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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 LIBIA CIV. 29÷51 PER COMPLESSIVI 70 ALLOGGI
DI ERP CON RELATIVE PERTINENZE E PARTI COMUNI**

LOTTO **3053/PN_2**

PROGETTO ESECUTIVO

TAV. TAB_16		OGGETTO TABULATI DI CALCOLO CIVICO 43-45 STATO DI PROGETTO			DATA Settembre 2022	
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TABULATI DI CALCOLO
CIVICI 43-45
STATO DI PROGETTO



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1 Risultati numerici

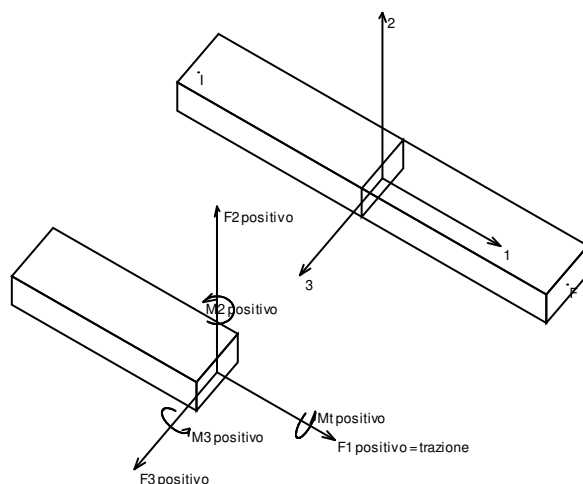
1.1 Sollecitazioni

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;
- $M1$ (M_t): 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).

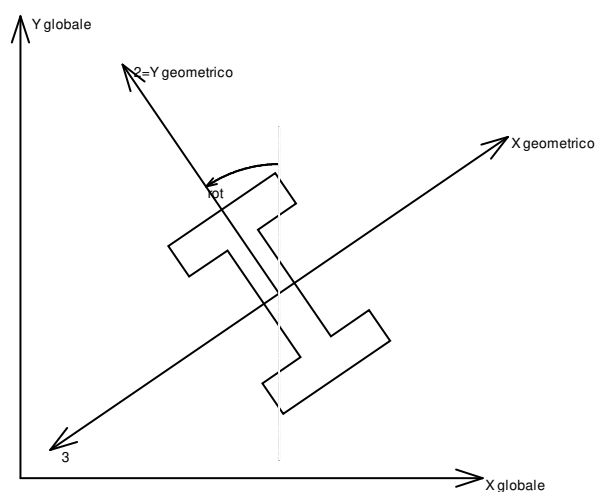
Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

- 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.

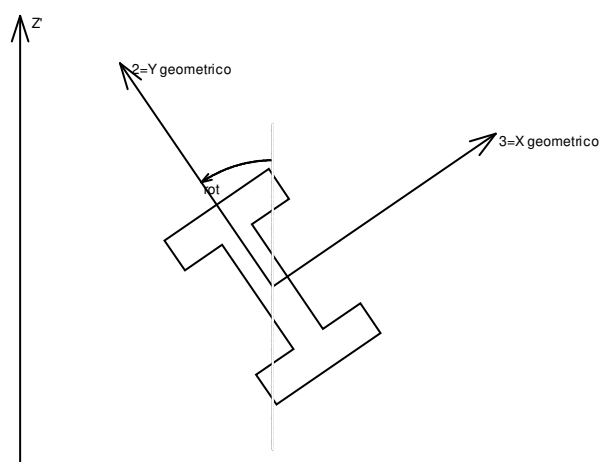


Sistema locale aste verticali



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

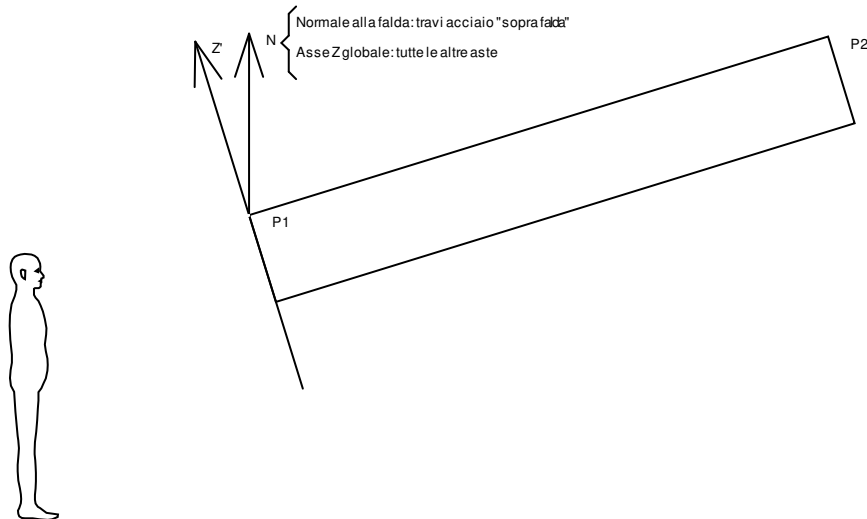
Sistema locale aste non verticali



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

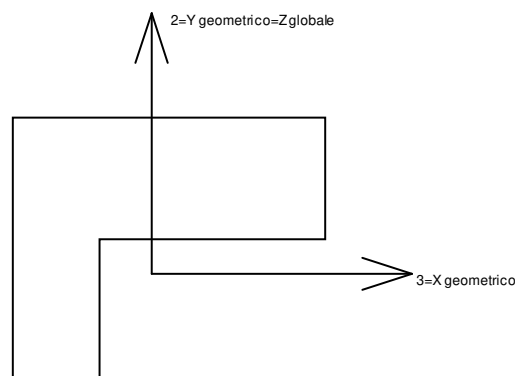
L'asse Z' è illustrato nella figura seguente dove:

- 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 mezzzeria, 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
98	SLV Y	1	-3.26	-13	-1.53	-17626	-650	-734	-6.15	-1329.36	-109.9
124	SLV 5	1	-3.26	-13.5	-1.53	-17203	121	869	5.22	1314.97	-177.88
99	SLV Y	1	-3.67	-13	-1.53	-17167	2158	431	-8.67	-1523.33	493.4
125	SLV 10	31	-4.07	-13.5	-1.53	-16921	496	-600	-4.74	1345.48	-277.88
97	SLV Y	1	-2.86	-13	-1.53	-16812	-594	-797	-6.94	-1230.21	-117.4

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
98	SLV 9	1	-3.26	-13	-1.53	18758	2538	886	5.06	1322.96	245.3
99	SLV 6	31	-4.07	-13	-1.53	18395	-2998	-584	-4.83	1357.87	312.45
124	SLV 12	1	-3.26	-13.5	-1.53	18238	1193	-731	-7.22	-1324.48	19.84
97	SLV 10	1	-2.86	-13	-1.53	17715	2385	805	5.62	1234.68	324.8
100	SLV 5	31	-4.47	-13	-1.53	17681	-2876	-488	-5.25	1313.52	418.56

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
64	SLV 9	1	-9.18	-13.25	-1.53	-3156	12557	3613	-41.17	-6528.92	10625.95
86	SLV 10	31	1.94	-13.25	-1.53	-4263	-4601	-4304	98.51	-6323.08	2971.7
66	SLV 11	31	-9.18	-17.73	-1.53	-2909	-2952	-3180	9.81	-6312.29	-473.2
63	SLV 12	31	-9.18	-13.25	-1.53	-3398	-12627	-3467	39.59	-6303.16	10751.28
61	SLV 10	1	-9.18	-8.72	-1.53	-2763	3242	3209	-13.1	-6296.36	-532.11

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
63	SLV 5	31	-9.18	-13.25	-1.53	5770	-12712	3579	52.07	6524.17	11810.53
66	SLV 6	31	-9.18	-17.73	-1.53	5348	-9908	3343	131.91	6512.69	-2595.16
86	SLV 7	31	1.94	-13.25	-1.53	-1726	-8455	3971	22.93	6457.62	5716.96
64	SLV 8	1	-9.18	-13.25	-1.53	5393	12498	-3579	-50.48	6382.52	11667.17
77	SLV 8	31	1.93	-17.73	-1.53	6658	-1308	4481	89.63	6274.9	-575.26

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
161	SLU 81	31	-3.67	-8.72	-1.53	-493	5333	131	-3.25	206.96	-10754.82
138	SLU 81	1	-3.67	-17.73	-1.53	-733	-5081	91	2.99	-121.27	-10190.84
61	SLU 81	30	-9.18	-10.18	-1.53	1623	48	83	-7.2	-74.43	-9262.15
62	SLU 81	1	-9.18	-10.23	-1.53	1624	-216	82	-6.51	-70.27	-9256.96
66	SLU 81	2	-9.18	-16.28	-1.53	1680	-69	64	7.06	2.5	-8840.51

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
63	SLU 81	31	-9.18	-13.25	-1.53	1681	-19364	94	63.63	173.88	17251.99
64	SLU 81	1	-9.18	-13.25	-1.53	1590	19170	10	-63.63	-93.2	17061.08
15	SLU 81	31	-3.67	-9.07	-1.53	-213	-14848	-212	223.69	738.84	11210.95
16	SLU 81	1	-3.67	-9.07	-1.53	-22	14753	101	-206.07	878.67	11193.46
45	SLU 81	31	-3.67	-17.38	-1.53	-1501	-14068	256	-215.22	-787.79	10612.59

1.1.2 Sollecitazioni gusci

1.1.2.1 Convenzioni di segno gusci

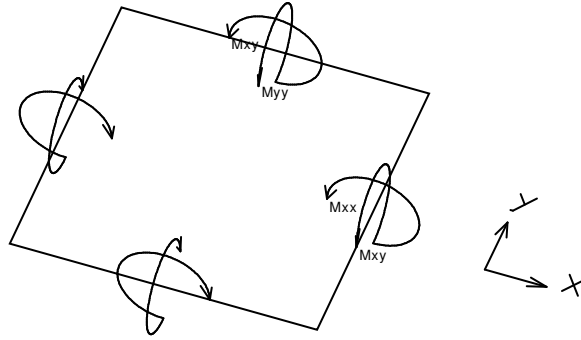
Sono individuate distinte convenzioni di segno in relazione al tipo di elemento strutturale a cui il guscio si riferisce:

- 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 destrorsa. 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.

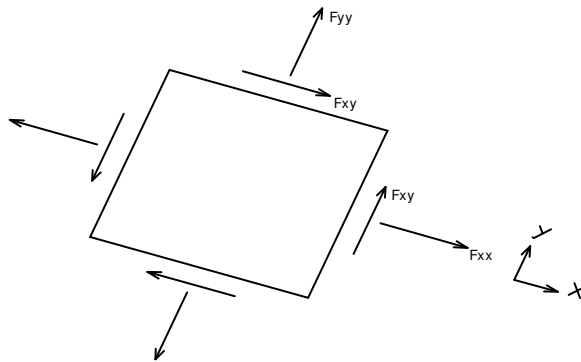
In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione M_{xx} , M_{yy} , M_{xy} .



Si definiscono:

- M_{xx} : momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- M_{yy} : momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale y (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- M_{xy} : 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 F_{xx} , F_{yy} , F_{xy} .



Si definiscono:

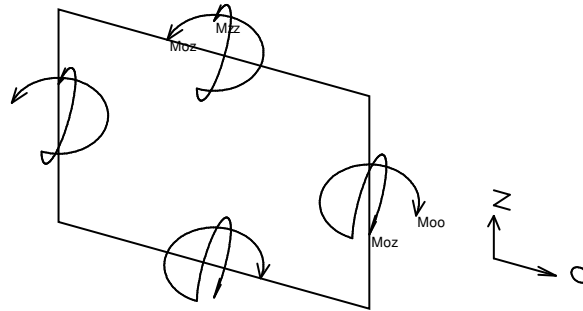
- F_{xx} : sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- F_{yy} : sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- F_{xy} : 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:

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

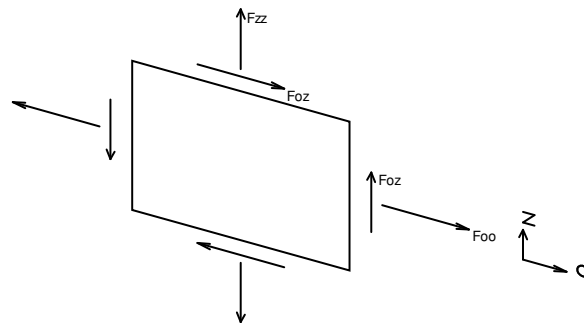
Convenzione di segno per gusci verticali

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 destrorsa. 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 M_{xx} , M_{yy} , M_{xy} .



- Moo: momento flettente distribuito $[Forza \cdot Lunghezza / Lunghezza]$ 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 $[Forza \cdot Lunghezza / Lunghezza]$ 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 $[Forza \cdot Lunghezza / Lunghezza]$ 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. $[daN \cdot m / m]$

M12: componente M12 della sollecitazione del guscio nel nodo indicato. $[daN \cdot m / m]$

M22: componente M22 della sollecitazione del guscio nel nodo indicato. $[daN \cdot m / m]$

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
1496	SLV 12	2104	-361	-52	-146	-5376	-3219	-7538	-789	-255



Shell	Cont.	Nodo	Sollecitazione							
Ind	N.br.	Ind	M11	M12	M22	F11	F12	F22	V13	V23
1236	SLV 8	2423	-352	59	-108	-146	1124	-5111	977	-381
2468	SLV 7	2103	-350	55	-153	-4416	3176	-7172	754	-243
1313	SLV 11	2414	-347	-57	-109	-614	-1277	-5535	-992	-374
1376	SLV 5	2072	-276	18	-16	-1617	1915	-338	575	65

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
1496	SLV 5	2104	361	52	146	-3579	-2635	-6326	789	255
2468	SLV 10	2103	350	-55	153	-2850	2427	-5661	-754	243
1236	SLV 9	2423	348	-60	110	4804	-964	2790	-967	382
1313	SLV 6	2414	344	57	111	5932	1150	3078	983	375
1376	SLV 12	2072	279	-17	19	-133	1451	700	-580	-76

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
162	SLV 6	1227	-87	41	-542	-1946	2902	-4523	-318	473
41	SLV 9	1220	-86	-45	-535	-1819	-2130	-4901	321	496
140	SLV 6	1224	-83	-48	-528	-602	1852	-6168	304	498
63	SLV 9	1223	-80	47	-517	-757	-1171	-6228	-280	505
1233	SLV 10	1251	-129	-26	-515	-1789	-605	-9605	-151	-655

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
162	SLV 11	1227	82	-29	562	-1738	-3843	-13822	287	-614
41	SLV 8	1220	81	32	553	-1714	3072	-12901	-293	-614
140	SLV 11	1224	77	34	543	-3553	-3648	-10032	-274	-612
63	SLV 8	1223	75	-35	533	-3346	3067	-9468	254	-617
1233	SLV 7	1251	127	25	508	-673	-334	-922	154	658

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
585	SLV 5	196	35	11	3	-93109	-28497	-2389	-125	-64
664	SLV 8	109	31	-11	2	-90511	27894	-2209	139	-67
741	SLV 5	69	10	21	-24	-76095	-30836	-10846	172	-34
574	SLV 8	234	12	-21	-24	-74786	31024	-10937	-145	-29
308	SLV 10	1073	-16	-9	-2	-26908	-7690	-19159	23	15

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
585	SLV Y	167	45	9	11	58550	16489	3410	100	46
741	SLV Y	69	-11	-9	8	58324	14223	3646	96	40
574	SLV 5	298	151	-13	31	53879	-9045	-21081	-420	119
664	SLV 9	167	18	-9	22	35621	-6774	-38890	-74	77
575	SLV 5	230	-9	4	1	34145	-10638	7361	-40	6

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
239	SLV 11	194	23	-17	88	1930	25974	-73758	-131	238
585	SLU 81	167	-7	3	8	-43056	-17861	-73552	-43	31
664	SLU 81	167	-9	-3	7	-41546	17453	-73421	48	29
891	SLU 81	312	1	0	2	3050	-5597	-65365	-3	-3
890	SLU 81	311	0	0	1	5796	-5004	-59604	1	4

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
328	SLV 6	1075	-29	18	-61	12320	-7963	27105	-25	45
207	SLV Y	901	2	-7	-12	2435	8367	24592	-32	-70
585	SLV X	167	-48	-7	21	10145	4410	18357	-22	19
882	SLV X	427	0	0	-4	1986	-4569	18351	-3	-7
664	SLV X	167	-46	6	20	6673	-3428	18061	-17	14

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

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

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

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

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

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

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

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

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
1496	SLV 5	2104	-361	52	-146	-3579	2635	-6326	789	-255
2468	SLV 10	2103	-350	-55	-153	-2850	-2427	-5661	-754	-243
1236	SLV 9	2423	-348	-60	-110	4804	964	2790	-967	-382
1313	SLV 6	2414	-344	57	-111	5932	-1150	3078	983	-375
1376	SLV 12	2072	-279	-17	-19	-133	-1451	700	-580	76



Sollecitazioni con momento Moo massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell Ind	Cont. N.br.	Nodo Ind	Sollecitazione							
			Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
1496	SLV 12	2104	361	-52	146	-5376	3219	-7538	-789	255
1236	SLV 8	2423	352	59	108	-146	-1124	-5111	977	381
2468	SLV 7	2103	350	55	153	-4416	-3176	-7172	754	243
1313	SLV 11	2414	347	-57	109	-614	1277	-5535	-992	374
1376	SLV 5	2072	276	18	16	-1617	-1915	-338	575	-65

Sollecitazioni con momento Mzz minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell Ind	Cont. N.br.	Nodo Ind	Sollecitazione							
			Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
162	SLV 11	1227	-82	-29	-562	-1738	3843	-13822	287	614
41	SLV 8	1220	-81	32	-553	-1714	-3072	-12901	-293	614
140	SLV 11	1224	-77	34	-543	-3553	3648	-10032	-274	612
63	SLV 8	1223	-75	-35	-533	-3346	-3067	-9468	254	617
1233	SLV 7	1251	-127	25	-508	-673	334	-922	154	-658

Sollecitazioni con momento Mzz massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell Ind	Cont. N.br.	Nodo Ind	Sollecitazione							
			Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
162	SLV 6	1227	87	41	542	-1946	-2902	-4523	-318	-473
41	SLV 9	1220	86	-45	535	-1819	2130	-4901	321	-496
140	SLV 6	1224	83	-48	528	-602	-1852	-6168	304	-498
63	SLV 9	1223	80	47	517	-757	1171	-6228	-280	-505
1233	SLV 10	1251	129	-26	515	-1789	605	-9605	-151	655

Sollecitazioni con sforzo Foo minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell Ind	Cont. N.br.	Nodo Ind	Sollecitazione							
			Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
585	SLV 5	196	35	11	3	-93109	-28497	-2389	-125	-64
664	SLV 8	109	31	-11	2	-90511	27894	-2209	139	-67
741	SLV 5	69	10	21	-24	-76095	-30836	-10846	172	-34
574	SLV 8	234	12	-21	-24	-74786	31024	-10937	-145	-29
308	SLV 10	1073	-16	-9	-2	-26908	-7690	-19159	23	15

Sollecitazioni con sforzo Foo massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell Ind	Cont. N.br.	Nodo Ind	Sollecitazione							
			Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
585	SLV Y	167	45	9	11	58550	16489	3410	100	46
741	SLV Y	69	-11	-9	8	58324	14223	3646	96	40
574	SLV 5	298	151	-13	31	53879	-9045	-21081	-420	119
664	SLV 9	167	18	-9	22	35621	-6774	-38890	-74	77
575	SLV 5	230	-9	4	1	34145	-10638	7361	-40	6

Sollecitazioni con sforzo Fzz minimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell Ind	Cont. N.br.	Nodo Ind	Sollecitazione							
			Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
239	SLV 11	194	23	-17	88	1930	25974	-73758	-131	238
585	SLU 81	167	-7	3	8	-43056	-17861	-73552	-43	31
664	SLU 81	167	-9	-3	7	-41546	17453	-73421	48	29
891	SLU 81	312	-1	0	-2	3050	5597	-65365	-3	3
890	SLU 81	311	0	0	-1	5796	5004	-59604	1	-4

Sollecitazioni con sforzo Fzz massimo

Vengono mostrati i soli 5 gusci più sollecitati.

Shell Ind	Cont. N.br.	Nodo Ind	Sollecitazione							
			Moo	Moz	Mzz	Foo	Foz	Fzz	Vo	Vz
328	SLV 6	1075	-29	18	-61	12320	-7963	27105	-25	45
207	SLV Y	901	2	-7	-12	2435	8367	24592	-32	-70
585	SLV X	167	-48	-7	21	10145	4410	18357	-22	19
882	SLV X	427	0	0	4	1986	4569	18351	-3	7
664	SLV X	167	-46	6	20	6673	-3428	18061	-17	14

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.

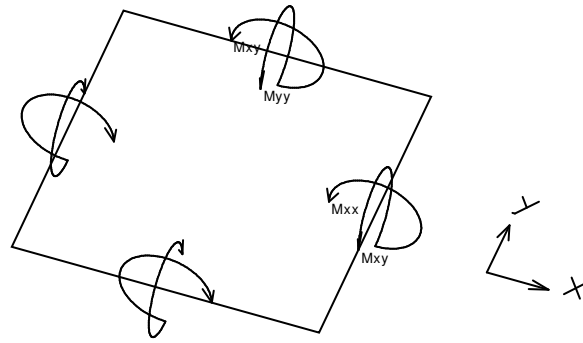
Convenzione di segno per gusci non verticali

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 destrorsa. In particolare l'asse x ha proiezione in pianta parallela ed equivale all'asse globale X. Nel caso di piastre orizzontali (caso più comune) gli assi x, y e z locali all'elemento sono paralleli ed equivale 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.

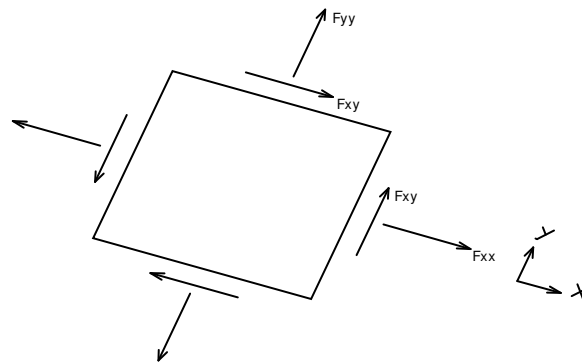
In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione M_{xx} , M_{yy} , M_{xy} .



Si definiscono:

- M_{xx} : momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- M_{yy} : momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale y (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- M_{xy} : 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 F_{xx} , F_{yy} , F_{xy} .



Si definiscono:

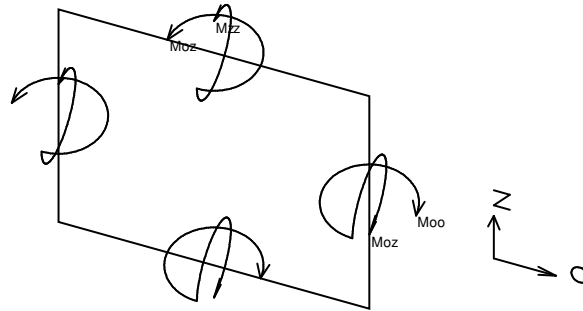
- F_{xx} : sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- F_{yy} : sforzo estensionale [Forza/Lunghezza] agente sul bordo di normale all'asse y (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- F_{xy} : 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:

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

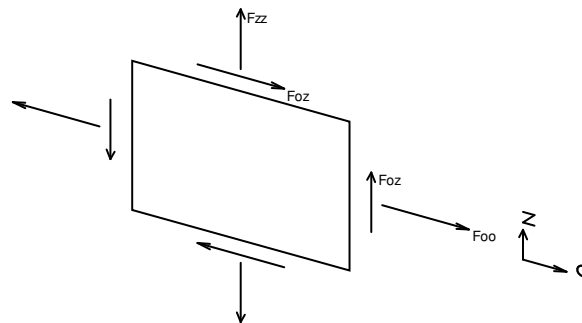
Convenzione di segno per gusci verticali

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 destrorsa. 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 M_{xx} , M_{yy} , M_{xy} .



- 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

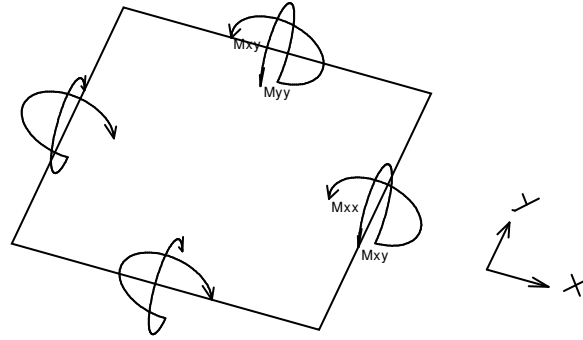
Sono individuate distinte convenzioni di segno in relazione al tipo di elemento strutturale a cui il guscio muratura si riferisce:

- 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 destrorsa. In particolare l'asse x ha proiezione in pianta parallela ed equivale all'asse globale X. Nel caso di piastre orizzontali (caso più comune) gli assi x, y e z locali all'elemento sono paralleli ed equivale 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.

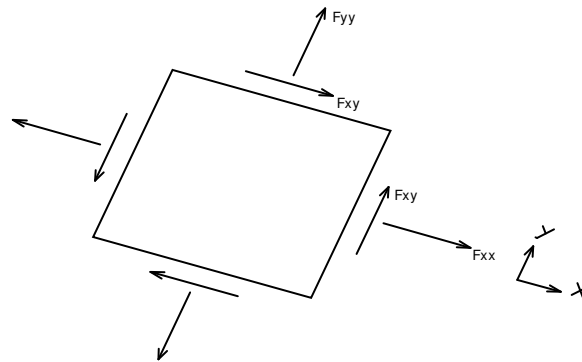
In figura è mostrato un elemento infinitesimo di shell orizzontale con indicato il sistema di riferimento e i parametri di sollecitazione Mxx, Myy, Mxy.



Si definiscono:

- M_{xx} : momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- M_{yy} : momento flettente [Forza*Lunghezza/Lunghezza] agente sul bordo di normale y (verso positivo indicato dalla freccia in figura che tende le fibre inferiori);
- M_{xy} : 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 F_{xx} , F_{yy} , F_{xy} .

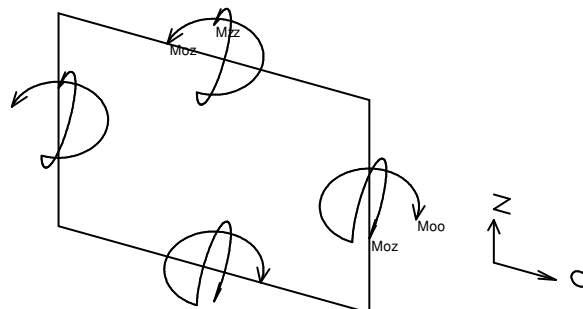


Si definiscono:

- F_{xx} : sforzo tensionale [Forza/Lunghezza] agente sul bordo di normale x (verso positivo indicato dalla freccia in figura che mette in trazione l'elemento);
- F_{yy} : 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);
- F_{xy} : sforzo tagliente [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 destrorsa. 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 M_{oo} , M_{zz} , M_{oz} .



- M_{oo} : momento flettente distribuito [Forza*Lunghezza/Lunghezza] applicato al bordo di normale parallela all'asse O (verso positivo indicato dalla freccia in

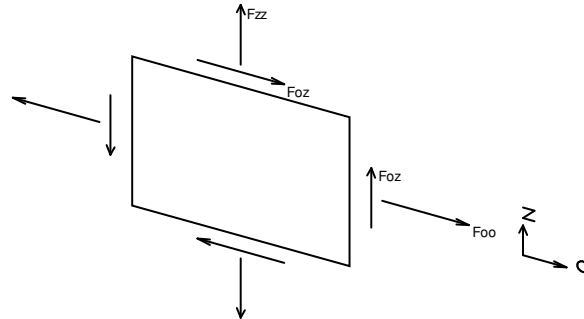


figura che tende le fibre inferiori);

- M_{zz} : 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);

- M_{oz} : 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 F_{oo} , F_{zz} , F_{oz} sono rispettivamente:



- F_{zz} : 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);

- F_{oo} : 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);

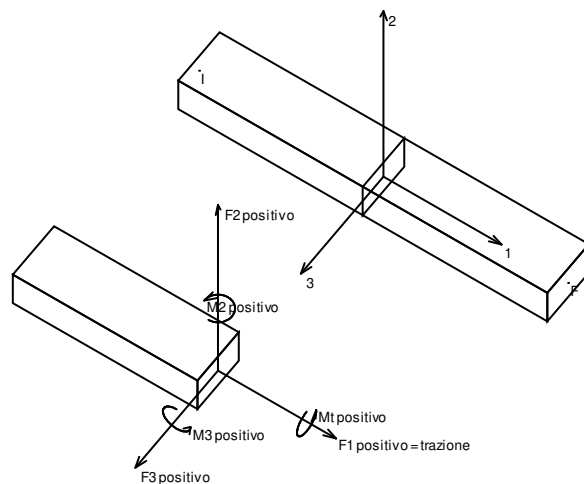
- F_{oz} : sforzo tagliante distribuito $[Forza / Lunghezza]$ applicato sui bordi (verso positivo indicato dalla freccia in figura).

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:

- F_1 (N): sforzo normale nell'asta;
- F_2 : sforzo di taglio agente nella direzione dell'asse locale 2;
- F_3 : sforzo di taglio agente nella direzione dell'asse locale 3;
- M_1 (Mt): momento attorno all'asse locale 1; equivale al momento torcente;
- M_2 : momento attorno all'asse locale 2;
- M_3 : 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).

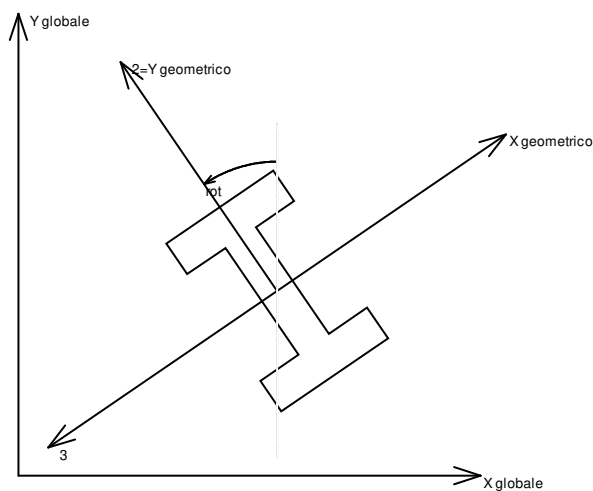


Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

- 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.

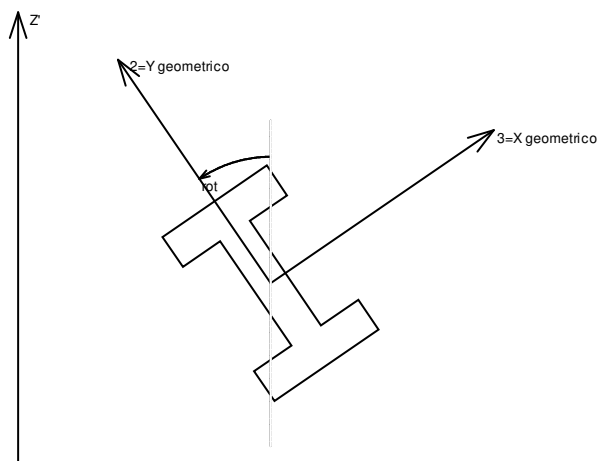
Nel seguito si indica con 1, 2 e 3 il sistema locale dell'asta che non sempre coincide con gli assi principali della sezione. Si ricorda che per assi principali si intendono gli assi rispetto a cui si ha il raggio di inerzia minimo e massimo. Gli assi 1, 2 e 3 rispettano la regola della mano destra.

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).

