	3.15
238	SLE QP 1	-10	81	3267	3.04	-13.95	2.95
238	SLE QP 2	-10	84	3441	3.18	-14.62	3.07
238	SLD 1	295	131	3419	1.64	-3.62	0.59
238	SLD 2	243	123	3417	1.65	-3.44	1.99
238	SLD 3	318	4	3597	3.98	-5.3	0.3
238	SLD 4	265	-4	3596	3.99	-5.12	1.69

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
238	SLD 5	67	294	3164	-0.83	-8.83	2.28
238	SLD 6	13	286	3163	-0.82	-8.65	3.69
238	SLD 7	141	-130	3758	6.95	-14.44	1.29
238	SLD 8	88	-138	3757	6.97	-14.26	2.71
238	SLD 9	-107	307	3124	-0.61	-14.99	3.44
238	SLD 10	-161	299	3123	-0.6	-14.8	4.85
238	SLD 11	-33	-118	3718	7.17	-20.6	2.45
238	SLD 12	-86	-126	3717	7.18	-20.41	3.86
238	SLD 13	-285	173	3286	2.37	-24.13	4.45
238	SLD 14	-337	165	3284	2.38	-23.95	5.84
238	SLD 15	-263	46	3464	4.7	-25.81	4.16
238	SLD 16	-315	37	3462	4.71	-25.63	5.55
238	SLV 1	683	191	3390	-0.33	10.44	-2.54
238	SLV 2	564	173	3387	-0.3	10.85	0.61
238	SLV 3	734	-99	3797	5	6.57	-3.23
238	SLV 4	615	-118	3793	5.02	6.98	-0.07
238	SLV 5	163	563	2810	-5.96	-1.38	1.29
238	SLV 6	43	544	2807	-5.93	-0.96	4.49
238	SLV 7	333	-404	4165	11.79	-14.28	-0.98
238	SLV 8	212	-423	4162	11.82	-13.86	2.22
238	SLV 9	-232	591	2719	-5.46	-15.38	3.92
238	SLV 10	-353	573	2716	-5.44	-14.97	7.12
238	SLV 11	-63	-376	4074	12.29	-28.28	1.65
238	SLV 12	-183	-395	4071	12.32	-27.86	4.85
238	SLV 13	-635	286	3088	1.33	-36.23	6.21
238	SLV 14	-754	268	3084	1.36	-35.82	9.37
238	SLV 15	-584	-4	3494	6.66	-40.1	5.53
238	SLV 16	-703	-23	3491	6.68	-39.69	8.69
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
240	SLU 1	-12	-29	1647	1.96	-229.01	-7.16
240	SLU 2	-12	-40	1661	2.05	-230.66	-9.7
240	SLU 3	-12	-29	1647	1.96	-229.01	-7.16
240	SLU 4	-12	-36	1656	2.01	-230	-8.68
240	SLU 5	-12	-40	1661	2.05	-230.66	-9.7
240	SLU 6	-12	-29	1647	1.96	-229.01	-7.16
240	SLU 7	-12	-36	1656	2.01	-230	-8.68
240	SLU 8	-12	-29	1647	1.96	-229.01	-7.16
240	SLU 9	-12	-36	1656	2.01	-230	-8.68
240	SLU 10	-13	-44	1973	2.53	-268.69	-10.77
240	SLU 11	-13	-34	1959	2.44	-267.03	-8.23
240	SLU 12	-13	-40	1967	2.49	-268.03	-9.75
240	SLU 13	-13	-44	1973	2.53	-268.69	-10.77
240	SLU 14	-13	-34	1959	2.44	-267.03	-8.23
240	SLU 15	-13	-40	1967	2.49	-268.03	-9.75
240	SLU 16	-13	-34	1959	2.44	-267.03	-8.23
240	SLU 17	-13	-40	1967	2.49	-268.03	-9.75
240	SLU 18	-14	-36	2092	2.64	-283.33	-8.69
240	SLU 19	-13	-42	2100	2.7	-284.32	-10.21
240	SLU 20	-14	-36	2092	2.64	-283.33	-8.69
240	SLU 21	-13	-42	2100	2.7	-284.32	-10.21
240	SLU 22	-13	-32	1872	2.27	-256.33	-7.77
240	SLU 23	-13	-42	1886	2.36	-257.98	-10.31
240	SLU 24	-13	-32	1872	2.27	-256.33	-7.77
240	SLU 25	-13	-38	1881	2.32	-257.32	-9.29
240	SLU 26	-13	-42	1886	2.36	-257.98	-10.31
240	SLU 27	-13	-32	1872	2.27	-256.33	-7.77
240	SLU 28	-13	-38	1881	2.32	-257.32	-9.29
240	SLU 29	-13	-32	1872	2.27	-256.33	-7.77
240	SLU 30	-13	-38	1881	2.32	-257.32	-9.29
240	SLU 31	-14	-46	2198	2.84	-296.01	-11.38
240	SLU 32	-14	-36	2184	2.75	-294.35	-8.84
240	SLU 33	-14	-42	2192	2.8	-295.34	-10.37
240	SLU 34	-14	-46	2198	2.84	-296.01	-11.38
240	SLU 35	-14	-36	2184	2.75	-294.35	-8.84
240	SLU 36	-14	-42	2192	2.8	-295.34	-10.37
240	SLU 37	-14	-36	2184	2.75	-294.35	-8.84
240	SLU 38	-14	-42	2192	2.8	-295.34	-10.37
240	SLU 39	-15	-38	2317	2.95	-310.65	-9.3
240	SLU 40	-15	-44	2325	3.01	-311.64	-10.83
240	SLU 41	-15	-38	2317	2.95	-310.65	-9.3
240	SLU 42	-15	-44	2325	3.01	-311.64	-10.83
240	SLU 43	-16	-37	2064	2.44	-288.35	-9.1
240	SLU 44	-15	-48	2078	2.53	-290	-11.63
240	SLU 45	-16	-37	2064	2.44	-288.35	-9.1
240	SLU 46	-15	-43	2073	2.49	-289.34	-10.62
240	SLU 47	-15	-48	2078	2.53	-290	-11.63
240	SLU 48	-16	-37	2064	2.44	-288.35	-9.1
240	SLU 49	-15	-43	2073	2.49	-289.34	-10.62
240	SLU 50	-16	-37	2064	2.44	-288.35	-9.1
240	SLU 51	-15	-43	2073	2.49	-289.34	-10.62
240	SLU 52	-16	-52	2390	3.01	-328.02	-12.71
240	SLU 53	-17	-42	2376	2.92	-326.37	-10.17
240	SLU 54	-16	-48	2384	2.97	-327.36	-11.69
240	SLU 55	-16	-52	2390	3.01	-328.02	-12.71

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
240	SLU 56	-17	-42	2376	2.92	-326.37	-10.17
240	SLU 57	-16	-48	2384	2.97	-327.36	-11.69
240	SLU 58	-17	-42	2376	2.92	-326.37	-10.17
240	SLU 59	-16	-48	2384	2.97	-327.36	-11.69
240	SLU 60	-17	-44	2509	3.12	-342.67	-10.63
240	SLU 61	-17	-50	2518	3.18	-343.66	-12.15
240	SLU 62	-17	-44	2509	3.12	-342.67	-10.63
240	SLU 63	-17	-50	2518	3.18	-343.66	-12.15
240	SLU 64	-17	-40	2289	2.75	-315.67	-9.71
240	SLU 65	-16	-50	2303	2.84	-317.32	-12.25
240	SLU 66	-17	-40	2289	2.75	-315.67	-9.71
240	SLU 67	-17	-46	2298	2.8	-316.66	-11.23
240	SLU 68	-16	-50	2303	2.84	-317.32	-12.25
240	SLU 69	-17	-40	2289	2.75	-315.67	-9.71
240	SLU 70	-17	-46	2298	2.8	-316.66	-11.23
240	SLU 71	-17	-40	2289	2.75	-315.67	-9.71
240	SLU 72	-17	-46	2298	2.8	-316.66	-11.23
240	SLU 73	-17	-54	2615	3.32	-355.34	-13.32
240	SLU 74	-18	-44	2601	3.23	-353.69	-10.78
240	SLU 75	-17	-50	2609	3.28	-354.68	-12.3
240	SLU 76	-17	-54	2615	3.32	-355.34	-13.32
240	SLU 77	-18	-44	2601	3.23	-353.69	-10.78
240	SLU 78	-17	-50	2609	3.28	-354.68	-12.3
240	SLU 79	-18	-44	2601	3.23	-353.69	-10.78
240	SLU 80	-17	-50	2609	3.28	-354.68	-12.3
240	SLU 81	-18	-46	2734	3.43	-369.99	-11.24
240	SLU 82	-18	-52	2742	3.49	-370.98	-12.76
240	SLU 83	-18	-46	2734	3.43	-369.99	-11.24
240	SLU 84	-18	-52	2742	3.49	-370.98	-12.76
240	SLE RA 1	-13	-30	1712	2.05	-236.82	-7.34
240	SLE RA 2	-12	-37	1721	2.11	-237.92	-9.03
240	SLE RA 3	-13	-30	1712	2.05	-236.82	-7.34
240	SLE RA 4	-13	-34	1717	2.08	-237.48	-8.35
240	SLE RA 5	-12	-37	1721	2.11	-237.92	-9.03
240	SLE RA 6	-13	-30	1712	2.05	-236.82	-7.34
240	SLE RA 7	-13	-34	1717	2.08	-237.48	-8.35
240	SLE RA 8	-13	-30	1712	2.05	-236.82	-7.34
240	SLE RA 9	-13	-34	1717	2.08	-237.48	-8.35
240	SLE RA 10	-13	-40	1928	2.43	-263.27	-9.74
240	SLE RA 11	-13	-33	1919	2.37	-262.17	-8.05
240	SLE RA 12	-13	-37	1925	2.4	-262.83	-9.06
240	SLE RA 13	-13	-40	1928	2.43	-263.27	-9.74
240	SLE RA 14	-13	-33	1919	2.37	-262.17	-8.05
240	SLE RA 15	-13	-37	1925	2.4	-262.83	-9.06
240	SLE RA 16	-13	-33	1919	2.37	-262.17	-8.05
240	SLE RA 17	-13	-37	1925	2.4	-262.83	-9.06
240	SLE RA 18	-14	-34	2008	2.5	-273.03	-8.36
240	SLE RA 19	-13	-38	2014	2.54	-273.69	-9.37
240	SLE RA 20	-14	-34	2008	2.5	-273.03	-8.36
240	SLE RA 21	-13	-38	2014	2.54	-273.69	-9.37
240	SLE FR 1	-13	-30	1712	2.05	-236.82	-7.34
240	SLE FR 2	-13	-31	1713	2.06	-237.04	-7.67
240	SLE FR 3	-13	-30	1712	2.05	-236.82	-7.34
240	SLE FR 4	-13	-33	1802	2.2	-247.9	-7.98
240	SLE FR 5	-13	-31	1801	2.18	-247.68	-7.64
240	SLE FR 6	-13	-32	1860	2.28	-254.92	-7.85
240	SLE QP 1	-13	-30	1712	2.05	-236.82	-7.34
240	SLE QP 2	-13	-31	1801	2.18	-247.68	-7.64
240	SLD 1	137	62	1974	2.2	-262.99	15.53
240	SLD 2	110	26	1979	2.23	-263.64	6.64
240	SLD 3	147	-55	2125	3.1	-283.13	-13.66
240	SLD 4	120	-91	2130	3.13	-283.78	-22.55
240	SLD 5	26	187	1621	0.82	-221.5	46.77
240	SLD 6	-2	150	1626	0.84	-222.16	37.74
240	SLD 7	61	-203	2126	3.81	-288.63	-50.55
240	SLD 8	33	-239	2131	3.84	-289.29	-59.57
240	SLD 9	-59	177	1470	0.53	-206.08	44.29
240	SLD 10	-87	140	1475	0.56	-206.74	35.26
240	SLD 11	-24	-213	1975	3.53	-273.2	-53.03
240	SLD 12	-51	-249	1980	3.55	-273.86	-62.05
240	SLD 13	-146	29	1471	1.24	-211.58	7.27
240	SLD 14	-173	-8	1476	1.27	-212.23	-1.62
240	SLD 15	-136	-88	1622	2.14	-231.72	-21.93
240	SLD 16	-162	-124	1627	2.17	-232.37	-30.82
240	SLV 1	327	180	2194	2.22	-282.47	45.14
240	SLV 2	266	99	2205	2.28	-283.94	24.99
240	SLV 3	351	-86	2539	4.27	-328.36	-21.4
240	SLV 4	290	-168	2551	4.33	-329.84	-41.56
240	SLV 5	74	465	1390	-0.93	-187.98	116.33
240	SLV 6	13	382	1402	-0.88	-189.48	95.87
240	SLV 7	154	-422	2542	5.9	-340.97	-105.49
240	SLV 8	93	-505	2554	5.96	-342.46	-125.95
240	SLV 9	-118	443	1047	-1.59	-152.9	110.66
240	SLV 10	-180	360	1059	-1.53	-154.4	90.21
240	SLV 11	-38	-445	2199	5.25	-305.88	-111.15
240	SLV 12	-100	-528	2211	5.3	-307.38	-131.61
240	SLV 13	-316	105	1050	0.04	-165.53	26.27

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
240	SLV 14	-377	23	1062	0.1	-167	6.12
240	SLV 15	-292	-161	1396	2.09	-211.42	-40.27
240	SLV 16	-353	-243	1407	2.15	-212.9	-60.43
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
243	SLU 1	-15	-4	1664	2.01	234.78	1.07
243	SLU 2	-16	-14	1679	2.1	236.62	3.66
243	SLU 3	-15	-4	1664	2.01	234.78	1.07
243	SLU 4	-16	-10	1673	2.06	235.88	2.63
243	SLU 5	-16	-14	1679	2.1	236.62	3.66
243	SLU 6	-15	-4	1664	2.01	234.78	1.07
243	SLU 7	-16	-10	1673	2.06	235.88	2.63
243	SLU 8	-15	-4	1664	2.01	234.78	1.07
243	SLU 9	-16	-10	1673	2.06	235.88	2.63
243	SLU 10	-18	-14	1954	2.49	271.31	3.59
243	SLU 11	-18	-3	1939	2.4	269.46	1
243	SLU 12	-18	-10	1948	2.45	270.57	2.55
243	SLU 13	-18	-14	1954	2.49	271.31	3.59
243	SLU 14	-18	-3	1939	2.4	269.46	1
243	SLU 15	-18	-10	1948	2.45	270.57	2.55
243	SLU 16	-18	-3	1939	2.4	269.46	1
243	SLU 17	-18	-10	1948	2.45	270.57	2.55
243	SLU 18	-19	-3	2057	2.57	284.33	0.97
243	SLU 19	-19	-10	2065	2.62	285.43	2.52
243	SLU 20	-19	-3	2057	2.57	284.33	0.97
243	SLU 21	-19	-10	2065	2.62	285.43	2.52
243	SLU 22	-17	-3	1870	2.28	260.47	0.91
243	SLU 23	-18	-13	1885	2.36	262.32	3.49
243	SLU 24	-17	-3	1870	2.28	260.47	0.91
243	SLU 25	-18	-9	1879	2.33	261.58	2.46
243	SLU 26	-18	-13	1885	2.36	262.32	3.49
243	SLU 27	-17	-3	1870	2.28	260.47	0.91
243	SLU 28	-18	-9	1879	2.33	261.58	2.46
243	SLU 29	-17	-3	1870	2.28	260.47	0.91
243	SLU 30	-18	-9	1879	2.33	261.58	2.46
243	SLU 31	-20	-13	2159	2.75	297	3.42
243	SLU 32	-20	-3	2145	2.66	295.16	0.83
243	SLU 33	-20	-9	2154	2.72	296.27	2.38
243	SLU 34	-20	-13	2159	2.75	297	3.42
243	SLU 35	-20	-3	2145	2.66	295.16	0.83
243	SLU 36	-20	-9	2154	2.72	296.27	2.38
243	SLU 37	-20	-3	2145	2.66	295.16	0.83
243	SLU 38	-20	-9	2154	2.72	296.27	2.38
243	SLU 39	-21	-3	2262	2.83	310.02	0.8
243	SLU 40	-21	-9	2271	2.88	311.13	2.35
243	SLU 41	-21	-3	2262	2.83	310.02	0.8
243	SLU 42	-21	-9	2271	2.88	311.13	2.35
243	SLU 43	-19	-5	2093	2.52	296.4	1.45
243	SLU 44	-20	-16	2108	2.61	298.25	4.04
243	SLU 45	-19	-5	2093	2.52	296.4	1.45
243	SLU 46	-20	-11	2102	2.58	297.51	3
243	SLU 47	-20	-16	2108	2.61	298.25	4.04
243	SLU 48	-19	-5	2093	2.52	296.4	1.45
243	SLU 49	-20	-11	2102	2.58	297.51	3
243	SLU 50	-19	-5	2093	2.52	296.4	1.45
243	SLU 51	-20	-11	2102	2.58	297.51	3
243	SLU 52	-22	-15	2383	3	332.93	3.97
243	SLU 53	-22	-5	2368	2.91	331.08	1.38
243	SLU 54	-22	-11	2377	2.97	332.19	2.93
243	SLU 55	-22	-15	2383	3	332.93	3.97
243	SLU 56	-22	-5	2368	2.91	331.08	1.38
243	SLU 57	-22	-11	2377	2.97	332.19	2.93
243	SLU 58	-22	-5	2368	2.91	331.08	1.38
243	SLU 59	-22	-11	2377	2.97	332.19	2.93
243	SLU 60	-23	-5	2485	3.08	345.95	1.35
243	SLU 61	-23	-11	2494	3.13	347.06	2.9
243	SLU 62	-23	-5	2485	3.08	345.95	1.35
243	SLU 63	-23	-11	2494	3.13	347.06	2.9
243	SLU 64	-21	-5	2299	2.79	322.09	1.28
243	SLU 65	-22	-15	2314	2.88	323.94	3.87
243	SLU 66	-21	-5	2299	2.79	322.09	1.28
243	SLU 67	-22	-11	2308	2.84	323.2	2.84
243	SLU 68	-22	-15	2314	2.88	323.94	3.87
243	SLU 69	-21	-5	2299	2.79	322.09	1.28
243	SLU 70	-22	-11	2308	2.84	323.2	2.84
243	SLU 71	-21	-5	2299	2.79	322.09	1.28
243	SLU 72	-22	-11	2308	2.84	323.2	2.84
243	SLU 73	-24	-14	2588	3.27	358.63	3.8
243	SLU 74	-24	-4	2573	3.18	356.78	1.21
243	SLU 75	-24	-10	2582	3.23	357.89	2.76
243	SLU 76	-24	-14	2588	3.27	358.63	3.8
243	SLU 77	-24	-4	2573	3.18	356.78	1.21
243	SLU 78	-24	-10	2582	3.23	357.89	2.76
243	SLU 79	-24	-4	2573	3.18	356.78	1.21
243	SLU 80	-24	-10	2582	3.23	357.89	2.76

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
243	SLU 81	-25	-4	2691	3.34	371.65	1.18
243	SLU 82	-25	-10	2700	3.4	372.75	2.73
243	SLU 83	-25	-4	2691	3.34	371.65	1.18
243	SLU 84	-25	-10	2700	3.4	372.75	2.73
243	SLE RA 1	-16	-4	1723	2.09	242.12	1.02
243	SLE RA 2	-16	-11	1733	2.15	243.35	2.75
243	SLE RA 3	-16	-4	1723	2.09	242.12	1.02
243	SLE RA 4	-16	-8	1729	2.12	242.86	2.06
243	SLE RA 5	-16	-11	1733	2.15	243.35	2.75
243	SLE RA 6	-16	-4	1723	2.09	242.12	1.02
243	SLE RA 7	-16	-8	1729	2.12	242.86	2.06
243	SLE RA 8	-16	-4	1723	2.09	242.12	1.02
243	SLE RA 9	-16	-8	1729	2.12	242.86	2.06
243	SLE RA 10	-18	-10	1916	2.4	266.47	2.7
243	SLE RA 11	-18	-3	1906	2.35	265.24	0.98
243	SLE RA 12	-18	-8	1912	2.38	265.98	2.01
243	SLE RA 13	-18	-10	1916	2.4	266.47	2.7
243	SLE RA 14	-18	-3	1906	2.35	265.24	0.98
243	SLE RA 15	-18	-8	1912	2.38	265.98	2.01
243	SLE RA 16	-18	-3	1906	2.35	265.24	0.98
243	SLE RA 17	-18	-8	1912	2.38	265.98	2.01
243	SLE RA 18	-18	-3	1985	2.46	275.15	0.95
243	SLE RA 19	-18	-7	1991	2.49	275.89	1.99
243	SLE RA 20	-18	-3	1985	2.46	275.15	0.95
243	SLE RA 21	-18	-7	1991	2.49	275.89	1.99
243	SLE FR 1	-16	-4	1723	2.09	242.12	1.02
243	SLE FR 2	-16	-5	1725	2.1	242.36	1.37
243	SLE FR 3	-16	-4	1723	2.09	242.12	1.02
243	SLE FR 4	-17	-5	1804	2.21	252.27	1.35
243	SLE FR 5	-17	-4	1802	2.2	252.03	1
243	SLE FR 6	-17	-3	1854	2.27	258.63	0.99
243	SLE QP 1	-16	-4	1723	2.09	242.12	1.02
243	SLE QP 2	-17	-4	1802	2.2	252.03	1
243	SLD 1	143	13	1431	1.23	211.51	-3.2
243	SLD 2	117	48	1428	1.22	211.04	-11.91
243	SLD 3	132	-103	1607	2.15	233.82	25.84
243	SLD 4	105	-68	1603	2.14	233.35	17.13
243	SLD 5	58	165	1426	0.52	206.21	-41.19
243	SLD 6	31	201	1422	0.5	205.73	-50.03
243	SLD 7	20	-222	2010	3.59	280.57	55.61
243	SLD 8	-7	-186	2007	3.57	280.09	46.77
243	SLD 9	-26	179	1597	0.83	223.96	-44.77
243	SLD 10	-54	215	1593	0.81	223.49	-53.61
243	SLD 11	-64	-208	2181	3.89	298.32	52.04
243	SLD 12	-91	-172	2177	3.88	297.85	43.2
243	SLD 13	-139	61	2000	2.26	270.71	-15.12
243	SLD 14	-165	96	1997	2.24	270.24	-23.83
243	SLD 15	-150	-55	2175	3.18	293.01	13.92
243	SLD 16	-177	-20	2172	3.16	292.55	5.21
243	SLV 1	347	34	959	0	159.7	-8.66
243	SLV 2	287	114	951	-0.04	158.64	-28.4
243	SLV 3	321	-231	1359	2.1	210.58	57.57
243	SLV 4	261	-151	1351	2.06	209.52	37.83
243	SLV 5	153	380	945	-1.63	147.55	-95.28
243	SLV 6	92	462	937	-1.67	146.47	-115.32
243	SLV 7	67	-502	2278	5.37	317.14	125.48
243	SLV 8	6	-421	2270	5.33	316.06	105.44
243	SLV 9	-39	414	1333	-0.93	188	-103.43
243	SLV 10	-100	495	1325	-0.97	186.92	-123.47
243	SLV 11	-125	-469	2666	6.07	357.59	117.33
243	SLV 12	-187	-388	2658	6.03	356.51	97.29
243	SLV 13	-294	144	2253	2.33	294.54	-35.82
243	SLV 14	-354	224	2245	2.29	293.48	-55.56
243	SLV 15	-320	-121	2652	4.43	345.41	30.41
243	SLV 16	-380	-41	2644	4.39	344.35	10.67
243	CRTFP Ux+	0	0	0	0	0	0
243	CRTFP Ux-	0	0	0	0	0	0
243	CRTFP Uy+	0	0	0	0	0	0
243	CRTFP Uy-	0	0	0	0	0	0
245	SLU 1	-24	81	3240	3.93	-12.6	2.7
245	SLU 2	-24	71	3263	4.17	-13.02	2.71
245	SLU 3	-24	81	3240	3.93	-12.6	2.7
245	SLU 4	-24	75	3254	4.07	-12.85	2.7
245	SLU 5	-24	71	3263	4.17	-13.02	2.71
245	SLU 6	-24	81	3240	3.93	-12.6	2.7
245	SLU 7	-24	75	3254	4.07	-12.85	2.7
245	SLU 8	-24	81	3240	3.93	-12.6	2.7
245	SLU 9	-24	75	3254	4.07	-12.85	2.7
245	SLU 10	-26	82	3889	4.81	-15.1	3.11
245	SLU 11	-26	92	3866	4.57	-14.68	3.1
245	SLU 12	-26	86	3879	4.71	-14.93	3.11
245	SLU 13	-26	82	3889	4.81	-15.1	3.11
245	SLU 14	-26	92	3866	4.57	-14.68	3.1
245	SLU 15	-26	86	3879	4.71	-14.93	3.11
245	SLU 16	-26	92	3866	4.57	-14.68	3.1
245	SLU 17	-26	86	3879	4.71	-14.93	3.11
245	SLU 18	-27	97	4134	4.84	-15.58	3.27

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
245	SLU 19	-27	91	4148	4.99	-15.83	3.28
245	SLU 20	-27	97	4134	4.84	-15.58	3.27
245	SLU 21	-27	91	4148	4.99	-15.83	3.28
245	SLU 22	-26	86	3706	4.2	-14.02	3
245	SLU 23	-26	77	3728	4.44	-14.44	3
245	SLU 24	-26	86	3706	4.2	-14.02	3
245	SLU 25	-26	80	3719	4.34	-14.27	3
245	SLU 26	-26	77	3728	4.44	-14.44	3
245	SLU 27	-26	86	3706	4.2	-14.02	3
245	SLU 28	-26	80	3719	4.34	-14.27	3
245	SLU 29	-26	86	3706	4.2	-14.02	3
245	SLU 30	-26	80	3719	4.34	-14.27	3
245	SLU 31	-29	88	4354	5.08	-16.52	3.41
245	SLU 32	-29	97	4331	4.84	-16.1	3.4
245	SLU 33	-29	92	4345	4.98	-16.35	3.4
245	SLU 34	-29	88	4354	5.08	-16.52	3.41
245	SLU 35	-29	97	4331	4.84	-16.1	3.4
245	SLU 36	-29	92	4345	4.98	-16.35	3.4
245	SLU 37	-29	97	4331	4.84	-16.1	3.4
245	SLU 38	-29	92	4345	4.98	-16.35	3.4
245	SLU 39	-30	102	4599	5.11	-16.99	3.57
245	SLU 40	-30	96	4613	5.26	-17.24	3.58
245	SLU 41	-30	102	4599	5.11	-16.99	3.57
245	SLU 42	-30	96	4613	5.26	-17.24	3.58
245	SLU 43	-30	103	4053	5.02	-15.9	3.41
245	SLU 44	-30	94	4075	5.26	-16.31	3.41
245	SLU 45	-30	103	4053	5.02	-15.9	3.41
245	SLU 46	-30	97	4066	5.16	-16.15	3.41
245	SLU 47	-30	94	4075	5.26	-16.31	3.41
245	SLU 48	-30	103	4053	5.02	-15.9	3.41
245	SLU 49	-30	97	4066	5.16	-16.15	3.41
245	SLU 50	-30	103	4053	5.02	-15.9	3.41
245	SLU 51	-30	97	4066	5.16	-16.15	3.41
245	SLU 52	-32	105	4701	5.9	-18.39	3.81
245	SLU 53	-32	114	4678	5.66	-17.98	3.81
245	SLU 54	-32	109	4692	5.8	-18.23	3.81
245	SLU 55	-32	105	4701	5.9	-18.39	3.81
245	SLU 56	-32	114	4678	5.66	-17.98	3.81
245	SLU 57	-32	109	4692	5.8	-18.23	3.81
245	SLU 58	-32	114	4678	5.66	-17.98	3.81
245	SLU 59	-32	109	4692	5.8	-18.23	3.81
245	SLU 60	-34	119	4946	5.93	-18.87	3.98
245	SLU 61	-33	113	4960	6.08	-19.12	3.98
245	SLU 62	-34	119	4946	5.93	-18.87	3.98
245	SLU 63	-33	113	4960	6.08	-19.12	3.98
245	SLU 64	-32	108	4518	5.29	-17.31	3.71
245	SLU 65	-32	99	4541	5.53	-17.73	3.71
245	SLU 66	-32	108	4518	5.29	-17.31	3.71
245	SLU 67	-32	103	4532	5.43	-17.56	3.71
245	SLU 68	-32	99	4541	5.53	-17.73	3.71
245	SLU 69	-32	108	4518	5.29	-17.31	3.71
245	SLU 70	-32	103	4532	5.43	-17.56	3.71
245	SLU 71	-32	108	4518	5.29	-17.31	3.71
245	SLU 72	-32	103	4532	5.43	-17.56	3.71
245	SLU 73	-35	110	5166	6.16	-19.81	4.11
245	SLU 74	-35	120	5144	5.93	-19.4	4.11
245	SLU 75	-35	114	5157	6.07	-19.65	4.11
245	SLU 76	-35	110	5166	6.16	-19.81	4.11
245	SLU 77	-35	120	5144	5.93	-19.4	4.11
245	SLU 78	-35	114	5157	6.07	-19.65	4.11
245	SLU 79	-35	120	5144	5.93	-19.4	4.11
245	SLU 80	-35	114	5157	6.07	-19.65	4.11
245	SLU 81	-36	124	5412	6.2	-20.29	4.28
245	SLU 82	-36	119	5425	6.34	-20.54	4.28
245	SLU 83	-36	124	5412	6.2	-20.29	4.28
245	SLU 84	-36	119	5425	6.34	-20.54	4.28
245	SLE RA 1	-24	82	3373	4.01	-13.01	2.79
245	SLE RA 2	-24	76	3388	4.17	-13.28	2.79
245	SLE RA 3	-24	82	3373	4.01	-13.01	2.79
245	SLE RA 4	-24	78	3382	4.1	-13.17	2.79
245	SLE RA 5	-24	76	3388	4.17	-13.28	2.79
245	SLE RA 6	-24	82	3373	4.01	-13.01	2.79
245	SLE RA 7	-24	78	3382	4.1	-13.17	2.79
245	SLE RA 8	-24	82	3373	4.01	-13.01	2.79
245	SLE RA 9	-24	78	3382	4.1	-13.17	2.79
245	SLE RA 10	-26	83	3805	4.59	-14.67	3.06
245	SLE RA 11	-26	90	3790	4.43	-14.39	3.05
245	SLE RA 12	-26	86	3799	4.53	-14.56	3.06
245	SLE RA 13	-26	83	3805	4.59	-14.67	3.06
245	SLE RA 14	-26	90	3790	4.43	-14.39	3.05
245	SLE RA 15	-26	86	3799	4.53	-14.56	3.06
245	SLE RA 16	-26	90	3790	4.43	-14.39	3.05
245	SLE RA 17	-26	86	3799	4.53	-14.56	3.06
245	SLE RA 18	-27	93	3969	4.62	-14.99	3.17
245	SLE RA 19	-27	89	3978	4.71	-15.16	3.17
245	SLE RA 20	-27	93	3969	4.62	-14.99	3.17
245	SLE RA 21	-27	89	3978	4.71	-15.16	3.17

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
245	SLE FR 1	-24	82	3373	4.01	-13.01	2.79
245	SLE FR 2	-24	81	3376	4.04	-13.06	2.79
245	SLE FR 3	-24	82	3373	4.01	-13.01	2.79
245	SLE FR 4	-25	84	3555	4.22	-13.66	2.9
245	SLE FR 5	-25	85	3552	4.19	-13.6	2.9
245	SLE FR 6	-26	88	3671	4.31	-14	2.98
245	SLE QP 1	-24	82	3373	4.01	-13.01	2.79
245	SLE QP 2	-25	85	3552	4.19	-13.6	2.9
245	SLD 1	293	132	3495	2.56	-2.31	0.4
245	SLD 2	233	124	3494	2.57	-2.13	1.78
245	SLD 3	317	5	3747	5.06	-3.99	0.12
245	SLD 4	257	-3	3746	5.07	-3.81	1.49
245	SLD 5	56	295	3153	-0.1	-7.73	2.09
245	SLD 6	-5	287	3152	-0.09	-7.54	3.48
245	SLD 7	135	-129	3993	8.24	-13.33	1.15
245	SLD 8	74	-137	3992	8.26	-13.15	2.54
245	SLD 9	-125	308	3112	0.12	-14.05	3.26
245	SLD 10	-185	299	3111	0.14	-13.87	4.65
245	SLD 11	-45	-116	3952	8.47	-19.66	2.32
245	SLD 12	-106	-124	3951	8.48	-19.47	3.72
245	SLD 13	-308	174	3357	3.31	-23.39	4.31
245	SLD 14	-367	166	3356	3.32	-23.21	5.68
245	SLD 15	-284	47	3609	5.81	-25.07	4.03
245	SLD 16	-344	39	3608	5.82	-24.89	5.4
245	SLV 1	698	192	3422	0.46	12.11	-2.77
245	SLV 2	562	174	3420	0.49	12.52	0.35
245	SLV 3	753	-98	3997	6.17	8.24	-3.42
245	SLV 4	617	-116	3994	6.2	8.65	-0.3
245	SLV 5	158	563	2642	-5.6	-0.17	1.07
245	SLV 6	20	545	2640	-5.57	0.25	4.23
245	SLV 7	339	-402	4558	13.43	-13.06	-1.09
245	SLV 8	201	-421	4555	13.46	-12.64	2.07
245	SLV 9	-251	592	2548	-5.08	-14.56	3.73
245	SLV 10	-389	573	2546	-5.05	-14.14	6.89
245	SLV 11	-70	-374	4464	13.95	-27.45	1.57
245	SLV 12	-208	-393	4461	13.98	-27.03	4.73
245	SLV 13	-667	287	3109	2.18	-35.85	6.1
245	SLV 14	-803	268	3107	2.21	-35.44	9.22
245	SLV 15	-613	-3	3684	7.89	-39.72	5.45
245	SLV 16	-748	-21	3681	7.92	-39.31	8.57
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
247	SLU 1	-19	-30	1725	2.94	-281.08	-7.25
247	SLU 2	-18	-40	1742	3.04	-283.75	-9.77
247	SLU 3	-19	-30	1725	2.94	-281.08	-7.25
247	SLU 4	-19	-36	1735	3	-282.68	-8.76
247	SLU 5	-18	-40	1742	3.04	-283.75	-9.77
247	SLU 6	-19	-30	1725	2.94	-281.08	-7.25
247	SLU 7	-19	-36	1735	3	-282.68	-8.76
247	SLU 8	-19	-30	1725	2.94	-281.08	-7.25
247	SLU 9	-19	-36	1735	3	-282.68	-8.76
247	SLU 10	-20	-44	2071	3.74	-333.35	-10.85
247	SLU 11	-20	-34	2055	3.64	-330.68	-8.33
247	SLU 12	-20	-40	2065	3.7	-332.28	-9.84
247	SLU 13	-20	-44	2071	3.74	-333.35	-10.85
247	SLU 14	-20	-34	2055	3.64	-330.68	-8.33
247	SLU 15	-20	-40	2065	3.7	-332.28	-9.84
247	SLU 16	-20	-34	2055	3.64	-330.68	-8.33
247	SLU 17	-20	-40	2065	3.7	-332.28	-9.84
247	SLU 18	-21	-36	2196	3.94	-351.93	-8.79
247	SLU 19	-21	-42	2206	4	-353.54	-10.3
247	SLU 20	-21	-36	2196	3.94	-351.93	-8.79
247	SLU 21	-21	-42	2206	4	-353.54	-10.3
247	SLU 22	-20	-32	1962	3.41	-316.55	-7.88
247	SLU 23	-20	-43	1979	3.51	-319.22	-10.4
247	SLU 24	-20	-32	1962	3.41	-316.55	-7.88
247	SLU 25	-20	-39	1972	3.47	-318.15	-9.39
247	SLU 26	-20	-43	1979	3.51	-319.22	-10.4
247	SLU 27	-20	-32	1962	3.41	-316.55	-7.88
247	SLU 28	-20	-39	1972	3.47	-318.15	-9.39
247	SLU 29	-20	-32	1962	3.41	-316.55	-7.88
247	SLU 30	-20	-39	1972	3.47	-318.15	-9.39
247	SLU 31	-22	-47	2309	4.21	-368.82	-11.48
247	SLU 32	-22	-37	2292	4.11	-366.15	-8.96
247	SLU 33	-22	-43	2302	4.17	-367.75	-10.47
247	SLU 34	-22	-47	2309	4.21	-368.82	-11.48
247	SLU 35	-22	-37	2292	4.11	-366.15	-8.96
247	SLU 36	-22	-43	2302	4.17	-367.75	-10.47
247	SLU 37	-22	-37	2292	4.11	-366.15	-8.96
247	SLU 38	-22	-43	2302	4.17	-367.75	-10.47
247	SLU 39	-23	-39	2433	4.41	-387.41	-9.42
247	SLU 40	-23	-45	2443	4.47	-389.01	-10.93
247	SLU 41	-23	-39	2433	4.41	-387.41	-9.42
247	SLU 42	-23	-45	2443	4.47	-389.01	-10.93
247	SLU 43	-24	-38	2161	3.67	-353.24	-9.21

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
247	SLU 44	-23	-48	2178	3.77	-355.91	-11.73
247	SLU 45	-24	-38	2161	3.67	-353.24	-9.21
247	SLU 46	-23	-44	2171	3.73	-354.84	-10.72
247	SLU 47	-23	-48	2178	3.77	-355.91	-11.73
247	SLU 48	-24	-38	2161	3.67	-353.24	-9.21
247	SLU 49	-23	-44	2171	3.73	-354.84	-10.72
247	SLU 50	-24	-38	2161	3.67	-353.24	-9.21
247	SLU 51	-23	-44	2171	3.73	-354.84	-10.72
247	SLU 52	-25	-52	2508	4.46	-405.51	-12.81
247	SLU 53	-25	-42	2491	4.36	-402.84	-10.29
247	SLU 54	-25	-48	2501	4.42	-404.44	-11.8
247	SLU 55	-25	-52	2508	4.46	-405.51	-12.81
247	SLU 56	-25	-42	2491	4.36	-402.84	-10.29
247	SLU 57	-25	-48	2501	4.42	-404.44	-11.8
247	SLU 58	-25	-42	2491	4.36	-402.84	-10.29
247	SLU 59	-25	-48	2501	4.42	-404.44	-11.8
247	SLU 60	-26	-44	2632	4.66	-424.09	-10.75
247	SLU 61	-26	-50	2642	4.72	-425.7	-12.27
247	SLU 62	-26	-44	2632	4.66	-424.09	-10.75
247	SLU 63	-26	-50	2642	4.72	-425.7	-12.27
247	SLU 64	-25	-40	2398	4.13	-388.71	-9.84
247	SLU 65	-25	-51	2415	4.23	-391.38	-12.36
247	SLU 66	-25	-40	2398	4.13	-388.71	-9.84
247	SLU 67	-25	-47	2408	4.19	-390.31	-11.35
247	SLU 68	-25	-51	2415	4.23	-391.38	-12.36
247	SLU 69	-25	-40	2398	4.13	-388.71	-9.84
247	SLU 70	-25	-47	2408	4.19	-390.31	-11.35
247	SLU 71	-25	-40	2398	4.13	-388.71	-9.84
247	SLU 72	-25	-47	2408	4.19	-390.31	-11.35
247	SLU 73	-27	-55	2745	4.93	-440.98	-13.44
247	SLU 74	-27	-45	2728	4.83	-438.31	-10.92
247	SLU 75	-27	-51	2738	4.89	-439.91	-12.43
247	SLU 76	-27	-55	2745	4.93	-440.98	-13.44
247	SLU 77	-27	-45	2728	4.83	-438.31	-10.92
247	SLU 78	-27	-51	2738	4.89	-439.91	-12.43
247	SLU 79	-27	-45	2728	4.83	-438.31	-10.92
247	SLU 80	-27	-51	2738	4.89	-439.91	-12.43
247	SLU 81	-28	-47	2869	5.13	-459.57	-11.38
247	SLU 82	-28	-53	2879	5.19	-461.17	-12.89
247	SLU 83	-28	-47	2869	5.13	-459.57	-11.38
247	SLU 84	-28	-53	2879	5.19	-461.17	-12.89
247	SLE RA 1	-19	-31	1792	3.08	-291.21	-7.43
247	SLE RA 2	-19	-37	1804	3.14	-292.99	-9.11
247	SLE RA 3	-19	-31	1792	3.08	-291.21	-7.43
247	SLE RA 4	-19	-35	1799	3.12	-292.28	-8.44
247	SLE RA 5	-19	-37	1804	3.14	-292.99	-9.11
247	SLE RA 6	-19	-31	1792	3.08	-291.21	-7.43
247	SLE RA 7	-19	-35	1799	3.12	-292.28	-8.44
247	SLE RA 8	-19	-31	1792	3.08	-291.21	-7.43
247	SLE RA 9	-19	-35	1799	3.12	-292.28	-8.44
247	SLE RA 10	-20	-40	2024	3.61	-326.06	-9.83
247	SLE RA 11	-20	-34	2012	3.54	-324.28	-8.15
247	SLE RA 12	-20	-38	2019	3.58	-325.35	-9.16
247	SLE RA 13	-20	-40	2024	3.61	-326.06	-9.83
247	SLE RA 14	-20	-34	2012	3.54	-324.28	-8.15
247	SLE RA 15	-20	-38	2019	3.58	-325.35	-9.16
247	SLE RA 16	-20	-34	2012	3.54	-324.28	-8.15
247	SLE RA 17	-20	-38	2019	3.58	-325.35	-9.16
247	SLE RA 18	-21	-35	2107	3.74	-338.45	-8.46
247	SLE RA 19	-21	-39	2113	3.78	-339.52	-9.47
247	SLE RA 20	-21	-35	2107	3.74	-338.45	-8.46
247	SLE RA 21	-21	-39	2113	3.78	-339.52	-9.47
247	SLE FR 1	-19	-31	1792	3.08	-291.21	-7.43
247	SLE FR 2	-19	-32	1795	3.09	-291.57	-7.77
247	SLE FR 3	-19	-31	1792	3.08	-291.21	-7.43
247	SLE FR 4	-20	-33	1889	3.29	-305.74	-8.07
247	SLE FR 5	-20	-32	1887	3.28	-305.38	-7.74
247	SLE FR 6	-20	-33	1949	3.41	-314.83	-7.94
247	SLE QP 1	-19	-31	1792	3.08	-291.21	-7.43
247	SLE QP 2	-20	-32	1887	3.28	-305.38	-7.74
247	SLD 1	138	61	2062	3.42	-325.51	15.35
247	SLD 2	107	25	2068	3.45	-326.45	6.47
247	SLD 3	149	-56	2244	4.43	-355.29	-13.73
247	SLD 4	119	-92	2250	4.46	-356.23	-22.61
247	SLD 5	21	186	1662	1.77	-265.92	46.47
247	SLD 6	-10	149	1668	1.8	-266.87	37.45
247	SLD 7	60	-203	2267	5.15	-365.19	-50.46
247	SLD 8	28	-240	2273	5.18	-366.14	-59.48
247	SLD 9	-68	176	1500	1.37	-244.63	44
247	SLD 10	-99	139	1506	1.4	-245.58	34.99
247	SLD 11	-29	-213	2105	4.75	-343.89	-52.93
247	SLD 12	-60	-249	2112	4.78	-344.85	-61.95
247	SLD 13	-158	28	1523	2.09	-254.53	7.13
247	SLD 14	-189	-8	1529	2.12	-255.47	-1.75
247	SLD 15	-146	-89	1705	3.1	-284.31	-21.95
247	SLD 16	-177	-125	1711	3.13	-285.25	-30.83
247	SLV 1	338	180	2285	3.59	-351.02	44.87

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
247	SLV 2	268	98	2298	3.66	-353.15	24.73
247	SLV 3	364	-86	2699	5.9	-418.91	-21.42
247	SLV 4	294	-168	2712	5.97	-421.04	-41.56
247	SLV 5	72	464	1373	-0.15	-215.35	115.78
247	SLV 6	2	381	1387	-0.09	-217.51	95.34
247	SLV 7	160	-422	2753	7.54	-441.64	-105.18
247	SLV 8	90	-505	2767	7.61	-443.81	-125.62
247	SLV 9	-129	441	1006	-1.06	-166.96	110.14
247	SLV 10	-200	358	1020	-0.99	-169.12	89.7
247	SLV 11	-41	-445	2386	6.64	-393.26	-110.81
247	SLV 12	-112	-528	2400	6.71	-395.42	-131.25
247	SLV 13	-334	104	1061	0.58	-189.73	26.08
247	SLV 14	-403	23	1075	0.65	-191.86	5.94
247	SLV 15	-307	-162	1475	2.89	-257.62	-40.2
247	SLV 16	-377	-243	1489	2.96	-259.75	-60.34
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
250	SLU 1	-18	-4	1744	3.04	284.79	1.05
250	SLU 2	-19	-14	1762	3.14	287.71	3.62
250	SLU 3	-18	-4	1744	3.04	284.79	1.05
250	SLU 4	-18	-10	1755	3.1	286.54	2.59
250	SLU 5	-19	-14	1762	3.14	287.71	3.62
250	SLU 6	-18	-4	1744	3.04	284.79	1.05
250	SLU 7	-18	-10	1755	3.1	286.54	2.59
250	SLU 8	-18	-4	1744	3.04	284.79	1.05
250	SLU 9	-18	-10	1755	3.1	286.54	2.59
250	SLU 10	-21	-14	2052	3.73	331.87	3.55
250	SLU 11	-21	-4	2034	3.63	328.95	0.97
250	SLU 12	-21	-10	2045	3.69	330.7	2.52
250	SLU 13	-21	-14	2052	3.73	331.87	3.55
250	SLU 14	-21	-4	2034	3.63	328.95	0.97
250	SLU 15	-21	-10	2045	3.69	330.7	2.52
250	SLU 16	-21	-4	2034	3.63	328.95	0.97
250	SLU 17	-21	-10	2045	3.69	330.7	2.52
250	SLU 18	-22	-3	2158	3.88	347.88	0.94
250	SLU 19	-23	-10	2169	3.95	349.63	2.48
250	SLU 20	-22	-3	2158	3.88	347.88	0.94
250	SLU 21	-23	-10	2169	3.95	349.63	2.48
250	SLU 22	-20	-3	1961	3.45	317.42	0.89
250	SLU 23	-21	-14	1978	3.55	320.34	3.46
250	SLU 24	-20	-3	1961	3.45	317.42	0.89
250	SLU 25	-21	-9	1971	3.51	319.17	2.43
250	SLU 26	-21	-14	1978	3.55	320.34	3.46
250	SLU 27	-20	-3	1961	3.45	317.42	0.89
250	SLU 28	-21	-9	1971	3.51	319.17	2.43
250	SLU 29	-20	-3	1961	3.45	317.42	0.89
250	SLU 30	-21	-9	1971	3.51	319.17	2.43
250	SLU 31	-24	-13	2268	4.15	364.5	3.38
250	SLU 32	-23	-3	2250	4.05	361.58	0.81
250	SLU 33	-23	-9	2261	4.11	363.33	2.36
250	SLU 34	-24	-13	2268	4.15	364.5	3.38
250	SLU 35	-23	-3	2250	4.05	361.58	0.81
250	SLU 36	-23	-9	2261	4.11	363.33	2.36
250	SLU 37	-23	-3	2250	4.05	361.58	0.81
250	SLU 38	-23	-9	2261	4.11	363.33	2.36
250	SLU 39	-25	-3	2375	4.3	380.51	0.78
250	SLU 40	-25	-9	2385	4.36	382.26	2.32
250	SLU 41	-25	-3	2375	4.3	380.51	0.78
250	SLU 42	-25	-9	2385	4.36	382.26	2.32
250	SLU 43	-23	-5	2193	3.81	359.04	1.42
250	SLU 44	-23	-16	2211	3.91	361.95	3.99
250	SLU 45	-23	-5	2193	3.81	359.04	1.42
250	SLU 46	-23	-12	2204	3.87	360.79	2.96
250	SLU 47	-23	-16	2211	3.91	361.95	3.99
250	SLU 48	-23	-5	2193	3.81	359.04	1.42
250	SLU 49	-23	-12	2204	3.87	360.79	2.96
250	SLU 50	-23	-5	2193	3.81	359.04	1.42
250	SLU 51	-23	-12	2204	3.87	360.79	2.96
250	SLU 52	-26	-15	2501	4.5	406.12	3.92
250	SLU 53	-26	-5	2483	4.4	403.2	1.34
250	SLU 54	-26	-11	2494	4.46	404.95	2.89
250	SLU 55	-26	-15	2501	4.5	406.12	3.92
250	SLU 56	-26	-5	2483	4.4	403.2	1.34
250	SLU 57	-26	-11	2494	4.46	404.95	2.89
250	SLU 58	-26	-5	2483	4.4	403.2	1.34
250	SLU 59	-26	-11	2494	4.46	404.95	2.89
250	SLU 60	-27	-5	2607	4.65	422.12	1.31
250	SLU 61	-27	-11	2618	4.71	423.88	2.85
250	SLU 62	-27	-5	2607	4.65	422.12	1.31
250	SLU 63	-27	-11	2618	4.71	423.88	2.85
250	SLU 64	-25	-5	2410	4.22	391.67	1.26
250	SLU 65	-25	-15	2427	4.32	394.59	3.83
250	SLU 66	-25	-5	2410	4.22	391.67	1.26
250	SLU 67	-25	-11	2420	4.28	393.42	2.8
250	SLU 68	-25	-15	2427	4.32	394.59	3.83

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
250	SLU 69	-25	-5	2410	4.22	391.67	1.26
250	SLU 70	-25	-11	2420	4.28	393.42	2.8
250	SLU 71	-25	-5	2410	4.22	391.67	1.26
250	SLU 72	-25	-11	2420	4.28	393.42	2.8
250	SLU 73	-28	-15	2717	4.92	438.75	3.75
250	SLU 74	-28	-4	2700	4.82	435.83	1.18
250	SLU 75	-28	-11	2710	4.88	437.58	2.73
250	SLU 76	-28	-15	2717	4.92	438.75	3.75
250	SLU 77	-28	-4	2700	4.82	435.83	1.18
250	SLU 78	-28	-11	2710	4.88	437.58	2.73
250	SLU 79	-28	-4	2700	4.82	435.83	1.18
250	SLU 80	-28	-11	2710	4.88	437.58	2.73
250	SLU 81	-29	-4	2824	5.07	454.76	1.15
250	SLU 82	-29	-10	2834	5.13	456.51	2.69
250	SLU 83	-29	-4	2824	5.07	454.76	1.15
250	SLU 84	-29	-10	2834	5.13	456.51	2.69
250	SLE RA 1	-19	-4	1806	3.16	294.11	1
250	SLE RA 2	-19	-11	1818	3.22	296.06	2.72
250	SLE RA 3	-19	-4	1806	3.16	294.11	1
250	SLE RA 4	-19	-8	1813	3.2	295.28	2.03
250	SLE RA 5	-19	-11	1818	3.22	296.06	2.72
250	SLE RA 6	-19	-4	1806	3.16	294.11	1
250	SLE RA 7	-19	-8	1813	3.2	295.28	2.03
250	SLE RA 8	-19	-4	1806	3.16	294.11	1
250	SLE RA 9	-19	-8	1813	3.2	295.28	2.03
250	SLE RA 10	-21	-10	2011	3.62	325.5	2.67
250	SLE RA 11	-21	-4	1999	3.55	323.55	0.95
250	SLE RA 12	-21	-8	2006	3.59	324.72	1.98
250	SLE RA 13	-21	-10	2011	3.62	325.5	2.67
250	SLE RA 14	-21	-4	1999	3.55	323.55	0.95
250	SLE RA 15	-21	-8	2006	3.59	324.72	1.98
250	SLE RA 16	-21	-4	1999	3.55	323.55	0.95
250	SLE RA 17	-21	-8	2006	3.59	324.72	1.98
250	SLE RA 18	-22	-3	2082	3.72	336.17	0.93
250	SLE RA 19	-22	-8	2089	3.76	337.34	1.96
250	SLE RA 20	-22	-3	2082	3.72	336.17	0.93
250	SLE RA 21	-22	-8	2089	3.76	337.34	1.96
250	SLE FR 1	-19	-4	1806	3.16	294.11	1
250	SLE FR 2	-19	-5	1808	3.17	294.5	1.35
250	SLE FR 3	-19	-4	1806	3.16	294.11	1
250	SLE FR 4	-20	-5	1891	3.34	307.12	1.32
250	SLE FR 5	-20	-4	1889	3.33	306.73	0.98
250	SLE FR 6	-20	-4	1944	3.44	315.14	0.97
250	SLE QP 1	-19	-4	1806	3.16	294.11	1
250	SLE QP 2	-20	-4	1889	3.33	306.73	0.98
250	SLD 1	149	12	1484	2.09	250.4	-3.17
250	SLD 2	118	48	1480	2.07	249.72	-11.87
250	SLD 3	137	-103	1690	3.14	283.03	25.75
250	SLD 4	106	-68	1686	3.12	282.36	17.05
250	SLD 5	60	164	1456	1.37	240.57	-41.02
250	SLD 6	29	200	1452	1.35	239.89	-49.84
250	SLD 7	20	-222	2144	4.87	349.36	55.38
250	SLD 8	-11	-186	2139	4.85	348.67	46.55
250	SLD 9	-28	179	1638	1.81	264.78	-44.59
250	SLD 10	-59	215	1634	1.78	264.1	-53.42
250	SLD 11	-68	-207	2326	5.3	373.57	51.81
250	SLD 12	-99	-172	2322	5.28	372.88	42.98
250	SLD 13	-146	61	2091	3.54	331.1	-15.09
250	SLD 14	-176	96	2087	3.51	330.43	-23.78
250	SLD 15	-158	-55	2297	4.59	363.73	13.83
250	SLD 16	-188	-20	2293	4.56	363.06	5.13
250	SLV 1	363	33	968	0.51	178.44	-8.56
250	SLV 2	294	113	958	0.46	176.91	-28.28
250	SLV 3	336	-231	1438	2.9	252.88	57.39
250	SLV 4	266	-151	1429	2.85	251.35	37.67
250	SLV 5	161	379	902	-1.13	155.88	-94.86
250	SLV 6	91	461	893	-1.18	154.33	-114.87
250	SLV 7	70	-501	2471	6.85	404.03	124.97
250	SLV 8	0	-420	2461	6.8	402.48	104.96
250	SLV 9	-39	413	1316	-0.15	210.98	-103
250	SLV 10	-109	494	1307	-0.19	209.43	-123.01
250	SLV 11	-131	-468	2885	7.84	459.13	116.83
250	SLV 12	-201	-387	2875	7.79	457.58	96.82
250	SLV 13	-306	144	2349	3.8	362.1	-35.71
250	SLV 14	-375	224	2339	3.75	360.57	-55.43
250	SLV 15	-333	-121	2819	6.19	436.55	30.24
250	SLV 16	-402	-41	2810	6.15	435.02	10.52
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	-43	93	3869	116.24	-13.24	4.05
252	SLU 2	-43	82	3904	117.59	-13.72	4.08
252	SLU 3	-43	93	3869	116.24	-13.24	4.05
252	SLU 4	-43	86	3890	117.05	-13.53	4.07
252	SLU 5	-43	82	3904	117.59	-13.72	4.08
252	SLU 6	-43	93	3869	116.24	-13.24	4.05

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
252	SLU 7	-43	86	3890	117.05	-13.53	4.07
252	SLU 8	-43	93	3869	116.24	-13.24	4.05
252	SLU 9	-43	86	3890	117.05	-13.53	4.07
252	SLU 10	-48	95	4646	139.77	-15.76	4.64
252	SLU 11	-48	106	4611	138.42	-15.29	4.62
252	SLU 12	-48	99	4632	139.23	-15.57	4.63
252	SLU 13	-48	95	4646	139.77	-15.76	4.64
252	SLU 14	-48	106	4611	138.42	-15.29	4.62
252	SLU 15	-48	99	4632	139.23	-15.57	4.63
252	SLU 16	-48	106	4611	138.42	-15.29	4.62
252	SLU 17	-48	99	4632	139.23	-15.57	4.63
252	SLU 18	-50	111	4930	147.92	-16.16	4.86
252	SLU 19	-50	105	4951	148.73	-16.45	4.88
252	SLU 20	-50	111	4930	147.92	-16.16	4.86
252	SLU 21	-50	105	4951	148.73	-16.45	4.88
252	SLU 22	-47	99	4413	132.14	-14.64	4.49
252	SLU 23	-47	88	4448	133.49	-15.12	4.52
252	SLU 24	-47	99	4413	132.14	-14.64	4.49
252	SLU 25	-47	93	4434	132.95	-14.93	4.51
252	SLU 26	-47	88	4448	133.49	-15.12	4.52
252	SLU 27	-47	99	4413	132.14	-14.64	4.49
252	SLU 28	-47	93	4434	132.95	-14.93	4.51
252	SLU 29	-47	99	4413	132.14	-14.64	4.49
252	SLU 30	-47	93	4434	132.95	-14.93	4.51
252	SLU 31	-53	101	5191	155.67	-17.16	5.08
252	SLU 32	-52	112	5155	154.31	-16.69	5.06
252	SLU 33	-52	106	5176	155.13	-16.97	5.07
252	SLU 34	-53	101	5191	155.67	-17.16	5.08
252	SLU 35	-52	112	5155	154.31	-16.69	5.06
252	SLU 36	-52	106	5176	155.13	-16.97	5.07
252	SLU 37	-52	112	5155	154.31	-16.69	5.06
252	SLU 38	-52	106	5176	155.13	-16.97	5.07
252	SLU 39	-55	118	5474	163.82	-17.56	5.3
252	SLU 40	-55	111	5495	164.63	-17.85	5.32
252	SLU 41	-55	118	5474	163.82	-17.56	5.3
252	SLU 42	-55	111	5495	164.63	-17.85	5.32
252	SLU 43	-54	119	4843	145.66	-16.73	5.12
252	SLU 44	-54	108	4878	147.01	-17.21	5.14
252	SLU 45	-54	119	4843	145.66	-16.73	5.12
252	SLU 46	-54	112	4864	146.47	-17.02	5.13
252	SLU 47	-54	108	4878	147.01	-17.21	5.14
252	SLU 48	-54	119	4843	145.66	-16.73	5.12
252	SLU 49	-54	112	4864	146.47	-17.02	5.13
252	SLU 50	-54	119	4843	145.66	-16.73	5.12
252	SLU 51	-54	112	4864	146.47	-17.02	5.13
252	SLU 52	-59	121	5620	169.19	-19.25	5.71
252	SLU 53	-59	132	5585	167.84	-18.78	5.68
252	SLU 54	-59	125	5606	168.65	-19.06	5.7
252	SLU 55	-59	121	5620	169.19	-19.25	5.71
252	SLU 56	-59	132	5585	167.84	-18.78	5.68
252	SLU 57	-59	125	5606	168.65	-19.06	5.7
252	SLU 58	-59	132	5585	167.84	-18.78	5.68
252	SLU 59	-59	125	5606	168.65	-19.06	5.7
252	SLU 60	-61	137	5904	177.34	-19.65	5.93
252	SLU 61	-61	131	5925	178.15	-19.94	5.94
252	SLU 62	-61	137	5904	177.34	-19.65	5.93
252	SLU 63	-61	131	5925	178.15	-19.94	5.94
252	SLU 64	-59	125	5387	161.56	-18.13	5.56
252	SLU 65	-59	114	5422	162.91	-18.61	5.58
252	SLU 66	-59	125	5387	161.56	-18.13	5.56
252	SLU 67	-59	118	5408	162.37	-18.42	5.57
252	SLU 68	-59	114	5422	162.91	-18.61	5.58
252	SLU 69	-59	125	5387	161.56	-18.13	5.56
252	SLU 70	-59	118	5408	162.37	-18.42	5.57
252	SLU 71	-59	125	5387	161.56	-18.13	5.56
252	SLU 72	-59	118	5408	162.37	-18.42	5.57
252	SLU 73	-64	127	6165	185.09	-20.65	6.15
252	SLU 74	-64	138	6129	183.73	-20.18	6.12
252	SLU 75	-64	131	6151	184.55	-20.46	6.14
252	SLU 76	-64	127	6165	185.09	-20.65	6.15
252	SLU 77	-64	138	6129	183.73	-20.18	6.12
252	SLU 78	-64	131	6151	184.55	-20.46	6.14
252	SLU 79	-64	138	6129	183.73	-20.18	6.12
252	SLU 80	-64	131	6151	184.55	-20.46	6.14
252	SLU 81	-66	143	6448	193.24	-21.05	6.37
252	SLU 82	-66	137	6469	194.05	-21.34	6.38
252	SLU 83	-66	143	6448	193.24	-21.05	6.37
252	SLU 84	-66	137	6469	194.05	-21.34	6.38
252	SLE RA 1	-44	95	4024	120.78	-13.64	4.18
252	SLE RA 2	-44	88	4047	121.68	-13.96	4.2
252	SLE RA 3	-44	95	4024	120.78	-13.64	4.18
252	SLE RA 4	-44	90	4038	121.32	-13.83	4.19
252	SLE RA 5	-44	88	4047	121.68	-13.96	4.2
252	SLE RA 6	-44	95	4024	120.78	-13.64	4.18
252	SLE RA 7	-44	90	4038	121.32	-13.83	4.19
252	SLE RA 8	-44	95	4024	120.78	-13.64	4.18
252	SLE RA 9	-44	90	4038	121.32	-13.83	4.19

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
252	SLE RA 10	-48	96	4543	136.47	-15.32	4.57
252	SLE RA 11	-47	103	4519	135.57	-15	4.56
252	SLE RA 12	-47	99	4533	136.11	-15.19	4.57
252	SLE RA 13	-48	96	4543	136.47	-15.32	4.57
252	SLE RA 14	-47	103	4519	135.57	-15	4.56
252	SLE RA 15	-47	99	4533	136.11	-15.19	4.57
252	SLE RA 16	-47	103	4519	135.57	-15	4.56
252	SLE RA 17	-47	99	4533	136.11	-15.19	4.57
252	SLE RA 18	-49	107	4731	141.9	-15.59	4.72
252	SLE RA 19	-49	103	4745	142.44	-15.78	4.73
252	SLE RA 20	-49	107	4731	141.9	-15.59	4.72
252	SLE RA 21	-49	103	4745	142.44	-15.78	4.73
252	SLE FR 1	-44	95	4024	120.78	-13.64	4.18
252	SLE FR 2	-44	93	4029	120.96	-13.7	4.18
252	SLE FR 3	-44	95	4024	120.78	-13.64	4.18
252	SLE FR 4	-46	97	4241	127.3	-14.29	4.34
252	SLE FR 5	-46	98	4236	127.12	-14.22	4.34
252	SLE FR 6	-46	101	4378	131.34	-14.61	4.45
252	SLE QP 1	-44	95	4024	120.78	-13.64	4.18
252	SLE QP 2	-46	98	4236	127.12	-14.22	4.34
252	SLD 1	363	152	4130	122.52	-1.08	-9.01
252	SLD 2	285	142	4129	122.52	-0.87	-5.27
252	SLD 3	333	7	4514	137.24	-2.99	-10.1
252	SLD 4	256	-2	4513	137.23	-2.78	-6.36
252	SLD 5	149	337	3622	103.43	-7.46	0.64
252	SLD 6	70	328	3622	103.42	-7.25	4.44
252	SLD 7	52	-145	4902	152.47	-13.82	-2.97
252	SLD 8	-27	-154	4901	152.46	-13.61	0.83
252	SLD 9	-64	351	3571	101.77	-14.84	7.86
252	SLD 10	-143	342	3570	101.76	-14.63	11.65
252	SLD 11	-161	-131	4851	150.81	-21.2	4.24
252	SLD 12	-240	-140	4850	150.81	-20.99	8.04
252	SLD 13	-347	199	3959	117	-25.67	15.04
252	SLD 14	-424	190	3959	117	-25.46	18.78
252	SLD 15	-376	54	4343	131.72	-27.57	13.95
252	SLD 16	-454	45	4342	131.71	-27.37	17.69
252	SLV 1	881	220	3993	116.61	15.7	-25.97
252	SLV 2	706	199	3991	116.6	16.16	-17.49
252	SLV 3	815	-110	4868	150.17	11.31	-28.45
252	SLV 4	640	-131	4867	150.16	11.78	-19.97
252	SLV 5	396	642	2836	73.07	1.24	-4.03
252	SLV 6	218	621	2834	73.06	1.72	4.58
252	SLV 7	174	-456	5754	184.93	-13.39	-12.29
252	SLV 8	-3	-478	5753	184.92	-12.91	-3.68
252	SLV 9	-88	674	2720	69.31	-15.53	12.36
252	SLV 10	-265	653	2718	69.3	-15.06	20.97
252	SLV 11	-309	-424	5638	181.17	-30.16	4.1
252	SLV 12	-487	-445	5636	181.16	-29.69	12.71
252	SLV 13	-731	328	3606	104.07	-40.22	28.65
252	SLV 14	-906	307	3604	104.06	-39.76	37.13
252	SLV 15	-797	-2	4481	137.63	-44.61	26.17
252	SLV 16	-972	-23	4480	137.62	-44.14	34.65
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	-21	-26	1560	-41.14	-300.3	-6.91
254	SLU 2	-21	-34	1578	-41.55	-303.62	-9.07
254	SLU 3	-21	-26	1560	-41.14	-300.3	-6.91
254	SLU 4	-21	-31	1571	-41.38	-302.29	-8.21
254	SLU 5	-21	-34	1578	-41.55	-303.62	-9.07
254	SLU 6	-21	-26	1560	-41.14	-300.3	-6.91
254	SLU 7	-21	-31	1571	-41.38	-302.29	-8.21
254	SLU 8	-21	-26	1560	-41.14	-300.3	-6.91
254	SLU 9	-21	-31	1571	-41.38	-302.29	-8.21
254	SLU 10	-24	-38	1880	-49.42	-359.36	-10.06
254	SLU 11	-23	-30	1863	-49.01	-356.05	-7.91
254	SLU 12	-23	-35	1873	-49.25	-358.04	-9.2
254	SLU 13	-24	-38	1880	-49.42	-359.36	-10.06
254	SLU 14	-23	-30	1863	-49.01	-356.05	-7.91
254	SLU 15	-23	-35	1873	-49.25	-358.04	-9.2
254	SLU 16	-23	-30	1863	-49.01	-356.05	-7.91
254	SLU 17	-23	-35	1873	-49.25	-358.04	-9.2
254	SLU 18	-24	-31	1992	-52.38	-379.94	-8.34
254	SLU 19	-24	-36	2002	-52.63	-381.93	-9.63
254	SLU 20	-24	-31	1992	-52.38	-379.94	-8.34
254	SLU 21	-24	-36	2002	-52.63	-381.93	-9.63
254	SLU 22	-23	-28	1777	-46.79	-340.09	-7.53
254	SLU 23	-24	-37	1794	-47.2	-343.4	-9.68
254	SLU 24	-23	-28	1777	-46.79	-340.09	-7.53
254	SLU 25	-23	-33	1787	-47.04	-342.08	-8.82
254	SLU 26	-24	-37	1794	-47.2	-343.4	-9.68
254	SLU 27	-23	-28	1777	-46.79	-340.09	-7.53
254	SLU 28	-23	-33	1787	-47.04	-342.08	-8.82
254	SLU 29	-23	-28	1777	-46.79	-340.09	-7.53
254	SLU 30	-23	-33	1787	-47.04	-342.08	-8.82
254	SLU 31	-26	-41	2096	-55.07	-399.15	-10.68

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
254	SLU 32	-26	-32	2079	-54.66	-395.84	-8.53
254	SLU 33	-26	-37	2089	-54.91	-397.82	-9.82
254	SLU 34	-26	-41	2096	-55.07	-399.15	-10.68
254	SLU 35	-26	-32	2079	-54.66	-395.84	-8.53
254	SLU 36	-26	-37	2089	-54.91	-397.82	-9.82
254	SLU 37	-26	-32	2079	-54.66	-395.84	-8.53
254	SLU 38	-26	-37	2089	-54.91	-397.82	-9.82
254	SLU 39	-26	-34	2209	-58.04	-419.73	-8.95
254	SLU 40	-27	-39	2219	-58.28	-421.72	-10.25
254	SLU 41	-26	-34	2209	-58.04	-419.73	-8.95
254	SLU 42	-27	-39	2219	-58.28	-421.72	-10.25
254	SLU 43	-27	-33	1954	-51.54	-376.75	-8.78
254	SLU 44	-27	-41	1972	-51.95	-380.07	-10.93
254	SLU 45	-27	-33	1954	-51.54	-376.75	-8.78
254	SLU 46	-27	-38	1965	-51.79	-378.74	-10.07
254	SLU 47	-27	-41	1972	-51.95	-380.07	-10.93
254	SLU 48	-27	-33	1954	-51.54	-376.75	-8.78
254	SLU 49	-27	-38	1965	-51.79	-378.74	-10.07
254	SLU 50	-27	-33	1954	-51.54	-376.75	-8.78
254	SLU 51	-27	-38	1965	-51.79	-378.74	-10.07
254	SLU 52	-29	-45	2274	-59.82	-435.81	-11.93
254	SLU 53	-29	-37	2257	-59.41	-432.5	-9.77
254	SLU 54	-29	-42	2267	-59.66	-434.49	-11.07
254	SLU 55	-29	-45	2274	-59.82	-435.81	-11.93
254	SLU 56	-29	-37	2257	-59.41	-432.5	-9.77
254	SLU 57	-29	-42	2267	-59.66	-434.49	-11.07
254	SLU 58	-29	-37	2257	-59.41	-432.5	-9.77
254	SLU 59	-29	-42	2267	-59.66	-434.49	-11.07
254	SLU 60	-30	-38	2386	-62.79	-456.39	-10.2
254	SLU 61	-30	-43	2396	-63.03	-458.38	-11.49
254	SLU 62	-30	-38	2386	-62.79	-456.39	-10.2
254	SLU 63	-30	-43	2396	-63.03	-458.38	-11.49
254	SLU 64	-29	-35	2171	-57.2	-416.54	-9.39
254	SLU 65	-29	-44	2188	-57.6	-419.85	-11.54
254	SLU 66	-29	-35	2171	-57.2	-416.54	-9.39
254	SLU 67	-29	-40	2181	-57.44	-418.53	-10.68
254	SLU 68	-29	-44	2188	-57.6	-419.85	-11.54
254	SLU 69	-29	-35	2171	-57.2	-416.54	-9.39
254	SLU 70	-29	-40	2181	-57.44	-418.53	-10.68
254	SLU 71	-29	-35	2171	-57.2	-416.54	-9.39
254	SLU 72	-29	-40	2181	-57.44	-418.53	-10.68
254	SLU 73	-31	-48	2490	-65.48	-475.6	-12.54
254	SLU 74	-31	-39	2473	-65.07	-472.29	-10.39
254	SLU 75	-31	-44	2483	-65.31	-474.27	-11.68
254	SLU 76	-31	-48	2490	-65.48	-475.6	-12.54
254	SLU 77	-31	-39	2473	-65.07	-472.29	-10.39
254	SLU 78	-31	-44	2483	-65.31	-474.27	-11.68
254	SLU 79	-31	-39	2473	-65.07	-472.29	-10.39
254	SLU 80	-31	-44	2483	-65.31	-474.27	-11.68
254	SLU 81	-32	-41	2603	-68.44	-496.18	-10.82
254	SLU 82	-32	-46	2613	-68.69	-498.17	-12.11
254	SLU 83	-32	-41	2603	-68.44	-496.18	-10.82
254	SLU 84	-32	-46	2613	-68.69	-498.17	-12.11
254	SLE RA 1	-22	-26	1622	-42.75	-311.67	-7.09
254	SLE RA 2	-22	-32	1634	-43.03	-313.88	-8.52
254	SLE RA 3	-22	-26	1622	-42.75	-311.67	-7.09
254	SLE RA 4	-22	-30	1629	-42.92	-313	-7.95
254	SLE RA 5	-22	-32	1634	-43.03	-313.88	-8.52
254	SLE RA 6	-22	-26	1622	-42.75	-311.67	-7.09
254	SLE RA 7	-22	-30	1629	-42.92	-313	-7.95
254	SLE RA 8	-22	-26	1622	-42.75	-311.67	-7.09
254	SLE RA 9	-22	-30	1629	-42.92	-313	-7.95
254	SLE RA 10	-23	-35	1835	-48.27	-351.04	-9.19
254	SLE RA 11	-23	-29	1824	-48	-348.84	-7.75
254	SLE RA 12	-23	-32	1831	-48.17	-350.16	-8.62
254	SLE RA 13	-23	-35	1835	-48.27	-351.04	-9.19
254	SLE RA 14	-23	-29	1824	-48	-348.84	-7.75
254	SLE RA 15	-23	-32	1831	-48.17	-350.16	-8.62
254	SLE RA 16	-23	-29	1824	-48	-348.84	-7.75
254	SLE RA 17	-23	-32	1831	-48.17	-350.16	-8.62
254	SLE RA 18	-24	-30	1910	-50.25	-364.76	-8.04
254	SLE RA 19	-24	-34	1917	-50.41	-366.09	-8.9
254	SLE RA 20	-24	-30	1910	-50.25	-364.76	-8.04
254	SLE RA 21	-24	-34	1917	-50.41	-366.09	-8.9
254	SLE FR 1	-22	-26	1622	-42.75	-311.67	-7.09
254	SLE FR 2	-22	-28	1625	-42.81	-312.11	-7.38
254	SLE FR 3	-22	-26	1622	-42.75	-311.67	-7.09
254	SLE FR 4	-22	-29	1711	-45.06	-328.04	-7.66
254	SLE FR 5	-22	-28	1709	-45	-327.6	-7.37
254	SLE FR 6	-23	-28	1766	-46.5	-338.22	-7.56
254	SLE QP 1	-22	-26	1622	-42.75	-311.67	-7.09
254	SLE QP 2	-22	-28	1709	-45	-327.6	-7.37
254	SLD 1	129	52	1863	-49.18	-350.92	14.47
254	SLD 2	99	21	1869	-49.32	-352.01	6.02
254	SLD 3	117	-48	2045	-53.56	-386.21	-10.5
254	SLD 4	88	-79	2051	-53.7	-387.29	-18.94
254	SLD 5	51	158	1477	-39.56	-280.7	40.06

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
254	SLD 6	21	127	1483	-39.71	-281.8	31.48
254	SLD 7	13	-174	2084	-54.16	-398.3	-43.15
254	SLD 8	-17	-205	2090	-54.3	-399.41	-51.72
254	SLD 9	-28	150	1328	-35.7	-255.79	36.97
254	SLD 10	-58	118	1334	-35.85	-256.89	28.4
254	SLD 11	-66	-182	1934	-50.3	-373.4	-46.23
254	SLD 12	-96	-213	1940	-50.44	-374.5	-54.81
254	SLD 13	-133	24	1366	-36.31	-267.9	4.19
254	SLD 14	-162	-7	1372	-36.45	-268.99	-4.25
254	SLD 15	-144	-76	1548	-40.69	-303.19	-20.77
254	SLD 16	-173	-107	1554	-40.83	-304.27	-29.22
254	SLV 1	321	153	2059	-54.47	-380.43	42.37
254	SLV 2	254	83	2073	-54.79	-382.89	23.22
254	SLV 3	295	-74	2475	-64.45	-460.87	-14.53
254	SLV 4	228	-144	2488	-64.77	-463.34	-33.68
254	SLV 5	144	396	1179	-32.58	-220.56	100.69
254	SLV 6	76	325	1193	-32.91	-223.06	81.26
254	SLV 7	57	-361	2563	-65.86	-488.71	-88.98
254	SLV 8	-11	-431	2577	-66.19	-491.21	-108.41
254	SLV 9	-34	376	840	-23.81	-163.99	93.66
254	SLV 10	-102	305	854	-24.14	-166.49	74.23
254	SLV 11	-121	-380	2224	-57.09	-432.14	-96.01
254	SLV 12	-189	-451	2238	-57.42	-434.64	-115.44
254	SLV 13	-273	89	929	-25.23	-191.86	18.93
254	SLV 14	-339	19	943	-25.56	-194.33	-0.22
254	SLV 15	-299	-138	1345	-35.21	-272.31	-37.97
254	SLV 16	-365	-208	1358	-35.54	-274.77	-57.12
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
257	SLU 1	-17	-3	1580	-41.6	302.46	0.41
257	SLU 2	-16	-12	1598	-42.03	306.03	2.6
257	SLU 3	-17	-3	1580	-41.6	302.46	0.41
257	SLU 4	-16	-9	1591	-41.86	304.6	1.72
257	SLU 5	-16	-12	1598	-42.03	306.03	2.6
257	SLU 6	-17	-3	1580	-41.6	302.46	0.41
257	SLU 7	-16	-9	1591	-41.86	304.6	1.72
257	SLU 8	-17	-3	1580	-41.6	302.46	0.41
257	SLU 9	-16	-9	1591	-41.86	304.6	1.72
257	SLU 10	-19	-12	1863	-48.95	355.05	2.46
257	SLU 11	-19	-3	1845	-48.52	351.48	0.27
257	SLU 12	-19	-8	1856	-48.77	353.62	1.58
257	SLU 13	-19	-12	1863	-48.95	355.05	2.46
257	SLU 14	-19	-3	1845	-48.52	351.48	0.27
257	SLU 15	-19	-8	1856	-48.77	353.62	1.58
257	SLU 16	-19	-3	1845	-48.52	351.48	0.27
257	SLU 17	-19	-8	1856	-48.77	353.62	1.58
257	SLU 18	-20	-3	1959	-51.48	372.49	0.2
257	SLU 19	-20	-8	1970	-51.74	374.64	1.52
257	SLU 20	-20	-3	1959	-51.48	372.49	0.2
257	SLU 21	-20	-8	1970	-51.74	374.64	1.52
257	SLU 22	-18	-3	1777	-46.76	338.66	0.22
257	SLU 23	-18	-12	1795	-47.19	342.23	2.41
257	SLU 24	-18	-3	1777	-46.76	338.66	0.22
257	SLU 25	-18	-8	1788	-47.02	340.8	1.54
257	SLU 26	-18	-12	1795	-47.19	342.23	2.41
257	SLU 27	-18	-3	1777	-46.76	338.66	0.22
257	SLU 28	-18	-8	1788	-47.02	340.8	1.54
257	SLU 29	-18	-3	1777	-46.76	338.66	0.22
257	SLU 30	-18	-8	1788	-47.02	340.8	1.54
257	SLU 31	-21	-11	2060	-54.11	391.26	2.27
257	SLU 32	-21	-3	2042	-53.68	387.68	0.08
257	SLU 33	-21	-8	2053	-53.93	389.83	1.39
257	SLU 34	-21	-11	2060	-54.11	391.26	2.27
257	SLU 35	-21	-3	2042	-53.68	387.68	0.08
257	SLU 36	-21	-8	2053	-53.93	389.83	1.39
257	SLU 37	-21	-3	2042	-53.68	387.68	0.08
257	SLU 38	-21	-8	2053	-53.93	389.83	1.39
257	SLU 39	-22	-3	2156	-56.64	408.69	0.02
257	SLU 40	-22	-8	2167	-56.9	410.84	1.33
257	SLU 41	-22	-3	2156	-56.64	408.69	0.02
257	SLU 42	-22	-8	2167	-56.9	410.84	1.33
257	SLU 43	-21	-5	1986	-52.31	380.78	0.6
257	SLU 44	-21	-14	2004	-52.74	384.35	2.79
257	SLU 45	-21	-5	1986	-52.31	380.78	0.6
257	SLU 46	-21	-10	1997	-52.57	382.92	1.91
257	SLU 47	-21	-14	2004	-52.74	384.35	2.79
257	SLU 48	-21	-5	1986	-52.31	380.78	0.6
257	SLU 49	-21	-10	1997	-52.57	382.92	1.91
257	SLU 50	-21	-5	1986	-52.31	380.78	0.6
257	SLU 51	-21	-10	1997	-52.57	382.92	1.91
257	SLU 52	-23	-13	2269	-59.66	433.38	2.64
257	SLU 53	-24	-4	2251	-59.23	429.81	0.45
257	SLU 54	-23	-10	2262	-59.49	431.95	1.77
257	SLU 55	-23	-13	2269	-59.66	433.38	2.64
257	SLU 56	-24	-4	2251	-59.23	429.81	0.45

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
257	SLU 57	-23	-10	2262	-59.49	431.95	1.77
257	SLU 58	-24	-4	2251	-59.23	429.81	0.45
257	SLU 59	-23	-10	2262	-59.49	431.95	1.77
257	SLU 60	-25	-4	2365	-62.19	450.82	0.39
257	SLU 61	-25	-10	2376	-62.45	452.96	1.71
257	SLU 62	-25	-4	2365	-62.19	450.82	0.39
257	SLU 63	-25	-10	2376	-62.45	452.96	1.71
257	SLU 64	-23	-4	2184	-57.47	416.98	0.41
257	SLU 65	-23	-13	2201	-57.9	420.55	2.6
257	SLU 66	-23	-4	2184	-57.47	416.98	0.41
257	SLU 67	-23	-9	2194	-57.73	419.13	1.72
257	SLU 68	-23	-13	2201	-57.9	420.55	2.6
257	SLU 69	-23	-4	2184	-57.47	416.98	0.41
257	SLU 70	-23	-9	2194	-57.73	419.13	1.72
257	SLU 71	-23	-4	2184	-57.47	416.98	0.41
257	SLU 72	-23	-9	2194	-57.73	419.13	1.72
257	SLU 73	-25	-13	2467	-64.82	469.58	2.46
257	SLU 74	-25	-4	2449	-64.39	466.01	0.27
257	SLU 75	-25	-9	2459	-64.65	468.15	1.58
257	SLU 76	-25	-13	2467	-64.82	469.58	2.46
257	SLU 77	-25	-4	2449	-64.39	466.01	0.27
257	SLU 78	-25	-9	2459	-64.65	468.15	1.58
257	SLU 79	-25	-4	2449	-64.39	466.01	0.27
257	SLU 80	-25	-9	2459	-64.65	468.15	1.58
257	SLU 81	-27	-4	2562	-67.35	487.02	0.2
257	SLU 82	-26	-9	2573	-67.61	489.16	1.52
257	SLU 83	-27	-4	2562	-67.35	487.02	0.2
257	SLU 84	-26	-9	2573	-67.61	489.16	1.52
257	SLE RA 1	-17	-3	1636	-43.08	312.8	0.36
257	SLE RA 2	-17	-9	1648	-43.36	315.18	1.82
257	SLE RA 3	-17	-3	1636	-43.08	312.8	0.36
257	SLE RA 4	-17	-7	1643	-43.25	314.23	1.23
257	SLE RA 5	-17	-9	1648	-43.36	315.18	1.82
257	SLE RA 6	-17	-3	1636	-43.08	312.8	0.36
257	SLE RA 7	-17	-7	1643	-43.25	314.23	1.23
257	SLE RA 8	-17	-3	1636	-43.08	312.8	0.36
257	SLE RA 9	-17	-7	1643	-43.25	314.23	1.23
257	SLE RA 10	-19	-9	1825	-47.97	347.86	1.72
257	SLE RA 11	-19	-3	1813	-47.69	345.48	0.26
257	SLE RA 12	-19	-7	1820	-47.86	346.91	1.14
257	SLE RA 13	-19	-9	1825	-47.97	347.86	1.72
257	SLE RA 14	-19	-3	1813	-47.69	345.48	0.26
257	SLE RA 15	-19	-7	1820	-47.86	346.91	1.14
257	SLE RA 16	-19	-3	1813	-47.69	345.48	0.26
257	SLE RA 17	-19	-7	1820	-47.86	346.91	1.14
257	SLE RA 18	-20	-3	1889	-49.66	359.49	0.22
257	SLE RA 19	-20	-7	1896	-49.83	360.92	1.1
257	SLE RA 20	-20	-3	1889	-49.66	359.49	0.22
257	SLE RA 21	-20	-7	1896	-49.83	360.92	1.1
257	SLE FR 1	-17	-3	1636	-43.08	312.8	0.36
257	SLE FR 2	-17	-4	1639	-43.13	313.28	0.65
257	SLE FR 3	-17	-3	1636	-43.08	312.8	0.36
257	SLE FR 4	-18	-4	1714	-45.11	327.28	0.61
257	SLE FR 5	-18	-3	1712	-45.05	326.81	0.31
257	SLE FR 6	-18	-3	1763	-46.37	336.14	0.29
257	SLE QP 1	-17	-3	1636	-43.08	312.8	0.36
257	SLE QP 2	-18	-3	1712	-45.05	326.81	0.31
257	SLD 1	122	10	1332	-35.37	261.04	-0.37
257	SLD 2	93	41	1328	-35.27	260.26	-8.65
257	SLD 3	132	-89	1537	-40.33	299.59	24.22
257	SLD 4	103	-58	1532	-40.24	298.81	15.94
257	SLD 5	19	140	1290	-34.65	248.89	-34.22
257	SLD 6	-11	171	1286	-34.55	248.1	-42.63
257	SLD 7	53	-190	1971	-51.2	377.39	47.74
257	SLD 8	23	-159	1967	-51.1	376.59	39.33
257	SLD 9	-59	152	1458	-39	277.02	-38.71
257	SLD 10	-89	183	1453	-38.9	276.23	-47.11
257	SLD 11	-25	-177	2139	-55.55	405.51	43.26
257	SLD 12	-55	-146	2134	-55.45	404.72	34.85
257	SLD 13	-138	52	1892	-49.87	354.8	-15.31
257	SLD 14	-168	82	1888	-49.77	354.02	-23.59
257	SLD 15	-128	-47	2096	-54.83	393.35	9.28
257	SLD 16	-157	-17	2092	-54.73	392.57	1
257	SLV 1	299	28	847	-23.01	177.07	-1.38
257	SLV 2	233	96	838	-22.78	175.3	-20.16
257	SLV 3	323	-197	1313	-34.34	265.01	54.69
257	SLV 4	256	-129	1304	-34.11	263.25	35.92
257	SLV 5	66	324	749	-21.34	149.14	-78.53
257	SLV 6	-2	393	740	-21.11	147.34	-97.58
257	SLV 7	144	-428	2303	-59.1	442.28	108.38
257	SLV 8	76	-358	2293	-58.87	440.49	89.33
257	SLV 9	-112	352	1131	-31.23	213.12	-88.7
257	SLV 10	-179	421	1121	-31	211.33	-107.75
257	SLV 11	-34	-399	2684	-69	506.27	98.21
257	SLV 12	-101	-330	2675	-68.77	504.48	79.16
257	SLV 13	-292	123	2120	-55.99	390.36	-35.29
257	SLV 14	-358	191	2111	-55.76	388.6	-54.06

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
257	SLV 15	-268	-103	2586	-67.32	478.31	20.79
257	SLV 16	-335	-34	2577	-67.09	476.54	2.01
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
284	SLU 1	-39	-45	2690	-614.2	-464.47	-17.37
284	SLU 2	-40	-59	2721	-620.59	-469.86	-20.08
284	SLU 3	-39	-45	2690	-614.2	-464.47	-17.37
284	SLU 4	-40	-53	2709	-618.04	-467.7	-19
284	SLU 5	-40	-59	2721	-620.59	-469.86	-20.08
284	SLU 6	-39	-45	2690	-614.2	-464.47	-17.37
284	SLU 7	-40	-53	2709	-618.04	-467.7	-19
284	SLU 8	-39	-45	2690	-614.2	-464.47	-17.37
284	SLU 9	-40	-53	2709	-618.04	-467.7	-19
284	SLU 10	-44	-66	3246	-738.61	-559.75	-22.25
284	SLU 11	-43	-51	3216	-732.22	-554.37	-19.53
284	SLU 12	-44	-60	3234	-736.05	-557.6	-21.16
284	SLU 13	-44	-66	3246	-738.61	-559.75	-22.25
284	SLU 14	-43	-51	3216	-732.22	-554.37	-19.53
284	SLU 15	-44	-60	3234	-736.05	-557.6	-21.16
284	SLU 16	-43	-51	3216	-732.22	-554.37	-19.53
284	SLU 17	-44	-60	3234	-736.05	-557.6	-21.16
284	SLU 18	-45	-54	3441	-782.8	-592.9	-20.46
284	SLU 19	-46	-63	3459	-786.63	-596.13	-22.09
284	SLU 20	-45	-54	3441	-782.8	-592.9	-20.46
284	SLU 21	-46	-63	3459	-786.63	-596.13	-22.09
284	SLU 22	-43	-49	3066	-698.88	-528.68	-19.04
284	SLU 23	-44	-63	3097	-705.27	-534.06	-21.75
284	SLU 24	-43	-49	3066	-698.88	-528.68	-19.04
284	SLU 25	-44	-57	3084	-702.71	-531.91	-20.67
284	SLU 26	-44	-63	3097	-705.27	-534.06	-21.75
284	SLU 27	-43	-49	3066	-698.88	-528.68	-19.04
284	SLU 28	-44	-57	3084	-702.71	-531.91	-20.67
284	SLU 29	-43	-49	3066	-698.88	-528.68	-19.04
284	SLU 30	-44	-57	3084	-702.71	-531.91	-20.67
284	SLU 31	-48	-70	3622	-823.28	-623.96	-23.92
284	SLU 32	-47	-55	3591	-816.9	-618.58	-21.2
284	SLU 33	-48	-64	3609	-820.73	-621.81	-22.83
284	SLU 34	-48	-70	3622	-823.28	-623.96	-23.92
284	SLU 35	-47	-55	3591	-816.9	-618.58	-21.2
284	SLU 36	-48	-64	3609	-820.73	-621.81	-22.83
284	SLU 37	-47	-55	3591	-816.9	-618.58	-21.2
284	SLU 38	-48	-64	3609	-820.73	-621.81	-22.83
284	SLU 39	-49	-58	3816	-867.48	-657.11	-22.13
284	SLU 40	-50	-67	3834	-871.31	-660.34	-23.76
284	SLU 41	-49	-58	3816	-867.48	-657.11	-22.13
284	SLU 42	-50	-67	3834	-871.31	-660.34	-23.76
284	SLU 43	-50	-57	3369	-769.43	-581.8	-22
284	SLU 44	-50	-71	3400	-775.82	-587.18	-24.72
284	SLU 45	-50	-57	3369	-769.43	-581.8	-22
284	SLU 46	-50	-65	3387	-773.26	-585.03	-23.63
284	SLU 47	-50	-71	3400	-775.82	-587.18	-24.72
284	SLU 48	-50	-57	3369	-769.43	-581.8	-22
284	SLU 49	-50	-65	3387	-773.26	-585.03	-23.63
284	SLU 50	-50	-57	3369	-769.43	-581.8	-22
284	SLU 51	-50	-65	3387	-773.26	-585.03	-23.63
284	SLU 52	-54	-78	3925	-893.84	-677.08	-26.88
284	SLU 53	-54	-63	3894	-887.45	-671.7	-24.17
284	SLU 54	-54	-72	3912	-891.28	-674.93	-25.8
284	SLU 55	-54	-78	3925	-893.84	-677.08	-26.88
284	SLU 56	-54	-63	3894	-887.45	-671.7	-24.17
284	SLU 57	-54	-72	3912	-891.28	-674.93	-25.8
284	SLU 58	-54	-63	3894	-887.45	-671.7	-24.17
284	SLU 59	-54	-72	3912	-891.28	-674.93	-25.8
284	SLU 60	-56	-66	4119	-938.03	-710.22	-25.1
284	SLU 61	-56	-75	4138	-941.86	-713.45	-26.73
284	SLU 62	-56	-66	4119	-938.03	-710.22	-25.1
284	SLU 63	-56	-75	4138	-941.86	-713.45	-26.73
284	SLU 64	-54	-61	3744	-854.11	-646.01	-23.67
284	SLU 65	-54	-75	3775	-860.5	-651.39	-26.39
284	SLU 66	-54	-61	3744	-854.11	-646.01	-23.67
284	SLU 67	-54	-69	3763	-857.94	-649.24	-25.3
284	SLU 68	-54	-75	3775	-860.5	-651.39	-26.39
284	SLU 69	-54	-61	3744	-854.11	-646.01	-23.67
284	SLU 70	-54	-69	3763	-857.94	-649.24	-25.3
284	SLU 71	-54	-61	3744	-854.11	-646.01	-23.67
284	SLU 72	-54	-69	3763	-857.94	-649.24	-25.3
284	SLU 73	-58	-82	4300	-978.51	-741.29	-28.56
284	SLU 74	-58	-67	4269	-972.13	-735.9	-25.84
284	SLU 75	-58	-76	4288	-975.96	-739.14	-27.47
284	SLU 76	-58	-82	4300	-978.51	-741.29	-28.56
284	SLU 77	-58	-67	4269	-972.13	-735.9	-25.84
284	SLU 78	-58	-76	4288	-975.96	-739.14	-27.47
284	SLU 79	-58	-67	4269	-972.13	-735.9	-25.84
284	SLU 80	-58	-76	4288	-975.96	-739.14	-27.47
284	SLU 81	-60	-70	4494	-1022.71	-774.43	-26.77

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
284	SLU 82	-60	-79	4513	-1026.54	-777.66	-28.4
284	SLU 83	-60	-70	4494	-1022.71	-774.43	-26.77
284	SLU 84	-60	-79	4513	-1026.54	-777.66	-28.4
284	SLE RA 1	-40	-46	2798	-638.4	-482.82	-17.84
284	SLE RA 2	-41	-55	2818	-642.65	-486.41	-19.65
284	SLE RA 3	-40	-46	2798	-638.4	-482.82	-17.84
284	SLE RA 4	-41	-52	2810	-640.95	-484.97	-18.93
284	SLE RA 5	-41	-55	2818	-642.65	-486.41	-19.65
284	SLE RA 6	-40	-46	2798	-638.4	-482.82	-17.84
284	SLE RA 7	-41	-52	2810	-640.95	-484.97	-18.93
284	SLE RA 8	-40	-46	2798	-638.4	-482.82	-17.84
284	SLE RA 9	-41	-52	2810	-640.95	-484.97	-18.93
284	SLE RA 10	-44	-60	3168	-721.33	-546.34	-21.1
284	SLE RA 11	-43	-50	3148	-717.08	-542.75	-19.29
284	SLE RA 12	-43	-56	3160	-719.63	-544.9	-20.37
284	SLE RA 13	-44	-60	3168	-721.33	-546.34	-21.1
284	SLE RA 14	-43	-50	3148	-717.08	-542.75	-19.29
284	SLE RA 15	-43	-56	3160	-719.63	-544.9	-20.37
284	SLE RA 16	-43	-50	3148	-717.08	-542.75	-19.29
284	SLE RA 17	-43	-56	3160	-719.63	-544.9	-20.37
284	SLE RA 18	-44	-52	3298	-750.79	-568.43	-19.91
284	SLE RA 19	-45	-58	3310	-753.35	-570.59	-20.99
284	SLE RA 20	-44	-52	3298	-750.79	-568.43	-19.91
284	SLE RA 21	-45	-58	3310	-753.35	-570.59	-20.99
284	SLE FR 1	-40	-46	2798	-638.4	-482.82	-17.84
284	SLE FR 2	-40	-48	2802	-639.25	-483.53	-18.21
284	SLE FR 3	-40	-46	2798	-638.4	-482.82	-17.84
284	SLE FR 4	-42	-50	2952	-672.97	-509.22	-18.82
284	SLE FR 5	-42	-48	2948	-672.12	-508.5	-18.46
284	SLE FR 6	-42	-49	3048	-694.6	-525.62	-18.88
284	SLE QP 1	-40	-46	2798	-638.4	-482.82	-17.84
284	SLE QP 2	-42	-48	2948	-672.12	-508.5	-18.46
284	SLD 1	213	85	3217	-736.08	-550.54	63.65
284	SLD 2	162	33	3228	-738.35	-552.29	41.81
284	SLD 3	193	-81	3545	-804.13	-607.22	30.49
284	SLD 4	142	-133	3556	-806.39	-608.97	8.65
284	SLD 5	84	262	2527	-587.29	-434.53	64.27
284	SLD 6	33	210	2538	-589.59	-436.31	42.1
284	SLD 7	16	-291	3620	-814.11	-623.45	-46.25
284	SLD 8	-36	-344	3631	-816.42	-625.22	-68.42
284	SLD 9	-47	248	2264	-527.82	-391.78	31.5
284	SLD 10	-99	196	2275	-530.12	-393.56	9.33
284	SLD 11	-116	-305	3357	-754.64	-580.69	-79.02
284	SLD 12	-168	-358	3368	-756.94	-582.47	-101.19
284	SLD 13	-225	38	2340	-537.84	-408.04	-45.58
284	SLD 14	-276	-14	2350	-540.1	-409.78	-67.42
284	SLD 15	-245	-128	2668	-605.89	-464.71	-78.74
284	SLD 16	-296	-180	2678	-608.15	-466.46	-100.57
284	SLV 1	537	254	3558	-817.1	-603.72	168.19
284	SLV 2	421	137	3582	-822.25	-607.69	118.67
284	SLV 3	490	-124	4306	-972.26	-732.95	92.6
284	SLV 4	374	-242	4330	-977.4	-736.92	43.07
284	SLV 5	245	659	1988	-478.45	-339.65	169.88
284	SLV 6	127	540	2013	-483.67	-343.68	119.62
284	SLV 7	88	-603	4481	-995.64	-770.42	-82.09
284	SLV 8	-29	-722	4505	-1000.86	-774.44	-132.35
284	SLV 9	-54	627	1390	-343.37	-242.56	95.42
284	SLV 10	-171	507	1415	-348.59	-246.59	45.17
284	SLV 11	-210	-635	3883	-860.56	-673.32	-156.55
284	SLV 12	-328	-754	3908	-865.78	-677.35	-206.8
284	SLV 13	-458	147	1565	-366.83	-280.08	-80
284	SLV 14	-573	29	1590	-371.97	-284.05	-129.52
284	SLV 15	-505	-232	2313	-521.99	-409.31	-155.59
284	SLV 16	-620	-350	2337	-527.13	-413.28	-205.11
284	CRTFP Ux+	0	0	0	0.01	0	0
284	CRTFP Ux-	0	0	0	-0.01	0	0
284	CRTFP Uy+	0	0	0	-0.01	-0.01	0
284	CRTFP Uy-	0	0	0	0.01	0.01	0
286	SLU 1	-27	-28	1841	-524.29	-48.49	-10.04
286	SLU 2	-27	-38	1861	-529.62	-49.03	-10.37
286	SLU 3	-27	-28	1841	-524.29	-48.49	-10.04
286	SLU 4	-27	-34	1853	-527.49	-48.82	-10.24
286	SLU 5	-27	-38	1861	-529.62	-49.03	-10.37
286	SLU 6	-27	-28	1841	-524.29	-48.49	-10.04
286	SLU 7	-27	-34	1853	-527.49	-48.82	-10.24
286	SLU 8	-27	-28	1841	-524.29	-48.49	-10.04
286	SLU 9	-27	-34	1853	-527.49	-48.82	-10.24
286	SLU 10	-30	-43	2217	-626.98	-58.31	-11.46
286	SLU 11	-30	-33	2196	-621.66	-57.77	-11.13
286	SLU 12	-30	-39	2208	-624.85	-58.09	-11.33
286	SLU 13	-30	-43	2217	-626.98	-58.31	-11.46
286	SLU 14	-30	-33	2196	-621.66	-57.77	-11.13
286	SLU 15	-30	-39	2208	-624.85	-58.09	-11.33
286	SLU 16	-30	-33	2196	-621.66	-57.77	-11.13
286	SLU 17	-30	-39	2208	-624.85	-58.09	-11.33
286	SLU 18	-31	-34	2348	-663.39	-61.74	-11.6
286	SLU 19	-31	-40	2361	-666.58	-62.07	-11.8

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
286	SLU 20	-31	-34	2348	-663.39	-61.74	-11.6
286	SLU 21	-31	-40	2361	-666.58	-62.07	-11.8
286	SLU 22	-30	-31	2095	-594.43	-55.13	-11.07
286	SLU 23	-30	-41	2115	-599.76	-55.67	-11.4
286	SLU 24	-30	-31	2095	-594.43	-55.13	-11.07
286	SLU 25	-30	-37	2107	-597.63	-55.45	-11.27
286	SLU 26	-30	-41	2115	-599.76	-55.67	-11.4
286	SLU 27	-30	-31	2095	-594.43	-55.13	-11.07
286	SLU 28	-30	-37	2107	-597.63	-55.45	-11.27
286	SLU 29	-30	-31	2095	-594.43	-55.13	-11.07
286	SLU 30	-30	-37	2107	-597.63	-55.45	-11.27
286	SLU 31	-33	-45	2471	-697.12	-64.94	-12.49
286	SLU 32	-33	-35	2450	-691.8	-64.4	-12.16
286	SLU 33	-33	-41	2463	-694.99	-64.73	-12.36
286	SLU 34	-33	-45	2471	-697.12	-64.94	-12.49
286	SLU 35	-33	-35	2450	-691.8	-64.4	-12.16
286	SLU 36	-33	-41	2463	-694.99	-64.73	-12.36
286	SLU 37	-33	-35	2450	-691.8	-64.4	-12.16
286	SLU 38	-33	-41	2463	-694.99	-64.73	-12.36
286	SLU 39	-34	-37	2603	-733.52	-68.37	-12.63
286	SLU 40	-34	-43	2615	-736.72	-68.7	-12.83
286	SLU 41	-34	-37	2603	-733.52	-68.37	-12.63
286	SLU 42	-34	-43	2615	-736.72	-68.7	-12.83
286	SLU 43	-34	-36	2306	-657.53	-60.76	-12.7
286	SLU 44	-34	-46	2326	-662.86	-61.31	-13.03
286	SLU 45	-34	-36	2306	-657.53	-60.76	-12.7
286	SLU 46	-34	-42	2318	-660.73	-61.09	-12.89
286	SLU 47	-34	-46	2326	-662.86	-61.31	-13.03
286	SLU 48	-34	-36	2306	-657.53	-60.76	-12.7
286	SLU 49	-34	-42	2318	-660.73	-61.09	-12.89
286	SLU 50	-34	-36	2306	-657.53	-60.76	-12.7
286	SLU 51	-34	-42	2318	-660.73	-61.09	-12.89
286	SLU 52	-37	-50	2682	-760.22	-70.58	-14.12
286	SLU 53	-37	-40	2661	-754.9	-70.04	-13.79
286	SLU 54	-37	-46	2673	-758.09	-70.36	-13.99
286	SLU 55	-37	-50	2682	-760.22	-70.58	-14.12
286	SLU 56	-37	-40	2661	-754.9	-70.04	-13.79
286	SLU 57	-37	-46	2673	-758.09	-70.36	-13.99
286	SLU 58	-37	-40	2661	-754.9	-70.04	-13.79
286	SLU 59	-37	-46	2673	-758.09	-70.36	-13.99
286	SLU 60	-38	-42	2813	-796.63	-74.01	-14.26
286	SLU 61	-38	-48	2826	-799.82	-74.34	-14.46
286	SLU 62	-38	-42	2813	-796.63	-74.01	-14.26
286	SLU 63	-38	-48	2826	-799.82	-74.34	-14.46
286	SLU 64	-37	-39	2560	-727.67	-67.4	-13.73
286	SLU 65	-37	-49	2580	-733	-67.94	-14.06
286	SLU 66	-37	-39	2560	-727.67	-67.4	-13.73
286	SLU 67	-37	-45	2572	-730.87	-67.72	-13.93
286	SLU 68	-37	-49	2580	-733	-67.94	-14.06
286	SLU 69	-37	-39	2560	-727.67	-67.4	-13.73
286	SLU 70	-37	-45	2572	-730.87	-67.72	-13.93
286	SLU 71	-37	-39	2560	-727.67	-67.4	-13.73
286	SLU 72	-37	-45	2572	-730.87	-67.72	-13.93
286	SLU 73	-40	-53	2936	-830.36	-77.22	-15.15
286	SLU 74	-40	-43	2915	-825.04	-76.67	-14.82
286	SLU 75	-40	-49	2928	-828.23	-77	-15.02
286	SLU 76	-40	-53	2936	-830.36	-77.22	-15.15
286	SLU 77	-40	-43	2915	-825.04	-76.67	-14.82
286	SLU 78	-40	-49	2928	-828.23	-77	-15.02
286	SLU 79	-40	-43	2915	-825.04	-76.67	-14.82
286	SLU 80	-40	-49	2928	-828.23	-77	-15.02
286	SLU 81	-41	-45	3068	-866.76	-80.65	-15.29
286	SLU 82	-41	-51	3080	-869.96	-80.97	-15.49
286	SLU 83	-41	-45	3068	-866.76	-80.65	-15.29
286	SLU 84	-41	-51	3080	-869.96	-80.97	-15.49
286	SLE RA 1	-28	-29	1913	-544.33	-50.39	-10.33
286	SLE RA 2	-28	-36	1927	-547.88	-50.75	-10.55
286	SLE RA 3	-28	-29	1913	-544.33	-50.39	-10.33
286	SLE RA 4	-28	-33	1921	-546.46	-50.6	-10.47
286	SLE RA 5	-28	-36	1927	-547.88	-50.75	-10.55
286	SLE RA 6	-28	-29	1913	-544.33	-50.39	-10.33
286	SLE RA 7	-28	-33	1921	-546.46	-50.6	-10.47
286	SLE RA 8	-28	-29	1913	-544.33	-50.39	-10.33
286	SLE RA 9	-28	-33	1921	-546.46	-50.6	-10.47
286	SLE RA 10	-30	-39	2164	-612.79	-56.93	-11.28
286	SLE RA 11	-30	-32	2150	-609.24	-56.57	-11.06
286	SLE RA 12	-30	-36	2158	-611.37	-56.79	-11.19
286	SLE RA 13	-30	-39	2164	-612.79	-56.93	-11.28
286	SLE RA 14	-30	-32	2150	-609.24	-56.57	-11.06
286	SLE RA 15	-30	-36	2158	-611.37	-56.79	-11.19
286	SLE RA 16	-30	-32	2150	-609.24	-56.57	-11.06
286	SLE RA 17	-30	-36	2158	-611.37	-56.79	-11.19
286	SLE RA 18	-30	-33	2252	-637.06	-59.22	-11.38
286	SLE RA 19	-30	-37	2260	-639.19	-59.44	-11.51
286	SLE RA 20	-30	-33	2252	-637.06	-59.22	-11.38
286	SLE RA 21	-30	-37	2260	-639.19	-59.44	-11.51
286	SLE FR 1	-28	-29	1913	-544.33	-50.39	-10.33

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
286	SLE FR 2	-28	-30	1916	-545.04	-50.46	-10.38
286	SLE FR 3	-28	-29	1913	-544.33	-50.39	-10.33
286	SLE FR 4	-29	-32	2018	-572.86	-53.11	-10.69
286	SLE FR 5	-28	-30	2015	-572.15	-53.04	-10.65
286	SLE FR 6	-29	-31	2082	-590.7	-54.8	-10.86
286	SLE QP 1	-28	-29	1913	-544.33	-50.39	-10.33
286	SLE QP 2	-28	-30	2015	-572.15	-53.04	-10.65
286	SLD 1	156	62	2187	-624.63	-57.01	55.24
286	SLD 2	119	27	2193	-626.32	-57.17	41.68
286	SLD 3	142	-54	2403	-678.05	-62.62	48.28
286	SLD 4	105	-90	2410	-679.74	-62.78	34.72
286	SLD 5	61	186	1735	-506.27	-45.65	24.52
286	SLD 6	24	150	1742	-507.99	-45.81	10.76
286	SLD 7	14	-201	2458	-684.33	-64.38	1.33
286	SLD 8	-22	-237	2464	-686.06	-64.54	-12.44
286	SLD 9	-35	177	1565	-458.24	-41.54	-8.86
286	SLD 10	-71	141	1572	-459.97	-41.7	-22.62
286	SLD 11	-81	-211	2287	-636.31	-60.26	-32.05
286	SLD 12	-118	-247	2294	-638.03	-60.42	-45.81
286	SLD 13	-162	29	1620	-464.56	-43.29	-56.02
286	SLD 14	-199	-6	1626	-466.25	-43.45	-69.57
286	SLD 15	-176	-87	1836	-517.98	-48.91	-62.98
286	SLD 16	-212	-123	1843	-519.67	-49.07	-76.53
286	SLV 1	389	180	2404	-691.13	-62.03	139.02
286	SLV 2	307	100	2419	-694.97	-62.39	108.28
286	SLV 3	358	-85	2898	-812.92	-74.84	123.15
286	SLV 4	276	-165	2913	-816.77	-75.2	92.41
286	SLV 5	174	463	1377	-421.75	-36.18	69.31
286	SLV 6	91	382	1392	-425.65	-36.54	38.11
286	SLV 7	69	-420	3024	-827.73	-78.87	16.41
286	SLV 8	-15	-501	3039	-831.63	-79.24	-14.78
286	SLV 9	-42	441	990	-312.67	-26.83	-6.51
286	SLV 10	-126	359	1006	-316.57	-27.2	-37.71
286	SLV 11	-148	-442	2637	-718.65	-69.53	-59.4
286	SLV 12	-231	-524	2653	-722.55	-69.9	-90.6
286	SLV 13	-333	105	1116	-327.53	-30.88	-113.7
286	SLV 14	-415	25	1131	-331.38	-31.24	-144.45
286	SLV 15	-364	-160	1610	-449.33	-43.68	-129.57
286	SLV 16	-446	-240	1626	-453.17	-44.05	-160.31
286	CRTFP Ux+	0	0	0	0	0	0
286	CRTFP Ux-	0	0	0	0	0	0
286	CRTFP Uy+	0	0	0	0	0	0
286	CRTFP Uy-	0	0	0	0	0	0
287	SLU 1	-31	-26	2026	-520.86	3.72	-10.76
287	SLU 2	-32	-36	2049	-526.3	3.77	-10.81
287	SLU 3	-31	-26	2026	-520.86	3.72	-10.76
287	SLU 4	-32	-32	2040	-524.13	3.75	-10.79
287	SLU 5	-32	-36	2049	-526.3	3.77	-10.81
287	SLU 6	-31	-26	2026	-520.86	3.72	-10.76
287	SLU 7	-32	-32	2040	-524.13	3.75	-10.79
287	SLU 8	-31	-26	2026	-520.86	3.72	-10.76
287	SLU 9	-32	-32	2040	-524.13	3.75	-10.79
287	SLU 10	-35	-40	2436	-619.81	4.6	-11.95
287	SLU 11	-35	-30	2413	-614.36	4.56	-11.91
287	SLU 12	-35	-36	2427	-617.63	4.59	-11.93
287	SLU 13	-35	-40	2436	-619.81	4.6	-11.95
287	SLU 14	-35	-30	2413	-614.36	4.56	-11.91
287	SLU 15	-35	-36	2427	-617.63	4.59	-11.93
287	SLU 16	-35	-30	2413	-614.36	4.56	-11.91
287	SLU 17	-35	-36	2427	-617.63	4.59	-11.93
287	SLU 18	-36	-31	2579	-654.43	4.92	-12.4
287	SLU 19	-36	-38	2593	-657.7	4.95	-12.43
287	SLU 20	-36	-31	2579	-654.43	4.92	-12.4
287	SLU 21	-36	-38	2593	-657.7	4.95	-12.43
287	SLU 22	-35	-28	2303	-588.46	4.32	-11.89
287	SLU 23	-35	-39	2326	-593.91	4.36	-11.93
287	SLU 24	-35	-28	2303	-588.46	4.32	-11.89
287	SLU 25	-35	-34	2317	-591.73	4.35	-11.91
287	SLU 26	-35	-39	2326	-593.91	4.36	-11.93
287	SLU 27	-35	-28	2303	-588.46	4.32	-11.89
287	SLU 28	-35	-34	2317	-591.73	4.35	-11.91
287	SLU 29	-35	-28	2303	-588.46	4.32	-11.89
287	SLU 30	-35	-34	2317	-591.73	4.35	-11.91
287	SLU 31	-38	-43	2713	-687.41	5.2	-13.08
287	SLU 32	-38	-32	2691	-681.96	5.16	-13.03
287	SLU 33	-38	-38	2704	-685.23	5.18	-13.06
287	SLU 34	-38	-43	2713	-687.41	5.2	-13.08
287	SLU 35	-38	-32	2691	-681.96	5.16	-13.03
287	SLU 36	-38	-38	2704	-685.23	5.18	-13.06
287	SLU 37	-38	-32	2691	-681.96	5.16	-13.03
287	SLU 38	-38	-38	2704	-685.23	5.18	-13.06
287	SLU 39	-40	-34	2857	-722.04	5.52	-13.53
287	SLU 40	-40	-40	2870	-725.3	5.54	-13.55
287	SLU 41	-40	-34	2857	-722.04	5.52	-13.53
287	SLU 42	-40	-40	2870	-725.3	5.54	-13.55
287	SLU 43	-40	-32	2539	-653.94	4.64	-13.6
287	SLU 44	-40	-43	2561	-659.38	4.68	-13.65

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
287	SLU 45	-40	-32	2539	-653.94	4.64	-13.6
287	SLU 46	-40	-39	2552	-657.2	4.66	-13.63
287	SLU 47	-40	-43	2561	-659.38	4.68	-13.65
287	SLU 48	-40	-32	2539	-653.94	4.64	-13.6
287	SLU 49	-40	-39	2552	-657.2	4.66	-13.63
287	SLU 50	-40	-32	2539	-653.94	4.64	-13.6
287	SLU 51	-40	-39	2552	-657.2	4.66	-13.63
287	SLU 52	-43	-47	2949	-752.88	5.52	-14.79
287	SLU 53	-43	-36	2926	-747.44	5.47	-14.75
287	SLU 54	-43	-43	2940	-750.71	5.5	-14.78
287	SLU 55	-43	-47	2949	-752.88	5.52	-14.79
287	SLU 56	-43	-36	2926	-747.44	5.47	-14.75
287	SLU 57	-43	-43	2940	-750.71	5.5	-14.78
287	SLU 58	-43	-36	2926	-747.44	5.47	-14.75
287	SLU 59	-43	-43	2940	-750.71	5.5	-14.78
287	SLU 60	-45	-38	3092	-787.51	5.83	-15.24
287	SLU 61	-45	-45	3106	-790.78	5.86	-15.27
287	SLU 62	-45	-38	3092	-787.51	5.83	-15.24
287	SLU 63	-45	-45	3106	-790.78	5.86	-15.27
287	SLU 64	-43	-35	2816	-721.54	5.23	-14.73
287	SLU 65	-43	-46	2839	-726.99	5.28	-14.77
287	SLU 66	-43	-35	2816	-721.54	5.23	-14.73
287	SLU 67	-43	-41	2829	-724.81	5.26	-14.76
287	SLU 68	-43	-46	2839	-726.99	5.28	-14.77
287	SLU 69	-43	-35	2816	-721.54	5.23	-14.73
287	SLU 70	-43	-41	2829	-724.81	5.26	-14.76
287	SLU 71	-43	-35	2816	-721.54	5.23	-14.73
287	SLU 72	-43	-41	2829	-724.81	5.26	-14.76
287	SLU 73	-47	-50	3226	-820.49	6.11	-15.92
287	SLU 74	-46	-39	3203	-815.04	6.07	-15.88
287	SLU 75	-47	-45	3217	-818.31	6.1	-15.9
287	SLU 76	-47	-50	3226	-820.49	6.11	-15.92
287	SLU 77	-46	-39	3203	-815.04	6.07	-15.88
287	SLU 78	-47	-45	3217	-818.31	6.1	-15.9
287	SLU 79	-46	-39	3203	-815.04	6.07	-15.88
287	SLU 80	-47	-45	3217	-818.31	6.1	-15.9
287	SLU 81	-48	-40	3369	-855.11	6.43	-16.37
287	SLU 82	-48	-47	3383	-858.38	6.45	-16.39
287	SLU 83	-48	-40	3369	-855.11	6.43	-16.37
287	SLU 84	-48	-47	3383	-858.38	6.45	-16.39
287	SLE RA 1	-32	-26	2105	-540.17	3.9	-11.08
287	SLE RA 2	-33	-33	2120	-543.8	3.92	-11.11
287	SLE RA 3	-32	-26	2105	-540.17	3.9	-11.08
287	SLE RA 4	-33	-31	2114	-542.35	3.91	-11.1
287	SLE RA 5	-33	-33	2120	-543.8	3.92	-11.11
287	SLE RA 6	-32	-26	2105	-540.17	3.9	-11.08
287	SLE RA 7	-33	-31	2114	-542.35	3.91	-11.1
287	SLE RA 8	-32	-26	2105	-540.17	3.9	-11.08
287	SLE RA 9	-33	-31	2114	-542.35	3.91	-11.1
287	SLE RA 10	-35	-36	2379	-606.14	4.48	-11.88
287	SLE RA 11	-35	-29	2363	-602.51	4.45	-11.85
287	SLE RA 12	-35	-33	2372	-604.69	4.47	-11.86
287	SLE RA 13	-35	-36	2379	-606.14	4.48	-11.88
287	SLE RA 14	-35	-29	2363	-602.51	4.45	-11.85
287	SLE RA 15	-35	-33	2372	-604.69	4.47	-11.86
287	SLE RA 16	-35	-29	2363	-602.51	4.45	-11.85
287	SLE RA 17	-35	-33	2372	-604.69	4.47	-11.86
287	SLE RA 18	-36	-30	2474	-629.22	4.69	-12.17
287	SLE RA 19	-36	-34	2483	-631.4	4.71	-12.19
287	SLE RA 20	-36	-30	2474	-629.22	4.69	-12.17
287	SLE RA 21	-36	-34	2483	-631.4	4.71	-12.19
287	SLE FR 1	-32	-26	2105	-540.17	3.9	-11.08
287	SLE FR 2	-32	-28	2108	-540.9	3.9	-11.09
287	SLE FR 3	-32	-26	2105	-540.17	3.9	-11.08
287	SLE FR 4	-33	-29	2219	-567.61	4.14	-11.42
287	SLE FR 5	-33	-27	2216	-566.89	4.13	-11.41
287	SLE FR 6	-34	-28	2290	-584.7	4.29	-11.63
287	SLE QP 1	-32	-26	2105	-540.17	3.9	-11.08
287	SLE QP 2	-33	-27	2216	-566.89	4.13	-11.41
287	SLD 1	181	73	2380	-613.31	5.35	63.58
287	SLD 2	139	35	2386	-614.69	5.4	48.95
287	SLD 3	165	-54	2614	-663.34	5.93	58.07
287	SLD 4	123	-92	2621	-664.72	5.97	43.44
287	SLD 5	71	209	1907	-504.43	3.61	24.69
287	SLD 6	28	171	1914	-505.84	3.65	9.83
287	SLD 7	17	-215	2689	-671.22	5.53	6.3
287	SLD 8	-26	-253	2695	-672.62	5.58	-8.55
287	SLD 9	-41	198	1736	-461.16	2.69	-14.27
287	SLD 10	-83	160	1743	-462.56	2.74	-29.12
287	SLD 11	-95	-226	2518	-627.94	4.61	-32.65
287	SLD 12	-137	-263	2525	-629.34	4.66	-47.51
287	SLD 13	-190	37	1811	-469.05	2.3	-66.26
287	SLD 14	-232	0	1818	-470.43	2.34	-80.89
287	SLD 15	-206	-90	2045	-519.09	2.87	-71.77
287	SLD 16	-248	-127	2052	-520.47	2.91	-86.41
287	SLV 1	454	200	2587	-672.13	6.9	158.93
287	SLV 2	359	116	2602	-675.26	7	125.76

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
287	SLV 3	417	-89	3121	-786.19	8.22	146.36
287	SLV 4	322	-174	3136	-789.32	8.31	113.18
287	SLV 5	203	510	1511	-424.34	2.94	70.63
287	SLV 6	106	425	1526	-427.52	3.04	36.96
287	SLV 7	80	-455	3293	-804.56	7.32	28.7
287	SLV 8	-17	-540	3308	-807.74	7.42	-4.97
287	SLV 9	-50	486	1124	-326.04	0.85	-17.85
287	SLV 10	-147	400	1139	-329.21	0.95	-51.52
287	SLV 11	-173	-479	2905	-706.26	5.23	-59.78
287	SLV 12	-270	-565	2921	-709.43	5.33	-93.45
287	SLV 13	-389	119	1295	-344.45	-0.05	-136
287	SLV 14	-484	34	1310	-347.58	0.05	-169.18
287	SLV 15	-425	-171	1830	-458.52	1.27	-148.58
287	SLV 16	-521	-255	1845	-461.65	1.36	-181.76
287	CRTFP Ux+	0	0	0	0	0	0
287	CRTFP Ux-	0	0	0	0	0	0
287	CRTFP Uy+	0	0	0	0	0	0
287	CRTFP Uy-	0	0	0	0	0	0
288	SLU 1	-32	-17	1927	-451.28	2.66	-10.78
288	SLU 2	-32	-27	1948	-456.13	2.69	-10.82
288	SLU 3	-32	-17	1927	-451.28	2.66	-10.78
288	SLU 4	-32	-23	1939	-454.19	2.68	-10.81
288	SLU 5	-32	-27	1948	-456.13	2.69	-10.82
288	SLU 6	-32	-17	1927	-451.28	2.66	-10.78
288	SLU 7	-32	-23	1939	-454.19	2.68	-10.81
288	SLU 8	-32	-17	1927	-451.28	2.66	-10.78
288	SLU 9	-32	-23	1939	-454.19	2.68	-10.81
288	SLU 10	-35	-30	2313	-534.3	3.29	-11.99
288	SLU 11	-35	-20	2292	-529.45	3.25	-11.95
288	SLU 12	-35	-26	2305	-532.36	3.27	-11.97
288	SLU 13	-35	-30	2313	-534.3	3.29	-11.99
288	SLU 14	-35	-20	2292	-529.45	3.25	-11.95
288	SLU 15	-35	-26	2305	-532.36	3.27	-11.97
288	SLU 16	-35	-20	2292	-529.45	3.25	-11.95
288	SLU 17	-35	-26	2305	-532.36	3.27	-11.97
288	SLU 18	-37	-21	2448	-562.95	3.51	-12.45
288	SLU 19	-37	-27	2461	-565.86	3.53	-12.47
288	SLU 20	-37	-21	2448	-562.95	3.51	-12.45
288	SLU 21	-37	-27	2461	-565.86	3.53	-12.47
288	SLU 22	-35	-19	2188	-508.11	3.08	-11.92
288	SLU 23	-35	-29	2209	-512.96	3.11	-11.96
288	SLU 24	-35	-19	2188	-508.11	3.08	-11.92
288	SLU 25	-35	-25	2201	-511.02	3.1	-11.94
288	SLU 26	-35	-29	2209	-512.96	3.11	-11.96
288	SLU 27	-35	-19	2188	-508.11	3.08	-11.92
288	SLU 28	-35	-25	2201	-511.02	3.1	-11.94
288	SLU 29	-35	-19	2188	-508.11	3.08	-11.92
288	SLU 30	-35	-25	2201	-511.02	3.1	-11.94
288	SLU 31	-39	-32	2575	-591.12	3.71	-13.12
288	SLU 32	-38	-22	2553	-586.28	3.67	-13.08
288	SLU 33	-38	-28	2566	-589.19	3.69	-13.11
288	SLU 34	-39	-32	2575	-591.12	3.71	-13.12
288	SLU 35	-38	-22	2553	-586.28	3.67	-13.08
288	SLU 36	-38	-28	2566	-589.19	3.69	-13.11
288	SLU 37	-38	-22	2553	-586.28	3.67	-13.08
288	SLU 38	-38	-28	2566	-589.19	3.69	-13.11
288	SLU 39	-40	-23	2710	-619.78	3.93	-13.58
288	SLU 40	-40	-29	2723	-622.69	3.95	-13.61
288	SLU 41	-40	-23	2710	-619.78	3.93	-13.58
288	SLU 42	-40	-29	2723	-622.69	3.95	-13.61
288	SLU 43	-40	-22	2415	-567.18	3.31	-13.63
288	SLU 44	-40	-32	2436	-572.03	3.35	-13.67
288	SLU 45	-40	-22	2415	-567.18	3.31	-13.63
288	SLU 46	-40	-28	2428	-570.09	3.33	-13.65
288	SLU 47	-40	-32	2436	-572.03	3.35	-13.67
288	SLU 48	-40	-22	2415	-567.18	3.31	-13.63
288	SLU 49	-40	-28	2428	-570.09	3.33	-13.65
288	SLU 50	-40	-22	2415	-567.18	3.31	-13.63
288	SLU 51	-40	-28	2428	-570.09	3.33	-13.65
288	SLU 52	-44	-34	2802	-650.2	3.94	-14.83
288	SLU 53	-43	-25	2780	-645.35	3.91	-14.79
288	SLU 54	-43	-31	2793	-648.26	3.93	-14.82
288	SLU 55	-44	-34	2802	-650.2	3.94	-14.83
288	SLU 56	-43	-25	2780	-645.35	3.91	-14.79
288	SLU 57	-43	-31	2793	-648.26	3.93	-14.82
288	SLU 58	-43	-25	2780	-645.35	3.91	-14.79
288	SLU 59	-43	-31	2793	-648.26	3.93	-14.82
288	SLU 60	-45	-26	2937	-678.85	4.16	-15.29
288	SLU 61	-45	-32	2949	-681.76	4.18	-15.32
288	SLU 62	-45	-26	2937	-678.85	4.16	-15.29
288	SLU 63	-45	-32	2949	-681.76	4.18	-15.32
288	SLU 64	-43	-24	2676	-624.01	3.73	-14.76
288	SLU 65	-43	-33	2698	-628.86	3.77	-14.8
288	SLU 66	-43	-24	2676	-624.01	3.73	-14.76
288	SLU 67	-43	-29	2689	-626.92	3.75	-14.79
288	SLU 68	-43	-33	2698	-628.86	3.77	-14.8
288	SLU 69	-43	-24	2676	-624.01	3.73	-14.76

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
288	SLU 70	-43	-29	2689	-626.92	3.75	-14.79
288	SLU 71	-43	-24	2676	-624.01	3.73	-14.76
288	SLU 72	-43	-29	2689	-626.92	3.75	-14.79
288	SLU 73	-47	-36	3063	-707.02	4.36	-15.97
288	SLU 74	-47	-26	3041	-702.18	4.33	-15.93
288	SLU 75	-47	-32	3054	-705.09	4.35	-15.95
288	SLU 76	-47	-36	3063	-707.02	4.36	-15.97
288	SLU 77	-47	-26	3041	-702.18	4.33	-15.93
288	SLU 78	-47	-32	3054	-705.09	4.35	-15.95
288	SLU 79	-47	-26	3041	-702.18	4.33	-15.93
288	SLU 80	-47	-32	3054	-705.09	4.35	-15.95
288	SLU 81	-48	-28	3198	-735.68	4.58	-16.43
288	SLU 82	-48	-34	3211	-738.59	4.6	-16.45
288	SLU 83	-48	-28	3198	-735.68	4.58	-16.43
288	SLU 84	-48	-34	3211	-738.59	4.6	-16.45
288	SLE RA 1	-33	-18	2001	-467.52	2.78	-11.11
288	SLE RA 2	-33	-24	2016	-470.75	2.8	-11.13
288	SLE RA 3	-33	-18	2001	-467.52	2.78	-11.11
288	SLE RA 4	-33	-22	2010	-469.46	2.79	-11.12
288	SLE RA 5	-33	-24	2016	-470.75	2.8	-11.13
288	SLE RA 6	-33	-18	2001	-467.52	2.78	-11.11
288	SLE RA 7	-33	-22	2010	-469.46	2.79	-11.12
288	SLE RA 8	-33	-18	2001	-467.52	2.78	-11.11
288	SLE RA 9	-33	-22	2010	-469.46	2.79	-11.12
288	SLE RA 10	-35	-26	2259	-522.86	3.2	-11.91
288	SLE RA 11	-35	-20	2245	-519.63	3.18	-11.88
288	SLE RA 12	-35	-24	2253	-521.57	3.19	-11.9
288	SLE RA 13	-35	-26	2259	-522.86	3.2	-11.91
288	SLE RA 14	-35	-20	2245	-519.63	3.18	-11.88
288	SLE RA 15	-35	-24	2253	-521.57	3.19	-11.9
288	SLE RA 16	-35	-20	2245	-519.63	3.18	-11.88
288	SLE RA 17	-35	-24	2253	-521.57	3.19	-11.9
288	SLE RA 18	-36	-20	2349	-541.96	3.35	-12.22
288	SLE RA 19	-36	-24	2358	-543.9	3.36	-12.23
288	SLE RA 20	-36	-20	2349	-541.96	3.35	-12.22
288	SLE RA 21	-36	-24	2358	-543.9	3.36	-12.23
288	SLE FR 1	-33	-18	2001	-467.52	2.78	-11.11
288	SLE FR 2	-33	-19	2004	-468.16	2.78	-11.11
288	SLE FR 3	-33	-18	2001	-467.52	2.78	-11.11
288	SLE FR 4	-34	-20	2108	-490.5	2.95	-11.45
288	SLE FR 5	-34	-19	2106	-489.85	2.95	-11.44
288	SLE FR 6	-34	-19	2175	-504.74	3.06	-11.66
288	SLE QP 1	-33	-18	2001	-467.52	2.78	-11.11
288	SLE QP 2	-34	-19	2106	-489.85	2.95	-11.44
288	SLD 1	181	73	2233	-522.56	4.07	63.64
288	SLD 2	139	40	2239	-523.44	4.11	49
288	SLD 3	165	-44	2452	-562.85	4.5	58.14
288	SLD 4	123	-77	2457	-563.72	4.54	43.49
288	SLD 5	71	199	1810	-438.25	2.61	24.67
288	SLD 6	28	166	1816	-439.14	2.65	9.8
288	SLD 7	17	-193	2539	-572.54	4.06	6.33
288	SLD 8	-26	-226	2545	-573.43	4.1	-8.55
288	SLD 9	-41	189	1666	-406.27	1.8	-14.33
288	SLD 10	-84	156	1672	-407.16	1.84	-29.21
288	SLD 11	-95	-203	2396	-540.56	3.25	-32.68
288	SLD 12	-138	-236	2401	-541.45	3.28	-47.55
288	SLD 13	-190	40	1754	-415.98	1.36	-66.37
288	SLD 14	-232	7	1759	-416.85	1.4	-81.02
288	SLD 15	-206	-77	1973	-456.27	1.79	-71.88
288	SLD 16	-248	-110	1978	-457.14	1.83	-86.52
288	SLV 1	455	191	2394	-563.98	5.49	159.11
288	SLV 2	359	116	2407	-565.97	5.57	125.89
288	SLV 3	418	-78	2893	-655.82	6.47	146.56
288	SLV 4	322	-152	2905	-657.81	6.56	113.34
288	SLV 5	203	477	1431	-372.09	2.18	70.63
288	SLV 6	106	402	1444	-374.11	2.27	36.92
288	SLV 7	80	-416	3094	-678.22	5.47	28.8
288	SLV 8	-17	-492	3106	-680.24	5.56	-4.91
288	SLV 9	-50	455	1105	-299.46	0.34	-17.97
288	SLV 10	-147	379	1117	-301.48	0.42	-51.68
288	SLV 11	-173	-439	2768	-605.59	3.63	-59.8
288	SLV 12	-270	-515	2780	-607.61	3.72	-93.51
288	SLV 13	-389	115	1306	-321.89	-0.66	-136.22
288	SLV 14	-485	40	1318	-323.88	-0.58	-169.44
288	SLV 15	-426	-153	1805	-413.73	0.32	-148.77
288	SLV 16	-522	-228	1817	-415.72	0.41	-181.99
288	CRTFP Ux+	0	0	0	0	0	0
288	CRTFP Ux-	0	0	0	0	0	0
288	CRTFP Uy+	0	0	0	0	0	0
288	CRTFP Uy-	0	0	0	0	0	0
289	SLU 1	-32	-9	1861	-409.38	1.54	-10.76
289	SLU 2	-32	-17	1882	-413.83	1.57	-10.8
289	SLU 3	-32	-9	1861	-409.38	1.54	-10.76
289	SLU 4	-32	-14	1874	-412.05	1.56	-10.78
289	SLU 5	-32	-17	1882	-413.83	1.57	-10.8
289	SLU 6	-32	-9	1861	-409.38	1.54	-10.76
289	SLU 7	-32	-14	1874	-412.05	1.56	-10.78

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
289	SLU 8	-32	-9	1861	-409.38	1.54	-10.76
289	SLU 9	-32	-14	1874	-412.05	1.56	-10.78
289	SLU 10	-35	-19	2233	-482.86	1.91	-11.98
289	SLU 11	-35	-10	2212	-478.42	1.89	-11.94
289	SLU 12	-35	-16	2224	-481.08	1.9	-11.96
289	SLU 13	-35	-19	2233	-482.86	1.91	-11.98
289	SLU 14	-35	-10	2212	-478.42	1.89	-11.94
289	SLU 15	-35	-16	2224	-481.08	1.9	-11.96
289	SLU 16	-35	-10	2212	-478.42	1.89	-11.94
289	SLU 17	-35	-16	2224	-481.08	1.9	-11.96
289	SLU 18	-37	-11	2362	-508	2.03	-12.44
289	SLU 19	-37	-16	2375	-510.67	2.05	-12.47
289	SLU 20	-37	-11	2362	-508	2.03	-12.44
289	SLU 21	-37	-16	2375	-510.67	2.05	-12.47
289	SLU 22	-35	-10	2113	-459.93	1.78	-11.9
289	SLU 23	-35	-19	2133	-464.38	1.8	-11.94
289	SLU 24	-35	-10	2113	-459.93	1.78	-11.9
289	SLU 25	-35	-15	2125	-462.6	1.79	-11.92
289	SLU 26	-35	-19	2133	-464.38	1.8	-11.94
289	SLU 27	-35	-10	2113	-459.93	1.78	-11.9
289	SLU 28	-35	-15	2125	-462.6	1.79	-11.92
289	SLU 29	-35	-10	2113	-459.93	1.78	-11.9
289	SLU 30	-35	-15	2125	-462.6	1.79	-11.92
289	SLU 31	-39	-20	2484	-533.41	2.14	-13.12
289	SLU 32	-38	-11	2463	-528.96	2.12	-13.08
289	SLU 33	-38	-17	2475	-531.63	2.13	-13.1
289	SLU 34	-39	-20	2484	-533.41	2.14	-13.12
289	SLU 35	-38	-11	2463	-528.96	2.12	-13.08
289	SLU 36	-38	-17	2475	-531.63	2.13	-13.1
289	SLU 37	-38	-11	2463	-528.96	2.12	-13.08
289	SLU 38	-38	-17	2475	-531.63	2.13	-13.1
289	SLU 39	-40	-12	2613	-558.55	2.27	-13.58
289	SLU 40	-40	-17	2626	-561.21	2.28	-13.61
289	SLU 41	-40	-12	2613	-558.55	2.27	-13.58
289	SLU 42	-40	-17	2626	-561.21	2.28	-13.61
289	SLU 43	-40	-11	2334	-514.87	1.93	-13.6
289	SLU 44	-40	-20	2354	-519.31	1.95	-13.64
289	SLU 45	-40	-11	2334	-514.87	1.93	-13.6
289	SLU 46	-40	-16	2346	-517.54	1.94	-13.62
289	SLU 47	-40	-20	2354	-519.31	1.95	-13.64
289	SLU 48	-40	-11	2334	-514.87	1.93	-13.6
289	SLU 49	-40	-16	2346	-517.54	1.94	-13.62
289	SLU 50	-40	-11	2334	-514.87	1.93	-13.6
289	SLU 51	-40	-16	2346	-517.54	1.94	-13.62
289	SLU 52	-44	-21	2705	-588.34	2.29	-14.82
289	SLU 53	-43	-12	2684	-583.9	2.27	-14.78
289	SLU 54	-43	-18	2696	-586.57	2.28	-14.8
289	SLU 55	-44	-21	2705	-588.34	2.29	-14.82
289	SLU 56	-43	-12	2684	-583.9	2.27	-14.78
289	SLU 57	-43	-18	2696	-586.57	2.28	-14.8
289	SLU 58	-43	-12	2684	-583.9	2.27	-14.78
289	SLU 59	-43	-18	2696	-586.57	2.28	-14.8
289	SLU 60	-45	-13	2834	-613.48	2.41	-15.28
289	SLU 61	-45	-18	2847	-616.15	2.43	-15.31
289	SLU 62	-45	-13	2834	-613.48	2.41	-15.28
289	SLU 63	-45	-18	2847	-616.15	2.43	-15.31
289	SLU 64	-43	-12	2585	-565.42	2.16	-14.73
289	SLU 65	-43	-21	2605	-569.86	2.18	-14.77
289	SLU 66	-43	-12	2585	-565.42	2.16	-14.73
289	SLU 67	-43	-17	2597	-568.08	2.17	-14.76
289	SLU 68	-43	-21	2605	-569.86	2.18	-14.77
289	SLU 69	-43	-12	2585	-565.42	2.16	-14.73
289	SLU 70	-43	-17	2597	-568.08	2.17	-14.76
289	SLU 71	-43	-12	2585	-565.42	2.16	-14.73
289	SLU 72	-43	-17	2597	-568.08	2.17	-14.76
289	SLU 73	-47	-22	2956	-638.89	2.53	-15.95
289	SLU 74	-47	-14	2935	-634.45	2.5	-15.91
289	SLU 75	-47	-19	2948	-637.11	2.52	-15.94
289	SLU 76	-47	-22	2956	-638.89	2.53	-15.95
289	SLU 77	-47	-14	2935	-634.45	2.5	-15.91
289	SLU 78	-47	-19	2948	-637.11	2.52	-15.94
289	SLU 79	-47	-14	2935	-634.45	2.5	-15.91
289	SLU 80	-47	-19	2948	-637.11	2.52	-15.94
289	SLU 81	-48	-14	3086	-664.03	2.65	-16.42
289	SLU 82	-48	-20	3098	-666.7	2.66	-16.44
289	SLU 83	-48	-14	3086	-664.03	2.65	-16.42
289	SLU 84	-48	-20	3098	-666.7	2.66	-16.44
289	SLE RA 1	-32	-9	1933	-423.83	1.61	-11.08
289	SLE RA 2	-33	-15	1947	-426.79	1.63	-11.11
289	SLE RA 3	-32	-9	1933	-423.83	1.61	-11.08
289	SLE RA 4	-33	-13	1941	-425.6	1.62	-11.1
289	SLE RA 5	-33	-15	1947	-426.79	1.63	-11.11
289	SLE RA 6	-32	-9	1933	-423.83	1.61	-11.08
289	SLE RA 7	-33	-13	1941	-425.6	1.62	-11.1
289	SLE RA 8	-32	-9	1933	-423.83	1.61	-11.08
289	SLE RA 9	-33	-13	1941	-425.6	1.62	-11.1
289	SLE RA 10	-35	-16	2181	-472.81	1.85	-11.9

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
289	SLE RA 11	-35	-10	2167	-469.85	1.84	-11.87
289	SLE RA 12	-35	-14	2175	-471.62	1.85	-11.89
289	SLE RA 13	-35	-16	2181	-472.81	1.85	-11.9
289	SLE RA 14	-35	-10	2167	-469.85	1.84	-11.87
289	SLE RA 15	-35	-14	2175	-471.62	1.85	-11.89
289	SLE RA 16	-35	-10	2167	-469.85	1.84	-11.87
289	SLE RA 17	-35	-14	2175	-471.62	1.85	-11.89
289	SLE RA 18	-36	-10	2267	-489.57	1.94	-12.21
289	SLE RA 19	-36	-14	2275	-491.35	1.95	-12.22
289	SLE RA 20	-36	-10	2267	-489.57	1.94	-12.21
289	SLE RA 21	-36	-14	2275	-491.35	1.95	-12.22
289	SLE FR 1	-32	-9	1933	-423.83	1.61	-11.08
289	SLE FR 2	-33	-10	1936	-424.42	1.61	-11.09
289	SLE FR 3	-32	-9	1933	-423.83	1.61	-11.08
289	SLE FR 4	-34	-11	2036	-444.14	1.71	-11.43
289	SLE FR 5	-33	-9	2033	-443.55	1.71	-11.42
289	SLE FR 6	-34	-10	2100	-456.7	1.77	-11.65
289	SLE QP 1	-32	-9	1933	-423.83	1.61	-11.08
289	SLE QP 2	-33	-9	2033	-443.55	1.71	-11.42
289	SLD 1	182	74	2128	-464.36	2.73	63.72
289	SLD 2	139	45	2132	-464.9	2.77	49.06
289	SLD 3	165	-34	2336	-498.47	3.01	58.23
289	SLD 4	123	-63	2340	-499.01	3.04	43.56
289	SLD 5	71	191	1745	-397.87	1.58	24.7
289	SLD 6	28	161	1749	-398.42	1.62	9.81
289	SLD 7	17	-171	2438	-511.57	2.51	6.39
289	SLD 8	-26	-200	2442	-512.11	2.54	-8.5
289	SLD 9	-41	182	1625	-374.99	0.87	-14.34
289	SLD 10	-84	152	1629	-375.53	0.91	-29.23
289	SLD 11	-95	-180	2317	-488.68	1.8	-32.65
289	SLD 12	-138	-209	2322	-489.23	1.84	-47.54
289	SLD 13	-190	44	1727	-388.09	0.37	-66.41
289	SLD 14	-232	15	1731	-388.63	0.41	-81.07
289	SLD 15	-206	-64	1934	-422.2	0.65	-71.9
289	SLD 16	-249	-93	1939	-422.74	0.69	-86.57
289	SLV 1	455	182	2247	-490.69	4.03	159.27
289	SLV 2	359	116	2257	-491.9	4.11	126.01
289	SLV 3	418	-66	2721	-568.43	4.67	146.74
289	SLV 4	322	-131	2730	-569.65	4.74	113.48
289	SLV 5	203	446	1375	-339.34	1.41	70.67
289	SLV 6	106	380	1385	-340.57	1.49	36.92
289	SLV 7	81	-378	2955	-598.5	3.53	28.91
289	SLV 8	-17	-444	2964	-599.73	3.61	-4.84
289	SLV 9	-50	426	1102	-287.37	-0.19	-18.01
289	SLV 10	-148	359	1112	-288.6	-0.11	-51.75
289	SLV 11	-173	-398	2681	-546.53	1.92	-59.77
289	SLV 12	-270	-465	2691	-547.76	2	-93.51
289	SLV 13	-389	113	1336	-317.45	-1.33	-136.32
289	SLV 14	-485	47	1346	-318.67	-1.25	-169.58
289	SLV 15	-426	-135	1810	-395.2	-0.69	-148.85
289	SLV 16	-522	-200	1819	-396.41	-0.62	-182.11
289	CRTFP Ux+	0	0	0	0	0	0
289	CRTFP Ux-	0	0	0	0	0	0
289	CRTFP Uy+	0	0	0	0	0	0
289	CRTFP Uy-	0	0	0	0	0	0
290	SLU 1	-31	0	1830	-394.19	0.46	-10.68
290	SLU 2	-32	-8	1850	-398.39	0.48	-10.72
290	SLU 3	-31	0	1830	-394.19	0.46	-10.68
290	SLU 4	-31	-5	1842	-396.71	0.47	-10.7
290	SLU 5	-32	-8	1850	-398.39	0.48	-10.72
290	SLU 6	-31	0	1830	-394.19	0.46	-10.68
290	SLU 7	-31	-5	1842	-396.71	0.47	-10.7
290	SLU 8	-31	0	1830	-394.19	0.46	-10.68
290	SLU 9	-31	-5	1842	-396.71	0.47	-10.7
290	SLU 10	-35	-8	2194	-464.26	0.58	-11.91
290	SLU 11	-35	0	2174	-460.06	0.56	-11.87
290	SLU 12	-35	-5	2186	-462.58	0.57	-11.89
290	SLU 13	-35	-8	2194	-464.26	0.58	-11.91
290	SLU 14	-35	0	2174	-460.06	0.56	-11.87
290	SLU 15	-35	-5	2186	-462.58	0.57	-11.89
290	SLU 16	-35	0	2174	-460.06	0.56	-11.87
290	SLU 17	-35	-5	2186	-462.58	0.57	-11.89
290	SLU 18	-36	0	2321	-488.29	0.6	-12.38
290	SLU 19	-36	-5	2333	-490.81	0.61	-12.4
290	SLU 20	-36	0	2321	-488.29	0.6	-12.38
290	SLU 21	-36	-5	2333	-490.81	0.61	-12.4
290	SLU 22	-35	0	2077	-442.81	0.52	-11.82
290	SLU 23	-35	-8	2097	-447.01	0.53	-11.85
290	SLU 24	-35	0	2077	-442.81	0.52	-11.82
290	SLU 25	-35	-5	2089	-445.33	0.53	-11.84
290	SLU 26	-35	-8	2097	-447.01	0.53	-11.85
290	SLU 27	-35	0	2077	-442.81	0.52	-11.82
290	SLU 28	-35	-5	2089	-445.33	0.53	-11.84
290	SLU 29	-35	0	2077	-442.81	0.52	-11.82
290	SLU 30	-35	-5	2089	-445.33	0.53	-11.84
290	SLU 31	-38	-9	2441	-512.87	0.63	-13.04
290	SLU 32	-38	-1	2421	-508.68	0.62	-13.01

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
290	SLU 33	-38	-6	2433	-511.19	0.63	-13.03
290	SLU 34	-38	-9	2441	-512.87	0.63	-13.04
290	SLU 35	-38	-1	2421	-508.68	0.62	-13.01
290	SLU 36	-38	-6	2433	-511.19	0.63	-13.03
290	SLU 37	-38	-1	2421	-508.68	0.62	-13.01
290	SLU 38	-38	-6	2433	-511.19	0.63	-13.03
290	SLU 39	-40	-1	2568	-536.9	0.66	-13.52
290	SLU 40	-40	-6	2580	-539.42	0.67	-13.54
290	SLU 41	-40	-1	2568	-536.9	0.66	-13.52
290	SLU 42	-40	-6	2580	-539.42	0.67	-13.54
290	SLU 43	-40	0	2295	-495.78	0.58	-13.5
290	SLU 44	-40	-8	2315	-499.98	0.6	-13.53
290	SLU 45	-40	0	2295	-495.78	0.58	-13.5
290	SLU 46	-40	-4	2307	-498.3	0.59	-13.52
290	SLU 47	-40	-8	2315	-499.98	0.6	-13.53
290	SLU 48	-40	0	2295	-495.78	0.58	-13.5
290	SLU 49	-40	-4	2307	-498.3	0.59	-13.52
290	SLU 50	-40	0	2295	-495.78	0.58	-13.5
290	SLU 51	-40	-4	2307	-498.3	0.59	-13.52
290	SLU 52	-43	-8	2659	-565.85	0.7	-14.72
290	SLU 53	-43	0	2639	-561.65	0.68	-14.69
290	SLU 54	-43	-5	2651	-564.17	0.69	-14.71
290	SLU 55	-43	-8	2659	-565.85	0.7	-14.72
290	SLU 56	-43	0	2639	-561.65	0.68	-14.69
290	SLU 57	-43	-5	2651	-564.17	0.69	-14.71
290	SLU 58	-43	0	2639	-561.65	0.68	-14.69
290	SLU 59	-43	-5	2651	-564.17	0.69	-14.71
290	SLU 60	-45	0	2786	-589.88	0.72	-15.2
290	SLU 61	-45	-5	2798	-592.4	0.73	-15.22
290	SLU 62	-45	0	2786	-589.88	0.72	-15.2
290	SLU 63	-45	-5	2798	-592.4	0.73	-15.22
290	SLU 64	-43	0	2541	-544.4	0.64	-14.63
290	SLU 65	-43	-8	2561	-548.6	0.66	-14.67
290	SLU 66	-43	0	2541	-544.4	0.64	-14.63
290	SLU 67	-43	-5	2553	-546.92	0.65	-14.65
290	SLU 68	-43	-8	2561	-548.6	0.66	-14.67
290	SLU 69	-43	0	2541	-544.4	0.64	-14.63
290	SLU 70	-43	-5	2553	-546.92	0.65	-14.65
290	SLU 71	-43	0	2541	-544.4	0.64	-14.63
290	SLU 72	-43	-5	2553	-546.92	0.65	-14.65
290	SLU 73	-47	-9	2905	-614.46	0.75	-15.86
290	SLU 74	-46	0	2885	-610.27	0.74	-15.82
290	SLU 75	-47	-5	2897	-612.78	0.75	-15.84
290	SLU 76	-47	-9	2905	-614.46	0.75	-15.86
290	SLU 77	-46	0	2885	-610.27	0.74	-15.82
290	SLU 78	-47	-5	2897	-612.78	0.75	-15.84
290	SLU 79	-46	0	2885	-610.27	0.74	-15.82
290	SLU 80	-47	-5	2897	-612.78	0.75	-15.84
290	SLU 81	-48	-1	3033	-638.5	0.78	-16.33
290	SLU 82	-48	-5	3045	-641.01	0.79	-16.35
290	SLU 83	-48	-1	3033	-638.5	0.78	-16.33
290	SLU 84	-48	-5	3045	-641.01	0.79	-16.35
290	SLE RA 1	-32	0	1901	-408.08	0.48	-11.01
290	SLE RA 2	-32	-5	1914	-410.88	0.49	-11.03
290	SLE RA 3	-32	0	1901	-408.08	0.48	-11.01
290	SLE RA 4	-32	-3	1909	-409.76	0.49	-11.02
290	SLE RA 5	-32	-5	1914	-410.88	0.49	-11.03
290	SLE RA 6	-32	0	1901	-408.08	0.48	-11.01
290	SLE RA 7	-32	-3	1909	-409.76	0.49	-11.02
290	SLE RA 8	-32	0	1901	-408.08	0.48	-11.01
290	SLE RA 9	-32	-3	1909	-409.76	0.49	-11.02
290	SLE RA 10	-35	-6	2143	-454.79	0.55	-11.82
290	SLE RA 11	-35	0	2130	-452	0.54	-11.8
290	SLE RA 12	-35	-3	2138	-453.67	0.55	-11.81
290	SLE RA 13	-35	-6	2143	-454.79	0.55	-11.82
290	SLE RA 14	-35	0	2130	-452	0.54	-11.8
290	SLE RA 15	-35	-3	2138	-453.67	0.55	-11.81
290	SLE RA 16	-35	0	2130	-452	0.54	-11.8
290	SLE RA 17	-35	-3	2138	-453.67	0.55	-11.81
290	SLE RA 18	-36	0	2228	-470.82	0.57	-12.14
290	SLE RA 19	-36	-4	2236	-472.49	0.58	-12.15
290	SLE RA 20	-36	0	2228	-470.82	0.57	-12.14
290	SLE RA 21	-36	-4	2236	-472.49	0.58	-12.15
290	SLE FR 1	-32	0	1901	-408.08	0.48	-11.01
290	SLE FR 2	-32	-1	1903	-408.64	0.48	-11.01
290	SLE FR 3	-32	0	1901	-408.08	0.48	-11.01
290	SLE FR 4	-33	-1	2002	-427.46	0.51	-11.35
290	SLE FR 5	-33	0	1999	-426.9	0.51	-11.35
290	SLE FR 6	-34	0	2064	-439.45	0.53	-11.57
290	SLE QP 1	-32	0	1901	-408.08	0.48	-11.01
290	SLE QP 2	-33	0	1999	-426.9	0.51	-11.35
290	SLD 1	182	76	2063	-437.46	1.45	63.83
290	SLD 2	140	51	2067	-437.79	1.48	49.15
290	SLD 3	166	-24	2265	-468.89	1.58	58.34
290	SLD 4	124	-49	2268	-469.23	1.61	43.66
290	SLD 5	71	184	1711	-382.27	0.58	24.78
290	SLD 6	28	158	1714	-382.61	0.61	9.88

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
290	SLD 7	17	-150	2384	-487.06	1.01	6.49
290	SLD 8	-26	-175	2387	-487.4	1.04	-8.41
290	SLD 9	-41	175	1611	-366.4	-0.03	-14.28
290	SLD 10	-84	150	1614	-366.74	0	-29.18
290	SLD 11	-94	-158	2284	-471.2	0.4	-32.57
290	SLD 12	-137	-184	2287	-471.54	0.43	-47.47
290	SLD 13	-190	49	1730	-384.58	-0.59	-66.35
290	SLD 14	-232	23	1733	-384.91	-0.56	-81.03
290	SLD 15	-206	-51	1931	-416.01	-0.46	-71.84
290	SLD 16	-248	-77	1935	-416.35	-0.43	-86.52
290	SLV 1	455	174	2144	-450.74	2.64	159.4
290	SLV 2	359	117	2151	-451.5	2.71	126.12
290	SLV 3	419	-54	2604	-522.4	2.94	146.89
290	SLV 4	323	-111	2611	-523.16	3.01	113.61
290	SLV 5	203	418	1342	-325.09	0.68	70.75
290	SLV 6	106	360	1350	-325.87	0.75	36.97
290	SLV 7	81	-341	2876	-563.97	1.66	29.05
290	SLV 8	-16	-399	2883	-564.74	1.73	-4.73
290	SLV 9	-50	399	1115	-289.07	-0.71	-17.96
290	SLV 10	-148	341	1122	-289.84	-0.64	-51.74
290	SLV 11	-172	-360	2648	-527.94	0.27	-59.66
290	SLV 12	-270	-418	2656	-528.71	0.34	-93.44
290	SLV 13	-389	111	1387	-330.65	-1.99	-136.3
290	SLV 14	-485	54	1394	-331.41	-1.92	-169.58
290	SLV 15	-426	-117	1847	-402.31	-1.7	-148.81
290	SLV 16	-522	-174	1854	-403.07	-1.63	-182.09
290	CRTFP Ux+	0	0	0	0	0	0
290	CRTFP Ux-	0	0	0	0	0	0
290	CRTFP Uy+	0	0	0	0	0	0
290	CRTFP Uy-	0	0	0	0	0	0
291	SLU 1	-31	9	1831	-403.3	-0.5	-10.55
291	SLU 2	-31	2	1851	-407.39	-0.49	-10.58
291	SLU 3	-31	9	1831	-403.3	-0.5	-10.55
291	SLU 4	-31	5	1843	-405.75	-0.5	-10.57
291	SLU 5	-31	2	1851	-407.39	-0.49	-10.58
291	SLU 6	-31	9	1831	-403.3	-0.5	-10.55
291	SLU 7	-31	5	1843	-405.75	-0.5	-10.57
291	SLU 8	-31	9	1831	-403.3	-0.5	-10.55
291	SLU 9	-31	5	1843	-405.75	-0.5	-10.57
291	SLU 10	-35	3	2195	-475.54	-0.62	-11.78
291	SLU 11	-34	10	2175	-471.45	-0.62	-11.74
291	SLU 12	-35	6	2187	-473.9	-0.62	-11.76
291	SLU 13	-35	3	2195	-475.54	-0.62	-11.78
291	SLU 14	-34	10	2175	-471.45	-0.62	-11.74
291	SLU 15	-35	6	2187	-473.9	-0.62	-11.76
291	SLU 16	-34	10	2175	-471.45	-0.62	-11.74
291	SLU 17	-35	6	2187	-473.9	-0.62	-11.76
291	SLU 18	-36	10	2323	-500.66	-0.68	-12.25
291	SLU 19	-36	6	2335	-503.11	-0.67	-12.28
291	SLU 20	-36	10	2323	-500.66	-0.68	-12.25
291	SLU 21	-36	6	2335	-503.11	-0.67	-12.28
291	SLU 22	-34	9	2079	-453.93	-0.61	-11.67
291	SLU 23	-34	2	2098	-458.03	-0.6	-11.71
291	SLU 24	-34	9	2079	-453.93	-0.61	-11.67
291	SLU 25	-34	5	2091	-456.39	-0.6	-11.69
291	SLU 26	-34	2	2098	-458.03	-0.6	-11.71
291	SLU 27	-34	9	2079	-453.93	-0.61	-11.67
291	SLU 28	-34	5	2091	-456.39	-0.6	-11.69
291	SLU 29	-34	9	2079	-453.93	-0.61	-11.67
291	SLU 30	-34	5	2091	-456.39	-0.6	-11.69
291	SLU 31	-38	3	2443	-526.18	-0.72	-12.9
291	SLU 32	-38	10	2423	-522.09	-0.73	-12.86
291	SLU 33	-38	6	2435	-524.54	-0.73	-12.89
291	SLU 34	-38	3	2443	-526.18	-0.72	-12.9
291	SLU 35	-38	10	2423	-522.09	-0.73	-12.86
291	SLU 36	-38	6	2435	-524.54	-0.73	-12.89
291	SLU 37	-38	10	2423	-522.09	-0.73	-12.86
291	SLU 38	-38	6	2435	-524.54	-0.73	-12.89
291	SLU 39	-39	10	2571	-551.3	-0.78	-13.38
291	SLU 40	-39	6	2582	-553.75	-0.78	-13.4
291	SLU 41	-39	10	2571	-551.3	-0.78	-13.38
291	SLU 42	-39	6	2582	-553.75	-0.78	-13.4
291	SLU 43	-39	12	2296	-506.93	-0.62	-13.33
291	SLU 44	-39	4	2315	-511.02	-0.61	-13.36
291	SLU 45	-39	12	2296	-506.93	-0.62	-13.33
291	SLU 46	-39	7	2307	-509.38	-0.61	-13.35
291	SLU 47	-39	4	2315	-511.02	-0.61	-13.36
291	SLU 48	-39	12	2296	-506.93	-0.62	-13.33
291	SLU 49	-39	7	2307	-509.38	-0.61	-13.35
291	SLU 50	-39	12	2296	-506.93	-0.62	-13.33
291	SLU 51	-39	7	2307	-509.38	-0.61	-13.35
291	SLU 52	-43	5	2660	-579.17	-0.73	-14.56
291	SLU 53	-43	13	2640	-575.08	-0.74	-14.52
291	SLU 54	-43	8	2652	-577.53	-0.73	-14.54
291	SLU 55	-43	5	2660	-579.17	-0.73	-14.56
291	SLU 56	-43	13	2640	-575.08	-0.74	-14.52
291	SLU 57	-43	8	2652	-577.53	-0.73	-14.54

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
291	SLU 58	-43	13	2640	-575.08	-0.74	-14.52
291	SLU 59	-43	8	2652	-577.53	-0.73	-14.54
291	SLU 60	-44	13	2787	-604.29	-0.79	-15.03
291	SLU 61	-44	9	2799	-606.74	-0.79	-15.06
291	SLU 62	-44	13	2787	-604.29	-0.79	-15.03
291	SLU 63	-44	9	2799	-606.74	-0.79	-15.06
291	SLU 64	-42	12	2543	-557.56	-0.72	-14.45
291	SLU 65	-43	4	2563	-561.65	-0.71	-14.49
291	SLU 66	-42	12	2543	-557.56	-0.72	-14.45
291	SLU 67	-42	7	2555	-560.02	-0.72	-14.47
291	SLU 68	-43	4	2563	-561.65	-0.71	-14.49
291	SLU 69	-42	12	2543	-557.56	-0.72	-14.45
291	SLU 70	-42	7	2555	-560.02	-0.72	-14.47
291	SLU 71	-42	12	2543	-557.56	-0.72	-14.45
291	SLU 72	-42	7	2555	-560.02	-0.72	-14.47
291	SLU 73	-46	5	2907	-629.81	-0.84	-15.68
291	SLU 74	-46	13	2888	-625.71	-0.85	-15.64
291	SLU 75	-46	8	2899	-628.17	-0.84	-15.67
291	SLU 76	-46	5	2907	-629.81	-0.84	-15.68
291	SLU 77	-46	13	2888	-625.71	-0.85	-15.64
291	SLU 78	-46	8	2899	-628.17	-0.84	-15.67
291	SLU 79	-46	13	2888	-625.71	-0.85	-15.64
291	SLU 80	-46	8	2899	-628.17	-0.84	-15.67
291	SLU 81	-47	13	3035	-654.92	-0.9	-16.16
291	SLU 82	-48	9	3047	-657.38	-0.89	-16.18
291	SLU 83	-47	13	3035	-654.92	-0.9	-16.16
291	SLU 84	-48	9	3047	-657.38	-0.89	-16.18
291	SLE RA 1	-32	9	1902	-417.77	-0.53	-10.87
291	SLE RA 2	-32	4	1915	-420.49	-0.53	-10.89
291	SLE RA 3	-32	9	1902	-417.77	-0.53	-10.87
291	SLE RA 4	-32	6	1910	-419.4	-0.53	-10.88
291	SLE RA 5	-32	4	1915	-420.49	-0.53	-10.89
291	SLE RA 6	-32	9	1902	-417.77	-0.53	-10.87
291	SLE RA 7	-32	6	1910	-419.4	-0.53	-10.88
291	SLE RA 8	-32	9	1902	-417.77	-0.53	-10.87
291	SLE RA 9	-32	6	1910	-419.4	-0.53	-10.88
291	SLE RA 10	-34	5	2145	-465.93	-0.61	-11.69
291	SLE RA 11	-34	10	2131	-463.2	-0.61	-11.66
291	SLE RA 12	-34	7	2139	-464.84	-0.61	-11.68
291	SLE RA 13	-34	5	2145	-465.93	-0.61	-11.69
291	SLE RA 14	-34	10	2131	-463.2	-0.61	-11.66
291	SLE RA 15	-34	7	2139	-464.84	-0.61	-11.68
291	SLE RA 16	-34	10	2131	-463.2	-0.61	-11.66
291	SLE RA 17	-34	7	2139	-464.84	-0.61	-11.68
291	SLE RA 18	-35	10	2230	-482.67	-0.65	-12.01
291	SLE RA 19	-35	7	2238	-484.31	-0.65	-12.02
291	SLE RA 20	-35	10	2230	-482.67	-0.65	-12.01
291	SLE RA 21	-35	7	2238	-484.31	-0.65	-12.02
291	SLE FR 1	-32	9	1902	-417.77	-0.53	-10.87
291	SLE FR 2	-32	8	1905	-418.31	-0.53	-10.87
291	SLE FR 3	-32	9	1902	-417.77	-0.53	-10.87
291	SLE FR 4	-33	8	2003	-437.78	-0.57	-11.21
291	SLE FR 5	-33	9	2000	-437.24	-0.57	-11.21
291	SLE FR 6	-34	9	2066	-450.22	-0.59	-11.44
291	SLE QP 1	-32	9	1902	-417.77	-0.53	-10.87
291	SLE QP 2	-33	9	2000	-437.24	-0.57	-11.21
291	SLD 1	182	79	2037	-439.18	0.27	63.94
291	SLD 2	140	58	2039	-439.41	0.3	49.26
291	SLD 3	166	-13	2237	-471.18	0.33	58.47
291	SLD 4	124	-35	2240	-471.41	0.36	43.79
291	SLD 5	71	178	1707	-389.21	-0.42	24.9
291	SLD 6	28	156	1709	-389.44	-0.39	9.99
291	SLD 7	18	-130	2374	-495.87	-0.22	6.64
291	SLD 8	-25	-152	2377	-496.1	-0.19	-8.27
291	SLD 9	-41	171	1624	-378.37	-0.95	-14.15
291	SLD 10	-84	149	1626	-378.61	-0.92	-29.05
291	SLD 11	-94	-138	2292	-485.03	-0.74	-32.41
291	SLD 12	-137	-160	2294	-485.27	-0.72	-47.31
291	SLD 13	-190	54	1761	-403.07	-1.49	-66.2
291	SLD 14	-232	32	1763	-403.3	-1.47	-80.88
291	SLD 15	-206	-39	1961	-435.06	-1.43	-71.68
291	SLD 16	-248	-61	1964	-435.29	-1.4	-86.36
291	SLV 1	455	169	2082	-441.51	1.33	159.49
291	SLV 2	360	120	2088	-442.03	1.39	126.2
291	SLV 3	419	-42	2539	-514.45	1.47	147
291	SLV 4	323	-91	2544	-514.97	1.53	113.71
291	SLV 5	203	394	1330	-327.7	-0.23	70.85
291	SLV 6	106	345	1336	-328.24	-0.17	37.06
291	SLV 7	82	-308	2853	-570.84	0.23	29.21
291	SLV 8	-15	-358	2858	-571.37	0.29	-4.58
291	SLV 9	-50	377	1142	-303.1	-1.43	-17.84
291	SLV 10	-148	327	1148	-303.63	-1.37	-51.63
291	SLV 11	-172	-326	2665	-546.24	-0.97	-59.48
291	SLV 12	-269	-376	2670	-546.77	-0.91	-93.26
291	SLV 13	-389	110	1456	-359.5	-2.67	-136.13
291	SLV 14	-485	61	1461	-360.03	-2.61	-169.42
291	SLV 15	-425	-101	1913	-432.44	-2.53	-148.62

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
291	SLV 16	-521	-150	1918	-432.97	-2.47	-181.91
291	CRTFP Ux+	0	0	0	0	0	0
291	CRTFP Ux-	0	0	0	0	0	0
291	CRTFP Uy+	0	0	0	0	0	0
291	CRTFP Uy-	0	0	0	0	0	0
292	SLU 1	-30	18	1859	-432.93	-1.27	-10.36
292	SLU 2	-31	11	1879	-437.04	-1.27	-10.39
292	SLU 3	-30	18	1859	-432.93	-1.27	-10.36
292	SLU 4	-30	14	1871	-435.4	-1.27	-10.38
292	SLU 5	-31	11	1879	-437.04	-1.27	-10.39
292	SLU 6	-30	18	1859	-432.93	-1.27	-10.36
292	SLU 7	-30	14	1871	-435.4	-1.27	-10.38
292	SLU 8	-30	18	1859	-432.93	-1.27	-10.36
292	SLU 9	-30	14	1871	-435.4	-1.27	-10.38
292	SLU 10	-34	13	2230	-512.09	-1.56	-11.59
292	SLU 11	-34	20	2210	-507.99	-1.57	-11.55
292	SLU 12	-34	16	2222	-510.45	-1.57	-11.57
292	SLU 13	-34	13	2230	-512.09	-1.56	-11.59
292	SLU 14	-34	20	2210	-507.99	-1.57	-11.55
292	SLU 15	-34	16	2222	-510.45	-1.57	-11.57
292	SLU 16	-34	20	2210	-507.99	-1.57	-11.55
292	SLU 17	-34	16	2222	-510.45	-1.57	-11.57
292	SLU 18	-35	21	2361	-540.15	-1.69	-12.06
292	SLU 19	-36	17	2372	-542.62	-1.69	-12.09
292	SLU 20	-35	21	2361	-540.15	-1.69	-12.06
292	SLU 21	-36	17	2372	-542.62	-1.69	-12.09
292	SLU 22	-34	18	2112	-488.93	-1.51	-11.46
292	SLU 23	-34	12	2132	-493.04	-1.5	-11.5
292	SLU 24	-34	18	2112	-488.93	-1.51	-11.46
292	SLU 25	-34	14	2124	-491.39	-1.5	-11.48
292	SLU 26	-34	12	2132	-493.04	-1.5	-11.5
292	SLU 27	-34	18	2112	-488.93	-1.51	-11.46
292	SLU 28	-34	14	2124	-491.39	-1.5	-11.48
292	SLU 29	-34	18	2112	-488.93	-1.51	-11.46
292	SLU 30	-34	14	2124	-491.39	-1.5	-11.48
292	SLU 31	-37	14	2483	-568.09	-1.8	-12.69
292	SLU 32	-37	21	2463	-563.99	-1.8	-12.66
292	SLU 33	-37	17	2475	-566.45	-1.8	-12.68
292	SLU 34	-37	14	2483	-568.09	-1.8	-12.69
292	SLU 35	-37	21	2463	-563.99	-1.8	-12.66
292	SLU 36	-37	17	2475	-566.45	-1.8	-12.68
292	SLU 37	-37	21	2463	-563.99	-1.8	-12.66
292	SLU 38	-37	17	2475	-566.45	-1.8	-12.68
292	SLU 39	-39	21	2614	-596.15	-1.93	-13.17
292	SLU 40	-39	17	2625	-598.62	-1.93	-13.19
292	SLU 41	-39	21	2614	-596.15	-1.93	-13.17
292	SLU 42	-39	17	2625	-598.62	-1.93	-13.19
292	SLU 43	-38	23	2330	-543.61	-1.57	-13.08
292	SLU 44	-39	16	2350	-547.72	-1.57	-13.12
292	SLU 45	-38	23	2330	-543.61	-1.57	-13.08
292	SLU 46	-38	19	2342	-546.08	-1.57	-13.11
292	SLU 47	-39	16	2350	-547.72	-1.57	-13.12
292	SLU 48	-38	23	2330	-543.61	-1.57	-13.08
292	SLU 49	-38	19	2342	-546.08	-1.57	-13.11
292	SLU 50	-38	23	2330	-543.61	-1.57	-13.08
292	SLU 51	-38	19	2342	-546.08	-1.57	-13.11
292	SLU 52	-42	18	2701	-622.77	-1.87	-14.32
292	SLU 53	-42	25	2681	-618.67	-1.87	-14.28
292	SLU 54	-42	21	2693	-621.13	-1.87	-14.3
292	SLU 55	-42	18	2701	-622.77	-1.87	-14.32
292	SLU 56	-42	25	2681	-618.67	-1.87	-14.28
292	SLU 57	-42	21	2693	-621.13	-1.87	-14.3
292	SLU 58	-42	25	2681	-618.67	-1.87	-14.28
292	SLU 59	-42	21	2693	-621.13	-1.87	-14.3
292	SLU 60	-43	26	2832	-650.83	-1.99	-14.79
292	SLU 61	-44	22	2843	-653.3	-1.99	-14.81
292	SLU 62	-43	26	2832	-650.83	-1.99	-14.79
292	SLU 63	-44	22	2843	-653.3	-1.99	-14.81
292	SLU 64	-42	24	2583	-599.61	-1.81	-14.19
292	SLU 65	-42	17	2603	-603.72	-1.8	-14.23
292	SLU 66	-42	24	2583	-599.61	-1.81	-14.19
292	SLU 67	-42	19	2595	-602.07	-1.81	-14.21
292	SLU 68	-42	17	2603	-603.72	-1.8	-14.23
292	SLU 69	-42	24	2583	-599.61	-1.81	-14.19
292	SLU 70	-42	19	2595	-602.07	-1.81	-14.21
292	SLU 71	-42	24	2583	-599.61	-1.81	-14.19
292	SLU 72	-42	19	2595	-602.07	-1.81	-14.21
292	SLU 73	-45	19	2954	-678.77	-2.1	-15.42
292	SLU 74	-45	26	2934	-674.67	-2.1	-15.39
292	SLU 75	-45	22	2946	-677.13	-2.1	-15.41
292	SLU 76	-45	19	2954	-678.77	-2.1	-15.42
292	SLU 77	-45	26	2934	-674.67	-2.1	-15.39
292	SLU 78	-45	22	2946	-677.13	-2.1	-15.41
292	SLU 79	-45	26	2934	-674.67	-2.1	-15.39
292	SLU 80	-45	22	2946	-677.13	-2.1	-15.41
292	SLU 81	-47	27	3085	-706.83	-2.23	-15.9
292	SLU 82	-47	23	3096	-709.3	-2.23	-15.92

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
292	SLU 83	-47	27	3085	-706.83	-2.23	-15.9
292	SLU 84	-47	23	3096	-709.3	-2.23	-15.92
292	SLE RA 1	-31	18	1932	-448.93	-1.34	-10.67
292	SLE RA 2	-31	13	1944	-451.67	-1.34	-10.7
292	SLE RA 3	-31	18	1932	-448.93	-1.34	-10.67
292	SLE RA 4	-31	15	1939	-450.57	-1.34	-10.69
292	SLE RA 5	-31	13	1944	-451.67	-1.34	-10.7
292	SLE RA 6	-31	18	1932	-448.93	-1.34	-10.67
292	SLE RA 7	-31	15	1939	-450.57	-1.34	-10.69
292	SLE RA 8	-31	18	1932	-448.93	-1.34	-10.67
292	SLE RA 9	-31	15	1939	-450.57	-1.34	-10.69
292	SLE RA 10	-34	15	2178	-501.71	-1.53	-11.49
292	SLE RA 11	-34	19	2165	-498.97	-1.53	-11.47
292	SLE RA 12	-34	17	2173	-500.61	-1.53	-11.48
292	SLE RA 13	-34	15	2178	-501.71	-1.53	-11.49
292	SLE RA 14	-34	19	2165	-498.97	-1.53	-11.47
292	SLE RA 15	-34	17	2173	-500.61	-1.53	-11.48
292	SLE RA 16	-34	19	2165	-498.97	-1.53	-11.47
292	SLE RA 17	-34	17	2173	-500.61	-1.53	-11.48
292	SLE RA 18	-35	20	2266	-520.41	-1.62	-11.81
292	SLE RA 19	-35	17	2274	-522.05	-1.62	-11.83
292	SLE RA 20	-35	20	2266	-520.41	-1.62	-11.81
292	SLE RA 21	-35	17	2274	-522.05	-1.62	-11.83
292	SLE FR 1	-31	18	1932	-448.93	-1.34	-10.67
292	SLE FR 2	-31	17	1934	-449.48	-1.34	-10.68
292	SLE FR 3	-31	18	1932	-448.93	-1.34	-10.67
292	SLE FR 4	-32	18	2034	-470.92	-1.42	-11.02
292	SLE FR 5	-32	19	2032	-470.38	-1.42	-11.01
292	SLE FR 6	-33	19	2099	-484.67	-1.48	-11.24
292	SLE QP 1	-31	18	1932	-448.93	-1.34	-10.67
292	SLE QP 2	-32	19	2032	-470.38	-1.42	-11.01
292	SLD 1	183	83	2043	-465.5	-0.59	64.08
292	SLD 2	140	65	2044	-465.66	-0.57	49.4
292	SLD 3	167	-3	2246	-500.78	-0.74	58.61
292	SLD 4	124	-22	2247	-500.95	-0.72	43.93
292	SLD 5	71	175	1727	-415.34	-0.95	25.05
292	SLD 6	28	157	1728	-415.51	-0.93	10.15
292	SLD 7	18	-112	2403	-532.95	-1.46	6.83
292	SLD 8	-24	-131	2405	-533.12	-1.44	-8.07
292	SLD 9	-40	168	1659	-407.63	-1.41	-13.96
292	SLD 10	-83	149	1660	-407.8	-1.39	-28.86
292	SLD 11	-93	-119	2335	-525.24	-1.92	-32.18
292	SLD 12	-136	-138	2337	-525.41	-1.9	-47.08
292	SLD 13	-189	59	1816	-439.8	-2.12	-65.96
292	SLD 14	-231	40	1818	-439.97	-2.1	-80.64
292	SLD 15	-205	-27	2019	-475.09	-2.28	-71.43
292	SLD 16	-247	-46	2021	-475.25	-2.25	-86.11
292	SLV 1	456	165	2056	-459.14	0.47	159.55
292	SLV 2	360	123	2059	-459.52	0.52	126.27
292	SLV 3	419	-32	2518	-539.58	0.12	147.08
292	SLV 4	324	-73	2522	-539.95	0.17	113.8
292	SLV 5	203	375	1336	-344.87	-0.34	70.96
292	SLV 6	106	333	1339	-345.25	-0.29	37.18
292	SLV 7	83	-280	2878	-613	-1.51	29.4
292	SLV 8	-15	-322	2882	-613.38	-1.46	-4.37
292	SLV 9	-50	359	1182	-327.37	-1.39	-17.66
292	SLV 10	-147	317	1185	-327.75	-1.34	-51.43
292	SLV 11	-171	-296	2724	-595.5	-2.55	-59.21
292	SLV 12	-268	-338	2728	-595.88	-2.5	-92.98
292	SLV 13	-388	110	1542	-400.8	-3.01	-135.83
292	SLV 14	-484	69	1545	-401.17	-2.96	-169.11
292	SLV 15	-425	-86	2004	-481.24	-3.36	-148.29
292	SLV 16	-520	-128	2008	-481.61	-3.31	-181.58
292	CRTFP Ux+	0	0	0	0	0	0
292	CRTFP Ux-	0	0	0	0	0	0
292	CRTFP Uy+	0	0	0	0	0	0
292	CRTFP Uy-	0	0	0	0	0	0
293	SLU 1	-30	26	1907	-477.93	-1.74	-10.11
293	SLU 2	-30	20	1926	-482.18	-1.74	-10.15
293	SLU 3	-30	26	1907	-477.93	-1.74	-10.11
293	SLU 4	-30	22	1918	-480.48	-1.74	-10.13
293	SLU 5	-30	20	1926	-482.18	-1.74	-10.15
293	SLU 6	-30	26	1907	-477.93	-1.74	-10.11
293	SLU 7	-30	22	1918	-480.48	-1.74	-10.13
293	SLU 8	-30	26	1907	-477.93	-1.74	-10.11
293	SLU 9	-30	22	1918	-480.48	-1.74	-10.13
293	SLU 10	-33	23	2288	-567.6	-2.14	-11.34
293	SLU 11	-33	30	2269	-563.35	-2.14	-11.31
293	SLU 12	-33	26	2280	-565.9	-2.14	-11.33
293	SLU 13	-33	23	2288	-567.6	-2.14	-11.34
293	SLU 14	-33	30	2269	-563.35	-2.14	-11.31
293	SLU 15	-33	26	2280	-565.9	-2.14	-11.33
293	SLU 16	-33	30	2269	-563.35	-2.14	-11.31
293	SLU 17	-33	26	2280	-565.9	-2.14	-11.33
293	SLU 18	-35	31	2424	-599.96	-2.31	-11.82
293	SLU 19	-35	27	2435	-602.51	-2.31	-11.84
293	SLU 20	-35	31	2424	-599.96	-2.31	-11.82

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
293	SLU 21	-35	27	2435	-602.51	-2.31	-11.84
293	SLU 22	-33	27	2168	-541.75	-2.05	-11.2
293	SLU 23	-33	21	2188	-545.99	-2.05	-11.23
293	SLU 24	-33	27	2168	-541.75	-2.05	-11.2
293	SLU 25	-33	24	2180	-544.29	-2.05	-11.22
293	SLU 26	-33	21	2188	-545.99	-2.05	-11.23
293	SLU 27	-33	27	2168	-541.75	-2.05	-11.2
293	SLU 28	-33	24	2180	-544.29	-2.05	-11.22
293	SLU 29	-33	27	2168	-541.75	-2.05	-11.2
293	SLU 30	-33	24	2180	-544.29	-2.05	-11.22
293	SLU 31	-36	25	2550	-631.41	-2.45	-12.42
293	SLU 32	-36	31	2530	-627.17	-2.44	-12.39
293	SLU 33	-36	27	2542	-629.72	-2.45	-12.41
293	SLU 34	-36	25	2550	-631.41	-2.45	-12.42
293	SLU 35	-36	31	2530	-627.17	-2.44	-12.39
293	SLU 36	-36	27	2542	-629.72	-2.45	-12.41
293	SLU 37	-36	31	2530	-627.17	-2.44	-12.39
293	SLU 38	-36	27	2542	-629.72	-2.45	-12.41
293	SLU 39	-38	32	2685	-663.78	-2.61	-12.9
293	SLU 40	-38	29	2697	-666.32	-2.62	-12.92
293	SLU 41	-38	32	2685	-663.78	-2.61	-12.9
293	SLU 42	-38	29	2697	-666.32	-2.62	-12.92
293	SLU 43	-37	34	2389	-599.43	-2.16	-12.78
293	SLU 44	-38	27	2409	-603.68	-2.16	-12.81
293	SLU 45	-37	34	2389	-599.43	-2.16	-12.78
293	SLU 46	-38	30	2401	-601.98	-2.16	-12.8
293	SLU 47	-38	27	2409	-603.68	-2.16	-12.81
293	SLU 48	-37	34	2389	-599.43	-2.16	-12.78
293	SLU 49	-38	30	2401	-601.98	-2.16	-12.8
293	SLU 50	-37	34	2389	-599.43	-2.16	-12.78
293	SLU 51	-38	30	2401	-601.98	-2.16	-12.8
293	SLU 52	-41	31	2770	-689.1	-2.56	-14
293	SLU 53	-41	37	2751	-684.85	-2.55	-13.97
293	SLU 54	-41	33	2763	-687.4	-2.55	-13.99
293	SLU 55	-41	31	2770	-689.1	-2.56	-14
293	SLU 56	-41	37	2751	-684.85	-2.55	-13.97
293	SLU 57	-41	33	2763	-687.4	-2.55	-13.99
293	SLU 58	-41	37	2751	-684.85	-2.55	-13.97
293	SLU 59	-41	33	2763	-687.4	-2.55	-13.99
293	SLU 60	-43	38	2906	-721.46	-2.72	-14.48
293	SLU 61	-43	35	2918	-724.01	-2.72	-14.5
293	SLU 62	-43	38	2906	-721.46	-2.72	-14.48
293	SLU 63	-43	35	2918	-724.01	-2.72	-14.5
293	SLU 64	-41	35	2651	-663.25	-2.46	-13.86
293	SLU 65	-41	29	2670	-667.49	-2.47	-13.89
293	SLU 66	-41	35	2651	-663.25	-2.46	-13.86
293	SLU 67	-41	31	2662	-665.79	-2.47	-13.88
293	SLU 68	-41	29	2670	-667.49	-2.47	-13.89
293	SLU 69	-41	35	2651	-663.25	-2.46	-13.86
293	SLU 70	-41	31	2662	-665.79	-2.47	-13.88
293	SLU 71	-41	35	2651	-663.25	-2.46	-13.86
293	SLU 72	-41	31	2662	-665.79	-2.47	-13.88
293	SLU 73	-44	32	3032	-752.91	-2.86	-15.09
293	SLU 74	-44	38	3012	-748.67	-2.86	-15.05
293	SLU 75	-44	35	3024	-751.22	-2.86	-15.07
293	SLU 76	-44	32	3032	-752.91	-2.86	-15.09
293	SLU 77	-44	38	3012	-748.67	-2.86	-15.05
293	SLU 78	-44	35	3024	-751.22	-2.86	-15.07
293	SLU 79	-44	38	3012	-748.67	-2.86	-15.05
293	SLU 80	-44	35	3024	-751.22	-2.86	-15.07
293	SLU 81	-46	40	3168	-785.28	-3.03	-15.56
293	SLU 82	-46	36	3179	-787.83	-3.03	-15.58
293	SLU 83	-46	40	3168	-785.28	-3.03	-15.56
293	SLU 84	-46	36	3179	-787.83	-3.03	-15.58
293	SLE RA 1	-31	27	1981	-496.17	-1.83	-10.42
293	SLE RA 2	-31	22	1994	-499	-1.83	-10.45
293	SLE RA 3	-31	27	1981	-496.17	-1.83	-10.42
293	SLE RA 4	-31	24	1989	-497.86	-1.83	-10.44
293	SLE RA 5	-31	22	1994	-499	-1.83	-10.45
293	SLE RA 6	-31	27	1981	-496.17	-1.83	-10.42
293	SLE RA 7	-31	24	1989	-497.86	-1.83	-10.44
293	SLE RA 8	-31	27	1981	-496.17	-1.83	-10.42
293	SLE RA 9	-31	24	1989	-497.86	-1.83	-10.44
293	SLE RA 10	-33	25	2236	-555.94	-2.09	-11.24
293	SLE RA 11	-33	29	2223	-553.11	-2.09	-11.22
293	SLE RA 12	-33	26	2231	-554.81	-2.09	-11.23
293	SLE RA 13	-33	25	2236	-555.94	-2.09	-11.24
293	SLE RA 14	-33	29	2223	-553.11	-2.09	-11.22
293	SLE RA 15	-33	26	2231	-554.81	-2.09	-11.23
293	SLE RA 16	-33	29	2223	-553.11	-2.09	-11.22
293	SLE RA 17	-33	26	2231	-554.81	-2.09	-11.23
293	SLE RA 18	-34	30	2326	-577.52	-2.2	-11.56
293	SLE RA 19	-34	27	2334	-579.22	-2.21	-11.57
293	SLE RA 20	-34	30	2326	-577.52	-2.2	-11.56
293	SLE RA 21	-34	27	2334	-579.22	-2.21	-11.57
293	SLE FR 1	-31	27	1981	-496.17	-1.83	-10.42
293	SLE FR 2	-31	26	1984	-496.73	-1.83	-10.43

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
293	SLE FR 3	-31	27	1981	-496.17	-1.83	-10.42
293	SLE FR 4	-32	27	2087	-521.14	-1.94	-10.77
293	SLE FR 5	-32	28	2085	-520.57	-1.94	-10.76
293	SLE FR 6	-32	28	2154	-536.84	-2.02	-10.99
293	SLE QP 1	-31	27	1981	-496.17	-1.83	-10.42
293	SLE QP 2	-32	28	2085	-520.57	-1.94	-10.76
293	SLD 1	183	87	2072	-510.76	-1.16	64.22
293	SLD 2	141	72	2073	-510.86	-1.14	49.56
293	SLD 3	167	6	2281	-551.31	-1.38	58.77
293	SLD 4	125	-9	2282	-551.4	-1.37	44.1
293	SLD 5	72	174	1764	-456.09	-1.37	25.25
293	SLD 6	29	159	1765	-456.19	-1.35	10.36
293	SLD 7	19	-97	2460	-591.26	-2.12	7.07
293	SLD 8	-24	-112	2461	-591.35	-2.1	-7.82
293	SLD 9	-40	167	1709	-449.79	-1.78	-13.71
293	SLD 10	-82	152	1710	-449.89	-1.76	-28.6
293	SLD 11	-92	-103	2404	-584.95	-2.53	-31.88
293	SLD 12	-135	-119	2405	-585.05	-2.51	-46.77
293	SLD 13	-188	64	1888	-489.74	-2.51	-65.63
293	SLD 14	-230	49	1889	-489.83	-2.49	-80.3
293	SLD 15	-204	-17	2097	-530.29	-2.74	-71.08
293	SLD 16	-246	-32	2097	-530.38	-2.72	-85.75
293	SLV 1	456	163	2055	-498.1	-0.17	159.56
293	SLV 2	360	129	2057	-498.32	-0.13	126.3
293	SLV 3	420	-22	2531	-590.55	-0.68	147.13
293	SLV 4	324	-56	2533	-590.77	-0.64	113.87
293	SLV 5	203	361	1354	-373.54	-0.65	71.08
293	SLV 6	106	326	1356	-373.76	-0.6	37.33
293	SLV 7	83	-256	2940	-681.7	-2.35	29.63
293	SLV 8	-14	-290	2942	-681.92	-2.31	-4.12
293	SLV 9	-49	345	1228	-359.22	-1.57	-17.41
293	SLV 10	-147	311	1230	-359.44	-1.53	-51.16
293	SLV 11	-169	-271	2814	-667.38	-3.27	-58.85
293	SLV 12	-267	-306	2816	-667.6	-3.23	-92.6
293	SLV 13	-387	111	1637	-450.37	-3.24	-135.4
293	SLV 14	-483	77	1639	-450.59	-3.2	-168.65
293	SLV 15	-423	-74	2113	-542.82	-3.75	-147.83
293	SLV 16	-519	-108	2115	-543.04	-3.71	-181.09
293	CRTFP Ux+	0	0	0	0	0	0
293	CRTFP Ux-	0	0	0	0	0	0
293	CRTFP Uy+	0	0	0	0	0	0
293	CRTFP Uy-	0	0	0	0	0	0
294	SLU 1	-29	34	1962	-531.77	-1.76	-9.81
294	SLU 2	-29	28	1982	-536.29	-1.77	-9.85
294	SLU 3	-29	34	1962	-531.77	-1.76	-9.81
294	SLU 4	-29	31	1974	-534.48	-1.77	-9.83
294	SLU 5	-29	28	1982	-536.29	-1.77	-9.85
294	SLU 6	-29	34	1962	-531.77	-1.76	-9.81
294	SLU 7	-29	31	1974	-534.48	-1.77	-9.83
294	SLU 8	-29	34	1962	-531.77	-1.76	-9.81
294	SLU 9	-29	31	1974	-534.48	-1.77	-9.83
294	SLU 10	-32	33	2356	-634.04	-2.17	-11.03
294	SLU 11	-32	39	2337	-629.52	-2.16	-11
294	SLU 12	-32	35	2348	-632.23	-2.16	-11.02
294	SLU 13	-32	33	2356	-634.04	-2.17	-11.03
294	SLU 14	-32	39	2337	-629.52	-2.16	-11
294	SLU 15	-32	35	2348	-632.23	-2.16	-11.02
294	SLU 16	-32	39	2337	-629.52	-2.16	-11
294	SLU 17	-32	35	2348	-632.23	-2.16	-11.02
294	SLU 18	-34	41	2497	-671.41	-2.33	-11.51
294	SLU 19	-34	37	2509	-674.12	-2.33	-11.52
294	SLU 20	-34	41	2497	-671.41	-2.33	-11.51
294	SLU 21	-34	37	2509	-674.12	-2.33	-11.52
294	SLU 22	-32	36	2233	-604.7	-2.07	-10.87
294	SLU 23	-32	30	2253	-609.21	-2.08	-10.9
294	SLU 24	-32	36	2233	-604.7	-2.07	-10.87
294	SLU 25	-32	33	2245	-607.4	-2.07	-10.89
294	SLU 26	-32	30	2253	-609.21	-2.08	-10.9
294	SLU 27	-32	36	2233	-604.7	-2.07	-10.87
294	SLU 28	-32	33	2245	-607.4	-2.07	-10.89
294	SLU 29	-32	36	2233	-604.7	-2.07	-10.87
294	SLU 30	-32	33	2245	-607.4	-2.07	-10.89
294	SLU 31	-35	35	2628	-706.96	-2.47	-12.08
294	SLU 32	-35	41	2608	-702.45	-2.46	-12.05
294	SLU 33	-35	37	2620	-705.16	-2.47	-12.07
294	SLU 34	-35	35	2628	-706.96	-2.47	-12.08
294	SLU 35	-35	41	2608	-702.45	-2.46	-12.05
294	SLU 36	-35	37	2620	-705.16	-2.47	-12.07
294	SLU 37	-35	41	2608	-702.45	-2.46	-12.05
294	SLU 38	-35	37	2620	-705.16	-2.47	-12.07
294	SLU 39	-37	43	2768	-744.34	-2.63	-12.56
294	SLU 40	-37	39	2780	-747.05	-2.64	-12.58
294	SLU 41	-37	43	2768	-744.34	-2.63	-12.56
294	SLU 42	-37	39	2780	-747.05	-2.64	-12.58
294	SLU 43	-36	44	2458	-666.3	-2.19	-12.4
294	SLU 44	-36	38	2478	-670.81	-2.2	-12.43
294	SLU 45	-36	44	2458	-666.3	-2.19	-12.4

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
294	SLU 46	-36	40	2470	-669.01	-2.19	-12.42
294	SLU 47	-36	38	2478	-670.81	-2.2	-12.43
294	SLU 48	-36	44	2458	-666.3	-2.19	-12.4
294	SLU 49	-36	40	2470	-669.01	-2.19	-12.42
294	SLU 50	-36	44	2458	-666.3	-2.19	-12.4
294	SLU 51	-36	40	2470	-669.01	-2.19	-12.42
294	SLU 52	-40	43	2852	-768.56	-2.59	-13.61
294	SLU 53	-40	48	2832	-764.05	-2.58	-13.58
294	SLU 54	-40	45	2844	-766.76	-2.59	-13.6
294	SLU 55	-40	43	2852	-768.56	-2.59	-13.61
294	SLU 56	-40	48	2832	-764.05	-2.58	-13.58
294	SLU 57	-40	45	2844	-766.76	-2.59	-13.6
294	SLU 58	-40	48	2832	-764.05	-2.58	-13.58
294	SLU 59	-40	45	2844	-766.76	-2.59	-13.6
294	SLU 60	-41	50	2993	-805.94	-2.75	-14.09
294	SLU 61	-41	47	3005	-808.65	-2.76	-14.11
294	SLU 62	-41	50	2993	-805.94	-2.75	-14.09
294	SLU 63	-41	47	3005	-808.65	-2.76	-14.11
294	SLU 64	-39	46	2729	-739.22	-2.49	-13.45
294	SLU 65	-40	40	2749	-743.74	-2.5	-13.48
294	SLU 66	-39	46	2729	-739.22	-2.49	-13.45
294	SLU 67	-39	42	2741	-741.93	-2.5	-13.47
294	SLU 68	-40	40	2749	-743.74	-2.5	-13.48
294	SLU 69	-39	46	2729	-739.22	-2.49	-13.45
294	SLU 70	-39	42	2741	-741.93	-2.5	-13.47
294	SLU 71	-39	46	2729	-739.22	-2.49	-13.45
294	SLU 72	-39	42	2741	-741.93	-2.5	-13.47
294	SLU 73	-43	44	3123	-841.49	-2.9	-14.67
294	SLU 74	-43	50	3104	-836.97	-2.88	-14.63
294	SLU 75	-43	47	3115	-839.68	-2.89	-14.65
294	SLU 76	-43	44	3123	-841.49	-2.9	-14.67
294	SLU 77	-43	50	3104	-836.97	-2.88	-14.63
294	SLU 78	-43	47	3115	-839.68	-2.89	-14.65
294	SLU 79	-43	50	3104	-836.97	-2.88	-14.63
294	SLU 80	-43	47	3115	-839.68	-2.89	-14.65
294	SLU 81	-44	52	3264	-878.87	-3.05	-15.14
294	SLU 82	-44	49	3276	-881.58	-3.06	-15.16
294	SLU 83	-44	52	3264	-878.87	-3.05	-15.14
294	SLU 84	-44	49	3276	-881.58	-3.06	-15.16
294	SLE RA 1	-30	35	2040	-552.61	-1.85	-10.11
294	SLE RA 2	-30	31	2053	-555.62	-1.86	-10.14
294	SLE RA 3	-30	35	2040	-552.61	-1.85	-10.11
294	SLE RA 4	-30	32	2048	-554.41	-1.85	-10.13
294	SLE RA 5	-30	31	2053	-555.62	-1.86	-10.14
294	SLE RA 6	-30	35	2040	-552.61	-1.85	-10.11
294	SLE RA 7	-30	32	2048	-554.41	-1.85	-10.13
294	SLE RA 8	-30	35	2040	-552.61	-1.85	-10.11
294	SLE RA 9	-30	32	2048	-554.41	-1.85	-10.13
294	SLE RA 10	-32	34	2302	-620.78	-2.12	-10.93
294	SLE RA 11	-32	38	2289	-617.77	-2.11	-10.9
294	SLE RA 12	-32	36	2297	-619.58	-2.12	-10.92
294	SLE RA 13	-32	34	2302	-620.78	-2.12	-10.93
294	SLE RA 14	-32	38	2289	-617.77	-2.11	-10.9
294	SLE RA 15	-32	36	2297	-619.58	-2.12	-10.92
294	SLE RA 16	-32	38	2289	-617.77	-2.11	-10.9
294	SLE RA 17	-32	36	2297	-619.58	-2.12	-10.92
294	SLE RA 18	-33	39	2396	-645.7	-2.22	-11.24
294	SLE RA 19	-33	37	2404	-647.51	-2.23	-11.26
294	SLE RA 20	-33	39	2396	-645.7	-2.22	-11.24
294	SLE RA 21	-33	37	2404	-647.51	-2.23	-11.26
294	SLE FR 1	-30	35	2040	-552.61	-1.85	-10.11
294	SLE FR 2	-30	34	2042	-553.21	-1.85	-10.12
294	SLE FR 3	-30	35	2040	-552.61	-1.85	-10.11
294	SLE FR 4	-31	35	2149	-581.14	-1.96	-10.46
294	SLE FR 5	-31	36	2147	-580.54	-1.96	-10.45
294	SLE FR 6	-31	37	2218	-599.15	-2.04	-10.68
294	SLE QP 1	-30	35	2040	-552.61	-1.85	-10.11
294	SLE QP 2	-31	36	2147	-580.54	-1.96	-10.45
294	SLD 1	184	92	2113	-567.51	-1.24	64.38
294	SLD 2	141	80	2113	-567.52	-1.23	49.74
294	SLD 3	168	14	2329	-614.32	-1.48	58.95
294	SLD 4	126	2	2329	-614.32	-1.46	44.3
294	SLD 5	72	174	1809	-505.63	-1.39	25.48
294	SLD 6	30	162	1810	-505.64	-1.38	10.61
294	SLD 7	20	-84	2528	-661.66	-2.18	7.36
294	SLD 8	-23	-96	2529	-661.66	-2.17	-7.51
294	SLD 9	-39	168	1765	-499.41	-1.76	-13.4
294	SLD 10	-81	156	1765	-499.41	-1.74	-28.27
294	SLD 11	-91	-90	2484	-655.43	-2.54	-31.52
294	SLD 12	-134	-102	2484	-655.44	-2.53	-46.38
294	SLD 13	-187	70	1964	-546.75	-2.46	-65.21
294	SLD 14	-229	58	1965	-546.75	-2.45	-79.86
294	SLD 15	-203	-8	2180	-593.55	-2.7	-70.65
294	SLD 16	-245	-19	2181	-593.56	-2.68	-85.29
294	SLV 1	456	162	2068	-550.73	-0.32	159.53
294	SLV 2	360	136	2069	-550.74	-0.29	126.32
294	SLV 3	420	-14	2561	-657.46	-0.86	147.14

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
294	SLV 4	325	-40	2561	-657.47	-0.83	113.93
294	SLV 5	204	351	1377	-409.71	-0.67	71.21
294	SLV 6	107	324	1378	-409.73	-0.63	37.5
294	SLV 7	85	-237	3017	-765.48	-2.46	29.9
294	SLV 8	-12	-264	3018	-765.5	-2.43	-3.8
294	SLV 9	-49	336	1276	-395.57	-1.5	-17.11
294	SLV 10	-146	309	1277	-395.59	-1.46	-50.81
294	SLV 11	-168	-252	2916	-751.34	-3.29	-58.41
294	SLV 12	-265	-279	2917	-751.36	-3.26	-92.11
294	SLV 13	-386	113	1732	-503.6	-3.09	-134.84
294	SLV 14	-481	86	1733	-503.61	-3.06	-168.05
294	SLV 15	-422	-64	2224	-610.33	-3.63	-147.23
294	SLV 16	-517	-90	2225	-610.34	-3.6	-180.44
294	CRTFP Ux+	0	0	0	0	0	0
294	CRTFP Ux-	0	0	0	0	0	0
294	CRTFP Uy+	0	0	0	0	0	0
294	CRTFP Uy-	0	0	0	0	0	0
295	SLU 1	-25	37	1817	-530.32	32.92	-9.29
295	SLU 2	-25	32	1836	-534.77	33.25	-9.23
295	SLU 3	-25	37	1817	-530.32	32.92	-9.29
295	SLU 4	-25	34	1828	-532.99	33.12	-9.25
295	SLU 5	-25	32	1836	-534.77	33.25	-9.23
295	SLU 6	-25	37	1817	-530.32	32.92	-9.29
295	SLU 7	-25	34	1828	-532.99	33.12	-9.25
295	SLU 8	-25	37	1817	-530.32	32.92	-9.29
295	SLU 9	-25	34	1828	-532.99	33.12	-9.25
295	SLU 10	-28	37	2183	-634.36	39.53	-10.38
295	SLU 11	-28	43	2165	-629.92	39.21	-10.45
295	SLU 12	-28	39	2176	-632.58	39.4	-10.41
295	SLU 13	-28	37	2183	-634.36	39.53	-10.38
295	SLU 14	-28	43	2165	-629.92	39.21	-10.45
295	SLU 15	-28	39	2176	-632.58	39.4	-10.41
295	SLU 16	-28	43	2165	-629.92	39.21	-10.45
295	SLU 17	-28	39	2176	-632.58	39.4	-10.41
295	SLU 18	-29	45	2314	-672.6	41.9	-10.95
295	SLU 19	-30	42	2325	-675.27	42.1	-10.91
295	SLU 20	-29	45	2314	-672.6	41.9	-10.95
295	SLU 21	-30	42	2325	-675.27	42.1	-10.91
295	SLU 22	-28	40	2070	-604.35	37.47	-10.26
295	SLU 23	-28	35	2088	-608.79	37.8	-10.19
295	SLU 24	-28	40	2070	-604.35	37.47	-10.26
295	SLU 25	-28	37	2081	-607.02	37.67	-10.22
295	SLU 26	-28	35	2088	-608.79	37.8	-10.19
295	SLU 27	-28	40	2070	-604.35	37.47	-10.26
295	SLU 28	-28	37	2081	-607.02	37.67	-10.22
295	SLU 29	-28	40	2070	-604.35	37.47	-10.26
295	SLU 30	-28	37	2081	-607.02	37.67	-10.22
295	SLU 31	-31	40	2436	-708.39	44.08	-11.35
295	SLU 32	-31	45	2418	-703.94	43.76	-11.42
295	SLU 33	-31	42	2429	-706.61	43.95	-11.38
295	SLU 34	-31	40	2436	-708.39	44.08	-11.35
295	SLU 35	-31	45	2418	-703.94	43.76	-11.42
295	SLU 36	-31	42	2429	-706.61	43.95	-11.38
295	SLU 37	-31	45	2418	-703.94	43.76	-11.42
295	SLU 38	-31	42	2429	-706.61	43.95	-11.38
295	SLU 39	-32	47	2567	-746.63	46.45	-11.92
295	SLU 40	-32	44	2578	-749.29	46.65	-11.88
295	SLU 41	-32	47	2567	-746.63	46.45	-11.92
295	SLU 42	-32	44	2578	-749.29	46.65	-11.88
295	SLU 43	-32	48	2276	-664.04	41.24	-11.75
295	SLU 44	-32	43	2294	-668.48	41.57	-11.68
295	SLU 45	-32	48	2276	-664.04	41.24	-11.75
295	SLU 46	-32	45	2287	-666.71	41.43	-11.71
295	SLU 47	-32	43	2294	-668.48	41.57	-11.68
295	SLU 48	-32	48	2276	-664.04	41.24	-11.75
295	SLU 49	-32	45	2287	-666.71	41.43	-11.71
295	SLU 50	-32	48	2276	-664.04	41.24	-11.75
295	SLU 51	-32	45	2287	-666.71	41.43	-11.71
295	SLU 52	-35	48	2642	-768.08	47.85	-12.84
295	SLU 53	-35	53	2624	-763.63	47.52	-12.91
295	SLU 54	-35	50	2635	-766.3	47.72	-12.87
295	SLU 55	-35	48	2642	-768.08	47.85	-12.84
295	SLU 56	-35	53	2624	-763.63	47.52	-12.91
295	SLU 57	-35	50	2635	-766.3	47.72	-12.87
295	SLU 58	-35	53	2624	-763.63	47.52	-12.91
295	SLU 59	-35	50	2635	-766.3	47.72	-12.87
295	SLU 60	-36	55	2773	-806.32	50.21	-13.41
295	SLU 61	-36	52	2784	-808.98	50.41	-13.37
295	SLU 62	-36	55	2773	-806.32	50.21	-13.41
295	SLU 63	-36	52	2784	-808.98	50.41	-13.37
295	SLU 64	-34	50	2528	-738.07	45.79	-12.72
295	SLU 65	-34	45	2547	-742.51	46.12	-12.65
295	SLU 66	-34	50	2528	-738.07	45.79	-12.72
295	SLU 67	-34	47	2539	-740.73	45.99	-12.68
295	SLU 68	-34	45	2547	-742.51	46.12	-12.65
295	SLU 69	-34	50	2528	-738.07	45.79	-12.72
295	SLU 70	-34	47	2539	-740.73	45.99	-12.68

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
295	SLU 71	-34	50	2528	-738.07	45.79	-12.72
295	SLU 72	-34	47	2539	-740.73	45.99	-12.68
295	SLU 73	-38	50	2895	-842.1	52.4	-13.81
295	SLU 74	-37	55	2876	-837.66	52.07	-13.88
295	SLU 75	-37	52	2887	-840.33	52.27	-13.84
295	SLU 76	-38	50	2895	-842.1	52.4	-13.81
295	SLU 77	-37	55	2876	-837.66	52.07	-13.88
295	SLU 78	-37	52	2887	-840.33	52.27	-13.84
295	SLU 79	-37	55	2876	-837.66	52.07	-13.88
295	SLU 80	-37	52	2887	-840.33	52.27	-13.84
295	SLU 81	-39	57	3025	-880.34	54.77	-14.37
295	SLU 82	-39	54	3036	-883.01	54.96	-14.33
295	SLU 83	-39	57	3025	-880.34	54.77	-14.37
295	SLU 84	-39	54	3036	-883.01	54.96	-14.33
295	SLE RA 1	-26	38	1889	-551.47	34.22	-9.57
295	SLE RA 2	-26	35	1902	-554.44	34.44	-9.53
295	SLE RA 3	-26	38	1889	-551.47	34.22	-9.57
295	SLE RA 4	-26	36	1897	-553.25	34.35	-9.54
295	SLE RA 5	-26	35	1902	-554.44	34.44	-9.53
295	SLE RA 6	-26	38	1889	-551.47	34.22	-9.57
295	SLE RA 7	-26	36	1897	-553.25	34.35	-9.54
295	SLE RA 8	-26	38	1889	-551.47	34.22	-9.57
295	SLE RA 9	-26	36	1897	-553.25	34.35	-9.54
295	SLE RA 10	-28	38	2134	-620.83	38.63	-10.3
295	SLE RA 11	-28	41	2121	-617.87	38.41	-10.34
295	SLE RA 12	-28	39	2129	-619.65	38.54	-10.32
295	SLE RA 13	-28	38	2134	-620.83	38.63	-10.3
295	SLE RA 14	-28	41	2121	-617.87	38.41	-10.34
295	SLE RA 15	-28	39	2129	-619.65	38.54	-10.32
295	SLE RA 16	-28	41	2121	-617.87	38.41	-10.34
295	SLE RA 17	-28	39	2129	-619.65	38.54	-10.32
295	SLE RA 18	-29	43	2221	-646.33	40.21	-10.67
295	SLE RA 19	-29	41	2228	-648.1	40.34	-10.65
295	SLE RA 20	-29	43	2221	-646.33	40.21	-10.67
295	SLE RA 21	-29	41	2228	-648.1	40.34	-10.65
295	SLE FR 1	-26	38	1889	-551.47	34.22	-9.57
295	SLE FR 2	-26	37	1892	-552.07	34.27	-9.56
295	SLE FR 3	-26	38	1889	-551.47	34.22	-9.57
295	SLE FR 4	-27	39	1991	-580.52	36.06	-9.89
295	SLE FR 5	-27	40	1989	-579.93	36.02	-9.9
295	SLE FR 6	-27	41	2055	-598.9	37.21	-10.12
295	SLE QP 1	-26	38	1889	-551.47	34.22	-9.57
295	SLE QP 2	-27	40	1989	-579.93	36.02	-9.9
295	SLD 1	167	87	1942	-566.7	35.57	52.96
295	SLD 2	129	79	1942	-566.62	35.58	39.85
295	SLD 3	153	19	2143	-614.42	39.18	57.48
295	SLD 4	115	12	2143	-614.35	39.19	44.38
295	SLD 5	66	159	1670	-503.6	30.4	6.78
295	SLD 6	28	152	1670	-503.52	30.41	-6.53
295	SLD 7	19	-67	2340	-662.69	42.45	21.86
295	SLD 8	-19	-74	2340	-662.61	42.45	8.56
295	SLD 9	-34	154	1638	-497.24	29.58	-28.36
295	SLD 10	-73	146	1638	-497.17	29.59	-41.67
295	SLD 11	-81	-73	2307	-656.34	41.63	-13.28
295	SLD 12	-120	-80	2307	-656.26	41.64	-26.58
295	SLD 13	-168	67	1835	-545.51	32.84	-64.18
295	SLD 14	-206	60	1835	-545.43	32.85	-77.29
295	SLD 15	-182	0	2035	-593.24	36.46	-59.65
295	SLD 16	-220	-8	2035	-593.16	36.47	-72.76
295	SLV 1	413	148	1882	-549.63	34.98	132.83
295	SLV 2	326	131	1882	-549.46	35	103.11
295	SLV 3	381	-7	2340	-658.48	43.22	143.15
295	SLV 4	294	-24	2340	-658.3	43.24	113.43
295	SLV 5	185	313	1262	-405.82	23.2	27.89
295	SLV 6	97	295	1262	-405.64	23.22	-2.27
295	SLV 7	78	-203	2789	-768.64	50.67	62.28
295	SLV 8	-10	-220	2789	-768.46	50.69	32.12
295	SLV 9	-43	299	1189	-391.4	21.34	-51.93
295	SLV 10	-131	282	1189	-391.22	21.36	-82.09
295	SLV 11	-151	-216	2715	-754.21	48.82	-17.54
295	SLV 12	-238	-234	2715	-754.04	48.84	-47.7
295	SLV 13	-348	103	1638	-501.55	28.79	-133.23
295	SLV 14	-434	86	1638	-501.38	28.81	-162.96
295	SLV 15	-380	-52	2096	-610.4	37.03	-122.92
295	SLV 16	-466	-69	2096	-610.22	37.05	-152.64
295	CRTFP Ux+	0	0	0	0	0	0
295	CRTFP Ux-	0	0	0	0	0	0
295	CRTFP Uy+	0	0	0	0	0	0
295	CRTFP Uy-	0	0	0	0	0	0
297	SLU 1	-77	133	5763	-1386.08	-18.77	-17.16
297	SLU 2	-77	118	5824	-1399.19	-19.29	-17.22
297	SLU 3	-77	133	5763	-1386.08	-18.77	-17.16
297	SLU 4	-77	124	5800	-1393.94	-19.08	-17.2
297	SLU 5	-77	118	5824	-1399.19	-19.29	-17.22
297	SLU 6	-77	133	5763	-1386.08	-18.77	-17.16
297	SLU 7	-77	124	5800	-1393.94	-19.08	-17.2
297	SLU 8	-77	133	5763	-1386.08	-18.77	-17.16

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
297	SLU 9	-77	124	5800	-1393.94	-19.08	-17.2
297	SLU 10	-87	136	6927	-1664.24	-22.3	-19.36
297	SLU 11	-87	151	6866	-1651.13	-21.79	-19.29
297	SLU 12	-87	142	6903	-1659	-22.1	-19.33
297	SLU 13	-87	136	6927	-1664.24	-22.3	-19.36
297	SLU 14	-87	151	6866	-1651.13	-21.79	-19.29
297	SLU 15	-87	142	6903	-1659	-22.1	-19.33
297	SLU 16	-87	151	6866	-1651.13	-21.79	-19.29
297	SLU 17	-87	142	6903	-1659	-22.1	-19.33
297	SLU 18	-91	159	7339	-1764.73	-23.08	-20.21
297	SLU 19	-91	150	7376	-1772.59	-23.39	-20.25
297	SLU 20	-91	159	7339	-1764.73	-23.08	-20.21
297	SLU 21	-91	150	7376	-1772.59	-23.39	-20.25
297	SLU 22	-85	142	6561	-1579.98	-20.92	-19.02
297	SLU 23	-85	126	6622	-1593.08	-21.43	-19.08
297	SLU 24	-85	142	6561	-1579.98	-20.92	-19.02
297	SLU 25	-85	133	6598	-1587.84	-21.23	-19.06
297	SLU 26	-85	126	6622	-1593.08	-21.43	-19.08
297	SLU 27	-85	142	6561	-1579.98	-20.92	-19.02
297	SLU 28	-85	133	6598	-1587.84	-21.23	-19.06
297	SLU 29	-85	142	6561	-1579.98	-20.92	-19.02
297	SLU 30	-85	133	6598	-1587.84	-21.23	-19.06
297	SLU 31	-95	145	7725	-1858.14	-24.45	-21.22
297	SLU 32	-95	160	7664	-1845.03	-23.94	-21.15
297	SLU 33	-95	151	7701	-1852.89	-24.25	-21.19
297	SLU 34	-95	145	7725	-1858.14	-24.45	-21.22
297	SLU 35	-95	160	7664	-1845.03	-23.94	-21.15
297	SLU 36	-95	151	7701	-1852.89	-24.25	-21.19
297	SLU 37	-95	160	7664	-1845.03	-23.94	-21.15
297	SLU 38	-95	151	7701	-1852.89	-24.25	-21.19
297	SLU 39	-99	168	8137	-1958.63	-25.23	-22.07
297	SLU 40	-99	159	8174	-1966.49	-25.54	-22.1
297	SLU 41	-99	168	8137	-1958.63	-25.23	-22.07
297	SLU 42	-99	159	8174	-1966.49	-25.54	-22.1
297	SLU 43	-97	170	7219	-1735.43	-23.67	-21.67
297	SLU 44	-97	154	7280	-1748.53	-24.18	-21.73
297	SLU 45	-97	170	7219	-1735.43	-23.67	-21.67
297	SLU 46	-97	161	7255	-1743.29	-23.98	-21.71
297	SLU 47	-97	154	7280	-1748.53	-24.18	-21.73
297	SLU 48	-97	170	7219	-1735.43	-23.67	-21.67
297	SLU 49	-97	161	7255	-1743.29	-23.98	-21.71
297	SLU 50	-97	170	7219	-1735.43	-23.67	-21.67
297	SLU 51	-97	161	7255	-1743.29	-23.98	-21.71
297	SLU 52	-107	173	8383	-2013.58	-27.2	-23.87
297	SLU 53	-107	188	8322	-2000.48	-26.69	-23.8
297	SLU 54	-107	179	8358	-2008.34	-26.99	-23.84
297	SLU 55	-107	173	8383	-2013.58	-27.2	-23.87
297	SLU 56	-107	188	8322	-2000.48	-26.69	-23.8
297	SLU 57	-107	179	8358	-2008.34	-26.99	-23.84
297	SLU 58	-107	188	8322	-2000.48	-26.69	-23.8
297	SLU 59	-107	179	8358	-2008.34	-26.99	-23.84
297	SLU 60	-111	196	8795	-2114.07	-27.98	-24.72
297	SLU 61	-111	187	8831	-2121.93	-28.29	-24.76
297	SLU 62	-111	196	8795	-2114.07	-27.98	-24.72
297	SLU 63	-111	187	8831	-2121.93	-28.29	-24.76
297	SLU 64	-105	179	8017	-1929.33	-25.82	-23.53
297	SLU 65	-106	163	8077	-1942.43	-26.33	-23.59
297	SLU 66	-105	179	8017	-1929.33	-25.82	-23.53
297	SLU 67	-106	169	8053	-1937.19	-26.12	-23.57
297	SLU 68	-106	163	8077	-1942.43	-26.33	-23.59
297	SLU 69	-105	179	8017	-1929.33	-25.82	-23.53
297	SLU 70	-106	169	8053	-1937.19	-26.12	-23.57
297	SLU 71	-105	179	8017	-1929.33	-25.82	-23.53
297	SLU 72	-106	169	8053	-1937.19	-26.12	-23.57
297	SLU 73	-115	182	9181	-2207.48	-29.35	-25.73
297	SLU 74	-115	197	9120	-2194.38	-28.83	-25.66
297	SLU 75	-115	188	9156	-2202.24	-29.14	-25.7
297	SLU 76	-115	182	9181	-2207.48	-29.35	-25.73
297	SLU 77	-115	197	9120	-2194.38	-28.83	-25.66
297	SLU 78	-115	188	9156	-2202.24	-29.14	-25.7
297	SLU 79	-115	197	9120	-2194.38	-28.83	-25.66
297	SLU 80	-115	188	9156	-2202.24	-29.14	-25.7
297	SLU 81	-119	205	9592	-2307.97	-30.13	-26.57
297	SLU 82	-119	196	9629	-2315.83	-30.44	-26.61
297	SLU 83	-119	205	9592	-2307.97	-30.13	-26.57
297	SLU 84	-119	196	9629	-2315.83	-30.44	-26.61
297	SLE RA 1	-79	135	5991	-1441.48	-19.39	-17.69
297	SLE RA 2	-79	125	6032	-1450.22	-19.73	-17.73
297	SLE RA 3	-79	135	5991	-1441.48	-19.39	-17.69
297	SLE RA 4	-79	129	6016	-1446.72	-19.59	-17.71
297	SLE RA 5	-79	125	6032	-1450.22	-19.73	-17.73
297	SLE RA 6	-79	135	5991	-1441.48	-19.39	-17.69
297	SLE RA 7	-79	129	6016	-1446.72	-19.59	-17.71
297	SLE RA 8	-79	135	5991	-1441.48	-19.39	-17.69
297	SLE RA 9	-79	129	6016	-1446.72	-19.59	-17.71
297	SLE RA 10	-86	138	6767	-1626.92	-21.74	-19.16
297	SLE RA 11	-86	148	6727	-1618.18	-21.4	-19.11

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
297	SLE RA 12	-86	142	6751	-1623.42	-21.6	-19.14
297	SLE RA 13	-86	138	6767	-1626.92	-21.74	-19.16
297	SLE RA 14	-86	148	6727	-1618.18	-21.4	-19.11
297	SLE RA 15	-86	142	6751	-1623.42	-21.6	-19.14
297	SLE RA 16	-86	148	6727	-1618.18	-21.4	-19.11
297	SLE RA 17	-86	142	6751	-1623.42	-21.6	-19.14
297	SLE RA 18	-88	153	7042	-1693.91	-22.26	-19.72
297	SLE RA 19	-89	147	7066	-1699.15	-22.47	-19.75
297	SLE RA 20	-88	153	7042	-1693.91	-22.26	-19.72
297	SLE RA 21	-89	147	7066	-1699.15	-22.47	-19.75
297	SLE FR 1	-79	135	5991	-1441.48	-19.39	-17.69
297	SLE FR 2	-79	133	5999	-1443.23	-19.46	-17.7
297	SLE FR 3	-79	135	5991	-1441.48	-19.39	-17.69
297	SLE FR 4	-82	139	6315	-1518.96	-20.32	-18.31
297	SLE FR 5	-82	141	6306	-1517.21	-20.25	-18.3
297	SLE FR 6	-84	144	6517	-1567.7	-20.82	-18.7
297	SLE QP 1	-79	135	5991	-1441.48	-19.39	-17.69
297	SLE QP 2	-82	141	6306	-1517.21	-20.25	-18.3
297	SLD 1	518	216	6108	-1477.51	-7.81	132.78
297	SLD 2	398	203	6107	-1477.23	-7.62	103.58
297	SLD 3	474	11	6770	-1618.62	-10.31	121.7
297	SLD 4	354	-2	6770	-1618.35	-10.12	92.51
297	SLD 5	207	479	5242	-1291.37	-12.79	54.26
297	SLD 6	86	466	5241	-1291.09	-12.6	24.62
297	SLD 7	61	-205	7451	-1761.76	-21.12	17.35
297	SLD 8	-60	-218	7450	-1761.49	-20.93	-12.29
297	SLD 9	-104	499	5162	-1272.94	-19.56	-24.3
297	SLD 10	-225	486	5162	-1272.66	-19.38	-53.94
297	SLD 11	-250	-185	7372	-1743.33	-27.9	-61.22
297	SLD 12	-371	-198	7371	-1743.06	-27.71	-90.86
297	SLD 13	-518	284	5843	-1416.07	-30.38	-129.1
297	SLD 14	-638	270	5842	-1415.8	-30.19	-158.3
297	SLD 15	-562	78	6506	-1557.19	-32.88	-140.18
297	SLD 16	-682	65	6505	-1556.92	-32.69	-169.38
297	SLV 1	1280	313	5852	-1426.3	8.07	324.87
297	SLV 2	1008	283	5850	-1425.68	8.49	258.66
297	SLV 3	1180	-155	7363	-1748.17	2.34	299.62
297	SLV 4	909	-185	7362	-1747.56	2.76	233.41
297	SLV 5	575	912	3878	-1001.98	-3.21	146.61
297	SLV 6	300	882	3876	-1001.35	-2.78	79.42
297	SLV 7	242	-647	8917	-2074.9	-22.32	62.44
297	SLV 8	-33	-677	8915	-2074.27	-21.89	-4.75
297	SLV 9	-130	958	3698	-960.15	-18.61	-31.85
297	SLV 10	-406	928	3696	-959.52	-18.18	-99.04
297	SLV 11	-464	-601	8737	-2033.07	-37.72	-116.02
297	SLV 12	-739	-631	8735	-2032.44	-37.29	-183.21
297	SLV 13	-1072	466	5251	-1286.86	-43.26	-270
297	SLV 14	-1344	436	5250	-1286.25	-42.84	-336.21
297	SLV 15	-1172	-2	6763	-1608.74	-48.99	-295.25
297	SLV 16	-1444	-31	6761	-1608.13	-48.57	-361.46
297	CRTFP Ux+	0	0	0	0	0	0
297	CRTFP Ux-	0	0	0	0	0	0
297	CRTFP Uy+	0	0	0	-0.01	0	0
297	CRTFP Uy-	0	0	0	0.01	0	0
297	CRTFP Rz+	0	0	0	0	0	0
297	CRTFP Rz-	0	0	0	0	0	0
299	SLU 1	-24	48	1896	-549.8	-34.21	-7.44
299	SLU 2	-24	43	1916	-555.2	-34.59	-7.55
299	SLU 3	-24	48	1896	-549.8	-34.21	-7.44
299	SLU 4	-24	45	1908	-553.04	-34.44	-7.51
299	SLU 5	-24	43	1916	-555.2	-34.59	-7.55
299	SLU 6	-24	48	1896	-549.8	-34.21	-7.44
299	SLU 7	-24	45	1908	-553.04	-34.44	-7.51
299	SLU 8	-24	48	1896	-549.8	-34.21	-7.44
299	SLU 9	-24	45	1908	-553.04	-34.44	-7.51
299	SLU 10	-27	50	2276	-658.76	-41.02	-8.5
299	SLU 11	-27	55	2256	-653.35	-40.63	-8.39
299	SLU 12	-27	52	2268	-656.6	-40.86	-8.46
299	SLU 13	-27	50	2276	-658.76	-41.02	-8.5
299	SLU 14	-27	55	2256	-653.35	-40.63	-8.39
299	SLU 15	-27	52	2268	-656.6	-40.86	-8.46
299	SLU 16	-27	55	2256	-653.35	-40.63	-8.39
299	SLU 17	-27	52	2268	-656.6	-40.86	-8.46
299	SLU 18	-28	58	2411	-697.73	-43.39	-8.8
299	SLU 19	-28	55	2423	-700.98	-43.62	-8.87
299	SLU 20	-28	58	2411	-697.73	-43.39	-8.8
299	SLU 21	-28	55	2423	-700.98	-43.62	-8.87
299	SLU 22	-26	51	2157	-626.54	-38.87	-8.28
299	SLU 23	-27	47	2177	-631.94	-39.25	-8.38
299	SLU 24	-26	51	2157	-626.54	-38.87	-8.28
299	SLU 25	-26	49	2169	-629.78	-39.1	-8.34
299	SLU 26	-27	47	2177	-631.94	-39.25	-8.38
299	SLU 27	-26	51	2157	-626.54	-38.87	-8.28
299	SLU 28	-26	49	2169	-629.78	-39.1	-8.34
299	SLU 29	-26	51	2157	-626.54	-38.87	-8.28
299	SLU 30	-26	49	2169	-629.78	-39.1	-8.34
299	SLU 31	-30	53	2538	-735.49	-45.67	-9.34

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
299	SLU 32	-30	58	2518	-730.09	-45.29	-9.23
299	SLU 33	-30	55	2530	-733.33	-45.52	-9.29
299	SLU 34	-30	53	2538	-735.49	-45.67	-9.34
299	SLU 35	-30	58	2518	-730.09	-45.29	-9.23
299	SLU 36	-30	55	2530	-733.33	-45.52	-9.29
299	SLU 37	-30	58	2518	-730.09	-45.29	-9.23
299	SLU 38	-30	55	2530	-733.33	-45.52	-9.29
299	SLU 39	-31	61	2673	-774.47	-48.04	-9.64
299	SLU 40	-31	58	2685	-777.71	-48.27	-9.7
299	SLU 41	-31	61	2673	-774.47	-48.04	-9.64
299	SLU 42	-31	58	2685	-777.71	-48.27	-9.7
299	SLU 43	-30	61	2374	-688.43	-42.88	-9.39
299	SLU 44	-30	56	2394	-693.83	-43.26	-9.49
299	SLU 45	-30	61	2374	-688.43	-42.88	-9.39
299	SLU 46	-30	58	2386	-691.67	-43.11	-9.45
299	SLU 47	-30	56	2394	-693.83	-43.26	-9.49
299	SLU 48	-30	61	2374	-688.43	-42.88	-9.39
299	SLU 49	-30	58	2386	-691.67	-43.11	-9.45
299	SLU 50	-30	61	2374	-688.43	-42.88	-9.39
299	SLU 51	-30	58	2386	-691.67	-43.11	-9.45
299	SLU 52	-33	63	2755	-797.39	-49.69	-10.45
299	SLU 53	-33	68	2735	-791.99	-49.3	-10.34
299	SLU 54	-33	65	2747	-795.23	-49.53	-10.4
299	SLU 55	-33	63	2755	-797.39	-49.69	-10.45
299	SLU 56	-33	68	2735	-791.99	-49.3	-10.34
299	SLU 57	-33	65	2747	-795.23	-49.53	-10.4
299	SLU 58	-33	68	2735	-791.99	-49.3	-10.34
299	SLU 59	-33	65	2747	-795.23	-49.53	-10.4
299	SLU 60	-35	71	2890	-836.36	-52.06	-10.75
299	SLU 61	-35	68	2902	-839.61	-52.29	-10.81
299	SLU 62	-35	71	2890	-836.36	-52.06	-10.75
299	SLU 63	-35	68	2902	-839.61	-52.29	-10.81
299	SLU 64	-33	65	2636	-765.17	-47.53	-10.22
299	SLU 65	-33	60	2656	-770.57	-47.92	-10.33
299	SLU 66	-33	65	2636	-765.17	-47.53	-10.22
299	SLU 67	-33	62	2648	-768.41	-47.76	-10.29
299	SLU 68	-33	60	2656	-770.57	-47.92	-10.33
299	SLU 69	-33	65	2636	-765.17	-47.53	-10.22
299	SLU 70	-33	62	2648	-768.41	-47.76	-10.29
299	SLU 71	-33	65	2636	-765.17	-47.53	-10.22
299	SLU 72	-33	62	2648	-768.41	-47.76	-10.29
299	SLU 73	-36	66	3017	-874.12	-54.34	-11.28
299	SLU 74	-36	71	2997	-868.72	-53.96	-11.18
299	SLU 75	-36	68	3009	-871.96	-54.19	-11.24
299	SLU 76	-36	66	3017	-874.12	-54.34	-11.28
299	SLU 77	-36	71	2997	-868.72	-53.96	-11.18
299	SLU 78	-36	68	3009	-871.96	-54.19	-11.24
299	SLU 79	-36	71	2997	-868.72	-53.96	-11.18
299	SLU 80	-36	68	3009	-871.96	-54.19	-11.24
299	SLU 81	-37	74	3152	-913.1	-56.71	-11.58
299	SLU 82	-37	71	3164	-916.34	-56.94	-11.65
299	SLU 83	-37	74	3152	-913.1	-56.71	-11.58
299	SLU 84	-37	71	3164	-916.34	-56.94	-11.65
299	SLE RA 1	-25	49	1970	-571.73	-35.54	-7.68
299	SLE RA 2	-25	46	1984	-575.33	-35.8	-7.75
299	SLE RA 3	-25	49	1970	-571.73	-35.54	-7.68
299	SLE RA 4	-25	47	1978	-573.89	-35.69	-7.72
299	SLE RA 5	-25	46	1984	-575.33	-35.8	-7.75
299	SLE RA 6	-25	49	1970	-571.73	-35.54	-7.68
299	SLE RA 7	-25	47	1978	-573.89	-35.69	-7.72
299	SLE RA 8	-25	49	1970	-571.73	-35.54	-7.68
299	SLE RA 9	-25	47	1978	-573.89	-35.69	-7.72
299	SLE RA 10	-27	50	2224	-644.36	-40.08	-8.39
299	SLE RA 11	-27	53	2211	-640.76	-39.82	-8.32
299	SLE RA 12	-27	52	2219	-642.92	-39.98	-8.36
299	SLE RA 13	-27	50	2224	-644.36	-40.08	-8.39
299	SLE RA 14	-27	53	2211	-640.76	-39.82	-8.32
299	SLE RA 15	-27	52	2219	-642.92	-39.98	-8.36
299	SLE RA 16	-27	53	2211	-640.76	-39.82	-8.32
299	SLE RA 17	-27	52	2219	-642.92	-39.98	-8.36
299	SLE RA 18	-28	55	2314	-670.35	-41.66	-8.59
299	SLE RA 19	-28	53	2322	-672.51	-41.81	-8.63
299	SLE RA 20	-28	55	2314	-670.35	-41.66	-8.59
299	SLE RA 21	-28	53	2322	-672.51	-41.81	-8.63
299	SLE FR 1	-25	49	1970	-571.73	-35.54	-7.68
299	SLE FR 2	-25	48	1973	-572.45	-35.59	-7.69
299	SLE FR 3	-25	49	1970	-571.73	-35.54	-7.68
299	SLE FR 4	-26	50	2076	-602.03	-37.43	-7.97
299	SLE FR 5	-25	51	2073	-601.31	-37.38	-7.95
299	SLE FR 6	-26	52	2142	-621.04	-38.6	-8.13
299	SLE QP 1	-25	49	1970	-571.73	-35.54	-7.68
299	SLE QP 2	-25	51	2073	-601.31	-37.38	-7.95
299	SLD 1	161	72	2002	-589.74	-34.86	62.56
299	SLD 2	122	71	2002	-589.57	-34.85	48.75
299	SLD 3	176	4	2212	-639.1	-38.64	56.89
299	SLD 4	136	3	2212	-638.93	-38.62	43.08
299	SLD 5	23	162	1734	-523.03	-30.9	26.74

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
299	SLD 6	-18	161	1733	-522.85	-30.89	12.72
299	SLD 7	71	-67	2434	-687.58	-43.49	7.83
299	SLD 8	31	-68	2433	-687.41	-43.47	-6.18
299	SLD 9	-82	170	1714	-515.22	-31.28	-9.72
299	SLD 10	-122	169	1713	-515.04	-31.27	-23.74
299	SLD 11	-33	-59	2414	-679.77	-43.87	-28.63
299	SLD 12	-74	-60	2413	-679.6	-43.85	-42.65
299	SLD 13	-187	99	1935	-563.69	-36.13	-58.98
299	SLD 14	-227	98	1935	-563.52	-36.11	-72.79
299	SLD 15	-173	30	2145	-613.06	-39.9	-64.66
299	SLD 16	-212	30	2145	-612.89	-39.89	-78.46
299	SLV 1	399	100	1911	-574.74	-31.64	152.21
299	SLV 2	309	98	1909	-574.35	-31.61	120.9
299	SLV 3	432	-56	2389	-687.37	-40.25	139.28
299	SLV 4	342	-58	2388	-686.98	-40.22	107.97
299	SLV 5	84	303	1299	-422.65	-22.61	70.9
299	SLV 6	-8	301	1297	-422.26	-22.57	39.13
299	SLV 7	194	-217	2895	-798.09	-51.31	27.79
299	SLV 8	103	-219	2894	-797.7	-51.28	-3.98
299	SLV 9	-154	321	1253	-404.93	-23.48	-11.92
299	SLV 10	-245	319	1252	-404.53	-23.44	-43.7
299	SLV 11	-43	-199	2849	-780.37	-52.18	-55.04
299	SLV 12	-135	-201	2848	-779.97	-52.15	-86.81
299	SLV 13	-393	160	1759	-515.64	-34.54	-123.87
299	SLV 14	-483	158	1757	-515.26	-34.5	-155.18
299	SLV 15	-360	4	2237	-628.28	-43.15	-136.81
299	SLV 16	-450	2	2236	-627.89	-43.11	-168.12
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
300	SLU 1	-26	52	2031	-540.2	2.33	-9.04
300	SLU 2	-26	47	2053	-546.46	2.31	-9.04
300	SLU 3	-26	52	2031	-540.2	2.33	-9.04
300	SLU 4	-26	49	2044	-543.95	2.32	-9.04
300	SLU 5	-26	47	2053	-546.46	2.31	-9.04
300	SLU 6	-26	52	2031	-540.2	2.33	-9.04
300	SLU 7	-26	49	2044	-543.95	2.32	-9.04
300	SLU 8	-26	52	2031	-540.2	2.33	-9.04
300	SLU 9	-26	49	2044	-543.95	2.32	-9.04
300	SLU 10	-29	54	2436	-645.91	2.93	-10.25
300	SLU 11	-29	59	2413	-639.65	2.95	-10.25
300	SLU 12	-29	56	2427	-643.41	2.94	-10.25
300	SLU 13	-29	54	2436	-645.91	2.93	-10.25
300	SLU 14	-29	59	2413	-639.65	2.95	-10.25
300	SLU 15	-29	56	2427	-643.41	2.94	-10.25
300	SLU 16	-29	59	2413	-639.65	2.95	-10.25
300	SLU 17	-29	56	2427	-643.41	2.94	-10.25
300	SLU 18	-30	62	2577	-682.27	3.21	-10.77
300	SLU 19	-31	59	2590	-686.03	3.2	-10.77
300	SLU 20	-30	62	2577	-682.27	3.21	-10.77
300	SLU 21	-31	59	2590	-686.03	3.2	-10.77
300	SLU 22	-28	56	2308	-614.04	2.79	-10.02
300	SLU 23	-28	51	2330	-620.3	2.77	-10.02
300	SLU 24	-28	56	2308	-614.04	2.79	-10.02
300	SLU 25	-28	53	2321	-617.8	2.78	-10.02
300	SLU 26	-28	51	2330	-620.3	2.77	-10.02
300	SLU 27	-28	56	2308	-614.04	2.79	-10.02
300	SLU 28	-28	53	2321	-617.8	2.78	-10.02
300	SLU 29	-28	56	2308	-614.04	2.79	-10.02
300	SLU 30	-28	53	2321	-617.8	2.78	-10.02
300	SLU 31	-32	58	2713	-719.76	3.39	-11.23
300	SLU 32	-32	63	2690	-713.5	3.4	-11.23
300	SLU 33	-32	60	2704	-717.25	3.4	-11.23
300	SLU 34	-32	58	2713	-719.76	3.39	-11.23
300	SLU 35	-32	63	2690	-713.5	3.4	-11.23
300	SLU 36	-32	60	2704	-717.25	3.4	-11.23
300	SLU 37	-32	63	2690	-713.5	3.4	-11.23
300	SLU 38	-32	60	2704	-717.25	3.4	-11.23
300	SLU 39	-33	66	2854	-756.12	3.67	-11.75
300	SLU 40	-33	63	2868	-759.88	3.66	-11.75
300	SLU 41	-33	66	2854	-756.12	3.67	-11.75
300	SLU 42	-33	63	2868	-759.88	3.66	-11.75
300	SLU 43	-32	66	2545	-676.94	2.87	-11.41
300	SLU 44	-32	61	2568	-683.2	2.85	-11.42
300	SLU 45	-32	66	2545	-676.94	2.87	-11.41
300	SLU 46	-32	63	2559	-680.69	2.86	-11.42
300	SLU 47	-32	61	2568	-683.2	2.85	-11.42
300	SLU 48	-32	66	2545	-676.94	2.87	-11.41
300	SLU 49	-32	63	2559	-680.69	2.86	-11.42
300	SLU 50	-32	66	2545	-676.94	2.87	-11.41
300	SLU 51	-32	63	2559	-680.69	2.86	-11.42
300	SLU 52	-36	68	2950	-782.65	3.47	-12.63
300	SLU 53	-36	74	2927	-776.39	3.49	-12.62
300	SLU 54	-36	70	2941	-780.15	3.48	-12.63
300	SLU 55	-36	68	2950	-782.65	3.47	-12.63
300	SLU 56	-36	74	2927	-776.39	3.49	-12.62

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
300	SLU 57	-36	70	2941	-780.15	3.48	-12.63
300	SLU 58	-36	74	2927	-776.39	3.49	-12.62
300	SLU 59	-36	70	2941	-780.15	3.48	-12.63
300	SLU 60	-37	77	3091	-819.02	3.75	-13.14
300	SLU 61	-37	73	3105	-822.77	3.75	-13.14
300	SLU 62	-37	77	3091	-819.02	3.75	-13.14
300	SLU 63	-37	73	3105	-822.77	3.75	-13.14
300	SLU 64	-35	70	2822	-750.78	3.33	-12.39
300	SLU 65	-35	65	2845	-757.04	3.31	-12.4
300	SLU 66	-35	70	2822	-750.78	3.33	-12.39
300	SLU 67	-35	67	2836	-754.54	3.32	-12.4
300	SLU 68	-35	65	2845	-757.04	3.31	-12.4
300	SLU 69	-35	70	2822	-750.78	3.33	-12.39
300	SLU 70	-35	67	2836	-754.54	3.32	-12.4
300	SLU 71	-35	70	2822	-750.78	3.33	-12.39
300	SLU 72	-35	67	2836	-754.54	3.32	-12.4
300	SLU 73	-39	72	3227	-856.5	3.93	-13.61
300	SLU 74	-39	77	3205	-850.24	3.95	-13.6
300	SLU 75	-39	74	3218	-853.99	3.94	-13.61
300	SLU 76	-39	72	3227	-856.5	3.93	-13.61
300	SLU 77	-39	77	3205	-850.24	3.95	-13.6
300	SLU 78	-39	74	3218	-853.99	3.94	-13.61
300	SLU 79	-39	77	3205	-850.24	3.95	-13.6
300	SLU 80	-39	74	3218	-853.99	3.94	-13.61
300	SLU 81	-40	80	3368	-892.86	4.21	-14.12
300	SLU 82	-40	77	3382	-896.62	4.2	-14.12
300	SLU 83	-40	80	3368	-892.86	4.21	-14.12
300	SLU 84	-40	77	3382	-896.62	4.2	-14.12
300	SLE RA 1	-26	53	2110	-561.3	2.46	-9.32
300	SLE RA 2	-26	50	2125	-565.47	2.45	-9.32
300	SLE RA 3	-26	53	2110	-561.3	2.46	-9.32
300	SLE RA 4	-26	51	2119	-563.8	2.45	-9.32
300	SLE RA 5	-26	50	2125	-565.47	2.45	-9.32
300	SLE RA 6	-26	53	2110	-561.3	2.46	-9.32
300	SLE RA 7	-26	51	2119	-563.8	2.45	-9.32
300	SLE RA 8	-26	53	2110	-561.3	2.46	-9.32
300	SLE RA 9	-26	51	2119	-563.8	2.45	-9.32
300	SLE RA 10	-29	54	2380	-631.77	2.86	-10.13
300	SLE RA 11	-29	58	2365	-627.6	2.87	-10.12
300	SLE RA 12	-29	56	2374	-630.1	2.87	-10.13
300	SLE RA 13	-29	54	2380	-631.77	2.86	-10.13
300	SLE RA 14	-29	58	2365	-627.6	2.87	-10.12
300	SLE RA 15	-29	56	2374	-630.1	2.87	-10.13
300	SLE RA 16	-29	58	2365	-627.6	2.87	-10.12
300	SLE RA 17	-29	56	2374	-630.1	2.87	-10.13
300	SLE RA 18	-30	60	2474	-656.01	3.05	-10.47
300	SLE RA 19	-30	58	2483	-658.52	3.04	-10.47
300	SLE RA 20	-30	60	2474	-656.01	3.05	-10.47
300	SLE RA 21	-30	58	2483	-658.52	3.04	-10.47
300	SLE FR 1	-26	53	2110	-561.3	2.46	-9.32
300	SLE FR 2	-26	53	2113	-562.13	2.46	-9.32
300	SLE FR 3	-26	53	2110	-561.3	2.46	-9.32
300	SLE FR 4	-27	55	2222	-590.55	2.63	-9.66
300	SLE FR 5	-27	55	2219	-589.71	2.64	-9.66
300	SLE FR 6	-28	57	2292	-608.65	2.75	-9.89
300	SLE QP 1	-26	53	2110	-561.3	2.46	-9.32
300	SLE QP 2	-27	55	2219	-589.71	2.64	-9.66
300	SLD 1	179	75	2073	-580.06	3.23	62.31
300	SLD 2	135	78	2073	-579.84	3.24	47.13
300	SLD 3	194	0	2298	-627.06	3.53	67.87
300	SLD 4	151	3	2297	-626.83	3.54	52.68
300	SLD 5	26	175	1836	-515.62	2.36	8.94
300	SLD 6	-18	177	1835	-515.39	2.37	-6.47
300	SLD 7	79	-76	2583	-672.27	3.36	27.44
300	SLD 8	35	-74	2582	-672.05	3.36	12.03
300	SLD 9	-89	184	1856	-507.37	1.91	-31.36
300	SLD 10	-134	187	1856	-507.15	1.91	-46.77
300	SLD 11	-36	-67	2603	-664.03	2.91	-12.85
300	SLD 12	-81	-64	2603	-663.81	2.91	-28.27
300	SLD 13	-206	108	2142	-552.59	1.73	-72.01
300	SLD 14	-249	110	2141	-552.36	1.74	-87.19
300	SLD 15	-190	33	2366	-599.59	2.03	-66.46
300	SLD 16	-233	35	2365	-599.36	2.04	-81.64
300	SLV 1	440	101	1886	-567.5	3.99	153.78
300	SLV 2	341	107	1885	-566.99	4.01	119.35
300	SLV 3	477	-70	2398	-674.78	4.68	166.44
300	SLV 4	377	-65	2396	-674.27	4.69	132.01
300	SLV 5	93	327	1345	-420.52	2	32.48
300	SLV 6	-7	333	1343	-420	2.02	-2.46
300	SLV 7	214	-245	3049	-778.12	4.28	74.67
300	SLV 8	114	-239	3047	-777.61	4.29	39.73
300	SLV 9	-168	350	1391	-401.82	0.98	-59.06
300	SLV 10	-269	355	1390	-401.3	0.99	-94
300	SLV 11	-48	-223	3096	-759.42	3.25	-16.87
300	SLV 12	-148	-217	3094	-758.9	3.27	-51.8
300	SLV 13	-432	175	2043	-505.15	0.58	-151.34
300	SLV 14	-531	181	2041	-504.64	0.59	-185.77

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
300	SLV 15	-396	4	2554	-612.43	1.26	-138.68
300	SLV 16	-495	9	2552	-611.92	1.28	-173.11
300	CRTFP Ux+	0	0	0	0	0	0
300	CRTFP Ux-	0	0	0	0	0	0
300	CRTFP Uy+	0	0	0	0	0	0
300	CRTFP Uy-	0	0	0	0	0	0
301	SLU 1	-25	49	1956	-470.1	2.56	-8.95
301	SLU 2	-25	44	1979	-476.71	2.55	-8.96
301	SLU 3	-25	49	1956	-470.1	2.56	-8.95
301	SLU 4	-25	46	1970	-474.07	2.55	-8.96
301	SLU 5	-25	44	1979	-476.71	2.55	-8.96
301	SLU 6	-25	49	1956	-470.1	2.56	-8.95
301	SLU 7	-25	46	1970	-474.07	2.55	-8.96
301	SLU 8	-25	49	1956	-470.1	2.56	-8.95
301	SLU 9	-25	46	1970	-474.07	2.55	-8.96
301	SLU 10	-29	50	2342	-560.1	3.24	-10.2
301	SLU 11	-29	55	2319	-553.5	3.25	-10.2
301	SLU 12	-29	52	2333	-557.46	3.25	-10.2
301	SLU 13	-29	50	2342	-560.1	3.24	-10.2
301	SLU 14	-29	55	2319	-553.5	3.25	-10.2
301	SLU 15	-29	52	2333	-557.46	3.25	-10.2
301	SLU 16	-29	55	2319	-553.5	3.25	-10.2
301	SLU 17	-29	52	2333	-557.46	3.25	-10.2
301	SLU 18	-30	58	2474	-589.24	3.55	-10.73
301	SLU 19	-30	55	2488	-593.2	3.54	-10.73
301	SLU 20	-30	58	2474	-589.24	3.55	-10.73
301	SLU 21	-30	55	2488	-593.2	3.54	-10.73
301	SLU 22	-28	52	2219	-532.1	3.07	-9.93
301	SLU 23	-28	47	2242	-538.7	3.05	-9.93
301	SLU 24	-28	52	2219	-532.1	3.07	-9.93
301	SLU 25	-28	49	2233	-536.06	3.06	-9.93
301	SLU 26	-28	47	2242	-538.7	3.05	-9.93
301	SLU 27	-28	52	2219	-532.1	3.07	-9.93
301	SLU 28	-28	49	2233	-536.06	3.06	-9.93
301	SLU 29	-28	52	2219	-532.1	3.07	-9.93
301	SLU 30	-28	49	2233	-536.06	3.06	-9.93
301	SLU 31	-31	54	2604	-622.09	3.75	-11.18
301	SLU 32	-31	59	2581	-615.49	3.76	-11.17
301	SLU 33	-31	56	2595	-619.45	3.75	-11.17
301	SLU 34	-31	54	2604	-622.09	3.75	-11.18
301	SLU 35	-31	59	2581	-615.49	3.76	-11.17
301	SLU 36	-31	56	2595	-619.45	3.75	-11.17
301	SLU 37	-31	59	2581	-615.49	3.76	-11.17
301	SLU 38	-31	56	2595	-619.45	3.75	-11.17
301	SLU 39	-33	62	2737	-651.23	4.06	-11.71
301	SLU 40	-33	59	2750	-655.19	4.05	-11.71
301	SLU 41	-33	62	2737	-651.23	4.06	-11.71
301	SLU 42	-33	59	2750	-655.19	4.05	-11.71
301	SLU 43	-32	62	2453	-589.88	3.16	-11.31
301	SLU 44	-32	57	2476	-596.49	3.14	-11.31
301	SLU 45	-32	62	2453	-589.88	3.16	-11.31
301	SLU 46	-32	59	2467	-593.84	3.15	-11.31
301	SLU 47	-32	57	2476	-596.49	3.14	-11.31
301	SLU 48	-32	62	2453	-589.88	3.16	-11.31
301	SLU 49	-32	59	2467	-593.84	3.15	-11.31
301	SLU 50	-32	62	2453	-589.88	3.16	-11.31
301	SLU 51	-32	59	2467	-593.84	3.15	-11.31
301	SLU 52	-35	64	2839	-679.88	3.83	-12.55
301	SLU 53	-35	69	2816	-673.28	3.85	-12.55
301	SLU 54	-35	66	2829	-677.24	3.84	-12.55
301	SLU 55	-35	64	2839	-679.88	3.83	-12.55
301	SLU 56	-35	69	2816	-673.28	3.85	-12.55
301	SLU 57	-35	66	2829	-677.24	3.84	-12.55
301	SLU 58	-35	69	2816	-673.28	3.85	-12.55
301	SLU 59	-35	66	2829	-677.24	3.84	-12.55
301	SLU 60	-37	72	2971	-709.02	4.14	-13.08
301	SLU 61	-37	68	2985	-712.98	4.14	-13.08
301	SLU 62	-37	72	2971	-709.02	4.14	-13.08
301	SLU 63	-37	68	2985	-712.98	4.14	-13.08
301	SLU 64	-35	66	2716	-651.87	3.66	-12.28
301	SLU 65	-35	61	2739	-658.48	3.65	-12.28
301	SLU 66	-35	66	2716	-651.87	3.66	-12.28
301	SLU 67	-35	63	2730	-655.84	3.65	-12.28
301	SLU 68	-35	61	2739	-658.48	3.65	-12.28
301	SLU 69	-35	66	2716	-651.87	3.66	-12.28
301	SLU 70	-35	63	2730	-655.84	3.65	-12.28
301	SLU 71	-35	66	2716	-651.87	3.66	-12.28
301	SLU 72	-35	63	2730	-655.84	3.65	-12.28
301	SLU 73	-38	67	3101	-741.87	4.34	-13.53
301	SLU 74	-38	72	3078	-735.27	4.36	-13.53
301	SLU 75	-38	69	3092	-739.23	4.35	-13.53
301	SLU 76	-38	67	3101	-741.87	4.34	-13.53
301	SLU 77	-38	72	3078	-735.27	4.36	-13.53
301	SLU 78	-38	69	3092	-739.23	4.35	-13.53
301	SLU 79	-38	72	3078	-735.27	4.36	-13.53
301	SLU 80	-38	69	3092	-739.23	4.35	-13.53
301	SLU 81	-40	75	3234	-771.01	4.65	-14.06

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
301	SLU 82	-40	72	3247	-774.97	4.64	-14.06
301	SLU 83	-40	75	3234	-771.01	4.65	-14.06
301	SLU 84	-40	72	3247	-774.97	4.64	-14.06
301	SLE RA 1	-26	50	2031	-487.82	2.71	-9.23
301	SLE RA 2	-26	46	2047	-492.22	2.7	-9.23
301	SLE RA 3	-26	50	2031	-487.82	2.71	-9.23
301	SLE RA 4	-26	48	2041	-490.46	2.7	-9.23
301	SLE RA 5	-26	46	2047	-492.22	2.7	-9.23
301	SLE RA 6	-26	50	2031	-487.82	2.71	-9.23
301	SLE RA 7	-26	48	2041	-490.46	2.7	-9.23
301	SLE RA 8	-26	50	2031	-487.82	2.71	-9.23
301	SLE RA 9	-26	48	2041	-490.46	2.7	-9.23
301	SLE RA 10	-28	51	2288	-547.81	3.16	-10.06
301	SLE RA 11	-28	54	2273	-543.41	3.17	-10.06
301	SLE RA 12	-28	52	2282	-546.05	3.16	-10.06
301	SLE RA 13	-28	51	2288	-547.81	3.16	-10.06
301	SLE RA 14	-28	54	2273	-543.41	3.17	-10.06
301	SLE RA 15	-28	52	2282	-546.05	3.16	-10.06
301	SLE RA 16	-28	54	2273	-543.41	3.17	-10.06
301	SLE RA 17	-28	52	2282	-546.05	3.16	-10.06
301	SLE RA 18	-29	56	2377	-567.24	3.37	-10.42
301	SLE RA 19	-29	54	2386	-569.88	3.36	-10.42
301	SLE RA 20	-29	56	2377	-567.24	3.37	-10.42
301	SLE RA 21	-29	54	2386	-569.88	3.36	-10.42
301	SLE FR 1	-26	50	2031	-487.82	2.71	-9.23
301	SLE FR 2	-26	49	2034	-488.7	2.7	-9.23
301	SLE FR 3	-26	50	2031	-487.82	2.71	-9.23
301	SLE FR 4	-27	51	2138	-512.52	2.9	-9.59
301	SLE FR 5	-27	52	2135	-511.64	2.9	-9.59
301	SLE FR 6	-28	53	2204	-527.53	3.04	-9.83
301	SLE QP 1	-26	50	2031	-487.82	2.71	-9.23
301	SLE QP 2	-27	52	2135	-511.64	2.9	-9.59
301	SLD 1	179	69	1984	-504.5	3.55	62.51
301	SLD 2	136	75	1983	-504.24	3.56	47.3
301	SLD 3	195	-7	2199	-543.09	3.88	68.05
301	SLD 4	151	-1	2198	-542.83	3.88	52.84
301	SLD 5	27	171	1764	-451.06	2.61	9.07
301	SLD 6	-18	176	1763	-450.8	2.62	-6.36
301	SLD 7	79	-84	2480	-579.7	3.68	27.54
301	SLD 8	35	-78	2479	-579.44	3.69	12.11
301	SLD 9	-89	181	1791	-443.85	2.12	-31.29
301	SLD 10	-133	187	1790	-443.58	2.13	-46.72
301	SLD 11	-36	-73	2507	-572.49	3.19	-12.82
301	SLD 12	-80	-67	2506	-572.22	3.2	-28.25
301	SLD 13	-205	104	2072	-480.46	1.93	-72.02
301	SLD 14	-249	110	2071	-480.19	1.93	-87.22
301	SLD 15	-189	28	2287	-519.05	2.25	-66.48
301	SLD 16	-233	34	2286	-518.78	2.25	-81.68
301	SLV 1	441	92	1790	-495.16	4.38	154.12
301	SLV 2	342	106	1787	-494.56	4.4	119.64
301	SLV 3	477	-81	2280	-583.34	5.11	166.75
301	SLV 4	378	-68	2278	-582.74	5.13	132.28
301	SLV 5	94	323	1289	-373.17	2.23	32.68
301	SLV 6	-6	336	1287	-372.57	2.25	-2.3
301	SLV 7	214	-256	2923	-667.11	4.67	74.8
301	SLV 8	114	-243	2920	-666.5	4.68	39.81
301	SLV 9	-168	346	1350	-356.78	1.12	-58.99
301	SLV 10	-268	360	1347	-356.18	1.14	-93.97
301	SLV 11	-48	-233	2983	-650.72	3.56	-16.88
301	SLV 12	-148	-219	2981	-650.12	3.57	-51.86
301	SLV 13	-432	171	1992	-440.54	0.68	-151.45
301	SLV 14	-531	185	1990	-439.95	0.7	-185.93
301	SLV 15	-396	-2	2482	-528.72	1.41	-138.82
301	SLV 16	-495	11	2480	-528.13	1.43	-173.3
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
302	SLU 1	-25	44	1883	-405.24	2.28	-8.89
302	SLU 2	-25	39	1906	-412.15	2.27	-8.89
302	SLU 3	-25	44	1883	-405.24	2.28	-8.89
302	SLU 4	-25	41	1897	-409.38	2.27	-8.89
302	SLU 5	-25	39	1906	-412.15	2.27	-8.89
302	SLU 6	-25	44	1883	-405.24	2.28	-8.89
302	SLU 7	-25	41	1897	-409.38	2.27	-8.89
302	SLU 8	-25	44	1883	-405.24	2.28	-8.89
302	SLU 9	-25	41	1897	-409.38	2.27	-8.89
302	SLU 10	-28	45	2249	-480.39	2.91	-10.17
302	SLU 11	-28	50	2225	-473.49	2.93	-10.17
302	SLU 12	-28	47	2239	-477.63	2.92	-10.17
302	SLU 13	-28	45	2249	-480.39	2.91	-10.17
302	SLU 14	-28	50	2225	-473.49	2.93	-10.17
302	SLU 15	-28	47	2239	-477.63	2.92	-10.17
302	SLU 16	-28	50	2225	-473.49	2.93	-10.17
302	SLU 17	-28	47	2239	-477.63	2.92	-10.17
302	SLU 18	-30	52	2372	-502.74	3.2	-10.72
302	SLU 19	-30	49	2386	-506.88	3.19	-10.72

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
302	SLU 20	-30	52	2372	-502.74	3.2	-10.72
302	SLU 21	-30	49	2386	-506.88	3.19	-10.72
302	SLU 22	-28	47	2131	-456	2.75	-9.87
302	SLU 23	-28	42	2154	-462.9	2.74	-9.87
302	SLU 24	-28	47	2131	-456	2.75	-9.87
302	SLU 25	-28	44	2145	-460.14	2.74	-9.87
302	SLU 26	-28	42	2154	-462.9	2.74	-9.87
302	SLU 27	-28	47	2131	-456	2.75	-9.87
302	SLU 28	-28	44	2145	-460.14	2.74	-9.87
302	SLU 29	-28	47	2131	-456	2.75	-9.87
302	SLU 30	-28	44	2145	-460.14	2.74	-9.87
302	SLU 31	-31	48	2496	-531.15	3.38	-11.15
302	SLU 32	-31	53	2473	-524.25	3.39	-11.15
302	SLU 33	-31	50	2487	-528.39	3.39	-11.15
302	SLU 34	-31	48	2496	-531.15	3.38	-11.15
302	SLU 35	-31	53	2473	-524.25	3.39	-11.15
302	SLU 36	-31	50	2487	-528.39	3.39	-11.15
302	SLU 37	-31	53	2473	-524.25	3.39	-11.15
302	SLU 38	-31	50	2487	-528.39	3.39	-11.15
302	SLU 39	-33	56	2620	-553.5	3.67	-11.69
302	SLU 40	-33	53	2634	-557.64	3.66	-11.69
302	SLU 41	-33	56	2620	-553.5	3.67	-11.69
302	SLU 42	-33	53	2634	-557.64	3.66	-11.69
302	SLU 43	-31	56	2363	-509.41	2.8	-11.23
302	SLU 44	-31	51	2386	-516.32	2.79	-11.23
302	SLU 45	-31	56	2363	-509.41	2.8	-11.23
302	SLU 46	-31	53	2377	-513.55	2.8	-11.23
302	SLU 47	-31	51	2386	-516.32	2.79	-11.23
302	SLU 48	-31	56	2363	-509.41	2.8	-11.23
302	SLU 49	-31	53	2377	-513.55	2.8	-11.23
302	SLU 50	-31	56	2363	-509.41	2.8	-11.23
302	SLU 51	-31	53	2377	-513.55	2.8	-11.23
302	SLU 52	-35	56	2729	-584.56	3.44	-12.5
302	SLU 53	-35	62	2705	-577.66	3.45	-12.5
302	SLU 54	-35	59	2719	-581.8	3.44	-12.5
302	SLU 55	-35	56	2729	-584.56	3.44	-12.5
302	SLU 56	-35	62	2705	-577.66	3.45	-12.5
302	SLU 57	-35	59	2719	-581.8	3.44	-12.5
302	SLU 58	-35	62	2705	-577.66	3.45	-12.5
302	SLU 59	-35	59	2719	-581.8	3.44	-12.5
302	SLU 60	-37	64	2852	-606.91	3.73	-13.05
302	SLU 61	-36	61	2866	-611.05	3.72	-13.05
302	SLU 62	-37	64	2852	-606.91	3.73	-13.05
302	SLU 63	-36	61	2866	-611.05	3.72	-13.05
302	SLU 64	-34	59	2611	-560.17	3.27	-12.2
302	SLU 65	-34	54	2634	-567.07	3.26	-12.2
302	SLU 66	-34	59	2611	-560.17	3.27	-12.2
302	SLU 67	-34	56	2625	-564.31	3.26	-12.2
302	SLU 68	-34	54	2634	-567.07	3.26	-12.2
302	SLU 69	-34	59	2611	-560.17	3.27	-12.2
302	SLU 70	-34	56	2625	-564.31	3.26	-12.2
302	SLU 71	-34	59	2611	-560.17	3.27	-12.2
302	SLU 72	-34	56	2625	-564.31	3.26	-12.2
302	SLU 73	-38	60	2976	-635.32	3.9	-13.48
302	SLU 74	-38	65	2953	-628.42	3.92	-13.48
302	SLU 75	-38	62	2967	-632.56	3.91	-13.48
302	SLU 76	-38	60	2976	-635.32	3.9	-13.48
302	SLU 77	-38	65	2953	-628.42	3.92	-13.48
302	SLU 78	-38	62	2967	-632.56	3.91	-13.48
302	SLU 79	-38	65	2953	-628.42	3.92	-13.48
302	SLU 80	-38	62	2967	-632.56	3.91	-13.48
302	SLU 81	-39	68	3100	-657.67	4.19	-14.03
302	SLU 82	-39	65	3114	-661.81	4.19	-14.03
302	SLU 83	-39	68	3100	-657.67	4.19	-14.03
302	SLU 84	-39	65	3114	-661.81	4.19	-14.03
302	SLE RA 1	-26	45	1954	-419.74	2.41	-9.17
302	SLE RA 2	-26	41	1969	-424.35	2.41	-9.17
302	SLE RA 3	-26	45	1954	-419.74	2.41	-9.17
302	SLE RA 4	-26	43	1963	-422.51	2.41	-9.17
302	SLE RA 5	-26	41	1969	-424.35	2.41	-9.17
302	SLE RA 6	-26	45	1954	-419.74	2.41	-9.17
302	SLE RA 7	-26	43	1963	-422.51	2.41	-9.17
302	SLE RA 8	-26	45	1954	-419.74	2.41	-9.17
302	SLE RA 9	-26	43	1963	-422.51	2.41	-9.17
302	SLE RA 10	-28	45	2197	-469.84	2.84	-10.02
302	SLE RA 11	-28	49	2182	-465.24	2.84	-10.02
302	SLE RA 12	-28	47	2191	-468	2.84	-10.02
302	SLE RA 13	-28	45	2197	-469.84	2.84	-10.02
302	SLE RA 14	-28	49	2182	-465.24	2.84	-10.02
302	SLE RA 15	-28	47	2191	-468	2.84	-10.02
302	SLE RA 16	-28	49	2182	-465.24	2.84	-10.02
302	SLE RA 17	-28	47	2191	-468	2.84	-10.02
302	SLE RA 18	-29	50	2280	-484.74	3.03	-10.39
302	SLE RA 19	-29	48	2289	-487.5	3.02	-10.39
302	SLE RA 20	-29	50	2280	-484.74	3.03	-10.39
302	SLE RA 21	-29	48	2289	-487.5	3.02	-10.39
302	SLE FR 1	-26	45	1954	-419.74	2.41	-9.17

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
302	SLE FR 2	-26	44	1957	-420.66	2.41	-9.17
302	SLE FR 3	-26	45	1954	-419.74	2.41	-9.17
302	SLE FR 4	-27	46	2055	-440.16	2.6	-9.54
302	SLE FR 5	-27	46	2052	-439.24	2.6	-9.54
302	SLE FR 6	-27	48	2117	-452.24	2.72	-9.78
302	SLE QP 1	-26	45	1954	-419.74	2.41	-9.17
302	SLE QP 2	-27	46	2052	-439.24	2.6	-9.54
302	SLD 1	180	63	1885	-433.39	3.34	62.64
302	SLD 2	136	72	1884	-433.1	3.34	47.42
302	SLD 3	195	-15	2092	-464.13	3.6	68.17
302	SLD 4	152	-6	2090	-463.84	3.61	52.96
302	SLD 5	27	167	1690	-390.97	2.41	9.16
302	SLD 6	-17	176	1688	-390.68	2.42	-6.29
302	SLD 7	80	-94	2377	-493.43	3.3	27.61
302	SLD 8	35	-85	2375	-493.14	3.31	12.16
302	SLD 9	-88	178	1728	-385.35	1.89	-31.24
302	SLD 10	-133	187	1727	-385.06	1.89	-46.69
302	SLD 11	-36	-83	2415	-487.8	2.78	-12.79
302	SLD 12	-80	-74	2414	-487.52	2.78	-28.24
302	SLD 13	-205	99	2013	-414.64	1.59	-72.03
302	SLD 14	-249	108	2012	-414.36	1.59	-87.25
302	SLD 15	-189	21	2219	-445.38	1.85	-66.5
302	SLD 16	-233	30	2218	-445.1	1.86	-81.71
302	SLV 1	442	84	1672	-425.72	4.28	154.35
302	SLV 2	343	105	1670	-425.08	4.29	119.85
302	SLV 3	478	-94	2143	-496.09	4.88	166.97
302	SLV 4	379	-74	2140	-495.44	4.9	132.47
302	SLV 5	95	322	1225	-328.7	2.17	32.82
302	SLV 6	-6	343	1223	-328.04	2.19	-2.19
302	SLV 7	215	-274	2793	-563.25	4.2	74.89
302	SLV 8	114	-253	2791	-562.59	4.22	39.87
302	SLV 9	-167	346	1313	-315.89	0.98	-58.95
302	SLV 10	-268	367	1310	-315.24	1	-93.96
302	SLV 11	-48	-250	2881	-550.44	3.01	-16.88
302	SLV 12	-148	-229	2878	-549.79	3.02	-51.9
302	SLV 13	-432	166	1963	-383.05	0.3	-151.54
302	SLV 14	-531	187	1961	-382.4	0.31	-186.05
302	SLV 15	-396	-12	2434	-453.41	0.9	-138.93
302	SLV 16	-495	8	2431	-452.77	0.92	-173.43
302	CRTFP Ux+	0	0	0	0	0	0
302	CRTFP Ux-	0	0	0	0	0	0
302	CRTFP Uy+	0	0	0	0	0	0
302	CRTFP Uy-	0	0	0	0	0	0
303	SLU 1	-25	38	1824	-352.81	1.65	-8.84
303	SLU 2	-25	32	1847	-359.92	1.64	-8.84
303	SLU 3	-25	38	1824	-352.81	1.65	-8.84
303	SLU 4	-25	35	1838	-357.07	1.65	-8.84
303	SLU 5	-25	32	1847	-359.92	1.64	-8.84
303	SLU 6	-25	38	1824	-352.81	1.65	-8.84
303	SLU 7	-25	35	1838	-357.07	1.65	-8.84
303	SLU 8	-25	38	1824	-352.81	1.65	-8.84
303	SLU 9	-25	35	1838	-357.07	1.65	-8.84
303	SLU 10	-28	38	2172	-415.61	2.16	-10.15
303	SLU 11	-28	43	2148	-408.5	2.17	-10.15
303	SLU 12	-28	40	2162	-412.76	2.17	-10.15
303	SLU 13	-28	38	2172	-415.61	2.16	-10.15
303	SLU 14	-28	43	2148	-408.5	2.17	-10.15
303	SLU 15	-28	40	2162	-412.76	2.17	-10.15
303	SLU 16	-28	43	2148	-408.5	2.17	-10.15
303	SLU 17	-28	40	2162	-412.76	2.17	-10.15
303	SLU 18	-30	45	2287	-432.37	2.39	-10.71
303	SLU 19	-30	42	2302	-436.63	2.39	-10.71
303	SLU 20	-30	45	2287	-432.37	2.39	-10.71
303	SLU 21	-30	42	2302	-436.63	2.39	-10.71
303	SLU 22	-27	41	2059	-394.22	2.02	-9.82
303	SLU 23	-27	36	2082	-401.33	2.01	-9.82
303	SLU 24	-27	41	2059	-394.22	2.02	-9.82
303	SLU 25	-27	38	2073	-398.49	2.02	-9.82
303	SLU 26	-27	36	2082	-401.33	2.01	-9.82
303	SLU 27	-27	41	2059	-394.22	2.02	-9.82
303	SLU 28	-27	38	2073	-398.49	2.02	-9.82
303	SLU 29	-27	41	2059	-394.22	2.02	-9.82
303	SLU 30	-27	38	2073	-398.49	2.02	-9.82
303	SLU 31	-31	41	2407	-457.02	2.53	-11.12
303	SLU 32	-31	46	2383	-449.91	2.54	-11.13
303	SLU 33	-31	43	2397	-454.18	2.53	-11.12
303	SLU 34	-31	41	2407	-457.02	2.53	-11.12
303	SLU 35	-31	46	2383	-449.91	2.54	-11.13
303	SLU 36	-31	43	2397	-454.18	2.53	-11.12
303	SLU 37	-31	46	2383	-449.91	2.54	-11.13
303	SLU 38	-31	43	2397	-454.18	2.53	-11.12
303	SLU 39	-33	48	2522	-473.78	2.76	-11.69
303	SLU 40	-33	45	2537	-478.05	2.76	-11.68
303	SLU 41	-33	48	2522	-473.78	2.76	-11.69
303	SLU 42	-33	45	2537	-478.05	2.76	-11.68
303	SLU 43	-31	48	2290	-444.45	2.02	-11.16
303	SLU 44	-31	43	2314	-451.56	2.01	-11.16

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
303	SLU 45	-31	48	2290	-444.45	2.02	-11.16
303	SLU 46	-31	45	2304	-448.72	2.02	-11.16
303	SLU 47	-31	43	2314	-451.56	2.01	-11.16
303	SLU 48	-31	48	2290	-444.45	2.02	-11.16
303	SLU 49	-31	45	2304	-448.72	2.02	-11.16
303	SLU 50	-31	48	2290	-444.45	2.02	-11.16
303	SLU 51	-31	45	2304	-448.72	2.02	-11.16
303	SLU 52	-35	48	2638	-507.25	2.53	-12.47
303	SLU 53	-35	53	2615	-500.14	2.54	-12.47
303	SLU 54	-35	50	2629	-504.41	2.54	-12.47
303	SLU 55	-35	48	2638	-507.25	2.53	-12.47
303	SLU 56	-35	53	2615	-500.14	2.54	-12.47
303	SLU 57	-35	50	2629	-504.41	2.54	-12.47
303	SLU 58	-35	53	2615	-500.14	2.54	-12.47
303	SLU 59	-35	50	2629	-504.41	2.54	-12.47
303	SLU 60	-36	55	2754	-524.01	2.76	-13.03
303	SLU 61	-36	52	2768	-528.28	2.76	-13.03
303	SLU 62	-36	55	2754	-524.01	2.76	-13.03
303	SLU 63	-36	52	2768	-528.28	2.76	-13.03
303	SLU 64	-34	51	2525	-485.86	2.39	-12.14
303	SLU 65	-34	46	2549	-492.97	2.38	-12.14
303	SLU 66	-34	51	2525	-485.86	2.39	-12.14
303	SLU 67	-34	48	2539	-490.13	2.39	-12.14
303	SLU 68	-34	46	2549	-492.97	2.38	-12.14
303	SLU 69	-34	51	2525	-485.86	2.39	-12.14
303	SLU 70	-34	48	2539	-490.13	2.39	-12.14
303	SLU 71	-34	51	2525	-485.86	2.39	-12.14
303	SLU 72	-34	48	2539	-490.13	2.39	-12.14
303	SLU 73	-37	51	2873	-548.67	2.9	-13.44
303	SLU 74	-38	56	2850	-541.56	2.91	-13.44
303	SLU 75	-38	53	2864	-545.82	2.9	-13.44
303	SLU 76	-37	51	2873	-548.67	2.9	-13.44
303	SLU 77	-38	56	2850	-541.56	2.91	-13.44
303	SLU 78	-38	53	2864	-545.82	2.9	-13.44
303	SLU 79	-38	56	2850	-541.56	2.91	-13.44
303	SLU 80	-38	53	2864	-545.82	2.9	-13.44
303	SLU 81	-39	59	2989	-565.42	3.13	-14
303	SLU 82	-39	55	3003	-569.69	3.13	-14
303	SLU 83	-39	59	2989	-565.42	3.13	-14
303	SLU 84	-39	55	3003	-569.69	3.13	-14
303	SLE RA 1	-25	39	1891	-364.64	1.76	-9.12
303	SLE RA 2	-25	35	1907	-369.38	1.75	-9.12
303	SLE RA 3	-25	39	1891	-364.64	1.76	-9.12
303	SLE RA 4	-25	37	1900	-367.48	1.76	-9.12
303	SLE RA 5	-25	35	1907	-369.38	1.75	-9.12
303	SLE RA 6	-25	39	1891	-364.64	1.76	-9.12
303	SLE RA 7	-25	37	1900	-367.48	1.76	-9.12
303	SLE RA 8	-25	39	1891	-364.64	1.76	-9.12
303	SLE RA 9	-25	37	1900	-367.48	1.76	-9.12
303	SLE RA 10	-28	39	2123	-406.51	2.1	-9.99
303	SLE RA 11	-28	42	2107	-401.77	2.11	-9.99
303	SLE RA 12	-28	40	2117	-404.61	2.1	-9.99
303	SLE RA 13	-28	39	2123	-406.51	2.1	-9.99
303	SLE RA 14	-28	42	2107	-401.77	2.11	-9.99
303	SLE RA 15	-28	40	2117	-404.61	2.1	-9.99
303	SLE RA 16	-28	42	2107	-401.77	2.11	-9.99
303	SLE RA 17	-28	40	2117	-404.61	2.1	-9.99
303	SLE RA 18	-29	44	2200	-417.68	2.25	-10.37
303	SLE RA 19	-29	41	2209	-420.52	2.25	-10.37
303	SLE RA 20	-29	44	2200	-417.68	2.25	-10.37
303	SLE RA 21	-29	41	2209	-420.52	2.25	-10.37
303	SLE FR 1	-25	39	1891	-364.64	1.76	-9.12
303	SLE FR 2	-25	38	1894	-365.59	1.76	-9.12
303	SLE FR 3	-25	39	1891	-364.64	1.76	-9.12
303	SLE FR 4	-26	39	1987	-381.5	1.91	-9.5
303	SLE FR 5	-26	40	1984	-380.55	1.91	-9.5
303	SLE FR 6	-27	41	2045	-391.16	2.01	-9.74
303	SLE QP 1	-25	39	1891	-364.64	1.76	-9.12
303	SLE QP 2	-26	40	1984	-380.55	1.91	-9.5
303	SLD 1	180	56	1796	-374.73	2.77	62.73
303	SLD 2	136	69	1795	-374.45	2.78	47.51
303	SLD 3	196	-26	1996	-399.28	2.93	68.26
303	SLD 4	152	-13	1995	-399	2.94	53.04
303	SLD 5	27	165	1625	-341.67	1.91	9.23
303	SLD 6	-17	178	1623	-341.39	1.92	-6.22
303	SLD 7	80	-109	2291	-423.51	2.46	27.66
303	SLD 8	35	-96	2289	-423.22	2.47	12.2
303	SLD 9	-88	176	1678	-337.88	1.35	-31.2
303	SLD 10	-133	189	1676	-337.6	1.36	-46.65
303	SLD 11	-36	-97	2344	-419.72	1.89	-12.77
303	SLD 12	-80	-85	2342	-419.43	1.9	-28.22
303	SLD 13	-205	93	1973	-362.1	0.87	-72.03
303	SLD 14	-249	106	1971	-361.82	0.88	-87.25
303	SLD 15	-189	11	2172	-386.65	1.04	-66.5
303	SLD 16	-233	24	2171	-386.37	1.05	-81.72
303	SLV 1	443	77	1556	-367.18	3.86	154.51
303	SLV 2	343	106	1553	-366.55	3.89	120

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
303	SLV 3	478	-110	2012	-423.55	4.24	167.12
303	SLV 4	379	-81	2009	-422.91	4.26	132.6
303	SLV 5	95	325	1165	-291.28	1.92	32.93
303	SLV 6	-5	353	1161	-290.64	1.94	-2.1
303	SLV 7	215	-299	2685	-479.17	3.17	74.94
303	SLV 8	114	-270	2682	-478.52	3.19	39.91
303	SLV 9	-167	350	1285	-282.59	0.63	-58.9
303	SLV 10	-268	379	1282	-281.94	0.65	-93.93
303	SLV 11	-48	-273	2806	-470.47	1.87	-16.89
303	SLV 12	-148	-245	2802	-469.82	1.9	-51.92
303	SLV 13	-432	162	1958	-338.19	-0.44	-151.59
303	SLV 14	-531	190	1955	-337.55	-0.42	-186.11
303	SLV 15	-396	-25	2414	-394.56	-0.07	-138.99
303	SLV 16	-495	3	2411	-393.92	-0.05	-173.5
303	CRTFP Ux+	0	0	0	0	0	0
303	CRTFP Ux-	0	0	0	0	0	0
303	CRTFP Uy+	0	0	0	0	0	0
303	CRTFP Uy-	0	0	0	0	0	0
304	SLU 1	-24	31	1787	-317.98	0.8	-8.8
304	SLU 2	-24	25	1810	-325.17	0.79	-8.8
304	SLU 3	-24	31	1787	-317.98	0.8	-8.8
304	SLU 4	-24	28	1801	-322.29	0.79	-8.8
304	SLU 5	-24	25	1810	-325.17	0.79	-8.8
304	SLU 6	-24	31	1787	-317.98	0.8	-8.8
304	SLU 7	-24	28	1801	-322.29	0.79	-8.8
304	SLU 8	-24	31	1787	-317.98	0.8	-8.8
304	SLU 9	-24	28	1801	-322.29	0.79	-8.8
304	SLU 10	-28	30	2122	-372.04	1.13	-10.13
304	SLU 11	-28	36	2098	-364.85	1.13	-10.13
304	SLU 12	-28	32	2113	-369.16	1.13	-10.13
304	SLU 13	-28	30	2122	-372.04	1.13	-10.13
304	SLU 14	-28	36	2098	-364.85	1.13	-10.13
304	SLU 15	-28	32	2113	-369.16	1.13	-10.13
304	SLU 16	-28	36	2098	-364.85	1.13	-10.13
304	SLU 17	-28	32	2113	-369.16	1.13	-10.13
304	SLU 18	-30	37	2232	-384.93	1.28	-10.7
304	SLU 19	-30	34	2246	-389.25	1.27	-10.7
304	SLU 20	-30	37	2232	-384.93	1.28	-10.7
304	SLU 21	-30	34	2246	-389.25	1.27	-10.7
304	SLU 22	-27	34	2013	-352.81	1.03	-9.77
304	SLU 23	-27	28	2036	-360.01	1.02	-9.77
304	SLU 24	-27	34	2013	-352.81	1.03	-9.77
304	SLU 25	-27	31	2027	-357.13	1.02	-9.77
304	SLU 26	-27	28	2036	-360.01	1.02	-9.77
304	SLU 27	-27	34	2013	-352.81	1.03	-9.77
304	SLU 28	-27	31	2027	-357.13	1.02	-9.77
304	SLU 29	-27	34	2013	-352.81	1.03	-9.77
304	SLU 30	-27	31	2027	-357.13	1.02	-9.77
304	SLU 31	-31	33	2348	-406.88	1.36	-11.1
304	SLU 32	-31	38	2324	-399.68	1.36	-11.1
304	SLU 33	-31	35	2339	-404	1.36	-11.1
304	SLU 34	-31	33	2348	-406.88	1.36	-11.1
304	SLU 35	-31	38	2324	-399.68	1.36	-11.1
304	SLU 36	-31	35	2339	-404	1.36	-11.1
304	SLU 37	-31	38	2324	-399.68	1.36	-11.1
304	SLU 38	-31	35	2339	-404	1.36	-11.1
304	SLU 39	-33	40	2458	-419.77	1.51	-11.67
304	SLU 40	-33	37	2472	-424.09	1.5	-11.68
304	SLU 41	-33	40	2458	-419.77	1.51	-11.67
304	SLU 42	-33	37	2472	-424.09	1.5	-11.68
304	SLU 43	-31	39	2245	-401.42	0.96	-11.1
304	SLU 44	-31	34	2269	-408.62	0.95	-11.11
304	SLU 45	-31	39	2245	-401.42	0.96	-11.1
304	SLU 46	-31	36	2259	-405.74	0.95	-11.11
304	SLU 47	-31	34	2269	-408.62	0.95	-11.11
304	SLU 48	-31	39	2245	-401.42	0.96	-11.1
304	SLU 49	-31	36	2259	-405.74	0.95	-11.11
304	SLU 50	-31	39	2245	-401.42	0.96	-11.1
304	SLU 51	-31	36	2259	-405.74	0.95	-11.11
304	SLU 52	-35	38	2581	-455.49	1.29	-12.44
304	SLU 53	-35	44	2557	-448.29	1.29	-12.44
304	SLU 54	-35	40	2571	-452.61	1.29	-12.44
304	SLU 55	-35	38	2581	-455.49	1.29	-12.44
304	SLU 56	-35	44	2557	-448.29	1.29	-12.44
304	SLU 57	-35	40	2571	-452.61	1.29	-12.44
304	SLU 58	-35	44	2557	-448.29	1.29	-12.44
304	SLU 59	-35	40	2571	-452.61	1.29	-12.44
304	SLU 60	-36	46	2690	-468.38	1.44	-13.01
304	SLU 61	-36	42	2705	-472.7	1.43	-13.01
304	SLU 62	-36	46	2690	-468.38	1.44	-13.01
304	SLU 63	-36	42	2705	-472.7	1.43	-13.01
304	SLU 64	-34	42	2471	-436.26	1.19	-12.08
304	SLU 65	-34	37	2495	-443.46	1.18	-12.08
304	SLU 66	-34	42	2471	-436.26	1.19	-12.08
304	SLU 67	-34	39	2485	-440.58	1.18	-12.08
304	SLU 68	-34	37	2495	-443.46	1.18	-12.08
304	SLU 69	-34	42	2471	-436.26	1.19	-12.08

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
304	SLU 70	-34	39	2485	-440.58	1.18	-12.08
304	SLU 71	-34	42	2471	-436.26	1.19	-12.08
304	SLU 72	-34	39	2485	-440.58	1.18	-12.08
304	SLU 73	-37	41	2807	-490.33	1.52	-13.41
304	SLU 74	-37	47	2783	-483.13	1.52	-13.41
304	SLU 75	-37	43	2797	-487.45	1.52	-13.41
304	SLU 76	-37	41	2807	-490.33	1.52	-13.41
304	SLU 77	-37	47	2783	-483.13	1.52	-13.41
304	SLU 78	-37	43	2797	-487.45	1.52	-13.41
304	SLU 79	-37	47	2783	-483.13	1.52	-13.41
304	SLU 80	-37	43	2797	-487.45	1.52	-13.41
304	SLU 81	-39	49	2916	-503.22	1.67	-13.98
304	SLU 82	-39	45	2931	-507.54	1.66	-13.98
304	SLU 83	-39	49	2916	-503.22	1.67	-13.98
304	SLU 84	-39	45	2931	-507.54	1.66	-13.98
304	SLE RA 1	-25	32	1851	-327.93	0.86	-9.08
304	SLE RA 2	-25	28	1867	-332.73	0.86	-9.08
304	SLE RA 3	-25	32	1851	-327.93	0.86	-9.08
304	SLE RA 4	-25	30	1861	-330.81	0.86	-9.08
304	SLE RA 5	-25	28	1867	-332.73	0.86	-9.08
304	SLE RA 6	-25	32	1851	-327.93	0.86	-9.08
304	SLE RA 7	-25	30	1861	-330.81	0.86	-9.08
304	SLE RA 8	-25	32	1851	-327.93	0.86	-9.08
304	SLE RA 9	-25	30	1861	-330.81	0.86	-9.08
304	SLE RA 10	-28	31	2075	-363.97	1.08	-9.97
304	SLE RA 11	-28	35	2059	-359.18	1.09	-9.96
304	SLE RA 12	-28	33	2069	-362.05	1.08	-9.97
304	SLE RA 13	-28	31	2075	-363.97	1.08	-9.97
304	SLE RA 14	-28	35	2059	-359.18	1.09	-9.96
304	SLE RA 15	-28	33	2069	-362.05	1.08	-9.97
304	SLE RA 16	-28	35	2059	-359.18	1.09	-9.96
304	SLE RA 17	-28	33	2069	-362.05	1.08	-9.97
304	SLE RA 18	-29	36	2148	-372.57	1.18	-10.35
304	SLE RA 19	-29	34	2158	-375.45	1.18	-10.35
304	SLE RA 20	-29	36	2148	-372.57	1.18	-10.35
304	SLE RA 21	-29	34	2158	-375.45	1.18	-10.35
304	SLE FR 1	-25	32	1851	-327.93	0.86	-9.08
304	SLE FR 2	-25	31	1854	-328.89	0.86	-9.08
304	SLE FR 3	-25	32	1851	-327.93	0.86	-9.08
304	SLE FR 4	-26	32	1943	-342.28	0.96	-9.46
304	SLE FR 5	-26	33	1940	-341.32	0.96	-9.46
304	SLE FR 6	-27	34	2000	-350.25	1.02	-9.71
304	SLE QP 1	-25	32	1851	-327.93	0.86	-9.08
304	SLE QP 2	-26	33	1940	-341.32	0.96	-9.46
304	SLD 1	180	50	1726	-324.36	1.96	62.79
304	SLD 2	136	66	1724	-324.09	1.98	47.57
304	SLD 3	196	-37	1923	-345.14	2.02	68.31
304	SLD 4	152	-22	1922	-344.88	2.03	53.09
304	SLD 5	28	165	1577	-304.8	1.17	9.29
304	SLD 6	-17	181	1576	-304.53	1.18	-6.16
304	SLD 7	80	-126	2235	-374.09	1.36	27.68
304	SLD 8	35	-110	2233	-373.82	1.37	12.23
304	SLD 9	-88	176	1647	-308.82	0.54	-31.15
304	SLD 10	-132	192	1645	-308.55	0.56	-46.6
304	SLD 11	-36	-114	2305	-378.11	0.74	-12.75
304	SLD 12	-80	-98	2303	-377.84	0.75	-28.2
304	SLD 13	-205	88	1959	-337.76	-0.12	-72
304	SLD 14	-249	104	1957	-337.5	-0.1	-87.22
304	SLD 15	-189	1	2156	-358.55	-0.06	-66.49
304	SLD 16	-233	17	2155	-358.28	-0.05	-81.7
304	SLV 1	443	71	1452	-302.25	3.24	154.6
304	SLV 2	343	107	1448	-301.66	3.27	120.09
304	SLV 3	478	-128	1902	-350.12	3.37	167.18
304	SLV 4	379	-91	1898	-349.53	3.4	132.67
304	SLV 5	96	333	1112	-257.21	1.44	33.01
304	SLV 6	-5	370	1108	-256.61	1.46	-2.01
304	SLV 7	215	-329	2613	-416.78	1.87	74.95
304	SLV 8	114	-293	2609	-416.17	1.9	39.93
304	SLV 9	-166	359	1271	-266.47	0.02	-58.85
304	SLV 10	-267	396	1267	-265.86	0.05	-93.86
304	SLV 11	-48	-303	2772	-426.03	0.45	-16.9
304	SLV 12	-149	-266	2768	-425.43	0.48	-51.92
304	SLV 13	-432	158	1982	-333.11	-1.48	-151.59
304	SLV 14	-531	194	1978	-332.52	-1.45	-186.09
304	SLV 15	-396	-41	2433	-380.98	-1.35	-139
304	SLV 16	-495	-5	2429	-380.39	-1.32	-173.51
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
305	SLU 1	-24	24	1778	-304.4	-0.22	-8.76
305	SLU 2	-24	18	1802	-311.57	-0.23	-8.76
305	SLU 3	-24	24	1778	-304.4	-0.22	-8.76
305	SLU 4	-24	20	1792	-308.7	-0.23	-8.76
305	SLU 5	-24	18	1802	-311.57	-0.23	-8.76
305	SLU 6	-24	24	1778	-304.4	-0.22	-8.76
305	SLU 7	-24	20	1792	-308.7	-0.23	-8.76

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
305	SLU 8	-24	24	1778	-304.4	-0.22	-8.76
305	SLU 9	-24	20	1792	-308.7	-0.23	-8.76
305	SLU 10	-28	21	2107	-354.11	-0.11	-10.12
305	SLU 11	-28	28	2082	-346.93	-0.1	-10.11
305	SLU 12	-28	24	2097	-351.24	-0.1	-10.11
305	SLU 13	-28	21	2107	-354.11	-0.11	-10.12
305	SLU 14	-28	28	2082	-346.93	-0.1	-10.11
305	SLU 15	-28	24	2097	-351.24	-0.1	-10.11
305	SLU 16	-28	28	2082	-346.93	-0.1	-10.11
305	SLU 17	-28	24	2097	-351.24	-0.1	-10.11
305	SLU 18	-30	29	2213	-365.16	-0.05	-10.69
305	SLU 19	-30	26	2228	-369.47	-0.05	-10.7
305	SLU 20	-30	29	2213	-365.16	-0.05	-10.69
305	SLU 21	-30	26	2228	-369.47	-0.05	-10.7
305	SLU 22	-27	27	1999	-336	-0.15	-9.73
305	SLU 23	-27	20	2023	-343.18	-0.16	-9.73
305	SLU 24	-27	27	1999	-336	-0.15	-9.73
305	SLU 25	-27	23	2014	-340.31	-0.16	-9.73
305	SLU 26	-27	20	2023	-343.18	-0.16	-9.73
305	SLU 27	-27	27	1999	-336	-0.15	-9.73
305	SLU 28	-27	23	2014	-340.31	-0.16	-9.73
305	SLU 29	-27	27	1999	-336	-0.15	-9.73
305	SLU 30	-27	23	2014	-340.31	-0.16	-9.73
305	SLU 31	-31	24	2328	-385.71	-0.04	-11.09
305	SLU 32	-31	30	2304	-378.53	-0.03	-11.08
305	SLU 33	-31	27	2318	-382.84	-0.04	-11.08
305	SLU 34	-31	24	2328	-385.71	-0.04	-11.09
305	SLU 35	-31	30	2304	-378.53	-0.03	-11.08
305	SLU 36	-31	27	2318	-382.84	-0.04	-11.08
305	SLU 37	-31	30	2304	-378.53	-0.03	-11.08
305	SLU 38	-31	27	2318	-382.84	-0.04	-11.08
305	SLU 39	-33	32	2435	-396.76	0.02	-11.66
305	SLU 40	-32	28	2449	-401.07	0.02	-11.66
305	SLU 41	-33	32	2435	-396.76	0.02	-11.66
305	SLU 42	-32	28	2449	-401.07	0.02	-11.66
305	SLU 43	-31	31	2235	-384.89	-0.31	-11.05
305	SLU 44	-31	24	2259	-392.06	-0.32	-11.06
305	SLU 45	-31	31	2235	-384.89	-0.31	-11.05
305	SLU 46	-31	27	2249	-389.19	-0.31	-11.06
305	SLU 47	-31	24	2259	-392.06	-0.32	-11.06
305	SLU 48	-31	31	2235	-384.89	-0.31	-11.05
305	SLU 49	-31	27	2249	-389.19	-0.31	-11.06
305	SLU 50	-31	31	2235	-384.89	-0.31	-11.05
305	SLU 51	-31	27	2249	-389.19	-0.31	-11.06
305	SLU 52	-34	28	2564	-434.59	-0.19	-12.41
305	SLU 53	-35	34	2540	-427.42	-0.19	-12.41
305	SLU 54	-34	30	2554	-431.72	-0.19	-12.41
305	SLU 55	-34	28	2564	-434.59	-0.19	-12.41
305	SLU 56	-35	34	2540	-427.42	-0.19	-12.41
305	SLU 57	-34	30	2554	-431.72	-0.19	-12.41
305	SLU 58	-35	34	2540	-427.42	-0.19	-12.41
305	SLU 59	-34	30	2554	-431.72	-0.19	-12.41
305	SLU 60	-36	36	2670	-445.65	-0.14	-12.99
305	SLU 61	-36	32	2685	-449.95	-0.14	-12.99
305	SLU 62	-36	36	2670	-445.65	-0.14	-12.99
305	SLU 63	-36	32	2685	-449.95	-0.14	-12.99
305	SLU 64	-33	33	2457	-416.49	-0.24	-12.02
305	SLU 65	-33	27	2481	-423.66	-0.25	-12.03
305	SLU 66	-33	33	2457	-416.49	-0.24	-12.02
305	SLU 67	-33	29	2471	-420.79	-0.25	-12.03
305	SLU 68	-33	27	2481	-423.66	-0.25	-12.03
305	SLU 69	-33	33	2457	-416.49	-0.24	-12.02
305	SLU 70	-33	29	2471	-420.79	-0.25	-12.03
305	SLU 71	-33	33	2457	-416.49	-0.24	-12.02
305	SLU 72	-33	29	2471	-420.79	-0.25	-12.03
305	SLU 73	-37	30	2785	-466.19	-0.13	-13.38
305	SLU 74	-37	37	2761	-459.02	-0.12	-13.38
305	SLU 75	-37	33	2776	-463.32	-0.13	-13.38
305	SLU 76	-37	30	2785	-466.19	-0.13	-13.38
305	SLU 77	-37	37	2761	-459.02	-0.12	-13.38
305	SLU 78	-37	33	2776	-463.32	-0.13	-13.38
305	SLU 79	-37	37	2761	-459.02	-0.12	-13.38
305	SLU 80	-37	33	2776	-463.32	-0.13	-13.38
305	SLU 81	-39	38	2892	-477.25	-0.07	-13.96
305	SLU 82	-39	35	2906	-481.55	-0.07	-13.96
305	SLU 83	-39	38	2892	-477.25	-0.07	-13.96
305	SLU 84	-39	35	2906	-481.55	-0.07	-13.96
305	SLE RA 1	-25	25	1841	-313.43	-0.2	-9.04
305	SLE RA 2	-25	21	1857	-318.21	-0.21	-9.04
305	SLE RA 3	-25	25	1841	-313.43	-0.2	-9.04
305	SLE RA 4	-25	22	1851	-316.3	-0.21	-9.04
305	SLE RA 5	-25	21	1857	-318.21	-0.21	-9.04
305	SLE RA 6	-25	25	1841	-313.43	-0.2	-9.04
305	SLE RA 7	-25	22	1851	-316.3	-0.21	-9.04
305	SLE RA 8	-25	25	1841	-313.43	-0.2	-9.04
305	SLE RA 9	-25	22	1851	-316.3	-0.21	-9.04
305	SLE RA 10	-28	23	2060	-346.57	-0.12	-9.94

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
305	SLE RA 11	-28	27	2044	-341.78	-0.12	-9.94
305	SLE RA 12	-28	25	2054	-344.65	-0.12	-9.94
305	SLE RA 13	-28	23	2060	-346.57	-0.12	-9.94
305	SLE RA 14	-28	27	2044	-341.78	-0.12	-9.94
305	SLE RA 15	-28	25	2054	-344.65	-0.12	-9.94
305	SLE RA 16	-28	27	2044	-341.78	-0.12	-9.94
305	SLE RA 17	-28	25	2054	-344.65	-0.12	-9.94
305	SLE RA 18	-29	28	2131	-353.94	-0.09	-10.32
305	SLE RA 19	-29	26	2141	-356.81	-0.09	-10.33
305	SLE RA 20	-29	28	2131	-353.94	-0.09	-10.32
305	SLE RA 21	-29	26	2141	-356.81	-0.09	-10.33
305	SLE FR 1	-25	25	1841	-313.43	-0.2	-9.04
305	SLE FR 2	-25	24	1844	-314.39	-0.2	-9.04
305	SLE FR 3	-25	25	1841	-313.43	-0.2	-9.04
305	SLE FR 4	-26	25	1931	-326.54	-0.17	-9.42
305	SLE FR 5	-26	26	1928	-325.58	-0.17	-9.42
305	SLE FR 6	-27	27	1986	-333.68	-0.14	-9.68
305	SLE QP 1	-25	25	1841	-313.43	-0.2	-9.04
305	SLE QP 2	-26	26	1928	-325.58	-0.17	-9.42
305	SLD 1	180	43	1681	-302.1	1.07	62.81
305	SLD 2	137	63	1679	-301.85	1.08	47.6
305	SLD 3	196	-51	1880	-322.03	0.9	68.32
305	SLD 4	152	-31	1878	-321.77	0.92	53.11
305	SLD 5	28	166	1552	-288.41	0.45	9.33
305	SLD 6	-17	186	1550	-288.15	0.47	-6.11
305	SLD 7	80	-146	2217	-354.83	-0.11	27.69
305	SLD 8	35	-126	2215	-354.57	-0.09	12.25
305	SLD 9	-88	178	1641	-296.59	-0.24	-31.1
305	SLD 10	-132	198	1639	-296.34	-0.23	-46.54
305	SLD 11	-36	-134	2306	-363.01	-0.8	-12.74
305	SLD 12	-80	-114	2304	-362.76	-0.79	-28.18
305	SLD 13	-205	83	1978	-329.39	-1.25	-71.96
305	SLD 14	-248	103	1976	-329.14	-1.23	-87.17
305	SLD 15	-189	-11	2177	-349.31	-1.42	-66.45
305	SLD 16	-233	9	2175	-349.06	-1.4	-81.66
305	SLV 1	443	65	1365	-271.77	2.64	154.6
305	SLV 2	344	110	1360	-271.2	2.67	120.12
305	SLV 3	478	-148	1820	-317.69	2.26	167.16
305	SLV 4	379	-104	1815	-317.11	2.29	132.68
305	SLV 5	96	346	1070	-240.01	1.24	33.06
305	SLV 6	-5	391	1065	-239.43	1.28	-1.93
305	SLV 7	214	-366	2588	-393.05	-0.03	74.93
305	SLV 8	114	-321	2583	-392.47	0	39.93
305	SLV 9	-166	373	1273	-258.69	-0.34	-58.77
305	SLV 10	-267	418	1268	-258.11	-0.3	-93.77
305	SLV 11	-48	-339	2791	-411.73	-1.61	-16.91
305	SLV 12	-149	-294	2786	-411.15	-1.58	-51.91
305	SLV 13	-431	156	2041	-334.05	-2.63	-151.52
305	SLV 14	-531	200	2036	-333.48	-2.59	-186.01
305	SLV 15	-396	-58	2496	-379.96	-3.01	-138.96
305	SLV 16	-495	-13	2491	-379.39	-2.97	-173.45
305	CRTFP Ux+	0	0	0	0	0	0
305	CRTFP Ux-	0	0	0	0	0	0
305	CRTFP Uy+	0	0	0	0	0	0
305	CRTFP Uy-	0	0	0	0	0	0
306	SLU 1	-24	17	1801	-314.85	-1.35	-8.73
306	SLU 2	-24	10	1825	-321.93	-1.36	-8.73
306	SLU 3	-24	17	1801	-314.85	-1.35	-8.73
306	SLU 4	-24	13	1816	-319.1	-1.36	-8.73
306	SLU 5	-24	10	1825	-321.93	-1.36	-8.73
306	SLU 6	-24	17	1801	-314.85	-1.35	-8.73
306	SLU 7	-24	13	1816	-319.1	-1.36	-8.73
306	SLU 8	-24	17	1801	-314.85	-1.35	-8.73
306	SLU 9	-24	13	1816	-319.1	-1.36	-8.73
306	SLU 10	-28	13	2130	-365.12	-1.47	-10.1
306	SLU 11	-28	20	2106	-358.04	-1.47	-10.1
306	SLU 12	-28	16	2120	-362.28	-1.47	-10.1
306	SLU 13	-28	13	2130	-365.12	-1.47	-10.1
306	SLU 14	-28	20	2106	-358.04	-1.47	-10.1
306	SLU 15	-28	16	2120	-362.28	-1.47	-10.1
306	SLU 16	-28	20	2106	-358.04	-1.47	-10.1
306	SLU 17	-28	16	2120	-362.28	-1.47	-10.1
306	SLU 18	-30	21	2236	-376.55	-1.52	-10.69
306	SLU 19	-30	17	2251	-380.79	-1.52	-10.69
306	SLU 20	-30	21	2236	-376.55	-1.52	-10.69
306	SLU 21	-30	17	2251	-380.79	-1.52	-10.69
306	SLU 22	-27	20	2023	-346.95	-1.47	-9.69
306	SLU 23	-27	12	2048	-354.03	-1.47	-9.7
306	SLU 24	-27	20	2023	-346.95	-1.47	-9.69
306	SLU 25	-27	15	2038	-351.2	-1.47	-9.7
306	SLU 26	-27	12	2048	-354.03	-1.47	-9.7
306	SLU 27	-27	20	2023	-346.95	-1.47	-9.69
306	SLU 28	-27	15	2038	-351.2	-1.47	-9.7
306	SLU 29	-27	20	2023	-346.95	-1.47	-9.69
306	SLU 30	-27	15	2038	-351.2	-1.47	-9.7
306	SLU 31	-31	15	2352	-397.22	-1.59	-11.07
306	SLU 32	-31	22	2328	-390.14	-1.58	-11.06

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
306	SLU 33	-31	18	2342	-394.39	-1.58	-11.07
306	SLU 34	-31	15	2352	-397.22	-1.59	-11.07
306	SLU 35	-31	22	2328	-390.14	-1.58	-11.06
306	SLU 36	-31	18	2342	-394.39	-1.58	-11.07
306	SLU 37	-31	22	2328	-390.14	-1.58	-11.06
306	SLU 38	-31	18	2342	-394.39	-1.58	-11.07
306	SLU 39	-32	24	2458	-408.65	-1.63	-11.65
306	SLU 40	-32	19	2473	-412.9	-1.63	-11.65
306	SLU 41	-32	24	2458	-408.65	-1.63	-11.65
306	SLU 42	-32	19	2473	-412.9	-1.63	-11.65
306	SLU 43	-31	22	2265	-398.3	-1.72	-11.01
306	SLU 44	-31	14	2289	-405.37	-1.73	-11.02
306	SLU 45	-31	22	2265	-398.3	-1.72	-11.01
306	SLU 46	-31	17	2280	-402.54	-1.72	-11.02
306	SLU 47	-31	14	2289	-405.37	-1.73	-11.02
306	SLU 48	-31	22	2265	-398.3	-1.72	-11.01
306	SLU 49	-31	17	2280	-402.54	-1.72	-11.02
306	SLU 50	-31	22	2265	-398.3	-1.72	-11.01
306	SLU 51	-31	17	2280	-402.54	-1.72	-11.02
306	SLU 52	-34	17	2594	-448.56	-1.84	-12.39
306	SLU 53	-34	25	2570	-441.48	-1.83	-12.39
306	SLU 54	-34	20	2584	-445.73	-1.84	-12.39
306	SLU 55	-34	17	2594	-448.56	-1.84	-12.39
306	SLU 56	-34	25	2570	-441.48	-1.83	-12.39
306	SLU 57	-34	20	2584	-445.73	-1.84	-12.39
306	SLU 58	-34	25	2570	-441.48	-1.83	-12.39
306	SLU 59	-34	20	2584	-445.73	-1.84	-12.39
306	SLU 60	-36	26	2700	-459.99	-1.88	-12.97
306	SLU 61	-36	21	2715	-464.24	-1.89	-12.98
306	SLU 62	-36	26	2700	-459.99	-1.88	-12.97
306	SLU 63	-36	21	2715	-464.24	-1.89	-12.98
306	SLU 64	-33	24	2487	-430.4	-1.83	-11.98
306	SLU 65	-33	17	2512	-437.48	-1.84	-11.99
306	SLU 66	-33	24	2487	-430.4	-1.83	-11.98
306	SLU 67	-33	20	2502	-434.65	-1.84	-11.98
306	SLU 68	-33	17	2512	-437.48	-1.84	-11.99
306	SLU 69	-33	24	2487	-430.4	-1.83	-11.98
306	SLU 70	-33	20	2502	-434.65	-1.84	-11.98
306	SLU 71	-33	24	2487	-430.4	-1.83	-11.98
306	SLU 72	-33	20	2502	-434.65	-1.84	-11.98
306	SLU 73	-37	20	2816	-480.67	-1.95	-13.36
306	SLU 74	-37	27	2792	-473.59	-1.95	-13.35
306	SLU 75	-37	22	2807	-477.84	-1.95	-13.35
306	SLU 76	-37	20	2816	-480.67	-1.95	-13.36
306	SLU 77	-37	27	2792	-473.59	-1.95	-13.35
306	SLU 78	-37	22	2807	-477.84	-1.95	-13.35
306	SLU 79	-37	27	2792	-473.59	-1.95	-13.35
306	SLU 80	-37	22	2807	-477.84	-1.95	-13.35
306	SLU 81	-39	28	2923	-492.1	-2	-13.94
306	SLU 82	-39	24	2937	-496.35	-2	-13.94
306	SLU 83	-39	28	2923	-492.1	-2	-13.94
306	SLU 84	-39	24	2937	-496.35	-2	-13.94
306	SLE RA 1	-25	18	1865	-324.02	-1.38	-9
306	SLE RA 2	-25	13	1881	-328.74	-1.39	-9.01
306	SLE RA 3	-25	18	1865	-324.02	-1.38	-9
306	SLE RA 4	-25	15	1874	-326.85	-1.39	-9.01
306	SLE RA 5	-25	13	1881	-328.74	-1.39	-9.01
306	SLE RA 6	-25	18	1865	-324.02	-1.38	-9
306	SLE RA 7	-25	15	1874	-326.85	-1.39	-9.01
306	SLE RA 8	-25	18	1865	-324.02	-1.38	-9
306	SLE RA 9	-25	15	1874	-326.85	-1.39	-9.01
306	SLE RA 10	-28	15	2084	-357.53	-1.47	-9.92
306	SLE RA 11	-28	20	2068	-352.81	-1.46	-9.92
306	SLE RA 12	-28	17	2077	-355.65	-1.46	-9.92
306	SLE RA 13	-28	15	2084	-357.53	-1.47	-9.92
306	SLE RA 14	-28	20	2068	-352.81	-1.46	-9.92
306	SLE RA 15	-28	17	2077	-355.65	-1.46	-9.92
306	SLE RA 16	-28	20	2068	-352.81	-1.46	-9.92
306	SLE RA 17	-28	17	2077	-355.65	-1.46	-9.92
306	SLE RA 18	-29	21	2155	-365.15	-1.49	-10.31
306	SLE RA 19	-29	18	2164	-367.99	-1.5	-10.31
306	SLE RA 20	-29	21	2155	-365.15	-1.49	-10.31
306	SLE RA 21	-29	18	2164	-367.99	-1.5	-10.31
306	SLE FR 1	-25	18	1865	-324.02	-1.38	-9
306	SLE FR 2	-25	17	1868	-324.97	-1.39	-9
306	SLE FR 3	-25	18	1865	-324.02	-1.38	-9
306	SLE FR 4	-26	18	1955	-337.31	-1.42	-9.4
306	SLE FR 5	-26	19	1952	-336.36	-1.42	-9.39
306	SLE FR 6	-27	19	2010	-344.59	-1.44	-9.66
306	SLE QP 1	-25	18	1865	-324.02	-1.38	-9
306	SLE QP 2	-26	19	1952	-336.36	-1.42	-9.39
306	SLD 1	180	37	1665	-300.66	0.06	62.8
306	SLD 2	137	60	1662	-300.37	0.07	47.6
306	SLD 3	196	-65	1872	-323.04	-0.29	68.29
306	SLD 4	152	-41	1869	-322.75	-0.27	53.1
306	SLD 5	28	170	1553	-291.8	-0.46	9.36
306	SLD 6	-17	194	1550	-291.51	-0.44	-6.06

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
306	SLD 7	80	-169	2242	-366.42	-1.61	27.68
306	SLD 8	35	-145	2240	-366.13	-1.59	12.25
306	SLD 9	-87	182	1664	-306.6	-1.24	-31.04
306	SLD 10	-132	206	1661	-306.3	-1.22	-46.47
306	SLD 11	-36	-156	2353	-381.22	-2.4	-12.73
306	SLD 12	-80	-132	2350	-380.92	-2.38	-28.15
306	SLD 13	-204	79	2034	-349.97	-2.56	-71.89
306	SLD 14	-248	102	2032	-349.68	-2.54	-87.08
306	SLD 15	-189	-23	2241	-372.36	-2.91	-66.39
306	SLD 16	-233	1	2239	-372.07	-2.89	-81.59
306	SLV 1	443	60	1298	-254.85	1.93	154.54
306	SLV 2	343	113	1292	-254.19	1.98	120.08
306	SLV 3	478	-172	1770	-306.28	1.14	167.06
306	SLV 4	379	-118	1764	-305.62	1.19	132.61
306	SLV 5	96	363	1042	-234.14	0.77	33.1
306	SLV 6	-4	418	1036	-233.47	0.81	-1.87
306	SLV 7	214	-409	2615	-405.58	-1.86	74.86
306	SLV 8	113	-355	2609	-404.91	-1.82	39.9
306	SLV 9	-166	392	1294	-267.82	-1.01	-58.69
306	SLV 10	-267	446	1288	-267.15	-0.97	-93.65
306	SLV 11	-48	-380	2868	-439.25	-3.65	-16.92
306	SLV 12	-149	-326	2861	-438.58	-3.61	-51.89
306	SLV 13	-431	156	2139	-367.1	-4.02	-151.4
306	SLV 14	-530	209	2133	-366.44	-3.98	-185.85
306	SLV 15	-396	-76	2611	-418.54	-4.81	-138.87
306	SLV 16	-495	-23	2605	-417.88	-4.77	-173.33
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
307	SLU 1	-24	11	1859	-351.56	-2.56	-8.71
307	SLU 2	-24	2	1884	-358.53	-2.57	-8.71
307	SLU 3	-24	11	1859	-351.56	-2.56	-8.71
307	SLU 4	-24	6	1874	-355.74	-2.56	-8.71
307	SLU 5	-24	2	1884	-358.53	-2.57	-8.71
307	SLU 6	-24	11	1859	-351.56	-2.56	-8.71
307	SLU 7	-24	6	1874	-355.74	-2.56	-8.71
307	SLU 8	-24	11	1859	-351.56	-2.56	-8.71
307	SLU 9	-24	6	1874	-355.74	-2.56	-8.71
307	SLU 10	-28	4	2196	-407.75	-2.93	-10.1
307	SLU 11	-28	13	2171	-400.78	-2.92	-10.09
307	SLU 12	-28	8	2186	-404.96	-2.93	-10.1
307	SLU 13	-28	4	2196	-407.75	-2.93	-10.1
307	SLU 14	-28	13	2171	-400.78	-2.92	-10.09
307	SLU 15	-28	8	2186	-404.96	-2.93	-10.1
307	SLU 16	-28	13	2171	-400.78	-2.92	-10.09
307	SLU 17	-28	8	2186	-404.96	-2.93	-10.1
307	SLU 18	-30	14	2305	-421.88	-3.08	-10.68
307	SLU 19	-30	9	2320	-426.06	-3.09	-10.69
307	SLU 20	-30	14	2305	-421.88	-3.08	-10.68
307	SLU 21	-30	9	2320	-426.06	-3.09	-10.69
307	SLU 22	-27	13	2088	-388.2	-2.86	-9.67
307	SLU 23	-27	4	2112	-395.17	-2.87	-9.68
307	SLU 24	-27	13	2088	-388.2	-2.86	-9.67
307	SLU 25	-27	8	2103	-392.38	-2.87	-9.67
307	SLU 26	-27	4	2112	-395.17	-2.87	-9.68
307	SLU 27	-27	13	2088	-388.2	-2.86	-9.67
307	SLU 28	-27	8	2103	-392.38	-2.87	-9.67
307	SLU 29	-27	13	2088	-388.2	-2.86	-9.67
307	SLU 30	-27	8	2103	-392.38	-2.87	-9.67
307	SLU 31	-31	6	2424	-444.39	-3.24	-11.06
307	SLU 32	-31	15	2400	-437.43	-3.23	-11.05
307	SLU 33	-31	10	2414	-441.61	-3.23	-11.06
307	SLU 34	-31	6	2424	-444.39	-3.24	-11.06
307	SLU 35	-31	15	2400	-437.43	-3.23	-11.05
307	SLU 36	-31	10	2414	-441.61	-3.23	-11.06
307	SLU 37	-31	15	2400	-437.43	-3.23	-11.05
307	SLU 38	-31	10	2414	-441.61	-3.23	-11.06
307	SLU 39	-33	16	2533	-458.52	-3.38	-11.65
307	SLU 40	-32	11	2548	-462.7	-3.39	-11.65
307	SLU 41	-33	16	2533	-458.52	-3.38	-11.65
307	SLU 42	-32	11	2548	-462.7	-3.39	-11.65
307	SLU 43	-31	13	2339	-444.47	-3.22	-10.99
307	SLU 44	-31	5	2364	-451.43	-3.23	-11
307	SLU 45	-31	13	2339	-444.47	-3.22	-10.99
307	SLU 46	-31	8	2354	-448.65	-3.23	-10.99
307	SLU 47	-31	5	2364	-451.43	-3.23	-11
307	SLU 48	-31	13	2339	-444.47	-3.22	-10.99
307	SLU 49	-31	8	2354	-448.65	-3.23	-10.99
307	SLU 50	-31	13	2339	-444.47	-3.22	-10.99
307	SLU 51	-31	8	2354	-448.65	-3.23	-10.99
307	SLU 52	-34	7	2675	-500.65	-3.6	-12.38
307	SLU 53	-35	15	2651	-493.69	-3.59	-12.37
307	SLU 54	-34	10	2666	-497.87	-3.59	-12.38
307	SLU 55	-34	7	2675	-500.65	-3.6	-12.38
307	SLU 56	-35	15	2651	-493.69	-3.59	-12.37
307	SLU 57	-34	10	2666	-497.87	-3.59	-12.38