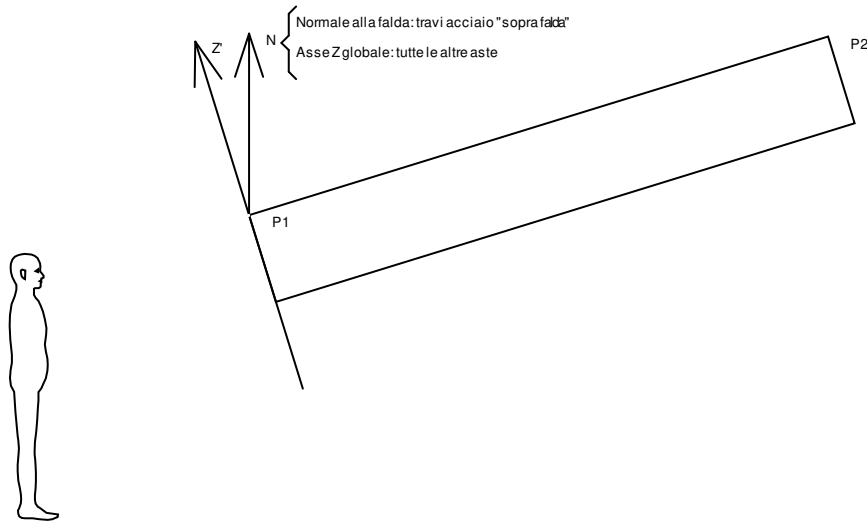
Sistema locale aste non verticali



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

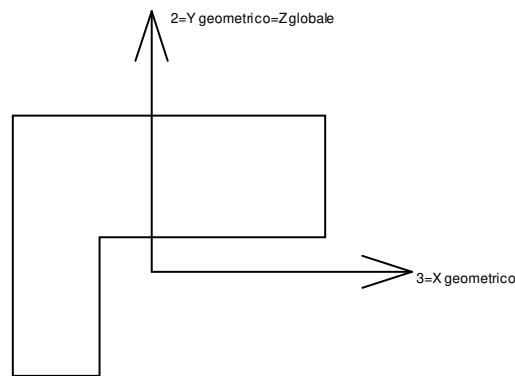
L'asse Z' è illustrato nella figura seguente dove:

- 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.



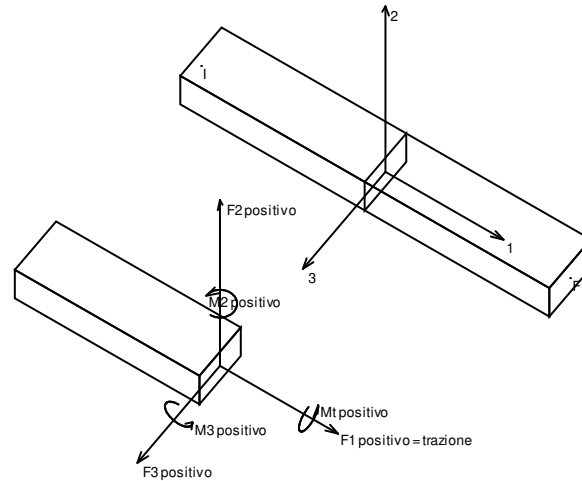
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. Si sottolinea il fatto che gli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

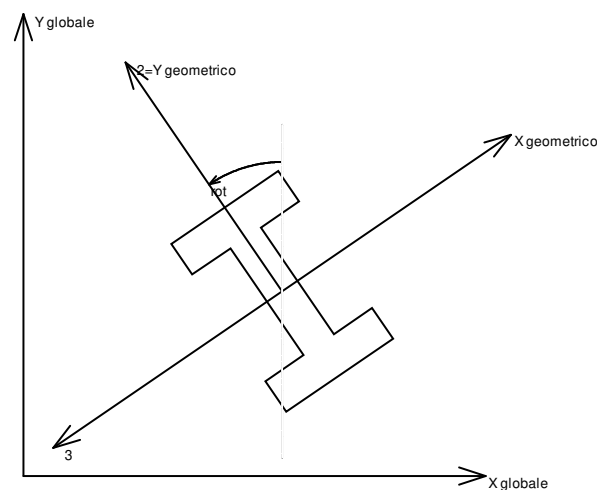
presa un'asta con nodo iniziale i e nodo finale f, asse 1 che va da i a f, assi 2 e 3 presi secondo quanto indicato nei paragrafi successivi relativi al sistema locale delle aste sezionando l'asta in un punto e considerando la sezione sinistra del punto in cui si è effettuato il taglio (sezione da cui 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.

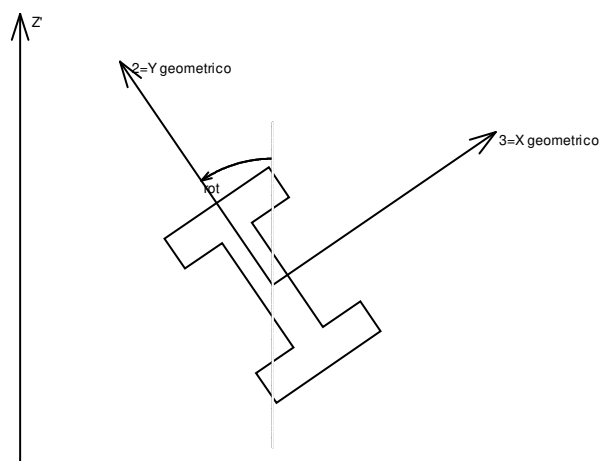
Sistema locale aste verticali



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



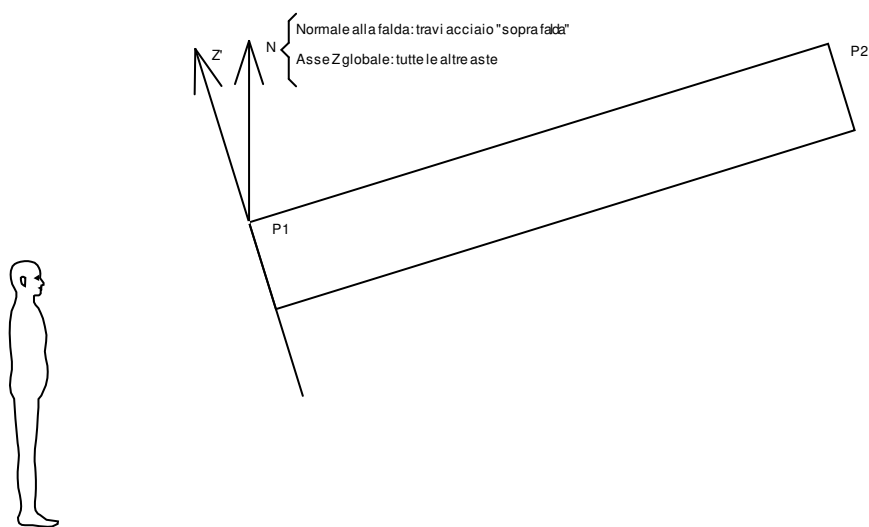
Sistema locale aste non verticali



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:

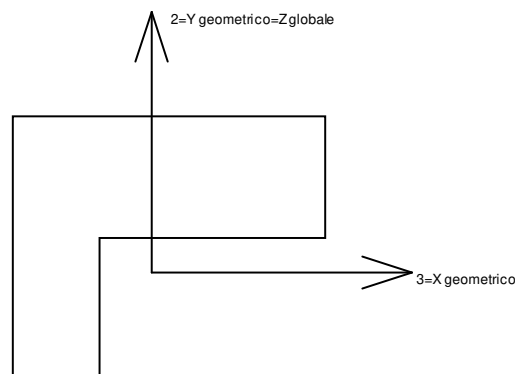
- $P1$ è il punto di inserimento iniziale dell'asta;
- $P2$ è il punto di inserimento finale dell'asta;
- N è la normale al piano o falda di inserimento;



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.



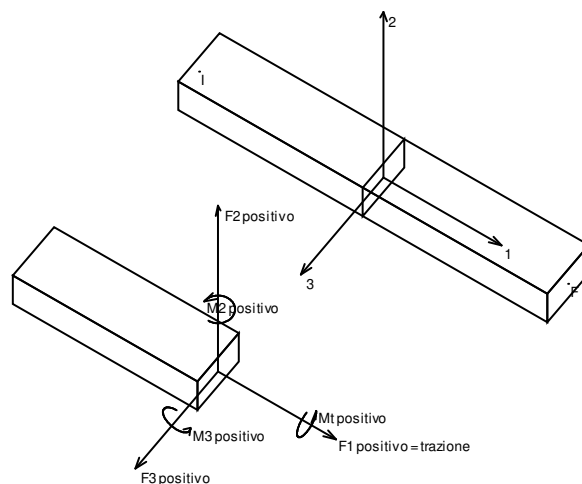
Nella figura si considera l'asse 1 entrante nel foglio (l'osservatore guarda in direzione coincidente a quella dell'asse 1). L'asse 2 è sempre verticale e quindi coincidente con l'asse Z globale nonché con l'asse y geometrico. L'asse 3 coincide con l'asse x geometrico. Si sottolinea il fatto che gli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

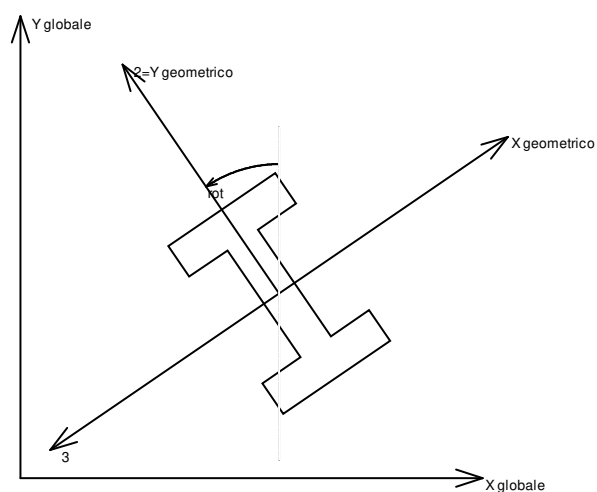
Il sistema è definito diversamente per tre categorie di aste, a seconda che siano originate da:

- 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.

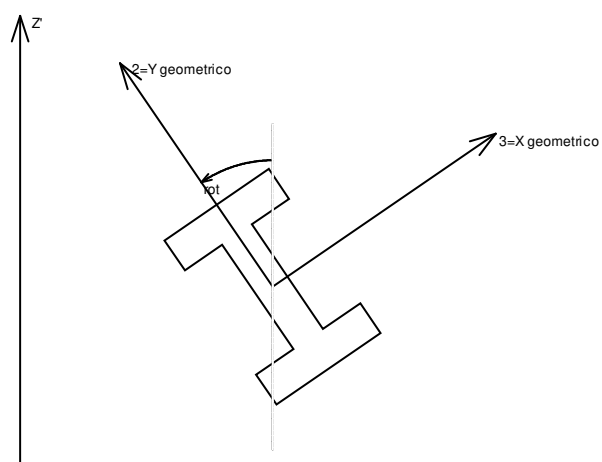


Sistema locale aste verticali



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

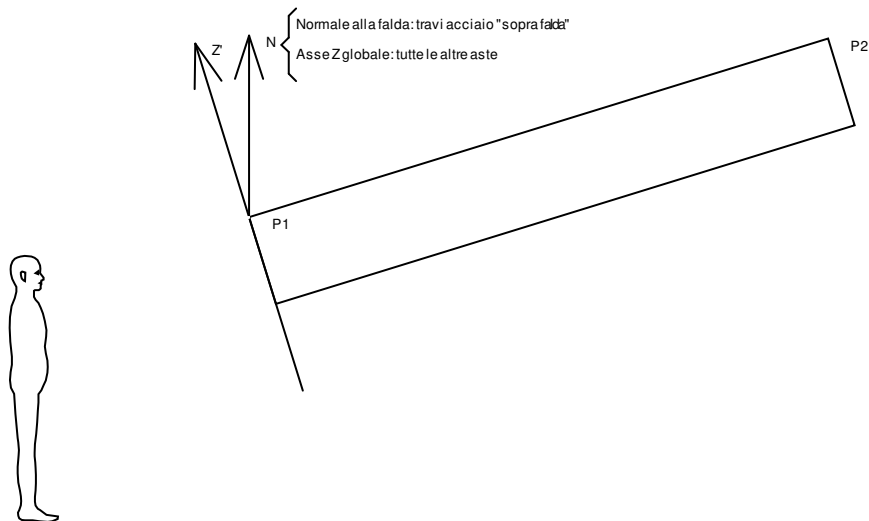
Sistema locale aste non verticali



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

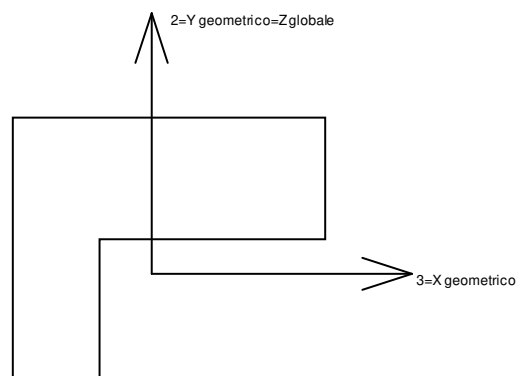
L'asse Z' è illustrato nella figura seguente dove:

- 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		
		x	y	z	x	y	z
165	SLVX	-2523	-185	-4925	-7.93	6.36	9.24



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
140	SLV 14	-2055	1563	15390	1394.57	1623.46	35.68
221	SLV 14	-1417	616	3777	-63.57	4.26	-3.96
142	SLV 14	-1389	867	10085	206.91	-1858.12	209.5
81	SLV 15	-1385	-751	3695	75.1	4.3	5.28

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
165	SLV 3	2554	-1120	21457	59.63	-69.93	24.8
140	SLV 3	2045	-1685	8192	787.86	872.39	-32.36
81	SLV 2	1440	821	7926	-31.81	26.57	-2.61
221	SLV 3	1388	-590	8177	85.5	27.64	6.46
142	SLV 3	1376	-904	5467	145.85	-994.43	-221.22

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
165	SLV 12	-702	-5765	15010	85.29	-63.56	162.49
140	SLV 7	698	-4641	11148	1141.39	1156.17	362.41
221	SLV 12	-476	-3012	7086	225.05	23.77	-18.51
204	SLV 12	-696	-3006	6345	-6.96	9.68	-0.31
96	SLV 12	-4	-2961	5675	156.02	8.37	-19.1

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
165	SLV 5	735	5859	18097	-12.09	-63.47	-163.92
140	SLV 10	-708	4520	12435	1041.04	1339.68	-359.08
204	SLV 5	700	3044	6915	-184.09	11.21	3.8
221	SLV 5	447	3039	4867	-203.12	8.13	21.01
81	SLV 5	360	3025	7951	-185.77	28.79	13.06

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
165	SLV X	-2523	-185	-4925	-7.93	6.36	9.24
36	SLV Y	124	-2170	-2971	-991.95	597.62	-498.81
164	SLV X	-1238	-72	-2186	1.75	-336.1	12.75
298	SLV X	-1108	-79	-1981	698.48	392.45	-441.94
204	SLV X	-1228	-98	-1930	36.55	-4.28	29.69

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
165	SLU 81	36	68	24987	54.38	-114.52	-0.96
140	SLU 81	-14	-93	17848	1646.05	1901.66	3.2
142	SLU 81	-15	-29	11875	267.24	-2172.37	-8.92
153	SLU 81	6	4	11755	12.96	-12.12	0.18
164	SLU 81	20	26	11719	5	1754.98	-4.76

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	10	-8	2948	669.85	509.88	-0.92
4	SLU 2	10	-8	2948	669.85	509.88	-0.92
4	SLU 3	10	-8	2948	669.85	509.88	-0.92
4	SLU 4	10	-8	2948	669.85	509.88	-0.92
4	SLU 5	10	-8	2948	669.85	509.88	-0.92
4	SLU 6	10	-8	2948	669.85	509.88	-0.92
4	SLU 7	10	-8	2948	669.85	509.88	-0.92
4	SLU 8	10	-8	2948	669.85	509.88	-0.92
4	SLU 9	10	-8	2948	669.85	509.88	-0.92
4	SLU 10	8	-11	3485	790.32	602.32	-0.06
4	SLU 11	8	-11	3485	790.32	602.32	-0.06



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
4	SLU 12	8	-11	3485	790.32	602.32	-0.06
4	SLU 13	8	-11	3485	790.32	602.32	-0.06
4	SLU 14	8	-11	3485	790.32	602.32	-0.06
4	SLU 15	8	-11	3485	790.32	602.32	-0.06
4	SLU 16	8	-11	3485	790.32	602.32	-0.06
4	SLU 17	8	-11	3485	790.32	602.32	-0.06
4	SLU 18	7	-12	3716	841.95	641.93	0.3
4	SLU 19	7	-12	3716	841.95	641.93	0.3
4	SLU 20	7	-12	3716	841.95	641.93	0.3
4	SLU 21	7	-12	3716	841.95	641.93	0.3
4	SLU 22	9	-10	3348	759.69	578.72	-0.38
4	SLU 23	9	-10	3348	759.69	578.72	-0.38
4	SLU 24	9	-10	3348	759.69	578.72	-0.38
4	SLU 25	9	-10	3348	759.69	578.72	-0.38
4	SLU 26	9	-10	3348	759.69	578.72	-0.38
4	SLU 27	9	-10	3348	759.69	578.72	-0.38
4	SLU 28	9	-10	3348	759.69	578.72	-0.38
4	SLU 29	9	-10	3348	759.69	578.72	-0.38
4	SLU 30	9	-10	3348	759.69	578.72	-0.38
4	SLU 31	7	-12	3886	880.17	671.16	0.47
4	SLU 32	7	-12	3886	880.17	671.16	0.47
4	SLU 33	7	-12	3886	880.17	671.16	0.47
4	SLU 34	7	-12	3886	880.17	671.16	0.47
4	SLU 35	7	-12	3886	880.17	671.16	0.47
4	SLU 36	7	-12	3886	880.17	671.16	0.47
4	SLU 37	7	-12	3886	880.17	671.16	0.47
4	SLU 38	7	-12	3886	880.17	671.16	0.47
4	SLU 39	6	-14	4117	931.8	710.78	0.84
4	SLU 40	6	-14	4117	931.8	710.78	0.84
4	SLU 41	6	-14	4117	931.8	710.78	0.84
4	SLU 42	6	-14	4117	931.8	710.78	0.84
4	SLU 43	13	-10	3694	840	639.24	-1.38
4	SLU 44	13	-10	3694	840	639.24	-1.38
4	SLU 45	13	-10	3694	840	639.24	-1.38
4	SLU 46	13	-10	3694	840	639.24	-1.38
4	SLU 47	13	-10	3694	840	639.24	-1.38
4	SLU 48	13	-10	3694	840	639.24	-1.38
4	SLU 49	13	-10	3694	840	639.24	-1.38
4	SLU 50	13	-10	3694	840	639.24	-1.38
4	SLU 51	13	-10	3694	840	639.24	-1.38
4	SLU 52	11	-12	4232	960.47	731.68	-0.52
4	SLU 53	11	-12	4232	960.47	731.68	-0.52
4	SLU 54	11	-12	4232	960.47	731.68	-0.52
4	SLU 55	11	-12	4232	960.47	731.68	-0.52
4	SLU 56	11	-12	4232	960.47	731.68	-0.52
4	SLU 57	11	-12	4232	960.47	731.68	-0.52
4	SLU 58	11	-12	4232	960.47	731.68	-0.52
4	SLU 59	11	-12	4232	960.47	731.68	-0.52
4	SLU 60	10	-14	4463	1012.1	771.29	-0.16
4	SLU 61	10	-14	4463	1012.1	771.29	-0.16
4	SLU 62	10	-14	4463	1012.1	771.29	-0.16
4	SLU 63	10	-14	4463	1012.1	771.29	-0.16
4	SLU 64	12	-12	4095	929.84	708.08	-0.84
4	SLU 65	12	-12	4095	929.84	708.08	-0.84
4	SLU 66	12	-12	4095	929.84	708.08	-0.84
4	SLU 67	12	-12	4095	929.84	708.08	-0.84
4	SLU 68	12	-12	4095	929.84	708.08	-0.84
4	SLU 69	12	-12	4095	929.84	708.08	-0.84
4	SLU 70	12	-12	4095	929.84	708.08	-0.84
4	SLU 71	12	-12	4095	929.84	708.08	-0.84
4	SLU 72	12	-12	4095	929.84	708.08	-0.84
4	SLU 73	10	-14	4633	1050.32	800.52	0.01
4	SLU 74	10	-14	4633	1050.32	800.52	0.01
4	SLU 75	10	-14	4633	1050.32	800.52	0.01
4	SLU 76	10	-14	4633	1050.32	800.52	0.01
4	SLU 77	10	-14	4633	1050.32	800.52	0.01
4	SLU 78	10	-14	4633	1050.32	800.52	0.01
4	SLU 79	10	-14	4633	1050.32	800.52	0.01
4	SLU 80	10	-14	4633	1050.32	800.52	0.01
4	SLU 81	9	-15	4863	1101.95	840.14	0.38
4	SLU 82	9	-15	4863	1101.95	840.14	0.38
4	SLU 83	9	-15	4863	1101.95	840.14	0.38
4	SLU 84	9	-15	4863	1101.95	840.14	0.38
4	SLE RA 1	9	-9	3062	695.52	529.55	-0.77
4	SLE RA 2	9	-9	3062	695.52	529.55	-0.77
4	SLE RA 3	9	-9	3062	695.52	529.55	-0.77
4	SLE RA 4	9	-9	3062	695.52	529.55	-0.77
4	SLE RA 5	9	-9	3062	695.52	529.55	-0.77
4	SLE RA 6	9	-9	3062	695.52	529.55	-0.77
4	SLE RA 7	9	-9	3062	695.52	529.55	-0.77
4	SLE RA 8	9	-9	3062	695.52	529.55	-0.77
4	SLE RA 9	9	-9	3062	695.52	529.55	-0.77
4	SLE RA 10	8	-10	3421	775.83	591.17	-0.2
4	SLE RA 11	8	-10	3421	775.83	591.17	-0.2
4	SLE RA 12	8	-10	3421	775.83	591.17	-0.2
4	SLE RA 13	8	-10	3421	775.83	591.17	-0.2
4	SLE RA 14	8	-10	3421	775.83	591.17	-0.2
4	SLE RA 15	8	-10	3421	775.83	591.17	-0.2
4	SLE RA 16	8	-10	3421	775.83	591.17	-0.2
4	SLE RA 17	8	-10	3421	775.83	591.17	-0.2



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
4	SLE RA 18	8	-11	3574	810.25	617.58	0.05
4	SLE RA 19	8	-11	3574	810.25	617.58	0.05
4	SLE RA 20	8	-11	3574	810.25	617.58	0.05
4	SLE RA 21	8	-11	3574	810.25	617.58	0.05
4	SLE FR 1	9	-9	3062	695.52	529.55	-0.77
4	SLE FR 2	9	-9	3062	695.52	529.55	-0.77
4	SLE FR 3	9	-9	3062	695.52	529.55	-0.77
4	SLE FR 4	9	-9	3216	729.94	555.96	-0.52
4	SLE FR 5	9	-9	3216	729.94	555.96	-0.52
4	SLE FR 6	8	-10	3318	752.89	573.57	-0.36
4	SLE QP 1	9	-9	3062	695.52	529.55	-0.77
4	SLE QP 2	9	-9	3216	729.94	555.96	-0.52
4	SLD 1	243	98	3004	677.86	522.83	-78.53
4	SLD 2	296	149	3027	682.59	526.61	-100.74
4	SLD 3	236	-190	2532	579.24	442.17	-25.45
4	SLD 4	289	-139	2555	583.97	445.95	-47.66
4	SLD 5	70	441	3859	862.18	666.99	-96.41
4	SLD 6	124	493	3883	867.01	670.85	-119.11
4	SLD 7	48	-518	2287	533.45	398.12	80.52
4	SLD 8	102	-466	2310	538.28	401.99	57.82
4	SLD 9	-84	448	4121	921.59	709.93	-58.87
4	SLD 10	-30	500	4144	926.42	713.79	-81.57
4	SLD 11	-107	-511	2549	592.87	441.07	118.06
4	SLD 12	-52	-460	2572	597.7	444.93	95.36
4	SLD 13	-272	120	3876	875.91	665.97	46.61
4	SLD 14	-219	171	3899	880.63	669.75	24.4
4	SLD 15	-279	-167	3405	777.29	585.31	99.69
4	SLD 16	-225	-117	3428	782.01	589.09	77.48
4	SLV 1	540	245	2752	615.4	483.78	-179.46
4	SLV 2	662	361	2804	626.21	492.42	-230.26
4	SLV 3	525	-430	1645	383.96	294.47	-54.91
4	SLV 4	646	-314	1697	394.77	303.12	-105.71
4	SLV 5	147	1048	4736	1042.6	818.23	-224.36
4	SLV 6	273	1169	4790	1053.82	827.21	-277.1
4	SLV 7	95	-1202	1047	271.15	187.21	190.82
4	SLV 8	221	-1082	1101	282.37	196.18	138.07
4	SLV 9	-204	1064	5331	1177.51	915.74	-139.12
4	SLV 10	-78	1184	5385	1188.73	924.71	-191.86
4	SLV 11	-255	-1187	1641	406.06	284.71	276.05
4	SLV 12	-129	-1067	1695	417.28	293.69	223.31
4	SLV 13	-629	296	4734	1065.1	808.8	104.66
4	SLV 14	-507	412	4786	1075.91	817.44	53.86
4	SLV 15	-644	-379	3627	833.67	619.49	229.21
4	SLV 16	-523	-263	3679	844.48	628.14	178.41
4	CRTFP Ux+	0	0	0	0	0	0
4	CRTFP Ux-	0	0	0	0	0	0
4	CRTFP Uy+	0	0	0	-0.01	-0.01	0
4	CRTFP Uy-	0	0	0	0.01	0.01	0
6	SLU 1	7	-5	1911	526.6	50.02	-2.28
6	SLU 2	7	-5	1911	526.6	50.02	-2.28
6	SLU 3	7	-5	1911	526.6	50.02	-2.28
6	SLU 4	7	-5	1911	526.6	50.02	-2.28
6	SLU 5	7	-5	1911	526.6	50.02	-2.28
6	SLU 6	7	-5	1911	526.6	50.02	-2.28
6	SLU 7	7	-5	1911	526.6	50.02	-2.28
6	SLU 8	7	-5	1911	526.6	50.02	-2.28
6	SLU 9	7	-5	1911	526.6	50.02	-2.28
6	SLU 10	6	-7	2257	617.6	59.02	-1.91
6	SLU 11	6	-7	2257	617.6	59.02	-1.91
6	SLU 12	6	-7	2257	617.6	59.02	-1.91
6	SLU 13	6	-7	2257	617.6	59.02	-1.91
6	SLU 14	6	-7	2257	617.6	59.02	-1.91
6	SLU 15	6	-7	2257	617.6	59.02	-1.91
6	SLU 16	6	-7	2257	617.6	59.02	-1.91
6	SLU 17	6	-7	2257	617.6	59.02	-1.91
6	SLU 18	5	-7	2405	656.6	62.87	-1.75
6	SLU 19	5	-7	2405	656.6	62.87	-1.75
6	SLU 20	5	-7	2405	656.6	62.87	-1.75
6	SLU 21	5	-7	2405	656.6	62.87	-1.75
6	SLU 22	6	-6	2169	594.48	56.72	-2.07
6	SLU 23	6	-6	2169	594.48	56.72	-2.07
6	SLU 24	6	-6	2169	594.48	56.72	-2.07
6	SLU 25	6	-6	2169	594.48	56.72	-2.07
6	SLU 26	6	-6	2169	594.48	56.72	-2.07
6	SLU 27	6	-6	2169	594.48	56.72	-2.07
6	SLU 28	6	-6	2169	594.48	56.72	-2.07
6	SLU 29	6	-6	2169	594.48	56.72	-2.07
6	SLU 30	6	-6	2169	594.48	56.72	-2.07
6	SLU 31	5	-8	2515	685.48	65.71	-1.7
6	SLU 32	5	-8	2515	685.48	65.71	-1.7
6	SLU 33	5	-8	2515	685.48	65.71	-1.7
6	SLU 34	5	-8	2515	685.48	65.71	-1.7
6	SLU 35	5	-8	2515	685.48	65.71	-1.7
6	SLU 36	5	-8	2515	685.48	65.71	-1.7
6	SLU 37	5	-8	2515	685.48	65.71	-1.7
6	SLU 38	5	-8	2515	685.48	65.71	-1.7
6	SLU 39	5	-8	2663	724.48	69.57	-1.54
6	SLU 40	5	-8	2663	724.48	69.57	-1.54
6	SLU 41	5	-8	2663	724.48	69.57	-1.54
6	SLU 42	5	-8	2663	724.48	69.57	-1.54



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
6	SLU 43	9	-6	2396	661.3	62.73	-3.04
6	SLU 44	9	-6	2396	661.3	62.73	-3.04
6	SLU 45	9	-6	2396	661.3	62.73	-3.04
6	SLU 46	9	-6	2396	661.3	62.73	-3.04
6	SLU 47	9	-6	2396	661.3	62.73	-3.04
6	SLU 48	9	-6	2396	661.3	62.73	-3.04
6	SLU 49	9	-6	2396	661.3	62.73	-3.04
6	SLU 50	9	-6	2396	661.3	62.73	-3.04
6	SLU 51	9	-6	2396	661.3	62.73	-3.04
6	SLU 52	8	-8	2742	752.31	71.72	-2.67
6	SLU 53	8	-8	2742	752.31	71.72	-2.67
6	SLU 54	8	-8	2742	752.31	71.72	-2.67
6	SLU 55	8	-8	2742	752.31	71.72	-2.67
6	SLU 56	8	-8	2742	752.31	71.72	-2.67
6	SLU 57	8	-8	2742	752.31	71.72	-2.67
6	SLU 58	8	-8	2742	752.31	71.72	-2.67
6	SLU 59	8	-8	2742	752.31	71.72	-2.67
6	SLU 60	8	-8	2890	791.31	75.58	-2.51
6	SLU 61	8	-8	2890	791.31	75.58	-2.51
6	SLU 62	8	-8	2890	791.31	75.58	-2.51
6	SLU 63	8	-8	2890	791.31	75.58	-2.51
6	SLU 64	9	-7	2654	729.19	69.43	-2.83
6	SLU 65	9	-7	2654	729.19	69.43	-2.83
6	SLU 66	9	-7	2654	729.19	69.43	-2.83
6	SLU 67	9	-7	2654	729.19	69.43	-2.83
6	SLU 68	9	-7	2654	729.19	69.43	-2.83
6	SLU 69	9	-7	2654	729.19	69.43	-2.83
6	SLU 70	9	-7	2654	729.19	69.43	-2.83
6	SLU 71	9	-7	2654	729.19	69.43	-2.83
6	SLU 72	9	-7	2654	729.19	69.43	-2.83
6	SLU 73	8	-9	2999	820.19	78.42	-2.46
6	SLU 74	8	-9	2999	820.19	78.42	-2.46
6	SLU 75	8	-9	2999	820.19	78.42	-2.46
6	SLU 76	8	-9	2999	820.19	78.42	-2.46
6	SLU 77	8	-9	2999	820.19	78.42	-2.46
6	SLU 78	8	-9	2999	820.19	78.42	-2.46
6	SLU 79	8	-9	2999	820.19	78.42	-2.46
6	SLU 80	8	-9	2999	820.19	78.42	-2.46
6	SLU 81	7	-9	3148	859.19	82.28	-2.3
6	SLU 82	7	-9	3148	859.19	82.28	-2.3
6	SLU 83	7	-9	3148	859.19	82.28	-2.3
6	SLU 84	7	-9	3148	859.19	82.28	-2.3
6	SLE RA 1	7	-5	1985	545.99	51.93	-2.22
6	SLE RA 2	7	-5	1985	545.99	51.93	-2.22
6	SLE RA 3	7	-5	1985	545.99	51.93	-2.22
6	SLE RA 4	7	-5	1985	545.99	51.93	-2.22
6	SLE RA 5	7	-5	1985	545.99	51.93	-2.22
6	SLE RA 6	7	-5	1985	545.99	51.93	-2.22
6	SLE RA 7	7	-5	1985	545.99	51.93	-2.22
6	SLE RA 8	7	-5	1985	545.99	51.93	-2.22
6	SLE RA 9	7	-5	1985	545.99	51.93	-2.22
6	SLE RA 10	6	-6	2215	606.66	57.93	-1.98
6	SLE RA 11	6	-6	2215	606.66	57.93	-1.98
6	SLE RA 12	6	-6	2215	606.66	57.93	-1.98
6	SLE RA 13	6	-6	2215	606.66	57.93	-1.98
6	SLE RA 14	6	-6	2215	606.66	57.93	-1.98
6	SLE RA 15	6	-6	2215	606.66	57.93	-1.98
6	SLE RA 16	6	-6	2215	606.66	57.93	-1.98
6	SLE RA 17	6	-6	2215	606.66	57.93	-1.98
6	SLE RA 18	6	-7	2314	632.66	60.5	-1.87
6	SLE RA 19	6	-7	2314	632.66	60.5	-1.87
6	SLE RA 20	6	-7	2314	632.66	60.5	-1.87
6	SLE RA 21	6	-7	2314	632.66	60.5	-1.87
6	SLE FR 1	7	-5	1985	545.99	51.93	-2.22
6	SLE FR 2	7	-5	1985	545.99	51.93	-2.22
6	SLE FR 3	7	-5	1985	545.99	51.93	-2.22
6	SLE FR 4	6	-6	2083	571.99	54.5	-2.12
6	SLE FR 5	6	-6	2083	571.99	54.5	-2.12
6	SLE FR 6	6	-6	2149	589.33	56.22	-2.05
6	SLE QP 1	7	-5	1985	545.99	51.93	-2.22
6	SLE QP 2	6	-6	2083	571.99	54.5	-2.12
6	SLD 1	169	64	1952	530.31	51.43	-59.87
6	SLD 2	204	97	1966	533.76	51.76	-73.21
6	SLD 3	165	-125	1659	458.72	44	-55.35
6	SLD 4	201	-92	1673	462.17	44.33	-68.69
6	SLD 5	48	290	2483	666.82	64.72	-21.48
6	SLD 6	84	324	2497	670.35	65.06	-35.12
6	SLD 7	35	-340	1507	428.19	39.98	-6.41
6	SLD 8	72	-307	1521	431.72	40.31	-20.05
6	SLD 9	-59	295	2646	712.27	68.7	15.81
6	SLD 10	-22	329	2660	715.8	69.03	2.18
6	SLD 11	-72	-335	1670	473.64	43.95	30.89
6	SLD 12	-35	-302	1684	477.17	44.29	17.25
6	SLD 13	-188	80	2494	681.82	64.67	64.46
6	SLD 14	-152	113	2507	685.26	65	51.11
6	SLD 15	-191	-109	2201	610.23	57.25	68.98
6	SLD 16	-156	-76	2215	613.68	57.58	55.63
6	SLV 1	374	160	1797	480.07	47.8	-133.28
6	SLV 2	456	235	1828	487.96	48.55	-163.8
6	SLV 3	365	-283	1109	312	30.37	-122.69