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
307	SLU 58	-35	15	2651	-493.69	-3.59	-12.37
307	SLU 59	-34	10	2666	-497.87	-3.59	-12.38
307	SLU 60	-36	16	2784	-514.78	-3.74	-12.97
307	SLU 61	-36	11	2799	-518.96	-3.75	-12.97
307	SLU 62	-36	16	2784	-514.78	-3.74	-12.97
307	SLU 63	-36	11	2799	-518.96	-3.75	-12.97
307	SLU 64	-33	15	2567	-481.11	-3.52	-11.95
307	SLU 65	-33	7	2592	-488.08	-3.53	-11.96
307	SLU 66	-33	15	2567	-481.11	-3.52	-11.95
307	SLU 67	-33	10	2582	-485.29	-3.53	-11.96
307	SLU 68	-33	7	2592	-488.08	-3.53	-11.96
307	SLU 69	-33	15	2567	-481.11	-3.52	-11.95
307	SLU 70	-33	10	2582	-485.29	-3.53	-11.96
307	SLU 71	-33	15	2567	-481.11	-3.52	-11.95
307	SLU 72	-33	10	2582	-485.29	-3.53	-11.96
307	SLU 73	-37	9	2904	-537.3	-3.9	-13.34
307	SLU 74	-37	17	2879	-530.33	-3.89	-13.34
307	SLU 75	-37	12	2894	-534.51	-3.9	-13.34
307	SLU 76	-37	9	2904	-537.3	-3.9	-13.34
307	SLU 77	-37	17	2879	-530.33	-3.89	-13.34
307	SLU 78	-37	12	2894	-534.51	-3.9	-13.34
307	SLU 79	-37	17	2879	-530.33	-3.89	-13.34
307	SLU 80	-37	12	2894	-534.51	-3.9	-13.34
307	SLU 81	-39	18	3013	-551.43	-4.05	-13.93
307	SLU 82	-39	13	3028	-555.61	-4.05	-13.93
307	SLU 83	-39	18	3013	-551.43	-4.05	-13.93
307	SLU 84	-39	13	3028	-555.61	-4.05	-13.93
307	SLE RA 1	-25	11	1925	-362.03	-2.64	-8.98
307	SLE RA 2	-25	6	1941	-366.67	-2.65	-8.99
307	SLE RA 3	-25	11	1925	-362.03	-2.64	-8.98
307	SLE RA 4	-25	8	1935	-364.82	-2.65	-8.99
307	SLE RA 5	-25	6	1941	-366.67	-2.65	-8.99
307	SLE RA 6	-25	11	1925	-362.03	-2.64	-8.98
307	SLE RA 7	-25	8	1935	-364.82	-2.65	-8.99
307	SLE RA 8	-25	11	1925	-362.03	-2.64	-8.98
307	SLE RA 9	-25	8	1935	-364.82	-2.65	-8.99
307	SLE RA 10	-28	7	2149	-399.49	-2.9	-9.91
307	SLE RA 11	-28	13	2133	-394.84	-2.89	-9.91
307	SLE RA 12	-28	9	2142	-397.63	-2.89	-9.91
307	SLE RA 13	-28	7	2149	-399.49	-2.9	-9.91
307	SLE RA 14	-28	13	2133	-394.84	-2.89	-9.91
307	SLE RA 15	-28	9	2142	-397.63	-2.89	-9.91
307	SLE RA 16	-28	13	2133	-394.84	-2.89	-9.91
307	SLE RA 17	-28	9	2142	-397.63	-2.89	-9.91
307	SLE RA 18	-29	13	2222	-408.91	-2.99	-10.3
307	SLE RA 19	-29	10	2232	-411.69	-3	-10.3
307	SLE RA 20	-29	13	2222	-408.91	-2.99	-10.3
307	SLE RA 21	-29	10	2232	-411.69	-3	-10.3
307	SLE FR 1	-25	11	1925	-362.03	-2.64	-8.98
307	SLE FR 2	-25	10	1928	-362.96	-2.65	-8.98
307	SLE FR 3	-25	11	1925	-362.03	-2.64	-8.98
307	SLE FR 4	-26	11	2017	-377.02	-2.75	-9.38
307	SLE FR 5	-26	12	2014	-376.09	-2.75	-9.38
307	SLE FR 6	-27	12	2073	-385.47	-2.82	-9.64
307	SLE QP 1	-25	11	1925	-362.03	-2.64	-8.98
307	SLE QP 2	-26	12	2014	-376.09	-2.75	-9.38
307	SLD 1	180	31	1679	-322.67	-1	62.75
307	SLD 2	136	59	1676	-322.25	-0.98	47.57
307	SLD 3	196	-80	1899	-351.32	-1.54	68.22
307	SLD 4	152	-52	1896	-350.9	-1.52	53.05
307	SLD 5	28	175	1581	-316.76	-1.42	9.38
307	SLD 6	-16	204	1578	-316.33	-1.4	-6.03
307	SLD 7	79	-193	2314	-412.27	-3.21	27.64
307	SLD 8	35	-165	2311	-411.84	-3.18	12.23
307	SLD 9	-87	189	1717	-340.34	-2.31	-30.99
307	SLD 10	-132	217	1714	-339.92	-2.29	-46.39
307	SLD 11	-36	-180	2450	-435.86	-4.1	-12.73
307	SLD 12	-80	-152	2447	-435.43	-4.08	-28.13
307	SLD 13	-204	76	2132	-401.29	-3.98	-71.81
307	SLD 14	-248	103	2129	-400.87	-3.96	-86.98
307	SLD 15	-189	-35	2352	-429.94	-4.52	-66.33
307	SLD 16	-233	-7	2348	-429.52	-4.5	-81.5
307	SLV 1	442	55	1252	-254.34	1.23	154.4
307	SLV 2	343	118	1244	-253.39	1.28	119.99
307	SLV 3	478	-197	1753	-319.95	0	166.89
307	SLV 4	378	-134	1746	-318.99	0.05	132.48
307	SLV 5	97	385	1027	-240.41	0.28	33.11
307	SLV 6	-4	449	1019	-239.45	0.34	-1.81
307	SLV 7	214	-456	2699	-459.08	-3.8	74.74
307	SLV 8	113	-392	2692	-458.12	-3.75	39.82
307	SLV 9	-165	416	1336	-294.07	-1.75	-58.58
307	SLV 10	-266	479	1328	-293.1	-1.7	-93.5
307	SLV 11	-48	-425	3008	-512.74	-5.83	-16.95
307	SLV 12	-149	-361	3001	-511.77	-5.78	-51.87
307	SLV 13	-431	158	2282	-433.19	-5.55	-151.23
307	SLV 14	-530	221	2274	-432.24	-5.5	-185.64
307	SLV 15	-396	-95	2783	-498.79	-6.78	-138.74

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
307	SLV 16	-495	-32	2776	-497.84	-6.73	-173.15
307	CRTFP Ux+	0	0	0	0	0	0
307	CRTFP Ux-	0	0	0	0	0	0
307	CRTFP Uy+	0	0	0	0	0	0
307	CRTFP Uy-	0	0	0	0	0	0
308	SLU 1	-24	5	1955	-416.18	-3.79	-8.7
308	SLU 2	-24	-5	1979	-423.1	-3.81	-8.71
308	SLU 3	-24	5	1955	-416.18	-3.79	-8.7
308	SLU 4	-24	-1	1969	-420.33	-3.8	-8.7
308	SLU 5	-24	-5	1979	-423.1	-3.81	-8.71
308	SLU 6	-24	5	1955	-416.18	-3.79	-8.7
308	SLU 7	-24	-1	1969	-420.33	-3.8	-8.7
308	SLU 8	-24	5	1955	-416.18	-3.79	-8.7
308	SLU 9	-24	-1	1969	-420.33	-3.8	-8.7
308	SLU 10	-28	-3	2306	-483.98	-4.43	-10.1
308	SLU 11	-28	6	2281	-477.07	-4.41	-10.09
308	SLU 12	-28	0	2296	-481.22	-4.42	-10.1
308	SLU 13	-28	-3	2306	-483.98	-4.43	-10.1
308	SLU 14	-28	6	2281	-477.07	-4.41	-10.09
308	SLU 15	-28	0	2296	-481.22	-4.42	-10.1
308	SLU 16	-28	6	2281	-477.07	-4.41	-10.09
308	SLU 17	-28	0	2296	-481.22	-4.42	-10.1
308	SLU 18	-30	7	2421	-503.16	-4.68	-10.69
308	SLU 19	-30	1	2436	-507.31	-4.69	-10.7
308	SLU 20	-30	7	2421	-503.16	-4.68	-10.69
308	SLU 21	-30	1	2436	-507.31	-4.69	-10.7
308	SLU 22	-27	6	2195	-461.59	-4.29	-9.66
308	SLU 23	-27	-3	2220	-468.5	-4.3	-9.67
308	SLU 24	-27	6	2195	-461.59	-4.29	-9.66
308	SLU 25	-27	0	2210	-465.74	-4.29	-9.67
308	SLU 26	-27	-3	2220	-468.5	-4.3	-9.67
308	SLU 27	-27	6	2195	-461.59	-4.29	-9.66
308	SLU 28	-27	0	2210	-465.74	-4.29	-9.67
308	SLU 29	-27	6	2195	-461.59	-4.29	-9.66
308	SLU 30	-27	0	2210	-465.74	-4.29	-9.67
308	SLU 31	-31	-2	2546	-529.39	-4.92	-11.06
308	SLU 32	-31	8	2521	-522.48	-4.9	-11.06
308	SLU 33	-31	2	2536	-526.62	-4.91	-11.06
308	SLU 34	-31	-2	2546	-529.39	-4.92	-11.06
308	SLU 35	-31	8	2521	-522.48	-4.9	-11.06
308	SLU 36	-31	2	2536	-526.62	-4.91	-11.06
308	SLU 37	-31	8	2521	-522.48	-4.9	-11.06
308	SLU 38	-31	2	2536	-526.62	-4.91	-11.06
308	SLU 39	-33	8	2661	-548.57	-5.17	-11.65
308	SLU 40	-33	3	2676	-552.72	-5.18	-11.66
308	SLU 41	-33	8	2661	-548.57	-5.17	-11.65
308	SLU 42	-33	3	2676	-552.72	-5.18	-11.66
308	SLU 43	-31	6	2459	-525.47	-4.76	-10.98
308	SLU 44	-31	-4	2483	-532.38	-4.78	-10.98
308	SLU 45	-31	6	2459	-525.47	-4.76	-10.98
308	SLU 46	-31	0	2473	-529.62	-4.77	-10.98
308	SLU 47	-31	-4	2483	-532.38	-4.78	-10.98
308	SLU 48	-31	6	2459	-525.47	-4.76	-10.98
308	SLU 49	-31	0	2473	-529.62	-4.77	-10.98
308	SLU 50	-31	6	2459	-525.47	-4.76	-10.98
308	SLU 51	-31	0	2473	-529.62	-4.77	-10.98
308	SLU 52	-35	-2	2810	-593.27	-5.4	-12.38
308	SLU 53	-35	7	2785	-586.36	-5.38	-12.37
308	SLU 54	-35	1	2800	-590.5	-5.39	-12.38
308	SLU 55	-35	-2	2810	-593.27	-5.4	-12.38
308	SLU 56	-35	7	2785	-586.36	-5.38	-12.37
308	SLU 57	-35	1	2800	-590.5	-5.39	-12.38
308	SLU 58	-35	7	2785	-586.36	-5.38	-12.37
308	SLU 59	-35	1	2800	-590.5	-5.39	-12.38
308	SLU 60	-36	8	2925	-612.45	-5.65	-12.97
308	SLU 61	-36	2	2940	-616.6	-5.66	-12.98
308	SLU 62	-36	8	2925	-612.45	-5.65	-12.97
308	SLU 63	-36	2	2940	-616.6	-5.66	-12.98
308	SLU 64	-33	7	2699	-570.88	-5.25	-11.94
308	SLU 65	-33	-2	2724	-577.79	-5.27	-11.95
308	SLU 66	-33	7	2699	-570.88	-5.25	-11.94
308	SLU 67	-33	1	2714	-575.03	-5.26	-11.94
308	SLU 68	-33	-2	2724	-577.79	-5.27	-11.95
308	SLU 69	-33	7	2699	-570.88	-5.25	-11.94
308	SLU 70	-33	1	2714	-575.03	-5.26	-11.94
308	SLU 71	-33	7	2699	-570.88	-5.25	-11.94
308	SLU 72	-33	1	2714	-575.03	-5.26	-11.94
308	SLU 73	-37	-1	3050	-638.68	-5.89	-13.34
308	SLU 74	-37	9	3025	-631.76	-5.87	-13.34
308	SLU 75	-37	3	3040	-635.91	-5.88	-13.34
308	SLU 76	-37	-1	3050	-638.68	-5.89	-13.34
308	SLU 77	-37	9	3025	-631.76	-5.87	-13.34
308	SLU 78	-37	3	3040	-635.91	-5.88	-13.34
308	SLU 79	-37	9	3025	-631.76	-5.87	-13.34
308	SLU 80	-37	3	3040	-635.91	-5.88	-13.34
308	SLU 81	-39	9	3165	-657.86	-6.14	-13.93
308	SLU 82	-39	3	3180	-662.01	-6.15	-13.94

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
308	SLU 83	-39	9	3165	-657.86	-6.14	-13.93
308	SLU 84	-39	3	3180	-662.01	-6.15	-13.94
308	SLE RA 1	-25	5	2023	-429.16	-3.93	-8.97
308	SLE RA 2	-25	-1	2040	-433.77	-3.94	-8.98
308	SLE RA 3	-25	5	2023	-429.16	-3.93	-8.97
308	SLE RA 4	-25	1	2033	-431.92	-3.94	-8.98
308	SLE RA 5	-25	-1	2040	-433.77	-3.94	-8.98
308	SLE RA 6	-25	5	2023	-429.16	-3.93	-8.97
308	SLE RA 7	-25	1	2033	-431.92	-3.94	-8.98
308	SLE RA 8	-25	5	2023	-429.16	-3.93	-8.97
308	SLE RA 9	-25	1	2033	-431.92	-3.94	-8.98
308	SLE RA 10	-28	0	2258	-474.36	-4.36	-9.91
308	SLE RA 11	-28	6	2241	-469.75	-4.35	-9.9
308	SLE RA 12	-28	2	2251	-472.51	-4.35	-9.91
308	SLE RA 13	-28	0	2258	-474.36	-4.36	-9.91
308	SLE RA 14	-28	6	2241	-469.75	-4.35	-9.9
308	SLE RA 15	-28	2	2251	-472.51	-4.35	-9.91
308	SLE RA 16	-28	6	2241	-469.75	-4.35	-9.9
308	SLE RA 17	-28	2	2251	-472.51	-4.35	-9.91
308	SLE RA 18	-29	7	2334	-487.14	-4.52	-10.3
308	SLE RA 19	-29	3	2344	-489.91	-4.53	-10.31
308	SLE RA 20	-29	7	2334	-487.14	-4.52	-10.3
308	SLE RA 21	-29	3	2344	-489.91	-4.53	-10.31
308	SLE FR 1	-25	5	2023	-429.16	-3.93	-8.97
308	SLE FR 2	-25	4	2027	-430.08	-3.94	-8.97
308	SLE FR 3	-25	5	2023	-429.16	-3.93	-8.97
308	SLE FR 4	-26	4	2120	-447.48	-4.11	-9.37
308	SLE FR 5	-26	6	2117	-446.55	-4.11	-9.37
308	SLE FR 6	-27	6	2179	-458.15	-4.23	-9.64
308	SLE QP 1	-25	5	2023	-429.16	-3.93	-8.97
308	SLE QP 2	-26	6	2117	-446.55	-4.11	-9.37
308	SLD 1	180	25	1725	-369.39	-2.06	62.66
308	SLD 2	136	58	1721	-368.73	-2.04	47.51
308	SLD 3	195	-95	1964	-408.45	-2.79	68.12
308	SLD 4	152	-63	1960	-407.79	-2.77	52.97
308	SLD 5	28	183	1639	-364.39	-2.4	9.38
308	SLD 6	-16	215	1635	-363.72	-2.38	-6
308	SLD 7	79	-219	2434	-494.61	-4.83	27.57
308	SLD 8	35	-186	2430	-493.94	-4.8	12.18
308	SLD 9	-87	197	1803	-399.17	-3.42	-30.93
308	SLD 10	-132	230	1799	-398.5	-3.39	-46.31
308	SLD 11	-36	-204	2598	-529.39	-5.84	-12.74
308	SLD 12	-80	-171	2594	-528.72	-5.82	-28.13
308	SLD 13	-204	74	2273	-485.31	-5.46	-71.71
308	SLD 14	-248	106	2269	-484.65	-5.43	-86.86
308	SLD 15	-189	-46	2512	-524.38	-6.18	-66.25
308	SLD 16	-232	-14	2508	-523.72	-6.16	-81.41
308	SLV 1	442	51	1226	-270.84	0.55	154.2
308	SLV 2	343	124	1217	-269.34	0.61	119.84
308	SLV 3	477	-223	1770	-360.09	-1.11	166.64
308	SLV 4	378	-150	1761	-358.59	-1.06	132.28
308	SLV 5	97	409	1027	-259.01	-0.22	33.11
308	SLV 6	-4	484	1017	-257.49	-0.16	-1.76
308	SLV 7	213	-505	2842	-556.52	-5.75	74.58
308	SLV 8	113	-431	2833	-554.99	-5.69	39.71
308	SLV 9	-165	443	1400	-338.11	-2.53	-58.45
308	SLV 10	-266	517	1391	-336.59	-2.47	-93.32
308	SLV 11	-48	-472	3216	-635.62	-8.06	-16.99
308	SLV 12	-149	-398	3206	-634.1	-8	-51.86
308	SLV 13	-430	162	2472	-534.52	-7.17	-151.02
308	SLV 14	-529	235	2463	-533.01	-7.11	-185.38
308	SLV 15	-395	-113	3016	-623.77	-8.83	-138.58
308	SLV 16	-494	-40	3007	-622.27	-8.77	-172.94
308	CRTFP Ux+	0	0	0	0	0	0
308	CRTFP Ux-	0	0	0	0	0	0
308	CRTFP Uy+	0	0	0	0	0	0
308	CRTFP Uy-	0	0	0	0	0	0
309	SLU 1	-24	0	2086	-509.64	-4.98	-8.7
309	SLU 2	-24	-11	2112	-516.63	-5	-8.7
309	SLU 3	-24	0	2086	-509.64	-4.98	-8.7
309	SLU 4	-24	-7	2101	-513.84	-4.99	-8.7
309	SLU 5	-24	-11	2112	-516.63	-5	-8.7
309	SLU 6	-24	0	2086	-509.64	-4.98	-8.7
309	SLU 7	-24	-7	2101	-513.84	-4.99	-8.7
309	SLU 8	-24	0	2086	-509.64	-4.98	-8.7
309	SLU 9	-24	-7	2101	-513.84	-4.99	-8.7
309	SLU 10	-28	-10	2460	-594.93	-5.86	-10.11
309	SLU 11	-28	1	2435	-587.93	-5.84	-10.1
309	SLU 12	-28	-6	2450	-592.13	-5.85	-10.11
309	SLU 13	-28	-10	2460	-594.93	-5.86	-10.11
309	SLU 14	-28	1	2435	-587.93	-5.84	-10.1
309	SLU 15	-28	-6	2450	-592.13	-5.85	-10.11
309	SLU 16	-28	1	2435	-587.93	-5.84	-10.1
309	SLU 17	-28	-6	2450	-592.13	-5.85	-10.11
309	SLU 18	-30	1	2584	-621.49	-6.21	-10.71
309	SLU 19	-30	-5	2600	-625.68	-6.22	-10.71
309	SLU 20	-30	1	2584	-621.49	-6.21	-10.71

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
309	SLU 21	-30	-5	2600	-625.68	-6.22	-10.71
309	SLU 22	-27	1	2344	-568.11	-5.65	-9.66
309	SLU 23	-27	-10	2369	-575.11	-5.68	-9.67
309	SLU 24	-27	1	2344	-568.11	-5.65	-9.66
309	SLU 25	-27	-6	2359	-572.31	-5.67	-9.67
309	SLU 26	-27	-10	2369	-575.11	-5.68	-9.67
309	SLU 27	-27	1	2344	-568.11	-5.65	-9.66
309	SLU 28	-27	-6	2359	-572.31	-5.67	-9.67
309	SLU 29	-27	1	2344	-568.11	-5.65	-9.66
309	SLU 30	-27	-6	2359	-572.31	-5.67	-9.67
309	SLU 31	-31	-9	2718	-653.41	-6.54	-11.07
309	SLU 32	-31	2	2693	-646.41	-6.51	-11.07
309	SLU 33	-31	-5	2708	-650.61	-6.53	-11.07
309	SLU 34	-31	-9	2718	-653.41	-6.54	-11.07
309	SLU 35	-31	2	2693	-646.41	-6.51	-11.07
309	SLU 36	-31	-5	2708	-650.61	-6.53	-11.07
309	SLU 37	-31	2	2693	-646.41	-6.51	-11.07
309	SLU 38	-31	-5	2708	-650.61	-6.53	-11.07
309	SLU 39	-33	2	2842	-679.96	-6.88	-11.67
309	SLU 40	-33	-4	2857	-684.16	-6.9	-11.67
309	SLU 41	-33	2	2842	-679.96	-6.88	-11.67
309	SLU 42	-33	-4	2857	-684.16	-6.9	-11.67
309	SLU 43	-31	-1	2623	-642.48	-6.24	-10.98
309	SLU 44	-31	-12	2649	-649.48	-6.27	-10.98
309	SLU 45	-31	-1	2623	-642.48	-6.24	-10.98
309	SLU 46	-31	-7	2639	-646.68	-6.26	-10.98
309	SLU 47	-31	-12	2649	-649.48	-6.27	-10.98
309	SLU 48	-31	-1	2623	-642.48	-6.24	-10.98
309	SLU 49	-31	-7	2639	-646.68	-6.26	-10.98
309	SLU 50	-31	-1	2623	-642.48	-6.24	-10.98
309	SLU 51	-31	-7	2639	-646.68	-6.26	-10.98
309	SLU 52	-35	-11	2998	-727.77	-7.13	-12.39
309	SLU 53	-35	0	2972	-720.77	-7.1	-12.38
309	SLU 54	-35	-6	2988	-724.97	-7.12	-12.39
309	SLU 55	-35	-11	2998	-727.77	-7.13	-12.39
309	SLU 56	-35	0	2972	-720.77	-7.1	-12.38
309	SLU 57	-35	-6	2988	-724.97	-7.12	-12.39
309	SLU 58	-35	0	2972	-720.77	-7.1	-12.38
309	SLU 59	-35	-6	2988	-724.97	-7.12	-12.39
309	SLU 60	-37	1	3122	-754.33	-7.47	-12.99
309	SLU 61	-36	-6	3137	-758.53	-7.49	-12.99
309	SLU 62	-37	1	3122	-754.33	-7.47	-12.99
309	SLU 63	-36	-6	3137	-758.53	-7.49	-12.99
309	SLU 64	-34	1	2881	-700.96	-6.92	-11.94
309	SLU 65	-33	-10	2907	-707.95	-6.94	-11.95
309	SLU 66	-34	1	2881	-700.96	-6.92	-11.94
309	SLU 67	-33	-6	2897	-705.15	-6.93	-11.94
309	SLU 68	-33	-10	2907	-707.95	-6.94	-11.95
309	SLU 69	-34	1	2881	-700.96	-6.92	-11.94
309	SLU 70	-33	-6	2897	-705.15	-6.93	-11.94
309	SLU 71	-34	1	2881	-700.96	-6.92	-11.94
309	SLU 72	-33	-6	2897	-705.15	-6.93	-11.94
309	SLU 73	-37	-10	3256	-786.25	-7.8	-13.35
309	SLU 74	-38	1	3230	-779.25	-7.78	-13.35
309	SLU 75	-37	-5	3245	-783.45	-7.79	-13.35
309	SLU 76	-37	-10	3256	-786.25	-7.8	-13.35
309	SLU 77	-38	1	3230	-779.25	-7.78	-13.35
309	SLU 78	-37	-5	3245	-783.45	-7.79	-13.35
309	SLU 79	-38	1	3230	-779.25	-7.78	-13.35
309	SLU 80	-37	-5	3245	-783.45	-7.79	-13.35
309	SLU 81	-39	2	3379	-812.81	-8.15	-13.95
309	SLU 82	-39	-5	3395	-817	-8.16	-13.95
309	SLU 83	-39	2	3379	-812.81	-8.15	-13.95
309	SLU 84	-39	-5	3395	-817	-8.16	-13.95
309	SLE RA 1	-25	0	2160	-526.34	-5.17	-8.98
309	SLE RA 2	-25	-7	2177	-531.01	-5.19	-8.98
309	SLE RA 3	-25	0	2160	-526.34	-5.17	-8.98
309	SLE RA 4	-25	-4	2170	-529.14	-5.18	-8.98
309	SLE RA 5	-25	-7	2177	-531.01	-5.19	-8.98
309	SLE RA 6	-25	0	2160	-526.34	-5.17	-8.98
309	SLE RA 7	-25	-4	2170	-529.14	-5.18	-8.98
309	SLE RA 8	-25	0	2160	-526.34	-5.17	-8.98
309	SLE RA 9	-25	-4	2170	-529.14	-5.18	-8.98
309	SLE RA 10	-28	-7	2409	-583.21	-5.76	-9.91
309	SLE RA 11	-28	1	2392	-578.54	-5.75	-9.91
309	SLE RA 12	-28	-4	2402	-581.34	-5.76	-9.91
309	SLE RA 13	-28	-7	2409	-583.21	-5.76	-9.91
309	SLE RA 14	-28	1	2392	-578.54	-5.75	-9.91
309	SLE RA 15	-28	-4	2402	-581.34	-5.76	-9.91
309	SLE RA 16	-28	1	2392	-578.54	-5.75	-9.91
309	SLE RA 17	-28	-4	2402	-581.34	-5.76	-9.91
309	SLE RA 18	-29	1	2492	-600.91	-5.99	-10.31
309	SLE RA 19	-29	-3	2502	-603.71	-6	-10.31
309	SLE RA 20	-29	1	2492	-600.91	-5.99	-10.31
309	SLE RA 21	-29	-3	2502	-603.71	-6	-10.31
309	SLE FR 1	-25	0	2160	-526.34	-5.17	-8.98
309	SLE FR 2	-25	-1	2163	-527.28	-5.18	-8.98

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
309	SLE FR 3	-25	0	2160	-526.34	-5.17	-8.98
309	SLE FR 4	-26	-1	2263	-549.65	-5.42	-9.38
309	SLE FR 5	-26	0	2259	-548.71	-5.42	-9.38
309	SLE FR 6	-27	1	2326	-563.63	-5.58	-9.64
309	SLE QP 1	-25	0	2160	-526.34	-5.17	-8.98
309	SLE QP 2	-26	0	2259	-548.71	-5.42	-9.38
309	SLD 1	180	21	1803	-441.28	-3.07	62.55
309	SLD 2	136	58	1798	-440.26	-3.04	47.42
309	SLD 3	195	-110	2066	-494.97	-3.98	67.98
309	SLD 4	151	-73	2061	-493.95	-3.95	52.85
309	SLD 5	28	191	1725	-435.41	-3.35	9.38
309	SLD 6	-17	229	1720	-434.38	-3.32	-5.98
309	SLD 7	79	-244	2602	-614.39	-6.37	27.47
309	SLD 8	35	-206	2597	-613.36	-6.34	12.11
309	SLD 9	-87	207	1922	-484.07	-4.5	-30.87
309	SLD 10	-132	245	1917	-483.04	-4.47	-46.23
309	SLD 11	-36	-228	2798	-663.05	-7.51	-12.77
309	SLD 12	-81	-190	2794	-662.02	-7.48	-28.13
309	SLD 13	-204	74	2458	-603.48	-6.89	-71.6
309	SLD 14	-248	111	2453	-602.46	-6.86	-86.73
309	SLD 15	-189	-57	2721	-657.17	-7.8	-66.18
309	SLD 16	-232	-20	2716	-656.15	-7.77	-81.31
309	SLV 1	441	47	1220	-304.14	-0.08	153.95
309	SLV 2	342	130	1209	-301.83	-0.01	119.64
309	SLV 3	476	-251	1820	-426.7	-2.14	166.33
309	SLV 4	377	-167	1809	-424.39	-2.07	132.02
309	SLV 5	96	435	1041	-290.29	-0.71	33.11
309	SLV 6	-4	520	1030	-287.95	-0.64	-1.71
309	SLV 7	213	-556	3041	-698.81	-7.59	74.37
309	SLV 8	112	-471	3030	-696.47	-7.52	39.55
309	SLV 9	-165	472	1488	-400.96	-3.31	-58.31
309	SLV 10	-265	557	1477	-398.62	-3.25	-93.12
309	SLV 11	-49	-520	3489	-809.48	-10.2	-17.05
309	SLV 12	-149	-434	3477	-807.14	-10.13	-51.87
309	SLV 13	-430	168	2710	-673.04	-8.76	-150.77
309	SLV 14	-529	252	2699	-670.73	-8.7	-185.08
309	SLV 15	-395	-130	3310	-795.6	-10.83	-138.4
309	SLV 16	-494	-46	3299	-793.29	-10.76	-172.71
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
310	SLU 1	-21	-3	1932	-538.61	50.1	-7.4
310	SLU 2	-21	-14	1954	-544.88	50.72	-7.09
310	SLU 3	-21	-3	1932	-538.61	50.1	-7.4
310	SLU 4	-21	-10	1945	-542.37	50.47	-7.21
310	SLU 5	-21	-14	1954	-544.88	50.72	-7.09
310	SLU 6	-21	-3	1932	-538.61	50.1	-7.4
310	SLU 7	-21	-10	1945	-542.37	50.47	-7.21
310	SLU 8	-21	-3	1932	-538.61	50.1	-7.4
310	SLU 9	-21	-10	1945	-542.37	50.47	-7.21
310	SLU 10	-25	-13	2278	-631.1	59.08	-8.32
310	SLU 11	-25	-3	2256	-624.83	58.47	-8.63
310	SLU 12	-25	-9	2269	-628.59	58.84	-8.44
310	SLU 13	-25	-13	2278	-631.1	59.08	-8.32
310	SLU 14	-25	-3	2256	-624.83	58.47	-8.63
310	SLU 15	-25	-9	2269	-628.59	58.84	-8.44
310	SLU 16	-25	-3	2256	-624.83	58.47	-8.63
310	SLU 17	-25	-9	2269	-628.59	58.84	-8.44
310	SLU 18	-26	-3	2394	-661.78	62.06	-9.15
310	SLU 19	-26	-9	2408	-665.55	62.42	-8.97
310	SLU 20	-26	-3	2394	-661.78	62.06	-9.15
310	SLU 21	-26	-9	2408	-665.55	62.42	-8.97
310	SLU 22	-24	-2	2172	-603.06	56.29	-8.25
310	SLU 23	-23	-13	2195	-609.33	56.9	-7.94
310	SLU 24	-24	-2	2172	-603.06	56.29	-8.25
310	SLU 25	-23	-9	2186	-606.82	56.66	-8.07
310	SLU 26	-23	-13	2195	-609.33	56.9	-7.94
310	SLU 27	-24	-2	2172	-603.06	56.29	-8.25
310	SLU 28	-23	-9	2186	-606.82	56.66	-8.07
310	SLU 29	-24	-2	2172	-603.06	56.29	-8.25
310	SLU 30	-23	-9	2186	-606.82	56.66	-8.07
310	SLU 31	-27	-13	2519	-695.55	65.27	-9.17
310	SLU 32	-27	-2	2496	-689.28	64.66	-9.48
310	SLU 33	-27	-8	2510	-693.05	65.02	-9.3
310	SLU 34	-27	-13	2519	-695.55	65.27	-9.17
310	SLU 35	-27	-2	2496	-689.28	64.66	-9.48
310	SLU 36	-27	-8	2510	-693.05	65.02	-9.3
310	SLU 37	-27	-2	2496	-689.28	64.66	-9.48
310	SLU 38	-27	-8	2510	-693.05	65.02	-9.3
310	SLU 39	-28	-2	2635	-726.24	68.24	-10.01
310	SLU 40	-28	-8	2649	-730	68.61	-9.82
310	SLU 41	-28	-2	2635	-726.24	68.24	-10.01
310	SLU 42	-28	-8	2649	-730	68.61	-9.82
310	SLU 43	-27	-4	2429	-678.09	63.01	-9.32
310	SLU 44	-27	-15	2451	-684.36	63.63	-9.02
310	SLU 45	-27	-4	2429	-678.09	63.01	-9.32

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
310	SLU 46	-27	-11	2442	-681.85	63.38	-9.14
310	SLU 47	-27	-15	2451	-684.36	63.63	-9.02
310	SLU 48	-27	-4	2429	-678.09	63.01	-9.32
310	SLU 49	-27	-11	2442	-681.85	63.38	-9.14
310	SLU 50	-27	-4	2429	-678.09	63.01	-9.32
310	SLU 51	-27	-11	2442	-681.85	63.38	-9.14
310	SLU 52	-30	-14	2775	-770.59	71.99	-10.25
310	SLU 53	-30	-4	2753	-764.31	71.38	-10.55
310	SLU 54	-30	-10	2766	-768.08	71.75	-10.37
310	SLU 55	-30	-14	2775	-770.59	71.99	-10.25
310	SLU 56	-30	-4	2753	-764.31	71.38	-10.55
310	SLU 57	-30	-10	2766	-768.08	71.75	-10.37
310	SLU 58	-30	-4	2753	-764.31	71.38	-10.55
310	SLU 59	-30	-10	2766	-768.08	71.75	-10.37
310	SLU 60	-32	-4	2892	-801.27	74.97	-11.08
310	SLU 61	-32	-10	2905	-805.03	75.33	-10.89
310	SLU 62	-32	-4	2892	-801.27	74.97	-11.08
310	SLU 63	-32	-10	2905	-805.03	75.33	-10.89
310	SLU 64	-29	-4	2669	-742.54	69.2	-10.18
310	SLU 65	-29	-14	2692	-748.81	69.81	-9.87
310	SLU 66	-29	-4	2669	-742.54	69.2	-10.18
310	SLU 67	-29	-10	2683	-746.31	69.57	-9.99
310	SLU 68	-29	-14	2692	-748.81	69.81	-9.87
310	SLU 69	-29	-4	2669	-742.54	69.2	-10.18
310	SLU 70	-29	-10	2683	-746.31	69.57	-9.99
310	SLU 71	-29	-4	2669	-742.54	69.2	-10.18
310	SLU 72	-29	-10	2683	-746.31	69.57	-9.99
310	SLU 73	-32	-14	3016	-835.04	78.18	-11.1
310	SLU 74	-33	-3	2993	-828.77	77.57	-11.41
310	SLU 75	-32	-10	3007	-832.53	77.93	-11.22
310	SLU 76	-32	-14	3016	-835.04	78.18	-11.1
310	SLU 77	-33	-3	2993	-828.77	77.57	-11.41
310	SLU 78	-32	-10	3007	-832.53	77.93	-11.22
310	SLU 79	-33	-3	2993	-828.77	77.57	-11.41
310	SLU 80	-32	-10	3007	-832.53	77.93	-11.22
310	SLU 81	-34	-3	3132	-865.72	81.15	-11.93
310	SLU 82	-34	-9	3146	-869.48	81.52	-11.75
310	SLU 83	-34	-3	3132	-865.72	81.15	-11.93
310	SLU 84	-34	-9	3146	-869.48	81.52	-11.75
310	SLE RA 1	-22	-3	2000	-557.02	51.87	-7.64
310	SLE RA 2	-22	-10	2015	-561.2	52.28	-7.44
310	SLE RA 3	-22	-3	2000	-557.02	51.87	-7.64
310	SLE RA 4	-22	-7	2009	-559.53	52.12	-7.52
310	SLE RA 5	-22	-10	2015	-561.2	52.28	-7.44
310	SLE RA 6	-22	-3	2000	-557.02	51.87	-7.64
310	SLE RA 7	-22	-7	2009	-559.53	52.12	-7.52
310	SLE RA 8	-22	-3	2000	-557.02	51.87	-7.64
310	SLE RA 9	-22	-7	2009	-559.53	52.12	-7.52
310	SLE RA 10	-24	-10	2231	-618.68	57.86	-8.26
310	SLE RA 11	-24	-3	2216	-614.5	57.45	-8.46
310	SLE RA 12	-24	-7	2225	-617.01	57.69	-8.34
310	SLE RA 13	-24	-10	2231	-618.68	57.86	-8.26
310	SLE RA 14	-24	-3	2216	-614.5	57.45	-8.46
310	SLE RA 15	-24	-7	2225	-617.01	57.69	-8.34
310	SLE RA 16	-24	-3	2216	-614.5	57.45	-8.46
310	SLE RA 17	-24	-7	2225	-617.01	57.69	-8.34
310	SLE RA 18	-25	-3	2309	-639.14	59.84	-8.81
310	SLE RA 19	-25	-7	2318	-641.65	60.08	-8.69
310	SLE RA 20	-25	-3	2309	-639.14	59.84	-8.81
310	SLE RA 21	-25	-7	2318	-641.65	60.08	-8.69
310	SLE FR 1	-22	-3	2000	-557.02	51.87	-7.64
310	SLE FR 2	-22	-4	2003	-557.86	51.95	-7.6
310	SLE FR 3	-22	-3	2000	-557.02	51.87	-7.64
310	SLE FR 4	-23	-4	2096	-582.49	54.34	-7.95
310	SLE FR 5	-23	-3	2093	-581.66	54.26	-7.99
310	SLE FR 6	-24	-3	2155	-598.08	55.86	-8.23
310	SLE QP 1	-22	-3	2000	-557.02	51.87	-7.64
310	SLE QP 2	-23	-3	2093	-581.66	54.26	-7.99
310	SLD 1	155	14	1639	-459.01	43.27	54.66
310	SLD 2	117	50	1634	-457.77	43.15	40.58
310	SLD 3	168	-106	1890	-520.38	49.59	59.66
310	SLD 4	130	-70	1885	-519.14	49.47	45.58
310	SLD 5	24	172	1579	-452.22	41.42	8.25
310	SLD 6	-14	208	1574	-450.97	41.3	-6.04
310	SLD 7	68	-229	2413	-656.8	62.49	24.93
310	SLD 8	30	-193	2408	-655.54	62.37	10.63
310	SLD 9	-75	187	1777	-507.77	46.15	-26.62
310	SLD 10	-113	223	1773	-506.52	46.03	-40.91
310	SLD 11	-31	-214	2612	-712.34	67.22	-9.94
310	SLD 12	-70	-178	2607	-711.09	67.1	-24.23
310	SLD 13	-176	64	2301	-644.17	59.05	-61.57
310	SLD 14	-214	100	2296	-642.94	58.93	-75.65
310	SLD 15	-163	-56	2551	-705.54	65.37	-56.56
310	SLD 16	-200	-20	2546	-704.31	65.25	-70.64
310	SLV 1	380	37	1060	-302.47	29.24	134.26
310	SLV 2	295	118	1049	-299.67	28.97	102.33
310	SLV 3	410	-238	1632	-442.5	43.66	145.67

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
310	SLV 4	325	-156	1620	-439.7	43.39	113.74
310	SLV 5	83	396	921	-286.52	24.98	28.8
310	SLV 6	-4	479	910	-283.68	24.71	-3.61
310	SLV 7	183	-519	2825	-753.29	73.05	66.82
310	SLV 8	96	-436	2813	-750.45	72.78	34.42
310	SLV 9	-142	430	1373	-412.86	35.75	-50.4
310	SLV 10	-229	513	1361	-410.02	35.48	-82.8
310	SLV 11	-42	-484	3276	-879.63	83.81	-12.38
310	SLV 12	-129	-402	3265	-876.79	83.55	-44.78
310	SLV 13	-371	151	2565	-723.61	65.13	-129.72
310	SLV 14	-456	232	2554	-720.81	64.87	-161.65
310	SLV 15	-341	-124	3137	-863.64	79.55	-118.32
310	SLV 16	-426	-42	3125	-860.84	79.29	-150.24
310	CRTFP Ux+	0	0	0	-0.01	0	0
310	CRTFP Ux-	0	0	0	0.01	0	0
310	CRTFP Uy+	0	0	0	-0.01	0	0
310	CRTFP Uy-	0	0	0	0.01	0	0
312	SLU 1	-28	-6	2772	-635.08	479.09	-5.9
312	SLU 2	-27	-21	2805	-641.92	484.91	-3.09
312	SLU 3	-28	-6	2772	-635.08	479.09	-5.9
312	SLU 4	-28	-15	2792	-639.18	482.58	-4.21
312	SLU 5	-27	-21	2805	-641.92	484.91	-3.09
312	SLU 6	-28	-6	2772	-635.08	479.09	-5.9
312	SLU 7	-28	-15	2792	-639.18	482.58	-4.21
312	SLU 8	-28	-6	2772	-635.08	479.09	-5.9
312	SLU 9	-28	-15	2792	-639.18	482.58	-4.21
312	SLU 10	-32	-21	3272	-747.49	565.44	-4.33
312	SLU 11	-32	-6	3240	-740.65	559.62	-7.14
312	SLU 12	-32	-15	3259	-744.76	563.12	-5.45
312	SLU 13	-32	-21	3272	-747.49	565.44	-4.33
312	SLU 14	-32	-6	3240	-740.65	559.62	-7.14
312	SLU 15	-32	-15	3259	-744.76	563.12	-5.45
312	SLU 16	-32	-6	3240	-740.65	559.62	-7.14
312	SLU 17	-32	-15	3259	-744.76	563.12	-5.45
312	SLU 18	-34	-6	3440	-785.9	594.14	-7.67
312	SLU 19	-34	-15	3460	-790.01	597.63	-5.98
312	SLU 20	-34	-6	3440	-785.9	594.14	-7.67
312	SLU 21	-34	-15	3460	-790.01	597.63	-5.98
312	SLU 22	-31	-5	3120	-713.86	538.76	-6.85
312	SLU 23	-30	-20	3152	-720.7	544.58	-4.04
312	SLU 24	-31	-5	3120	-713.86	538.76	-6.85
312	SLU 25	-31	-14	3139	-717.96	542.25	-5.16
312	SLU 26	-30	-20	3152	-720.7	544.58	-4.04
312	SLU 27	-31	-5	3120	-713.86	538.76	-6.85
312	SLU 28	-31	-14	3139	-717.96	542.25	-5.16
312	SLU 29	-31	-5	3120	-713.86	538.76	-6.85
312	SLU 30	-31	-14	3139	-717.96	542.25	-5.16
312	SLU 31	-35	-20	3620	-826.27	625.11	-5.27
312	SLU 32	-36	-5	3588	-819.43	619.29	-8.08
312	SLU 33	-35	-14	3607	-823.54	622.79	-6.4
312	SLU 34	-35	-20	3620	-826.27	625.11	-5.27
312	SLU 35	-36	-5	3588	-819.43	619.29	-8.08
312	SLU 36	-35	-14	3607	-823.54	622.79	-6.4
312	SLU 37	-36	-5	3588	-819.43	619.29	-8.08
312	SLU 38	-35	-14	3607	-823.54	622.79	-6.4
312	SLU 39	-38	-5	3788	-864.68	653.81	-8.61
312	SLU 40	-37	-14	3808	-868.78	657.3	-6.93
312	SLU 41	-38	-5	3788	-864.68	653.81	-8.61
312	SLU 42	-37	-14	3808	-868.78	657.3	-6.93
312	SLU 43	-35	-9	3484	-798.59	602.36	-7.34
312	SLU 44	-35	-23	3517	-805.43	608.18	-4.53
312	SLU 45	-35	-9	3484	-798.59	602.36	-7.34
312	SLU 46	-35	-17	3504	-802.69	605.85	-5.66
312	SLU 47	-35	-23	3517	-805.43	608.18	-4.53
312	SLU 48	-35	-9	3484	-798.59	602.36	-7.34
312	SLU 49	-35	-17	3504	-802.69	605.85	-5.66
312	SLU 50	-35	-9	3484	-798.59	602.36	-7.34
312	SLU 51	-35	-17	3504	-802.69	605.85	-5.66
312	SLU 52	-39	-23	3985	-911.01	688.71	-5.77
312	SLU 53	-40	-8	3952	-904.17	682.89	-8.58
312	SLU 54	-39	-17	3972	-908.27	686.38	-6.89
312	SLU 55	-39	-23	3985	-911.01	688.71	-5.77
312	SLU 56	-40	-8	3952	-904.17	682.89	-8.58
312	SLU 57	-39	-17	3972	-908.27	686.38	-6.89
312	SLU 58	-40	-8	3952	-904.17	682.89	-8.58
312	SLU 59	-39	-17	3972	-908.27	686.38	-6.89
312	SLU 60	-42	-8	4153	-949.41	717.41	-9.11
312	SLU 61	-41	-17	4172	-953.52	720.9	-7.42
312	SLU 62	-42	-8	4153	-949.41	717.41	-9.11
312	SLU 63	-41	-17	4172	-953.52	720.9	-7.42
312	SLU 64	-38	-8	3832	-877.37	662.03	-8.29
312	SLU 65	-38	-23	3865	-884.21	667.85	-5.48
312	SLU 66	-38	-8	3832	-877.37	662.03	-8.29
312	SLU 67	-38	-17	3852	-881.47	665.52	-6.6
312	SLU 68	-38	-23	3865	-884.21	667.85	-5.48
312	SLU 69	-38	-8	3832	-877.37	662.03	-8.29
312	SLU 70	-38	-17	3852	-881.47	665.52	-6.6

Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
312	SLU 71	-38	-8	3832	-877.37	662.03	-8.29
312	SLU 72	-38	-17	3852	-881.47	665.52	-6.6
312	SLU 73	-42	-22	4333	-989.79	748.38	-6.72
312	SLU 74	-43	-7	4300	-982.95	742.56	-9.53
312	SLU 75	-43	-16	4320	-987.05	746.05	-7.84
312	SLU 76	-42	-22	4333	-989.79	748.38	-6.72
312	SLU 77	-43	-7	4300	-982.95	742.56	-9.53
312	SLU 78	-43	-16	4320	-987.05	746.05	-7.84
312	SLU 79	-43	-7	4300	-982.95	742.56	-9.53
312	SLU 80	-43	-16	4320	-987.05	746.05	-7.84
312	SLU 81	-45	-7	4501	-1028.19	777.08	-10.06
312	SLU 82	-44	-16	4520	-1032.3	780.57	-8.37
312	SLU 83	-45	-7	4501	-1028.19	777.08	-10.06
312	SLU 84	-44	-16	4520	-1032.3	780.57	-8.37
312	SLE RA 1	-29	-6	2871	-657.58	496.14	-6.17
312	SLE RA 2	-28	-16	2893	-662.15	500.02	-4.3
312	SLE RA 3	-29	-6	2871	-657.58	496.14	-6.17
312	SLE RA 4	-29	-12	2884	-660.32	498.47	-5.05
312	SLE RA 5	-28	-16	2893	-662.15	500.02	-4.3
312	SLE RA 6	-29	-6	2871	-657.58	496.14	-6.17
312	SLE RA 7	-29	-12	2884	-660.32	498.47	-5.05
312	SLE RA 8	-29	-6	2871	-657.58	496.14	-6.17
312	SLE RA 9	-29	-12	2884	-660.32	498.47	-5.05
312	SLE RA 10	-31	-16	3205	-732.53	553.71	-5.12
312	SLE RA 11	-32	-6	3183	-727.97	549.83	-6.99
312	SLE RA 12	-32	-12	3196	-730.71	552.16	-5.87
312	SLE RA 13	-31	-16	3205	-732.53	553.71	-5.12
312	SLE RA 14	-32	-6	3183	-727.97	549.83	-6.99
312	SLE RA 15	-32	-12	3196	-730.71	552.16	-5.87
312	SLE RA 16	-32	-6	3183	-727.97	549.83	-6.99
312	SLE RA 17	-32	-12	3196	-730.71	552.16	-5.87
312	SLE RA 18	-33	-6	3317	-758.13	572.84	-7.35
312	SLE RA 19	-33	-12	3330	-760.87	575.17	-6.22
312	SLE RA 20	-33	-6	3317	-758.13	572.84	-7.35
312	SLE RA 21	-33	-12	3330	-760.87	575.17	-6.22
312	SLE FR 1	-29	-6	2871	-657.58	496.14	-6.17
312	SLE FR 2	-29	-8	2876	-658.5	496.91	-5.79
312	SLE FR 3	-29	-6	2871	-657.58	496.14	-6.17
312	SLE FR 4	-30	-8	3009	-688.66	519.92	-6.15
312	SLE FR 5	-30	-6	3005	-687.75	519.15	-6.52
312	SLE FR 6	-31	-6	3094	-707.86	534.49	-6.76
312	SLE QP 1	-29	-6	2871	-657.58	496.14	-6.17
312	SLE QP 2	-30	-6	3005	-687.75	519.15	-6.52
312	SLD 1	209	16	2322	-535.44	405.76	47.76
312	SLD 2	157	68	2314	-533.84	404.5	25.65
312	SLD 3	226	-151	2695	-614.09	469.77	78.08
312	SLD 4	174	-99	2687	-612.49	468.51	55.98
312	SLD 5	34	236	2237	-523.34	388.5	-28.32
312	SLD 6	-19	289	2230	-521.72	387.22	-50.77
312	SLD 7	92	-322	3480	-785.51	601.87	72.76
312	SLD 8	39	-269	3473	-783.89	600.59	50.31
312	SLD 9	-99	258	2538	-591.61	437.71	-63.36
312	SLD 10	-152	310	2530	-589.99	436.42	-85.8
312	SLD 11	-41	-301	3780	-853.78	651.08	37.72
312	SLD 12	-94	-248	3773	-852.16	649.8	15.28
312	SLD 13	-234	87	3323	-763.01	569.78	-69.02
312	SLD 14	-286	139	3315	-761.41	568.52	-91.13
312	SLD 15	-217	-80	3696	-841.66	633.8	-38.7
312	SLD 16	-269	-28	3688	-840.06	632.53	-60.8
312	SLV 1	512	45	1450	-341.05	261.02	116.5
312	SLV 2	395	163	1433	-337.43	258.16	66.37
312	SLV 3	552	-336	2301	-520.49	407.06	185.65
312	SLV 4	435	-219	2284	-516.86	404.2	135.52
312	SLV 5	115	547	1255	-312.89	221.24	-56.58
312	SLV 6	-5	666	1237	-309.22	218.33	-107.45
312	SLV 7	247	-726	4090	-911.01	708.04	173.92
312	SLV 8	127	-607	4073	-907.33	705.13	123.05
312	SLV 9	-188	595	1938	-468.17	333.16	-136.1
312	SLV 10	-307	714	1920	-464.49	330.25	-186.97
312	SLV 11	-55	-677	4773	-1066.28	819.96	94.4
312	SLV 12	-175	-559	4756	-1062.61	817.06	43.53
312	SLV 13	-495	207	3727	-858.64	634.1	-148.57
312	SLV 14	-612	324	3709	-855.01	631.23	-198.7
312	SLV 15	-455	-174	4577	-1038.07	780.14	-79.42
312	SLV 16	-572	-57	4560	-1034.45	777.27	-129.55
312	CRTFP Ux+	0	0	0	-0.01	0	0
312	CRTFP Ux-	0	0	0	0.01	0	0
312	CRTFP Uy+	0	0	0	-0.01	0.01	0
312	CRTFP Uy-	0	0	0	0.01	-0.01	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 -8146 al nodo di indice 311, di coordinate x = -24.67, y = 5.73, z = -1.37, nel contesto SLV 11.
Spostamento estremo minimo -0.0027153 al nodo di indice 311, di coordinate x = -24.67, y = 5.73, z = -1.37, nel contesto SLV 11.
Spostamento estremo massimo -0.0006353 al nodo di indice 279, di coordinate x = -25.65, y = 5.38, z = -1.37, nel contesto SLV 6.

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
5	SLV 5	-0.0026696	-8008.8	SLV 12	-0.0007248	-2174.5
20	SLU 81	-0.0023637	-7091.1	SLV 7	-0.0009007	-2702.2
22	SLU 81	-0.0023793	-7137.8	SLV 7	-0.0008932	-2679.6
31	SLV 10	-0.002504	-7512.1	SLV 7	-0.0007161	-2148.4
33	SLV 5	-0.0025898	-7769.5	SLV 12	-0.000753	-2258.9
34	SLV 5	-0.0023509	-7052.8	SLV 12	-0.00072	-2160
35	SLU 81	-0.0021486	-6445.7	SLV 12	-0.0006944	-2083.2
36	SLU 81	-0.0019961	-5988.4	SLV 12	-0.0006778	-2033.4
37	SLU 81	-0.0018794	-5638.3	SLV 12	-0.0006705	-2011.4
38	SLU 81	-0.0017983	-5394.9	SLV 12	-0.0006721	-2016.3
39	SLU 81	-0.0017511	-5253.4	SLV 12	-0.0006822	-2046.7
40	SLU 81	-0.0017358	-5207.3	SLV 12	-0.0007004	-2101.1
41	SLU 81	-0.0017498	-5249.4	SLV 12	-0.000726	-2177.9
42	SLU 81	-0.0017907	-5372.1	SLV 12	-0.0007586	-2275.8
43	SLU 81	-0.0018552	-5565.7	SLV 12	-0.0007972	-2391.5
44	SLU 81	-0.0019388	-5816.3	SLV 11	-0.0008389	-2516.6
45	SLU 81	-0.0020339	-6101.6	SLV 11	-0.0008771	-2631.3
46	SLU 81	-0.0021287	-6386.2	SLV 7	-0.0009077	-2723.2
47	SLU 81	-0.0022052	-6615.6	SLV 7	-0.0009282	-2784.5
48	SLU 81	-0.0022383	-6714.9	SLV 7	-0.0009304	-2791.1
49	SLU 81	-0.0022302	-6690.7	SLV 7	-0.0009149	-2744.8
50	SLU 81	-0.0021818	-6545.3	SLV 7	-0.0008808	-2642.4
51	SLU 81	-0.0021229	-6368.7	SLV 7	-0.0008397	-2519
52	SLU 81	-0.0020758	-6227.4	SLV 7	-0.0007997	-2399.2
53	SLU 81	-0.0020549	-6164.8	SLV 7	-0.0007664	-2299.2
54	SLU 81	-0.0020686	-6205.8	SLV 7	-0.0007426	-2227.9
55	SLU 81	-0.0021197	-6359.2	SLV 7	-0.0007298	-2189.4
56	SLV 10	-0.0022339	-6701.8	SLV 7	-0.0007275	-2182.6
57	SLV 10	-0.0023821	-7146.3	SLV 7	-0.0007337	-2201
59	SLV 5	-0.00242	-7260.1	SLV 12	-0.0007354	-2206.1
60	SLV 10	-0.0022698	-6809.3	SLV 7	-0.0007331	-2199.4
62	SLU 81	-0.002214	-6642.1	SLV 7	-0.0009466	-2839.8
64	SLU 81	-0.0022298	-6689.3	SLV 7	-0.0009391	-2817.2
66	SLU 81	-0.0022564	-6769.2	SLV 12	-0.0007582	-2274.7
67	SLU 81	-0.0021097	-6329	SLV 3	-0.000746	-2238
69	SLU 81	-0.0020988	-6296.4	SLV 7	-0.0009983	-2995
71	SLU 81	-0.002115	-6344.9	SLV 7	-0.0009912	-2973.6
73	SLU 81	-0.0021578	-6473.3	SLV 12	-0.0007944	-2383.2
74	SLU 81	-0.0020243	-6073	SLV 3	-0.0007436	-2230.8
76	SLU 81	-0.0019954	-5986.3	SLV 7	-0.001039	-3116.9
78	SLU 81	-0.002012	-6036	SLV 7	-0.0010322	-3096.5
80	SLU 81	-0.0021019	-6305.8	SLV 16	-0.0008097	-2429
81	SLU 81	-0.0019801	-5940.2	SLV 3	-0.000753	-2259
83	SLU 81	-0.0018948	-5684.4	SLV 8	-0.0010579	-3173.8
85	SLU 81	-0.0019118	-5735.5	SLV 7	-0.0010519	-3155.7
87	SLU 81	-0.0020849	-6254.8	SLV 16	-0.0008277	-2483.1
88	SLU 81	-0.0019747	-5924	SLV 3	-0.0007731	-2319.3
91	SLU 81	-0.0021015	-6304.5	SLV 16	-0.0008545	-2563.6
92	SLU 81	-0.0020042	-6012.7	SLV 3	-0.0008027	-2408
95	SLU 81	-0.0021449	-6434.8	SLV 16	-0.000888	-2664
96	SLU 81	-0.0020631	-6189.4	SLV 3	-0.0008397	-2519.1
99	SLU 81	-0.0022062	-6618.6	SLV 16	-0.0009253	-2775.9
100	SLU 81	-0.0021428	-6428.4	SLV 3	-0.0008811	-2643.2
103	SLU 81	-0.0022725	-6817.4	SLV 16	-0.0009625	-2887.6
104	SLU 81	-0.00223	-6690	SLV 3	-0.0009207	-2762.1
106	SLU 81	-0.0017887	-5366.2	SLU 2	-0.0010787	-3236
108	SLU 81	-0.0018491	-5547.4	SLU 2	-0.0011186	-3355.7
110	SLU 81	-0.002325	-6974.9	SLV 16	-0.0009939	-2981.7
111	SLU 81	-0.0023046	-6913.9	SLV 3	-0.0009487	-2846
113	SLU 81	-0.0018408	-5522.4	SLU 2	-0.0011079	-3323.8
115	SLU 81	-0.0019016	-5704.9	SLU 2	-0.0011481	-3444.4
116	SLU 81	-0.002514	-7542.1	SLV 16	-0.0010829	-3248.6
117	SLU 81	-0.0022597	-6779.1	SLV 16	-0.0009664	-2899.2
118	SLU 81	-0.001758	-5273.9	SLV 16	-0.0007393	-2217.8
119	SLU 81	-0.0016676	-5002.9	SLV 16	-0.000718	-2154.1
120	SLU 81	-0.0016185	-4855.6	SLV 16	-0.0007287	-2186
121	SLU 81	-0.0015963	-4788.9	SLV 16	-0.0007578	-2273.5
122	SLU 81	-0.0015895	-4768.5	SLV 16	-0.0007919	-2375.6
123	SLU 81	-0.0015928	-4778.3	SLV 16	-0.0008221	-2466.4
124	SLU 81	-0.0016584	-4975.1	SLV 16	-0.000904	-2711.9
125	SLU 81	-0.0017093	-5127.9	SLV 16	-0.0009656	-2896.9
126	SLU 81	-0.0017577	-5273.1	SLV 16	-0.0010383	-3114.8

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
127	SLU 81	-0.0018038	-5411.3	SLU 2	-0.0010826	-3247.9
128	SLU 81	-0.001846	-5537.9	SLU 2	-0.0011098	-3329.5
129	SLU 81	-0.001888	-5664.1	SLU 2	-0.0011375	-3412.6
130	SLU 81	-0.0019405	-5821.5	SLU 2	-0.0011721	-3516.4
131	SLU 81	-0.0019954	-5986.2	SLV 4	-0.0011546	-3463.9
132	SLU 81	-0.002048	-6144	SLV 3	-0.0011281	-3384.4
133	SLU 81	-0.0020974	-6292.3	SLV 1	-0.0010984	-3295.2
134	SLU 81	-0.0021444	-6433.2	SLV 1	-0.0010661	-3198.3
135	SLU 81	-0.002191	-6572.9	SLV 1	-0.0010322	-3096.5
136	SLU 81	-0.0022409	-6722.8	SLV 1	-0.0009981	-2994.3
137	SLU 81	-0.0023011	-6903.3	SLV 1	-0.0009668	-2900.3
138	SLU 81	-0.0023808	-7142.5	SLV 1	-0.0009417	-2825.1
140	SLU 81	-0.0023401	-7020.2	SLV 15	-0.0010112	-3033.7
148	SLU 81	-0.0016615	-4984.5	SLV 16	-0.0009108	-2732.3
150	SLU 81	-0.0017296	-5188.8	SLV 16	-0.000985	-2955
154	SLU 81	-0.001885	-5655	SLU 2	-0.0011328	-3398.4
156	SLU 81	-0.001946	-5838	SLU 2	-0.0011731	-3519.2
165	SLU 82	-0.0023405	-7021.5	SLV 1	-0.0009593	-2877.8
167	SLU 81	-0.0025154	-7546.2	SLV 15	-0.0010969	-3290.6
168	SLU 81	-0.0022613	-6783.8	SLV 15	-0.0009811	-2943.2
169	SLU 81	-0.0017707	-5312.1	SLV 15	-0.0007627	-2288.2
170	SLU 81	-0.0016809	-5042.8	SLV 15	-0.0007422	-2226.5
171	SLU 81	-0.0016324	-4897.2	SLV 16	-0.0007534	-2260.2
172	SLU 81	-0.0016108	-4832.3	SLV 16	-0.000783	-2349.1
173	SLU 81	-0.0016046	-4813.7	SLV 16	-0.0008176	-2452.7
174	SLU 81	-0.0016085	-4825.5	SLV 16	-0.0008483	-2544.8
175	SLU 81	-0.0016764	-5029.3	SLV 16	-0.0009298	-2789.3
176	SLU 81	-0.0017499	-5249.7	SLV 16	-0.0010044	-3013.1
177	SLU 81	-0.0018024	-5407.2	SLU 2	-0.0010785	-3235.5
178	SLU 81	-0.0018526	-5557.8	SLU 2	-0.0011097	-3329.1
179	SLU 81	-0.001899	-5697.1	SLU 2	-0.0011395	-3418.4
180	SLU 81	-0.0019432	-5829.5	SLU 2	-0.0011684	-3505.3
181	SLU 81	-0.0019936	-5980.7	SLU 2	-0.0012019	-3605.7
182	SLU 82	-0.0020448	-6134.3	SLV 2	-0.0011746	-3523.7
183	SLU 82	-0.0020937	-6281.2	SLV 2	-0.0011452	-3435.5
184	SLU 82	-0.0021395	-6418.6	SLV 2	-0.0011132	-3339.6
185	SLU 82	-0.0021829	-6548.8	SLV 2	-0.0010789	-3236.6
186	SLU 82	-0.002226	-6678	SLV 2	-0.001043	-3129
187	SLU 82	-0.0022725	-6817.5	SLV 2	-0.0010071	-3021.2
188	SLU 82	-0.0023292	-6987.7	SLV 2	-0.0009738	-2921.5
189	SLU 82	-0.0024077	-7223.2	SLV 1	-0.0009481	-2844.4
191	SLU 81	-0.0023264	-6979.3	SLV 13	-0.0010155	-3046.5
192	SLU 82	-0.0023421	-7026.4	SLV 2	-0.000956	-2867.9
195	SLU 82	-0.0022728	-6818.4	SLV 13	-0.0009975	-2992.6
196	SLU 82	-0.0022895	-6868.4	SLV 2	-0.0009308	-2792.3
199	SLU 82	-0.0022022	-6606.6	SLV 13	-0.0009643	-2893
200	SLU 82	-0.0022119	-6635.8	SLV 2	-0.0008945	-2683.6
202	SLU 81	-0.001762	-5286	SLV 16	-0.0010217	-3065.2
204	SLU 81	-0.0017877	-5363.2	SLU 2	-0.0010647	-3194.2
206	SLU 82	-0.002133	-6399.1	SLV 13	-0.0009268	-2780.3
207	SLU 82	-0.0021327	-6398.2	SLV 2	-0.0008553	-2565.9
209	SLU 81	-0.0017981	-5394.2	SLV 16	-0.0010661	-3198.2
211	SLU 81	-0.0018212	-5463.7	SLU 2	-0.0010837	-3251.1
213	SLU 82	-0.0020776	-6232.9	SLV 13	-0.0008909	-2672.6
214	SLU 82	-0.0020672	-6201.5	SLV 2	-0.0008181	-2454.4
216	SLU 81	-0.0018364	-5509.1	SLU 2	-0.0010927	-3278
218	SLU 81	-0.001857	-5570.9	SLU 2	-0.0011057	-3317
220	SLU 82	-0.0020444	-6133.3	SLV 13	-0.0008599	-2579.7
221	SLU 82	-0.0020253	-6075.9	SLV 2	-0.0007862	-2358.5
223	SLU 82	-0.0018767	-5630	SLU 1	-0.0011176	-3352.7
225	SLU 82	-0.0018951	-5685.2	SLU 1	-0.0011287	-3386
227	SLU 82	-0.0020396	-6118.8	SLV 13	-0.0008361	-2508.4
228	SLU 82	-0.0020139	-6041.6	SLV 2	-0.0007615	-2284.4
230	SLU 82	-0.0019207	-5762.1	SLV 10	-0.0010807	-3242.2
232	SLU 82	-0.0019367	-5810	SLV 10	-0.0010927	-3278.1
234	SLU 82	-0.002068	-6204	SLV 13	-0.0008213	-2464
235	SLU 82	-0.0020377	-6113.2	SLV 2	-0.0007456	-2236.9
237	SLU 82	-0.0019717	-5915	SLV 10	-0.0010168	-3050.5
239	SLU 82	-0.0019852	-5955.6	SLV 10	-0.0010277	-3083.2
241	SLU 82	-0.0021338	-6401.4	SLV 9	-0.000815	-2444.9
242	SLU 82	-0.0021007	-6302	SLV 6	-0.0007292	-2187.7
244	SLU 82	-0.0020359	-6107.6	SLV 10	-0.0009531	-2859.2
246	SLU 82	-0.002047	-6141.1	SLV 10	-0.0009627	-2888
248	SLU 82	-0.0022403	-6720.8	SLV 9	-0.0007829	-2348.6
249	SLV 11	-0.0022446	-6733.8	SLV 6	-0.0006946	-2083.8
251	SLU 82	-0.002123	-6369.1	SLV 10	-0.0008961	-2688.4
253	SLU 82	-0.0021319	-6395.6	SLV 10	-0.0009044	-2713.1
255	SLU 82	-0.0023891	-7167.3	SLV 9	-0.0007636	-2290.9
256	SLV 11	-0.002459	-7377	SLV 6	-0.0006717	-2015.2
258	SLU 82	-0.0025118	-7535.4	SLV 9	-0.0007803	-2340.9
259	SLU 82	-0.0023387	-7016.2	SLV 9	-0.0007502	-2250.7
260	SLU 82	-0.0021921	-6576.2	SLV 9	-0.0007281	-2184.3
261	SLU 82	-0.0020803	-6241	SLV 9	-0.0007158	-2147.5
262	SLU 82	-0.0020071	-6021.4	SLV 9	-0.0007141	-2142.3
263	SLU 82	-0.0019727	-5918.1	SLV 9	-0.0007226	-2167.9
264	SLU 82	-0.0019743	-5923	SLV 9	-0.0007405	-2221.4
265	SLU 82	-0.0020067	-6020	SLV 9	-0.0007659	-2297.7

Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
266	SLU 82	-0.002061	-6183.1	SLV 9	-0.0007962	-2388.7
267	SLU 82	-0.0021244	-6373.2	SLV 9	-0.0008273	-2482
268	SLU 82	-0.0021781	-6534.2	SLV 9	-0.0008531	-2559.3
269	SLU 82	-0.002198	-6594	SLV 10	-0.0008649	-2594.8
270	SLU 82	-0.0021792	-6537.5	SLV 10	-0.0008619	-2585.8
271	SLU 82	-0.0021138	-6341.3	SLV 6	-0.0008393	-2518
272	SLU 82	-0.0020288	-6086.5	SLV 6	-0.0008039	-2411.7
273	SLU 82	-0.0019448	-5834.3	SLV 6	-0.0007639	-2291.7
274	SLU 82	-0.0018754	-5626.2	SLV 6	-0.0007255	-2176.4
275	SLU 82	-0.0018299	-5489.7	SLV 6	-0.000692	-2076.1
276	SLU 82	-0.0018146	-5443.7	SLV 6	-0.0006654	-1996.2
277	SLU 82	-0.0018336	-5500.9	SLV 6	-0.0006466	-1939.9
278	SLU 82	-0.0018901	-5670.2	SLV 6	-0.0006365	-1909.4
279	SLV 11	-0.0020074	-6022.2	SLV 6	-0.0006353	-1906
280	SLV 11	-0.0021782	-6534.5	SLV 6	-0.0006433	-1929.8
281	SLV 11	-0.0023863	-7159	SLV 6	-0.0006599	-1979.6
282	SLV 11	-0.002623	-7869.1	SLV 6	-0.0006835	-2050.5
285	SLV 8	-0.002608	-7823.9	SLV 9	-0.0007562	-2268.6
296	SLU 82	-0.0023353	-7005.8	SLV 9	-0.0008356	-2506.9
298	SLU 82	-0.0023393	-7018	SLV 10	-0.0008416	-2524.9
311	SLV 11	-0.0027153	-8146	SLV 6	-0.0006595	-1978.4

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 -0.0021382 al nodo di indice 311, di coordinate x = -24.67, y = 5.73, z = -1.37, nel contesto SLD 11.
Spostamento estremo massimo -0.0009216 al nodo di indice 120, di coordinate x = -32, y = 0.81, z = -1.37, nel contesto SLD 16.
Cedimento elastico estremo massimo 0.000031 al nodo di indice 64, di coordinate x = -27.82, y = -2.84, z = -1.37, nel contesto SLE rara 18.

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	-1.3E-03	-3812.1	SLD 5	-2.1E-03	-6371.2	SLE RA 18	3.86E-06				
20	SLD 7	-1.3E-03	-3818.9	SLD 10	-1.9E-03	-5563.7	SLE RA 18	1.55E-05				
22	SLD 7	-1.3E-03	-3828.4	SLD 10	-1.9E-03	-5624	SLE RA 18	1.64E-05				
31	SLD 7	-1.2E-03	-3653	SLD 10	-2.0E-03	-6007.5	SLE RA 18	1.40E-06				
33	SLD 12	-1.3E-03	-3805.6	SLD 5	-2.1E-03	-6222.8	SLE RA 18	4.10E-06				
34	SLD 12	-1.2E-03	-3533.4	SLD 5	-1.9E-03	-5679.4	SLE RA 18	3.66E-06				
35	SLD 12	-1.1E-03	-3298.9	SLD 5	-1.7E-03	-5198.1	SLE RA 18	1.12E-06				
36	SLD 12	-1.0E-03	-3112.3	SLD 5	-1.6E-03	-4797.2						
37	SLD 12	-9.9E-04	-2976.6	SLD 5	-1.5E-03	-4483.5						
38	SLD 12	-9.6E-04	-2891.4	SLD 5	-1.4E-03	-4256.9						
39	SLD 12	-9.5E-04	-2854.1	SLD 5	-1.4E-03	-4113.7						
40	SLD 12	-9.5E-04	-2862	SLD 5	-1.3E-03	-4048.7						
41	SLD 12	-9.7E-04	-2911.7	SLD 5	-1.4E-03	-4055.9						
42	SLD 12	-0.001	-2999.9	SLD 5	-1.4E-03	-4129						
43	SLD 12	-1.0E-03	-3121.7	SLD 5	-1.4E-03	-4260.5						
44	SLD 11	-1.1E-03	-3268.4	SLD 6	-1.5E-03	-4441.2						
45	SLD 11	-1.1E-03	-3423.2	SLD 6	-1.6E-03	-4659.2	SLE RA 18	2.60E-06				
46	SLD 7	-1.2E-03	-3568	SLD 10	-1.6E-03	-4887.2	SLE RA 18	1.18E-05				
47	SLD 7	-1.2E-03	-3679.6	SLD 10	-1.7E-03	-5078	SLE RA 18	2.47E-05				
48	SLD 7	-1.2E-03	-3720.4	SLD 10	-1.7E-03	-5172.8	SLE RA 18	3.05E-05				
49	SLD 7	-1.2E-03	-3693.6	SLD 10	-1.7E-03	-5176.7	SLE RA 18	2.61E-05				
50	SLD 7	-1.2E-03	-3598.6	SLD 10	-1.7E-03	-5093.7	SLE RA 18	1.48E-05				
51	SLD 7	-1.2E-03	-3483.6	SLD 10	-1.7E-03	-4992.2	SLE RA 18	5.20E-06				
52	SLD 7	-1.1E-03	-3383.4	SLD 10	-1.6E-03	-4923	SLE RA 18	0.000002				
53	SLD 7	-1.1E-03	-3321	SLD 10	-1.6E-03	-4919.7	SLE RA 18	6.18E-07				
54	SLD 7	-1.1E-03	-3309.4	SLD 10	-1.7E-03	-5001.4	SLE RA 18	7.28E-07				
55	SLD 7	-1.1E-03	-3353.4	SLD 10	-1.7E-03	-5174.9	SLE RA 18	1.69E-06				
56	SLD 7	-1.2E-03	-3450.3	SLD 10	-1.8E-03	-5434.1	SLE RA 18	2.13E-06				

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.
57	SLD 7	-1.2E-03	-3588.2	SLD 10	-1.9E-03	-5759.1	SLE RA 18	8.44E-07				
59	SLD 12	-1.2E-03	-3624.7	SLD 5	-1.9E-03	-5841.6	SLE RA 18	4.13E-06				
60	SLD 7	-1.2E-03	-3492.5	SLD 10	-1.8E-03	-5516.2	SLE RA 18	1.91E-06				
62	SLD 7	-1.2E-03	-3713.6	SLD 10	-1.7E-03	-5079	SLE RA 18	0.00003				
64	SLD 7	-1.2E-03	-3723.4	SLD 10	-1.7E-03	-5139.8	SLE RA 18	0.000031				
66	SLD 12	-1.2E-03	-3499.7	SLD 5	-1.8E-03	-5414.2	SLE RA 18	2.63E-06				
67	SLD 3	-1.1E-03	-3366.5	SLD 14	-1.7E-03	-5139.1	SLE RA 18	6.57E-07				
69	SLD 7	-1.2E-03	-3653.7	SLD 10	-1.6E-03	-4682.9	SLE RA 18	3.51E-06				
71	SLD 7	-1.2E-03	-3664.4	SLD 10	-1.6E-03	-4744.4	SLE RA 18	4.41E-06				
73	SLD 12	-1.1E-03	-3440.9	SLD 5	-1.7E-03	-5094.2	SLE RA 18	2.09E-07				
74	SLD 3	-1.1E-03	-3268.1	SLD 14	-1.6E-03	-4897.4						
76	SLD 7	-1.2E-03	-3592.2	SLE RA 18	-1.5E-03	-4401.4	SLE RA 18	1.43E-06				
78	SLD 7	-1.2E-03	-3603.9	SLE RA 18	-1.5E-03	-4438.9	SLE RA 18	2.35E-06				
80	SLD 16	-1.1E-03	-3399.8	SLD 1	-1.6E-03	-4922.2						
81	SLD 3	-1.1E-03	-3230.5	SLD 14	-1.6E-03	-4756.8						
83	SLD 8	-1.2E-03	-3505.3	SLE RA 18	-1.4E-03	-4179.8						
85	SLD 7	-1.2E-03	-3518.5	SLE RA 18	-1.4E-03	-4218.4						
87	SLD 16	-1.1E-03	-3406	SLD 1	-1.6E-03	-4853.4						
88	SLD 3	-1.1E-03	-3250	SLD 14	-1.6E-03	-4712.2						
91	SLD 16	-1.2E-03	-3460.1	SLD 1	-1.6E-03	-4866.6						
92	SLD 3	-1.1E-03	-3320.6	SLD 14	-1.6E-03	-4754.5						
95	SLD 16	-1.2E-03	-3552.1	SLD 1	-1.6E-03	-4945.7						
96	SLD 3	-1.1E-03	-3433.3	SLD 14	-1.6E-03	-4870						
99	SLD 16	-1.2E-03	-3668.3	SLD 1	-1.7E-03	-5069.2	SLE RA 18	3.11E-06				
100	SLD 3	-1.2E-03	-3574.7	SLD 14	-1.7E-03	-5038.5	SLE RA 18	3.32E-06				
103	SLD 16	-1.3E-03	-3789.6	SLD 1	-1.7E-03	-5206.1	SLE RA 18	7.26E-06				
104	SLD 3	-1.2E-03	-3722	SLD 14	-1.7E-03	-5230.7	SLE RA 18	8.71E-06				
106	SLE RA 2	-1.1E-03	-3363.8	SLE RA 18	-1.3E-03	-3942	SLE RA 18	2.41E-06				
108	SLE RA 2	-1.2E-03	-3486.4	SLE RA 18	-1.4E-03	-4077	SLE RA 18	4.14E-06				
110	SLD 16	-1.3E-03	-3888.1	SLD 1	-1.8E-03	-5311.7	SLE RA 18	1.49E-05				
111	SLD 3	-0.00128	-3840.1	SLD 14	-1.8E-03	-5402.4	SLE RA 18	1.99E-05				
113	SLE RA 2	-1.2E-03	-3456.2	SLE RA 18	-1.4E-03	-4055.1	SLE RA 18	1.56E-05				
115	SLE RA 2	-1.2E-03	-3579.6	SLE RA 18	-1.4E-03	-4191	SLE RA 18	1.39E-05				
116	SLD 16	-1.4E-03	-4212.3	SLD 1	-1.9E-03	-5726.1	SLE RA 18	1.26E-05				
117	SLD 16	-0.00126	-3780.1	SLD 1	-1.7E-03	-5163.8	SLE RA 18	1.81E-05				
118	SLD 16	-9.8E-04	-2930.9	SLD 1	-1.4E-03	-4051.2	SLE RA 18	2.75E-06				
119	SLD 16	-9.3E-04	-2804.1	SLD 1	-1.3E-03	-3825.2						
120	SLD 16	-9.2E-04	-2764.7	SLD 1	-1.2E-03	-3673.6						
121	SLD 16	-9.3E-04	-2778.8	SLD 1	-1.2E-03	-3572.6						
122	SLD 16	-9.4E-04	-2815.5	SLE RA 18	-1.2E-03	-3508						
123	SLD 16	-9.5E-04	-2856.9	SLE RA 18	-1.2E-03	-3514						
124	SLD 16	-1.0E-03	-3027.6	SLE RA 18	-1.2E-03	-3653						
125	SLD 16	-1.1E-03	-3162.7	SLE RA 18	-1.3E-03	-3763.7						
126	SLE RA 2	-1.1E-03	-3290	SLE RA 18	-0.00129	-3870	SLE RA 18	7.06E-07				
127	SLE RA 2	-1.1E-03	-3378.9	SLE RA 18	-1.3E-03	-3971.8	SLE RA 18	6.42E-06				
128	SLE RA 2	-1.2E-03	-3462.8	SLE RA 18	-1.4E-03	-4065.7	SLE RA 18	1.62E-05				
129	SLE RA 2	-1.2E-03	-3547.9	SLE RA 18	-1.4E-03	-4159.6	SLE RA 18	1.82E-05				
130	SLE RA 2	-1.2E-03	-3654.3	SLE RA 18	-1.4E-03	-4276.8	SLE RA 18	1.12E-05				
131	SLD 4	-1.2E-03	-3739.9	SLE RA 18	-1.5E-03	-4399.6	SLE RA 18	7.71E-06				
132	SLD 3	-1.3E-03	-3767.2	SLE RA 18	-1.5E-03	-4517.5	SLE RA 18	7.68E-06				
133	SLD 1	-1.3E-03	-3787.1	SLE RA 18	-1.5E-03	-4628.6	SLE RA 18	2.14E-05				
134	SLD 1	-1.3E-03	-3801.1	SLD 16	-1.6E-03	-4748.1	SLE RA 18	2.19E-05				
135	SLD 1	-1.3E-03	-3812.5	SLD 16	-1.6E-03	-4937.7	SLE RA 18	2.53E-05				
136	SLD 1	-1.3E-03	-3827.7	SLD 16	-1.7E-03	-5137.3	SLE RA 18	2.86E-05				
137	SLD 1	-1.3E-03	-3857.8	SLD 16	-1.8E-03	-5362.3	SLE RA 18	2.63E-05				
138	SLD 1	-1.3E-03	-3917.8	SLD 16	-1.9E-03	-5634.7	SLE RA 18	1.39E-05				
140	SLD 15	-1.3E-03	-3927	SLD 2	-1.8E-03	-5330.3	SLE RA 18	0.000019				
148	SLD 16	-1.0E-03	-3039.6	SLE RA 18	-1.2E-03	-3659.2						
150	SLD 16	-1.1E-03	-3209.4	SLE RA 18	-1.3E-03	-3807.4						
154	SLE RA 2	-1.2E-03	-3534.8	SLE RA 18	-1.4E-03	-4151	SLE RA 18	0.000016				
156	SLE RA 2	-1.2E-03	-3658.6	SLE RA 18	-1.4E-03	-4287.3	SLE RA 18	1.06E-05				
165	SLD 1	-1.3E-03	-3892.5	SLD 16	-1.8E-03	-5486.7	SLE RA 19	2.47E-05				
167	SLD 15	-1.4E-03	-4231.7	SLD 2	-1.9E-03	-5710.2	SLE RA 18	1.26E-05				
168	SLD 15	-1.3E-03	-3800.6	SLD 2	-1.7E-03	-5147.5	SLE RA 18	1.82E-05				
169	SLD 15	-9.9E-04	-2974.1	SLD 2	-1.4E-03	-4051.7	SLE RA 18	3.20E-06				
170	SLD 15	-9.5E-04	-2848.7	SLD 2	-1.3E-03	-3826.4						
171	SLD 16	-9.4E-04	-2810.7	SLD 1	-1.2E-03	-3675.5						
172	SLD 16	-9.4E-04	-2826.1	SLD 1	-1.2E-03	-3575.3						
173	SLD 16	-9.5E-04	-2864	SLE RA 18	-1.2E-03	-3539.5						
174	SLD 16	-9.7E-04	-2906.6	SLE RA 18	-1.2E-03	-3546.9						
175	SLD 16	-1.0E-03	-3079.6	SLE RA 18	-1.2E-03	-3690.8						
176	SLD 16	-1.1E-03	-3256	SLE RA 18	-1.3E-03	-3851						
177	SLE RA 2	-1.1E-03	-3368.4	SLE RA 18	-1.3E-03	-3966.4	SLE RA 18	2.38E-06				
178	SLE RA 2	-1.2E-03	-3465	SLE RA 18	-1.4E-03	-4077.4	SLE RA 18	4.46E-06				
179	SLE RA 2	-1.2E-03	-3556.7	SLE RA 18	-1.4E-03	-4180.6	SLE RA 18	6.81E-06				
180	SLE RA 2	-1.2E-03	-3645.8	SLE RA 18	-1.4E-03	-4279.1	SLE RA 18	6.79E-06				
181	SLE RA 2	-1.2E-03	-3748.5	SLE RA 18	-1.5E-03	-4391.8	SLE RA 18	7.28E-06				
182	SLD 2	-1.3E-03	-3818.1	SLE RA 19	-1.5E-03	-4506.5	SLE RA 18	7.46E-06				
183	SLD 2	-1.3E-03	-3837.7	SLE RA 19	-1.5E-03	-4616.5	SLE RA 18	2.09E-05				
184	SLD 2	-1.3E-03	-3850.7	SLE RA 19	-1.6E-03	-4719.7	SLE RA 19	1.95E-05				
185	SLD 2	-1.3E-03	-3858.2	SLD 15	-1.6E-03	-4834.5	SLE RA 19	2.12E-05				
186	SLD 2	-1.3E-03	-3863.4	SLD 15	-1.7E-03	-5017	SLE RA 19	2.52E-05				
187	SLD 2	-1.3E-03	-3872.4	SLD 15	-1.7E-03	-5209.6	SLE RA 19	2.89E-05				
188	SLD 2	-1.3E-03	-3896.3	SLD 15	-1.8E-03	-5427.7	SLE RA 19	2.66E-05				
189	SLD 1	-1.3E-03	-3954.1	SLD 16	-1.9E-03	-5697.4	SLE RA 19	1.43E-05				
191	SLD 13	-1.3E-03	-3917.3	SLD 4	-1.8E-03	-5285.6	SLE RA 18	0.000015				
192	SLD 2	-1.3E-03	-3888.6	SLD 15	-1.8E-03	-5491.9	SLE RA 19	2.05E-05				

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.
195	SLD 13	-1.3E-03	-3834.3	SLD 4	-1.7E-03	-5157	SLE RA 19	7.32E-06				
196	SLD 2	-1.3E-03	-3796.5	SLD 15	-1.8E-03	-5373.6	SLE RA 19	9.69E-06				
199	SLD 13	-1.2E-03	-3712.6	SLD 4	-1.7E-03	-5000.6	SLE RA 19	3.09E-06				
200	SLD 2	-1.2E-03	-3662.8	SLD 15	-1.7E-03	-5200.1	SLE RA 19	4.28E-06				
202	SLE RA 2	-1.1E-03	-3282.8	SLE RA 18	-1.3E-03	-3873.2						
204	SLE RA 2	-1.1E-03	-3331.7	SLE RA 18	-0.00131	-3929.9						
206	SLD 13	-1.2E-03	-3586.6	SLD 4	-1.6E-03	-4853.5						
207	SLD 2	-1.2E-03	-3523.4	SLD 15	-1.7E-03	-5026.2	SLE RA 19	3.15E-07				
209	SLE RA 2	-1.1E-03	-3347.8	SLE RA 18	-1.3E-03	-3951.1						
211	SLE RA 2	-1.1E-03	-3392.1	SLE RA 18	-1.3E-03	-4002.2						
213	SLD 13	-1.2E-03	-3477.5	SLD 4	-1.6E-03	-4742						
214	SLD 2	-1.1E-03	-3401.8	SLD 15	-1.6E-03	-4888.3						
216	SLE RA 2	-1.1E-03	-3420.3	SLE RA 18	-1.3E-03	-4034.7	SLE RA 19	0.000005				
218	SLE RA 2	-1.2E-03	-3460	SLE RA 18	-1.4E-03	-4080.2	SLE RA 19	0.000006				
220	SLD 13	-1.1E-03	-3398.9	SLD 4	-1.6E-03	-4685.5						
221	SLD 2	-1.1E-03	-3313.1	SLD 15	-1.6E-03	-4810.4						
223	SLE RA 1	-1.2E-03	-3496.7	SLE RA 19	-1.4E-03	-4123.6	SLE RA 19	5.91E-06				
225	SLE RA 1	-1.2E-03	-3531	SLE RA 19	-1.4E-03	-4164.3	SLE RA 19	6.48E-06				
227	SLD 13	-1.1E-03	-3360.2	SLD 4	-1.6E-03	-4698						
228	SLD 2	-1.1E-03	-3267.4	SLD 15	-1.6E-03	-4808.8						
230	SLD 10	-1.2E-03	-3538.7	SLE RA 19	-1.4E-03	-4221.3	SLE RA 19	9.48E-06				
232	SLD 10	-1.2E-03	-3572.2	SLE RA 19	-1.4E-03	-4256.6	SLE RA 19	9.80E-06				
234	SLD 13	-1.1E-03	-3369.2	SLD 4	-1.6E-03	-4790.8						
235	SLD 2	-1.1E-03	-3272.1	SLD 15	-1.6E-03	-4895						
237	SLD 10	-1.2E-03	-3511.1	SLE RA 19	-1.4E-03	-4334.9	SLE RA 18	1.55E-05				
239	SLD 10	-1.2E-03	-3540.7	SLE RA 19	-1.5E-03	-4364.9	SLE RA 19	1.59E-05				
241	SLD 9	-1.1E-03	-3431.1	SLD 8	-1.7E-03	-4974.5						
242	SLD 6	-1.1E-03	-3320.3	SLD 11	-1.7E-03	-5090.3						
244	SLD 10	-1.2E-03	-3498.6	SLD 7	-1.5E-03	-4497.7	SLE RA 19	3.81E-07				
246	SLD 10	-1.2E-03	-3524	SLD 7	-1.5E-03	-4517.3	SLE RA 19	6.55E-07				
248	SLD 9	-1.2E-03	-3501.7	SLD 8	-1.8E-03	-5306	SLE RA 19	2.55E-06				
249	SLD 6	-1.1E-03	-3389	SLD 11	-1.8E-03	-5428.5	SLE RA 19	1.75E-06				
251	SLD 10	-1.2E-03	-3520.5	SLD 7	-1.6E-03	-4820.4	SLE RA 19	1.35E-06				
253	SLD 10	-1.2E-03	-3541.6	SLD 7	-1.6E-03	-4835.5	SLE RA 19	1.53E-06				
255	SLD 9	-1.2E-03	-3635	SLD 8	-1.9E-03	-5737.7	SLE RA 19	4.17E-06				
256	SLD 6	-1.2E-03	-3520.2	SLD 11	-2.0E-03	-5871.9	SLE RA 19	3.35E-06				
258	SLD 9	-1.3E-03	-3789	SLD 8	-2.0E-03	-6054.6	SLE RA 19	3.74E-06				
259	SLD 9	-1.2E-03	-3562.8	SLD 8	-1.9E-03	-5615.6	SLE RA 19	0.000004				
260	SLD 9	-1.1E-03	-3375.6	SLD 8	-1.7E-03	-5239.2	SLE RA 19	2.35E-06				
261	SLD 9	-1.1E-03	-3239	SLD 8	-1.6E-03	-4946.3						
262	SLD 9	-1.1E-03	-3157.8	SLD 8	-1.6E-03	-4746.1						
263	SLD 9	-1.0E-03	-3131.9	SLD 8	-1.5E-03	-4639.3						
264	SLD 9	-1.1E-03	-3157.1	SLD 8	-0.00154	-4620						
265	SLD 9	-1.1E-03	-3225.4	SLD 8	-1.6E-03	-4675.5						
266	SLD 9	-1.1E-03	-3323.9	SLD 8	-1.6E-03	-4785.5	SLE RA 19	0.000003				
267	SLD 9	-1.1E-03	-3433.2	SLD 8	-1.6E-03	-4919.7	SLE RA 19	9.71E-06				
268	SLD 9	-1.2E-03	-3525.3	SLD 8	-1.7E-03	-5034.4	SLE RA 19	2.03E-05				
269	SLD 10	-1.2E-03	-3562.9	SLD 7	-1.7E-03	-5075	SLE RA 19	2.48E-05				
270	SLD 10	-1.2E-03	-3539.6	SLD 7	-1.7E-03	-5029	SLE RA 19	1.98E-05				
271	SLD 6	-1.1E-03	-3441	SLD 11	-1.6E-03	-4881.7	SLE RA 19	8.10E-06				
272	SLD 6	-1.1E-03	-3304.9	SLD 11	-1.6E-03	-4698.6	SLE RA 19	1.75E-06				
273	SLD 6	-1.1E-03	-3164	SLD 11	-1.5E-03	-4525						
274	SLD 6	-1.0E-03	-3041.4	SLD 11	-1.5E-03	-4390.9						
275	SLD 6	-9.8E-04	-2951.5	SLD 11	-1.4E-03	-4317.4						
276	SLD 6	-9.7E-04	-2903.4	SLD 11	-1.4E-03	-4319.2						
277	SLD 6	-9.7E-04	-2903.2	SLD 11	-1.5E-03	-4407						
278	SLD 6	-9.9E-04	-2955.2	SLD 11	-1.5E-03	-4588.1						
279	SLD 6	-1.0E-03	-3061.6	SLD 11	-1.6E-03	-4866.6						
280	SLD 6	-1.1E-03	-3222.4	SLD 11	-1.7E-03	-5241.8	SLE RA 19	6.82E-07				
281	SLD 6	-1.1E-03	-3433.5	SLD 11	-1.9E-03	-5705.1	SLE RA 19	0.000003				
282	SLD 6	-1.2E-03	-3683.7	SLD 11	-2.1E-03	-6235.8	SLE RA 19	3.18E-06				
285	SLD 9	-1.3E-03	-3827.1	SLD 8	-2.1E-03	-6265.3	SLE RA 19	0.000004				
296	SLD 9	-1.2E-03	-3674.9	SLD 8	-1.8E-03	-5499.6	SLE RA 19	0.000012				
298	SLD 10	-1.2E-03	-3688.1	SLD 7	-1.8E-03	-5504.7	SLE RA 19	1.19E-05				
311	SLD 6	-1.2E-03	-3709.7	SLD 11	-2.1E-03	-6414.7	SLE RA 19	3.20E-06				

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	-29.204	1.175	-29.228	1.209	0.024	-0.034

Quota	Posizione		Baricentro masse		Distanza	
	X	Y	X	Y	X	Y
Primo	-29.156	1.175	-29.236	1.211	0.079	-0.036

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	78574071	51895022
Rialzato	Primo	45402606	44319947

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: 0.9995
Traslazione Y: 0.999489
Traslazione Z: 0
Rotazione X: 0.967714
Rotazione Y: 0.972455
Rotazione Z: 0.980574

Modo	Periodo	Massa X	Massa Y	Massa Z	Massa rot. X	Massa rot. Y	Massa rot. Z	Massa sX	Massa sY
1	0.739859909	0.009790744	0.000000259	0	0.000000107	0.012032677	0.000015325	0.009790744	0.000000259
2	0.548140248	0.000000459	0.039958339	0	0.050321212	0.000000528	0.038975486	0.000000459	0.039958339
3	0.492811036	0.000500333	0.018988555	0	0.025154229	0.000619129	0.021770644	0.000500333	0.018988555
4	0.467107365	0.000009673	0.007029461	0	0.008332155	0.00000875	0.007171429	0.000009673	0.007029461
5	0.435215211	0.011469387	0.00010085	0	0.000119313	0.014163664	0.001582012	0.011469387	0.00010085
6	0.41798017	0.000162875	0.000086169	0	0.000078593	0.000205839	0.000148939	0.000162875	0.000086169
7	0.399862311	0.000290975	0.0001078	0	0.000116334	0.000339624	0.000279069	0.000290975	0.0001078
8	0.380898995	0.00005793	0.000013719	0	0.000007828	0.000078111	0.000017837	0.00005793	0.000013719
9	0.375013143	0.087939068	0.00087777	0	0.001128025	0.107676194	0.001068272	0.087939068	0.00087777
10	0.363820697	0.001241217	0.004176247	0	0.005057125	0.001979902	0.00415593	0.001241217	0.004176247
11	0.335164387	0.000861362	0.021363281	0	0.027079228	0.000769803	0.019917561	0.000861362	0.021363281
12	0.329594072	0.000138091	0.002604727	0	0.002812464	0.00092018	0.001980139	0.000138091	0.002604727
13	0.317192943	0.000152989	0.024404783	0	0.028059282	0.000049198	0.018168591	0.000152989	0.024404783
14	0.29915932	0.000314002	0.008751369	0	0.010467324	0.00047104	0.008138818	0.000314002	0.008751369
15	0.285691877	0.001643067	0.000211488	0	0.000293607	0.001910591	0.000066607	0.001643067	0.000211488
16	0.269432824	0.003685467	0.000851761	0	0.001013065	0.004299863	0.00019412	0.003685467	0.000851761
17	0.22731284	0.00000353	0.000374361	0	0.000412653	0.000002531	0.000313946	0.00000353	0.000374361
18	0.21501293	0.00000756	0.004872165	0	0.005375106	0.000006744	0.005176588	0.00000756	0.004872165
19	0.207261593	0.000128037	0.00003422	0	0.000063405	0.000144171	0.000037171	0.000128037	0.00003422
20	0.205667325	0.000172693	0.005548111	0	0.007184099	0.000154333	0.005898798	0.000172693	0.005548111
21	0.197151691	0.000206279	0.012767873	0	0.012705981	0.000259244	0.01311613	0.000206279	0.012767873
22	0.192922987	0.017582707	0.000269354	0	0.000307983	0.003560284	0.000853909	0.017582707	0.000269354
23	0.188211163	0.002436219	0.013196836	0	0.014288456	0.00222684	0.012332654	0.002436219	0.013196836
24	0.186319159	0.000321811	0.005221577	0	0.00497513	0.000468747	0.005108271	0.000321811	0.005221577
25	0.181869278	0.003703672	0.003619426	0	0.003303052	0.003348876	0.003411712	0.003703672	0.003619426
26	0.17547448	0.000075225	0.006842003	0	0.006009625	0.00020941	0.006423901	0.000075225	0.006842003
27	0.170596737	0.002552547	0.003140492	0	0.003703063	0.002782761	0.002456833	0.002552547	0.003140492
28	0.166541322	0.008469921	0.025584489	0	0.029188361	0.010609399	0.026208614	0.008469921	0.025584489
29	0.163029079	0.024484605	0.002888662	0	0.00353033	0.031811347	0.002290464	0.024484605	0.002888662
30	0.155042654	0.000850932	0.143136313	0	0.114634939	0.00063073	0.138655486	0.000850932	0.143136313
31	0.14975973	0.07684862	0.004201911	0	0.002345558	0.049253539	0.003965035	0.07684862	0.004201911
32	0.146470543	0.00498586	0.536579215	0	0.397142691	0.005289441	0.538363053	0.00498586	0.536579215
33	0.139360725	0.199065043	0.010130856	0	0.005217117	0.176474276	0.005110099	0.199065043	0.010130856
34	0.135342477	0.413624136	0.002247247	0	0.001477521	0.336691013	0.000543689	0.413624136	0.002247247
35	0.13137369	0.008404577	0.013728459	0	0.020310488	0.006527803	0.006983853	0.008404577	0.013728459
36	0.120477573	0.003617463	0.013420911	0	0.046883811	0.005113108	0.007706724	0.003617463	0.013420911
37	0.118457291	0.019187945	0.005539	0	0.020615043	0.035969706	0.009220042	0.019187945	0.005539
38	0.107867738	0.012073106	0.001231408	0	0.007322497	0.044032864	0.005899923	0.012073106	0.001231408
39	0.105518432	0.0059575	0.002709788	0	0.004986007	0.018936025	0.003604104	0.0059575	0.002709788
40	0.095100275	0.010409821	0.000030639	0	0.000284789	0.00725523	0.000017732	0.010409821	0.000030639

Modo	Periodo	Massa X	Massa Y	Massa Z	Massa rot. X	Massa rot. Y	Massa rot. Z	Massa sX	Massa sY
41	0.085113277	0.000100128	0.002525462	0	0.006783814	0.000310409	0.003124795	0.000100128	0.002525462
42	0.077071055	0.003029841	0.00008895	0	0.000018087	0.009607606	0.000014066	0.003029841	0.00008895
43	0.069377093	0.000216903	0.001476799	0	0.000004819	0.000088798	0.000983301	0.000216903	0.001476799
44	0.058475857	0.000850416	0.000559956	0	0.00007825	0.001072328	0.001240559	0.000850416	0.000559956
45	0.048564859	0.003368601	0.004212206	0	0.008706829	0.006081508	0.003882538	0.003368601	0.004212206
46	0.047320297	0.006577545	0.003098818	0	0.007897064	0.009173837	0.002733989	0.006577545	0.003098818
47	0.03691227	0.050478079	0.00024021	0	0.000159108	0.055012743	0.000680739	0.050478079	0.00024021
48	0.035737384	0.000252094	0.03825137	0	0.067953612	0.000474368	0.037684488	0.000252094	0.03825137
49	0.023535764	0.000081939	0.00213455	0	0.002850752	0.000228505	0.001902726	0.000081939	0.00213455
50	0.020670844	0.001115172	0.000057834	0	0.000266185	0.002065113	0.000010366	0.001115172	0.000057834
51	0.005753578	0.000000333	0.000000335	0	0.000043626	0.000083229	0.000106328	0.000000333	0.000000335
52	0.004949254	0.000000212	0.000000039	0	0.000134955	0.000204626	0.000000163	0.000000212	0.000000039
53	0.003883811	0.000000106	0.000000339	0	0.00050107	0.000435977	0.000084495	0.000000106	0.000000339
54	0.003181801	0.000000383	0.000000049	0	0.000000711	0.000104977	0.000756675	0.000000383	0.000000049
55	0.001577205	0.000000418	0.000000023	0	0.000007449	0.000227046	0.000018774	0.000000418	0.000000023

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	0	0.023	-266596.537	-314080.9	-7762423.73	-0.65
Reazioni	0	-0.023	266596.537	314080.9	7762423.73	0.65
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	-60374.245	-72754.96	-1764624.01	0
Reazioni	0	0	60374.245	72754.96	1764624.01	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	-54274.629	-66537.93	-1588379.54	0
Reazioni	0	0	54274.629	66537.93	1588379.54	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	949.674	0	-3074.81	0	-27680.23
Reazioni	0	-949.674	0	3074.81	0	27680.23
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	88590.681	0	0	0	328768.82	-102903.2
Reazioni	-88590.681	0	0	0	-328768.82	102903.2
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	91039.629	0	-337857.11	0	-2651508.74
Reazioni	0	-91039.629	0	337857.11	0	2651508.74
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	-24009.2
Reazioni	0	0	0	0	0	24009.2
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	24672.89
Reazioni	0	0	0	0	0	-24672.89
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	39058.764	0	0	0	144950.95	-45369.01
Reazioni	-39058.764	0	0	0	-144950.95	45369.01
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	40171.89	0	-149081.87	0	-1169997.27
Reazioni	0	-40171.89	0	149081.87	0	1169997.27
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	-10585.42
Reazioni	0	0	0	0	0	10585.42
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	10887.09
Reazioni	0	0	0	0	0	-10887.09
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	5.08	-1.21
Reazioni	-1	0	0	0	-5.08	1.21
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	-5.08	0	-29.24
Reazioni	0	-1	0	5.08	0	29.24
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	61980.54	6127.62	0	1.616E04	1.766E05	1.661E05	62010.61	177	64663.02	88	0	0
SLV Y	6127.62	64629.23	0	1.767E05	1.772E04	1.891E06	62010.61	177	64663.02	88	0	0
X SLD	27275.24	2691.92	0	7093.315	7.768E04	72749.475	27289.09	177	28364.44	88	0	0
Y SLD	2691.92	28350.03	0	7.743E04	7784.7571	8.295E05	27289.09	177	28364.44	88	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	11988
Elemento min. diagonale	930.23841712
Elemento max diagonale	25506693984740.4
Rapporto max/min	27419523334.242
Elementi non nulli	478740

SIDEL
INGEGNERIA

TABULATI DI CALCOLO – VERIFICHE
CIVICO 35
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 0,01 (limite=0,2) al livello Primo
No - Criterio A2 (Distribuzione rigidezze) NON rispettato, con rapporto massimo 785740.7/518950.2=1.5 (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 1,07 (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 1,01 (limite=1,25) tra il livello Primo ed il precedente
No - Criterio E2 (Riduzione rigidezze) NON rispettato, con rapporto massimo 785740.7/454026.1=1.7 (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 50.9/19.6=2.6 (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	1.32	0.03	9.45	0	785741	518950	1.51	95.7823	95.782	1	10.14	9.45	1.07	0	+∞	0
Primo	5.08	0.08	9.99	0.01	454026	443199	1.02	92.8663	92.8663	1	9.99	9.3	1.07	0	+∞	0

Verifiche di regolarità in elevazione

Rapporto di regolarità per la condizione D (Altezza elementi sismoresistenti): 6.45/6.45=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	5.08	1.32	70393	69538	1.01	78574071	45402606	1.73	78574071	78574071	1	50.9	19.6	2.6	0.08	9.45	0.01	0.08	9.45	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	1.32	SLV 1	413706	-53383	7.7	334277	-14770	22.6
Rialzato	1.32	SLV 2	413592	-53383	7.7	334294	-14770	22.6
Rialzato	1.32	SLV 3	413885	-52037	8	334267	17067	19.6
Rialzato	1.32	SLV 4	413772	-52037	8	334283	17067	19.6
Rialzato	1.32	SLV 5	414031	-18056	22.9	334229	-52718	6.3
Rialzato	1.32	SLV 6	413916	-18056	22.9	334245	-52718	6.3
Rialzato	1.32	SLV 7	414629	-13569	30.6	334196	53407	6.3
Rialzato	1.32	SLV 8	414514	-13569	30.5	334212	53407	6.3
Rialzato	1.32	SLV 9	403739	13569	29.8	334178	-53407	6.3
Rialzato	1.32	SLV 10	403624	13569	29.7	334194	-53407	6.3
Rialzato	1.32	SLV 11	404337	18056	22.4	334144	52718	6.3
Rialzato	1.32	SLV 12	404222	18056	22.4	334160	52718	6.3
Rialzato	1.32	SLV 13	404482	52037	7.8	334106	-17067	19.6
Rialzato	1.32	SLV 14	404368	52037	7.8	334122	-17067	19.6
Rialzato	1.32	SLV 15	404661	53383	7.6	334096	14770	22.6
Rialzato	1.32	SLV 16	404548	53383	7.6	334112	14770	22.6
Primo	5.08	SLV 1	326137	-17084	19.1	239870	-4592	52.2
Primo	5.08	SLV 2	326137	-17084	19.1	231881	-4592	50.5
Primo	5.08	SLV 3	326137	-16522	19.7	203328	5208	39
Primo	5.08	SLV 4	326137	-16522	19.7	228224	5208	43.8
Primo	5.08	SLV 5	326137	-5978	54.6	219616	-16241	13.5
Primo	5.08	SLV 6	326137	-5978	54.6	230359	-16241	14.2
Primo	5.08	SLV 7	322212	-4104	78.5	203745	16426	12.4
Primo	5.08	SLV 8	322212	-4104	78.5	218355	16426	13.3
Primo	5.08	SLV 9	314134	4104	76.6	239702	-16426	14.6
Primo	5.08	SLV 10	314134	4104	76.6	245275	-16426	14.9
Primo	5.08	SLV 11	310481	5978	51.9	256301	16241	15.8
Primo	5.08	SLV 12	322212	5978	53.9	260480	16241	16
Primo	5.08	SLV 13	305722	16522	18.5	264966	-5208	50.9
Primo	5.08	SLV 14	296684	16522	18	259582	-5208	49.8
Primo	5.08	SLV 15	296956	17084	17.4	265457	4592	57.8
Primo	5.08	SLV 16	301171	17084	17.6	265461	4592	57.8

1.2 Verifiche travate C.A.

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

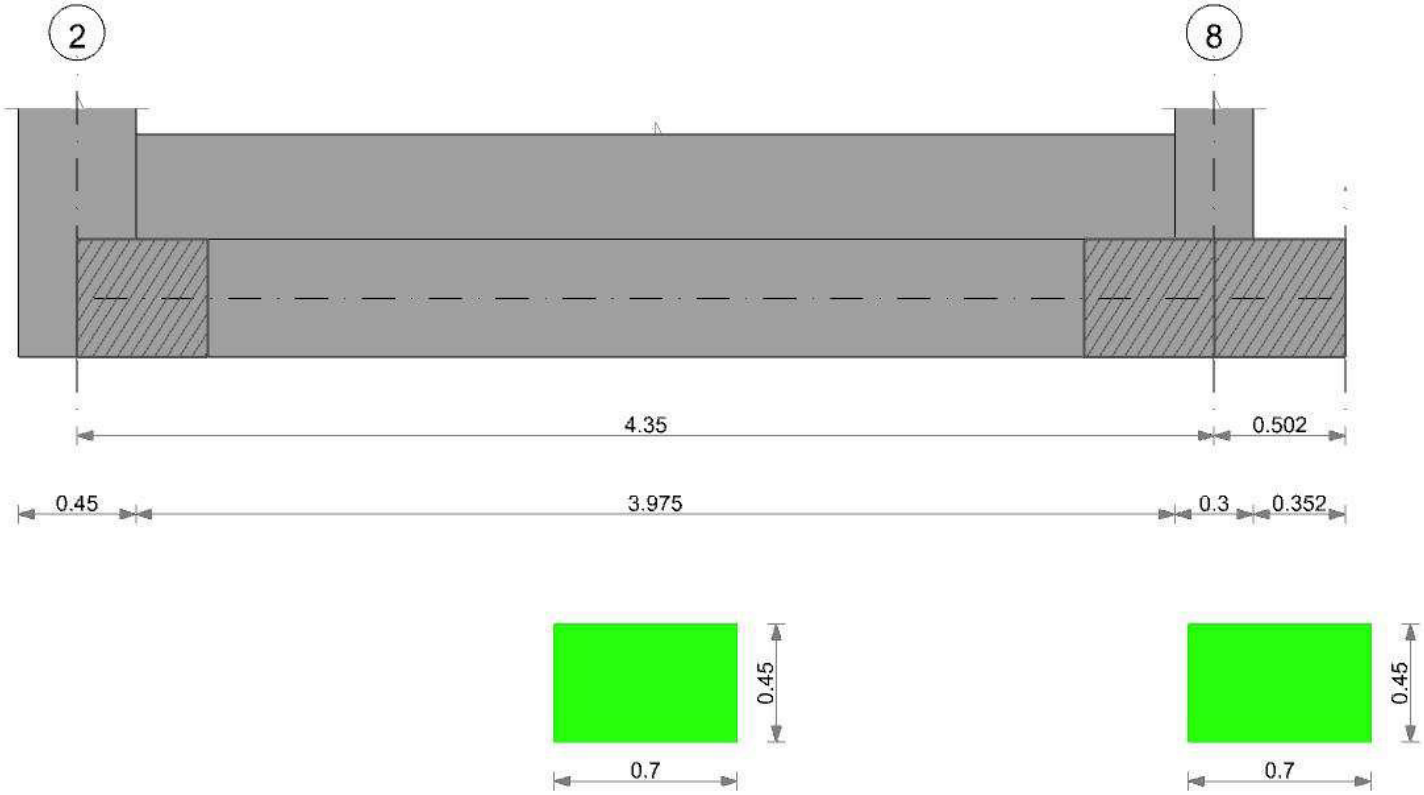
N°: *indice progressivo della sezione.*
Descrizione: *descrizione della sezione.*
Tipo: *tipo di sezione.*
Base: *base della sezione. [m]*
Altezza: *altezza della sezione. [m]*
Copriferro sup.: *distanza del bordo della staffa dalla superficie superiore del getto. [m]*
Copriferro inf.: *distanza del 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]*
d: *altezza utile. [m]*
Af: *area di armatura inferiore per unità di lunghezza. [m]*
M: *momento flettente. [daN*m/m]*
Comb: *combinazione.*
x/d: *rapporto tra posizione asse neutro e altezza utile.*
Mult: *momento ultimo. [daN*m/m]*
V: *sforzo di taglio. [daN/m]*
Vult: *sforzo di taglio ultimo. [daN/m]*
Verifica: *stato di verifica.*
Af: *area di armatura. [m²]*
Rara: *famiglia di combinazione di verifica.*
σ c: *tensione di compressione nel calcestruzzo. [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.*
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.*
Size X: *misura dell'impronta al suolo lungo X. [m]*
Size Y: *misura dell'impronta al suolo lungo Y. [m]*
Comb.: *combinazione.*
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).*
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]*
M+des: *momento flettente di progetto che tende le fibre inferiori. [daN*m]*
M+ult: *momento ultimo per trazione delle fibre inferiori. [daN*m]*
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]*
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.*

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

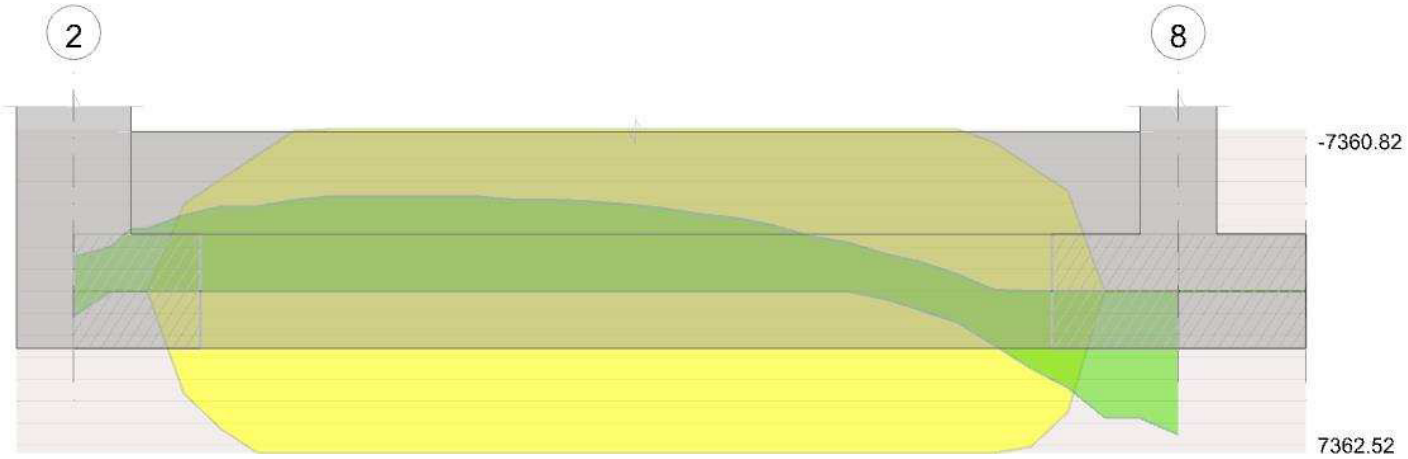
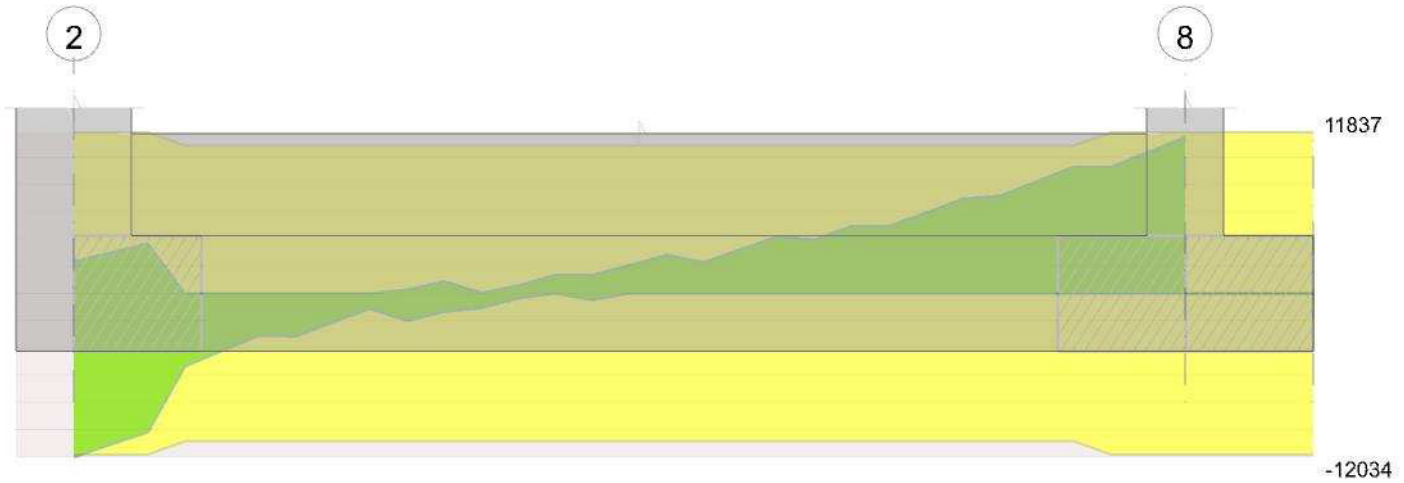


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 2 - 8, sezione R 70x45, aste 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1915	SLV 8	0.086	2729	4943	SLV 8	15877	Si
0.23	0.41	0.0002	1815	SLV 8	0.086	2729	4684	SLV 8	15877	Si
2.18	0.41	0.0002	1334	SLV 8	0.086	2729	3445	SLU 82	15877	Si
4.2	0.41	0.0002	1539	SLU 82	0.018	2807	3972	SLU 82	15877	Si
4.35	0.41	0.0002	1541	SLU 82	0.018	2807	3977	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	0.00000176	1322	SLE RA 19	38249	1494000	474289	36000000	1140	SLE QP 2	32992	1120500	Si
0.23	0.41	0.00000176	1256	SLE RA 19	36330	1494000	450492	36000000	1082	SLE QP 2	31306	1120500	Si
2.18	0.41	0.00000176	965	SLE RA 19	27928	1494000	346303	36000000	827	SLE QP 2	23930	1120500	Si
4.2	0.41	0.00000176	1114	SLE RA 19	32224	1494000	399582	36000000	958	SLE QP 2	27712	1120500	Si
4.35	0.41	0.00000176	1115	SLE RA 19	32269	1494000	400136	36000000	959	SLE QP 2	27753	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	29	20	159	SLV 8	0.36	1618	1.653	11.4	7.75	27.29	SLV 8	0.36	1618	1.653	Si
0.23	28	19	159	SLV 8	0.36	1618	1.653	10.82	7.33	27.29	SLV 8	0.36	1618	1.653	Si
2.18	21	13	159	SLV 8	0.36	1618	1.653	8.27	5.07	27.29	SLV 8	0.36	1618	1.653	Si
4.2	25	13	159	SLV 7	0.36	1618	1.653	9.58	5.19	27.29	SLV 7	0.36	1618	1.653	Si
4.35	25	13	159	SLV 7	0.36	1618	1.653	9.59	5.18	27.29	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
4.58	1.3	SLU 43	ST	LT	422	-63	-32761	1	0	19	0	0	1.1	9965	426	23.39	Si
4.58	1.3	SLV 9	SIS	LT	544	-4472	-17468	2	-14	19	0	0	1.1	5313	4505	1.18	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
24,25,26,27,28,29,30,31,32,33,34	4.58	1.3	SLU 82	ST	BT	2.3	215842	41696	5.18	Si
24,25,26,27,28,29,30,31,32,33,34	4.58	1.3	SLV 8	SIS	BT	2.3	183887	38512	4.77	Si
24,25,26,27,28,29,30,31,32,33,34	4.58	1.3	SLD 8	SIS	BT	2.3	200308	32607	6.14	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
0	-10	-41696	-3454.83	-843.81	0	0	-0.02	-0.08	1.13	4.53	1496	2060	0	14430	
0	4377	-38512	-5704.28	-2121.8	0	6	-0.06	-0.15	1	4.46	1496	2060	0	14430	0.07
0	1895	-32607	-3738.4	-1230.85	0	3	-0.04	-0.11	1.07	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	0.23	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

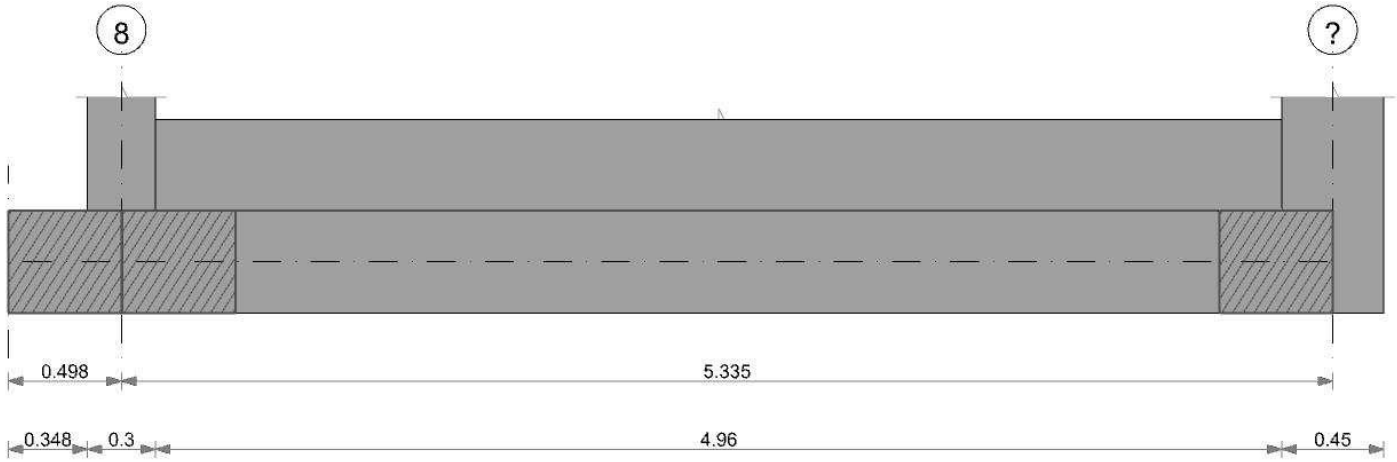
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	269	SLE RA 19	0.05	0	269	258	SLE RA 19	0.05	0	269	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	269	SLE RA 1	0.05	0	269	269	SLE RA 1	0.05	0	269	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	269	SLE RA 1	0.05	0	269	269	SLE RA 1	0.05	0	269	SLE RA 1	0.0033	0	SLE RA 1	Si

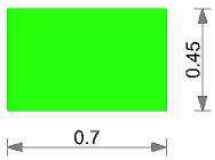
Verifiche geotecniche - Rotazioni assolute e differenziali

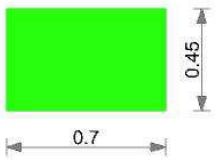
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 19	0.19	0	269	258	SLE RA 19	0.19	0	269	SLE RA 1	0.1	0	269	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	269	258	SLE RA 1	0.19	0	269	SLE RA 1	0.1	0	269	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	269	258	SLE RA 1	0.19	0	269	SLE RA 1	0.1	0	269	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 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

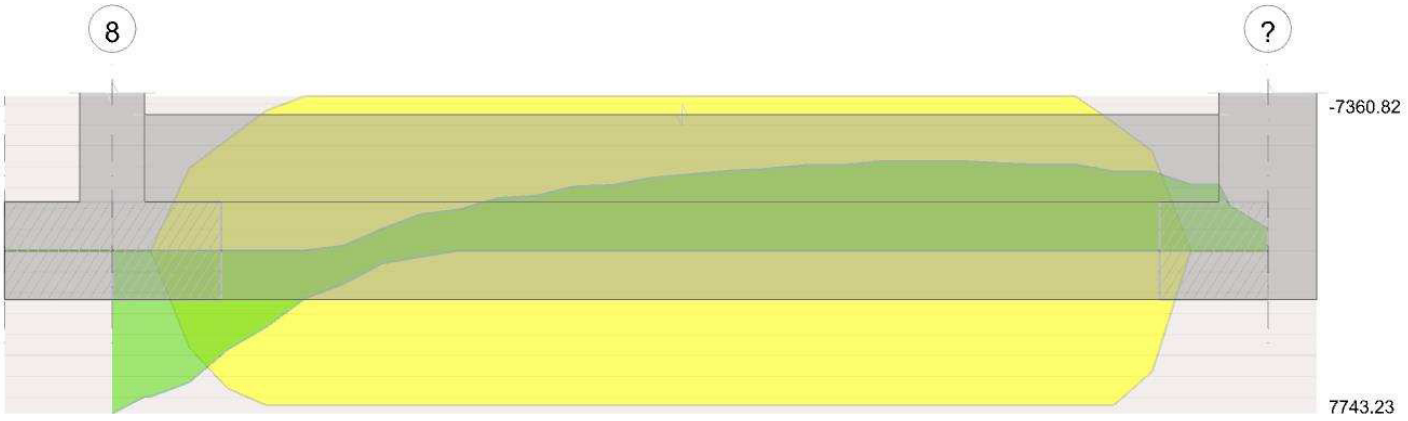
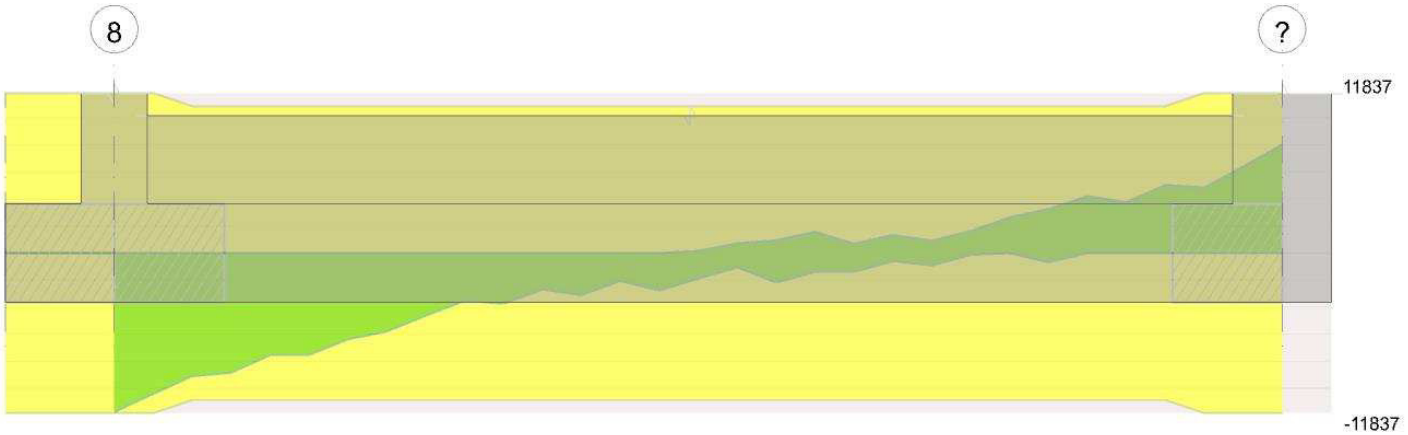


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 8 - ?, sezione R 70x45, aste 117, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 128, 129

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1541	SLU 82	0.017	2743	3977	SLU 82	15877	Si
0.15	0.41	0.0002	1541	SLU 82	0.017	2743	3977	SLU 82	15877	Si
2.67	0.41	0.0002	1223	SLV 11	0.085	2668	3155	SLV 11	15877	Si
5.11	0.41	0.0002	1906	SLV 11	0.085	2668	4919	SLV 11	15877	Si
5.34	0.41	0.0002	2025	SLV 11	0.085	2668	5227	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	0.00000172	1115	SLE RA 19	32286	1494000	400350	36000000	959	SLE QP 2	27768	1120500	Si
0.15	0.41	0.00000172	1115	SLE RA 19	32287	1494000	400358	36000000	959	SLE QP 2	27771	1120500	Si
2.67	0.41	0.00000172	868	SLE RA 19	25141	1494000	311748	36000000	748	SLE QP 2	21648	1120500	Si
5.11	0.41	0.00000172	1239	SLE RA 19	35872	1494000	444814	36000000	1086	SLE QP 2	31435	1120500	Si
5.34	0.41	0.00000172	1312	SLE RA 19	37990	1494000	471073	36000000	1152	SLE QP 2	33340	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	25	13	159	SLV 7	0.36	1618	1.653	9.59	5.18	26.68	SLV 7	0.36	1618	1.653	Si
0.15	25	13	159	SLV 7	0.36	1618	1.653	9.59	5.17	26.68	SLV 7	0.36	1618	1.653	Si
2.67	19	12	159	SLV 11	0.36	1618	1.653	7.48	4.75	26.68	SLV 11	0.36	1618	1.653	Si
5.11	28	21	159	SLV 11	0.36	1618	1.653	10.86	8.2	26.68	SLV 11	0.36	1618	1.653	Si
5.34	30	23	159	SLV 11	0.36	1618	1.653	11.52	8.74	26.68	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
5.56	1.3	SLU 18	ST	LT	392	-416	-37393	1	-1	19	0	0	1.1	11374	572	19.9	Si
5.56	1.3	SLV 10	SIS	LT	3362	-5708	-23280	8	-14	19	0	0	1.1	7081	6625	1.07	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
117,118,119,120,121,122,123,124,125,126,127,128,129	5.56	1.3	SLU 82	ST	BT	2.3	253262	49029	5.17	Si
117,118,119,120,121,122,123,124,125,126,127,128,129	5.56	1.3	SLV 11	SIS	BT	2.3	212722	45933	4.63	Si

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
117,118,119,120,121,122,123,124,125,126,127,128,129	5.56	1.3	SLD 11	SIS	BT	2.3	233300	38778	6.02	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	-482	-49029	-4826.88	932.92	0	-1	0.02	-0.1	1.1	5.52	1496	2060	0	14430	
0	4609	-45933	-7571.32	4313.55	0	6	0.09	-0.16	0.97	5.37	1496	2060	0	14430	0.07
0	1817	-38778	-5074.37	2383.33	0	3	0.06	-0.13	1.04	5.44	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	0.23	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	0.04	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

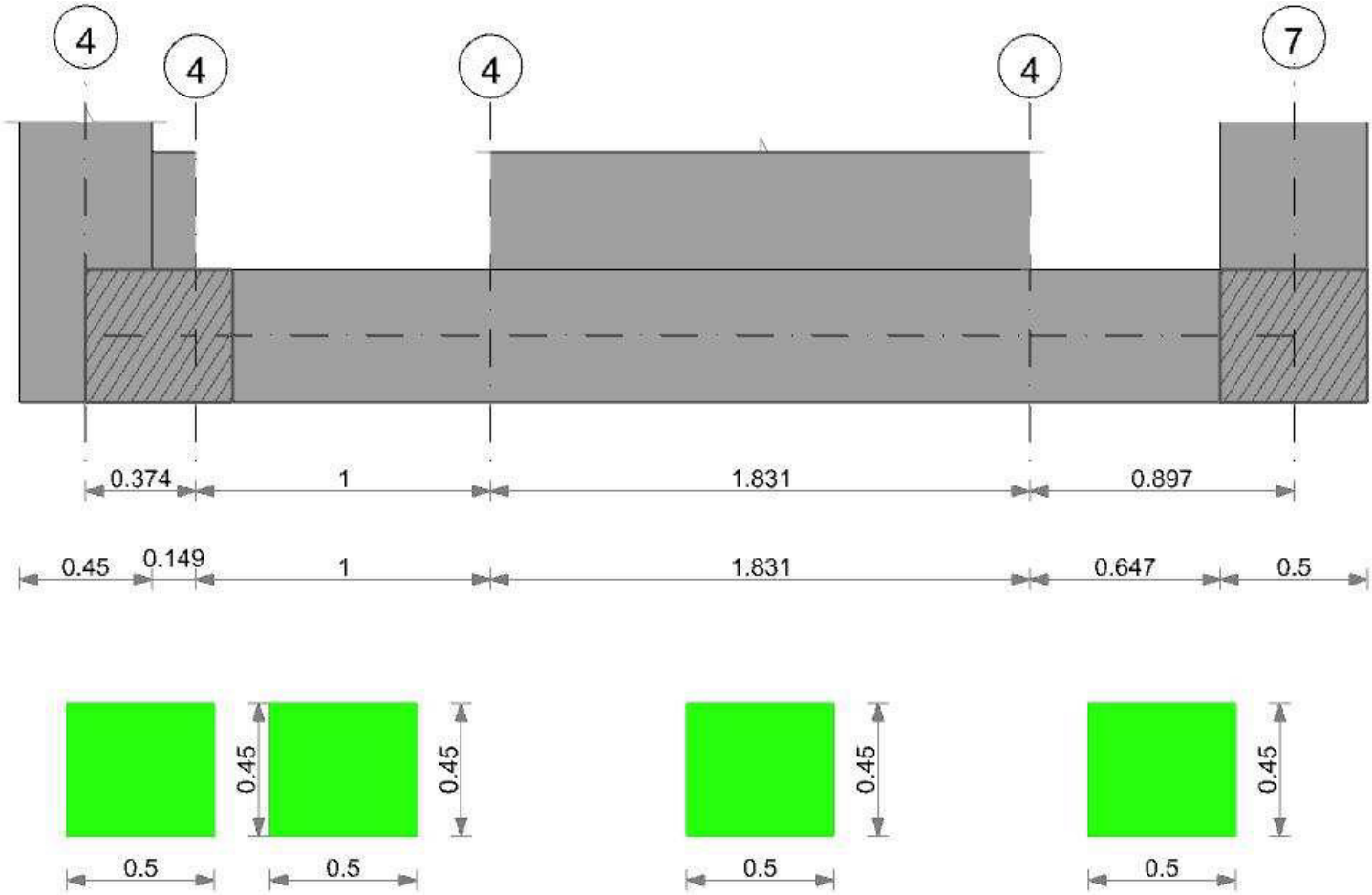
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	269	SLE RA 19	0.05	0	269	282	SLE RA 19	0.05	0	282	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	282	SLE RA 1	0.05	0	282	282	SLE RA 1	0.05	0	282	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	282	SLE RA 1	0.05	0	282	282	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 19	0.19	0	282	269	SLE RA 19	0.19	0	282	SLE RA 1	0.1	0	282	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	282	269	SLE RA 1	0.19	0	282	SLE RA 1	0.1	0	282	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	282	269	SLE RA 1	0.19	0	282	SLE RA 1	0.1	0	282	SLE RA 1	Si

CORDOLO 3

Geometria



Caratteristiche dei materiali

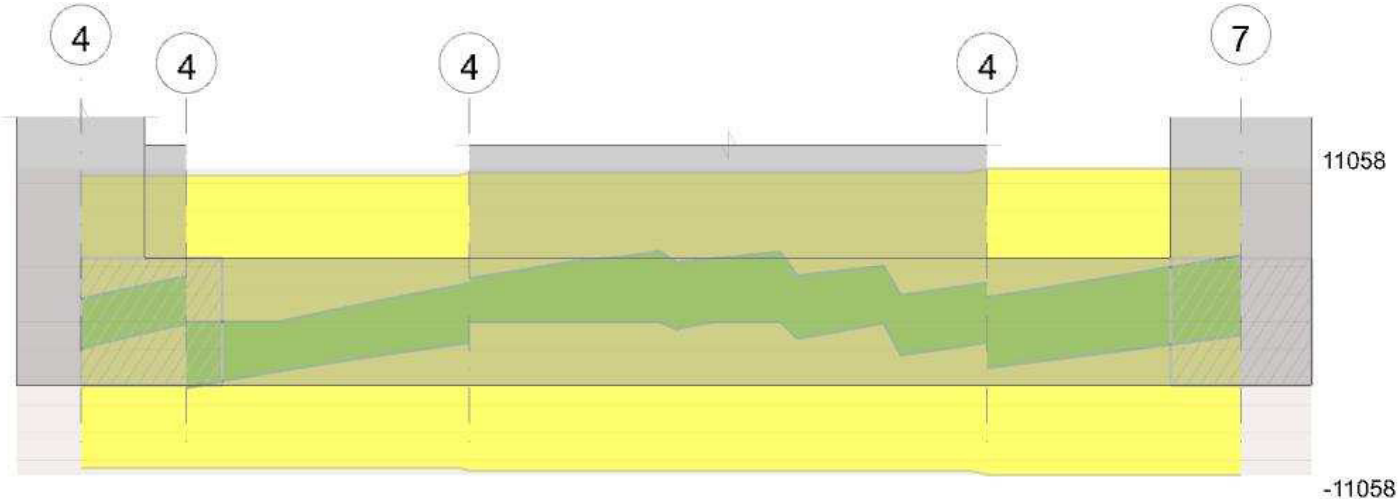
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

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

Campata 2 tra i fili 4 - 4, sezione R 50x45, asta 36

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							-2643.6	SLU 81	-3380.64	-7755.45	0.113	2.29	Si
0.5	0.000509	0.052	0.000509	0.052							-4200.1	SLU 81	-4398.44	-7755.45	0.113	1.76	Si
0.87	0.000509	0.052	0.000509	0.052							-4418.54	SLU 82	-4433.27	-7755.45	0.113	1.75	Si
1	0.000509	0.052	0.000509	0.052							-4319.29	SLU 82	-4430.5	-7755.45	0.113	1.75	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							-2685.12	SLV 5	-2883.3	-7266.79	0.197	2.52	Si
0.5	0.000509	0.052	0.000509	0.052							-3094.57	SLV 1	-3202.54	-7266.79	0.197	2.27	Si
0.87	0.000509	0.052	0.000509	0.052							-3506.4	SLV 8	-3725.15	-7266.79	0.197	1.95	Si
1	0.000509	0.052	0.000509	0.052							-3725.15	SLV 12	-3725.15	-7266.79	0.197	1.95	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	0.0000075	0.000509	0	-4738	SLU 82	-4738	-7764	-63178	-10574	-10574	1	2.23	Si
0.5	0.0000075	0.000509	0	-1621	SLU 82	-1621	-7764	-63178	-10574	-10574	1	6.52	Si
1	0.0000077	0.000509	0	1116	SLU 81	1116	7764	63178	10775	10775	1	9.65	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	0.0000075	0.000509	0	-4776	SLV 8	-4776	-7764	-63178	-10574	-10574	1	2.21	Si
0.5	0.0000075	0.000509	0	756	SLV 5	756	7764	63178	10574	10574	1	13.99	Si
0.5	0.0000075	0.000509	0	-2991	SLV 12	-2991	-7764	-63178	-10574	-10574	1	3.53	Si
1	0.0000077	0.000509	0	2777	SLV 5	2777	7764	63178	10775	10775	1	3.88	Si
1	0.0000077	0.000509	0	-1509	SLV 12	-1509	-7764	-63178	-10775	-10775	1	7.14	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	-1919.84	18	-2464.08	130333	1494000	1955002	36000000	-1686.88	2	-2179.32	115272	1120500			Si

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.	
0.5	-3073.1	18	-3223.5	170502	1494000	2557527	36000000	-2737.28	2	-2878.08	152232	1120500			Si
1	-3175.61	19	-3251.29	171972	1494000	2579577	36000000	-2849.25	2	-2908.67	153849	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	-3136	-1641	-10574	SLV 8	0.36	1618	1.653	-1686.88	-998.23	-7266.79	SLV 5	0.36	1618	1.653	Si
0.5	-1118	-1874	-10574	SLV 12	0.36	1618	1.653	-2498.19	-437.26	-7266.79	SLV 5	0.36	1618	1.653	Si
1	634	2143	10775	SLV 5	0.36	1618	1.653	-2849.25	-875.9	-7266.79	SLV 12	0.36	1618	1.653	Si

Campata 4 tra i fili 4 - 7, 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	0.000509	0.052	0.000509	0.052							-1413.69	SLU 81	-1504.67	-7755.45	0.113	5.15	Si
0.27	0.000509	0.052	0.000509	0.052							-1494.79	SLU 81	-1505.52	-7755.45	0.113	5.15	Si
0.45	0.000509	0.052	0.000509	0.052							-1365.58	SLU 82	-1494.68	-7755.45	0.113	5.19	Si
0.65	0.000509	0.052	0.000508	0.052							-1052.17	SLU 82	-1342.69	-7755.42	0.113	5.78	Si
0.9	0.000509	0.052	0.000314	0.052							-498.95	SLU 44	-498.95	-7738.37	0.109	15.51	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	303.55	SLV 12	303.55	7266.79	0.197	23.94	-1955.61	SLV 5	-1955.61	-7266.79	0.197	3.72	Si
0.12	0.000509	0.052	0.000509	0.052	-74.03	SLV 12	303.55	7266.79	0.197	23.94	-1721.12	SLV 5	-1955.61	-7266.79	0.197	3.72	Si
0.45	0.000509	0.052	0.000509	0.052							-1195.83	SLV 4	-1462.17	-7266.79	0.197	4.97	Si
0.65	0.000509	0.052	0.000508	0.052							-1351.12	SLV 8	-1351.12	-7266.86	0.197	5.38	Si
0.9	0.000509	0.052	0.000314	0.052	984.79	SLV 5	371.21	4567.91	0.159	12.31	-1633.56	SLV 12	-1496.97	-7269.88	0.2	4.86	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	0.0000079	0.000509	0	-1154	SLU 44	-1154	-7764	-63178	-11058	-11058	1	9.58	Si
0.45	0.0000079	0.000509	0	1148	SLU 81	1148	7764	63178	11058	11058	1	9.63	Si
0.65	0.0000079	0.000509	0	2077	SLU 81	2077	7764	63178	11058	11058	1	5.32	Si
0.9	0.0000079	0.000509	0	3266	SLU 81	3266	7764	63178	11058	11058	1	3.39	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	0.0000079	0.000509	0	1769	SLV 5	1769	7764	63178	11058	11058	1	6.25	Si
0	0.0000079	0.000509	0	-3318	SLV 12	-3318	-7764	-63178	-11058	-11058	1	3.33	Si
0.45	0.0000079	0.000509	0	3267	SLV 5	3267	7764	63178	11058	11058	1	3.38	Si
0.45	0.0000079	0.000509	0	-2158	SLV 12	-2158	-7764	-63178	-11058	-11058	1	5.12	Si
0.65	0.0000079	0.000509	0	3940	SLV 5	3940	7764	63178	11058	11058	1	2.81	Si
0.65	0.0000079	0.000509	0	-1639	SLV 12	-1639	-7764	-63178	-11058	-11058	1	6.75	Si
0.9	0.0000079	0.000508	0	4801	SLV 5	4801	7764	63178	11058	11058	1	2.3	Si
0.9	0.0000079	0.000509	0	-976	SLV 12	-976	-7764	-63178	-11058	-11058	1	11.33	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	-1001.47	18	-1079.76	57112	1494000	856687	36000000	-826.03	2	-917.44	48526	1120500			Si
0.45	-996.17	19	-1078.5	57046	1494000	855685	36000000	-876.09	2	-927.58	49063	1120500			Si
0.65	-780.46	19	-980.72	51877	1494000	778126	36000000	-706.71	2	-864.5	45730	1120500			Si
0.9	-352.51	2	-352.51	19221	1494000	282919	36000000	-332.68	1	-332.68	18140	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	-775	-2544	-11058	SLV 12	0.36	1618	1.653	-826.03	-1129.58	-7266.79	SLV 5	0.36	1618	1.653	Si
0.45	554	2712	11058	SLV 5	0.36	1618	1.653	-728.71	-601.04	-7266.79	SLV 8	0.36	1618	1.653	Si
0.65	1151	2790	11058	SLV 5	0.36	1618	1.653	-706.71	-644.41	-7266.86	SLV 8	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 4 - 4, sezione R 50x45, asta 35

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1006	SLU 81	0.032	5989	3498	SLU 81	15877	Si
0.19	0.41	0.0004	941	SLU 81	0.032	5989	3274	SLU 81	15877	Si
0.23	0.41	0.0004	928	SLU 81	0.032	5989	3229	SLU 81	15877	Si
0.37	0.41	0.0004	880	SLU 81	0.032	5989	3060	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	0.00000377	730	SLE RA 18	20566	1494000	255021	36000000	636	SLE QP 2	17914	1120500	Si
0.19	0.41	0.00000377	683	SLE RA 18	19236	1494000	238530	36000000	594	SLE QP 2	16730	1120500	Si
0.23	0.41	0.00000377	673	SLE RA 18	18973	1494000	235265	36000000	585	SLE QP 2	16495	1120500	Si
0.37	0.41	0.00000377	638	SLE RA 18	17968	1494000	222799	36000000	554	SLE QP 2	15600	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	22	10	159	SLV 2	0.36	1618	1.653	6.36	2.78	57.62	SLV 2	0.36	1618	1.653	Si
0.19	21	9	159	SLV 2	0.36	1618	1.653	5.94	2.65	57.62	SLV 2	0.36	1618	1.653	Si
0.23	20	9	159	SLV 2	0.36	1618	1.653	5.85	2.62	57.62	SLV 2	0.36	1618	1.653	Si
0.37	19	9	159	SLV 2	0.36	1618	1.653	5.54	2.53	57.62	SLV 2	0.36	1618	1.653	Si

Campata 2 tra i fili 4 - 4, sezione R 50x45, asta 36

Campata 3 tra i fili 4 - 4, sezione R 50x45, aste 37, 38, 39, 40, 41

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	636	SLU 81	0.032	6101	2213	SLU 81	15877	Si
0.92	0.41	0.0004	561	SLU 81	0.032	6101	1952	SLU 81	15877	Si
1.83	0.41	0.0004	556	SLU 81	0.033	6259	1934	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	0.00000384	460	SLE RA 18	12936	1494000	160411	36000000	395	SLE QP 2	11113	1120500	Si
0.92	0.41	0.00000384	405	SLE RA 18	11387	1494000	141203	36000000	346	SLE QP 2	9736	1120500	Si
1.83	0.41	0.00000394	400	SLE RA 18	11256	1494000	139573	36000000	342	SLE QP 2	9601	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	7	159	SLV 2	0.36	1618	1.653	3.95	2.02	58.69	SLV 2	0.36	1618	1.653	Si
0.92	12	5	159	SLV 1	0.36	1618	1.653	3.46	1.52	58.69	SLV 1	0.36	1618	1.653	Si
1.83	12	4	159	SLV 1	0.36	1618	1.653	3.42	1.07	60.19	SLV 1	0.36	1618	1.653	Si

Campata 4 tra i fili 4 - 7, sezione R 50x45, asta 42

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
4.58	1.1	SLU 31	ST	LT	-263	70	-23146	-1	0	19	0	0	1.1	7040	272	25.9	Si
4.58	1.1	SLV 12	SIS	LT	949	3683	-17717	3	12	19	0	0	1.1	5389	3804	1.42	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
35,36,37,38,39,40,41,42	4.58	1.1	SLU 82	ST	BT	2.3	206088	29164	7.07	Si
35,36,37,38,39,40,41,42	4.58	1.1	SLV 5	SIS	LT	2.3	163773	21897	7.48	Si
35,36,37,38,39,40,41,42	4.58	1.1	SLD 1	SIS	BT	2.3	197597	21828	9.05	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	37	-29164	-48.72	-3499.18	0	0	-0.12	0	1.1	4.34	1496	2060	0	14430	
0	-3708	-21897	1716.24	-3330.67	0	-10	-0.15	0.08	0.94	4.27	1496	2060	37	0	0.07
0	-519	-21828	234.32	-3730.59	0	-1	-0.17	0.01	1.08	4.24	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
43	56	66	1.17	1.17	0.91	1.16	1.27	1	0.71	0.71	0.59	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
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

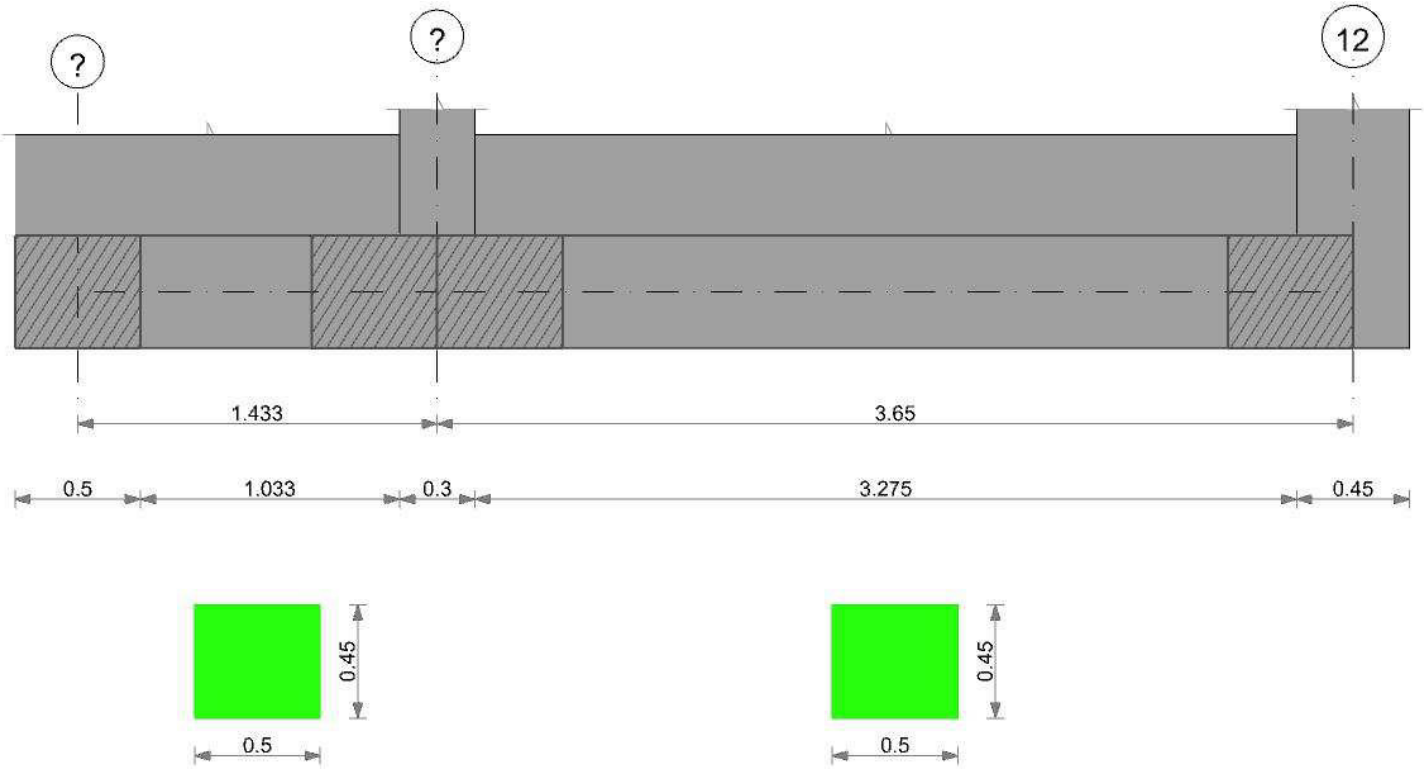
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	168	SLE RA 18	0.05	0	168	175	SLE RA 18	0.05	0	168	SLE RA 18	0.0033	0	SLE RA 19	Si
D	0.05	0	175	SLE RA 1	0.05	0	175	175	SLE RA 1	0.05	0	174	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	175	SLE RA 1	0.05	0	175	175	SLE RA 1	0.05	0	174	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 18	0.19	0	169	168	SLE RA 19	0.19	0	168	SLE RA 19	0.1	0	169	SLE RA 19	Si
D	0.19	0	SLE RA 1	0.19	0	175	174	SLE RA 1	0.19	0	175	SLE RA 1	0.1	0	174	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	175	174	SLE RA 1	0.19	0	175	SLE RA 1	0.1	0	174	SLE RA 1	Si

CORDOLO 4

Geometria



Caratteristiche dei materiali

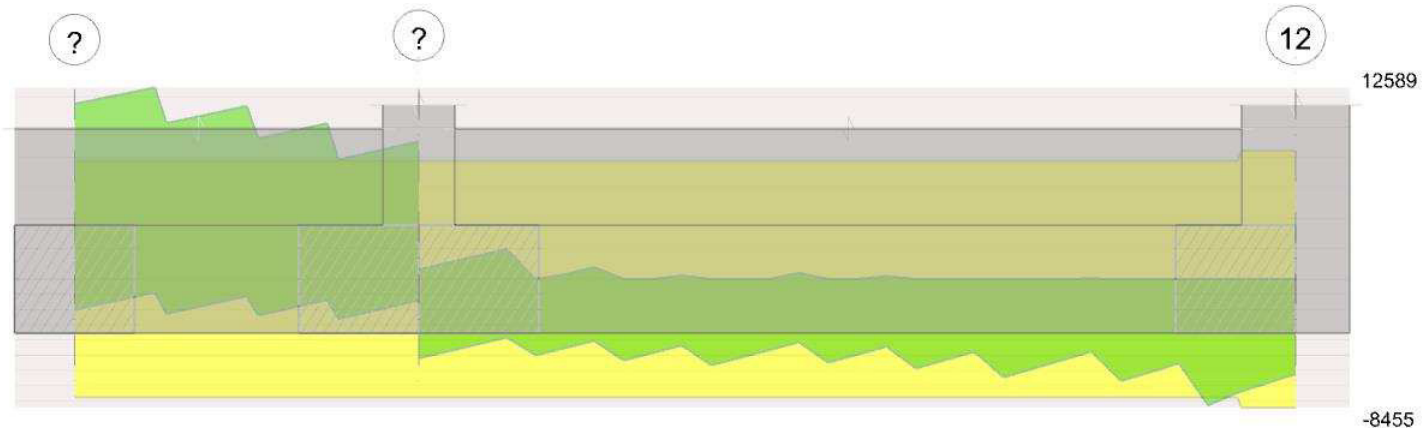
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

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

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili ? - ?, sezione R 50x45, aste 142, 143, 144, 145

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	626	SLU 81	0.018	2862	2178	SLU 81	15877	Si
0.25	0.41	0.0002	644	SLU 81	0.018	2862	2241	SLU 81	15877	Si
0.72	0.41	0.0002	677	SLU 81	0.018	2862	2355	SLU 81	15877	Si
1.28	0.41	0.0002	713	SLU 81	0.018	2862	2479	SLU 81	15877	Si
1.43	0.41	0.0002	722	SLU 81	0.018	2862	2511	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	0.00000179	451	SLE RA 18	13033	1494000	161613	36000000	384	SLE QP 2	11100	1120500	Si
0.25	0.41	0.00000179	464	SLE RA 18	13420	1494000	166408	36000000	396	SLE QP 2	11444	1120500	Si
0.72	0.41	0.00000179	488	SLE RA 18	14116	1494000	175034	36000000	417	SLE QP 2	12072	1120500	Si
1.28	0.41	0.00000179	515	SLE RA 18	14883	1494000	184550	36000000	442	SLE QP 2	12779	1120500	Si
1.43	0.41	0.00000179	521	SLE RA 18	15080	1494000	186988	36000000	448	SLE QP 2	12962	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	2	159	SLV 1	0.36	1618	1.653	3.84	0.72	27.82	SLV 1	0.36	1618	1.653	Si
0.25	14	2	159	SLV 1	0.36	1618	1.653	3.96	0.58	27.82	SLV 1	0.36	1618	1.653	Si
0.72	15	0	15	SLV 16	0.36	1618	1.653	4.17	0.28	27.82	SLV 1	0.36	1618	1.653	Si
1.28	15	0	60	SLV 16	0.36	1618	1.653	4.42	0.13	27.82	SLV 16	0.36	1618	1.653	Si
1.43	16	1	102	SLV 16	0.36	1618	1.653	4.48	0.25	27.82	SLV 15	0.36	1618	1.653	Si

Campata 2 tra i fili ? - 12, sezione R 50x45, aste 146, 147, 148, 149, 150, 151, 152, 153, 154

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	722	SLU 81	0.018	2862	2511	SLU 81	15877	Si
0.15	0.41	0.0002	731	SLU 81	0.017	2693	2543	SLU 81	15877	Si
1.82	0.41	0.0002	830	SLU 82	0.017	2693	2887	SLU 82	15877	Si
3.42	0.41	0.0002	929	SLU 82	0.017	2693	3232	SLU 82	15877	Si
3.65	0.41	0.0002	939	SLV 16	0.085	2620	3312	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	0.00000179	521	SLE RA 18	15080	1494000	186988	36000000	448	SLE QP 2	12962	1120500	Si
0.15	0.41	0.00000169	528	SLE RA 18	15297	1494000	189680	36000000	454	SLE QP 2	13163	1120500	Si
1.82	0.41	0.00000169	602	SLE RA 19	17447	1494000	216345	36000000	525	SLE QP 2	15199	1120500	Si
3.42	0.41	0.00000169	677	SLE RA 19	19596	1494000	242990	36000000	596	SLE QP 2	17253	1120500	Si
3.65	0.41	0.00000169	694	SLE RA 19	20096	1494000	249189	36000000	612	SLE QP 2	17719	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	1	102	SLV 16	0.36	1618	1.653	4.48	0.25	27.82	SLV 15	0.36	1618	1.653	Si
0.15	16	1	140	SLV 16	0.36	1618	1.653	4.54	0.36	26.2	SLV 15	0.36	1618	1.653	Si
1.82	18	6	159	SLV 15	0.36	1618	1.653	5.25	1.67	26.2	SLV 15	0.36	1618	1.653	Si
3.42	21	11	159	SLV 16	0.36	1618	1.653	5.96	3.05	26.2	SLV 16	0.36	1618	1.653	Si
3.65	21	11	159	SLV 16	0.36	1618	1.653	6.12	3.28	26.2	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
5.56	1.1	SLU 2	ST	LT	-575	148	-25692	-1	0	19	0	0	1.1	7815	594	13.15	Si

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPl	γR	Rd	Ed	Rd/Ed	Verifica
5.56	1.1	SLV 2	SIS	LT	-4181	-1754	-23730	-10	-4	19	0	0	1.1	7218	4534	1.59	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
142,143,144,145,146,147,148,149,150,151,152,153,154	5.56	1.1	SLU 82	ST	BT	2.3	251368	40743	6.17	Si
142,143,144,145,146,147,148,149,150,151,152,153,154	5.56	1.1	SLV 15	SIS	BT	2.3	218129	31472	6.93	Si
142,143,144,145,146,147,148,149,150,151,152,153,154	5.56	1.1	SLD 15	SIS	BT	2.3	235496	29304	8.04	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	137	-40743	-201.56	3973.44	0	0	0.1	0	1.09	5.36	1496	2060	0	14430	
0	1875	-31472	-978.44	10140.05	0	3	0.32	-0.03	1.04	4.91	1496	2060	0	14430	0.07
0	857	-29304	-493.44	6037.02	0	2	0.21	-0.02	1.07	5.15	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	0.04	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	0.01	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	0	0	0	0	0	0	0	1	1	1	0	0	0

Verifiche geotecniche - Cedimenti assoluti e differenziali

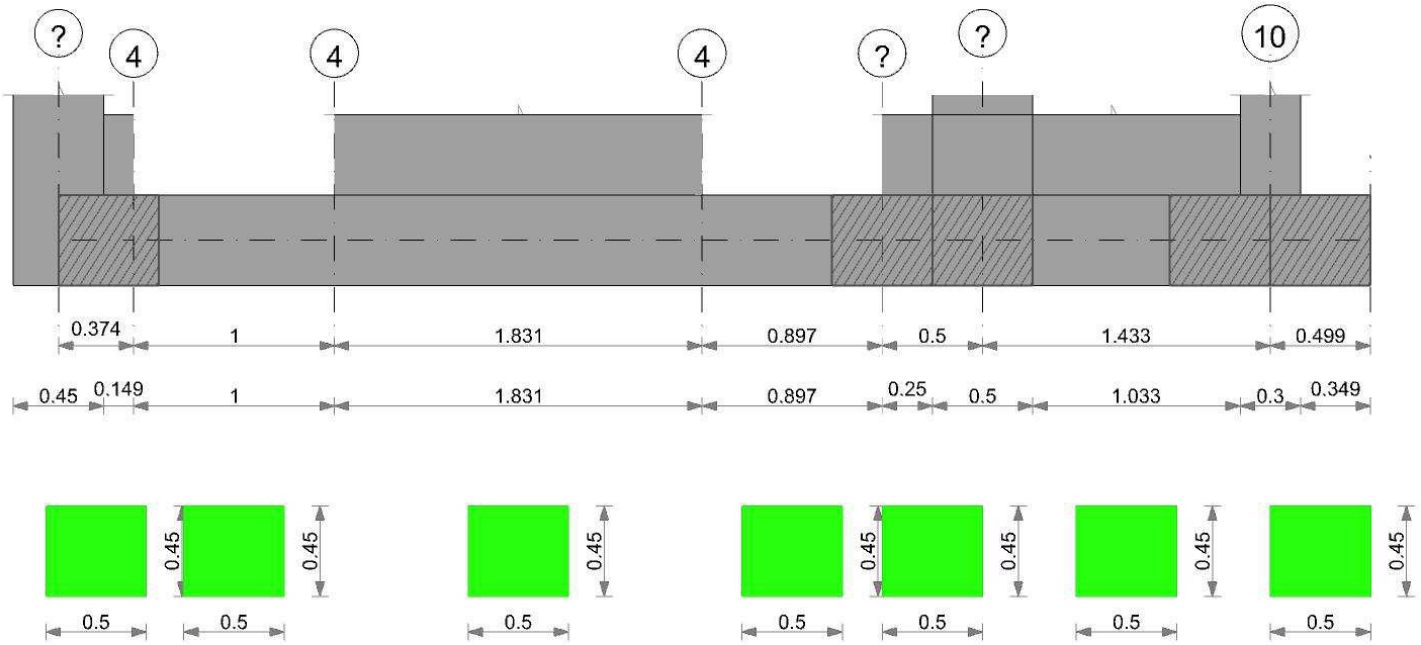
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	189	SLE RA 19	0.05	0	189	176	SLE RA 19	0.05	0	180	SLE RA 18	0.0033	0	SLE FR 6	Si
D	0.05	0	189	SLE RA 1	0.05	0	189	189	SLE RA 1	0.05	0	180	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	189	SLE RA 1	0.05	0	189	189	SLE RA 1	0.05	0	180	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 19	0.19	0	180	176	SLE RA 18	0.19	0	180	SLE RA 18	0.1	0	180	SLE FR 6	Si
D	0.19	0	SLE RA 1	0.19	0	189	180	SLE RA 1	0.19	0	189	SLE RA 1	0.1	0	180	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	189	180	SLE RA 1	0.19	0	189	SLE RA 1	0.1	0	180	SLE RA 1	Si

CORDOLO 5

Geometria



Caratteristiche dei materiali

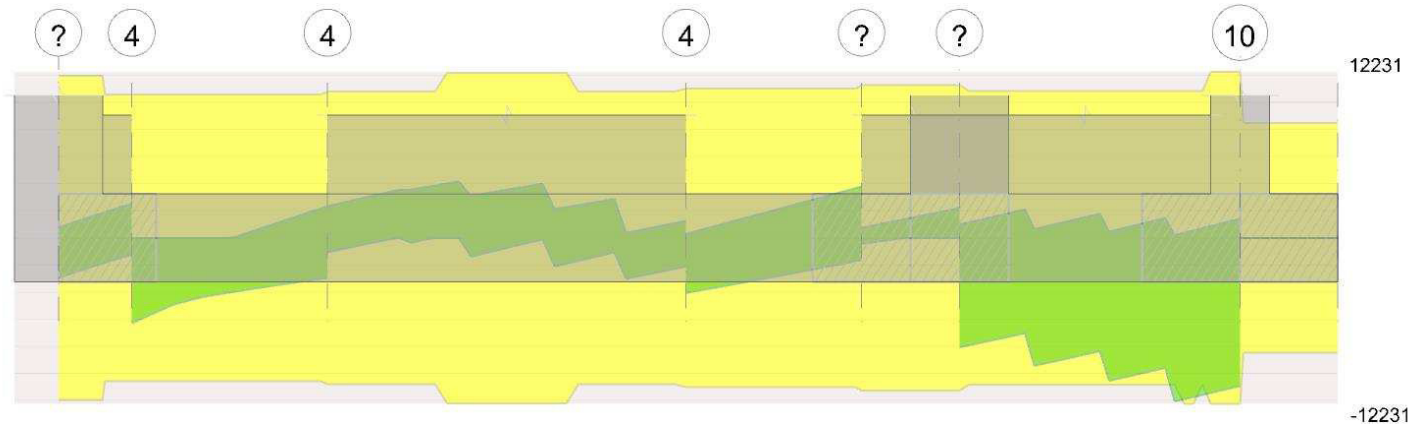
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 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 4 - 4, sezione R 50x45, asta 44

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	0							-1858.32	SLU 82	-2875.84	-7645.09	0.089	2.66	Si
0.5	0.000509	0.052	0.000509	0.052							-4199.12	SLU 81	-4679.19	-7755.45	0.113	1.66	Si
1	0.000509	0.052	0.000509	0.052							-5107.16	SLU 81	-5107.16	-7755.45	0.113	1.52	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	0							-2348.61	SLV 4	-2766.41	-7274.26	0.206	2.63	Si
0.5	0.000509	0.052	0.000509	0.052							-3096.06	SLV 1	-3333.25	-7266.79	0.197	2.18	Si
1	0.000509	0.052	0.000509	0.052							-4177.82	SLV 9	-4177.82	-7266.79	0.197	1.74	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	0.0000075	0.000509	0	-6303	SLU 81	-6303	-7764	-63178	-10574	-10574	1	1.68	Si
0.5	0.0000075	0.000509	0	-3191	SLU 81	-3191	-7764	-63178	-10574	-10574	1	3.31	Si
1	0.0000077	0.000509	0	-498	SLU 81	-498	-7764	-63178	-10775	-10775	1	21.62	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	0.0000075	0.000509	0	-5755	SLV 9	-5755	-7764	-63178	-10574	-10574	1	1.84	Si
0.5	0.0000075	0.000509	0	-4024	SLV 13	-4024	-7764	-63178	-10574	-10574	1	2.63	Si
1	0.0000077	0.000509	0	2309	SLV 4	2309	7764	63178	10775	10775	1	4.67	Si
1	0.0000077	0.000509	0	-2950	SLV 13	-2950	-7764	-63178	-10775	-10775	1	3.65	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	-1367.42	19	-2108.99	121083	1494000	1726848	36000000	-1215.37	2	-1876.34	107727	1120500			Si
0.5	-3072.42	18	-3421	180949	1494000	2714228	36000000	-2736.73	2	-3046.85	161158	1120500			Si
1	-3729.84	18	-3729.84	197284	1494000	2959263	36000000	-3322.96	2	-3322.96	175763	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	-4076	-1679	-10574	SLV 9	0.36	1618	1.653	-1215.37	1133.24	0	SLV 13	0.26	579	1.085	Si
0.5	-2062	-1962	-10574	SLV 13	0.36	1618	1.653	-2306.1	-664.12	-7266.79	SLV 4	0.36	1618	1.653	Si
1	-320	-2629	-10775	SLV 13	0.36	1618	1.653	-3322.96	-854.86	-7266.79	SLV 9	0.36	1618	1.653	Si

Campata 4 tra i fili 4 - ?, sezione R 50x45, asta 50

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							-447.18	SLU 82	-914.58	-7755.45	0.113	8.48	Si
0.45	0.000509	0.052	0.000509	0.052							-1276.27	SLU 82	-1305.1	-7755.45	0.113	5.94	Si
0.9	0.000509	0.052	0.000509	0.052							-961.86	SLU 81	-1226.48	-7755.45	0.113	6.32	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	1209.01	SLV 13	1209.01	7266.79	0.197	6.01	-1691.52	SLV 4	-1691.52	-7266.79	0.197	4.3	Si
0.45	0.000509	0.052	0.000509	0.052	-524.91	SLV 13	96.5	7266.79	0.197	75.3	-1113.07	SLV 4	-1448.8	-7266.79	0.197	5.02	Si
0.9	0.000509	0.052	0.000509	0.052	339.72	SLV 4	339.72	7266.79	0.197	21.39	-1654.62	SLV 13	-1654.62	-7266.79	0.197	4.39	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	0.0000078	0.000509	0	-2810	SLU 81	-2810	-7764	-63178	-10998	-10998	1	3.91	Si
0.45	0.0000078	0.000509	0	-573	SLU 64	-573	-7764	-63178	-10998	-10998	1	19.2	Si
0.9	0.000008	0.000509	0	1810	SLU 82	1810	7764	63178	11266	11266	1	6.22	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	0.0000078	0.000509	0	281	SLV 4	281	7764	63178	10998	10998	1	39.17	Si
0	0.0000078	0.000509	0	-4055	SLV 13	-4055	-7764	-63178	-10998	-10998	1	2.71	Si
0.45	0.0000078	0.000509	0	2031	SLV 4	2031	7764	63178	10998	10998	1	5.41	Si
0.45	0.0000078	0.000509	0	-2874	SLV 13	-2874	-7764	-63178	-10998	-10998	1	3.83	Si
0.9	0.000008	0.000509	0	3780	SLV 4	3780	7764	63178	11266	11266	1	2.98	Si
0.9	0.000008	0.000509	0	-1630	SLV 13	-1630	-7764	-63178	-11266	-11266	1	6.91	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	-318.87	19	-662.82	35059	1494000	525881	36000000	-241.26	2	-559.82	29611	1120500			Si
0.45	-931.07	19	-953.72	50445	1494000	756680	36000000	-818.99	2	-848.86	44899	1120500			Si
0.9	-708.82	18	-899.01	47552	1494000	713274	36000000	-657.45	2	-811.71	42934	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	-1887	-2168	-10998	SLV 13	0.36	1618	1.653	-241.26	-1450.27	-7266.79	SLV 4	0.36	1618	1.653	Si
0.45	-421	-2452	-10998	SLV 13	0.36	1618	1.653	-676.15	-772.65	-7266.79	SLV 4	0.36	1618	1.653	Si
0.9	1075	2705	11266	SLV 4	0.36	1618	1.653	-657.45	-997.17	-7266.79	SLV 13	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili ? - 4, sezione R 50x45, asta 43

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1005	SLU 81	0.032	5989	3496	SLU 81	15877	Si
0.19	0.41	0.0004	940	SLU 81	0.032	5989	3271	SLU 81	15877	Si
0.23	0.41	0.0004	928	SLU 81	0.032	5989	3227	SLU 81	15877	Si
0.37	0.41	0.0004	879	SLU 81	0.032	5989	3057	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	0.00000377	729	SLE RA 18	20552	1494000	254847	36000000	635	SLE QP 2	17905	1120500	Si
0.19	0.41	0.00000377	682	SLE RA 18	19222	1494000	238353	36000000	593	SLE QP 2	16720	1120500	Si
0.23	0.41	0.00000377	673	SLE RA 18	18958	1494000	235084	36000000	585	SLE QP 2	16485	1120500	Si
0.37	0.41	0.00000377	637	SLE RA 18	17952	1494000	222605	36000000	553	SLE QP 2	15589	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	22	10	159	SLV 1	0.36	1618	1.653	6.35	2.84	57.62	SLV 1	0.36	1618	1.653	Si
0.19	21	9	159	SLV 1	0.36	1618	1.653	5.93	2.72	57.62	SLV 1	0.36	1618	1.653	Si
0.23	20	9	159	SLV 1	0.36	1618	1.653	5.85	2.69	57.62	SLV 1	0.36	1618	1.653	Si
0.37	19	9	159	SLV 1	0.36	1618	1.653	5.53	2.6	57.62	SLV 1	0.36	1618	1.653	Si

Campata 2 tra i fili 4 - 4, sezione R 50x45, asta 44

Campata 3 tra i fili 4 - 4, sezione R 50x45, aste 45, 46, 47, 48, 49

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	630	SLU 81	0.032	6101	2191	SLU 81	15877	Si
0.92	0.41	0.0004	554	SLU 81	0.032	6101	1927	SLU 81	15877	Si
1.83	0.41	0.0004	548	SLU 81	0.033	6226	1907	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	0.00000384	455	SLE RA 18	12812	1494000	158864	36000000	391	SLE QP 2	11010	1120500	Si
0.92	0.41	0.00000384	400	SLE RA 18	11248	1494000	139481	36000000	342	SLE QP 2	9621	1120500	Si
1.83	0.41	0.00000392	395	SLE RA 18	11105	1494000	137703	36000000	337	SLE QP 2	9476	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	7	159	SLV 1	0.36	1618	1.653	3.91	2.1	58.69	SLV 1	0.36	1618	1.653	Si
0.92	12	6	159	SLV 1	0.36	1618	1.653	3.42	1.6	58.69	SLV 1	0.36	1618	1.653	Si
1.83	12	4	159	SLV 1	0.36	1618	1.653	3.37	1.15	59.87	SLV 1	0.36	1618	1.653	Si

Campata 4 tra i fili 4 - ?, sezione R 50x45, asta 50

Campata 5 tra i fili ? - ?, sezione R 50x45, asta 51

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	581	SLU 81	0.034	6376	2020	SLU 81	15877	Si
0.25	0.41	0.0004	593	SLU 81	0.034	6376	2061	SLU 81	15877	Si
0.25	0.41	0.0004	593	SLU 81	0.034	6376	2061	SLU 81	15877	Si
0.5	0.41	0.0004	606	SLU 81	0.034	6376	2108	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	0.00000402	418	SLE RA 18	11737	1494000	145539	36000000	355	SLE QP 2	9984	1120500	Si
0.25	0.41	0.00000402	427	SLE RA 18	11980	1494000	148555	36000000	363	SLE QP 2	10192	1120500	Si
0.25	0.41	0.00000402	427	SLE RA 18	11980	1494000	148557	36000000	363	SLE QP 2	10192	1120500	Si
0.5	0.41	0.00000402	436	SLE RA 18	12251	1494000	151911	36000000	371	SLE QP 2	10429	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	12	3	159	SLV 1	0.36	1618	1.653	3.55	0.93	61.29	SLV 1	0.36	1618	1.653	Si
0.25	13	3	159	SLV 1	0.36	1618	1.653	3.63	0.87	61.29	SLV 1	0.36	1618	1.653	Si
0.25	13	3	159	SLV 1	0.36	1618	1.653	3.63	0.87	61.29	SLV 1	0.36	1618	1.653	Si
0.5	13	3	159	SLV 1	0.36	1618	1.653	3.71	0.78	61.29	SLV 1	0.36	1618	1.653	Si

Campata 6 tra i fili ? - 10, sezione R 50x45, aste 52, 53, 54, 55

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	606	SLU 81	0.034	6376	2108	SLU 81	15877	Si
0.25	0.41	0.0004	623	SLU 81	0.033	6126	2166	SLU 81	15877	Si
0.72	0.41	0.0004	653	SLU 81	0.033	6126	2270	SLU 81	15877	Si
1.28	0.41	0.0004	686	SLU 81	0.033	6126	2385	SLU 81	15877	Si
1.43	0.41	0.0004	695	SLU 81	0.033	6126	2416	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	0.00000402	436	SLE RA 18	12251	1494000	151911	36000000	371	SLE QP 2	10429	1120500	Si
0.25	0.41	0.00000386	448	SLE RA 18	12620	1494000	156482	36000000	382	SLE QP 2	10756	1120500	Si
0.72	0.41	0.00000386	471	SLE RA 18	13245	1494000	164232	36000000	402	SLE QP 2	11321	1120500	Si
1.28	0.41	0.00000386	495	SLE RA 18	13930	1494000	172736	36000000	425	SLE QP 2	11956	1120500	Si
1.43	0.41	0.00000386	502	SLE RA 18	14118	1494000	175062	36000000	431	SLE QP 2	12131	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	159	SLV 1	0.36	1618	1.653	3.71	0.78	61.29	SLV 1	0.36	1618	1.653	Si
0.25	13	2	159	SLV 1	0.36	1618	1.653	3.82	0.65	58.92	SLV 1	0.36	1618	1.653	Si
0.72	14	0	14	SLV 16	0.36	1618	1.653	4.02	0	58.92	SLV 16	0.36	1618	1.653	Si
1.28	15	0	38	SLV 16	0.36	1618	1.653	4.25	0.07	58.92	SLV 16	0.36	1618	1.653	Si
1.43	15	1	76	SLV 16	0.36	1618	1.653	4.31	0.18	58.92	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
6.26	1.1	SLU 39	ST	LT	-605	-122	-35116	-1	0	19	0	0	1.1	10682	617	17.32	Si
6.26	1.1	SLV 13	SIS	LT	4068	-1911	-23932	10	-5	19	0	0	1.1	7279	4494	1.62	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
43,44,45,46,47,48,49,50,51,52,53,54,55	6.26	1.1	SLU 82	ST	BT	2.3	286373	42072	6.81	Si
43,44,45,46,47,48,49,50,51,52,53,54,55	6.26	1.1	SLV 5	SIS	LT	2.3	233904	31412	7.45	Si
43,44,45,46,47,48,49,50,51,52,53,54,55	6.26	1.1	SLD 1	SIS	BT	2.3	272028	30906	8.8	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	-94	-42072	-44.88	-3655.49	0	0	-0.09	0	1.1	6.09	1496	2060	0	14430	
0	-4955	-31412	2264.32	-4929.49	0	-9	-0.16	0.07	0.96	5.95	1496	2060	37	0	0.07
0	-761	-30906	317.28	-5733.65	0	-1	-0.19	0.01	1.08	5.89	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
43	56	66	1.12	1.12	0.94	1.16	1.27	1	0.73	0.72	0.61	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
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

Verifiche geotecniche - Cedimenti assoluti e differenziali

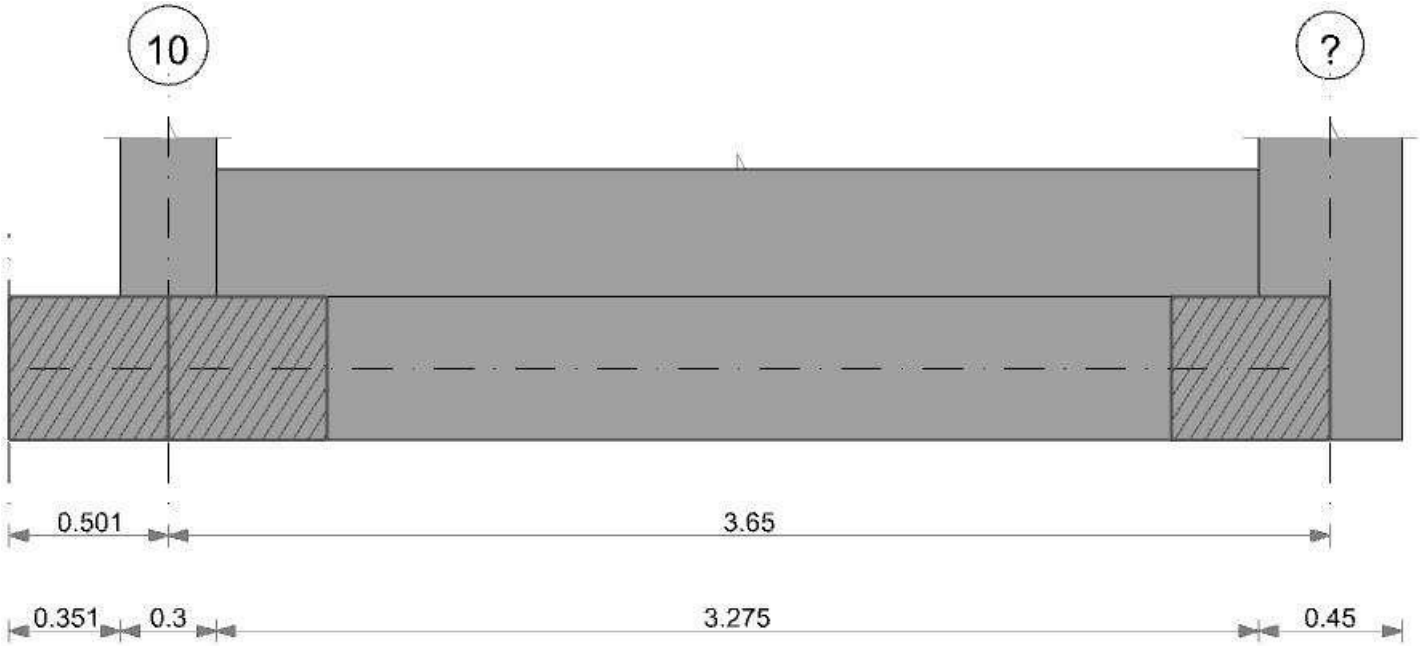
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	129	SLE RA 18	0.05	0	129	125	SLE RA 18	0.05	0	125	SLE RA 18	0.0033	0	SLE RA 19	Si
D	0.05	0	129	SLE RA 1	0.05	0	129	129	SLE RA 1	0.05	0	125	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	129	SLE RA 1	0.05	0	129	129	SLE RA 1	0.05	0	125	SLE RA 1	0.0033	0	SLE RA 1	Si

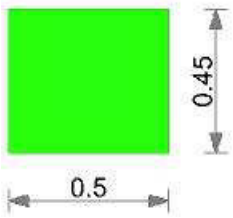
Verifiche geotecniche - Rotazioni assolute e differenziali

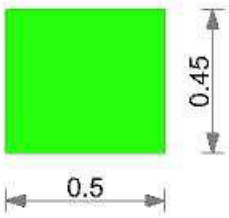
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE FR 6	0.19	0	118	117	SLE RA 18	0.19	0	117	SLE RA 18	0.1	0	118	SLE RA 19	Si
D	0.19	0	SLE RA 1	0.19	0	129	125	SLE RA 1	0.19	0	129	SLE RA 1	0.1	0	125	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	129	125	SLE RA 1	0.19	0	129	SLE RA 1	0.1	0	125	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

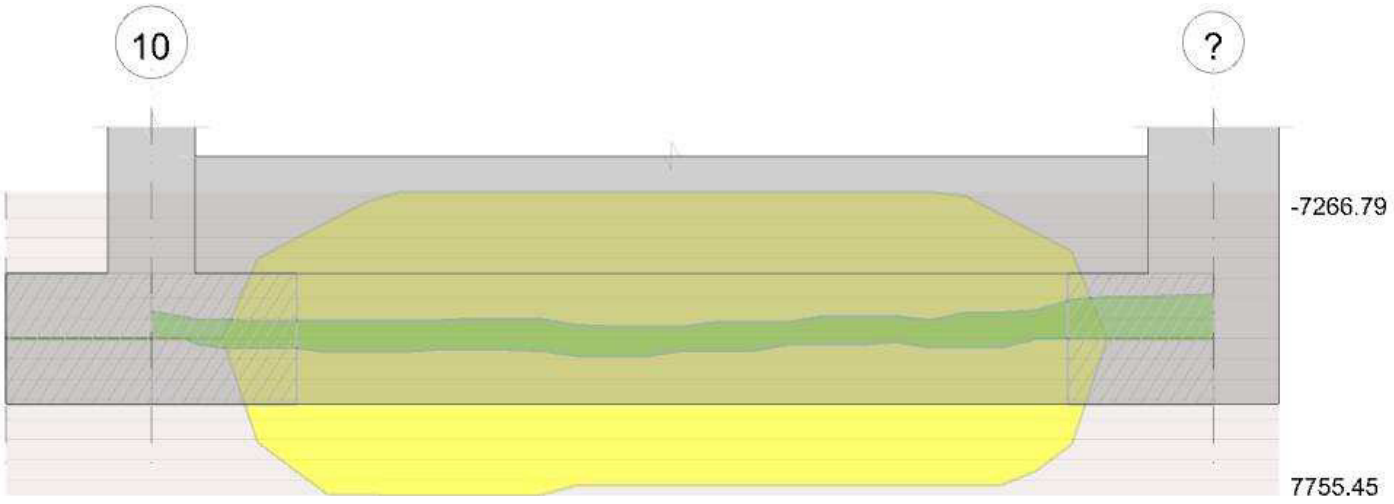
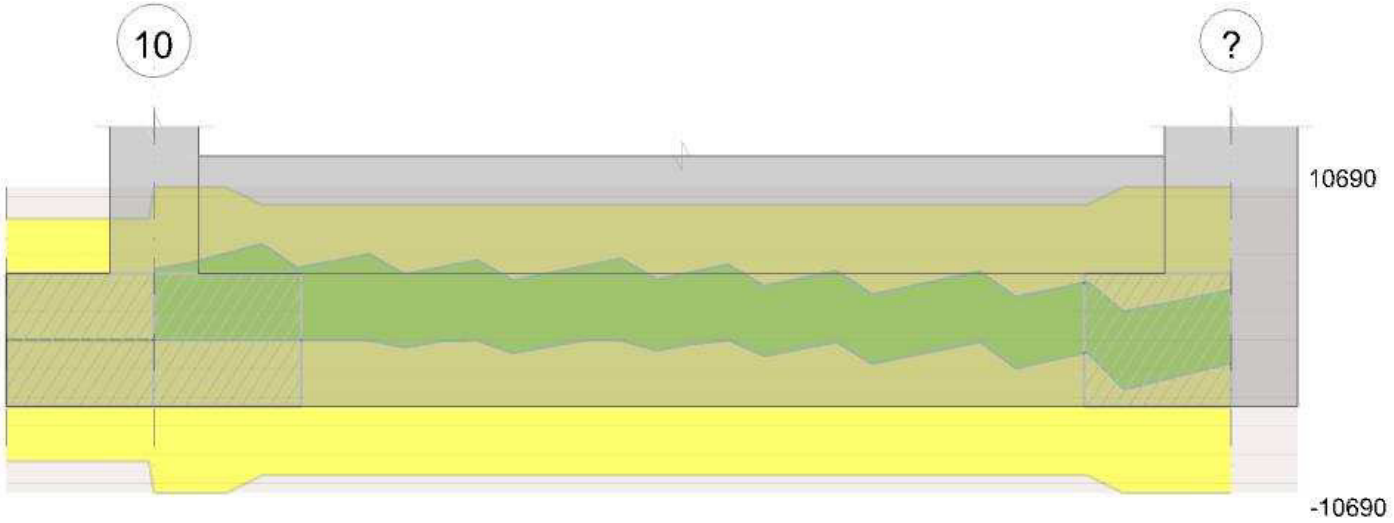


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 10 - ?, sezione R 50x45, aste 1, 2, 3, 4, 5, 6, 7, 8, 9

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0003	695	SLU 81	0.028	5362	2416	SLU 81	15877	Si
0.15	0.41	0.0003	704	SLU 81	0.028	5362	2448	SLU 81	15877	Si
1.82	0.41	0.0003	810	SLU 81	0.028	5362	2818	SLU 81	15877	Si
3.42	0.41	0.0003	887	SLV 16	0.119	5166	3184	SLU 81	15877	Si
3.65	0.41	0.0003	926	SLV 16	0.119	5166	3266	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	0.00000337	502	SLE RA 18	14208	1494000	176175	36000000	431	SLE QP 2	12208	1120500	Si
0.15	0.41	0.00000337	508	SLE RA 18	14402	1494000	178583	36000000	437	SLE QP 2	12389	1120500	Si
1.82	0.41	0.00000337	588	SLE RA 18	16653	1494000	206492	36000000	512	SLE QP 2	14511	1120500	Si
3.42	0.41	0.00000337	667	SLE RA 18	18886	1494000	234189	36000000	587	SLE QP 2	16635	1120500	Si
3.65	0.41	0.00000337	684	SLE RA 18	19379	1494000	240303	36000000	604	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	1	76	SLV 16	0.36	1618	1.653	4.31	0.18	51.66	SLV 16	0.36	1618	1.653	Si
0.15	15	1	115	SLV 16	0.36	1618	1.653	4.37	0.29	51.66	SLV 16	0.36	1618	1.653	Si
1.82	18	6	159	SLV 16	0.36	1618	1.653	5.12	1.61	51.66	SLV 16	0.36	1618	1.653	Si
3.42	20	10	159	SLV 16	0.36	1618	1.653	5.87	3	51.66	SLV 16	0.36	1618	1.653	Si
3.65	21	11	159	SLV 16	0.36	1618	1.653	6.04	3.23	51.66	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
3.87	1.1	SLU 2	ST	LT	-402	182	-18786	-1	1	19	0	0	1.1	5714	441	12.95	Si
3.87	1.1	SLV 2	SIS	LT	-3161	-1417	-16210	-11	-5	19	0	0	1.1	4931	3464	1.42	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	3.87	1.1	SLU 82	ST	BT	2.3	178897	29702	6.02	Si
1,2,3,4,5,6,7,8,9	3.87	1.1	SLV 15	SIS	BT	2.3	156197	24114	6.48	Si
1,2,3,4,5,6,7,8,9	3.87	1.1	SLD 15	SIS	BT	2.3	167852	21901	7.66	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	206	-29702	-187.53	1408.68	0	0	0.05	-0.01	1.09	3.78	1496	2060	0	14430	
0	1648	-24114	-835.14	4477.4	0	4	0.19	-0.03	1.03	3.5	1496	2060	0	14430	0.07
0	788	-21901	-428.58	2535.96	0	2	0.12	-0.02	1.06	3.64	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

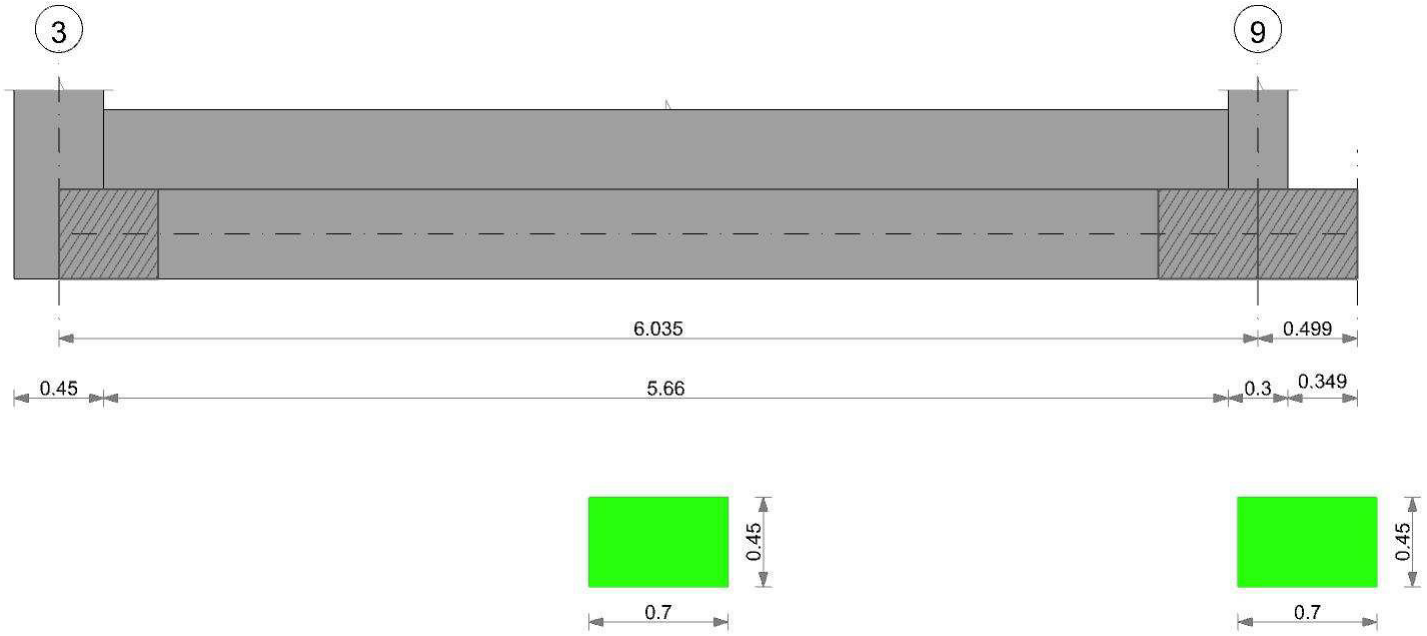
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	129	SLE RA 18	0.05	0	138	129	SLE RA 10	0.05	0	138	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	138	SLE RA 1	0.05	0	138	138	SLE RA 1	0.05	0	138	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	138	SLE RA 1	0.05	0	138	138	SLE RA 1	0.05	0	138	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 10	0.19	0	138	129	SLE RA 10	0.19	0	138	SLE RA 1	0.1	0	138	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	138	129	SLE RA 1	0.19	0	138	SLE RA 1	0.1	0	138	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	138	129	SLE RA 1	0.19	0	138	SLE RA 1	0.1	0	138	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 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

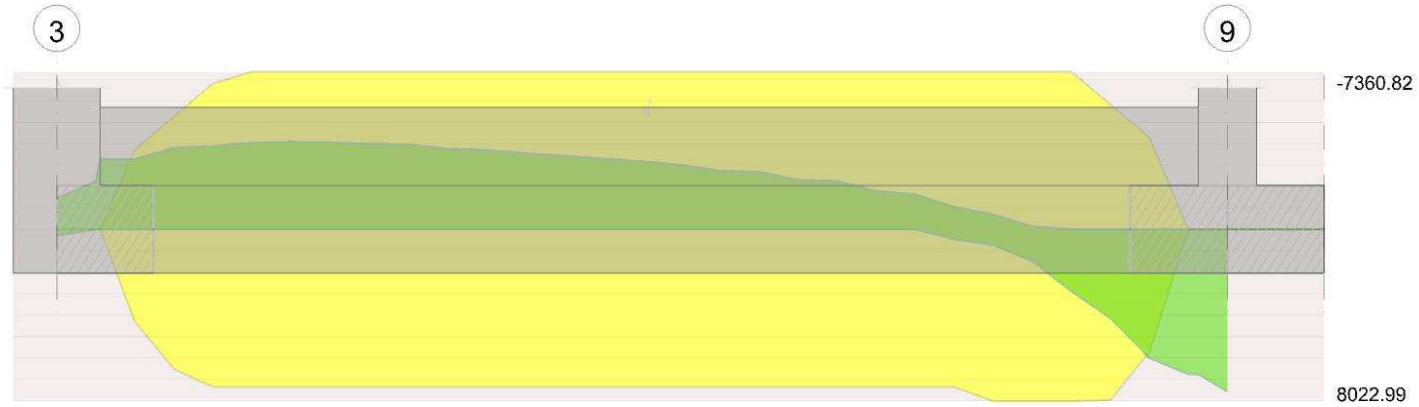
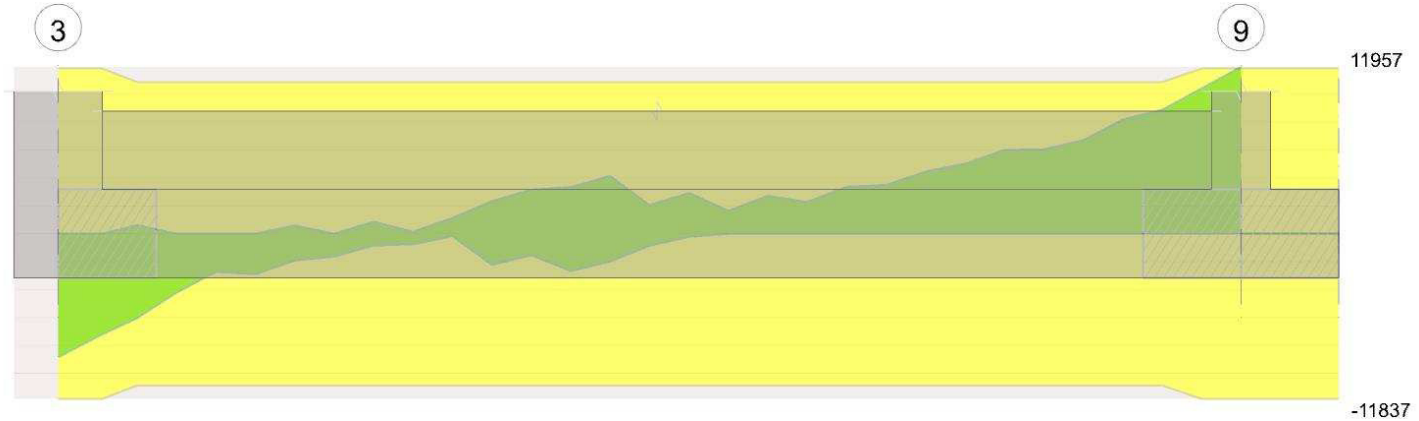


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 3 - 9, sezione R 70x45, aste 169, 168, 167, 166, 165, 164, 163, 162, 161, 160, 159, 158, 157, 156, 155

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1995	SLV 5	0.085	2620	5149	SLV 5	15877	Si
0.23	0.41	0.0002	1873	SLV 5	0.085	2620	4833	SLV 5	15877	Si
3.02	0.41	0.0002	1100	SLV 5	0.085	2620	2910	SLU 81	15877	Si
5.89	0.41	0.0002	1572	SLU 81	0.017	2693	4057	SLU 81	15877	Si
6.04	0.41	0.0002	1577	SLU 81	0.017	2693	4071	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	1345	SLE RA 18	38947	1494000	482946	36000000	1168	SLE QP 2	33827	1120500	Si
0.23	0.41	0.00000169	1265	SLE RA 18	36651	1494000	454472	36000000	1098	SLE QP 2	31802	1120500	Si
3.02	0.41	0.00000169	815	SLE RA 18	23615	1494000	292824	36000000	702	SLE QP 2	20332	1120500	Si
5.89	0.41	0.00000169	1141	SLE RA 18	33038	1494000	409669	36000000	994	SLE QP 2	28778	1120500	Si
6.04	0.41	0.00000169	1145	SLE RA 18	33153	1494000	411103	36000000	998	SLE QP 2	28890	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	30	21	159	SLV 5	0.36	1618	1.653	11.68	8.27	26.2	SLV 5	0.36	1618	1.653	Si
0.23	28	20	159	SLV 5	0.36	1618	1.653	10.98	7.75	26.2	SLV 5	0.36	1618	1.653	Si
3.02	18	10	159	SLV 5	0.36	1618	1.653	7.02	3.98	26.2	SLV 5	0.36	1618	1.653	Si
5.89	26	13	159	SLV 10	0.36	1618	1.653	9.94	4.92	26.2	SLV 10	0.36	1618	1.653	Si
6.04	26	13	159	SLV 10	0.36	1618	1.653	9.98	4.97	26.2	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
6.26	1.3	SLU 31	ST	LT	966	361	-43059	1	0	19	0	0	1.1	13098	1031	12.71	Si
6.26	1.3	SLV 15	SIS	LT	8016	1234	-29383	15	2	19	0	0	1.1	8938	8110	1.1	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
169,168,167,166,165,164,163,162,161,160,159,158,157,156,155	6.26	1.3	SLU 81	ST	BT	2.3	278000	54566	5.09	Si
169,168,167,166,165,164,163,162,161,160,159,158,157,156,155	6.26	1.3	SLV 5	SIS	BT	2.3	230124	49556	4.64	Si
169,168,167,166,165,164,163,162,161,160,159,158,157,156,155	6.26	1.3	SLD 5	SIS	BT	2.3	255235	42479	6.01	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	309	-54566	6165.04	-314.92	0	0	-0.01	0.11	1.07	6.25	1496	2060	0	14430	
0	-5293	-49556	9000.02	-5162.96	0	-6	-0.1	0.18	0.94	6.05	1496	2060	0	14430	0.07
0	-2203	-42479	6179.33	-2320.35	0	-3	-0.05	0.15	1.01	6.15	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	0.03	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.03	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	0.03	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

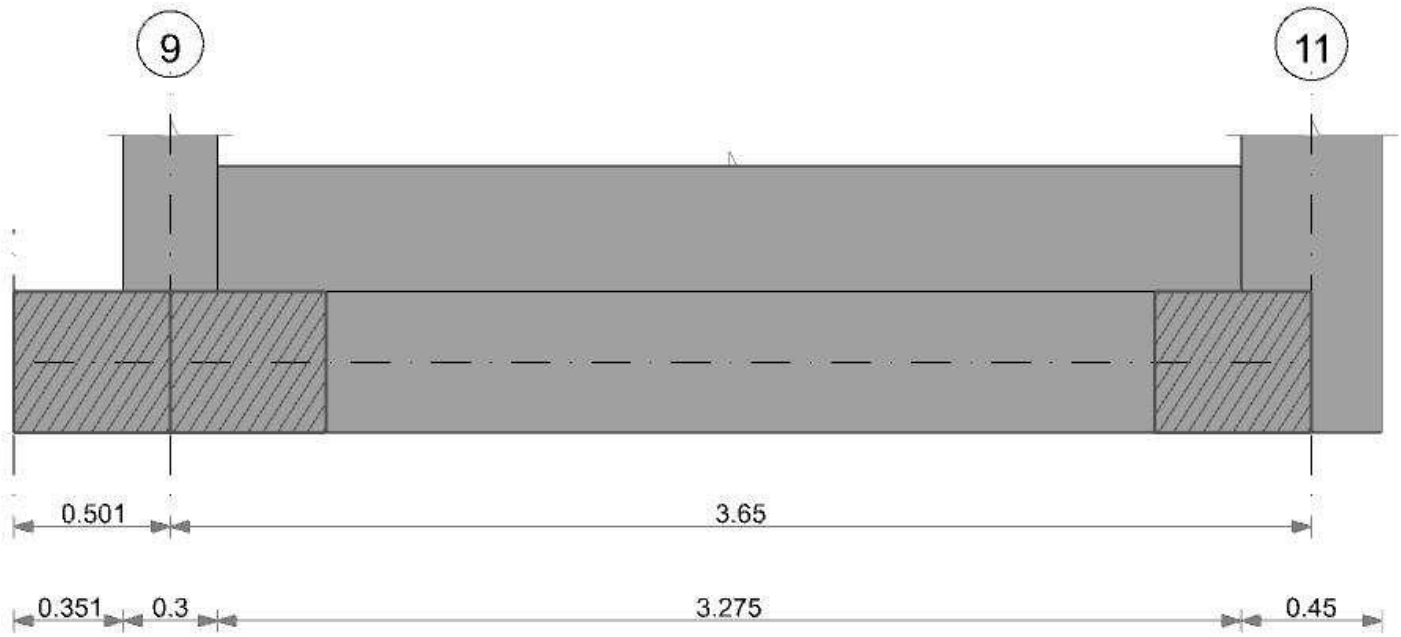
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	48	SLE RA 18	0.05	0	48	33	SLE RA 18	0.05	0	48	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	48	SLE RA 1	0.05	0	48	48	SLE RA 1	0.05	0	48	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	48	SLE RA 1	0.05	0	48	48	SLE RA 1	0.05	0	48	SLE RA 1	0.0033	0	SLE RA 1	Si

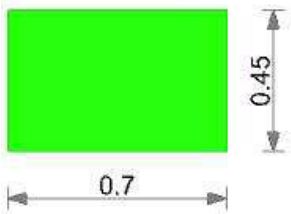
Verifiche geotecniche - Rotazioni assolute e differenziali

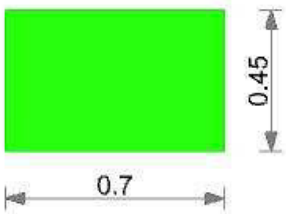
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva				Distorsione angolare negativa				Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 18	0.19	0	48	33	SLE RA 18	0.19	0	48	SLE RA 1	0.1	0	48	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	48	33	SLE RA 1	0.19	0	48	SLE RA 1	0.1	0	48	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	48	33	SLE RA 1	0.19	0	48	SLE RA 1	0.1	0	48	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 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

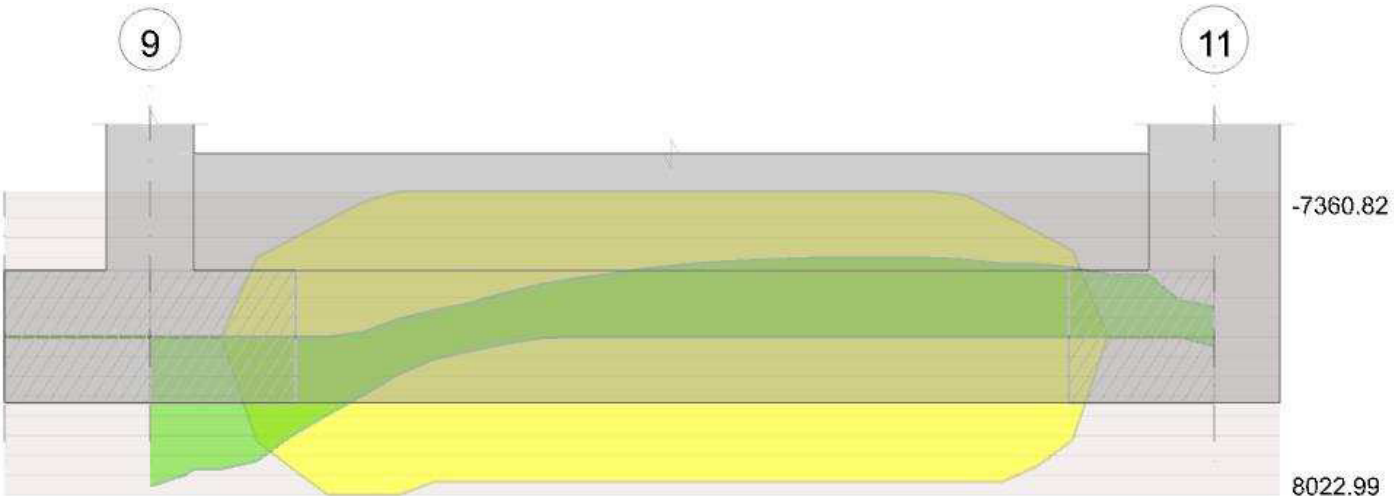


Diagramma verifica stato limite ultimo taglio

Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 9 - 11, sezione R 70x45, aste 75, 74, 73, 72, 71, 70, 69, 68, 67

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1577	SLU 81	0.017	2693	4071	SLU 81	15877	Si
0.15	0.41	0.0002	1580	SLU 81	0.017	2693	4079	SLU 81	15877	Si
1.82	0.41	0.0002	1438	SLV 10	0.085	2620	3710	SLV 10	15877	Si
3.42	0.41	0.0002	1732	SLV 10	0.085	2620	4470	SLV 10	15877	Si
3.65	0.41	0.0002	1808	SLV 10	0.085	2620	4666	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	0.00000169	1145	SLE RA 18	33153	1494000	411102	36000000	998	SLE QP 2	28890	1120500	Si
0.15	0.41	0.00000169	1147	SLE RA 18	33222	1494000	411954	36000000	1000	SLE QP 2	28961	1120500	Si
1.82	0.41	0.00000169	1030	SLE RA 18	29844	1494000	370060	36000000	902	SLE QP 2	26128	1120500	Si
3.42	0.41	0.00000169	1160	SLE RA 18	33605	1494000	416699	36000000	1026	SLE QP 2	29705	1120500	Si
3.65	0.41	0.00000169	1204	SLE RA 18	34868	1494000	432359	36000000	1066	SLE QP 2	30865	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	26	13	159	SLV 10	0.36	1618	1.653	9.98	4.97	26.2	SLV 10	0.36	1618	1.653	Si
0.15	26	13	159	SLV 10	0.36	1618	1.653	10	5.02	26.2	SLV 10	0.36	1618	1.653	Si
1.82	23	14	159	SLV 10	0.36	1618	1.653	9.02	5.35	26.2	SLV 10	0.36	1618	1.653	Si
3.42	26	18	159	SLV 10	0.36	1618	1.653	10.26	7.06	26.2	SLV 10	0.36	1618	1.653	Si
3.65	28	19	159	SLV 10	0.36	1618	1.653	10.66	7.43	26.2	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
3.87	1.3	SLU 31	ST	LT	545	185	-27990	1	0	19	0	0	1.1	8514	575	14.8	Si
3.87	1.3	SLV 11	SIS	LT	2425	4143	-17933	8	13	19	0	0	1.1	5455	4800	1.14	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
75,74,73,72,71,70,69,68,67	3.87	1.3	SLU 81	ST	BT	2.3	194013	35486	5.47	Si
75,74,73,72,71,70,69,68,67	3.87	1.3	SLV 10	SIS	BT	2.3	165345	33143	4.99	Si
75,74,73,72,71,70,69,68,67	3.87	1.3	SLD 10	SIS	BT	2.3	179628	28114	6.39	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
675	132	-35486	1989.12	170.48	1	0	0	0.06	1.19	3.87	1496	2060	0	14430	
706	-3711	-33143	4094.15	1386.66	1	-6	0.04	0.12	1.05	3.79	1496	2060	0	14430	0.07
557	-1575	-28114	2530.9	728.41	1	-3	0.03	0.09	1.12	3.82	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	0.23	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

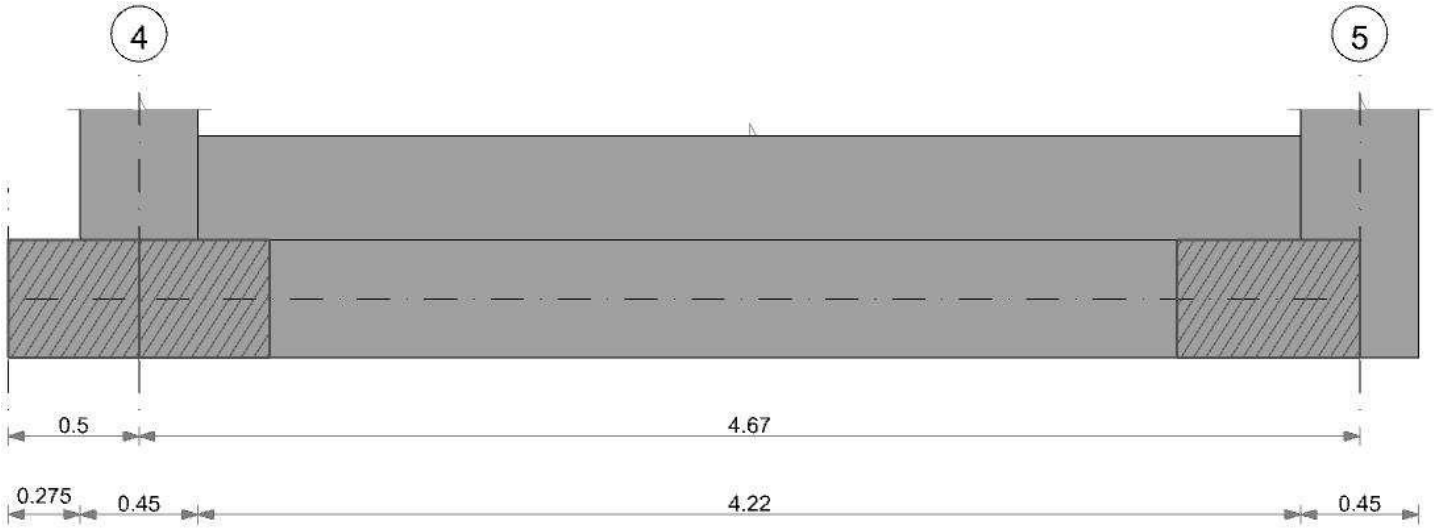
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0	48	SLE RA 18	0.05	0	48	57	SLE RA 18	0.05	0	57	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	57	SLE RA 1	0.05	0	57	57	SLE RA 1	0.05	0	57	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	57	SLE RA 1	0.05	0	57	57	SLE RA 1	0.05	0	57	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 18	0.19	0	57	48	SLE RA 18	0.19	0	57	SLE RA 1	0.1	0	57	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	57	48	SLE RA 1	0.19	0	57	SLE RA 1	0.1	0	57	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	57	48	SLE RA 1	0.19	0	57	SLE RA 1	0.1	0	57	SLE RA 1	Si

CORDOLO 9

Geometria



Caratteristiche dei materiali

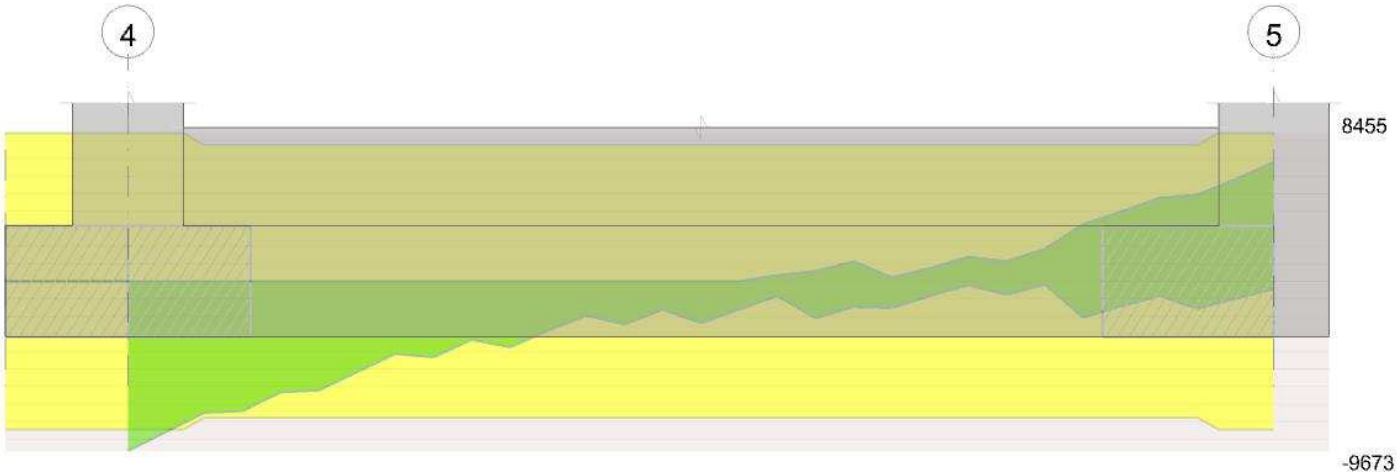
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

N°	Descrizione	Tipo	Base	Altezza	Copriferro sup.	Copriferro inf.	Copriferro lat.
1	R 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 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	919	SLU 81	0.018	2788	3196	SLU 81	15877	Si
0.23	0.41	0.0002	918	SLU 81	0.018	2788	3192	SLU 81	15877	Si
2.33	0.41	0.0002	772	SLU 82	0.018	2788	2686	SLU 82	15877	Si
4.44	0.41	0.0002	1034	SLV 8	0.086	2711	3598	SLV 8	15877	Si
4.67	0.41	0.0002	1107	SLV 8	0.086	2711	3852	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	0.00000175	666	SLE RA 18	19282	1494000	239099	36000000	579	SLE QP 2	16761	1120500	Si
0.23	0.41	0.00000175	666	SLE RA 18	19260	1494000	238821	36000000	578	SLE QP 2	16740	1120500	Si
2.33	0.41	0.00000175	559	SLE RA 19	16174	1494000	200564	36000000	482	SLE QP 2	13956	1120500	Si
4.44	0.41	0.00000175	711	SLE RA 19	20562	1494000	254973	36000000	612	SLE QP 2	17724	1120500	Si
4.67	0.41	0.00000175	752	SLE RA 19	21751	1494000	269717	36000000	648	SLE QP 2	18759	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	9	159	SLV 2	0.36	1618	1.653	5.79	2.64	27.11	SLV 2	0.36	1618	1.653	Si
0.23	20	9	159	SLV 2	0.36	1618	1.653	5.78	2.6	27.11	SLV 2	0.36	1618	1.653	Si
2.33	17	8	159	SLV 4	0.36	1618	1.653	4.82	2.42	27.11	SLV 4	0.36	1618	1.653	Si
4.44	21	15	159	SLV 8	0.36	1618	1.653	6.12	4.22	27.11	SLV 8	0.36	1618	1.653	Si
4.67	23	16	159	SLV 8	0.36	1618	1.653	6.48	4.59	27.11	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
4.89	1.1	SLU 2	ST	LT	462	-16	-24523	1	0	19	0	0	1.1	7459	463	16.12	Si
4.89	1.1	SLV 9	SIS	LT	-5323	-658	-19882	-15	-2	19	0	0	1.1	6048	5364	1.13	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
105,106,107,108,109,110,111,112,113,114,115,116	4.89	1.1	SLU 82	ST	BT	2.3	196565	39115	5.03	Si
105,106,107,108,109,110,111,112,113,114,115,116	4.89	1.1	SLV 3	SIS	BT	2.3	166656	34652	4.81	Si
105,106,107,108,109,110,111,112,113,114,115,116	4.89	1.1	SLD 3	SIS	BT	2.3	182330	29981	6.08	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	-2	-39115	-3136.41	476.56	0	0	0.01	-0.08	0.94	4.87	1496	2060	0	14430	
0	3757	-34652	-4717.16	1867.17	0	6	0.05	-0.14	0.83	4.79	1496	2060	0	14430	0.07
0	1649	-29981	-3206.8	935.38	0	3	0.03	-0.11	0.89	4.83	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	0.03	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

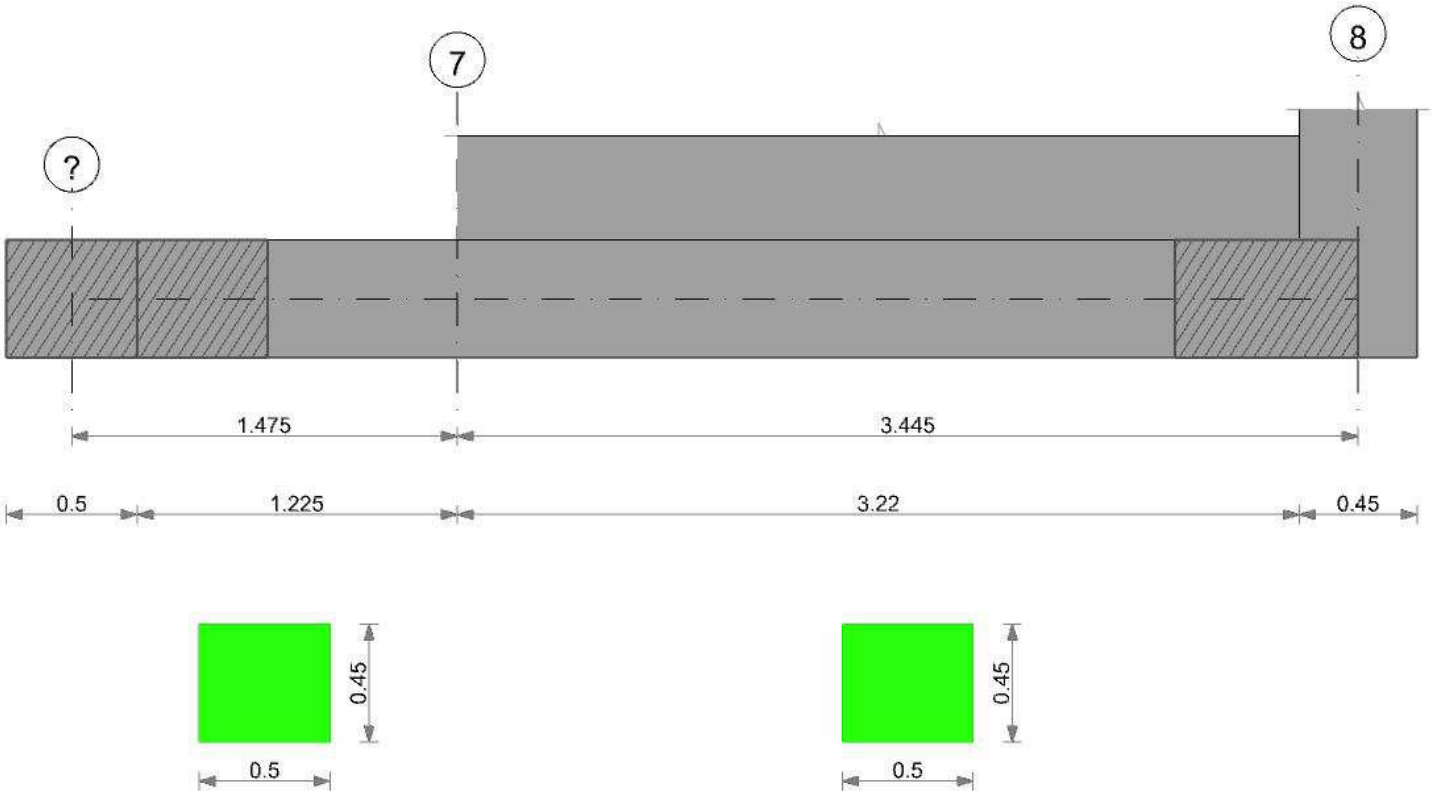
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Rl adm	Rl	Comb.	
E	0.05	0	140	SLE RA 18	0.05	0	140	285	SLE RA 18	0.05	0	140	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	140	SLE RA 1	0.05	0	140	140	SLE RA 1	0.05	0	140	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	140	SLE RA 1	0.05	0	140	140	SLE RA 1	0.05	0	140	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 18	0.19	0	140	285	SLE RA 18	0.19	0	140	SLE RA 1	0.1	0	140	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	140	285	SLE RA 1	0.19	0	140	SLE RA 1	0.1	0	140	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	140	285	SLE RA 1	0.19	0	140	SLE RA 1	0.1	0	140	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

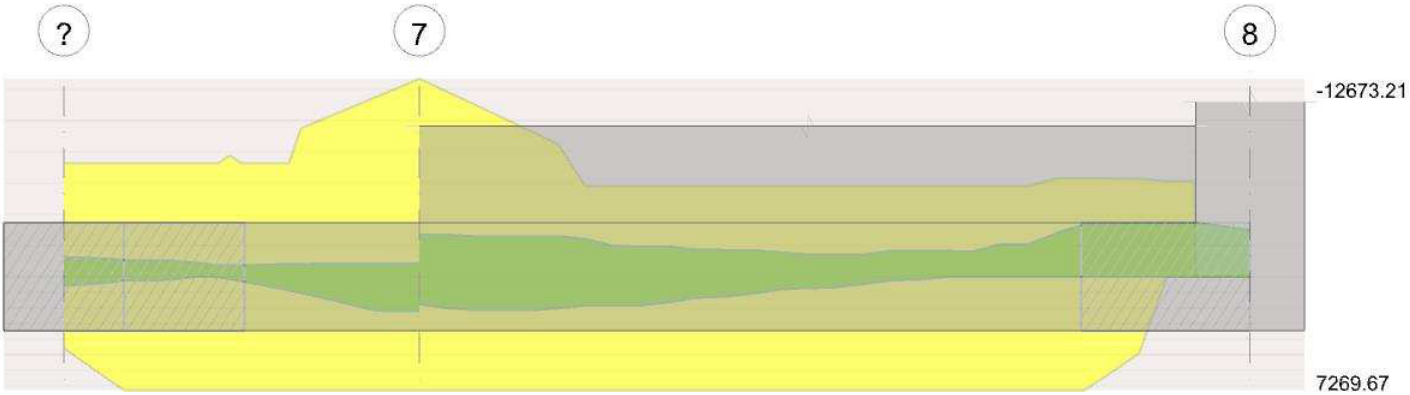
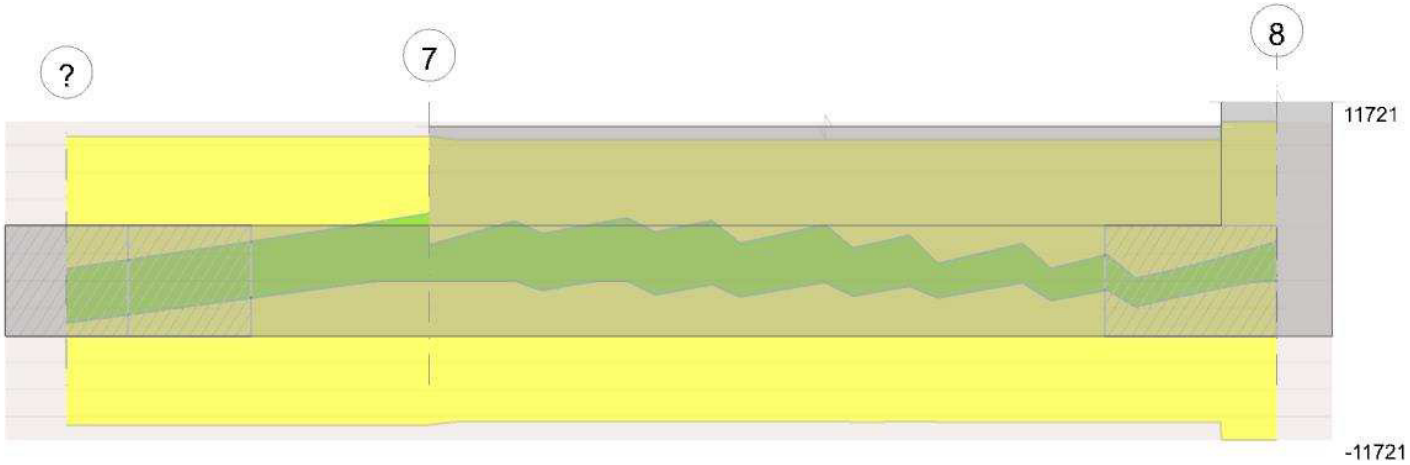


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili ? - 7, sezione R 50x45, asta 85

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	0.000314	0.052							-465.07	SLU 81	-465.07	-7738.37	0.109	16.64	Si
0.25	0.000509	0.052	0.000508	0.052							-700.19	SLU 81	-742.42	-7755.42	0.113	10.45	Si
0.74	0.000509	0.052	0.000509	0.052							-567.81	SLU 82	-705.11	-7755.45	0.113	11	Si
1.33	0.00084	0.052	0.000509	0.052	678.4	SLU 81	1176.79	7766.24	0.117	6.6							Si
1.47	0.000911	0.052	0.000509	0.052	1176.79	SLU 81	1176.79	7767.77	0.118	6.6							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	0.000314	0.052	793.37	SLV 8	524.9	4567.91	0.159	8.7	-1308.54	SLV 9	-1251.98	-7269.88	0.2	5.81	Si
0.25	0.000509	0.052	0.000508	0.052	213.88	SLV 8	213.88	7260.75	0.197	33.95	-1062.45	SLV 9	-1062.45	-7266.86	0.197	6.84	Si
0.74	0.000509	0.052	0.000509	0.052	-173.48	SLV 10	278.22	7266.79	0.197	26.12	-562.52	SLV 7	-714.7	-7266.79	0.197	10.17	Si
1.47	0.000911	0.052	0.000509	0.052	2184.91	SLV 9	2184.91	7261.38	0.192	3.32	-789.2	SLV 8	-834.2	-12673.21	0.259	15.19	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	0.000509	0	-1658	SLU 82	-1658	-7764	-63178	-10619	-10619	1	6.4	Si
0.25	0.0000076	0.000509	0	-720	SLU 52	-720	-7764	-63178	-10619	-10619	1	14.75	Si
0.74	0.0000076	0.000509	0	1322	SLU 81	1322	7764	63178	10619	10619	1	8.03	Si
1.47	0.0000076	0.000509	0	4379	SLU 81	4379	7764	63178	10619	10619	1	2.43	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	0.000509	0	859	SLV 9	859	7764	63178	10619	10619	1	12.36	Si
0	0.0000076	0.000508	0	-3101	SLV 8	-3101	-7764	-63178	-10619	-10619	1	3.42	Si
0.25	0.0000076	0.000509	0	1516	SLV 9	1516	7764	63178	10619	10619	1	7	Si
0.25	0.0000076	0.000508	0	-2488	SLV 8	-2488	-7764	-63178	-10619	-10619	1	4.27	Si
0.74	0.0000076	0.000509	0	2829	SLV 9	2829	7764	63178	10619	10619	1	3.75	Si
0.74	0.0000076	0.000509	0	-1290	SLV 8	-1290	-7764	-63178	-10619	-10619	1	8.23	Si
1.47	0.0000076	0.000509	0	4928	SLV 5	4928	7764	63178	10619	10619	1	2.15	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	-320.38	18	-320.38	17469	1494000	257132	36000000	-257.59	2	-257.59	14045	1120500			Si
0.25	-498.33	18	-533.16	28203	1494000	423022	36000000	-424.28	2	-462.21	24450	1120500			Si
0.74	-414.66	19	-510.15	26983	1494000	404752	36000000	-368	2	-447.25	23657	1120500			Si
1.47	835.47	18	835.47	41611	1494000	648268	36000000	697.86	2	697.86	34757	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
0.25	-486	-2002	-10619	SLV 8	0.36	1618	1.653	-424.28	-638.16	-7266.86	SLV 9	0.36	1618	1.653	Si
0.74	769	2059	10619	SLV 9	0.36	1618	1.653	-218.24	-496.46	-7266.79	SLV 7	0.36	1618	1.653	Si
1.47	2723	2205	10619	SLV 5	0.36	1618	1.653	697.86	1487.05	7261.38	SLV 9	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili ? - 7, sezione R 50x45, asta 85

Campata 2 tra i fili 7 - 8, sezione R 50x45, aste 86, 87, 88, 89, 90, 91, 92, 93

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	803	SLU 81	0.032	6015	2478	SLU 81	15877	Si
1.72	0.41	0.0004	911	SLU 82	0.031	5873	2812	SLU 82	15877	Si
3.22	0.41	0.0004	1081	SLV 7	0.124	5652	3422	SLU 82	15877	Si
3.44	0.41	0.0004	1164	SLV 8	0.124	5652	3593	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	0.00000379	577	SLE RA 18	16259	1494000	201618	36000000	491	SLE QP 2	13836	1120500	Si
1.72	0.41	0.0000037	656	SLE RA 19	18515	1494000	229584	36000000	561	SLE QP 2	15824	1120500	Si
3.22	0.41	0.0000037	803	SLE RA 19	22644	1494000	280785	36000000	691	SLE QP 2	19490	1120500	Si
3.44	0.41	0.0000037	844	SLE RA 19	23794	1494000	295044	36000000	727	SLE QP 2	20509	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 1	0.36	1618	1.653	4.91	0.84	57.86	SLV 1	0.36	1618	1.653	Si
1.72	17	4	159	SLV 7	0.36	1618	1.653	5.61	1.27	56.52	SLV 7	0.36	1618	1.653	Si
3.22	21	12	159	SLV 7	0.36	1618	1.653	6.91	3.9	56.52	SLV 7	0.36	1618	1.653	Si
3.44	22	13	159	SLV 8	0.36	1618	1.653	7.27	4.37	56.52	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
5.39	1.1	SLU 43	ST	LT	-513	113	-27637	-1	0	19	0	0	1.1	8407	525	16.01	Si
5.39	1.1	SLV 14	SIS	LT	-1176	-3885	-21534	-3	-10	19	0	0	1.1	6550	4059	1.61	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
85,86,87,88,89,90,91,92,93	5.39	1.1	SLU 82	ST	BT	2.3	246498	35046	7.03	Si
85,86,87,88,89,90,91,92,93	5.39	1.1	SLV 3	SIS	LT	2.3	202969	25715	7.89	Si
85,86,87,88,89,90,91,92,93	5.39	1.1	SLD 3	SIS	BT	2.3	228516	24544	9.31	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	-35046	-10.56	3263.99	0	0	0.09	0	1.1	5.21	1496	2060	0	14430	
0	4086	-25715	-1870.35	3324.63	0	9	0.13	-0.07	0.95	5.14	1496	2060	37	0	0.07
0	1855	-24544	-826.99	2628.3	0	4	0.11	-0.03	1.03	5.18	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
43	56	66	1.14	1.14	0.93	1.16	1.27	1	0.73	0.72	0.61	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
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

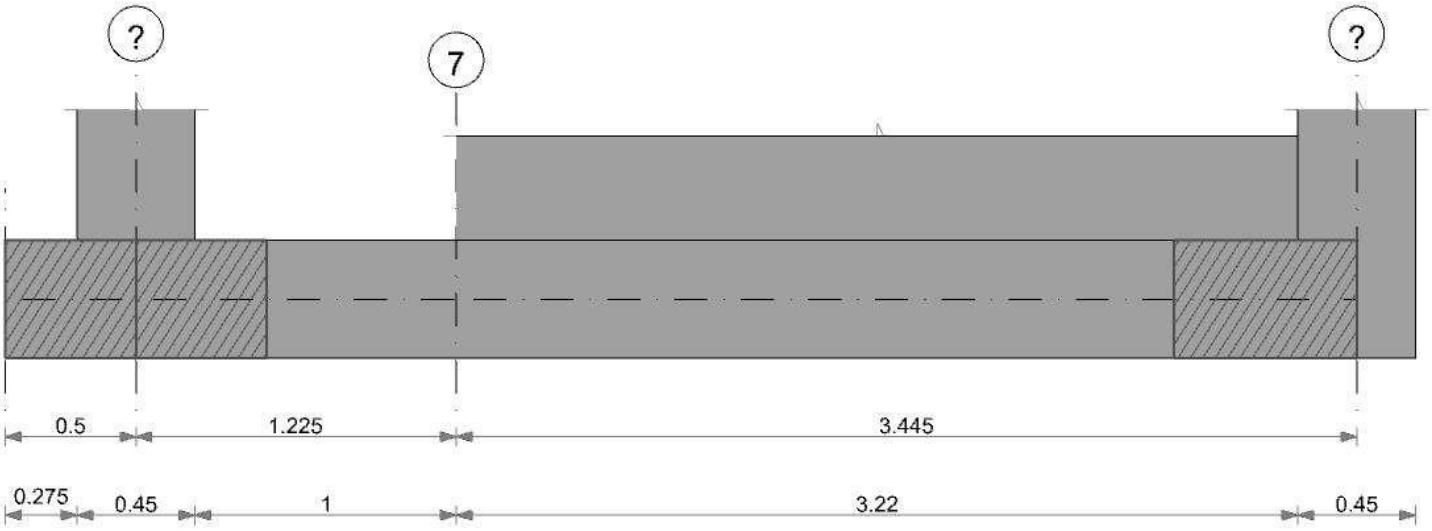
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	296	SLE RA 19	0.05	0	296	148	SLE RA 19	0.05	0	202	SLE RA 19	0.0033	0	SLE RA 19	Si
D	0.05	0	148	SLE RA 1	0.05	0	148	148	SLE RA 1	0.05	0	202	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	148	SLE RA 1	0.05	0	148	148	SLE RA 1	0.05	0	202	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 19	0.19	0	202	296	SLE RA 19	0.19	0	148	SLE RA 1	0.1	0	202	SLE RA 19	Si
D	0.19	0	SLE RA 1	0.19	0	148	202	SLE RA 1	0.19	0	148	SLE RA 1	0.1	0	202	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	148	202	SLE RA 1	0.19	0	148	SLE RA 1	0.1	0	202	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

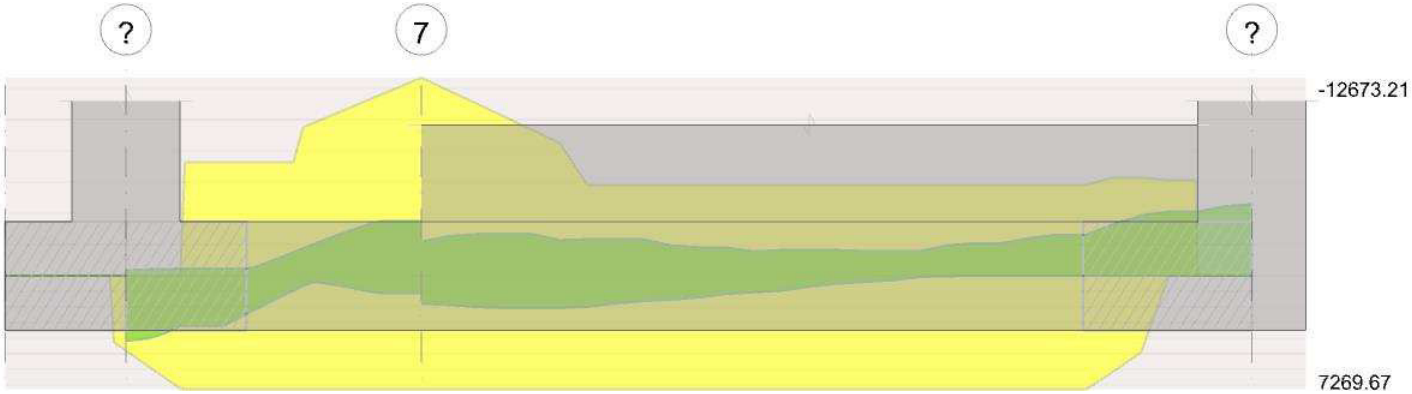
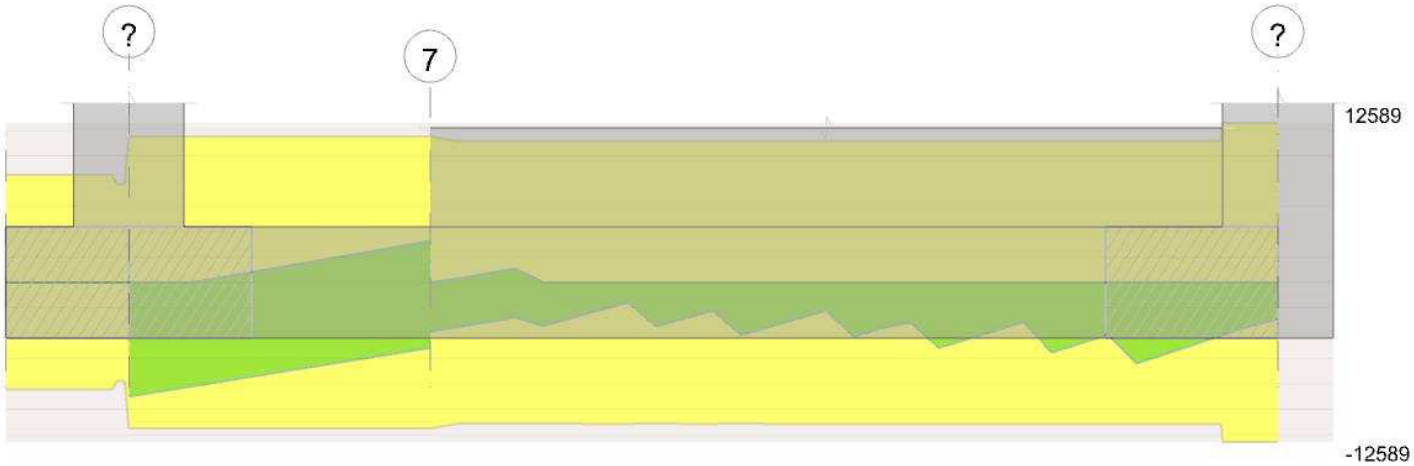


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili ? - 7, sezione R 50x45, asta 76

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	0.000329	0.052	3776.01	SLU 82	2908.86	5008.82	0.057	1.72							Si
0.23	0	0	0.000504	0.052	2167.48	SLU 82	2167.48	7571.31	0.088	3.49							Si
0.61	0.000509	0.052	0.000509	0.052	14.07	SLU 52	903.5	7755.45	0.113	8.58	-23.72	SLU 22	-755.35	-7755.45	0.113	10.27	Si
1.23	0.000911	0.052	0.000509	0.052							-1889.56	SLU 82	-1889.56	-13290.91	0.144	7.03	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
0.61	0.000509	0.052	0.000509	0.052	308.6	SLV 3	1554.9	7266.79	0.197	4.67	-321.93	SLV 14	-1016.07	-7266.79	0.197	7.15	Si
1.23	0.000911	0.052	0.000509	0.052	1106.58	SLV 9	1106.58	7261.38	0.192	6.56	-3513.52	SLV 8	-3513.52	-12673.21	0.259	3.61	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	0.0000082	0.000504	0	-7716	SLU 82	-7716	-7764	-63178	-11503	-11503	1	1.49	Si
0.23	0.0000082	0.000504	0	-6590	SLU 82	-6590	-7764	-63178	-11503	-11503	1	1.75	Si
0.61	0.0000082	0	0	-4632	SLU 82	-4632	-7764	-63178	-11503	-11503	1	2.48	Si
1.23	0.0000082	0.000714	0	-1503	SLU 61	-1503	-8471	-63248	-11516	-11516	1	7.66	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	0.0000082	0.000504	0	-8999	SLV 8	-8999	-7764	-63178	-11503	-11503	1	1.28	Si
0.23	0.0000082	0.000504	0	-8295	SLV 8	-8295	-7764	-63178	-11503	-11503	1	1.39	Si
0.61	0.0000082	0	0	1170	SLV 9	1170	7764	63178	11503	11503	1	9.83	Si
0.61	0.0000082	0.000504	0	-7075	SLV 8	-7075	-7764	-63178	-11503	-11503	1	1.63	Si
1.23	0.0000082	0.000509	0	3259	SLV 9	3259	7764	63178	11503	11503	1	3.53	Si
1.23	0.0000082	0.000714	0	-5159	SLV 8	-5159	-8471	-63248	-11516	-11516	1	2.23	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	2769.28	19	2134.86	123881	1494000	1797856	36000000	2408.43	2	1854.6	107618	1120500			Si
0.23	1592.07	19	1592.07	91432	1494000	1304619	36000000	1381.36	2	1381.36	79332	1120500			Si
0.61	-7.79	1	-550.94	29141	1494000	437120	36000000	-7.79	1	-482.66	25529	1120500			Si
1.23	-1388.26	19	-1388.26	71813	1494000	1037150	36000000	-1203.47	2	-1203.47	62254	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
0.61	-2952	-4122	-11503	SLV 8	0.36	1618	1.653	574.78	980.12	7266.79	SLV 7	0.36	1618	1.653	Si
1.23	-950	-4209	-11516	SLV 8	0.36	1618	1.653	-1203.47	2310.05	7261.38	SLV 9	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili ? - 7, sezione R 50x45, asta 76

Campata 3 tra i fili 7 - ?, sezione R 50x45, aste 77, 78, 79, 80, 81, 82, 83, 84

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	830	SLU 81	0.035	6508	2544	SLU 81	15877	Si
1.72	0.41	0.0004	933	SLU 82	0.034	6302	2860	SLU 82	15877	Si
3.22	0.41	0.0004	1095	SLV 7	0.129	6059	3453	SLU 82	15877	Si
3.44	0.41	0.0004	1179	SLV 7	0.129	6059	3623	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	0.0000041	597	SLE RA 18	16737	1494000	207543	36000000	508	SLE QP 2	14255	1120500	Si
1.72	0.41	0.00000397	672	SLE RA 19	18888	1494000	234214	36000000	575	SLE QP 2	16151	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	
3.22	0.41	0.00000397	815	SLE RA 19	22914	1494000	284128	36000000	702	SLE QP 2	19728	1120500	Si
3.44	0.41	0.00000397	856	SLE RA 19	24066	1494000	298422	36000000	738	SLE QP 2	20750	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	2	159	SLV 1	0.36	1618	1.653	5.08	0.67	62.54	SLV 1	0.36	1618	1.653	Si
1.72	18	4	159	SLV 7	0.36	1618	1.653	5.75	1.28	60.59	SLV 7	0.36	1618	1.653	Si
3.22	22	12	159	SLV 7	0.36	1618	1.653	7.02	3.93	60.59	SLV 7	0.36	1618	1.653	Si
3.44	23	14	159	SLV 7	0.36	1618	1.653	7.38	4.41	60.59	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
4.89	1.1	SLU 43	ST	LT	-604	147	-27384	-1	0	19	0	0	1.1	8330	622	13.4	Si
4.89	1.1	SLV 14	SIS	LT	-1613	-3856	-21699	-4	-10	19	0	0	1.1	6600	4180	1.58	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
76,77,78,79,80,81,82,83,84	4.89	1.1	SLU 82	ST	BT	2.3	224395	34894	6.43	Si
76,77,78,79,80,81,82,83,84	4.89	1.1	SLV 3	SIS	LT	2.3	181557	25221	7.2	Si
76,77,78,79,80,81,82,83,84	4.89	1.1	SLD 7	SIS	BT	2.3	210079	24598	8.54	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	199	-34894	-24.68	2860.01	0	0	0.08	0	1.1	4.73	1496	2060	0	14430	
0	4113	-25221	-1884.9	3228.55	0	9	0.13	-0.07	0.95	4.64	1496	2060	37	0	0.07
0	841	-24598	-336.85	4304.18	0	2	0.17	-0.01	1.07	4.55	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
43	56	66	1.15	1.16	0.92	1.16	1.27	1	0.72	0.72	0.6	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
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

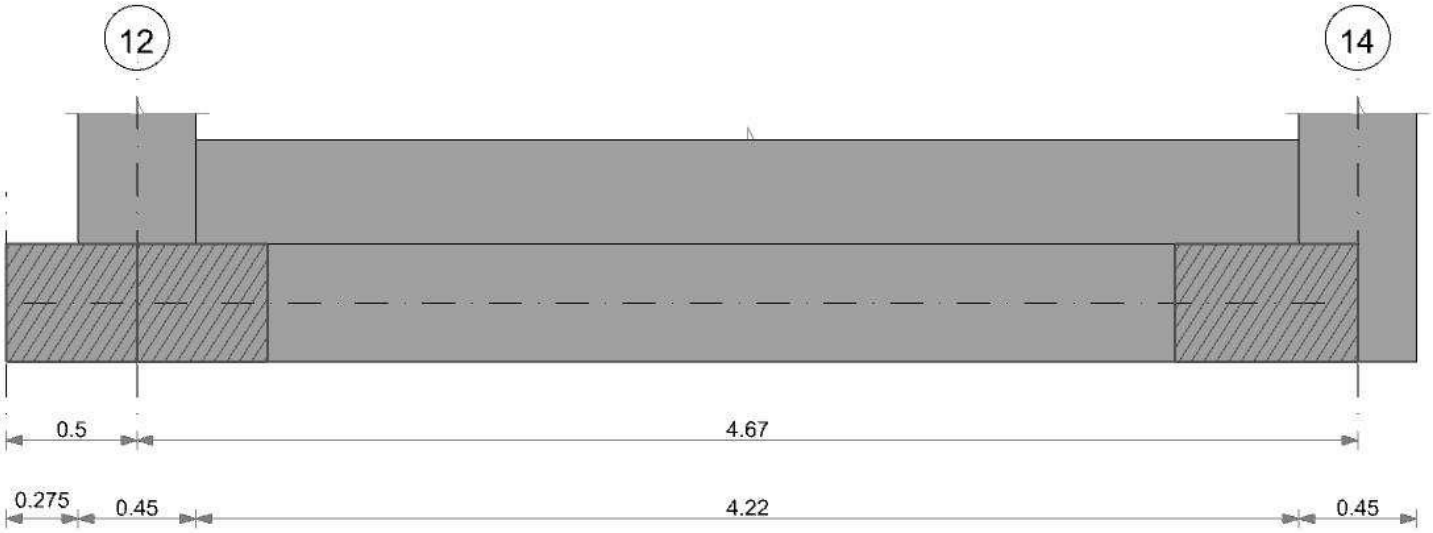
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	298	SLE RA 19	0.05	0	298	150	SLE RA 19	0.05	0	204	SLE RA 19	0.0033	0	SLE RA 19	Si
D	0.05	0	150	SLE RA 1	0.05	0	150	150	SLE RA 1	0.05	0	204	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	150	SLE RA 1	0.05	0	150	150	SLE RA 1	0.05	0	204	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 19	0.19	0	204	298	SLE RA 19	0.19	0	150	SLE RA 1	0.1	0	204	SLE RA 19	Si
D	0.19	0	SLE RA 1	0.19	0	150	204	SLE RA 1	0.19	0	150	SLE RA 1	0.1	0	204	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	150	204	SLE RA 1	0.19	0	150	SLE RA 1	0.1	0	204	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

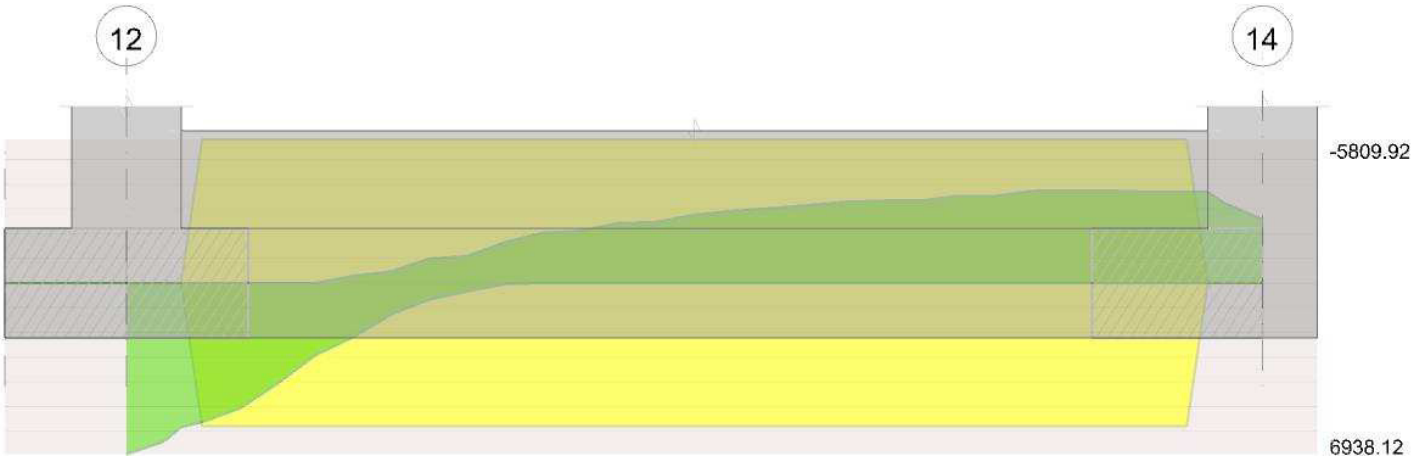
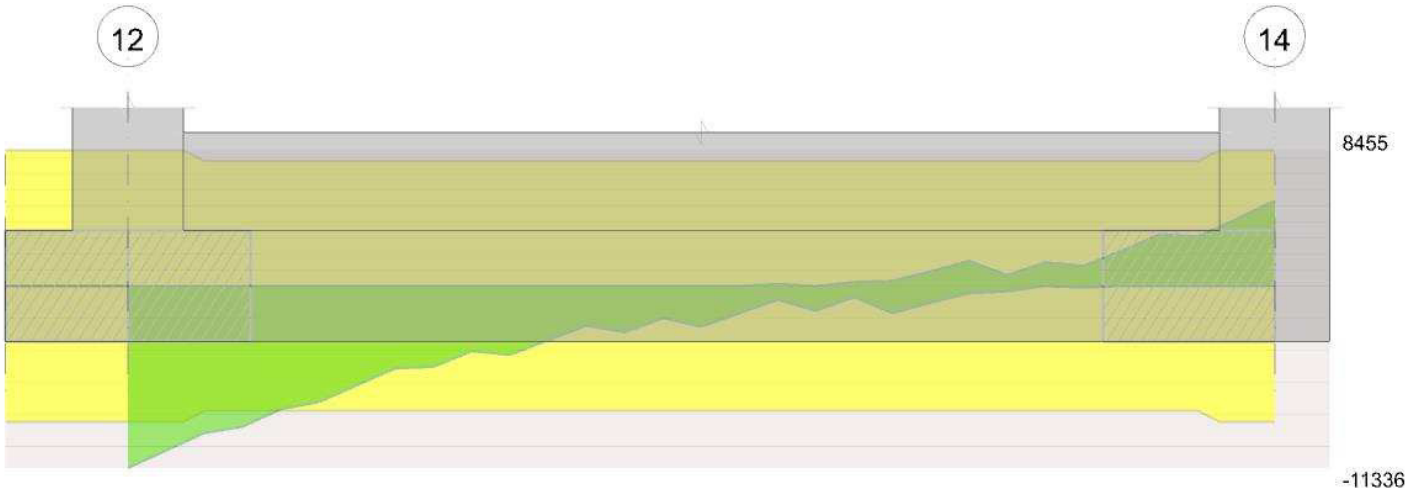


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 12 - 14, sezione R 50x45, aste 141, 140, 139, 138, 137, 136, 135, 134, 133, 132, 131, 130

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	919	SLU 82	0.018	2788	3196	SLU 82	15877	Si
0.23	0.41	0.0002	923	SLU 82	0.018	2788	3211	SLU 82	15877	Si
2.33	0.41	0.0002	767	SLV 15	0.086	2711	2668	SLV 15	15877	Si
4.44	0.41	0.0002	1085	SLV 11	0.086	2711	3774	SLV 11	15877	Si
4.67	0.41	0.0002	1161	SLV 11	0.086	2711	4037	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	0.00000175	669	SLE RA 19	19368	1494000	240159	36000000	589	SLE QP 2	17053	1120500	Si
0.23	0.41	0.00000175	672	SLE RA 19	19457	1494000	241263	36000000	592	SLE QP 2	17127	1120500	Si
2.33	0.41	0.00000175	555	SLE RA 19	16049	1494000	199012	36000000	485	SLE QP 2	14050	1120500	Si
4.44	0.41	0.00000175	701	SLE RA 19	20288	1494000	251569	36000000	614	SLE QP 2	17782	1120500	Si
4.67	0.41	0.00000175	742	SLE RA 19	21476	1494000	266307	36000000	651	SLE QP 2	18835	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	10	159	SLV 16	0.36	1618	1.653	5.89	3	27.11	SLV 16	0.36	1618	1.653	Si
0.23	21	10	159	SLV 16	0.36	1618	1.653	5.92	3.01	27.11	SLV 16	0.36	1618	1.653	Si
2.33	17	10	159	SLV 15	0.36	1618	1.653	4.85	2.82	27.11	SLV 15	0.36	1618	1.653	Si
4.44	21	16	159	SLV 11	0.36	1618	1.653	6.14	4.7	27.11	SLV 11	0.36	1618	1.653	Si
4.67	23	18	159	SLV 11	0.36	1618	1.653	6.51	5.1	27.11	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
4.89	1.1	SLU 2	ST	LT	171	74	-24884	0	0	19	0	0	1.1	7569	186	40.64	Si
4.89	1.1	SLV 6	SIS	LT	-5558	640	-18588	-17	2	19	0	0	1.1	5654	5595	1.01	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
141,140,139,138,137,136,135,134,133,132,131,130	4.89	1.1	SLU 82	ST	BT	2.3	201900	38904	5.19	Si
141,140,139,138,137,136,135,134,133,132,131,130	4.89	1.1	SLV 16	SIS	BT	2.3	171789	36219	4.74	Si
141,140,139,138,137,136,135,134,133,132,131,130	4.89	1.1	SLD 16	SIS	BT	2.3	187336	30771	6.09	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	112	-38904	2691.88	-140.56	0	0	0	0.07	0.96	4.89	1496	2060	0	14430	
0	-3686	-36219	4597.45	1335.02	0	-6	0.04	0.13	0.85	4.82	1496	2060	0	14430	0.07
0	-1580	-30771	3014.9	502.03	0	-3	0.02	0.1	0.9	4.86	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	0.04	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

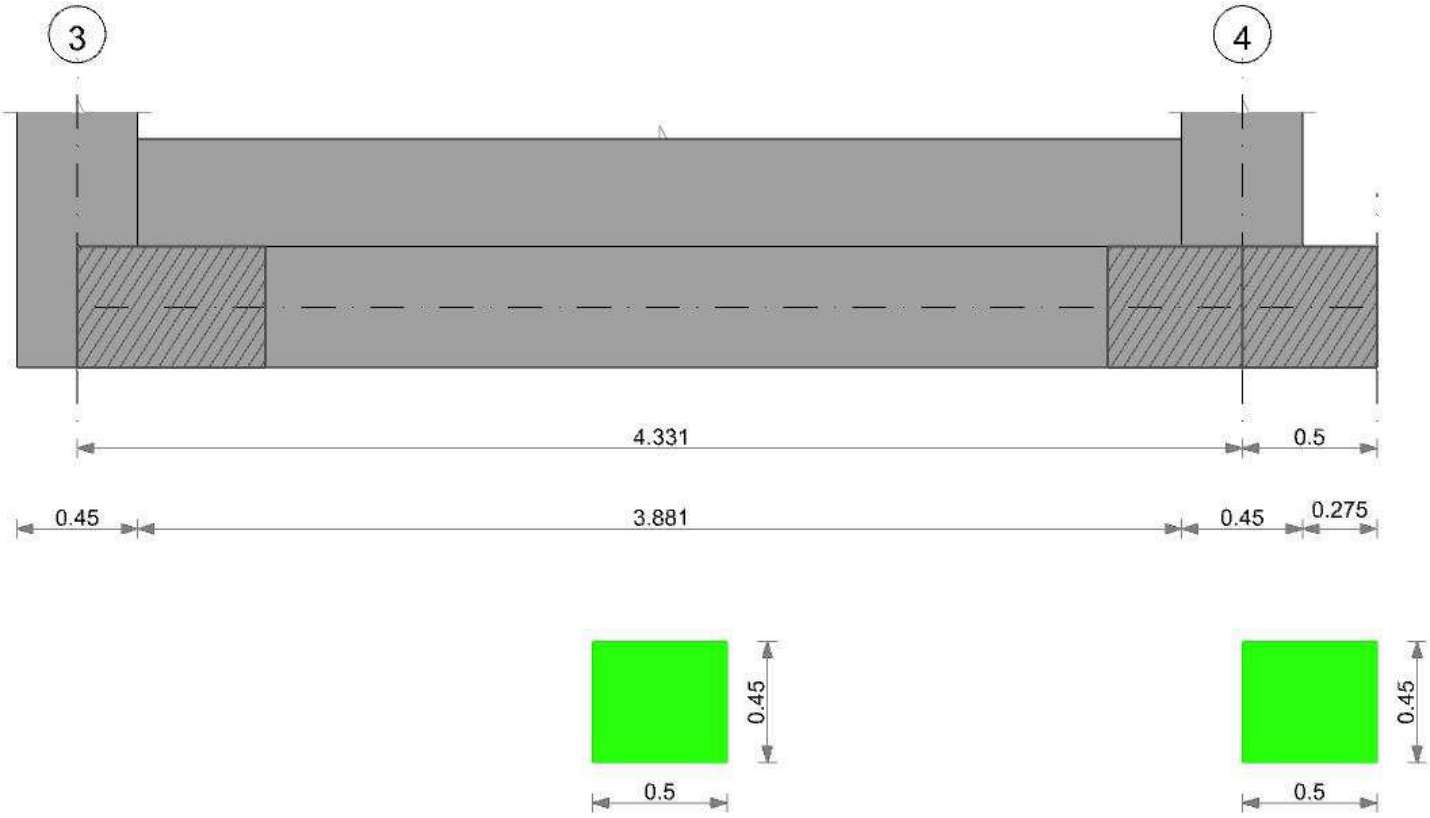
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	165	SLE RA 19	0.05	0	165	311	SLE RA 18	0.05	0	165	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	165	SLE RA 1	0.05	0	165	165	SLE RA 1	0.05	0	165	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	165	SLE RA 1	0.05	0	165	165	SLE RA 1	0.05	0	165	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 18	0.19	0	165	311	SLE RA 18	0.19	0	165	SLE RA 1	0.1	0	165	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	165	311	SLE RA 1	0.19	0	165	SLE RA 1	0.1	0	165	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	165	311	SLE RA 1	0.19	0	165	SLE RA 1	0.1	0	165	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

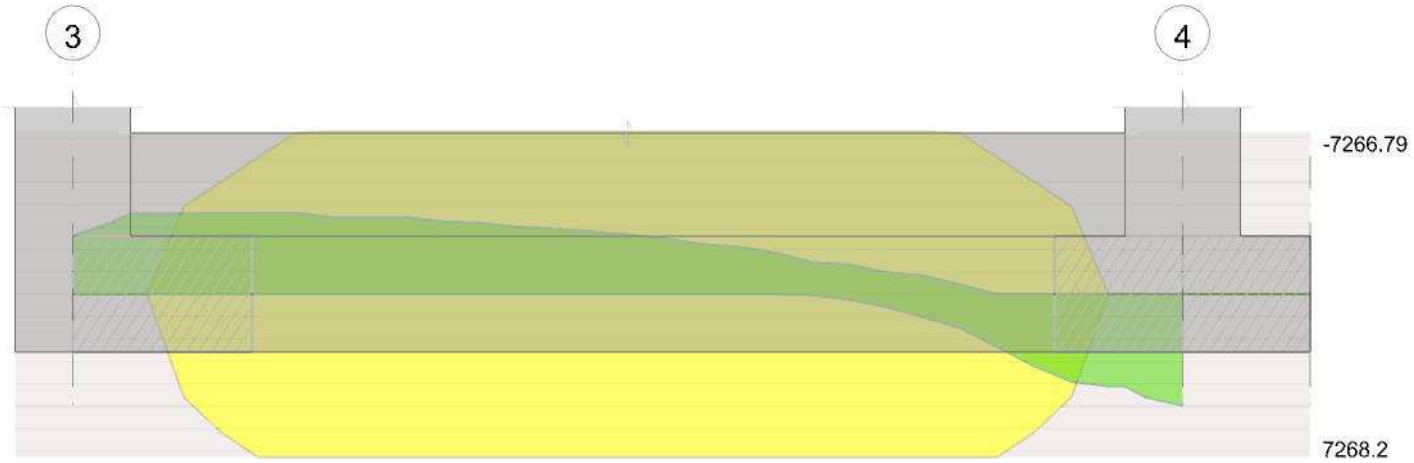
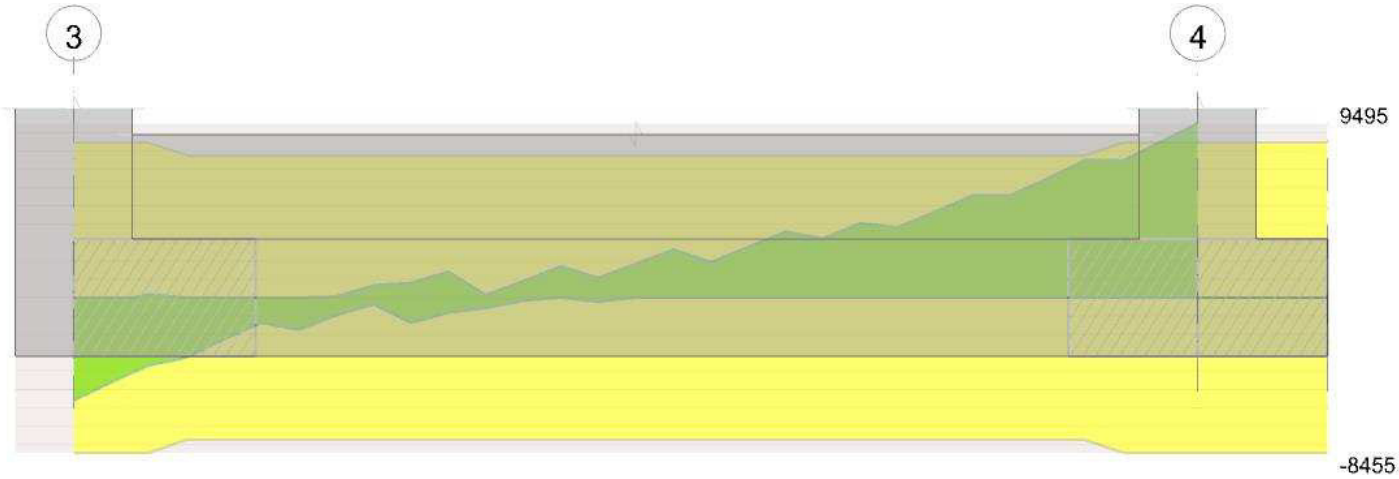


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 3 - 4, sezione R 50x45, aste 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1138	SLV 5	0.087	2741	3958	SLV 5	15877	Si
0.23	0.41	0.0002	1065	SLV 5	0.087	2741	3704	SLV 5	15877	Si
2.17	0.41	0.0002	794	SLU 81	0.018	2819	2763	SLU 81	15877	Si
4.11	0.41	0.0002	917	SLU 81	0.018	2819	3190	SLU 81	15877	Si
4.33	0.41	0.0002	919	SLU 81	0.018	2819	3196	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	0.00000177	755	SLE RA 18	21839	1494000	270798	36000000	656	SLE QP 2	18971	1120500	Si
0.23	0.41	0.00000177	715	SLE RA 18	20677	1494000	256399	36000000	620	SLE QP 2	17949	1120500	Si
2.17	0.41	0.00000177	575	SLE RA 18	16646	1494000	206415	36000000	498	SLE QP 2	14416	1120500	Si
4.11	0.41	0.00000177	665	SLE RA 18	19245	1494000	238642	36000000	578	SLE QP 2	16730	1120500	Si
4.33	0.41	0.00000177	666	SLE RA 18	19277	1494000	239036	36000000	579	SLE QP 2	16757	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	17	159	SLV 5	0.36	1618	1.653	6.56	4.82	27.41	SLV 5	0.36	1618	1.653	Si
0.23	22	15	159	SLV 5	0.36	1618	1.653	6.2	4.45	27.41	SLV 5	0.36	1618	1.653	Si
2.17	17	9	159	SLV 1	0.36	1618	1.653	4.98	2.68	27.41	SLV 1	0.36	1618	1.653	Si
4.11	20	9	159	SLV 1	0.36	1618	1.653	5.78	2.67	27.41	SLV 1	0.36	1618	1.653	Si
4.33	20	9	159	SLV 2	0.36	1618	1.653	5.79	2.64	27.41	SLV 2	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
4.56	1.1	SLU 10	ST	LT	497	-29	-26439	1	0	19	0	0	1.1	8042	498	16.16	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
56,57,58,59,60,61,62,63,64,65,66	4.56	1.1	SLU 81	ST	BT	2.3	185857	36712	5.06	Si
56,57,58,59,60,61,62,63,64,65,66	4.56	1.1	SLV 2	SIS	BT	2.3	158489	33139	4.78	Si
56,57,58,59,60,61,62,63,64,65,66	4.56	1.1	SLD 2	SIS	BT	2.3	172602	28433	6.07	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	-43	-36712	-2773.57	-94.39	0	0	0	-0.08	0.95	4.55	1496	2060	0	14430	
0	3505	-33139	-4272.81	-1546.86	0	6	-0.05	-0.13	0.84	4.46	1496	2060	0	14430	0.07
0	1525	-28433	-2883.45	-696.39	0	3	-0.02	-0.1	0.9	4.51	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

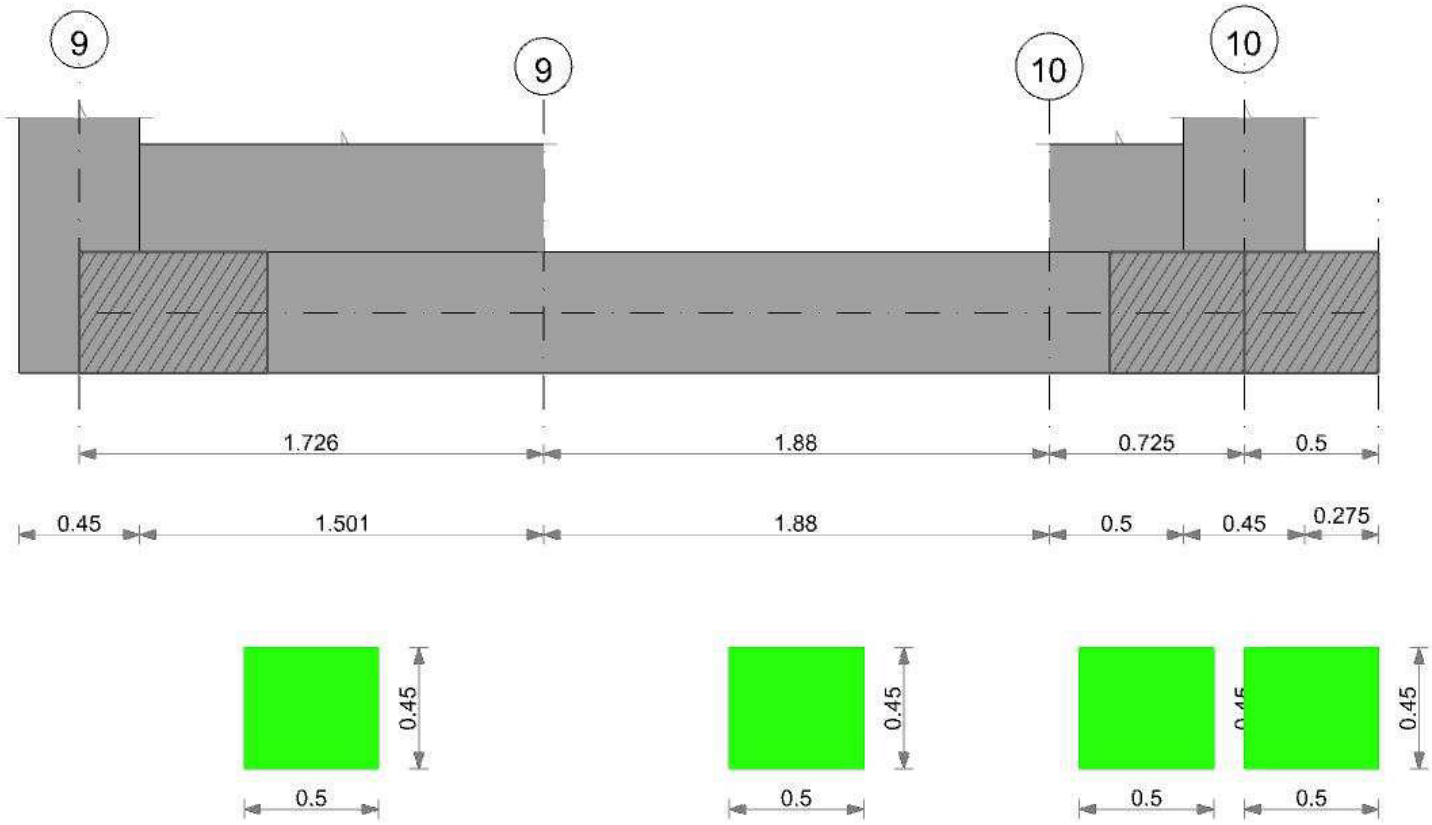
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	140	SLE RA 18	0.05	0	140	5	SLE RA 19	0.05	0	140	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	140	SLE RA 1	0.05	0	140	140	SLE RA 1	0.05	0	140	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	140	SLE RA 1	0.05	0	140	140	SLE RA 1	0.05	0	140	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 19	0.19	0	140	5	SLE RA 19	0.19	0	140	SLE RA 1	0.1	0	140	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	140	5	SLE RA 1	0.19	0	140	SLE RA 1	0.1	0	140	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	140	5	SLE RA 1	0.19	0	140	SLE RA 1	0.1	0	140	SLE RA 1	Si

CORDOLO 14

Geometria



Caratteristiche dei materiali

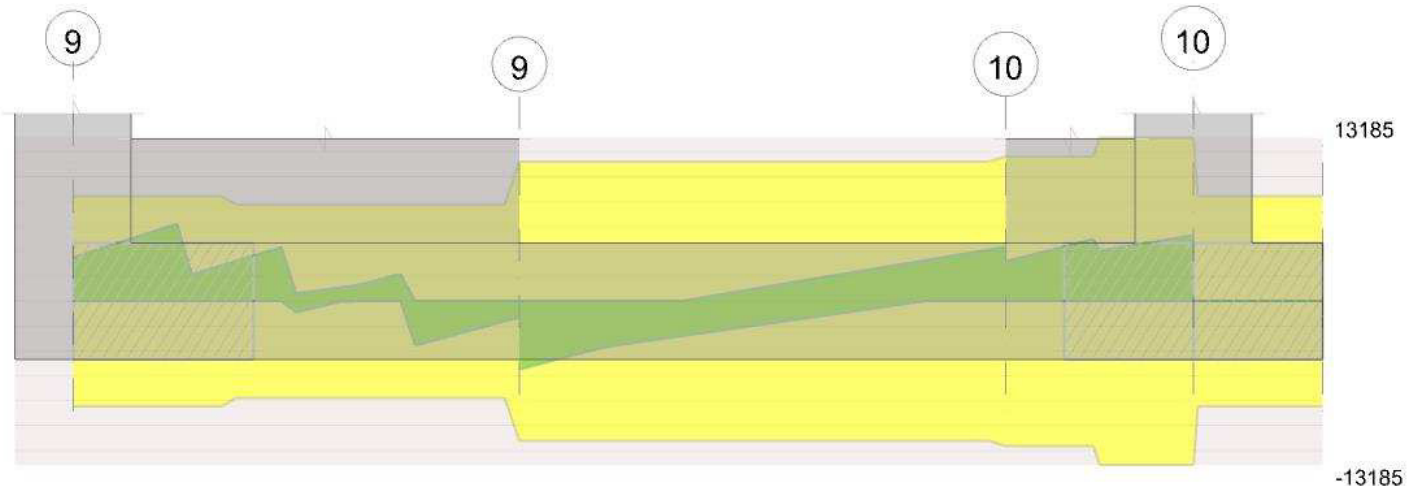
Acciaio: B450C Fyk 45000000
Calcestruzzo: C25/30 Rck 3000000

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

Campata 2 tra i fili 9 - 10, sezione R 50x45, asta 12

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							-261.59	SLU 81	-1150.09	-7755.45	0.113	6.74	Si
0.94	0.000509	0.052	0.000509	0.052							-3046.35	SLU 81	-3075.71	-7755.45	0.113	2.52	Si
1	0.000509	0.052	0.000509	0.052							-3070.85	SLU 81	-3075.71	-7755.45	0.113	2.52	Si
1.88	0.000509	0.052	0.000509	0.052							-1355.05	SLU 82	-2017.49	-7755.45	0.113	3.84	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	1842.65	SLV 11	1842.65	7266.79	0.197	3.94	-2149.77	SLV 6	-2519.96	-7266.79	0.197	2.88	Si
0.63	0.000509	0.052	0.000509	0.052	-460.23	SLV 7	66.34	7266.79	0.197	109.54	-2929.71	SLV 10	-2934.71	-7266.79	0.197	2.48	Si
0.94	0.000509	0.052	0.000509	0.052							-2825.87	SLV 10	-2924.26	-7266.79	0.197	2.48	Si
1.88	0.000509	0.052	0.000509	0.052							-1660.27	SLV 15	-1928.66	-7266.79	0.197	3.77	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	0.000008	0.000509	0	-5472	SLU 82	-5472	-7764	-63178	-11243	-11243	1	2.05	Si
0.94	0.000008	0.000509	0	-567	SLU 82	-567	-7764	-63178	-11243	-11243	1	19.83	Si
1.88	0.0000083	0.000509	0	4188	SLU 81	4188	7764	63178	11661	11661	1	2.78	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	0.000008	0.000509	0	-4684	SLV 11	-4684	-7764	-63178	-11243	-11243	1	2.4	Si
0.94	0.000008	0.000509	0	1111	SLV 6	1111	7764	63178	11243	11243	1	10.12	Si
0.94	0.000008	0.000509	0	-1857	SLV 11	-1857	-7764	-63178	-11243	-11243	1	6.05	Si
1.88	0.0000083	0.000509	0	4366	SLV 6	4366	7764	63178	11661	11661	1	2.67	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	-185.97	18	-835.84	44210	1494000	663156	36000000	-153.56	2	-731.64	38699	1120500			Si
0.94	-2224.28	18	-2246.29	118814	1494000	1782206	36000000	-1971.72	2	-1993.06	105420	1120500			Si
1.88	-993.44	19	-1476.42	78093	1494000	1171393	36000000	-893.98	2	-1320.26	69833	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	-3550	-1134	-11243	SLV 11	0.36	1618	1.653	-153.56	-1996.21	-7266.79	SLV 6	0.36	1618	1.653	Si
0.94	-373	-1484	-11243	SLV 11	0.36	1618	1.653	-1852.06	-1072.2	-7266.79	SLV 10	0.36	1618	1.653	Si
1.88	2681	1684	11661	SLV 6	0.36	1618	1.653	-893.98	-766.29	-7266.79	SLV 15	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 9 - 9, sezione R 50x45, aste 16, 15, 14, 13

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1176	SLV 10	0.088	2800	3663	SLU 81	15877	Si
0.23	0.41	0.0002	1139	SLU 81	0.018	2880	3499	SLU 81	15877	Si
0.86	0.41	0.0002	1023	SLU 81	0.018	2880	3146	SLU 81	15877	Si
1.73	0.41	0.0004	894	SLU 81	0.034	6363	2747	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	865	SLE RA 18	25022	1494000	310277	36000000	755	SLE QP 2	21834	1120500	Si
0.23	0.41	0.0000018	826	SLE RA 18	23896	1494000	296312	36000000	720	SLE QP 2	20826	1120500	Si
0.86	0.41	0.0000018	742	SLE RA 18	21453	1494000	266019	36000000	644	SLE QP 2	18633	1120500	Si
1.73	0.41	0.00000401	647	SLE RA 18	18168	1494000	225286	36000000	559	SLE QP 2	15697	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 10	0.36	1618	1.653	7.55	4.21	28	SLV 10	0.36	1618	1.653	Si
0.23	22	11	159	SLV 10	0.36	1618	1.653	7.2	3.72	28	SLV 10	0.36	1618	1.653	Si
0.86	20	8	159	SLV 10	0.36	1618	1.653	6.44	2.48	28	SLV 10	0.36	1618	1.653	Si
1.73	17	4	159	SLV 9	0.36	1618	1.653	5.59	1.25	61.17	SLV 9	0.36	1618	1.653	Si

Campata 2 tra i fili 9 - 10, sezione R 50x45, asta 12

Campata 3 tra i fili 10 - 10, sezione R 50x45, aste 11, 10

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	827	SLU 81	0.035	6596	2540	SLU 81	15877	Si
0.36	0.41	0.0004	860	SLU 81	0.035	6596	2642	SLU 81	15877	Si
0.5	0.41	0.0004	871	SLU 81	0.035	6596	2678	SLU 81	15877	Si
0.72	0.41	0.0004	888	SLU 81	0.035	6596	2728	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	0.00000416	596	SLE RA 18	16722	1494000	207348	36000000	511	SLE QP 2	14330	1120500	Si
0.36	0.41	0.00000416	620	SLE RA 18	17393	1494000	215670	36000000	532	SLE QP 2	14913	1120500	Si
0.5	0.41	0.00000416	629	SLE RA 18	17630	1494000	218615	36000000	539	SLE QP 2	15119	1120500	Si
0.72	0.41	0.00000416	641	SLE RA 18	17962	1494000	222728	36000000	550	SLE QP 2	15407	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	0	16	SLV 16	0.36	1618	1.653	5.11	0	63.38	SLV 16	0.36	1618	1.653	Si
0.36	16	0	16	SLV 16	0.36	1618	1.653	5.32	0	63.38	SLV 16	0.36	1618	1.653	Si
0.5	17	0	17	SLV 16	0.36	1618	1.653	5.39	0	63.38	SLV 16	0.36	1618	1.653	Si
0.72	17	0	26	SLV 16	0.36	1618	1.653	5.5	0.03	63.38	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
4.56	1.1	SLU 2	ST	LT	92	-57	-20312	0	0	19	0	0	1.1	6179	108	57.03	Si
4.56	1.1	SLV 15	SIS	LT	880	-3769	-21704	2	-10	19	0	0	1.1	6602	3870	1.71	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
16,15,14,13,12,11,10	4.56	1.1	SLU 81	ST	BT	2.3	207833	32311	6.43	Si
16,15,14,13,12,11,10	4.56	1.1	SLV 13	SIS	LT	2.3	170183	23403	7.27	Si
16,15,14,13,12,11,10	4.56	1.1	SLD 13	SIS	BT	2.3	190728	22556	8.46	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	-99	-32311	116.63	-2628.65	0	0	-0.08	0	1.09	4.39	1496	2060	0	14430	
0	-3621	-23403	1793.73	-3575.53	0	-9	-0.15	0.08	0.95	4.25	1496	2060	37	0	0.07
0	-1628	-22556	833.75	-2564.56	0	-4	-0.11	0.04	1.03	4.33	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
43	56	66	1.17	1.17	0.91	1.16	1.27	1	0.74	0.73	0.62	1	1	1	1	1	1	1	1	1	0.96	0.98	0.96
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

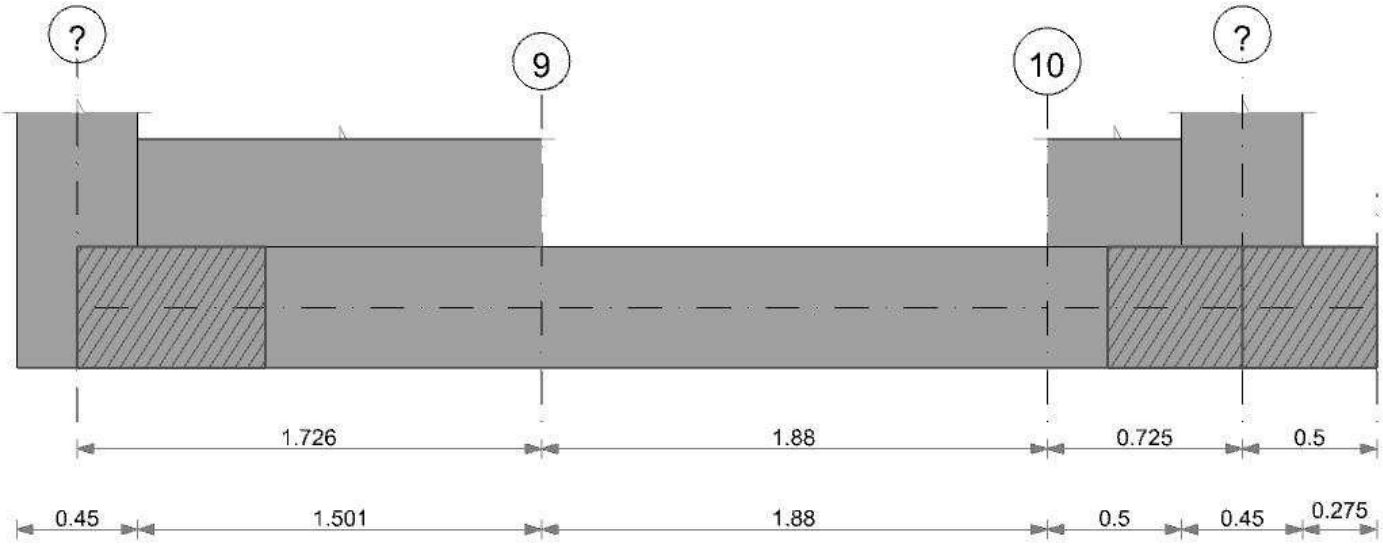
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	154	SLE RA 18	0.05	0	154	83	SLE RA 18	0.05	0	83	SLE RA 18	0.0033	0	SLE RA 18	Si
D	0.05	0	154	SLE RA 1	0.05	0	154	154	SLE RA 1	0.05	0	106	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	154	SLE RA 1	0.05	0	154	154	SLE RA 1	0.05	0	106	SLE RA 1	0.0033	0	SLE RA 1	Si

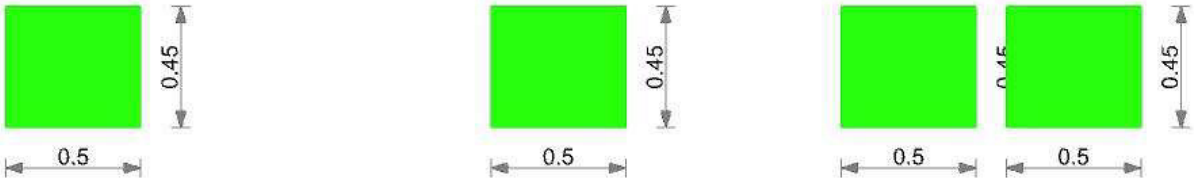
Verifiche geotecniche - Rotazioni assolute e differenziali

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 11	0.19	0	154	106	SLE RA 18	0.19	0	154	SLE RA 1	0.1	0	106	SLE RA 18	Si
D	0.19	0	SLE RA 1	0.19	0	154	106	SLE RA 1	0.19	0	154	SLE RA 1	0.1	0	106	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	154	106	SLE RA 1	0.19	0	154	SLE RA 1	0.1	0	106	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 50x45	Rettangolare	0.5	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

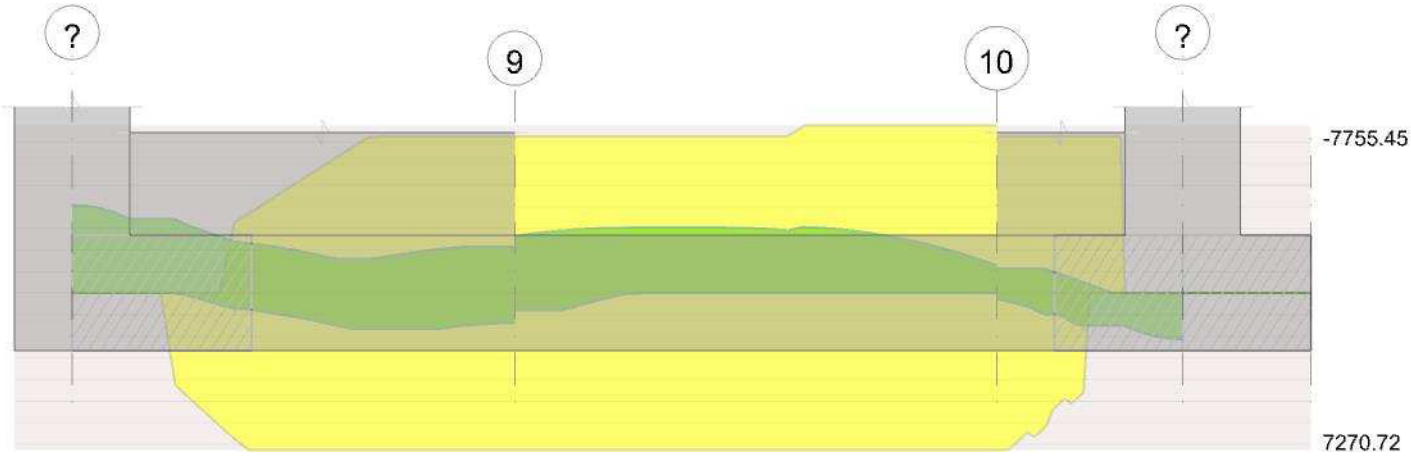
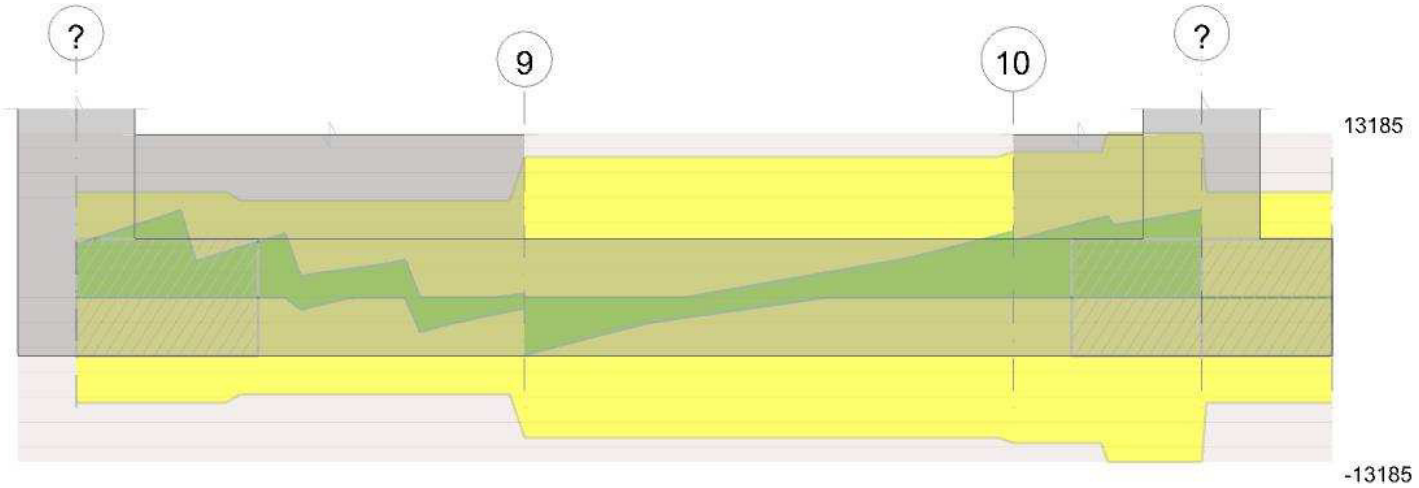


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 9 - 10, sezione R 50x45, asta 19

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							-1108.76	SLU 81	-1844.39	-7755.45	0.113	4.2	Si
0.75	0.000509	0.052	0.000509	0.052							-3045.1	SLU 81	-3078.62	-7755.45	0.113	2.52	Si
0.94	0.000509	0.052	0.000509	0.052							-3065.03	SLU 81	-3078.62	-7755.45	0.113	2.52	Si
1.88	0.000509	0.052	0.000509	0.052							-427.21	SLU 82	-1283.6	-7755.45	0.113	6.04	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	804.2	SLV 7	804.2	7266.79	0.197	9.04	-2255.22	SLV 10	-2638.64	-7266.79	0.197	2.75	Si
0.5	0.000509	0.052	0.000509	0.052							-2999.85	SLV 10	-3029.61	-7266.79	0.197	2.4	Si
0.94	0.000509	0.052	0.000509	0.052							-2844.47	SLV 10	-2994.27	-7266.79	0.197	2.43	Si
1.88	0.000509	0.052	0.000509	0.052							-410.07	SLV 7	-922	-7266.79	0.197	7.88	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	0.000008	0.000509	0	-4617	SLU 82	-4617	-7764	-63178	-11243	-11243	1	2.43	Si
0.94	0.000008	0.000509	0	378	SLU 81	378	7764	63178	11243	11243	1	29.75	Si
1.88	0.0000083	0.000509	0	5276	SLU 81	5276	7764	63178	11661	11661	1	2.21	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	0.000008	0.000509	0	-3481	SLV 11	-3481	-7764	-63178	-11243	-11243	1	3.23	Si
0.94	0.000008	0.000509	0	1174	SLV 10	1174	7764	63178	11243	11243	1	9.58	Si
0.94	0.000008	0.000509	0	-667	SLV 7	-667	-7764	-63178	-11243	-11243	1	16.86	Si
1.88	0.0000083	0.000509	0	4583	SLV 10	4583	7764	63178	11661	11661	1	2.54	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	-813.29	18	-1350.03	71408	1494000	1071114	36000000	-725.51	2	-1200.74	63511	1120500			Si
0.94	-2238.22	18	-2248.47	118929	1494000	1783938	36000000	-1984.88	2	-1994.22	105481	1120500			Si
1.88	-306.35	19	-932.94	49346	1494000	740197	36000000	-269.32	2	-825.69	43674	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	-2980	-501	-11243	SLV 11	0.36	1618	1.653	-725.51	-1529.71	-7266.79	SLV 10	0.36	1618	1.653	Si
0.94	253	920	11243	SLV 10	0.36	1618	1.653	-1976.01	-1018.26	-7266.79	SLV 10	0.36	1618	1.653	Si
1.88	3420	1163	11661	SLV 10	0.36	1618	1.653	-269.32	-140.76	-7266.79	SLV 7	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili ? - 9, sezione R 50x45, aste 23, 22, 21, 20

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1190	SLV 10	0.088	2800	3685	SLU 81	15877	Si
0.23	0.41	0.0002	1143	SLU 81	0.018	2880	3522	SLU 81	15877	Si
0.86	0.41	0.0002	1029	SLU 81	0.018	2880	3170	SLU 81	15877	Si
1.73	0.41	0.0004	901	SLU 81	0.034	6363	2774	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	869	SLE RA 18	25125	1494000	311547	36000000	759	SLE QP 2	21949	1120500	Si
0.23	0.41	0.0000018	830	SLE RA 18	24004	1494000	297653	36000000	724	SLE QP 2	20946	1120500	Si
0.86	0.41	0.0000018	746	SLE RA 18	21579	1494000	267586	36000000	649	SLE QP 2	18768	1120500	Si
1.73	0.41	0.00000401	652	SLE RA 18	18315	1494000	227101	36000000	564	SLE QP 2	15850	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 10	0.36	1618	1.653	7.59	4.31	28	SLV 10	0.36	1618	1.653	Si
0.23	22	12	159	SLV 10	0.36	1618	1.653	7.24	3.83	28	SLV 10	0.36	1618	1.653	Si
0.86	20	8	159	SLV 10	0.36	1618	1.653	6.49	2.59	28	SLV 10	0.36	1618	1.653	Si
1.73	17	4	159	SLV 10	0.36	1618	1.653	5.64	1.36	61.17	SLV 10	0.36	1618	1.653	Si

Campata 2 tra i fili 9 - 10, sezione R 50x45, asta 19

Campata 3 tra i fili 10 - ?, sezione R 50x45, aste 18, 17

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	861	SLU 81	0.035	6596	2652	SLU 81	15877	Si
0.36	0.41	0.0004	894	SLU 81	0.035	6596	2754	SLU 81	15877	Si
0.5	0.41	0.0004	906	SLU 81	0.035	6596	2791	SLU 81	15877	Si
0.72	0.41	0.0004	922	SLU 81	0.035	6596	2841	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	0.00000416	622	SLE RA 18	17444	1494000	216301	36000000	535	SLE QP 2	15009	1120500	Si
0.36	0.41	0.00000416	646	SLE RA 18	18118	1494000	224658	36000000	556	SLE QP 2	15594	1120500	Si
0.5	0.41	0.00000416	655	SLE RA 18	18355	1494000	227605	36000000	564	SLE QP 2	15801	1120500	Si
0.72	0.41	0.00000416	667	SLE RA 18	18686	1494000	231710	36000000	574	SLE QP 2	16089	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	2	159	SLV 14	0.36	1618	1.653	5.35	0.4	63.38	SLV 16	0.36	1618	1.653	Si
0.36	17	2	159	SLV 13	0.36	1618	1.653	5.56	0.44	63.38	SLV 16	0.36	1618	1.653	Si
0.5	17	2	159	SLV 13	0.36	1618	1.653	5.64	0.46	63.38	SLV 16	0.36	1618	1.653	Si
0.72	18	2	159	SLV 13	0.36	1618	1.653	5.74	0.49	63.38	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
4.56	1.1	SLU 2	ST	LT	191	-57	-20635	1	0	19	0	0	1.1	6277	199	31.55	Si
4.56	1.1	SLV 4	SIS	LT	565	3498	-20011	2	10	19	0	0	1.1	6087	3543	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
23,22,21,20,19,18,17	4.56	1.1	SLU 81	ST	BT	2.3	209032	32788	6.38	Si
23,22,21,20,19,18,17	4.56	1.1	SLV 13	SIS	BT	2.3	174368	24448	7.13	Si
23,22,21,20,19,18,17	4.56	1.1	SLD 13	SIS	BT	2.3	192879	23205	8.31	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	-99	-32788	116.63	-2243.62	0	0	-0.07	0	1.09	4.42	1496	2060	0	14430	
0	-3621	-24448	1793.73	-2996.52	0	-8	-0.12	0.07	0.95	4.31	1496	2060	0	14430	0.07
0	-1628	-23205	833.75	-2164.78	0	-4	-0.09	0.04	1.03	4.37	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

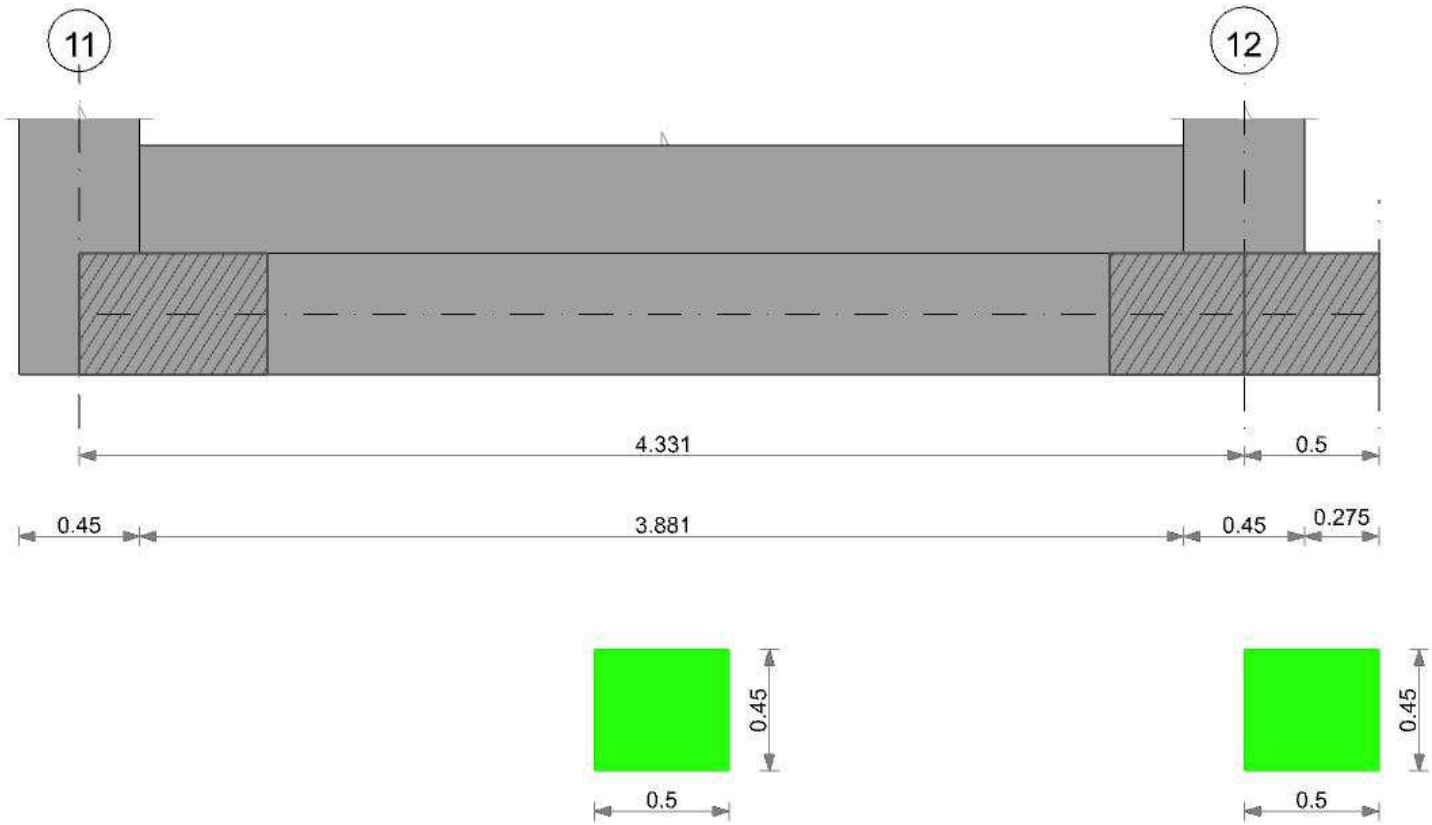
Tipo	Assoluto				Differenziale					Relativo				Rapp. inflessione			Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	22	SLE RA 18	0.05	0	22	85	SLE RA 18	0.05	0	85	SLE RA 18	0.0033	0	SLE RA 18	Si
D	0.05	0	156	SLE RA 1	0.05	0	156	156	SLE RA 1	0.05	0	108	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	156	SLE RA 1	0.05	0	156	156	SLE RA 1	0.05	0	108	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 11	0.19	0	85	22	SLE RA 18	0.19	0	156	SLE RA 1	0.1	0	85	SLE RA 18	Si
D	0.19	0	SLE RA 1	0.19	0	156	108	SLE RA 1	0.19	0	156	SLE RA 1	0.1	0	108	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	156	108	SLE RA 1	0.19	0	156	SLE RA 1	0.1	0	108	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

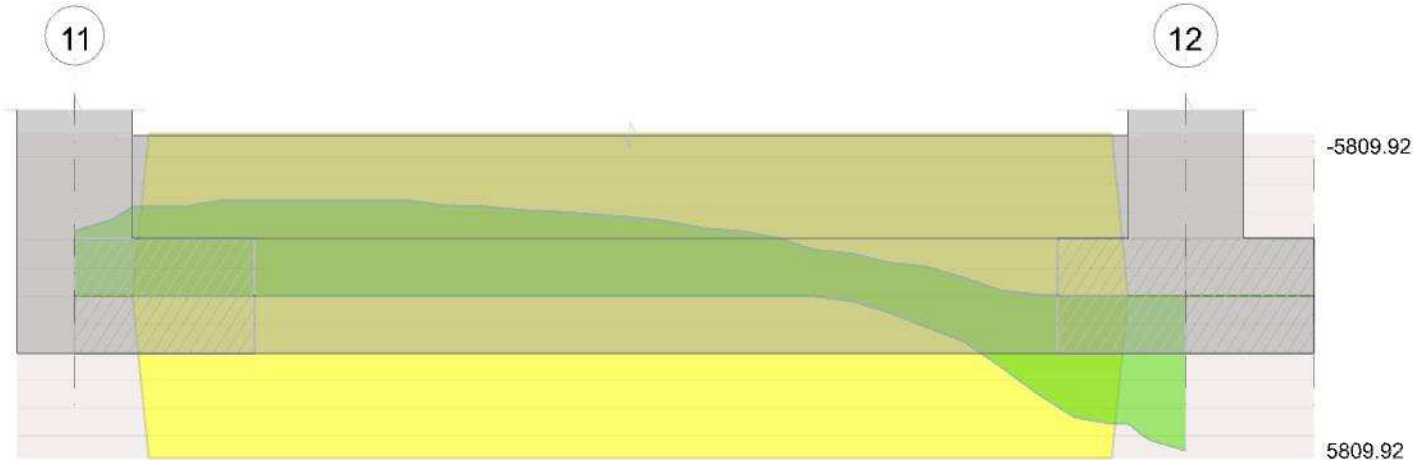
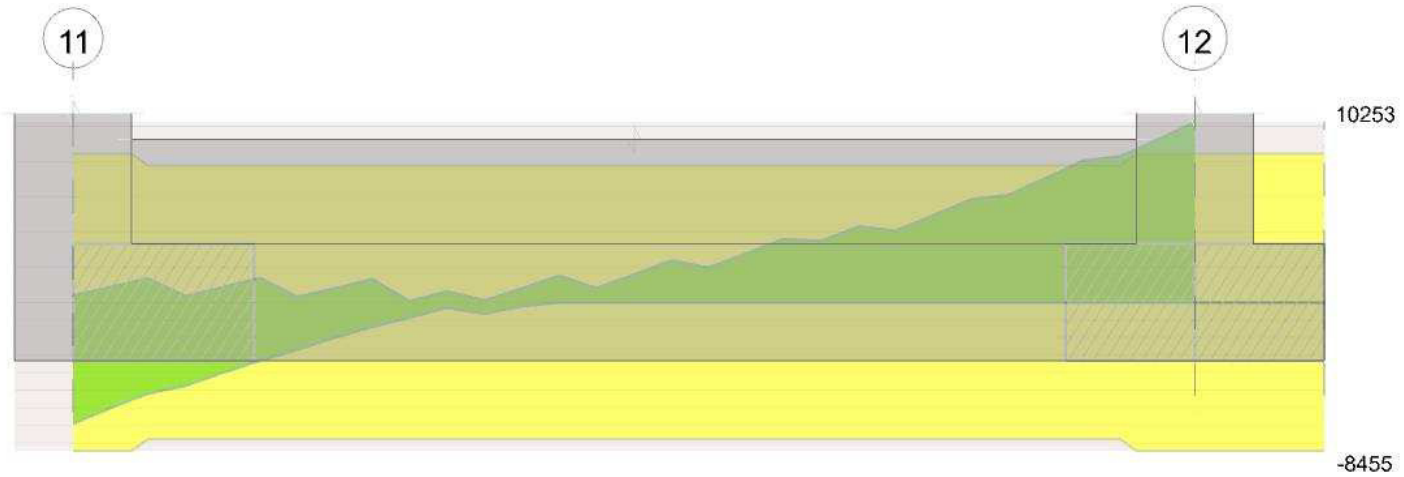


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 11 - 12, sezione R 50x45, aste 104, 103, 102, 101, 100, 99, 98, 97, 96, 95, 94

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1056	SLV 10	0.087	2741	3673	SLV 10	15877	Si
0.23	0.41	0.0002	987	SLV 10	0.087	2741	3435	SLV 10	15877	Si
2.17	0.41	0.0002	747	SLV 14	0.087	2741	2597	SLV 14	15877	Si
4.11	0.41	0.0002	912	SLU 81	0.018	2819	3171	SLU 81	15877	Si
4.33	0.41	0.0002	919	SLU 82	0.018	2819	3196	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	0.00000177	692	SLE RA 18	20021	1494000	248264	36000000	613	SLE QP 2	17721	1120500	Si
0.23	0.41	0.00000177	656	SLE RA 18	18989	1494000	235469	36000000	580	SLE QP 2	16792	1120500	Si
2.17	0.41	0.00000177	541	SLE RA 18	15641	1494000	193943	36000000	475	SLE QP 2	13757	1120500	Si
4.11	0.41	0.00000177	664	SLE RA 18	19210	1494000	238205	36000000	585	SLE QP 2	16917	1120500	Si
4.33	0.41	0.00000177	669	SLE RA 19	19363	1494000	240096	36000000	589	SLE QP 2	17048	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	21	15	159	SLV 10	0.36	1618	1.653	6.13	4.43	27.41	SLV 10	0.36	1618	1.653	Si
0.23	20	14	159	SLV 10	0.36	1618	1.653	5.8	4.07	27.41	SLV 10	0.36	1618	1.653	Si
2.17	17	9	159	SLV 14	0.36	1618	1.653	4.75	2.71	27.41	SLV 14	0.36	1618	1.653	Si
4.11	20	10	159	SLV 16	0.36	1618	1.653	5.85	2.97	27.41	SLV 16	0.36	1618	1.653	Si
4.33	20	10	159	SLV 16	0.36	1618	1.653	5.89	3	27.41	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
4.56	1.1	SLU 2	ST	LT	170	59	-22531	0	0	19	0	0	1.1	6853	180	38.01	Si
4.56	1.1	SLV 7	SIS	LT	5205	463	-18140	16	1	19	0	0	1.1	5518	5226	1.06	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	γR	Rd	Ed	Rd/Ed	Verifica
104,103,102,101,100,99,98,97,96,95,94	4.56	1.1	SLU 81	ST	BT	2.3	189646	35318	5.37	Si
104,103,102,101,100,99,98,97,96,95,94	4.56	1.1	SLV 13	SIS	BT	2.3	163558	32732	5	Si
104,103,102,101,100,99,98,97,96,95,94	4.56	1.1	SLD 13	SIS	BT	2.3	177987	27937	6.37	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	-35318	2237.07	577.21	0	0	0.02	0.06	0.97	4.52	1496	2060	0	14430	
0	-3376	-32732	3944.34	-778.51	0	-6	-0.02	0.12	0.86	4.51	1496	2060	0	14430	0.07
0	-1451	-27937	2563.61	-146.37	0	-3	-0.01	0.09	0.92	4.55	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	165	SLE RA 19	0.05	0	165	31	SLE RA 19	0.05	0	165	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	165	SLE RA 1	0.05	0	165	165	SLE RA 1	0.05	0	165	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	165	SLE RA 1	0.05	0	165	165	SLE RA 1	0.05	0	165	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 19	0.19	0	165	31	SLE RA 19	0.19	0	165	SLE RA 1	0.1	0	165	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	165	31	SLE RA 1	0.19	0	165	SLE RA 1	0.1	0	165	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	165	31	SLE RA 1	0.19	0	165	SLE RA 1	0.1	0	165	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 7	PF	0.392	SLV 15	0.0888	0.3635	39	0.3588	0.3618
Maschio 14	V	2.033	SLV 6	0.3624	1.4833	1618	1.6529	1.4831
Maschio 25	PFFP	0.459	SLV 11	0.1051	0.43	58	0.4222	0.4274
Maschio 22	R	1.586	SLV 16	0.3624	1.4833	1618	1.6529	1.4831
Trave di accoppiamento 7	PF	0.165	SLV 1	0.0349	0.1428	4	0.1411	0.139
Trave di accoppiamento 7	V	0.264	SLV 2	0.0572	0.2342	13	0.2287	0.2279

Coefficienti di sicurezza riferiti al solo materiale muratura

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 1	PF SLU	60.354	SLU 64	Si
Maschio 1	V SLU	36.28	SLU 73	Si
Maschio 1	PF	4.141	SLV 12	Si
Maschio 1	V	5.351	SLV 12	Si
Maschio 1	PFFP	13.544	SLV 16	Si
Maschio 1	R	4.195	SLV 1	Si
Maschio 2	PF SLU	28.992	SLU 40	Si
Maschio 2	V SLU	4.679	SLU 81	Si
Maschio 2	PF	2.152	SLV 8	Si
Maschio 2	V	3.847	SLV 9	Si
Maschio 2	PFFP	23.05	SLV 10	Si
Maschio 2	R	4.758	SLV 1	Si
Maschio 3	PF SLU	6.101	SLU 43	Si
Maschio 3	V SLU	19.405	SLU 64	Si
Maschio 3	PF	2.644	SLV 13	Si
Maschio 3	V	6.481	SLV 13	Si
Maschio 3	PFFP	6.88	SLV 12	Si
Maschio 3	R	4.629	SLV 5	Si
Maschio 4	PF SLU	12.613	SLU 44	Si
Maschio 4	V SLU	7.378	SLU 81	Si
Maschio 4	PF	5.372	SLV 15	Si
Maschio 4	V	3.11	SLV 13	Si
Maschio 4	PFFP	8.05	SLV 8	Si
Maschio 4	R	5.445	SLV 9	Si
Maschio 5	PF SLU	5.828	SLU 43	Si
Maschio 5	V SLU	8.851	SLU 81	Si
Maschio 5	PF	3.092	SLV 2	Si
Maschio 5	V	5.91	SLV 6	Si
Maschio 5	PFFP	6.919	SLV 7	Si
Maschio 5	R	4.946	SLV 10	Si
Maschio 7	PF SLU	1.56	SLU 44	Si
Maschio 7	V SLU	6.025	SLU 82	Si
Maschio 7	PF	0.507	SLV 15	No
Maschio 7	V	3.536	SLV 15	Si
Maschio 7	PFFP	15.668	SLV 15	Si
Maschio 7	R	7.944	SLV 2	Si
Maschio 8	PF SLU	13.016	SLU 39	Si
Maschio 8	V SLU	5.858	SLU 81	Si
Maschio 8	PF	3.761	SLV 4	Si
Maschio 8	V	4.085	SLV 2	Si
Maschio 8	PFFP	28.081	SLV 1	Si
Maschio 8	R	3.685	SLV 16	Si
Maschio 9	PF SLU	3.028	SLU 44	Si
Maschio 9	V SLU	5.453	SLU 82	Si
Maschio 9	PF	1.873	SLV 16	Si
Maschio 9	V	4.979	SLV 16	Si
Maschio 9	PFFP	8.738	SLV 5	Si
Maschio 9	R	3.825	SLV 12	Si
Maschio 10	PF SLU	11.303	SLU 44	Si
Maschio 10	V SLU	85.696	SLU 65	Si
Maschio 10	PF	2.692	SLV 14	Si
Maschio 10	V	3.939	SLV 16	Si
Maschio 10	PFFP	9.722	SLV 10	Si
Maschio 10	R	4.62	SLV 7	Si
Maschio 11	PF SLU	11.021	SLU 73	Si
Maschio 11	V SLU	15.247	SLU 73	Si
Maschio 11	PF	3.33	SLV 3	Si
Maschio 11	V	6.489	SLV 3	Si
Maschio 11	PFFP	5.742	SLV 6	Si
Maschio 11	R	5.24	SLV 11	Si
Maschio 12	PF SLU	3.833	SLU 82	Si
Maschio 12	V SLU	3.615	SLU 82	Si
Maschio 12	PF	2.03	SLV 7	Si
Maschio 12	V	3.828	SLV 11	Si
Maschio 12	PFFP	28.64	SLV 7	Si
Maschio 12	R	2.387	SLV 6	Si
Maschio 13	PF SLU	4.843	SLU 31	Si
Maschio 13	V SLU	5.763	SLU 82	Si
Maschio 13	PF	0	SLV 7	No
Maschio 13	V	2.867	SLV 11	Si
Maschio 13	PFFP	33.758	SLV 2	Si
Maschio 13	R	3.113	SLV 3	Si
Maschio 14	PF SLU	103.301	SLU 10	Si
Maschio 14	V SLU	31.208	SLU 81	Si
Maschio 14	PF	3.75	SLV 6	Si
Maschio 14	V	2.956	SLV 10	Si
Maschio 14	PFFP	7.364	SLV 1	Si