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
6	SLV 4	447	-208	1141	319.88	31.13	-153.21
6	SLV 5	100	690	3028	796.42	78.64	-46.26
6	SLV 6	185	767	3061	804.6	79.43	-77.95
6	SLV 7	71	-790	737	236.17	20.56	-10.96
6	SLV 8	156	-712	770	244.36	21.34	-42.65
6	SLV 9	-143	700	3397	899.62	87.67	38.42
6	SLV 10	-58	778	3430	907.81	88.45	6.73
6	SLV 11	-172	-779	1106	339.38	29.58	73.71
6	SLV 12	-87	-701	1139	347.57	30.36	42.03
6	SLV 13	-434	197	3026	824.1	77.88	148.98
6	SLV 14	-353	272	3057	831.99	78.63	118.46
6	SLV 15	-443	-247	2339	656.03	60.45	159.57
6	SLV 16	-361	-172	2370	663.92	61.21	129.05
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	8	-5	2092	500.96	-4.46	-2.93
7	SLU 2	8	-5	2092	500.96	-4.46	-2.93
7	SLU 3	8	-5	2092	500.96	-4.46	-2.93
7	SLU 4	8	-5	2092	500.96	-4.46	-2.93
7	SLU 5	8	-5	2092	500.96	-4.46	-2.93
7	SLU 6	8	-5	2092	500.96	-4.46	-2.93
7	SLU 7	8	-5	2092	500.96	-4.46	-2.93
7	SLU 8	8	-5	2092	500.96	-4.46	-2.93
7	SLU 9	8	-5	2092	500.96	-4.46	-2.93
7	SLU 10	7	-6	2468	583.6	-5.34	-2.58
7	SLU 11	7	-6	2468	583.6	-5.34	-2.58
7	SLU 12	7	-6	2468	583.6	-5.34	-2.58
7	SLU 13	7	-6	2468	583.6	-5.34	-2.58
7	SLU 14	7	-6	2468	583.6	-5.34	-2.58
7	SLU 15	7	-6	2468	583.6	-5.34	-2.58
7	SLU 16	7	-6	2468	583.6	-5.34	-2.58
7	SLU 17	7	-6	2468	583.6	-5.34	-2.58
7	SLU 18	7	-7	2629	619.02	-5.72	-2.42
7	SLU 19	7	-7	2629	619.02	-5.72	-2.42
7	SLU 20	7	-7	2629	619.02	-5.72	-2.42
7	SLU 21	7	-7	2629	619.02	-5.72	-2.42
7	SLU 22	8	-6	2372	562.58	-5.13	-2.74
7	SLU 23	8	-6	2372	562.58	-5.13	-2.74
7	SLU 24	8	-6	2372	562.58	-5.13	-2.74
7	SLU 25	8	-6	2372	562.58	-5.13	-2.74
7	SLU 26	8	-6	2372	562.58	-5.13	-2.74
7	SLU 27	8	-6	2372	562.58	-5.13	-2.74
7	SLU 28	8	-6	2372	562.58	-5.13	-2.74
7	SLU 29	8	-6	2372	562.58	-5.13	-2.74
7	SLU 30	8	-6	2372	562.58	-5.13	-2.74
7	SLU 31	7	-7	2748	645.23	-6.01	-2.38
7	SLU 32	7	-7	2748	645.23	-6.01	-2.38
7	SLU 33	7	-7	2748	645.23	-6.01	-2.38
7	SLU 34	7	-7	2748	645.23	-6.01	-2.38
7	SLU 35	7	-7	2748	645.23	-6.01	-2.38
7	SLU 36	7	-7	2748	645.23	-6.01	-2.38
7	SLU 37	7	-7	2748	645.23	-6.01	-2.38
7	SLU 38	7	-7	2748	645.23	-6.01	-2.38
7	SLU 39	6	-7	2909	680.65	-6.38	-2.23
7	SLU 40	6	-7	2909	680.65	-6.38	-2.23
7	SLU 41	6	-7	2909	680.65	-6.38	-2.23
7	SLU 42	6	-7	2909	680.65	-6.38	-2.23
7	SLU 43	11	-6	2623	630.11	-5.58	-3.88
7	SLU 44	11	-6	2623	630.11	-5.58	-3.88
7	SLU 45	11	-6	2623	630.11	-5.58	-3.88
7	SLU 46	11	-6	2623	630.11	-5.58	-3.88
7	SLU 47	11	-6	2623	630.11	-5.58	-3.88
7	SLU 48	11	-6	2623	630.11	-5.58	-3.88
7	SLU 49	11	-6	2623	630.11	-5.58	-3.88
7	SLU 50	11	-6	2623	630.11	-5.58	-3.88
7	SLU 51	11	-6	2623	630.11	-5.58	-3.88
7	SLU 52	10	-7	2999	712.76	-6.46	-3.52
7	SLU 53	10	-7	2999	712.76	-6.46	-3.52
7	SLU 54	10	-7	2999	712.76	-6.46	-3.52
7	SLU 55	10	-7	2999	712.76	-6.46	-3.52
7	SLU 56	10	-7	2999	712.76	-6.46	-3.52
7	SLU 57	10	-7	2999	712.76	-6.46	-3.52
7	SLU 58	10	-7	2999	712.76	-6.46	-3.52
7	SLU 59	10	-7	2999	712.76	-6.46	-3.52
7	SLU 60	9	-8	3160	748.18	-6.83	-3.37
7	SLU 61	9	-8	3160	748.18	-6.83	-3.37
7	SLU 62	9	-8	3160	748.18	-6.83	-3.37
7	SLU 63	9	-8	3160	748.18	-6.83	-3.37
7	SLU 64	10	-7	2903	691.74	-6.24	-3.68
7	SLU 65	10	-7	2903	691.74	-6.24	-3.68
7	SLU 66	10	-7	2903	691.74	-6.24	-3.68
7	SLU 67	10	-7	2903	691.74	-6.24	-3.68
7	SLU 68	10	-7	2903	691.74	-6.24	-3.68
7	SLU 69	10	-7	2903	691.74	-6.24	-3.68
7	SLU 70	10	-7	2903	691.74	-6.24	-3.68
7	SLU 71	10	-7	2903	691.74	-6.24	-3.68
7	SLU 72	10	-7	2903	691.74	-6.24	-3.68
7	SLU 73	9	-8	3279	774.39	-7.12	-3.33



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
7	SLU 74	9	-8	3279	774.39	-7.12	-3.33
7	SLU 75	9	-8	3279	774.39	-7.12	-3.33
7	SLU 76	9	-8	3279	774.39	-7.12	-3.33
7	SLU 77	9	-8	3279	774.39	-7.12	-3.33
7	SLU 78	9	-8	3279	774.39	-7.12	-3.33
7	SLU 79	9	-8	3279	774.39	-7.12	-3.33
7	SLU 80	9	-8	3279	774.39	-7.12	-3.33
7	SLU 81	9	-9	3440	809.81	-7.5	-3.18
7	SLU 82	9	-9	3440	809.81	-7.5	-3.18
7	SLU 83	9	-9	3440	809.81	-7.5	-3.18
7	SLU 84	9	-9	3440	809.81	-7.5	-3.18
7	SLE RA 1	8	-5	2172	518.56	-4.65	-2.88
7	SLE RA 2	8	-5	2172	518.56	-4.65	-2.88
7	SLE RA 3	8	-5	2172	518.56	-4.65	-2.88
7	SLE RA 4	8	-5	2172	518.56	-4.65	-2.88
7	SLE RA 5	8	-5	2172	518.56	-4.65	-2.88
7	SLE RA 6	8	-5	2172	518.56	-4.65	-2.88
7	SLE RA 7	8	-5	2172	518.56	-4.65	-2.88
7	SLE RA 8	8	-5	2172	518.56	-4.65	-2.88
7	SLE RA 9	8	-5	2172	518.56	-4.65	-2.88
7	SLE RA 10	7	-6	2422	573.66	-5.24	-2.64
7	SLE RA 11	7	-6	2422	573.66	-5.24	-2.64
7	SLE RA 12	7	-6	2422	573.66	-5.24	-2.64
7	SLE RA 13	7	-6	2422	573.66	-5.24	-2.64
7	SLE RA 14	7	-6	2422	573.66	-5.24	-2.64
7	SLE RA 15	7	-6	2422	573.66	-5.24	-2.64
7	SLE RA 16	7	-6	2422	573.66	-5.24	-2.64
7	SLE RA 17	7	-6	2422	573.66	-5.24	-2.64
7	SLE RA 18	7	-6	2530	597.27	-5.49	-2.54
7	SLE RA 19	7	-6	2530	597.27	-5.49	-2.54
7	SLE RA 20	7	-6	2530	597.27	-5.49	-2.54
7	SLE RA 21	7	-6	2530	597.27	-5.49	-2.54
7	SLE FR 1	8	-5	2172	518.56	-4.65	-2.88
7	SLE FR 2	8	-5	2172	518.56	-4.65	-2.88
7	SLE FR 3	8	-5	2172	518.56	-4.65	-2.88
7	SLE FR 4	8	-6	2279	542.18	-4.9	-2.77
7	SLE FR 5	8	-6	2279	542.18	-4.9	-2.77
7	SLE FR 6	8	-6	2351	557.92	-5.07	-2.71
7	SLE QP 1	8	-5	2172	518.56	-4.65	-2.88
7	SLE QP 2	8	-6	2279	542.18	-4.9	-2.77
7	SLD 1	198	68	2152	504.61	-4.04	-67.41
7	SLD 2	239	102	2166	507.65	-4.12	-81.91
7	SLD 3	193	-133	1843	440.45	-2.98	-69.43
7	SLD 4	235	-98	1856	443.49	-3.05	-83.94
7	SLD 5	57	309	2705	627.13	-6.24	-13.85
7	SLD 6	99	344	2719	630.24	-6.32	-28.67
7	SLD 7	41	-361	1674	413.24	-2.68	-20.61
7	SLD 8	84	-326	1688	416.35	-2.76	-35.43
7	SLD 9	-68	315	2870	668.01	-7.05	29.89
7	SLD 10	-26	350	2884	671.11	-7.13	15.06
7	SLD 11	-84	-355	1839	454.12	-3.49	23.13
7	SLD 12	-41	-320	1853	457.22	-3.57	8.3
7	SLD 13	-219	87	2702	640.87	-6.76	78.39
7	SLD 14	-177	121	2715	643.91	-6.83	63.89
7	SLD 15	-224	-114	2393	576.7	-5.69	76.36
7	SLD 16	-182	-79	2406	579.74	-5.77	61.86
7	SLV 1	438	169	2002	459.38	-2.99	-149.33
7	SLV 2	534	247	2033	466.34	-3.16	-182.5
7	SLV 3	428	-302	1276	308.62	-0.49	-154.05
7	SLV 4	523	-224	1307	315.58	-0.66	-187.22
7	SLV 5	118	733	3285	743.43	-8.06	-27.35
7	SLV 6	217	814	3318	750.65	-8.24	-61.79
7	SLV 7	82	-838	866	240.89	0.28	-43.06
7	SLV 8	182	-757	898	248.11	0.1	-77.5
7	SLV 9	-166	746	3660	836.24	-9.91	71.95
7	SLV 10	-67	827	3692	843.46	-10.09	37.51
7	SLV 11	-201	-825	1240	333.71	-1.57	56.24
7	SLV 12	-102	-744	1273	340.93	-1.75	21.8
7	SLV 13	-508	213	3251	768.78	-9.15	181.67
7	SLV 14	-412	291	3282	775.73	-9.32	148.5
7	SLV 15	-518	-258	2525	618.01	-6.65	176.95
7	SLV 16	-423	-180	2556	624.97	-6.82	143.79
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	9	-4	1968	404.13	-3.45	-3.03
8	SLU 2	9	-4	1968	404.13	-3.45	-3.03
8	SLU 3	9	-4	1968	404.13	-3.45	-3.03
8	SLU 4	9	-4	1968	404.13	-3.45	-3.03
8	SLU 5	9	-4	1968	404.13	-3.45	-3.03
8	SLU 6	9	-4	1968	404.13	-3.45	-3.03
8	SLU 7	9	-4	1968	404.13	-3.45	-3.03
8	SLU 8	9	-4	1968	404.13	-3.45	-3.03
8	SLU 9	9	-4	1968	404.13	-3.45	-3.03
8	SLU 10	8	-4	2320	466.7	-4.12	-2.71
8	SLU 11	8	-4	2320	466.7	-4.12	-2.71
8	SLU 12	8	-4	2320	466.7	-4.12	-2.71
8	SLU 13	8	-4	2320	466.7	-4.12	-2.71
8	SLU 14	8	-4	2320	466.7	-4.12	-2.71



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
8	SLU 15	8	-4	2320	466.7	-4.12	-2.71
8	SLU 16	8	-4	2320	466.7	-4.12	-2.71
8	SLU 17	8	-4	2320	466.7	-4.12	-2.71
8	SLU 18	7	-5	2471	493.51	-4.4	-2.57
8	SLU 19	7	-5	2471	493.51	-4.4	-2.57
8	SLU 20	7	-5	2471	493.51	-4.4	-2.57
8	SLU 21	7	-5	2471	493.51	-4.4	-2.57
8	SLU 22	8	-4	2230	450.76	-3.95	-2.86
8	SLU 23	8	-4	2230	450.76	-3.95	-2.86
8	SLU 24	8	-4	2230	450.76	-3.95	-2.86
8	SLU 25	8	-4	2230	450.76	-3.95	-2.86
8	SLU 26	8	-4	2230	450.76	-3.95	-2.86
8	SLU 27	8	-4	2230	450.76	-3.95	-2.86
8	SLU 28	8	-4	2230	450.76	-3.95	-2.86
8	SLU 29	8	-4	2230	450.76	-3.95	-2.86
8	SLU 30	8	-4	2230	450.76	-3.95	-2.86
8	SLU 31	7	-5	2582	513.33	-4.62	-2.54
8	SLU 32	7	-5	2582	513.33	-4.62	-2.54
8	SLU 33	7	-5	2582	513.33	-4.62	-2.54
8	SLU 34	7	-5	2582	513.33	-4.62	-2.54
8	SLU 35	7	-5	2582	513.33	-4.62	-2.54
8	SLU 36	7	-5	2582	513.33	-4.62	-2.54
8	SLU 37	7	-5	2582	513.33	-4.62	-2.54
8	SLU 38	7	-5	2582	513.33	-4.62	-2.54
8	SLU 39	7	-5	2733	540.15	-4.9	-2.4
8	SLU 40	7	-5	2733	540.15	-4.9	-2.4
8	SLU 41	7	-5	2733	540.15	-4.9	-2.4
8	SLU 42	7	-5	2733	540.15	-4.9	-2.4
8	SLU 43	11	-5	2469	509.38	-4.31	-3.99
8	SLU 44	11	-5	2469	509.38	-4.31	-3.99
8	SLU 45	11	-5	2469	509.38	-4.31	-3.99
8	SLU 46	11	-5	2469	509.38	-4.31	-3.99
8	SLU 47	11	-5	2469	509.38	-4.31	-3.99
8	SLU 48	11	-5	2469	509.38	-4.31	-3.99
8	SLU 49	11	-5	2469	509.38	-4.31	-3.99
8	SLU 50	11	-5	2469	509.38	-4.31	-3.99
8	SLU 51	11	-5	2469	509.38	-4.31	-3.99
8	SLU 52	10	-6	2821	571.95	-4.98	-3.67
8	SLU 53	10	-6	2821	571.95	-4.98	-3.67
8	SLU 54	10	-6	2821	571.95	-4.98	-3.67
8	SLU 55	10	-6	2821	571.95	-4.98	-3.67
8	SLU 56	10	-6	2821	571.95	-4.98	-3.67
8	SLU 57	10	-6	2821	571.95	-4.98	-3.67
8	SLU 58	10	-6	2821	571.95	-4.98	-3.67
8	SLU 59	10	-6	2821	571.95	-4.98	-3.67
8	SLU 60	10	-6	2971	598.76	-5.26	-3.54
8	SLU 61	10	-6	2971	598.76	-5.26	-3.54
8	SLU 62	10	-6	2971	598.76	-5.26	-3.54
8	SLU 63	10	-6	2971	598.76	-5.26	-3.54
8	SLU 64	11	-5	2730	556.01	-4.81	-3.82
8	SLU 65	11	-5	2730	556.01	-4.81	-3.82
8	SLU 66	11	-5	2730	556.01	-4.81	-3.82
8	SLU 67	11	-5	2730	556.01	-4.81	-3.82
8	SLU 68	11	-5	2730	556.01	-4.81	-3.82
8	SLU 69	11	-5	2730	556.01	-4.81	-3.82
8	SLU 70	11	-5	2730	556.01	-4.81	-3.82
8	SLU 71	11	-5	2730	556.01	-4.81	-3.82
8	SLU 72	11	-5	2730	556.01	-4.81	-3.82
8	SLU 73	10	-6	3082	618.58	-5.48	-3.5
8	SLU 74	10	-6	3082	618.58	-5.48	-3.5
8	SLU 75	10	-6	3082	618.58	-5.48	-3.5
8	SLU 76	10	-6	3082	618.58	-5.48	-3.5
8	SLU 77	10	-6	3082	618.58	-5.48	-3.5
8	SLU 78	10	-6	3082	618.58	-5.48	-3.5
8	SLU 79	10	-6	3082	618.58	-5.48	-3.5
8	SLU 80	10	-6	3082	618.58	-5.48	-3.5
8	SLU 81	9	-6	3233	645.4	-5.77	-3.37
8	SLU 82	9	-6	3233	645.4	-5.77	-3.37
8	SLU 83	9	-6	3233	645.4	-5.77	-3.37
8	SLU 84	9	-6	3233	645.4	-5.77	-3.37
8	SLE RA 1	8	-4	2043	417.45	-3.59	-2.98
8	SLE RA 2	8	-4	2043	417.45	-3.59	-2.98
8	SLE RA 3	8	-4	2043	417.45	-3.59	-2.98
8	SLE RA 4	8	-4	2043	417.45	-3.59	-2.98
8	SLE RA 5	8	-4	2043	417.45	-3.59	-2.98
8	SLE RA 6	8	-4	2043	417.45	-3.59	-2.98
8	SLE RA 7	8	-4	2043	417.45	-3.59	-2.98
8	SLE RA 8	8	-4	2043	417.45	-3.59	-2.98
8	SLE RA 9	8	-4	2043	417.45	-3.59	-2.98
8	SLE RA 10	8	-4	2277	459.17	-4.04	-2.76
8	SLE RA 11	8	-4	2277	459.17	-4.04	-2.76
8	SLE RA 12	8	-4	2277	459.17	-4.04	-2.76
8	SLE RA 13	8	-4	2277	459.17	-4.04	-2.76
8	SLE RA 14	8	-4	2277	459.17	-4.04	-2.76
8	SLE RA 15	8	-4	2277	459.17	-4.04	-2.76
8	SLE RA 16	8	-4	2277	459.17	-4.04	-2.76
8	SLE RA 17	8	-4	2277	459.17	-4.04	-2.76
8	SLE RA 18	7	-5	2378	477.04	-4.23	-2.67
8	SLE RA 19	7	-5	2378	477.04	-4.23	-2.67
8	SLE RA 20	7	-5	2378	477.04	-4.23	-2.67



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
8	SLE RA 21	7	-5	2378	477.04	-4.23	-2.67
8	SLE FR 1	8	-4	2043	417.45	-3.59	-2.98
8	SLE FR 2	8	-4	2043	417.45	-3.59	-2.98
8	SLE FR 3	8	-4	2043	417.45	-3.59	-2.98
8	SLE FR 4	8	-4	2143	435.33	-3.78	-2.89
8	SLE FR 5	8	-4	2143	435.33	-3.78	-2.89
8	SLE FR 6	8	-4	2210	447.25	-3.91	-2.83
8	SLE QP 1	8	-4	2043	417.45	-3.59	-2.98
8	SLE QP 2	8	-4	2143	435.33	-3.78	-2.89
8	SLD 1	198	61	2042	408	-3	-67.58
8	SLD 2	240	91	2053	410.15	-3.07	-82.1
8	SLD 3	193	-117	1764	360.78	-2.1	-69.72
8	SLD 4	235	-88	1775	362.93	-2.17	-84.24
8	SLD 5	57	275	2531	497.97	-4.89	-13.8
8	SLD 6	100	305	2543	500.17	-4.96	-28.64
8	SLD 7	41	-319	1603	340.57	-1.89	-20.94
8	SLD 8	84	-289	1615	342.77	-1.95	-35.79
8	SLD 9	-68	280	2672	527.89	-5.61	30.02
8	SLD 10	-25	311	2684	530.09	-5.68	15.17
8	SLD 11	-84	-314	1744	370.49	-2.61	22.87
8	SLD 12	-41	-283	1756	372.69	-2.68	8.03
8	SLD 13	-219	79	2512	507.73	-5.4	78.47
8	SLD 14	-177	109	2523	509.88	-5.47	63.95
8	SLD 15	-224	-99	2233	460.51	-4.5	76.33
8	SLD 16	-182	-69	2245	462.66	-4.57	61.8
8	SLV 1	439	149	1924	375.19	-2.03	-149.57
8	SLV 2	535	218	1950	380.1	-2.19	-182.79
8	SLV 3	428	-268	1270	264.09	0.08	-154.56
8	SLV 4	524	-200	1296	269	-0.08	-187.78
8	SLV 5	119	650	3059	583.97	-6.41	-27.06
8	SLV 6	218	721	3086	589.07	-6.57	-61.55
8	SLV 7	82	-742	880	213.65	0.64	-43.69
8	SLV 8	182	-672	908	218.75	0.48	-78.18
8	SLV 9	-165	663	3379	651.91	-8.04	72.41
8	SLV 10	-66	734	3406	657.01	-8.2	37.92
8	SLV 11	-202	-730	1200	281.59	-1	55.78
8	SLV 12	-103	-659	1228	286.69	-1.16	21.29
8	SLV 13	-508	192	2990	601.66	-7.49	182.01
8	SLV 14	-412	260	3017	606.57	-7.65	148.79
8	SLV 15	-519	-226	2337	490.56	-5.38	177.02
8	SLV 16	-423	-158	2363	495.47	-5.53	143.8
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	9	-3	1877	332.6	-2.39	-3.11
9	SLU 2	9	-3	1877	332.6	-2.39	-3.11
9	SLU 3	9	-3	1877	332.6	-2.39	-3.11
9	SLU 4	9	-3	1877	332.6	-2.39	-3.11
9	SLU 5	9	-3	1877	332.6	-2.39	-3.11
9	SLU 6	9	-3	1877	332.6	-2.39	-3.11
9	SLU 7	9	-3	1877	332.6	-2.39	-3.11
9	SLU 8	9	-3	1877	332.6	-2.39	-3.11
9	SLU 9	9	-3	1877	332.6	-2.39	-3.11
9	SLU 10	8	-3	2212	380.34	-2.84	-2.84
9	SLU 11	8	-3	2212	380.34	-2.84	-2.84
9	SLU 12	8	-3	2212	380.34	-2.84	-2.84
9	SLU 13	8	-3	2212	380.34	-2.84	-2.84
9	SLU 14	8	-3	2212	380.34	-2.84	-2.84
9	SLU 15	8	-3	2212	380.34	-2.84	-2.84
9	SLU 16	8	-3	2212	380.34	-2.84	-2.84
9	SLU 17	8	-3	2212	380.34	-2.84	-2.84
9	SLU 18	8	-3	2355	400.8	-3.03	-2.72
9	SLU 19	8	-3	2355	400.8	-3.03	-2.72
9	SLU 20	8	-3	2355	400.8	-3.03	-2.72
9	SLU 21	8	-3	2355	400.8	-3.03	-2.72
9	SLU 22	8	-3	2126	368.16	-2.73	-2.97
9	SLU 23	8	-3	2126	368.16	-2.73	-2.97
9	SLU 24	8	-3	2126	368.16	-2.73	-2.97
9	SLU 25	8	-3	2126	368.16	-2.73	-2.97
9	SLU 26	8	-3	2126	368.16	-2.73	-2.97
9	SLU 27	8	-3	2126	368.16	-2.73	-2.97
9	SLU 28	8	-3	2126	368.16	-2.73	-2.97
9	SLU 29	8	-3	2126	368.16	-2.73	-2.97
9	SLU 30	8	-3	2126	368.16	-2.73	-2.97
9	SLU 31	8	-3	2460	415.9	-3.17	-2.7
9	SLU 32	8	-3	2460	415.9	-3.17	-2.7
9	SLU 33	8	-3	2460	415.9	-3.17	-2.7
9	SLU 34	8	-3	2460	415.9	-3.17	-2.7
9	SLU 35	8	-3	2460	415.9	-3.17	-2.7
9	SLU 36	8	-3	2460	415.9	-3.17	-2.7
9	SLU 37	8	-3	2460	415.9	-3.17	-2.7
9	SLU 38	8	-3	2460	415.9	-3.17	-2.7
9	SLU 39	7	-3	2604	436.36	-3.36	-2.58
9	SLU 40	7	-3	2604	436.36	-3.36	-2.58
9	SLU 41	7	-3	2604	436.36	-3.36	-2.58
9	SLU 42	7	-3	2604	436.36	-3.36	-2.58
9	SLU 43	12	-4	2355	420.19	-2.99	-4.1
9	SLU 44	12	-4	2355	420.19	-2.99	-4.1
9	SLU 45	12	-4	2355	420.19	-2.99	-4.1



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
9	SLU 46	12	-4	2355	420.19	-2.99	-4.1
9	SLU 47	12	-4	2355	420.19	-2.99	-4.1
9	SLU 48	12	-4	2355	420.19	-2.99	-4.1
9	SLU 49	12	-4	2355	420.19	-2.99	-4.1
9	SLU 50	12	-4	2355	420.19	-2.99	-4.1
9	SLU 51	12	-4	2355	420.19	-2.99	-4.1
9	SLU 52	11	-4	2689	467.93	-3.44	-3.82
9	SLU 53	11	-4	2689	467.93	-3.44	-3.82
9	SLU 54	11	-4	2689	467.93	-3.44	-3.82
9	SLU 55	11	-4	2689	467.93	-3.44	-3.82
9	SLU 56	11	-4	2689	467.93	-3.44	-3.82
9	SLU 57	11	-4	2689	467.93	-3.44	-3.82
9	SLU 58	11	-4	2689	467.93	-3.44	-3.82
9	SLU 59	11	-4	2689	467.93	-3.44	-3.82
9	SLU 60	10	-4	2833	488.39	-3.63	-3.7
9	SLU 61	10	-4	2833	488.39	-3.63	-3.7
9	SLU 62	10	-4	2833	488.39	-3.63	-3.7
9	SLU 63	10	-4	2833	488.39	-3.63	-3.7
9	SLU 64	11	-4	2603	455.75	-3.33	-3.96
9	SLU 65	11	-4	2603	455.75	-3.33	-3.96
9	SLU 66	11	-4	2603	455.75	-3.33	-3.96
9	SLU 67	11	-4	2603	455.75	-3.33	-3.96
9	SLU 68	11	-4	2603	455.75	-3.33	-3.96
9	SLU 69	11	-4	2603	455.75	-3.33	-3.96
9	SLU 70	11	-4	2603	455.75	-3.33	-3.96
9	SLU 71	11	-4	2603	455.75	-3.33	-3.96
9	SLU 72	11	-4	2603	455.75	-3.33	-3.96
9	SLU 73	10	-4	2938	503.49	-3.77	-3.68
9	SLU 74	10	-4	2938	503.49	-3.77	-3.68
9	SLU 75	10	-4	2938	503.49	-3.77	-3.68
9	SLU 76	10	-4	2938	503.49	-3.77	-3.68
9	SLU 77	10	-4	2938	503.49	-3.77	-3.68
9	SLU 78	10	-4	2938	503.49	-3.77	-3.68
9	SLU 79	10	-4	2938	503.49	-3.77	-3.68
9	SLU 80	10	-4	2938	503.49	-3.77	-3.68
9	SLU 81	10	-4	3081	523.95	-3.97	-3.56
9	SLU 82	10	-4	3081	523.95	-3.97	-3.56
9	SLU 83	10	-4	3081	523.95	-3.97	-3.56
9	SLU 84	10	-4	3081	523.95	-3.97	-3.56
9	SLE RA 1	9	-3	1948	342.76	-2.49	-3.07
9	SLE RA 2	9	-3	1948	342.76	-2.49	-3.07
9	SLE RA 3	9	-3	1948	342.76	-2.49	-3.07
9	SLE RA 4	9	-3	1948	342.76	-2.49	-3.07
9	SLE RA 5	9	-3	1948	342.76	-2.49	-3.07
9	SLE RA 6	9	-3	1948	342.76	-2.49	-3.07
9	SLE RA 7	9	-3	1948	342.76	-2.49	-3.07
9	SLE RA 8	9	-3	1948	342.76	-2.49	-3.07
9	SLE RA 9	9	-3	1948	342.76	-2.49	-3.07
9	SLE RA 10	8	-3	2171	374.59	-2.78	-2.89
9	SLE RA 11	8	-3	2171	374.59	-2.78	-2.89
9	SLE RA 12	8	-3	2171	374.59	-2.78	-2.89
9	SLE RA 13	8	-3	2171	374.59	-2.78	-2.89
9	SLE RA 14	8	-3	2171	374.59	-2.78	-2.89
9	SLE RA 15	8	-3	2171	374.59	-2.78	-2.89
9	SLE RA 16	8	-3	2171	374.59	-2.78	-2.89
9	SLE RA 17	8	-3	2171	374.59	-2.78	-2.89
9	SLE RA 18	8	-3	2267	388.23	-2.91	-2.81
9	SLE RA 19	8	-3	2267	388.23	-2.91	-2.81
9	SLE RA 20	8	-3	2267	388.23	-2.91	-2.81
9	SLE RA 21	8	-3	2267	388.23	-2.91	-2.81
9	SLE FR 1	9	-3	1948	342.76	-2.49	-3.07
9	SLE FR 2	9	-3	1948	342.76	-2.49	-3.07
9	SLE FR 3	9	-3	1948	342.76	-2.49	-3.07
9	SLE FR 4	8	-3	2044	356.4	-2.61	-3
9	SLE FR 5	8	-3	2044	356.4	-2.61	-3
9	SLE FR 6	8	-3	2107	365.5	-2.7	-2.94
9	SLE QP 1	9	-3	1948	342.76	-2.49	-3.07
9	SLE QP 2	8	-3	2044	356.4	-2.61	-3
9	SLD 1	199	53	1966	337.72	-1.9	-67.74
9	SLD 2	241	79	1975	339.15	-1.96	-82.28
9	SLD 3	194	-102	1713	303.55	-1.18	-69.98
9	SLD 4	236	-76	1722	304.99	-1.23	-84.53
9	SLD 5	58	240	2400	402.1	-3.48	-13.76
9	SLD 6	101	266	2410	403.57	-3.54	-28.63
9	SLD 7	41	-277	1557	288.21	-1.07	-21.24
9	SLD 8	84	-251	1567	289.68	-1.13	-36.11
9	SLD 9	-67	245	2520	423.13	-4.1	30.12
9	SLD 10	-24	272	2530	424.6	-4.16	15.25
9	SLD 11	-84	-272	1677	309.24	-1.69	22.64
9	SLD 12	-41	-246	1687	310.71	-1.75	7.77
9	SLD 13	-219	70	2365	407.82	-3.99	78.54
9	SLD 14	-177	96	2374	409.26	-4.05	63.99
9	SLD 15	-224	-85	2112	373.65	-3.27	76.29
9	SLD 16	-182	-59	2121	375.09	-3.33	61.75
9	SLV 1	441	130	1876	315.44	-1.01	-149.79
9	SLV 2	537	189	1898	318.72	-1.15	-183.07
9	SLV 3	429	-234	1283	234.87	0.68	-155.02
9	SLV 4	525	-175	1304	238.15	0.54	-188.3
9	SLV 5	120	567	2886	465.1	-4.66	-26.82
9	SLV 6	220	629	2909	468.51	-4.8	-61.37



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
9	SLV 7	82	-646	906	196.53	0.99	-44.25
9	SLV 8	181	-585	929	199.94	0.85	-78.8
9	SLV 9	-164	579	3158	512.86	-6.08	72.81
9	SLV 10	-65	640	3181	516.27	-6.22	38.26
9	SLV 11	-203	-634	1178	244.3	-0.43	55.38
9	SLV 12	-103	-573	1201	247.71	-0.57	20.83
9	SLV 13	-508	169	2783	474.65	-5.77	182.31
9	SLV 14	-412	229	2805	477.94	-5.91	149.03
9	SLV 15	-520	-195	2189	394.08	-4.08	177.08
9	SLV 16	-424	-135	2211	397.37	-4.22	143.8
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	9	-2	1819	285.83	-1.35	-3.2
10	SLU 2	9	-2	1819	285.83	-1.35	-3.2
10	SLU 3	9	-2	1819	285.83	-1.35	-3.2
10	SLU 4	9	-2	1819	285.83	-1.35	-3.2
10	SLU 5	9	-2	1819	285.83	-1.35	-3.2
10	SLU 6	9	-2	1819	285.83	-1.35	-3.2
10	SLU 7	9	-2	1819	285.83	-1.35	-3.2
10	SLU 8	9	-2	1819	285.83	-1.35	-3.2
10	SLU 9	9	-2	1819	285.83	-1.35	-3.2
10	SLU 10	8	-1	2143	323.93	-1.58	-2.97
10	SLU 11	8	-1	2143	323.93	-1.58	-2.97
10	SLU 12	8	-1	2143	323.93	-1.58	-2.97
10	SLU 13	8	-1	2143	323.93	-1.58	-2.97
10	SLU 14	8	-1	2143	323.93	-1.58	-2.97
10	SLU 15	8	-1	2143	323.93	-1.58	-2.97
10	SLU 16	8	-1	2143	323.93	-1.58	-2.97
10	SLU 17	8	-1	2143	323.93	-1.58	-2.97
10	SLU 18	8	-1	2282	340.27	-1.67	-2.87
10	SLU 19	8	-1	2282	340.27	-1.67	-2.87
10	SLU 20	8	-1	2282	340.27	-1.67	-2.87
10	SLU 21	8	-1	2282	340.27	-1.67	-2.87
10	SLU 22	9	-2	2060	314.18	-1.53	-3.09
10	SLU 23	9	-2	2060	314.18	-1.53	-3.09
10	SLU 24	9	-2	2060	314.18	-1.53	-3.09
10	SLU 25	9	-2	2060	314.18	-1.53	-3.09
10	SLU 26	9	-2	2060	314.18	-1.53	-3.09
10	SLU 27	9	-2	2060	314.18	-1.53	-3.09
10	SLU 28	9	-2	2060	314.18	-1.53	-3.09
10	SLU 29	9	-2	2060	314.18	-1.53	-3.09
10	SLU 30	9	-2	2060	314.18	-1.53	-3.09
10	SLU 31	8	-1	2384	352.29	-1.75	-2.86
10	SLU 32	8	-1	2384	352.29	-1.75	-2.86
10	SLU 33	8	-1	2384	352.29	-1.75	-2.86
10	SLU 34	8	-1	2384	352.29	-1.75	-2.86
10	SLU 35	8	-1	2384	352.29	-1.75	-2.86
10	SLU 36	8	-1	2384	352.29	-1.75	-2.86
10	SLU 37	8	-1	2384	352.29	-1.75	-2.86
10	SLU 38	8	-1	2384	352.29	-1.75	-2.86
10	SLU 39	8	-1	2523	368.62	-1.85	-2.76
10	SLU 40	8	-1	2523	368.62	-1.85	-2.76
10	SLU 41	8	-1	2523	368.62	-1.85	-2.76
10	SLU 42	8	-1	2523	368.62	-1.85	-2.76
10	SLU 43	12	-3	2282	361.85	-1.7	-4.19
10	SLU 44	12	-3	2282	361.85	-1.7	-4.19
10	SLU 45	12	-3	2282	361.85	-1.7	-4.19
10	SLU 46	12	-3	2282	361.85	-1.7	-4.19
10	SLU 47	12	-3	2282	361.85	-1.7	-4.19
10	SLU 48	12	-3	2282	361.85	-1.7	-4.19
10	SLU 49	12	-3	2282	361.85	-1.7	-4.19
10	SLU 50	12	-3	2282	361.85	-1.7	-4.19
10	SLU 51	12	-3	2282	361.85	-1.7	-4.19
10	SLU 52	11	-2	2606	399.96	-1.92	-3.96
10	SLU 53	11	-2	2606	399.96	-1.92	-3.96
10	SLU 54	11	-2	2606	399.96	-1.92	-3.96
10	SLU 55	11	-2	2606	399.96	-1.92	-3.96
10	SLU 56	11	-2	2606	399.96	-1.92	-3.96
10	SLU 57	11	-2	2606	399.96	-1.92	-3.96
10	SLU 58	11	-2	2606	399.96	-1.92	-3.96
10	SLU 59	11	-2	2606	399.96	-1.92	-3.96
10	SLU 60	11	-2	2745	416.29	-2.02	-3.87
10	SLU 61	11	-2	2745	416.29	-2.02	-3.87
10	SLU 62	11	-2	2745	416.29	-2.02	-3.87
10	SLU 63	11	-2	2745	416.29	-2.02	-3.87
10	SLU 64	12	-2	2523	390.21	-1.87	-4.08
10	SLU 65	12	-2	2523	390.21	-1.87	-4.08
10	SLU 66	12	-2	2523	390.21	-1.87	-4.08
10	SLU 67	12	-2	2523	390.21	-1.87	-4.08
10	SLU 68	12	-2	2523	390.21	-1.87	-4.08
10	SLU 69	12	-2	2523	390.21	-1.87	-4.08
10	SLU 70	12	-2	2523	390.21	-1.87	-4.08
10	SLU 71	12	-2	2523	390.21	-1.87	-4.08
10	SLU 72	12	-2	2523	390.21	-1.87	-4.08
10	SLU 73	11	-2	2847	428.32	-2.1	-3.86
10	SLU 74	11	-2	2847	428.32	-2.1	-3.86
10	SLU 75	11	-2	2847	428.32	-2.1	-3.86
10	SLU 76	11	-2	2847	428.32	-2.1	-3.86



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
10	SLU 77	11	-2	2847	428.32	-2.1	-3.86
10	SLU 78	11	-2	2847	428.32	-2.1	-3.86
10	SLU 79	11	-2	2847	428.32	-2.1	-3.86
10	SLU 80	11	-2	2847	428.32	-2.1	-3.86
10	SLU 81	11	-1	2986	444.65	-2.19	-3.76
10	SLU 82	11	-1	2986	444.65	-2.19	-3.76
10	SLU 83	11	-1	2986	444.65	-2.19	-3.76
10	SLU 84	11	-1	2986	444.65	-2.19	-3.76
10	SLE RA 1	9	-2	1888	293.93	-1.4	-3.17
10	SLE RA 2	9	-2	1888	293.93	-1.4	-3.17
10	SLE RA 3	9	-2	1888	293.93	-1.4	-3.17
10	SLE RA 4	9	-2	1888	293.93	-1.4	-3.17
10	SLE RA 5	9	-2	1888	293.93	-1.4	-3.17
10	SLE RA 6	9	-2	1888	293.93	-1.4	-3.17
10	SLE RA 7	9	-2	1888	293.93	-1.4	-3.17
10	SLE RA 8	9	-2	1888	293.93	-1.4	-3.17
10	SLE RA 9	9	-2	1888	293.93	-1.4	-3.17
10	SLE RA 10	8	-1	2104	319.33	-1.55	-3.01
10	SLE RA 11	8	-1	2104	319.33	-1.55	-3.01
10	SLE RA 12	8	-1	2104	319.33	-1.55	-3.01
10	SLE RA 13	8	-1	2104	319.33	-1.55	-3.01
10	SLE RA 14	8	-1	2104	319.33	-1.55	-3.01
10	SLE RA 15	8	-1	2104	319.33	-1.55	-3.01
10	SLE RA 16	8	-1	2104	319.33	-1.55	-3.01
10	SLE RA 17	8	-1	2104	319.33	-1.55	-3.01
10	SLE RA 18	8	-1	2196	330.22	-1.62	-2.95
10	SLE RA 19	8	-1	2196	330.22	-1.62	-2.95
10	SLE RA 20	8	-1	2196	330.22	-1.62	-2.95
10	SLE RA 21	8	-1	2196	330.22	-1.62	-2.95
10	SLE FR 1	9	-2	1888	293.93	-1.4	-3.17
10	SLE FR 2	9	-2	1888	293.93	-1.4	-3.17
10	SLE FR 3	9	-2	1888	293.93	-1.4	-3.17
10	SLE FR 4	9	-2	1980	304.82	-1.47	-3.1
10	SLE FR 5	9	-2	1980	304.82	-1.47	-3.1
10	SLE FR 6	9	-2	2042	312.08	-1.51	-3.06
10	SLE QP 1	9	-2	1888	293.93	-1.4	-3.17
10	SLE QP 2	9	-2	1980	304.82	-1.47	-3.1
10	SLD 1	200	46	1924	293.41	-0.8	-67.89
10	SLD 2	242	68	1932	294.3	-0.85	-82.46
10	SLD 3	194	-87	1691	268.51	-0.26	-70.22
10	SLD 4	236	-65	1699	269.41	-0.31	-84.79
10	SLD 5	59	206	2314	338.83	-2.07	-13.74
10	SLD 6	102	229	2322	339.74	-2.12	-28.63
10	SLD 7	41	-237	1537	255.85	-0.26	-21.51
10	SLD 8	84	-214	1545	256.76	-0.31	-36.41
10	SLD 9	-67	211	2416	352.87	-2.62	30.21
10	SLD 10	-24	233	2423	353.78	-2.67	15.31
10	SLD 11	-84	-232	1639	269.9	-0.81	22.43
10	SLD 12	-41	-209	1646	270.81	-0.86	7.53
10	SLD 13	-219	61	2262	340.23	-2.62	78.59
10	SLD 14	-177	84	2270	341.12	-2.67	64.02
10	SLD 15	-224	-71	2029	315.33	-2.08	76.26
10	SLD 16	-182	-49	2037	316.23	-2.13	61.68
10	SLV 1	442	111	1862	280.05	0.02	-149.99
10	SLV 2	538	162	1879	282.09	-0.1	-183.32
10	SLV 3	430	-201	1314	221.14	1.29	-155.43
10	SLV 4	526	-150	1332	223.18	1.18	-188.76
10	SLV 5	122	486	2769	385.98	-2.91	-26.62
10	SLV 6	221	539	2787	388.1	-3.03	-61.22
10	SLV 7	81	-553	944	189.61	1.34	-44.74
10	SLV 8	181	-500	962	191.73	1.22	-79.35
10	SLV 9	-163	497	2999	417.9	-4.15	73.15
10	SLV 10	-64	549	3017	420.02	-4.27	38.54
10	SLV 11	-204	-542	1174	221.53	0.1	55.02
10	SLV 12	-104	-489	1192	223.65	-0.02	20.42
10	SLV 13	-508	147	2629	386.45	-4.11	182.56
10	SLV 14	-412	197	2647	388.49	-4.22	149.23
10	SLV 15	-520	-165	2081	327.54	-2.83	177.12
10	SLV 16	-424	-114	2099	329.58	-2.95	143.79
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	9	-1	1793	262.91	-0.36	-3.27
11	SLU 2	9	-1	1793	262.91	-0.36	-3.27
11	SLU 3	9	-1	1793	262.91	-0.36	-3.27
11	SLU 4	9	-1	1793	262.91	-0.36	-3.27
11	SLU 5	9	-1	1793	262.91	-0.36	-3.27
11	SLU 6	9	-1	1793	262.91	-0.36	-3.27
11	SLU 7	9	-1	1793	262.91	-0.36	-3.27
11	SLU 8	9	-1	1793	262.91	-0.36	-3.27
11	SLU 9	9	-1	1793	262.91	-0.36	-3.27
11	SLU 10	9	0	2113	296.46	-0.37	-3.1
11	SLU 11	9	0	2113	296.46	-0.37	-3.1
11	SLU 12	9	0	2113	296.46	-0.37	-3.1
11	SLU 13	9	0	2113	296.46	-0.37	-3.1
11	SLU 14	9	0	2113	296.46	-0.37	-3.1
11	SLU 15	9	0	2113	296.46	-0.37	-3.1
11	SLU 16	9	0	2113	296.46	-0.37	-3.1
11	SLU 17	9	0	2113	296.46	-0.37	-3.1



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
11	SLU 18	9	0	2251	310.84	-0.38	-3.03
11	SLU 19	9	0	2251	310.84	-0.38	-3.03
11	SLU 20	9	0	2251	310.84	-0.38	-3.03
11	SLU 21	9	0	2251	310.84	-0.38	-3.03
11	SLU 22	9	0	2031	287.83	-0.38	-3.2
11	SLU 23	9	0	2031	287.83	-0.38	-3.2
11	SLU 24	9	0	2031	287.83	-0.38	-3.2
11	SLU 25	9	0	2031	287.83	-0.38	-3.2
11	SLU 26	9	0	2031	287.83	-0.38	-3.2
11	SLU 27	9	0	2031	287.83	-0.38	-3.2
11	SLU 28	9	0	2031	287.83	-0.38	-3.2
11	SLU 29	9	0	2031	287.83	-0.38	-3.2
11	SLU 30	9	0	2031	287.83	-0.38	-3.2
11	SLU 31	9	1	2351	321.39	-0.39	-3.03
11	SLU 32	9	1	2351	321.39	-0.39	-3.03
11	SLU 33	9	1	2351	321.39	-0.39	-3.03
11	SLU 34	9	1	2351	321.39	-0.39	-3.03
11	SLU 35	9	1	2351	321.39	-0.39	-3.03
11	SLU 36	9	1	2351	321.39	-0.39	-3.03
11	SLU 37	9	1	2351	321.39	-0.39	-3.03
11	SLU 38	9	1	2351	321.39	-0.39	-3.03
11	SLU 39	8	1	2488	335.77	-0.4	-2.96
11	SLU 40	8	1	2488	335.77	-0.4	-2.96
11	SLU 41	8	1	2488	335.77	-0.4	-2.96
11	SLU 42	8	1	2488	335.77	-0.4	-2.96
11	SLU 43	12	-2	2249	333.23	-0.46	-4.28
11	SLU 44	12	-2	2249	333.23	-0.46	-4.28
11	SLU 45	12	-2	2249	333.23	-0.46	-4.28
11	SLU 46	12	-2	2249	333.23	-0.46	-4.28
11	SLU 47	12	-2	2249	333.23	-0.46	-4.28
11	SLU 48	12	-2	2249	333.23	-0.46	-4.28
11	SLU 49	12	-2	2249	333.23	-0.46	-4.28
11	SLU 50	12	-2	2249	333.23	-0.46	-4.28
11	SLU 51	12	-2	2249	333.23	-0.46	-4.28
11	SLU 52	12	-1	2570	366.79	-0.47	-4.11
11	SLU 53	12	-1	2570	366.79	-0.47	-4.11
11	SLU 54	12	-1	2570	366.79	-0.47	-4.11
11	SLU 55	12	-1	2570	366.79	-0.47	-4.11
11	SLU 56	12	-1	2570	366.79	-0.47	-4.11
11	SLU 57	12	-1	2570	366.79	-0.47	-4.11
11	SLU 58	12	-1	2570	366.79	-0.47	-4.11
11	SLU 59	12	-1	2570	366.79	-0.47	-4.11
11	SLU 60	11	0	2707	381.17	-0.48	-4.03
11	SLU 61	11	0	2707	381.17	-0.48	-4.03
11	SLU 62	11	0	2707	381.17	-0.48	-4.03
11	SLU 63	11	0	2707	381.17	-0.48	-4.03
11	SLU 64	12	-1	2487	358.16	-0.48	-4.21
11	SLU 65	12	-1	2487	358.16	-0.48	-4.21
11	SLU 66	12	-1	2487	358.16	-0.48	-4.21
11	SLU 67	12	-1	2487	358.16	-0.48	-4.21
11	SLU 68	12	-1	2487	358.16	-0.48	-4.21
11	SLU 69	12	-1	2487	358.16	-0.48	-4.21
11	SLU 70	12	-1	2487	358.16	-0.48	-4.21
11	SLU 71	12	-1	2487	358.16	-0.48	-4.21
11	SLU 72	12	-1	2487	358.16	-0.48	-4.21
11	SLU 73	11	0	2807	391.71	-0.49	-4.04
11	SLU 74	11	0	2807	391.71	-0.49	-4.04
11	SLU 75	11	0	2807	391.71	-0.49	-4.04
11	SLU 76	11	0	2807	391.71	-0.49	-4.04
11	SLU 77	11	0	2807	391.71	-0.49	-4.04
11	SLU 78	11	0	2807	391.71	-0.49	-4.04
11	SLU 79	11	0	2807	391.71	-0.49	-4.04
11	SLU 80	11	0	2807	391.71	-0.49	-4.04
11	SLU 81	11	1	2945	406.1	-0.5	-3.96
11	SLU 82	11	1	2945	406.1	-0.5	-3.96
11	SLU 83	11	1	2945	406.1	-0.5	-3.96
11	SLU 84	11	1	2945	406.1	-0.5	-3.96
11	SLE RA 1	9	-1	1861	270.03	-0.36	-3.25
11	SLE RA 2	9	-1	1861	270.03	-0.36	-3.25
11	SLE RA 3	9	-1	1861	270.03	-0.36	-3.25
11	SLE RA 4	9	-1	1861	270.03	-0.36	-3.25
11	SLE RA 5	9	-1	1861	270.03	-0.36	-3.25
11	SLE RA 6	9	-1	1861	270.03	-0.36	-3.25
11	SLE RA 7	9	-1	1861	270.03	-0.36	-3.25
11	SLE RA 8	9	-1	1861	270.03	-0.36	-3.25
11	SLE RA 9	9	-1	1861	270.03	-0.36	-3.25
11	SLE RA 10	9	0	2074	292.4	-0.37	-3.14
11	SLE RA 11	9	0	2074	292.4	-0.37	-3.14
11	SLE RA 12	9	0	2074	292.4	-0.37	-3.14
11	SLE RA 13	9	0	2074	292.4	-0.37	-3.14
11	SLE RA 14	9	0	2074	292.4	-0.37	-3.14
11	SLE RA 15	9	0	2074	292.4	-0.37	-3.14
11	SLE RA 16	9	0	2074	292.4	-0.37	-3.14
11	SLE RA 17	9	0	2074	292.4	-0.37	-3.14
11	SLE RA 18	9	0	2166	301.99	-0.38	-3.09
11	SLE RA 19	9	0	2166	301.99	-0.38	-3.09
11	SLE RA 20	9	0	2166	301.99	-0.38	-3.09
11	SLE RA 21	9	0	2166	301.99	-0.38	-3.09
11	SLE FR 1	9	-1	1861	270.03	-0.36	-3.25
11	SLE FR 2	9	-1	1861	270.03	-0.36	-3.25



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
11	SLE FR 3	9	-1	1861	270.03	-0.36	-3.25
11	SLE FR 4	9	-1	1952	279.62	-0.37	-3.2
11	SLE FR 5	9	-1	1952	279.62	-0.37	-3.2
11	SLE FR 6	9	0	2013	286.01	-0.37	-3.17
11	SLE QP 1	9	-1	1861	270.03	-0.36	-3.25
11	SLE QP 2	9	-1	1952	279.62	-0.37	-3.2
11	SLD 1	195	39	1916	274.34	0.26	-68.02
11	SLD 2	237	58	1922	274.83	0.22	-82.62
11	SLD 3	200	-73	1697	255.17	0.63	-70.43
11	SLD 4	242	-54	1704	255.66	0.59	-85.03
11	SLD 5	41	174	2271	306.93	-0.72	-13.72
11	SLD 6	84	193	2277	307.43	-0.77	-28.64
11	SLD 7	60	-199	1542	243.03	0.51	-21.76
11	SLD 8	103	-179	1548	243.53	0.46	-36.67
11	SLD 9	-84	178	2357	315.7	-1.2	30.27
11	SLD 10	-42	197	2363	316.2	-1.24	15.35
11	SLD 11	-66	-194	1627	251.8	0.04	22.24
11	SLD 12	-23	-175	1633	252.3	-0.01	7.32
11	SLD 13	-224	53	2201	303.57	-1.32	78.62
11	SLD 14	-182	72	2207	304.06	-1.36	64.03
11	SLD 15	-219	-59	1982	284.4	-0.95	76.21
11	SLD 16	-177	-40	1988	284.89	-0.99	61.62
11	SLV 1	430	93	1879	268.56	1.04	-150.17
11	SLV 2	526	137	1893	269.68	0.94	-183.55
11	SLV 3	443	-169	1365	222.99	1.91	-155.78
11	SLV 4	539	-125	1379	224.11	1.81	-189.16
11	SLV 5	80	409	2705	344.99	-1.22	-26.45
11	SLV 6	180	454	2719	346.16	-1.33	-61.11
11	SLV 7	123	-464	991	193.11	1.67	-45.18
11	SLV 8	223	-419	1006	194.27	1.57	-79.83
11	SLV 9	-205	418	2899	364.96	-2.3	73.43
11	SLV 10	-105	463	2913	366.13	-2.4	38.77
11	SLV 11	-162	-455	1185	213.07	0.59	54.7
11	SLV 12	-62	-410	1200	214.24	0.49	20.04
11	SLV 13	-521	124	2526	335.12	-2.54	182.76
11	SLV 14	-425	168	2540	336.24	-2.64	149.38
11	SLV 15	-508	-138	2012	289.55	-1.67	177.14
11	SLV 16	-412	-94	2026	290.67	-1.77	143.76
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	9	0	1797	262.68	0.58	-3.34
12	SLU 2	9	0	1797	262.68	0.58	-3.34
12	SLU 3	9	0	1797	262.68	0.58	-3.34
12	SLU 4	9	0	1797	262.68	0.58	-3.34
12	SLU 5	9	0	1797	262.68	0.58	-3.34
12	SLU 6	9	0	1797	262.68	0.58	-3.34
12	SLU 7	9	0	1797	262.68	0.58	-3.34
12	SLU 8	9	0	1797	262.68	0.58	-3.34
12	SLU 9	9	0	1797	262.68	0.58	-3.34
12	SLU 10	9	1	2120	296.58	0.76	-3.23
12	SLU 11	9	1	2120	296.58	0.76	-3.23
12	SLU 12	9	1	2120	296.58	0.76	-3.23
12	SLU 13	9	1	2120	296.58	0.76	-3.23
12	SLU 14	9	1	2120	296.58	0.76	-3.23
12	SLU 15	9	1	2120	296.58	0.76	-3.23
12	SLU 16	9	1	2120	296.58	0.76	-3.23
12	SLU 17	9	1	2120	296.58	0.76	-3.23
12	SLU 18	9	2	2259	311.1	0.83	-3.19
12	SLU 19	9	2	2259	311.1	0.83	-3.19
12	SLU 20	9	2	2259	311.1	0.83	-3.19
12	SLU 21	9	2	2259	311.1	0.83	-3.19
12	SLU 22	9	1	2037	287.81	0.71	-3.31
12	SLU 23	9	1	2037	287.81	0.71	-3.31
12	SLU 24	9	1	2037	287.81	0.71	-3.31
12	SLU 25	9	1	2037	287.81	0.71	-3.31
12	SLU 26	9	1	2037	287.81	0.71	-3.31
12	SLU 27	9	1	2037	287.81	0.71	-3.31
12	SLU 28	9	1	2037	287.81	0.71	-3.31
12	SLU 29	9	1	2037	287.81	0.71	-3.31
12	SLU 30	9	1	2037	287.81	0.71	-3.31
12	SLU 31	9	2	2360	321.71	0.89	-3.2
12	SLU 32	9	2	2360	321.71	0.89	-3.2
12	SLU 33	9	2	2360	321.71	0.89	-3.2
12	SLU 34	9	2	2360	321.71	0.89	-3.2
12	SLU 35	9	2	2360	321.71	0.89	-3.2
12	SLU 36	9	2	2360	321.71	0.89	-3.2
12	SLU 37	9	2	2360	321.71	0.89	-3.2
12	SLU 38	9	2	2360	321.71	0.89	-3.2
12	SLU 39	9	3	2498	336.23	0.96	-3.16
12	SLU 40	9	3	2498	336.23	0.96	-3.16
12	SLU 41	9	3	2498	336.23	0.96	-3.16
12	SLU 42	9	3	2498	336.23	0.96	-3.16
12	SLU 43	12	-1	2254	332.87	0.71	-4.35
12	SLU 44	12	-1	2254	332.87	0.71	-4.35
12	SLU 45	12	-1	2254	332.87	0.71	-4.35
12	SLU 46	12	-1	2254	332.87	0.71	-4.35
12	SLU 47	12	-1	2254	332.87	0.71	-4.35
12	SLU 48	12	-1	2254	332.87	0.71	-4.35