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 14	R	4.846	SLV 16	Si
Maschio 15	PF SLU	32.9	SLU 40	Si
Maschio 15	V SLU	93.077	SLU 73	Si
Maschio 15	PF	5.018	SLV 12	Si
Maschio 15	V	9.015	SLV 8	Si
Maschio 15	PFFP	1.632	SLV 9	Si
Maschio 15	R	5.009	SLV 14	Si
Maschio 17	PF SLU	3.112	SLU 40	Si
Maschio 17	V SLU	19.652	SLU 40	Si
Maschio 17	PF	1.469	SLV 13	Si
Maschio 17	V	6.197	SLV 13	Si
Maschio 17	PFFP	2.087	SLV 8	Si
Maschio 17	R	1.96	SLV 4	Si
Maschio 18	PF SLU	1.992	SLU 43	Si
Maschio 18	V SLU	6.14	SLU 81	Si
Maschio 18	PF	1.22	SLV 13	Si
Maschio 18	V	4.191	SLV 13	Si
Maschio 18	PFFP	1.904	SLV 15	Si
Maschio 18	R	2.033	SLV 13	Si
Maschio 19	PF SLU	7.774	SLU 44	Si
Maschio 19	V SLU	6.297	SLU 82	Si
Maschio 19	PF	1.881	SLV 15	Si
Maschio 19	V	4.726	SLV 15	Si
Maschio 19	PFFP	2.785	SLV 4	Si
Maschio 19	R	2.682	SLV 14	Si
Maschio 20	PF SLU	2.506	SLU 82	Si
Maschio 20	V SLU	10.949	SLU 82	Si
Maschio 20	PF	0.338	SLV 11	No
Maschio 20	V	5.281	SLV 15	Si
Maschio 20	PFFP	1.457	SLV 11	Si
Maschio 20	R	2.781	SLV 15	Si
Maschio 21	PF SLU	4.045	SLU 39	Si
Maschio 21	V SLU	19.67	SLU 39	Si
Maschio 21	PF	1.617	SLV 16	Si
Maschio 21	V	7.745	SLV 16	Si
Maschio 21	PFFP	1.976	SLV 13	Si
Maschio 21	R	1.94	SLV 1	Si
Maschio 22	PF SLU	2.024	SLU 82	Si
Maschio 22	V SLU	3.773	SLU 82	Si
Maschio 22	PF	1.496	SLV 16	Si
Maschio 22	V	3.199	SLV 16	Si
Maschio 22	PFFP	3.272	SLV 5	Si
Maschio 22	R	1.708	SLV 16	Si
Maschio 23	PF SLU	12.746	SLU 40	Si
Maschio 23	V SLU	19.656	SLU 82	Si
Maschio 23	PF	2.87	SLV 14	Si
Maschio 23	V	7.705	SLV 3	Si
Maschio 23	PFFP	2.23	SLV 10	Si
Maschio 23	R	2.486	SLV 3	Si
Maschio 24	PF SLU	3.922	SLU 81	Si
Maschio 24	V SLU	16.805	SLU 81	Si
Maschio 24	PF	1.344	SLV 3	Si
Maschio 24	V	6.193	SLV 14	Si
Maschio 24	PFFP	1.298	SLV 6	Si
Maschio 24	R	2.72	SLV 14	Si
Maschio 25	PF SLU	2.006	SLU 82	Si
Maschio 25	V SLU	12.753	SLU 52	Si
Maschio 25	PF	0.71	SLV 11	No
Maschio 25	V	6.66	SLV 11	Si
Maschio 25	PFFP	0	SLV 7	No
Maschio 25	R	7.046	SLV 9	Si
Maschio 26	PF SLU	1.473	SLU 65	Si
Maschio 26	V SLU	15.104	SLU 82	Si
Maschio 26	PF	0.564	SLV 11	No
Maschio 26	V	8.469	SLV 11	Si
Maschio 26	PFFP	2.323	SLV 6	Si
Maschio 26	R	2.838	SLV 2	Si
Maschio 27	PF SLU	3.474	SLU 44	Si
Maschio 27	V SLU	11.084	SLU 82	Si
Maschio 27	PF	2.211	SLV 4	Si
Maschio 27	V	9.049	SLV 4	Si
Maschio 27	PFFP	4.11	SLV 13	Si
Maschio 27	R	1.765	SLV 4	Si
Maschio 28	PF SLU	4.387	SLU 82	Si
Maschio 28	V SLU	7.532	SLU 64	Si
Maschio 28	PF	3.264	SLV 4	Si
Maschio 28	V	6.72	SLV 2	Si
Maschio 28	PFFP	3.601	SLV 1	Si
Maschio 28	R	1.907	SLV 15	Si
Maschio 29	PF SLU	10.265	SLU 39	Si
Maschio 29	V SLU	14.952	SLU 43	Si
Maschio 29	PF	3.408	SLV 6	Si
Maschio 29	V	3.297	SLV 10	Si
Maschio 29	PFFP	0	SLV 1	No
Maschio 29	R	5.158	SLV 14	Si

Verifica maschi in muratura

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
1	PF	2.32	SLV 16	0.362	1.483	1618	1.653	Si
	V	3.357	SLV 12	0.362	1.483	1618	1.653	Si
	PFFP	2.974	SLV 15	0.362	1.483	1618	1.653	Si
	R	2.949	SLV 1	0.362	1.483	1618	1.653	Si
2	PF	2.173	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	1000	SLV 1	0.362	1.483	1618	1.653	Si
3	PF	1.758	SLV 8	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.696	SLV 12	0.362	1.483	1618	1.653	Si
	R	3.002	SLV 5	0.362	1.483	1618	1.653	Si
4	PF	3.346	SLV 11	0.362	1.483	1618	1.653	Si
	V	3.152	SLV 15	0.362	1.483	1618	1.653	Si
	PFFP	2.265	SLV 8	0.362	1.483	1618	1.653	Si
	R	3.759	SLV 9	0.362	1.483	1618	1.653	Si
5	PF	1.933	SLV 7	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.777	SLV 7	0.362	1.483	1618	1.653	Si
	R	3.147	SLV 10	0.362	1.483	1618	1.653	Si
7	PF	0.392	SLV 15	0.089	0.364	39	0.359	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.309	SLV 15	0.362	1.483	1618	1.653	Si
	R	4.045	SLV 2	0.362	1.483	1618	1.653	Si
8	PF	3.378	SLV 2	0.362	1.483	1618	1.653	Si
	V	4.054	SLV 2	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	3.114	SLV 16	0.362	1.483	1618	1.653	Si
9	PF	1.655	SLV 5	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.904	SLV 5	0.362	1.483	1618	1.653	Si
	R	2.662	SLV 12	0.362	1.483	1618	1.653	Si
10	PF	2.283	SLV 14	0.362	1.483	1618	1.653	Si
	V	2.321	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	2.387	SLV 10	0.362	1.483	1618	1.653	Si
	R	3.142	SLV 7	0.362	1.483	1618	1.653	Si
11	PF	1.656	SLV 10	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.581	SLV 6	0.362	1.483	1618	1.653	Si
	R	3.206	SLV 11	0.362	1.483	1618	1.653	Si
12	PF	2.154	SLV 7	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	3.19	SLV 7	0.362	1.483	1618	1.653	Si
	R	1.935	SLV 6	0.362	1.483	1618	1.653	Si
13	PF	0.392	SLV 11	0.089	0.364	39	0.359	No
	V	3.592	SLV 11	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
	R	2.707	SLV 3	0.362	1.483	1618	1.653	Si
14	PF	2.115	SLV 2	0.362	1.483	1618	1.653	Si
	V	2.033	SLV 6	0.362	1.483	1618	1.653	Si
	PFFP	2.101	SLV 1	0.362	1.483	1618	1.653	Si
	R	3.241	SLV 16	0.362	1.483	1618	1.653	Si
15	PF	1.775	SLV 16	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.17	SLV 9	0.284	1.161	742	1.201	Si
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
17	PF	1.245	SLV 13	0.301	1.233	888	1.292	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.711	SLV 8	0.362	1.483	1618	1.653	Si
	R	1.839	SLV 4	0.362	1.483	1618	1.653	Si
18	PF	1.326	SLV 15	0.32	1.312	1078	1.399	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.441	SLV 15	0.348	1.423	1411	1.563	Si
	R	1.947	SLV 9	0.362	1.483	1618	1.653	Si
19	PF	1.97	SLV 11	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.913	SLV 4	0.362	1.483	1618	1.653	Si
	R	2.558	SLV 14	0.362	1.483	1618	1.653	Si
20	PF	0.67	SLV 11	0.157	0.644	154	0.63	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.32	SLV 11	0.319	1.305	1061	1.39	Si
	R	2.479	SLV 15	0.362	1.483	1618	1.653	Si
21	PF	1.313	SLV 16	0.317	1.299	1045	1.382	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.667	SLV 13	0.362	1.483	1618	1.653	Si
	R	1.828	SLV 1	0.362	1.483	1618	1.653	Si
22	PF	1.617	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.238	SLV 5	0.362	1.483	1618	1.653	Si
	R	1.586	SLV 16	0.362	1.483	1618	1.653	Si
23	PF	1.785	SLV 14	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.837	SLV 10	0.362	1.483	1618	1.653	Si
	R	2.241	SLV 3	0.362	1.483	1618	1.653	Si
24	PF	1.135	SLV 3	0.276	1.128	681	1.159	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ζE)	TR	(TR/TRrif)^.41	Verifica
	PFFP	1.197	SLV 6	0.29	1.187	792	1.233	Si
	R	2.426	SLV 14	0.362	1.483	1618	1.653	Si
25	PF	0.768	SLV 11	0.183	0.747	219	0.728	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.459	SLV 11	0.105	0.43	58	0.422	No
	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
26	PF	0.434	SLV 11	0.099	0.407	51	0.401	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.314	SLV 6	0.317	1.299	1046	1.382	Si
	R	1.952	SLV 1	0.362	1.483	1618	1.653	Si
27	PF	1.607	SLV 13	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.984	SLV 13	0.362	1.483	1618	1.653	Si
	R	1.702	SLV 3	0.362	1.483	1618	1.653	Si
28	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	2.412	SLV 1	0.362	1.483	1618	1.653	Si
	R	1.854	SLV 15	0.362	1.483	1618	1.653	Si
29	PF	1.696	SLV 2	0.362	1.483	1618	1.653	Si
	V	2.629	SLV 6	0.362	1.483	1618	1.653	Si
	PFFP	0.729	SLV 1	0.173	0.706	190	0.687	No
	R	1000	SLV 1	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	2.027	SLV 9	0.362	1.483	1618	1.653	Si
	V	1.957	SLV 9	0.362	1.483	1618	1.653	Si
2	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.718	SLV 13	0.362	1.483	1618	1.653	Si
3	F	1.205	SLV 13	0.292	1.195	808	1.243	Si
	V	2.51	SLV 13	0.362	1.483	1618	1.653	Si
4	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.736	SLV 2	0.362	1.483	1618	1.653	Si
5	F	1.425	SLV 6	0.344	1.406	1358	1.538	Si
	V	3.369	SLV 6	0.362	1.483	1618	1.653	Si
7	F	0.165	SLV 1	0.035	0.143	4	0.141	No
	V	0.264	SLV 2	0.057	0.234	13	0.229	No
8	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.755	SLV 16	0.18	0.735	210	0.716	No
10	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.72	SLV 3	0.362	1.483	1618	1.653	Si
11	F	1.005	SLV 3	0.245	1.005	481	1.005	Si
	V	3.169	SLV 3	0.362	1.483	1618	1.653	Si
12	F	0.877	SLV 11	0.211	0.865	323	0.854	No
	V	0.365	SLV 11	0.083	0.342	34	0.339	No
13	F	3.578	SLV 13	0.362	1.483	1618	1.653	Si
	V	2.199	SLV 13	0.362	1.483	1618	1.653	Si
14	F	3.755	SLV 13	0.362	1.483	1618	1.653	Si
	V	2.473	SLV 13	0.362	1.483	1618	1.653	Si
15	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.262	SLV 15	0.362	1.483	1618	1.653	Si
16	F	4.073	SLV 15	0.362	1.483	1618	1.653	Si
	V	2.527	SLV 15	0.362	1.483	1618	1.653	Si
17	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.937	SLV 6	0.362	1.483	1618	1.653	Si
18	F	2.528	SLV 16	0.362	1.483	1618	1.653	Si
	V	1.878	SLV 16	0.362	1.483	1618	1.653	Si
19	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.767	SLV 16	0.183	0.747	219	0.728	No
20	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.372	SLV 1	0.362	1.483	1618	1.653	Si
21	F	3.144	SLV 3	0.362	1.483	1618	1.653	Si
	V	2.56	SLV 14	0.362	1.483	1618	1.653	Si
22	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.737	SLV 3	0.362	1.483	1618	1.653	Si
23	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.745	SLV 11	0.362	1.483	1618	1.653	Si
24	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.385	SLV 4	0.334	1.369	1241	1.483	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	4	0.035	475	0.244	flessione trave connessione in muratura

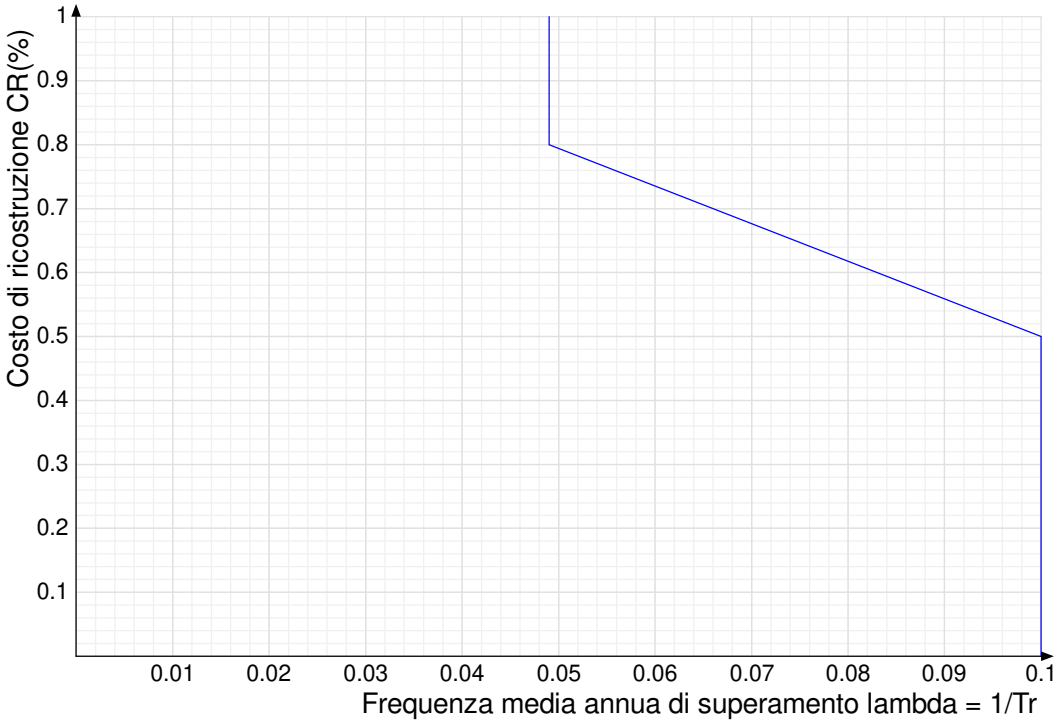
Coefficienti relativi alle Linee guida per la classificazione del rischio sismico delle costruzioni secondo il D.M. 24 09/01/2020

TR,C	TR,Rif	PAM	Classe PAM	IS-V	Classe IS-V	Tipo rottura
4	475	8.215	G	14.284	F	flessione trave connessione in muratura

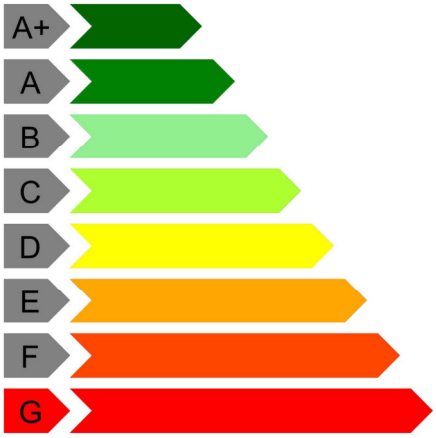
Coefficienti λ relativi alle Linee guida per la classificazione del rischio sismico delle costruzioni secondo il D.M. 24 09/01/2020

λ,SLR	λ,SLC	λ,SLV	λ,SLD	λ,SLO	λ,SLID
0.049	0.049	0.1	0.1	0.1	0.1

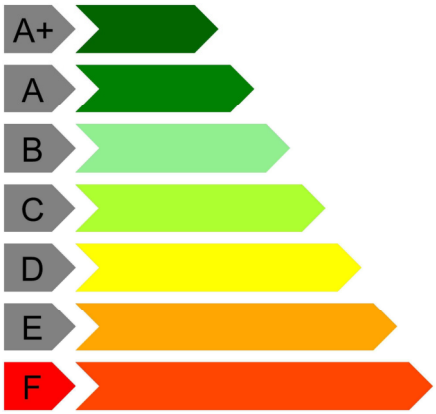
Andamento della curva che individua il PAM (Perdita Annuale Media Attesa)



Classe PAM



Classe IS-V



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.*
Sa: *accelerazione massima adimensionalizzata rispetto a quella di gravità.*
M: *momento flettente fuori 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.*
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]*
Mc: *momento di collasso per azioni perpendicolari al piano. [daN*m]*

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
-34.108	-3.274	-34.108	5.726	L1	L2	9.001	0.45	2.69	2.69	2.69			

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 72	-1.37	579.31	-46239	-0.0000167	0.0004492	0.0035	9.0006	188646.87	202096.47	202096.47	348.86	No	Si
SLU 72	1.32	-3767.98	-43569	-0.0000165	0.0004492	0.0035	9.0006	178811.05	230998.97	230998.97	61.31	No	Si
SLU 64	-1.37	135.3	-46252	-0.0000166	0.0004492	0.0035	9.0006	188695.16	202148.38	202148.38	1494.09	No	Si
SLU 64	1.32	-3828.13	-43580	-0.0000165	0.0004492	0.0035	9.0006	178851.8	231041.74	231041.74	60.35	No	Si
SLU 71	-1.37	135.3	-46252	-0.0000166	0.0004492	0.0035	9.0006	188695.16	202148.38	202148.38	1494.09	No	Si
SLU 71	1.32	-3828.13	-43580	-0.0000165	0.0004492	0.0035	9.0006	178851.8	231041.74	231041.74	60.35	No	Si
SLU 70	-1.37	579.31	-46239	-0.0000167	0.0004492	0.0035	9.0006	188646.87	202096.47	202096.47	348.86	No	Si
SLU 70	1.32	-3767.98	-43569	-0.0000165	0.0004492	0.0035	9.0006	178811.05	230998.97	230998.97	61.31	No	Si
SLU 79	-1.37	244.61	-53371	-0.0000193	0.0004492	0.0035	9.0006	214282.47	229978.2	229978.2	940.19	No	Si
SLU 79	1.32	-4405.72	-53625	-0.0000204	0.0004492	0.0035	9.0006	215179.78	270137.93	270137.93	61.32	No	Si
SLU 67	-1.37	579.31	-46239	-0.0000167	0.0004492	0.0035	9.0006	188646.87	202096.47	202096.47	348.86	No	Si
SLU 67	1.32	-3767.98	-43569	-0.0000165	0.0004492	0.0035	9.0006	178811.05	230998.97	230998.97	61.31	No	Si
SLU 74	-1.37	244.61	-53371	-0.0000193	0.0004492	0.0035	9.0006	214282.47	229978.2	229978.2	940.19	No	Si
SLU 74	1.32	-4405.72	-53625	-0.0000204	0.0004492	0.0035	9.0006	215179.78	270137.93	270137.93	61.32	No	Si
SLU 69	-1.37	135.3	-46252	-0.0000166	0.0004492	0.0035	9.0006	188695.16	202148.38	202148.38	1494.09	No	Si
SLU 69	1.32	-3828.13	-43580	-0.0000165	0.0004492	0.0035	9.0006	178851.8	231041.74	231041.74	60.35	No	Si
SLU 66	-1.37	135.3	-46252	-0.0000166	0.0004492	0.0035	9.0006	188695.16	202148.38	202148.38	1494.09	No	Si
SLU 66	1.32	-3828.13	-43580	-0.0000165	0.0004492	0.0035	9.0006	178851.8	231041.74	231041.74	60.35	No	Si
SLU 77	-1.37	244.61	-53371	-0.0000193	0.0004492	0.0035	9.0006	214282.47	229978.2	229978.2	940.19	No	Si
SLU 77	1.32	-4405.72	-53625	-0.0000204	0.0004492	0.0035	9.0006	215179.78	270137.93	270137.93	61.32	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	-1.37	11056.61	-22434	-0.0000106	0.0006738	0.0035	9.0006		106036.58	106036.58	9.59		Si
SLV 16	1.32	-264.46	-23342	-0.0000083	0.0006738	0.0035	9.0006		149906.74	149906.74	566.85		Si
SLV 8	-1.37	34879.02	-39844	-0.0000226	0.0006738	0.0035	9.0006		179321.34	179321.34	5.14		Si
SLV 8	1.32	4590.74	-37275	-0.0000144	0.0006738	0.0035	9.0006		168691.07	168691.07	36.75		Si
SLV 15	-1.37	10014.03	-22418	-0.0000103	0.0006738	0.0035	9.0006		105968.71	105968.71	10.58		Si
SLV 15	1.32	272.02	-23344	-0.0000083	0.0006738	0.0035	9.0006		109908.35	109908.35	404.04		Si
SLV 9	-1.37	-34579.95	-33089	-0.00002	0.0006738	0.0035	9.0006		190800.71	190800.71	5.52		Si
SLV 9	1.32	-10547.63	-32238	-0.000014	0.0006738	0.0035	9.0006		187252.91	187252.91	17.75		Si
SLV 11	-1.37	33890.17	-31542	-0.0000193	0.0006738	0.0035	9.0006		144669.64	144669.64	4.27		Si
SLV 11	1.32	5481.84	-30578	-0.0000122	0.0006738	0.0035	9.0006		140629.03	140629.03	25.65		Si
SLV 7	-1.37	33821.01	-39828	-0.0000223	0.0006738	0.0035	9.0006		179254.55	179254.55	5.3		Si
SLV 7	1.32	5135.15	-37277	-0.0000145	0.0006738	0.0035	9.0006		168697.63	168697.63	32.85		Si
SLV 10	-1.37	-33521.94	-33106	-0.0000198	0.0006738	0.0035	9.0006		190868.15	190868.15	5.69		Si
SLV 10	1.32	-11092.05	-32236	-0.0000141	0.0006738	0.0035	9.0006		187246.38	187246.38	16.88		Si
SLV 5	-1.37	-34649.11	-41375	-0.0000231	0.0006738	0.0035	9.0006		225072.06	225072.06	6.5		Si
SLV 5	1.32	-10894.32	-38937	-0.0000165	0.0006738	0.0035	9.0006		215048.9	215048.9	19.74		Si
SLV 6	-1.37	-33591.1	-41391	-0.0000228	0.0006738	0.0035	9.0006		225138.61	225138.61	6.7		Si
SLV 6	1.32	-11438.73	-38935	-0.0000166	0.0006738	0.0035	9.0006		215042.46	215042.46	18.8		Si
SLV 12	-1.37	34948.18	-31559	-0.0000196	0.0006738	0.0035	9.0006		144737.48	144737.48	4.14		Si
SLV 12	1.32	4937.43	-30577	-0.000012	0.0006738	0.0035	9.0006		140622.46	140622.46	28.48		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 75	-1.37	688.62	-53358	-42686	3078	9.0006	9.0006	-10539	9739	39444	81562	145556	45903	121005	No	39.31	Si
SLU 75	1.32	-4345.58	-53614	-42892	3106	9.0006	9.0006	-10590	9745	39471	81562	145556	45903	121033	No	38.97	Si
SLU 76	-1.37	984.62	-53349	-42679	3295	9.0006	9.0006	-10537	9738	39443	81562	145556	45903	121004	No	36.72	Si
SLU 76	1.32	-4305.48	-53607	-42886	3336	9.0006	9.0006	-10588	9745	39470	81562	145556	45903	121032	No	36.28	Si
SLU 84	-1.37	735.46	-56409	-45127	3222	9.0006	9.0006	-11142	9819	39769	81562	145556	45903	121331	No	37.65	Si
SLU 84	1.32	-4593.12	-57920	-46336	3250	9.0006	9.0006	-11440	9859	39930	81562	145556	45903	121492	No	37.38	Si
SLU 78	-1.37	688.62	-53358	-42686	3078	9.0006	9.0006	-10539	9739	39444	81562	145556	45903	121005	No	39.31	Si
SLU 78	1.32	-4345.58	-53614	-42892	3106	9.0006	9.0006	-10590	9745	39471	81562	145556	45903	121033	No	38.97	Si
SLU 63	-1.37	800.2	-51195	-40956	3085	9.0006	9.0006	-10112	9682	39213	81562	145556	45903	120775	No	39.15	Si
SLU 63	1.32	-3995.74	-50473	-40379	3112	9.0006	9.0006	-9969	9663	39136	81562	145556	45903	120698	No	38.79	Si
SLU 61	-1.37	800.2	-51195	-40956	3085	9.0006	9.0006	-10112	9682	39213	81562	145556	45903	120775	No	39.15	Si
SLU 61	1.32	-3995.74	-50473	-40379	3112	9.0006	9.0006	-9969	9663	39136	81562	145556	45903	120698	No	38.79	Si
SLU 55	-1.37	1049.36	-48135	-38508	3158	9.0006	9.0006	-9508	9601	38887	81562	145556	45903	120448	No	38.14	Si
SLU 55	1.32	-3708.11	-46161	-36929	3198	9.0006	9.0006	-9118	9549	38676	81562	145556	45903	120238	No	37.6	Si
SLU 52	-1.37	1049.36	-48135	-38508	3158	9.0006	9.0006	-9508	9601	38887	81562	145556	45903	120448	No	38.14	Si
SLU 52	1.32	-3708.11	-46161	-36929	3198	9.0006	9.0006	-9118	9549	38676	81562	145556	45903	120238	No	37.6	Si
SLU 73	-1.37	984.62	-53349	-42679	3295	9.0006	9.0006	-10537	9738	39443	81562	145556	45903	121004	No	36.72	Si
SLU 73	1.32	-4305.48	-53607	-42886	3336	9.0006	9.0006	-10588	9745	39470	81562	145556	45903	121032	No	36.28	Si
SLU 82	-1.37	735.46	-56409	-45127	3222	9.0006	9.0006	-11142	9819	39769	81562	145556	45903	121331	No	37.65	Si
SLU 82	1.32	-4593.12	-57920	-46336	3250	9.0006	9.0006	-11440	9859	39930	81562	145556	45903	121492	No	37.38	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	-1.37	11056.61	-22434	-17947	9798	9.0006	9.0006	-4431	13386	54218	81562	218334	45903	135779		13.86	Si
SLV 16	1.32	-264.46	-23342	-18674	9125	9.0006	9.0006	-4610	13422	54363	81562	218334	45903	135925		14.9	Si
SLV 11	-1.37	33890.17	-31542	-25234	22562	9.0006	9.0006	-6230	13746	55675	81562	218334	45903	137237		6.08	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	1.32	5481.84	-30578	-24463	20056	9.0006	9.0006	-6040	13708	55521	81562	218334	45903	137082		6.83	Si
SLV 7	-1.37	33821.01	-39828	-31862	22760	9.0006	9.0006	-7867	14073	57001	81562	218334	45903	138562		6.09	Si
SLV 7	1.32	5135.15	-37277	-29822	20205	9.0006	9.0006	-7363	13973	56593	81562	218334	45903	138154		6.84	Si
SLV 10	-1.37	-33521.94	-33106	-26484	-18909	9.0006	9.0006	-6539	13808	55925	81562	218334	45903	137487		7.27	Si
SLV 10	1.32	-11092.05	-32236	-25789	-16344	9.0006	9.0006	-6367	13773	55786	81562	218334	45903	137348		8.4	Si
SLV 5	-1.37	-34649.11	-41375	-33100	-21795	9.0006	9.0006	-8172	14134	57248	81562	218334	45903	138810		6.37	Si
SLV 5	1.32	-10894.32	-38937	-31149	-19280	9.0006	9.0006	-7691	14038	56858	81562	218334	45903	138420		7.18	Si
SLV 9	-1.37	-34579.95	-33089	-26471	-21993	9.0006	9.0006	-6536	13807	55923	81562	218334	45903	137484		6.25	Si
SLV 9	1.32	-10547.63	-32238	-25790	-19428	9.0006	9.0006	-6368	13774	55786	81562	218334	45903	137348		7.07	Si
SLV 6	-1.37	-33591.1	-41391	-33113	-18711	9.0006	9.0006	-8175	14135	57251	81562	218334	45903	138812		7.42	Si
SLV 6	1.32	-11438.73	-38935	-31148	-16196	9.0006	9.0006	-7690	14038	56858	81562	218334	45903	138419		8.55	Si
SLV 12	-1.37	34948.18	-31559	-25247	25645	9.0006	9.0006	-6233	13747	55678	81562	218334	45903	137239		5.35	Si
SLV 12	1.32	4937.43	-30577	-24461	23140	9.0006	9.0006	-6039	13708	55521	81562	218334	45903	137082		5.92	Si
SLV 4	-1.37	10826.08	-50052	-40041	10458	9.0006	9.0006	-9886	14477	58637	81562	218334	45903	140198		13.41	Si
SLV 4	1.32	-1420.07	-45672	-36537	9620	9.0006	9.0006	-9021	14304	57936	81562	218334	45903	139497		14.5	Si
SLV 8	-1.37	34879.02	-39844	-31875	25844	9.0006	9.0006	-7870	14074	57003	81562	218334	45903	138565		5.36	Si
SLV 8	1.32	4590.74	-37275	-29820	23289	9.0006	9.0006	-7363	13973	56592	81562	218334	45903	138154		5.93	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.025 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-29367	0.24	558.91	6346.19	8793.49	7569.84	13.54	Si
SLV 15	-29367	0.24	558.91	6346.24	8793.55	7569.89	13.54	Si
SLV 14	-29677	0.24	558.91	6410.47	8866.83	7638.65	13.67	Si
SLV 13	-29678	0.24	558.91	6410.52	8866.89	7638.7	13.67	Si
SLV 12	-36991	0.24	558.91	7908.23	10591.68	9249.96	16.55	Si
SLV 11	-36991	0.24	558.91	7908.28	10591.74	9250.01	16.55	Si
SLV 10	-38026	0.24	558.91	8117.48	10833.93	9475.7	16.95	Si
SLV 9	-38026	0.24	558.91	8117.53	10833.99	9475.76	16.95	Si
SLV 8	-43836	0.24	558.91	9280.69	12192.48	10736.58	19.21	Si
SLV 7	-43836	0.24	558.91	9280.74	12192.54	10736.64	19.21	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.025 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-46171	-50500	-975	0.984	6253.8	0.933	15.33452	3.65568	Si
SLV 2	-46169	-50516	-976	0.984	6253.7	0.933	15.3349	3.65568	Si
SLV 3	-45673	-50036	-970	0.992	6203.6	0.932	15.46918	3.65568	Si
SLV 4	-45672	-50052	-971	0.992	6203.4	0.932	15.46956	3.65568	Si
SLV 5	-38937	-41375	-289	1.132	5524.3	0.926	17.76996	3.53142	Si
SLV 6	-38935	-41391	-289	1.132	5524.1	0.926	17.77048	3.53142	Si
SLV 7	-37277	-39828	-272	1.169	5357.3	0.924	18.39112	3.53142	Si
SLV 8	-37275	-39844	-272	1.169	5357.2	0.924	18.39168	3.53142	Si
SLV 9	-32238	-33089	305	1.298	4851.5	0.918	20.55699	3.53142	Si
SLV 10	-32236	-33106	305	1.298	4851.4	0.918	20.55779	3.53142	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	60.354	SLU 64	Si
V_SLU	36.28	SLU 73	Si
PF_SLV	4.141	SLV 12	Si
V_SLV	5.351	SLV 12	Si
PFFP_SLV	13.544	SLV 16	Si
R_SLV	4.195	SLV 1	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
-29.758	2.281	-29.758	5.501	L1	L2	3.22	0.3	2.69	2.69	2.69			

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 31	-1.37	-204.28	-36415	-0.0000552	0.0004492	0.0035	3.22	40540.43	53767.1	53767.1	263.2	No	Si
SLU 31	0.81	-1155.25	-20483	-0.0000332	0.0004492	0.0035	3.22	27254.38	35153.28	35153.28	30.43	No	Si
SLU 39	-1.37	-679.06	-39079	-0.0000609	0.0004492	0.0035	3.22	42086.01	56506.28	56506.28	83.21	No	Si
SLU 39	0.81	-1270.76	-22423	-0.0000365	0.0004492	0.0035	3.22	29242.94	37577.34	37577.34	29.57	No	Si
SLU 41	-1.37	-679.06	-39079	-0.0000609	0.0004492	0.0035	3.22	42086.01	56506.28	56506.28	83.21	No	Si
SLU 41	0.81	-1270.76	-22423	-0.0000365	0.0004492	0.0035	3.22	29242.94	37577.34	37577.34	29.57	No	Si
SLU 38	-1.37	-381.84	-36434	-0.0000558	0.0004492	0.0035	3.22	40552.48	53787.21	53787.21	140.86	No	Si
SLU 38	0.81	-1139.82	-20517	-0.0000332	0.0004492	0.0035	3.22	27290.33	35196.01	35196.01	30.88	No	Si
SLU 40	-1.37	-412.72	-39049	-0.00006	0.0004492	0.0035	3.22	42070.04	56476.11	56476.11	136.84	No	Si
SLU 40	0.81	-1293.91	-22372	-0.0000364	0.0004492	0.0035	3.22	29191.68	37513.24	37513.24	28.99	No	Si
SLU 34	-1.37	-204.28	-36415	-0.0000552	0.0004492	0.0035	3.22	40540.43	53767.1	53767.1	263.2	No	Si
SLU 34	0.81	-1155.25	-20483	-0.0000332	0.0004492	0.0035	3.22	27254.38	35153.28	35153.28	30.43	No	Si
SLU 33	-1.37	-381.84	-36434	-0.0000558	0.0004492	0.0035	3.22	40552.48	53787.21	53787.21	140.86	No	Si
SLU 33	0.81	-1139.82	-20517	-0.0000332	0.0004492	0.0035	3.22	27290.33	35196.01	35196.01	30.88	No	Si
SLU 42	-1.37	-412.72	-39049	-0.00006	0.0004492	0.0035	3.22	42070.04	56476.11	56476.11	136.84	No	Si
SLU 42	0.81	-1293.91	-22372	-0.0000364	0.0004492	0.0035	3.22	29191.68	37513.24	37513.24	28.99	No	Si
SLU 36	-1.37	-381.84	-36434	-0.0000558	0.0004492	0.0035	3.22	40552.48	53787.21	53787.21	140.86	No	Si
SLU 36	0.81	-1139.82	-20517	-0.0000332	0.0004492	0.0035	3.22	27290.33	35196.01	35196.01	30.88	No	Si
SLU 37	-1.37	-648.19	-36464	-0.0000566	0.0004492	0.0035	3.22	40570.54	53817.38	53817.38	83.03	No	Si
SLU 37	0.81	-1116.67	-20568	-0.0000332	0.0004492	0.0035	3.22	27344.19	35260.12	35260.12	31.58	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	-1.37	18124.36	-28968	-0.0000946	0.0006738	0.0035	3.22		42199.94	42199.94	2.33		Si
SLV 11	0.81	-38.95	-15037	-0.0000217	0.0006738	0.0035	3.22		28355	28355	727.99		Si
SLV 10	-1.37	-20442.51	-27869	-0.0001027	0.0006738	0.0035	3.22		45672.95	45672.95	2.23		Si
SLV 10	0.81	-1024.75	-14369	-0.0000234	0.0006738	0.0035	3.22		27401.43	27401.43	26.74		Si
SLV 7	-1.37	19658.4	-29329	-0.0001007	0.0006738	0.0035	3.22		42622.28	42622.28	2.17		Si
SLV 7	0.81	-21.78	-15193	-0.0000219	0.0006738	0.0035	3.22		28578.98	28578.98	1312.19		Si
SLV 14	-1.37	-8695.65	-27808	-0.000065	0.0006738	0.0035	3.22		45594.13	45594.13	5.24		Si
SLV 14	0.81	-708.09	-14411	-0.0000226	0.0006738	0.0035	3.22		27461.77	27461.77	38.78		Si
SLV 6	-1.37	-18908.47	-28230	-0.0000966	0.0006738	0.0035	3.22		46140.76	46140.76	2.44		Si
SLV 6	0.81	-1007.58	-14526	-0.0000236	0.0006738	0.0035	3.22		27625.4	27625.4	27.42		Si
SLV 8	-1.37	19769.8	-29259	-0.000101	0.0006738	0.0035	3.22		42540.54	42540.54	2.15		Si
SLV 8	0.81	-46.11	-15169	-0.0000219	0.0006738	0.0035	3.22		28543.69	28543.69	619.04		Si
SLV 12	-1.37	18235.75	-28898	-0.0000949	0.0006738	0.0035	3.22		42118.19	42118.19	2.31		Si
SLV 12	0.81	-63.28	-15012	-0.0000218	0.0006738	0.0035	3.22		28319.71	28319.71	447.53		Si
SLV 13	-1.37	-8805.42	-27877	-0.0000654	0.0006738	0.0035	3.22		45683.35	45683.35	5.19		Si
SLV 13	0.81	-684.11	-14436	-0.0000226	0.0006738	0.0035	3.22		27496.55	27496.55	40.19		Si
SLV 9	-1.37	-20553.9	-27939	-0.0001032	0.0006738	0.0035	3.22		45763.5	45763.5	2.23		Si
SLV 9	0.81	-1000.42	-14394	-0.0000234	0.0006738	0.0035	3.22		27436.72	27436.72	27.43		Si
SLV 5	-1.37	-19019.86	-28300	-0.0000971	0.0006738	0.0035	3.22		46231.31	46231.31	2.43		Si
SLV 5	0.81	-983.25	-14551	-0.0000236	0.0006738	0.0035	3.22		27660.7	27660.7	28.13		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	-1.37	-401.36	-45002	-32729	-9764	3.22	3.22	-33881	10833	10465	81562	34716	16422	51138	No	5.24	Si
SLU 84	0.81	-1218.11	-24818	-18050	-10764	3.22	3.22	-18685	10825	10457	81562	34716	16422	51138	No	4.75	Si
SLU 77	-1.37	-636.82	-42417	-30848	-9491	3.22	3.22	-31934	10833	10465	81562	34716	16422	51138	No	5.39	Si
SLU 77	0.81	-1040.88	-23014	-16738	-10451	3.22	3.22	-17327	10644	10282	81562	34716	16422	51138	No	4.89	Si
SLU 80	-1.37	-370.48	-42387	-30827	-9357	3.22	3.22	-31912	10833	10465	81562	34716	16422	51138	No	5.47	Si
SLU 80	0.81	-1064.02	-22963	-16700	-10285	3.22	3.22	-17288	10638	10277	81562	34716	16422	51138	No	4.97	Si
SLU 79	-1.37	-636.82	-42417	-30848	-9491	3.22	3.22	-31934	10833	10465	81562	34716	16422	51138	No	5.39	Si
SLU 79	0.81	-1040.88	-23014	-16738	-10451	3.22	3.22	-17327	10644	10282	81562	34716	16422	51138	No	4.89	Si
SLU 83	-1.37	-667.7	-45031	-32750	-9898	3.22	3.22	-33903	10833	10465	81562	34716	16422	51138	No	5.17	Si
SLU 83	0.81	-1194.97	-24869	-18087	-10930	3.22	3.22	-18723	10830	10462	81562	34716	16422	51138	No	4.68	Si
SLU 82	-1.37	-401.36	-45002	-32729	-9764	3.22	3.22	-33881	10833	10465	81562	34716	16422	51138	No	5.24	Si
SLU 82	0.81	-1218.11	-24818	-18050	-10764	3.22	3.22	-18685	10825	10457	81562	34716	16422	51138	No	4.75	Si
SLU 81	-1.37	-667.7	-45031	-32750	-9898	3.22	3.22	-33903	10833	10465	81562	34716	16422	51138	No	5.17	Si
SLU 81	0.81	-1194.97	-24869	-18087	-10930	3.22	3.22	-18723	10830	10462	81562	34716	16422	51138	No	4.68	Si
SLU 74	-1.37	-636.82	-42417	-30848	-9491	3.22	3.22	-31934	10833	10465	81562	34716	16422	51138	No	5.39	Si
SLU 74	0.81	-1040.88	-23014	-16738	-10451	3.22	3.22	-17327	10644	10282	81562	34716	16422	51138	No	4.89	Si
SLU 62	-1.37	-381.17	-40122	-29180	-9454	3.22	3.22	-30207	10833	10465	81562	34716	16422	51138	No	5.41	Si
SLU 62	0.81	-723.74	-21096	-15343	-10403	3.22	3.22	-15883	10451	10096	81562	34716	16422	51138	No	4.92	Si
SLU 60	-1.37	-381.17	-40122	-29180	-9454	3.22	3.22	-30207	10833	10465	81562	34716	16422	51138	No	5.41	Si
SLU 60	0.81	-723.74	-21096	-15343	-10403	3.22	3.22	-15883	10451	10096	81562	34716	16422	51138	No	4.92	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	-1.37	-20442.51	-27869	-20268	-17692	3.22	2.6294	-26001	16250	12819	81562	52073	16422	68495		3.87	Si
SLV 10	0.81	-1024.75	-14369	-10450	-15676	3.22	3.22	-10818	14664	14165	81562	52073	16422	68495		4.37	Si
SLV 5	-1.37	-19019.86	-28300	-20582	-16975	3.22	2.8138	-24662	16250	13717	81562	52073	16422	68495		4.04	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	0.81	-983.25	-14551	-10582	-15437	3.22	3.22	-10955	14691	14191	81562	52073	16422	68495		4.44	Si
SLV 6	-1.37	-18908.47	-28230	-20531	-16862	3.22	2.8206	-24540	16250	13751	81562	52073	16422	68495		4.06	Si
SLV 6	0.81	-1007.58	-14526	-10564	-15338	3.22	3.22	-10936	14687	14188	81562	52073	16422	68495		4.47	Si
SLV 14	-1.37	-8695.65	-27808	-20224	-11248	3.22	3.22	-20936	16250	15698	81562	52073	16422	68495		6.09	Si
SLV 14	0.81	-708.09	-14411	-10481	-10350	3.22	3.22	-10850	14670	14171	81562	52073	16422	68495		6.62	Si
SLV 16	-1.37	2907.83	-28117	-20449	-4894	3.22	3.22	-21168	16250	15698	81562	52073	16422	68495		14	Si
SLV 16	0.81	-419.65	-14604	-10621	-5446	3.22	3.22	-10995	14699	14199	81562	52073	16422	68495		12.58	Si
SLV 9	-1.37	-20553.9	-27939	-20319	-17805	3.22	2.623	-26132	16250	12787	81562	52073	16422	68495		3.85	Si
SLV 9	0.81	-1000.42	-14394	-10468	-15775	3.22	3.22	-10837	14667	14169	81562	52073	16422	68495		4.34	Si
SLV 1	-1.37	-3691.94	-29082	-21150	-8593	3.22	3.22	-21895	16250	15698	81562	52073	16422	68495		7.97	Si
SLV 1	0.81	-626.88	-14958	-10879	-9321	3.22	3.22	-11262	14752	14251	81562	52073	16422	68495		7.35	Si
SLV 15	-1.37	2798.06	-28186	-20499	-5005	3.22	3.22	-21220	16250	15698	81562	52073	16422	68495		13.69	Si
SLV 15	0.81	-395.67	-14629	-10639	-5544	3.22	3.22	-11013	14703	14203	81562	52073	16422	68495		12.36	Si
SLV 13	-1.37	-8805.42	-27877	-20274	-11359	3.22	3.22	-20988	16250	15698	81562	52073	16422	68495		6.03	Si
SLV 13	0.81	-684.11	-14436	-10499	-10447	3.22	3.22	-10868	14674	14175	81562	52073	16422	68495		6.56	Si
SLV 2	-1.37	-3582.17	-29013	-21100	-8482	3.22	3.22	-21843	16250	15698	81562	52073	16422	68495		8.08	Si
SLV 2	0.81	-650.85	-14934	-10861	-9224	3.22	3.22	-11243	14749	14247	81562	52073	16422	68495		7.43	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.025 Ta 0.04 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 10	-19723	0.24	135.91	2628.84	3636.67	3132.76	23.05	Si
SLV 9	-19765	0.24	135.91	2633.78	3643.43	3138.6	23.09	Si
SLV 14	-20030	0.24	135.91	2664.64	3685.72	3175.18	23.36	Si
SLV 6	-20053	0.24	135.91	2667.24	3689.29	3178.26	23.38	Si
SLV 13	-20072	0.24	135.91	2669.49	3692.38	3180.93	23.4	Si
SLV 5	-20095	0.24	135.91	2672.15	3696.05	3184.1	23.43	Si
SLV 16	-20624	0.24	135.91	2733.25	3780.35	3256.8	23.96	Si
SLV 15	-20666	0.24	135.91	2738.05	3787.01	3262.53	24	Si
SLV 2	-21131	0.24	135.91	2791.34	3861.15	3326.25	24.47	Si
SLV 1	-21173	0.24	135.91	2796.11	3867.81	3331.96	24.52	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.025 Wa = 0.05 Ta = 0.0403

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-10710	-29082	-533	1.411	1461.1	0.931	22.01405	4.62651	Si
SLV 2	-10700	-29013	-533	1.412	1460	0.931	22.03247	4.62651	Si
SLV 13	-10585	-27877	546	1.423	1448.5	0.931	22.21489	4.62651	Si
SLV 14	-10574	-27808	546	1.424	1447.4	0.931	22.23408	4.62651	Si
SLV 3	-10395	-29390	-546	1.444	1429.3	0.93	22.55186	4.62651	Si
SLV 4	-10384	-29321	-546	1.445	1428.2	0.93	22.57123	4.62651	Si
SLV 15	-10269	-28186	533	1.458	1416.6	0.93	22.79607	4.62651	Si
SLV 16	-10258	-28117	533	1.46	1415.5	0.93	22.81628	4.62651	Si
SLV 5	-11035	-28300	-140	1.407	1493.9	0.933	21.93092	4.37979	Si
SLV 9	-10997	-27939	184	1.408	1490.1	0.933	21.94242	4.37979	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	28.992	SLU 40	Si
V_SLU	4.679	SLU 81	Si
PF_SLV	2.152	SLV 8	Si
V_SLV	3.847	SLV 9	Si
PFFP_SLV	23.05	SLV 10	Si
R_SLV	4.758	SLV 1	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
-34.108	-3.274	-32.783	-3.274	L1	L2	1.325	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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 45	0.63	613.32	-5962	-0.0000226	0.0003743	0.0035	1.325	3561.99	3742.06	3742.06	6.1	No	Si
SLU 45	1.03	313.08	-5293	-0.0000173	0.0003743	0.0035	1.325	3200.78	3360.44	3360.44	10.73	No	Si
SLU 66	0.63	689.41	-6976	-0.0000263	0.0003743	0.0035	1.325	4090.66	4287.75	4287.75	6.22	No	Si
SLU 66	1.03	359.23	-6266	-0.0000204	0.0003743	0.0035	1.325	3722.5	3912.74	3912.74	10.89	No	Si
SLU 49	0.63	602.02	-5929	-0.0000224	0.0003743	0.0035	1.325	3544.13	3723.21	3723.21	6.18	No	Si
SLU 49	1.03	310.05	-5271	-0.0000172	0.0003743	0.0035	1.325	3188.68	3347.74	3347.74	10.8	No	Si
SLU 43	0.63	613.32	-5962	-0.0000226	0.0003743	0.0035	1.325	3561.99	3742.06	3742.06	6.1	No	Si
SLU 43	1.03	313.08	-5293	-0.0000173	0.0003743	0.0035	1.325	3200.78	3360.44	3360.44	10.73	No	Si
SLU 51	0.63	602.02	-5929	-0.0000224	0.0003743	0.0035	1.325	3544.13	3723.21	3723.21	6.18	No	Si
SLU 51	1.03	310.05	-5271	-0.0000172	0.0003743	0.0035	1.325	3188.68	3347.74	3347.74	10.8	No	Si
SLU 46	0.63	602.02	-5929	-0.0000224	0.0003743	0.0035	1.325	3544.13	3723.21	3723.21	6.18	No	Si
SLU 46	1.03	310.05	-5271	-0.0000172	0.0003743	0.0035	1.325	3188.68	3347.74	3347.74	10.8	No	Si
SLU 69	0.63	689.41	-6976	-0.0000263	0.0003743	0.0035	1.325	4090.66	4287.75	4287.75	6.22	No	Si
SLU 69	1.03	359.23	-6266	-0.0000204	0.0003743	0.0035	1.325	3722.5	3912.74	3912.74	10.89	No	Si
SLU 48	0.63	613.32	-5962	-0.0000226	0.0003743	0.0035	1.325	3561.99	3742.06	3742.06	6.1	No	Si
SLU 48	1.03	313.08	-5293	-0.0000173	0.0003743	0.0035	1.325	3200.78	3360.44	3360.44	10.73	No	Si
SLU 71	0.63	689.41	-6976	-0.0000263	0.0003743	0.0035	1.325	4090.66	4287.75	4287.75	6.22	No	Si
SLU 71	1.03	359.23	-6266	-0.0000204	0.0003743	0.0035	1.325	3722.5	3912.74	3912.74	10.89	No	Si
SLU 50	0.63	613.32	-5962	-0.0000226	0.0003743	0.0035	1.325	3561.99	3742.06	3742.06	6.1	No	Si
SLU 50	1.03	313.08	-5293	-0.0000173	0.0003743	0.0035	1.325	3200.78	3360.44	3360.44	10.73	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	0.63	-70.83	-2905	-0.0000082	0.0005615	0.0035	1.325		2338.52	2338.52	33.02		Si
SLV 12	1.03	279.51	-2735	-0.0000101	0.0005615	0.0035	1.325		1856.65	1856.65	6.64		Si
SLV 5	0.63	1136.44	-8262	-0.0000347	0.0005615	0.0035	1.325		5172.53	5172.53	4.55		Si
SLV 5	1.03	293.23	-7373	-0.0000224	0.0005615	0.0035	1.325		4661.07	4661.07	15.9		Si
SLV 13	0.63	1499.78	-6188	-0.0000335	0.0005615	0.0035	1.325		3966.13	3966.13	2.64		Si
SLV 13	1.03	179.2	-4964	-0.0000147	0.0005615	0.0035	1.325		3232.85	3232.85	18.04		Si
SLV 6	0.63	968.43	-7979	-0.0000319	0.0005615	0.0035	1.325		5010.61	5010.61	5.17		Si
SLV 6	1.03	301.55	-7243	-0.0000221	0.0005615	0.0035	1.325		4585.28	4585.28	15.21		Si
SLV 8	0.63	-471.73	-3067	-0.0000132	0.0005615	0.0035	1.325		2439.82	2439.82	5.17		Si
SLV 8	1.03	338.07	-3192	-0.000012	0.0005615	0.0035	1.325		2143.31	2143.31	6.34		Si
SLV 14	0.63	1334.22	-5910	-0.0000307	0.0005615	0.0035	1.325		3800.75	3800.75	2.85		Si
SLV 14	1.03	187.4	-4835	-0.0000145	0.0005615	0.0035	1.325		3154.45	3154.45	16.83		Si
SLV 10	0.63	1369.33	-7817	-0.0000362	0.0005615	0.0035	1.325		4916.76	4916.76	3.59		Si
SLV 10	1.03	242.99	-6785	-0.0000202	0.0005615	0.0035	1.325		4317.74	4317.74	17.77		Si
SLV 15	0.63	1067.73	-4714	-0.0000244	0.0005615	0.0035	1.325		3081.16	3081.16	2.89		Si
SLV 15	1.03	190.15	-3749	-0.0000117	0.0005615	0.0035	1.325		2489.05	2489.05	13.09		Si
SLV 16	0.63	902.17	-4436	-0.0000218	0.0005615	0.0035	1.325		2911.99	2911.99	3.23		Si
SLV 16	1.03	198.35	-3620	-0.0000115	0.0005615	0.0035	1.325		2409.35	2409.35	12.15		Si
SLV 9	0.63	1537.34	-8099	-0.000039	0.0005615	0.0035	1.325		5079.79	5079.79	3.3		Si
SLV 9	1.03	234.67	-6916	-0.0000205	0.0005615	0.0035	1.325		4394.67	4394.67	18.73		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 67	0.63	678.11	-6943	-6171	1055	1.325	1.325	-10350	8324	4963	28547	17854	3379	21233	No	20.13	Si
SLU 67	1.03	356.2	-6243	-5550	1053	1.325	1.325	-9308	8185	4881	28547	17854	3379	21233	No	20.16	Si
SLU 79	0.63	756.66	-8515	-7569	1036	1.325	1.325	-12694	8637	5150	28547	17854	3379	21233	No	20.49	Si
SLU 79	1.03	429.87	-7834	-6964	1034	1.325	1.325	-11679	8502	5069	28547	17854	3379	21233	No	20.53	Si
SLU 74	0.63	756.66	-8515	-7569	1036	1.325	1.325	-12694	8637	5150	28547	17854	3379	21233	No	20.49	Si
SLU 74	1.03	429.87	-7834	-6964	1034	1.325	1.325	-11679	8502	5069	28547	17854	3379	21233	No	20.53	Si
SLU 70	0.63	678.11	-6943	-6171	1055	1.325	1.325	-10350	8324	4963	28547	17854	3379	21233	No	20.13	Si
SLU 70	1.03	356.2	-6243	-5550	1053	1.325	1.325	-9308	8185	4881	28547	17854	3379	21233	No	20.16	Si
SLU 66	0.63	689.41	-6976	-6201	1094	1.325	1.325	-10400	8331	4967	28547	17854	3379	21233	No	19.41	Si
SLU 66	1.03	359.23	-6266	-5569	1093	1.325	1.325	-9341	8190	4883	28547	17854	3379	21233	No	19.43	Si
SLU 72	0.63	678.11	-6943	-6171	1055	1.325	1.325	-10350	8324	4963	28547	17854	3379	21233	No	20.13	Si
SLU 72	1.03	356.2	-6243	-5550	1053	1.325	1.325	-9308	8185	4881	28547	17854	3379	21233	No	20.16	Si
SLU 71	0.63	689.41	-6976	-6201	1094	1.325	1.325	-10400	8331	4967	28547	17854	3379	21233	No	19.41	Si
SLU 71	1.03	359.23	-6266	-5569	1093	1.325	1.325	-9341	8190	4883	28547	17854	3379	21233	No	19.43	Si
SLU 77	0.63	756.66	-8515	-7569	1036	1.325	1.325	-12694	8637	5150	28547	17854	3379	21233	No	20.49	Si
SLU 77	1.03	429.87	-7834	-6964	1034	1.325	1.325	-11679	8502	5069	28547	17854	3379	21233	No	20.53	Si
SLU 64	0.63	689.41	-6976	-6201	1094	1.325	1.325	-10400	8331	4967	28547	17854	3379	21233	No	19.41	Si
SLU 64	1.03	359.23	-6266	-5569	1093	1.325	1.325	-9341	8190	4883	28547	17854	3379	21233	No	19.43	Si
SLU 69	0.63	689.41	-6976	-6201	1094	1.325	1.325	-10400	8331	4967	28547	17854	3379	21233	No	19.41	Si
SLU 69	1.03	359.23	-6266	-5569	1093	1.325	1.325	-9341	8190	4883	28547	17854	3379	21233	No	19.43	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	0.63	-471.73	-3067	-2726	-2959	1.325	1.325	-4572	11331	6756	28547	26782	3379	30160		10.19	Si
SLV 8	1.03	338.07	-3192	-2837	-2947	1.325	1.325	-4758	11368	6778	28547	26782	3379	30160		10.24	Si
SLV 3	0.63	-268.6	-5256	-4672	-2382	1.325	1.325	-7836	11984	7145	28547	26782	3379	30160		12.66	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	1.03	385.34	-5273	-4687	-2303	1.325	1.325	-7861	11989	7148	28547	26782	3379	30160		13.1	Si
SLV 5	0.63	1136.44	-8262	-7344	2904	1.325	1.325	-12316	12880	7680	28547	26782	3379	30160		10.39	Si
SLV 5	1.03	293.23	-7373	-6554	2940	1.325	1.325	-10992	12615	7522	28547	26782	3379	30160		10.26	Si
SLV 16	0.63	902.17	-4436	-3943	2421	1.325	1.325	-6613	11739	7000	28547	26782	3379	30160		12.46	Si
SLV 16	1.03	198.35	-3620	-3218	2332	1.325	1.325	-5396	11496	6854	28547	26782	3379	30160		12.93	Si
SLV 13	0.63	1499.78	-6188	-5501	4654	1.325	1.2604	-9225	12262	6955	28547	26782	3379	30160		6.48	Si
SLV 13	1.03	179.2	-4964	-4412	4572	1.325	1.325	-7400	11897	7093	28547	26782	3379	30160		6.6	Si
SLV 15	0.63	1067.73	-4714	-4191	3102	1.325	1.3081	-7028	11822	6959	28547	26782	3379	30160		9.72	Si
SLV 15	1.03	190.15	-3749	-3332	3013	1.325	1.325	-5589	11534	6877	28547	26782	3379	30160		10.01	Si
SLV 9	0.63	1537.34	-8099	-7199	4550	1.325	1.325	-12074	12831	7651	28547	26782	3379	30160		6.63	Si
SLV 9	1.03	234.67	-6916	-6148	4535	1.325	1.325	-10311	12479	7440	28547	26782	3379	30160		6.65	Si
SLV 10	0.63	1369.33	-7817	-6948	3858	1.325	1.325	-11653	12747	7601	28547	26782	3379	30160		7.82	Si
SLV 10	1.03	242.99	-6785	-6031	3844	1.325	1.325	-10115	12440	7417	28547	26782	3379	30160		7.85	Si
SLV 14	0.63	1334.22	-5910	-5253	3973	1.325	1.3102	-8810	12179	7180	28547	26782	3379	30160		7.59	Si
SLV 14	1.03	187.4	-4835	-4298	3891	1.325	1.325	-7208	11858	7070	28547	26782	3379	30160		7.75	Si
SLV 4	0.63	-434.16	-4978	-4425	-3063	1.325	1.325	-7421	11901	7096	28547	26782	3379	30160		9.85	Si
SLV 4	1.03	393.55	-5144	-4573	-2984	1.325	1.325	-7669	11950	7125	28547	26782	3379	30160		10.11	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.025 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.24	4269	-2545	80.91	556.64	6.88	Si
SLV 11	179667	0.24	4622	-2756	80.91	601.29	7.43	Si
SLV 8	179667	0.24	5022	-2994	80.91	651.57	8.05	Si
SLV 7	179667	0.24	5375	-3205	80.91	695.75	8.6	Si
SLV 16	179667	0.24	6259	-3732	80.91	805.27	9.95	Si
SLV 15	179667	0.24	6607	-3940	80.91	848.05	10.48	Si
SLV 14	179667	0.24	8716	-5197	80.91	1102.6	13.63	Si
SLV 4	179667	0.24	8770	-5229	80.91	1109.02	13.71	Si
SLV 13	179667	0.24	9065	-5405	80.91	1143.88	14.14	Si
SLV 3	179667	0.24	9119	-5437	80.91	1150.27	14.22	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 = -0.025 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-6275	-9474	-141	1.045	867.9	0.929	16.34556	3.53142	Si
SLV 9	-6149	-8318	-140	1.061	855.3	0.929	16.61204	3.53142	Si
SLV 6	-6055	-9411	-141	1.074	845.7	0.928	16.81507	3.53142	Si
SLV 10	-5929	-8255	-139	1.091	833.1	0.927	17.09806	3.53142	Si
SLV 1	-5142	-8781	-42	1.226	753.9	0.921	19.33883	3.65568	Si
SLV 2	-4925	-8720	-42	1.265	732.1	0.919	19.99241	3.65568	Si
SLV 13	-4724	-4928	-37	1.304	712	0.918	20.65081	3.65568	Si
SLV 14	-4506	-4866	-36	1.349	690.3	0.916	21.40106	3.65568	Si
SLV 3	-4046	-7032	44	1.453	644.3	0.912	23.16777	3.65568	Si
SLV 4	-3829	-6971	45	1.51	622.7	0.91	24.11967	3.65568	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	6.101	SLU 43	Si
V_SLU	19.405	SLU 64	Si
PF_SLV	2.644	SLV 13	Si
V_SLV	6.481	SLV 13	Si
PFFP_SLV	6.88	SLV 12	Si
R_SLV	4.629	SLV 5	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
-31.783	-3.274	-26.798	-3.274	L1	L2	4.985	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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	0.63	2328.33	-15771	-0.0000127	0.0003743	0.0035	4.985	36594.06	38358.64	38358.64	16.47	No	Si
SLU 2	1.03	2832.02	-15870	-0.0000131	0.0003743	0.0035	4.985	36806.42	38577.6	38577.6	13.62	No	Si
SLU 50	0.63	3001.61	-19439	-0.0000158	0.0003743	0.0035	4.985	44327.39	46434.87	46434.87	15.47	No	Si
SLU 50	1.03	3644.5	-19517	-0.0000164	0.0003743	0.0035	4.985	44489.21	46605.43	46605.43	12.79	No	Si
SLU 49	0.63	3011.67	-19373	-0.0000157	0.0003743	0.0035	4.985	44192.09	46291.62	46291.62	15.37	No	Si
SLU 49	1.03	3664.23	-19456	-0.0000163	0.0003743	0.0035	4.985	44363.6	46473.23	46473.23	12.68	No	Si
SLU 46	0.63	3011.67	-19373	-0.0000157	0.0003743	0.0035	4.985	44192.09	46291.62	46291.62	15.37	No	Si
SLU 46	1.03	3664.23	-19456	-0.0000163	0.0003743	0.0035	4.985	44363.6	46473.23	46473.23	12.68	No	Si
SLU 43	0.63	3001.61	-19439	-0.0000158	0.0003743	0.0035	4.985	44327.39	46434.87	46434.87	15.47	No	Si
SLU 43	1.03	3644.5	-19517	-0.0000164	0.0003743	0.0035	4.985	44489.21	46605.43	46605.43	12.79	No	Si
SLU 44	0.63	3018.38	-19330	-0.0000157	0.0003743	0.0035	4.985	44101.85	46196.14	46196.14	15.3	No	Si
SLU 44	1.03	3677.39	-19416	-0.0000163	0.0003743	0.0035	4.985	44279.82	46384.48	46384.48	12.61	No	Si
SLU 47	0.63	3018.38	-19330	-0.0000157	0.0003743	0.0035	4.985	44101.85	46196.14	46196.14	15.3	No	Si
SLU 47	1.03	3677.39	-19416	-0.0000163	0.0003743	0.0035	4.985	44279.82	46384.48	46384.48	12.61	No	Si
SLU 48	0.63	3001.61	-19439	-0.0000158	0.0003743	0.0035	4.985	44327.39	46434.87	46434.87	15.47	No	Si
SLU 48	1.03	3644.5	-19517	-0.0000164	0.0003743	0.0035	4.985	44489.21	46605.43	46605.43	12.79	No	Si
SLU 45	0.63	3001.61	-19439	-0.0000158	0.0003743	0.0035	4.985	44327.39	46434.87	46434.87	15.47	No	Si
SLU 45	1.03	3644.5	-19517	-0.0000164	0.0003743	0.0035	4.985	44489.21	46605.43	46605.43	12.79	No	Si
SLU 51	0.63	3011.67	-19373	-0.0000157	0.0003743	0.0035	4.985	44192.09	46291.62	46291.62	15.37	No	Si
SLU 51	1.03	3664.23	-19456	-0.0000163	0.0003743	0.0035	4.985	44363.6	46473.23	46473.23	12.68	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 4	0.63	-3513.33	-16717	-0.0000142	0.0005615	0.0035	4.985		47042.48	47042.48	13.39		Si
SLV 4	1.03	1915.56	-16580	-0.0000128	0.0005615	0.0035	4.985		40857.54	40857.54	21.33		Si
SLV 7	0.63	1088.74	-13798	-0.0000102	0.0005615	0.0035	4.985		34414.29	34414.29	31.61		Si
SLV 7	1.03	2789.87	-14062	-0.0000118	0.0005615	0.0035	4.985		35033.82	35033.82	12.56		Si
SLV 2	0.63	-3706.02	-19519	-0.0000163	0.0005615	0.0035	4.985		53335.5	53335.5	14.39		Si
SLV 2	1.03	1509.56	-19279	-0.0000143	0.0005615	0.0035	4.985		47026.06	47026.06	31.15		Si
SLV 12	0.63	3849.98	-13889	-0.0000125	0.0005615	0.0035	4.985		34628.23	34628.23	8.99		Si
SLV 12	1.03	3801.54	-14358	-0.0000128	0.0005615	0.0035	4.985		35727.57	35727.57	9.4		Si
SLV 15	0.63	8002.43	-17507	-0.0000184	0.0005615	0.0035	4.985		42986.99	42986.99	5.37		Si
SLV 15	1.03	3728.53	-18137	-0.0000153	0.0005615	0.0035	4.985		44429.73	44429.73	11.92		Si
SLV 13	0.63	7809.74	-20309	-0.0000202	0.0005615	0.0035	4.985		49370.89	49370.89	6.32		Si
SLV 13	1.03	3322.53	-20836	-0.0000169	0.0005615	0.0035	4.985		50558.89	50558.89	15.22		Si
SLV 11	0.63	4385.23	-14002	-0.000013	0.0005615	0.0035	4.985		34891.79	34891.79	7.96		Si
SLV 11	1.03	3440.49	-14490	-0.0000126	0.0005615	0.0035	4.985		36037.15	36037.15	10.47		Si
SLV 8	0.63	553.48	-13685	-0.0000097	0.0005615	0.0035	4.985		34150.85	34150.85	61.7		Si
SLV 8	1.03	3150.91	-13930	-0.000012	0.0005615	0.0035	4.985		34724.54	34724.54	11.02		Si
SLV 16	0.63	7474.98	-17396	-0.0000179	0.0005615	0.0035	4.985		42732.72	42732.72	5.72		Si
SLV 16	1.03	4084.31	-18007	-0.0000156	0.0005615	0.0035	4.985		44131.97	44131.97	10.81		Si
SLV 14	0.63	7282.29	-20198	-0.0000197	0.0005615	0.0035	4.985		49118.2	49118.2	6.74		Si
SLV 14	1.03	3678.31	-20706	-0.0000171	0.0005615	0.0035	4.985		50267.06	50267.06	13.67		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	0.63	2190.63	-31033	-27585	6470	4.985	4.985	-12297	8584	19256	28547	67173	12712	47803	No	7.39	Si
SLU 82	1.03	2770.83	-31586	-28076	6470	4.985	4.985	-12516	8613	19322	28547	67173	12712	47868	No	7.4	Si
SLU 75	0.63	2439.93	-28590	-25413	6114	4.985	4.985	-11329	8455	18967	28547	67173	12712	47513	No	7.77	Si
SLU 75	1.03	3033.93	-29036	-25810	6113	4.985	4.985	-11506	8479	19019	28547	67173	12712	47566	No	7.78	Si
SLU 77	0.63	2429.87	-28655	-25471	6124	4.985	4.985	-11355	8458	18974	28547	67173	12712	47521	No	7.76	Si
SLU 77	1.03	3014.19	-29097	-25864	6124	4.985	4.985	-11530	8482	19027	28547	67173	12712	47573	No	7.77	Si
SLU 78	0.63	2439.93	-28590	-25413	6114	4.985	4.985	-11329	8455	18967	28547	67173	12712	47513	No	7.77	Si
SLU 78	1.03	3033.93	-29036	-25810	6113	4.985	4.985	-11506	8479	19019	28547	67173	12712	47566	No	7.78	Si
SLU 74	0.63	2429.87	-28655	-25471	6124	4.985	4.985	-11355	8458	18974	28547	67173	12712	47521	No	7.76	Si
SLU 74	1.03	3014.19	-29097	-25864	6124	4.985	4.985	-11530	8482	19027	28547	67173	12712	47573	No	7.77	Si
SLU 83	0.63	2180.56	-31099	-27643	6480	4.985	4.985	-12323	8588	19264	28547	67173	12712	47810	No	7.38	Si
SLU 83	1.03	2751.1	-31647	-28130	6480	4.985	4.985	-12540	8616	19329	28547	67173	12712	47875	No	7.39	Si
SLU 84	0.63	2190.63	-31033	-27585	6470	4.985	4.985	-12297	8584	19256	28547	67173	12712	47803	No	7.39	Si
SLU 84	1.03	2770.83	-31586	-28076	6470	4.985	4.985	-12516	8613	19322	28547	67173	12712	47868	No	7.4	Si
SLU 80	0.63	2439.93	-28590	-25413	6114	4.985	4.985	-11329	8455	18967	28547	67173	12712	47513	No	7.77	Si
SLU 80	1.03	3033.93	-29036	-25810	6113	4.985	4.985	-11506	8479	19019	28547	67173	12712	47566	No	7.78	Si
SLU 81	0.63	2180.56	-31099	-27643	6480	4.985	4.985	-12323	8588	19264	28547	67173	12712	47810	No	7.38	Si
SLU 81	1.03	2751.1	-31647	-28130	6480	4.985	4.985	-12540	8616	19329	28547	67173	12712	47875	No	7.39	Si
SLU 79	0.63	2429.87	-28655	-25471	6124	4.985	4.985	-11355	8458	18974	28547	67173	12712	47521	No	7.76	Si
SLU 79	1.03	3014.19	-29097	-25864	6124	4.985	4.985	-11530	8482	19027	28547	67173	12712	47573	No	7.77	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 13	0.63	7809.74	-20309	-18052	17852	4.985	4.985	-8047	12026	26978	28547	100759	12712	55524		3.11	Si
SLV 13	1.03	3322.53	-20836	-18521	17592	4.985	4.985	-8256	12068	27071	28547	100759	12712	55618		3.16	Si
SLV 9	0.63	3742.93	-23340	-20747	9406	4.985	4.985	-9249	12266	27517	28547	100759	12712	56063		5.96	Si
SLV 9	1.03	2087.17	-23486	-20876	9416	4.985	4.985	-9306	12278	27542	28547	100759	12712	56089		5.96	Si
SLV 4	0.63	-3513.33	-16717	-14859	-9451	4.985	4.985	-6624	11741	26339	28547	100759	12712	54886		5.81	Si
SLV 4	1.03	1915.56	-16580	-14738	-9192	4.985	4.985	-6570	11731	26315	28547	100759	12712	54861		5.97	Si
SLV 14	0.63	7282.29	-20198	-17954	15586	4.985	4.985	-8003	12017	26958	28547	100759	12712	55504		3.56	Si
SLV 14	1.03	3678.31	-20706	-18405	15326	4.985	4.985	-8205	12058	27048	28547	100759	12712	55595		3.63	Si
SLV 2	0.63	-3706.02	-19519	-17350	-9254	4.985	4.985	-7734	11964	26837	28547	100759	12712	55384		5.99	Si
SLV 2	1.03	1509.56	-19279	-17137	-8936	4.985	4.985	-7639	11945	26795	28547	100759	12712	55341		6.19	Si
SLV 15	0.63	8002.43	-17507	-15562	17655	4.985	4.985	-6937	11804	26480	28547	100759	12712	55026		3.12	Si
SLV 15	1.03	3728.53	-18137	-16122	17336	4.985	4.985	-7187	11854	26592	28547	100759	12712	55138		3.18	Si
SLV 10	0.63	3207.67	-23228	-20647	7106	4.985	4.985	-9204	12257	27497	28547	100759	12712	56043		7.89	Si
SLV 10	1.03	2448.22	-23354	-20759	7116	4.985	4.985	-9254	12267	27519	28547	100759	12712	56066		7.88	Si
SLV 16	0.63	7474.98	-17396	-15463	15388	4.985	4.985	-6893	11795	26460	28547	100759	12712	55006		3.57	Si
SLV 16	1.03	4084.31	-18007	-16006	15070	4.985	4.985	-7135	11844	26568	28547	100759	12712	55115		3.66	Si
SLV 11	0.63	4385.23	-14002	-12446	8747	4.985	4.985	-5548	11526	25856	28547	100759	12712	54403		6.22	Si
SLV 11	1.03	3440.49	-14490	-12880	8563	4.985	4.985	-5742	11565	25943	28547	100759	12712	54490		6.36	Si
SLV 3	0.63	-2985.88	-16828	-14958	-7185	4.985	4.985	-6668	11750	26359	28547	100759	12712	54905		7.64	Si
SLV 3	1.03	1559.77	-16710	-14854	-6926	4.985	4.985	-6622	11741	26338	28547	100759	12712	54884		7.92	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.025 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.24	5020	-11261	304.41	2450.54	8.05	Si
SLV 7	179667	0.24	5045	-11317	304.41	2462.16	8.09	Si
SLV 12	179667	0.24	5049	-11325	304.41	2463.96	8.09	Si
SLV 11	179667	0.24	5073	-11381	304.41	2475.58	8.13	Si
SLV 4	179667	0.24	6982	-15663	304.41	3363.04	11.05	Si
SLV 3	179667	0.24	7007	-15717	304.41	3374.17	11.08	Si
SLV 16	179667	0.24	7077	-15876	304.41	3406.54	11.19	Si
SLV 15	179667	0.24	7101	-15930	304.41	3417.66	11.23	Si
SLV 2	179667	0.24	8692	-19499	304.41	4137.6	13.59	Si
SLV 1	179667	0.24	8717	-19554	304.41	4148.46	13.63	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 = -0.025 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-19276	-26595	417	1.218	2829.5	0.921	19.22709	3.53142	Si
SLV 10	-19183	-26605	417	1.223	2820.2	0.921	19.29854	3.53142	Si
SLV 5	-19030	-26633	410	1.23	2804.9	0.921	19.42226	3.53142	Si
SLV 6	-18938	-26644	410	1.235	2795.6	0.92	19.49522	3.53142	Si
SLV 13	-17072	-20294	182	1.34	2608.6	0.916	21.2591	3.65568	Si
SLV 14	-16981	-20305	181	1.345	2599.5	0.916	21.34517	3.65568	Si
SLV 1	-16255	-20421	157	1.389	2527	0.914	22.07467	3.65568	Si
SLV 2	-16163	-20432	157	1.394	2517.9	0.914	22.16762	3.65568	Si
SLV 15	-14938	-14932	-28	1.479	2395.7	0.911	23.60049	3.65568	Si
SLV 16	-14847	-14942	-28	1.486	2386.7	0.911	23.70638	3.65568	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	12.613	SLU 44	Si
V_SLU	7.378	SLU 81	Si
PF_SLV	5.372	SLV 15	Si
V_SLV	3.11	SLV 13	Si
PFFP_SLV	8.05	SLV 8	Si
R_SLV	5.445	SLV 9	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
-25.798	-3.274	-24.423	-3.274	L1	L2	1.375	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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	0.63	-988.04	-8630	-0.0000327	0.0003743	0.0035	1.375	5120.45	5788.72	5788.72	5.86	No	Si
SLU 83	1.03	-282.62	-7639	-0.0000222	0.0003743	0.0035	1.375	4614.77	5240.09	5240.09	18.54	No	Si
SLU 50	0.63	-752.13	-6148	-0.0000235	0.0003743	0.0035	1.375	3814.14	4383.12	4383.12	5.83	No	Si
SLU 50	1.03	-122.61	-5260	-0.0000144	0.0003743	0.0035	1.375	3314.38	3859.96	3859.96	31.48	No	Si
SLU 69	0.63	-832.67	-6959	-0.0000265	0.0003743	0.0035	1.375	4255.54	4854.8	4854.8	5.83	No	Si
SLU 69	1.03	-170.18	-6017	-0.0000168	0.0003743	0.0035	1.375	3741.59	4306.48	4306.48	25.31	No	Si
SLU 71	0.63	-832.67	-6959	-0.0000265	0.0003743	0.0035	1.375	4255.54	4854.8	4854.8	5.83	No	Si
SLU 71	1.03	-170.18	-6017	-0.0000168	0.0003743	0.0035	1.375	3741.59	4306.48	4306.48	25.31	No	Si
SLU 66	0.63	-832.67	-6959	-0.0000265	0.0003743	0.0035	1.375	4255.54	4854.8	4854.8	5.83	No	Si
SLU 66	1.03	-170.18	-6017	-0.0000168	0.0003743	0.0035	1.375	3741.59	4306.48	4306.48	25.31	No	Si
SLU 48	0.63	-752.13	-6148	-0.0000235	0.0003743	0.0035	1.375	3814.14	4383.12	4383.12	5.83	No	Si
SLU 48	1.03	-122.61	-5260	-0.0000144	0.0003743	0.0035	1.375	3314.38	3859.96	3859.96	31.48	No	Si
SLU 43	0.63	-752.13	-6148	-0.0000235	0.0003743	0.0035	1.375	3814.14	4383.12	4383.12	5.83	No	Si
SLU 43	1.03	-122.61	-5260	-0.0000144	0.0003743	0.0035	1.375	3314.38	3859.96	3859.96	31.48	No	Si
SLU 45	0.63	-752.13	-6148	-0.0000235	0.0003743	0.0035	1.375	3814.14	4383.12	4383.12	5.83	No	Si
SLU 45	1.03	-122.61	-5260	-0.0000144	0.0003743	0.0035	1.375	3314.38	3859.96	3859.96	31.48	No	Si
SLU 64	0.63	-832.67	-6959	-0.0000265	0.0003743	0.0035	1.375	4255.54	4854.8	4854.8	5.83	No	Si
SLU 64	1.03	-170.18	-6017	-0.0000168	0.0003743	0.0035	1.375	3741.59	4306.48	4306.48	25.31	No	Si
SLU 81	0.63	-988.04	-8630	-0.0000327	0.0003743	0.0035	1.375	5120.45	5788.72	5788.72	5.86	No	Si
SLU 81	1.03	-282.62	-7639	-0.0000222	0.0003743	0.0035	1.375	4614.77	5240.09	5240.09	18.54	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	0.63	-762.34	-3918	-0.0000178	0.0005615	0.0035	1.375		3077.37	3077.37	4.04		Si
SLV 3	1.03	-34.09	-3050	-0.0000078	0.0005615	0.0035	1.375		2517.96	2517.96	73.86		Si
SLV 12	0.63	69.54	-3748	-0.0000099	0.0005615	0.0035	1.375		2591.96	2591.96	37.27		Si
SLV 12	1.03	-307.26	-3418	-0.0000117	0.0005615	0.0035	1.375		2756.47	2756.47	8.97		Si
SLV 1	0.63	-1168.86	-5195	-0.0000254	0.0005615	0.0035	1.375		3880.25	3880.25	3.32		Si
SLV 1	1.03	46.89	-4108	-0.0000106	0.0005615	0.0035	1.375		2822.47	2822.47	60.2		Si
SLV 2	0.63	-1302.08	-5429	-0.0000275	0.0005615	0.0035	1.375		4025.91	4025.91	3.09		Si
SLV 2	1.03	90.11	-4202	-0.0000113	0.0005615	0.0035	1.375		2882.25	2882.25	31.98		Si
SLV 5	0.63	-1377.32	-7269	-0.000033	0.0005615	0.0035	1.375		5157.39	5157.39	3.74		Si
SLV 5	1.03	21.38	-6155	-0.0000154	0.0005615	0.0035	1.375		4108.74	4108.74	192.17		Si
SLV 9	0.63	-1150.32	-7771	-0.0000318	0.0005615	0.0035	1.375		5459.4	5459.4	4.75		Si
SLV 9	1.03	-81.19	-6851	-0.0000178	0.0005615	0.0035	1.375		4903.68	4903.68	60.4		Si
SLV 4	0.63	-895.57	-4151	-0.0000198	0.0005615	0.0035	1.375		3226.38	3226.38	3.6		Si
SLV 4	1.03	9.13	-3143	-0.0000078	0.0005615	0.0035	1.375		2200.47	2200.47	240.96		Si
SLV 6	0.63	-1512.51	-7506	-0.0000351	0.0005615	0.0035	1.375		5299.95	5299.95	3.5		Si
SLV 6	1.03	65.24	-6250	-0.0000161	0.0005615	0.0035	1.375		4167.47	4167.47	63.87		Si
SLV 11	0.63	204.74	-3511	-0.0000108	0.0005615	0.0035	1.375		2439.62	2439.62	11.92		Si
SLV 11	1.03	-351.13	-3323	-0.0000119	0.0005615	0.0035	1.375		2695.01	2695.01	7.68		Si
SLV 10	0.63	-1285.52	-8008	-0.0000339	0.0005615	0.0035	1.375		5602.6	5602.6	4.36		Si
SLV 10	1.03	-37.33	-6946	-0.0000176	0.0005615	0.0035	1.375		4961.92	4961.92	132.93		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 84	0.63	-977.86	-8602	-7646	-2452	1.375	1.375	-12357	8592	5316	28547	18528	3506	22034	No	8.99	Si
SLU 84	1.03	-280.27	-7621	-6774	-2448	1.375	1.375	-10948	8404	5200	28547	18528	3506	22034	No	9	Si
SLU 82	0.63	-977.86	-8602	-7646	-2452	1.375	1.375	-12357	8592	5316	28547	18528	3506	22034	No	8.99	Si
SLU 82	1.03	-280.27	-7621	-6774	-2448	1.375	1.375	-10948	8404	5200	28547	18528	3506	22034	No	9	Si
SLU 77	0.63	-941.43	-8129	-7226	-2432	1.375	1.375	-11678	8501	5260	28547	18528	3506	22034	No	9.06	Si
SLU 77	1.03	-248.89	-7152	-6357	-2428	1.375	1.375	-10275	8314	5145	28547	18528	3506	22034	No	9.08	Si
SLU 78	0.63	-931.24	-8100	-7200	-2394	1.375	1.375	-11637	8496	5257	28547	18528	3506	22034	No	9.2	Si
SLU 78	1.03	-246.54	-7134	-6342	-2390	1.375	1.375	-10249	8311	5142	28547	18528	3506	22034	No	9.22	Si
SLU 79	0.63	-941.43	-8129	-7226	-2432	1.375	1.375	-11678	8501	5260	28547	18528	3506	22034	No	9.06	Si
SLU 79	1.03	-248.89	-7152	-6357	-2428	1.375	1.375	-10275	8314	5145	28547	18528	3506	22034	No	9.08	Si
SLU 75	0.63	-931.24	-8100	-7200	-2394	1.375	1.375	-11637	8496	5257	28547	18528	3506	22034	No	9.2	Si
SLU 75	1.03	-246.54	-7134	-6342	-2390	1.375	1.375	-10249	8311	5142	28547	18528	3506	22034	No	9.22	Si
SLU 81	0.63	-988.04	-8630	-7671	-2490	1.375	1.375	-12398	8598	5320	28547	18528	3506	22034	No	8.85	Si
SLU 81	1.03	-282.62	-7639	-6790	-2486	1.375	1.375	-10974	8408	5202	28547	18528	3506	22034	No	8.86	Si
SLU 74	0.63	-941.43	-8129	-7226	-2432	1.375	1.375	-11678	8501	5260	28547	18528	3506	22034	No	9.06	Si
SLU 74	1.03	-248.89	-7152	-6357	-2428	1.375	1.375	-10275	8314	5145	28547	18528	3506	22034	No	9.08	Si
SLU 83	0.63	-988.04	-8630	-7671	-2490	1.375	1.375	-12398	8598	5320	28547	18528	3506	22034	No	8.85	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 83	1.03	-282.62	-7639	-6790	-2486	1.375	1.375	-10974	8408	5202	28547	18528	3506	22034	No	8.86	Si
SLU 80	0.63	-931.24	-8100	-7200	-2394	1.375	1.375	-11637	8496	5257	28547	18528	3506	22034	No	9.2	Si
SLU 80	1.03	-246.54	-7134	-6342	-2390	1.375	1.375	-10249	8311	5142	28547	18528	3506	22034	No	9.22	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 6	0.63	-1512.51	-7506	-6672	-5295	1.375	1.375	-10784	12573	7780	28547	27792	3506	31298		5.91	Si
SLV 6	1.03	65.24	-6250	-5555	-5282	1.375	1.375	-8978	12212	7556	28547	27792	3506	31298		5.93	Si
SLV 2	0.63	-1302.08	-5429	-4826	-4650	1.375	1.343	-7799	11976	7238	28547	27792	3506	31298		6.73	Si
SLV 2	1.03	90.11	-4202	-3735	-4572	1.375	1.375	-6036	11624	7192	28547	27792	3506	31298		6.85	Si
SLV 10	0.63	-1285.52	-8008	-7118	-4249	1.375	1.375	-11504	12717	7869	28547	27792	3506	31298		7.37	Si
SLV 10	1.03	-37.33	-6946	-6174	-4284	1.375	1.375	-9979	12412	7680	28547	27792	3506	31298		7.31	Si
SLV 5	0.63	-1377.32	-7269	-6462	-4604	1.375	1.375	-10443	12505	7738	28547	27792	3506	31298		6.8	Si
SLV 5	1.03	21.38	-6155	-5471	-4591	1.375	1.375	-8842	12185	7540	28547	27792	3506	31298		6.82	Si
SLV 9	0.63	-1150.32	-7771	-6907	-3558	1.375	1.375	-11163	12649	7827	28547	27792	3506	31298		8.8	Si
SLV 9	1.03	-81.19	-6851	-6090	-3593	1.375	1.375	-9843	12385	7663	28547	27792	3506	31298		8.71	Si
SLV 4	0.63	-895.57	-4151	-3690	-3055	1.375	1.375	-5963	11609	7183	28547	27792	3506	31298		10.24	Si
SLV 4	1.03	9.13	-3143	-2794	-2969	1.375	1.375	-4515	11320	7004	28547	27792	3506	31298		10.54	Si
SLV 14	0.63	-545.44	-7100	-6311	-1163	1.375	1.375	-10200	12457	7708	28547	27792	3506	31298		26.92	Si
SLV 14	1.03	-251.79	-6523	-5798	-1244	1.375	1.375	-9371	12291	7605	28547	27792	3506	31298		25.16	Si
SLV 1	0.63	-1168.86	-5195	-4618	-3969	1.375	1.375	-7464	11909	7369	28547	27792	3506	31298		7.89	Si
SLV 1	1.03	46.89	-4108	-3652	-3891	1.375	1.375	-5902	11597	7176	28547	27792	3506	31298		8.04	Si
SLV 3	0.63	-762.34	-3918	-3482	-2374	1.375	1.375	-5628	11542	7142	28547	27792	3506	31298		13.18	Si
SLV 3	1.03	-34.09	-3050	-2711	-2288	1.375	1.375	-4381	11293	6987	28547	27792	3506	31298		13.68	Si
SLV 11	0.63	204.74	-3511	-3121	1759	1.375	1.375	-5044	11426	7070	28547	27792	3506	31298		17.79	Si
SLV 11	1.03	-351.13	-3323	-2954	1751	1.375	1.375	-4774	11371	7036	28547	27792	3506	31298		17.88	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.025 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.24	4294	-2657	83.97	580.95	6.92	Si
SLV 8	179667	0.24	4606	-2850	83.97	621.91	7.41	Si
SLV 3	179667	0.24	5341	-3305	83.97	717.62	8.55	Si
SLV 11	179667	0.24	5441	-3367	83.97	730.5	8.7	Si
SLV 4	179667	0.24	5649	-3496	83.97	757.39	9.02	Si
SLV 12	179667	0.24	5753	-3560	83.97	770.8	9.18	Si
SLV 1	179667	0.24	7385	-4569	83.97	978.4	11.65	Si
SLV 2	179667	0.24	7693	-4760	83.97	1017.03	12.11	Si
SLV 15	179667	0.24	9166	-5671	83.97	1199.48	14.29	Si
SLV 16	179667	0.24	9474	-5862	83.97	1237.11	14.73	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 = -0.025 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 10	-5989	-8833	-143	1.113	848	0.926	17.46817	3.53142	Si
SLV 9	-5786	-8773	-143	1.142	827.6	0.924	17.94577	3.53142	Si
SLV 14	-5316	-8491	-206	1.205	780.3	0.921	19.01926	3.65568	Si
SLV 6	-5602	-7614	-36	1.184	809.2	0.923	18.63838	3.53142	Si
SLV 13	-5116	-8432	-206	1.239	760.3	0.919	19.58746	3.65568	Si
SLV 5	-5400	-7554	-36	1.216	788.8	0.922	19.17929	3.53142	Si
SLV 16	-4354	-6980	-153	1.399	684.1	0.913	22.26355	3.65568	Si
SLV 15	-4154	-6921	-152	1.445	664.2	0.911	23.04928	3.65568	Si
SLV 2	-4029	-4429	151	1.477	651.7	0.91	23.57985	3.65568	Si
SLV 1	-3829	-4370	151	1.529	631.9	0.908	24.46154	3.65568	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	5.828	SLU 43	Si
V_SLU	8.851	SLU 81	Si
PF_SLV	3.092	SLV 2	Si
V_SLV	5.91	SLV 6	Si
PFFP_SLV	6.919	SLV 7	Si
R_SLV	4.946	SLV 10	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
-32.734	1.056	-30.903	1.056	L1	L2	1.831	0.45	2.69	2.69	2.69			

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	-1.37	8505.56	-15922	-0.0000963	0.0004492	0.0035	1.8309	12270.54	13293.48	13293.48	1.56	No	Si
SLU 49	0.8	-2536.09	-5173	-0.0000263	0.0004492	0.0035	1.8309	4492.42	6266.75	6266.75	2.47	No	Si
SLU 43	-1.37	8482.7	-15920	-0.0000959	0.0004492	0.0035	1.8309	12269.18	13292.05	13292.05	1.57	No	Si
SLU 43	0.8	-2534.23	-5172	-0.0000263	0.0004492	0.0035	1.8309	4491.12	6265.43	6265.43	2.47	No	Si
SLU 51	-1.37	8505.56	-15922	-0.0000963	0.0004492	0.0035	1.8309	12270.54	13293.48	13293.48	1.56	No	Si
SLU 51	0.8	-2536.09	-5173	-0.0000263	0.0004492	0.0035	1.8309	4492.42	6266.75	6266.75	2.47	No	Si
SLU 46	-1.37	8505.56	-15922	-0.0000963	0.0004492	0.0035	1.8309	12270.54	13293.48	13293.48	1.56	No	Si
SLU 46	0.8	-2536.09	-5173	-0.0000263	0.0004492	0.0035	1.8309	4492.42	6266.75	6266.75	2.47	No	Si
SLU 65	-1.37	9160.47	-17762	-0.0001032	0.0004492	0.0035	1.8309	13391.44	14512.92	14512.92	1.58	No	Si
SLU 65	0.8	-2770.68	-5821	-0.0000287	0.0004492	0.0035	1.8309	5020.49	6810.08	6810.08	2.46	No	Si
SLU 44	-1.37	8520.8	-15924	-0.0000966	0.0004492	0.0035	1.8309	12271.44	13294.43	13294.43	1.56	No	Si
SLU 44	0.8	-2537.32	-5174	-0.0000263	0.0004492	0.0035	1.8309	4493.28	6267.63	6267.63	2.47	No	Si
SLU 48	-1.37	8482.7	-15920	-0.0000959	0.0004492	0.0035	1.8309	12269.18	13292.05	13292.05	1.57	No	Si
SLU 48	0.8	-2534.23	-5172	-0.0000263	0.0004492	0.0035	1.8309	4491.12	6265.43	6265.43	2.47	No	Si
SLU 45	-1.37	8482.7	-15920	-0.0000959	0.0004492	0.0035	1.8309	12269.18	13292.05	13292.05	1.57	No	Si
SLU 45	0.8	-2534.23	-5172	-0.0000263	0.0004492	0.0035	1.8309	4491.12	6265.43	6265.43	2.47	No	Si
SLU 50	-1.37	8482.7	-15920	-0.0000959	0.0004492	0.0035	1.8309	12269.18	13292.05	13292.05	1.57	No	Si
SLU 50	0.8	-2534.23	-5172	-0.0000263	0.0004492	0.0035	1.8309	4491.12	6265.43	6265.43	2.47	No	Si
SLU 47	-1.37	8520.8	-15924	-0.0000966	0.0004492	0.0035	1.8309	12271.44	13294.43	13294.43	1.56	No	Si
SLU 47	0.8	-2537.32	-5174	-0.0000263	0.0004492	0.0035	1.8309	4493.28	6267.63	6267.63	2.47	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 14	-1.37	15191.38	-9248	-0.0210983	0.0006738	0.0035	1.4647		8422.29	8422.29	0.55		No
SLV 14	0.8	-3423.81	-3413	-0.0001974	0.0006738	0.0035	1.4647		4789.84	4789.84	1.4		Si
SLV 16	-1.37	16421.92	-9147	-0.0242876	0.0006738	0.0035	1.4647		8337.65	8337.65	0.51		No
SLV 16	0.8	-3532.68	-3366	-0.0002263	0.0006738	0.0035	1.4647		4748.8	4748.8	1.34		Si
SLV 7	-1.37	6516.91	-15251	-0.0000688	0.0006738	0.0035	1.8309		13277.13	13277.13	2.04		Si
SLV 7	0.8	-1934.18	-4870	-0.0000201	0.0006738	0.0035	1.8309		6051.27	6051.27	3.13		Si
SLV 10	-1.37	7645.94	-12718	-0.0000903	0.0006738	0.0035	1.8309		11265.27	11265.27	1.47		Si
SLV 10	0.8	-2366.74	-4308	-0.0000252	0.0006738	0.0035	1.4647		5567.69	5567.69	2.35		Si
SLV 8	-1.37	6510.8	-15255	-0.0000688	0.0006738	0.0035	1.8309		13280.36	13280.36	2.04		Si
SLV 8	0.8	-1932.47	-4871	-0.0000201	0.0006738	0.0035	1.8309		6052.04	6052.04	3.13		Si
SLV 12	-1.37	11747.74	-12382	-0.0059403	0.0006738	0.0035	1.4647		10992.48	10992.48	0.94		No
SLV 12	0.8	-2729.65	-4151	-0.0000346	0.0006738	0.0035	1.4647		5431.17	5431.17	1.99		Si
SLV 15	-1.37	16427.94	-9143	-0.0243092	0.0006738	0.0035	1.4647		8334.25	8334.25	0.51		No
SLV 15	0.8	-3534.37	-3365	-0.0002268	0.0006738	0.0035	1.4647		4748.03	4748.03	1.34		Si
SLV 9	-1.37	7652.05	-12714	-0.0000905	0.0006738	0.0035	1.8309		11261.99	11261.99	1.47		Si
SLV 9	0.8	-2368.45	-4307	-0.0000253	0.0006738	0.0035	1.4647		5566.92	5566.92	2.35		Si
SLV 11	-1.37	11753.85	-12378	-0.0059707	0.0006738	0.0035	1.4647		10989.15	10989.15	0.93		No
SLV 11	0.8	-2731.36	-4150	-0.0000347	0.0006738	0.0035	1.4647		5430.4	5430.4	1.99		Si
SLV 13	-1.37	15197.4	-9244	-0.0211201	0.0006738	0.0035	1.4647		8418.89	8418.89	0.55		No
SLV 13	0.8	-3425.5	-3412	-0.0001978	0.0006738	0.0035	1.4647		4789.08	4789.08	1.4		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	-1.37	9862.03	-20310	-16248	6366	1.8309	1.2896	-19721	10833	6287	81562	29609	9338	38947	No	6.12	Si
SLU 80	0.8	-3024.35	-6715	-5372	3647	1.8309	1.3952	-8598	9480	5952	81562	29609	9338	38947	No	10.68	Si
SLU 81	-1.37	10146.38	-21401	-17121	6450	1.8309	1.324	-20780	10833	6455	81562	29609	9338	38947	No	6.04	Si
SLU 81	0.8	-3131.74	-7098	-5678	3754	1.8309	1.4226	-8916	9522	6096	81562	29609	9338	38947	No	10.37	Si
SLU 75	-1.37	9862.03	-20310	-16248	6366	1.8309	1.2896	-19721	10833	6287	81562	29609	9338	38947	No	6.12	Si
SLU 75	0.8	-3024.35	-6715	-5372	3647	1.8309	1.3952	-8598	9480	5952	81562	29609	9338	38947	No	10.68	Si
SLU 79	-1.37	9839.17	-20308	-16247	6352	1.8309	1.2929	-19719	10833	6303	81562	29609	9338	38947	No	6.13	Si
SLU 79	0.8	-3022.5	-6714	-5371	3640	1.8309	1.3958	-8593	9479	5954	81562	29609	9338	38947	No	10.7	Si
SLU 84	-1.37	10169.23	-21403	-17122	6464	1.8309	1.321	-20782	10833	6440	81562	29609	9338	38947	No	6.03	Si
SLU 84	0.8	-3133.6	-7099	-5679	3761	1.8309	1.4221	-8921	9523	6094	81562	29609	9338	38947	No	10.36	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
SLU 76	-1.37	9877.27	-20312	-16249	6375	1.8309	1.2875	-19723	10833	6277	81562	29609	9338	38947	No	6.11	Si
SLU 76	0.8	-3025.59	-6716	-5373	3651	1.8309	1.3949	-8601	9480	5951	81562	29609	9338	38947	No	10.67	Si
SLU 82	-1.37	10169.23	-21403	-17122	6464	1.8309	1.321	-20782	10833	6440	81562	29609	9338	38947	No	6.03	Si
SLU 82	0.8	-3133.6	-7099	-5679	3761	1.8309	1.4221	-8921	9523	6094	81562	29609	9338	38947	No	10.36	Si
SLU 78	-1.37	9862.03	-20310	-16248	6366	1.8309	1.2896	-19721	10833	6287	81562	29609	9338	38947	No	6.12	Si
SLU 78	0.8	-3024.35	-6715	-5372	3647	1.8309	1.3952	-8598	9480	5952	81562	29609	9338	38947	No	10.68	Si
SLU 83	-1.37	10146.38	-21401	-17121	6450	1.8309	1.324	-20780	10833	6455	81562	29609	9338	38947	No	6.04	Si
SLU 83	0.8	-3131.74	-7098	-5678	3754	1.8309	1.4226	-8916	9522	6096	81562	29609	9338	38947	No	10.37	Si
SLU 73	-1.37	9877.27	-20312	-16249	6375	1.8309	1.2875	-19723	10833	6277	81562	29609	9338	38947	No	6.11	Si
SLU 73	0.8	-3025.59	-6716	-5373	3651	1.8309	1.3949	-8601	9480	5951	81562	29609	9338	38947	No	10.67	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 10	-1.37	7645.94	-12718	-10175	5449	1.8309	0.9428	-12349	14970	6351	81562	44414	9338	53751		9.86	Si
SLV 10	0.8	-2366.74	-4308	-3447	2784	1.4647	1.0983	0	0	0	81562	35531	7470	43001		15.45	Si
SLV 8	-1.37	6510.8	-15255	-12204	3958	1.8309	1.466	-14813	15463	10201	81562	44414	9338	53751		13.58	Si
SLV 8	0.8	-1932.47	-4871	-3897	2449	1.8309	1.5562	-5578	13616	9535	81562	44414	9338	53751		21.95	Si
SLV 7	-1.37	6516.91	-15251	-12201	3964	1.8309	1.4644	-14809	15462	10189	81562	44414	9338	53751		13.56	Si
SLV 7	0.8	-1934.18	-4870	-3896	2450	1.8309	1.5549	-5581	13616	9527	81562	44414	9338	53751		21.94	Si
SLV 15	-1.37	16427.94	-9143	-7315	12162	1.4647	0	0	0	0	81562	35531	7470	43001		3.54	Si
SLV 15	0.8	-3534.37	-3365	-2692	5274	1.4647	0	0	0	0	81562	35531	7470	43001		8.15	Si
SLV 13	-1.37	15197.4	-9244	-7395	11342	1.4647	0	0	0	0	81562	35531	7470	43001		3.79	Si
SLV 13	0.8	-3425.5	-3412	-2730	4928	1.4647	0	0	0	0	81562	35531	7470	43001		8.73	Si
SLV 9	-1.37	7652.05	-12714	-10171	5455	1.8309	0.9408	-12345	14969	6337	81562	44414	9338	53751		9.85	Si
SLV 9	0.8	-2368.45	-4307	-3446	2785	1.4647	1.0968	0	0	0	81562	35531	7470	43001		15.44	Si
SLV 16	-1.37	16421.92	-9147	-7318	12156	1.4647	0	0	0	0	81562	35531	7470	43001		3.54	Si
SLV 16	0.8	-3532.68	-3366	-2693	5273	1.4647	0	0	0	0	81562	35531	7470	43001		8.15	Si
SLV 14	-1.37	15191.38	-9248	-7399	11336	1.4647	0	0	0	0	81562	35531	7470	43001		3.79	Si
SLV 14	0.8	-3423.81	-3413	-2730	4927	1.4647	0	0	0	0	81562	35531	7470	43001		8.73	Si
SLV 12	-1.37	11747.74	-12382	-9906	8183	1.4647	0	0	0	0	81562	35531	7470	43001		5.25	Si
SLV 12	0.8	-2729.65	-4151	-3321	3939	1.4647	0.7735	0	0	0	81562	35531	7470	43001		10.92	Si
SLV 11	-1.37	11753.85	-12378	-9902	8189	1.4647	0	0	0	0	81562	35531	7470	43001		5.25	Si
SLV 11	0.8	-2731.36	-4150	-3320	3940	1.4647	0.7719	0	0	0	81562	35531	7470	43001		10.91	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.025 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-7120	0.24	113.69	1526.42	2036.18	1781.3	15.67	Si
SLV 16	-7124	0.24	113.69	1527.25	2037.14	1782.19	15.68	Si
SLV 13	-7197	0.24	113.69	1542.22	2054.53	1798.37	15.82	Si
SLV 14	-7201	0.24	113.69	1543.04	2055.49	1799.27	15.83	Si
SLV 11	-10383	0.24	113.69	2175.52	2802.76	2489.14	21.89	Si
SLV 12	-10387	0.24	113.69	2176.32	2803.73	2490.02	21.9	Si
SLV 9	-10641	0.24	113.69	2225.59	2863.39	2544.49	22.38	Si
SLV 10	-10646	0.24	113.69	2226.38	2864.36	2545.37	22.39	Si
SLV 7	-13257	0.24	113.69	2721.03	3473.08	3097.06	27.24	Si
SLV 8	-13262	0.24	113.69	2721.8	3474.04	3097.92	27.25	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.025 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-4079	-18827	-28	1.8	740.8	0.901	29.03972	3.65568	Si
SLV 1	-4078	-18822	-28	1.8	740.6	0.901	29.0479	3.65568	Si
SLV 4	-3972	-18726	-19	1.832	730.3	0.9	29.5895	3.65568	Si
SLV 3	-3970	-18722	-19	1.833	730.1	0.9	29.59798	3.65568	Si
SLV 6	-2901	-15592	-21	2.214	626.7	0.892	36.06412	3.53142	Si
SLV 5	-2899	-15588	-21	2.215	626.5	0.892	36.07673	3.53142	Si
SLV 8	-2542	-15255	8	2.386	592.8	0.89	38.94007	3.53142	Si
SLV 7	-2540	-15251	8	2.386	592.6	0.89	38.95398	3.53142	Si
SLV 10	-1783	-12718	-7	2.848	523.2	0.889	46.5561	3.53142	Si
SLV 9	-1781	-12714	-6	2.85	523.1	0.889	46.57629	3.53142	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	1.56	SLU 44	Si
V_SLU	6.025	SLU 82	Si
PF_SLV	0.507	SLV 15	No
V_SLV	3.536	SLV 15	Si
PFFP_SLV	15.668	SLV 15	Si
R_SLV	7.944	SLV 2	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
-29.903	1.056	-24.423	1.056	L1	L2	5.48	0.45	2.69	2.69	2.69			

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 39	-1.37	-9672.98	-81390	-0.0000565	0.0004492	0.0035	5.48	162770.27	200576.99	200576.99	20.74	No	Si
SLU 39	0.73	-11019.25	-52380	-0.0000388	0.0004492	0.0035	5.48	118572.48	143422.76	143422.76	13.02	No	Si
SLU 81	-1.37	-10415.56	-95060	-0.0000661	0.0004492	0.0035	5.48	178291.8	224146.71	224146.71	21.52	No	Si
SLU 81	0.73	-11987.87	-59954	-0.0000443	0.0004492	0.0035	5.48	131587.27	159264.53	159264.53	13.29	No	Si
SLU 41	-1.37	-9672.98	-81390	-0.0000565	0.0004492	0.0035	5.48	162770.27	200576.99	200576.99	20.74	No	Si
SLU 41	0.73	-11019.25	-52380	-0.0000388	0.0004492	0.0035	5.48	118572.48	143422.76	143422.76	13.02	No	Si
SLU 42	-1.37	-9819.23	-81498	-0.0000567	0.0004492	0.0035	5.48	162906.77	200766.05	200766.05	20.45	No	Si
SLU 42	0.73	-11003.11	-52369	-0.0000388	0.0004492	0.0035	5.48	118551.43	143397.77	143397.77	13.03	No	Si
SLU 84	-1.37	-10561.81	-95168	-0.0000663	0.0004492	0.0035	5.48	178401.34	224322.06	224322.06	21.24	No	Si
SLU 84	0.73	-11971.73	-59942	-0.0000443	0.0004492	0.0035	5.48	131567.85	159241.03	159241.03	13.3	No	Si
SLU 82	-1.37	-10561.81	-95168	-0.0000663	0.0004492	0.0035	5.48	178401.34	224322.06	224322.06	21.24	No	Si
SLU 82	0.73	-11971.73	-59942	-0.0000443	0.0004492	0.0035	5.48	131567.85	159241.03	159241.03	13.3	No	Si
SLU 40	-1.37	-9819.23	-81498	-0.0000567	0.0004492	0.0035	5.48	162906.77	200766.05	200766.05	20.45	No	Si
SLU 40	0.73	-11003.11	-52369	-0.0000388	0.0004492	0.0035	5.48	118551.43	143397.77	143397.77	13.03	No	Si
SLU 83	-1.37	-10415.56	-95060	-0.0000661	0.0004492	0.0035	5.48	178291.8	224146.71	224146.71	21.52	No	Si
SLU 83	0.73	-11987.87	-59954	-0.0000443	0.0004492	0.0035	5.48	131587.27	159264.53	159264.53	13.29	No	Si
SLU 35	-1.37	-8450.66	-76212	-0.0000523	0.0004492	0.0035	5.48	156003.05	190899.1	190899.1	22.59	No	Si
SLU 35	0.73	-9758.51	-48268	-0.0000354	0.0004492	0.0035	5.48	111068.31	134694.14	134694.14	13.8	No	Si
SLU 32	-1.37	-8450.66	-76212	-0.0000523	0.0004492	0.0035	5.48	156003.05	190899.1	190899.1	22.59	No	Si
SLU 32	0.73	-9758.51	-48268	-0.0000354	0.0004492	0.0035	5.48	111068.31	134694.14	134694.14	13.8	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	-1.37	-43574.98	-59566	-0.0000646	0.0006738	0.0035	5.48		163895.2	163895.2	3.76		Si
SLV 4	0.73	-7268.7	-31886	-0.0000234	0.0006738	0.0035	5.48		99185.81	99185.81	13.65		Si
SLV 1	-1.37	-38302.21	-54816	-0.0000581	0.0006738	0.0035	5.48		153358.77	153358.77	4		Si
SLV 1	0.73	-8007.67	-32179	-0.0000241	0.0006738	0.0035	5.48		99896.64	99896.64	12.48		Si
SLV 16	-1.37	27557.49	-67971	-0.0000591	0.0006738	0.0035	5.48		167149.11	167149.11	6.07		Si
SLV 16	0.73	-4914.84	-41698	-0.0000278	0.0006738	0.0035	5.48		122982.18	122982.18	25.02		Si
SLV 15	-1.37	27590.91	-67991	-0.0000591	0.0006738	0.0035	5.48		167189.07	167189.07	6.06		Si
SLV 15	0.73	-4897.01	-41662	-0.0000278	0.0006738	0.0035	5.48		122900.59	122900.59	25.1		Si
SLV 7	-1.37	-24757.54	-68092	-0.0000573	0.0006738	0.0035	5.48		182656.5	182656.5	7.38		Si
SLV 7	0.73	-5543.95	-34902	-0.0000241	0.0006738	0.0035	5.48		106517.66	106517.66	19.21		Si
SLV 13	-1.37	32830.26	-63222	-0.0000597	0.0006738	0.0035	5.48		157615.99	157615.99	4.8		Si
SLV 13	0.73	-5653.81	-41990	-0.0000285	0.0006738	0.0035	5.48		123659.31	123659.31	21.87		Si
SLV 2	-1.37	-38335.62	-54796	-0.0000581	0.0006738	0.0035	5.48		153312.67	153312.67	4		Si
SLV 2	0.73	-8025.5	-32214	-0.0000241	0.0006738	0.0035	5.48		99982.29	99982.29	12.46		Si
SLV 8	-1.37	-24791.45	-68072	-0.0000573	0.0006738	0.0035	5.48		182612.04	182612.04	7.37		Si
SLV 8	0.73	-5562.05	-34938	-0.0000242	0.0006738	0.0035	5.48		106604.57	106604.57	19.17		Si
SLV 14	-1.37	32796.85	-63202	-0.0000596	0.0006738	0.0035	5.48		157576.03	157576.03	4.8		Si
SLV 14	0.73	-5671.64	-42025	-0.0000285	0.0006738	0.0035	5.48		123740.9	123740.9	21.82		Si
SLV 3	-1.37	-43541.57	-59586	-0.0000646	0.0006738	0.0035	5.48		163939.01	163939.01	3.77		Si
SLV 3	0.73	-7250.87	-31851	-0.0000234	0.0006738	0.0035	5.48		99100.16	99100.16	13.67		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	-1.37	-10561.81	-95168	-76135	-18195	5.48	5.48	-30874	10833	26715	81562	88622	27948	108277	No	5.95	Si
SLU 84	0.73	-11971.73	-59942	-47954	-18483	5.48	5.48	-19446	10833	26715	81562	88622	27948	108277	No	5.86	Si
SLU 79	-1.37	-9193.25	-89882	-71905	-17508	5.48	5.48	-29159	10833	26715	81562	88622	27948	108277	No	6.18	Si
SLU 79	0.73	-10727.13	-55841	-44673	-17780	5.48	5.48	-18116	10749	26506	81562	88622	27948	108068	No	6.08	Si
SLU 82	-1.37	-10561.81	-95168	-76135	-18195	5.48	5.48	-30874	10833	26715	81562	88622	27948	108277	No	5.95	Si
SLU 82	0.73	-11971.73	-59942	-47954	-18483	5.48	5.48	-19446	10833	26715	81562	88622	27948	108277	No	5.86	Si
SLU 80	-1.37	-9339.49	-89990	-71992	-17504	5.48	5.48	-29194	10833	26715	81562	88622	27948	108277	No	6.19	Si
SLU 80	0.73	-10710.99	-55830	-44664	-17778	5.48	5.48	-18112	10748	26505	81562	88622	27948	108067	No	6.08	Si
SLU 74	-1.37	-9193.25	-89882	-71905	-17508	5.48	5.48	-29159	10833	26715	81562	88622	27948	108277	No	6.18	Si
SLU 74	0.73	-10727.13	-55841	-44673	-17780	5.48	5.48	-18116	10749	26506	81562	88622	27948	108068	No	6.08	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 77	-1.37	-9193.25	-89882	-71905	-17508	5.48	5.48	-29159	10833	26715	81562	88622	27948	108277	No	6.18	Si
SLU 77	0.73	-10727.13	-55841	-44673	-17780	5.48	5.48	-18116	10749	26506	81562	88622	27948	108068	No	6.08	Si
SLU 81	-1.37	-10415.56	-95060	-76048	-18199	5.48	5.48	-30839	10833	26715	81562	88622	27948	108277	No	5.95	Si
SLU 81	0.73	-11987.87	-59954	-47963	-18485	5.48	5.48	-19450	10833	26715	81562	88622	27948	108277	No	5.86	Si
SLU 75	-1.37	-9339.49	-89990	-71992	-17504	5.48	5.48	-29194	10833	26715	81562	88622	27948	108277	No	6.19	Si
SLU 75	0.73	-10710.99	-55830	-44664	-17778	5.48	5.48	-18112	10748	26505	81562	88622	27948	108067	No	6.08	Si
SLU 78	-1.37	-9339.49	-89990	-71992	-17504	5.48	5.48	-29194	10833	26715	81562	88622	27948	108277	No	6.19	Si
SLU 78	0.73	-10710.99	-55830	-44664	-17778	5.48	5.48	-18112	10748	26505	81562	88622	27948	108067	No	6.08	Si
SLU 83	-1.37	-10415.56	-95060	-76048	-18199	5.48	5.48	-30839	10833	26715	81562	88622	27948	108277	No	5.95	Si
SLU 83	0.73	-11987.87	-59954	-47963	-18485	5.48	5.48	-19450	10833	26715	81562	88622	27948	108277	No	5.86	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	-1.37	-43541.57	-59586	-47668	-28978	5.48	5.48	-19330	16250	40072	81562	132933	27948	121634		4.2	Si
SLV 3	0.73	-7250.87	-31851	-25481	-28272	5.48	5.48	-10333	14567	35921	81562	132933	27948	117483		4.16	Si
SLV 10	-1.37	14012.82	-54695	-43756	-7993	5.48	5.48	-17744	16049	39576	81562	132933	27948	121138		15.16	Si
SLV 10	0.73	-7378.56	-38974	-31179	-8489	5.48	5.48	-12644	15029	37061	81562	132933	27948	118622		13.97	Si
SLV 8	-1.37	-24791.45	-68072	-54458	-16924	5.48	5.48	-22083	16250	40072	81562	132933	27948	121634		7.19	Si
SLV 8	0.73	-5562.05	-34938	-27951	-16804	5.48	5.48	-11334	14767	36415	81562	132933	27948	117977		7.02	Si
SLV 4	-1.37	-43574.98	-59566	-47653	-29105	5.48	5.48	-19324	16250	40072	81562	132933	27948	121634		4.18	Si
SLV 4	0.73	-7268.7	-31886	-25509	-28398	5.48	5.48	-10344	14569	35927	81562	132933	27948	117488		4.14	Si
SLV 2	-1.37	-38335.62	-54796	-43837	-29454	5.48	5.48	-17776	16055	39592	81562	132933	27948	121154		4.11	Si
SLV 2	0.73	-8025.5	-32214	-25771	-28773	5.48	5.48	-10451	14590	35979	81562	132933	27948	117541		4.09	Si
SLV 1	-1.37	-38302.21	-54816	-43853	-29327	5.48	5.48	-17783	16057	39596	81562	132933	27948	121157		4.13	Si
SLV 1	0.73	-8007.67	-32179	-25743	-28646	5.48	5.48	-10439	14588	35974	81562	132933	27948	117535		4.1	Si
SLV 5	-1.37	-7293.01	-52194	-41755	-17958	5.48	5.48	-16932	15886	39176	81562	132933	27948	120738		6.72	Si
SLV 5	0.73	-8066.62	-35995	-28796	-17925	5.48	5.48	-11677	14835	36584	81562	132933	27948	118146		6.59	Si
SLV 6	-1.37	-7326.92	-52173	-41739	-18087	5.48	5.48	-16926	15885	39173	81562	132933	27948	120734		6.68	Si
SLV 6	0.73	-8084.72	-36030	-28824	-18053	5.48	5.48	-11689	14838	36590	81562	132933	27948	118151		6.54	Si
SLV 7	-1.37	-24757.54	-68092	-54474	-16795	5.48	5.48	-22090	16250	40072	81562	132933	27948	121634		7.24	Si
SLV 7	0.73	-5543.95	-34902	-27922	-16676	5.48	5.48	-11323	14765	36409	81562	132933	27948	117971		7.07	Si
SLV 9	-1.37	14046.73	-54715	-43772	-7864	5.48	5.48	-17750	16050	39579	81562	132933	27948	121141		15.4	Si
SLV 9	0.73	-7360.47	-38938	-31150	-8361	5.48	5.48	-12632	15026	37055	81562	132933	27948	118617		14.19	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.025 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-40935	0.24	340.29	8376.22	10735	9555.61	28.08	Si
SLV 2	-40956	0.24	340.29	8380.03	10739.79	9559.91	28.09	Si
SLV 5	-42231	0.24	340.29	8614.05	11035.86	9824.96	28.87	Si
SLV 6	-42251	0.24	340.29	8617.88	11040.71	9829.3	28.88	Si
SLV 3	-42342	0.24	340.29	8634.41	11061.61	9848.01	28.94	Si
SLV 4	-42363	0.24	340.29	8638.19	11066.39	9852.29	28.95	Si
SLV 9	-44748	0.24	340.29	9071.42	11617.97	10344.69	30.4	Si
SLV 10	-44769	0.24	340.29	9075.2	11622.81	10349.01	30.41	Si
SLV 7	-46920	0.24	340.29	9460.98	12119.83	10790.4	31.71	Si
SLV 8	-46941	0.24	340.29	9464.71	12124.68	10794.7	31.72	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.025 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-33316	-67971	-358	0.871	4334	0.939	13.47034	3.65568	Si
SLV 15	-33287	-67991	-359	0.871	4331.1	0.939	13.47953	3.65568	Si
SLV 14	-33205	-63202	54	0.881	4322.8	0.939	13.62697	3.65568	Si
SLV 13	-33177	-63222	53	0.881	4319.9	0.939	13.63649	3.65568	Si
SLV 12	-31269	-70594	-767	0.903	4126.8	0.937	14.00755	3.53142	Si
SLV 11	-31240	-70614	-767	0.904	4123.9	0.937	14.01783	3.53142	Si
SLV 10	-30900	-54695	606	0.916	4089.6	0.936	14.20967	3.53142	Si
SLV 9	-30871	-54715	606	0.916	4086.6	0.936	14.22042	3.53142	Si
SLV 8	-29404	-68072	-705	0.948	3938.2	0.934	14.74378	3.53142	Si
SLV 7	-29375	-68092	-706	0.949	3935.3	0.934	14.75525	3.53142	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	13.016	SLU 39	Si
V_SLU	5.858	SLU 81	Si
PF_SLV	3.761	SLV 4	Si
V_SLV	4.085	SLV 2	Si
PFFP_SLV	28.081	SLV 1	Si
R_SLV	3.685	SLV 16	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
-34.108	5.726	-32.543	5.726	L1	L2	1.565	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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 49	0.63	2092.46	-8976	-0.0000378	0.0003743	0.0035	1.565	6144.3	6347.64	6347.64	3.03	No	Si
SLU 49	1.03	1058.29	-7849	-0.0000262	0.0003743	0.0035	1.565	5469.23	5697.03	5697.03	5.38	No	Si
SLU 44	0.63	2103.56	-9012	-0.000038	0.0003743	0.0035	1.565	6165.72	6368.89	6368.89	3.03	No	Si
SLU 44	1.03	1063.8	-7877	-0.0000263	0.0003743	0.0035	1.565	5486.35	5713.1	5713.1	5.37	No	Si
SLU 51	0.63	2092.46	-8976	-0.0000378	0.0003743	0.0035	1.565	6144.3	6347.64	6347.64	3.03	No	Si
SLU 51	1.03	1058.29	-7849	-0.0000262	0.0003743	0.0035	1.565	5469.23	5697.03	5697.03	5.38	No	Si
SLU 50	0.63	2075.8	-8921	-0.0000375	0.0003743	0.0035	1.565	6112.11	6315.79	6315.79	3.04	No	Si
SLU 50	1.03	1050.03	-7807	-0.000026	0.0003743	0.0035	1.565	5443.52	5672.92	5672.92	5.4	No	Si
SLU 68	0.63	2300.8	-10473	-0.0000432	0.0003743	0.0035	1.565	6998.13	7226.57	7226.57	3.14	No	Si
SLU 68	1.03	1134.49	-9277	-0.0000302	0.0003743	0.0035	1.565	6320.27	6523.37	6523.37	5.75	No	Si
SLU 43	0.63	2075.8	-8921	-0.0000375	0.0003743	0.0035	1.565	6112.11	6315.79	6315.79	3.04	No	Si
SLU 43	1.03	1050.03	-7807	-0.000026	0.0003743	0.0035	1.565	5443.52	5672.92	5672.92	5.4	No	Si
SLU 47	0.63	2103.56	-9012	-0.000038	0.0003743	0.0035	1.565	6165.72	6368.89	6368.89	3.03	No	Si
SLU 47	1.03	1063.8	-7877	-0.0000263	0.0003743	0.0035	1.565	5486.35	5713.1	5713.1	5.37	No	Si
SLU 46	0.63	2092.46	-8976	-0.0000378	0.0003743	0.0035	1.565	6144.3	6347.64	6347.64	3.03	No	Si
SLU 46	1.03	1058.29	-7849	-0.0000262	0.0003743	0.0035	1.565	5469.23	5697.03	5697.03	5.38	No	Si
SLU 48	0.63	2075.8	-8921	-0.0000375	0.0003743	0.0035	1.565	6112.11	6315.79	6315.79	3.04	No	Si
SLU 48	1.03	1050.03	-7807	-0.000026	0.0003743	0.0035	1.565	5443.52	5672.92	5672.92	5.4	No	Si
SLU 45	0.63	2075.8	-8921	-0.0000375	0.0003743	0.0035	1.565	6112.11	6315.79	6315.79	3.04	No	Si
SLU 45	1.03	1050.03	-7807	-0.000026	0.0003743	0.0035	1.565	5443.52	5672.92	5672.92	5.4	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 11	0.63	3491.52	-11851	-0.0000562	0.0005615	0.0035	1.565		8508.09	8508.09	2.44		Si
SLV 11	1.03	1881.88	-10134	-0.0000381	0.0005615	0.0035	1.565		7473.38	7473.38	3.97		Si
SLV 9	0.63	775.75	-4846	-0.0000169	0.0005615	0.0035	1.565		3788.49	3788.49	4.88		Si
SLV 9	1.03	283.2	-4716	-0.0000125	0.0005615	0.0035	1.565		3694.73	3694.73	13.05		Si
SLV 8	0.63	2774.15	-11765	-0.0000495	0.0005615	0.0035	1.565		8458.38	8458.38	3.05		Si
SLV 8	1.03	1452.88	-10107	-0.0000343	0.0005615	0.0035	1.565		7455.98	7455.98	5.13		Si
SLV 10	0.63	1174.2	-5480	-0.0000216	0.0005615	0.0035	1.565		4247.17	4247.17	3.62		Si
SLV 10	1.03	495.99	-5195	-0.0000153	0.0005615	0.0035	1.565		4041.45	4041.45	8.15		Si
SLV 16	0.63	4238.33	-10868	-0.0000645	0.0005615	0.0035	1.565		7937.81	7937.81	1.87		Si
SLV 16	1.03	2282.32	-9301	-0.0000396	0.0005615	0.0035	1.565		6917.42	6917.42	3.03		Si
SLV 14	0.63	3423.6	-8767	-0.0000516	0.0005615	0.0035	1.565		6552.9	6552.9	1.91		Si
SLV 14	1.03	1802.72	-7676	-0.0000318	0.0005615	0.0035	1.565		5800.57	5800.57	3.22		Si
SLV 7	0.63	2375.7	-11131	-0.0000446	0.0005615	0.0035	1.565		8090.05	8090.05	3.41		Si
SLV 7	1.03	1240.1	-9629	-0.0000315	0.0005615	0.0035	1.565		7139.62	7139.62	5.76		Si
SLV 12	0.63	3889.96	-12485	-0.0000616	0.0005615	0.0035	1.565		8877.98	8877.98	2.28		Si
SLV 12	1.03	2094.67	-10612	-0.000041	0.0005615	0.0035	1.565		7784.44	7784.44	3.72		Si
SLV 13	0.63	3030.96	-8142	-0.0000456	0.0005615	0.0035	1.565		6122.93	6122.93	2.02		Si
SLV 13	1.03	1593.03	-7205	-0.000029	0.0005615	0.0035	1.565		5471.45	5471.45	3.43		Si
SLV 15	0.63	3845.69	-10243	-0.0000584	0.0005615	0.0035	1.565		7545.06	7545.06	1.96		Si
SLV 15	1.03	2072.64	-8830	-0.0000367	0.0005615	0.0035	1.565		6596.14	6596.14	3.18		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	0.63	2638.74	-13639	-12124	4599	1.565	1.565	-17215	9240	6507	28547	21088	3991	25079	No	5.45	Si
SLU 84	1.03	1236.41	-12434	-11052	4594	1.565	1.565	-15694	9037	6364	28547	21088	3991	25079	No	5.46	Si
SLU 82	0.63	2638.74	-13639	-12124	4599	1.565	1.565	-17215	9240	6507	28547	21088	3991	25079	No	5.45	Si
SLU 82	1.03	1236.41	-12434	-11052	4594	1.565	1.565	-15694	9037	6364	28547	21088	3991	25079	No	5.46	Si
SLU 76	0.63	2545.13	-12715	-11302	4437	1.565	1.565	-16048	9084	6398	28547	21088	3991	25079	No	5.65	Si
SLU 76	1.03	1209.69	-11507	-10228	4435	1.565	1.565	-14523	8881	6254	28547	21088	3991	25079	No	5.66	Si
SLU 75	0.63	2534.03	-12678	-11270	4407	1.565	1.565	-16002	9078	6393	28547	21088	3991	25079	No	5.69	Si
SLU 75	1.03	1204.18	-11479	-10203	4403	1.565	1.565	-14488	8876	6251	28547	21088	3991	25079	No	5.7	Si
SLU 79	0.63	2517.37	-12623	-11221	4361	1.565	1.565	-15933	9069	6387	28547	21088	3991	25079	No	5.75	Si
SLU 79	1.03	1195.92	-11437	-10166	4356	1.565	1.565	-14435	8869	6246	28547	21088	3991	25079	No	5.76	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 83	0.63	2622.08	-13584	-12075	4553	1.565	1.565	-17146	9231	6501	28547	21088	3991	25079	No	5.51	Si
SLU 83	1.03	1228.15	-12392	-11015	4547	1.565	1.565	-15641	9030	6359	28547	21088	3991	25079	No	5.52	Si
SLU 81	0.63	2622.08	-13584	-12075	4553	1.565	1.565	-17146	9231	6501	28547	21088	3991	25079	No	5.51	Si
SLU 81	1.03	1228.15	-12392	-11015	4547	1.565	1.565	-15641	9030	6359	28547	21088	3991	25079	No	5.52	Si
SLU 80	0.63	2534.03	-12678	-11270	4407	1.565	1.565	-16002	9078	6393	28547	21088	3991	25079	No	5.69	Si
SLU 80	1.03	1204.18	-11479	-10203	4403	1.565	1.565	-14488	8876	6251	28547	21088	3991	25079	No	5.7	Si
SLU 73	0.63	2545.13	-12715	-11302	4437	1.565	1.565	-16048	9084	6398	28547	21088	3991	25079	No	5.65	Si
SLU 73	1.03	1209.69	-11507	-10228	4435	1.565	1.565	-14523	8881	6254	28547	21088	3991	25079	No	5.66	Si
SLU 78	0.63	2534.03	-12678	-11270	4407	1.565	1.565	-16002	9078	6393	28547	21088	3991	25079	No	5.69	Si
SLU 78	1.03	1204.18	-11479	-10203	4403	1.565	1.565	-14488	8876	6251	28547	21088	3991	25079	No	5.7	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 13	0.63	3030.96	-8142	-7237	4666	1.565	1.2307	-10276	12472	6907	28547	31633	3991	35453		7.6	Si
SLV 13	1.03	1593.03	-7205	-6404	4543	1.565	1.565	-9094	12235	8617	28547	31633	3991	35623		7.84	Si
SLV 16	0.63	4238.33	-10868	-9661	7134	1.565	1.1776	-13718	13160	6974	28547	31633	3991	35520		4.98	Si
SLV 16	1.03	2282.32	-9301	-8268	7017	1.565	1.565	-11740	12765	8990	28547	31633	3991	35623		5.08	Si
SLV 4	0.63	518.94	-8469	-7528	1425	1.565	1.565	-10690	12555	8842	28547	31633	3991	35623		25	Si
SLV 4	1.03	143.05	-7618	-6772	1542	1.565	1.565	-9616	12340	8690	28547	31633	3991	35623		23.11	Si
SLV 12	0.63	3889.96	-12485	-11098	7136	1.565	1.4128	-15758	13568	8626	28547	31633	3991	35623		4.99	Si
SLV 12	1.03	2094.67	-10612	-9433	7110	1.565	1.565	-13394	13096	9223	28547	31633	3991	35623		5.01	Si
SLV 14	0.63	3423.6	-8767	-7793	5424	1.565	1.1759	-11065	12630	6683	28547	31633	3991	35230		6.5	Si
SLV 14	1.03	1802.72	-7676	-6823	5300	1.565	1.565	-9689	12354	8701	28547	31633	3991	35623		6.72	Si
SLV 8	0.63	2774.15	-11765	-10458	5424	1.565	1.565	-14850	13387	9428	28547	31633	3991	35623		6.57	Si
SLV 8	1.03	1452.88	-10107	-8984	5467	1.565	1.565	-12757	12968	9133	28547	31633	3991	35623		6.52	Si
SLV 7	0.63	2375.7	-11131	-9894	4655	1.565	1.565	-14049	13227	9315	28547	31633	3991	35623		7.65	Si
SLV 7	1.03	1240.1	-9629	-8559	4699	1.565	1.565	-12153	12847	9048	28547	31633	3991	35623		7.58	Si
SLV 15	0.63	3845.69	-10243	-9105	6376	1.565	1.2212	-12929	13002	7145	28547	31633	3991	35623		5.59	Si
SLV 15	1.03	2072.64	-8830	-7849	6260	1.565	1.565	-11145	12646	8906	28547	31633	3991	35623		5.69	Si
SLV 11	0.63	3491.52	-11851	-10534	6368	1.565	1.4636	-14958	13408	8831	28547	31633	3991	35623		5.59	Si
SLV 11	1.03	1881.88	-10134	-9008	6341	1.565	1.565	-12790	12975	9137	28547	31633	3991	35623		5.62	Si
SLV 10	0.63	1174.2	-5480	-4871	1436	1.565	1.565	-6916	11800	8310	28547	31633	3991	35623		24.8	Si
SLV 10	1.03	495.99	-5195	-4617	1386	1.565	1.565	-6556	11728	8259	28547	31633	3991	35623		25.71	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.025 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.24	5465	-3849	95.57	835.04	8.74	Si
SLV 9	179667	0.24	5638	-3970	95.57	860.34	9	Si
SLV 6	179667	0.24	6066	-4272	95.57	923.06	9.66	Si
SLV 10	179667	0.24	6238	-4393	95.57	948.14	9.92	Si
SLV 1	179667	0.24	8333	-5869	95.57	1248.41	13.06	Si
SLV 13	179667	0.24	8907	-6273	95.57	1329.1	13.91	Si
SLV 2	179667	0.24	8925	-6286	95.57	1331.63	13.93	Si
SLV 14	179667	0.24	9499	-6690	95.57	1411.61	14.77	Si
SLV 3	179667	0.24	10960	-7719	95.57	1612.04	16.87	Si
SLV 15	179667	0.24	11534	-8123	95.57	1689.59	17.68	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 = -0.025 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 12	-9430	-9326	146	0.873	1229.1	0.939	13.50825	3.53142	Si
SLV 8	-9065	-10448	161	0.898	1192.2	0.938	13.92261	3.53142	Si
SLV 11	-8979	-9222	145	0.906	1183.6	0.937	14.05304	3.53142	Si
SLV 7	-8614	-10343	161	0.934	1146.6	0.935	14.50613	3.53142	Si
SLV 16	-8088	-5899	18	0.994	1093.4	0.933	15.48485	3.65568	Si
SLV 15	-7644	-5796	18	1.037	1048.6	0.931	16.19897	3.65568	Si
SLV 4	-6871	-9637	71	1.117	970.7	0.926	17.52599	3.65568	Si
SLV 14	-6576	-4084	-75	1.153	941	0.924	18.13348	3.65568	Si
SLV 3	-6427	-9534	71	1.173	926.1	0.923	18.46646	3.65568	Si
SLV 13	-6132	-3981	-75	1.214	896.4	0.922	19.1439	3.65568	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	3.028	SLU 44	Si
V_SLU	5.453	SLU 82	Si
PF_SLV	1.873	SLV 16	Si
V_SLV	4.979	SLV 16	Si
PFFP_SLV	8.738	SLV 5	Si
R_SLV	3.825	SLV 12	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
-31.543	5.726	-27.338	5.726	L1	L2	4.205	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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 51	0.63	3301.28	-18769	-0.0000191	0.0003743	0.0035	4.205	35617.48	37366.91	37366.91	11.32	No	Si
SLU 51	1.03	2292.85	-19631	-0.0000187	0.0003743	0.0035	4.205	37069.11	38905.15	38905.15	16.97	No	Si
SLU 48	0.63	3274.56	-18644	-0.000019	0.0003743	0.0035	4.205	35405.78	37141.98	37141.98	11.34	No	Si
SLU 48	1.03	2272.92	-19502	-0.0000185	0.0003743	0.0035	4.205	36852.67	38674.66	38674.66	17.02	No	Si
SLU 43	0.63	3274.56	-18644	-0.000019	0.0003743	0.0035	4.205	35405.78	37141.98	37141.98	11.34	No	Si
SLU 43	1.03	2272.92	-19502	-0.0000185	0.0003743	0.0035	4.205	36852.67	38674.66	38674.66	17.02	No	Si
SLU 49	0.63	3301.28	-18769	-0.0000191	0.0003743	0.0035	4.205	35617.48	37366.91	37366.91	11.32	No	Si
SLU 49	1.03	2292.85	-19631	-0.0000187	0.0003743	0.0035	4.205	37069.11	38905.15	38905.15	16.97	No	Si
SLU 47	0.63	3319.09	-18852	-0.0000192	0.0003743	0.0035	4.205	35758.42	37516.75	37516.75	11.3	No	Si
SLU 47	1.03	2306.14	-19718	-0.0000187	0.0003743	0.0035	4.205	37213.2	39058.88	39058.88	16.94	No	Si
SLU 45	0.63	3274.56	-18644	-0.000019	0.0003743	0.0035	4.205	35405.78	37141.98	37141.98	11.34	No	Si
SLU 45	1.03	2272.92	-19502	-0.0000185	0.0003743	0.0035	4.205	36852.67	38674.66	38674.66	17.02	No	Si
SLU 50	0.63	3274.56	-18644	-0.000019	0.0003743	0.0035	4.205	35405.78	37141.98	37141.98	11.34	No	Si
SLU 50	1.03	2272.92	-19502	-0.0000185	0.0003743	0.0035	4.205	36852.67	38674.66	38674.66	17.02	No	Si
SLU 65	0.63	3667.23	-22018	-0.0000223	0.0003743	0.0035	4.205	41002.18	42770.78	42770.78	11.66	No	Si
SLU 65	1.03	2574.65	-23072	-0.0000219	0.0003743	0.0035	4.205	42699.35	44376.34	44376.34	17.24	No	Si
SLU 46	0.63	3301.28	-18769	-0.0000191	0.0003743	0.0035	4.205	35617.48	37366.91	37366.91	11.32	No	Si
SLU 46	1.03	2292.85	-19631	-0.0000187	0.0003743	0.0035	4.205	37069.11	38905.15	38905.15	16.97	No	Si
SLU 44	0.63	3319.09	-18852	-0.0000192	0.0003743	0.0035	4.205	35758.42	37516.75	37516.75	11.3	No	Si
SLU 44	1.03	2306.14	-19718	-0.0000187	0.0003743	0.0035	4.205	37213.2	39058.88	39058.88	16.94	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 10	0.63	4060.99	-12452	-0.0000146	0.0005615	0.0035	4.205		26107.67	26107.67	6.43		Si
SLV 10	1.03	2000.1	-13433	-0.0000131	0.0005615	0.0035	4.205		28021.07	28021.07	14.01		Si
SLV 13	0.63	9910.47	-14746	-0.0000233	0.0005615	0.0035	4.205		30576.02	30576.02	3.09		Si
SLV 13	1.03	5489.97	-15451	-0.0000187	0.0005615	0.0035	4.205		31929.53	31929.53	5.82		Si
SLV 12	0.63	7782.43	-21497	-0.0000264	0.0005615	0.0035	4.205		43369.47	43369.47	5.57		Si
SLV 12	1.03	4820.1	-22114	-0.0000235	0.0005615	0.0035	4.205		44515.57	44515.57	9.24		Si
SLV 11	0.63	6557.76	-21838	-0.0000253	0.0005615	0.0035	4.205		44003.48	44003.48	6.71		Si
SLV 11	1.03	4449.54	-22474	-0.0000233	0.0005615	0.0035	4.205		45184.36	45184.36	10.15		Si
SLV 3	0.63	-5438.01	-20918	-0.0000232	0.0005615	0.0035	4.205		46341.54	46341.54	8.52		Si
SLV 3	1.03	-1866.12	-21992	-0.0000199	0.0005615	0.0035	4.205		48293.02	48293.02	25.88		Si
SLV 16	0.63	12233.73	-17123	-0.000028	0.0005615	0.0035	4.205		35132.93	35132.93	2.87		Si
SLV 16	1.03	6701.13	-17700	-0.000022	0.0005615	0.0035	4.205		36231.68	36231.68	5.41		Si
SLV 14	0.63	11117.3	-14410	-0.0000245	0.0005615	0.0035	4.205		29922.73	29922.73	2.69		Si
SLV 14	1.03	5855.13	-15096	-0.0000189	0.0005615	0.0035	4.205		31248.19	31248.19	5.34		Si
SLV 2	0.63	-5347.63	-17868	-0.0000206	0.0005615	0.0035	4.205		40555.89	40555.89	7.58		Si
SLV 2	1.03	-2346.96	-19033	-0.0000181	0.0005615	0.0035	4.205		42786.57	42786.57	18.23		Si
SLV 1	0.63	-6554.45	-18204	-0.0000222	0.0005615	0.0035	4.205		41198.47	41198.47	6.29		Si
SLV 1	1.03	-2712.12	-19388	-0.0000188	0.0005615	0.0035	4.205		43465.01	43465.01	16.03		Si
SLV 15	0.63	11026.91	-17459	-0.0000268	0.0005615	0.0035	4.205		35773.15	35773.15	3.24		Si
SLV 15	1.03	6335.97	-18055	-0.0000219	0.0005615	0.0035	4.205		36905.3	36905.3	5.82		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 64	0.63	3622.7	-21810	-19386	495	4.205	4.205	-10245	8310	15725	28547	56662	10723	44272	No	89.39	Si
SLU 64	1.03	2541.43	-22857	-20317	495	4.205	4.205	-10737	8376	15850	28547	56662	10723	44396	No	89.64	Si
SLU 70	0.63	3649.42	-21935	-19498	508	4.205	4.205	-10304	8318	15740	28547	56662	10723	44287	No	87.14	Si
SLU 70	1.03	2561.37	-22986	-20432	508	4.205	4.205	-10798	8384	15865	28547	56662	10723	44411	No	87.47	Si
SLU 69	0.63	3622.7	-21810	-19386	495	4.205	4.205	-10245	8310	15725	28547	56662	10723	44272	No	89.39	Si
SLU 69	1.03	2541.43	-22857	-20317	495	4.205	4.205	-10737	8376	15850	28547	56662	10723	44396	No	89.64	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 66	0.63	3622.7	-21810	-19386	495	4.205	4.205	-10245	8310	15725	28547	56662	10723	44272	No	89.39	Si
SLU 66	1.03	2541.43	-22857	-20317	495	4.205	4.205	-10737	8376	15850	28547	56662	10723	44396	No	89.64	Si
SLU 67	0.63	3649.42	-21935	-19498	508	4.205	4.205	-10304	8318	15740	28547	56662	10723	44287	No	87.14	Si
SLU 67	1.03	2561.37	-22986	-20432	508	4.205	4.205	-10798	8384	15865	28547	56662	10723	44411	No	87.47	Si
SLU 65	0.63	3667.23	-22018	-19572	517	4.205	4.205	-10343	8324	15750	28547	56662	10723	44297	No	85.7	Si
SLU 65	1.03	2574.65	-23072	-20508	516	4.205	4.205	-10838	8390	15875	28547	56662	10723	44422	No	86.08	Si
SLU 71	0.63	3622.7	-21810	-19386	495	4.205	4.205	-10245	8310	15725	28547	56662	10723	44272	No	89.39	Si
SLU 71	1.03	2541.43	-22857	-20317	495	4.205	4.205	-10737	8376	15850	28547	56662	10723	44396	No	89.64	Si
SLU 72	0.63	3649.42	-21935	-19498	508	4.205	4.205	-10304	8318	15740	28547	56662	10723	44287	No	87.14	Si
SLU 72	1.03	2561.37	-22986	-20432	508	4.205	4.205	-10798	8384	15865	28547	56662	10723	44411	No	87.47	Si
SLU 44	0.63	3319.09	-18852	-16758	482	4.205	4.205	-8856	8125	15375	28547	56662	10723	43922	No	91.2	Si
SLU 44	1.03	2306.14	-19718	-17527	481	4.205	4.205	-9262	8179	15478	28547	56662	10723	44024	No	91.57	Si
SLU 68	0.63	3667.23	-22018	-19572	517	4.205	4.205	-10343	8324	15750	28547	56662	10723	44297	No	85.7	Si
SLU 68	1.03	2574.65	-23072	-20508	516	4.205	4.205	-10838	8390	15875	28547	56662	10723	44422	No	86.08	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 5	0.63	-2103.15	-13831	-12294	-4899	4.205	4.205	-6497	11716	22170	28547	84994	10723	50716		10.35	Si
SLV 5	1.03	-831.09	-14975	-13311	-4754	4.205	4.205	-7034	11824	22373	28547	84994	10723	50920		10.71	Si
SLV 15	0.63	11026.91	-17459	-15519	10850	4.205	4.205	-8201	12057	22815	28547	84994	10723	51361		4.73	Si
SLV 15	1.03	6335.97	-18055	-16049	10568	4.205	4.205	-8481	12113	22921	28547	84994	10723	51467		4.87	Si
SLV 16	0.63	12233.73	-17123	-15221	12969	4.205	4.1641	-8044	12025	22534	28547	84994	10723	51080		3.94	Si
SLV 16	1.03	6701.13	-17700	-15733	12688	4.205	4.205	-8315	12080	22858	28547	84994	10723	51404		4.05	Si
SLV 2	0.63	-5347.63	-17868	-15883	-10134	4.205	4.205	-8394	12095	22888	28547	84994	10723	51434		5.08	Si
SLV 2	1.03	-2346.96	-19033	-16918	-9853	4.205	4.205	-8941	12205	23095	28547	84994	10723	51641		5.24	Si
SLV 14	0.63	11117.3	-14410	-12809	12498	4.205	3.993	-6769	11770	21150	28547	84994	10723	49696		3.98	Si
SLV 14	1.03	5855.13	-15096	-13419	12256	4.205	4.205	-7091	11835	22395	28547	84994	10723	50941		4.16	Si
SLV 13	0.63	9910.47	-14746	-13107	10378	4.205	4.205	-6927	11802	22332	28547	84994	10723	50879		4.9	Si
SLV 13	1.03	5489.97	-15451	-13734	10136	4.205	4.205	-7258	11868	22458	28547	84994	10723	51004		5.03	Si
SLV 3	0.63	-5438.01	-20918	-18594	-11782	4.205	4.205	-9826	12382	23430	28547	84994	10723	51976		4.41	Si
SLV 3	1.03	-1866.12	-21992	-19549	-11540	4.205	4.205	-10331	12483	23621	28547	84994	10723	52167		4.52	Si
SLV 4	0.63	-4231.19	-20582	-18295	-9663	4.205	4.205	-9668	12350	23370	28547	84994	10723	51916		5.37	Si
SLV 4	1.03	-1500.95	-21637	-19233	-9421	4.205	4.205	-10164	12449	23558	28547	84994	10723	52104		5.53	Si
SLV 12	0.63	7782.43	-21497	-19108	5614	4.205	4.205	-10098	12436	23533	28547	84994	10723	52079		9.28	Si
SLV 12	1.03	4820.1	-22114	-19656	5470	4.205	4.205	-10388	12494	23642	28547	84994	10723	52189		9.54	Si
SLV 1	0.63	-6554.45	-18204	-16182	-12254	4.205	4.205	-8552	12127	22947	28547	84994	10723	51494		4.2	Si
SLV 1	1.03	-2712.12	-19388	-17234	-11972	4.205	4.205	-9108	12238	23158	28547	84994	10723	51704		4.32	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.025 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.24	6108	-11557	256.78	2496.42	9.72	Si
SLV 9	179667	0.24	6216	-11763	256.78	2538.85	9.89	Si
SLV 6	179667	0.24	6434	-12174	256.78	2623.73	10.22	Si
SLV 5	179667	0.24	6542	-12379	256.78	2665.96	10.38	Si
SLV 14	179667	0.24	7924	-14993	256.78	3198.48	12.46	Si
SLV 13	179667	0.24	8030	-15196	256.78	3239.21	12.61	Si
SLV 2	179667	0.24	9009	-17048	256.78	3609.53	14.06	Si
SLV 1	179667	0.24	9116	-17250	256.78	3649.62	14.21	Si
SLV 16	179667	0.24	9805	-18554	256.78	3906.54	15.21	Si
SLV 15	179667	0.24	9912	-18756	256.78	3946.15	15.37	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 = -0.025 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 7	-19268	-27496	-1154	1.042	2689.4	0.928	16.31402	3.53142	Si
SLV 3	-18781	-22280	-441	1.092	2640.3	0.927	17.12433	3.65568	Si
SLV 8	-18790	-27461	-1153	1.061	2641.2	0.927	16.64062	3.53142	Si
SLV 4	-18310	-22246	-439	1.113	2592.9	0.926	17.47061	3.65568	Si
SLV 11	-17804	-27262	-1177	1.103	2542	0.925	17.33978	3.53142	Si
SLV 12	-17326	-27228	-1175	1.126	2493.9	0.924	17.71212	3.53142	Si
SLV 1	-16903	-17576	148	1.194	2451.4	0.923	18.80856	3.65568	Si
SLV 2	-16432	-17541	149	1.219	2404	0.921	19.22367	3.65568	Si
SLV 15	-13902	-21501	-517	1.354	2150.7	0.915	21.51667	3.65568	Si
SLV 16	-13431	-21467	-515	1.388	2103.6	0.913	22.0787	3.65568	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	11.303	SLU 44	Si
V_SLU	85.696	SLU 65	Si
PF_SLV	2.692	SLV 14	Si
V_SLV	3.939	SLV 16	Si
PFFP_SLV	9.722	SLV 10	Si
R_SLV	4.62	SLV 7	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
-26.338	5.726	-24.423	5.726	L1	L2	1.915	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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 80	0.63	-885.61	-10152	-0.0000232	0.0003743	0.0035	1.915	8595.78	9868.49	9868.49	11.14	No	Si
SLU 80	1.03	-351.39	-9097	-0.0000182	0.0003743	0.0035	1.915	7807.06	9032.81	9032.81	25.71	No	Si
SLU 73	0.63	-898.26	-10192	-0.0000234	0.0003743	0.0035	1.915	8624.84	9899.25	9899.25	11.02	No	Si
SLU 73	1.03	-356.43	-9126	-0.0000183	0.0003743	0.0035	1.915	7829.25	9057.01	9057.01	25.41	No	Si
SLU 75	0.63	-885.61	-10152	-0.0000232	0.0003743	0.0035	1.915	8595.78	9868.49	9868.49	11.14	No	Si
SLU 75	1.03	-351.39	-9097	-0.0000182	0.0003743	0.0035	1.915	7807.06	9032.81	9032.81	25.71	No	Si
SLU 55	0.63	-806.56	-9064	-0.0000208	0.0003743	0.0035	1.915	7782.09	9005.61	9005.61	11.17	No	Si
SLU 55	1.03	-304.03	-8061	-0.0000161	0.0003743	0.0035	1.915	7009.45	8182.4	8182.4	26.91	No	Si
SLU 52	0.63	-806.56	-9064	-0.0000208	0.0003743	0.0035	1.915	7782.09	9005.61	9005.61	11.17	No	Si
SLU 52	1.03	-304.03	-8061	-0.0000161	0.0003743	0.0035	1.915	7009.45	8182.4	8182.4	26.91	No	Si
SLU 78	0.63	-885.61	-10152	-0.0000232	0.0003743	0.0035	1.915	8595.78	9868.49	9868.49	11.14	No	Si
SLU 78	1.03	-351.39	-9097	-0.0000182	0.0003743	0.0035	1.915	7807.06	9032.81	9032.81	25.71	No	Si
SLU 84	0.63	-944.89	-10868	-0.0000249	0.0003743	0.0035	1.915	9116.92	10428.3	10428.3	11.04	No	Si
SLU 84	1.03	-404.33	-9802	-0.0000198	0.0003743	0.0035	1.915	8336.92	9596.85	9596.85	23.74	No	Si
SLU 76	0.63	-898.26	-10192	-0.0000234	0.0003743	0.0035	1.915	8624.84	9899.25	9899.25	11.02	No	Si
SLU 76	1.03	-356.43	-9126	-0.0000183	0.0003743	0.0035	1.915	7829.25	9057.01	9057.01	25.41	No	Si
SLU 61	0.63	-853.19	-9740	-0.0000223	0.0003743	0.0035	1.915	8290.8	9548.9	9548.9	11.19	No	Si
SLU 61	1.03	-351.93	-8737	-0.0000176	0.0003743	0.0035	1.915	7532.82	8736.18	8736.18	24.82	No	Si
SLU 82	0.63	-944.89	-10868	-0.0000249	0.0003743	0.0035	1.915	9116.92	10428.3	10428.3	11.04	No	Si
SLU 82	1.03	-404.33	-9802	-0.0000198	0.0003743	0.0035	1.915	8336.92	9596.85	9596.85	23.74	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 1	0.63	-1587.19	-5001	-0.0000176	0.0005615	0.0035	1.915		5654.4	5654.4	3.56		Si
SLV 1	1.03	-337.48	-4194	-0.0000092	0.0005615	0.0035	1.915		4928.36	4928.36	14.6		Si
SLV 10	0.63	904.99	-3741	-0.0000115	0.0005615	0.0035	1.915		3676.48	3676.48	4.06		Si
SLV 10	1.03	298.58	-3850	-0.0000084	0.0005615	0.0035	1.915		3774.96	3774.96	12.64		Si
SLV 4	0.63	-1926.98	-6526	-0.0000222	0.0005615	0.0035	1.915		7001.15	7001.15	3.63		Si
SLV 4	1.03	-535.03	-5408	-0.0000125	0.0005615	0.0035	1.915		6018.81	6018.81	11.25		Si
SLV 14	0.63	1027.66	-6565	-0.0000173	0.0005615	0.0035	1.915		6208.09	6208.09	6.04		Si
SLV 14	1.03	189.8	-6276	-0.0000121	0.0005615	0.0035	1.915		5954.47	5954.47	31.37		Si
SLV 11	0.63	-1357.72	-10242	-0.0000258	0.0005615	0.0035	1.915		10189.66	10189.66	7.5		Si
SLV 11	1.03	-539.23	-8698	-0.0000184	0.0005615	0.0035	1.915		8883.16	8883.16	16.47		Si
SLV 2	0.63	-1327.29	-4675	-0.0000155	0.0005615	0.0035	1.915		5361.71	5361.71	4.04		Si
SLV 2	1.03	-296.25	-4010	-0.0000087	0.0005615	0.0035	1.915		4761.81	4761.81	16.07		Si
SLV 7	0.63	-2064.21	-9675	-0.0000287	0.0005615	0.0035	1.915		9712.67	9712.67	4.71		Si
SLV 7	1.03	-685.04	-8018	-0.000018	0.0005615	0.0035	1.915		8295.11	8295.11	12.11		Si
SLV 9	0.63	641.24	-4072	-0.0000107	0.0005615	0.0035	1.915		3976.52	3976.52	6.2		Si
SLV 9	1.03	256.73	-4037	-0.0000085	0.0005615	0.0035	1.915		3944.5	3944.5	15.36		Si
SLV 8	0.63	-1800.46	-9345	-0.0000266	0.0005615	0.0035	1.915		9432.86	9432.86	5.24		Si
SLV 8	1.03	-643.2	-7832	-0.0000174	0.0005615	0.0035	1.915		8132.48	8132.48	12.64		Si
SLV 3	0.63	-2186.88	-6852	-0.0000243	0.0005615	0.0035	1.915		7282.62	7282.62	3.33		Si
SLV 3	1.03	-576.27	-5592	-0.000013	0.0005615	0.0035	1.915		6182.03	6182.03	10.73		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	0.63	-925.92	-10808	-9608	-1945	1.915	1.915	-11149	8431	7265	28547	25805	4883	30688	No	15.78	Si
SLU 83	1.03	-396.76	-9758	-8674	-1943	1.915	1.915	-10066	8287	7141	28547	25805	4883	30688	No	15.8	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
SLU 82	0.63	-944.89	-10868	-9660	-2010	1.915	1.915	-11210	8439	7272	28547	25805	4883	30688	No	15.27	Si
SLU 82	1.03	-404.33	-9802	-8713	-2009	1.915	1.915	-10111	8293	7146	28547	25805	4883	30688	No	15.27	Si
SLU 65	0.63	-759.93	-8521	-7575	-1917	1.915	1.915	-8790	8116	6994	28547	25805	4883	30688	No	16.01	Si
SLU 65	1.03	-232.9	-7480	-6649	-1918	1.915	1.915	-7716	7973	6871	28547	25805	4883	30688	No	16	Si
SLU 78	0.63	-885.61	-10152	-9024	-1969	1.915	1.915	-10472	8341	7188	28547	25805	4883	30688	No	15.58	Si
SLU 78	1.03	-351.39	-9097	-8086	-1968	1.915	1.915	-9383	8196	7063	28547	25805	4883	30688	No	15.59	Si
SLU 81	0.63	-925.92	-10808	-9608	-1945	1.915	1.915	-11149	8431	7265	28547	25805	4883	30688	No	15.78	Si
SLU 81	1.03	-396.76	-9758	-8674	-1943	1.915	1.915	-10066	8287	7141	28547	25805	4883	30688	No	15.8	Si
SLU 80	0.63	-885.61	-10152	-9024	-1969	1.915	1.915	-10472	8341	7188	28547	25805	4883	30688	No	15.58	Si
SLU 80	1.03	-351.39	-9097	-8086	-1968	1.915	1.915	-9383	8196	7063	28547	25805	4883	30688	No	15.59	Si
SLU 75	0.63	-885.61	-10152	-9024	-1969	1.915	1.915	-10472	8341	7188	28547	25805	4883	30688	No	15.58	Si
SLU 75	1.03	-351.39	-9097	-8086	-1968	1.915	1.915	-9383	8196	7063	28547	25805	4883	30688	No	15.59	Si
SLU 84	0.63	-944.89	-10868	-9660	-2010	1.915	1.915	-11210	8439	7272	28547	25805	4883	30688	No	15.27	Si
SLU 84	1.03	-404.33	-9802	-8713	-2009	1.915	1.915	-10111	8293	7146	28547	25805	4883	30688	No	15.27	Si
SLU 76	0.63	-898.26	-10192	-9059	-2013	1.915	1.915	-10512	8346	7192	28547	25805	4883	30688	No	15.25	Si
SLU 76	1.03	-356.43	-9126	-8112	-2013	1.915	1.915	-9413	8200	7066	28547	25805	4883	30688	No	15.25	Si
SLU 73	0.63	-898.26	-10192	-9059	-2013	1.915	1.915	-10512	8346	7192	28547	25805	4883	30688	No	15.25	Si
SLU 73	1.03	-356.43	-9126	-8112	-2013	1.915	1.915	-9413	8200	7066	28547	25805	4883	30688	No	15.25	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 11	0.63	-1357.72	-10242	-9104	-4030	1.915	1.915	-10565	12530	10797	28547	38707	4883	39344		9.76	Si
SLV 11	1.03	-539.23	-8698	-7732	-4086	1.915	1.915	-8972	12211	10523	28547	38707	4883	39069		9.56	Si
SLV 8	0.63	-1800.46	-9345	-8306	-5056	1.915	1.915	-9639	12344	10638	28547	38707	4883	39184		7.75	Si
SLV 8	1.03	-643.2	-7832	-6961	-5033	1.915	1.915	-8078	12032	10369	28547	38707	4883	38915		7.73	Si
SLV 7	0.63	-2064.21	-9675	-8600	-5955	1.915	1.915	-9980	12413	10697	28547	38707	4883	39243		6.59	Si
SLV 7	1.03	-685.04	-8018	-7127	-5931	1.915	1.915	-8271	12071	10402	28547	38707	4883	38949		6.57	Si
SLV 14	0.63	1027.66	-6565	-5835	3234	1.915	1.915	-6771	11771	10144	28547	38707	4883	38690		11.96	Si
SLV 14	1.03	189.8	-6276	-5578	3108	1.915	1.915	-6473	11711	10092	28547	38707	4883	38639		12.43	Si
SLV 12	0.63	-1093.98	-9912	-8810	-3132	1.915	1.915	-10224	12461	10739	28547	38707	4883	39285		12.54	Si
SLV 12	1.03	-497.38	-8511	-7566	-3188	1.915	1.915	-8779	12173	10490	28547	38707	4883	39036		12.24	Si
SLV 3	0.63	-2186.88	-6852	-6091	-5970	1.915	1.915	-7068	11830	10195	28547	38707	4883	38741		6.49	Si
SLV 3	1.03	-576.27	-5592	-4971	-5842	1.915	1.915	-5768	11570	9971	28547	38707	4883	38517		6.59	Si
SLV 10	0.63	904.99	-3741	-3326	3218	1.915	1.915	-3859	11188	9642	28547	38707	4883	38188		11.87	Si
SLV 10	1.03	298.58	-3850	-3422	3198	1.915	1.915	-3971	11211	9661	28547	38707	4883	38208		11.95	Si
SLV 2	0.63	-1327.29	-4675	-4156	-3180	1.915	1.915	-4822	11381	9808	28547	38707	4883	38354		12.06	Si
SLV 2	1.03	-296.25	-4010	-3564	-3041	1.915	1.915	-4136	11244	9689	28547	38707	4883	38236		12.57	Si
SLV 4	0.63	-1926.98	-6526	-5801	-5085	1.915	1.915	-6732	11763	10137	28547	38707	4883	38683		7.61	Si
SLV 4	1.03	-535.03	-5408	-4807	-4956	1.915	1.915	-5579	11532	9938	28547	38707	4883	38485		7.76	Si
SLV 1	0.63	-1587.19	-5001	-4445	-4065	1.915	1.915	-5158	11448	9866	28547	38707	4883	38412		9.45	Si
SLV 1	1.03	-337.48	-4194	-3728	-3926	1.915	1.915	-4326	11282	9722	28547	38707	4883	38269		9.75	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.025 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.24	3545	-3055	116.94	671.46	5.74	Si
SLV 5	179667	0.24	3848	-3316	116.94	727.32	6.22	Si
SLV 10	179667	0.24	4480	-3861	116.94	843.23	7.21	Si
SLV 9	179667	0.24	4783	-4122	116.94	898.36	7.68	Si
SLV 2	179667	0.24	5132	-4423	116.94	961.63	8.22	Si
SLV 1	179667	0.24	5430	-4680	116.94	1015.47	8.68	Si
SLV 4	179667	0.24	7425	-6399	116.94	1369.69	11.71	Si
SLV 3	179667	0.24	7723	-6656	116.94	1421.8	12.16	Si
SLV 14	179667	0.24	8249	-7108	116.94	1512.98	12.94	Si
SLV 13	179667	0.24	8547	-7365	116.94	1564.46	13.38	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 = -0.025 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 11	-7757	-12711	187	1.175	1122.3	0.923	18.50588	3.53142	Si
SLV 12	-7473	-12635	186	1.208	1093.8	0.921	19.0486	3.53142	Si
SLV 7	-7426	-11153	203	1.211	1089.1	0.921	19.11418	3.53142	Si
SLV 8	-7142	-11077	202	1.246	1060.6	0.92	19.69628	3.53142	Si
SLV 15	-6466	-11760	28	1.358	992.9	0.916	21.56332	3.65568	Si
SLV 16	-6187	-11685	27	1.402	965	0.914	22.29079	3.65568	Si
SLV 3	-5363	-6567	82	1.54	883	0.908	24.63807	3.65568	Si
SLV 4	-5083	-6492	81	1.597	855.3	0.906	25.60257	3.65568	Si
SLV 13	-5031	-9388	-92	1.607	850.1	0.906	25.7678	3.65568	Si
SLV 14	-4751	-9313	-92	1.669	822.5	0.904	26.82406	3.65568	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	11.021	SLU 73	Si
V_SLU	15.247	SLU 73	Si
PF_SLV	3.33	SLV 3	Si
V_SLV	6.489	SLV 3	Si