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
Ind.	N.br.	x	y	z		x	y	z	
12	SLU 49	12	-1	2254		332.87	0.71	-4.35	
12	SLU 50	12	-1	2254		332.87	0.71	-4.35	
12	SLU 51	12	-1	2254		332.87	0.71	-4.35	
12	SLU 52	12	1	2577		366.77	0.89	-4.24	
12	SLU 53	12	1	2577		366.77	0.89	-4.24	
12	SLU 54	12	1	2577		366.77	0.89	-4.24	
12	SLU 55	12	1	2577		366.77	0.89	-4.24	
12	SLU 56	12	1	2577		366.77	0.89	-4.24	
12	SLU 57	12	1	2577		366.77	0.89	-4.24	
12	SLU 58	12	1	2577		366.77	0.89	-4.24	
12	SLU 59	12	1	2577		366.77	0.89	-4.24	
12	SLU 60	12	1	2716		381.29	0.96	-4.2	
12	SLU 61	12	1	2716		381.29	0.96	-4.2	
12	SLU 62	12	1	2716		381.29	0.96	-4.2	
12	SLU 63	12	1	2716		381.29	0.96	-4.2	
12	SLU 64	12	0	2494		358	0.83	-4.32	
12	SLU 65	12	0	2494		358	0.83	-4.32	
12	SLU 66	12	0	2494		358	0.83	-4.32	
12	SLU 67	12	0	2494		358	0.83	-4.32	
12	SLU 68	12	0	2494		358	0.83	-4.32	
12	SLU 69	12	0	2494		358	0.83	-4.32	
12	SLU 70	12	0	2494		358	0.83	-4.32	
12	SLU 71	12	0	2494		358	0.83	-4.32	
12	SLU 72	12	0	2494		358	0.83	-4.32	
12	SLU 73	12	2	2817		391.9	1.01	-4.22	
12	SLU 74	12	2	2817		391.9	1.01	-4.22	
12	SLU 75	12	2	2817		391.9	1.01	-4.22	
12	SLU 76	12	2	2817		391.9	1.01	-4.22	
12	SLU 77	12	2	2817		391.9	1.01	-4.22	
12	SLU 78	12	2	2817		391.9	1.01	-4.22	
12	SLU 79	12	2	2817		391.9	1.01	-4.22	
12	SLU 80	12	2	2817		391.9	1.01	-4.22	
12	SLU 81	12	2	2955		406.42	1.09	-4.17	
12	SLU 82	12	2	2955		406.42	1.09	-4.17	
12	SLU 83	12	2	2955		406.42	1.09	-4.17	
12	SLU 84	12	2	2955		406.42	1.09	-4.17	
12	SLE RA 1	9	0	1865		269.86	0.61	-3.33	
12	SLE RA 2	9	0	1865		269.86	0.61	-3.33	
12	SLE RA 3	9	0	1865		269.86	0.61	-3.33	
12	SLE RA 4	9	0	1865		269.86	0.61	-3.33	
12	SLE RA 5	9	0	1865		269.86	0.61	-3.33	
12	SLE RA 6	9	0	1865		269.86	0.61	-3.33	
12	SLE RA 7	9	0	1865		269.86	0.61	-3.33	
12	SLE RA 8	9	0	1865		269.86	0.61	-3.33	
12	SLE RA 9	9	0	1865		269.86	0.61	-3.33	
12	SLE RA 10	9	1	2081		292.46	0.73	-3.26	
12	SLE RA 11	9	1	2081		292.46	0.73	-3.26	
12	SLE RA 12	9	1	2081		292.46	0.73	-3.26	
12	SLE RA 13	9	1	2081		292.46	0.73	-3.26	
12	SLE RA 14	9	1	2081		292.46	0.73	-3.26	
12	SLE RA 15	9	1	2081		292.46	0.73	-3.26	
12	SLE RA 16	9	1	2081		292.46	0.73	-3.26	
12	SLE RA 17	9	1	2081		292.46	0.73	-3.26	
12	SLE RA 18	9	1	2173		302.14	0.79	-3.23	
12	SLE RA 19	9	1	2173		302.14	0.79	-3.23	
12	SLE RA 20	9	1	2173		302.14	0.79	-3.23	
12	SLE RA 21	9	1	2173		302.14	0.79	-3.23	
12	SLE FR 1	9	0	1865		269.86	0.61	-3.33	
12	SLE FR 2	9	0	1865		269.86	0.61	-3.33	
12	SLE FR 3	9	0	1865		269.86	0.61	-3.33	
12	SLE FR 4	9	0	1958		279.55	0.67	-3.3	
12	SLE FR 5	9	0	1958		279.55	0.67	-3.3	
12	SLE FR 6	9	1	2019		286	0.7	-3.28	
12	SLE QP 1	9	0	1865		269.86	0.61	-3.33	
12	SLE QP 2	9	0	1958		279.55	0.67	-3.3	
12	SLD 1	195	33	1941		279.52	1.27	-68.14	
12	SLD 2	237	49	1946		279.73	1.23	-82.75	
12	SLD 3	201	-59	1731		262.82	1.48	-70.62	
12	SLD 4	243	-43	1736		263.04	1.44	-85.23	
12	SLD 5	41	144	2269		304.78	0.55	-13.72	
12	SLD 6	84	161	2274		305	0.51	-28.66	
12	SLD 7	60	-163	1570		249.14	1.24	-21.98	
12	SLD 8	103	-147	1575		249.35	1.2	-36.91	
12	SLD 9	-85	148	2341		309.75	0.13	30.31	
12	SLD 10	-42	164	2346		309.96	0.09	15.37	
12	SLD 11	-65	-160	1641		254.1	0.82	22.06	
12	SLD 12	-22	-144	1646		254.31	0.78	7.12	
12	SLD 13	-224	44	2180		296.06	-0.11	78.63	
12	SLD 14	-182	60	2184		296.27	-0.15	64.02	
12	SLD 15	-218	-48	1970		279.37	0.1	76.15	
12	SLD 16	-176	-32	1975		279.58	0.06	61.54	
12	SLV 1	430	77	1928		280.22	2.03	-150.31	
12	SLV 2	526	114	1939		280.7	1.95	-183.74	
12	SLV 3	444	-139	1435		240.44	2.52	-156.09	
12	SLV 4	540	-102	1446		240.92	2.43	-189.51	
12	SLV 5	80	338	2692		339.9	0.37	-26.31	
12	SLV 6	180	376	2704		340.4	0.28	-61.01	
12	SLV 7	125	-383	1049		207.3	1.99	-45.56	
12	SLV 8	224	-345	1061		207.8	1.9	-80.26	
12	SLV 9	-206	346	2855		351.29	-0.57	73.66	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
12	SLV 10	-106	384	2866	351.79	-0.66	38.95
12	SLV 11	-161	-375	1212	218.69	1.05	54.41
12	SLV 12	-61	-337	1223	219.19	0.96	19.71
12	SLV 13	-521	103	2469	318.18	-1.1	182.91
12	SLV 14	-425	140	2481	318.66	-1.19	149.49
12	SLV 15	-508	-113	1976	278.4	-0.62	177.14
12	SLV 16	-412	-77	1988	278.88	-0.7	143.71
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	10	0	1830	283.78	1.44	-3.4
13	SLU 2	10	0	1830	283.78	1.44	-3.4
13	SLU 3	10	0	1830	283.78	1.44	-3.4
13	SLU 4	10	0	1830	283.78	1.44	-3.4
13	SLU 5	10	0	1830	283.78	1.44	-3.4
13	SLU 6	10	0	1830	283.78	1.44	-3.4
13	SLU 7	10	0	1830	283.78	1.44	-3.4
13	SLU 8	10	0	1830	283.78	1.44	-3.4
13	SLU 9	10	0	1830	283.78	1.44	-3.4
13	SLU 10	10	2	2161	322.63	1.8	-3.36
13	SLU 11	10	2	2161	322.63	1.8	-3.36
13	SLU 12	10	2	2161	322.63	1.8	-3.36
13	SLU 13	10	2	2161	322.63	1.8	-3.36
13	SLU 14	10	2	2161	322.63	1.8	-3.36
13	SLU 15	10	2	2161	322.63	1.8	-3.36
13	SLU 16	10	2	2161	322.63	1.8	-3.36
13	SLU 17	10	2	2161	322.63	1.8	-3.36
13	SLU 18	9	2	2304	339.28	1.95	-3.34
13	SLU 19	9	2	2304	339.28	1.95	-3.34
13	SLU 20	9	2	2304	339.28	1.95	-3.34
13	SLU 21	9	2	2304	339.28	1.95	-3.34
13	SLU 22	10	1	2075	312.54	1.7	-3.42
13	SLU 23	10	1	2075	312.54	1.7	-3.42
13	SLU 24	10	1	2075	312.54	1.7	-3.42
13	SLU 25	10	1	2075	312.54	1.7	-3.42
13	SLU 26	10	1	2075	312.54	1.7	-3.42
13	SLU 27	10	1	2075	312.54	1.7	-3.42
13	SLU 28	10	1	2075	312.54	1.7	-3.42
13	SLU 29	10	1	2075	312.54	1.7	-3.42
13	SLU 30	10	1	2075	312.54	1.7	-3.42
13	SLU 31	10	3	2407	351.4	2.06	-3.38
13	SLU 32	10	3	2407	351.4	2.06	-3.38
13	SLU 33	10	3	2407	351.4	2.06	-3.38
13	SLU 34	10	3	2407	351.4	2.06	-3.38
13	SLU 35	10	3	2407	351.4	2.06	-3.38
13	SLU 36	10	3	2407	351.4	2.06	-3.38
13	SLU 37	10	3	2407	351.4	2.06	-3.38
13	SLU 38	10	3	2407	351.4	2.06	-3.38
13	SLU 39	10	3	2550	368.05	2.22	-3.36
13	SLU 40	10	3	2550	368.05	2.22	-3.36
13	SLU 41	10	3	2550	368.05	2.22	-3.36
13	SLU 42	10	3	2550	368.05	2.22	-3.36
13	SLU 43	13	0	2294	359.05	1.78	-4.41
13	SLU 44	13	0	2294	359.05	1.78	-4.41
13	SLU 45	13	0	2294	359.05	1.78	-4.41
13	SLU 46	13	0	2294	359.05	1.78	-4.41
13	SLU 47	13	0	2294	359.05	1.78	-4.41
13	SLU 48	13	0	2294	359.05	1.78	-4.41
13	SLU 49	13	0	2294	359.05	1.78	-4.41
13	SLU 50	13	0	2294	359.05	1.78	-4.41
13	SLU 51	13	0	2294	359.05	1.78	-4.41
13	SLU 52	12	2	2626	397.9	2.14	-4.37
13	SLU 53	12	2	2626	397.9	2.14	-4.37
13	SLU 54	12	2	2626	397.9	2.14	-4.37
13	SLU 55	12	2	2626	397.9	2.14	-4.37
13	SLU 56	12	2	2626	397.9	2.14	-4.37
13	SLU 57	12	2	2626	397.9	2.14	-4.37
13	SLU 58	12	2	2626	397.9	2.14	-4.37
13	SLU 59	12	2	2626	397.9	2.14	-4.37
13	SLU 60	12	2	2768	414.55	2.3	-4.36
13	SLU 61	12	2	2768	414.55	2.3	-4.36
13	SLU 62	12	2	2768	414.55	2.3	-4.36
13	SLU 63	12	2	2768	414.55	2.3	-4.36
13	SLU 64	13	1	2540	387.81	2.04	-4.43
13	SLU 65	13	1	2540	387.81	2.04	-4.43
13	SLU 66	13	1	2540	387.81	2.04	-4.43
13	SLU 67	13	1	2540	387.81	2.04	-4.43
13	SLU 68	13	1	2540	387.81	2.04	-4.43
13	SLU 69	13	1	2540	387.81	2.04	-4.43
13	SLU 70	13	1	2540	387.81	2.04	-4.43
13	SLU 71	13	1	2540	387.81	2.04	-4.43
13	SLU 72	13	1	2540	387.81	2.04	-4.43
13	SLU 73	12	3	2872	426.67	2.4	-4.39
13	SLU 74	12	3	2872	426.67	2.4	-4.39
13	SLU 75	12	3	2872	426.67	2.4	-4.39
13	SLU 76	12	3	2872	426.67	2.4	-4.39
13	SLU 77	12	3	2872	426.67	2.4	-4.39
13	SLU 78	12	3	2872	426.67	2.4	-4.39
13	SLU 79	12	3	2872	426.67	2.4	-4.39



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
13	SLU 80	12	3	2872	426.67	2.4	-4.39
13	SLU 81	12	3	3014	443.32	2.56	-4.38
13	SLU 82	12	3	3014	443.32	2.56	-4.38
13	SLU 83	12	3	3014	443.32	2.56	-4.38
13	SLU 84	12	3	3014	443.32	2.56	-4.38
13	SLE RA 1	10	1	1900	291.99	1.51	-3.4
13	SLE RA 2	10	1	1900	291.99	1.51	-3.4
13	SLE RA 3	10	1	1900	291.99	1.51	-3.4
13	SLE RA 4	10	1	1900	291.99	1.51	-3.4
13	SLE RA 5	10	1	1900	291.99	1.51	-3.4
13	SLE RA 6	10	1	1900	291.99	1.51	-3.4
13	SLE RA 7	10	1	1900	291.99	1.51	-3.4
13	SLE RA 8	10	1	1900	291.99	1.51	-3.4
13	SLE RA 9	10	1	1900	291.99	1.51	-3.4
13	SLE RA 10	10	2	2121	317.9	1.75	-3.38
13	SLE RA 11	10	2	2121	317.9	1.75	-3.38
13	SLE RA 12	10	2	2121	317.9	1.75	-3.38
13	SLE RA 13	10	2	2121	317.9	1.75	-3.38
13	SLE RA 14	10	2	2121	317.9	1.75	-3.38
13	SLE RA 15	10	2	2121	317.9	1.75	-3.38
13	SLE RA 16	10	2	2121	317.9	1.75	-3.38
13	SLE RA 17	10	2	2121	317.9	1.75	-3.38
13	SLE RA 18	10	2	2216	329	1.86	-3.37
13	SLE RA 19	10	2	2216	329	1.86	-3.37
13	SLE RA 20	10	2	2216	329	1.86	-3.37
13	SLE RA 21	10	2	2216	329	1.86	-3.37
13	SLE FR 1	10	1	1900	291.99	1.51	-3.4
13	SLE FR 2	10	1	1900	291.99	1.51	-3.4
13	SLE FR 3	10	1	1900	291.99	1.51	-3.4
13	SLE FR 4	10	1	1995	303.1	1.62	-3.39
13	SLE FR 5	10	1	1995	303.1	1.62	-3.39
13	SLE FR 6	10	1	2058	310.5	1.69	-3.38
13	SLE QP 1	10	1	1900	291.99	1.51	-3.4
13	SLE QP 2	10	1	1995	303.1	1.62	-3.39
13	SLD 1	195	27	1997	307.56	2.22	-68.24
13	SLD 2	237	41	2001	307.59	2.18	-82.87
13	SLD 3	201	-48	1791	290.41	2.27	-70.78
13	SLD 4	243	-34	1795	290.44	2.24	-85.41
13	SLD 5	41	117	2306	330.43	1.72	-13.72
13	SLD 6	84	131	2310	330.47	1.69	-28.67
13	SLD 7	61	-132	1620	273.26	1.91	-22.17
13	SLD 8	104	-118	1624	273.3	1.88	-37.12
13	SLD 9	-85	120	2365	332.89	1.35	30.34
13	SLD 10	-42	134	2369	332.93	1.32	15.39
13	SLD 11	-65	-129	1679	275.72	1.55	21.89
13	SLD 12	-22	-116	1683	275.76	1.52	6.94
13	SLD 13	-224	36	2194	315.75	0.99	78.62
13	SLD 14	-182	50	2198	315.79	0.96	63.99
13	SLD 15	-218	-39	1989	298.6	1.05	76.09
13	SLD 16	-176	-25	1993	298.64	1.02	61.46
13	SLV 1	431	63	2008	313.75	2.97	-150.42
13	SLV 2	527	94	2016	313.83	2.9	-183.88
13	SLV 3	445	-112	1524	272.95	3.11	-156.33
13	SLV 4	541	-82	1533	273.03	3.04	-189.79
13	SLV 5	79	274	2728	368.15	1.84	-26.18
13	SLV 6	179	306	2738	368.23	1.76	-60.92
13	SLV 7	126	-310	1117	232.14	2.3	-45.89
13	SLV 8	226	-278	1126	232.22	2.23	-80.63
13	SLV 9	-207	280	2863	373.97	1	73.85
13	SLV 10	-107	312	2872	374.05	0.93	39.1
13	SLV 11	-160	-304	1252	237.96	1.47	54.14
13	SLV 12	-60	-272	1261	238.04	1.4	19.4
13	SLV 13	-522	84	2456	333.17	0.19	183.01
13	SLV 14	-425	114	2465	333.24	0.12	149.55
13	SLV 15	-507	-92	1973	292.36	0.33	177.1
13	SLV 16	-411	-61	1982	292.44	0.26	143.64
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	10	1	1888	324.37	2.2	-3.44
14	SLU 2	10	1	1888	324.37	2.2	-3.44
14	SLU 3	10	1	1888	324.37	2.2	-3.44
14	SLU 4	10	1	1888	324.37	2.2	-3.44
14	SLU 5	10	1	1888	324.37	2.2	-3.44
14	SLU 6	10	1	1888	324.37	2.2	-3.44
14	SLU 7	10	1	1888	324.37	2.2	-3.44
14	SLU 8	10	1	1888	324.37	2.2	-3.44
14	SLU 9	10	1	1888	324.37	2.2	-3.44
14	SLU 10	10	2	2234	372.42	2.73	-3.48
14	SLU 11	10	2	2234	372.42	2.73	-3.48
14	SLU 12	10	2	2234	372.42	2.73	-3.48
14	SLU 13	10	2	2234	372.42	2.73	-3.48
14	SLU 14	10	2	2234	372.42	2.73	-3.48
14	SLU 15	10	2	2234	372.42	2.73	-3.48
14	SLU 16	10	2	2234	372.42	2.73	-3.48
14	SLU 17	10	2	2234	372.42	2.73	-3.48
14	SLU 18	10	3	2382	393.01	2.95	-3.5
14	SLU 19	10	3	2382	393.01	2.95	-3.5
14	SLU 20	10	3	2382	393.01	2.95	-3.5



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
14	SLU 21	10	3	2382	393.01	2.95	-3.5
14	SLU 22	10	2	2144	359.92	2.59	-3.51
14	SLU 23	10	2	2144	359.92	2.59	-3.51
14	SLU 24	10	2	2144	359.92	2.59	-3.51
14	SLU 25	10	2	2144	359.92	2.59	-3.51
14	SLU 26	10	2	2144	359.92	2.59	-3.51
14	SLU 27	10	2	2144	359.92	2.59	-3.51
14	SLU 28	10	2	2144	359.92	2.59	-3.51
14	SLU 29	10	2	2144	359.92	2.59	-3.51
14	SLU 30	10	2	2144	359.92	2.59	-3.51
14	SLU 31	10	3	2490	407.97	3.11	-3.55
14	SLU 32	10	3	2490	407.97	3.11	-3.55
14	SLU 33	10	3	2490	407.97	3.11	-3.55
14	SLU 34	10	3	2490	407.97	3.11	-3.55
14	SLU 35	10	3	2490	407.97	3.11	-3.55
14	SLU 36	10	3	2490	407.97	3.11	-3.55
14	SLU 37	10	3	2490	407.97	3.11	-3.55
14	SLU 38	10	3	2490	407.97	3.11	-3.55
14	SLU 39	10	4	2638	428.56	3.33	-3.56
14	SLU 40	10	4	2638	428.56	3.33	-3.56
14	SLU 41	10	4	2638	428.56	3.33	-3.56
14	SLU 42	10	4	2638	428.56	3.33	-3.56
14	SLU 43	13	0	2366	409.49	2.73	-4.45
14	SLU 44	13	0	2366	409.49	2.73	-4.45
14	SLU 45	13	0	2366	409.49	2.73	-4.45
14	SLU 46	13	0	2366	409.49	2.73	-4.45
14	SLU 47	13	0	2366	409.49	2.73	-4.45
14	SLU 48	13	0	2366	409.49	2.73	-4.45
14	SLU 49	13	0	2366	409.49	2.73	-4.45
14	SLU 50	13	0	2366	409.49	2.73	-4.45
14	SLU 51	13	0	2366	409.49	2.73	-4.45
14	SLU 52	13	2	2712	457.54	3.26	-4.49
14	SLU 53	13	2	2712	457.54	3.26	-4.49
14	SLU 54	13	2	2712	457.54	3.26	-4.49
14	SLU 55	13	2	2712	457.54	3.26	-4.49
14	SLU 56	13	2	2712	457.54	3.26	-4.49
14	SLU 57	13	2	2712	457.54	3.26	-4.49
14	SLU 58	13	2	2712	457.54	3.26	-4.49
14	SLU 59	13	2	2712	457.54	3.26	-4.49
14	SLU 60	13	3	2861	478.13	3.48	-4.51
14	SLU 61	13	3	2861	478.13	3.48	-4.51
14	SLU 62	13	3	2861	478.13	3.48	-4.51
14	SLU 63	13	3	2861	478.13	3.48	-4.51
14	SLU 64	13	1	2623	445.04	3.12	-4.52
14	SLU 65	13	1	2623	445.04	3.12	-4.52
14	SLU 66	13	1	2623	445.04	3.12	-4.52
14	SLU 67	13	1	2623	445.04	3.12	-4.52
14	SLU 68	13	1	2623	445.04	3.12	-4.52
14	SLU 69	13	1	2623	445.04	3.12	-4.52
14	SLU 70	13	1	2623	445.04	3.12	-4.52
14	SLU 71	13	1	2623	445.04	3.12	-4.52
14	SLU 72	13	1	2623	445.04	3.12	-4.52
14	SLU 73	13	3	2969	493.09	3.64	-4.56
14	SLU 74	13	3	2969	493.09	3.64	-4.56
14	SLU 75	13	3	2969	493.09	3.64	-4.56
14	SLU 76	13	3	2969	493.09	3.64	-4.56
14	SLU 77	13	3	2969	493.09	3.64	-4.56
14	SLU 78	13	3	2969	493.09	3.64	-4.56
14	SLU 79	13	3	2969	493.09	3.64	-4.56
14	SLU 80	13	3	2969	493.09	3.64	-4.56
14	SLU 81	13	4	3117	513.68	3.86	-4.57
14	SLU 82	13	4	3117	513.68	3.86	-4.57
14	SLU 83	13	4	3117	513.68	3.86	-4.57
14	SLU 84	13	4	3117	513.68	3.86	-4.57
14	SLE RA 1	10	1	1961	334.52	2.31	-3.46
14	SLE RA 2	10	1	1961	334.52	2.31	-3.46
14	SLE RA 3	10	1	1961	334.52	2.31	-3.46
14	SLE RA 4	10	1	1961	334.52	2.31	-3.46
14	SLE RA 5	10	1	1961	334.52	2.31	-3.46
14	SLE RA 6	10	1	1961	334.52	2.31	-3.46
14	SLE RA 7	10	1	1961	334.52	2.31	-3.46
14	SLE RA 8	10	1	1961	334.52	2.31	-3.46
14	SLE RA 9	10	1	1961	334.52	2.31	-3.46
14	SLE RA 10	10	2	2192	366.56	2.66	-3.49
14	SLE RA 11	10	2	2192	366.56	2.66	-3.49
14	SLE RA 12	10	2	2192	366.56	2.66	-3.49
14	SLE RA 13	10	2	2192	366.56	2.66	-3.49
14	SLE RA 14	10	2	2192	366.56	2.66	-3.49
14	SLE RA 15	10	2	2192	366.56	2.66	-3.49
14	SLE RA 16	10	2	2192	366.56	2.66	-3.49
14	SLE RA 17	10	2	2192	366.56	2.66	-3.49
14	SLE RA 18	10	2	2291	380.29	2.81	-3.5
14	SLE RA 19	10	2	2291	380.29	2.81	-3.5
14	SLE RA 20	10	2	2291	380.29	2.81	-3.5
14	SLE RA 21	10	2	2291	380.29	2.81	-3.5
14	SLE FR 1	10	1	1961	334.52	2.31	-3.46
14	SLE FR 2	10	1	1961	334.52	2.31	-3.46
14	SLE FR 3	10	1	1961	334.52	2.31	-3.46
14	SLE FR 4	10	1	2060	348.25	2.46	-3.47
14	SLE FR 5	10	1	2060	348.25	2.46	-3.47



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
14	SLE FR 6	10	2	2126	357.41	2.56	-3.48
14	SLE QP 1	10	1	1961	334.52	2.31	-3.46
14	SLE QP 2	10	1	2060	348.25	2.46	-3.47
14	SLD 1	196	22	2081	356.08	3.07	-68.32
14	SLD 2	238	33	2084	356.03	3.05	-82.96
14	SLD 3	202	-37	1875	335.76	2.99	-70.91
14	SLD 4	244	-26	1878	335.7	2.96	-85.55
14	SLD 5	41	94	2378	381.45	2.78	-13.72
14	SLD 6	84	105	2381	381.39	2.76	-28.68
14	SLD 7	62	-105	1691	313.7	2.5	-22.34
14	SLD 8	105	-93	1694	313.64	2.48	-37.3
14	SLD 9	-85	96	2426	382.87	2.45	30.36
14	SLD 10	-42	107	2429	382.81	2.42	15.39
14	SLD 11	-64	-102	1739	315.11	2.17	21.73
14	SLD 12	-21	-91	1742	315.05	2.15	6.77
14	SLD 13	-224	29	2242	360.8	1.96	78.6
14	SLD 14	-182	40	2245	360.75	1.94	63.96
14	SLD 15	-218	-30	2036	340.48	1.88	76.01
14	SLD 16	-176	-19	2039	340.42	1.85	61.37
14	SLV 1	431	50	2116	366.44	3.85	-150.49
14	SLV 2	527	76	2123	366.31	3.79	-183.98
14	SLV 3	446	-89	1632	318.28	3.65	-156.52
14	SLV 4	542	-64	1638	318.15	3.6	-190.01
14	SLV 5	78	218	2809	426.79	3.19	-26.07
14	SLV 6	178	244	2816	426.66	3.13	-60.83
14	SLV 7	128	-247	1194	266.28	2.55	-46.18
14	SLV 8	227	-220	1201	266.14	2.49	-80.95
14	SLV 9	-208	223	2918	430.37	2.44	74
14	SLV 10	-108	249	2926	430.23	2.38	39.23
14	SLV 11	-158	-242	1304	269.85	1.79	53.89
14	SLV 12	-58	-215	1311	269.71	1.73	19.12
14	SLV 13	-522	66	2481	378.35	1.33	183.06
14	SLV 14	-426	92	2488	378.22	1.27	149.58
14	SLV 15	-507	-73	1997	330.2	1.14	177.03
14	SLV 16	-411	-48	2004	330.07	1.08	143.54
14	CRTFP Ux+	0	0	0	0	0	0
14	CRTFP Ux-	0	0	0	0	0	0
14	CRTFP Uy+	0	0	0	0	0	0
14	CRTFP Uy-	0	0	0	0	0	0
15	SLU 1	10	1	1968	381.95	2.83	-3.48
15	SLU 2	10	1	1968	381.95	2.83	-3.48
15	SLU 3	10	1	1968	381.95	2.83	-3.48
15	SLU 4	10	1	1968	381.95	2.83	-3.48
15	SLU 5	10	1	1968	381.95	2.83	-3.48
15	SLU 6	10	1	1968	381.95	2.83	-3.48
15	SLU 7	10	1	1968	381.95	2.83	-3.48
15	SLU 8	10	1	1968	381.95	2.83	-3.48
15	SLU 9	10	1	1968	381.95	2.83	-3.48
15	SLU 10	10	2	2333	442.88	3.49	-3.59
15	SLU 11	10	2	2333	442.88	3.49	-3.59
15	SLU 12	10	2	2333	442.88	3.49	-3.59
15	SLU 13	10	2	2333	442.88	3.49	-3.59
15	SLU 14	10	2	2333	442.88	3.49	-3.59
15	SLU 15	10	2	2333	442.88	3.49	-3.59
15	SLU 16	10	2	2333	442.88	3.49	-3.59
15	SLU 17	10	2	2333	442.88	3.49	-3.59
15	SLU 18	10	3	2489	468.99	3.77	-3.64
15	SLU 19	10	3	2489	468.99	3.77	-3.64
15	SLU 20	10	3	2489	468.99	3.77	-3.64
15	SLU 21	10	3	2489	468.99	3.77	-3.64
15	SLU 22	10	2	2238	427.03	3.32	-3.6
15	SLU 23	10	2	2238	427.03	3.32	-3.6
15	SLU 24	10	2	2238	427.03	3.32	-3.6
15	SLU 25	10	2	2238	427.03	3.32	-3.6
15	SLU 26	10	2	2238	427.03	3.32	-3.6
15	SLU 27	10	2	2238	427.03	3.32	-3.6
15	SLU 28	10	2	2238	427.03	3.32	-3.6
15	SLU 29	10	2	2238	427.03	3.32	-3.6
15	SLU 30	10	2	2238	427.03	3.32	-3.6
15	SLU 31	11	3	2603	487.96	3.97	-3.71
15	SLU 32	11	3	2603	487.96	3.97	-3.71
15	SLU 33	11	3	2603	487.96	3.97	-3.71
15	SLU 34	11	3	2603	487.96	3.97	-3.71
15	SLU 35	11	3	2603	487.96	3.97	-3.71
15	SLU 36	11	3	2603	487.96	3.97	-3.71
15	SLU 37	11	3	2603	487.96	3.97	-3.71
15	SLU 38	11	3	2603	487.96	3.97	-3.71
15	SLU 39	11	4	2759	514.07	4.25	-3.76
15	SLU 40	11	4	2759	514.07	4.25	-3.76
15	SLU 41	11	4	2759	514.07	4.25	-3.76
15	SLU 42	11	4	2759	514.07	4.25	-3.76
15	SLU 43	13	0	2466	481.09	3.52	-4.48
15	SLU 44	13	0	2466	481.09	3.52	-4.48
15	SLU 45	13	0	2466	481.09	3.52	-4.48
15	SLU 46	13	0	2466	481.09	3.52	-4.48
15	SLU 47	13	0	2466	481.09	3.52	-4.48
15	SLU 48	13	0	2466	481.09	3.52	-4.48
15	SLU 49	13	0	2466	481.09	3.52	-4.48
15	SLU 50	13	0	2466	481.09	3.52	-4.48
15	SLU 51	13	0	2466	481.09	3.52	-4.48



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione		
Ind.	N.br.	x	y	z		x	y	z
15	SLU 52	13	2	2831		542.01	4.17	-4.6
15	SLU 53	13	2	2831		542.01	4.17	-4.6
15	SLU 54	13	2	2831		542.01	4.17	-4.6
15	SLU 55	13	2	2831		542.01	4.17	-4.6
15	SLU 56	13	2	2831		542.01	4.17	-4.6
15	SLU 57	13	2	2831		542.01	4.17	-4.6
15	SLU 58	13	2	2831		542.01	4.17	-4.6
15	SLU 59	13	2	2831		542.01	4.17	-4.6
15	SLU 60	13	3	2987		568.13	4.45	-4.65
15	SLU 61	13	3	2987		568.13	4.45	-4.65
15	SLU 62	13	3	2987		568.13	4.45	-4.65
15	SLU 63	13	3	2987		568.13	4.45	-4.65
15	SLU 64	13	2	2736		526.16	4	-4.6
15	SLU 65	13	2	2736		526.16	4	-4.6
15	SLU 66	13	2	2736		526.16	4	-4.6
15	SLU 67	13	2	2736		526.16	4	-4.6
15	SLU 68	13	2	2736		526.16	4	-4.6
15	SLU 69	13	2	2736		526.16	4	-4.6
15	SLU 70	13	2	2736		526.16	4	-4.6
15	SLU 71	13	2	2736		526.16	4	-4.6
15	SLU 72	13	2	2736		526.16	4	-4.6
15	SLU 73	13	3	3101		587.09	4.65	-4.72
15	SLU 74	13	3	3101		587.09	4.65	-4.72
15	SLU 75	13	3	3101		587.09	4.65	-4.72
15	SLU 76	13	3	3101		587.09	4.65	-4.72
15	SLU 77	13	3	3101		587.09	4.65	-4.72
15	SLU 78	13	3	3101		587.09	4.65	-4.72
15	SLU 79	13	3	3101		587.09	4.65	-4.72
15	SLU 80	13	3	3101		587.09	4.65	-4.72
15	SLU 81	14	4	3257		613.2	4.93	-4.76
15	SLU 82	14	4	3257		613.2	4.93	-4.76
15	SLU 83	14	4	3257		613.2	4.93	-4.76
15	SLU 84	14	4	3257		613.2	4.93	-4.76
15	SLE RA 1	10	1	2046		394.83	2.97	-3.51
15	SLE RA 2	10	1	2046		394.83	2.97	-3.51
15	SLE RA 3	10	1	2046		394.83	2.97	-3.51
15	SLE RA 4	10	1	2046		394.83	2.97	-3.51
15	SLE RA 5	10	1	2046		394.83	2.97	-3.51
15	SLE RA 6	10	1	2046		394.83	2.97	-3.51
15	SLE RA 7	10	1	2046		394.83	2.97	-3.51
15	SLE RA 8	10	1	2046		394.83	2.97	-3.51
15	SLE RA 9	10	1	2046		394.83	2.97	-3.51
15	SLE RA 10	10	2	2289		435.45	3.41	-3.59
15	SLE RA 11	10	2	2289		435.45	3.41	-3.59
15	SLE RA 12	10	2	2289		435.45	3.41	-3.59
15	SLE RA 13	10	2	2289		435.45	3.41	-3.59
15	SLE RA 14	10	2	2289		435.45	3.41	-3.59
15	SLE RA 15	10	2	2289		435.45	3.41	-3.59
15	SLE RA 16	10	2	2289		435.45	3.41	-3.59
15	SLE RA 17	10	2	2289		435.45	3.41	-3.59
15	SLE RA 18	10	2	2393		452.86	3.59	-3.62
15	SLE RA 19	10	2	2393		452.86	3.59	-3.62
15	SLE RA 20	10	2	2393		452.86	3.59	-3.62
15	SLE RA 21	10	2	2393		452.86	3.59	-3.62
15	SLE FR 1	10	1	2046		394.83	2.97	-3.51
15	SLE FR 2	10	1	2046		394.83	2.97	-3.51
15	SLE FR 3	10	1	2046		394.83	2.97	-3.51
15	SLE FR 4	10	1	2150		412.24	3.16	-3.54
15	SLE FR 5	10	1	2150		412.24	3.16	-3.54
15	SLE FR 6	10	2	2219		423.85	3.28	-3.57
15	SLE QP 1	10	1	2046		394.83	2.97	-3.51
15	SLE QP 2	10	1	2150		412.24	3.16	-3.54
15	SLD 1	196	18	2190		428.12	3.78	-68.37
15	SLD 2	238	27	2192		428.03	3.76	-83.02
15	SLD 3	202	-29	1980		402.16	3.58	-71
15	SLD 4	244	-20	1982		402.07	3.56	-85.65
15	SLD 5	41	74	2480		456.41	3.65	-13.71
15	SLD 6	83	83	2483		456.32	3.63	-28.68
15	SLD 7	63	-82	1778		369.88	3	-22.49
15	SLD 8	106	-72	1781		369.79	2.98	-37.46
15	SLD 9	-85	75	2519		454.69	3.34	30.37
15	SLD 10	-42	84	2521		454.61	3.32	15.4
15	SLD 11	-63	-80	1817		368.16	2.69	21.59
15	SLD 12	-20	-71	1819		368.07	2.67	6.62
15	SLD 13	-224	23	2318		422.41	2.75	78.56
15	SLD 14	-182	32	2320		422.32	2.73	63.91
15	SLD 15	-217	-24	2107		396.45	2.56	75.93
15	SLD 16	-175	-15	2109		396.36	2.54	61.28
15	SLV 1	431	39	2250		449.86	4.57	-150.51
15	SLV 2	527	60	2255		449.66	4.52	-184.01
15	SLV 3	446	-69	1755		388.6	4.12	-156.66
15	SLV 4	542	-49	1760		388.4	4.07	-190.16
15	SLV 5	77	170	2928		516.52	4.29	-25.95
15	SLV 6	177	192	2933		516.31	4.24	-60.73
15	SLV 7	129	-193	1279		312.3	2.77	-46.43
15	SLV 8	229	-171	1285		312.1	2.72	-81.22
15	SLV 9	-208	174	3015		512.38	3.59	74.13
15	SLV 10	-109	195	3020		512.18	3.54	39.34
15	SLV 11	-157	-189	1366		308.17	2.08	53.64
15	SLV 12	-57	-168	1372		307.96	2.03	18.86



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
15	SLV 13	-522	52	2539	436.08	2.25	183.07
15	SLV 14	-426	72	2544	435.88	2.2	149.57
15	SLV 15	-507	-57	2045	374.82	1.79	176.92
15	SLV 16	-410	-37	2050	374.62	1.74	143.42
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	10	0	2066	452.85	3.25	-3.5
16	SLU 2	10	0	2066	452.85	3.25	-3.5
16	SLU 3	10	0	2066	452.85	3.25	-3.5
16	SLU 4	10	0	2066	452.85	3.25	-3.5
16	SLU 5	10	0	2066	452.85	3.25	-3.5
16	SLU 6	10	0	2066	452.85	3.25	-3.5
16	SLU 7	10	0	2066	452.85	3.25	-3.5
16	SLU 8	10	0	2066	452.85	3.25	-3.5
16	SLU 9	10	0	2066	452.85	3.25	-3.5
16	SLU 10	11	2	2453	529.52	3.99	-3.7
16	SLU 11	11	2	2453	529.52	3.99	-3.7
16	SLU 12	11	2	2453	529.52	3.99	-3.7
16	SLU 13	11	2	2453	529.52	3.99	-3.7
16	SLU 14	11	2	2453	529.52	3.99	-3.7
16	SLU 15	11	2	2453	529.52	3.99	-3.7
16	SLU 16	11	2	2453	529.52	3.99	-3.7
16	SLU 17	11	2	2453	529.52	3.99	-3.7
16	SLU 18	11	2	2618	562.38	4.31	-3.78
16	SLU 19	11	2	2618	562.38	4.31	-3.78
16	SLU 20	11	2	2618	562.38	4.31	-3.78
16	SLU 21	11	2	2618	562.38	4.31	-3.78
16	SLU 22	11	1	2352	509.59	3.8	-3.67
16	SLU 23	11	1	2352	509.59	3.8	-3.67
16	SLU 24	11	1	2352	509.59	3.8	-3.67
16	SLU 25	11	1	2352	509.59	3.8	-3.67
16	SLU 26	11	1	2352	509.59	3.8	-3.67
16	SLU 27	11	1	2352	509.59	3.8	-3.67
16	SLU 28	11	1	2352	509.59	3.8	-3.67
16	SLU 29	11	1	2352	509.59	3.8	-3.67
16	SLU 30	11	1	2352	509.59	3.8	-3.67
16	SLU 31	11	3	2739	586.26	4.54	-3.87
16	SLU 32	11	3	2739	586.26	4.54	-3.87
16	SLU 33	11	3	2739	586.26	4.54	-3.87
16	SLU 34	11	3	2739	586.26	4.54	-3.87
16	SLU 35	11	3	2739	586.26	4.54	-3.87
16	SLU 36	11	3	2739	586.26	4.54	-3.87
16	SLU 37	11	3	2739	586.26	4.54	-3.87
16	SLU 38	11	3	2739	586.26	4.54	-3.87
16	SLU 39	11	3	2905	619.12	4.85	-3.95
16	SLU 40	11	3	2905	619.12	4.85	-3.95
16	SLU 41	11	3	2905	619.12	4.85	-3.95
16	SLU 42	11	3	2905	619.12	4.85	-3.95
16	SLU 43	13	0	2587	569.25	4.04	-4.49
16	SLU 44	13	0	2587	569.25	4.04	-4.49
16	SLU 45	13	0	2587	569.25	4.04	-4.49
16	SLU 46	13	0	2587	569.25	4.04	-4.49
16	SLU 47	13	0	2587	569.25	4.04	-4.49
16	SLU 48	13	0	2587	569.25	4.04	-4.49
16	SLU 49	13	0	2587	569.25	4.04	-4.49
16	SLU 50	13	0	2587	569.25	4.04	-4.49
16	SLU 51	13	0	2587	569.25	4.04	-4.49
16	SLU 52	13	2	2974	645.92	4.78	-4.69
16	SLU 53	13	2	2974	645.92	4.78	-4.69
16	SLU 54	13	2	2974	645.92	4.78	-4.69
16	SLU 55	13	2	2974	645.92	4.78	-4.69
16	SLU 56	13	2	2974	645.92	4.78	-4.69
16	SLU 57	13	2	2974	645.92	4.78	-4.69
16	SLU 58	13	2	2974	645.92	4.78	-4.69
16	SLU 59	13	2	2974	645.92	4.78	-4.69
16	SLU 60	14	2	3140	678.78	5.1	-4.77
16	SLU 61	14	2	3140	678.78	5.1	-4.77
16	SLU 62	14	2	3140	678.78	5.1	-4.77
16	SLU 63	14	2	3140	678.78	5.1	-4.77
16	SLU 64	13	1	2874	625.99	4.59	-4.66
16	SLU 65	13	1	2874	625.99	4.59	-4.66
16	SLU 66	13	1	2874	625.99	4.59	-4.66
16	SLU 67	13	1	2874	625.99	4.59	-4.66
16	SLU 68	13	1	2874	625.99	4.59	-4.66
16	SLU 69	13	1	2874	625.99	4.59	-4.66
16	SLU 70	13	1	2874	625.99	4.59	-4.66
16	SLU 71	13	1	2874	625.99	4.59	-4.66
16	SLU 72	13	1	2874	625.99	4.59	-4.66
16	SLU 73	14	3	3261	702.66	5.32	-4.86
16	SLU 74	14	3	3261	702.66	5.32	-4.86
16	SLU 75	14	3	3261	702.66	5.32	-4.86
16	SLU 76	14	3	3261	702.66	5.32	-4.86
16	SLU 77	14	3	3261	702.66	5.32	-4.86
16	SLU 78	14	3	3261	702.66	5.32	-4.86
16	SLU 79	14	3	3261	702.66	5.32	-4.86
16	SLU 80	14	3	3261	702.66	5.32	-4.86
16	SLU 81	14	3	3426	735.52	5.64	-4.94
16	SLU 82	14	3	3426	735.52	5.64	-4.94



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
Ind.	N.br.	x	y	z		x	y	z	
16	SLU 83	14	3	3426		735.52	5.64	-4.94	
16	SLU 84	14	3	3426		735.52	5.64	-4.94	
16	SLE RA 1	10	1	2148		469.06	3.41	-3.55	
16	SLE RA 2	10	1	2148		469.06	3.41	-3.55	
16	SLE RA 3	10	1	2148		469.06	3.41	-3.55	
16	SLE RA 4	10	1	2148		469.06	3.41	-3.55	
16	SLE RA 5	10	1	2148		469.06	3.41	-3.55	
16	SLE RA 6	10	1	2148		469.06	3.41	-3.55	
16	SLE RA 7	10	1	2148		469.06	3.41	-3.55	
16	SLE RA 8	10	1	2148		469.06	3.41	-3.55	
16	SLE RA 9	10	1	2148		469.06	3.41	-3.55	
16	SLE RA 10	11	2	2406		520.18	3.9	-3.68	
16	SLE RA 11	11	2	2406		520.18	3.9	-3.68	
16	SLE RA 12	11	2	2406		520.18	3.9	-3.68	
16	SLE RA 13	11	2	2406		520.18	3.9	-3.68	
16	SLE RA 14	11	2	2406		520.18	3.9	-3.68	
16	SLE RA 15	11	2	2406		520.18	3.9	-3.68	
16	SLE RA 16	11	2	2406		520.18	3.9	-3.68	
16	SLE RA 17	11	2	2406		520.18	3.9	-3.68	
16	SLE RA 18	11	2	2516		542.08	4.11	-3.74	
16	SLE RA 19	11	2	2516		542.08	4.11	-3.74	
16	SLE RA 20	11	2	2516		542.08	4.11	-3.74	
16	SLE RA 21	11	2	2516		542.08	4.11	-3.74	
16	SLE FR 1	10	1	2148		469.06	3.41	-3.55	
16	SLE FR 2	10	1	2148		469.06	3.41	-3.55	
16	SLE FR 3	10	1	2148		469.06	3.41	-3.55	
16	SLE FR 4	10	1	2258		490.97	3.62	-3.6	
16	SLE FR 5	10	1	2258		490.97	3.62	-3.6	
16	SLE FR 6	10	1	2332		505.57	3.76	-3.64	
16	SLE QP 1	10	1	2148		469.06	3.41	-3.55	
16	SLE QP 2	10	1	2258		490.97	3.62	-3.6	
16	SLD 1	196	14	2318		511.35	4.25	-68.39	
16	SLD 2	238	21	2320		511.27	4.23	-83.04	
16	SLD 3	203	-22	2100		477.77	3.97	-71.07	
16	SLD 4	245	-15	2102		477.69	3.95	-85.72	
16	SLD 5	40	57	2606		548.04	4.24	-13.69	
16	SLD 6	83	64	2608		547.96	4.22	-28.66	
16	SLD 7	63	-63	1879		436.1	3.31	-22.62	
16	SLD 8	106	-56	1881		436.02	3.29	-37.59	
16	SLD 9	-86	58	2635		545.91	3.95	30.38	
16	SLD 10	-43	65	2637		545.83	3.93	15.41	
16	SLD 11	-62	-62	1908		433.97	3.02	21.45	
16	SLD 12	-20	-55	1910		433.89	3	6.48	
16	SLD 13	-224	17	2415		504.25	3.28	78.51	
16	SLD 14	-182	24	2416		504.16	3.27	63.86	
16	SLD 15	-217	-19	2196		470.66	3.01	75.83	
16	SLD 16	-175	-11	2198		470.58	2.99	61.19	
16	SLV 1	431	30	2403		538.88	5.06	-150.49	
16	SLV 2	527	47	2407		538.7	5.02	-183.99	
16	SLV 3	447	-54	1891		459.83	4.41	-156.74	
16	SLV 4	543	-37	1895		459.64	4.37	-190.24	
16	SLV 5	76	131	3077		625.31	5.05	-25.82	
16	SLV 6	176	148	3081		625.12	5.01	-60.61	
16	SLV 7	130	-149	1370		361.79	2.89	-46.66	
16	SLV 8	230	-132	1374		361.6	2.84	-81.44	
16	SLV 9	-209	134	3142		620.33	4.39	74.23	
16	SLV 10	-110	151	3146		620.14	4.35	39.45	
16	SLV 11	-155	-146	1436		356.81	2.23	53.4	
16	SLV 12	-56	-129	1440		356.62	2.19	18.62	
16	SLV 13	-522	39	2622		522.29	2.87	183.03	
16	SLV 14	-426	56	2626		522.1	2.83	149.53	
16	SLV 15	-506	-45	2110		443.23	2.22	176.78	
16	SLV 16	-410	-28	2114		443.05	2.18	143.28	
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	10	0	2172		531.59	3.34	-3.5	
17	SLU 2	10	0	2172		531.59	3.34	-3.5	
17	SLU 3	10	0	2172		531.59	3.34	-3.5	
17	SLU 4	10	0	2172		531.59	3.34	-3.5	
17	SLU 5	10	0	2172		531.59	3.34	-3.5	
17	SLU 6	10	0	2172		531.59	3.34	-3.5	
17	SLU 7	10	0	2172		531.59	3.34	-3.5	
17	SLU 8	10	0	2172		531.59	3.34	-3.5	
17	SLU 9	10	0	2172		531.59	3.34	-3.5	
17	SLU 10	11	1	2582		625.69	4.09	-3.78	
17	SLU 11	11	1	2582		625.69	4.09	-3.78	
17	SLU 12	11	1	2582		625.69	4.09	-3.78	
17	SLU 13	11	1	2582		625.69	4.09	-3.78	
17	SLU 14	11	1	2582		625.69	4.09	-3.78	
17	SLU 15	11	1	2582		625.69	4.09	-3.78	
17	SLU 16	11	1	2582		625.69	4.09	-3.78	
17	SLU 17	11	1	2582		625.69	4.09	-3.78	
17	SLU 18	11	1	2758		666.03	4.42	-3.9	
17	SLU 19	11	1	2758		666.03	4.42	-3.9	
17	SLU 20	11	1	2758		666.03	4.42	-3.9	
17	SLU 21	11	1	2758		666.03	4.42	-3.9	
17	SLU 22	11	1	2476		601.25	3.9	-3.72	
17	SLU 23	11	1	2476		601.25	3.9	-3.72	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
17	SLU 24	11	1	2476	601.25	3.9	-3.72
17	SLU 25	11	1	2476	601.25	3.9	-3.72
17	SLU 26	11	1	2476	601.25	3.9	-3.72
17	SLU 27	11	1	2476	601.25	3.9	-3.72
17	SLU 28	11	1	2476	601.25	3.9	-3.72
17	SLU 29	11	1	2476	601.25	3.9	-3.72
17	SLU 30	11	1	2476	601.25	3.9	-3.72
17	SLU 31	12	2	2886	695.36	4.65	-4.01
17	SLU 32	12	2	2886	695.36	4.65	-4.01
17	SLU 33	12	2	2886	695.36	4.65	-4.01
17	SLU 34	12	2	2886	695.36	4.65	-4.01
17	SLU 35	12	2	2886	695.36	4.65	-4.01
17	SLU 36	12	2	2886	695.36	4.65	-4.01
17	SLU 37	12	2	2886	695.36	4.65	-4.01
17	SLU 38	12	2	2886	695.36	4.65	-4.01
17	SLU 39	12	2	3062	735.69	4.97	-4.13
17	SLU 40	12	2	3062	735.69	4.97	-4.13
17	SLU 41	12	2	3062	735.69	4.97	-4.13
17	SLU 42	12	2	3062	735.69	4.97	-4.13
17	SLU 43	13	0	2719	667.18	4.16	-4.48
17	SLU 44	13	0	2719	667.18	4.16	-4.48
17	SLU 45	13	0	2719	667.18	4.16	-4.48
17	SLU 46	13	0	2719	667.18	4.16	-4.48
17	SLU 47	13	0	2719	667.18	4.16	-4.48
17	SLU 48	13	0	2719	667.18	4.16	-4.48
17	SLU 49	13	0	2719	667.18	4.16	-4.48
17	SLU 50	13	0	2719	667.18	4.16	-4.48
17	SLU 51	13	0	2719	667.18	4.16	-4.48
17	SLU 52	14	1	3130	761.29	4.91	-4.76
17	SLU 53	14	1	3130	761.29	4.91	-4.76
17	SLU 54	14	1	3130	761.29	4.91	-4.76
17	SLU 55	14	1	3130	761.29	4.91	-4.76
17	SLU 56	14	1	3130	761.29	4.91	-4.76
17	SLU 57	14	1	3130	761.29	4.91	-4.76
17	SLU 58	14	1	3130	761.29	4.91	-4.76
17	SLU 59	14	1	3130	761.29	4.91	-4.76
17	SLU 60	14	1	3306	801.62	5.23	-4.88
17	SLU 61	14	1	3306	801.62	5.23	-4.88
17	SLU 62	14	1	3306	801.62	5.23	-4.88
17	SLU 63	14	1	3306	801.62	5.23	-4.88
17	SLU 64	14	0	3023	736.84	4.71	-4.7
17	SLU 65	14	0	3023	736.84	4.71	-4.7
17	SLU 66	14	0	3023	736.84	4.71	-4.7
17	SLU 67	14	0	3023	736.84	4.71	-4.7
17	SLU 68	14	0	3023	736.84	4.71	-4.7
17	SLU 69	14	0	3023	736.84	4.71	-4.7
17	SLU 70	14	0	3023	736.84	4.71	-4.7
17	SLU 71	14	0	3023	736.84	4.71	-4.7
17	SLU 72	14	0	3023	736.84	4.71	-4.7
17	SLU 73	14	1	3434	830.95	5.46	-4.98
17	SLU 74	14	1	3434	830.95	5.46	-4.98
17	SLU 75	14	1	3434	830.95	5.46	-4.98
17	SLU 76	14	1	3434	830.95	5.46	-4.98
17	SLU 77	14	1	3434	830.95	5.46	-4.98
17	SLU 78	14	1	3434	830.95	5.46	-4.98
17	SLU 79	14	1	3434	830.95	5.46	-4.98
17	SLU 80	14	1	3434	830.95	5.46	-4.98
17	SLU 81	15	2	3610	871.28	5.78	-5.1
17	SLU 82	15	2	3610	871.28	5.78	-5.1
17	SLU 83	15	2	3610	871.28	5.78	-5.1
17	SLU 84	15	2	3610	871.28	5.78	-5.1
17	SLE RA 1	10	0	2259	551.49	3.5	-3.57
17	SLE RA 2	10	0	2259	551.49	3.5	-3.57
17	SLE RA 3	10	0	2259	551.49	3.5	-3.57
17	SLE RA 4	10	0	2259	551.49	3.5	-3.57
17	SLE RA 5	10	0	2259	551.49	3.5	-3.57
17	SLE RA 6	10	0	2259	551.49	3.5	-3.57
17	SLE RA 7	10	0	2259	551.49	3.5	-3.57
17	SLE RA 8	10	0	2259	551.49	3.5	-3.57
17	SLE RA 9	10	0	2259	551.49	3.5	-3.57
17	SLE RA 10	11	1	2532	614.23	4	-3.75
17	SLE RA 11	11	1	2532	614.23	4	-3.75
17	SLE RA 12	11	1	2532	614.23	4	-3.75
17	SLE RA 13	11	1	2532	614.23	4	-3.75
17	SLE RA 14	11	1	2532	614.23	4	-3.75
17	SLE RA 15	11	1	2532	614.23	4	-3.75
17	SLE RA 16	11	1	2532	614.23	4	-3.75
17	SLE RA 17	11	1	2532	614.23	4	-3.75
17	SLE RA 18	11	1	2650	641.12	4.22	-3.83
17	SLE RA 19	11	1	2650	641.12	4.22	-3.83
17	SLE RA 20	11	1	2650	641.12	4.22	-3.83
17	SLE RA 21	11	1	2650	641.12	4.22	-3.83
17	SLE FR 1	10	0	2259	551.49	3.5	-3.57
17	SLE FR 2	10	0	2259	551.49	3.5	-3.57
17	SLE FR 3	10	0	2259	551.49	3.5	-3.57
17	SLE FR 4	10	0	2376	578.38	3.72	-3.65
17	SLE FR 5	10	0	2376	578.38	3.72	-3.65
17	SLE FR 6	11	1	2454	596.3	3.86	-3.7
17	SLE QP 1	10	0	2259	551.49	3.5	-3.57
17	SLE QP 2	10	0	2376	578.38	3.72	-3.65



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
Ind.	N.br.	x	y	z		x	y	z	
17	SLD 1	196	10	2456		603.46	4.34	-68.38	
17	SLD 2	238	16	2457		603.39	4.33	-83.03	
17	SLD 3	203	-18		560.98		4.03	-71.11	
17	SLD 4	245	-12	2229	560.91		4.01	-85.75	
17	SLD 5	40	43	2745	650.35		4.39	-13.66	
17	SLD 6	83	49	2746	650.28		4.37	-28.62	
17	SLD 7	64	-49	1986	508.76		3.33	-22.72	
17	SLD 8	107	-43	1987	508.69		3.32	-37.69	
17	SLD 9	-86	44	2765	648.07		4.11	30.4	
17	SLD 10	-43	50	2766	648		4.1	15.43	
17	SLD 11	-62	-48	2006	506.48		3.06	21.33	
17	SLD 12	-19	-42	2007	506.41		3.04	6.36	
17	SLD 13	-224	13	2523	595.84		3.42	78.46	
17	SLD 14	-182	18	2524	595.78		3.4	63.81	
17	SLD 15	-217	-15	2295	553.37		3.1	75.73	
17	SLD 16	-175	-9	2296	553.3		3.09	61.09	
17	SLV 1	430	23	2566	637.15		5.15	-150.41	
17	SLV 2	526	36	2568	637		5.12	-183.9	
17	SLV 3	447	-41	2031	537.3		4.41	-156.76	
17	SLV 4	543	-29	2034	537.15		4.38	-190.26	
17	SLV 5	75	101	3242	747.5		5.28	-25.68	
17	SLV 6	175	114	3245	747.34		5.25	-60.45	
17	SLV 7	132	-115		414.68		2.81	-46.85	
17	SLV 8	231	-102	1464	414.52		2.78	-81.62	
17	SLV 9	-210	103	3288	742.23		4.65	74.33	
17	SLV 10	-111	116	3291	742.08		4.62	39.56	
17	SLV 11	-154	-113	1507	409.42		2.18	53.16	
17	SLV 12	-54	-100	1510	409.26		2.15	18.39	
17	SLV 13	-522	30	2718	619.61		3.05	182.96	
17	SLV 14	-426	42	2720	619.46		3.02	149.47	
17	SLV 15	-505	-35	2183	519.76		2.31	176.61	
17	SLV 16	-409	-22	2186	519.61		2.28	143.12	
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	10	-1	2273	610.54		2.94	-3.48	
18	SLU 2	10	-1	2273	610.54		2.94	-3.48	
18	SLU 3	10	-1	2273	610.54		2.94	-3.48	
18	SLU 4	10	-1	2273	610.54		2.94	-3.48	
18	SLU 5	10	-1	2273	610.54		2.94	-3.48	
18	SLU 6	10	-1	2273	610.54		2.94	-3.48	
18	SLU 7	10	-1	2273	610.54		2.94	-3.48	
18	SLU 8	10	-1	2273	610.54		2.94	-3.48	
18	SLU 9	10	-1	2273	610.54		2.94	-3.48	
18	SLU 10	11	0	2707	722.09		3.59	-3.85	
18	SLU 11	11	0	2707	722.09		3.59	-3.85	
18	SLU 12	11	0	2707	722.09		3.59	-3.85	
18	SLU 13	11	0	2707	722.09		3.59	-3.85	
18	SLU 14	11	0	2707	722.09		3.59	-3.85	
18	SLU 15	11	0	2707	722.09		3.59	-3.85	
18	SLU 16	11	0	2707	722.09		3.59	-3.85	
18	SLU 17	11	0	2707	722.09		3.59	-3.85	
18	SLU 18	12	0	2892	769.9		3.87	-4.01	
18	SLU 19	12	0	2892	769.9		3.87	-4.01	
18	SLU 20	12	0	2892	769.9		3.87	-4.01	
18	SLU 21	12	0	2892	769.9		3.87	-4.01	
18	SLU 22	11	0	2594	693.13		3.42	-3.76	
18	SLU 23	11	0	2594	693.13		3.42	-3.76	
18	SLU 24	11	0	2594	693.13		3.42	-3.76	
18	SLU 25	11	0	2594	693.13		3.42	-3.76	
18	SLU 26	11	0	2594	693.13		3.42	-3.76	
18	SLU 27	11	0	2594	693.13		3.42	-3.76	
18	SLU 28	11	0	2594	693.13		3.42	-3.76	
18	SLU 29	11	0	2594	693.13		3.42	-3.76	
18	SLU 30	11	0	2594	693.13		3.42	-3.76	
18	SLU 31	12	0	3027	804.69		4.08	-4.13	
18	SLU 32	12	0	3027	804.69		4.08	-4.13	
18	SLU 33	12	0	3027	804.69		4.08	-4.13	
18	SLU 34	12	0	3027	804.69		4.08	-4.13	
18	SLU 35	12	0	3027	804.69		4.08	-4.13	
18	SLU 36	12	0	3027	804.69		4.08	-4.13	
18	SLU 37	12	0	3027	804.69		4.08	-4.13	
18	SLU 38	12	0	3027	804.69		4.08	-4.13	
18	SLU 39	12	1	3213	852.49		4.36	-4.28	
18	SLU 40	12	1	3213	852.49		4.36	-4.28	
18	SLU 41	12	1	3213	852.49		4.36	-4.28	
18	SLU 42	12	1	3213	852.49		4.36	-4.28	
18	SLU 43	13	-1	2845	765.38		3.65	-4.43	
18	SLU 44	13	-1	2845	765.38		3.65	-4.43	
18	SLU 45	13	-1	2845	765.38		3.65	-4.43	
18	SLU 46	13	-1	2845	765.38		3.65	-4.43	
18	SLU 47	13	-1	2845	765.38		3.65	-4.43	
18	SLU 48	13	-1	2845	765.38		3.65	-4.43	
18	SLU 49	13	-1	2845	765.38		3.65	-4.43	
18	SLU 50	13	-1	2845	765.38		3.65	-4.43	
18	SLU 51	13	-1	2845	765.38		3.65	-4.43	
18	SLU 52	14	-1	3279	876.93		4.31	-4.8	
18	SLU 53	14	-1	3279	876.93		4.31	-4.8	
18	SLU 54	14	-1	3279	876.93		4.31	-4.8	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18	SLU 55	14	-1	3279	876.93	4.31	-4.8
18	SLU 56	14	-1	3279	876.93	4.31	-4.8
18	SLU 57	14	-1	3279	876.93	4.31	-4.8
18	SLU 58	14	-1	3279	876.93	4.31	-4.8
18	SLU 59	14	-1	3279	876.93	4.31	-4.8
18	SLU 60	14	0	3464	924.74	4.59	-4.96
18	SLU 61	14	0	3464	924.74	4.59	-4.96
18	SLU 62	14	0	3464	924.74	4.59	-4.96
18	SLU 63	14	0	3464	924.74	4.59	-4.96
18	SLU 64	14	-1	3166	847.98	4.14	-4.71
18	SLU 65	14	-1	3166	847.98	4.14	-4.71
18	SLU 66	14	-1	3166	847.98	4.14	-4.71
18	SLU 67	14	-1	3166	847.98	4.14	-4.71
18	SLU 68	14	-1	3166	847.98	4.14	-4.71
18	SLU 69	14	-1	3166	847.98	4.14	-4.71
18	SLU 70	14	-1	3166	847.98	4.14	-4.71
18	SLU 71	14	-1	3166	847.98	4.14	-4.71
18	SLU 72	14	-1	3166	847.98	4.14	-4.71
18	SLU 73	15	0	3599	959.53	4.79	-5.08
18	SLU 74	15	0	3599	959.53	4.79	-5.08
18	SLU 75	15	0	3599	959.53	4.79	-5.08
18	SLU 76	15	0	3599	959.53	4.79	-5.08
18	SLU 77	15	0	3599	959.53	4.79	-5.08
18	SLU 78	15	0	3599	959.53	4.79	-5.08
18	SLU 79	15	0	3599	959.53	4.79	-5.08
18	SLU 80	15	0	3599	959.53	4.79	-5.08
18	SLU 81	15	0	3785	1007.33	5.07	-5.23
18	SLU 82	15	0	3785	1007.33	5.07	-5.23
18	SLU 83	15	0	3785	1007.33	5.07	-5.23
18	SLU 84	15	0	3785	1007.33	5.07	-5.23
18	SLE RA 1	10	-1	2365	634.14	3.08	-3.56
18	SLE RA 2	10	-1	2365	634.14	3.08	-3.56
18	SLE RA 3	10	-1	2365	634.14	3.08	-3.56
18	SLE RA 4	10	-1	2365	634.14	3.08	-3.56
18	SLE RA 5	10	-1	2365	634.14	3.08	-3.56
18	SLE RA 6	10	-1	2365	634.14	3.08	-3.56
18	SLE RA 7	10	-1	2365	634.14	3.08	-3.56
18	SLE RA 8	10	-1	2365	634.14	3.08	-3.56
18	SLE RA 9	10	-1	2365	634.14	3.08	-3.56
18	SLE RA 10	11	0	2654	708.5	3.51	-3.81
18	SLE RA 11	11	0	2654	708.5	3.51	-3.81
18	SLE RA 12	11	0	2654	708.5	3.51	-3.81
18	SLE RA 13	11	0	2654	708.5	3.51	-3.81
18	SLE RA 14	11	0	2654	708.5	3.51	-3.81
18	SLE RA 15	11	0	2654	708.5	3.51	-3.81
18	SLE RA 16	11	0	2654	708.5	3.51	-3.81
18	SLE RA 17	11	0	2654	708.5	3.51	-3.81
18	SLE RA 18	11	0	2778	740.38	3.7	-3.91
18	SLE RA 19	11	0	2778	740.38	3.7	-3.91
18	SLE RA 20	11	0	2778	740.38	3.7	-3.91
18	SLE RA 21	11	0	2778	740.38	3.7	-3.91
18	SLE FR 1	10	-1	2365	634.14	3.08	-3.56
18	SLE FR 2	10	-1	2365	634.14	3.08	-3.56
18	SLE FR 3	10	-1	2365	634.14	3.08	-3.56
18	SLE FR 4	11	-1	2489	666.01	3.26	-3.67
18	SLE FR 5	11	-1	2489	666.01	3.26	-3.67
18	SLE FR 6	11	0	2571	687.26	3.39	-3.74
18	SLE QP 1	10	-1	2365	634.14	3.08	-3.56
18	SLE QP 2	11	-1	2489	666.01	3.26	-3.67
18	SLD 1	195	7	2588	695.48	3.86	-68.34
18	SLD 2	237	11	2589	695.43	3.85	-82.97
18	SLD 3	203	-14	2350	643.83	3.57	-71.1
18	SLD 4	245	-11	2351	643.78	3.56	-85.73
18	SLD 5	39	34	2878	753.21	3.89	-13.6
18	SLD 6	82	38	2879	753.15	3.88	-28.55
18	SLD 7	65	-39	2087	581.03	2.92	-22.81
18	SLD 8	107	-35	2087	580.98	2.91	-37.76
18	SLD 9	-86	34	2890	751.04	3.62	30.43
18	SLD 10	-43	38	2891	750.98	3.61	15.47
18	SLD 11	-61	-39	2098	578.86	2.65	21.22
18	SLD 12	-18	-35	2099	578.81	2.64	6.26
18	SLD 13	-224	10	2626	688.24	2.97	78.4
18	SLD 14	-182	13	2627	688.18	2.95	63.77
18	SLD 15	-216	-12	2389	636.59	2.68	75.64
18	SLD 16	-174	-9	2390	636.53	2.66	61.01
18	SLV 1	430	18	2723	735.01	4.64	-150.28
18	SLV 2	526	27	2724	734.89	4.61	-183.75
18	SLV 3	447	-33	2165	613.7	3.95	-156.73
18	SLV 4	543	-24	2167	613.58	3.93	-190.2
18	SLV 5	74	79	3403	870.74	4.72	-25.51
18	SLV 6	174	88	3405	870.62	4.69	-60.26
18	SLV 7	133	-91	1546	466.37	2.45	-47.02
18	SLV 8	232	-82	1548	466.24	2.42	-81.76
18	SLV 9	-211	81	3430	865.77	4.11	74.43
18	SLV 10	-112	90	3431	865.65	4.08	39.68
18	SLV 11	-153	-89	1572	461.4	1.84	52.93
18	SLV 12	-53	-80	1574	461.27	1.81	18.18
18	SLV 13	-522	23	2810	718.44	2.6	182.87
18	SLV 14	-426	32	2812	718.32	2.57	149.4
18	SLV 15	-505	-28	2253	597.12	1.92	176.42