Stato limite	Coeff.s.	Comb.	Verifica
PFFP_SLV	5.742	SLV 6	Si
R_SLV	5.24	SLV 11	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
-28.073	-3.274	-28.073	-1.549	L1	L2	1.726	0.3	2.69	2.69	2.69			

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 84	-1.37	6205.43	-42439	-0.0002092	0.0004492	0.0035	1.7256	12049.09	23785.53	23785.53	3.83	No	Si
SLU 84	0.8	2447.28	-21143	-0.0000853	0.0004492	0.0035	1.7256	12144.46	15077.91	15077.91	6.16	No	Si
SLU 78	-1.37	5910.41	-40159	-0.0001954	0.0004492	0.0035	1.7256	12650.54	23044.12	23044.12	3.9	No	Si
SLU 78	0.8	2279.47	-19719	-0.000079	0.0004492	0.0035	1.7256	11709.35	14200.56	14200.56	6.23	No	Si
SLU 81	-1.37	6143.29	-42497	-0.0002087	0.0004492	0.0035	1.7256	12031.83	23796.38	23796.38	3.87	No	Si
SLU 81	0.8	2472.14	-21209	-0.0000857	0.0004492	0.0035	1.7256	12163.13	15109.68	15109.68	6.11	No	Si
SLU 75	-1.37	5910.41	-40159	-0.0001954	0.0004492	0.0035	1.7256	12650.54	23044.12	23044.12	3.9	No	Si
SLU 75	0.8	2279.47	-19719	-0.000079	0.0004492	0.0035	1.7256	11709.35	14200.56	14200.56	6.23	No	Si
SLU 82	-1.37	6205.43	-42439	-0.0002092	0.0004492	0.0035	1.7256	12049.09	23785.53	23785.53	3.83	No	Si
SLU 82	0.8	2447.28	-21143	-0.0000853	0.0004492	0.0035	1.7256	12144.46	15077.91	15077.91	6.16	No	Si
SLU 80	-1.37	5910.41	-40159	-0.0001954	0.0004492	0.0035	1.7256	12650.54	23044.12	23044.12	3.9	No	Si
SLU 80	0.8	2279.47	-19719	-0.000079	0.0004492	0.0035	1.7256	11709.35	14200.56	14200.56	6.23	No	Si
SLU 76	-1.37	5951.84	-40120	-0.0001958	0.0004492	0.0035	1.7256	12659.57	23031.04	23031.04	3.87	No	Si
SLU 76	0.8	2262.89	-19675	-0.0000787	0.0004492	0.0035	1.7256	11695.14	14173.18	14173.18	6.26	No	Si
SLU 73	-1.37	5951.84	-40120	-0.0001958	0.0004492	0.0035	1.7256	12659.57	23031.04	23031.04	3.87	No	Si
SLU 73	0.8	2262.89	-19675	-0.0000787	0.0004492	0.0035	1.7256	11695.14	14173.18	14173.18	6.26	No	Si
SLU 83	-1.37	6143.29	-42497	-0.0002087	0.0004492	0.0035	1.7256	12031.83	23796.38	23796.38	3.87	No	Si
SLU 83	0.8	2472.14	-21209	-0.0000857	0.0004492	0.0035	1.7256	12163.13	15109.68	15109.68	6.11	No	Si
SLU 61	-1.37	5714.09	-38409	-0.0001855	0.0004492	0.0035	1.7256	13016.05	22455.96	22455.96	3.93	No	Si
SLU 61	0.8	2087.48	-18499	-0.0000732	0.0004492	0.0035	1.7256	11292.86	13435.69	13435.69	6.44	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 3	-1.37	4852.02	-23813	-0.0001155	0.0006738	0.0035	1.7256		17332.64	17332.64	3.57		Si
SLV 3	0.8	984.11	-11662	-0.000041	0.0006738	0.0035	1.7256		9524.18	9524.18	9.68		Si
SLV 8	-1.37	8042.86	-22441	-0.0001476	0.0006738	0.0035	1.7256		16463.18	16463.18	2.05		Si
SLV 8	0.8	-23.08	-8555	-0.0000232	0.0006738	0.0035	1.7256		8524.13	8524.13	369.29		Si
SLV 9	-1.37	72.81	-32518	-0.0000925	0.0006738	0.0035	1.7256		22060.75	22060.75	302.99		Si
SLV 9	0.8	3031.38	-17506	-0.0000779	0.0006738	0.0035	1.7256		13335.73	13335.73	4.4		Si
SLV 16	-1.37	5766.21	-28559	-0.0001403	0.0006738	0.0035	1.7256		20107.71	20107.71	3.49		Si
SLV 16	0.8	1120.43	-11671	-0.0000423	0.0006738	0.0035	1.7256		9530.95	9530.95	8.51		Si
SLV 12	-1.37	8339.37	-23871	-0.000155	0.0006738	0.0035	1.7256		17369.87	17369.87	2.08		Si
SLV 12	0.8	18.05	-8525	-0.0000231	0.0006738	0.0035	1.7256		7191.99	7191.99	398.37		Si
SLV 4	-1.37	4777.85	-23790	-0.0001147	0.0006738	0.0035	1.7256		17318.3	17318.3	3.62		Si
SLV 4	0.8	983.31	-11771	-0.0000413	0.0006738	0.0035	1.7256		9604.4	9604.4	9.77		Si
SLV 15	-1.37	5840.38	-28582	-0.0001412	0.0006738	0.0035	1.7256		20118.87	20118.87	3.44		Si
SLV 15	0.8	1121.23	-11561	-0.000042	0.0006738	0.0035	1.7256		9450.74	9450.74	8.43		Si
SLV 11	-1.37	8414.64	-23894	-0.0001561	0.0006738	0.0035	1.7256		17384.42	17384.42	2.07		Si
SLV 11	0.8	18.87	-8413	-0.0000228	0.0006738	0.0035	1.7256		7107.89	7107.89	376.76		Si
SLV 10	-1.37	-2.46	-32495	-0.0000917	0.0006738	0.0035	1.7256		23488.53	23488.53	9565.46		Si
SLV 10	0.8	3030.57	-17617	-0.0000782	0.0006738	0.0035	1.7256		13406.25	13406.25	4.42		Si
SLV 7	-1.37	8118.13	-22464	-0.0001488	0.0006738	0.0035	1.7256		16477.74	16477.74	2.03		Si
SLV 7	0.8	-22.27	-8443	-0.0000229	0.0006738	0.0035	1.7256		8438.87	8438.87	378.93		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 80	-1.37	5910.41	-40159	-29207	6961	1.7256	1.7256	-56419	10833	5608	81562	18604	8800	27404	No	3.94	Si
SLU 80	0.8	2279.47	-19719	-14341	7272	1.7256	1.7256	-27702	10833	5608	81562	18604	8800	27404	No	3.77	Si
SLU 78	-1.37	5910.41	-40159	-29207	6961	1.7256	1.7256	-56419	10833	5608	81562	18604	8800	27404	No	3.94	Si
SLU 78	0.8	2279.47	-19719	-14341	7272	1.7256	1.7256	-27702	10833	5608	81562	18604	8800	27404	No	3.77	Si
SLU 84	-1.37	6205.43	-42439	-30864	7221	1.7256	1.7256	-59621	10833	5608	81562	18604	8800	27404	No	3.8	Si
SLU 84	0.8	2447.28	-21143	-15377	7581	1.7256	1.7256	-29704	10833	5608	81562	18604	8800	27404	No	3.61	Si
SLU 73	-1.37	5951.84	-40120	-29178	7003	1.7256	1.7256	-56364	10833	5608	81562	18604	8800	27404	No	3.91	Si
SLU 73	0.8	2262.89	-19675	-14309	7295	1.7256	1.7256	-27641	10833	5608	81562	18604	8800	27404	No	3.76	Si
SLU 75	-1.37	5910.41	-40159	-29207	6961	1.7256	1.7256	-56419	10833	5608	81562	18604	8800	27404	No	3.94	Si
SLU 75	0.8	2279.47	-19719	-14341	7272	1.7256	1.7256	-27702	10833	5608	81562	18604	8800	27404	No	3.77	Si
SLU 76	-1.37	5951.84	-40120	-29178	7003	1.7256	1.7256	-56364	10833	5608	81562	18604	8800	27404	No	3.91	Si
SLU 76	0.8	2262.89	-19675	-14309	7295	1.7256	1.7256	-27641	10833	5608	81562	18604	8800	27404	No	3.76	Si
SLU 77	-1.37	5848.27	-40218	-29249	6897	1.7256	1.7256	-56501	10833	5608	81562	18604	8800	27404	No	3.97	Si
SLU 77	0.8	2304.32	-19784	-14388	7238	1.7256	1.7256	-27794	10833	5608	81562	18604	8800	27404	No	3.79	Si
SLU 81	-1.37	6143.29	-42497	-30907	7157	1.7256	1.7256	-59703	10833	5608	81562	18604	8800	27404	No	3.83	Si
SLU 81	0.8	2472.14	-21209	-15424	7547	1.7256	1.7256	-29796	10833	5608	81562	18604	8800	27404	No	3.63	Si
SLU 83	-1.37	6143.29	-42497	-30907	7157	1.7256	1.7256	-59703	10833	5608	81562	18604	8800	27404	No	3.83	Si
SLU 83	0.8	2472.14	-21209	-15424	7547	1.7256	1.7256	-29796	10833	5608	81562	18604	8800	27404	No	3.63	Si
SLU 82	-1.37	6205.43	-42439	-30864	7221	1.7256	1.7256	-59621	10833	5608	81562	18604	8800	27404	No	3.8	Si
SLU 82	0.8	2447.28	-21143	-15377	7581	1.7256	1.7256	-29704	10833	5608	81562	18604	8800	27404	No	3.61	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 14	-1.37	3263.66	-31146	-22652	4681	1.7256	1.7256	-43757	16250	8412	81562	27906	8800	36706		7.84	Si
SLV 14	0.8	2024.19	-14399	-10472	5508	1.7256	1.7256	-20228	16250	8412	81562	27906	8800	36706		6.66	Si
SLV 8	-1.37	8042.86	-22441	-16320	8840	1.7256	1.5132	-31526	16250	7377	81562	27906	8800	36706		4.15	Si
SLV 8	0.8	-23.08	-8555	-6222	6559	1.7256	1.7256	-12018	14904	7715	81562	27906	8800	36706		5.6	Si
SLV 4	-1.37	4777.85	-23790	-17302	5105	1.7256	1.7256	-33422	16250	8412	81562	27906	8800	36706		7.19	Si
SLV 4	0.8	983.31	-11771	-8561	4674	1.7256	1.7256	-16537	15807	8183	81562	27906	8800	36706		7.85	Si
SLV 3	-1.37	4852.02	-23813	-17318	5212	1.7256	1.7256	-33454	16250	8412	81562	27906	8800	36706		7.04	Si
SLV 3	0.8	984.11	-11662	-8481	4749	1.7256	1.7256	-16383	15777	8167	81562	27906	8800	36706		7.73	Si
SLV 11	-1.37	8414.64	-23894	-17378	9590	1.7256	1.5319	-33569	16250	7468	81562	27906	8800	36706		3.83	Si
SLV 11	0.8	18.87	-8413	-6119	7200	1.7256	1.7256	-11820	14864	7695	81562	27906	8800	36706		5.1	Si
SLV 16	-1.37	5766.21	-28559	-20770	7242	1.7256	1.7256	-40122	16250	8412	81562	27906	8800	36706		5.07	Si
SLV 16	0.8	1120.43	-11671	-8488	6558	1.7256	1.7256	-16396	15779	8169	81562	27906	8800	36706		5.6	Si
SLV 12	-1.37	8339.37	-23871	-17361	9482	1.7256	1.5403	-33536	16250	7509	81562	27906	8800	36706		3.87	Si
SLV 12	0.8	18.05	-8525	-6200	7124	1.7256	1.7256	-11976	14895	7711	81562	27906	8800	36706		5.15	Si
SLV 13	-1.37	3337.83	-31169	-22668	4788	1.7256	1.7256	-43789	16250	8412	81562	27906	8800	36706		7.67	Si
SLV 13	0.8	2024.99	-14289	-10392	5582	1.7256	1.7256	-20074	16250	8412	81562	27906	8800	36706		6.58	Si
SLV 15	-1.37	5840.38	-28582	-20787	7349	1.7256	1.7256	-40154	16250	8412	81562	27906	8800	36706		4.99	Si
SLV 15	0.8	1121.23	-11561	-8408	6633	1.7256	1.7256	-16242	15748	8153	81562	27906	8800	36706		5.53	Si
SLV 7	-1.37	8118.13	-22464	-16337	8949	1.7256	1.5042	-31559	16250	7333	81562	27906	8800	36706		4.1	Si
SLV 7	0.8	-22.27	-8443	-6141	6634	1.7256	1.7256	-11862	14872	7699	81562	27906	8800	36706		5.53	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.025 Ta 0.04 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 7	-13571	0.24	72.83	1744.5	2427.47	2085.98	28.64	Si
SLV 8	-13641	0.24	72.83	1752.01	2438.56	2095.28	28.77	Si
SLV 11	-14036	0.24	72.83	1793.96	2500.86	2147.41	29.48	Si
SLV 12	-14106	0.24	72.83	1801.37	2511.84	2156.61	29.61	Si
SLV 3	-16721	0.24	72.83	2066.16	2920.12	2493.14	34.23	Si
SLV 4	-16791	0.24	72.83	2072.87	2930.74	2501.81	34.35	Si
SLV 15	-18272	0.24	72.83	2212.95	3158	2685.47	36.87	Si
SLV 16	-18341	0.24	72.83	2219.32	3168.61	2693.97	36.99	Si
SLV 1	-19886	0.24	72.83	2357.73	3405.58	2881.66	39.56	Si
SLV 2	-19955	0.24	72.83	2363.75	3416.19	2889.97	39.68	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.025 Wa = 0.05 Ta = 0.0403

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 6	-13997	-31065	39	0.693	1621.2	0.964	10.45662	4.37979	Si
SLV 5	-13881	-31087	39	0.698	1609.4	0.963	10.53318	4.37979	Si
SLV 10	-13836	-32495	-64	0.698	1604.8	0.963	10.53785	4.37979	Si
SLV 9	-13720	-32518	-65	0.703	1593	0.963	10.61553	4.37979	Si
SLV 2	-11477	-26377	169	0.809	1364.9	0.958	12.28508	4.62651	Si
SLV 1	-11363	-26400	168	0.816	1353.3	0.957	12.3932	4.62651	Si
SLV 14	-10939	-31146	-176	0.842	1310.2	0.956	12.80205	4.62651	Si
SLV 13	-10825	-31169	-176	0.849	1298.5	0.956	12.91973	4.62651	Si
SLV 4	-9156	-23790	176	0.977	1129.1	0.95	14.94591	4.62651	Si
SLV 3	-9042	-23813	176	0.987	1117.5	0.949	15.10994	4.62651	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	3.833	SLU 82	Si
V_SLU	3.615	SLU 82	Si
PF_SLV	2.03	SLV 7	Si
V_SLV	3.828	SLV 11	Si
PFFP_SLV	28.64	SLV 7	Si
R_SLV	2.387	SLV 6	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
-28.073	0.331	-28.073	1.056	L1	L2	0.725	0.3	2.69	2.69	2.69			

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	-1.37	427.99	-6888	-0.0000702	0.0004492	0.0035	0.725	1849.8	2148.57	2148.57	5.02	No	Si
SLU 40	0.8	-469.67	-8131	-0.0000819	0.0004492	0.0035	0.725	2045.71	2676.67	2676.67	5.7	No	Si
SLU 34	-1.37	416.46	-6373	-0.0000658	0.0004492	0.0035	0.725	1756.17	2016.74	2016.74	4.84	No	Si
SLU 34	0.8	-442.73	-7515	-0.0000757	0.0004492	0.0035	0.725	1953.82	2527.53	2527.53	5.71	No	Si
SLU 73	-1.37	469.71	-7492	-0.0000771	0.0004492	0.0035	0.725	1950.19	2302.9	2302.9	4.9	No	Si
SLU 73	0.8	-506.08	-8581	-0.0000874	0.0004492	0.0035	0.725	2106.25	2784.14	2784.14	5.5	No	Si
SLU 10	-1.37	358.34	-5565	-0.0000566	0.0004492	0.0035	0.725	1594.83	1810.11	1810.11	5.05	No	Si
SLU 10	0.8	-374.2	-6367	-0.0000633	0.0004492	0.0035	0.725	1755.11	2232.82	2232.82	5.97	No	Si
SLU 13	-1.37	358.34	-5565	-0.0000566	0.0004492	0.0035	0.725	1594.83	1810.11	1810.11	5.05	No	Si
SLU 13	0.8	-374.2	-6367	-0.0000633	0.0004492	0.0035	0.725	1755.11	2232.82	2232.82	5.97	No	Si
SLU 76	-1.37	469.71	-7492	-0.0000771	0.0004492	0.0035	0.725	1950.19	2302.9	2302.9	4.9	No	Si
SLU 76	0.8	-506.08	-8581	-0.0000874	0.0004492	0.0035	0.725	2106.25	2784.14	2784.14	5.5	No	Si
SLU 23	-1.37	347.3	-5311	-0.0000542	0.0004492	0.0035	0.725	1540.42	1745.13	1745.13	5.02	No	Si
SLU 23	0.8	-369.32	-6046	-0.0000607	0.0004492	0.0035	0.725	1693.13	2146.15	2146.15	5.81	No	Si
SLU 31	-1.37	416.46	-6373	-0.0000658	0.0004492	0.0035	0.725	1756.17	2016.74	2016.74	4.84	No	Si
SLU 31	0.8	-442.73	-7515	-0.0000757	0.0004492	0.0035	0.725	1953.82	2527.53	2527.53	5.71	No	Si
SLU 42	-1.37	427.99	-6888	-0.0000702	0.0004492	0.0035	0.725	1849.8	2148.57	2148.57	5.02	No	Si
SLU 42	0.8	-469.67	-8131	-0.0000819	0.0004492	0.0035	0.725	2045.71	2676.67	2676.67	5.7	No	Si
SLU 26	-1.37	347.3	-5311	-0.0000542	0.0004492	0.0035	0.725	1540.42	1745.13	1745.13	5.02	No	Si
SLU 26	0.8	-369.32	-6046	-0.0000607	0.0004492	0.0035	0.725	1693.13	2146.15	2146.15	5.81	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	-1.37	2091.22	913	-0.0346097	0.0006738	0.0035	0.58		0	0	0		No
SLV 7	0.8	-766.44	-6948	-0.0000881	0.0006738	0.0035	0.725		2472.5	2472.5	3.23		Si
SLV 16	-1.37	1018.62	-3570	-0.0001541	0.0006738	0.0035	0.725		1276.18	1276.18	1.25		Si
SLV 16	0.8	-558.58	-5981	-0.0000696	0.0006738	0.0035	0.725		2195.65	2195.65	3.93		Si
SLV 6	-1.37	-1645.95	-11195	-0.0001754	0.0006738	0.0035	0.725		3570.07	3570.07	2.17		Si
SLV 6	0.8	162.61	-4291	-0.0000363	0.0006738	0.0035	0.725		1503.92	1503.92	9.25		Si
SLV 11	-1.37	2206.52	820	-0.0360096	0.0006738	0.0035	0.58		0	0	0		No
SLV 11	0.8	-822.7	-6936	-0.0000912	0.0006738	0.0035	0.725		2469.12	2469.12	3		Si
SLV 15	-1.37	1040.72	-3503	-0.0001812	0.0006738	0.0035	0.725		1255	1255	1.21		Si
SLV 15	0.8	-565.62	-5998	-0.0000701	0.0006738	0.0035	0.725		2200.83	2200.83	3.89		Si
SLV 3	-1.37	656.37	-3193	-0.0000642	0.0006738	0.0035	0.725		1154.87	1154.87	1.76		Si
SLV 3	0.8	-378.08	-6038	-0.0000599	0.0006738	0.0035	0.725		2212.67	2212.67	5.85		Si
SLV 5	-1.37	-1623.52	-11128	-0.0001732	0.0006738	0.0035	0.725		3553.99	3553.99	2.19		Si
SLV 5	0.8	155.47	-4309	-0.0000361	0.0006738	0.0035	0.725		1509.49	1509.49	9.71		Si
SLV 8	-1.37	2068.79	845	-0.0340258	0.0006738	0.0035	0.58		0	0	0		No
SLV 8	0.8	-759.3	-6930	-0.0000876	0.0006738	0.0035	0.725		2467.5	2467.5	3.25		Si
SLV 12	-1.37	2184.09	752	-0.0354255	0.0006738	0.0035	0.58		0	0	0		No
SLV 12	0.8	-815.56	-6918	-0.0000907	0.0006738	0.0035	0.725		2464.12	2464.12	3.02		Si
SLV 4	-1.37	634.27	-3260	-0.0000612	0.0006738	0.0035	0.725		1176.42	1176.42	1.85		Si
SLV 4	0.8	-371.05	-6021	-0.0000594	0.0006738	0.0035	0.725		2207.49	2207.49	5.95		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	-1.37	451.6	-7552	-5492	1870	0.725	0.725	-25252	10833	2356	81562	7816	3697	11514	No	6.16	Si
SLU 78	0.8	-501.56	-8568	-6231	369	0.725	0.725	-28650	10833	2356	81562	7816	3697	11514	No	31.2	Si
SLU 80	-1.37	451.6	-7552	-5492	1870	0.725	0.725	-25252	10833	2356	81562	7816	3697	11514	No	6.16	Si
SLU 80	0.8	-501.56	-8568	-6231	369	0.725	0.725	-28650	10833	2356	81562	7816	3697	11514	No	31.2	Si
SLU 76	-1.37	469.71	-7492	-5449	1899	0.725	0.725	-25051	10833	2356	81562	7816	3697	11514	No	6.06	Si
SLU 76	0.8	-506.08	-8581	-6241	376	0.725	0.725	-28693	10833	2356	81562	7816	3697	11514	No	30.6	Si
SLU 83	-1.37	454.09	-8098	-5889	1955	0.725	0.725	-27077	10833	2356	81562	7816	3697	11514	No	5.89	Si
SLU 83	0.8	-526.24	-9178	-6675	407	0.725	0.725	-30689	10833	2356	81562	7816	3697	11514	No	28.28	Si
SLU 82	-1.37	481.24	-8007	-5823	1998	0.725	0.725	-26775	10833	2356	81562	7816	3697	11514	No	5.76	Si
SLU 82	0.8	-533.02	-9197	-6689	418	0.725	0.725	-30754	10833	2356	81562	7816	3697	11514	No	27.55	Si
SLU 73	-1.37	469.71	-7492	-5449	1899	0.725	0.725	-25051	10833	2356	81562	7816	3697	11514	No	6.06	Si
SLU 73	0.8	-506.08	-8581	-6241	376	0.725	0.725	-28693	10833	2356	81562	7816	3697	11514	No	30.6	Si
SLU 75	-1.37	451.6	-7552	-5492	1870	0.725	0.725	-25252	10833	2356	81562	7816	3697	11514	No	6.16	Si
SLU 75	0.8	-501.56	-8568	-6231	369	0.725	0.725	-28650	10833	2356	81562	7816	3697	11514	No	31.2	Si
SLU 79	-1.37	424.45	-7643	-5558	1827	0.725	0.725	-25555	10833	2356	81562	7816	3697	11514	No	6.3	Si
SLU 79	0.8	-494.78	-8549	-6217	358	0.725	0.725	-28584	10833	2356	81562	7816	3697	11514	No	32.15	Si
SLU 81	-1.37	454.09	-8098	-5889	1955	0.725	0.725	-27077	10833	2356	81562	7816	3697	11514	No	5.89	Si
SLU 81	0.8	-526.24	-9178	-6675	407	0.725	0.725	-30689	10833	2356	81562	7816	3697	11514	No	28.28	Si
SLU 84	-1.37	481.24	-8007	-5823	1998	0.725	0.725	-26775	10833	2356	81562	7816	3697	11514	No	5.76	Si
SLU 84	0.8	-533.02	-9197	-6689	418	0.725	0.725	-30754	10833	2356	81562	7816	3697	11514	No	27.55	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 3	-1.37	656.37	-3193	-2322	1834	0.725	0.4709	-10678	14636	2067	81562	11725	3697	15422		8.41	Si
SLV 3	0.8	-378.08	-6038	-4391	444	0.725	0.725	-20191	16250	3534	81562	11725	3697	15422		34.7	Si
SLV 7	-1.37	2091.22	913	664	4131	0.58	0	0	0	0	81562	9380	2958	12338		2.99	Si
SLV 7	0.8	-766.44	-6948	-5053	773	0.725	0.725	-23234	16250	3534	81562	11725	3697	15422		19.95	Si
SLV 15	-1.37	1040.72	-3503	-2548	2410	0.725	0.1963	-44176	16250	957	81562	11725	3697	15422		6.4	Si
SLV 15	0.8	-565.62	-5998	-4362	278	0.725	0.725	-20057	16250	3534	81562	11725	3697	15422		55.5	Si
SLV 6	-1.37	-1645.95	-11195	-8142	-1893	0.725	0.6464	-42890	16250	3151	81562	11725	3697	15422		8.15	Si
SLV 6	0.8	162.61	-4291	-3121	-340	0.725	0.725	-14347	15369	3343	81562	11725	3697	15422		45.38	Si
SLV 5	-1.37	-1623.52	-11128	-8093	-1855	0.725	0.6498	-42398	16250	3168	81562	11725	3697	15422		8.31	Si
SLV 5	0.8	155.47	-4309	-3133	-332	0.725	0.725	-14407	15381	3345	81562	11725	3697	15422		46.39	Si
SLV 11	-1.37	2206.52	820	596	4304	0.58	0	0	0	0	81562	9380	2958	12338		2.87	Si
SLV 11	0.8	-822.7	-6936	-5045	723	0.725	0.725	-23193	16250	3534	81562	11725	3697	15422		21.32	Si
SLV 16	-1.37	1018.62	-3570	-2596	2374	0.725	0.2315	-38074	16250	1129	81562	11725	3697	15422		6.5	Si
SLV 16	0.8	-558.58	-5981	-4350	271	0.725	0.725	-19998	16250	3534	81562	11725	3697	15422		57.01	Si
SLV 8	-1.37	2068.79	845	615	4094	0.58	0	0	0	0	81562	9380	2958	12338		3.01	Si
SLV 8	0.8	-759.3	-6930	-5040	766	0.725	0.725	-23174	16250	3534	81562	11725	3697	15422		20.14	Si
SLV 4	-1.37	634.27	-3260	-2371	1797	0.725	0.5038	-10900	14680	2219	81562	11725	3697	15422		8.58	Si
SLV 4	0.8	-371.05	-6021	-4379	437	0.725	0.725	-20132	16250	3534	81562	11725	3697	15422		35.28	Si
SLV 12	-1.37	2184.09	752	547	4267	0.58	0	0	0	0	81562	9380	2958	12338		2.89	Si
SLV 12	0.8	-815.56	-6918	-5032	716	0.725	0.725	-23134	16250	3534	81562	11725	3697	15422		21.55	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota -0.025 Ta 0.04 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-6941	0.24	30.6	859.84	1206.21	1033.03	33.76	Si
SLV 1	-6948	0.24	30.6	860.5	1207.28	1033.89	33.79	Si
SLV 4	-6989	0.24	30.6	864.54	1213.73	1039.13	33.96	Si
SLV 3	-6996	0.24	30.6	865.2	1214.77	1039.99	33.99	Si
SLV 6	-7057	0.24	30.6	871.12	1224.13	1047.62	34.23	Si
SLV 5	-7063	0.24	30.6	871.78	1225.19	1048.48	34.26	Si
SLV 10	-7204	0.24	30.6	885.33	1246.81	1066.07	34.84	Si
SLV 9	-7211	0.24	30.6	885.99	1247.87	1066.93	34.87	Si
SLV 8	-7217	0.24	30.6	886.58	1248.83	1067.71	34.89	Si
SLV 7	-7224	0.24	30.6	887.24	1249.89	1068.56	34.92	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.025 Wa = 0.05 Ta = 0.0403

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 3	-4074	-3193	19	0.943	497.4	0.952	14.40382	4.62651	Si
SLV 4	-4072	-3260	19	0.944	497.3	0.952	14.40819	4.62651	Si
SLV 1	-4007	-6805	16	0.957	490.6	0.951	14.62389	4.62651	Si
SLV 2	-4005	-6872	16	0.957	490.5	0.951	14.6284	4.62651	Si
SLV 7	-3902	913	11	0.979	480	0.95	14.98106	4.37979	Si, Trazione
SLV 8	-3900	845	11	0.98	479.8	0.95	14.98587	4.37979	Si, Trazione
SLV 11	-3688	820	1	1.029	458.2	0.948	15.76968	4.37979	Si, Trazione
SLV 12	-3686	752	1	1.029	458.1	0.948	15.77502	4.37979	Si, Trazione
SLV 5	-3679	-11128	0	1.031	457.3	0.948	15.80521	4.37979	Si
SLV 6	-3678	-11195	0	1.031	457.2	0.948	15.81073	4.37979	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	4.843	SLU 31	Si
V_SLU	5.763	SLU 82	Si
PF_SLV	0	SLV 7	No
V_SLV	2.867	SLV 11	Si
PFFP_SLV	33.758	SLV 2	Si
R_SLV	3.113	SLV 3	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
-24.423	5.726	-24.423	-3.274	L1	L2	9.001	0.45	2.69	2.69	2.69			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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 34	-1.37	-1832.3	-41295	-0.0000161	0.0003743	0.0035	9.0006	167230.75	194926.58	194926.58	106.38	No	Si
SLU 34	1.32	-580.22	-38309	-0.0000147	0.0003743	0.0035	9.0006	156384.7	183480.88	183480.88	316.22	No	Si
SLU 5	-1.37	-1368.27	-31105	-0.0000121	0.0003743	0.0035	9.0006	129422.33	155309.33	155309.33	113.51	No	Si
SLU 5	1.32	636.68	-24684	-0.0000094	0.0003743	0.0035	9.0006	104436.64	109629.42	109629.42	172.19	No	Si
SLU 2	-1.37	-1368.27	-31105	-0.0000121	0.0003743	0.0035	9.0006	129422.33	155309.33	155309.33	113.51	No	Si
SLU 2	1.32	636.68	-24684	-0.0000094	0.0003743	0.0035	9.0006	104436.64	109629.42	109629.42	172.19	No	Si
SLU 76	-1.37	-1987.31	-49116	-0.0000192	0.0003743	0.0035	9.0006	194707.88	224251.37	224251.37	112.84	No	Si
SLU 76	1.32	-146.99	-43691	-0.0000166	0.0003743	0.0035	9.0006	175789.36	204191.27	204191.27	1389.17	No	Si
SLU 73	-1.37	-1987.31	-49116	-0.0000192	0.0003743	0.0035	9.0006	194707.88	224251.37	224251.37	112.84	No	Si
SLU 73	1.32	-146.99	-43691	-0.0000166	0.0003743	0.0035	9.0006	175789.36	204191.27	204191.27	1389.17	No	Si
SLU 31	-1.37	-1832.3	-41295	-0.0000161	0.0003743	0.0035	9.0006	167230.75	194926.58	194926.58	106.38	No	Si
SLU 31	1.32	-580.22	-38309	-0.0000147	0.0003743	0.0035	9.0006	156384.7	183480.88	183480.88	316.22	No	Si
SLU 10	-1.37	-1723.51	-36879	-0.0000144	0.0003743	0.0035	9.0006	151122.83	178040.05	178040.05	103.3	No	Si
SLU 10	1.32	76.74	-32394	-0.0000123	0.0003743	0.0035	9.0006	134331.71	140674.37	140674.37	1833.21	No	Si
SLU 13	-1.37	-1723.51	-36879	-0.0000144	0.0003743	0.0035	9.0006	151122.83	178040.05	178040.05	103.3	No	Si
SLU 13	1.32	76.74	-32394	-0.0000123	0.0003743	0.0035	9.0006	134331.71	140674.37	140674.37	1833.21	No	Si
SLU 52	-1.37	-1878.52	-44699	-0.0000175	0.0003743	0.0035	9.0006	179353.84	208110.27	208110.27	110.78	No	Si
SLU 52	1.32	509.97	-37777	-0.0000144	0.0003743	0.0035	9.0006	154431.16	161783.31	161783.31	317.24	No	Si
SLU 55	-1.37	-1878.52	-44699	-0.0000175	0.0003743	0.0035	9.0006	179353.84	208110.27	208110.27	110.78	No	Si
SLU 55	1.32	509.97	-37777	-0.0000144	0.0003743	0.0035	9.0006	154431.16	161783.31	161783.31	317.24	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 12	-1.37	-34471.97	-39619	-0.0000236	0.0005615	0.0035	9.0006		192180.73	192180.73	5.57		Si
SLV 12	1.32	-6603.84	-32161	-0.0000137	0.0005615	0.0035	9.0006		161830.3	161830.3	24.51		Si
SLV 11	-1.37	-35412.9	-39598	-0.0000239	0.0005615	0.0035	9.0006		192095.7	192095.7	5.42		Si
SLV 11	1.32	-6004.27	-32068	-0.0000135	0.0005615	0.0035	9.0006		161453.99	161453.99	26.89		Si
SLV 9	-1.37	32559.86	-36606	-0.000022	0.0005615	0.0035	9.0006		160668.76	160668.76	4.93		Si
SLV 9	1.32	6341.81	-30763	-0.0000131	0.0005615	0.0035	9.0006		136620.96	136620.96	21.54		Si
SLV 6	-1.37	33865.68	-28455	-0.0000192	0.0005615	0.0035	9.0006		126993.23	126993.23	3.75		Si
SLV 6	1.32	6695.5	-25117	-0.0000111	0.0005615	0.0035	9.0006		113040.14	113040.14	16.88		Si
SLV 7	-1.37	-35048.02	-31426	-0.0000206	0.0005615	0.0035	9.0006		158857.22	158857.22	4.53		Si
SLV 7	1.32	-5051	-26329	-0.0000111	0.0005615	0.0035	9.0006		137911.73	137911.73	27.3		Si
SLV 5	-1.37	32924.74	-28434	-0.0000189	0.0005615	0.0035	9.0006		126906.53	126906.53	3.85		Si
SLV 5	1.32	7295.08	-25024	-0.0000112	0.0005615	0.0035	9.0006		112645.97	112645.97	15.44		Si
SLV 8	-1.37	-34107.09	-31447	-0.0000204	0.0005615	0.0035	9.0006		158941.23	158941.23	4.66		Si
SLV 8	1.32	-5650.58	-26422	-0.0000113	0.0005615	0.0035	9.0006		138300.06	138300.06	24.48		Si
SLV 2	-1.37	10494.05	-19968	-0.0000101	0.0005615	0.0035	9.0006		91238.69	91238.69	8.69		Si
SLV 2	1.32	3490.89	-18877	-0.0000079	0.0005615	0.0035	9.0006		86555.47	86555.47	24.79		Si
SLV 10	-1.37	33500.8	-36627	-0.0000222	0.0005615	0.0035	9.0006		160753.89	160753.89	4.8		Si
SLV 10	1.32	5742.24	-30856	-0.000013	0.0005615	0.0035	9.0006		137006.96	137006.96	23.86		Si
SLV 1	-1.37	9566.82	-19948	-0.0000098	0.0005615	0.0035	9.0006		91150.74	91150.74	9.53		Si
SLV 1	1.32	4081.72	-18785	-0.000008	0.0005615	0.0035	9.0006		86162.49	86162.49	21.11		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 83	-1.37	-1412.32	-51600	-45867	1936	9.0006	9.0006	-11324	8454	34242	28547	121283	22951	62789	No	32.43	Si
SLU 83	1.32	-330.34	-47011	-41787	1995	9.0006	9.0006	-10317	8320	33698	28547	121283	22951	62245	No	31.21	Si
SLU 79	-1.37	-1260.07	-49126	-43667	1822	9.0006	9.0006	-10781	8382	33949	28547	121283	22951	62496	No	34.31	Si
SLU 79	1.32	-90.36	-43706	-38850	1877	9.0006	9.0006	-9592	8223	33307	28547	121283	22951	61853	No	32.96	Si
SLU 81	-1.37	-1412.32	-51600	-45867	1936	9.0006	9.0006	-11324	8454	34242	28547	121283	22951	62789	No	32.43	Si
SLU 81	1.32	-330.34	-47011	-41787	1995	9.0006	9.0006	-10317	8320	33698	28547	121283	22951	62245	No	31.21	Si
SLU 53	-1.37	-1151.29	-44709	-39741	1580	9.0006	9.0006	-9812	8253	33426	28547	121283	22951	61972	No	39.22	Si
SLU 53	1.32	566.6	-37792	-33593	1630	9.0006	9.0006	-8294	8050	32606	28547	121283	22951	61152	No	37.52	Si
SLU 41	-1.37	-1257.31	-43780	-38916	1697	9.0006	9.0006	-9608	8226	33316	28547	121283	22951	61862	No	36.46	Si
SLU 41	1.32	-763.57	-41629	-37003	1747	9.0006	9.0006	-9136	8163	33061	28547	121283	22951	61607	No	35.27	Si
SLU 74	-1.37	-1260.07	-49126	-43667	1822	9.0006	9.0006	-10781	8382	33949	28547	121283	22951	62496	No	34.31	Si
SLU 74	1.32	-90.36	-43706	-38850	1877	9.0006	9.0006	-9592	8223	33307	28547	121283	22951	61853	No	32.96	Si
SLU 62	-1.37	-1303.53	-47184	-41941	1695	9.0006	9.0006	-10355	8325	33719	28547	121283	22951	62266	No	36.74	Si
SLU 62	1.32	326.62	-41096	-36530	1748	9.0006	9.0006	-9019	8147	32997	28547	121283	22951	61544	No	35.21	Si
SLU 77	-1.37	-1260.07	-49126	-43667	1822	9.0006	9.0006	-10781	8382	33949	28547	121283	22951	62496	No	34.31	Si
SLU 77	1.32	-90.36	-43706	-38850	1877	9.0006	9.0006	-9592	8223	33307	28547	121283	22951	61853	No	32.96	Si
SLU 39	-1.37	-1257.31	-43780	-38916	1697	9.0006	9.0006	-9608	8226	33316	28547	121283	22951	61862	No	36.46	Si
SLU 39	1.32	-763.57	-41629	-37003	1747	9.0006	9.0006	-9136	8163	33061	28547	121283	22951	61607	No	35.27	Si
SLU 60	-1.37	-1303.53	-47184	-41941	1695	9.0006	9.0006	-10355	8325	33719	28547	121283	22951	62266	No	36.74	Si
SLU 60	1.32	326.62	-41096	-36530	1748	9.0006	9.0006	-9019	8147	32997	28547	121283	22951	61544	No	35.21	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	-1.37	10494.05	-19968	-17750	8624	9.0006	9.0006	-4382	11293	45740	28547	181924	22951	74287		8.61	Si
SLV 2	1.32	3490.89	-18877	-16779	7919	9.0006	9.0006	-4143	11245	45546	28547	181924	22951	74093		9.36	Si
SLV 6	-1.37	33865.68	-28455	-25294	25517	9.0006	9.0006	-6245	11666	47249	28547	181924	22951	75795		2.97	Si
SLV 6	1.32	6695.5	-25117	-22326	22926	9.0006	9.0006	-5512	11519	46655	28547	181924	22951	75202		3.28	Si
SLV 12	-1.37	-34471.97	-39619	-35217	-20031	9.0006	9.0006	-8695	12156	49234	28547	181924	22951	77780		3.88	Si
SLV 12	1.32	-6603.84	-32161	-28588	-17363	9.0006	9.0006	-7058	11828	47908	28547	181924	22951	76454		4.4	Si
SLV 10	-1.37	33500.8	-36627	-32557	26130	9.0006	9.0006	-8038	12024	48702	28547	181924	22951	77248		2.96	Si
SLV 10	1.32	5742.24	-30856	-27428	23509	9.0006	9.0006	-6772	11771	47676	28547	181924	22951	76222		3.24	Si
SLV 14	-1.37	9277.78	-47208	-41963	10666	9.0006	9.0006	-10360	12489	50583	28547	181924	22951	79129		7.42	Si
SLV 14	1.32	313.34	-38008	-33785	9862	9.0006	9.0006	-8342	12085	48947	28547	181924	22951	77494		7.86	Si
SLV 7	-1.37	-35048.02	-31426	-27934	-23692	9.0006	9.0006	-6897	11796	47777	28547	181924	22951	76324		3.22	Si
SLV 7	1.32	-5051	-26329	-23403	-20996	9.0006	9.0006	-5778	11572	46871	28547	181924	22951	75417		3.59	Si
SLV 5	-1.37	32924.74	-28434	-25275	22468	9.0006	9.0006	-6240	11665	47245	28547	181924	22951	75792		3.37	Si
SLV 5	1.32	7295.08	-25024	-22243	19875	9.0006	9.0006	-5492	11515	46639	28547	181924	22951	75185		3.78	Si
SLV 8	-1.37	-34107.09	-31447	-27953	-20643	9.0006	9.0006	-6901	11797	47781	28547	181924	22951	76327		3.7	Si
SLV 8	1.32	-5650.58	-26422	-23486	-17945	9.0006	9.0006	-5799	11576	46887	28547	181924	22951	75434		4.2	Si
SLV 9	-1.37	32559.86	-36606	-32539	23081	9.0006	9.0006	-8034	12023	48698	28547	181924	22951	77245		3.35	Si
SLV 9	1.32	6341.81	-30763	-27345	20458	9.0006	9.0006	-6751	11767	47659	28547	181924	22951	76206		3.72	Si
SLV 11	-1.37	-35412.9	-39598	-35198	-23080	9.0006	9.0006	-8690	12155	49230	28547	181924	22951	77776		3.37	Si
SLV 11	1.32	-6004.27	-32068	-28505	-20414	9.0006	9.0006	-7038	11824	47891	28547	181924	22951	76438		3.74	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota -0.025 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 1	179667	0.24	4659	-18869	558.91	4115.98	7.36	Si
SLV 2	179667	0.24	4674	-18930	558.91	4128.92	7.39	Si
SLV 3	179667	0.24	4822	-19531	558.91	4255.77	7.61	Si
SLV 4	179667	0.24	4837	-19593	558.91	4268.69	7.64	Si
SLV 5	179667	0.24	6539	-26485	558.91	5704	10.21	Si
SLV 6	179667	0.24	6554	-26547	558.91	5716.8	10.23	Si
SLV 7	179667	0.24	7084	-28693	558.91	6156.51	11.02	Si
SLV 8	179667	0.24	7100	-28755	558.91	6169.2	11.04	Si
SLV 9	179667	0.24	8315	-33676	558.91	7164.63	12.82	Si
SLV 10	179667	0.24	8330	-33739	558.91	7177.1	12.84	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 = -0.025 Wa = 0.08 Ta = 0.0269

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-38400	-48105	-1054	1.128	5470.3	0.925	17.7147	3.65568	Si
SLV 15	-38308	-48085	-1054	1.13	5461.1	0.925	17.74789	3.65568	Si
SLV 14	-38008	-47208	-1044	1.136	5430.9	0.925	17.86038	3.65568	Si
SLV 13	-37917	-47187	-1044	1.138	5421.7	0.925	17.89414	3.65568	Si
SLV 12	-32161	-39619	-378	1.299	4843.9	0.918	20.56669	3.53142	Si
SLV 11	-32068	-39598	-378	1.302	4834.5	0.918	20.61211	3.53142	Si
SLV 10	-30856	-36627	-345	1.339	4713.3	0.916	21.23541	3.53142	Si
SLV 9	-30763	-36606	-345	1.342	4704	0.916	21.28391	3.53142	Si
SLV 8	-26422	-31447	212	1.496	4270.9	0.91	23.88721	3.53142	Si
SLV 7	-26329	-31426	212	1.5	4261.7	0.91	23.94866	3.53142	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	103.301	SLU 10	Si
V_SLU	31.208	SLU 81	Si
PF_SLV	3.75	SLV 6	Si
V_SLV	2.956	SLV 10	Si
PFFP_SLV	7.364	SLV 1	Si
R_SLV	4.846	SLV 16	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
-34.108	-3.274	-34.108	5.726	L2	L3	9.001	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 41	1.32	3519.11	-26546	-0.0000149	0.0004492	0.0035	9.0006	109852.68	120654.78	120654.78	34.29	No	Si
SLU 41	5.08	35.85	-1304	-0.0000007	0.0004492	0.0035	9.0006	5846.42	13883.95	13883.95	387.25	No	Si
SLU 38	1.32	3298.82	-24605	-0.0000138	0.0004492	0.0035	9.0006	102469.9	112753.12	112753.12	34.18	No	Si
SLU 38	5.08	12.27	-1086	-0.0000006	0.0004492	0.0035	9.0006	4871.98	12922.98	12922.98	1052.88	No	Si
SLU 36	1.32	3298.82	-24605	-0.0000138	0.0004492	0.0035	9.0006	102469.9	112753.12	112753.12	34.18	No	Si
SLU 36	5.08	12.27	-1086	-0.0000006	0.0004492	0.0035	9.0006	4871.98	12922.98	12922.98	1052.88	No	Si
SLU 37	1.32	3151.75	-24614	-0.0000137	0.0004492	0.0035	9.0006	102505.38	112790.83	112790.83	35.79	No	Si
SLU 37	5.08	27.19	-1084	-0.0000006	0.0004492	0.0035	9.0006	4862.51	12913.65	12913.65	474.96	No	Si
SLU 40	1.32	3666.18	-26537	-0.0000149	0.0004492	0.0035	9.0006	109817.68	120617.06	120617.06	32.9	No	Si
SLU 40	5.08	20.94	-1306	-0.0000007	0.0004492	0.0035	9.0006	5855.88	13893.29	13893.29	663.55	No	Si
SLU 31	1.32	3396.87	-24598	-0.0000138	0.0004492	0.0035	9.0006	102446.25	112727.98	112727.98	33.19	No	Si
SLU 31	5.08	2.33	-1088	-0.0000006	0.0004492	0.0035	9.0006	4878.29	12929.2	12929.2	5547.73	No	Si
SLU 33	1.32	3298.82	-24605	-0.0000138	0.0004492	0.0035	9.0006	102469.9	112753.12	112753.12	34.18	No	Si
SLU 33	5.08	12.27	-1086	-0.0000006	0.0004492	0.0035	9.0006	4871.98	12922.98	12922.98	1052.88	No	Si
SLU 42	1.32	3666.18	-26537	-0.0000149	0.0004492	0.0035	9.0006	109817.68	120617.06	120617.06	32.9	No	Si
SLU 42	5.08	20.94	-1306	-0.0000007	0.0004492	0.0035	9.0006	5855.88	13893.29	13893.29	663.55	No	Si
SLU 39	1.32	3519.11	-26546	-0.0000149	0.0004492	0.0035	9.0006	109852.68	120654.78	120654.78	34.29	No	Si
SLU 39	5.08	35.85	-1304	-0.0000007	0.0004492	0.0035	9.0006	5846.42	13883.95	13883.95	387.25	No	Si
SLU 34	1.32	3396.87	-24598	-0.0000138	0.0004492	0.0035	9.0006	102446.25	112727.98	112727.98	33.19	No	Si
SLU 34	5.08	2.33	-1088	-0.0000006	0.0004492	0.0035	9.0006	4878.29	12929.2	12929.2	5547.73	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	1.32	14214.48	-22311	-0.0000163	0.0006738	0.0035	9.0006		104490.88	104490.88	7.35		Si
SLV 7	5.08	-1026.26	-359	-0.0000007	0.0006738	0.0035	7.2005		50956.32	50956.32	49.65		Si
SLV 16	1.32	7187.66	-8999	-0.000007	0.0006738	0.0035	9.0006		47607.46	47607.46	6.62		Si
SLV 16	5.08	-466.56	-1068	-0.0000007	0.0006738	0.0035	9.0006		54045.77	54045.77	115.84		Si
SLV 10	1.32	-10200.56	-17091	-0.0000122	0.0006738	0.0035	9.0006		122584.5	122584.5	12.02		Si
SLV 10	5.08	1043.73	-684	-0.0000007	0.0006738	0.0035	9.0006		11150.35	11150.35	10.68		Si
SLV 9	1.32	-10895.49	-17062	-0.0000124	0.0006738	0.0035	9.0006		122462.58	122462.58	11.24		Si
SLV 9	5.08	1376.97	-682	-0.0000008	0.0006738	0.0035	9.0006		11140.35	11140.35	8.09		Si
SLV 5	1.32	-11485.48	-23394	-0.0000159	0.0006738	0.0035	9.0006		148959.72	148959.72	12.97		Si
SLV 5	5.08	1349.78	-355	-0.0000015	0.0006738	0.0035	9.0006		9697.06	9697.06	7.18		Si
SLV 11	1.32	14804.47	-15979	-0.0000132	0.0006738	0.0035	9.0006		77659.95	77659.95	5.25		Si
SLV 11	5.08	-999.08	-686	-0.0000007	0.0006738	0.0035	9.0006		52382.04	52382.04	52.43		Si
SLV 12	1.32	15499.39	-16008	-0.0000135	0.0006738	0.0035	9.0006		77783.02	77783.02	5.02		Si
SLV 12	5.08	-1332.32	-688	-0.0000008	0.0006738	0.0035	9.0006		52391.92	52391.92	39.32		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 6	1.32	-10790.55	-23423	-0.0000157	0.0006738	0.0035	9.0006		149080.24	149080.24	13.82		Si
SLV 6	5.08	1016.54	-357	-0.0000007	0.0006738	0.0035	9.0006		9707.05	9707.05	9.55		Si
SLV 8	1.32	14909.4	-22340	-0.0000165	0.0006738	0.0035	9.0006		104612.08	104612.08	7.02		Si
SLV 8	5.08	-1359.51	-362	-0.0000014	0.0006738	0.0035	7.2005		50966.2	50966.2	37.49		Si
SLV 15	1.32	6502.87	-8971	-0.0000068	0.0006738	0.0035	9.0006		47484.36	47484.36	7.3		Si
SLV 15	5.08	-138.17	-1066	-0.0000006	0.0006738	0.0035	9.0006		54036.11	54036.11	391.08		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 31	1.32	3396.87	-24598	-17890	1438	9.0006	9.0006	-6625	9217	24887	122342	97038	45903	142940	No	99.41	Si
SLU 31	5.08	2.33	-1088	-791	1247	9.0006	9.0006	-293	8372	22607	122342	97038	45903	142940	No	114.6	Si
SLU 80	1.32	3507.92	-29113	-21173	1389	9.0006	9.0006	-7841	9379	25325	122342	97038	45903	142940	No	102.93	Si
SLU 80	5.08	10.75	-1081	-786	1273	9.0006	9.0006	-291	8372	22606	122342	97038	45903	142940	No	112.3	Si
SLU 78	1.32	3507.92	-29113	-21173	1389	9.0006	9.0006	-7841	9379	25325	122342	97038	45903	142940	No	102.93	Si
SLU 78	5.08	10.75	-1081	-786	1273	9.0006	9.0006	-291	8372	22606	122342	97038	45903	142940	No	112.3	Si
SLU 76	1.32	3605.97	-29107	-21168	1536	9.0006	9.0006	-7840	9379	25324	122342	97038	45903	142940	No	93.08	Si
SLU 76	5.08	0.81	-1083	-788	1345	9.0006	9.0006	-292	8372	22606	122342	97038	45903	142940	No	106.31	Si
SLU 84	1.32	3875.28	-31045	-22578	1503	9.0006	9.0006	-8362	9448	25512	122342	97038	45903	142940	No	95.1	Si
SLU 84	5.08	19.41	-1302	-947	1387	9.0006	9.0006	-351	8380	22628	122342	97038	45903	142940	No	103.06	Si
SLU 40	1.32	3666.18	-26537	-19299	1405	9.0006	9.0006	-7147	9286	25075	122342	97038	45903	142940	No	101.71	Si
SLU 40	5.08	20.94	-1306	-950	1290	9.0006	9.0006	-352	8380	22628	122342	97038	45903	142940	No	110.83	Si
SLU 34	1.32	3396.87	-24598	-17890	1438	9.0006	9.0006	-6625	9217	24887	122342	97038	45903	142940	No	99.41	Si
SLU 34	5.08	2.33	-1088	-791	1247	9.0006	9.0006	-293	8372	22607	122342	97038	45903	142940	No	114.6	Si
SLU 73	1.32	3605.97	-29107	-21168	1536	9.0006	9.0006	-7840	9379	25324	122342	97038	45903	142940	No	93.08	Si
SLU 73	5.08	0.81	-1083	-788	1345	9.0006	9.0006	-292	8372	22606	122342	97038	45903	142940	No	106.31	Si
SLU 82	1.32	3875.28	-31045	-22578	1503	9.0006	9.0006	-8362	9448	25512	122342	97038	45903	142940	No	95.1	Si
SLU 82	5.08	19.41	-1302	-947	1387	9.0006	9.0006	-351	8380	22628	122342	97038	45903	142940	No	103.06	Si
SLU 42	1.32	3666.18	-26537	-19299	1405	9.0006	9.0006	-7147	9286	25075	122342	97038	45903	142940	No	101.71	Si
SLU 42	5.08	20.94	-1306	-950	1290	9.0006	9.0006	-352	8380	22628	122342	97038	45903	142940	No	110.83	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 16	1.32	7187.66	-8999	-6545	6097	9.0006	9.0006	-2424	12985	35061	122342	145556	45903	157404		25.82	Si
SLV 16	5.08	-466.56	-1068	-777	4436	9.0006	9.0006	-288	12558	33908	122342	145556	45903	156250		35.23	Si
SLV 10	1.32	-10200.56	-17091	-12430	-13527	9.0006	9.0006	-4603	13421	36238	122342	145556	45903	158581		11.72	Si
SLV 10	5.08	1043.73	-684	-497	-7500	9.0006	8.9227	-184	12537	33559	122342	145556	45903	155901		20.79	Si
SLV 5	1.32	-11485.48	-23394	-17014	-15883	9.0006	9.0006	-6301	13760	37155	122342	145556	45903	159497		10.04	Si
SLV 5	5.08	1349.78	-355	-258	-9938	9.0006	2.0927	-411	12582	7899	122342	145556	45903	130242		13.1	Si
SLV 9	1.32	-10895.49	-17062	-12409	-16234	9.0006	9.0006	-4595	13419	36234	122342	145556	45903	158576		9.77	Si
SLV 9	5.08	1376.97	-682	-496	-10207	9.0006	7.4409	-184	12537	27985	122342	145556	45903	150328		14.73	Si
SLV 11	1.32	14804.47	-15979	-11621	14617	9.0006	9.0006	-4304	13361	36076	122342	145556	45903	158419		10.84	Si
SLV 11	5.08	-999.08	-686	-499	8668	9.0006	9.0006	-185	12537	33852	122342	145556	45903	156194		18.02	Si
SLV 6	1.32	-10790.55	-23423	-17035	-13175	9.0006	9.0006	-6309	13762	37159	122342	145556	45903	159502		12.11	Si
SLV 6	5.08	1016.54	-357	-260	-7231	9.0006	4.9637	-96	12519	18642	122342	145556	45903	140985		19.5	Si
SLV 7	1.32	14214.48	-22311	-16226	14968	9.0006	9.0006	-6009	13702	36997	122342	145556	45903	159340		10.65	Si
SLV 7	5.08	-1026.26	-359	-261	8937	7.2005	4.9335	0	0	0	122342	116445	36722	122342		13.69	Si
SLV 4	1.32	5221.03	-30106	-21895	7268	9.0006	9.0006	-8109	14122	38131	122342	145556	45903	160474		22.08	Si
SLV 4	5.08	-557.18	21	15	5332	7.2005	0	0	0	0	122342	116445	36722	122342		22.94	Si
SLV 12	1.32	15499.39	-16008	-11642	17324	9.0006	9.0006	-4312	13362	36081	122342	145556	45903	158423		9.14	Si
SLV 12	5.08	-1332.32	-688	-501	11375	9.0006	7.6942	-217	12543	28953	122342	145556	45903	151296		13.3	Si
SLV 8	1.32	14909.4	-22340	-16247	17676	9.0006	9.0006	-6017	13703	37002	122342	145556	45903	159344		9.01	Si
SLV 8	5.08	-1359.51	-362	-263	11644	7.2005	2.2226	0	0	0	122342	116445	36722	122342		10.51	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.2 Ta 0.08 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 9	-11290	0.48	1443.56	1654.87	3057.17	2356.02	1.63	Si
SLV 13	-11314	0.48	1443.56	1658.35	3061.24	2359.8	1.63	Si
SLV 5	-11330	0.48	1443.56	1660.58	3063.85	2362.22	1.64	Si
SLV 15	-11375	0.48	1443.56	1666.96	3071.33	2369.14	1.64	Si
SLV 10	-11383	0.48	1443.56	1668.12	3072.68	2370.4	1.64	Si
SLV 14	-11406	0.48	1443.56	1671.41	3076.53	2373.97	1.64	Si
SLV 6	-11423	0.48	1443.56	1673.83	3079.36	2376.6	1.65	Si
SLV 1	-11447	0.48	1443.56	1677.39	3083.52	2380.46	1.65	Si
SLV 16	-11466	0.48	1443.56	1680.02	3086.61	2383.31	1.65	Si
SLV 11	-11491	0.48	1443.56	1683.58	3090.77	2387.17	1.65	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.2 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-1067	-9324	796	4.952	1883.5	0.955	75.3394	15.04226	Si
SLV 16	-1068	-8999	787	4.952	1883.5	0.955	75.3461	15.04226	Si
SLV 13	-1064	-9296	796	4.953	1883.4	0.955	75.35013	15.04226	Si
SLV 15	-1066	-8971	787	4.953	1883.4	0.955	75.35683	15.04226	Si
SLV 4	21	-30106	-807	5.531	1862.9	1	80.37865	15.04226	Si, Trazione
SLV 3	23	-30077	-807	5.531	1862.9	1	80.38836	15.04226	Si, Trazione
SLV 2	22	-30431	-798	5.532	1862.9	1	80.39837	15.04226	Si, Trazione
SLV 1	25	-30402	-798	5.533	1862.9	1	80.40808	15.04226	Si, Trazione
SLV 10	-684	-17091	248	5.199	1872	0.969	78.01139	13.64588	Si
SLV 9	-682	-17062	248	5.201	1871.9	0.969	78.02223	13.64588	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	32.9	SLU 40	Si
V_SLU	93.077	SLU 73	Si
PF_SLV	5.018	SLV 12	Si
V_SLV	9.015	SLV 8	Si
PFFP_SLV	1.632	SLV 9	Si
R_SLV	5.009	SLV 14	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
-34.108	-3.274	-32.708	-3.274	L2	L3	1.4	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 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 51	2.32	962.47	-4689	-0.000032	0.0003743	0.0035	1.4	2922.12	3121.17	3121.17	3.24	No	Si
SLU 51	4.22	-70.45	-2202	-0.0000089	0.0003743	0.0035	1.4	1462.05	1971.17	1971.17	27.98	No	Si
SLU 50	2.32	973.14	-4714	-0.0000322	0.0003743	0.0035	1.4	2936.25	3136.1	3136.1	3.22	No	Si
SLU 50	4.22	-80.62	-2199	-0.000009	0.0003743	0.0035	1.4	1460.08	1969.16	1969.16	24.43	No	Si
SLU 49	2.32	962.47	-4689	-0.000032	0.0003743	0.0035	1.4	2922.12	3121.17	3121.17	3.24	No	Si
SLU 49	4.22	-70.45	-2202	-0.0000089	0.0003743	0.0035	1.4	1462.05	1971.17	1971.17	27.98	No	Si
SLU 42	2.32	928.66	-7286	-0.0000415	0.0003743	0.0035	1.4	4231.31	4452.2	4452.2	4.79	No	Si
SLU 42	4.22	1423.09	-7242	-0.0000494	0.0003743	0.0035	1.4	4210.84	4429.16	4429.16	3.11	No	Si
SLU 43	2.32	973.14	-4714	-0.0000322	0.0003743	0.0035	1.4	2936.25	3136.1	3136.1	3.22	No	Si
SLU 43	4.22	-80.62	-2199	-0.000009	0.0003743	0.0035	1.4	1460.08	1969.16	1969.16	24.43	No	Si
SLU 45	2.32	973.14	-4714	-0.0000322	0.0003743	0.0035	1.4	2936.25	3136.1	3136.1	3.22	No	Si
SLU 45	4.22	-80.62	-2199	-0.000009	0.0003743	0.0035	1.4	1460.08	1969.16	1969.16	24.43	No	Si
SLU 39	2.32	939.33	-7312	-0.0000418	0.0003743	0.0035	1.4	4243.24	4465.68	4465.68	4.75	No	Si
SLU 39	4.22	1412.92	-7239	-0.0000492	0.0003743	0.0035	1.4	4209.39	4427.53	4427.53	3.13	No	Si
SLU 40	2.32	928.66	-7286	-0.0000415	0.0003743	0.0035	1.4	4231.31	4452.2	4452.2	4.79	No	Si
SLU 40	4.22	1423.09	-7242	-0.0000494	0.0003743	0.0035	1.4	4210.84	4429.16	4429.16	3.11	No	Si
SLU 41	2.32	939.33	-7312	-0.0000418	0.0003743	0.0035	1.4	4243.24	4465.68	4465.68	4.75	No	Si
SLU 41	4.22	1412.92	-7239	-0.0000492	0.0003743	0.0035	1.4	4209.39	4427.53	4427.53	3.13	No	Si
SLU 48	2.32	973.14	-4714	-0.0000322	0.0003743	0.0035	1.4	2936.25	3136.1	3136.1	3.22	No	Si
SLU 48	4.22	-80.62	-2199	-0.000009	0.0003743	0.0035	1.4	1460.08	1969.16	1969.16	24.43	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	2.32	2067.56	-5777	-0.0000575	0.0005615	0.0035	1.4		3869.47	3869.47	1.87		Si
SLV 15	4.22	-879.34	-2116	-0.0000247	0.0005615	0.0035	1.12		1929.52	1929.52	2.19		Si
SLV 8	2.32	-387.95	-2258	-0.0000139	0.0005615	0.0035	1.4		2023.24	2023.24	5.22		Si
SLV 8	4.22	1451.3	-3837	-0.0000401	0.0005615	0.0035	1.4		2664.13	2664.13	1.84		Si
SLV 2	2.32	-442.29	-3538	-0.0000193	0.0005615	0.0035	1.4		2848.44	2848.44	6.44		Si
SLV 2	4.22	1534.98	-4270	-0.0000422	0.0005615	0.0035	1.4		2938.41	2938.41	1.91		Si
SLV 3	2.32	-588.71	-2932	-0.0000194	0.0005615	0.0035	1.4		2462.56	2462.56	4.18		Si
SLV 3	4.22	1644.96	-4259	-0.0000458	0.0005615	0.0035	1.4		2931.6	2931.6	1.78		Si
SLV 4	2.32	-845.42	-2489	-0.0000229	0.0005615	0.0035	1.4		2175.36	2175.36	2.57		Si
SLV 4	4.22	1903.25	-4415	-0.0000558	0.0005615	0.0035	1.4		3029.53	3029.53	1.59		Si
SLV 14	2.32	2213.98	-6382	-0.0000618	0.0005615	0.0035	1.4		4233.55	4233.55	1.91		Si
SLV 14	4.22	-989.31	-2127	-0.0000301	0.0005615	0.0035	1.12		1936.71	1936.71	1.96		Si
SLV 13	2.32	2470.69	-6825	-0.0000694	0.0005615	0.0035	1.4		4496.78	4496.78	1.82		Si
SLV 13	4.22	-1247.6	-1970	-0.0000891	0.0005615	0.0035	1.12		1833.3	1833.3	1.47		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 16	2.32	1810.85	-5334	-0.0000501	0.0005615	0.0035	1.4		3598.66	3598.66	1.99		Si
SLV 16	4.22	-621.05	-2273	-0.0000176	0.0005615	0.0035	1.4		2032.88	2032.88	3.27		Si
SLV 7	2.32	-127.44	-2708	-0.0000115	0.0005615	0.0035	1.4		2316.93	2316.93	18.18		Si
SLV 7	4.22	1189.18	-3678	-0.0000326	0.0005615	0.0035	1.4		2562.57	2562.57	2.15		Si
SLV 1	2.32	-185.58	-3981	-0.000017	0.0005615	0.0035	1.4		3132.49	3132.49	16.88		Si
SLV 1	4.22	1276.69	-4113	-0.0000353	0.0005615	0.0035	1.4		2840.38	2840.38	2.22		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	2.32	962.47	-4689	-3948	729	1.4	1.4	-9401	8198	3443	42820	12577	3570	16147	No	22.15	Si
SLU 51	4.22	-70.45	-2202	-1854	726	1.4	1.4	-4415	7533	3164	42820	12577	3570	16147	No	22.23	Si
SLU 48	2.32	973.14	-4714	-3970	751	1.4	1.4	-9452	8205	3446	42820	12577	3570	16147	No	21.51	Si
SLU 48	4.22	-80.62	-2199	-1852	748	1.4	1.4	-4409	7532	3164	42820	12577	3570	16147	No	21.59	Si
SLU 39	2.32	939.33	-7312	-6158	-797	1.4	1.4	-14661	8899	3738	42820	12577	3570	16147	No	20.27	Si
SLU 39	4.22	1412.92	-7239	-6096	-800	1.4	1.4	-14514	8880	3729	42820	12577	3570	16147	No	20.18	Si
SLU 45	2.32	973.14	-4714	-3970	751	1.4	1.4	-9452	8205	3446	42820	12577	3570	16147	No	21.51	Si
SLU 45	4.22	-80.62	-2199	-1852	748	1.4	1.4	-4409	7532	3164	42820	12577	3570	16147	No	21.59	Si
SLU 42	2.32	928.66	-7286	-6136	-818	1.4	1.4	-14609	8892	3735	42820	12577	3570	16147	No	19.73	Si
SLU 42	4.22	1423.09	-7242	-6099	-822	1.4	1.4	-14520	8880	3730	42820	12577	3570	16147	No	19.65	Si
SLU 40	2.32	928.66	-7286	-6136	-818	1.4	1.4	-14609	8892	3735	42820	12577	3570	16147	No	19.73	Si
SLU 40	4.22	1423.09	-7242	-6099	-822	1.4	1.4	-14520	8880	3730	42820	12577	3570	16147	No	19.65	Si
SLU 41	2.32	939.33	-7312	-6158	-797	1.4	1.4	-14661	8899	3738	42820	12577	3570	16147	No	20.27	Si
SLU 41	4.22	1412.92	-7239	-6096	-800	1.4	1.4	-14514	8880	3729	42820	12577	3570	16147	No	20.18	Si
SLU 43	2.32	973.14	-4714	-3970	751	1.4	1.4	-9452	8205	3446	42820	12577	3570	16147	No	21.51	Si
SLU 43	4.22	-80.62	-2199	-1852	748	1.4	1.4	-4409	7532	3164	42820	12577	3570	16147	No	21.59	Si
SLU 50	2.32	973.14	-4714	-3970	751	1.4	1.4	-9452	8205	3446	42820	12577	3570	16147	No	21.51	Si
SLU 50	4.22	-80.62	-2199	-1852	748	1.4	1.4	-4409	7532	3164	42820	12577	3570	16147	No	21.59	Si
SLU 49	2.32	962.47	-4689	-3948	729	1.4	1.4	-9401	8198	3443	42820	12577	3570	16147	No	22.15	Si
SLU 49	4.22	-70.45	-2202	-1854	726	1.4	1.4	-4415	7533	3164	42820	12577	3570	16147	No	22.23	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	2.32	2067.56	-5777	-4864	2660	1.4	1.0262	-11582	12733	3920	42820	18865	3570	22435		8.43	Si
SLV 15	4.22	-879.34	-2116	-1782	2049	1.12	0.8533	0	0	0	42820	15092	2856	17948		8.76	Si
SLV 10	2.32	1752.71	-6607	-5564	2164	1.4	1.3042	-13247	13066	5112	42820	18865	3570	22435		10.37	Si
SLV 10	4.22	-533.54	-2708	-2280	1988	1.4	1.4	-5430	11503	4831	42820	18865	3570	22435		11.28	Si
SLV 2	2.32	-442.29	-3538	-2979	-2206	1.4	1.4	-7094	11835	4971	42820	18865	3570	22435		10.17	Si
SLV 2	4.22	1534.98	-4270	-3596	-1600	1.4	1.0215	-8561	12129	3717	42820	18865	3570	22435		14.03	Si
SLV 13	2.32	2470.69	-6825	-5748	3502	1.4	1.014	-13685	13154	4001	42820	18865	3570	22435		6.41	Si
SLV 13	4.22	-1247.6	-1970	-1659	2896	1.12	0.2004	0	0	0	42820	15092	2856	17948		6.2	Si
SLV 8	2.32	-387.95	-2258	-1902	-2209	1.4	1.4	-4527	11322	4755	42820	18865	3570	22435		10.16	Si
SLV 8	4.22	1451.3	-3837	-3231	-2038	1.4	0.9652	-7693	11955	3462	42820	18865	3570	22435		11.01	Si
SLV 16	2.32	1810.85	-5334	-4491	2168	1.4	1.0815	-10694	12555	4073	42820	18865	3570	22435		10.35	Si
SLV 16	4.22	-621.05	-2273	-1914	1557	1.4	1.2802	-4991	11415	4384	42820	18865	3570	22435		14.41	Si
SLV 4	2.32	-845.42	-2489	-2096	-3048	1.4	1.0812	-6479	11712	3799	42820	18865	3570	22435		7.36	Si
SLV 4	4.22	1903.25	-4415	-3718	-2447	1.4	0.8069	-8853	12187	2950	42820	18865	3570	22435		9.17	Si
SLV 14	2.32	2213.98	-6382	-5375	3011	1.4	1.0593	-12797	12976	4124	42820	18865	3570	22435		7.45	Si
SLV 14	4.22	-989.31	-2127	-1791	2404	1.12	0.7046	0	0	0	42820	15092	2856	17948		7.46	Si
SLV 9	2.32	2013.22	-7057	-5942	2663	1.4	1.2441	-14149	13246	4944	42820	18865	3570	22435		8.43	Si
SLV 9	4.22	-795.65	-2549	-2147	2487	1.4	1.1636	-6165	11650	4067	42820	18865	3570	22435		9.02	Si
SLV 3	2.32	-588.71	-2932	-2469	-2556	1.4	1.4	-5879	11593	4869	42820	18865	3570	22435		8.78	Si
SLV 3	4.22	1644.96	-4259	-3586	-1955	1.4	0.9413	-8539	12124	3424	42820	18865	3570	22435		11.47	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 8	179667	0.48	7640	-3209	219.05	457.21	2.09	Si
SLV 12	179667	0.48	7852	-3298	219.05	469.27	2.14	Si
SLV 7	179667	0.48	7995	-3358	219.05	477.29	2.18	Si
SLV 11	179667	0.48	8208	-3447	219.05	489.29	2.23	Si
SLV 4	179667	0.48	8608	-3615	219.05	511.72	2.34	Si
SLV 3	179667	0.48	8958	-3762	219.05	531.23	2.43	Si
SLV 16	179667	0.48	9317	-3913	219.05	551.18	2.52	Si
SLV 2	179667	0.48	9648	-4052	219.05	569.44	2.6	Si
SLV 15	179667	0.48	9667	-4060	219.05	570.49	2.6	Si
SLV 1	179667	0.48	9998	-4199	219.05	588.65	2.69	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 = 3.2 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-2980	-3591	-46	1.829	535	0.901	29.48915	15.04226	Si
SLV 3	-2935	-3823	-46	1.847	530.7	0.901	29.79757	15.04226	Si
SLV 2	-2915	-4551	-15	1.863	528.7	0.901	30.05816	15.04226	Si
SLV 1	-2871	-4783	-15	1.882	524.3	0.9	30.37717	15.04226	Si
SLV 8	-2878	-2507	-61	1.868	525	0.9	30.15104	13.64588	Si
SLV 16	-2473	-3701	16	2.07	485.6	0.896	33.56636	15.04226	Si
SLV 7	-2833	-2742	-61	1.887	520.6	0.9	30.47854	13.64588	Si
SLV 15	-2429	-3933	15	2.093	481.3	0.896	33.96322	15.04226	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-2408	-4661	47	2.096	479.3	0.896	34.01265	15.04226	Si
SLV 13	-2364	-4893	47	2.12	475.1	0.895	34.42119	15.04226	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	3.112	SLU 40	Si
V_SLU	19.652	SLU 40	Si
PF_SLV	1.469	SLV 13	Si
V_SLV	6.197	SLV 13	Si
PFFP_SLV	2.087	SLV 8	Si
R_SLV	1.96	SLV 4	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
-31.708	-3.274	-29.878	-3.274	L2	L3	1.83	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 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	2.32	1497.46	-6250	-0.000031	0.0003743	0.0035	1.83	5079.15	5404.53	5404.53	3.61	No	Si
SLU 44	4.22	-2297.27	-4329	-0.0000383	0.0003743	0.0035	1.464	3654.58	4592.89	4592.89	2	No	Si
SLU 48	2.32	1515.24	-6275	-0.0000312	0.0003743	0.0035	1.83	5096.75	5420.56	5420.56	3.58	No	Si
SLU 48	4.22	-2316.11	-4356	-0.0000387	0.0003743	0.0035	1.464	3674.89	4614.56	4614.56	1.99	No	Si
SLU 45	2.32	1515.24	-6275	-0.0000312	0.0003743	0.0035	1.83	5096.75	5420.56	5420.56	3.58	No	Si
SLU 45	4.22	-2316.11	-4356	-0.0000387	0.0003743	0.0035	1.464	3674.89	4614.56	4614.56	1.99	No	Si
SLU 47	2.32	1497.46	-6250	-0.000031	0.0003743	0.0035	1.83	5079.15	5404.53	5404.53	3.61	No	Si
SLU 47	4.22	-2297.27	-4329	-0.0000383	0.0003743	0.0035	1.464	3654.58	4592.89	4592.89	2	No	Si
SLU 50	2.32	1515.24	-6275	-0.0000312	0.0003743	0.0035	1.83	5096.75	5420.56	5420.56	3.58	No	Si
SLU 50	4.22	-2316.11	-4356	-0.0000387	0.0003743	0.0035	1.464	3674.89	4614.56	4614.56	1.99	No	Si
SLU 49	2.32	1504.57	-6260	-0.0000311	0.0003743	0.0035	1.83	5086.19	5410.94	5410.94	3.6	No	Si
SLU 49	4.22	-2304.81	-4340	-0.0000385	0.0003743	0.0035	1.464	3662.71	4601.62	4601.62	2	No	Si
SLU 43	2.32	1515.24	-6275	-0.0000312	0.0003743	0.0035	1.83	5096.75	5420.56	5420.56	3.58	No	Si
SLU 43	4.22	-2316.11	-4356	-0.0000387	0.0003743	0.0035	1.464	3674.89	4614.56	4614.56	1.99	No	Si
SLU 51	2.32	1504.57	-6260	-0.0000311	0.0003743	0.0035	1.83	5086.19	5410.94	5410.94	3.6	No	Si
SLU 51	4.22	-2304.81	-4340	-0.0000385	0.0003743	0.0035	1.464	3662.71	4601.62	4601.62	2	No	Si
SLU 66	2.32	1526.98	-8301	-0.0000373	0.0003743	0.0035	1.83	6467.65	6761.33	6761.33	4.43	No	Si
SLU 66	4.22	-2767.7	-6253	-0.0000454	0.0003743	0.0035	1.83	5081.75	6100.45	6100.45	2.2	No	Si
SLU 46	2.32	1504.57	-6260	-0.0000311	0.0003743	0.0035	1.83	5086.19	5410.94	5410.94	3.6	No	Si
SLU 46	4.22	-2304.81	-4340	-0.0000385	0.0003743	0.0035	1.464	3662.71	4601.62	4601.62	2	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	2.32	2630.71	-7397	-0.0000446	0.0005615	0.0035	1.83		6487.71	6487.71	2.47		Si
SLV 9	4.22	-3882.05	-6498	-0.0000702	0.0005615	0.0035	1.464		6428.09	6428.09	1.66		Si
SLV 11	2.32	1263.54	-5419	-0.0000261	0.0005615	0.0035	1.83		4885.02	4885.02	3.87		Si
SLV 11	4.22	-2367.06	-4550	-0.0000387	0.0005615	0.0035	1.464		4827.88	4827.88	2.04		Si
SLV 16	2.32	2843.11	-5126	-0.0000481	0.0005615	0.0035	1.83		4643.09	4643.09	1.63		Si
SLV 16	4.22	-4002.8	-5221	-0.0001215	0.0005615	0.0035	1.464		5388.58	5388.58	1.35		Si
SLV 10	2.32	2266.51	-7621	-0.0000415	0.0005615	0.0035	1.83		6665.01	6665.01	2.94		Si
SLV 10	4.22	-3453.82	-6398	-0.000058	0.0005615	0.0035	1.464		6347.42	6347.42	1.84		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	2.32	3612.16	-5499	-0.0000734	0.0005615	0.0035	1.83		4951.05	4951.05	1.37		Si
SLV 13	4.22	-4879.29	-5904	-0.0002198	0.0005615	0.0035	1.464		5952.82	5952.82	1.22		Si
SLV 5	2.32	1377.04	-8432	-0.0000357	0.0005615	0.0035	1.83		7301.18	7301.18	5.3		Si
SLV 5	4.22	-2570.1	-6422	-0.000042	0.0005615	0.0035	1.83		6367.26	6367.26	2.48		Si
SLV 15	2.32	3202.01	-4905	-0.000064	0.0005615	0.0035	1.83		4459	4459	1.39		Si
SLV 15	4.22	-4424.79	-5320	-0.0002037	0.0005615	0.0035	1.464		5471.82	5471.82	1.24		Si
SLV 6	2.32	1012.84	-8656	-0.000033	0.0005615	0.0035	1.83		7475.22	7475.22	7.38		Si
SLV 6	4.22	-2141.87	-6322	-0.0000368	0.0005615	0.0035	1.83		6286.67	6286.67	2.94		Si
SLV 12	2.32	899.33	-5643	-0.0000235	0.0005615	0.0035	1.83		5068.78	5068.78	5.64		Si
SLV 12	4.22	-1938.82	-4450	-0.000031	0.0005615	0.0035	1.83		4744.23	4744.23	2.45		Si
SLV 14	2.32	3253.26	-5720	-0.0000562	0.0005615	0.0035	1.83		5131.85	5131.85	1.58		Si
SLV 14	4.22	-4457.3	-5805	-0.0001377	0.0005615	0.0035	1.464		5873.94	5873.94	1.32		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	2.32	1357.83	-13788	-11611	3437	1.83	1.83	-21149	9764	5361	42820	16439	4666	21106	No	6.14	Si
SLU 83	4.22	-3891.27	-11467	-9657	2317	1.83	1.727	-18918	9467	4905	42820	16439	4666	21106	No	9.11	Si
SLU 81	2.32	1357.83	-13788	-11611	3437	1.83	1.83	-21149	9764	5361	42820	16439	4666	21106	No	6.14	Si
SLU 81	4.22	-3891.27	-11467	-9657	2317	1.83	1.727	-18918	9467	4905	42820	16439	4666	21106	No	9.11	Si
SLU 75	2.32	1397.9	-12127	-10212	3311	1.83	1.83	-18602	9425	5174	42820	16439	4666	21106	No	6.38	Si
SLU 75	4.22	-3542.89	-9887	-8326	2179	1.83	1.67	-16810	9186	4602	42820	16439	4666	21106	No	9.69	Si
SLU 84	2.32	1347.15	-13773	-11598	3425	1.83	1.83	-21126	9761	5359	42820	16439	4666	21106	No	6.16	Si
SLU 84	4.22	-3879.97	-11451	-9643	2305	1.83	1.7285	-18874	9461	4906	42820	16439	4666	21106	No	9.16	Si
SLU 77	2.32	1408.57	-12142	-10225	3323	1.83	1.83	-18625	9428	5176	42820	16439	4666	21106	No	6.35	Si
SLU 77	4.22	-3554.2	-9903	-8339	2191	1.83	1.6683	-16854	9192	4600	42820	16439	4666	21106	No	9.63	Si
SLU 82	2.32	1347.15	-13773	-11598	3425	1.83	1.83	-21126	9761	5359	42820	16439	4666	21106	No	6.16	Si
SLU 82	4.22	-3879.97	-11451	-9643	2305	1.83	1.7285	-18874	9461	4906	42820	16439	4666	21106	No	9.16	Si
SLU 74	2.32	1408.57	-12142	-10225	3323	1.83	1.83	-18625	9428	5176	42820	16439	4666	21106	No	6.35	Si
SLU 74	4.22	-3554.2	-9903	-8339	2191	1.83	1.6683	-16854	9192	4600	42820	16439	4666	21106	No	9.63	Si
SLU 78	2.32	1397.9	-12127	-10212	3311	1.83	1.83	-18602	9425	5174	42820	16439	4666	21106	No	6.38	Si
SLU 78	4.22	-3542.89	-9887	-8326	2179	1.83	1.67	-16810	9186	4602	42820	16439	4666	21106	No	9.69	Si
SLU 79	2.32	1408.57	-12142	-10225	3323	1.83	1.83	-18625	9428	5176	42820	16439	4666	21106	No	6.35	Si
SLU 79	4.22	-3554.2	-9903	-8339	2191	1.83	1.6683	-16854	9192	4600	42820	16439	4666	21106	No	9.63	Si
SLU 80	2.32	1397.9	-12127	-10212	3311	1.83	1.83	-18602	9425	5174	42820	16439	4666	21106	No	6.38	Si
SLU 80	4.22	-3542.89	-9887	-8326	2179	1.83	1.67	-16810	9186	4602	42820	16439	4666	21106	No	9.69	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	2.32	899.33	-5643	-4752	2526	1.83	1.83	-8655	12148	6669	42820	24659	4666	29326		11.61	Si
SLV 12	4.22	-1938.82	-4450	-3747	1113	1.83	1.4378	-8719	12160	5245	42820	24659	4666	29326		26.36	Si
SLV 5	2.32	1377.04	-8432	-7101	2236	1.83	1.83	-12934	13004	7139	42820	24659	4666	29326		13.12	Si
SLV 5	4.22	-2570.1	-6422	-5408	1878	1.83	1.5445	-11737	12764	5914	42820	24659	4666	29326		15.61	Si
SLV 11	2.32	1263.54	-5419	-4563	3210	1.83	1.83	-8312	12079	6631	42820	24659	4666	29326		9.14	Si
SLV 11	4.22	-2367.06	-4550	-3832	1521	1.464	1.1843	0	0	0	42820	19727	3733	23461		15.42	Si
SLV 10	2.32	2266.51	-7621	-6418	3988	1.83	1.83	-11690	12755	7002	42820	24659	4666	29326		7.35	Si
SLV 10	4.22	-3453.82	-6398	-5388	2632	1.464	1.1254	0	0	0	42820	19727	3733	23461		8.91	Si
SLV 13	2.32	3612.16	-5499	-4631	6998	1.83	0.7744	-8435	12104	2812	42820	24659	4666	29326		4.19	Si
SLV 13	4.22	-4879.29	-5904	-4972	3863	1.464	0.2657	0	0	0	42820	19727	3733	23461		6.07	Si
SLV 4	2.32	-1335.78	-8576	-7222	-2236	1.83	1.83	-13155	13048	7163	42820	24659	4666	29326		13.11	Si
SLV 4	4.22	370.36	-4968	-4184	-872	1.83	1.83	-7620	11941	6555	42820	24659	4666	29326		33.63	Si
SLV 14	2.32	3253.26	-5720	-4817	6323	1.83	1.0386	-8773	12171	3792	42820	24659	4666	29326		4.64	Si
SLV 14	4.22	-4457.3	-5805	-4888	3460	1.464	0.4415	0	0	0	42820	19727	3733	23461		6.78	Si
SLV 16	2.32	2843.11	-5126	-4317	5885	1.83	1.0811	-7863	11989	3888	42820	24659	4666	29326		4.98	Si
SLV 16	4.22	-4002.8	-5221	-4396	3004	1.464	0.4448	0	0	0	42820	19727	3733	23461		7.81	Si
SLV 9	2.32	2630.71	-7397	-6229	4672	1.83	1.6781	-11347	12686	6387	42820	24659	4666	29326		6.28	Si
SLV 9	4.22	-3882.05	-6498	-5472	3041	1.464	0.9528	0	0	0	42820	19727	3733	23461		7.71	Si
SLV 15	2.32	3202.01	-4905	-4131	6559	1.83	0.7867	-7524	11922	2814	42820	24659	4666	29326		4.47	Si
SLV 15	4.22	-4424.79	-5320	-4480	3407	1.464	0.2497	0	0	0	42820	19727	3733	23461		6.89	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 15	179667	0.48	6934	-3807	286.33	545.08	1.9	Si
SLV 16	179667	0.48	7336	-4027	286.33	575.07	2.01	Si
SLV 11	179667	0.48	7761	-4261	286.33	606.64	2.12	Si
SLV 13	179667	0.48	8122	-4459	286.33	633.28	2.21	Si
SLV 12	179667	0.48	8169	-4485	286.33	636.72	2.22	Si
SLV 14	179667	0.48	8524	-4680	286.33	662.76	2.31	Si
SLV 7	179667	0.48	9661	-5304	286.33	745.24	2.6	Si
SLV 8	179667	0.48	10069	-5528	286.33	774.48	2.7	Si
SLV 9	179667	0.48	11722	-6435	286.33	891.2	3.11	Si
SLV 10	179667	0.48	12130	-6659	286.33	919.53	3.21	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 = 3.2 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 13	-3658	-9626	132	1.893	676.1	0.9	30.58594	15.04226	Si
SLV 14	-3637	-9429	132	1.9	674	0.899	30.70761	15.04226	Si

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-3607	-8280	139	1.909	671.2	0.899	30.85637	15.04226	Si
SLV 2	-3586	-8083	139	1.916	669.1	0.899	30.98023	15.04226	Si
SLV 15	-3524	-8659	-139	1.938	663	0.898	31.34801	15.04226	Si
SLV 16	-3502	-8462	-139	1.945	660.9	0.898	31.47573	15.04226	Si
SLV 3	-3473	-7313	-132	1.957	658.1	0.898	31.67575	15.04226	Si
SLV 4	-3452	-7116	-132	1.965	656	0.898	31.80599	15.04226	Si
SLV 9	-3797	-10285	450	1.791	689.7	0.901	28.90376	13.64588	Si
SLV 5	-3782	-9881	452	1.796	688.2	0.901	28.97774	13.64588	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	1.992	SLU 43	Si
V_SLU	6.14	SLU 81	Si
PF_SLV	1.22	SLV 13	Si
V_SLV	4.191	SLV 13	Si
PFFP_SLV	1.904	SLV 15	Si
R_SLV	2.033	SLV 13	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
-28.478	-3.274	-26.647	-3.274	L2	L3	1.83	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 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 51	2.32	219.81	-8538	-0.0000258	0.0003743	0.0035	1.8303	6620.47	6923.36	6923.36	31.5	No	Si
SLU 51	4.22	-599.58	-4495	-0.0000177	0.0003743	0.0035	1.8303	3783.13	4727.57	4727.57	7.88	No	Si
SLU 48	2.32	208.34	-8544	-0.0000257	0.0003743	0.0035	1.8303	6623.89	6927.01	6927.01	33.25	No	Si
SLU 48	4.22	-588.22	-4510	-0.0000176	0.0003743	0.0035	1.8303	3794.05	4738.64	4738.64	8.06	No	Si
SLU 44	2.32	227.46	-8535	-0.0000259	0.0003743	0.0035	1.8303	6618.2	6920.93	6920.93	30.43	No	Si
SLU 44	4.22	-607.16	-4486	-0.0000177	0.0003743	0.0035	1.8303	3775.84	4720.2	4720.2	7.77	No	Si
SLU 46	2.32	219.81	-8538	-0.0000258	0.0003743	0.0035	1.8303	6620.47	6923.36	6923.36	31.5	No	Si
SLU 46	4.22	-599.58	-4495	-0.0000177	0.0003743	0.0035	1.8303	3783.13	4727.57	4727.57	7.88	No	Si
SLU 43	2.32	208.34	-8544	-0.0000257	0.0003743	0.0035	1.8303	6623.89	6927.01	6927.01	33.25	No	Si
SLU 43	4.22	-588.22	-4510	-0.0000176	0.0003743	0.0035	1.8303	3794.05	4738.64	4738.64	8.06	No	Si
SLU 49	2.32	219.81	-8538	-0.0000258	0.0003743	0.0035	1.8303	6620.47	6923.36	6923.36	31.5	No	Si
SLU 49	4.22	-599.58	-4495	-0.0000177	0.0003743	0.0035	1.8303	3783.13	4727.57	4727.57	7.88	No	Si
SLU 2	2.32	202.94	-7018	-0.0000213	0.0003743	0.0035	1.8303	5616.63	5907.08	5907.08	29.11	No	Si
SLU 2	4.22	-474.91	-3784	-0.0000146	0.0003743	0.0035	1.8303	3228.59	4141.12	4141.12	8.72	No	Si
SLU 50	2.32	208.34	-8544	-0.0000257	0.0003743	0.0035	1.8303	6623.89	6927.01	6927.01	33.25	No	Si
SLU 50	4.22	-588.22	-4510	-0.0000176	0.0003743	0.0035	1.8303	3794.05	4738.64	4738.64	8.06	No	Si
SLU 45	2.32	208.34	-8544	-0.0000257	0.0003743	0.0035	1.8303	6623.89	6927.01	6927.01	33.25	No	Si
SLU 45	4.22	-588.22	-4510	-0.0000176	0.0003743	0.0035	1.8303	3794.05	4738.64	4738.64	8.06	No	Si
SLU 47	2.32	227.46	-8535	-0.0000259	0.0003743	0.0035	1.8303	6618.2	6920.93	6920.93	30.43	No	Si
SLU 47	4.22	-607.16	-4486	-0.0000177	0.0003743	0.0035	1.8303	3775.84	4720.2	4720.2	7.77	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 15	2.32	2338.19	-10211	-0.0000497	0.0005615	0.0035	1.8303		8551.73	8551.73	3.66		Si
SLV 15	4.22	-2638.08	-4709	-0.0000447	0.0005615	0.0035	1.4643		4961.57	4961.57	1.88		Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 13	2.32	1792.9	-10359	-0.0000451	0.0005615	0.0035	1.8303		8650.61	8650.61	4.82		Si
SLV 13	4.22	-2058.32	-5188	-0.0000335	0.0005615	0.0035	1.8303		5362.53	5362.53	2.61		Si
SLV 16	2.32	1988.61	-9928	-0.0000457	0.0005615	0.0035	1.8303		8363.61	8363.61	4.21		Si
SLV 16	4.22	-2243.64	-4807	-0.0000359	0.0005615	0.0035	1.8303		5042.94	5042.94	2.25		Si
SLV 12	2.32	1478.31	-8493	-0.0000368	0.0005615	0.0035	1.8303		7349.74	7349.74	4.97		Si
SLV 12	4.22	-1728.7	-4146	-0.0000277	0.0005615	0.0035	1.8303		4493.25	4493.25	2.6		Si
SLV 2	2.32	-1824.95	-6474	-0.0000342	0.0005615	0.0035	1.8303		6409.71	6409.71	3.51		Si
SLV 2	4.22	1731.56	-4993	-0.0000293	0.0005615	0.0035	1.8303		4532.96	4532.96	2.62		Si
SLV 1	2.32	-1475.37	-6756	-0.0000318	0.0005615	0.0035	1.8303		6636.67	6636.67	4.5		Si
SLV 1	4.22	1337.12	-4896	-0.0000253	0.0005615	0.0035	1.8303		4451.61	4451.61	3.33		Si
SLV 7	2.32	852.58	-7698	-0.0000288	0.0005615	0.0035	1.8303		6727.07	6727.07	7.89		Si
SLV 7	4.22	-1110.34	-3960	-0.0000206	0.0005615	0.0035	1.8303		4338.69	4338.69	3.91		Si
SLV 11	2.32	1833.06	-8779	-0.0000409	0.0005615	0.0035	1.8303		7572.08	7572.08	4.13		Si
SLV 11	4.22	-2128.97	-4047	-0.0000348	0.0005615	0.0035	1.4643		4411.36	4411.36	2.07		Si
SLV 14	2.32	1443.32	-10076	-0.0000411	0.0005615	0.0035	1.8303		8462.21	8462.21	5.86		Si
SLV 14	4.22	-1663.88	-5286	-0.0000293	0.0005615	0.0035	1.8303		5444.4	5444.4	3.27		Si
SLV 4	2.32	-1279.66	-6326	-0.0000288	0.0005615	0.0035	1.8303		6291	6291	4.92		Si
SLV 4	4.22	1151.8	-4514	-0.0000226	0.0005615	0.0035	1.8303		4132.71	4132.71	3.59		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 80	2.32	474.61	-13140	-11066	3090	1.8303	1.8303	-20152	9631	5289	42820	16442	4667	21110	No	6.83	Si
SLU 80	4.22	-590.1	-8148	-6861	312	1.8303	1.8303	-12495	8610	4728	42820	16442	4667	21110	No	67.75	Si
SLU 84	2.32	545.53	-14373	-12103	3352	1.8303	1.8303	-22042	9883	5427	42820	16442	4667	21110	No	6.3	Si
SLU 84	4.22	-580.36	-9162	-7715	311	1.8303	1.8303	-14051	8818	4842	42820	16442	4667	21110	No	67.93	Si
SLU 73	2.32	482.26	-13137	-11063	3100	1.8303	1.8303	-20147	9631	5288	42820	16442	4667	21110	No	6.81	Si
SLU 73	4.22	-597.68	-8138	-6853	322	1.8303	1.8303	-12481	8609	4727	42820	16442	4667	21110	No	65.59	Si
SLU 76	2.32	482.26	-13137	-11063	3100	1.8303	1.8303	-20147	9631	5288	42820	16442	4667	21110	No	6.81	Si
SLU 76	4.22	-597.68	-8138	-6853	322	1.8303	1.8303	-12481	8609	4727	42820	16442	4667	21110	No	65.59	Si
SLU 81	2.32	534.06	-14378	-12108	3338	1.8303	1.8303	-22051	9885	5428	42820	16442	4667	21110	No	6.32	Si
SLU 81	4.22	-568.99	-9176	-7727	295	1.8303	1.8303	-14073	8821	4843	42820	16442	4667	21110	No	71.47	Si
SLU 78	2.32	474.61	-13140	-11066	3090	1.8303	1.8303	-20152	9631	5289	42820	16442	4667	21110	No	6.83	Si
SLU 78	4.22	-590.1	-8148	-6861	312	1.8303	1.8303	-12495	8610	4728	42820	16442	4667	21110	No	67.75	Si
SLU 79	2.32	463.14	-13146	-11070	3076	1.8303	1.8303	-20161	9633	5289	42820	16442	4667	21110	No	6.86	Si
SLU 79	4.22	-578.74	-8162	-6873	296	1.8303	1.8303	-12517	8613	4730	42820	16442	4667	21110	No	71.26	Si
SLU 75	2.32	474.61	-13140	-11066	3090	1.8303	1.8303	-20152	9631	5289	42820	16442	4667	21110	No	6.83	Si
SLU 75	4.22	-590.1	-8148	-6861	312	1.8303	1.8303	-12495	8610	4728	42820	16442	4667	21110	No	67.75	Si
SLU 83	2.32	534.06	-14378	-12108	3338	1.8303	1.8303	-22051	9885	5428	42820	16442	4667	21110	No	6.32	Si
SLU 83	4.22	-568.99	-9176	-7727	295	1.8303	1.8303	-14073	8821	4843	42820	16442	4667	21110	No	71.47	Si
SLU 82	2.32	545.53	-14373	-12103	3352	1.8303	1.8303	-22042	9883	5427	42820	16442	4667	21110	No	6.3	Si
SLU 82	4.22	-580.36	-9162	-7715	311	1.8303	1.8303	-14051	8818	4842	42820	16442	4667	21110	No	67.93	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	2.32	497.83	-7412	-6242	1730	1.8303	1.8303	-11367	12690	6968	42820	24664	4667	29331		16.95	Si
SLV 8	4.22	-710.07	-4058	-3418	746	1.8303	1.8303	-6224	11661	6403	42820	24664	4667	29331		39.33	Si
SLV 13	2.32	1792.9	-10359	-8723	5519	1.8303	1.8303	-15886	13594	7464	42820	24664	4667	29331		5.31	Si
SLV 13	4.22	-2058.32	-5188	-4369	1422	1.8303	1.5553	-9404	12298	5738	42820	24664	4667	29331		20.62	Si
SLV 2	2.32	-1824.95	-6474	-5452	-2229	1.8303	1.8303	-9929	12402	6810	42820	24664	4667	29331		13.16	Si
SLV 2	4.22	1731.56	-4993	-4205	-1669	1.8303	1.7051	-7657	11948	6112	42820	24664	4667	29331		17.58	Si
SLV 12	2.32	1478.31	-8493	-7152	3852	1.8303	1.8303	-13025	13022	7150	42820	24664	4667	29331		7.61	Si
SLV 12	4.22	-1728.7	-4146	-3492	1555	1.8303	1.4947	-7813	11979	5372	42820	24664	4667	29331		18.86	Si
SLV 15	2.32	2338.19	-10211	-8598	6206	1.8303	1.8303	-15659	13549	7439	42820	24664	4667	29331		4.73	Si
SLV 15	4.22	-2638.08	-4709	-3966	2102	1.4643	1.065	0	0	0	42820	19731	3734	23465		11.16	Si
SLV 9	2.32	15.41	-9272	-7808	2247	1.8303	1.8303	-14220	13261	7281	42820	24664	4667	29331		13.06	Si
SLV 9	4.22	-196.45	-5644	-4753	-312	1.8303	1.8303	-8656	12148	6670	42820	24664	4667	29331		93.97	Si
SLV 16	2.32	1988.61	-9928	-8361	5531	1.8303	1.8303	-15227	13462	7392	42820	24664	4667	29331		5.3	Si
SLV 16	4.22	-2243.64	-4807	-4048	1709	1.8303	1.3452	-10076	12432	5017	42820	24664	4667	29331		17.16	Si
SLV 11	2.32	1833.06	-8779	-7393	4538	1.8303	1.8303	-13464	13109	7198	42820	24664	4667	29331		6.46	Si
SLV 11	4.22	-2128.97	-4047	-3408	1954	1.4643	1.1674	0	0	0	42820	19731	3734	23465		12.01	Si
SLV 7	2.32	852.58	-7698	-6483	2416	1.8303	1.8303	-11807	12778	7016	42820	24664	4667	29331		12.14	Si
SLV 7	4.22	-1110.34	-3960	-3334	1145	1.8303	1.8303	-6072	11631	6387	42820	24664	4667	29331		25.62	Si
SLV 14	2.32	1443.32	-10076	-8485	4843	1.8303	1.8303	-15454	13507	7417	42820	24664	4667	29331		6.06	Si
SLV 14	4.22	-1663.88	-5286	-4451	1029	1.8303	1.8011	-8107	12038	6505	42820	24664	4667	29331		28.51	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 4	179667	0.48	10391	-5706	286.38	797.64	2.79	Si
SLV 2	179667	0.48	10775	-5916	286.38	824.83	2.88	Si
SLV 3	179667	0.48	10837	-5951	286.38	829.25	2.9	Si
SLV 1	179667	0.48	11220	-6161	286.38	856.26	2.99	Si
SLV 8	179667	0.48	12275	-6740	286.38	929.74	3.25	Si
SLV 7	179667	0.48	12727	-6988	286.38	960.91	3.36	Si
SLV 6	179667	0.48	13552	-7441	286.38	1017.16	3.55	Si
SLV 5	179667	0.48	14005	-7690	286.38	1047.7	3.66	Si
SLV 12	179667	0.48	14275	-7838	286.38	1065.87	3.72	Si
SLV 11	179667	0.48	14728	-8087	286.38	1096.05	3.83	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 = 3.2 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-2360	-7440	99	2.471	551.5	0.89	40.34158	15.04226	Si
SLV 13	-2339	-7321	99	2.484	549.4	0.89	40.55085	15.04226	Si
SLV 2	-2299	-8299	-57	2.517	545.7	0.89	41.10194	15.04226	Si
SLV 1	-2277	-8180	-57	2.53	543.7	0.89	41.31844	15.04226	Si
SLV 16	-2264	-6723	61	2.537	542.4	0.89	41.43903	15.04226	Si
SLV 15	-2242	-6603	61	2.55	540.4	0.89	41.65835	15.04226	Si
SLV 4	-2203	-7581	-94	2.567	536.7	0.89	41.93193	15.04226	Si
SLV 3	-2181	-7462	-94	2.58	534.7	0.89	42.15728	15.04226	Si
SLV 10	-2452	-8579	88	2.422	560	0.891	39.52132	13.64588	Si
SLV 9	-2430	-8458	88	2.434	558	0.891	39.72552	13.64588	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	7.774	SLU 44	Si
V_SLU	6.297	SLU 82	Si
PF_SLV	1.881	SLV 15	Si
V_SLV	4.726	SLV 15	Si
PFFP_SLV	2.785	SLV 4	Si
R_SLV	2.682	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
-25.647	-3.274	-24.423	-3.274	L2	L3	1.225	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 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	2.32	195.8	-4356	-0.000022	0.0003743	0.0035	1.2247	2356.58	2500.71	2500.71	12.77	No	Si
SLU 81	4.22	-1113.25	-4390	-0.0000418	0.0003743	0.0035	1.2247	2372.91	2809.69	2809.69	2.52	No	Si
SLU 82	2.32	204.92	-4334	-0.000022	0.0003743	0.0035	1.2247	2346.4	2491.1	2491.1	12.16	No	Si
SLU 82	4.22	-1122.57	-4397	-0.0000421	0.0003743	0.0035	1.2247	2375.85	2812.93	2812.93	2.51	No	Si
SLU 76	2.32	195.48	-3983	-0.0000204	0.0003743	0.0035	1.2247	2179.02	2328.39	2328.39	11.91	No	Si
SLU 76	4.22	-988.76	-3843	-0.0000368	0.0003743	0.0035	1.2247	2111.42	2530.46	2530.46	2.56	No	Si
SLU 83	2.32	195.8	-4356	-0.000022	0.0003743	0.0035	1.2247	2356.58	2500.71	2500.71	12.77	No	Si
SLU 83	4.22	-1113.25	-4390	-0.0000418	0.0003743	0.0035	1.2247	2372.91	2809.69	2809.69	2.52	No	Si
SLU 39	2.32	170.86	-3845	-0.0000193	0.0003743	0.0035	1.2247	2112.26	2259.5	2259.5	13.22	No	Si
SLU 39	4.22	-1048.87	-4147	-0.0000393	0.0003743	0.0035	1.2247	2257.75	2684.65	2684.65	2.56	No	Si
SLU 40	2.32	179.98	-3823	-0.0000194	0.0003743	0.0035	1.2247	2101.72	2248.22	2248.22	12.49	No	Si
SLU 40	4.22	-1058.19	-4153	-0.0000396	0.0003743	0.0035	1.2247	2260.74	2687.86	2687.86	2.54	No	Si
SLU 41	2.32	170.86	-3845	-0.0000193	0.0003743	0.0035	1.2247	2112.26	2259.5	2259.5	13.22	No	Si
SLU 41	4.22	-1048.87	-4147	-0.0000393	0.0003743	0.0035	1.2247	2257.75	2684.65	2684.65	2.56	No	Si
SLU 84	2.32	204.92	-4334	-0.000022	0.0003743	0.0035	1.2247	2346.4	2491.1	2491.1	12.16	No	Si
SLU 84	4.22	-1122.57	-4397	-0.0000421	0.0003743	0.0035	1.2247	2375.85	2812.93	2812.93	2.51	No	Si
SLU 42	2.32	179.98	-3823	-0.0000194	0.0003743	0.0035	1.2247	2101.72	2248.22	2248.22	12.49	No	Si
SLU 42	4.22	-1058.19	-4153	-0.0000396	0.0003743	0.0035	1.2247	2260.74	2687.86	2687.86	2.54	No	Si
SLU 73	2.32	195.48	-3983	-0.0000204	0.0003743	0.0035	1.2247	2179.02	2328.39	2328.39	11.91	No	Si
SLU 73	4.22	-988.76	-3843	-0.0000368	0.0003743	0.0035	1.2247	2111.42	2530.46	2530.46	2.56	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	2.32	1229.26	-1017	-0.0104356	0.0005615	0.0035	0.9797		698.44	698.44	0.57		No
SLV 15	4.22	-1644.18	-3248	-0.0001054	0.0005615	0.0035	0.9797		2248.55	2248.55	1.37		Si
SLV 7	2.32	642.88	-1020	-0.0003886	0.0005615	0.0035	0.9797		700.24	700.24	1.09		Si
SLV 7	4.22	-1103.6	-2571	-0.0000473	0.0005615	0.0035	0.9797		1870	1870	1.69		Si
SLV 14	2.32	627.87	-2413	-0.0000227	0.0005615	0.0035	1.2247		1510.37	1510.37	2.41		Si
SLV 14	4.22	-1023.19	-2740	-0.0000385	0.0005615	0.0035	0.9797		1964.02	1964.02	1.92		Si
SLV 6	2.32	-894.62	-4729	-0.0000374	0.0005615	0.0035	1.2247		3056.32	3056.32	3.42		Si
SLV 6	4.22	466.13	-1268	-0.0000171	0.0005615	0.0035	1.2247		846.93	846.93	1.82		Si
SLV 16	2.32	1027.79	-1424	-0.0023234	0.0005615	0.0035	0.9797		939.27	939.27	0.91		No
SLV 16	4.22	-1428.43	-3080	-0.0000708	0.0005615	0.0035	0.9797		2154.02	2154.02	1.51		Si
SLV 8	2.32	438.43	-1433	-0.0000154	0.0005615	0.0035	1.2247		944.63	944.63	2.15		Si
SLV 8	4.22	-884.66	-2400	-0.0000329	0.0005615	0.0035	0.9797		1773.2	1773.2	2		Si
SLV 12	2.32	925.09	-898	-0.0061729	0.0005615	0.0035	0.9797		627.98	627.98	0.68		No
SLV 12	4.22	-1353.1	-2896	-0.0000679	0.0005615	0.0035	0.9797		2051.27	2051.27	1.52		Si
SLV 2	2.32	-994.33	-4196	-0.0000375	0.0005615	0.0035	1.2247		2768.76	2768.76	2.78		Si
SLV 2	4.22	538.27	-1087	-0.000031	0.0005615	0.0035	1.2247		739.85	739.85	1.37		Si
SLV 11	2.32	1129.54	-485	-0.0141566	0.0005615	0.0035	0.9797		381.38	381.38	0.34		No
SLV 11	4.22	-1572.03	-3067	-0.0001052	0.0005615	0.0035	0.9797		2146.89	2146.89	1.37		Si
SLV 13	2.32	829.34	-2005	-0.0000337	0.0005615	0.0035	1.2247		1277.16	1277.16	1.54		Si
SLV 13	4.22	-1238.94	-2908	-0.0000528	0.0005615	0.0035	0.9797		2057.97	2057.97	1.66		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 42	2.32	179.98	-3823	-3219	1199	1.2247	1.2247	-8762	8113	2981	42820	11002	3123	14125	No	11.78	Si
SLU 42	4.22	-1058.19	-4153	-3497	1202	1.2247	1.0726	-10956	8405	2705	42820	11002	3123	14125	No	11.76	Si
SLU 82	2.32	204.92	-4334	-3650	1287	1.2247	1.2247	-9934	8269	3038	42820	11002	3123	14125	No	10.98	Si
SLU 82	4.22	-1122.57	-4397	-3703	1290	1.2247	1.0711	-11622	8494	2729	42820	11002	3123	14125	No	10.95	Si
SLU 40	2.32	179.98	-3823	-3219	1199	1.2247	1.2247	-8762	8113	2981	42820	11002	3123	14125	No	11.78	Si
SLU 40	4.22	-1058.19	-4153	-3497	1202	1.2247	1.0726	-10956	8405	2705	42820	11002	3123	14125	No	11.76	Si
SLU 81	2.32	195.8	-4356	-3668	1268	1.2247	1.2247	-9983	8276	3040	42820	11002	3123	14125	No	11.14	Si
SLU 81	4.22	-1113.25	-4390	-3697	1271	1.2247	1.0763	-11548	8484	2740	42820	11002	3123	14125	No	11.11	Si
SLU 39	2.32	170.86	-3845	-3238	1180	1.2247	1.2247	-8812	8119	2983	42820	11002	3123	14125	No	11.97	Si
SLU 39	4.22	-1048.87	-4147	-3492	1183	1.2247	1.0782	-10882	8395	2716	42820	11002	3123	14125	No	11.94	Si
SLU 83	2.32	195.8	-4356	-3668	1268	1.2247	1.2247	-9983	8276	3040	42820	11002	3123	14125	No	11.14	Si
SLU 83	4.22	-1113.25	-4390	-3697	1271	1.2247	1.0763	-11548	8484	2740	42820	11002	3123	14125	No	11.11	Si
SLU 76	2.32	195.48	-3983	-3354	1147	1.2247	1.2247	-9128	8162	2999	42820	11002	3123	14125	No	12.32	Si
SLU 76	4.22	-988.76	-3843	-3236	1149	1.2247	1.0651	-10203	8305	2654	42820	11002	3123	14125	No	12.29	Si
SLU 73	2.32	195.48	-3983	-3354	1147	1.2247	1.2247	-9128	8162	2999	42820	11002	3123	14125	No	12.32	Si
SLU 73	4.22	-988.76	-3843	-3236	1149	1.2247	1.0651	-10203	8305	2654	42820	11002	3123	14125	No	12.29	Si
SLU 41	2.32	170.86	-3845	-3238	1180	1.2247	1.2247	-8812	8119	2983	42820	11002	3123	14125	No	11.97	Si
SLU 41	4.22	-1048.87	-4147	-3492	1183	1.2247	1.0782	-10882	8395	2716	42820	11002	3123	14125	No	11.94	Si
SLU 84	2.32	204.92	-4334	-3650	1287	1.2247	1.2247	-9934	8269	3038	42820	11002	3123	14125	No	10.98	Si
SLU 84	4.22	-1122.57	-4397	-3703	1290	1.2247	1.0711	-11622	8494	2729	42820	11002	3123	14125	No	10.95	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	2.32	1229.26	-1017	-856	2973	0.9797	0	0	0	0	42820	13202	2498	15700		5.28	Si
SLV 15	4.22	-1644.18	-3248	-2735	2422	0.9797	0.3183	0	0	0	42820	13202	2498	15700		6.48	Si
SLV 6	2.32	-894.62	-4729	-3982	-1497	1.2247	1.2247	-10838	12584	4624	42820	16503	3123	19626		13.11	Si
SLV 6	4.22	466.13	-1268	-1068	-1281	1.2247	0.7339	-2906	10998	2421	42820	16503	3123	19626		15.32	Si
SLV 11	2.32	1129.54	-485	-408	2790	0.9797	0	0	0	0	42820	13202	2498	15700		5.63	Si
SLV 11	4.22	-1572.03	-3067	-2583	2579	0.9797	0.2992	0	0	0	42820	13202	2498	15700		6.09	Si
SLV 8	2.32	438.43	-1433	-1207	1363	1.2247	0.9191	-3284	11074	3053	42820	16503	3123	19626		14.4	Si
SLV 8	4.22	-884.66	-2400	-2021	1473	0.9797	0.7313	0	0	0	42820	13202	2498	15700		10.66	Si
SLV 16	2.32	1027.79	-1424	-1199	2568	0.9797	0	0	0	0	42820	13202	2498	15700		6.11	Si
SLV 16	4.22	-1428.43	-3080	-2593	2017	0.9797	0.4455	0	0	0	42820	13202	2498	15700		7.78	Si
SLV 2	2.32	-994.33	-4196	-3534	-1680	1.2247	1.1262	-9618	12340	4169	42820	16503	3123	19626		11.69	Si
SLV 2	4.22	538.27	-1087	-915	-1125	1.2247	0.3511	-8723	12161	1281	42820	16503	3123	19626		17.45	Si
SLV 12	2.32	925.09	-898	-756	2380	0.9797	0	0	0	0	42820	13202	2498	15700		6.6	Si
SLV 12	4.22	-1353.1	-2896	-2439	2168	0.9797	0.4354	0	0	0	42820	13202	2498	15700		7.24	Si
SLV 7	2.32	642.88	-1020	-859	1774	0.9797	0	0	0	0	42820	13202	2498	15700		8.85	Si
SLV 7	4.22	-1103.6	-2571	-2165	1884	0.9797	0.5492	0	0	0	42820	13202	2498	15700		8.33	Si
SLV 13	2.32	829.34	-2005	-1689	2115	1.2247	0.5964	-4597	11336	2028	42820	16503	3123	19626		9.28	Si
SLV 13	4.22	-1238.94	-2908	-2449	1596	0.9797	0.5589	0	0	0	42820	13202	2498	15700		9.84	Si
SLV 14	2.32	627.87	-2413	-2032	1710	1.2247	1.0563	-5530	11523	3651	42820	16503	3123	19626		11.48	Si
SLV 14	4.22	-1023.19	-2740	-2307	1191	0.9797	0.7166	0	0	0	42820	13202	2498	15700		13.18	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.48	5245	-1927	191.62	279.13	1.46	Si
SLV 7	179667	0.48	5262	-1933	191.62	280	1.46	Si
SLV 12	179667	0.48	5586	-2052	191.62	296.58	1.55	Si
SLV 8	179667	0.48	5603	-2058	191.62	297.44	1.55	Si
SLV 15	179667	0.48	6207	-2280	191.62	328.17	1.71	Si
SLV 3	179667	0.48	6263	-2301	191.62	331.01	1.73	Si
SLV 16	179667	0.48	6543	-2404	191.62	345.12	1.8	Si
SLV 4	179667	0.48	6599	-2424	191.62	347.95	1.82	Si
SLV 13	179667	0.48	7046	-2589	191.62	370.4	1.93	Si
SLV 1	179667	0.48	7102	-2609	191.62	373.21	1.95	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 = 3.2 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-1496	-2965	-24	2.561	361.2	0.89	41.82557	15.04226	Si
SLV 16	-1454	-3182	-24	2.6	357.3	0.889	42.47854	15.04226	Si
SLV 13	-1398	-3739	1	2.663	352.1	0.889	43.51573	15.04226	Si
SLV 14	-1356	-3956	1	2.705	348.3	0.889	44.21828	15.04226	Si
SLV 11	-1511	-1896	-45	2.539	362.6	0.89	41.47411	13.64588	Si
SLV 12	-1468	-2116	-45	2.579	358.6	0.89	42.12822	13.64588	Si
SLV 3	-1212	-2497	0	2.862	335.1	0.889	46.79145	15.04226	Si
SLV 7	-1426	-1755	-38	2.622	354.7	0.889	42.84444	13.64588	Si
SLV 4	-1170	-2714	0	2.911	331.3	0.889	47.5922	15.04226	Si
SLV 8	-1383	-1976	-38	2.664	350.7	0.889	43.53857	13.64588	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	2.506	SLU 82	Si
V_SLU	10.949	SLU 82	Si
PF_SLV	0.338	SLV 11	No
V_SLV	5.281	SLV 15	Si
PFFP_SLV	1.457	SLV 11	Si
R_SLV	2.781	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
-34.108	5.726	-32.168	5.726	L2	L3	1.94	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 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 19	1.32	528.65	-10124	-0.0000311	0.0003743	0.0035	1.94	8142.67	8554.66	8554.66	16.18	No	Si
SLU 19	4.22	1597.67	-8221	-0.0000347	0.0003743	0.0035	1.94	6867.89	7189.11	7189.11	4.5	No	Si
SLU 42	1.32	490.35	-11599	-0.0000349	0.0003743	0.0035	1.94	9048.8	9648.41	9648.41	19.68	No	Si
SLU 42	4.22	2101.34	-10077	-0.0000442	0.0003743	0.0035	1.94	8112.33	8519.98	8519.98	4.05	No	Si
SLU 20	1.32	520.11	-10084	-0.0000309	0.0003743	0.0035	1.94	8116.76	8525.03	8525.03	16.39	No	Si
SLU 20	4.22	1603.99	-8230	-0.0000348	0.0003743	0.0035	1.94	6874.09	7195.34	7195.34	4.49	No	Si
SLU 41	1.32	481.8	-11559	-0.0000347	0.0003743	0.0035	1.94	9024.84	9617.93	9617.93	19.96	No	Si
SLU 41	4.22	2107.66	-10086	-0.0000443	0.0003743	0.0035	1.94	8118	8526.45	8526.45	4.05	No	Si
SLU 39	1.32	481.8	-11559	-0.0000347	0.0003743	0.0035	1.94	9024.84	9617.93	9617.93	19.96	No	Si
SLU 39	4.22	2107.66	-10086	-0.0000443	0.0003743	0.0035	1.94	8118	8526.45	8526.45	4.05	No	Si
SLU 18	1.32	520.11	-10084	-0.0000309	0.0003743	0.0035	1.94	8116.76	8525.03	8525.03	16.39	No	Si
SLU 18	4.22	1603.99	-8230	-0.0000348	0.0003743	0.0035	1.94	6874.09	7195.34	7195.34	4.49	No	Si
SLU 81	1.32	745.46	-13031	-0.0000411	0.0003743	0.0035	1.94	9860.28	10740.94	10740.94	14.41	No	Si
SLU 81	4.22	1916.32	-10302	-0.0000433	0.0003743	0.0035	1.94	8255.59	8684.75	8684.75	4.53	No	Si
SLU 40	1.32	490.35	-11599	-0.0000349	0.0003743	0.0035	1.94	9048.8	9648.41	9648.41	19.68	No	Si
SLU 40	4.22	2101.34	-10077	-0.0000442	0.0003743	0.0035	1.94	8112.33	8519.98	8519.98	4.05	No	Si
SLU 21	1.32	528.65	-10124	-0.0000311	0.0003743	0.0035	1.94	8142.67	8554.66	8554.66	16.18	No	Si
SLU 21	4.22	1597.67	-8221	-0.0000347	0.0003743	0.0035	1.94	6867.89	7189.11	7189.11	4.5	No	Si
SLU 83	1.32	745.46	-13031	-0.0000411	0.0003743	0.0035	1.94	9860.28	10740.94	10740.94	14.41	No	Si
SLU 83	4.22	1916.32	-10302	-0.0000433	0.0003743	0.0035	1.94	8255.59	8684.75	8684.75	4.53	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	1.32	-1370.36	-6922	-0.0000288	0.0005615	0.0035	1.94		7322.49	7322.49	5.34		Si
SLV 3	4.22	2416.99	-6131	-0.0000357	0.0005615	0.0035	1.94		5814.63	5814.63	2.41		Si
SLV 2	1.32	-1499.74	-5564	-0.0000263	0.0005615	0.0035	1.94		6149.15	6149.15	4.1		Si
SLV 2	4.22	2574.15	-6051	-0.0000373	0.0005615	0.0035	1.94		5744.87	5744.87	2.23		Si
SLV 5	1.32	-899.89	-3741	-0.0000167	0.0005615	0.0035	1.94		4538.71	4538.71	5.04		Si
SLV 5	4.22	2230.54	-5323	-0.0000323	0.0005615	0.0035	1.94		5105.43	5105.43	2.29		Si
SLV 1	1.32	-1861.52	-4981	-0.0000278	0.0005615	0.0035	1.94		5634.77	5634.77	3.03		Si
SLV 1	4.22	3001.67	-6288	-0.000043	0.0005615	0.0035	1.94		5949.57	5949.57	1.98		Si
SLV 14	1.32	2892.65	-8503	-0.0000456	0.0005615	0.0035	1.94		7831.05	7831.05	2.71		Si
SLV 14	4.22	-1587.06	-2768	-0.0000231	0.0005615	0.0035	1.552		3654.85	3654.85	2.3		Si
SLV 6	1.32	-532.76	-4332	-0.0000153	0.0005615	0.0035	1.94		5065.79	5065.79	9.51		Si
SLV 6	4.22	1796.69	-5083	-0.0000274	0.0005615	0.0035	1.94		4894.11	4894.11	2.72		Si
SLV 16	1.32	3383.82	-10444	-0.0000549	0.0005615	0.0035	1.94		9354.28	9354.28	2.76		Si
SLV 16	4.22	-2171.74	-2612	-0.0000607	0.0005615	0.0035	1.552		3511.09	3511.09	1.62		Si
SLV 13	1.32	2530.87	-7920	-0.0000409	0.0005615	0.0035	1.94		7343.26	7343.26	2.9		Si
SLV 13	4.22	-1159.54	-3005	-0.000017	0.0005615	0.0035	1.94		3870.28	3870.28	3.34		Si
SLV 4	1.32	-1008.58	-7505	-0.0000275	0.0005615	0.0035	1.94		7816.74	7816.74	7.75		Si
SLV 4	4.22	1989.47	-5895	-0.0000311	0.0005615	0.0035	1.94		5608.4	5608.4	2.82		Si
SLV 15	1.32	3022.04	-9861	-0.0000503	0.0005615	0.0035	1.94		8939.75	8939.75	2.96		Si
SLV 15	4.22	-1744.22	-2848	-0.0000264	0.0005615	0.0035	1.552		3727.88	3727.88	2.14		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 47	1.32	1112.99	-8133	-6849	815	1.94	1.94	-11767	8513	4955	42820	17428	4947	22375	No	27.47	Si
SLU 47	4.22	-264.03	-3044	-2563	841	1.94	1.94	-4404	7532	4383	42820	17428	4947	22375	No	26.6	Si
SLU 83	1.32	745.46	-13031	-10973	-855	1.94	1.94	-18855	9458	5505	42820	17428	4947	22375	No	26.18	Si
SLU 83	4.22	1916.32	-10302	-8675	-867	1.94	1.94	-14906	8932	5198	42820	17428	4947	22375	No	25.8	Si
SLU 40	1.32	490.35	-11599	-9768	-1115	1.94	1.94	-16783	9182	5344	42820	17428	4947	22375	No	20.07	Si
SLU 40	4.22	2101.34	-10077	-8486	-1105	1.94	1.94	-14581	8889	5173	42820	17428	4947	22375	No	20.25	Si
SLU 44	1.32	1112.99	-8133	-6849	815	1.94	1.94	-11767	8513	4955	42820	17428	4947	22375	No	27.47	Si
SLU 44	4.22	-264.03	-3044	-2563	841	1.94	1.94	-4404	7532	4383	42820	17428	4947	22375	No	26.6	Si
SLU 39	1.32	481.8	-11559	-9734	-1127	1.94	1.94	-16725	9174	5339	42820	17428	4947	22375	No	19.86	Si
SLU 39	4.22	2107.66	-10086	-8493	-1137	1.94	1.94	-14593	8890	5174	42820	17428	4947	22375	No	19.67	Si
SLU 82	1.32	754.01	-13072	-11008	-843	1.94	1.94	-18913	9466	5509	42820	17428	4947	22375	No	26.54	Si
SLU 82	4.22	1910.01	-10293	-8668	-835	1.94	1.94	-14893	8930	5197	42820	17428	4947	22375	No	26.81	Si
SLU 84	1.32	754.01	-13072	-11008	-843	1.94	1.94	-18913	9466	5509	42820	17428	4947	22375	No	26.54	Si
SLU 84	4.22	1910.01	-10293	-8668	-835	1.94	1.94	-14893	8930	5197	42820	17428	4947	22375	No	26.81	Si
SLU 81	1.32	745.46	-13031	-10973	-855	1.94	1.94	-18855	9458	5505	42820	17428	4947	22375	No	26.18	Si
SLU 81	4.22	1916.32	-10302	-8675	-867	1.94	1.94	-14906	8932	5198	42820	17428	4947	22375	No	25.8	Si
SLU 41	1.32	481.8	-11559	-9734	-1127	1.94	1.94	-16725	9174	5339	42820	17428	4947	22375	No	19.86	Si
SLU 41	4.22	2107.66	-10086	-8493	-1137	1.94	1.94	-14593	8890	5174	42820	17428	4947	22375	No	19.67	Si
SLU 42	1.32	490.35	-11599	-9768	-1115	1.94	1.94	-16783	9182	5344	42820	17428	4947	22375	No	20.07	Si
SLU 42	4.22	2101.34	-10077	-8486	-1105	1.94	1.94	-14581	8889	5173	42820	17428	4947	22375	No	20.25	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 5	1.32	-899.89	-3741	-3150	-2842	1.94	1.94	-5413	11499	6693	42820	26142	4947	31089		10.94	Si
SLV 5	4.22	2230.54	-5323	-4482	-2501	1.94	1.6528	-7701	11957	5929	42820	26142	4947	31089		12.43	Si
SLV 1	1.32	-1861.52	-4981	-4195	-3685	1.94	1.7889	-7841	11985	6432	42820	26142	4947	31089		8.44	Si
SLV 1	4.22	3001.67	-6288	-5295	-2575	1.94	1.4778	-9098	12236	5425	42820	26142	4947	31089		12.07	Si
SLV 2	1.32	-1499.74	-5564	-4685	-3139	1.94	1.94	-8050	12027	7000	42820	26142	4947	31089		9.9	Si
SLV 2	4.22	2574.15	-6051	-5096	-2029	1.94	1.6339	-8756	12168	5964	42820	26142	4947	31089		15.32	Si
SLV 11	1.32	2055.05	-11093	-9341	2617	1.94	1.94	-16051	13627	7931	42820	26142	4947	31089		11.88	Si
SLV 11	4.22	-966.77	-3817	-3214	2261	1.94	1.94	-5523	11521	6705	42820	26142	4947	31089		13.75	Si
SLV 13	1.32	2530.87	-7920	-6670	2376	1.94	1.94	-11460	12709	7396	42820	26142	4947	31089		13.08	Si
SLV 13	4.22	-1159.54	-3005	-2530	1260	1.94	1.7523	-4820	11381	5982	42820	26142	4947	31089		24.68	Si
SLV 14	1.32	2892.65	-8503	-7160	2922	1.94	1.8894	-12303	12877	7299	42820	26142	4947	31089		10.64	Si
SLV 14	4.22	-1587.06	-2768	-2331	1806	1.552	1.1902	0	0	0	42820	20913	3958	24871		13.77	Si
SLV 15	1.32	3022.04	-9861	-8304	3468	1.94	1.94	-14269	13270	7723	42820	26142	4947	31089		8.96	Si
SLV 15	4.22	-1744.22	-2848	-2399	2343	1.552	1.073	0	0	0	42820	20913	3958	24871		10.61	Si
SLV 16	1.32	3383.82	-10444	-8795	4014	1.94	1.938	-15111	13439	7813	42820	26142	4947	31089		7.74	Si
SLV 16	4.22	-2171.74	-2612	-2200	2889	1.552	0.4159	0	0	0	42820	20913	3958	24871		8.61	Si
SLV 3	1.32	-1370.36	-6922	-5829	-2593	1.94	1.94	-10016	12420	7228	42820	26142	4947	31089		11.99	Si
SLV 3	4.22	2416.99	-6131	-5163	-1492	1.94	1.7274	-8872	12191	6318	42820	26142	4947	31089		20.84	Si
SLV 12	1.32	2422.18	-11684	-9839	3171	1.94	1.94	-16906	13798	8030	42820	26142	4947	31089		9.8	Si
SLV 12	4.22	-1400.61	-3577	-3012	2815	1.94	1.7354	-5795	11576	6027	42820	26142	4947	31089		11.04	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.48	7212	-4197	303.54	599.87	1.98	Si
SLV 14	179667	0.48	7227	-4206	303.54	601.03	1.98	Si
SLV 9	179667	0.48	7392	-4302	303.54	614.06	2.02	Si
SLV 10	179667	0.48	7407	-4311	303.54	615.23	2.03	Si
SLV 15	179667	0.48	7903	-4599	303.54	654.19	2.16	Si
SLV 16	179667	0.48	7917	-4608	303.54	655.34	2.16	Si
SLV 5	179667	0.48	8236	-4794	303.54	680.26	2.24	Si
SLV 6	179667	0.48	8251	-4802	303.54	681.42	2.24	Si
SLV 11	179667	0.48	9694	-5642	303.54	792.55	2.61	Si
SLV 12	179667	0.48	9709	-5650	303.54	793.68	2.61	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 = 3.2 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-4122	-4981	194	1.81	740.6	0.901	29.18318	15.04226	Si
SLV 2	-4078	-5564	194	1.823	736.4	0.901	29.3978	15.04226	Si
SLV 3	-4079	-6922	125	1.834	736.5	0.901	29.57467	15.04226	Si
SLV 4	-4036	-7505	126	1.847	732.3	0.901	29.79369	15.04226	Si
SLV 13	-3554	-7920	-127	2.004	685.2	0.897	32.46649	15.04226	Si
SLV 15	-3512	-9861	-195	2.007	681.1	0.897	32.52149	15.04226	Si
SLV 14	-3511	-8503	-127	2.02	681	0.897	32.72997	15.04226	Si
SLV 16	-3468	-10444	-195	2.022	676.9	0.896	32.78732	15.04226	Si
SLV 5	-3972	-3741	161	1.86	726	0.9	30.0258	13.64588	Si
SLV 6	-3929	-4332	161	1.873	721.7	0.9	30.25544	13.64588	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	4.045	SLU 39	Si
V_SLU	19.67	SLU 39	Si
PF_SLV	1.617	SLV 16	Si
V_SLV	7.745	SLV 16	Si
PFFP_SLV	1.976	SLV 13	Si
R_SLV	1.94	SLV 1	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
-30.968	5.726	-30.088	5.726	L2	L3	0.88	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 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 84	3.32	634.99	-9893	-0.0000892	0.0003743	0.0035	0.88	2750.7	3254.78	3254.78	5.13	No	Si
SLU 84	4.22	-1529.07	-8922	-0.0001257	0.0003743	0.0035	0.88	2622.6	3094.16	3094.16	2.02	No	Si
SLU 75	3.32	575.34	-8810	-0.0000787	0.0003743	0.0035	0.88	2605.85	2972.71	2972.71	5.17	No	Si
SLU 75	4.22	-1390.14	-7909	-0.0001112	0.0003743	0.0035	0.88	2455.92	2867.89	2867.89	2.06	No	Si
SLU 81	3.32	633.58	-9879	-0.0000891	0.0003743	0.0035	0.88	2749.09	3251.52	3251.52	5.13	No	Si
SLU 81	4.22	-1524.21	-8907	-0.0001253	0.0003743	0.0035	0.88	2620.35	3090.68	3090.68	2.03	No	Si
SLU 47	3.32	359.82	-4960	-0.0000437	0.0003743	0.0035	0.88	1779.72	1889.67	1889.67	5.25	No	Si
SLU 47	4.22	-882.36	-4307	-0.0000643	0.0003743	0.0035	0.88	1591.35	1821.33	1821.33	2.06	No	Si
SLU 82	3.32	634.99	-9893	-0.0000892	0.0003743	0.0035	0.88	2750.7	3254.78	3254.78	5.13	No	Si
SLU 82	4.22	-1529.07	-8922	-0.0001257	0.0003743	0.0035	0.88	2622.6	3094.16	3094.16	2.02	No	Si
SLU 78	3.32	575.34	-8810	-0.0000787	0.0003743	0.0035	0.88	2605.85	2972.71	2972.71	5.17	No	Si
SLU 78	4.22	-1390.14	-7909	-0.0001112	0.0003743	0.0035	0.88	2455.92	2867.89	2867.89	2.06	No	Si
SLU 80	3.32	575.34	-8810	-0.0000787	0.0003743	0.0035	0.88	2605.85	2972.71	2972.71	5.17	No	Si
SLU 80	4.22	-1390.14	-7909	-0.0001112	0.0003743	0.0035	0.88	2455.92	2867.89	2867.89	2.06	No	Si
SLU 83	3.32	633.58	-9879	-0.0000891	0.0003743	0.0035	0.88	2749.09	3251.52	3251.52	5.13	No	Si
SLU 83	4.22	-1524.21	-8907	-0.0001253	0.0003743	0.0035	0.88	2620.35	3090.68	3090.68	2.03	No	Si
SLU 76	3.32	576.28	-8819	-0.0000788	0.0003743	0.0035	0.88	2607.24	2975.11	2975.11	5.16	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 76	4.22	-1393.39	-7919	-0.0001115	0.0003743	0.0035	0.88	2457.75	2870.07	2870.07	2.06	No	Si
SLU 73	3.32	576.28	-8819	-0.0000788	0.0003743	0.0035	0.88	2607.24	2975.11	2975.11	5.16	No	Si
SLU 73	4.22	-1393.39	-7919	-0.0001115	0.0003743	0.0035	0.88	2457.75	2870.07	2870.07	2.06	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 7	3.32	315	-5889	-0.0000467	0.0005615	0.0035	0.88		2318.62	2318.62	7.36		Si
SLV 7	4.22	-921.8	-5155	-0.0000677	0.0005615	0.0035	0.88		2192.2	2192.2	2.38		Si
SLV 13	3.32	643.8	-5799	-0.0000594	0.0005615	0.0035	0.88		2290.26	2290.26	3.56		Si
SLV 13	4.22	-1438.65	-5652	-0.0001079	0.0005615	0.0035	0.88		2368.38	2368.38	1.65		Si
SLV 11	3.32	526.85	-6469	-0.0000588	0.0005615	0.0035	0.88		2501.18	2501.18	4.75		Si
SLV 11	4.22	-1376.03	-6053	-0.0001002	0.0005615	0.0035	0.88		2508.07	2508.07	1.82		Si
SLV 16	3.32	776.76	-6638	-0.0000702	0.0005615	0.0035	0.88		2554.75	2554.75	3.29		Si
SLV 16	4.22	-1811.01	-6649	-0.0001447	0.0005615	0.0035	0.704		2708.38	2708.38	1.5		Si
SLV 10	3.32	399.41	-4615	-0.0000423	0.0005615	0.0035	0.88		1902.41	1902.41	4.76		Si
SLV 10	4.22	-813.77	-4154	-0.000058	0.0005615	0.0035	0.88		1827.85	1827.85	2.25		Si
SLV 15	3.32	704.14	-6421	-0.0000658	0.0005615	0.0035	0.88		2485.95	2485.95	3.53		Si
SLV 15	4.22	-1654.86	-6321	-0.0001276	0.0005615	0.0035	0.704		2598.37	2598.37	1.57		Si
SLV 12	3.32	600.54	-6689	-0.0000632	0.0005615	0.0035	0.88		2571.08	2571.08	4.28		Si
SLV 12	4.22	-1534.48	-6385	-0.0001138	0.0005615	0.0035	0.88		2620.11	2620.11	1.71		Si
SLV 14	3.32	716.42	-6016	-0.0000637	0.0005615	0.0035	0.88		2358.15	2358.15	3.29		Si
SLV 14	4.22	-1594.79	-5980	-0.0001237	0.0005615	0.0035	0.704		2483.37	2483.37	1.56		Si
SLV 9	3.32	325.71	-4395	-0.000038	0.0005615	0.0035	0.88		1821.58	1821.58	5.59		Si
SLV 9	4.22	-655.31	-3821	-0.0000481	0.0005615	0.0035	0.88		1702.24	1702.24	2.6		Si
SLV 8	3.32	388.7	-6109	-0.000051	0.0005615	0.0035	0.88		2387.65	2387.65	6.14		Si
SLV 8	4.22	-1080.26	-5488	-0.0000781	0.0005615	0.0035	0.88		2310.76	2310.76	2.14		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 75	3.32	575.34	-8810	-7419	1975	0.88	0.88	-28103	10691	2823	42820	7905	2244	10149	No	5.14	Si
SLU 75	4.22	-1390.14	-7909	-6660	2468	0.88	0.7927	-25227	10308	2451	42820	7905	2244	10149	No	4.11	Si
SLU 84	3.32	634.99	-9893	-8331	2162	0.88	0.88	-31555	10833	2860	42820	7905	2244	10149	No	4.7	Si
SLU 84	4.22	-1529.07	-8922	-7513	2690	0.88	0.8059	-28460	10739	2596	42820	7905	2244	10149	No	3.77	Si
SLU 76	3.32	576.28	-8819	-7427	1980	0.88	0.88	-28132	10695	2824	42820	7905	2244	10149	No	5.13	Si
SLU 76	4.22	-1393.39	-7919	-6668	2475	0.88	0.7921	-25259	10312	2451	42820	7905	2244	10149	No	4.1	Si
SLU 79	3.32	573.93	-8796	-7408	1968	0.88	0.88	-28059	10686	2821	42820	7905	2244	10149	No	5.16	Si
SLU 79	4.22	-1385.28	-7894	-6647	2457	0.88	0.7935	-25179	10302	2452	42820	7905	2244	10149	No	4.13	Si
SLU 83	3.32	633.58	-9879	-8319	2154	0.88	0.88	-31511	10833	2860	42820	7905	2244	10149	No	4.71	Si
SLU 83	4.22	-1524.21	-8907	-7501	2680	0.88	0.8066	-28411	10733	2597	42820	7905	2244	10149	No	3.79	Si
SLU 78	3.32	575.34	-8810	-7419	1975	0.88	0.88	-28103	10691	2823	42820	7905	2244	10149	No	5.14	Si
SLU 78	4.22	-1390.14	-7909	-6660	2468	0.88	0.7927	-25227	10308	2451	42820	7905	2244	10149	No	4.11	Si
SLU 80	3.32	575.34	-8810	-7419	1975	0.88	0.88	-28103	10691	2823	42820	7905	2244	10149	No	5.14	Si
SLU 80	4.22	-1390.14	-7909	-6660	2468	0.88	0.7927	-25227	10308	2451	42820	7905	2244	10149	No	4.11	Si
SLU 73	3.32	576.28	-8819	-7427	1980	0.88	0.88	-28132	10695	2824	42820	7905	2244	10149	No	5.13	Si
SLU 73	4.22	-1393.39	-7919	-6668	2475	0.88	0.7921	-25259	10312	2451	42820	7905	2244	10149	No	4.1	Si
SLU 82	3.32	634.99	-9893	-8331	2162	0.88	0.88	-31555	10833	2860	42820	7905	2244	10149	No	4.7	Si
SLU 82	4.22	-1529.07	-8922	-7513	2690	0.88	0.8059	-28460	10739	2596	42820	7905	2244	10149	No	3.77	Si
SLU 81	3.32	633.58	-9879	-8319	2154	0.88	0.88	-31511	10833	2860	42820	7905	2244	10149	No	4.71	Si
SLU 81	4.22	-1524.21	-8907	-7501	2680	0.88	0.8066	-28411	10733	2597	42820	7905	2244	10149	No	3.79	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	3.32	315	-5889	-4960	1156	0.88	0.88	-18786	14174	3742	42820	11858	2244	14102		12.2	Si
SLV 7	4.22	-921.8	-5155	-4341	1697	0.88	0.7836	-16444	13705	3222	42820	11858	2244	14102		8.31	Si
SLV 10	3.32	399.41	-4615	-3886	1339	0.88	0.88	-14721	13361	3527	42820	11858	2244	14102		10.53	Si
SLV 10	4.22	-813.77	-4154	-3498	1445	0.88	0.7323	-16048	13626	2994	42820	11858	2244	14102		9.76	Si
SLV 8	3.32	388.7	-6109	-5145	1468	0.88	0.88	-19488	14314	3779	42820	11858	2244	14102		9.61	Si
SLV 8	4.22	-1080.26	-5488	-4621	2037	0.88	0.7295	-21346	14686	3214	42820	11858	2244	14102		6.92	Si
SLV 15	3.32	704.14	-6421	-5407	2833	0.88	0.88	-20482	14513	3831	42820	11858	2244	14102		4.98	Si
SLV 15	4.22	-1654.86	-6321	-5323	3191	0.704	0.5346	0	0	0	42820	9486	1795	11282		3.53	Si
SLV 14	3.32	716.42	-6016	-5066	2817	0.88	0.88	-19189	14254	3763	42820	11858	2244	14102		5.01	Si
SLV 14	4.22	-1594.79	-5980	-5035	3069	0.704	0.5199	0	0	0	42820	9486	1795	11282		3.68	Si
SLV 9	3.32	325.71	-4395	-3701	1027	0.88	0.88	-14019	13221	3490	42820	11858	2244	14102		13.73	Si
SLV 9	4.22	-655.31	-3821	-3218	1105	0.88	0.8055	-12189	12854	3106	42820	11858	2244	14102		12.77	Si
SLV 16	3.32	776.76	-6638	-5590	3140	0.88	0.88	-21173	14651	3868	42820	11858	2244	14102		4.49	Si
SLV 16	4.22	-1811.01	-6649	-5599	3527	0.704	0.5029	0	0	0	42820	9486	1795	11282		3.2	Si
SLV 13	3.32	643.8	-5799	-4883	2510	0.88	0.88	-18497	14116	3727	42820	11858	2244	14102		5.62	Si
SLV 13	4.22	-1438.65	-5652	-4759	2733	0.88	0.5563	-28943	16206	2705	42820	11858	2244	14102		5.16	Si
SLV 11	3.32	526.85	-6469	-5448	2103	0.88	0.88	-20635	14544	3840	42820	11858	2244	14102		6.71	Si
SLV 11	4.22	-1376.03	-6053	-5097	2632	0.88	0.638	-27009	15819	3027	42820	11858	2244	14102		5.36	Si
SLV 12	3.32	600.54	-6689	-5633	2414	0.88	0.88	-21337	14684	3877	42820	11858	2244	14102		5.84	Si
SLV 12	4.22	-1534.48	-6385	-5377	2973	0.88	0.5991	-30404	16250	2920	42820	11858	2244	14102		4.74	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.48	12380	-3268	137.69	450.51	3.27	Si
SLV 6	179667	0.48	12688	-3350	137.69	460.69	3.35	Si
SLV 9	179667	0.48	13029	-3440	137.69	471.93	3.43	Si
SLV 10	179667	0.48	13337	-3521	137.69	482.01	3.5	Si
SLV 1	179667	0.48	13636	-3600	137.69	491.77	3.57	Si
SLV 2	179667	0.48	13939	-3680	137.69	501.6	3.64	Si

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.48	15360	-4055	137.69	547.06	3.97	Si
SLV 4	179667	0.48	15663	-4135	137.69	556.63	4.04	Si
SLV 13	179667	0.48	15800	-4171	137.69	560.93	4.07	Si
SLV 14	179667	0.48	16103	-4251	137.69	570.43	4.14	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 = 3.2 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 16	-2202	-974	-139	1.604	368.7	0.907	25.697	15.04226	Si
SLV 15	-2154	-1392	-139	1.628	364	0.906	26.11708	15.04226	Si
SLV 12	-2203	-2918	-344	1.537	368.8	0.907	24.62948	13.64588	Si
SLV 14	-2074	-848	60	1.698	356	0.905	27.26642	15.04226	Si
SLV 11	-2154	-3342	-344	1.561	364	0.906	25.03763	13.64588	Si
SLV 13	-2025	-1265	60	1.725	351.3	0.904	27.73186	15.04226	Si
SLV 8	-2075	-4460	-320	1.609	356.2	0.905	25.85013	13.64588	Si
SLV 7	-2026	-4884	-320	1.636	351.3	0.904	26.29726	13.64588	Si
SLV 4	-1776	-6113	-60	1.883	326.7	0.9	30.409	15.04226	Si
SLV 3	-1727	-6531	-60	1.917	322	0.899	30.9858	15.04226	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	2.024	SLU 82	Si
V_SLU	3.773	SLU 82	Si
PF_SLV	1.496	SLV 16	Si
V_SLV	3.199	SLV 16	Si
PFFP_SLV	3.272	SLV 5	Si
R_SLV	1.708	SLV 16	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
-29.588	5.726	-27.338	5.726	L2	L3	2.25	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 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 40	3.32	-917.35	-12296	-0.0000337	0.0003743	0.0035	2.25	11358.19	13348.31	13348.31	14.55	No	Si
SLU 40	4.22	778.37	-9865	-0.000027	0.0003743	0.0035	2.25	9505.15	9921.25	9921.25	12.75	No	Si
SLU 83	3.32	-1013.34	-13246	-0.0000366	0.0003743	0.0035	2.25	12029.48	14130.45	14130.45	13.94	No	Si
SLU 83	4.22	793.7	-10423	-0.0000285	0.0003743	0.0035	2.25	9947.25	10389.8	10389.8	13.09	No	Si
SLU 81	3.32	-1013.34	-13246	-0.0000366	0.0003743	0.0035	2.25	12029.48	14130.45	14130.45	13.94	No	Si
SLU 81	4.22	793.7	-10423	-0.0000285	0.0003743	0.0035	2.25	9947.25	10389.8	10389.8	13.09	No	Si
SLU 84	3.32	-1006.35	-13266	-0.0000366	0.0003743	0.0035	2.25	12043.55	14146.7	14146.7	14.06	No	Si
SLU 84	4.22	806.94	-10441	-0.0000286	0.0003743	0.0035	2.25	9961.65	10405.32	10405.32	12.89	No	Si
SLU 41	3.32	-924.34	-12276	-0.0000337	0.0003743	0.0035	2.25	11343.47	13330.74	13330.74	14.42	No	Si
SLU 41	4.22	765.14	-9847	-0.0000269	0.0003743	0.0035	2.25	9490.41	9905.89	9905.89	12.95	No	Si
SLU 31	3.32	-800.47	-10786	-0.0000294	0.0003743	0.0035	2.25	10229.9	12059.8	12059.8	15.07	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 31	4.22	680.64	-8532	-0.0000233	0.0003743	0.0035	2.25	8406.98	8819.52	8819.52	12.96	No	Si
SLU 82	3.32	-1006.35	-13266	-0.0000366	0.0003743	0.0035	2.25	12043.55	14146.7	14146.7	14.06	No	Si
SLU 82	4.22	806.94	-10441	-0.0000286	0.0003743	0.0035	2.25	9961.65	10405.32	10405.32	12.89	No	Si
SLU 34	3.32	-800.47	-10786	-0.0000294	0.0003743	0.0035	2.25	10229.9	12059.8	12059.8	15.07	No	Si
SLU 34	4.22	680.64	-8532	-0.0000233	0.0003743	0.0035	2.25	8406.98	8819.52	8819.52	12.96	No	Si
SLU 39	3.32	-924.34	-12276	-0.0000337	0.0003743	0.0035	2.25	11343.47	13330.74	13330.74	14.42	No	Si
SLU 39	4.22	765.14	-9847	-0.0000269	0.0003743	0.0035	2.25	9490.41	9905.89	9905.89	12.95	No	Si
SLU 42	3.32	-917.35	-12296	-0.0000337	0.0003743	0.0035	2.25	11358.19	13348.31	13348.31	14.55	No	Si
SLU 42	4.22	778.37	-9865	-0.000027	0.0003743	0.0035	2.25	9505.15	9921.25	9921.25	12.75	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	3.32	-1605.74	-7334	-0.0000258	0.0005615	0.0035	2.25		9097.74	9097.74	5.67		Si
SLV 2	4.22	1680.4	-6087	-0.0000234	0.0005615	0.0035	2.25		6805.62	6805.62	4.05		Si
SLV 4	3.32	-1571.73	-8026	-0.0000272	0.0005615	0.0035	2.25		9776.72	9776.72	6.22		Si
SLV 4	4.22	2080.51	-6625	-0.000027	0.0005615	0.0035	2.25		7354.53	7354.53	3.53		Si
SLV 8	3.32	-727.42	-8199	-0.0000226	0.0005615	0.0035	2.25		9946.87	9946.87	13.67		Si
SLV 8	4.22	1358.86	-6261	-0.0000219	0.0005615	0.0035	2.25		6984.25	6984.25	5.14		Si
SLV 13	3.32	490.66	-5757	-0.0000156	0.0005615	0.0035	2.25		6466.77	6466.77	13.18		Si
SLV 13	4.22	-1328.35	-3599	-0.0000157	0.0005615	0.0035	2.25		5255.47	5255.47	3.96		Si
SLV 14	3.32	689.04	-5526	-0.0000163	0.0005615	0.0035	2.25		6228.48	6228.48	9.04		Si
SLV 14	4.22	-1707.11	-3262	-0.0000179	0.0005615	0.0035	2.25		4898.99	4898.99	2.87		Si
SLV 10	3.32	-152.34	-5350	-0.0000127	0.0005615	0.0035	2.25		7072	7072	46.42		Si
SLV 10	4.22	-991.07	-3621	-0.0000138	0.0005615	0.0035	2.25		5278.42	5278.42	5.33		Si
SLV 7	3.32	-928.74	-8434	-0.0000243	0.0005615	0.0035	2.25		10179.02	10179.02	10.96		Si
SLV 7	4.22	1743.23	-6603	-0.000025	0.0005615	0.0035	2.25		7332.4	7332.4	4.21		Si
SLV 16	3.32	723.05	-6218	-0.000018	0.0005615	0.0035	2.25		6939.6	6939.6	9.6		Si
SLV 16	4.22	-1307.01	-3800	-0.000016	0.0005615	0.0035	2.25		5468.48	5468.48	4.18		Si
SLV 1	3.32	-1804.13	-7566	-0.0000275	0.0005615	0.0035	2.25		9324.4	9324.4	5.17		Si
SLV 1	4.22	2059.17	-6424	-0.0000264	0.0005615	0.0035	2.25		7149.38	7149.38	3.47		Si
SLV 3	3.32	-1770.12	-8258	-0.0000289	0.0005615	0.0035	2.25		10005.06	10005.06	5.65		Si
SLV 3	4.22	2459.27	-6962	-0.0000301	0.0005615	0.0035	2.25		7694.55	7694.55	3.13		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	3.32	-1006.35	-13266	-11172	-52	2.25	2.25	-16551	9151	6177	42820	20212	5737	25950	No	498.85	Si
SLU 82	4.22	806.94	-10441	-8793	-1320	2.25	2.25	-13026	8681	5860	42820	20212	5737	25950	No	19.66	Si
SLU 39	3.32	-924.34	-12276	-10338	-54	2.25	2.25	-15315	8986	6066	42820	20212	5737	25950	No	480.4	Si
SLU 39	4.22	765.14	-9847	-8292	-1197	2.25	2.25	-12285	8582	5793	42820	20212	5737	25950	No	21.68	Si
SLU 41	3.32	-924.34	-12276	-10338	-54	2.25	2.25	-15315	8986	6066	42820	20212	5737	25950	No	480.4	Si
SLU 41	4.22	765.14	-9847	-8292	-1197	2.25	2.25	-12285	8582	5793	42820	20212	5737	25950	No	21.68	Si
SLU 73	3.32	-889.47	-11756	-9900	-41	2.25	2.25	-14667	8900	6007	42820	20212	5737	25950	No	640.48	Si
SLU 73	4.22	709.21	-9108	-7670	-1193	2.25	2.25	-11363	8460	5710	42820	20212	5737	25950	No	21.75	Si
SLU 83	3.32	-1013.34	-13246	-11155	-48	2.25	2.25	-16525	9148	6175	42820	20212	5737	25950	No	539.21	Si
SLU 83	4.22	793.7	-10423	-8777	-1311	2.25	2.25	-13003	8678	5858	42820	20212	5737	25950	No	19.79	Si
SLU 40	3.32	-917.35	-12296	-10355	-58	2.25	2.25	-15340	8990	6068	42820	20212	5737	25950	No	448.1	Si
SLU 40	4.22	778.37	-9865	-8308	-1206	2.25	2.25	-12307	8585	5795	42820	20212	5737	25950	No	21.51	Si
SLU 84	3.32	-1006.35	-13266	-11172	-52	2.25	2.25	-16551	9151	6177	42820	20212	5737	25950	No	498.85	Si
SLU 84	4.22	806.94	-10441	-8793	-1320	2.25	2.25	-13026	8681	5860	42820	20212	5737	25950	No	19.66	Si
SLU 76	3.32	-889.47	-11756	-9900	-41	2.25	2.25	-14667	8900	6007	42820	20212	5737	25950	No	640.48	Si
SLU 76	4.22	709.21	-9108	-7670	-1193	2.25	2.25	-11363	8460	5710	42820	20212	5737	25950	No	21.75	Si
SLU 81	3.32	-1013.34	-13246	-11155	-48	2.25	2.25	-16525	9148	6175	42820	20212	5737	25950	No	539.21	Si
SLU 81	4.22	793.7	-10423	-8777	-1311	2.25	2.25	-13003	8678	5858	42820	20212	5737	25950	No	19.79	Si
SLU 42	3.32	-917.35	-12296	-10355	-58	2.25	2.25	-15340	8990	6068	42820	20212	5737	25950	No	448.1	Si
SLU 42	4.22	778.37	-9865	-8308	-1206	2.25	2.25	-12307	8585	5795	42820	20212	5737	25950	No	21.51	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	3.32	-152.34	-5350	-4505	2246	2.25	2.25	-6674	11751	7932	42820	30319	5737	36056		16.05	Si
SLV 10	4.22	-991.07	-3621	-3049	1242	2.25	2.25	-4517	11320	7641	42820	30319	5737	36056		29.04	Si
SLV 1	3.32	-1804.13	-7566	-6371	-4304	2.25	2.25	-9439	12304	8305	42820	30319	5737	36056		8.38	Si
SLV 1	4.22	2059.17	-6424	-5409	-3671	2.25	2.25	-8014	12019	8113	42820	30319	5737	36056		9.82	Si
SLV 3	3.32	-1770.12	-8258	-6954	-4680	2.25	2.25	-10302	12477	8422	42820	30319	5737	36056		7.7	Si
SLV 3	4.22	2459.27	-6962	-5862	-4140	2.25	2.25	-8685	12154	8204	42820	30319	5737	36056		8.71	Si
SLV 4	3.32	-1571.73	-8026	-6759	-3889	2.25	2.25	-10013	12419	8383	42820	30319	5737	36056		9.27	Si
SLV 4	4.22	2080.51	-6625	-5579	-3523	2.25	2.25	-8265	12070	8147	42820	30319	5737	36056		10.23	Si
SLV 2	3.32	-1605.74	-7334	-6176	-3513	2.25	2.25	-9150	12247	8266	42820	30319	5737	36056		10.26	Si
SLV 2	4.22	1680.4	-6087	-5126	-3054	2.25	2.25	-7594	11935	8056	42820	30319	5737	36056		11.81	Si
SLV 14	3.32	689.04	-5526	-4653	4665	2.25	2.25	-6893	11795	7962	42820	30319	5737	36056		7.73	Si
SLV 14	4.22	-1707.11	-3262	-2747	2706	2.25	1.805	-5083	11433	6191	42820	30319	5737	36056		13.33	Si
SLV 16	3.32	723.05	-6218	-5236	4289	2.25	2.25	-7757	11968	8078	42820	30319	5737	36056		8.41	Si
SLV 16	4.22	-1307.01	-3800	-3200	2237	2.25	2.25	-4741	11365	7671	42820	30319	5737	36056		16.12	Si
SLV 13	3.32	490.66	-5757	-4848	3874	2.25	2.25	-7182	11853	8001	42820	30319	5737	36056		9.31	Si
SLV 13	4.22	-1328.35	-3599	-3031	2089	2.25	2.25	-4490	11315	7637	42820	30319	5737	36056		17.26	Si
SLV 15	3.32	524.66	-6449	-5431	3498	2.25	2.25	-8046	12026	8117	42820	30319	5737	36056		10.31	Si
SLV 15	4.22	-928.25	-4137	-3484	1620	2.25	2.25	-5161	11449	7728	42820	30319	5737	36056		22.26	Si
SLV 7	3.32	-928.74	-8434	-7102	-2261	2.25	2.25	-10521	12521	8452	42820	30319	5737	36056		15.95	Si
SLV 7	4.22	1743.23	-6603	-5561	-2676	2.25	2.25	-8238	12064	8143	42820	30319	5737	36056		13.47	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.48	8195	-5532	352.05	785.21	2.23	Si
SLV 9	179667	0.48	8355	-5640	352.05	799.7	2.27	Si
SLV 6	179667	0.48	8412	-5678	352.05	804.82	2.29	Si
SLV 5	179667	0.48	8573	-5787	352.05	819.27	2.33	Si
SLV 14	179667	0.48	9076	-6126	352.05	864.32	2.46	Si
SLV 13	179667	0.48	9234	-6233	352.05	878.42	2.5	Si
SLV 2	179667	0.48	9800	-6615	352.05	928.6	2.64	Si
SLV 1	179667	0.48	9958	-6722	352.05	942.55	2.68	Si
SLV 16	179667	0.48	10047	-6782	352.05	950.37	2.7	Si
SLV 15	179667	0.48	10206	-6889	352.05	964.26	2.74	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 = 3.2 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 3	-3228	-8579	-301	2.294	708.8	0.892	37.39278	15.04226	Si
SLV 4	-3166	-8688	-301	2.32	702.9	0.891	37.8231	15.04226	Si
SLV 1	-3128	-7416	180	2.359	699.3	0.891	38.46052	15.04226	Si
SLV 2	-3066	-7526	180	2.386	693.4	0.891	38.91054	15.04226	Si
SLV 7	-3171	-10689	-819	2.223	703.3	0.892	36.24454	13.64588	Si
SLV 8	-3108	-10800	-819	2.249	697.3	0.891	36.6716	13.64588	Si
SLV 11	-3021	-11336	-783	2.292	689.1	0.891	37.39306	13.64588	Si
SLV 15	-2728	-10736	-179	2.544	661.7	0.89	41.55323	15.04226	Si
SLV 12	-2958	-11447	-783	2.319	683.2	0.891	37.84479	13.64588	Si
SLV 13	-2628	-9574	302	2.57	652.4	0.889	41.99181	15.04226	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	12.746	SLU 40	Si
V_SLU	19.656	SLU 82	Si
PF_SLV	2.87	SLV 14	Si
V_SLV	7.705	SLV 3	Si
PFFP_SLV	2.23	SLV 10	Si
R_SLV	2.486	SLV 3	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
-26.338	5.726	-24.423	5.726	L2	L3	1.915	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 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	2.32	-751.69	-7362	-0.0000258	0.0003743	0.0035	1.915	6161.93	7411.75	7411.75	9.86	No	Si
SLU 81	4.22	-1660.48	-6225	-0.0000302	0.0003743	0.0035	1.915	5325.96	6511.84	6511.84	3.92	No	Si
SLU 41	2.32	-719.14	-6625	-0.0000235	0.0003743	0.0035	1.915	5625.17	6831.84	6831.84	9.5	No	Si
SLU 41	4.22	-1581.39	-5943	-0.0000288	0.0003743	0.0035	1.915	5112.6	6281.1	6281.1	3.97	No	Si
SLU 39	2.32	-719.14	-6625	-0.0000235	0.0003743	0.0035	1.915	5625.17	6831.84	6831.84	9.5	No	Si