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
18	SLV 16	-409	-19	2255	597	1.89	142.95
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	9	-2	2192	633.73	-27.04	-3.22
19	SLU 2	9	-2	2192	633.73	-27.04	-3.22
19	SLU 3	9	-2	2192	633.73	-27.04	-3.22
19	SLU 4	9	-2	2192	633.73	-27.04	-3.22
19	SLU 5	9	-2	2192	633.73	-27.04	-3.22
19	SLU 6	9	-2	2192	633.73	-27.04	-3.22
19	SLU 7	9	-2	2192	633.73	-27.04	-3.22
19	SLU 8	9	-2	2192	633.73	-27.04	-3.22
19	SLU 9	9	-2	2192	633.73	-27.04	-3.22
19	SLU 10	10	-1	2612	751.96	-32.18	-3.63
19	SLU 11	10	-1	2612	751.96	-32.18	-3.63
19	SLU 12	10	-1	2612	751.96	-32.18	-3.63
19	SLU 13	10	-1	2612	751.96	-32.18	-3.63
19	SLU 14	10	-1	2612	751.96	-32.18	-3.63
19	SLU 15	10	-1	2612	751.96	-32.18	-3.63
19	SLU 16	10	-1	2612	751.96	-32.18	-3.63
19	SLU 17	10	-1	2612	751.96	-32.18	-3.63
19	SLU 18	11	-1	2792	802.64	-34.38	-3.8
19	SLU 19	11	-1	2792	802.64	-34.38	-3.8
19	SLU 20	11	-1	2792	802.64	-34.38	-3.8
19	SLU 21	11	-1	2792	802.64	-34.38	-3.8
19	SLU 22	10	-1	2502	721.29	-30.84	-3.52
19	SLU 23	10	-1	2502	721.29	-30.84	-3.52
19	SLU 24	10	-1	2502	721.29	-30.84	-3.52
19	SLU 25	10	-1	2502	721.29	-30.84	-3.52
19	SLU 26	10	-1	2502	721.29	-30.84	-3.52
19	SLU 27	10	-1	2502	721.29	-30.84	-3.52
19	SLU 28	10	-1	2502	721.29	-30.84	-3.52
19	SLU 29	10	-1	2502	721.29	-30.84	-3.52
19	SLU 30	10	-1	2502	721.29	-30.84	-3.52
19	SLU 31	11	-1	2922	839.52	-35.98	-3.93
19	SLU 32	11	-1	2922	839.52	-35.98	-3.93
19	SLU 33	11	-1	2922	839.52	-35.98	-3.93
19	SLU 34	11	-1	2922	839.52	-35.98	-3.93
19	SLU 35	11	-1	2922	839.52	-35.98	-3.93
19	SLU 36	11	-1	2922	839.52	-35.98	-3.93
19	SLU 37	11	-1	2922	839.52	-35.98	-3.93
19	SLU 38	11	-1	2922	839.52	-35.98	-3.93
19	SLU 39	12	-1	3102	890.19	-38.18	-4.1
19	SLU 40	12	-1	3102	890.19	-38.18	-4.1
19	SLU 41	12	-1	3102	890.19	-38.18	-4.1
19	SLU 42	12	-1	3102	890.19	-38.18	-4.1
19	SLU 43	12	-2	2743	793.83	-33.85	-4.08
19	SLU 44	12	-2	2743	793.83	-33.85	-4.08
19	SLU 45	12	-2	2743	793.83	-33.85	-4.08
19	SLU 46	12	-2	2743	793.83	-33.85	-4.08
19	SLU 47	12	-2	2743	793.83	-33.85	-4.08
19	SLU 48	12	-2	2743	793.83	-33.85	-4.08
19	SLU 49	12	-2	2743	793.83	-33.85	-4.08
19	SLU 50	12	-2	2743	793.83	-33.85	-4.08
19	SLU 51	12	-2	2743	793.83	-33.85	-4.08
19	SLU 52	13	-2	3163	912.06	-38.99	-4.49
19	SLU 53	13	-2	3163	912.06	-38.99	-4.49
19	SLU 54	13	-2	3163	912.06	-38.99	-4.49
19	SLU 55	13	-2	3163	912.06	-38.99	-4.49
19	SLU 56	13	-2	3163	912.06	-38.99	-4.49
19	SLU 57	13	-2	3163	912.06	-38.99	-4.49
19	SLU 58	13	-2	3163	912.06	-38.99	-4.49
19	SLU 59	13	-2	3163	912.06	-38.99	-4.49
19	SLU 60	13	-2	3343	962.74	-41.19	-4.66
19	SLU 61	13	-2	3343	962.74	-41.19	-4.66
19	SLU 62	13	-2	3343	962.74	-41.19	-4.66
19	SLU 63	13	-2	3343	962.74	-41.19	-4.66
19	SLU 64	13	-2	3053	881.39	-37.65	-4.38
19	SLU 65	13	-2	3053	881.39	-37.65	-4.38
19	SLU 66	13	-2	3053	881.39	-37.65	-4.38
19	SLU 67	13	-2	3053	881.39	-37.65	-4.38
19	SLU 68	13	-2	3053	881.39	-37.65	-4.38
19	SLU 69	13	-2	3053	881.39	-37.65	-4.38
19	SLU 70	13	-2	3053	881.39	-37.65	-4.38
19	SLU 71	13	-2	3053	881.39	-37.65	-4.38
19	SLU 72	13	-2	3053	881.39	-37.65	-4.38
19	SLU 73	14	-1	3473	999.62	-42.79	-4.79
19	SLU 74	14	-1	3473	999.62	-42.79	-4.79
19	SLU 75	14	-1	3473	999.62	-42.79	-4.79
19	SLU 76	14	-1	3473	999.62	-42.79	-4.79
19	SLU 77	14	-1	3473	999.62	-42.79	-4.79
19	SLU 78	14	-1	3473	999.62	-42.79	-4.79
19	SLU 79	14	-1	3473	999.62	-42.79	-4.79
19	SLU 80	14	-1	3473	999.62	-42.79	-4.79
19	SLU 81	14	-1	3653	1050.29	-44.99	-4.96
19	SLU 82	14	-1	3653	1050.29	-44.99	-4.96
19	SLU 83	14	-1	3653	1050.29	-44.99	-4.96
19	SLU 84	14	-1	3653	1050.29	-44.99	-4.96
19	SLE RA 1	9	-2	2280	658.75	-28.13	-3.3



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
Ind.	N.br.	x	y	z		x	y	z	
19	SLE RA 2	9	-2	2280		658.75	-28.13	-3.3	
19	SLE RA 3	9	-2	2280		658.75	-28.13	-3.3	
19	SLE RA 4	9	-2	2280		658.75	-28.13	-3.3	
19	SLE RA 5	9	-2	2280		658.75	-28.13	-3.3	
19	SLE RA 6	9	-2	2280		658.75	-28.13	-3.3	
19	SLE RA 7	9	-2	2280		658.75	-28.13	-3.3	
19	SLE RA 8	9	-2	2280		658.75	-28.13	-3.3	
19	SLE RA 9	9	-2	2280		658.75	-28.13	-3.3	
19	SLE RA 10	10	-1	2560		737.57	-31.55	-3.58	
19	SLE RA 11	10	-1	2560		737.57	-31.55	-3.58	
19	SLE RA 12	10	-1	2560		737.57	-31.55	-3.58	
19	SLE RA 13	10	-1	2560		737.57	-31.55	-3.58	
19	SLE RA 14	10	-1	2560		737.57	-31.55	-3.58	
19	SLE RA 15	10	-1	2560		737.57	-31.55	-3.58	
19	SLE RA 16	10	-1	2560		737.57	-31.55	-3.58	
19	SLE RA 17	10	-1	2560		737.57	-31.55	-3.58	
19	SLE RA 18	11	-1	2680		771.35	-33.02	-3.69	
19	SLE RA 19	11	-1	2680		771.35	-33.02	-3.69	
19	SLE RA 20	11	-1	2680		771.35	-33.02	-3.69	
19	SLE RA 21	11	-1	2680		771.35	-33.02	-3.69	
19	SLE FR 1	9	-2	2280		658.75	-28.13	-3.3	
19	SLE FR 2	9	-2	2280		658.75	-28.13	-3.3	
19	SLE FR 3	9	-2	2280		658.75	-28.13	-3.3	
19	SLE FR 4	10	-1	2400		692.53	-29.59	-3.42	
19	SLE FR 5	10	-1	2400		692.53	-29.59	-3.42	
19	SLE FR 6	10	-1	2480		715.05	-30.57	-3.5	
19	SLE QP 1	9	-2	2280		658.75	-28.13	-3.3	
19	SLE QP 2	10	-1	2400		692.53	-29.59	-3.42	
19	SLD 1	182	6	2509		723.31	-30.58	-63.59	
19	SLD 2	221	8	2509		723.27	-30.59	-77.2	
19	SLD 3	189	-12	2280		667.54	-27.75	-66.39	
19	SLD 4	228	-10	2280		667.5	-27.76	-80	
19	SLD 5	36	26	2779		786.37	-34.18	-12.31	
19	SLD 6	76	28	2780		786.33	-34.19	-26.22	
19	SLD 7	61	-31	2018		600.46	-24.74	-21.64	
19	SLD 8	101	-29	2018		600.42	-24.76	-35.56	
19	SLD 9	-81	26	2783		784.64	-34.43	28.72	
19	SLD 10	-41	29	2783		784.6	-34.45	14.8	
19	SLD 11	-57	-31	2021		598.73	-25	19.38	
19	SLD 12	-17	-29	2022		598.69	-25.01	5.47	
19	SLD 13	-209	7	2520		717.56	-31.43	73.16	
19	SLD 14	-170	9	2521		717.52	-31.44	59.55	
19	SLD 15	-202	-10	2292		661.79	-28.6	70.36	
19	SLD 16	-162	-8	2292		661.75	-28.61	56.75	
19	SLV 1	400	15	2654		764.59	-31.94	-139.82	
19	SLV 2	490	20	2655		764.5	-31.97	-170.95	
19	SLV 3	417	-25	2118		633.65	-25.29	-146.36	
19	SLV 4	507	-21	2119		633.57	-25.32	-177.5	
19	SLV 5	68	63	3290		912.76	-40.36	-22.92	
19	SLV 6	161	68	3290		912.67	-40.4	-55.25	
19	SLV 7	125	-71	1502		476.32	-18.22	-44.73	
19	SLV 8	218	-67	1503		476.23	-18.25	-77.06	
19	SLV 9	-198	64	3298		908.83	-40.94	70.22	
19	SLV 10	-105	69	3299		908.74	-40.97	37.89	
19	SLV 11	-141	-71	1510		472.39	-18.79	48.41	
19	SLV 12	-48	-66	1511		472.3	-18.83	16.08	
19	SLV 13	-487	18	2682		751.49	-33.86	170.66	
19	SLV 14	-398	22	2683		751.4	-33.9	139.52	
19	SLV 15	-470	-22	2146		620.56	-27.22	164.12	
19	SLV 16	-381	-18	2146		620.47	-27.25	132.98	
19	CRTFP Ux+	0	0	0		0	0	0	
19	CRTFP Ux-	0	0	0		0	0	0	
19	CRTFP Uy+	0	0	0		0	0	0	
19	CRTFP Uy-	0	0	0		0	0	0	
20	SLU 1	16	-3	4010		994.13	-3.34	-4.31	
20	SLU 2	16	-3	4010		994.13	-3.34	-4.31	
20	SLU 3	16	-3	4010		994.13	-3.34	-4.31	
20	SLU 4	16	-3	4010		994.13	-3.34	-4.31	
20	SLU 5	16	-3	4010		994.13	-3.34	-4.31	
20	SLU 6	16	-3	4010		994.13	-3.34	-4.31	
20	SLU 7	16	-3	4010		994.13	-3.34	-4.31	
20	SLU 8	16	-3	4010		994.13	-3.34	-4.31	
20	SLU 9	16	-3	4010		994.13	-3.34	-4.31	
20	SLU 10	18	-3	4781		1182.93	-4.02	-4.97	
20	SLU 11	18	-3	4781		1182.93	-4.02	-4.97	
20	SLU 12	18	-3	4781		1182.93	-4.02	-4.97	
20	SLU 13	18	-3	4781		1182.93	-4.02	-4.97	
20	SLU 14	18	-3	4781		1182.93	-4.02	-4.97	
20	SLU 15	18	-3	4781		1182.93	-4.02	-4.97	
20	SLU 16	18	-3	4781		1182.93	-4.02	-4.97	
20	SLU 17	18	-3	4781		1182.93	-4.02	-4.97	
20	SLU 18	19	-3	5111		1263.85	-4.31	-5.25	
20	SLU 19	19	-3	5111		1263.85	-4.31	-5.25	
20	SLU 20	19	-3	5111		1263.85	-4.31	-5.25	
20	SLU 21	19	-3	5111		1263.85	-4.31	-5.25	
20	SLU 22	17	-3	4580		1133.93	-3.84	-4.78	
20	SLU 23	17	-3	4580		1133.93	-3.84	-4.78	
20	SLU 24	17	-3	4580		1133.93	-3.84	-4.78	
20	SLU 25	17	-3	4580		1133.93	-3.84	-4.78	
20	SLU 26	17	-3	4580		1133.93	-3.84	-4.78	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
20	SLU 27	17	-3	4580	1133.93	-3.84	-4.78
20	SLU 28	17	-3	4580	1133.93	-3.84	-4.78
20	SLU 29	17	-3	4580	1133.93	-3.84	-4.78
20	SLU 30	17	-3	4580	1133.93	-3.84	-4.78
20	SLU 31	20	-3	5351	1322.73	-4.51	-5.44
20	SLU 32	20	-3	5351	1322.73	-4.51	-5.44
20	SLU 33	20	-3	5351	1322.73	-4.51	-5.44
20	SLU 34	20	-3	5351	1322.73	-4.51	-5.44
20	SLU 35	20	-3	5351	1322.73	-4.51	-5.44
20	SLU 36	20	-3	5351	1322.73	-4.51	-5.44
20	SLU 37	20	-3	5351	1322.73	-4.51	-5.44
20	SLU 38	20	-3	5351	1322.73	-4.51	-5.44
20	SLU 39	21	-2	5681	1403.65	-4.8	-5.72
20	SLU 40	21	-2	5681	1403.65	-4.8	-5.72
20	SLU 41	21	-2	5681	1403.65	-4.8	-5.72
20	SLU 42	21	-2	5681	1403.65	-4.8	-5.72
20	SLU 43	20	-5	5017	1244.43	-4.18	-5.45
20	SLU 44	20	-5	5017	1244.43	-4.18	-5.45
20	SLU 45	20	-5	5017	1244.43	-4.18	-5.45
20	SLU 46	20	-5	5017	1244.43	-4.18	-5.45
20	SLU 47	20	-5	5017	1244.43	-4.18	-5.45
20	SLU 48	20	-5	5017	1244.43	-4.18	-5.45
20	SLU 49	20	-5	5017	1244.43	-4.18	-5.45
20	SLU 50	20	-5	5017	1244.43	-4.18	-5.45
20	SLU 51	20	-5	5017	1244.43	-4.18	-5.45
20	SLU 52	22	-4	5788	1433.24	-4.86	-6.11
20	SLU 53	22	-4	5788	1433.24	-4.86	-6.11
20	SLU 54	22	-4	5788	1433.24	-4.86	-6.11
20	SLU 55	22	-4	5788	1433.24	-4.86	-6.11
20	SLU 56	22	-4	5788	1433.24	-4.86	-6.11
20	SLU 57	22	-4	5788	1433.24	-4.86	-6.11
20	SLU 58	22	-4	5788	1433.24	-4.86	-6.11
20	SLU 59	22	-4	5788	1433.24	-4.86	-6.11
20	SLU 60	23	-4	6118	1514.15	-5.15	-6.39
20	SLU 61	23	-4	6118	1514.15	-5.15	-6.39
20	SLU 62	23	-4	6118	1514.15	-5.15	-6.39
20	SLU 63	23	-4	6118	1514.15	-5.15	-6.39
20	SLU 64	21	-4	5587	1384.23	-4.67	-5.92
20	SLU 65	21	-4	5587	1384.23	-4.67	-5.92
20	SLU 66	21	-4	5587	1384.23	-4.67	-5.92
20	SLU 67	21	-4	5587	1384.23	-4.67	-5.92
20	SLU 68	21	-4	5587	1384.23	-4.67	-5.92
20	SLU 69	21	-4	5587	1384.23	-4.67	-5.92
20	SLU 70	21	-4	5587	1384.23	-4.67	-5.92
20	SLU 71	21	-4	5587	1384.23	-4.67	-5.92
20	SLU 72	21	-4	5587	1384.23	-4.67	-5.92
20	SLU 73	24	-4	6358	1573.04	-5.35	-6.57
20	SLU 74	24	-4	6358	1573.04	-5.35	-6.57
20	SLU 75	24	-4	6358	1573.04	-5.35	-6.57
20	SLU 76	24	-4	6358	1573.04	-5.35	-6.57
20	SLU 77	24	-4	6358	1573.04	-5.35	-6.57
20	SLU 78	24	-4	6358	1573.04	-5.35	-6.57
20	SLU 79	24	-4	6358	1573.04	-5.35	-6.57
20	SLU 80	24	-4	6358	1573.04	-5.35	-6.57
20	SLU 81	25	-4	6689	1653.96	-5.64	-6.85
20	SLU 82	25	-4	6689	1653.96	-5.64	-6.85
20	SLU 83	25	-4	6689	1653.96	-5.64	-6.85
20	SLU 84	25	-4	6689	1653.96	-5.64	-6.85
20	SLE RA 1	16	-3	4173	1034.07	-3.49	-4.45
20	SLE RA 2	16	-3	4173	1034.07	-3.49	-4.45
20	SLE RA 3	16	-3	4173	1034.07	-3.49	-4.45
20	SLE RA 4	16	-3	4173	1034.07	-3.49	-4.45
20	SLE RA 5	16	-3	4173	1034.07	-3.49	-4.45
20	SLE RA 6	16	-3	4173	1034.07	-3.49	-4.45
20	SLE RA 7	16	-3	4173	1034.07	-3.49	-4.45
20	SLE RA 8	16	-3	4173	1034.07	-3.49	-4.45
20	SLE RA 9	16	-3	4173	1034.07	-3.49	-4.45
20	SLE RA 10	18	-3	4687	1159.94	-3.94	-4.89
20	SLE RA 11	18	-3	4687	1159.94	-3.94	-4.89
20	SLE RA 12	18	-3	4687	1159.94	-3.94	-4.89
20	SLE RA 13	18	-3	4687	1159.94	-3.94	-4.89
20	SLE RA 14	18	-3	4687	1159.94	-3.94	-4.89
20	SLE RA 15	18	-3	4687	1159.94	-3.94	-4.89
20	SLE RA 16	18	-3	4687	1159.94	-3.94	-4.89
20	SLE RA 17	18	-3	4687	1159.94	-3.94	-4.89
20	SLE RA 18	18	-3	4907	1213.88	-4.13	-5.07
20	SLE RA 19	18	-3	4907	1213.88	-4.13	-5.07
20	SLE RA 20	18	-3	4907	1213.88	-4.13	-5.07
20	SLE RA 21	18	-3	4907	1213.88	-4.13	-5.07
20	SLE FR 1	16	-3	4173	1034.07	-3.49	-4.45
20	SLE FR 2	16	-3	4173	1034.07	-3.49	-4.45
20	SLE FR 3	16	-3	4173	1034.07	-3.49	-4.45
20	SLE FR 4	17	-3	4393	1088.01	-3.68	-4.64
20	SLE FR 5	17	-3	4393	1088.01	-3.68	-4.64
20	SLE FR 6	17	-3	4540	1123.98	-3.81	-4.76
20	SLE QP 1	16	-3	4173	1034.07	-3.49	-4.45
20	SLE QP 2	17	-3	4393	1088.01	-3.68	-4.64
20	SLD 1	321	10	4621	1138.16	-1.55	-89.06
20	SLD 2	391	10	4621	1138.14	-1.61	-108.22
20	SLD 3	335	-19	4196	1045.02	-1.04	-92.82



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
20	SLD 4	405	-18	4196	1045.01	-1.1	-111.98
20	SLD 5	62	44	5106	1244.32	-3.8	-17.34
20	SLD 6	134	44	5106	1244.3	-3.86	-36.92
20	SLD 7	107	-51	3689	933.87	-2.08	-29.88
20	SLD 8	179	-51	3689	933.85	-2.14	-49.46
20	SLD 9	-145	45	5097	1242.17	-5.21	40.19
20	SLD 10	-74	45	5097	1242.16	-5.27	20.61
20	SLD 11	-100	-51	3680	931.73	-3.5	27.65
20	SLD 12	-29	-50	3680	931.71	-3.56	8.07
20	SLD 13	-371	12	4590	1131.02	-6.26	102.71
20	SLD 14	-301	12	4590	1131	-6.32	83.55
20	SLD 15	-358	-17	4165	1037.89	-5.75	98.95
20	SLD 16	-288	-16	4165	1037.87	-5.8	79.79
20	SLV 1	707	28	4927	1205.44	1.13	-196.02
20	SLV 2	867	29	4927	1205.41	0.99	-239.84
20	SLV 3	739	-39	3929	986.87	2.34	-204.81
20	SLV 4	898	-38	3930	986.83	2.2	-248.63
20	SLV 5	117	107	6066	1454.76	-4.02	-32.55
20	SLV 6	283	108	6066	1454.72	-4.16	-78.05
20	SLV 7	222	-116	2741	726.18	0.01	-61.84
20	SLV 8	388	-115	2741	726.14	-0.13	-107.34
20	SLV 9	-354	108	6045	1449.89	-7.23	98.07
20	SLV 10	-189	109	6045	1449.85	-7.37	52.57
20	SLV 11	-250	-115	2719	721.31	-3.2	68.78
20	SLV 12	-84	-114	2720	721.27	-3.34	23.28
20	SLV 13	-865	32	4856	1189.2	-9.56	239.36
20	SLV 14	-705	33	4856	1189.16	-9.69	195.54
20	SLV 15	-834	-35	3859	970.62	-8.35	230.57
20	SLV 16	-674	-34	3859	970.59	-8.48	186.75
20	CRTFP Ux+	0	0	0	0	0	0
20	CRTFP Ux-	0	0	0	0	0	0
20	CRTFP Uy+	0	0	0	-0.01	0	0
20	CRTFP Uy-	0	0	0	0.01	0	0
21	SLU 1	8	-1	2164	624.34	26.94	-2.89
21	SLU 2	8	-1	2164	624.34	26.94	-2.89
21	SLU 3	8	-1	2164	624.34	26.94	-2.89
21	SLU 4	8	-1	2164	624.34	26.94	-2.89
21	SLU 5	8	-1	2164	624.34	26.94	-2.89
21	SLU 6	8	-1	2164	624.34	26.94	-2.89
21	SLU 7	8	-1	2164	624.34	26.94	-2.89
21	SLU 8	8	-1	2164	624.34	26.94	-2.89
21	SLU 9	8	-1	2164	624.34	26.94	-2.89
21	SLU 10	10	-1	2579	740.88	32.05	-3.41
21	SLU 11	10	-1	2579	740.88	32.05	-3.41
21	SLU 12	10	-1	2579	740.88	32.05	-3.41
21	SLU 13	10	-1	2579	740.88	32.05	-3.41
21	SLU 14	10	-1	2579	740.88	32.05	-3.41
21	SLU 15	10	-1	2579	740.88	32.05	-3.41
21	SLU 16	10	-1	2579	740.88	32.05	-3.41
21	SLU 17	10	-1	2579	740.88	32.05	-3.41
21	SLU 18	10	-1	2756	790.82	34.24	-3.63
21	SLU 19	10	-1	2756	790.82	34.24	-3.63
21	SLU 20	10	-1	2756	790.82	34.24	-3.63
21	SLU 21	10	-1	2756	790.82	34.24	-3.63
21	SLU 22	9	-1	2471	710.64	30.73	-3.25
21	SLU 23	9	-1	2471	710.64	30.73	-3.25
21	SLU 24	9	-1	2471	710.64	30.73	-3.25
21	SLU 25	9	-1	2471	710.64	30.73	-3.25
21	SLU 26	9	-1	2471	710.64	30.73	-3.25
21	SLU 27	9	-1	2471	710.64	30.73	-3.25
21	SLU 28	9	-1	2471	710.64	30.73	-3.25
21	SLU 29	9	-1	2471	710.64	30.73	-3.25
21	SLU 30	9	-1	2471	710.64	30.73	-3.25
21	SLU 31	11	-1	2886	827.18	35.83	-3.77
21	SLU 32	11	-1	2886	827.18	35.83	-3.77
21	SLU 33	11	-1	2886	827.18	35.83	-3.77
21	SLU 34	11	-1	2886	827.18	35.83	-3.77
21	SLU 35	11	-1	2886	827.18	35.83	-3.77
21	SLU 36	11	-1	2886	827.18	35.83	-3.77
21	SLU 37	11	-1	2886	827.18	35.83	-3.77
21	SLU 38	11	-1	2886	827.18	35.83	-3.77
21	SLU 39	11	-1	3063	877.12	38.02	-3.99
21	SLU 40	11	-1	3063	877.12	38.02	-3.99
21	SLU 41	11	-1	3063	877.12	38.02	-3.99
21	SLU 42	11	-1	3063	877.12	38.02	-3.99
21	SLU 43	10	-2	2709	782.06	33.73	-3.63
21	SLU 44	10	-2	2709	782.06	33.73	-3.63
21	SLU 45	10	-2	2709	782.06	33.73	-3.63
21	SLU 46	10	-2	2709	782.06	33.73	-3.63
21	SLU 47	10	-2	2709	782.06	33.73	-3.63
21	SLU 48	10	-2	2709	782.06	33.73	-3.63
21	SLU 49	10	-2	2709	782.06	33.73	-3.63
21	SLU 50	10	-2	2709	782.06	33.73	-3.63
21	SLU 51	10	-2	2709	782.06	33.73	-3.63
21	SLU 52	12	-1	3123	898.59	38.84	-4.15
21	SLU 53	12	-1	3123	898.59	38.84	-4.15
21	SLU 54	12	-1	3123	898.59	38.84	-4.15
21	SLU 55	12	-1	3123	898.59	38.84	-4.15
21	SLU 56	12	-1	3123	898.59	38.84	-4.15
21	SLU 57	12	-1	3123	898.59	38.84	-4.15



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione		
		x	y	z		x	y	z
21	SLU 58	12	-1	3123	898.59	38.84	-4.15	
21	SLU 59	12	-1	3123	898.59	38.84	-4.15	
21	SLU 60	12	-1	3301	948.53	41.03	-4.37	
21	SLU 61	12	-1	3301	948.53	41.03	-4.37	
21	SLU 62	12	-1	3301	948.53	41.03	-4.37	
21	SLU 63	12	-1	3301	948.53	41.03	-4.37	
21	SLU 64	11	-2	3015	868.36	37.51	-3.99	
21	SLU 65	11	-2	3015	868.36	37.51	-3.99	
21	SLU 66	11	-2	3015	868.36	37.51	-3.99	
21	SLU 67	11	-2	3015	868.36	37.51	-3.99	
21	SLU 68	11	-2	3015	868.36	37.51	-3.99	
21	SLU 69	11	-2	3015	868.36	37.51	-3.99	
21	SLU 70	11	-2	3015	868.36	37.51	-3.99	
21	SLU 71	11	-2	3015	868.36	37.51	-3.99	
21	SLU 72	11	-2	3015	868.36	37.51	-3.99	
21	SLU 73	13	-1	3430	984.89	42.62	-4.51	
21	SLU 74	13	-1	3430	984.89	42.62	-4.51	
21	SLU 75	13	-1	3430	984.89	42.62	-4.51	
21	SLU 76	13	-1	3430	984.89	42.62	-4.51	
21	SLU 77	13	-1	3430	984.89	42.62	-4.51	
21	SLU 78	13	-1	3430	984.89	42.62	-4.51	
21	SLU 79	13	-1	3430	984.89	42.62	-4.51	
21	SLU 80	13	-1	3430	984.89	42.62	-4.51	
21	SLU 81	13	-1	3607	1034.83	44.81	-4.73	
21	SLU 82	13	-1	3607	1034.83	44.81	-4.73	
21	SLU 83	13	-1	3607	1034.83	44.81	-4.73	
21	SLU 84	13	-1	3607	1034.83	44.81	-4.73	
21	SLE RA 1	9	-1	2252	649	28.02	-2.99	
21	SLE RA 2	9	-1	2252	649	28.02	-2.99	
21	SLE RA 3	9	-1	2252	649	28.02	-2.99	
21	SLE RA 4	9	-1	2252	649	28.02	-2.99	
21	SLE RA 5	9	-1	2252	649	28.02	-2.99	
21	SLE RA 6	9	-1	2252	649	28.02	-2.99	
21	SLE RA 7	9	-1	2252	649	28.02	-2.99	
21	SLE RA 8	9	-1	2252	649	28.02	-2.99	
21	SLE RA 9	9	-1	2252	649	28.02	-2.99	
21	SLE RA 10	9	-1	2528	726.69	31.43	-3.34	
21	SLE RA 11	9	-1	2528	726.69	31.43	-3.34	
21	SLE RA 12	9	-1	2528	726.69	31.43	-3.34	
21	SLE RA 13	9	-1	2528	726.69	31.43	-3.34	
21	SLE RA 14	9	-1	2528	726.69	31.43	-3.34	
21	SLE RA 15	9	-1	2528	726.69	31.43	-3.34	
21	SLE RA 16	9	-1	2528	726.69	31.43	-3.34	
21	SLE RA 17	9	-1	2528	726.69	31.43	-3.34	
21	SLE RA 18	10	-1	2647	759.98	32.89	-3.49	
21	SLE RA 19	10	-1	2647	759.98	32.89	-3.49	
21	SLE RA 20	10	-1	2647	759.98	32.89	-3.49	
21	SLE RA 21	10	-1	2647	759.98	32.89	-3.49	
21	SLE FR 1	9	-1	2252	649	28.02	-2.99	
21	SLE FR 2	9	-1	2252	649	28.02	-2.99	
21	SLE FR 3	9	-1	2252	649	28.02	-2.99	
21	SLE FR 4	9	-1	2370	682.29	29.48	-3.14	
21	SLE FR 5	9	-1	2370	682.29	29.48	-3.14	
21	SLE FR 6	9	-1	2449	704.49	30.46	-3.24	
21	SLE QP 1	9	-1	2252	649	28.02	-2.99	
21	SLE QP 2	9	-1	2370	682.29	29.48	-3.14	
21	SLD 1	178	7	2503	711.37	31.46	-62.37	
21	SLD 2	216	5	2503	711.37	31.45	-75.76	
21	SLD 3	186	-10	2279	656.46	28.71	-64.87	
21	SLD 4	224	-11	2279	656.46	28.7	-78.25	
21	SLD 5	34	27	2750	774.29	34.25	-12.3	
21	SLD 6	73	25	2750	774.3	34.24	-25.97	
21	SLD 7	60	-28	2004	591.27	25.09	-20.61	
21	SLD 8	99	-30	2003	591.27	25.07	-34.28	
21	SLD 9	-81	28	2738	773.32	33.89	28	
21	SLD 10	-42	26	2737	773.32	33.88	14.33	
21	SLD 11	-55	-28	1991	590.29	24.73	19.7	
21	SLD 12	-16	-29	1991	590.3	24.72	6.02	
21	SLD 13	-206	9	2462	708.13	30.27	71.97	
21	SLD 14	-168	7	2462	708.13	30.26	58.59	
21	SLD 15	-198	-8	2238	653.22	27.52	69.48	
21	SLD 16	-160	-9	2238	653.22	27.51	56.1	
21	SLV 1	392	18	2680	750.49	34.08	-137.43	
21	SLV 2	480	14	2680	750.5	34.05	-168.04	
21	SLV 3	410	-21	2155	621.59	27.62	-143.25	
21	SLV 4	498	-24	2154	621.6	27.6	-173.86	
21	SLV 5	64	65	3260	898.25	40.66	-23.3	
21	SLV 6	155	61	3260	898.25	40.63	-55.08	
21	SLV 7	124	-65	1509	468.58	19.15	-42.71	
21	SLV 8	216	-68	1509	468.59	19.12	-74.48	
21	SLV 9	-198	66	3232	896	39.85	68.2	
21	SLV 10	-106	63	3232	896.01	39.82	36.43	
21	SLV 11	-137	-64	1481	466.34	18.34	48.8	
21	SLV 12	-46	-67	1481	466.34	18.31	17.02	
21	SLV 13	-480	22	2587	742.99	31.37	167.58	
21	SLV 14	-392	19	2586	743	31.34	136.97	
21	SLV 15	-462	-17	2061	614.09	24.92	161.76	
21	SLV 16	-374	-20	2061	614.1	24.89	131.15	
21	CRTFP Ux+	0	0	0	0	0	0	
21	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
21	CRTFP Uy+	0	0	0	0	0	0
21	CRTFP Uy-	0	0	0	0	0	0
22	SLU 1	9	0	2260	604.24	-2.55	-3.07
22	SLU 2	9	0	2260	604.24	-2.55	-3.07
22	SLU 3	9	0	2260	604.24	-2.55	-3.07
22	SLU 4	9	0	2260	604.24	-2.55	-3.07
22	SLU 5	9	0	2260	604.24	-2.55	-3.07
22	SLU 6	9	0	2260	604.24	-2.55	-3.07
22	SLU 7	9	0	2260	604.24	-2.55	-3.07
22	SLU 8	9	0	2260	604.24	-2.55	-3.07
22	SLU 9	9	0	2260	604.24	-2.55	-3.07
22	SLU 10	10	1	2690	714.78	-3.14	-3.7
22	SLU 11	10	1	2690	714.78	-3.14	-3.7
22	SLU 12	10	1	2690	714.78	-3.14	-3.7
22	SLU 13	10	1	2690	714.78	-3.14	-3.7
22	SLU 14	10	1	2690	714.78	-3.14	-3.7
22	SLU 15	10	1	2690	714.78	-3.14	-3.7
22	SLU 16	10	1	2690	714.78	-3.14	-3.7
22	SLU 17	10	1	2690	714.78	-3.14	-3.7
22	SLU 18	11	1	2874	762.15	-3.39	-3.97
22	SLU 19	11	1	2874	762.15	-3.39	-3.97
22	SLU 20	11	1	2874	762.15	-3.39	-3.97
22	SLU 21	11	1	2874	762.15	-3.39	-3.97
22	SLU 22	10	0	2578	686.08	-2.98	-3.5
22	SLU 23	10	0	2578	686.08	-2.98	-3.5
22	SLU 24	10	0	2578	686.08	-2.98	-3.5
22	SLU 25	10	0	2578	686.08	-2.98	-3.5
22	SLU 26	10	0	2578	686.08	-2.98	-3.5
22	SLU 27	10	0	2578	686.08	-2.98	-3.5
22	SLU 28	10	0	2578	686.08	-2.98	-3.5
22	SLU 29	10	0	2578	686.08	-2.98	-3.5
22	SLU 30	10	0	2578	686.08	-2.98	-3.5
22	SLU 31	12	1	3008	796.62	-3.57	-4.13
22	SLU 32	12	1	3008	796.62	-3.57	-4.13
22	SLU 33	12	1	3008	796.62	-3.57	-4.13
22	SLU 34	12	1	3008	796.62	-3.57	-4.13
22	SLU 35	12	1	3008	796.62	-3.57	-4.13
22	SLU 36	12	1	3008	796.62	-3.57	-4.13
22	SLU 37	12	1	3008	796.62	-3.57	-4.13
22	SLU 38	12	1	3008	796.62	-3.57	-4.13
22	SLU 39	12	1	3193	844	-3.82	-4.4
22	SLU 40	12	1	3193	844	-3.82	-4.4
22	SLU 41	12	1	3193	844	-3.82	-4.4
22	SLU 42	12	1	3193	844	-3.82	-4.4
22	SLU 43	11	-1	2829	757.45	-3.17	-3.85
22	SLU 44	11	-1	2829	757.45	-3.17	-3.85
22	SLU 45	11	-1	2829	757.45	-3.17	-3.85
22	SLU 46	11	-1	2829	757.45	-3.17	-3.85
22	SLU 47	11	-1	2829	757.45	-3.17	-3.85
22	SLU 48	11	-1	2829	757.45	-3.17	-3.85
22	SLU 49	11	-1	2829	757.45	-3.17	-3.85
22	SLU 50	11	-1	2829	757.45	-3.17	-3.85
22	SLU 51	11	-1	2829	757.45	-3.17	-3.85
22	SLU 52	13	0	3259	867.99	-3.75	-4.47
22	SLU 53	13	0	3259	867.99	-3.75	-4.47
22	SLU 54	13	0	3259	867.99	-3.75	-4.47
22	SLU 55	13	0	3259	867.99	-3.75	-4.47
22	SLU 56	13	0	3259	867.99	-3.75	-4.47
22	SLU 57	13	0	3259	867.99	-3.75	-4.47
22	SLU 58	13	0	3259	867.99	-3.75	-4.47
22	SLU 59	13	0	3259	867.99	-3.75	-4.47
22	SLU 60	13	1	3443	915.36	-4	-4.74
22	SLU 61	13	1	3443	915.36	-4	-4.74
22	SLU 62	13	1	3443	915.36	-4	-4.74
22	SLU 63	13	1	3443	915.36	-4	-4.74
22	SLU 64	12	0	3147	839.29	-3.6	-4.28
22	SLU 65	12	0	3147	839.29	-3.6	-4.28
22	SLU 66	12	0	3147	839.29	-3.6	-4.28
22	SLU 67	12	0	3147	839.29	-3.6	-4.28
22	SLU 68	12	0	3147	839.29	-3.6	-4.28
22	SLU 69	12	0	3147	839.29	-3.6	-4.28
22	SLU 70	12	0	3147	839.29	-3.6	-4.28
22	SLU 71	12	0	3147	839.29	-3.6	-4.28
22	SLU 72	12	0	3147	839.29	-3.6	-4.28
22	SLU 73	14	1	3577	949.83	-4.18	-4.9
22	SLU 74	14	1	3577	949.83	-4.18	-4.9
22	SLU 75	14	1	3577	949.83	-4.18	-4.9
22	SLU 76	14	1	3577	949.83	-4.18	-4.9
22	SLU 77	14	1	3577	949.83	-4.18	-4.9
22	SLU 78	14	1	3577	949.83	-4.18	-4.9
22	SLU 79	14	1	3577	949.83	-4.18	-4.9
22	SLU 80	14	1	3577	949.83	-4.18	-4.9
22	SLU 81	15	1	3762	997.21	-4.44	-5.17
22	SLU 82	15	1	3762	997.21	-4.44	-5.17
22	SLU 83	15	1	3762	997.21	-4.44	-5.17
22	SLU 84	15	1	3762	997.21	-4.44	-5.17
22	SLE RA 1	9	0	2351	627.62	-2.67	-3.19
22	SLE RA 2	9	0	2351	627.62	-2.67	-3.19
22	SLE RA 3	9	0	2351	627.62	-2.67	-3.19
22	SLE RA 4	9	0	2351	627.62	-2.67	-3.19