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	4.22	-1581.39	-5943	-0.0000288	0.0003743	0.0035	1.915	5112.6	6281.1	6281.1	3.97	No	Si
SLU 83	2.32	-751.69	-7362	-0.0000258	0.0003743	0.0035	1.915	6161.93	7411.75	7411.75	9.86	No	Si
SLU 83	4.22	-1660.48	-6225	-0.0000302	0.0003743	0.0035	1.915	5325.96	6511.84	6511.84	3.92	No	Si
SLU 40	2.32	-737.54	-6654	-0.0000237	0.0003743	0.0035	1.915	5646.06	6853.8	6853.8	9.29	No	Si
SLU 40	4.22	-1577.23	-5938	-0.0000287	0.0003743	0.0035	1.915	5108.3	6276.45	6276.45	3.98	No	Si
SLU 42	2.32	-737.54	-6654	-0.0000237	0.0003743	0.0035	1.915	5646.06	6853.8	6853.8	9.29	No	Si
SLU 42	4.22	-1577.23	-5938	-0.0000287	0.0003743	0.0035	1.915	5108.3	6276.45	6276.45	3.98	No	Si
SLU 84	2.32	-770.08	-7390	-0.000026	0.0003743	0.0035	1.915	6182.14	7434.26	7434.26	9.65	No	Si
SLU 84	4.22	-1656.32	-6219	-0.0000302	0.0003743	0.0035	1.915	5321.72	6507.27	6507.27	3.93	No	Si
SLU 60	2.32	-610.88	-6455	-0.0000221	0.0003743	0.0035	1.915	5498.67	6697.68	6697.68	10.96	No	Si
SLU 60	4.22	-1408.8	-5215	-0.0000253	0.0003743	0.0035	1.915	4548.23	5681.5	5681.5	4.03	No	Si
SLU 62	2.32	-610.88	-6455	-0.0000221	0.0003743	0.0035	1.915	5498.67	6697.68	6697.68	10.96	No	Si
SLU 62	4.22	-1408.8	-5215	-0.0000253	0.0003743	0.0035	1.915	4548.23	5681.5	5681.5	4.03	No	Si
SLU 82	2.32	-770.08	-7390	-0.000026	0.0003743	0.0035	1.915	6182.14	7434.26	7434.26	9.65	No	Si
SLU 82	4.22	-1656.32	-6219	-0.0000302	0.0003743	0.0035	1.915	5321.72	6507.27	6507.27	3.93	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	2.32	824.78	-2179	-0.0000124	0.0005615	0.0035	1.915		2225.32	2225.32	2.7		Si
SLV 9	4.22	-1760.11	-3222	-0.000026	0.0005615	0.0035	1.532		4018.81	4018.81	2.28		Si
SLV 16	2.32	1232.39	-3783	-0.0000198	0.0005615	0.0035	1.915		3675.91	3675.91	2.98		Si
SLV 16	4.22	-2447.79	-4262	-0.0000373	0.0005615	0.0035	1.532		4941.21	4941.21	2.02		Si
SLV 2	2.32	-1618.08	-4187	-0.0000243	0.0005615	0.0035	1.915		4875.57	4875.57	3.01		Si
SLV 2	4.22	525.7	-1802	-0.0000089	0.0005615	0.0035	1.915		1876.72	1876.72	3.57		Si
SLV 4	2.32	-2140.93	-5382	-0.0000321	0.0005615	0.0035	1.915		5912.26	5912.26	2.76		Si
SLV 4	4.22	922.1	-1808	-0.0000133	0.0005615	0.0035	1.915		1882.5	1882.5	2.04		Si
SLV 1	2.32	-1975.23	-4611	-0.000029	0.0005615	0.0035	1.915		5242.33	5242.33	2.65		Si
SLV 1	4.22	890.1	-1636	-0.000013	0.0005615	0.0035	1.915		1723.54	1723.54	1.94		Si
SLV 10	2.32	1187.21	-1748	-0.0000208	0.0005615	0.0035	1.915		1827.6	1827.6	1.54		Si
SLV 10	4.22	-2129.9	-3391	-0.0000344	0.0005615	0.0035	1.532		4170.38	4170.38	1.96		Si
SLV 13	2.32	1398.09	-3011	-0.0000202	0.0005615	0.0035	1.915		2982.24	2982.24	2.13		Si
SLV 13	4.22	-2479.79	-4090	-0.000039	0.0005615	0.0035	1.532		4790.15	4790.15	1.93		Si
SLV 14	2.32	1755.24	-2587	-0.0000309	0.0005615	0.0035	1.915		2597.46	2597.46	1.48		Si
SLV 14	4.22	-2844.19	-4256	-0.0000496	0.0005615	0.0035	1.532		4935.83	4935.83	1.74		Si
SLV 15	2.32	875.24	-4207	-0.000018	0.0005615	0.0035	1.915		4053.54	4053.54	4.63		Si
SLV 15	4.22	-2083.39	-4096	-0.0000304	0.0005615	0.0035	1.915		4795.66	4795.66	2.3		Si
SLV 3	2.32	-2498.09	-5807	-0.0000369	0.0005615	0.0035	1.915		6283.56	6283.56	2.52		Si
SLV 3	4.22	1286.5	-1642	-0.0000315	0.0005615	0.0035	1.915		1729.31	1729.31	1.34		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 62	2.32	-610.88	-6455	-5436	1180	1.915	1.915	-9462	8206	4714	42820	17203	4883	22086	No	18.72	Si
SLU 62	4.22	-1408.8	-5215	-4392	1183	1.915	1.915	-7644	7964	4575	42820	17203	4883	22086	No	18.66	Si
SLU 40	2.32	-737.54	-6654	-5603	1180	1.915	1.915	-9753	8245	4737	42820	17203	4883	22086	No	18.72	Si
SLU 40	4.22	-1577.23	-5938	-5000	1168	1.915	1.915	-8704	8105	4656	42820	17203	4883	22086	No	18.9	Si
SLU 82	2.32	-770.08	-7390	-6223	1289	1.915	1.915	-10833	8389	4819	42820	17203	4883	22086	No	17.14	Si
SLU 82	4.22	-1656.32	-6219	-5237	1278	1.915	1.915	-9116	8160	4688	42820	17203	4883	22086	No	17.28	Si
SLU 84	2.32	-770.08	-7390	-6223	1289	1.915	1.915	-10833	8389	4819	42820	17203	4883	22086	No	17.14	Si
SLU 84	4.22	-1656.32	-6219	-5237	1278	1.915	1.915	-9116	8160	4688	42820	17203	4883	22086	No	17.28	Si
SLU 81	2.32	-751.69	-7362	-6200	1310	1.915	1.915	-10791	8383	4816	42820	17203	4883	22086	No	16.86	Si
SLU 81	4.22	-1660.48	-6225	-5242	1314	1.915	1.915	-9124	8161	4689	42820	17203	4883	22086	No	16.81	Si
SLU 60	2.32	-610.88	-6455	-5436	1180	1.915	1.915	-9462	8206	4714	42820	17203	4883	22086	No	18.72	Si
SLU 60	4.22	-1408.8	-5215	-4392	1183	1.915	1.915	-7644	7964	4575	42820	17203	4883	22086	No	18.66	Si
SLU 42	2.32	-737.54	-6654	-5603	1180	1.915	1.915	-9753	8245	4737	42820	17203	4883	22086	No	18.72	Si
SLU 42	4.22	-1577.23	-5938	-5000	1168	1.915	1.915	-8704	8105	4656	42820	17203	4883	22086	No	18.9	Si
SLU 39	2.32	-719.14	-6625	-5579	1201	1.915	1.915	-9711	8239	4733	42820	17203	4883	22086	No	18.39	Si
SLU 39	4.22	-1581.39	-5943	-5005	1204	1.915	1.915	-8712	8106	4657	42820	17203	4883	22086	No	18.34	Si
SLU 41	2.32	-719.14	-6625	-5579	1201	1.915	1.915	-9711	8239	4733	42820	17203	4883	22086	No	18.39	Si
SLU 41	4.22	-1581.39	-5943	-5005	1204	1.915	1.915	-8712	8106	4657	42820	17203	4883	22086	No	18.34	Si
SLU 83	2.32	-751.69	-7362	-6200	1310	1.915	1.915	-10791	8383	4816	42820	17203	4883	22086	No	16.86	Si
SLU 83	4.22	-1660.48	-6225	-5242	1314	1.915	1.915	-9124	8161	4689	42820	17203	4883	22086	No	16.81	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	2.32	-2498.09	-5807	-4890	-3420	1.915	1.5819	-10353	12487	5926	42820	25805	4883	30688		8.97	Si
SLV 3	4.22	1286.5	-1642	-1383	-2634	1.915	0.5219	-8866	12190	1908	42820	25805	4883	30688		11.65	Si
SLV 14	2.32	1755.24	-2587	-2178	4745	1.915	0.8368	-3792	11175	2805	42820	25805	4883	30688		6.47	Si
SLV 14	4.22	-2844.19	-4256	-3584	3964	1.532	0.8675	0	0	0	42820	20644	3907	24550		6.19	Si
SLV 1	2.32	-1975.23	-4611	-3883	-2362	1.915	1.5874	-8183	12053	5740	42820	25805	4883	30688		12.99	Si
SLV 1	4.22	890.1	-1636	-1377	-1561	1.915	1.2399	-2398	10896	4053	42820	25805	4883	30688		19.66	Si
SLV 13	2.32	1398.09	-3011	-2536	4067	1.915	1.4796	-4414	11299	5016	42820	25805	4883	30688		7.54	Si
SLV 13	4.22	-2479.79	-4090	-3444	3287	1.532	1.0534	0	0	0	42820	20644	3907	24550		7.47	Si
SLV 10	2.32	1187.21	-1748	-1472	3734	1.915	0.8355	-2563	10929	2739	42820	25805	4883	30688		8.22	Si
SLV 10	4.22	-2129.9	-3391	-2855	3525	1.532	0.988	0	0	0	42820	20644	3907	24550		6.96	Si
SLV 4	2.32	-2140.93	-5382	-4533	-2743	1.915	1.6792	-9035	12224	6158	42820	25805	4883	30688		11.19	Si
SLV 4	4.22	922.1	-1808	-1522	-1957	1.915	1.3424	-2650	10947	4408	42820	25805	4883	30688		15.68	Si
SLV 9	2.32	824.78	-2179	-1835	3047	1.915	1.737	-3194	11056	5761	42820	25805	4883	30688		10.07	Si
SLV 9	4.22	-1760.11	-3222	-2713	2838	1.532	1.2337	0	0	0	42820	20644	3907	24550		8.65	Si
SLV 15	2.32	875.24	-4207	-3543	3009	1.915	1.915	-6167	11650	6693	42820	25805	4883	30688		10.2	Si
SLV 15	4.22	-2083.39	-4096	-3449	2213	1.915	1.3465	-8569	12131	4900	42820	25805	4883	30688		13.87	Si
SLV 7	2.32	-1930.06	-6645	-5596	-2410	1.915	1.915	-9740	12365	7104	42820	25805	4883	30688		12.74	Si
SLV 7	4.22	572.21	-2507	-2111	-2195	1.915	1.915	-3675	11152	6407	42820	25805	4883	30688		13.98	Si
SLV 16	2.32	1232.39	-3783	-3185	3686	1.915	1.8951	-5544	11526	6552	42820	25805	4883	30688		8.32	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	4.22	-2447.79	-4262	-3589	2890	1.532	1.1495	0	0	0	42820	20644	3907	24550		8.49	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.48	4655	-2674	299.63	388.89	1.3	Si
SLV 5	179667	0.48	4882	-2805	299.63	407.28	1.36	Si
SLV 10	179667	0.48	4904	-2817	299.63	409.04	1.37	Si
SLV 9	179667	0.48	5132	-2948	299.63	427.37	1.43	Si
SLV 2	179667	0.48	5507	-3164	299.63	457.44	1.53	Si
SLV 1	179667	0.48	5731	-3293	299.63	475.35	1.59	Si
SLV 14	179667	0.48	6338	-3641	299.63	523.54	1.75	Si
SLV 4	179667	0.48	6485	-3726	299.63	535.15	1.79	Si
SLV 13	179667	0.48	6563	-3770	299.63	541.24	1.81	Si
SLV 3	179667	0.48	6710	-3855	299.63	552.81	1.84	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 = 3.2 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-2392	-4148	144	2.506	569.7	0.89	40.91739	15.04226	Si
SLV 13	-2349	-4425	144	2.53	565.7	0.89	41.32165	15.04226	Si
SLV 16	-2372	-5451	82	2.531	567.9	0.89	41.34014	15.04226	Si
SLV 15	-2330	-5729	82	2.556	563.9	0.89	41.75022	15.04226	Si
SLV 4	-1834	-4782	-145	2.869	518.6	0.889	46.90056	15.04226	Si
SLV 10	-2227	-2390	137	2.605	554.4	0.889	42.56447	13.64588	Si
SLV 2	-1854	-3479	-83	2.871	520.3	0.889	46.92979	15.04226	Si
SLV 9	-2184	-2672	137	2.631	550.4	0.889	43.00565	13.64588	Si
SLV 3	-1792	-5060	-145	2.901	514.8	0.889	47.42101	15.04226	Si
SLV 1	-1812	-3756	-83	2.902	516.5	0.889	47.44851	15.04226	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	3.922	SLU 81	Si
V_SLU	16.805	SLU 81	Si
PF_SLV	1.344	SLV 3	Si
V_SLV	6.193	SLV 14	Si
PFFP_SLV	1.298	SLV 6	Si
R_SLV	2.72	SLV 14	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
-28.073	-3.274	-28.073	-0.094	L2	L3	3.181	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 76	1.32	-2578.37	-6236	-0.000029	0.0004492	0.0035	3.1806	8855.81	15043.27	15043.27	5.83	No	Si
SLU 76	3.42	-4447.61	-2105	-0.0001855	0.0004492	0.0035	2.5445	0	9051.61	9051.61	2.04	No	Si
SLU 75	1.32	-2616.27	-6269	-0.0000293	0.0004492	0.0035	3.1806	8897.56	15089.25	15089.25	5.77	No	Si
SLU 75	3.42	-4431.91	-2131	-0.0001821	0.0004492	0.0035	2.5445	0	9089.89	9089.89	2.05	No	Si
SLU 82	1.32	-2969.47	-6571	-0.0000319	0.0004492	0.0035	3.1806	9271.31	15503.88	15503.88	5.22	No	Si
SLU 82	3.42	-4708.36	-2370	-0.0001852	0.0004492	0.0035	2.5445	0	9446.8	9446.8	2.01	No	Si
SLU 78	1.32	-2616.27	-6269	-0.0000293	0.0004492	0.0035	3.1806	8897.56	15089.25	15089.25	5.77	No	Si
SLU 78	3.42	-4431.91	-2131	-0.0001821	0.0004492	0.0035	2.5445	0	9089.89	9089.89	2.05	No	Si
SLU 79	1.32	-2673.12	-6319	-0.0000297	0.0004492	0.0035	3.1806	8960.08	15158.22	15158.22	5.67	No	Si
SLU 79	3.42	-4408.37	-2170	-0.0001768	0.0004492	0.0035	2.5445	0	9147.33	9147.33	2.07	No	Si
SLU 80	1.32	-2616.27	-6269	-0.0000293	0.0004492	0.0035	3.1806	8897.56	15089.25	15089.25	5.77	No	Si
SLU 80	3.42	-4431.91	-2131	-0.0001821	0.0004492	0.0035	2.5445	0	9089.89	9089.89	2.05	No	Si
SLU 84	1.32	-2969.47	-6571	-0.0000319	0.0004492	0.0035	3.1806	9271.31	15503.88	15503.88	5.22	No	Si
SLU 84	3.42	-4708.36	-2370	-0.0001852	0.0004492	0.0035	2.5445	0	9446.8	9446.8	2.01	No	Si
SLU 73	1.32	-2578.37	-6236	-0.000029	0.0004492	0.0035	3.1806	8855.81	15043.27	15043.27	5.83	No	Si
SLU 73	3.42	-4447.61	-2105	-0.0001855	0.0004492	0.0035	2.5445	0	9051.61	9051.61	2.04	No	Si
SLU 83	1.32	-3026.31	-6621	-0.0000323	0.0004492	0.0035	3.1806	9333	15572.85	15572.85	5.15	No	Si
SLU 83	3.42	-4684.82	-2409	-0.0001796	0.0004492	0.0035	2.5445	0	9504.23	9504.23	2.03	No	Si
SLU 81	1.32	-3026.31	-6621	-0.0000323	0.0004492	0.0035	3.1806	9333	15572.85	15572.85	5.15	No	Si
SLU 81	3.42	-4684.82	-2409	-0.0001796	0.0004492	0.0035	2.5445	0	9504.23	9504.23	2.03	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	1.32	-1063.52	-3504	-0.0000142	0.0006738	0.0035	3.1806		11136.37	11136.37	10.47		Si
SLV 3	3.42	-2636.85	-770	-0.0001337	0.0006738	0.0035	2.5445		7035.07	7035.07	2.67		Si
SLV 14	1.32	-1949.9	-5455	-0.0000236	0.0006738	0.0035	3.1806		14001.81	14001.81	7.18		Si
SLV 14	3.42	-3248.77	-1983	-0.000089	0.0006738	0.0035	2.5445		8866.95	8866.95	2.73		Si
SLV 12	1.32	2910.86	-1376	-0.0006036	0.0006738	0.0035	2.5445		3162.83	3162.83	1.09		Si
SLV 12	3.42	-5169.66	1374	-0.0003188	0.0006738	0.0035	2.5445		3752.93	3752.93	0.73		No
SLV 4	1.32	-1171.72	-3608	-0.000015	0.0006738	0.0035	3.1806		11291.57	11291.57	9.64		Si
SLV 4	3.42	-2555.34	-784	-0.0001277	0.0006738	0.0035	2.5445		7057.23	7057.23	2.76		Si
SLV 8	1.32	2386.46	-1389	-0.0002644	0.0006738	0.0035	3.1806		3182.47	3182.47	1.33		Si
SLV 8	3.42	-4604.24	1249	-0.0002806	0.0006738	0.0035	2.5445		3946.98	3946.98	0.86		No
SLV 15	1.32	684.47	-3461	-0.0000122	0.0006738	0.0035	3.1806		6327.72	6327.72	9.24		Si
SLV 15	3.42	-4521.57	-351	-0.000268	0.0006738	0.0035	2.5445		6400.56	6400.56	1.42		Si
SLV 16	1.32	576.26	-3565	-0.000012	0.0006738	0.0035	3.1806		6483.88	6483.88	11.25		Si
SLV 16	3.42	-4440.07	-366	-0.0002624	0.0006738	0.0035	2.5445		6422.71	6422.71	1.45		Si
SLV 13	1.32	-1841.69	-5351	-0.0000228	0.0006738	0.0035	3.1806		13850.35	13850.35	7.52		Si
SLV 13	3.42	-3330.27	-1969	-0.0000981	0.0006738	0.0035	2.5445		8845	8845	2.66		Si
SLV 11	1.32	3020.66	-1270	-0.0007796	0.0006738	0.0035	2.5445		3000.26	3000.26	0.99		No
SLV 11	3.42	-5252.37	1389	-0.0003246	0.0006738	0.0035	2.5445		3729.98	3729.98	0.71		No
SLV 7	1.32	2496.26	-1283	-0.0004183	0.0006738	0.0035	3.1806		3019.9	3019.9	1.21		Si
SLV 7	3.42	-4686.95	1264	-0.0002861	0.0006738	0.0035	2.5445		3924.16	3924.16	0.84		No

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 61	1.32	-2282.13	-6382	-3647	2100	3.1806	3.1806	-7644	9352	4462	122342	17145	16221	33366	No	15.89	Si
SLU 61	3.42	-4087.93	-2268	-1296	2084	2.5445	0	0	0	0	122342	13716	12977	26693	No	12.81	Si
SLU 44	1.32	-1066.91	-5344	-3054	2082	3.1806	3.1806	-6400	9187	4383	122342	17145	16221	33366	No	16.03	Si
SLU 44	3.42	-3182.13	-1445	-826	2069	2.5445	0	0	0	0	122342	13716	12977	26693	No	12.9	Si
SLU 63	1.32	-2282.13	-6382	-3647	2100	3.1806	3.1806	-7644	9352	4462	122342	17145	16221	33366	No	15.89	Si
SLU 63	3.42	-4087.93	-2268	-1296	2084	2.5445	0	0	0	0	122342	13716	12977	26693	No	12.81	Si
SLU 60	1.32	-2338.98	-6432	-3675	2071	3.1806	3.1806	-7704	9361	4466	122342	17145	16221	33366	No	16.11	Si
SLU 60	3.42	-4064.39	-2307	-1318	2054	2.5445	0	0	0	0	122342	13716	12977	26693	No	12.99	Si
SLU 52	1.32	-1891.04	-6047	-3455	2109	3.1806	3.1806	-7243	9299	4436	122342	17145	16221	33366	No	15.82	Si
SLU 52	3.42	-3827.17	-2003	-1145	2093	2.5445	0	0	0	0	122342	13716	12977	26693	No	12.75	Si
SLU 59	1.32	-1928.93	-6080	-3474	2089	3.1806	3.1806	-7283	9304	4439	122342	17145	16221	33366	No	15.97	Si
SLU 59	3.42	-3811.48	-2029	-1159	2073	2.5445	0	0	0	0	122342	13716	12977	26693	No	12.87	Si
SLU 57	1.32	-1928.93	-6080	-3474	2089	3.1806	3.1806	-7283	9304	4439	122342	17145	16221	33366	No	15.97	Si
SLU 57	3.42	-3811.48	-2029	-1159	2073	2.5445	0	0	0	0	122342	13716	12977	26693	No	12.87	Si
SLU 55	1.32	-1891.04	-6047	-3455	2109	3.1806	3.1806	-7243	9299	4436	122342	17145	16221	33366	No	15.82	Si
SLU 55	3.42	-3827.17	-2003	-1145	2093	2.5445	0	0	0	0	122342	13716	12977	26693	No	12.75	Si
SLU 54	1.32	-1928.93	-6080	-3474	2089	3.1806	3.1806	-7283	9304	4439	122342	17145	16221	33366	No	15.97	Si
SLU 54	3.42	-3811.48	-2029	-1159	2073	2.5445	0	0	0	0	122342	13716	12977	26693	No	12.87	Si
SLU 47	1.32	-1066.91	-5344	-3054	2082	3.1806	3.1806	-6400	9187	4383	122342	17145	16221	33366	No	16.03	Si
SLU 47	3.42	-3182.13	-1445	-826	2069	2.5445	0	0	0	0	122342	13716	12977	26693	No	12.9	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	1.32	-6034.07	-7689	-4393	-1975	3.1806	2.4164	-12177	14936	5414	122342	25718	16221	41939		21.24	Si
SLV 6	3.42	-633.25	-4143	-2367	-1077	3.1806	3.1806	-4962	13492	6437	122342	25718	16221	41939		38.94	Si
SLV 12	1.32	2910.86	-1376	-786	5015	2.5445	0	0	0	0	122342	20574	12977	33551		6.69	Si
SLV 12	3.42	-5169.66	1374	785	4094	2.5445	0	0	0	0	122342	20574	12977	33551		8.2	Si
SLV 15	1.32	684.47	-3461	-1978	3466	3.1806	3.1806	-4145	13329	6359	122342	25718	16221	41939		12.1	Si
SLV 15	3.42	-4521.57	-351	-201	3277	2.5445	0	0	0	0	122342	20574	12977	33551		10.24	Si
SLV 8	1.32	2386.46	-1389	-794	4437	3.1806	0	-44784	16250	0	122342	25718	16221	41939		9.45	Si
SLV 8	3.42	-4604.24	1249	714	3454	2.5445	0	0	0	0	122342	20574	12977	33551		9.71	Si
SLV 16	1.32	576.26	-3565	-2037	3444	3.1806	3.1806	-4270	13354	6371	122342	25718	16221	41939		12.18	Si
SLV 16	3.42	-4440.07	-366	-209	3255	2.5445	0	0	0	0	122342	20574	12977	33551		10.31	Si
SLV 13	1.32	-1841.69	-5351	-3058	1543	3.1806	3.1806	-6409	13782	6575	122342	25718	16221	41939		27.19	Si
SLV 13	3.42	-3330.27	-1969	-1125	1918	2.5445	0	0	0	0	122342	20574	12977	33551		17.49	Si
SLV 5	1.32	-5924.27	-7583	-4333	-1952	3.1806	2.427	-11957	14892	5421	122342	25718	16221	41939		21.49	Si
SLV 5	3.42	-715.96	-4128	-2359	-1054	3.1806	3.1806	-4944	13489	6435	122342	25718	16221	41939		39.78	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
SLV 7	1.32	2496.26	-1283	-733	4460	3.1806	0	-52823	16250	0	122342	25718	16221	41939		9.4	Si
SLV 7	3.42	-4686.95	1264	722	3477	2.5445	0	0	0	0	122342	20574	12977	33551		9.65	Si
SLV 14	1.32	-1949.9	-5455	-3117	1520	3.1806	3.1806	-6534	13807	6587	122342	25718	16221	41939		27.59	Si
SLV 14	3.42	-3248.77	-1983	-1133	1896	2.5445	0	0	0	0	122342	20574	12977	33551		17.7	Si
SLV 11	1.32	3020.66	-1270	-726	5037	2.5445	0	0	0	0	122342	20574	12977	33551		6.66	Si
SLV 11	3.42	-5252.37	1389	794	4117	2.5445	0	0	0	0	122342	20574	12977	33551		8.15	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.2 Ta 0.16 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 11	1079	0.48	269.75	0	0	0	0	No
SLV 12	1045	0.48	269.75	0	0	0	0	No
SLV 8	934	0.48	269.75	0	0	0	0	No
SLV 7	968	0.48	269.75	0	0	0	0	No
SLV 15	-703	0.48	269.75	0	274.8	137.4	0.51	No
SLV 16	-737	0.48	269.75	0	278.18	139.09	0.52	No
SLV 3	-1073	0.48	269.75	0	310.98	155.49	0.58	No
SLV 4	-1108	0.48	269.75	0	314.28	157.14	0.58	No
SLV 13	-2342	0.48	269.75	0	431.51	215.75	0.8	No
SLV 14	-2376	0.48	269.75	0	434.71	217.35	0.81	No

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.2 Wa = 0.03 Ta = 0.1574

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 9	-439	-7570	2	8.736	344.9	0.922	137.62585	19.53246	Si
SLV 10	-432	-7676	2	8.764	344.5	0.923	137.98105	19.53246	Si
SLV 5	-414	-7583	-41	8.821	343.5	0.925	138.61522	19.53246	Si
SLV 6	-408	-7689	-41	8.85	343.1	0.926	138.9729	19.53246	Si
SLV 13	-237	-5351	66	9.65	334.6	0.947	148.08069	19.53246	Si
SLV 14	-231	-5455	66	9.685	334.4	0.948	148.44544	19.53246	Si
SLV 1	-156	-5394	-78	10.085	331.7	0.961	152.45374	19.53246	Si
SLV 2	-149	-5498	-78	10.123	331.5	0.963	152.81577	19.53246	Si
SLV 15	-40	-3461	78	10.791	329.3	0.988	158.67464	19.53246	Si
SLV 16	-33	-3565	78	10.834	329.3	0.99	159.01505	19.53246	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	2.006	SLU 82	Si
V_SLU	12.753	SLU 52	Si
PF_SLV	0.71	SLV 11	No
V_SLV	6.66	SLV 11	Si
PFFP_SLV	0	SLV 7	No
R_SLV	7.046	SLV 9	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
-28.073	0.706	-28.073	1.056	L2	L3	0.35	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 67	1.32	136.91	-1233	-0.0001143	0.0004492	0.0035	0.35	174.29	202.38	202.38	1.48	No	Si
SLU 67	3.42	-119.95	-1860	-0.0000985	0.0004492	0.0035	0.35	231.08	332.29	332.29	2.77	No	Si
SLU 28	1.32	116.29	-1014	-0.0000984	0.0004492	0.0035	0.35	149.36	172.65	172.65	1.48	No	Si
SLU 28	3.42	-100.64	-1584	-0.0000821	0.0004492	0.0035	0.35	208.73	294.68	294.68	2.93	No	Si
SLU 68	1.32	137.36	-1233	-0.0001151	0.0004492	0.0035	0.35	174.28	202.37	202.37	1.47	No	Si
SLU 68	3.42	-120.57	-1865	-0.000099	0.0004492	0.0035	0.35	231.5	333.02	333.02	2.76	No	Si
SLU 26	1.32	116.74	-1014	-0.0000992	0.0004492	0.0035	0.35	149.35	172.64	172.64	1.48	No	Si
SLU 26	3.42	-101.26	-1589	-0.0000825	0.0004492	0.0035	0.35	209.23	295.46	295.46	2.92	No	Si
SLU 30	1.32	116.29	-1014	-0.0000984	0.0004492	0.0035	0.35	149.36	172.65	172.65	1.48	No	Si
SLU 30	3.42	-100.64	-1584	-0.0000821	0.0004492	0.0035	0.35	208.73	294.68	294.68	2.93	No	Si
SLU 23	1.32	116.74	-1014	-0.0000992	0.0004492	0.0035	0.35	149.35	172.64	172.64	1.48	No	Si
SLU 23	3.42	-101.26	-1589	-0.0000825	0.0004492	0.0035	0.35	209.23	295.46	295.46	2.92	No	Si
SLU 70	1.32	136.91	-1233	-0.0001143	0.0004492	0.0035	0.35	174.29	202.38	202.38	1.48	No	Si
SLU 70	3.42	-119.95	-1860	-0.0000985	0.0004492	0.0035	0.35	231.08	332.29	332.29	2.77	No	Si
SLU 65	1.32	137.36	-1233	-0.0001151	0.0004492	0.0035	0.35	174.28	202.37	202.37	1.47	No	Si
SLU 65	3.42	-120.57	-1865	-0.000099	0.0004492	0.0035	0.35	231.5	333.02	333.02	2.76	No	Si
SLU 25	1.32	116.29	-1014	-0.0000984	0.0004492	0.0035	0.35	149.36	172.65	172.65	1.48	No	Si
SLU 25	3.42	-100.64	-1584	-0.0000821	0.0004492	0.0035	0.35	208.73	294.68	294.68	2.93	No	Si
SLU 72	1.32	136.91	-1233	-0.0001143	0.0004492	0.0035	0.35	174.29	202.38	202.38	1.48	No	Si
SLU 72	3.42	-119.95	-1860	-0.0000985	0.0004492	0.0035	0.35	231.08	332.29	332.29	2.77	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 4	1.32	102.61	-1372	-0.0000772	0.0006738	0.0035	0.35		227.49	227.49	2.22		Si
SLV 4	3.42	-58.52	-1248	-0.0000538	0.0006738	0.0035	0.35		250.39	250.39	4.28		Si
SLV 11	1.32	219.94	-666	-0.0176996	0.0006738	0.0035	0.28		124.12	124.12	0.56		No
SLV 11	3.42	-130.32	-2259	-0.0001106	0.0006738	0.0035	0.35		394.43	394.43	3.03		Si
SLV 12	1.32	218.81	-674	-0.0174049	0.0006738	0.0035	0.28		125.29	125.29	0.57		No
SLV 12	3.42	-128.98	-2248	-0.0001097	0.0006738	0.0035	0.35		392.94	392.94	3.05		Si
SLV 13	1.32	108.75	-653	-0.0004783	0.0006738	0.0035	0.28		122.01	122.01	1.12		Si
SLV 13	3.42	-125.47	-1732	-0.0000963	0.0006738	0.0035	0.35		321.45	321.45	2.56		Si
SLV 14	1.32	107.64	-660	-0.000348	0.0006738	0.0035	0.28		123.16	123.16	1.14		Si
SLV 14	3.42	-124.15	-1721	-0.0000953	0.0006738	0.0035	0.35		319.92	319.92	2.58		Si
SLV 3	1.32	103.73	-1365	-0.0000778	0.0006738	0.0035	0.35		226.51	226.51	2.18		Si
SLV 3	3.42	-59.84	-1259	-0.0000546	0.0006738	0.0035	0.35		252.05	252.05	4.21		Si
SLV 7	1.32	199.78	-919	-0.00982	0.0006738	0.0035	0.28		164.16	164.16	0.82		No
SLV 7	3.42	-106.04	-2002	-0.0000932	0.0006738	0.0035	0.35		359.67	359.67	3.39		Si
SLV 8	1.32	198.66	-926	-0.0094958	0.0006738	0.0035	0.28		165.29	165.29	0.83		No
SLV 8	3.42	-104.7	-1991	-0.0000924	0.0006738	0.0035	0.35		358.18	358.18	3.42		Si
SLV 15	1.32	170.92	-523	-0.0135221	0.0006738	0.0035	0.28		100.98	100.98	0.59		No
SLV 15	3.42	-140.78	-2113	-0.000112	0.0006738	0.0035	0.35		374.67	374.67	2.66		Si
SLV 16	1.32	169.81	-531	-0.0132286	0.0006738	0.0035	0.28		102.14	102.14	0.6		No
SLV 16	3.42	-139.46	-2102	-0.0001111	0.0006738	0.0035	0.35		373.2	373.2	2.68		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	1.32	164.69	-1698	-970	233	0.35	0.234	-18481	10797	379	122342	1887	1785	3672	No	15.73	Si
SLU 83	3.42	-139.33	-2517	-1438	242	0.35	0.35	-27394	10833	569	122342	1887	1785	3672	No	15.2	Si
SLU 81	1.32	164.69	-1698	-970	233	0.35	0.234	-18481	10797	379	122342	1887	1785	3672	No	15.73	Si
SLU 81	3.42	-139.33	-2517	-1438	242	0.35	0.35	-27394	10833	569	122342	1887	1785	3672	No	15.2	Si
SLU 78	1.32	156.83	-1558	-890	223	0.35	0.2231	-16962	10595	355	122342	1887	1785	3672	No	16.46	Si
SLU 78	3.42	-134.16	-2326	-1329	231	0.35	0.35	-25312	10833	569	122342	1887	1785	3672	No	15.9	Si
SLU 82	1.32	165.36	-1698	-970	235	0.35	0.2328	-18480	10797	377	122342	1887	1785	3672	No	15.63	Si
SLU 82	3.42	-140.25	-2525	-1443	243	0.35	0.35	-27486	10833	569	122342	1887	1785	3672	No	15.1	Si
SLU 80	1.32	156.83	-1558	-890	223	0.35	0.2231	-16962	10595	355	122342	1887	1785	3672	No	16.46	Si
SLU 80	3.42	-134.16	-2326	-1329	231	0.35	0.35	-25312	10833	569	122342	1887	1785	3672	No	15.9	Si
SLU 75	1.32	156.83	-1558	-890	223	0.35	0.2231	-16962	10595	355	122342	1887	1785	3672	No	16.46	Si
SLU 75	3.42	-134.16	-2326	-1329	231	0.35	0.35	-25312	10833	569	122342	1887	1785	3672	No	15.9	Si
SLU 76	1.32	157.27	-1558	-890	224	0.35	0.2222	-16961	10595	353	122342	1887	1785	3672	No	16.39	Si
SLU 76	3.42	-134.78	-2331	-1332	232	0.35	0.35	-25374	10833	569	122342	1887	1785	3672	No	15.83	Si
SLU 84	1.32	165.36	-1698	-970	235	0.35	0.2328	-18480	10797	377	122342	1887	1785	3672	No	15.63	Si
SLU 84	3.42	-140.25	-2525	-1443	243	0.35	0.35	-27486	10833	569	122342	1887	1785	3672	No	15.1	Si
SLU 79	1.32	156.16	-1558	-891	222	0.35	0.2244	-16963	10595	357	122342	1887	1785	3672	No	16.57	Si
SLU 79	3.42	-133.24	-2317	-1324	229	0.35	0.35	-25220	10833	569	122342	1887	1785	3672	No	16.01	Si
SLU 73	1.32	157.27	-1558	-890	224	0.35	0.2222	-16961	10595	353	122342	1887	1785	3672	No	16.39	Si
SLU 73	3.42	-134.78	-2331	-1332	232	0.35	0.35	-25374	10833	569	122342	1887	1785	3672	No	15.83	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 10	1.32	11.58	-1106	-632	-73	0.35	0.35	-12041	14908	783	122342	2830	1785	4615		62.96	Si
SLV 10	3.42	-77.95	-977	-558	415	0.35	0.2857	-10637	14627	627	122342	2830	1785	4615		11.12	Si
SLV 15	1.32	170.92	-523	-299	332	0.28	0	0	0	0	122342	2264	1428	3692		11.11	Si
SLV 15	3.42	-140.78	-2113	-1207	200	0.35	0.3251	-22997	16250	792	122342	2830	1785	4615		23.13	Si
SLV 12	1.32	218.81	-674	-385	433	0.28	0	0	0	0	122342	2264	1428	3692		8.52	Si
SLV 12	3.42	-128.98	-2248	-1284	-41	0.35	0.35	-24463	16250	853	122342	2830	1785	4615		113.62	Si
SLV 16	1.32	169.81	-531	-303	330	0.28	0	0	0	0	122342	2264	1428	3692		11.2	Si
SLV 16	3.42	-139.46	-2102	-1201	197	0.35	0.326	-22879	16250	795	122342	2830	1785	4615		23.45	Si
SLV 5	1.32	-7.45	-1351	-772	-134	0.35	0.35	-14708	15442	811	122342	2830	1785	4615		34.48	Si
SLV 5	3.42	-55.01	-732	-418	351	0.35	0.2995	-7967	14093	633	122342	2830	1785	4615		13.15	Si
SLV 9	1.32	12.71	-1099	-628	-71	0.35	0.35	-11962	14892	782	122342	2830	1785	4615		65.35	Si
SLV 9	3.42	-79.29	-988	-565	418	0.35	0.2843	-10756	14651	625	122342	2830	1785	4615		11.05	Si
SLV 7	1.32	199.78	-919	-525	373	0.28	0	0	0	0	122342	2264	1428	3692		9.9	Si
SLV 7	3.42	-106.04	-2002	-1144	-105	0.35	0.35	-21793	16250	853	122342	2830	1785	4615		44.07	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	1.32	219.94	-666	-381	436	0.28	0	0	0	0	122342	2264	1428	3692		8.47	Si
SLV 11	3.42	-130.32	-2259	-1291	-38	0.35	0.35	-24583	16250	853	122342	2830	1785	4615		121.8	Si
SLV 8	1.32	198.66	-926	-529	370	0.28	0	0	0	0	122342	2264	1428	3692		9.98	Si
SLV 8	3.42	-104.7	-1991	-1138	-107	0.35	0.35	-21674	16250	853	122342	2830	1785	4615		42.95	Si
SLV 6	1.32	-8.58	-1359	-776	-137	0.35	0.35	-14787	15457	812	122342	2830	1785	4615		33.8	Si
SLV 6	3.42	-53.67	-721	-412	348	0.35	0.3017	-7847	14069	637	122342	2830	1785	4615		13.26	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.2 Ta 0.16 Wa 0.03 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-761	0.48	29.68	52.57	85.36	68.97	2.32	Si
SLV 5	-772	0.48	29.68	53.26	86.35	69.81	2.35	Si
SLV 2	-906	0.48	29.68	61.56	98.48	80.02	2.7	Si
SLV 1	-917	0.48	29.68	62.22	99.45	80.84	2.72	Si
SLV 10	-1018	0.48	29.68	68.25	108.51	88.38	2.98	Si
SLV 9	-1029	0.48	29.68	68.9	109.49	89.19	3	Si
SLV 4	-1287	0.48	29.68	83.61	132.55	108.08	3.64	Si
SLV 3	-1298	0.48	29.68	84.2	133.51	108.85	3.67	Si
SLV 14	-1761	0.48	29.68	107.91	174.33	141.12	4.75	Si
SLV 13	-1772	0.48	29.68	108.42	175.27	141.85	4.78	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.2 Wa = 0.03 Ta = 0.1574

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-395	-1501	-9	3.446	69.1	0.903	55.43538	19.53246	Si
SLV 1	-395	-1494	-8	3.446	69.1	0.903	55.43626	19.53246	Si
SLV 3	-379	-1365	12	3.539	67.5	0.902	57.02665	19.53246	Si
SLV 4	-378	-1372	12	3.54	67.5	0.902	57.0434	19.53246	Si
SLV 5	-246	-1351	-23	4.615	54.6	0.891	75.24373	19.53246	Si
SLV 6	-246	-1359	-23	4.615	54.6	0.891	75.24579	19.53246	Si
SLV 7	-192	-919	46	5.227	49.6	0.889	85.45421	19.53246	Si
SLV 8	-192	-926	46	5.229	49.6	0.889	85.48538	19.53246	Si
SLV 9	-102	-1099	-14	7.007	41.8	0.896	113.64378	19.53246	Si
SLV 10	-102	-1106	-15	7.008	41.8	0.896	113.65443	19.53246	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	1.473	SLU 65	Si
V_SLU	15.104	SLU 82	Si
PF_SLV	0.564	SLV 11	No
V_SLV	8.469	SLV 11	Si
PFFP_SLV	2.323	SLV 6	Si
R_SLV	2.838	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
-30.558	1.056	-29.008	1.056	L2	L3	1.55	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 44	1.32	-1128.42	-10501	-0.0000457	0.0004492	0.0035	1.55	6634.16	8492.53	8492.53	7.53	No	Si
SLU 44	3.42	1735.99	-8153	-0.0000456	0.0004492	0.0035	1.55	5411.76	6030.41	6030.41	3.47	No	Si
SLU 45	1.32	-1121.04	-10476	-0.0000456	0.0004492	0.0035	1.55	6621.82	8477.28	8477.28	7.56	No	Si
SLU 45	3.42	1725.81	-8128	-0.0000454	0.0004492	0.0035	1.55	5397.8	6013.97	6013.97	3.48	No	Si
SLU 43	1.32	-1121.04	-10476	-0.0000456	0.0004492	0.0035	1.55	6621.82	8477.28	8477.28	7.56	No	Si
SLU 43	3.42	1725.81	-8128	-0.0000454	0.0004492	0.0035	1.55	5397.8	6013.97	6013.97	3.48	No	Si
SLU 49	1.32	-1125.47	-10491	-0.0000457	0.0004492	0.0035	1.55	6629.23	8486.43	8486.43	7.54	No	Si
SLU 49	3.42	1731.92	-8143	-0.0000455	0.0004492	0.0035	1.55	5406.17	6023.83	6023.83	3.48	No	Si
SLU 47	1.32	-1128.42	-10501	-0.0000457	0.0004492	0.0035	1.55	6634.16	8492.53	8492.53	7.53	No	Si
SLU 47	3.42	1735.99	-8153	-0.0000456	0.0004492	0.0035	1.55	5411.76	6030.41	6030.41	3.47	No	Si
SLU 68	1.32	-1426.72	-12697	-0.0000566	0.0004492	0.0035	1.55	7641.34	9796.6	9796.6	6.87	No	Si
SLU 68	3.42	2003.84	-10287	-0.0000558	0.0004492	0.0035	1.55	6529.11	7257.17	7257.17	3.62	No	Si
SLU 46	1.32	-1125.47	-10491	-0.0000457	0.0004492	0.0035	1.55	6629.23	8486.43	8486.43	7.54	No	Si
SLU 46	3.42	1731.92	-8143	-0.0000455	0.0004492	0.0035	1.55	5406.17	6023.83	6023.83	3.48	No	Si
SLU 48	1.32	-1121.04	-10476	-0.0000456	0.0004492	0.0035	1.55	6621.82	8477.28	8477.28	7.56	No	Si
SLU 48	3.42	1725.81	-8128	-0.0000454	0.0004492	0.0035	1.55	5397.8	6013.97	6013.97	3.48	No	Si
SLU 51	1.32	-1125.47	-10491	-0.0000457	0.0004492	0.0035	1.55	6629.23	8486.43	8486.43	7.54	No	Si
SLU 51	3.42	1731.92	-8143	-0.0000455	0.0004492	0.0035	1.55	5406.17	6023.83	6023.83	3.48	No	Si
SLU 50	1.32	-1121.04	-10476	-0.0000456	0.0004492	0.0035	1.55	6621.82	8477.28	8477.28	7.56	No	Si
SLU 50	3.42	1725.81	-8128	-0.0000454	0.0004492	0.0035	1.55	5397.8	6013.97	6013.97	3.48	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	1.32	-4485.4	-12509	-0.0000966	0.0006738	0.0035	1.55		9980.09	9980.09	2.23		Si
SLV 2	3.42	2358.54	-10831	-0.0000609	0.0006738	0.0035	1.55		7934.64	7934.64	3.36		Si
SLV 4	1.32	-4710.5	-13204	-0.0001019	0.0006738	0.0035	1.55		10415.22	10415.22	2.21		Si
SLV 4	3.42	2560.1	-11347	-0.000065	0.0006738	0.0035	1.55		8231.36	8231.36	3.22		Si
SLV 13	1.32	2396.55	-7546	-0.0000517	0.0006738	0.0035	1.55		5750.11	5750.11	2.4		Si
SLV 13	3.42	624.64	-5723	-0.0000243	0.0006738	0.0035	1.55		4486.16	4486.16	7.18		Si
SLV 8	1.32	-2566.17	-12283	-0.0000681	0.0006738	0.0035	1.55		9838.76	9838.76	3.83		Si
SLV 8	3.42	2189.86	-10164	-0.0000568	0.0006738	0.0035	1.55		7502.94	7502.94	3.43		Si
SLV 16	1.32	2166.61	-8252	-0.0000504	0.0006738	0.0035	1.55		6230.17	6230.17	2.88		Si
SLV 16	3.42	830.29	-6249	-0.0000284	0.0006738	0.0035	1.55		4854.71	4854.71	5.85		Si
SLV 3	1.32	-4705.66	-13194	-0.0001018	0.0006738	0.0035	1.55		10408.67	10408.67	2.21		Si
SLV 3	3.42	2556.01	-11336	-0.0000649	0.0006738	0.0035	1.55		8225.34	8225.34	3.22		Si
SLV 15	1.32	2171.45	-8242	-0.0000504	0.0006738	0.0035	1.55		6223.11	6223.11	2.87		Si
SLV 15	3.42	826.2	-6239	-0.0000283	0.0006738	0.0035	1.55		4847.44	4847.44	5.87		Si
SLV 7	1.32	-2561.26	-12272	-0.000068	0.0006738	0.0035	1.55		9832.11	9832.11	3.84		Si
SLV 7	3.42	2185.71	-10153	-0.0000567	0.0006738	0.0035	1.55		7495.99	7495.99	3.43		Si
SLV 1	1.32	-4480.56	-12498	-0.0000965	0.0006738	0.0035	1.55		9973.54	9973.54	2.23		Si
SLV 1	3.42	2354.45	-10820	-0.0000608	0.0006738	0.0035	1.55		7928.62	7928.62	3.37		Si
SLV 14	1.32	2391.71	-7557	-0.0000516	0.0006738	0.0035	1.55		5757.28	5757.28	2.41		Si
SLV 14	3.42	628.73	-5734	-0.0000244	0.0006738	0.0035	1.55		4493.55	4493.55	7.15		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	1.32	-2077.47	-18238	-13264	-2221	1.55	1.55	-28525	10833	5038	122342	16711	7905	24616	No	11.08	Si
SLU 84	3.42	2588.06	-15828	-11511	-2221	1.55	1.55	-24756	10833	5038	122342	16711	7905	24616	No	11.08	Si
SLU 79	1.32	-1876.92	-16558	-12042	-2038	1.55	1.55	-25897	10833	5038	122342	16711	7905	24616	No	12.08	Si
SLU 79	3.42	2405.46	-14148	-10289	-2038	1.55	1.55	-22127	10833	5038	122342	16711	7905	24616	No	12.08	Si
SLU 73	1.32	-1884.31	-16583	-12060	-2047	1.55	1.55	-25936	10833	5038	122342	16711	7905	24616	No	12.03	Si
SLU 73	3.42	2415.64	-14173	-10308	-2047	1.55	1.55	-22167	10833	5038	122342	16711	7905	24616	No	12.03	Si
SLU 78	1.32	-1881.35	-16573	-12053	-2043	1.55	1.55	-25921	10833	5038	122342	16711	7905	24616	No	12.05	Si
SLU 78	3.42	2411.57	-14163	-10300	-2043	1.55	1.55	-22151	10833	5038	122342	16711	7905	24616	No	12.05	Si
SLU 82	1.32	-2077.47	-18238	-13264	-2221	1.55	1.55	-28525	10833	5038	122342	16711	7905	24616	No	11.08	Si
SLU 82	3.42	2588.06	-15828	-11511	-2221	1.55	1.55	-24756	10833	5038	122342	16711	7905	24616	No	11.08	Si
SLU 80	1.32	-1881.35	-16573	-12053	-2043	1.55	1.55	-25921	10833	5038	122342	16711	7905	24616	No	12.05	Si
SLU 80	3.42	2411.57	-14163	-10300	-2043	1.55	1.55	-22151	10833	5038	122342	16711	7905	24616	No	12.05	Si
SLU 83	1.32	-2073.03	-18223	-13253	-2216	1.55	1.55	-28501	10833	5038	122342	16711	7905	24616	No	11.11	Si
SLU 83	3.42	2581.95	-15813	-11500	-2216	1.55	1.55	-24732	10833	5038	122342	16711	7905	24616	No	11.11	Si
SLU 81	1.32	-2073.03	-18223	-13253	-2216	1.55	1.55	-28501	10833	5038	122342	16711	7905	24616	No	11.11	Si
SLU 81	3.42	2581.95	-15813	-11500	-2216	1.55	1.55	-24732	10833	5038	122342	16711	7905	24616	No	11.11	Si
SLU 76	1.32	-1884.31	-16583	-12060	-2047	1.55	1.55	-25936	10833	5038	122342	16711	7905	24616	No	12.03	Si
SLU 76	3.42	2415.64	-14173	-10308	-2047	1.55	1.55	-22167	10833	5038	122342	16711	7905	24616	No	12.03	Si
SLU 75	1.32	-1881.35	-16573	-12053	-2043	1.55	1.55	-25921	10833	5038	122342	16711	7905	24616	No	12.05	Si
SLU 75	3.42	2411.57	-14163	-10300	-2043	1.55	1.55	-22151	10833	5038	122342	16711	7905	24616	No	12.05	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 5	1.32	-1810.91	-9953	-7239	-1690	1.55	1.55	-15567	15613	7260	122342	25066	7905	32971		19.52	Si
SLV 5	3.42	1513.82	-8435	-6134	-1585	1.55	1.55	-13192	15138	7039	122342	25066	7905	32971		20.8	Si
SLV 6	1.32	-1815.82	-9964	-7247	-1694	1.55	1.55	-15584	15617	7262	122342	25066	7905	32971		19.47	Si
SLV 6	3.42	1517.98	-8446	-6142	-1589	1.55	1.55	-13209	15142	7041	122342	25066	7905	32971		20.75	Si
SLV 3	1.32	-4705.66	-13194	-9595	-3639	1.55	1.255	-25786	16250	6118	122342	25066	7905	32971		9.06	Si
SLV 3	3.42	2556.01	-11336	-8244	-3219	1.55	1.55	-17730	16046	7461	122342	25066	7905	32971		10.24	Si
SLV 11	1.32	-498.13	-10787	-7845	-924	1.55	1.55	-16870	15874	7381	122342	25066	7905	32971		35.7	Si
SLV 11	3.42	1666.77	-8624	-6272	-1028	1.55	1.55	-13489	15198	7067	122342	25066	7905	32971		32.07	Si
SLV 4	1.32	-4710.5	-13204	-9603	-3643	1.55	1.2548	-25812	16250	6117	122342	25066	7905	32971		9.05	Si
SLV 4	3.42	2560.1	-11347	-8252	-3223	1.55	1.55	-17746	16049	7463	122342	25066	7905	32971		10.23	Si
SLV 12	1.32	-503.04	-10797	-7852	-928	1.55	1.55	-16887	15877	7383	122342	25066	7905	32971		35.53	Si
SLV 12	3.42	1670.92	-8635	-6280	-1033	1.55	1.55	-13505	15201	7068	122342	25066	7905	32971		31.93	Si
SLV 1	1.32	-4480.56	-12498	-9090	-3465	1.55	1.2495	-24518	16250	6091	122342	25066	7905	32971		9.52	Si
SLV 1	3.42	2354.45	-10820	-7869	-3057	1.55	1.55	-16924	15885	7386	122342	25066	7905	32971		10.79	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 8	1.32	-2566.17	-12283	-8933	-2275	1.55	1.55	-19211	16250	7556	122342	25066	7905	32971		14.49	Si
SLV 8	3.42	2189.86	-10164	-7392	-2131	1.55	1.55	-15897	15679	7291	122342	25066	7905	32971		15.47	Si
SLV 2	1.32	-4485.4	-12509	-9097	-3469	1.55	1.2492	-24544	16250	6090	122342	25066	7905	32971		9.5	Si
SLV 2	3.42	2358.54	-10831	-7877	-3061	1.55	1.55	-16940	15888	7388	122342	25066	7905	32971		10.77	Si
SLV 7	1.32	-2561.26	-12272	-8925	-2271	1.55	1.55	-19194	16250	7556	122342	25066	7905	32971		14.52	Si
SLV 7	3.42	2185.71	-10153	-7384	-2127	1.55	1.55	-15880	15676	7289	122342	25066	7905	32971		15.5	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.2 Ta 0.08 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 13	-6067	0.48	248.6	845.22	1198.13	1021.68	4.11	Si
SLV 14	-6077	0.48	248.6	846.57	1199.82	1023.2	4.12	Si
SLV 15	-6584	0.48	248.6	911.3	1281.68	1096.49	4.41	Si
SLV 16	-6594	0.48	248.6	912.62	1283.37	1098	4.42	Si
SLV 9	-7253	0.48	248.6	995.38	1389.7	1192.54	4.8	Si
SLV 10	-7264	0.48	248.6	996.7	1391.41	1194.05	4.8	Si
SLV 5	-8787	0.48	248.6	1182.2	1636.13	1409.17	5.67	Si
SLV 6	-8798	0.48	248.6	1183.47	1637.83	1410.65	5.67	Si
SLV 11	-8977	0.48	248.6	1204.76	1666.49	1435.62	5.77	Si
SLV 12	-8988	0.48	248.6	1206.01	1668.19	1437.1	5.78	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.2 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-3821	-13204	-52	1.656	643.8	0.906	26.55253	15.04226	Si
SLV 3	-3819	-13194	-52	1.656	643.7	0.906	26.5577	15.04226	Si
SLV 2	-3773	-12509	41	1.672	639	0.906	26.8308	15.04226	Si
SLV 1	-3772	-12498	41	1.673	638.9	0.906	26.83616	15.04226	Si
SLV 16	-3383	-8252	-42	1.801	600.6	0.902	29.00557	15.04226	Si
SLV 15	-3382	-8242	-42	1.801	600.5	0.902	29.01172	15.04226	Si
SLV 14	-3335	-7557	51	1.816	595.9	0.902	29.26815	15.04226	Si
SLV 13	-3334	-7546	51	1.816	595.8	0.902	29.27451	15.04226	Si
SLV 8	-3723	-12283	-157	1.666	634.1	0.905	26.73934	13.64588	Si
SLV 7	-3722	-12272	-157	1.666	634	0.905	26.74472	13.64588	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	3.474	SLU 44	Si
V_SLU	11.084	SLU 82	Si
PF_SLV	2.211	SLV 4	Si
V_SLV	9.049	SLV 4	Si
PFFP_SLV	4.11	SLV 13	Si
R_SLV	1.765	SLV 4	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
-28.208	1.056	-24.423	1.056	L2	L3	3.785	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 75	1.32	-14322.04	-34440	-0.0000737	0.0004492	0.0035	3.785	48999.11	63576.38	63576.38	4.44	No	Si
SLU 75	3.42	-6320.51	-21974	-0.0000401	0.0004492	0.0035	3.785	35000.08	45528.02	45528.02	7.2	No	Si
SLU 82	1.32	-15330.33	-37165	-0.0000798	0.0004492	0.0035	3.785	51494.75	67250.9	67250.9	4.39	No	Si
SLU 82	3.42	-7129.4	-24716	-0.0000453	0.0004492	0.0035	3.785	38442.43	49716.71	49716.71	6.97	No	Si
SLU 73	1.32	-14329.93	-34447	-0.0000738	0.0004492	0.0035	3.785	49005.06	63584.98	63584.98	4.44	No	Si
SLU 73	3.42	-6318.82	-21978	-0.0000401	0.0004492	0.0035	3.785	35005.03	45533.96	45533.96	7.21	No	Si
SLU 77	1.32	-14310.2	-34431	-0.0000737	0.0004492	0.0035	3.785	48990.19	63563.5	63563.5	4.44	No	Si
SLU 77	3.42	-6323.03	-21969	-0.0000401	0.0004492	0.0035	3.785	34992.65	45519.11	45519.11	7.2	No	Si
SLU 83	1.32	-15318.49	-37156	-0.0000797	0.0004492	0.0035	3.785	51486.53	67238.83	67238.83	4.39	No	Si
SLU 83	3.42	-7131.92	-24710	-0.0000453	0.0004492	0.0035	3.785	38435.43	49708.3	49708.3	6.97	No	Si
SLU 84	1.32	-15330.33	-37165	-0.0000798	0.0004492	0.0035	3.785	51494.75	67250.9	67250.9	4.39	No	Si
SLU 84	3.42	-7129.4	-24716	-0.0000453	0.0004492	0.0035	3.785	38442.43	49716.71	49716.71	6.97	No	Si
SLU 81	1.32	-15318.49	-37156	-0.0000797	0.0004492	0.0035	3.785	51486.53	67238.83	67238.83	4.39	No	Si
SLU 81	3.42	-7131.92	-24710	-0.0000453	0.0004492	0.0035	3.785	38435.43	49708.3	49708.3	6.97	No	Si
SLU 76	1.32	-14329.93	-34447	-0.0000738	0.0004492	0.0035	3.785	49005.06	63584.98	63584.98	4.44	No	Si
SLU 76	3.42	-6318.82	-21978	-0.0000401	0.0004492	0.0035	3.785	35005.03	45533.96	45533.96	7.21	No	Si
SLU 80	1.32	-14322.04	-34440	-0.0000737	0.0004492	0.0035	3.785	48999.11	63576.38	63576.38	4.44	No	Si
SLU 80	3.42	-6320.51	-21974	-0.0000401	0.0004492	0.0035	3.785	35000.08	45528.02	45528.02	7.2	No	Si
SLU 78	1.32	-14322.04	-34440	-0.0000737	0.0004492	0.0035	3.785	48999.11	63576.38	63576.38	4.44	No	Si
SLU 78	3.42	-6320.51	-21974	-0.0000401	0.0004492	0.0035	3.785	35000.08	45528.02	45528.02	7.2	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	1.32	-13979.14	-21447	-0.0000542	0.0006738	0.0035	3.785		45625.94	45625.94	3.26		Si
SLV 4	3.42	-1936.73	-10843	-0.000017	0.0006738	0.0035	3.785		27805.7	27805.7	14.36		Si
SLV 3	1.32	-13946.36	-21429	-0.0000541	0.0006738	0.0035	3.785		45597.57	45597.57	3.27		Si
SLV 3	3.42	-1939.88	-10849	-0.000017	0.0006738	0.0035	3.785		27816.79	27816.79	14.34		Si
SLV 6	1.32	-10051.03	-21229	-0.0000461	0.0006738	0.0035	3.785		45277.26	45277.26	4.5		Si
SLV 6	3.42	-3448.07	-12126	-0.0000215	0.0006738	0.0035	3.785		30025.51	30025.51	8.71		Si
SLV 2	1.32	-13524.29	-20903	-0.0000526	0.0006738	0.0035	3.785		44755.96	44755.96	3.31		Si
SLV 2	3.42	-2078.59	-10700	-0.0000171	0.0006738	0.0035	3.785		27558.06	27558.06	13.26		Si
SLV 8	1.32	-11567.19	-23044	-0.0000514	0.0006738	0.0035	3.785		48177.19	48177.19	4.16		Si
SLV 8	3.42	-2975.21	-12603	-0.0000212	0.0006738	0.0035	3.785		30850.97	30850.97	10.37		Si
SLV 7	1.32	-11533.92	-23026	-0.0000513	0.0006738	0.0035	3.785		48148.41	48148.41	4.17		Si
SLV 7	3.42	-2978.4	-12610	-0.0000212	0.0006738	0.0035	3.785		30862.22	30862.22	10.36		Si
SLV 5	1.32	-10017.76	-21211	-0.000046	0.0006738	0.0035	3.785		45248.48	45248.48	4.52		Si
SLV 5	3.42	-3451.26	-12133	-0.0000215	0.0006738	0.0035	3.785		30036.76	30036.76	8.7		Si
SLV 12	1.32	-9044.74	-23868	-0.0000474	0.0006738	0.0035	3.785		49493.83	49493.83	5.47		Si
SLV 12	3.42	-4007.21	-13969	-0.0000249	0.0006738	0.0035	3.785		33166.18	33166.18	8.28		Si
SLV 1	1.32	-13491.51	-20885	-0.0000525	0.0006738	0.0035	3.785		44727.59	44727.59	3.32		Si
SLV 1	3.42	-2081.74	-10706	-0.0000171	0.0006738	0.0035	3.785		27569.15	27569.15	13.24		Si
SLV 11	1.32	-9011.47	-23850	-0.0000473	0.0006738	0.0035	3.785		49465.04	49465.04	5.49		Si
SLV 11	3.42	-4010.4	-13976	-0.0000249	0.0006738	0.0035	3.785		33177.09	33177.09	8.27		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 65	1.32	-11977.25	-28088	-20428	-7973	3.785	3.785	-17990	10732	12186	122342	40807	19304	60111	No	7.54	Si
SLU 65	3.42	-4431.4	-15581	-11332	-7953	3.785	3.785	-9980	9664	10973	122342	40807	19304	60111	No	7.56	Si
SLU 70	1.32	-11969.36	-28082	-20423	-7976	3.785	3.785	-17986	10731	12186	122342	40807	19304	60111	No	7.54	Si
SLU 70	3.42	-4433.08	-15578	-11329	-7957	3.785	3.785	-9977	9664	10973	122342	40807	19304	60111	No	7.55	Si
SLU 67	1.32	-11969.36	-28082	-20423	-7976	3.785	3.785	-17986	10731	12186	122342	40807	19304	60111	No	7.54	Si
SLU 67	3.42	-4433.08	-15578	-11329	-7957	3.785	3.785	-9977	9664	10973	122342	40807	19304	60111	No	7.55	Si
SLU 77	1.32	-14310.2	-34431	-25041	-7926	3.785	3.785	-22053	10833	12301	122342	40807	19304	60111	No	7.58	Si
SLU 77	3.42	-6323.03	-21969	-15977	-7905	3.785	3.785	-14071	10209	11593	122342	40807	19304	60111	No	7.6	Si
SLU 66	1.32	-11957.53	-28072	-20416	-7981	3.785	3.785	-17980	10731	12185	122342	40807	19304	60111	No	7.53	Si
SLU 66	3.42	-4435.61	-15572	-11325	-7963	3.785	3.785	-9974	9663	10972	122342	40807	19304	60111	No	7.55	Si
SLU 71	1.32	-11957.53	-28072	-20416	-7981	3.785	3.785	-17980	10731	12185	122342	40807	19304	60111	No	7.53	Si
SLU 71	3.42	-4435.61	-15572	-11325	-7963	3.785	3.785	-9974	9663	10972	122342	40807	19304	60111	No	7.55	Si
SLU 64	1.32	-11957.53	-28072	-20416	-7981	3.785	3.785	-17980	10731	12185	122342	40807	19304	60111	No	7.53	Si
SLU 64	3.42	-4435.61	-15572	-11325	-7963	3.785	3.785	-9974	9663	10972	122342	40807	19304	60111	No	7.55	Si
SLU 72	1.32	-11969.36	-28082	-20423	-7976	3.785	3.785	-17986	10731	12186	122342	40807	19304	60111	No	7.54	Si
SLU 72	3.42	-4433.08	-15578	-11329	-7957	3.785	3.785	-9977	9664	10973	122342	40807	19304	60111	No	7.55	Si
SLU 68	1.32	-11977.25	-28088	-20428	-7973	3.785	3.785	-17990	10732	12186	122342	40807	19304	60111	No	7.54	Si
SLU 68	3.42	-4431.4	-15581	-11332	-7953	3.785	3.785	-9980	9664	10973	122342	40807	19304	60111	No	7.56	Si
SLU 69	1.32	-11957.53	-28072	-20416	-7981	3.785	3.785	-17980	10731	12185	122342	40807	19304	60111	No	7.53	Si
SLU 69	3.42	-4435.61	-15572	-11325	-7963	3.785	3.785	-9974	9663	10972	122342	40807	19304	60111	No	7.55	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 4	1.32	-13979.14	-21447	-15598	-11473	3.785	3.7221	-13737	15247	17026	122342	61211	19304	80514		7.02	Si
SLV 4	3.42	-1936.73	-10843	-7886	-10112	3.785	3.785	-6945	13889	15771	122342	61211	19304	80514		7.96	Si
SLV 6	1.32	-10051.03	-21229	-15439	-8634	3.785	3.785	-13597	15219	17282	122342	61211	19304	80514		9.33	Si
SLV 6	3.42	-3448.07	-12126	-8819	-8093	3.785	3.785	-7767	14053	15958	122342	61211	19304	80514		9.95	Si
SLV 2	1.32	-13524.29	-20903	-15202	-11981	3.785	3.7365	-13388	15178	17013	122342	61211	19304	80514		6.72	Si
SLV 2	3.42	-2078.59	-10700	-7782	-10552	3.785	3.785	-6853	13871	15750	122342	61211	19304	80514		7.63	Si
SLV 9	1.32	-7495.31	-22035	-16025	-5185	3.785	3.785	-14113	15323	17399	122342	61211	19304	80514		15.53	Si
SLV 9	3.42	-4483.27	-13498	-9817	-5474	3.785	3.785	-8646	14229	16157	122342	61211	19304	80514		14.71	Si
SLV 7	1.32	-11533.92	-23026	-16746	-6871	3.785	3.785	-14748	15450	17543	122342	61211	19304	80514		11.72	Si
SLV 7	3.42	-2978.4	-12610	-9171	-6554	3.785	3.785	-8076	14115	16028	122342	61211	19304	80514		12.28	Si
SLV 5	1.32	-10017.76	-21211	-15426	-8563	3.785	3.785	-13585	15217	17279	122342	61211	19304	80514		9.4	Si
SLV 5	3.42	-3451.26	-12133	-8824	-8022	3.785	3.785	-7771	14054	15958	122342	61211	19304	80514		10.04	Si
SLV 1	1.32	-13491.51	-20885	-15189	-11911	3.785	3.7395	-13376	15175	17024	122342	61211	19304	80514		6.76	Si
SLV 1	3.42	-2081.74	-10706	-7786	-10482	3.785	3.785	-6857	13871	15751	122342	61211	19304	80514		7.68	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	1.32	-7528.58	-22053	-16038	-5257	3.785	3.785	-14125	15325	17401	122342	61211	19304	80514		15.32	Si
SLV 10	3.42	-4480.07	-13492	-9812	-5545	3.785	3.785	-8641	14228	16156	122342	61211	19304	80514		14.52	Si
SLV 8	1.32	-11567.19	-23044	-16759	-6942	3.785	3.785	-14759	15452	17546	122342	61211	19304	80514		11.6	Si
SLV 8	3.42	-2975.21	-12603	-9166	-6625	3.785	3.785	-8072	14114	16027	122342	61211	19304	80514		12.15	Si
SLV 3	1.32	-13946.36	-21429	-15585	-11403	3.785	3.7251	-13725	15245	17037	122342	61211	19304	80514		7.06	Si
SLV 3	3.42	-1939.88	-10849	-7890	-10042	3.785	3.785	-6949	13890	15772	122342	61211	19304	80514		8.02	Si

Verifica a pressoflessione fuori piano muratura rinforzata con FRCM D.M. 17-01-18 (N.T.C.)

quota 3.2 Ta 0.08 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-12657	0.48	607.06	1783.12	2588.62	2185.87	3.6	Si
SLV 2	-12659	0.48	607.06	1783.37	2588.92	2186.14	3.6	Si
SLV 3	-12739	0.48	607.06	1793.91	2601.95	2197.93	3.62	Si
SLV 4	-12741	0.48	607.06	1794.16	2602.25	2198.2	3.62	Si
SLV 5	-13967	0.48	607.06	1954.39	2801.62	2378	3.92	Si
SLV 6	-13968	0.48	607.06	1954.63	2801.92	2378.28	3.92	Si
SLV 7	-14240	0.48	607.06	1989.79	2845.97	2417.88	3.98	Si
SLV 8	-14241	0.48	607.06	1990.04	2846.28	2418.16	3.98	Si
SLV 9	-15171	0.48	607.06	2109.72	2996.34	2553.03	4.21	Si
SLV 10	-15173	0.48	607.06	2109.96	2996.64	2553.3	4.21	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.2 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 15	-8385	-24176	-118	1.782	1478.8	0.903	28.68117	15.04226	Si
SLV 16	-8384	-24194	-118	1.782	1478.7	0.903	28.68345	15.04226	Si
SLV 13	-8309	-23632	50	1.798	1471.3	0.902	28.95529	15.04226	Si
SLV 14	-8308	-23649	50	1.798	1471.2	0.902	28.95826	15.04226	Si
SLV 3	-7811	-21429	-46	1.873	1422.4	0.9	30.23583	15.04226	Si
SLV 4	-7810	-21447	-47	1.874	1422.3	0.9	30.23836	15.04226	Si
SLV 1	-7735	-20885	121	1.879	1415	0.9	30.33557	15.04226	Si
SLV 2	-7734	-20903	121	1.879	1414.9	0.9	30.33882	15.04226	Si
SLV 11	-8273	-23850	-288	1.784	1467.8	0.902	28.72816	13.64588	Si
SLV 12	-8272	-23868	-288	1.784	1467.7	0.902	28.73049	13.64588	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	4.387	SLU 82	Si
V_SLU	7.532	SLU 64	Si
PF_SLV	3.264	SLV 4	Si
V_SLV	6.72	SLV 2	Si
PFFP_SLV	3.601	SLV 1	Si
R_SLV	1.907	SLV 15	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
-24.423	5.726	-24.423	-3.274	L2	L3	9.001	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 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 37	1.32	8603.06	-20231	-0.0000144	0.0003743	0.0035	9.0006	84344.6	89780.57	89780.57	10.44	No	Si
SLU 37	5.08	-302.64	-982	-0.0000006	0.0003743	0.0035	9.0006	4402.69	28974.54	28974.54	95.74	No	Si
SLU 32	1.32	8603.06	-20231	-0.0000144	0.0003743	0.0035	9.0006	84344.6	89780.57	89780.57	10.44	No	Si
SLU 32	5.08	-302.64	-982	-0.0000006	0.0003743	0.0035	9.0006	4402.69	28974.54	28974.54	95.74	No	Si
SLU 81	1.32	10597.04	-25648	-0.0000183	0.0003743	0.0035	9.0006	104654.64	111196.86	111196.86	10.49	No	Si
SLU 81	5.08	-396.17	-1163	-0.0000008	0.0003743	0.0035	9.0006	5210.38	29772.18	29772.18	75.15	No	Si
SLU 41	1.32	9262.95	-21558	-0.0000154	0.0003743	0.0035	9.0006	89408.48	95087.02	95087.02	10.27	No	Si
SLU 41	5.08	-311.15	-1225	-0.0000008	0.0003743	0.0035	9.0006	5486.95	30045.21	30045.21	96.56	No	Si
SLU 83	1.32	10597.04	-25648	-0.0000183	0.0003743	0.0035	9.0006	104654.64	111196.86	111196.86	10.49	No	Si
SLU 83	5.08	-396.17	-1163	-0.0000008	0.0003743	0.0035	9.0006	5210.38	29772.18	29772.18	75.15	No	Si
SLU 40	1.32	9139.44	-21551	-0.0000154	0.0003743	0.0035	9.0006	89382.95	95060.39	95060.39	10.4	No	Si
SLU 40	5.08	-295.75	-1225	-0.0000008	0.0003743	0.0035	9.0006	5489.13	30047.36	30047.36	101.6	No	Si
SLU 38	1.32	8479.55	-20224	-0.0000144	0.0003743	0.0035	9.0006	84318.77	89753.35	89753.35	10.58	No	Si
SLU 38	5.08	-287.24	-982	-0.0000006	0.0003743	0.0035	9.0006	4404.88	28976.7	28976.7	100.88	No	Si
SLU 35	1.32	8603.06	-20231	-0.0000144	0.0003743	0.0035	9.0006	84344.6	89780.57	89780.57	10.44	No	Si
SLU 35	5.08	-302.64	-982	-0.0000006	0.0003743	0.0035	9.0006	4402.69	28974.54	28974.54	95.74	No	Si
SLU 42	1.32	9139.44	-21551	-0.0000154	0.0003743	0.0035	9.0006	89382.95	95060.39	95060.39	10.4	No	Si
SLU 42	5.08	-295.75	-1225	-0.0000008	0.0003743	0.0035	9.0006	5489.13	30047.36	30047.36	101.6	No	Si
SLU 39	1.32	9262.95	-21558	-0.0000154	0.0003743	0.0035	9.0006	89408.48	95087.02	95087.02	10.27	No	Si
SLU 39	5.08	-311.15	-1225	-0.0000008	0.0003743	0.0035	9.0006	5486.95	30045.21	30045.21	96.56	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	1.32	17816.32	-18756	-0.0000169	0.0005615	0.0035	9.0006		85107.28	85107.28	4.78		Si
SLV 9	5.08	-1445.45	-440	-0.0000012	0.0005615	0.0035	7.2005		26533.37	26533.37	18.36		Si
SLV 5	1.32	18343.59	-13708	-0.0000143	0.0005615	0.0035	9.0006		63824.58	63824.58	3.48		Si
SLV 5	5.08	-1194.39	-317	-0.0000014	0.0005615	0.0035	7.2005		25979.64	25979.64	21.75		Si
SLV 6	1.32	18834.23	-13794	-0.0000145	0.0005615	0.0035	9.0006		64191.32	64191.32	3.41		Si
SLV 6	5.08	-1570.64	-337	-0.000005	0.0005615	0.0035	7.2005		26070.01	26070.01	16.6		Si
SLV 11	1.32	-5571.97	-19911	-0.000013	0.0005615	0.0035	9.0006		109848.37	109848.37	19.71		Si
SLV 11	5.08	993.33	-403	-0.0000006	0.0005615	0.0035	9.0006		5817.37	5817.37	5.86		Si
SLV 7	1.32	-5044.7	-14863	-0.00001	0.0005615	0.0035	9.0006		88757.42	88757.42	17.59		Si
SLV 7	5.08	1244.39	-279	-0.000008	0.0005615	0.0035	9.0006		5262.98	5262.98	4.23		Si
SLV 10	1.32	18306.95	-18842	-0.0000171	0.0005615	0.0035	9.0006		85466.59	85466.59	4.67		Si
SLV 10	5.08	-1821.7	-460	-0.0000025	0.0005615	0.0035	7.2005		26623.45	26623.45	14.61		Si
SLV 2	1.32	11259.9	-8308	-0.0000087	0.0005615	0.0035	9.0006		40573.6	40573.6	3.6		Si
SLV 2	5.08	-421.41	-179	-0.0000003	0.0005615	0.0035	9.0006		25362.27	25362.27	60.18		Si
SLV 8	1.32	-4554.06	-14949	-0.0000099	0.0005615	0.0035	9.0006		89121.33	89121.33	19.57		Si
SLV 8	5.08	868.15	-299	-0.0000006	0.0005615	0.0035	9.0006		5353.67	5353.67	6.17		Si
SLV 1	1.32	10776.41	-8223	-0.0000084	0.0005615	0.0035	9.0006		40204.48	40204.48	3.73		Si
SLV 1	5.08	-50.65	-159	-0.0000001	0.0005615	0.0035	9.0006		25272.75	25272.75	498.96		Si
SLV 3	1.32	3759.93	-8570	-0.0000061	0.0005615	0.0035	9.0006		41710.95	41710.95	11.09		Si
SLV 3	5.08	680.98	-148	-0.0000067	0.0005615	0.0035	9.0006		4672.84	4672.84	6.86		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 43	1.32	7176.44	-19591	-16498	2867	9.0006	9.0006	-6110	7759	20951	42820	80855	22951	63771	No	22.24	Si
SLU 43	5.08	-368.07	-63	-53	2864	7.2005	0	0	0	0	42820	64684	18361	42820	No	14.95	Si
SLU 50	1.32	7176.44	-19591	-16498	2867	9.0006	9.0006	-6110	7759	20951	42820	80855	22951	63771	No	22.24	Si
SLU 50	5.08	-368.07	-63	-53	2864	7.2005	0	0	0	0	42820	64684	18361	42820	No	14.95	Si
SLU 44	1.32	6970.6	-19580	-16488	2504	9.0006	9.0006	-6106	7759	20950	42820	80855	22951	63769	No	25.46	Si
SLU 44	5.08	-342.41	-64	-54	2692	7.2005	0	0	0	0	42820	64684	18361	42820	No	15.91	Si
SLU 51	1.32	7052.94	-19584	-16492	2649	9.0006	9.0006	-6108	7759	20950	42820	80855	22951	63770	No	24.07	Si
SLU 51	5.08	-352.68	-63	-53	2761	7.2005	0	0	0	0	42820	64684	18361	42820	No	15.51	Si
SLU 47	1.32	6970.6	-19580	-16488	2504	9.0006	9.0006	-6106	7759	20950	42820	80855	22951	63769	No	25.46	Si
SLU 47	5.08	-342.41	-64	-54	2692	7.2005	0	0	0	0	42820	64684	18361	42820	No	15.91	Si
SLU 48	1.32	7176.44	-19591	-16498	2867	9.0006	9.0006	-6110	7759	20951	42820	80855	22951	63771	No	22.24	Si
SLU 48	5.08	-368.07	-63	-53	2864	7.2005	0	0	0	0	42820	64684	18361	42820	No	14.95	Si
SLU 49	1.32	7052.94	-19584	-16492	2649	9.0006	9.0006	-6108	7759	20950	42820	80855	22951	63770	No	24.07	Si
SLU 49	5.08	-352.68	-63	-53	2761	7.2005	0	0	0	0	42820	64684	18361	42820	No	15.51	Si
SLU 46	1.32	7052.94	-19584	-16492	2649	9.0006	9.0006	-6108	7759	20950	42820	80855	22951	63770	No	24.07	Si
SLU 46	5.08	-352.68	-63	-53	2761	7.2005	0	0	0	0	42820	64684	18361	42820	No	15.51	Si
SLU 83	1.32	10597.04	-25648	-21598	3506	9.0006	9.0006	-7999	8011	21631	42820	80855	22951	64451	No	18.38	Si
SLU 83	5.08	-396.17	-1163	-979	3502	9.0006	9.0006	-363	6993	18882	42820	80855	22951	61702	No	17.62	Si
SLU 45	1.32	7176.44	-19591	-16498	2867	9.0006	9.0006	-6110	7759	20951	42820	80855	22951	63771	No	22.24	Si
SLU 45	5.08	-368.07	-63	-53	2864	7.2005	0	0	0	0	42820	64684	18361	42820	No	14.95	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	1.32	18834.23	-13794	-11616	18358	9.0006	9.0006	-4302	11277	30450	42820	121283	22951	73270		3.99	Si
SLV 6	5.08	-1570.64	-337	-284	12517	7.2005	0	0	0	0	42820	97026	18361	42820		3.42	Si
SLV 7	1.32	-5044.7	-14863	-12516	-14184	9.0006	9.0006	-4635	11344	30630	42820	121283	22951	73450		5.18	Si
SLV 7	5.08	1244.39	-279	-235	-8199	9.0006	0.1279	-2133	10860	417	42820	121283	22951	43237		5.27	Si
SLV 10	1.32	18306.95	-18842	-15867	18978	9.0006	9.0006	-5876	11592	31300	42820	121283	22951	74120		3.91	Si
SLV 10	5.08	-1821.7	-460	-388	12987	7.2005	1.63	0	0	0	42820	97026	18361	42820		3.3	Si
SLV 11	1.32	-5571.97	-19911	-16767	-13564	9.0006	9.0006	-6210	11659	31480	42820	121283	22951	74300		5.48	Si
SLV 11	5.08	993.33	-403	-339	-7729	9.0006	6.1039	-126	10442	19121	42820	121283	22951	61941		8.01	Si
SLV 5	1.32	18343.59	-13708	-11544	15676	9.0006	9.0006	-4275	11272	30436	42820	121283	22951	73255		4.67	Si
SLV 5	5.08	-1194.39	-317	-267	9835	7.2005	2.1799	0	0	0	42820	97026	18361	42820		4.35	Si
SLV 12	1.32	-5081.34	-19997	-16839	-10882	9.0006	9.0006	-6236	11664	31495	42820	121283	22951	74315		6.83	Si
SLV 12	5.08	617.08	-423	-356	-5047	9.0006	9.0006	-132	10443	28198	42820	121283	22951	71018		14.07	Si
SLV 14	1.32	9502.33	-25135	-21166	9231	9.0006	9.0006	-7839	11984	32360	42820	121283	22951	75180		8.14	Si
SLV 14	5.08	-1258.29	-591	-498	7204	9.0006	7.1189	-233	10463	22346	42820	121283	22951	65166		9.05	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 2	1.32	11259.9	-8308	-6996	7164	9.0006	9.0006	-2591	10935	29526	42820	121283	22951	72346		10.1	Si
SLV 2	5.08	-421.41	-179	-151	5638	9.0006	6.4431	-78	10432	20165	42820	121283	22951	62985		11.17	Si
SLV 9	1.32	17816.32	-18756	-15795	16296	9.0006	9.0006	-5849	11587	31286	42820	121283	22951	74106		4.55	Si
SLV 9	5.08	-1445.45	-440	-371	10305	7.2005	3.6503	0	0	0	42820	97026	18361	42820		4.16	Si
SLV 8	1.32	-4554.06	-14949	-12588	-11502	9.0006	9.0006	-4662	11349	30644	42820	121283	22951	73464		6.39	Si
SLV 8	5.08	868.15	-299	-252	-5517	9.0006	4.7998	-93	10435	15026	42820	121283	22951	57846		10.49	Si

Verifica a pressoflessione fuori piano D.M. 17-01-18 (N.T.C.)

quota 3.2 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.48	0	-8491	1443.56	0	0	No, e>t/2
SLV 5	179667	0.48	0	-8434	1443.56	0	0	No, e>t/2
SLV 2	179667	0.48	0	-6213	1443.56	0	0	No, e>t/2
SLV 1	179667	0.48	0	-6156	1443.56	0	0	No, e>t/2
SLV 7	179667	0.48	0	-9003	1443.56	0	0	No, e>t/2
SLV 3	179667	0.48	0	-6327	1443.56	0	0	No, e>t/2
SLV 4	179667	0.48	0	-6383	1443.56	0	0	No, e>t/2
SLV 8	179667	0.48	0	-9060	1443.56	0	0	No, e>t/2
SLV 9	179667	0.48	3910	-10557	1443.56	1543.06	1.07	Si
SLV 10	179667	0.48	3931	-10615	1443.56	1551.19	1.07	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 = 3.2 Wa = 0.05 Ta = 0.0787

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-591	-25135	-816	5.19	1869.8	0.972	77.58199	15.04226	Si
SLV 13	-572	-25050	-816	5.201	1869.4	0.973	77.67541	15.04226	Si
SLV 16	-580	-25482	-784	5.199	1869.5	0.973	77.68376	15.04226	Si
SLV 15	-560	-25397	-784	5.21	1869.1	0.973	77.77715	15.04226	Si
SLV 2	-179	-8308	778	5.422	1863.6	0.991	79.54335	15.04226	Si
SLV 4	-168	-8654	810	5.425	1863.5	0.991	79.54339	15.04226	Si
SLV 3	-148	-8570	810	5.437	1863.3	0.992	79.63236	15.04226	Si
SLV 1	-159	-8223	778	5.434	1863.4	0.992	79.63255	15.04226	Si
SLV 10	-460	-18842	-295	5.315	1867.2	0.978	79.00287	13.64588	Si
SLV 9	-440	-18756	-295	5.326	1866.8	0.979	79.09747	13.64588	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	10.265	SLU 39	Si
V_SLU	14.952	SLU 43	Si
PF_SLV	3.408	SLV 6	Si
V_SLV	3.297	SLV 10	Si
PFFP_SLV	0	SLV 1	No
R_SLV	5.158	SLV 14	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
-29.758	1.281	0.81	1.32	0.51	-29.758	2.281	0.81	1.32	0.51	1	0.3	3500

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 82	ini.	-168.03	532	-0.0002823	0.0002246	0.0035	0.51		975.58	975.58	No	5.81	Si
SLU 82	fin.	-168.33	-142	-0.0002829	0.0002246	0.0035	0.51		975.58	975.58	No	5.8	Si
SLU 84	ini.	-168.03	532	-0.0002823	0.0002246	0.0035	0.51		975.58	975.58	No	5.81	Si
SLU 84	fin.	-168.33	-142	-0.0002829	0.0002246	0.0035	0.51		975.58	975.58	No	5.8	Si
SLU 81	ini.	-174.9	559	-0.0002955	0.0002246	0.0035	0.51		975.58	975.58	No	5.58	Si
SLU 81	fin.	-163.31	-91	-0.0002734	0.0002246	0.0035	0.51		975.58	975.58	No	5.97	Si
SLU 77	ini.	-159.57	512	-0.0002663	0.0002246	0.0035	0.51		975.58	975.58	No	6.11	Si
SLU 77	fin.	-150.38	-88	-0.0002492	0.0002246	0.0035	0.51		975.58	975.58	No	6.49	Si
SLU 83	ini.	-174.9	559	-0.0002955	0.0002246	0.0035	0.51		975.58	975.58	No	5.58	Si
SLU 83	fin.	-163.31	-91	-0.0002734	0.0002246	0.0035	0.51		975.58	975.58	No	5.97	Si
SLU 39	ini.	-170.12	546	-0.0002863	0.0002246	0.0035	0.51		975.58	975.58	No	5.73	Si
SLU 39	fin.	-144.21	-21	-0.0002379	0.0002246	0.0035	0.51		975.58	975.58	No	6.76	Si
SLU 42	ini.	-163.25	520	-0.0002733	0.0002246	0.0035	0.51		975.58	975.58	No	5.98	Si
SLU 42	fin.	-149.23	-72	-0.0002471	0.0002246	0.0035	0.51		975.58	975.58	No	6.54	Si
SLU 40	ini.	-163.25	520	-0.0002733	0.0002246	0.0035	0.51		975.58	975.58	No	5.98	Si
SLU 40	fin.	-149.23	-72	-0.0002471	0.0002246	0.0035	0.51		975.58	975.58	No	6.54	Si
SLU 79	ini.	-159.57	512	-0.0002663	0.0002246	0.0035	0.51		975.58	975.58	No	6.11	Si
SLU 79	fin.	-150.38	-88	-0.0002492	0.0002246	0.0035	0.51		975.58	975.58	No	6.49	Si
SLU 41	ini.	-170.12	546	-0.0002863	0.0002246	0.0035	0.51		975.58	975.58	No	5.73	Si
SLU 41	fin.	-144.21	-21	-0.0002379	0.0002246	0.0035	0.51		975.58	975.58	No	6.76	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 80	ini.	-152.7	922	0.51	0	66	4044	2749	1301	4050	No	4.39	Si
SLU 80	fin.	-155.41	-1863	0.51	0	164	4044	2749	1301	4050	No	2.17	Si
SLU 83	ini.	-174.9	1034	0.51	0	41	4044	2749	1301	4050	No	3.92	Si
SLU 83	fin.	-163.31	-2012	0.51	0	158	4044	2749	1301	4050	No	2.01	Si
SLU 84	ini.	-168.03	1007	0.51	0	51	4044	2749	1301	4050	No	4.02	Si
SLU 84	fin.	-168.33	-2022	0.51	0	164	4044	2749	1301	4050	No	2	Si
SLU 76	ini.	-148.12	904	0.51	0	70	4044	2749	1301	4050	No	4.48	Si
SLU 76	fin.	-158.75	-1870	0.51	0	168	4044	2749	1301	4050	No	2.17	Si
SLU 81	ini.	-174.9	1034	0.51	0	41	4044	2749	1301	4050	No	3.92	Si
SLU 81	fin.	-163.31	-2012	0.51	0	158	4044	2749	1301	4050	No	2.01	Si
SLU 79	ini.	-159.57	950	0.51	0	58	4044	2749	1301	4050	No	4.26	Si
SLU 79	fin.	-150.38	-1853	0.51	0	158	4044	2749	1301	4050	No	2.19	Si
SLU 78	ini.	-152.7	922	0.51	0	66	4044	2749	1301	4050	No	4.39	Si
SLU 78	fin.	-155.41	-1863	0.51	0	164	4044	2749	1301	4050	No	2.17	Si
SLU 82	ini.	-168.03	1007	0.51	0	51	4044	2749	1301	4050	No	4.02	Si
SLU 82	fin.	-168.33	-2022	0.51	0	164	4044	2749	1301	4050	No	2	Si
SLU 75	ini.	-152.7	922	0.51	0	66	4044	2749	1301	4050	No	4.39	Si
SLU 75	fin.	-155.41	-1863	0.51	0	164	4044	2749	1301	4050	No	2.17	Si
SLU 73	ini.	-148.12	904	0.51	0	70	4044	2749	1301	4050	No	4.48	Si
SLU 73	fin.	-158.75	-1870	0.51	0	168	4044	2749	1301	4050	No	2.17	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.	333.36	-1585	-0.0006023	0.0003369	0.0035	0.51		959.5	959.5		2.88	Si
SLV 8	fin.	-501.61	-3254	-0.0010085	0.0003369	0.0035	0.51		962.99	962.99		1.92	Si
SLV 11	ini.	277.82	-1347	-0.0004841	0.0003369	0.0035	0.51		959.5	959.5		3.45	Si
SLV 11	fin.	-458.32	-2812	-0.0008953	0.0003369	0.0035	0.51		962.99	962.99		2.1	Si
SLV 7	ini.	330.48	-1574	-0.000596	0.0003369	0.0035	0.51		959.5	959.5		2.9	Si
SLV 7	fin.	-499.5	-3233	-0.0010028	0.0003369	0.0035	0.51		962.99	962.99		1.93	Si
SLV 9	ini.	-523.1	2196	-0.0010671	0.0003369	0.0035	0.51		962.99	962.99		1.84	Si
SLV 9	fin.	307.09	3080	-0.0005454	0.0003369	0.0035	0.51		959.5	959.5		3.12	Si
SLV 5	ini.	-470.44	1969	-0.0009264	0.0003369	0.0035	0.51		962.99	962.99		2.05	Si
SLV 5	fin.	265.92	2659	-0.0004599	0.0003369	0.0035	0.51		959.5	959.5		3.61	Si
SLV 13	ini.	-304.19	1221	-0.0005372	0.0003369	0.0035	0.51		962.99	962.99		3.17	Si
SLV 13	fin.	87.22	1509	-0.0001371	0.0003369	0.0035	0.51		959.5	959.5		11	Si
SLV 10	ini.	-520.23	2185	-0.0010591	0.0003369	0.0035	0.51		962.99	962.99		1.85	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	fin.	304.98	3059	-0.0005409	0.0003369	0.0035	0.51		959.5	959.5		3.15	Si
SLV 12	ini.	280.7	-1358	-0.0004901	0.0003369	0.0035	0.51		959.5	959.5		3.42	Si
SLV 12	fin.	-460.43	-2833	-0.0009007	0.0003369	0.0035	0.51		962.99	962.99		2.09	Si
SLV 14	ini.	-301.36	1210	-0.0005312	0.0003369	0.0035	0.51		962.99	962.99		3.2	Si
SLV 14	fin.	85.14	1488	-0.0001337	0.0003369	0.0035	0.51		959.5	959.5		11.27	Si
SLV 6	ini.	-467.57	1958	-0.000919	0.0003369	0.0035	0.51		962.99	962.99		2.06	Si
SLV 6	fin.	263.81	2637	-0.0004556	0.0003369	0.0035	0.51		959.5	959.5		3.64	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 6	ini.	-467.57	2125	0.51	0	0	4044	4124	1301	4044		1.9	Si
SLV 6	fin.	263.81	-734	0.51	0	0	4044	4124	1301	4044		5.51	Si
SLV 7	ini.	330.48	-1176	0.51	0	367	4044	4124	1301	4411		3.75	Si
SLV 7	fin.	-499.5	-1667	0.51	0	473	4044	4124	1301	4518		2.71	Si
SLV 11	ini.	277.82	-961	0.51	0	349	4044	4124	1301	4393		4.57	Si
SLV 11	fin.	-458.32	-1611	0.51	0	449	4044	4124	1301	4493		2.79	Si
SLV 5	ini.	-470.44	2137	0.51	0	0	4044	4124	1301	4044		1.89	Si
SLV 5	fin.	265.92	-730	0.51	0	0	4044	4124	1301	4044		5.54	Si
SLV 14	ini.	-301.36	1431	0.51	0	0	4044	4124	1301	4044		2.83	Si
SLV 14	fin.	85.14	-940	0.51	0	0	4044	4124	1301	4044		4.3	Si
SLV 9	ini.	-523.1	2351	0.51	0	0	4044	4124	1301	4044		1.72	Si
SLV 9	fin.	307.09	-674	0.51	0	0	4044	4124	1301	4044		6	Si
SLV 13	ini.	-304.19	1442	0.51	0	0	4044	4124	1301	4044		2.8	Si
SLV 13	fin.	87.22	-936	0.51	0	0	4044	4124	1301	4044		4.32	Si
SLV 10	ini.	-520.23	2340	0.51	0	0	4044	4124	1301	4044		1.73	Si
SLV 10	fin.	304.98	-678	0.51	0	0	4044	4124	1301	4044		5.97	Si
SLV 12	ini.	280.7	-973	0.51	0	350	4044	4124	1301	4394		4.52	Si
SLV 12	fin.	-460.43	-1615	0.51	0	450	4044	4124	1301	4494		2.78	Si
SLV 8	ini.	333.36	-1187	0.51	0	367	4044	4124	1301	4411		3.72	Si
SLV 8	fin.	-501.61	-1671	0.51	0	475	4044	4124	1301	4519		2.7	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.841	SLV 9	Si
V_SLV	1.72	SLV 9	Si
PF_SLU	5.578	SLU 81	Si
V_SLU	2.002	SLU 82	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
-32.783	-3.274	-1.37	0.63	2	-31.783	-3.274	-1.37	0.63	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	547.95	-1615	-0.0000554	0.0001872	0.0035	2		10722.86	10722.86	No	19.57	Si
SLU 77	fin.	13.63	-784	-0.0000013	0.0001872	0.0035	2		10722.86	10722.86	No	786.86	Si
SLU 79	ini.	547.95	-1615	-0.0000554	0.0001872	0.0035	2		10722.86	10722.86	No	19.57	Si
SLU 79	fin.	13.63	-784	-0.0000013	0.0001872	0.0035	2		10722.86	10722.86	No	786.86	Si
SLU 74	ini.	547.95	-1615	-0.0000554	0.0001872	0.0035	2		10722.86	10722.86	No	19.57	Si
SLU 74	fin.	13.63	-784	-0.0000013	0.0001872	0.0035	2		10722.86	10722.86	No	786.86	Si
SLU 69	ini.	543.86	-1432	-0.000055	0.0001872	0.0035	2		10722.86	10722.86	No	19.72	Si
SLU 69	fin.	-175.68	-582	-0.0000175	0.0001872	0.0035	2		10737.13	10737.13	No	61.12	Si
SLU 71	ini.	543.86	-1432	-0.000055	0.0001872	0.0035	2		10722.86	10722.86	No	19.72	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 71	fin.	-175.68	-582	-0.0000175	0.0001872	0.0035	2		10737.13	10737.13	No	61.12	Si
SLU 84	ini.	542.51	-1662	-0.0000548	0.0001872	0.0035	2		10722.86	10722.86	No	19.77	Si
SLU 84	fin.	114.49	-843	-0.0000114	0.0001872	0.0035	2		10722.86	10722.86	No	93.66	Si
SLU 66	ini.	543.86	-1432	-0.000055	0.0001872	0.0035	2		10722.86	10722.86	No	19.72	Si
SLU 66	fin.	-175.68	-582	-0.0000175	0.0001872	0.0035	2		10737.13	10737.13	No	61.12	Si
SLU 81	ini.	549.71	-1693	-0.0000556	0.0001872	0.0035	2		10722.86	10722.86	No	19.51	Si
SLU 81	fin.	94.76	-870	-0.0000094	0.0001872	0.0035	2		10722.86	10722.86	No	113.16	Si
SLU 83	ini.	549.71	-1693	-0.0000556	0.0001872	0.0035	2		10722.86	10722.86	No	19.51	Si
SLU 83	fin.	94.76	-870	-0.0000094	0.0001872	0.0035	2		10722.86	10722.86	No	113.16	Si
SLU 64	ini.	543.86	-1432	-0.000055	0.0001872	0.0035	2		10722.86	10722.86	No	19.72	Si
SLU 64	fin.	-175.68	-582	-0.0000175	0.0001872	0.0035	2		10737.13	10737.13	No	61.12	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.	547.95	-1136	2	0	1586	7930	13475	5100	9516	No	8.38	Si
SLU 77	fin.	13.63	-200	2	0	1448	7930	13475	5100	9377	No	46.89	Si
SLU 67	ini.	536.67	-1160	2	0	1552	7930	13475	5100	9481	No	8.18	Si
SLU 67	fin.	-155.95	-698	2	0	1408	7930	13475	5100	9337	No	13.37	Si
SLU 70	ini.	536.67	-1160	2	0	1552	7930	13475	5100	9481	No	8.18	Si
SLU 70	fin.	-155.95	-698	2	0	1408	7930	13475	5100	9337	No	13.37	Si
SLU 69	ini.	543.86	-1195	2	0	1557	7930	13475	5100	9486	No	7.94	Si
SLU 69	fin.	-175.68	-718	2	0	1412	7930	13475	5100	9342	No	13	Si
SLU 64	ini.	543.86	-1195	2	0	1557	7930	13475	5100	9486	No	7.94	Si
SLU 64	fin.	-175.68	-718	2	0	1412	7930	13475	5100	9342	No	13	Si
SLU 71	ini.	543.86	-1195	2	0	1557	7930	13475	5100	9486	No	7.94	Si
SLU 71	fin.	-175.68	-718	2	0	1412	7930	13475	5100	9342	No	13	Si
SLU 66	ini.	543.86	-1195	2	0	1557	7930	13475	5100	9486	No	7.94	Si
SLU 66	fin.	-175.68	-718	2	0	1412	7930	13475	5100	9342	No	13	Si
SLU 68	ini.	531.87	-1136	2	0	1548	7930	13475	5100	9478	No	8.34	Si
SLU 68	fin.	-142.8	-685	2	0	1404	7930	13475	5100	9334	No	13.62	Si
SLU 72	ini.	536.67	-1160	2	0	1552	7930	13475	5100	9481	No	8.18	Si
SLU 72	fin.	-155.95	-698	2	0	1408	7930	13475	5100	9337	No	13.37	Si
SLU 65	ini.	531.87	-1136	2	0	1548	7930	13475	5100	9478	No	8.34	Si
SLU 65	fin.	-142.8	-685	2	0	1404	7930	13475	5100	9334	No	13.62	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 14	ini.	1620.64	-2352	-0.0001686	0.0002807	0.0035	2		15635.95	15635.95		9.65	Si
SLV 14	fin.	-1778.52	-138	-0.0001858	0.0002807	0.0035	2		15648.46	15648.46		8.8	Si
SLV 15	ini.	1535.78	-1506	-0.0001593	0.0002807	0.0035	2		15635.95	15635.95		10.18	Si
SLV 15	fin.	-1356.63	908	-0.0001397	0.0002807	0.0035	2		15648.46	15648.46		11.53	Si
SLV 8	ini.	-503.81	1278	-0.0000505	0.0002807	0.0035	2		15648.46	15648.46		31.06	Si
SLV 8	fin.	1832.68	1056	-0.000192	0.0002807	0.0035	2		15635.95	15635.95		8.53	Si
SLV 16	ini.	1341.43	-1168	-0.0001382	0.0002807	0.0035	2		15635.95	15635.95		11.66	Si
SLV 16	fin.	-999.35	928	-0.0001017	0.0002807	0.0035	2		15648.46	15648.46		15.66	Si
SLV 13	ini.	1814.99	-2690	-0.0001901	0.0002807	0.0035	2		15635.95	15635.95		8.61	Si
SLV 13	fin.	-2135.79	-159	-0.0002261	0.0002807	0.0035	2		15648.46	15648.46		7.33	Si
SLV 10	ini.	1127.52	-3158	-0.0001154	0.0002807	0.0035	2		15635.95	15635.95		13.87	Si
SLV 10	fin.	-1650.87	-1984	-0.0001717	0.0002807	0.0035	2		15648.46	15648.46		9.48	Si
SLV 7	ini.	-306.58	934	-0.0000306	0.0002807	0.0035	2		15648.46	15648.46		51.04	Si
SLV 7	fin.	1470.12	1035	-0.0001521	0.0002807	0.0035	2		15635.95	15635.95		10.64	Si
SLV 9	ini.	1324.75	-3502	-0.0001364	0.0002807	0.0035	2		15635.95	15635.95		11.8	Si
SLV 9	fin.	-2013.43	-2005	-0.0002122	0.0002807	0.0035	2		15648.46	15648.46		7.77	Si
SLV 3	ini.	-799.7	128	-0.0000809	0.0002807	0.0035	2		15648.46	15648.46		19.57	Si
SLV 3	fin.	1597.77	-811	-0.0001661	0.0002807	0.0035	2		15635.95	15635.95		9.79	Si
SLV 4	ini.	-994.05	466	-0.0001012	0.0002807	0.0035	2		15648.46	15648.46		15.74	Si
SLV 4	fin.	1955.05	-791	-0.0002058	0.0002807	0.0035	2		15635.95	15635.95		8	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.	1341.43	-3919	2	0	2171	7930	20213	5100	10100		2.58	Si
SLV 16	fin.	-999.35	-4340	2	0	1768	7930	20213	5100	9698		2.23	Si
SLV 4	ini.	-994.05	4340	2	0	1864	7930	20213	5100	9794		2.26	Si
SLV 4	fin.	1955.05	5046	2	0	2104	7930	20213	5100	10033		1.99	Si
SLV 9	ini.	1324.75	-4715	2	0	2545	7930	20213	5100	10474		2.22	Si
SLV 9	fin.	-2013.43	-3509	2	0	2312	7930	20213	5100	10241		2.92	Si
SLV 15	ini.	1535.78	-4783	2	0	2229	7930	20213	5100	10158		2.12	Si
SLV 15	fin.	-1356.63	-5194	2	0	1772	7930	20213	5100	9702		1.87	Si
SLV 1	ini.	-520.49	2176	2	0	2151	7930	20213	5100	10081		4.63	Si
SLV 1	fin.	818.6	3456	2	0	2291	7930	20213	5100	10220		2.96	Si
SLV 3	ini.	-799.7	3476	2	0	1932	7930	20213	5100	9861		2.84	Si
SLV 3	fin.	1597.77	4191	2	0	2107	7930	20213	5100	10037		2.39	Si
SLV 2	ini.	-714.84	3040	2	0	2091	7930	20213	5100	10020		3.3	Si
SLV 2	fin.	1175.88	4311	2	0	2287	7930	20213	5100	10217		2.37	Si
SLV 10	ini.	1127.52	-3838	2	0	2493	7930	20213	5100	10423		2.72	Si
SLV 10	fin.	-1650.87	-2641	2	0	2308	7930	20213	5100	10238		3.88	Si
SLV 14	ini.	1620.64	-5219	2	0	2368	7930	20213	5100	10297		1.97	Si
SLV 14	fin.	-1778.52	-5075	2	0	1983	7930	20213	5100	9913		1.95	Si
SLV 13	ini.	1814.99	-6083	2	0	2421	7930	20213	5100	10351		1.7	Si
SLV 13	fin.	-2135.79	-5930	2	0	1987	7930	20213	5100	9917		1.67	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	7.327	SLV 13	Si
V_SLV	1.672	SLV 13	Si
PF_SLU	19.507	SLU 81	Si
V_SLU	7.939	SLU 64	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
-32.783	-3.274	1.03	1.32	0.29	-31.783	-3.274	1.03	1.32	0.29	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	-45.21	114	-0.0002333	0.0001872	0.0035	0.29		319.9	319.9	No	7.08	Si
SLU 79	fin.	-143.1	-456	-0.0009386	0.0001872	0.0035	0.29		319.9	319.9	No	2.24	Si
SLU 81	ini.	-55.6	79	-0.0002954	0.0001872	0.0035	0.29		319.9	319.9	No	5.75	Si
SLU 81	fin.	-147.2	-458	-0.0009742	0.0001872	0.0035	0.29		319.9	319.9	No	2.17	Si
SLU 82	ini.	-56.51	72	-0.0003011	0.0001872	0.0035	0.29		319.9	319.9	No	5.66	Si
SLU 82	fin.	-145.61	-450	-0.0009603	0.0001872	0.0035	0.29		319.9	319.9	No	2.2	Si
SLU 80	ini.	-46.12	107	-0.0002386	0.0001872	0.0035	0.29		319.9	319.9	No	6.94	Si
SLU 80	fin.	-141.51	-448	-0.000925	0.0001872	0.0035	0.29		319.9	319.9	No	2.26	Si
SLU 77	ini.	-45.21	114	-0.0002333	0.0001872	0.0035	0.29		319.9	319.9	No	7.08	Si
SLU 77	fin.	-143.1	-456	-0.0009386	0.0001872	0.0035	0.29		319.9	319.9	No	2.24	Si
SLU 74	ini.	-45.21	114	-0.0002333	0.0001872	0.0035	0.29		319.9	319.9	No	7.08	Si
SLU 74	fin.	-143.1	-456	-0.0009386	0.0001872	0.0035	0.29		319.9	319.9	No	2.24	Si
SLU 78	ini.	-46.12	107	-0.0002386	0.0001872	0.0035	0.29		319.9	319.9	No	6.94	Si
SLU 78	fin.	-141.51	-448	-0.000925	0.0001872	0.0035	0.29		319.9	319.9	No	2.26	Si
SLU 84	ini.	-56.51	72	-0.0003011	0.0001872	0.0035	0.29		319.9	319.9	No	5.66	Si
SLU 84	fin.	-145.61	-450	-0.0009603	0.0001872	0.0035	0.29		319.9	319.9	No	2.2	Si
SLU 83	ini.	-55.6	79	-0.0002954	0.0001872	0.0035	0.29		319.9	319.9	No	5.75	Si
SLU 83	fin.	-147.2	-458	-0.0009742	0.0001872	0.0035	0.29		319.9	319.9	No	2.17	Si
SLU 75	ini.	-46.12	107	-0.0002386	0.0001872	0.0035	0.29		319.9	319.9	No	6.94	Si
SLU 75	fin.	-141.51	-448	-0.000925	0.0001872	0.0035	0.29		319.9	319.9	No	2.26	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 82	ini.	-56.51	458	0.29	0	116	2300	1954	740	2416	No	5.28	Si
SLU 82	fin.	-145.61	-848	0.29	0	175	2300	1954	740	2474	No	2.92	Si
SLU 83	ini.	-55.6	454	0.29	0	115	2300	1954	740	2415	No	5.32	Si
SLU 83	fin.	-147.2	-855	0.29	0	175	2300	1954	740	2475	No	2.89	Si
SLU 78	ini.	-46.12	401	0.29	0	111	2300	1954	740	2411	No	6.01	Si
SLU 78	fin.	-141.51	-819	0.29	0	175	2300	1954	740	2474	No	3.02	Si
SLU 75	ini.	-46.12	401	0.29	0	111	2300	1954	740	2411	No	6.01	Si
SLU 75	fin.	-141.51	-819	0.29	0	175	2300	1954	740	2474	No	3.02	Si
SLU 74	ini.	-45.21	398	0.29	0	110	2300	1954	740	2410	No	6.06	Si
SLU 74	fin.	-143.1	-827	0.29	0	175	2300	1954	740	2475	No	2.99	Si
SLU 80	ini.	-46.12	401	0.29	0	111	2300	1954	740	2411	No	6.01	Si
SLU 80	fin.	-141.51	-819	0.29	0	175	2300	1954	740	2474	No	3.02	Si
SLU 77	ini.	-45.21	398	0.29	0	110	2300	1954	740	2410	No	6.06	Si
SLU 77	fin.	-143.1	-827	0.29	0	175	2300	1954	740	2475	No	2.99	Si
SLU 84	ini.	-56.51	458	0.29	0	116	2300	1954	740	2416	No	5.28	Si
SLU 84	fin.	-145.61	-848	0.29	0	175	2300	1954	740	2474	No	2.92	Si
SLU 79	ini.	-45.21	398	0.29	0	110	2300	1954	740	2410	No	6.06	Si
SLU 79	fin.	-143.1	-827	0.29	0	175	2300	1954	740	2475	No	2.99	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-55.6	454	0.29	0	115	2300	1954	740	2415	No	5.32	Si
SLU 81	fin.	-147.2	-855	0.29	0	175	2300	1954	740	2475	No	2.89	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.	113.52	906	-0.0006602	0.0002807	0.0035	0.29		328.78	328.78		2.9	Si
SLV 15	fin.	-229.76	-1078	-0.0017269	0.0002807	0.0035	0.29		330.63	330.63		1.44	Si
SLV 10	ini.	65.7	726	-0.0003442	0.0002807	0.0035	0.29		328.78	328.78		5	Si
SLV 10	fin.	-233.24	-1023	-0.0017709	0.0002807	0.0035	0.29		330.63	330.63		1.42	Si
SLV 4	ini.	-190.58	-906	-0.0012979	0.0002807	0.0035	0.29		330.63	330.63		1.73	Si
SLV 4	fin.	86.07	708	-0.0004715	0.0002807	0.0035	0.29		328.78	328.78		3.82	Si
SLV 2	ini.	-155.48	-646	-0.000981	0.0002807	0.0035	0.29		330.63	330.63		2.13	Si
SLV 2	fin.	24.08	394	-0.000117	0.0002807	0.0035	0.29		328.78	328.78		13.66	Si
SLV 14	ini.	122.1	1001	-0.0007232	0.0002807	0.0035	0.29		328.78	328.78		2.69	Si
SLV 14	fin.	-260.88	-1224	-0.0021699	0.0002807	0.0035	0.29		330.63	330.63		1.27	Si
SLV 3	ini.	-164.06	-741	-0.0010542	0.0002807	0.0035	0.29		330.63	330.63		2.02	Si
SLV 3	fin.	55.19	539	-0.000283	0.0002807	0.0035	0.29		328.78	328.78		5.96	Si
SLV 16	ini.	87	741	-0.0004776	0.0002807	0.0035	0.29		328.78	328.78		3.78	Si
SLV 16	fin.	-198.89	-910	-0.0013808	0.0002807	0.0035	0.29		330.63	330.63		1.66	Si
SLV 13	ini.	148.62	1166	-0.0009311	0.0002807	0.0035	0.29		328.78	328.78		2.21	Si
SLV 13	fin.	-291.75	-1393	-0.0027443	0.0002807	0.0035	0.29		330.63	330.63		1.13	Si
SLV 5	ini.	9.33	400	-0.0000444	0.0002807	0.0035	0.29		328.78	328.78		35.22	Si
SLV 5	fin.	-179.09	-709	-0.0011887	0.0002807	0.0035	0.29		330.63	330.63		1.85	Si
SLV 9	ini.	92.61	894	-0.0005146	0.0002807	0.0035	0.29		328.78	328.78		3.55	Si
SLV 9	fin.	-264.57	-1194	-0.0022309	0.0002807	0.0035	0.29		330.63	330.63		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 14	ini.	122.1	-403	0.29	0	0	2300	2931	740	2300		5.7	Si
SLV 14	fin.	-260.88	-1301	0.29	0	309	2300	2931	740	2608		2.01	Si
SLV 4	ini.	-190.58	976	0.29	0	283	2300	2931	740	2582		2.65	Si
SLV 4	fin.	86.07	262	0.29	0	36	2300	2931	740	2335		8.93	Si
SLV 16	ini.	87	-265	0.29	0	0	2300	2931	740	2300		8.67	Si
SLV 16	fin.	-198.89	-1017	0.29	0	283	2300	2931	740	2583		2.54	Si
SLV 10	ini.	65.7	-129	0.29	0	19	2300	2931	740	2319		17.99	Si
SLV 10	fin.	-233.24	-1183	0.29	0	293	2300	2931	740	2592		2.19	Si
SLV 2	ini.	-155.48	838	0.29	0	259	2300	2931	740	2559		3.05	Si
SLV 2	fin.	24.08	-22	0.29	0	129	2300	2931	740	2428		110.03	Si
SLV 5	ini.	9.33	128	0.29	0	128	2300	2931	740	2427		18.95	Si
SLV 5	fin.	-179.09	-941	0.29	0	265	2300	2931	740	2565		2.73	Si
SLV 3	ini.	-164.06	862	0.29	0	268	2300	2931	740	2568		2.98	Si
SLV 3	fin.	55.19	122	0.29	0	97	2300	2931	740	2397		19.69	Si
SLV 13	ini.	148.62	-517	0.29	0	0	2300	2931	740	2300		4.45	Si
SLV 13	fin.	-291.75	-1440	0.29	0	322	2300	2931	740	2622		1.82	Si
SLV 15	ini.	113.52	-379	0.29	0	0	2300	2931	740	2300		6.07	Si
SLV 15	fin.	-229.76	-1157	0.29	0	297	2300	2931	740	2597		2.25	Si
SLV 9	ini.	92.61	-244	0.29	0	0	2300	2931	740	2300		9.42	Si
SLV 9	fin.	-264.57	-1325	0.29	0	307	2300	2931	740	2606		1.97	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.133	SLV 13	Si
V_SLV	1.82	SLV 13	Si
PF_SLU	2.173	SLU 81	Si
V_SLU	2.894	SLU 81	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
-26.798	-3.274	-1.37	0.63	2	-25.798	-3.274	-1.37	0.63	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	-1151.18	-2165	-0.0001194	0.0001872	0.0035	2		10737.13	10737.13	No	9.33	Si
SLU 79	fin.	1554.39	-2828	-0.0001645	0.0001872	0.0035	2		10722.86	10722.86	No	6.9	Si
SLU 83	ini.	-1149.67	-2322	-0.0001192	0.0001872	0.0035	2		10737.13	10737.13	No	9.34	Si
SLU 83	fin.	1601.38	-2961	-0.0001699	0.0001872	0.0035	2		10722.86	10722.86	No	6.7	Si
SLU 78	ini.	-1131.7	-2131	-0.0001172	0.0001872	0.0035	2		10737.13	10737.13	No	9.49	Si
SLU 78	fin.	1548.36	-2794	-0.0001638	0.0001872	0.0035	2		10722.86	10722.86	No	6.93	Si
SLU 75	ini.	-1131.7	-2131	-0.0001172	0.0001872	0.0035	2		10737.13	10737.13	No	9.49	Si
SLU 75	fin.	1548.36	-2794	-0.0001638	0.0001872	0.0035	2		10722.86	10722.86	No	6.93	Si
SLU 80	ini.	-1131.7	-2131	-0.0001172	0.0001872	0.0035	2		10737.13	10737.13	No	9.49	Si
SLU 80	fin.	1548.36	-2794	-0.0001638	0.0001872	0.0035	2		10722.86	10722.86	No	6.93	Si
SLU 74	ini.	-1151.18	-2165	-0.0001194	0.0001872	0.0035	2		10737.13	10737.13	No	9.33	Si
SLU 74	fin.	1554.39	-2828	-0.0001645	0.0001872	0.0035	2		10722.86	10722.86	No	6.9	Si
SLU 81	ini.	-1149.67	-2322	-0.0001192	0.0001872	0.0035	2		10737.13	10737.13	No	9.34	Si
SLU 81	fin.	1601.38	-2961	-0.0001699	0.0001872	0.0035	2		10722.86	10722.86	No	6.7	Si
SLU 82	ini.	-1130.19	-2288	-0.0001171	0.0001872	0.0035	2		10737.13	10737.13	No	9.5	Si
SLU 82	fin.	1595.35	-2927	-0.0001692	0.0001872	0.0035	2		10722.86	10722.86	No	6.72	Si
SLU 84	ini.	-1130.19	-2288	-0.0001171	0.0001872	0.0035	2		10737.13	10737.13	No	9.5	Si
SLU 84	fin.	1595.35	-2927	-0.0001692	0.0001872	0.0035	2		10722.86	10722.86	No	6.72	Si
SLU 77	ini.	-1151.18	-2165	-0.0001194	0.0001872	0.0035	2		10737.13	10737.13	No	9.33	Si
SLU 77	fin.	1554.39	-2828	-0.0001645	0.0001872	0.0035	2		10722.86	10722.86	No	6.9	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.	-1122.24	3867	2	0	1606	7930	13475	5100	9536	No	2.47	Si
SLU 68	fin.	1434.7	3084	2	0	1715	7930	13475	5100	9645	No	3.13	Si
SLU 43	ini.	-1129.1	3845	2	0	1572	7930	13475	5100	9502	No	2.47	Si
SLU 43	fin.	1351.85	2927	2	0	1686	7930	13475	5100	9616	No	3.28	Si
SLU 72	ini.	-1135.23	3881	2	0	1610	7930	13475	5100	9539	No	2.46	Si
SLU 72	fin.	1438.72	3106	2	0	1718	7930	13475	5100	9648	No	3.11	Si
SLU 66	ini.	-1154.71	3902	2	0	1615	7930	13475	5100	9545	No	2.45	Si
SLU 66	fin.	1444.74	3138	2	0	1723	7930	13475	5100	9653	No	3.08	Si
SLU 70	ini.	-1135.23	3881	2	0	1610	7930	13475	5100	9539	No	2.46	Si
SLU 70	fin.	1438.72	3106	2	0	1718	7930	13475	5100	9648	No	3.11	Si
SLU 69	ini.	-1154.71	3902	2	0	1615	7930	13475	5100	9545	No	2.45	Si
SLU 69	fin.	1444.74	3138	2	0	1723	7930	13475	5100	9653	No	3.08	Si
SLU 71	ini.	-1154.71	3902	2	0	1615	7930	13475	5100	9545	No	2.45	Si
SLU 71	fin.	1444.74	3138	2	0	1723	7930	13475	5100	9653	No	3.08	Si
SLU 65	ini.	-1122.24	3867	2	0	1606	7930	13475	5100	9536	No	2.47	Si
SLU 65	fin.	1434.7	3084	2	0	1715	7930	13475	5100	9645	No	3.13	Si
SLU 64	ini.	-1154.71	3902	2	0	1615	7930	13475	5100	9545	No	2.45	Si
SLU 64	fin.	1444.74	3138	2	0	1723	7930	13475	5100	9653	No	3.08	Si
SLU 67	ini.	-1135.23	3881	2	0	1610	7930	13475	5100	9539	No	2.46	Si
SLU 67	fin.	1438.72	3106	2	0	1718	7930	13475	5100	9648	No	3.11	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.	-2158.9	-888	-0.0002287	0.0002807	0.0035	2		15648.46	15648.46		7.25	Si
SLV 2	fin.	2193.93	-2990	-0.000233	0.0002807	0.0035	2		15635.95	15635.95		7.13	Si
SLV 6	ini.	-2598.5	-3264	-0.0002801	0.0002807	0.0035	2		15648.46	15648.46		6.02	Si
SLV 6	fin.	1994.01	-4410	-0.0002102	0.0002807	0.0035	2		15635.95	15635.95		7.84	Si
SLV 10	ini.	-2164.32	-3973	-0.0002294	0.0002807	0.0035	2		15648.46	15648.46		7.23	Si
SLV 10	fin.	1504.22	-4286	-0.0001558	0.0002807	0.0035	2		15635.95	15635.95		10.39	Si
SLV 11	ini.	835.3	406	-0.0000847	0.0002807	0.0035	2		15635.95	15635.95		18.72	Si
SLV 11	fin.	250.5	471	-0.000025	0.0002807	0.0035	2		15635.95	15635.95		62.42	Si
SLV 4	ini.	-1349.81	441	-0.000139	0.0002807	0.0035	2		15648.46	15648.46		11.59	Si
SLV 4	fin.	1876.73	-1651	-0.000197	0.0002807	0.0035	2		15635.95	15635.95		8.33	Si
SLV 8	ini.	98.47	1165	-0.0000098	0.0002807	0.0035	2		15635.95	15635.95		158.79	Si
SLV 8	fin.	936.68	52	-0.0000953	0.0002807	0.0035	2		15635.95	15635.95		16.69	Si
SLV 1	ini.	-1860.67	-936	-0.000195	0.0002807	0.0035	2		15648.46	15648.46		8.41	Si
SLV 1	fin.	2000.41	-2698	-0.0002109	0.0002807	0.0035	2		15635.95	15635.95		7.82	Si
SLV 9	ini.	-1861.67	-4022	-0.0001951	0.0002807	0.0035	2		15648.46	15648.46		8.41	Si
SLV 9	fin.	1307.83	-3990	-0.0001346	0.0002807	0.0035	2		15635.95	15635.95		11.96	Si
SLV 3	ini.	-1051.58	392	-0.0001072	0.0002807	0.0035	2		15648.46	15648.46		14.88	Si
SLV 3	fin.	1683.21	-1359	-0.0001755	0.0002807	0.0035	2		15635.95	15635.95		9.29	Si
SLV 5	ini.	-2295.86	-3314	-0.0002445	0.0002807	0.0035	2		15648.46	15648.46		6.82	Si
SLV 5	fin.	1797.62	-4113	-0.0001881	0.0002807	0.0035	2		15635.95	15635.95		8.7	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.	-1349.81	5990	2	0	1869	7930	20213	5100	9799		1.64	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.	1876.73	4829	2	0	2253	7930	20213	5100	10183		2.11	Si
SLV 2	ini.	-2158.9	7012	2	0	2121	7930	20213	5100	10051		1.43	Si
SLV 2	fin.	2193.93	6199	2	0	2467	7930	20213	5100	10397		1.68	Si
SLV 10	ini.	-2164.32	4170	2	0	2614	7930	20213	5100	10543		2.53	Si
SLV 10	fin.	1504.22	4328	2	0	2659	7930	20213	5100	10588		2.45	Si
SLV 7	ini.	401.11	1797	2	0	1728	7930	20213	5100	9657		5.38	Si
SLV 7	fin.	740.29	526	2	0	1888	7930	20213	5100	9818		18.68	Si
SLV 9	ini.	-1861.67	3341	2	0	2621	7930	20213	5100	10551		3.16	Si
SLV 9	fin.	1307.83	3490	2	0	2616	7930	20213	5100	10546		3.02	Si
SLV 5	ini.	-2295.86	5206	2	0	2517	7930	20213	5100	10446		2.01	Si
SLV 5	fin.	1797.62	5094	2	0	2634	7930	20213	5100	10564		2.07	Si
SLV 1	ini.	-1860.67	6195	2	0	2130	7930	20213	5100	10059		1.62	Si
SLV 1	fin.	2000.41	5373	2	0	2422	7930	20213	5100	10352		1.93	Si
SLV 3	ini.	-1051.58	5173	2	0	1879	7930	20213	5100	9809		1.9	Si
SLV 3	fin.	1683.21	4003	2	0	2204	7930	20213	5100	10133		2.53	Si
SLV 8	ini.	98.47	2626	2	0	1717	7930	20213	5100	9646		3.67	Si
SLV 8	fin.	936.68	1364	2	0	1947	7930	20213	5100	9876		7.24	Si
SLV 6	ini.	-2598.5	6036	2	0	2509	7930	20213	5100	10439		1.73	Si
SLV 6	fin.	1994.01	5933	2	0	2676	7930	20213	5100	10606		1.79	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	6.022	SLV 6	Si
V_SLV	1.433	SLV 2	Si
PF_SLU	6.696	SLU 81	Si
V_SLU	2.446	SLU 64	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
-26.798	-3.274	1.03	1.32	0.29	-25.798	-3.274	1.03	1.32	0.29	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	-208.59	-795	-0.0015921	0.0001872	0.0035	0.29		319.9	319.9	No	1.53	Si
SLU 77	fin.	-29.9	340	-0.0001484	0.0001872	0.0035	0.29		319.9	319.9	No	10.7	Si
SLU 74	ini.	-208.59	-795	-0.0015921	0.0001872	0.0035	0.29		319.9	319.9	No	1.53	Si
SLU 74	fin.	-29.9	340	-0.0001484	0.0001872	0.0035	0.29		319.9	319.9	No	10.7	Si
SLU 82	ini.	-215.51	-807	-0.0016762	0.0001872	0.0035	0.29		319.9	319.9	No	1.48	Si
SLU 82	fin.	-38.85	320	-0.0001971	0.0001872	0.0035	0.29		319.9	319.9	No	8.23	Si
SLU 80	ini.	-207.31	-788	-0.001577	0.0001872	0.0035	0.29		319.9	319.9	No	1.54	Si
SLU 80	fin.	-30.83	334	-0.0001533	0.0001872	0.0035	0.29		319.9	319.9	No	10.38	Si
SLU 78	ini.	-207.31	-788	-0.001577	0.0001872	0.0035	0.29		319.9	319.9	No	1.54	Si
SLU 78	fin.	-30.83	334	-0.0001533	0.0001872	0.0035	0.29		319.9	319.9	No	10.38	Si
SLU 83	ini.	-216.79	-814	-0.0016922	0.0001872	0.0035	0.29		319.9	319.9	No	1.48	Si
SLU 83	fin.	-37.92	326	-0.0001919	0.0001872	0.0035	0.29		319.9	319.9	No	8.44	Si
SLU 79	ini.	-208.59	-795	-0.0015921	0.0001872	0.0035	0.29		319.9	319.9	No	1.53	Si
SLU 79	fin.	-29.9	340	-0.0001484	0.0001872	0.0035	0.29		319.9	319.9	No	10.7	Si
SLU 81	ini.	-216.79	-814	-0.0016922	0.0001872	0.0035	0.29		319.9	319.9	No	1.48	Si
SLU 81	fin.	-37.92	326	-0.0001919	0.0001872	0.0035	0.29		319.9	319.9	No	8.44	Si
SLU 84	ini.	-215.51	-807	-0.0016762	0.0001872	0.0035	0.29		319.9	319.9	No	1.48	Si
SLU 84	fin.	-38.85	320	-0.0001971	0.0001872	0.0035	0.29		319.9	319.9	No	8.23	Si
SLU 75	ini.	-207.31	-788	-0.001577	0.0001872	0.0035	0.29		319.9	319.9	No	1.54	Si
SLU 75	fin.	-30.83	334	-0.0001533	0.0001872	0.0035	0.29		319.9	319.9	No	10.38	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.	-207.31	1153	0.29	0	204	2300	1954	740	2503	No	2.17	Si
SLU 80	fin.	-30.83	-368	0.29	0	71	2300	1954	740	2371	No	6.45	Si
SLU 82	ini.	-215.51	1202	0.29	0	205	2300	1954	740	2505	No	2.08	Si
SLU 82	fin.	-38.85	-415	0.29	0	74	2300	1954	740	2374	No	5.72	Si
SLU 77	ini.	-208.59	1159	0.29	0	204	2300	1954	740	2504	No	2.16	Si
SLU 77	fin.	-29.9	-364	0.29	0	70	2300	1954	740	2369	No	6.52	Si
SLU 81	ini.	-216.79	1208	0.29	0	206	2300	1954	740	2505	No	2.07	Si
SLU 81	fin.	-37.92	-411	0.29	0	73	2300	1954	740	2372	No	5.77	Si
SLU 83	ini.	-216.79	1208	0.29	0	206	2300	1954	740	2505	No	2.07	Si
SLU 83	fin.	-37.92	-411	0.29	0	73	2300	1954	740	2372	No	5.77	Si
SLU 84	ini.	-215.51	1202	0.29	0	205	2300	1954	740	2505	No	2.08	Si
SLU 84	fin.	-38.85	-415	0.29	0	74	2300	1954	740	2374	No	5.72	Si
SLU 74	ini.	-208.59	1159	0.29	0	204	2300	1954	740	2504	No	2.16	Si
SLU 74	fin.	-29.9	-364	0.29	0	70	2300	1954	740	2369	No	6.52	Si
SLU 78	ini.	-207.31	1153	0.29	0	204	2300	1954	740	2503	No	2.17	Si
SLU 78	fin.	-30.83	-368	0.29	0	71	2300	1954	740	2371	No	6.45	Si
SLU 79	ini.	-208.59	1159	0.29	0	204	2300	1954	740	2504	No	2.16	Si
SLU 79	fin.	-29.9	-364	0.29	0	70	2300	1954	740	2369	No	6.52	Si
SLU 75	ini.	-207.31	1153	0.29	0	204	2300	1954	740	2503	No	2.17	Si
SLU 75	fin.	-30.83	-368	0.29	0	71	2300	1954	740	2371	No	6.45	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.	-234.75	-1161	-0.0017903	0.0002807	0.0035	0.29		330.63	330.63		1.41	Si
SLV 1	fin.	104.42	865	-0.0005954	0.0002807	0.0035	0.29		328.78	328.78		3.15	Si
SLV 4	ini.	-201.91	-1005	-0.0014118	0.0002807	0.0035	0.29		330.63	330.63		1.64	Si
SLV 4	fin.	89.83	751	-0.0004961	0.0002807	0.0035	0.29		328.78	328.78		3.66	Si
SLV 2	ini.	-258.8	-1315	-0.0021364	0.0002807	0.0035	0.29		330.63	330.63		1.28	Si
SLV 2	fin.	132.43	1017	-0.0008018	0.0002807	0.0035	0.29		328.78	328.78		2.48	Si
SLV 5	ini.	-251.72	-1170	-0.002027	0.0002807	0.0035	0.29		330.63	330.63		1.31	Si
SLV 5	fin.	77.69	804	-0.0004177	0.0002807	0.0035	0.29		328.78	328.78		4.23	Si
SLV 9	ini.	-209.52	-868	-0.0014924	0.0002807	0.0035	0.29		330.63	330.63		1.58	Si
SLV 9	fin.	12.35	487	-0.000059	0.0002807	0.0035	0.29		328.78	328.78		26.62	Si
SLV 6	ini.	-276.13	-1326	-0.0024344	0.0002807	0.0035	0.29		330.63	330.63		1.2	Si
SLV 6	fin.	106.11	959	-0.0006073	0.0002807	0.0035	0.29		328.78	328.78		3.1	Si
SLV 11	ini.	-19.87	166	-0.0000954	0.0002807	0.0035	0.29		330.63	330.63		16.64	Si
SLV 11	fin.	-129.64	-399	-0.0007747	0.0002807	0.0035	0.29		330.63	330.63		2.55	Si
SLV 15	ini.	-37.19	155	-0.0001835	0.0002807	0.0035	0.29		330.63	330.63		8.89	Si
SLV 15	fin.	-155.96	-458	-0.000985	0.0002807	0.0035	0.29		330.63	330.63		2.12	Si
SLV 10	ini.	-233.93	-1024	-0.0017797	0.0002807	0.0035	0.29		330.63	330.63		1.41	Si
SLV 10	fin.	40.77	642	-0.0002036	0.0002807	0.0035	0.29		328.78	328.78		8.06	Si
SLV 3	ini.	-177.85	-851	-0.0011773	0.0002807	0.0035	0.29		330.63	330.63		1.86	Si
SLV 3	fin.	61.82	599	-0.0003213	0.0002807	0.0035	0.29		328.78	328.78		5.32	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.	-209.52	1106	0.29	0	279	2300	2931	740	2579		2.33	Si
SLV 9	fin.	12.35	-129	0.29	0	110	2300	2931	740	2409		18.7	Si
SLV 5	ini.	-251.72	1283	0.29	0	305	2300	2931	740	2604		2.03	Si
SLV 5	fin.	77.69	182	0.29	0	0	2300	2931	740	2300		12.66	Si
SLV 10	ini.	-233.93	1208	0.29	0	293	2300	2931	740	2592		2.15	Si
SLV 10	fin.	40.77	0	0.29	0	67	2300	2931	740	2367		4993.97	Si
SLV 4	ini.	-201.91	1035	0.29	0	291	2300	2931	740	2591		2.5	Si
SLV 4	fin.	89.83	277	0.29	0	0	2300	2931	740	2300		8.29	Si
SLV 6	ini.	-276.13	1386	0.29	0	317	2300	2931	740	2616		1.89	Si
SLV 6	fin.	106.11	311	0.29	0	0	2300	2931	740	2300		7.39	Si
SLV 15	ini.	-37.19	343	0.29	0	168	2300	2931	740	2468		7.19	Si
SLV 15	fin.	-155.96	-885	0.29	0	241	2300	2931	740	2541		2.87	Si
SLV 16	ini.	-61.25	444	0.29	0	189	2300	2931	740	2489		5.6	Si
SLV 16	fin.	-127.96	-758	0.29	0	225	2300	2931	740	2525		3.33	Si
SLV 1	ini.	-234.75	1191	0.29	0	304	2300	2931	740	2603		2.19	Si
SLV 1	fin.	104.42	332	0.29	0	0	2300	2931	740	2300		6.92	Si
SLV 3	ini.	-177.85	934	0.29	0	278	2300	2931	740	2577		2.76	Si
SLV 3	fin.	61.82	150	0.29	0	81	2300	2931	740	2381		15.87	Si
SLV 2	ini.	-258.8	1292	0.29	0	316	2300	2931	740	2616		2.02	Si
SLV 2	fin.	132.43	460	0.29	0	0	2300	2931	740	2300		5	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.197	SLV 6	Si
V_SLV	1.888	SLV 6	Si
PF_SLU	1.476	SLU 81	Si
V_SLU	2.074	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
-30.903	1.056	0.73	1.32	0.59	-29.903	1.056	0.73	1.32	0.59	1	0.45	3500

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 40	ini.	-1188.55	-2642	-0.0028125	0.0002246	0.0035	0.59		882.81	882.81	No	0.74	No
SLU 40	fin.	0.53	-161	-0.0000006	0.0002246	0.0035	0.59		878.36	878.36	No	1661.69	Si
SLU 82	ini.	-1298.84	-2924	-0.0034485	0.0002246	0.0035	0.59		882.81	882.81	No	0.68	No
SLU 82	fin.	-38.39	-358	-0.0000441	0.0002246	0.0035	0.59		882.81	882.81	No	22.99	Si
SLU 74	ini.	-1172.65	-2674	-0.0027281	0.0002246	0.0035	0.59		882.81	882.81	No	0.75	No
SLU 74	fin.	-57.55	-432	-0.0000666	0.0002246	0.0035	0.59		882.81	882.81	No	15.34	Si
SLU 77	ini.	-1172.65	-2674	-0.0027281	0.0002246	0.0035	0.59		882.81	882.81	No	0.75	No
SLU 77	fin.	-57.55	-432	-0.0000666	0.0002246	0.0035	0.59		882.81	882.81	No	15.34	Si
SLU 41	ini.	-1189.61	-2646	-0.0028182	0.0002246	0.0035	0.59		882.81	882.81	No	0.74	No
SLU 41	fin.	1.94	-155	-0.0000022	0.0002246	0.0035	0.59		878.36	878.36	No	452.3	Si
SLU 39	ini.	-1189.61	-2646	-0.0028182	0.0002246	0.0035	0.59		882.81	882.81	No	0.74	No
SLU 39	fin.	1.94	-155	-0.0000022	0.0002246	0.0035	0.59		878.36	878.36	No	452.3	Si
SLU 84	ini.	-1298.84	-2924	-0.0034485	0.0002246	0.0035	0.59		882.81	882.81	No	0.68	No
SLU 84	fin.	-38.39	-358	-0.0000441	0.0002246	0.0035	0.59		882.81	882.81	No	22.99	Si
SLU 42	ini.	-1188.55	-2642	-0.0028125	0.0002246	0.0035	0.59		882.81	882.81	No	0.74	No
SLU 42	fin.	0.53	-161	-0.0000006	0.0002246	0.0035	0.59		878.36	878.36	No	1661.69	Si
SLU 81	ini.	-1299.9	-2929	-0.0034545	0.0002246	0.0035	0.59		882.81	882.81	No	0.68	No
SLU 81	fin.	-36.98	-352	-0.0000424	0.0002246	0.0035	0.59		882.81	882.81	No	23.87	Si
SLU 83	ini.	-1299.9	-2929	-0.0034545	0.0002246	0.0035	0.59		882.81	882.81	No	0.68	No
SLU 83	fin.	-36.98	-352	-0.0000424	0.0002246	0.0035	0.59		882.81	882.81	No	23.87	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 42	ini.	-1188.55	5996	0.59	0	490	4678	4771	1505	5169	No	0.86	No
SLU 42	fin.	0.53	-2579	0.59	0	276	4678	4771	1505	4955	No	1.92	Si
SLU 39	ini.	-1189.61	5999	0.59	0	491	4678	4771	1505	5169	No	0.86	No
SLU 39	fin.	1.94	-2570	0.59	0	276	4678	4771	1505	4954	No	1.93	Si
SLU 83	ini.	-1299.9	6561	0.59	0	509	4678	4771	1505	5188	No	0.79	No
SLU 83	fin.	-36.98	-3016	0.59	0	298	4678	4771	1505	4977	No	1.65	Si
SLU 41	ini.	-1189.61	5999	0.59	0	491	4678	4771	1505	5169	No	0.86	No
SLU 41	fin.	1.94	-2570	0.59	0	276	4678	4771	1505	4954	No	1.93	Si
SLU 81	ini.	-1299.9	6561	0.59	0	509	4678	4771	1505	5188	No	0.79	No
SLU 81	fin.	-36.98	-3016	0.59	0	298	4678	4771	1505	4977	No	1.65	Si
SLU 84	ini.	-1298.84	6557	0.59	0	509	4678	4771	1505	5187	No	0.79	No
SLU 84	fin.	-38.39	-3025	0.59	0	299	4678	4771	1505	4978	No	1.65	Si
SLU 82	ini.	-1298.84	6557	0.59	0	509	4678	4771	1505	5187	No	0.79	No
SLU 82	fin.	-38.39	-3025	0.59	0	299	4678	4771	1505	4978	No	1.65	Si
SLU 74	ini.	-1172.65	5915	0.59	0	493	4678	4771	1505	5171	No	0.87	No
SLU 74	fin.	-57.55	-2835	0.59	0	307	4678	4771	1505	4986	No	1.76	Si
SLU 40	ini.	-1188.55	5996	0.59	0	490	4678	4771	1505	5169	No	0.86	No
SLU 40	fin.	0.53	-2579	0.59	0	276	4678	4771	1505	4955	No	1.92	Si
SLU 77	ini.	-1172.65	5915	0.59	0	493	4678	4771	1505	5171	No	0.87	No
SLU 77	fin.	-57.55	-2835	0.59	0	307	4678	4771	1505	4986	No	1.76	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.	-2045.7	-4927	-0.0064138	0.0003369	0.0035	0.59		937.11	937.11		0.46	No
SLV 1	fin.	731.53	3143	-0.0011386	0.0003369	0.0035	0.59		932.52	932.52		1.27	Si
SLV 16	ini.	610.35	1563	-0.0008937	0.0003369	0.0035	0.59		932.52	932.52		1.53	Si
SLV 16	fin.	-879.42	-4037	-0.0014783	0.0003369	0.0035	0.59		937.11	937.11		1.07	Si
SLV 4	ini.	-1962.19	-4583	-0.0060819	0.0003369	0.0035	0.59		937.11	937.11		0.48	No

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	fin.	651.48	2816	-0.0009736	0.0003369	0.0035	0.59		932.52	932.52		1.43	Si
SLV 8	ini.	-962.94	-2025	-0.001706	0.0003369	0.0035	0.59		937.11	937.11		0.97	No
SLV 8	fin.	22.26	36	-0.0000254	0.0003369	0.0035	0.59		932.52	932.52		41.9	Si
SLV 15	ini.	611.59	1566	-0.000896	0.0003369	0.0035	0.59		932.52	932.52		1.52	Si
SLV 15	fin.	-879.44	-4037	-0.0014784	0.0003369	0.0035	0.59		937.11	937.11		1.07	Si
SLV 6	ini.	-1245.43	-3187	-0.0028178	0.0003369	0.0035	0.59		937.11	937.11		0.75	No
SLV 6	fin.	289.15	1127	-0.0003625	0.0003369	0.0035	0.59		932.52	932.52		3.23	Si
SLV 3	ini.	-1960.96	-4579	-0.0060769	0.0003369	0.0035	0.59		937.11	937.11		0.48	No
SLV 3	fin.	651.46	2816	-0.0009736	0.0003369	0.0035	0.59		932.52	932.52		1.43	Si
SLV 2	ini.	-2046.94	-4931	-0.0064187	0.0003369	0.0035	0.59		937.11	937.11		0.46	No
SLV 2	fin.	731.55	3143	-0.0011386	0.0003369	0.0035	0.59		932.52	932.52		1.27	Si
SLV 5	ini.	-1244.17	-3183	-0.0028113	0.0003369	0.0035	0.59		937.11	937.11		0.75	No
SLV 5	fin.	289.12	1127	-0.0003625	0.0003369	0.0035	0.59		932.52	932.52		3.23	Si
SLV 7	ini.	-961.68	-2022	-0.0017023	0.0003369	0.0035	0.59		937.11	937.11		0.97	No
SLV 7	fin.	22.23	36	-0.0000254	0.0003369	0.0035	0.59		932.52	932.52		41.95	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.	-962.94	4734	0.59	0	591	4678	7156	1505	5269		1.11	Si
SLV 8	fin.	22.26	-1969	0.59	0	380	4678	7156	1505	5059		2.57	Si
SLV 6	ini.	-1245.43	6210	0.59	0	681	4678	7156	1505	5360		0.86	No
SLV 6	fin.	289.15	-560	0.59	0	191	4678	7156	1505	4869		8.69	Si
SLV 2	ini.	-2046.94	10010	0.59	0	798	4678	7156	1505	5477		0.55	No
SLV 2	fin.	731.55	496	0.59	0	0	4678	7156	1505	4678		9.43	Si
SLV 4	ini.	-1962.19	9567	0.59	0	776	4678	7156	1505	5455		0.57	No
SLV 4	fin.	651.48	74	0.59	0	0	4678	7156	1505	4678		63.6	Si
SLV 3	ini.	-1960.96	9561	0.59	0	776	4678	7156	1505	5454		0.57	No
SLV 3	fin.	651.46	75	0.59	0	0	4678	7156	1505	4678		62.51	Si
SLV 15	ini.	611.59	-2771	0.59	0	0	4678	7156	1505	4678		1.69	Si
SLV 15	fin.	-879.44	-4352	0.59	0	740	4678	7156	1505	5419		1.25	Si
SLV 16	ini.	610.35	-2765	0.59	0	0	4678	7156	1505	4678		1.69	Si
SLV 16	fin.	-879.42	-4354	0.59	0	740	4678	7156	1505	5419		1.24	Si
SLV 1	ini.	-2045.7	10004	0.59	0	798	4678	7156	1505	5476		0.55	No
SLV 1	fin.	731.53	497	0.59	0	0	4678	7156	1505	4678		9.41	Si
SLV 7	ini.	-961.68	4728	0.59	0	590	4678	7156	1505	5269		1.11	Si
SLV 7	fin.	22.23	-1968	0.59	0	380	4678	7156	1505	5059		2.57	Si
SLV 5	ini.	-1244.17	6205	0.59	0	681	4678	7156	1505	5359		0.86	No
SLV 5	fin.	289.12	-559	0.59	0	191	4678	7156	1505	4869		8.71	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.458	SLV 2	No
V_SLV	0.547	SLV 2	No
PF_SLU	0.679	SLU 81	No
V_SLU	0.791	SLU 81	No

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
-32.543	5.726	-1.37	0.63	2	-31.543	5.726	-1.37	0.63	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	2210.01	-4078	-0.0002426	0.0001872	0.0035	2		10722.86	10722.86	No	4.85	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 73	fin.	-1700.33	-1436	-0.0001812	0.0001872	0.0035	2		10737.13	10737.13	No	6.31	Si
SLU 79	ini.	2204.62	-4008	-0.000242	0.0001872	0.0035	2		10722.86	10722.86	No	4.86	Si
SLU 79	fin.	-1667.19	-1378	-0.0001773	0.0001872	0.0035	2		10737.13	10737.13	No	6.44	Si
SLU 84	ini.	2336.72	-4284	-0.0002585	0.0001872	0.0035	2		10722.86	10722.86	No	4.59	Si
SLU 84	fin.	-1707.54	-1575	-0.000182	0.0001872	0.0035	2		10737.13	10737.13	No	6.29	Si
SLU 82	ini.	2336.72	-4284	-0.0002585	0.0001872	0.0035	2		10722.86	10722.86	No	4.59	Si
SLU 82	fin.	-1707.54	-1575	-0.000182	0.0001872	0.0035	2		10737.13	10737.13	No	6.29	Si
SLU 81	ini.	2333.49	-4242	-0.0002581	0.0001872	0.0035	2		10722.86	10722.86	No	4.6	Si
SLU 81	fin.	-1687.66	-1539	-0.0001797	0.0001872	0.0035	2		10737.13	10737.13	No	6.36	Si
SLU 76	ini.	2210.01	-4078	-0.0002426	0.0001872	0.0035	2		10722.86	10722.86	No	4.85	Si
SLU 76	fin.	-1700.33	-1436	-0.0001812	0.0001872	0.0035	2		10737.13	10737.13	No	6.31	Si
SLU 80	ini.	2207.85	-4050	-0.0002424	0.0001872	0.0035	2		10722.86	10722.86	No	4.86	Si
SLU 80	fin.	-1687.07	-1413	-0.0001797	0.0001872	0.0035	2		10737.13	10737.13	No	6.36	Si
SLU 75	ini.	2207.85	-4050	-0.0002424	0.0001872	0.0035	2		10722.86	10722.86	No	4.86	Si
SLU 75	fin.	-1687.07	-1413	-0.0001797	0.0001872	0.0035	2		10737.13	10737.13	No	6.36	Si
SLU 78	ini.	2207.85	-4050	-0.0002424	0.0001872	0.0035	2		10722.86	10722.86	No	4.86	Si
SLU 78	fin.	-1687.07	-1413	-0.0001797	0.0001872	0.0035	2		10737.13	10737.13	No	6.36	Si
SLU 83	ini.	2333.49	-4242	-0.0002581	0.0001872	0.0035	2		10722.86	10722.86	No	4.6	Si
SLU 83	fin.	-1687.66	-1539	-0.0001797	0.0001872	0.0035	2		10737.13	10737.13	No	6.36	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 73	ini.	2210.01	-7902	2	0	1938	7930	13475	5100	9868	No	1.25	Si
SLU 73	fin.	-1700.33	-5700	2	0	1557	7930	13475	5100	9487	No	1.66	Si
SLU 75	ini.	2207.85	-7869	2	0	1935	7930	13475	5100	9864	No	1.25	Si
SLU 75	fin.	-1687.07	-5690	2	0	1554	7930	13475	5100	9483	No	1.67	Si
SLU 81	ini.	2333.49	-8182	2	0	1960	7930	13475	5100	9889	No	1.21	Si
SLU 81	fin.	-1687.66	-5805	2	0	1574	7930	13475	5100	9504	No	1.64	Si
SLU 78	ini.	2207.85	-7869	2	0	1935	7930	13475	5100	9864	No	1.25	Si
SLU 78	fin.	-1687.07	-5690	2	0	1554	7930	13475	5100	9483	No	1.67	Si
SLU 84	ini.	2336.72	-8232	2	0	1965	7930	13475	5100	9895	No	1.2	Si
SLU 84	fin.	-1707.54	-5820	2	0	1580	7930	13475	5100	9509	No	1.63	Si
SLU 76	ini.	2210.01	-7902	2	0	1938	7930	13475	5100	9868	No	1.25	Si
SLU 76	fin.	-1700.33	-5700	2	0	1557	7930	13475	5100	9487	No	1.66	Si
SLU 77	ini.	2204.62	-7819	2	0	1929	7930	13475	5100	9859	No	1.26	Si
SLU 77	fin.	-1667.19	-5675	2	0	1548	7930	13475	5100	9477	No	1.67	Si
SLU 82	ini.	2336.72	-8232	2	0	1965	7930	13475	5100	9895	No	1.2	Si
SLU 82	fin.	-1707.54	-5820	2	0	1580	7930	13475	5100	9509	No	1.63	Si
SLU 83	ini.	2333.49	-8182	2	0	1960	7930	13475	5100	9889	No	1.21	Si
SLU 83	fin.	-1687.66	-5805	2	0	1574	7930	13475	5100	9504	No	1.64	Si
SLU 80	ini.	2207.85	-7869	2	0	1935	7930	13475	5100	9864	No	1.25	Si
SLU 80	fin.	-1687.07	-5690	2	0	1554	7930	13475	5100	9483	No	1.67	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 12	ini.	2311.36	-5567	-0.0002466	0.0002807	0.0035	2		15635.95	15635.95		6.76	Si
SLV 12	fin.	-3536.33	-1871	-0.0003973	0.0002807	0.0035	2		15648.46	15648.46		4.43	Si
SLV 1	ini.	510.14	-908	-0.0000512	0.0002807	0.0035	2		15635.95	15635.95		30.65	Si
SLV 1	fin.	1179.1	-2663	-0.0001208	0.0002807	0.0035	2		15635.95	15635.95		13.26	Si
SLV 7	ini.	1710.16	-4635	-0.0001784	0.0002807	0.0035	2		15635.95	15635.95		9.14	Si
SLV 7	fin.	-2075.2	-3502	-0.0002192	0.0002807	0.0035	2		15648.46	15648.46		7.54	Si
SLV 15	ini.	2370.82	-4181	-0.0002535	0.0002807	0.0035	2		15635.95	15635.95		6.6	Si
SLV 15	fin.	-3251.07	723	-0.0003605	0.0002807	0.0035	2		15648.46	15648.46		4.81	Si
SLV 16	ini.	2502.65	-4553	-0.000269	0.0002807	0.0035	2		15635.95	15635.95		6.25	Si
SLV 16	fin.	-3658.96	999	-0.0004134	0.0002807	0.0035	2		15648.46	15648.46		4.28	Si
SLV 11	ini.	2177.58	-5190	-0.0002311	0.0002807	0.0035	2		15635.95	15635.95		7.18	Si
SLV 11	fin.	-3122.4	-2152	-0.0003443	0.0002807	0.0035	2		15648.46	15648.46		5.01	Si
SLV 8	ini.	1843.94	-5012	-0.0001933	0.0002807	0.0035	2		15635.95	15635.95		8.48	Si
SLV 8	fin.	-2489.12	-3221	-0.0002671	0.0002807	0.0035	2		15648.46	15648.46		6.29	Si
SLV 10	ini.	1302.63	-825	-0.000134	0.0002807	0.0035	2		15635.95	15635.95		12	Si
SLV 10	fin.	-404.66	1838	-0.0000405	0.0002807	0.0035	2		15648.46	15648.46		38.67	Si
SLV 14	ini.	2200.03	-3130	-0.0002337	0.0002807	0.0035	2		15635.95	15635.95		7.11	Si
SLV 14	fin.	-2719.46	2112	-0.0002946	0.0002807	0.0035	2		15648.46	15648.46		5.75	Si
SLV 13	ini.	2068.2	-2759	-0.0002186	0.0002807	0.0035	2		15635.95	15635.95		7.56	Si
SLV 13	fin.	-2311.57	1835	-0.0002464	0.0002807	0.0035	2		15648.46	15648.46		6.77	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 7	ini.	1710.16	-6547	2	0	2708	7930	20213	5100	10637		1.62	Si
SLV 7	fin.	-2075.2	-4023	2	0	2545	7930	20213	5100	10474		2.6	Si
SLV 16	ini.	2502.65	-12221	2	0	2696	7930	20213	5100	10626		0.87	No
SLV 16	fin.	-3658.96	-11236	2	0	1753	7930	20213	5100	9682		0.86	No
SLV 15	ini.	2370.82	-11040	2	0	2644	7930	20213	5100	10573		0.96	No
SLV 15	fin.	-3251.07	-10072	2	0	1811	7930	20213	5100	9741		0.97	No
SLV 11	ini.	2177.58	-9669	2	0	2784	7930	20213	5100	10714		1.11	Si
SLV 11	fin.	-3122.4	-7530	2	0	2336	7930	20213	5100	10265		1.36	Si
SLV 9	ini.	1168.85	-3157	2	0	2041	7930	20213	5100	9971		3.16	Si
SLV 9	fin.	9.26	-3075	2	0	1628	7930	20213	5100	9558		3.11	Si
SLV 13	ini.	2068.2	-9086	2	0	2432	7930	20213	5100	10361		1.14	Si
SLV 13	fin.	-2311.57	-8735	2	0	1562	7930	20213	5100	9492		1.09	Si
SLV 8	ini.	1843.94	-7746	2	0	2760	7930	20213	5100	10690		1.38	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 8	fin.	-2489.12	-5205	2	0	2503	7930	20213	5100	10432		2	Si
SLV 14	ini.	2200.03	-10268	2	0	2489	7930	20213	5100	10419		1.01	Si
SLV 14	fin.	-2719.46	-9900	2	0	1494	7930	20213	5100	9423		0.95	No
SLV 12	ini.	2311.36	-10867	2	0	2835	7930	20213	5100	10765		0.99	No
SLV 12	fin.	-3536.33	-8712	2	0	2290	7930	20213	5100	10219		1.17	Si
SLV 10	ini.	1302.63	-4356	2	0	2110	7930	20213	5100	10040		2.3	Si
SLV 10	fin.	-404.66	-4257	2	0	1562	7930	20213	5100	9491		2.23	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.277	SLV 16	Si
V_SLV	0.862	SLV 16	No
PF_SLU	4.589	SLU 82	Si
V_SLU	1.202	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
-27.338	5.726	-1.37	0.63	2	-26.338	5.726	-1.37	0.63	2	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	-114.37	-1962	-0.0000114	0.0001872	0.0035	2		10737.13	10737.13	No	93.88	Si
SLU 78	fin.	1146.13	-2392	-0.0001189	0.0001872	0.0035	2		10722.86	10722.86	No	9.36	Si
SLU 75	ini.	-114.37	-1962	-0.0000114	0.0001872	0.0035	2		10737.13	10737.13	No	93.88	Si
SLU 75	fin.	1146.13	-2392	-0.0001189	0.0001872	0.0035	2		10722.86	10722.86	No	9.36	Si
SLU 81	ini.	-53.25	-2059	-0.0000053	0.0001872	0.0035	2		10737.13	10737.13	No	201.62	Si
SLU 81	fin.	1195.26	-2439	-0.0001243	0.0001872	0.0035	2		10722.86	10722.86	No	8.97	Si
SLU 84	ini.	-77.68	-2118	-0.0000077	0.0001872	0.0035	2		10737.13	10737.13	No	138.22	Si
SLU 84	fin.	1191.46	-2504	-0.0001239	0.0001872	0.0035	2		10722.86	10722.86	No	9	Si
SLU 83	ini.	-53.25	-2059	-0.0000053	0.0001872	0.0035	2		10737.13	10737.13	No	201.62	Si
SLU 83	fin.	1195.26	-2439	-0.0001243	0.0001872	0.0035	2		10722.86	10722.86	No	8.97	Si
SLU 77	ini.	-89.94	-1903	-0.0000089	0.0001872	0.0035	2		10737.13	10737.13	No	119.37	Si
SLU 77	fin.	1149.94	-2327	-0.0001193	0.0001872	0.0035	2		10722.86	10722.86	No	9.32	Si
SLU 74	ini.	-89.94	-1903	-0.0000089	0.0001872	0.0035	2		10737.13	10737.13	No	119.37	Si
SLU 74	fin.	1149.94	-2327	-0.0001193	0.0001872	0.0035	2		10722.86	10722.86	No	9.32	Si
SLU 79	ini.	-89.94	-1903	-0.0000089	0.0001872	0.0035	2		10737.13	10737.13	No	119.37	Si
SLU 79	fin.	1149.94	-2327	-0.0001193	0.0001872	0.0035	2		10722.86	10722.86	No	9.32	Si
SLU 82	ini.	-77.68	-2118	-0.0000077	0.0001872	0.0035	2		10737.13	10737.13	No	138.22	Si
SLU 82	fin.	1191.46	-2504	-0.0001239	0.0001872	0.0035	2		10722.86	10722.86	No	9	Si
SLU 80	ini.	-114.37	-1962	-0.0000114	0.0001872	0.0035	2		10737.13	10737.13	No	93.88	Si
SLU 80	fin.	1146.13	-2392	-0.0001189	0.0001872	0.0035	2		10722.86	10722.86	No	9.36	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 79	ini.	-89.94	132	2	0	1631	7930	13475	5100	9561	No	72.62	Si
SLU 79	fin.	1149.94	3132	2	0	1695	7930	13475	5100	9625	No	3.07	Si
SLU 83	ini.	-53.25	-39	2	0	1655	7930	13475	5100	9585	No	243.69	Si
SLU 83	fin.	1195.26	3226	2	0	1712	7930	13475	5100	9642	No	2.99	Si
SLU 84	ini.	-77.68	-40	2	0	1664	7930	13475	5100	9594	No	237.26	Si
SLU 84	fin.	1191.46	3276	2	0	1722	7930	13475	5100	9651	No	2.95	Si
SLU 81	ini.	-53.25	-39	2	0	1655	7930	13475	5100	9585	No	243.69	Si
SLU 81	fin.	1195.26	3226	2	0	1712	7930	13475	5100	9642	No	2.99	Si
SLU 73	ini.	-130.66	130	2	0	1646	7930	13475	5100	9576	No	73.76	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.	1143.6	3216	2	0	1711	7930	13475	5100	9641	No	3	Si
SLU 82	ini.	-77.68	-40	2	0	1664	7930	13475	5100	9594	No	237.26	Si
SLU 82	fin.	1191.46	3276	2	0	1722	7930	13475	5100	9651	No	2.95	Si
SLU 80	ini.	-114.37	131	2	0	1640	7930	13475	5100	9570	No	73.3	Si
SLU 80	fin.	1146.13	3183	2	0	1705	7930	13475	5100	9635	No	3.03	Si
SLU 75	ini.	-114.37	131	2	0	1640	7930	13475	5100	9570	No	73.3	Si
SLU 75	fin.	1146.13	3183	2	0	1705	7930	13475	5100	9635	No	3.03	Si
SLU 78	ini.	-114.37	131	2	0	1640	7930	13475	5100	9570	No	73.3	Si
SLU 78	fin.	1146.13	3183	2	0	1705	7930	13475	5100	9635	No	3.03	Si
SLU 76	ini.	-130.66	130	2	0	1646	7930	13475	5100	9576	No	73.76	Si
SLU 76	fin.	1143.6	3216	2	0	1711	7930	13475	5100	9641	No	3	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.	1061.83	-2224	-0.0001084	0.0002807	0.0035	2		15635.95	15635.95		14.73	Si
SLV 14	fin.	-226.5	338	-0.0000225	0.0002807	0.0035	2		15648.46	15648.46		69.09	Si
SLV 1	ini.	-633.48	1135	-0.0000638	0.0002807	0.0035	2		15648.46	15648.46		24.7	Si
SLV 1	fin.	1740.45	-2057	-0.0001818	0.0002807	0.0035	2		15635.95	15635.95		8.98	Si
SLV 3	ini.	-1292.27	-253	-0.0001328	0.0002807	0.0035	2		15648.46	15648.46		12.11	Si
SLV 3	fin.	1855.72	-3561	-0.0001946	0.0002807	0.0035	2		15635.95	15635.95		8.43	Si
SLV 9	ini.	1102.35	672	-0.0001127	0.0002807	0.0035	2		15635.95	15635.95		14.18	Si
SLV 9	fin.	424.3	983	-0.0000425	0.0002807	0.0035	2		15635.95	15635.95		36.85	Si
SLV 8	ini.	-1332.79	-3149	-0.0001372	0.0002807	0.0035	2		15648.46	15648.46		11.74	Si
SLV 8	fin.	1204.91	-4206	-0.0001236	0.0002807	0.0035	2		15635.95	15635.95		12.98	Si
SLV 4	ini.	-1087.36	-405	-0.000111	0.0002807	0.0035	2		15648.46	15648.46		14.39	Si
SLV 4	fin.	1708.39	-3149	-0.0001782	0.0002807	0.0035	2		15635.95	15635.95		9.15	Si
SLV 2	ini.	-428.57	983	-0.0000429	0.0002807	0.0035	2		15648.46	15648.46		36.51	Si
SLV 2	fin.	1593.13	-1646	-0.0001655	0.0002807	0.0035	2		15635.95	15635.95		9.81	Si
SLV 7	ini.	-1540.73	-2994	-0.0001597	0.0002807	0.0035	2		15648.46	15648.46		10.16	Si
SLV 7	fin.	1354.41	-4624	-0.0001396	0.0002807	0.0035	2		15635.95	15635.95		11.54	Si
SLV 11	ini.	-1093.61	-3957	-0.0001117	0.0002807	0.0035	2		15648.46	15648.46		14.31	Si
SLV 11	fin.	808.52	-4029	-0.0000819	0.0002807	0.0035	2		15635.95	15635.95		19.34	Si
SLV 10	ini.	1310.29	517	-0.0001349	0.0002807	0.0035	2		15635.95	15635.95		11.93	Si
SLV 10	fin.	274.8	1401	-0.0000274	0.0002807	0.0035	2		15635.95	15635.95		56.9	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.	-1087.36	4646	2	0	2033	7930	20213	5100	9963		2.14	Si
SLV 4	fin.	1708.39	6243	2	0	2492	7930	20213	5100	10421		1.67	Si
SLV 3	ini.	-1292.27	5542	2	0	2005	7930	20213	5100	9934		1.79	Si
SLV 3	fin.	1855.72	7149	2	0	2554	7930	20213	5100	10483		1.47	Si
SLV 7	ini.	-1540.73	2773	2	0	2468	7930	20213	5100	10398		3.75	Si
SLV 7	fin.	1354.41	6064	2	0	2706	7930	20213	5100	10636		1.75	Si
SLV 8	ini.	-1332.79	1864	2	0	2492	7930	20213	5100	10421		5.59	Si
SLV 8	fin.	1204.91	5145	2	0	2647	7930	20213	5100	10577		2.06	Si
SLV 11	ini.	-1093.61	22	2	0	2611	7930	20213	5100	10541		471.17	Si
SLV 11	fin.	808.52	3793	2	0	2622	7930	20213	5100	10551		2.78	Si
SLV 1	ini.	-633.48	5170	2	0	1723	7930	20213	5100	9653		1.87	Si
SLV 1	fin.	1740.45	5813	2	0	2320	7930	20213	5100	10250		1.76	Si
SLV 14	ini.	1061.83	-4893	2	0	2347	7930	20213	5100	10277		2.1	Si
SLV 14	fin.	-226.5	-2663	2	0	1890	7930	20213	5100	9820		3.69	Si
SLV 2	ini.	-428.57	4275	2	0	1756	7930	20213	5100	9686		2.27	Si
SLV 2	fin.	1593.13	4907	2	0	2252	7930	20213	5100	10182		2.07	Si
SLV 16	ini.	403.04	-4522	2	0	2561	7930	20213	5100	10491		2.32	Si
SLV 16	fin.	-111.24	-1327	2	0	2170	7930	20213	5100	10100		7.61	Si
SLV 13	ini.	856.92	-3997	2	0	2323	7930	20213	5100	10252		2.56	Si
SLV 13	fin.	-79.18	-1758	2	0	1971	7930	20213	5100	9900		5.63	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	8.426	SLV 3	Si
V_SLV	1.466	SLV 3	Si
PF_SLU	8.971	SLU 81	Si
V_SLU	2.946	SLU 82	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
-27.338	5.726	1.03	1.32	0.29	-26.338	5.726	1.03	1.32	0.29	1	0.45	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	-191.71	-404	-0.0014024	0.0001872	0.0035	0.29		319.9	319.9	No	1.67	Si
SLU 78	fin.	-37.27	308	-0.0001883	0.0001872	0.0035	0.29		319.9	319.9	No	8.58	Si
SLU 84	ini.	-200.52	-412	-0.001499	0.0001872	0.0035	0.29		319.9	319.9	No	1.6	Si
SLU 84	fin.	-45.86	306	-0.0002371	0.0001872	0.0035	0.29		319.9	319.9	No	6.98	Si
SLU 82	ini.	-200.52	-412	-0.001499	0.0001872	0.0035	0.29		319.9	319.9	No	1.6	Si
SLU 82	fin.	-45.86	306	-0.0002371	0.0001872	0.0035	0.29		319.9	319.9	No	6.98	Si
SLU 75	ini.	-191.71	-404	-0.0014024	0.0001872	0.0035	0.29		319.9	319.9	No	1.67	Si
SLU 75	fin.	-37.27	308	-0.0001883	0.0001872	0.0035	0.29		319.9	319.9	No	8.58	Si
SLU 83	ini.	-198.94	-406	-0.0014813	0.0001872	0.0035	0.29		319.9	319.9	No	1.61	Si
SLU 83	fin.	-46.66	302	-0.0002418	0.0001872	0.0035	0.29		319.9	319.9	No	6.86	Si
SLU 77	ini.	-190.13	-399	-0.0013856	0.0001872	0.0035	0.29		319.9	319.9	No	1.68	Si
SLU 77	fin.	-38.07	303	-0.0001927	0.0001872	0.0035	0.29		319.9	319.9	No	8.4	Si
SLU 81	ini.	-198.94	-406	-0.0014813	0.0001872	0.0035	0.29		319.9	319.9	No	1.61	Si
SLU 81	fin.	-46.66	302	-0.0002418	0.0001872	0.0035	0.29		319.9	319.9	No	6.86	Si
SLU 80	ini.	-191.71	-404	-0.0014024	0.0001872	0.0035	0.29		319.9	319.9	No	1.67	Si
SLU 80	fin.	-37.27	308	-0.0001883	0.0001872	0.0035	0.29		319.9	319.9	No	8.58	Si
SLU 73	ini.	-192.76	-408	-0.0014137	0.0001872	0.0035	0.29		319.9	319.9	No	1.66	Si
SLU 73	fin.	-36.74	310	-0.0001854	0.0001872	0.0035	0.29		319.9	319.9	No	8.71	Si
SLU 76	ini.	-192.76	-408	-0.0014137	0.0001872	0.0035	0.29		319.9	319.9	No	1.66	Si
SLU 76	fin.	-36.74	310	-0.0001854	0.0001872	0.0035	0.29		319.9	319.9	No	8.71	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.	-198.94	832	0.29	0	171	2300	1954	740	2470	No	2.97	Si
SLU 81	fin.	-46.66	-339	0.29	0	78	2300	1954	740	2378	No	7	Si
SLU 84	ini.	-200.52	838	0.29	0	171	2300	1954	740	2471	No	2.95	Si
SLU 84	fin.	-45.86	-337	0.29	0	77	2300	1954	740	2377	No	7.05	Si
SLU 76	ini.	-192.76	805	0.29	0	171	2300	1954	740	2470	No	3.07	Si
SLU 76	fin.	-36.74	-300	0.29	0	76	2300	1954	740	2376	No	7.93	Si
SLU 83	ini.	-198.94	832	0.29	0	171	2300	1954	740	2470	No	2.97	Si
SLU 83	fin.	-46.66	-339	0.29	0	78	2300	1954	740	2378	No	7	Si
SLU 82	ini.	-200.52	838	0.29	0	171	2300	1954	740	2471	No	2.95	Si
SLU 82	fin.	-45.86	-337	0.29	0	77	2300	1954	740	2377	No	7.05	Si
SLU 75	ini.	-191.71	801	0.29	0	170	2300	1954	740	2470	No	3.08	Si
SLU 75	fin.	-37.27	-301	0.29	0	77	2300	1954	740	2376	No	7.89	Si
SLU 73	ini.	-192.76	805	0.29	0	171	2300	1954	740	2470	No	3.07	Si
SLU 73	fin.	-36.74	-300	0.29	0	76	2300	1954	740	2376	No	7.93	Si
SLU 80	ini.	-191.71	801	0.29	0	170	2300	1954	740	2470	No	3.08	Si
SLU 80	fin.	-37.27	-301	0.29	0	77	2300	1954	740	2376	No	7.89	Si
SLU 78	ini.	-191.71	801	0.29	0	170	2300	1954	740	2470	No	3.08	Si
SLU 78	fin.	-37.27	-301	0.29	0	77	2300	1954	740	2376	No	7.89	Si
SLU 77	ini.	-190.13	796	0.29	0	170	2300	1954	740	2469	No	3.1	Si
SLU 77	fin.	-38.07	-303	0.29	0	78	2300	1954	740	2377	No	7.83	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.	-269.34	-882	-0.0023124	0.0002807	0.0035	0.29		330.63	330.63		1.23	Si
SLV 1	fin.	142.57	836	-0.0008819	0.0002807	0.0035	0.29		328.78	328.78		2.31	Si
SLV 13	ini.	29.83	373	-0.0001463	0.0002807	0.0035	0.29		328.78	328.78		11.02	Si
SLV 13	fin.	-179.29	-409	-0.0011906	0.0002807	0.0035	0.29		330.63	330.63		1.84	Si
SLV 8	ini.	-260.55	-762	-0.0021646	0.0002807	0.0035	0.29		330.63	330.63		1.27	Si
SLV 8	fin.	70.08	635	-0.0003707	0.0002807	0.0035	0.29		328.78	328.78		4.69	Si
SLV 2	ini.	-235.15	-747	-0.0017955	0.0002807	0.0035	0.29		330.63	330.63		1.41	Si
SLV 2	fin.	110.04	702	-0.0006352	0.0002807	0.0035	0.29		328.78	328.78		2.99	Si
SLV 7	ini.	-295.24	-899	-0.0028192	0.0002807	0.0035	0.29		330.63	330.63		1.12	Si
SLV 7	fin.	103.1	770	-0.0005862	0.0002807	0.0035	0.29		328.78	328.78		3.19	Si
SLV 14	ini.	64.02	508	-0.0003342	0.0002807	0.0035	0.29		328.78	328.78		5.14	Si
SLV 14	fin.	-211.83	-542	-0.0015176	0.0002807	0.0035	0.29		330.63	330.63		1.56	Si
SLV 11	ini.	-205.49	-523	-0.0014494	0.0002807	0.0035	0.29		330.63	330.63		1.61	Si
SLV 11	fin.	6.54	397	-0.000031	0.0002807	0.0035	0.29		328.78	328.78		50.26	Si
SLV 4	ini.	-295.32	-957	-0.0028209	0.0002807	0.0035	0.29		330.63	330.63		1.12	Si
SLV 4	fin.	143.7	873	-0.000891	0.0002807	0.0035	0.29		328.78	328.78		2.29	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	-329.51	-1092	-0.0036023	0.0002807	0.0035	0.29		330.63	330.63		1	Si
SLV 3	fin.	176.24	1006	-0.0011717	0.0002807	0.0035	0.29		328.78	328.78		1.87	Si
SLV 16	ini.	3.85	298	-0.0000182	0.0002807	0.0035	0.29		328.78	328.78		85.41	Si
SLV 16	fin.	-178.16	-372	-0.0011802	0.0002807	0.0035	0.29		330.63	330.63		1.86	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 3	ini.	-329.51	1238	0.29	0	298	2300	2931	740	2598		2.1	Si
SLV 3	fin.	176.24	524	0.29	0	0	2300	2931	740	2300		4.39	Si
SLV 13	ini.	29.83	-11	0.29	0	133	2300	2931	740	2432		212.92	Si
SLV 13	fin.	-179.29	-787	0.29	0	236	2300	2931	740	2536		3.22	Si
SLV 4	ini.	-295.32	1126	0.29	0	287	2300	2931	740	2587		2.3	Si
SLV 4	fin.	143.7	418	0.29	0	0	2300	2931	740	2300		5.5	Si
SLV 2	ini.	-235.15	921	0.29	0	269	2300	2931	740	2568		2.79	Si
SLV 2	fin.	110.04	305	0.29	0	39	2300	2931	740	2339		7.67	Si
SLV 11	ini.	-205.49	799	0.29	0	247	2300	2931	740	2547		3.19	Si
SLV 11	fin.	6.54	-122	0.29	0	128	2300	2931	740	2428		19.87	Si
SLV 14	ini.	64.02	-124	0.29	0	105	2300	2931	740	2404		19.4	Si
SLV 14	fin.	-211.83	-893	0.29	0	249	2300	2931	740	2549		2.85	Si
SLV 1	ini.	-269.34	1034	0.29	0	281	2300	2931	740	2580		2.5	Si
SLV 1	fin.	142.57	411	0.29	0	0	2300	2931	740	2300		5.59	Si
SLV 8	ini.	-260.55	998	0.29	0	270	2300	2931	740	2570		2.57	Si
SLV 8	fin.	70.08	130	0.29	0	70	2300	2931	740	2369		18.23	Si
SLV 16	ini.	3.85	81	0.29	0	146	2300	2931	740	2445		30.29	Si
SLV 16	fin.	-178.16	-780	0.29	0	232	2300	2931	740	2532		3.24	Si
SLV 7	ini.	-295.24	1112	0.29	0	282	2300	2931	740	2582		2.32	Si
SLV 7	fin.	103.1	237	0.29	0	0	2300	2931	740	2300		9.69	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.003	SLV 3	Si
V_SLV	2.098	SLV 3	Si
PF_SLU	1.595	SLU 82	Si
V_SLU	2.949	SLU 82	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
-28.073	-1.549	0.8	1.32	0.52	-28.073	0.331	0.8	1.32	0.52	1.88	0.3	3500

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 78	ini.	-265.82	290	-0.0004614	0.0002246	0.0035	0.52		1014.2	1014.2	No	3.82	Si
SLU 78	fin.	-625.05	-1575	-0.0013931	0.0002246	0.0035	0.52		1014.2	1014.2	No	1.62	Si
SLU 82	ini.	-295.23	263	-0.0005237	0.0002246	0.0035	0.52		1014.2	1014.2	No	3.44	Si
SLU 82	fin.	-660.68	-1653	-0.0015132	0.0002246	0.0035	0.52		1014.2	1014.2	No	1.54	Si
SLU 74	ini.	-275.58	248	-0.0004818	0.0002246	0.0035	0.52		1014.2	1014.2	No	3.68	Si
SLU 74	fin.	-614.99	-1531	-0.0013605	0.0002246	0.0035	0.52		1014.2	1014.2	No	1.65	Si
SLU 81	ini.	-304.99	220	-0.0005449	0.0002246	0.0035	0.52		1014.2	1014.2	No	3.33	Si
SLU 81	fin.	-650.61	-1609	-0.0014785	0.0002246	0.0035	0.52		1014.2	1014.2	No	1.56	Si
SLU 75	ini.	-265.82	290	-0.0004614	0.0002246	0.0035	0.52		1014.2	1014.2	No	3.82	Si
SLU 75	fin.	-625.05	-1575	-0.0013931	0.0002246	0.0035	0.52		1014.2	1014.2	No	1.62	Si
SLU 76	ini.	-259.31	318	-0.0004479	0.0002246	0.0035	0.52		1014.2	1014.2	No	3.91	Si
SLU 76	fin.	-631.76	-1604	-0.0014151	0.0002246	0.0035	0.52		1014.2	1014.2	No	1.61	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 80	ini.	-265.82	290	-0.0004614	0.0002246	0.0035	0.52		1014.2	1014.2	No	3.82	Si
SLU 80	fin.	-625.05	-1575	-0.0013931	0.0002246	0.0035	0.52		1014.2	1014.2	No	1.62	Si
SLU 84	ini.	-295.23	263	-0.0005237	0.0002246	0.0035	0.52		1014.2	1014.2	No	3.44	Si
SLU 84	fin.	-660.68	-1653	-0.0015132	0.0002246	0.0035	0.52		1014.2	1014.2	No	1.54	Si
SLU 83	ini.	-304.99	220	-0.0005449	0.0002246	0.0035	0.52		1014.2	1014.2	No	3.33	Si
SLU 83	fin.	-650.61	-1609	-0.0014785	0.0002246	0.0035	0.52		1014.2	1014.2	No	1.56	Si
SLU 73	ini.	-259.31	318	-0.0004479	0.0002246	0.0035	0.52		1014.2	1014.2	No	3.91	Si
SLU 73	fin.	-631.76	-1604	-0.0014151	0.0002246	0.0035	0.52		1014.2	1014.2	No	1.61	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.	-259.31	2910	0.52	0	105	4123	2803	1326	4129	No	1.42	Si
SLU 76	fin.	-631.76	-5366	0.52	0	286	4123	2803	1326	4129	No	0.77	No
SLU 82	ini.	-295.23	3172	0.52	0	114	4123	2803	1326	4129	No	1.3	Si
SLU 82	fin.	-660.68	-5695	0.52	0	289	4123	2803	1326	4129	No	0.73	No
SLU 79	ini.	-275.58	2965	0.52	0	117	4123	2803	1326	4129	No	1.39	Si
SLU 79	fin.	-614.99	-5302	0.52	0	281	4123	2803	1326	4129	No	0.78	No
SLU 84	ini.	-295.23	3172	0.52	0	114	4123	2803	1326	4129	No	1.3	Si
SLU 84	fin.	-660.68	-5695	0.52	0	289	4123	2803	1326	4129	No	0.73	No
SLU 81	ini.	-304.99	3206	0.52	0	121	4123	2803	1326	4129	No	1.29	Si
SLU 81	fin.	-650.61	-5656	0.52	0	286	4123	2803	1326	4129	No	0.73	No
SLU 78	ini.	-265.82	2932	0.52	0	110	4123	2803	1326	4129	No	1.41	Si
SLU 78	fin.	-625.05	-5341	0.52	0	284	4123	2803	1326	4129	No	0.77	No
SLU 75	ini.	-265.82	2932	0.52	0	110	4123	2803	1326	4129	No	1.41	Si
SLU 75	fin.	-625.05	-5341	0.52	0	284	4123	2803	1326	4129	No	0.77	No
SLU 80	ini.	-265.82	2932	0.52	0	110	4123	2803	1326	4129	No	1.41	Si
SLU 80	fin.	-625.05	-5341	0.52	0	284	4123	2803	1326	4129	No	0.77	No
SLU 73	ini.	-259.31	2910	0.52	0	105	4123	2803	1326	4129	No	1.42	Si
SLU 73	fin.	-631.76	-5366	0.52	0	286	4123	2803	1326	4129	No	0.77	No
SLU 83	ini.	-304.99	3206	0.52	0	121	4123	2803	1326	4129	No	1.29	Si
SLU 83	fin.	-650.61	-5656	0.52	0	286	4123	2803	1326	4129	No	0.73	No

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.	421.93	2805	-0.0007699	0.0003369	0.0035	0.52		998.47	998.47		2.37	Si
SLV 8	fin.	-1036.67	-3692	-0.0033018	0.0003369	0.0035	0.52		1001.89	1001.89		0.97	No
SLV 9	ini.	-751.34	-2327	-0.001719	0.0003369	0.0035	0.52		1001.89	1001.89		1.33	Si
SLV 9	fin.	198.21	1559	-0.0003155	0.0003369	0.0035	0.52		998.47	998.47		5.04	Si
SLV 12	ini.	461.65	2978	-0.0008638	0.0003369	0.0035	0.52		998.47	998.47		2.16	Si
SLV 12	fin.	-1073.54	-3776	-0.0035533	0.0003369	0.0035	0.52		1001.89	1001.89		0.93	No
SLV 5	ini.	-791.05	-2500	-0.0018775	0.0003369	0.0035	0.52		1001.89	1001.89		1.27	Si
SLV 5	fin.	235.08	1642	-0.0003819	0.0003369	0.0035	0.52		998.47	998.47		4.25	Si
SLV 7	ini.	432.83	2854	-0.0007952	0.0003369	0.0035	0.52		998.47	998.47		2.31	Si
SLV 7	fin.	-1046.19	-3731	-0.0033679	0.0003369	0.0035	0.52		1001.89	1001.89		0.96	No
SLV 10	ini.	-762.24	-2376	-0.0017609	0.0003369	0.0035	0.52		1001.89	1001.89		1.31	Si
SLV 10	fin.	207.74	1598	-0.0003324	0.0003369	0.0035	0.52		998.47	998.47		4.81	Si
SLV 16	ini.	79.7	1306	-0.0001201	0.0003369	0.0035	0.52		998.47	998.47		12.53	Si
SLV 16	fin.	-668.18	-1993	-0.0014302	0.0003369	0.0035	0.52		1001.89	1001.89		1.5	Si
SLV 6	ini.	-801.95	-2549	-0.0019239	0.0003369	0.0035	0.52		1001.89	1001.89		1.25	Si
SLV 6	fin.	244.61	1681	-0.0003996	0.0003369	0.0035	0.52		998.47	998.47		4.08	Si
SLV 11	ini.	472.55	3027	-0.0008904	0.0003369	0.0035	0.52		998.47	998.47		2.11	Si
SLV 11	fin.	-1083.07	-3815	-0.0036162	0.0003369	0.0035	0.52		1001.89	1001.89		0.93	No
SLV 15	ini.	90.44	1354	-0.0001369	0.0003369	0.0035	0.52		998.47	998.47		11.04	Si
SLV 15	fin.	-677.57	-2031	-0.0014605	0.0003369	0.0035	0.52		1001.89	1001.89		1.48	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 6	ini.	-801.95	4022	0.52	0	438	4123	4205	1326	4561		1.13	Si
SLV 6	fin.	244.61	-777	0.52	0	0	4123	4205	1326	4123		5.31	Si
SLV 3	ini.	-41.94	1460	0.52	0	90	4123	4205	1326	4214		2.89	Si
SLV 3	fin.	-554.66	-3978	0.52	0	384	4123	4205	1326	4508		1.13	Si
SLV 7	ini.	432.83	-105	0.52	0	0	4123	4205	1326	4123		39.41	Si
SLV 7	fin.	-1046.19	-6063	0.52	0	507	4123	4205	1326	4630		0.76	No
SLV 4	ini.	-52.68	1496	0.52	0	104	4123	4205	1326	4228		2.83	Si
SLV 4	fin.	-545.27	-3939	0.52	0	382	4123	4205	1326	4505		1.14	Si
SLV 16	ini.	79.7	1116	0.52	0	0	4123	4205	1326	4123		3.69	Si
SLV 16	fin.	-668.18	-4649	0.52	0	401	4123	4205	1326	4525		0.97	No
SLV 5	ini.	-791.05	3985	0.52	0	435	4123	4205	1326	4558		1.14	Si
SLV 5	fin.	235.08	-816	0.52	0	0	4123	4205	1326	4123		5.05	Si
SLV 8	ini.	421.93	-68	0.52	0	0	4123	4205	1326	4123		60.87	Si
SLV 8	fin.	-1036.67	-6023	0.52	0	505	4123	4205	1326	4628		0.77	No
SLV 15	ini.	90.44	1080	0.52	0	0	4123	4205	1326	4123		3.82	Si
SLV 15	fin.	-677.57	-4687	0.52	0	404	4123	4205	1326	4527		0.97	No
SLV 12	ini.	461.65	-182	0.52	0	0	4123	4205	1326	4123		22.68	Si
SLV 12	fin.	-1073.54	-6236	0.52	0	509	4123	4205	1326	4633		0.74	No
SLV 11	ini.	472.55	-219	0.52	0	0	4123	4205	1326	4123		18.86	Si
SLV 11	fin.	-1083.07	-6276	0.52	0	512	4123	4205	1326	4635		0.74	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.925	SLV 11	No

Stato limite	Coeff.s.	Comb.	Verifica
V_SLV	0.739	SLV 11	No
PF_SLU	1.535	SLU 82	Si
V_SLU	0.725	SLU 82	No

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
-32.708	-3.274	1.32	2.32	1	-31.708	-3.274	1.32	2.32	1	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	192.69	-386	-0.0000785	0.0001872	0.0035	1		3643.26	3643.26	No	18.91	Si
SLU 80	fin.	-354.94	775	-0.0001488	0.0001872	0.0035	1		3649.64	3649.64	No	10.28	Si
SLU 81	ini.	146.82	-305	-0.0000594	0.0001872	0.0035	1		3643.26	3643.26	No	24.81	Si
SLU 81	fin.	-361.04	739	-0.0001515	0.0001872	0.0035	1		3649.64	3649.64	No	10.11	Si
SLU 75	ini.	192.69	-386	-0.0000785	0.0001872	0.0035	1		3643.26	3643.26	No	18.91	Si
SLU 75	fin.	-354.94	775	-0.0001488	0.0001872	0.0035	1		3649.64	3649.64	No	10.28	Si
SLU 84	ini.	141.51	-296	-0.0000572	0.0001872	0.0035	1		3643.26	3643.26	No	25.75	Si
SLU 84	fin.	-357.76	729	-0.0001501	0.0001872	0.0035	1		3649.64	3649.64	No	10.2	Si
SLU 82	ini.	141.51	-296	-0.0000572	0.0001872	0.0035	1		3643.26	3643.26	No	25.75	Si
SLU 82	fin.	-357.76	729	-0.0001501	0.0001872	0.0035	1		3649.64	3649.64	No	10.2	Si
SLU 83	ini.	146.82	-305	-0.0000594	0.0001872	0.0035	1		3643.26	3643.26	No	24.81	Si
SLU 83	fin.	-361.04	739	-0.0001515	0.0001872	0.0035	1		3649.64	3649.64	No	10.11	Si
SLU 79	ini.	198	-395	-0.0000808	0.0001872	0.0035	1		3643.26	3643.26	No	18.4	Si
SLU 79	fin.	-358.22	785	-0.0001503	0.0001872	0.0035	1		3649.64	3649.64	No	10.19	Si
SLU 74	ini.	198	-395	-0.0000808	0.0001872	0.0035	1		3643.26	3643.26	No	18.4	Si
SLU 74	fin.	-358.22	785	-0.0001503	0.0001872	0.0035	1		3649.64	3649.64	No	10.19	Si
SLU 77	ini.	198	-395	-0.0000808	0.0001872	0.0035	1		3643.26	3643.26	No	18.4	Si
SLU 77	fin.	-358.22	785	-0.0001503	0.0001872	0.0035	1		3649.64	3649.64	No	10.19	Si
SLU 78	ini.	192.69	-386	-0.0000785	0.0001872	0.0035	1		3643.26	3643.26	No	18.91	Si
SLU 78	fin.	-354.94	775	-0.0001488	0.0001872	0.0035	1		3649.64	3649.64	No	10.28	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 64	ini.	317.43	-1456	1	0	534	7930	4492	2550	7042	No	4.84	Si
SLU 64	fin.	-351.65	-714	1	0	217	7930	4492	2550	7042	No	9.86	Si
SLU 67	ini.	312.12	-1436	1	0	533	7930	4492	2550	7042	No	4.9	Si
SLU 67	fin.	-348.36	-704	1	0	220	7930	4492	2550	7042	No	10.01	Si
SLU 69	ini.	317.43	-1456	1	0	534	7930	4492	2550	7042	No	4.84	Si
SLU 69	fin.	-351.65	-714	1	0	217	7930	4492	2550	7042	No	9.86	Si
SLU 65	ini.	308.58	-1423	1	0	532	7930	4492	2550	7042	No	4.95	Si
SLU 65	fin.	-346.18	-697	1	0	223	7930	4492	2550	7042	No	10.11	Si
SLU 70	ini.	312.12	-1436	1	0	533	7930	4492	2550	7042	No	4.9	Si
SLU 70	fin.	-348.36	-704	1	0	220	7930	4492	2550	7042	No	10.01	Si
SLU 72	ini.	312.12	-1436	1	0	533	7930	4492	2550	7042	No	4.9	Si
SLU 72	fin.	-348.36	-704	1	0	220	7930	4492	2550	7042	No	10.01	Si
SLU 71	ini.	317.43	-1456	1	0	534	7930	4492	2550	7042	No	4.84	Si
SLU 71	fin.	-351.65	-714	1	0	217	7930	4492	2550	7042	No	9.86	Si
SLU 66	ini.	317.43	-1456	1	0	534	7930	4492	2550	7042	No	4.84	Si
SLU 66	fin.	-351.65	-714	1	0	217	7930	4492	2550	7042	No	9.86	Si
SLU 68	ini.	308.58	-1423	1	0	532	7930	4492	2550	7042	No	4.95	Si
SLU 68	fin.	-346.18	-697	1	0	223	7930	4492	2550	7042	No	10.11	Si
SLU 43	ini.	350.92	-1423	1	0	543	7930	4492	2550	7042	No	4.95	Si
SLU 43	fin.	-332.17	-954	1	0	214	7930	4492	2550	7042	No	7.38	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.	-745.88	777	-0.0003262	0.0002807	0.0035	1		3671.29	3671.29		4.92	Si
SLV 4	fin.	456.56	-2031	-0.0001911	0.0002807	0.0035	1		3664.83	3664.83		8.03	Si
SLV 14	ini.	1039.96	-1440	-0.0004808	0.0002807	0.0035	1		3664.83	3664.83		3.52	Si
SLV 14	fin.	-880.07	2937	-0.0003943	0.0002807	0.0035	1		3671.29	3671.29		4.17	Si
SLV 10	ini.	711.16	-1178	-0.0003097	0.0002807	0.0035	1		3664.83	3664.83		5.15	Si
SLV 10	fin.	-596.75	1760	-0.0002546	0.0002807	0.0035	1		3671.29	3671.29		6.15	Si
SLV 15	ini.	984.7	-1273	-0.0004506	0.0002807	0.0035	1		3664.83	3664.83		3.72	Si
SLV 15	fin.	-870.56	2974	-0.0003893	0.0002807	0.0035	1		3671.29	3671.29		4.22	Si
SLV 16	ini.	843.95	-1101	-0.0003763	0.0002807	0.0035	1		3664.83	3664.83		4.34	Si
SLV 16	fin.	-757.86	2565	-0.0003321	0.0002807	0.0035	1		3671.29	3671.29		4.84	Si
SLV 9	ini.	853.99	-1353	-0.0003815	0.0002807	0.0035	1		3664.83	3664.83		4.29	Si
SLV 9	fin.	-711.11	2175	-0.0003091	0.0002807	0.0035	1		3671.29	3671.29		5.16	Si
SLV 13	ini.	1180.71	-1613	-0.0005603	0.0002807	0.0035	1		3664.83	3664.83		3.1	Si
SLV 13	fin.	-992.76	3346	-0.0004541	0.0002807	0.0035	1		3671.29	3671.29		3.7	Si
SLV 8	ini.	-419.16	517	-0.0001742	0.0002807	0.0035	1		3671.29	3671.29		8.76	Si
SLV 8	fin.	174.92	-860	-0.0000706	0.0002807	0.0035	1		3664.83	3664.83		20.95	Si
SLV 2	ini.	-549.87	437	-0.0002329	0.0002807	0.0035	1		3671.29	3671.29		6.68	Si
SLV 2	fin.	334.36	-1658	-0.0001376	0.0002807	0.0035	1		3664.83	3664.83		10.96	Si
SLV 3	ini.	-605.13	604	-0.0002585	0.0002807	0.0035	1		3671.29	3671.29		6.07	Si
SLV 3	fin.	343.87	-1621	-0.0001417	0.0002807	0.0035	1		3664.83	3664.83		10.66	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 14	ini.	1039.96	-4125	1	0	877	7930	6738	2550	8807		2.14	Si
SLV 14	fin.	-880.07	-3354	1	0	0	7930	6738	2550	7930		2.36	Si
SLV 10	ini.	711.16	-2932	1	0	841	7930	6738	2550	8770		2.99	Si
SLV 10	fin.	-596.75	-1732	1	0	71	7930	6738	2550	8000		4.62	Si
SLV 1	ini.	-409.12	1226	1	0	602	7930	6738	2550	8531		6.96	Si
SLV 1	fin.	221.67	2094	1	0	851	7930	6738	2550	8780		4.19	Si
SLV 13	ini.	1180.71	-4661	1	0	900	7930	6738	2550	8830		1.89	Si
SLV 13	fin.	-992.76	-3840	1	0	0	7930	6738	2550	7930		2.06	Si
SLV 3	ini.	-605.13	1973	1	0	530	7930	6738	2550	8460		4.29	Si
SLV 3	fin.	343.87	2488	1	0	901	7930	6738	2550	8831		3.55	Si
SLV 15	ini.	984.7	-3914	1	0	854	7930	6738	2550	8784		2.24	Si
SLV 15	fin.	-870.56	-3447	1	0	0	7930	6738	2550	7930		2.3	Si
SLV 4	ini.	-745.88	2509	1	0	490	7930	6738	2550	8419		3.36	Si
SLV 4	fin.	456.56	2975	1	0	954	7930	6738	2550	8884		2.99	Si
SLV 9	ini.	853.99	-3476	1	0	865	7930	6738	2550	8795		2.53	Si
SLV 9	fin.	-711.11	-2226	1	0	0	7930	6738	2550	7930		3.56	Si
SLV 2	ini.	-549.87	1762	1	0	567	7930	6738	2550	8496		4.82	Si
SLV 2	fin.	334.36	2581	1	0	906	7930	6738	2550	8836		3.42	Si
SLV 16	ini.	843.95	-3378	1	0	830	7930	6738	2550	8759		2.59	Si
SLV 16	fin.	-757.86	-2960	1	0	0	7930	6738	2550	7930		2.68	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.104	SLV 13	Si
V_SLV	1.894	SLV 13	Si
PF_SLU	10.109	SLU 81	Si
V_SLU	4.837	SLU 64	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
-32.708	-3.274	4.22	5.08	0.86	-31.708	-3.274	4.22	5.08	0.86	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	384.1	1226	-0.0002262	0.0001872	0.0035	0.86		2699.52	2699.52	No	7.03	Si
SLU 79	fin.	-421.6	358	-0.0002507	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.42	Si
SLU 80	ini.	380.15	1216	-0.0002236	0.0001872	0.0035	0.86		2699.52	2699.52	No	7.1	Si
SLU 80	fin.	-416.61	365	-0.0002474	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.49	Si
SLU 81	ini.	380.41	1242	-0.0002238	0.0001872	0.0035	0.86		2699.52	2699.52	No	7.1	Si
SLU 81	fin.	-424.59	476	-0.0002528	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.37	Si
SLU 84	ini.	376.46	1232	-0.0002212	0.0001872	0.0035	0.86		2699.52	2699.52	No	7.17	Si
SLU 84	fin.	-419.61	483	-0.0002494	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.45	Si
SLU 82	ini.	376.46	1232	-0.0002212	0.0001872	0.0035	0.86		2699.52	2699.52	No	7.17	Si
SLU 82	fin.	-419.61	483	-0.0002494	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.45	Si
SLU 74	ini.	384.1	1226	-0.0002262	0.0001872	0.0035	0.86		2699.52	2699.52	No	7.03	Si
SLU 74	fin.	-421.6	358	-0.0002507	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.42	Si
SLU 75	ini.	380.15	1216	-0.0002236	0.0001872	0.0035	0.86		2699.52	2699.52	No	7.1	Si
SLU 75	fin.	-416.61	365	-0.0002474	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.49	Si
SLU 83	ini.	380.41	1242	-0.0002238	0.0001872	0.0035	0.86		2699.52	2699.52	No	7.1	Si
SLU 83	fin.	-424.59	476	-0.0002528	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.37	Si
SLU 78	ini.	380.15	1216	-0.0002236	0.0001872	0.0035	0.86		2699.52	2699.52	No	7.1	Si
SLU 78	fin.	-416.61	365	-0.0002474	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.49	Si
SLU 77	ini.	384.1	1226	-0.0002262	0.0001872	0.0035	0.86		2699.52	2699.52	No	7.03	Si
SLU 77	fin.	-421.6	358	-0.0002507	0.0001872	0.0035	0.86		2705.05	2705.05	No	6.42	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.	380.15	1287	0.86	0	0	6819	3863	2193	6056	No	4.7	Si
SLU 80	fin.	-416.61	-3000	0.86	0	258	6819	3863	2193	6056	No	2.02	Si
SLU 75	ini.	380.15	1287	0.86	0	0	6819	3863	2193	6056	No	4.7	Si
SLU 75	fin.	-416.61	-3000	0.86	0	258	6819	3863	2193	6056	No	2.02	Si
SLU 78	ini.	380.15	1287	0.86	0	0	6819	3863	2193	6056	No	4.7	Si
SLU 78	fin.	-416.61	-3000	0.86	0	258	6819	3863	2193	6056	No	2.02	Si
SLU 74	ini.	384.1	1271	0.86	0	0	6819	3863	2193	6056	No	4.76	Si
SLU 74	fin.	-421.6	-3016	0.86	0	259	6819	3863	2193	6056	No	2.01	Si
SLU 83	ini.	380.41	1712	0.86	0	0	6819	3863	2193	6056	No	3.54	Si
SLU 83	fin.	-424.59	-3248	0.86	0	235	6819	3863	2193	6056	No	1.86	Si
SLU 77	ini.	384.1	1271	0.86	0	0	6819	3863	2193	6056	No	4.76	Si
SLU 77	fin.	-421.6	-3016	0.86	0	259	6819	3863	2193	6056	No	2.01	Si
SLU 79	ini.	384.1	1271	0.86	0	0	6819	3863	2193	6056	No	4.76	Si
SLU 79	fin.	-421.6	-3016	0.86	0	259	6819	3863	2193	6056	No	2.01	Si
SLU 82	ini.	376.46	1729	0.86	0	0	6819	3863	2193	6056	No	3.5	Si
SLU 82	fin.	-419.61	-3232	0.86	0	233	6819	3863	2193	6056	No	1.87	Si
SLU 81	ini.	380.41	1712	0.86	0	0	6819	3863	2193	6056	No	3.54	Si
SLU 81	fin.	-424.59	-3248	0.86	0	235	6819	3863	2193	6056	No	1.86	Si
SLU 84	ini.	376.46	1729	0.86	0	0	6819	3863	2193	6056	No	3.5	Si
SLU 84	fin.	-419.61	-3232	0.86	0	233	6819	3863	2193	6056	No	1.87	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 6	ini.	345.63	993	-0.0001961	0.0002807	0.0035	0.86		2705.45	2705.45		7.83	Si
SLV 6	fin.	-428.7	-125	-0.0002468	0.0002807	0.0035	0.86		2711.06	2711.06		6.32	Si
SLV 15	ini.	779.36	2222	-0.0004889	0.0002807	0.0035	0.86		2705.45	2705.45		3.47	Si
SLV 15	fin.	-762.68	-290	-0.0004754	0.0002807	0.0035	0.86		2711.06	2711.06		3.55	Si
SLV 10	ini.	649.06	1807	-0.0003941	0.0002807	0.0035	0.86		2705.45	2705.45		4.17	Si
SLV 10	fin.	-721.77	-419	-0.0004453	0.0002807	0.0035	0.86		2711.06	2711.06		3.76	Si
SLV 11	ini.	246.03	824	-0.000137	0.0002807	0.0035	0.86		2705.45	2705.45		11	Si
SLV 11	fin.	-200.02	366	-0.0001103	0.0002807	0.0035	0.86		2711.06	2711.06		13.55	Si
SLV 9	ini.	760.74	2111	-0.000475	0.0002807	0.0035	0.86		2705.45	2705.45		3.56	Si
SLV 9	fin.	-833.03	-528	-0.0005285	0.0002807	0.0035	0.86		2711.06	2711.06		3.25	Si
SLV 5	ini.	457.31	1297	-0.0002654	0.0002807	0.0035	0.86		2705.45	2705.45		5.92	Si
SLV 5	fin.	-539.95	-234	-0.0003186	0.0002807	0.0035	0.86		2711.06	2711.06		5.02	Si
SLV 13	ini.	933.78	2608	-0.0006088	0.0002807	0.0035	0.86		2705.45	2705.45		2.9	Si
SLV 13	fin.	-952.58	-558	-0.0006224	0.0002807	0.0035	0.86		2711.06	2711.06		2.85	Si
SLV 4	ini.	-342.11	-792	-0.0001935	0.0002807	0.0035	0.86		2711.06	2711.06		7.92	Si
SLV 4	fin.	323.86	798	-0.0001829	0.0002807	0.0035	0.86		2705.45	2705.45		8.35	Si
SLV 14	ini.	823.72	2309	-0.0005225	0.0002807	0.0035	0.86		2705.45	2705.45		3.28	Si
SLV 14	fin.	-842.95	-451	-0.0005361	0.0002807	0.0035	0.86		2711.06	2711.06		3.22	Si
SLV 16	ini.	669.31	1923	-0.0004085	0.0002807	0.0035	0.86		2705.45	2705.45		4.04	Si
SLV 16	fin.	-653.05	-182	-0.000396	0.0002807	0.0035	0.86		2711.06	2711.06		4.15	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 13	ini.	933.78	-1856	0.86	0	0	6819	5794	2193	6819		3.67	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 13	fin.	-952.58	-4214	0.86	0	563	6819	5794	2193	7383		1.75	Si
SLV 6	ini.	345.63	55	0.86	0	286	6819	5794	2193	7106		129.8	Si
SLV 6	fin.	-428.7	-2311	0.86	0	502	6819	5794	2193	7321		3.17	Si
SLV 9	ini.	760.74	-1384	0.86	0	0	6819	5794	2193	6819		4.93	Si
SLV 9	fin.	-833.03	-3745	0.86	0	559	6819	5794	2193	7379		1.97	Si
SLV 4	ini.	-342.11	2630	0.86	0	594	6819	5794	2193	7414		2.82	Si
SLV 4	fin.	323.86	254	0.86	0	334	6819	5794	2193	7153		28.17	Si
SLV 15	ini.	779.36	-1225	0.86	0	0	6819	5794	2193	6819		5.57	Si
SLV 15	fin.	-762.68	-3585	0.86	0	526	6819	5794	2193	7345		2.05	Si
SLV 14	ini.	823.72	-1462	0.86	0	0	6819	5794	2193	6819		4.67	Si
SLV 14	fin.	-842.95	-3819	0.86	0	549	6819	5794	2193	7368		1.93	Si
SLV 3	ini.	-232.06	2235	0.86	0	554	6819	5794	2193	7374		3.3	Si
SLV 3	fin.	214.23	-141	0.86	0	357	6819	5794	2193	7177		51.03	Si
SLV 10	ini.	649.06	-983	0.86	0	0	6819	5794	2193	6819		6.93	Si
SLV 10	fin.	-721.77	-3344	0.86	0	544	6819	5794	2193	7364		2.2	Si
SLV 5	ini.	457.31	-346	0.86	0	189	6819	5794	2193	7008		20.28	Si
SLV 5	fin.	-539.95	-2712	0.86	0	518	6819	5794	2193	7337		2.71	Si
SLV 16	ini.	669.31	-831	0.86	0	0	6819	5794	2193	6819		8.21	Si
SLV 16	fin.	-653.05	-3190	0.86	0	510	6819	5794	2193	7330		2.3	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	2.846	SLV 13	Si
V_SLV	1.752	SLV 13	Si
PF_SLU	6.371	SLU 81	Si
V_SLU	1.864	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
-29.878	-3.274	3.35	5.08	1.73	-28.478	-3.274	3.35	5.08	1.73	1.4	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	1296.27	-80	-0.000185	0.0001872	0.0035	1.73		10717.32	10717.32	No	8.27	Si
SLU 84	fin.	-2584.12	-3190	-0.0004071	0.0001872	0.0035	1.73		10728.25	10728.25	No	4.15	Si
SLU 77	ini.	1251.24	88	-0.000178	0.0001872	0.0035	1.73		10717.32	10717.32	No	8.57	Si
SLU 77	fin.	-2397.12	-2847	-0.0003723	0.0001872	0.0035	1.73		10728.25	10728.25	No	4.48	Si
SLU 74	ini.	1251.24	88	-0.000178	0.0001872	0.0035	1.73		10717.32	10717.32	No	8.57	Si
SLU 74	fin.	-2397.12	-2847	-0.0003723	0.0001872	0.0035	1.73		10728.25	10728.25	No	4.48	Si
SLU 80	ini.	1250.51	90	-0.0001779	0.0001872	0.0035	1.73		10717.32	10717.32	No	8.57	Si
SLU 80	fin.	-2396.67	-2844	-0.0003722	0.0001872	0.0035	1.73		10728.25	10728.25	No	4.48	Si
SLU 79	ini.	1251.24	88	-0.000178	0.0001872	0.0035	1.73		10717.32	10717.32	No	8.57	Si
SLU 79	fin.	-2397.12	-2847	-0.0003723	0.0001872	0.0035	1.73		10728.25	10728.25	No	4.48	Si
SLU 82	ini.	1296.27	-80	-0.000185	0.0001872	0.0035	1.73		10717.32	10717.32	No	8.27	Si
SLU 82	fin.	-2584.12	-3190	-0.0004071	0.0001872	0.0035	1.73		10728.25	10728.25	No	4.15	Si
SLU 78	ini.	1250.51	90	-0.0001779	0.0001872	0.0035	1.73		10717.32	10717.32	No	8.57	Si
SLU 78	fin.	-2396.67	-2844	-0.0003722	0.0001872	0.0035	1.73		10728.25	10728.25	No	4.48	Si
SLU 83	ini.	1296.99	-83	-0.0001851	0.0001872	0.0035	1.73		10717.32	10717.32	No	8.26	Si
SLU 83	fin.	-2584.57	-3193	-0.0004072	0.0001872	0.0035	1.73		10728.25	10728.25	No	4.15	Si
SLU 75	ini.	1250.51	90	-0.0001779	0.0001872	0.0035	1.73		10717.32	10717.32	No	8.57	Si
SLU 75	fin.	-2396.67	-2844	-0.0003722	0.0001872	0.0035	1.73		10728.25	10728.25	No	4.48	Si
SLU 81	ini.	1296.99	-83	-0.0001851	0.0001872	0.0035	1.73		10717.32	10717.32	No	8.26	Si
SLU 81	fin.	-2584.57	-3193	-0.0004072	0.0001872	0.0035	1.73		10728.25	10728.25	No	4.15	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.	1296.99	-2159	1.73	0	767	11101	7771	4412	11869	No	5.5	Si
SLU 81	fin.	-2584.57	-6904	1.73	0	1202	11101	7771	4412	12182	No	1.76	Si
SLU 75	ini.	1250.51	-2171	1.73	0	735	11101	7771	4412	11837	No	5.45	Si
SLU 75	fin.	-2396.67	-6413	1.73	0	1161	11101	7771	4412	12182	No	1.9	Si
SLU 83	ini.	1296.99	-2159	1.73	0	767	11101	7771	4412	11869	No	5.5	Si
SLU 83	fin.	-2584.57	-6904	1.73	0	1202	11101	7771	4412	12182	No	1.76	Si
SLU 77	ini.	1251.24	-2173	1.73	0	736	11101	7771	4412	11837	No	5.45	Si
SLU 77	fin.	-2397.12	-6414	1.73	0	1162	11101	7771	4412	12182	No	1.9	Si
SLU 74	ini.	1251.24	-2173	1.73	0	736	11101	7771	4412	11837	No	5.45	Si
SLU 74	fin.	-2397.12	-6414	1.73	0	1162	11101	7771	4412	12182	No	1.9	Si
SLU 82	ini.	1296.27	-2158	1.73	0	767	11101	7771	4412	11868	No	5.5	Si
SLU 82	fin.	-2584.12	-6902	1.73	0	1202	11101	7771	4412	12182	No	1.76	Si
SLU 84	ini.	1296.27	-2158	1.73	0	767	11101	7771	4412	11868	No	5.5	Si
SLU 84	fin.	-2584.12	-6902	1.73	0	1202	11101	7771	4412	12182	No	1.76	Si
SLU 79	ini.	1251.24	-2173	1.73	0	736	11101	7771	4412	11837	No	5.45	Si
SLU 79	fin.	-2397.12	-6414	1.73	0	1162	11101	7771	4412	12182	No	1.9	Si
SLU 78	ini.	1250.51	-2171	1.73	0	735	11101	7771	4412	11837	No	5.45	Si
SLU 78	fin.	-2396.67	-6413	1.73	0	1161	11101	7771	4412	12182	No	1.9	Si
SLU 80	ini.	1250.51	-2171	1.73	0	735	11101	7771	4412	11837	No	5.45	Si
SLU 80	fin.	-2396.67	-6413	1.73	0	1161	11101	7771	4412	12182	No	1.9	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 9	ini.	1362.5	409	-0.0001906	0.0002807	0.0035	1.73		10572.02	10572.02		7.76	Si
SLV 9	fin.	-2157.74	-2372	-0.0003144	0.0002807	0.0035	1.73		10583.55	10583.55		4.9	Si
SLV 13	ini.	2366.78	1681	-0.0003495	0.0002807	0.0035	1.73		10572.02	10572.02		4.47	Si
SLV 13	fin.	-3354.4	-3037	-0.0005258	0.0002807	0.0035	1.73		10583.55	10583.55		3.16	Si
SLV 16	ini.	2173.86	1715	-0.0003174	0.0002807	0.0035	1.73		10572.02	10572.02		4.86	Si
SLV 16	fin.	-3106.74	-2728	-0.0004795	0.0002807	0.0035	1.73		10583.55	10583.55		3.41	Si
SLV 15	ini.	2405.02	1936	-0.0003559	0.0002807	0.0035	1.73		10572.02	10572.02		4.4	Si
SLV 15	fin.	-3392.46	-2905	-0.000533	0.0002807	0.0035	1.73		10583.55	10583.55		3.12	Si
SLV 5	ini.	538.46	-427	-0.0000727	0.0002807	0.0035	1.73		10572.02	10572.02		19.63	Si
SLV 5	fin.	-1168.27	-1668	-0.0001618	0.0002807	0.0035	1.73		10583.55	10583.55		9.06	Si
SLV 7	ini.	665.9	423	-0.0000903	0.0002807	0.0035	1.73		10572.02	10572.02		15.88	Si
SLV 7	fin.	-1295.13	-1227	-0.0001804	0.0002807	0.0035	1.73		10583.55	10583.55		8.17	Si
SLV 12	ini.	1255.37	1035	-0.0001747	0.0002807	0.0035	1.73		10572.02	10572.02		8.42	Si
SLV 12	fin.	-1994.65	-1751	-0.0002879	0.0002807	0.0035	1.73		10583.55	10583.55		5.31	Si
SLV 10	ini.	1127.92	185	-0.0001561	0.0002807	0.0035	1.73		10572.02	10572.02		9.37	Si
SLV 10	fin.	-1867.79	-2192	-0.0002678	0.0002807	0.0035	1.73		10583.55	10583.55		5.67	Si
SLV 11	ini.	1489.95	1259	-0.0002097	0.0002807	0.0035	1.73		10572.02	10572.02		7.1	Si
SLV 11	fin.	-2284.6	-1931	-0.0003353	0.0002807	0.0035	1.73		10583.55	10583.55		4.63	Si
SLV 14	ini.	2135.62	1460	-0.0003111	0.0002807	0.0035	1.73		10572.02	10572.02		4.95	Si
SLV 14	fin.	-3068.68	-2860	-0.0004726	0.0002807	0.0035	1.73		10583.55	10583.55		3.45	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.	665.9	-892	1.73	0	1048	11101	11656	4412	12149		13.63	Si
SLV 7	fin.	-1295.13	-3607	1.73	0	1334	11101	11656	4412	12436		3.45	Si
SLV 14	ini.	2135.62	-4865	1.73	0	819	11101	11656	4412	11920		2.45	Si
SLV 14	fin.	-3068.68	-7387	1.73	0	1567	11101	11656	4412	12668		1.71	Si
SLV 12	ini.	1255.37	-2346	1.73	0	919	11101	11656	4412	12021		5.12	Si
SLV 12	fin.	-1994.65	-5066	1.73	0	1413	11101	11656	4412	12514		2.47	Si
SLV 10	ini.	1127.92	-2483	1.73	0	1094	11101	11656	4412	12195		4.91	Si
SLV 10	fin.	-1867.79	-4891	1.73	0	1476	11101	11656	4412	12577		2.57	Si
SLV 13	ini.	2366.78	-5480	1.73	0	761	11101	11656	4412	11862		2.16	Si
SLV 13	fin.	-3354.4	-8002	1.73	0	1590	11101	11656	4412	12691		1.59	Si
SLV 11	ini.	1489.95	-2971	1.73	0	868	11101	11656	4412	11969		4.03	Si
SLV 11	fin.	-2284.6	-5690	1.73	0	1439	11101	11656	4412	12540		2.2	Si
SLV 5	ini.	538.46	-1028	1.73	0	1204	11101	11656	4412	12305		11.97	Si
SLV 5	fin.	-1168.27	-3432	1.73	0	1401	11101	11656	4412	12502		3.64	Si
SLV 16	ini.	2173.86	-4824	1.73	0	751	11101	11656	4412	11853		2.46	Si
SLV 16	fin.	-3106.74	-7439	1.73	0	1549	11101	11656	4412	12651		1.7	Si
SLV 15	ini.	2405.02	-5439	1.73	0	688	11101	11656	4412	11789		2.17	Si
SLV 15	fin.	-3392.46	-8054	1.73	0	1573	11101	11656	4412	12674		1.57	Si
SLV 9	ini.	1362.5	-3107	1.73	0	1051	11101	11656	4412	12152		3.91	Si
SLV 9	fin.	-2157.74	-5515	1.73	0	1501	11101	11656	4412	12602		2.28	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.12	SLV 15	Si
V_SLV	1.574	SLV 15	Si
PF_SLU	4.151	SLU 81	Si
V_SLU	1.765	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
-26.647	-3.274	1.32	2.32	1	-25.647	-3.274	1.32	2.32	1	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	608.95	-2362	-0.0002707	0.0001872	0.0035	1		3643.26	3643.26	No	5.98	Si
SLU 81	fin.	-36.32	-297	-0.0000144	0.0001872	0.0035	1		3649.64	3649.64	No	100.47	Si
SLU 75	ini.	561.13	-2192	-0.0002466	0.0001872	0.0035	1		3643.26	3643.26	No	6.49	Si
SLU 75	fin.	-21.32	-323	-0.0000084	0.0001872	0.0035	1		3649.64	3649.64	No	171.2	Si
SLU 83	ini.	608.95	-2362	-0.0002707	0.0001872	0.0035	1		3643.26	3643.26	No	5.98	Si
SLU 83	fin.	-36.32	-297	-0.0000144	0.0001872	0.0035	1		3649.64	3649.64	No	100.47	Si
SLU 78	ini.	561.13	-2192	-0.0002466	0.0001872	0.0035	1		3643.26	3643.26	No	6.49	Si
SLU 78	fin.	-21.32	-323	-0.0000084	0.0001872	0.0035	1		3649.64	3649.64	No	171.2	Si
SLU 79	ini.	556.91	-2183	-0.0002445	0.0001872	0.0035	1		3643.26	3643.26	No	6.54	Si
SLU 79	fin.	-17.5	-334	-0.0000069	0.0001872	0.0035	1		3649.64	3649.64	No	208.53	Si
SLU 82	ini.	613.17	-2371	-0.0002728	0.0001872	0.0035	1		3643.26	3643.26	No	5.94	Si
SLU 82	fin.	-40.14	-287	-0.0000159	0.0001872	0.0035	1		3649.64	3649.64	No	90.92	Si
SLU 73	ini.	563.95	-2198	-0.000248	0.0001872	0.0035	1		3643.26	3643.26	No	6.46	Si
SLU 73	fin.	-23.86	-316	-0.0000094	0.0001872	0.0035	1		3649.64	3649.64	No	152.95	Si
SLU 84	ini.	613.17	-2371	-0.0002728	0.0001872	0.0035	1		3643.26	3643.26	No	5.94	Si
SLU 84	fin.	-40.14	-287	-0.0000159	0.0001872	0.0035	1		3649.64	3649.64	No	90.92	Si
SLU 76	ini.	563.95	-2198	-0.000248	0.0001872	0.0035	1		3643.26	3643.26	No	6.46	Si
SLU 76	fin.	-23.86	-316	-0.0000094	0.0001872	0.0035	1		3649.64	3649.64	No	152.95	Si
SLU 80	ini.	561.13	-2192	-0.0002466	0.0001872	0.0035	1		3643.26	3643.26	No	6.49	Si
SLU 80	fin.	-21.32	-323	-0.0000084	0.0001872	0.0035	1		3649.64	3649.64	No	171.2	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 39	ini.	542.67	-2226	1	0	721	7930	4492	2550	7042	No	3.16	Si
SLU 39	fin.	-53.58	-644	1	0	467	7930	4492	2550	7042	No	10.94	Si
SLU 42	ini.	546.89	-2242	1	0	722	7930	4492	2550	7042	No	3.14	Si
SLU 42	fin.	-57.4	-663	1	0	465	7930	4492	2550	7042	No	10.62	Si
SLU 41	ini.	542.67	-2226	1	0	721	7930	4492	2550	7042	No	3.16	Si
SLU 41	fin.	-53.58	-644	1	0	467	7930	4492	2550	7042	No	10.94	Si
SLU 73	ini.	563.95	-2199	1	0	734	7930	4492	2550	7042	No	3.2	Si
SLU 73	fin.	-23.86	-668	1	0	489	7930	4492	2550	7042	No	10.54	Si
SLU 81	ini.	608.95	-2425	1	0	752	7930	4492	2550	7042	No	2.9	Si
SLU 81	fin.	-36.32	-709	1	0	486	7930	4492	2550	7042	No	9.93	Si
SLU 40	ini.	546.89	-2242	1	0	722	7930	4492	2550	7042	No	3.14	Si
SLU 40	fin.	-57.4	-663	1	0	465	7930	4492	2550	7042	No	10.62	Si
SLU 82	ini.	613.17	-2441	1	0	753	7930	4492	2550	7042	No	2.89	Si
SLU 82	fin.	-40.14	-728	1	0	484	7930	4492	2550	7042	No	9.67	Si
SLU 76	ini.	563.95	-2199	1	0	734	7930	4492	2550	7042	No	3.2	Si
SLU 76	fin.	-23.86	-668	1	0	489	7930	4492	2550	7042	No	10.54	Si
SLU 83	ini.	608.95	-2425	1	0	752	7930	4492	2550	7042	No	2.9	Si
SLU 83	fin.	-36.32	-709	1	0	486	7930	4492	2550	7042	No	9.93	Si
SLU 84	ini.	613.17	-2441	1	0	753	7930	4492	2550	7042	No	2.89	Si
SLU 84	fin.	-40.14	-728	1	0	484	7930	4492	2550	7042	No	9.67	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 2	ini.	-458.16	646	-0.0001915	0.0002807	0.0035	1		3671.29	3671.29		8.01	Si
SLV 2	fin.	535.85	-1622	-0.0002269	0.0002807	0.0035	1		3664.83	3664.83		6.84	Si
SLV 12	ini.	809.51	-2485	-0.0003587	0.0002807	0.0035	1		3664.83	3664.83		4.53	Si
SLV 12	fin.	-343.09	664	-0.0001411	0.0002807	0.0035	1		3671.29	3671.29		10.7	Si
SLV 11	ini.	949.53	-2843	-0.0004317	0.0002807	0.0035	1		3664.83	3664.83		3.86	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	fin.	-433.81	895	-0.0001807	0.0002807	0.0035	1		3671.29	3671.29		8.46	Si
SLV 16	ini.	1029.14	-3139	-0.0004749	0.0002807	0.0035	1		3664.83	3664.83		3.56	Si
SLV 16	fin.	-420.98	785	-0.000175	0.0002807	0.0035	1		3671.29	3671.29		8.72	Si
SLV 15	ini.	1167.12	-3492	-0.0005525	0.0002807	0.0035	1		3664.83	3664.83		3.14	Si
SLV 15	fin.	-510.39	1012	-0.0002149	0.0002807	0.0035	1		3671.29	3671.29		7.19	Si
SLV 6	ini.	-240.57	-3	-0.0000977	0.0002807	0.0035	1		3671.29	3671.29		15.26	Si
SLV 6	fin.	459.28	-1504	-0.0001923	0.0002807	0.0035	1		3664.83	3664.83		7.98	Si
SLV 1	ini.	-320.18	293	-0.0001313	0.0002807	0.0035	1		3671.29	3671.29		11.47	Si
SLV 1	fin.	446.45	-1395	-0.0001866	0.0002807	0.0035	1		3664.83	3664.83		8.21	Si
SLV 14	ini.	830.05	-2695	-0.0003692	0.0002807	0.0035	1		3664.83	3664.83		4.42	Si
SLV 14	fin.	-251.1	308	-0.0001021	0.0002807	0.0035	1		3671.29	3671.29		14.62	Si
SLV 13	ini.	968.03	-3048	-0.0004416	0.0002807	0.0035	1		3664.83	3664.83		3.79	Si
SLV 13	fin.	-340.5	535	-0.00014	0.0002807	0.0035	1		3671.29	3671.29		10.78	Si
SLV 7	ini.	563.07	-1841	-0.0002394	0.0002807	0.0035	1		3664.83	3664.83		6.51	Si
SLV 7	fin.	-197.73	316	-0.0000798	0.0002807	0.0035	1		3671.29	3671.29		18.57	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.	830.05	-3213	1	0	1034	7930	6738	2550	8963		2.79	Si
SLV 14	fin.	-251.1	-1703	1	0	593	7930	6738	2550	8523		5	Si
SLV 13	ini.	968.03	-3731	1	0	1074	7930	6738	2550	9003		2.41	Si
SLV 13	fin.	-340.5	-2156	1	0	546	7930	6738	2550	8475		3.93	Si
SLV 16	ini.	1029.14	-3950	1	0	1084	7930	6738	2550	9014		2.28	Si
SLV 16	fin.	-420.98	-2553	1	0	488	7930	6738	2550	8417		3.3	Si
SLV 15	ini.	1167.12	-4468	1	0	1122	7930	6738	2550	9052		2.03	Si
SLV 15	fin.	-510.39	-3006	1	0	429	7930	6738	2550	8358		2.78	Si
SLV 1	ini.	-320.18	1323	1	0	596	7930	6738	2550	8526		6.44	Si
SLV 1	fin.	446.45	1775	1	0	871	7930	6738	2550	8800		4.96	Si
SLV 6	ini.	-240.57	936	1	0	653	7930	6738	2550	8582		9.17	Si
SLV 6	fin.	459.28	1846	1	0	886	7930	6738	2550	8815		4.78	Si
SLV 2	ini.	-458.16	1842	1	0	521	7930	6738	2550	8450		4.59	Si
SLV 2	fin.	535.85	2228	1	0	901	7930	6738	2550	8831		3.96	Si
SLV 11	ini.	949.53	-3562	1	0	1051	7930	6738	2550	8980		2.52	Si
SLV 11	fin.	-433.81	-2624	1	0	460	7930	6738	2550	8390		3.2	Si
SLV 7	ini.	563.07	-2046	1	0	930	7930	6738	2550	8860		4.33	Si
SLV 7	fin.	-197.73	-1444	1	0	592	7930	6738	2550	8521		5.9	Si
SLV 12	ini.	809.51	-3036	1	0	1009	7930	6738	2550	8939		2.94	Si
SLV 12	fin.	-343.09	-2164	1	0	516	7930	6738	2550	8446		3.9	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.14	SLV 15	Si
V_SLV	2.026	SLV 15	Si
PF_SLU	5.942	SLU 82	Si
V_SLU	2.885	SLU 82	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
-26.647	-3.274	4.22	5.08	0.86	-25.647	-3.274	4.22	5.08	0.86	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	-140.73	-689	-0.0000774	0.0001872	0.0035	0.86		2705.05	2705.05	No	19.22	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	fin.	-203.2	-585	-0.0001135	0.0001872	0.0035	0.86		2705.05	2705.05	No	13.31	Si
SLU 82	ini.	-140.73	-689	-0.0000774	0.0001872	0.0035	0.86		2705.05	2705.05	No	19.22	Si
SLU 82	fin.	-203.2	-585	-0.0001135	0.0001872	0.0035	0.86		2705.05	2705.05	No	13.31	Si
SLU 73	ini.	-127.83	-631	-0.0000701	0.0001872	0.0035	0.86		2705.05	2705.05	No	21.16	Si
SLU 73	fin.	-189.37	-551	-0.0001054	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.28	Si
SLU 40	ini.	-119.92	-589	-0.0000657	0.0001872	0.0035	0.86		2705.05	2705.05	No	22.56	Si
SLU 40	fin.	-183.64	-505	-0.0001021	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.73	Si
SLU 76	ini.	-127.83	-631	-0.0000701	0.0001872	0.0035	0.86		2705.05	2705.05	No	21.16	Si
SLU 76	fin.	-189.37	-551	-0.0001054	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.28	Si
SLU 78	ini.	-130.49	-640	-0.0000716	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.73	Si
SLU 78	fin.	-185.66	-547	-0.0001033	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.57	Si
SLU 75	ini.	-130.49	-640	-0.0000716	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.73	Si
SLU 75	fin.	-185.66	-547	-0.0001033	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.57	Si
SLU 80	ini.	-130.49	-640	-0.0000716	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.73	Si
SLU 80	fin.	-185.66	-547	-0.0001033	0.0001872	0.0035	0.86		2705.05	2705.05	No	14.57	Si
SLU 83	ini.	-144.72	-701	-0.0000797	0.0001872	0.0035	0.86		2705.05	2705.05	No	18.69	Si
SLU 83	fin.	-197.65	-579	-0.0001102	0.0001872	0.0035	0.86		2705.05	2705.05	No	13.69	Si
SLU 81	ini.	-144.72	-701	-0.0000797	0.0001872	0.0035	0.86		2705.05	2705.05	No	18.69	Si
SLU 81	fin.	-197.65	-579	-0.0001102	0.0001872	0.0035	0.86		2705.05	2705.05	No	13.69	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 77	ini.	-134.48	1316	0.86	0	412	6819	3863	2193	6056	No	4.6	Si
SLU 77	fin.	-180.11	-1010	0.86	0	398	6819	3863	2193	6056	No	6	Si
SLU 84	ini.	-140.73	1500	0.86	0	416	6819	3863	2193	6056	No	4.04	Si
SLU 84	fin.	-203.2	-1165	0.86	0	403	6819	3863	2193	6056	No	5.2	Si
SLU 74	ini.	-134.48	1316	0.86	0	412	6819	3863	2193	6056	No	4.6	Si
SLU 74	fin.	-180.11	-1010	0.86	0	398	6819	3863	2193	6056	No	6	Si
SLU 41	ini.	-123.91	1430	0.86	0	405	6819	3863	2193	6056	No	4.23	Si
SLU 41	fin.	-178.09	-1075	0.86	0	392	6819	3863	2193	6056	No	5.63	Si
SLU 83	ini.	-144.72	1517	0.86	0	418	6819	3863	2193	6056	No	3.99	Si
SLU 83	fin.	-197.65	-1147	0.86	0	403	6819	3863	2193	6056	No	5.28	Si
SLU 40	ini.	-119.92	1413	0.86	0	404	6819	3863	2193	6056	No	4.29	Si
SLU 40	fin.	-183.64	-1092	0.86	0	393	6819	3863	2193	6056	No	5.55	Si
SLU 81	ini.	-144.72	1517	0.86	0	418	6819	3863	2193	6056	No	3.99	Si
SLU 81	fin.	-197.65	-1147	0.86	0	403	6819	3863	2193	6056	No	5.28	Si
SLU 42	ini.	-119.92	1413	0.86	0	404	6819	3863	2193	6056	No	4.29	Si
SLU 42	fin.	-183.64	-1092	0.86	0	393	6819	3863	2193	6056	No	5.55	Si
SLU 82	ini.	-140.73	1500	0.86	0	416	6819	3863	2193	6056	No	4.04	Si
SLU 82	fin.	-203.2	-1165	0.86	0	403	6819	3863	2193	6056	No	5.2	Si
SLU 39	ini.	-123.91	1430	0.86	0	405	6819	3863	2193	6056	No	4.23	Si
SLU 39	fin.	-178.09	-1075	0.86	0	392	6819	3863	2193	6056	No	5.63	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 13	ini.	74.4	-114	-0.0000402	0.0002807	0.0035	0.86		2705.45	2705.45		36.37	Si
SLV 13	fin.	-471.93	-988	-0.0002742	0.0002807	0.0035	0.86		2711.06	2711.06		5.74	Si
SLV 2	ini.	-426.13	-1280	-0.0002452	0.0002807	0.0035	0.86		2711.06	2711.06		6.36	Si
SLV 2	fin.	497.4	546	-0.0002912	0.0002807	0.0035	0.86		2705.45	2705.45		5.44	Si
SLV 12	ini.	224.07	485	-0.0001243	0.0002807	0.0035	0.86		2705.45	2705.45		12.07	Si
SLV 12	fin.	-591.74	-938	-0.0003535	0.0002807	0.0035	0.86		2711.06	2711.06		4.58	Si
SLV 11	ini.	298.32	680	-0.0001677	0.0002807	0.0035	0.86		2705.45	2705.45		9.07	Si
SLV 11	fin.	-725.32	-1133	-0.0004479	0.0002807	0.0035	0.86		2711.06	2711.06		3.74	Si
SLV 1	ini.	-352.96	-1087	-0.0002001	0.0002807	0.0035	0.86		2711.06	2711.06		7.68	Si
SLV 1	fin.	365.76	354	-0.0002083	0.0002807	0.0035	0.86		2705.45	2705.45		7.4	Si
SLV 16	ini.	173.36	217	-0.0000953	0.0002807	0.0035	0.86		2705.45	2705.45		15.61	Si
SLV 16	fin.	-592.11	-1079	-0.0003537	0.0002807	0.0035	0.86		2711.06	2711.06		4.58	Si
SLV 6	ini.	-477.92	-1551	-0.000278	0.0002807	0.0035	0.86		2711.06	2711.06		5.67	Si
SLV 6	fin.	498.97	407	-0.0002923	0.0002807	0.0035	0.86		2705.45	2705.45		5.42	Si
SLV 7	ini.	170.12	389	-0.0000935	0.0002807	0.0035	0.86		2705.45	2705.45		15.9	Si
SLV 7	fin.	-474.01	-730	-0.0002755	0.0002807	0.0035	0.86		2711.06	2711.06		5.72	Si
SLV 15	ini.	246.53	409	-0.0001373	0.0002807	0.0035	0.86		2705.45	2705.45		10.97	Si
SLV 15	fin.	-723.75	-1271	-0.0004467	0.0002807	0.0035	0.86		2711.06	2711.06		3.75	Si
SLV 5	ini.	-403.67	-1356	-0.0002312	0.0002807	0.0035	0.86		2711.06	2711.06		6.72	Si
SLV 5	fin.	365.38	213	-0.0002081	0.0002807	0.0035	0.86		2705.45	2705.45		7.4	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 5	ini.	-403.67	2156	0.86	0	662	6819	5794	2193	7482		3.47	Si
SLV 5	fin.	365.38	835	0.86	0	448	6819	5794	2193	7267		8.7	Si
SLV 11	ini.	298.32	-1056	0.86	0	360	6819	5794	2193	7179		6.8	Si
SLV 11	fin.	-725.32	-2378	0.86	0	636	6819	5794	2193	7456		3.14	Si
SLV 2	ini.	-426.13	2395	0.86	0	653	6819	5794	2193	7473		3.12	Si
SLV 2	fin.	497.4	1068	0.86	0	387	6819	5794	2193	7206		6.75	Si
SLV 6	ini.	-477.92	2532	0.86	0	684	6819	5794	2193	7504		2.96	Si
SLV 6	fin.	498.97	1211	0.86	0	413	6819	5794	2193	7233		5.97	Si
SLV 10	ini.	-349.71	1878	0.86	0	651	6819	5794	2193	7471		3.98	Si
SLV 10	fin.	247.66	562	0.86	0	482	6819	5794	2193	7301		13	Si
SLV 15	ini.	246.53	-920	0.86	0	413	6819	5794	2193	7232		7.86	Si
SLV 15	fin.	-723.75	-2235	0.86	0	652	6819	5794	2193	7472		3.34	Si
SLV 1	ini.	-352.96	2025	0.86	0	631	6819	5794	2193	7450		3.68	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 1	fin.	365.76	698	0.86	0	423	6819	5794	2193	7242		10.37	Si
SLV 12	ini.	224.07	-680	0.86	0	399	6819	5794	2193	7218		10.61	Si
SLV 12	fin.	-591.74	-2002	0.86	0	612	6819	5794	2193	7432		3.71	Si
SLV 16	ini.	173.36	-550	0.86	0	447	6819	5794	2193	7266		13.22	Si
SLV 16	fin.	-592.11	-1865	0.86	0	630	6819	5794	2193	7449		3.99	Si
SLV 7	ini.	170.12	-403	0.86	0	417	6819	5794	2193	7236		17.97	Si
SLV 7	fin.	-474.01	-1728	0.86	0	586	6819	5794	2193	7406		4.28	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.738	SLV 11	Si
V_SLV	2.964	SLV 6	Si
PF_SLU	13.312	SLU 82	Si
V_SLU	3.992	SLU 81	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
-32.168	5.726	4.22	5.08	0.86	-30.968	5.726	4.22	5.08	0.86	1.2	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	442.42	1267	-0.0002655	0.0001872	0.0035	0.86		2699.52	2699.52	No	6.1	Si
SLU 81	fin.	-928.68	-1319	-0.0006416	0.0001872	0.0035	0.86		2705.05	2705.05	No	2.91	Si
SLU 83	ini.	442.42	1267	-0.0002655	0.0001872	0.0035	0.86		2699.52	2699.52	No	6.1	Si
SLU 83	fin.	-928.68	-1319	-0.0006416	0.0001872	0.0035	0.86		2705.05	2705.05	No	2.91	Si
SLU 84	ini.	446.71	1288	-0.0002684	0.0001872	0.0035	0.86		2699.52	2699.52	No	6.04	Si
SLU 84	fin.	-933.23	-1326	-0.0006455	0.0001872	0.0035	0.86		2705.05	2705.05	No	2.9	Si
SLU 80	ini.	432.06	1319	-0.0002584	0.0001872	0.0035	0.86		2699.52	2699.52	No	6.25	Si
SLU 80	fin.	-877.61	-1296	-0.0005981	0.0001872	0.0035	0.86		2705.05	2705.05	No	3.08	Si
SLU 73	ini.	434.92	1332	-0.0002603	0.0001872	0.0035	0.86		2699.52	2699.52	No	6.21	Si
SLU 73	fin.	-880.64	-1301	-0.0006007	0.0001872	0.0035	0.86		2705.05	2705.05	No	3.07	Si
SLU 78	ini.	432.06	1319	-0.0002584	0.0001872	0.0035	0.86		2699.52	2699.52	No	6.25	Si
SLU 78	fin.	-877.61	-1296	-0.0005981	0.0001872	0.0035	0.86		2705.05	2705.05	No	3.08	Si
SLU 75	ini.	432.06	1319	-0.0002584	0.0001872	0.0035	0.86		2699.52	2699.52	No	6.25	Si
SLU 75	fin.	-877.61	-1296	-0.0005981	0.0001872	0.0035	0.86		2705.05	2705.05	No	3.08	Si
SLU 76	ini.	434.92	1332	-0.0002603	0.0001872	0.0035	0.86		2699.52	2699.52	No	6.21	Si
SLU 76	fin.	-880.64	-1301	-0.0006007	0.0001872	0.0035	0.86		2705.05	2705.05	No	3.07	Si
SLU 82	ini.	446.71	1288	-0.0002684	0.0001872	0.0035	0.86		2699.52	2699.52	No	6.04	Si
SLU 82	fin.	-933.23	-1326	-0.0006455	0.0001872	0.0035	0.86		2705.05	2705.05	No	2.9	Si
SLU 79	ini.	427.77	1298	-0.0002555	0.0001872	0.0035	0.86		2699.52	2699.52	No	6.31	Si
SLU 79	fin.	-873.07	-1289	-0.0005943	0.0001872	0.0035	0.86		2705.05	2705.05	No	3.1	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.	446.71	2058	0.86	0	0	6819	3863	2193	6056	No	2.94	Si
SLU 82	fin.	-933.23	-5027	0.86	0	406	6819	3863	2193	6056	No	1.2	Si
SLU 80	ini.	432.06	1509	0.86	0	0	6819	3863	2193	6056	No	4.01	Si
SLU 80	fin.	-877.61	-4562	0.86	0	404	6819	3863	2193	6056	No	1.33	Si
SLU 83	ini.	442.42	2075	0.86	0	0	6819	3863	2193	6056	No	2.92	Si
SLU 83	fin.	-928.68	-5010	0.86	0	406	6819	3863	2193	6056	No	1.21	Si
SLU 81	ini.	442.42	2075	0.86	0	0	6819	3863	2193	6056	No	2.92	Si
SLU 81	fin.	-928.68	-5010	0.86	0	406	6819	3863	2193	6056	No	1.21	Si
SLU 75	ini.	432.06	1509	0.86	0	0	6819	3863	2193	6056	No	4.01	Si

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 75	fin.	-877.61	-4562	0.86	0	404	6819	3863	2193	6056	No	1.33	Si
SLU 78	ini.	432.06	1509	0.86	0	0	6819	3863	2193	6056	No	4.01	Si
SLU 78	fin.	-877.61	-4562	0.86	0	404	6819	3863	2193	6056	No	1.33	Si
SLU 73	ini.	434.92	1498	0.86	0	0	6819	3863	2193	6056	No	4.04	Si
SLU 73	fin.	-880.64	-4574	0.86	0	404	6819	3863	2193	6056	No	1.32	Si
SLU 76	ini.	434.92	1498	0.86	0	0	6819	3863	2193	6056	No	4.04	Si
SLU 76	fin.	-880.64	-4574	0.86	0	404	6819	3863	2193	6056	No	1.32	Si
SLU 84	ini.	446.71	2058	0.86	0	0	6819	3863	2193	6056	No	2.94	Si
SLU 84	fin.	-933.23	-5027	0.86	0	406	6819	3863	2193	6056	No	1.2	Si
SLU 79	ini.	427.77	1526	0.86	0	0	6819	3863	2193	6056	No	3.97	Si
SLU 79	fin.	-873.07	-4545	0.86	0	403	6819	3863	2193	6056	No	1.33	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 7	ini.	364.52	1343	-0.0002075	0.0002807	0.0035	0.86		2705.45	2705.45		7.42	Si
SLV 7	fin.	-674.8	-1120	-0.0004115	0.0002807	0.0035	0.86		2711.06	2711.06		4.02	Si
SLV 15	ini.	768.69	2874	-0.0004809	0.0002807	0.0035	0.86		2705.45	2705.45		3.52	Si
SLV 15	fin.	-1287.75	-2416	-0.0009124	0.0002807	0.0035	0.86		2711.06	2711.06		2.11	Si
SLV 11	ini.	628.2	2385	-0.0003795	0.0002807	0.0035	0.86		2705.45	2705.45		4.31	Si
SLV 11	fin.	-1072.13	-1957	-0.0007213	0.0002807	0.0035	0.86		2711.06	2711.06		2.53	Si
SLV 8	ini.	461.88	1751	-0.0002683	0.0002807	0.0035	0.86		2705.45	2705.45		5.86	Si
SLV 8	fin.	-817.62	-1406	-0.0005167	0.0002807	0.0035	0.86		2711.06	2711.06		3.32	Si
SLV 14	ini.	720.77	2650	-0.0004456	0.0002807	0.0035	0.86		2705.45	2705.45		3.75	Si
SLV 14	fin.	-1215.09	-2253	-0.0008461	0.0002807	0.0035	0.86		2711.06	2711.06		2.23	Si
SLV 16	ini.	864.63	3275	-0.0005541	0.0002807	0.0035	0.86		2705.45	2705.45		3.13	Si
SLV 16	fin.	-1428.49	-2698	-0.0010472	0.0002807	0.0035	0.86		2711.06	2711.06		1.9	Si
SLV 13	ini.	624.83	2248	-0.0003771	0.0002807	0.0035	0.86		2705.45	2705.45		4.33	Si
SLV 13	fin.	-1074.36	-1971	-0.0007232	0.0002807	0.0035	0.86		2711.06	2711.06		2.52	Si
SLV 12	ini.	725.55	2793	-0.0004491	0.0002807	0.0035	0.86		2705.45	2705.45		3.73	Si
SLV 12	fin.	-1214.94	-2243	-0.0008459	0.0002807	0.0035	0.86		2711.06	2711.06		2.23	Si
SLV 10	ini.	246.01	708	-0.000137	0.0002807	0.0035	0.86		2705.45	2705.45		11	Si
SLV 10	fin.	-503.63	-760	-0.0002947	0.0002807	0.0035	0.86		2711.06	2711.06		5.38	Si
SLV 9	ini.	148.65	300	-0.0000814	0.0002807	0.0035	0.86		2705.45	2705.45		18.2	Si
SLV 9	fin.	-360.81	-474	-0.0002049	0.0002807	0.0035	0.86		2711.06	2711.06		7.51	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.	768.69	-1662	0.86	0	0	6819	5794	2193	6819		4.1	Si
SLV 15	fin.	-1287.75	-4931	0.86	0	645	6819	5794	2193	7465		1.51	Si
SLV 13	ini.	624.83	-983	0.86	0	0	6819	5794	2193	6819		6.94	Si
SLV 13	fin.	-1074.36	-4254	0.86	0	608	6819	5794	2193	7427		1.75	Si
SLV 16	ini.	864.63	-2104	0.86	0	0	6819	5794	2193	6819		3.24	Si
SLV 16	fin.	-1428.49	-5373	0.86	0	668	6819	5794	2193	7487		1.39	Si
SLV 12	ini.	725.55	-1516	0.86	0	0	6819	5794	2193	6819		4.5	Si
SLV 12	fin.	-1214.94	-4784	0.86	0	631	6819	5794	2193	7450		1.56	Si
SLV 14	ini.	720.77	-1425	0.86	0	0	6819	5794	2193	6819		4.79	Si
SLV 14	fin.	-1215.09	-4696	0.86	0	632	6819	5794	2193	7451		1.59	Si
SLV 10	ini.	246.01	747	0.86	0	295	6819	5794	2193	7114		9.53	Si
SLV 10	fin.	-503.63	-2525	0.86	0	492	6819	5794	2193	7311		2.9	Si
SLV 7	ini.	364.52	118	0.86	0	141	6819	5794	2193	6960		58.82	Si
SLV 7	fin.	-674.8	-3149	0.86	0	529	6819	5794	2193	7348		2.33	Si
SLV 11	ini.	628.2	-1067	0.86	0	0	6819	5794	2193	6819		6.39	Si
SLV 11	fin.	-1072.13	-4335	0.86	0	607	6819	5794	2193	7426		1.71	Si
SLV 8	ini.	461.88	-330	0.86	0	0	6819	5794	2193	6819		20.65	Si
SLV 8	fin.	-817.62	-3598	0.86	0	557	6819	5794	2193	7376		2.05	Si
SLV 1	ini.	-254.1	2969	0.86	0	539	6819	5794	2193	7359		2.48	Si
SLV 1	fin.	250.05	-301	0.86	0	274	6819	5794	2193	7094		23.56	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.898	SLV 16	Si
V_SLV	1.393	SLV 16	Si
PF_SLU	2.899	SLU 82	Si
V_SLU	1.205	SLU 82	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
-30.088	5.726	1.32	3.32	2	-29.588	5.726	1.32	3.32	2	0.5	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	663.38	-2009	-0.0000674	0.0001872	0.0035	2		14206.68	14206.68	No	21.42	Si
SLU 80	fin.	-257.03	-1860	-0.0000257	0.0001872	0.0035	2		14219.44	14219.44	No	55.32	Si
SLU 76	ini.	665.93	-2016	-0.0000676	0.0001872	0.0035	2		14206.68	14206.68	No	21.33	Si
SLU 76	fin.	-255.76	-1865	-0.0000255	0.0001872	0.0035	2		14219.44	14219.44	No	55.6	Si
SLU 75	ini.	663.38	-2009	-0.0000674	0.0001872	0.0035	2		14206.68	14206.68	No	21.42	Si
SLU 75	fin.	-257.03	-1860	-0.0000257	0.0001872	0.0035	2		14219.44	14219.44	No	55.32	Si
SLU 73	ini.	665.93	-2016	-0.0000676	0.0001872	0.0035	2		14206.68	14206.68	No	21.33	Si
SLU 73	fin.	-255.76	-1865	-0.0000255	0.0001872	0.0035	2		14219.44	14219.44	No	55.6	Si
SLU 81	ini.	710.29	-2257	-0.0000723	0.0001872	0.0035	2		14206.68	14206.68	No	20	Si
SLU 81	fin.	-274.37	-2103	-0.0000274	0.0001872	0.0035	2		14219.44	14219.44	No	51.83	Si
SLU 84	ini.	714.12	-2268	-0.0000727	0.0001872	0.0035	2		14206.68	14206.68	No	19.89	Si
SLU 84	fin.	-272.46	-2111	-0.0000272	0.0001872	0.0035	2		14219.44	14219.44	No	52.19	Si
SLU 83	ini.	710.29	-2257	-0.0000723	0.0001872	0.0035	2		14206.68	14206.68	No	20	Si
SLU 83	fin.	-274.37	-2103	-0.0000274	0.0001872	0.0035	2		14219.44	14219.44	No	51.83	Si
SLU 82	ini.	714.12	-2268	-0.0000727	0.0001872	0.0035	2		14206.68	14206.68	No	19.89	Si
SLU 82	fin.	-272.46	-2111	-0.0000272	0.0001872	0.0035	2		14219.44	14219.44	No	52.19	Si
SLU 78	ini.	663.38	-2009	-0.0000674	0.0001872	0.0035	2		14206.68	14206.68	No	21.42	Si
SLU 78	fin.	-257.03	-1860	-0.0000257	0.0001872	0.0035	2		14219.44	14219.44	No	55.32	Si
SLU 79	ini.	659.55	-1998	-0.000067	0.0001872	0.0035	2		14206.68	14206.68	No	21.54	Si
SLU 79	fin.	-258.94	-1851	-0.0000258	0.0001872	0.0035	2		14219.44	14219.44	No	54.91	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 74	ini.	659.55	-3135	2	0	1180	3965	8983	5100	5145	No	1.64	Si
SLU 74	fin.	-258.94	366	2	0	1160	3965	8983	5100	5125	No	14.01	Si
SLU 78	ini.	663.38	-3135	2	0	1181	3965	8983	5100	5146	No	1.64	Si
SLU 78	fin.	-257.03	345	2	0	1161	3965	8983	5100	5126	No	14.84	Si
SLU 79	ini.	659.55	-3135	2	0	1180	3965	8983	5100	5145	No	1.64	Si
SLU 79	fin.	-258.94	366	2	0	1160	3965	8983	5100	5125	No	14.01	Si
SLU 82	ini.	714.12	-3398	2	0	1216	3965	8983	5100	5181	No	1.52	Si
SLU 82	fin.	-272.46	426	2	0	1195	3965	8983	5100	5160	No	12.13	Si
SLU 75	ini.	663.38	-3135	2	0	1181	3965	8983	5100	5146	No	1.64	Si
SLU 75	fin.	-257.03	345	2	0	1161	3965	8983	5100	5126	No	14.84	Si
SLU 84	ini.	714.12	-3398	2	0	1216	3965	8983	5100	5181	No	1.52	Si
SLU 84	fin.	-272.46	426	2	0	1195	3965	8983	5100	5160	No	12.13	Si
SLU 80	ini.	663.38	-3135	2	0	1181	3965	8983	5100	5146	No	1.64	Si
SLU 80	fin.	-257.03	345	2	0	1161	3965	8983	5100	5126	No	14.84	Si
SLU 81	ini.	710.29	-3398	2	0	1214	3965	8983	5100	5179	No	1.52	Si
SLU 81	fin.	-274.37	446	2	0	1194	3965	8983	5100	5159	No	11.57	Si
SLU 77	ini.	659.55	-3135	2	0	1180	3965	8983	5100	5145	No	1.64	Si
SLU 77	fin.	-258.94	366	2	0	1160	3965	8983	5100	5125	No	14.01	Si
SLU 83	ini.	710.29	-3398	2	0	1214	3965	8983	5100	5179	No	1.52	Si
SLU 83	fin.	-274.37	446	2	0	1194	3965	8983	5100	5159	No	11.57	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.	1966.32	-1707	-0.000207	0.0002807	0.0035	2		13920.08	13920.08		7.08	Si
SLV 16	fin.	-284.11	-986	-0.0000283	0.0002807	0.0035	2		13933.43	13933.43		49.04	Si
SLV 3	ini.	-904.22	-919	-0.0000918	0.0002807	0.0035	2		13933.43	13933.43		15.41	Si
SLV 3	fin.	23.34	-1309	-0.0000023	0.0002807	0.0035	2		13920.08	13920.08		596.46	Si
SLV 11	ini.	1033.64	-1711	-0.0001054	0.0002807	0.0035	2		13920.08	13920.08		13.47	Si
SLV 11	fin.	-46.23	-1294	-0.0000046	0.0002807	0.0035	2		13933.43	13933.43		301.42	Si
SLV 2	ini.	-860.75	-711	-0.0000873	0.0002807	0.0035	2		13933.43	13933.43		16.19	Si
SLV 2	fin.	-101.23	-1131	-0.00001	0.0002807	0.0035	2		13933.43	13933.43		137.64	Si
SLV 12	ini.	1278.19	-1783	-0.0001314	0.0002807	0.0035	2		13920.08	13920.08		10.89	Si
SLV 12	fin.	-76.23	-1269	-0.0000076	0.0002807	0.0035	2		13933.43	13933.43		182.77	Si
SLV 4	ini.	-663.23	-990	-0.0000668	0.0002807	0.0035	2		13933.43	13933.43		21.01	Si
SLV 4	fin.	-6.23	-1284	-0.0000006	0.0002807	0.0035	2		13933.43	13933.43		2235.7	Si
SLV 14	ini.	1768.8	-1427	-0.0001849	0.0002807	0.0035	2		13920.08	13920.08		7.87	Si
SLV 14	fin.	-379.11	-833	-0.0000379	0.0002807	0.0035	2		13933.43	13933.43		36.75	Si
SLV 13	ini.	1527.81	-1356	-0.0001584	0.0002807	0.0035	2		13920.08	13920.08		9.11	Si
SLV 13	fin.	-349.54	-858	-0.0000349	0.0002807	0.0035	2		13933.43	13933.43		39.86	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 15	ini.	1725.32	-1636	-0.0001801	0.0002807	0.0035	2		13920.08	13920.08		8.07	Si
SLV 15	fin.	-254.54	-1011	-0.0000253	0.0002807	0.0035	2		13933.43	13933.43		54.74	Si
SLV 1	ini.	-1101.74	-639	-0.0001125	0.0002807	0.0035	2		13933.43	13933.43		12.65	Si
SLV 1	fin.	-71.66	-1156	-0.0000071	0.0002807	0.0035	2		13933.43	13933.43		194.43	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 3	ini.	-904.22	2103	2	0	1463	3965	13475	5100	5428		2.58	Si
SLV 3	fin.	23.34	4838	2	0	1525	3965	13475	5100	5490		1.13	Si
SLV 4	ini.	-663.23	1392	2	0	1475	3965	13475	5100	5439		3.91	Si
SLV 4	fin.	-6.23	4060	2	0	1521	3965	13475	5100	5486		1.35	Si
SLV 11	ini.	1033.64	-3583	2	0	1587	3965	13475	5100	5552		1.55	Si
SLV 11	fin.	-46.23	-1043	2	0	1523	3965	13475	5100	5488		5.26	Si
SLV 12	ini.	1278.19	-4305	2	0	1598	3965	13475	5100	5563		1.29	Si
SLV 12	fin.	-76.23	-1832	2	0	1519	3965	13475	5100	5484		2.99	Si
SLV 2	ini.	-860.75	1819	2	0	1429	3965	13475	5100	5393		2.96	Si
SLV 2	fin.	-101.23	4246	2	0	1497	3965	13475	5100	5462		1.29	Si
SLV 13	ini.	1527.81	-5459	2	0	1533	3965	13475	5100	5497		1.01	Si
SLV 13	fin.	-349.54	-3699	2	0	1453	3965	13475	5100	5418		1.46	Si
SLV 1	ini.	-1101.74	2530	2	0	1417	3965	13475	5100	5381		2.13	Si
SLV 1	fin.	-71.66	5023	2	0	1501	3965	13475	5100	5466		1.09	Si
SLV 16	ini.	1966.32	-6597	2	0	1586	3965	13475	5100	5551		0.84	No
SLV 16	fin.	-284.11	-4662	2	0	1474	3965	13475	5100	5439		1.17	Si
SLV 15	ini.	1725.32	-5886	2	0	1576	3965	13475	5100	5540		0.94	No
SLV 15	fin.	-254.54	-3885	2	0	1478	3965	13475	5100	5443		1.4	Si
SLV 14	ini.	1768.8	-6170	2	0	1544	3965	13475	5100	5508		0.89	No
SLV 14	fin.	-379.11	-4476	2	0	1449	3965	13475	5100	5414		1.21	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	7.079	SLV 16	Si
V_SLV	0.841	SLV 16	No
PF_SLU	19.894	SLU 82	Si
V_SLU	1.524	SLU 81	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
-30.088	5.726	4.12	5.08	0.96	-29.588	5.726	4.12	5.08	0.96	0.5	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	-179.35	-1715	-0.0000793	0.0001872	0.0035	0.96		3354.47	3354.47	No	18.7	Si
SLU 80	fin.	-451.47	-2237	-0.0002117	0.0001872	0.0035	0.96		3354.47	3354.47	No	7.43	Si
SLU 73	ini.	-180.14	-1720	-0.0000797	0.0001872	0.0035	0.96		3354.47	3354.47	No	18.62	Si
SLU 73	fin.	-453	-2243	-0.0002125	0.0001872	0.0035	0.96		3354.47	3354.47	No	7.41	Si
SLU 75	ini.	-179.35	-1715	-0.0000793	0.0001872	0.0035	0.96		3354.47	3354.47	No	18.7	Si
SLU 75	fin.	-451.47	-2237	-0.0002117	0.0001872	0.0035	0.96		3354.47	3354.47	No	7.43	Si
SLU 76	ini.	-180.14	-1720	-0.0000797	0.0001872	0.0035	0.96		3354.47	3354.47	No	18.62	Si
SLU 76	fin.	-453	-2243	-0.0002125	0.0001872	0.0035	0.96		3354.47	3354.47	No	7.41	Si
SLU 81	ini.	-195.91	-1853	-0.0000869	0.0001872	0.0035	0.96		3354.47	3354.47	No	17.12	Si
SLU 81	fin.	-490.99	-2482	-0.0002325	0.0001872	0.0035	0.96		3354.47	3354.47	No	6.83	Si
SLU 79	ini.	-178.16	-1707	-0.0000788	0.0001872	0.0035	0.96		3354.47	3354.47	No	18.83	Si
SLU 79	fin.	-449.19	-2228	-0.0002105	0.0001872	0.0035	0.96		3354.47	3354.47	No	7.47	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	-197.1	-1861	-0.0000875	0.0001872	0.0035	0.96		3354.47	3354.47	No	17.02	Si
SLU 84	fin.	-493.27	-2491	-0.0002338	0.0001872	0.0035	0.96		3354.47	3354.47	No	6.8	Si
SLU 83	ini.	-195.91	-1853	-0.0000869	0.0001872	0.0035	0.96		3354.47	3354.47	No	17.12	Si
SLU 83	fin.	-490.99	-2482	-0.0002325	0.0001872	0.0035	0.96		3354.47	3354.47	No	6.83	Si
SLU 78	ini.	-179.35	-1715	-0.0000793	0.0001872	0.0035	0.96		3354.47	3354.47	No	18.7	Si
SLU 78	fin.	-451.47	-2237	-0.0002117	0.0001872	0.0035	0.96		3354.47	3354.47	No	7.43	Si
SLU 82	ini.	-197.1	-1861	-0.0000875	0.0001872	0.0035	0.96		3354.47	3354.47	No	17.02	Si
SLU 82	fin.	-493.27	-2491	-0.0002338	0.0001872	0.0035	0.96		3354.47	3354.47	No	6.8	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.	-197.1	248	0.96	0	677	3965	4312	2448	4642	No	18.75	Si
SLU 82	fin.	-493.27	-2322	0.96	0	745	3965	4312	2448	4710	No	2.03	Si
SLU 39	ini.	-176.66	259	0.96	0	652	3965	4312	2448	4617	No	17.83	Si
SLU 39	fin.	-439.12	-2203	0.96	0	722	3965	4312	2448	4687	No	2.13	Si
SLU 40	ini.	-177.85	256	0.96	0	653	3965	4312	2448	4618	No	18.07	Si
SLU 40	fin.	-441.41	-2206	0.96	0	723	3965	4312	2448	4688	No	2.12	Si
SLU 76	ini.	-180.14	193	0.96	0	661	3965	4312	2448	4626	No	24.03	Si
SLU 76	fin.	-453	-2016	0.96	0	719	3965	4312	2448	4684	No	2.32	Si
SLU 73	ini.	-180.14	193	0.96	0	661	3965	4312	2448	4626	No	24.03	Si
SLU 73	fin.	-453	-2016	0.96	0	719	3965	4312	2448	4684	No	2.32	Si
SLU 81	ini.	-195.91	251	0.96	0	676	3965	4312	2448	4641	No	18.49	Si
SLU 81	fin.	-490.99	-2318	0.96	0	744	3965	4312	2448	4709	No	2.03	Si
SLU 83	ini.	-195.91	251	0.96	0	676	3965	4312	2448	4641	No	18.49	Si
SLU 83	fin.	-490.99	-2318	0.96	0	744	3965	4312	2448	4709	No	2.03	Si
SLU 42	ini.	-177.85	256	0.96	0	653	3965	4312	2448	4618	No	18.07	Si
SLU 42	fin.	-441.41	-2206	0.96	0	723	3965	4312	2448	4688	No	2.12	Si
SLU 41	ini.	-176.66	259	0.96	0	652	3965	4312	2448	4617	No	17.83	Si
SLU 41	fin.	-439.12	-2203	0.96	0	722	3965	4312	2448	4687	No	2.13	Si
SLU 84	ini.	-197.1	248	0.96	0	677	3965	4312	2448	4642	No	18.75	Si
SLU 84	fin.	-493.27	-2322	0.96	0	745	3965	4312	2448	4710	No	2.03	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.	-101.53	-1885	-0.0000441	0.0002807	0.0035	0.96		3379.17	3379.17		33.28	Si
SLV 14	fin.	-656.76	-2570	-0.0003104	0.0002807	0.0035	0.96		3379.17	3379.17		5.15	Si
SLV 11	ini.	-192.71	-1956	-0.0000847	0.0002807	0.0035	0.96		3379.17	3379.17		17.54	Si
SLV 11	fin.	-516.13	-2229	-0.000238	0.0002807	0.0035	0.96		3379.17	3379.17		6.55	Si
SLV 10	ini.	-37.59	-785	-0.0000162	0.0002807	0.0035	0.96		3379.17	3379.17		89.9	Si
SLV 10	fin.	-282.6	-1242	-0.0001257	0.0002807	0.0035	0.96		3379.17	3379.17		11.96	Si
SLV 7	ini.	-185.52	-1417	-0.0000814	0.0002807	0.0035	0.96		3379.17	3379.17		18.21	Si
SLV 7	fin.	-288.1	-1465	-0.0001283	0.0002807	0.0035	0.96		3379.17	3379.17		11.73	Si
SLV 8	ini.	-189.2	-1594	-0.0000831	0.0002807	0.0035	0.96		3379.17	3379.17		17.86	Si
SLV 8	fin.	-365.09	-1728	-0.0001644	0.0002807	0.0035	0.96		3379.17	3379.17		9.26	Si
SLV 12	ini.	-196.39	-2134	-0.0000863	0.0002807	0.0035	0.96		3379.17	3379.17		17.21	Si
SLV 12	fin.	-593.12	-2493	-0.0002771	0.0002807	0.0035	0.96		3379.17	3379.17		5.7	Si
SLV 13	ini.	-97.91	-1710	-0.0000425	0.0002807	0.0035	0.96		3379.17	3379.17		34.51	Si
SLV 13	fin.	-580.89	-2311	-0.0002708	0.0002807	0.0035	0.96		3379.17	3379.17		5.82	Si
SLV 15	ini.	-145.55	-2115	-0.0000636	0.0002807	0.0035	0.96		3379.17	3379.17		23.22	Si
SLV 15	fin.	-674.05	-2686	-0.0003196	0.0002807	0.0035	0.96		3379.17	3379.17		5.01	Si
SLV 16	ini.	-149.17	-2290	-0.0000652	0.0002807	0.0035	0.96		3379.17	3379.17		22.65	Si
SLV 16	fin.	-749.91	-2945	-0.0003608	0.0002807	0.0035	0.96		3379.17	3379.17		4.51	Si
SLV 9	ini.	-33.91	-607	-0.0000146	0.0002807	0.0035	0.96		3379.17	3379.17		99.66	Si
SLV 9	fin.	-205.61	-979	-0.0000905	0.0002807	0.0035	0.96		3379.17	3379.17		16.43	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.	-73.93	1233	0.96	0	610	3965	6468	2448	4575		3.71	Si
SLV 1	fin.	179.21	52	0.96	0	581	3965	6468	2448	4545		87.86	Si
SLV 15	ini.	-145.55	-844	0.96	0	936	3965	6468	2448	4901		5.8	Si
SLV 15	fin.	-674.05	-2061	0.96	0	1004	3965	6468	2448	4969		2.41	Si
SLV 12	ini.	-196.39	-399	0.96	0	939	3965	6468	2448	4903		12.28	Si
SLV 12	fin.	-593.12	-1639	0.96	0	982	3965	6468	2448	4946		3.02	Si
SLV 11	ini.	-192.71	-171	0.96	0	917	3965	6468	2448	4882		28.6	Si
SLV 11	fin.	-516.13	-1411	0.96	0	950	3965	6468	2448	4915		3.48	Si
SLV 13	ini.	-97.91	-808	0.96	0	885	3965	6468	2448	4850		6	Si
SLV 13	fin.	-580.89	-2001	0.96	0	960	3965	6468	2448	4925		2.46	Si
SLV 16	ini.	-149.17	-1070	0.96	0	958	3965	6468	2448	4922		4.6	Si
SLV 16	fin.	-749.91	-2286	0.96	0	1033	3965	6468	2448	4998		2.19	Si
SLV 10	ini.	-37.59	-278	0.96	0	756	3965	6468	2448	4721		16.96	Si
SLV 10	fin.	-282.6	-1439	0.96	0	823	3965	6468	2448	4787		3.33	Si
SLV 3	ini.	-121.57	1197	0.96	0	682	3965	6468	2448	4646		3.88	Si
SLV 3	fin.	86.05	-8	0.96	0	651	3965	6468	2448	4615		556.35	Si
SLV 14	ini.	-101.53	-1033	0.96	0	908	3965	6468	2448	4873		4.72	Si
SLV 14	fin.	-656.76	-2226	0.96	0	991	3965	6468	2448	4955		2.23	Si
SLV 9	ini.	-33.91	-50	0.96	0	729	3965	6468	2448	4694		94.46	Si
SLV 9	fin.	-205.61	-1211	0.96	0	785	3965	6468	2448	4750		3.92	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.506	SLV 16	Si

Stato limite	Coeff.s.	Comb.	Verifica
V_SLV	2.186	SLV 16	Si
PF_SLU	6.8	SLU 82	Si
V_SLU	2.029	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
-27.338	5.726	1.32	2.32	1	-26.338	5.726	1.32	2.32	1	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	184.59	-1179	-0.0000751	0.0001872	0.0035	1		3643.26	3643.26	No	19.74	Si
SLU 82	fin.	-39.54	-938	-0.0000157	0.0001872	0.0035	1		3649.64	3649.64	No	92.31	Si
SLU 62	ini.	160.08	-1062	-0.0000649	0.0001872	0.0035	1		3643.26	3643.26	No	22.76	Si
SLU 62	fin.	-28.48	-857	-0.0000113	0.0001872	0.0035	1		3649.64	3649.64	No	128.13	Si
SLU 81	ini.	189.91	-1186	-0.0000774	0.0001872	0.0035	1		3643.26	3643.26	No	19.18	Si
SLU 81	fin.	-42.47	-939	-0.0000169	0.0001872	0.0035	1		3649.64	3649.64	No	85.93	Si
SLU 42	ini.	181.62	-1046	-0.0000739	0.0001872	0.0035	1		3643.26	3643.26	No	20.06	Si
SLU 42	fin.	-52.5	-804	-0.0000209	0.0001872	0.0035	1		3649.64	3649.64	No	69.52	Si
SLU 41	ini.	186.93	-1052	-0.0000761	0.0001872	0.0035	1		3643.26	3643.26	No	19.49	Si
SLU 41	fin.	-55.43	-805	-0.0000221	0.0001872	0.0035	1		3649.64	3649.64	No	65.84	Si
SLU 83	ini.	189.91	-1186	-0.0000774	0.0001872	0.0035	1		3643.26	3643.26	No	19.18	Si
SLU 83	fin.	-42.47	-939	-0.0000169	0.0001872	0.0035	1		3649.64	3649.64	No	85.93	Si
SLU 40	ini.	181.62	-1046	-0.0000739	0.0001872	0.0035	1		3643.26	3643.26	No	20.06	Si
SLU 40	fin.	-52.5	-804	-0.0000209	0.0001872	0.0035	1		3649.64	3649.64	No	69.52	Si
SLU 84	ini.	184.59	-1179	-0.0000751	0.0001872	0.0035	1		3643.26	3643.26	No	19.74	Si
SLU 84	fin.	-39.54	-938	-0.0000157	0.0001872	0.0035	1		3649.64	3649.64	No	92.31	Si
SLU 60	ini.	160.08	-1062	-0.0000649	0.0001872	0.0035	1		3643.26	3643.26	No	22.76	Si
SLU 60	fin.	-28.48	-857	-0.0000113	0.0001872	0.0035	1		3649.64	3649.64	No	128.13	Si
SLU 39	ini.	186.93	-1052	-0.0000761	0.0001872	0.0035	1		3643.26	3643.26	No	19.49	Si
SLU 39	fin.	-55.43	-805	-0.0000221	0.0001872	0.0035	1		3649.64	3649.64	No	65.84	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.	186.93	-467	1	0	597	7930	4492	2550	7042	No	15.09	Si
SLU 41	fin.	-55.43	-249	1	0	563	7930	4492	2550	7042	No	28.27	Si
SLU 18	ini.	157.11	-359	1	0	580	7930	4492	2550	7042	No	19.6	Si
SLU 18	fin.	-41.44	-229	1	0	551	7930	4492	2550	7042	No	30.79	Si
SLU 81	ini.	189.91	-424	1	0	615	7930	4492	2550	7042	No	16.62	Si
SLU 81	fin.	-42.47	-269	1	0	582	7930	4492	2550	7042	No	26.18	Si
SLU 84	ini.	184.59	-414	1	0	614	7930	4492	2550	7042	No	17	Si
SLU 84	fin.	-39.54	-256	1	0	582	7930	4492	2550	7042	No	27.47	Si
SLU 40	ini.	181.62	-457	1	0	596	7930	4492	2550	7042	No	15.4	Si
SLU 40	fin.	-52.5	-236	1	0	563	7930	4492	2550	7042	No	29.78	Si
SLU 42	ini.	181.62	-457	1	0	596	7930	4492	2550	7042	No	15.4	Si
SLU 42	fin.	-52.5	-236	1	0	563	7930	4492	2550	7042	No	29.78	Si
SLU 20	ini.	157.11	-359	1	0	580	7930	4492	2550	7042	No	19.6	Si
SLU 20	fin.	-41.44	-229	1	0	551	7930	4492	2550	7042	No	30.79	Si
SLU 83	ini.	189.91	-424	1	0	615	7930	4492	2550	7042	No	16.62	Si
SLU 83	fin.	-42.47	-269	1	0	582	7930	4492	2550	7042	No	26.18	Si
SLU 39	ini.	186.93	-467	1	0	597	7930	4492	2550	7042	No	15.09	Si
SLU 39	fin.	-55.43	-249	1	0	563	7930	4492	2550	7042	No	28.27	Si
SLU 82	ini.	184.59	-414	1	0	614	7930	4492	2550	7042	No	17	Si
SLU 82	fin.	-39.54	-256	1	0	582	7930	4492	2550	7042	No	27.47	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.	-1060.11	52	-0.000491	0.0002807	0.0035	1		3671.29	3671.29		3.46	Si
SLV 3	fin.	1171.9	-1458	-0.0005552	0.0002807	0.0035	1		3664.83	3664.83		3.13	Si
SLV 2	ini.	-672.92	-171	-0.0002906	0.0002807	0.0035	1		3671.29	3671.29		5.46	Si
SLV 2	fin.	784.76	-1114	-0.0003462	0.0002807	0.0035	1		3664.83	3664.83		4.67	Si
SLV 14	ini.	1210.4	-1434	-0.0005775	0.0002807	0.0035	1		3664.83	3664.83		3.03	Si
SLV 14	fin.	-1152.92	253	-0.0005432	0.0002807	0.0035	1		3671.29	3671.29		3.18	Si
SLV 1	ini.	-859.13	-36	-0.0003834	0.0002807	0.0035	1		3671.29	3671.29		4.27	Si
SLV 1	fin.	969.76	-1252	-0.0004426	0.0002807	0.0035	1		3664.83	3664.83		3.78	Si
SLV 13	ini.	1024.18	-1299	-0.0004722	0.0002807	0.0035	1		3664.83	3664.83		3.58	Si
SLV 13	fin.	-967.93	115	-0.0004407	0.0002807	0.0035	1		3671.29	3671.29		3.79	Si
SLV 10	ini.	787.08	-1096	-0.0003474	0.0002807	0.0035	1		3664.83	3664.83		4.66	Si
SLV 10	fin.	-711.94	16	-0.0003095	0.0002807	0.0035	1		3671.29	3671.29		5.16	Si
SLV 16	ini.	1009.42	-1345	-0.0004641	0.0002807	0.0035	1		3664.83	3664.83		3.63	Si
SLV 16	fin.	-950.78	47	-0.0004315	0.0002807	0.0035	1		3671.29	3671.29		3.86	Si
SLV 4	ini.	-873.89	-83	-0.0003911	0.0002807	0.0035	1		3671.29	3671.29		4.2	Si
SLV 4	fin.	986.91	-1320	-0.0004518	0.0002807	0.0035	1		3664.83	3664.83		3.71	Si
SLV 7	ini.	-636.79	-286	-0.0002734	0.0002807	0.0035	1		3671.29	3671.29		5.77	Si
SLV 7	fin.	730.91	-1221	-0.0003194	0.0002807	0.0035	1		3664.83	3664.83		5.01	Si
SLV 15	ini.	823.21	-1210	-0.0003657	0.0002807	0.0035	1		3664.83	3664.83		4.45	Si
SLV 15	fin.	-765.79	-91	-0.0003361	0.0002807	0.0035	1		3671.29	3671.29		4.79	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.	1210.4	-3240	1	0	876	7930	6738	2550	8806		2.72	Si
SLV 14	fin.	-1152.92	-3257	1	0	604	7930	6738	2550	8534		2.62	Si
SLV 15	ini.	823.21	-2222	1	0	845	7930	6738	2550	8775		3.95	Si
SLV 15	fin.	-765.79	-2157	1	0	669	7930	6738	2550	8598		3.99	Si
SLV 16	ini.	1009.42	-2723	1	0	864	7930	6738	2550	8794		3.23	Si
SLV 16	fin.	-950.78	-2664	1	0	644	7930	6738	2550	8573		3.22	Si
SLV 7	ini.	-636.79	1823	1	0	703	7930	6738	2550	8632		4.73	Si
SLV 7	fin.	730.91	1897	1	0	847	7930	6738	2550	8776		4.63	Si
SLV 4	ini.	-873.89	2567	1	0	667	7930	6738	2550	8597		3.35	Si
SLV 4	fin.	986.91	2503	1	0	861	7930	6738	2550	8790		3.51	Si
SLV 13	ini.	1024.18	-2739	1	0	858	7930	6738	2550	8787		3.21	Si
SLV 13	fin.	-967.93	-2749	1	0	631	7930	6738	2550	8560		3.11	Si
SLV 1	ini.	-859.13	2551	1	0	659	7930	6738	2550	8588		3.37	Si
SLV 1	fin.	969.76	2417	1	0	851	7930	6738	2550	8781		3.63	Si
SLV 3	ini.	-1060.11	3068	1	0	643	7930	6738	2550	8572		2.79	Si
SLV 3	fin.	1171.9	3010	1	0	879	7930	6738	2550	8809		2.93	Si
SLV 10	ini.	787.08	-1995	1	0	829	7930	6738	2550	8758		4.39	Si
SLV 10	fin.	-711.94	-2144	1	0	649	7930	6738	2550	8579		4	Si
SLV 2	ini.	-672.92	2050	1	0	683	7930	6738	2550	8612		4.2	Si
SLV 2	fin.	784.76	1910	1	0	831	7930	6738	2550	8761		4.59	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.028	SLV 14	Si
V_SLV	2.62	SLV 14	Si
PF_SLU	19.184	SLU 81	Si
V_SLU	15.089	SLU 39	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
-27.338	5.726	4.22	5.08	0.86	-26.338	5.726	4.22	5.08	0.86	1	0.3	3500

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo 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.	-129.51	-980	-0.0000711	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.89	Si
SLU 78	fin.	-9.68	-238	-0.0000052	0.0001872	0.0035	0.86		2705.05	2705.05	No	279.33	Si
SLU 42	ini.	-129.99	-1031	-0.0000714	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.81	Si
SLU 42	fin.	-14	-282	-0.0000075	0.0001872	0.0035	0.86		2705.05	2705.05	No	193.22	Si
SLU 83	ini.	-140.43	-1097	-0.0000773	0.0001872	0.0035	0.86		2705.05	2705.05	No	19.26	Si
SLU 83	fin.	-18.14	-310	-0.0000097	0.0001872	0.0035	0.86		2705.05	2705.05	No	149.09	Si
SLU 73	ini.	-130.84	-985	-0.0000718	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.67	Si
SLU 73	fin.	-7.13	-226	-0.0000038	0.0001872	0.0035	0.86		2705.05	2705.05	No	379.23	Si
SLU 82	ini.	-142.43	-1105	-0.0000784	0.0001872	0.0035	0.86		2705.05	2705.05	No	18.99	Si
SLU 82	fin.	-14.32	-292	-0.0000077	0.0001872	0.0035	0.86		2705.05	2705.05	No	188.94	Si
SLU 84	ini.	-142.43	-1105	-0.0000784	0.0001872	0.0035	0.86		2705.05	2705.05	No	18.99	Si
SLU 84	fin.	-14.32	-292	-0.0000077	0.0001872	0.0035	0.86		2705.05	2705.05	No	188.94	Si
SLU 81	ini.	-140.43	-1097	-0.0000773	0.0001872	0.0035	0.86		2705.05	2705.05	No	19.26	Si
SLU 81	fin.	-18.14	-310	-0.0000097	0.0001872	0.0035	0.86		2705.05	2705.05	No	149.09	Si
SLU 40	ini.	-129.99	-1031	-0.0000714	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.81	Si
SLU 40	fin.	-14	-282	-0.0000075	0.0001872	0.0035	0.86		2705.05	2705.05	No	193.22	Si
SLU 80	ini.	-129.51	-980	-0.0000711	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.89	Si
SLU 80	fin.	-9.68	-238	-0.0000052	0.0001872	0.0035	0.86		2705.05	2705.05	No	279.33	Si
SLU 76	ini.	-130.84	-985	-0.0000718	0.0001872	0.0035	0.86		2705.05	2705.05	No	20.67	Si
SLU 76	fin.	-7.13	-226	-0.0000038	0.0001872	0.0035	0.86		2705.05	2705.05	No	379.23	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 39	ini.	-127.99	2324	0.86	0	455	6819	3863	2193	6056	No	2.61	Si
SLU 39	fin.	-17.83	-1438	0.86	0	366	6819	3863	2193	6056	No	4.21	Si
SLU 40	ini.	-129.99	2341	0.86	0	456	6819	3863	2193	6056	No	2.59	Si
SLU 40	fin.	-14	-1421	0.86	0	363	6819	3863	2193	6056	No	4.26	Si
SLU 84	ini.	-142.43	2472	0.86	0	464	6819	3863	2193	6056	No	2.45	Si
SLU 84	fin.	-14.32	-1471	0.86	0	365	6819	3863	2193	6056	No	4.12	Si
SLU 83	ini.	-140.43	2455	0.86	0	463	6819	3863	2193	6056	No	2.47	Si
SLU 83	fin.	-18.14	-1488	0.86	0	367	6819	3863	2193	6056	No	4.07	Si
SLU 81	ini.	-140.43	2455	0.86	0	463	6819	3863	2193	6056	No	2.47	Si
SLU 81	fin.	-18.14	-1488	0.86	0	367	6819	3863	2193	6056	No	4.07	Si
SLU 73	ini.	-130.84	2171	0.86	0	451	6819	3863	2193	6056	No	2.79	Si
SLU 73	fin.	-7.13	-1231	0.86	0	355	6819	3863	2193	6056	No	4.92	Si
SLU 82	ini.	-142.43	2472	0.86	0	464	6819	3863	2193	6056	No	2.45	Si
SLU 82	fin.	-14.32	-1471	0.86	0	365	6819	3863	2193	6056	No	4.12	Si
SLU 76	ini.	-130.84	2171	0.86	0	451	6819	3863	2193	6056	No	2.79	Si
SLU 76	fin.	-7.13	-1231	0.86	0	355	6819	3863	2193	6056	No	4.92	Si
SLU 41	ini.	-127.99	2324	0.86	0	455	6819	3863	2193	6056	No	2.61	Si
SLU 41	fin.	-17.83	-1438	0.86	0	366	6819	3863	2193	6056	No	4.21	Si
SLU 42	ini.	-129.99	2341	0.86	0	456	6819	3863	2193	6056	No	2.59	Si
SLU 42	fin.	-14	-1421	0.86	0	363	6819	3863	2193	6056	No	4.26	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 14	ini.	390.21	1324	-0.0002233	0.0002807	0.0035	0.86		2705.45	2705.45		6.93	Si
SLV 14	fin.	-458.95	-1888	-0.0002659	0.0002807	0.0035	0.86		2711.06	2711.06		5.91	Si
SLV 7	ini.	-396.64	-1870	-0.0002268	0.0002807	0.0035	0.86		2711.06	2711.06		6.84	Si
SLV 7	fin.	308.42	1150	-0.0001737	0.0002807	0.0035	0.86		2705.45	2705.45		8.77	Si
SLV 13	ini.	308.14	990	-0.0001735	0.0002807	0.0035	0.86		2705.45	2705.45		8.78	Si
SLV 13	fin.	-374.45	-1547	-0.0002132	0.0002807	0.0035	0.86		2711.06	2711.06		7.24	Si
SLV 10	ini.	238.54	731	-0.0001326	0.0002807	0.0035	0.86		2705.45	2705.45		11.34	Si
SLV 10	fin.	-318.48	-1403	-0.0001794	0.0002807	0.0035	0.86		2711.06	2711.06		8.51	Si
SLV 16	ini.	292.97	919	-0.0001645	0.0002807	0.0035	0.86		2705.45	2705.45		9.23	Si
SLV 16	fin.	-361.97	-1475	-0.0002056	0.0002807	0.0035	0.86		2711.06	2711.06		7.49	Si
SLV 2	ini.	-369	-1725	-0.0002098	0.0002807	0.0035	0.86		2711.06	2711.06		7.35	Si
SLV 2	fin.	267.41	881	-0.0001495	0.0002807	0.0035	0.86		2705.45	2705.45		10.12	Si
SLV 1	ini.	-451.07	-2059	-0.0002609	0.0002807	0.0035	0.86		2711.06	2711.06		6.01	Si
SLV 1	fin.	351.91	1222	-0.0001999	0.0002807	0.0035	0.86		2705.45	2705.45		7.69	Si
SLV 8	ini.	-313.36	-1531	-0.0001763	0.0002807	0.0035	0.86		2711.06	2711.06		8.65	Si
SLV 8	fin.	222.68	804	-0.0001235	0.0002807	0.0035	0.86		2705.45	2705.45		12.15	Si
SLV 4	ini.	-466.24	-2129	-0.0002705	0.0002807	0.0035	0.86		2711.06	2711.06		5.81	Si
SLV 4	fin.	364.39	1294	-0.0002075	0.0002807	0.0035	0.86		2705.45	2705.45		7.42	Si
SLV 3	ini.	-548.31	-2463	-0.0003242	0.0002807	0.0035	0.86		2711.06	2711.06		4.94	Si
SLV 3	fin.	448.89	1635	-0.00026	0.0002807	0.0035	0.86		2705.45	2705.45		6.03	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.	-466.24	3185	0.86	0	746	6819	5794	2193	7565		2.38	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.	364.39	1313	0.86	0	190	6819	5794	2193	7010		5.34	Si
SLV 13	ini.	308.14	-768	0.86	0	287	6819	5794	2193	7106		9.25	Si
SLV 13	fin.	-374.45	-2630	0.86	0	684	6819	5794	2193	7503		2.85	Si
SLV 16	ini.	292.97	-679	0.86	0	305	6819	5794	2193	7124		10.5	Si
SLV 16	fin.	-361.97	-2541	0.86	0	676	6819	5794	2193	7495		2.95	Si
SLV 2	ini.	-369	2638	0.86	0	703	6819	5794	2193	7523		2.85	Si
SLV 2	fin.	267.41	767	0.86	0	314	6819	5794	2193	7134		9.31	Si
SLV 1	ini.	-451.07	3095	0.86	0	738	6819	5794	2193	7558		2.44	Si
SLV 1	fin.	351.91	1223	0.86	0	217	6819	5794	2193	7036		5.75	Si
SLV 7	ini.	-396.64	2931	0.86	0	719	6819	5794	2193	7538		2.57	Si
SLV 7	fin.	308.42	1061	0.86	0	241	6819	5794	2193	7060		6.65	Si
SLV 10	ini.	238.54	-514	0.86	0	349	6819	5794	2193	7168		13.95	Si
SLV 10	fin.	-318.48	-2378	0.86	0	668	6819	5794	2193	7487		3.15	Si
SLV 3	ini.	-548.31	3642	0.86	0	779	6819	5794	2193	7598		2.09	Si
SLV 3	fin.	448.89	1769	0.86	0	0	6819	5794	2193	6819		3.85	Si
SLV 8	ini.	-313.36	2467	0.86	0	682	6819	5794	2193	7502		3.04	Si
SLV 8	fin.	222.68	597	0.86	0	333	6819	5794	2193	7152		11.97	Si
SLV 14	ini.	390.21	-1225	0.86	0	178	6819	5794	2193	6997		5.71	Si
SLV 14	fin.	-458.95	-3087	0.86	0	721	6819	5794	2193	7540		2.44	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.944	SLV 3	Si
V_SLV	2.086	SLV 3	Si
PF_SLU	18.992	SLU 82	Si
V_SLU	2.45	SLU 82	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
-28.073	-0.094	3.42	5.08	1.66	-28.073	0.706	3.42	5.08	1.66	0.8	0.15	3500

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 69	ini.	1070.63	910	-0.0001628	0.0002246	0.0035	1.66		10395.87	10395.87	No	9.71	Si
SLU 69	fin.	122.67	-19	-0.0000177	0.0002246	0.0035	1.66		10395.87	10395.87	No	84.74	Si
SLU 73	ini.	1077.77	773	-0.0001639	0.0002246	0.0035	1.66		10395.87	10395.87	No	9.65	Si
SLU 73	fin.	64.64	-115	-0.0000093	0.0002246	0.0035	1.66		10395.87	10395.87	No	160.83	Si
SLU 67	ini.	1087.39	928	-0.0001655	0.0002246	0.0035	1.66		10395.87	10395.87	No	9.56	Si
SLU 67	fin.	126.74	-16	-0.0000183	0.0002246	0.0035	1.66		10395.87	10395.87	No	82.03	Si
SLU 65	ini.	1098.56	940	-0.0001673	0.0002246	0.0035	1.66		10395.87	10395.87	No	9.46	Si
SLU 65	fin.	129.45	-15	-0.0000187	0.0002246	0.0035	1.66		10395.87	10395.87	No	80.31	Si
SLU 76	ini.	1077.77	773	-0.0001639	0.0002246	0.0035	1.66		10395.87	10395.87	No	9.65	Si
SLU 76	fin.	64.64	-115	-0.0000093	0.0002246	0.0035	1.66		10395.87	10395.87	No	160.83	Si
SLU 66	ini.	1070.63	910	-0.0001628	0.0002246	0.0035	1.66		10395.87	10395.87	No	9.71	Si
SLU 66	fin.	122.67	-19	-0.0000177	0.0002246	0.0035	1.66		10395.87	10395.87	No	84.74	Si
SLU 68	ini.	1098.56	940	-0.0001673	0.0002246	0.0035	1.66		10395.87	10395.87	No	9.46	Si
SLU 68	fin.	129.45	-15	-0.0000187	0.0002246	0.0035	1.66		10395.87	10395.87	No	80.31	Si
SLU 72	ini.	1087.39	928	-0.0001655	0.0002246	0.0035	1.66		10395.87	10395.87	No	9.56	Si
SLU 72	fin.	126.74	-16	-0.0000183	0.0002246	0.0035	1.66		10395.87	10395.87	No	82.03	Si
SLU 64	ini.	1070.63	910	-0.0001628	0.0002246	0.0035	1.66		10395.87	10395.87	No	9.71	Si
SLU 64	fin.	122.67	-19	-0.0000177	0.0002246	0.0035	1.66		10395.87	10395.87	No	84.74	Si
SLU 70	ini.	1087.39	928	-0.0001655	0.0002246	0.0035	1.66		10395.87	10395.87	No	9.56	Si
SLU 70	fin.	126.74	-16	-0.0000183	0.0002246	0.0035	1.66		10395.87	10395.87	No	82.03	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.	1077.77	-1926	1.66	0	205	6344	4474	4233	6549	No	3.4	Si
SLU 76	fin.	64.64	-2445	1.66	0	379	6344	4474	4233	6722	No	2.75	Si
SLU 80	ini.	1066.59	-1905	1.66	0	208	6344	4474	4233	6552	No	3.44	Si
SLU 80	fin.	61.93	-2424	1.66	0	379	6344	4474	4233	6722	No	2.77	Si
SLU 75	ini.	1066.59	-1905	1.66	0	208	6344	4474	4233	6552	No	3.44	Si
SLU 75	fin.	61.93	-2424	1.66	0	379	6344	4474	4233	6722	No	2.77	Si
SLU 72	ini.	1087.39	-1919	1.66	0	156	6344	4474	4233	6500	No	3.39	Si
SLU 72	fin.	126.74	-2438	1.66	0	363	6344	4474	4233	6707	No	2.75	Si
SLU 65	ini.	1098.56	-1940	1.66	0	152	6344	4474	4233	6495	No	3.35	Si
SLU 65	fin.	129.45	-2459	1.66	0	363	6344	4474	4233	6707	No	2.73	Si
SLU 73	ini.	1077.77	-1926	1.66	0	205	6344	4474	4233	6549	No	3.4	Si
SLU 73	fin.	64.64	-2445	1.66	0	379	6344	4474	4233	6722	No	2.75	Si
SLU 70	ini.	1087.39	-1919	1.66	0	156	6344	4474	4233	6500	No	3.39	Si
SLU 70	fin.	126.74	-2438	1.66	0	363	6344	4474	4233	6707	No	2.75	Si
SLU 78	ini.	1066.59	-1905	1.66	0	208	6344	4474	4233	6552	No	3.44	Si
SLU 78	fin.	61.93	-2424	1.66	0	379	6344	4474	4233	6722	No	2.77	Si
SLU 67	ini.	1087.39	-1919	1.66	0	156	6344	4474	4233	6500	No	3.39	Si
SLU 67	fin.	126.74	-2438	1.66	0	363	6344	4474	4233	6707	No	2.75	Si
SLU 68	ini.	1098.56	-1940	1.66	0	152	6344	4474	4233	6495	No	3.35	Si
SLU 68	fin.	129.45	-2459	1.66	0	363	6344	4474	4233	6707	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 3	ini.	1242.06	245	-0.0001873	0.0003369	0.0035	1.66		10662.35	10662.35		8.58	Si
SLV 3	fin.	640.17	-182	-0.0000941	0.0003369	0.0035	1.66		10662.35	10662.35		16.66	Si
SLV 15	ini.	1174.82	2018	-0.0001766	0.0003369	0.0035	1.66		10662.35	10662.35		9.08	Si
SLV 15	fin.	-113.75	837	-0.0000164	0.0003369	0.0035	1.66		10672.8	10672.8		93.83	Si
SLV 11	ini.	2124.91	2492	-0.0003343	0.0003369	0.0035	1.66		10662.35	10662.35		5.02	Si
SLV 11	fin.	571.62	1318	-0.0000838	0.0003369	0.0035	1.66		10662.35	10662.35		18.65	Si
SLV 8	ini.	2126.91	1943	-0.0003347	0.0003369	0.0035	1.66		10662.35	10662.35		5.01	Si
SLV 8	fin.	794.57	1011	-0.0001176	0.0003369	0.0035	1.66		10662.35	10662.35		13.42	Si
SLV 12	ini.	2106.74	2475	-0.0003311	0.0003369	0.0035	1.66		10662.35	10662.35		5.06	Si
SLV 12	fin.	568.4	1317	-0.0000833	0.0003369	0.0035	1.66		10662.35	10662.35		18.76	Si
SLV 9	ini.	-522.01	-636	-0.0000763	0.0003369	0.0035	1.66		10672.8	10672.8		20.45	Si
SLV 9	fin.	-632.59	-1075	-0.0000929	0.0003369	0.0035	1.66		10672.8	10672.8		16.87	Si
SLV 16	ini.	1156.92	2001	-0.0001738	0.0003369	0.0035	1.66		10662.35	10662.35		9.22	Si
SLV 16	fin.	-116.92	836	-0.0000168	0.0003369	0.0035	1.66		10672.8	10672.8		91.28	Si
SLV 4	ini.	1224.15	228	-0.0001844	0.0003369	0.0035	1.66		10662.35	10662.35		8.71	Si
SLV 4	fin.	636.99	-184	-0.0000937	0.0003369	0.0035	1.66		10662.35	10662.35		16.74	Si
SLV 10	ini.	-540.18	-653	-0.000079	0.0003369	0.0035	1.66		10672.8	10672.8		19.76	Si
SLV 10	fin.	-635.82	-1077	-0.0000934	0.0003369	0.0035	1.66		10672.8	10672.8		16.79	Si
SLV 7	ini.	2145.08	1960	-0.0003378	0.0003369	0.0035	1.66		10662.35	10662.35		4.97	Si
SLV 7	fin.	797.8	1012	-0.0001181	0.0003369	0.0035	1.66		10662.35	10662.35		13.36	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.	2126.91	-3201	1.66	0	0	6344	6711	4233	6344		1.98	Si
SLV 8	fin.	794.57	-3972	1.66	0	346	6344	6711	4233	6690		1.68	Si
SLV 7	ini.	2145.08	-3236	1.66	0	0	6344	6711	4233	6344		1.96	Si
SLV 7	fin.	797.8	-4007	1.66	0	346	6344	6711	4233	6690		1.67	Si
SLV 12	ini.	2106.74	-3563	1.66	0	0	6344	6711	4233	6344		1.78	Si
SLV 12	fin.	568.4	-4371	1.66	0	260	6344	6711	4233	6604		1.51	Si
SLV 11	ini.	2124.91	-3598	1.66	0	0	6344	6711	4233	6344		1.76	Si
SLV 11	fin.	571.62	-4406	1.66	0	260	6344	6711	4233	6603		1.5	Si
SLV 3	ini.	1242.06	-1424	1.66	0	501	6344	6711	4233	6845		4.81	Si
SLV 3	fin.	640.17	-1874	1.66	0	569	6344	6711	4233	6913		3.69	Si
SLV 14	ini.	362.84	-1404	1.66	0	333	6344	6711	4233	6677		4.75	Si
SLV 14	fin.	-478.19	-1740	1.66	0	522	6344	6711	4233	6866		3.95	Si
SLV 15	ini.	1174.82	-2630	1.66	0	0	6344	6711	4233	6344		2.41	Si
SLV 15	fin.	-113.75	-3204	1.66	0	387	6344	6711	4233	6731		2.1	Si
SLV 13	ini.	380.75	-1439	1.66	0	329	6344	6711	4233	6673		4.64	Si
SLV 13	fin.	-475.01	-1775	1.66	0	522	6344	6711	4233	6866		3.87	Si
SLV 4	ini.	1224.15	-1390	1.66	0	504	6344	6711	4233	6848		4.93	Si
SLV 4	fin.	636.99	-1840	1.66	0	570	6344	6711	4233	6913		3.76	Si
SLV 16	ini.	1156.92	-2595	1.66	0	0	6344	6711	4233	6344		2.44	Si
SLV 16	fin.	-116.92	-3169	1.66	0	387	6344	6711	4233	6731		2.12	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.971	SLV 7	Si
V_SLV	1.499	SLV 11	Si
PF_SLU	9.463	SLU 65	Si
V_SLU	2.728	SLU 65	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
-29.008	1.056	3.42	5.08	1.66	-28.208	1.056	3.42	5.08	1.66	0.8	0.3	3500

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 78	ini.	-394.11	-1347	-0.0000576	0.0002246	0.0035	1.66		10326.06	10326.06	No	26.2	Si
SLU 78	fin.	1097.09	145	-0.0001671	0.0002246	0.0035	1.66		10315.61	10315.61	No	9.4	Si
SLU 82	ini.	-399.16	-1542	-0.0000584	0.0002246	0.0035	1.66		10326.06	10326.06	No	25.87	Si
SLU 82	fin.	1140.53	-28	-0.0001741	0.0002246	0.0035	1.66		10315.61	10315.61	No	9.04	Si
SLU 83	ini.	-397.55	-1541	-0.0000581	0.0002246	0.0035	1.66		10326.06	10326.06	No	25.97	Si
SLU 83	fin.	1136.07	-34	-0.0001734	0.0002246	0.0035	1.66		10315.61	10315.61	No	9.08	Si
SLU 77	ini.	-392.5	-1346	-0.0000574	0.0002246	0.0035	1.66		10326.06	10326.06	No	26.31	Si
SLU 77	fin.	1092.63	139	-0.0001663	0.0002246	0.0035	1.66		10315.61	10315.61	No	9.44	Si
SLU 75	ini.	-394.11	-1347	-0.0000576	0.0002246	0.0035	1.66		10326.06	10326.06	No	26.2	Si
SLU 75	fin.	1097.09	145	-0.0001671	0.0002246	0.0035	1.66		10315.61	10315.61	No	9.4	Si
SLU 73	ini.	-395.19	-1348	-0.0000578	0.0002246	0.0035	1.66		10326.06	10326.06	No	26.13	Si
SLU 73	fin.	1100.06	149	-0.0001675	0.0002246	0.0035	1.66		10315.61	10315.61	No	9.38	Si
SLU 84	ini.	-399.16	-1542	-0.0000584	0.0002246	0.0035	1.66		10326.06	10326.06	No	25.87	Si
SLU 84	fin.	1140.53	-28	-0.0001741	0.0002246	0.0035	1.66		10315.61	10315.61	No	9.04	Si
SLU 76	ini.	-395.19	-1348	-0.0000578	0.0002246	0.0035	1.66		10326.06	10326.06	No	26.13	Si
SLU 76	fin.	1100.06	149	-0.0001675	0.0002246	0.0035	1.66		10315.61	10315.61	No	9.38	Si
SLU 80	ini.	-394.11	-1347	-0.0000576	0.0002246	0.0035	1.66		10326.06	10326.06	No	26.2	Si
SLU 80	fin.	1097.09	145	-0.0001671	0.0002246	0.0035	1.66		10315.61	10315.61	No	9.4	Si
SLU 81	ini.	-397.55	-1541	-0.0000581	0.0002246	0.0035	1.66		10326.06	10326.06	No	25.97	Si
SLU 81	fin.	1136.07	-34	-0.0001734	0.0002246	0.0035	1.66		10315.61	10315.61	No	9.08	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.	-394.11	5991	1.66	0	936	6344	8948	4233	7280	No	1.22	Si
SLU 75	fin.	1097.09	1464	1.66	0	695	6344	8948	4233	7038	No	4.81	Si
SLU 81	ini.	-397.55	6467	1.66	0	963	6344	8948	4233	7307	No	1.13	Si
SLU 81	fin.	1136.07	1269	1.66	0	728	6344	8948	4233	7072	No	5.57	Si
SLU 82	ini.	-399.16	6482	1.66	0	964	6344	8948	4233	7307	No	1.13	Si
SLU 82	fin.	1140.53	1284	1.66	0	727	6344	8948	4233	7070	No	5.51	Si
SLU 80	ini.	-394.11	5991	1.66	0	936	6344	8948	4233	7280	No	1.22	Si
SLU 80	fin.	1097.09	1464	1.66	0	695	6344	8948	4233	7038	No	4.81	Si
SLU 79	ini.	-392.5	5976	1.66	0	936	6344	8948	4233	7280	No	1.22	Si
SLU 79	fin.	1092.63	1449	1.66	0	696	6344	8948	4233	7039	No	4.86	Si
SLU 73	ini.	-395.19	6001	1.66	0	937	6344	8948	4233	7280	No	1.21	Si
SLU 73	fin.	1100.06	1474	1.66	0	694	6344	8948	4233	7038	No	4.77	Si
SLU 76	ini.	-395.19	6001	1.66	0	937	6344	8948	4233	7280	No	1.21	Si
SLU 76	fin.	1100.06	1474	1.66	0	694	6344	8948	4233	7038	No	4.77	Si
SLU 84	ini.	-399.16	6482	1.66	0	964	6344	8948	4233	7307	No	1.13	Si
SLU 84	fin.	1140.53	1284	1.66	0	727	6344	8948	4233	7070	No	5.51	Si
SLU 78	ini.	-394.11	5991	1.66	0	936	6344	8948	4233	7280	No	1.22	Si
SLU 78	fin.	1097.09	1464	1.66	0	695	6344	8948	4233	7038	No	4.81	Si
SLU 83	ini.	-397.55	6467	1.66	0	963	6344	8948	4233	7307	No	1.13	Si
SLU 83	fin.	1136.07	1269	1.66	0	728	6344	8948	4233	7072	No	5.57	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.	-175.35	-539	-0.0000253	0.0003369	0.0035	1.66		9879.39	9879.39		56.34	Si
SLV 12	fin.	876.19	662	-0.0001301	0.0003369	0.0035	1.66		9868.25	9868.25		11.26	Si
SLV 8	ini.	-579.35	-1118	-0.0000849	0.0003369	0.0035	1.66		9879.39	9879.39		17.05	Si
SLV 8	fin.	1176.1	802	-0.0001768	0.0003369	0.0035	1.66		9868.25	9868.25		8.39	Si
SLV 1	ini.	-936.28	-1706	-0.0001392	0.0003369	0.0035	1.66		9879.39	9879.39		10.55	Si

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	fin.	1194.64	450	-0.0001797	0.0003369	0.0035	1.66		9868.25	9868.25		8.26	Si
SLV 11	ini.	-173.47	-537	-0.000025	0.0003369	0.0035	1.66		9879.39	9879.39		56.95	Si
SLV 11	fin.	872.94	660	-0.0001296	0.0003369	0.0035	1.66		9868.25	9868.25		11.3	Si
SLV 3	ini.	-988.22	-1746	-0.0001472	0.0003369	0.0035	1.66		9879.39	9879.39		10	Si
SLV 3	fin.	1346.08	686	-0.0002039	0.0003369	0.0035	1.66		9868.25	9868.25		7.33	Si
SLV 5	ini.	-404.34	-982	-0.0000589	0.0003369	0.0035	1.66		9879.39	9879.39		24.43	Si
SLV 5	fin.	668.04	11	-0.0000983	0.0003369	0.0035	1.66		9868.25	9868.25		14.77	Si
SLV 4	ini.	-990.08	-1747	-0.0001475	0.0003369	0.0035	1.66		9879.39	9879.39		9.98	Si
SLV 4	fin.	1349.28	689	-0.0002044	0.0003369	0.0035	1.66		9868.25	9868.25		7.31	Si
SLV 7	ini.	-577.47	-1117	-0.0000846	0.0003369	0.0035	1.66		9879.39	9879.39		17.11	Si
SLV 7	fin.	1172.85	799	-0.0001763	0.0003369	0.0035	1.66		9868.25	9868.25		8.41	Si
SLV 2	ini.	-938.14	-1707	-0.0001395	0.0003369	0.0035	1.66		9879.39	9879.39		10.53	Si
SLV 2	fin.	1197.84	452	-0.0001802	0.0003369	0.0035	1.66		9868.25	9868.25		8.24	Si
SLV 6	ini.	-406.23	-984	-0.0000591	0.0003369	0.0035	1.66		9879.39	9879.39		24.32	Si
SLV 6	fin.	671.29	14	-0.0000988	0.0003369	0.0035	1.66		9868.25	9868.25		14.7	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 2	ini.	-938.14	6181	1.66	0	1360	6344	13423	4233	7703		1.25	Si
SLV 2	fin.	1197.84	3747	1.66	0	996	6344	13423	4233	7340		1.96	Si
SLV 8	ini.	-579.35	5489	1.66	0	1271	6344	13423	4233	7615		1.39	Si
SLV 8	fin.	1176.1	3195	1.66	0	924	6344	13423	4233	7268		2.27	Si
SLV 7	ini.	-577.47	5478	1.66	0	1271	6344	13423	4233	7614		1.39	Si
SLV 7	fin.	1172.85	3184	1.66	0	925	6344	13423	4233	7268		2.28	Si
SLV 1	ini.	-936.28	6170	1.66	0	1359	6344	13423	4233	7703		1.25	Si
SLV 1	fin.	1194.64	3737	1.66	0	997	6344	13423	4233	7341		1.96	Si
SLV 3	ini.	-988.22	6673	1.66	0	1365	6344	13423	4233	7709		1.16	Si
SLV 3	fin.	1346.08	4361	1.66	0	949	6344	13423	4233	7292		1.67	Si
SLV 12	ini.	-175.35	3962	1.66	0	1177	6344	13423	4233	7521		1.9	Si
SLV 12	fin.	876.19	1562	1.66	0	954	6344	13423	4233	7297		4.67	Si
SLV 6	ini.	-406.23	3813	1.66	0	1250	6344	13423	4233	7593		1.99	Si
SLV 6	fin.	671.29	1113	1.66	0	1080	6344	13423	4233	7424		6.67	Si
SLV 4	ini.	-990.08	6683	1.66	0	1366	6344	13423	4233	7709		1.15	Si
SLV 4	fin.	1349.28	4372	1.66	0	948	6344	13423	4233	7292		1.67	Si
SLV 5	ini.	-404.34	3802	1.66	0	1250	6344	13423	4233	7593		2	Si
SLV 5	fin.	668.04	1103	1.66	0	1081	6344	13423	4233	7424		6.73	Si
SLV 11	ini.	-173.47	3951	1.66	0	1177	6344	13423	4233	7521		1.9	Si
SLV 11	fin.	872.94	1551	1.66	0	954	6344	13423	4233	7298		4.71	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	7.314	SLV 4	Si
V_SLV	1.153	SLV 4	Si
PF_SLU	9.045	SLU 82	Si
V_SLU	1.127	SLU 82	Si