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
22	SLE RA 5	9	0	2351	627.62	-2.67	-3.19
22	SLE RA 6	9	0	2351	627.62	-2.67	-3.19
22	SLE RA 7	9	0	2351	627.62	-2.67	-3.19
22	SLE RA 8	9	0	2351	627.62	-2.67	-3.19
22	SLE RA 9	9	0	2351	627.62	-2.67	-3.19
22	SLE RA 10	10	0	2638	701.31	-3.06	-3.61
22	SLE RA 11	10	0	2638	701.31	-3.06	-3.61
22	SLE RA 12	10	0	2638	701.31	-3.06	-3.61
22	SLE RA 13	10	0	2638	701.31	-3.06	-3.61
22	SLE RA 14	10	0	2638	701.31	-3.06	-3.61
22	SLE RA 15	10	0	2638	701.31	-3.06	-3.61
22	SLE RA 16	10	0	2638	701.31	-3.06	-3.61
22	SLE RA 17	10	0	2638	701.31	-3.06	-3.61
22	SLE RA 18	11	1	2761	732.9	-3.23	-3.79
22	SLE RA 19	11	1	2761	732.9	-3.23	-3.79
22	SLE RA 20	11	1	2761	732.9	-3.23	-3.79
22	SLE RA 21	11	1	2761	732.9	-3.23	-3.79
22	SLE FR 1	9	0	2351	627.62	-2.67	-3.19
22	SLE FR 2	9	0	2351	627.62	-2.67	-3.19
22	SLE FR 3	9	0	2351	627.62	-2.67	-3.19
22	SLE FR 4	10	0	2474	659.2	-2.84	-3.37
22	SLE FR 5	10	0	2474	659.2	-2.84	-3.37
22	SLE FR 6	10	0	2556	680.26	-2.95	-3.49
22	SLE QP 1	9	0	2351	627.62	-2.67	-3.19
22	SLE QP 2	10	0	2474	659.2	-2.84	-3.37
22	SLD 1	191	11	2625	686.09	-2.58	-66.89
22	SLD 2	232	8	2624	686.11	-2.59	-81.27
22	SLD 3	199	-10	2393	635.01	-2.27	-69.8
22	SLD 4	241	-13	2392	635.04	-2.28	-84.18
22	SLD 5	36	36	2872	744.73	-3.23	-12.82
22	SLD 6	78	33	2871	744.75	-3.24	-27.52
22	SLD 7	65	-33	2098	574.47	-2.19	-22.52
22	SLD 8	107	-36	2097	574.49	-2.2	-37.23
22	SLD 9	-88	37	2851	743.91	-3.48	30.48
22	SLD 10	-46	33	2850	743.94	-3.49	15.78
22	SLD 11	-59	-32	2077	573.65	-2.44	20.77
22	SLD 12	-17	-36	2076	573.68	-2.45	6.07
22	SLD 13	-222	13	2556	683.37	-3.4	77.44
22	SLD 14	-180	10	2555	683.4	-3.41	63.05
22	SLD 15	-213	-7	2323	632.29	-3.09	74.52
22	SLD 16	-172	-11	2323	632.32	-3.1	60.14
22	SLV 1	420	25	2826	722.46	-2.26	-147.35
22	SLV 2	515	18	2824	722.52	-2.28	-180.25
22	SLV 3	440	-23	2281	602.5	-1.53	-154.15
22	SLV 4	535	-31	2279	602.56	-1.55	-187.06
22	SLV 5	67	84	3407	860.1	-3.76	-24.1
22	SLV 6	165	76	3405	860.16	-3.79	-58.27
22	SLV 7	135	-78	1590	460.23	-1.33	-46.78
22	SLV 8	233	-85	1588	460.29	-1.36	-80.94
22	SLV 9	-214	85	3359	858.12	-4.32	74.19
22	SLV 10	-116	78	3358	858.18	-4.35	40.03
22	SLV 11	-146	-76	1543	458.24	-1.89	51.52
22	SLV 12	-48	-83	1541	458.31	-1.92	17.36
22	SLV 13	-516	31	2668	715.85	-4.13	180.31
22	SLV 14	-421	24	2667	715.91	-4.15	147.41
22	SLV 15	-496	-18	2123	595.89	-3.4	173.51
22	SLV 16	-401	-25	2122	595.95	-3.42	140.6
22	CRTFP Ux+	0	0	0	0	0	0
22	CRTFP Ux-	0	0	0	0	0	0
22	CRTFP Uy+	0	0	0	0	0	0
22	CRTFP Uy-	0	0	0	0	0	0
23	SLU 1	9	1	2172	528.49	-2.94	-3.06
23	SLU 2	9	1	2172	528.49	-2.94	-3.06
23	SLU 3	9	1	2172	528.49	-2.94	-3.06
23	SLU 4	9	1	2172	528.49	-2.94	-3.06
23	SLU 5	9	1	2172	528.49	-2.94	-3.06
23	SLU 6	9	1	2172	528.49	-2.94	-3.06
23	SLU 7	9	1	2172	528.49	-2.94	-3.06
23	SLU 8	9	1	2172	528.49	-2.94	-3.06
23	SLU 9	9	1	2172	528.49	-2.94	-3.06
23	SLU 10	11	2	2582	622.3	-3.62	-3.77
23	SLU 11	11	2	2582	622.3	-3.62	-3.77
23	SLU 12	11	2	2582	622.3	-3.62	-3.77
23	SLU 13	11	2	2582	622.3	-3.62	-3.77
23	SLU 14	11	2	2582	622.3	-3.62	-3.77
23	SLU 15	11	2	2582	622.3	-3.62	-3.77
23	SLU 16	11	2	2582	622.3	-3.62	-3.77
23	SLU 17	11	2	2582	622.3	-3.62	-3.77
23	SLU 18	11	3	2758	662.5	-3.91	-4.07
23	SLU 19	11	3	2758	662.5	-3.91	-4.07
23	SLU 20	11	3	2758	662.5	-3.91	-4.07
23	SLU 21	11	3	2758	662.5	-3.91	-4.07
23	SLU 22	10	2	2476	597.93	-3.44	-3.54
23	SLU 23	10	2	2476	597.93	-3.44	-3.54
23	SLU 24	10	2	2476	597.93	-3.44	-3.54
23	SLU 25	10	2	2476	597.93	-3.44	-3.54
23	SLU 26	10	2	2476	597.93	-3.44	-3.54
23	SLU 27	10	2	2476	597.93	-3.44	-3.54
23	SLU 28	10	2	2476	597.93	-3.44	-3.54
23	SLU 29	10	2	2476	597.93	-3.44	-3.54



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
23	SLU 30	10	2	2476	597.93	-3.44	-3.54
23	SLU 31	12	3	2886	691.73	-4.12	-4.25
23	SLU 32	12	3	2886	691.73	-4.12	-4.25
23	SLU 33	12	3	2886	691.73	-4.12	-4.25
23	SLU 34	12	3	2886	691.73	-4.12	-4.25
23	SLU 35	12	3	2886	691.73	-4.12	-4.25
23	SLU 36	12	3	2886	691.73	-4.12	-4.25
23	SLU 37	12	3	2886	691.73	-4.12	-4.25
23	SLU 38	12	3	2886	691.73	-4.12	-4.25
23	SLU 39	13	4	3061	731.93	-4.41	-4.55
23	SLU 40	13	4	3061	731.93	-4.41	-4.55
23	SLU 41	13	4	3061	731.93	-4.41	-4.55
23	SLU 42	13	4	3061	731.93	-4.41	-4.55
23	SLU 43	11	1	2720	663.23	-3.65	-3.81
23	SLU 44	11	1	2720	663.23	-3.65	-3.81
23	SLU 45	11	1	2720	663.23	-3.65	-3.81
23	SLU 46	11	1	2720	663.23	-3.65	-3.81
23	SLU 47	11	1	2720	663.23	-3.65	-3.81
23	SLU 48	11	1	2720	663.23	-3.65	-3.81
23	SLU 49	11	1	2720	663.23	-3.65	-3.81
23	SLU 50	11	1	2720	663.23	-3.65	-3.81
23	SLU 51	11	1	2720	663.23	-3.65	-3.81
23	SLU 52	13	2	3130	757.04	-4.33	-4.52
23	SLU 53	13	2	3130	757.04	-4.33	-4.52
23	SLU 54	13	2	3130	757.04	-4.33	-4.52
23	SLU 55	13	2	3130	757.04	-4.33	-4.52
23	SLU 56	13	2	3130	757.04	-4.33	-4.52
23	SLU 57	13	2	3130	757.04	-4.33	-4.52
23	SLU 58	13	2	3130	757.04	-4.33	-4.52
23	SLU 59	13	2	3130	757.04	-4.33	-4.52
23	SLU 60	14	3	3306	797.24	-4.62	-4.82
23	SLU 61	14	3	3306	797.24	-4.62	-4.82
23	SLU 62	14	3	3306	797.24	-4.62	-4.82
23	SLU 63	14	3	3306	797.24	-4.62	-4.82
23	SLU 64	12	2	3024	732.67	-4.15	-4.29
23	SLU 65	12	2	3024	732.67	-4.15	-4.29
23	SLU 66	12	2	3024	732.67	-4.15	-4.29
23	SLU 67	12	2	3024	732.67	-4.15	-4.29
23	SLU 68	12	2	3024	732.67	-4.15	-4.29
23	SLU 69	12	2	3024	732.67	-4.15	-4.29
23	SLU 70	12	2	3024	732.67	-4.15	-4.29
23	SLU 71	12	2	3024	732.67	-4.15	-4.29
23	SLU 72	12	2	3024	732.67	-4.15	-4.29
23	SLU 73	14	3	3433	826.47	-4.83	-5
23	SLU 74	14	3	3433	826.47	-4.83	-5
23	SLU 75	14	3	3433	826.47	-4.83	-5
23	SLU 76	14	3	3433	826.47	-4.83	-5
23	SLU 77	14	3	3433	826.47	-4.83	-5
23	SLU 78	14	3	3433	826.47	-4.83	-5
23	SLU 79	14	3	3433	826.47	-4.83	-5
23	SLU 80	14	3	3433	826.47	-4.83	-5
23	SLU 81	15	4	3609	866.67	-5.12	-5.3
23	SLU 82	15	4	3609	866.67	-5.12	-5.3
23	SLU 83	15	4	3609	866.67	-5.12	-5.3
23	SLU 84	15	4	3609	866.67	-5.12	-5.3
23	SLE RA 1	9	1	2259	548.33	-3.08	-3.19
23	SLE RA 2	9	1	2259	548.33	-3.08	-3.19
23	SLE RA 3	9	1	2259	548.33	-3.08	-3.19
23	SLE RA 4	9	1	2259	548.33	-3.08	-3.19
23	SLE RA 5	9	1	2259	548.33	-3.08	-3.19
23	SLE RA 6	9	1	2259	548.33	-3.08	-3.19
23	SLE RA 7	9	1	2259	548.33	-3.08	-3.19
23	SLE RA 8	9	1	2259	548.33	-3.08	-3.19
23	SLE RA 9	9	1	2259	548.33	-3.08	-3.19
23	SLE RA 10	10	2	2532	610.87	-3.54	-3.67
23	SLE RA 11	10	2	2532	610.87	-3.54	-3.67
23	SLE RA 12	10	2	2532	610.87	-3.54	-3.67
23	SLE RA 13	10	2	2532	610.87	-3.54	-3.67
23	SLE RA 14	10	2	2532	610.87	-3.54	-3.67
23	SLE RA 15	10	2	2532	610.87	-3.54	-3.67
23	SLE RA 16	10	2	2532	610.87	-3.54	-3.67
23	SLE RA 17	10	2	2532	610.87	-3.54	-3.67
23	SLE RA 18	11	2	2649	637.67	-3.73	-3.87
23	SLE RA 19	11	2	2649	637.67	-3.73	-3.87
23	SLE RA 20	11	2	2649	637.67	-3.73	-3.87
23	SLE RA 21	11	2	2649	637.67	-3.73	-3.87
23	SLE FR 1	9	1	2259	548.33	-3.08	-3.19
23	SLE FR 2	9	1	2259	548.33	-3.08	-3.19
23	SLE FR 3	9	1	2259	548.33	-3.08	-3.19
23	SLE FR 4	10	2	2376	575.13	-3.28	-3.4
23	SLE FR 5	10	2	2376	575.13	-3.28	-3.4
23	SLE FR 6	10	2	2454	593	-3.41	-3.53
23	SLE QP 1	9	1	2259	548.33	-3.08	-3.19
23	SLE QP 2	10	2	2376	575.13	-3.28	-3.4
23	SLD 1	191	16	2536	594.56	-3.02	-66.92
23	SLD 2	232	11	2535	594.62	-3.03	-81.31
23	SLD 3	200	-10	2314	552.39	-2.68	-69.88
23	SLD 4	241	-15	2313	552.45	-2.69	-84.27
23	SLD 5	35	47	2761	644.9	-3.71	-12.78
23	SLD 6	78	42	2760	644.96	-3.72	-27.49



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
Ind.	N.br.	x	y	z		x	y	z	
23	SLD 7	65	-39	2021		504.33	-2.58	-22.62	
23	SLD 8	107	-44	2020		504.39	-2.59	-37.33	
23	SLD 9	-88	47	2732		645.88	-3.96	30.54	
23	SLD 10	-46	43	2731		645.93	-3.98	15.83	
23	SLD 11	-58	-38	1993		505.31	-2.83	20.69	
23	SLD 12	-16	-43	1992		505.36	-2.85	5.99	
23	SLD 13	-222	18	2440		597.82	-3.86	77.47	
23	SLD 14	-180	13	2439		597.87	-3.88	63.08	
23	SLD 15	-213	-7	2218		555.65	-3.52	74.52	
23	SLD 16	-172	-12	2217		555.7	-3.54	60.13	
23	SLV 1	420	34	2747		620.58	-2.7	-147.41	
23	SLV 2	515	23	2744		620.71	-2.73	-180.32	
23	SLV 3	441	-26	2226		521.46	-1.91	-154.3	
23	SLV 4	535	-37	2224		521.58	-1.93	-187.22	
23	SLV 5	66	107	3278		739.06	-4.3	-23.99	
23	SLV 6	164	95	3275		739.19	-4.33	-58.16	
23	SLV 7	136	-94	1542		408.64	-1.65	-46.98	
23	SLV 8	234	-106	1540		408.78	-1.68	-81.16	
23	SLV 9	-215	109	3212		741.49	-4.87	74.36	
23	SLV 10	-117	97	3210		741.62	-4.9	40.19	
23	SLV 11	-145	-92	1477		411.07	-2.23	51.36	
23	SLV 12	-47	-104	1475		411.21	-2.26	17.19	
23	SLV 13	-516	41	2529		628.68	-4.62	180.42	
23	SLV 14	-422	30	2527		628.81	-4.65	147.51	
23	SLV 15	-495	-20	2008		529.55	-3.83	173.52	
23	SLV 16	-401	-31	2006		529.68	-3.85	140.61	
23	CRTFP Ux+	0	0	0		0	0	0	
23	CRTFP Ux-	0	0	0		0	0	0	
23	CRTFP Uy+	0	0	0		0	0	0	
23	CRTFP Uy-	0	0	0		0	0	0	
24	SLU 1	9	2	2080		452.45	-2.87	-3.06	
24	SLU 2	9	2	2080		452.45	-2.87	-3.06	
24	SLU 3	9	2	2080		452.45	-2.87	-3.06	
24	SLU 4	9	2	2080		452.45	-2.87	-3.06	
24	SLU 5	9	2	2080		452.45	-2.87	-3.06	
24	SLU 6	9	2	2080		452.45	-2.87	-3.06	
24	SLU 7	9	2	2080		452.45	-2.87	-3.06	
24	SLU 8	9	2	2080		452.45	-2.87	-3.06	
24	SLU 9	9	2	2080		452.45	-2.87	-3.06	
24	SLU 10	11	4	2468		529.42	-3.54	-3.85	
24	SLU 11	11	4	2468		529.42	-3.54	-3.85	
24	SLU 12	11	4	2468		529.42	-3.54	-3.85	
24	SLU 13	11	4	2468		529.42	-3.54	-3.85	
24	SLU 14	11	4	2468		529.42	-3.54	-3.85	
24	SLU 15	11	4	2468		529.42	-3.54	-3.85	
24	SLU 16	11	4	2468		529.42	-3.54	-3.85	
24	SLU 17	11	4	2468		529.42	-3.54	-3.85	
24	SLU 18	12	5	2635		562.4	-3.83	-4.19	
24	SLU 19	12	5	2635		562.4	-3.83	-4.19	
24	SLU 20	12	5	2635		562.4	-3.83	-4.19	
24	SLU 21	12	5	2635		562.4	-3.83	-4.19	
24	SLU 22	10	3	2368		509.4	-3.36	-3.6	
24	SLU 23	10	3	2368		509.4	-3.36	-3.6	
24	SLU 24	10	3	2368		509.4	-3.36	-3.6	
24	SLU 25	10	3	2368		509.4	-3.36	-3.6	
24	SLU 26	10	3	2368		509.4	-3.36	-3.6	
24	SLU 27	10	3	2368		509.4	-3.36	-3.6	
24	SLU 28	10	3	2368		509.4	-3.36	-3.6	
24	SLU 29	10	3	2368		509.4	-3.36	-3.6	
24	SLU 30	10	3	2368		509.4	-3.36	-3.6	
24	SLU 31	12	5	2756		586.37	-4.03	-4.39	
24	SLU 32	12	5	2756		586.37	-4.03	-4.39	
24	SLU 33	12	5	2756		586.37	-4.03	-4.39	
24	SLU 34	12	5	2756		586.37	-4.03	-4.39	
24	SLU 35	12	5	2756		586.37	-4.03	-4.39	
24	SLU 36	12	5	2756		586.37	-4.03	-4.39	
24	SLU 37	12	5	2756		586.37	-4.03	-4.39	
24	SLU 38	12	5	2756		586.37	-4.03	-4.39	
24	SLU 39	13	6	2922		619.36	-4.32	-4.72	
24	SLU 40	13	6	2922		619.36	-4.32	-4.72	
24	SLU 41	13	6	2922		619.36	-4.32	-4.72	
24	SLU 42	13	6	2922		619.36	-4.32	-4.72	
24	SLU 43	11	3	2605		568.66	-3.56	-3.8	
24	SLU 44	11	3	2605		568.66	-3.56	-3.8	
24	SLU 45	11	3	2605		568.66	-3.56	-3.8	
24	SLU 46	11	3	2605		568.66	-3.56	-3.8	
24	SLU 47	11	3	2605		568.66	-3.56	-3.8	
24	SLU 48	11	3	2605		568.66	-3.56	-3.8	
24	SLU 49	11	3	2605		568.66	-3.56	-3.8	
24	SLU 50	11	3	2605		568.66	-3.56	-3.8	
24	SLU 51	11	3	2605		568.66	-3.56	-3.8	
24	SLU 52	13	4	2994		645.63	-4.23	-4.59	
24	SLU 53	13	4	2994		645.63	-4.23	-4.59	
24	SLU 54	13	4	2994		645.63	-4.23	-4.59	
24	SLU 55	13	4	2994		645.63	-4.23	-4.59	
24	SLU 56	13	4	2994		645.63	-4.23	-4.59	
24	SLU 57	13	4	2994		645.63	-4.23	-4.59	
24	SLU 58	13	4	2994		645.63	-4.23	-4.59	
24	SLU 59	13	4	2994		645.63	-4.23	-4.59	
24	SLU 60	14	5	3160		678.61	-4.52	-4.93	



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione		
Ind.	N.br.	x	y	z		x	y	z
24	SLU 61	14	5	3160		678.61	-4.52	-4.93
24	SLU 62	14	5	3160		678.61	-4.52	-4.93
24	SLU 63	14	5	3160		678.61	-4.52	-4.93
24	SLU 64	12	4	2893		625.61	-4.05	-4.33
24	SLU 65	12	4	2893		625.61	-4.05	-4.33
24	SLU 66	12	4	2893		625.61	-4.05	-4.33
24	SLU 67	12	4	2893		625.61	-4.05	-4.33
24	SLU 68	12	4	2893		625.61	-4.05	-4.33
24	SLU 69	12	4	2893		625.61	-4.05	-4.33
24	SLU 70	12	4	2893		625.61	-4.05	-4.33
24	SLU 71	12	4	2893		625.61	-4.05	-4.33
24	SLU 72	12	4	2893		625.61	-4.05	-4.33
24	SLU 73	14	5	3281		702.58	-4.72	-5.12
24	SLU 74	14	5	3281		702.58	-4.72	-5.12
24	SLU 75	14	5	3281		702.58	-4.72	-5.12
24	SLU 76	14	5	3281		702.58	-4.72	-5.12
24	SLU 77	14	5	3281		702.58	-4.72	-5.12
24	SLU 78	14	5	3281		702.58	-4.72	-5.12
24	SLU 79	14	5	3281		702.58	-4.72	-5.12
24	SLU 80	14	5	3281		702.58	-4.72	-5.12
24	SLU 81	15	6	3448		735.57	-5.01	-5.46
24	SLU 82	15	6	3448		735.57	-5.01	-5.46
24	SLU 83	15	6	3448		735.57	-5.01	-5.46
24	SLU 84	15	6	3448		735.57	-5.01	-5.46
24	SLE RA 1	9	3	2162		468.72	-3.01	-3.22
24	SLE RA 2	9	3	2162		468.72	-3.01	-3.22
24	SLE RA 3	9	3	2162		468.72	-3.01	-3.22
24	SLE RA 4	9	3	2162		468.72	-3.01	-3.22
24	SLE RA 5	9	3	2162		468.72	-3.01	-3.22
24	SLE RA 6	9	3	2162		468.72	-3.01	-3.22
24	SLE RA 7	9	3	2162		468.72	-3.01	-3.22
24	SLE RA 8	9	3	2162		468.72	-3.01	-3.22
24	SLE RA 9	9	3	2162		468.72	-3.01	-3.22
24	SLE RA 10	11	4	2421		520.03	-3.45	-3.74
24	SLE RA 11	11	4	2421		520.03	-3.45	-3.74
24	SLE RA 12	11	4	2421		520.03	-3.45	-3.74
24	SLE RA 13	11	4	2421		520.03	-3.45	-3.74
24	SLE RA 14	11	4	2421		520.03	-3.45	-3.74
24	SLE RA 15	11	4	2421		520.03	-3.45	-3.74
24	SLE RA 16	11	4	2421		520.03	-3.45	-3.74
24	SLE RA 17	11	4	2421		520.03	-3.45	-3.74
24	SLE RA 18	11	4	2532		542.03	-3.65	-3.97
24	SLE RA 19	11	4	2532		542.03	-3.65	-3.97
24	SLE RA 20	11	4	2532		542.03	-3.65	-3.97
24	SLE RA 21	11	4	2532		542.03	-3.65	-3.97
24	SLE FR 1	9	3	2162		468.72	-3.01	-3.22
24	SLE FR 2	9	3	2162		468.72	-3.01	-3.22
24	SLE FR 3	9	3	2162		468.72	-3.01	-3.22
24	SLE FR 4	10	3	2273		490.71	-3.2	-3.44
24	SLE FR 5	10	3	2273		490.71	-3.2	-3.44
24	SLE FR 6	10	3	2347		505.37	-3.33	-3.59
24	SLE QP 1	9	3	2162		468.72	-3.01	-3.22
24	SLE QP 2	10	3	2273		490.71	-3.2	-3.44
24	SLD 1	191	25	2441		505.41	-2.9	-66.97
24	SLD 2	232	18	2440		505.5	-2.92	-81.36
24	SLD 3	200	-8	2230		471.98	-2.6	-69.96
24	SLD 4	241	-15	2228		472.07	-2.61	-84.35
24	SLD 5	35	62	2645		545.79	-3.57	-12.77
24	SLD 6	77	56	2643		545.89	-3.59	-27.48
24	SLD 7	66	-48	1940		434.36	-2.55	-22.73
24	SLD 8	108	-55	1938		434.45	-2.56	-37.44
24	SLD 9	-89	61	2608		546.97	-3.84	30.56
24	SLD 10	-46	54	2606		547.07	-3.85	15.85
24	SLD 11	-58	-49	1903		435.54	-2.81	20.6
24	SLD 12	-16	-56	1901		435.64	-2.83	5.89
24	SLD 13	-222	21	2318		509.35	-3.79	77.47
24	SLD 14	-181	15	2316		509.45	-3.8	63.08
24	SLD 15	-213	-12	2106		475.92	-3.48	74.48
24	SLD 16	-171	-19	2105		476.02	-3.5	60.09
24	SLV 1	420	54	2663		525.02	-2.54	-147.46
24	SLV 2	514	39	2660		525.23	-2.57	-180.37
24	SLV 3	442	-24	2167		446.32	-1.82	-154.44
24	SLV 4	536	-39	2163		446.54	-1.85	-187.35
24	SLV 5	65	141	3144		620.27	-4.08	-23.91
24	SLV 6	163	126	3141		620.5	-4.11	-58.08
24	SLV 7	137	-117	1489		357.97	-1.68	-47.18
24	SLV 8	235	-133	1486		358.19	-1.72	-81.35
24	SLV 9	-216	139	3060		623.24	-4.68	74.47
24	SLV 10	-118	123	3057		623.46	-4.72	40.3
24	SLV 11	-144	-120	1405		360.93	-2.28	51.19
24	SLV 12	-46	-135	1402		361.15	-2.32	17.02
24	SLV 13	-517	45	2383		534.89	-4.55	180.47
24	SLV 14	-422	30	2380		535.1	-4.58	147.56
24	SLV 15	-495	-32	1886		456.19	-3.83	173.49
24	SLV 16	-401	-47	1883		456.41	-3.86	140.58
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	9	4	1995		383.32	-2.49	-3.08



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
25	SLU 2	9	4	1995	383.32	-2.49	-3.08
25	SLU 3	9	4	1995	383.32	-2.49	-3.08
25	SLU 4	9	4	1995	383.32	-2.49	-3.08
25	SLU 5	9	4	1995	383.32	-2.49	-3.08
25	SLU 6	9	4	1995	383.32	-2.49	-3.08
25	SLU 7	9	4	1995	383.32	-2.49	-3.08
25	SLU 8	9	4	1995	383.32	-2.49	-3.08
25	SLU 9	9	4	1995	383.32	-2.49	-3.08
25	SLU 10	11	5	2363	444.92	-3.08	-3.95
25	SLU 11	11	5	2363	444.92	-3.08	-3.95
25	SLU 12	11	5	2363	444.92	-3.08	-3.95
25	SLU 13	11	5	2363	444.92	-3.08	-3.95
25	SLU 14	11	5	2363	444.92	-3.08	-3.95
25	SLU 15	11	5	2363	444.92	-3.08	-3.95
25	SLU 16	11	5	2363	444.92	-3.08	-3.95
25	SLU 17	11	5	2363	444.92	-3.08	-3.95
25	SLU 18	12	6	2521	471.32	-3.34	-4.32
25	SLU 19	12	6	2521	471.32	-3.34	-4.32
25	SLU 20	12	6	2521	471.32	-3.34	-4.32
25	SLU 21	12	6	2521	471.32	-3.34	-4.32
25	SLU 22	10	5	2268	428.89	-2.92	-3.66
25	SLU 23	10	5	2268	428.89	-2.92	-3.66
25	SLU 24	10	5	2268	428.89	-2.92	-3.66
25	SLU 25	10	5	2268	428.89	-2.92	-3.66
25	SLU 26	10	5	2268	428.89	-2.92	-3.66
25	SLU 27	10	5	2268	428.89	-2.92	-3.66
25	SLU 28	10	5	2268	428.89	-2.92	-3.66
25	SLU 29	10	5	2268	428.89	-2.92	-3.66
25	SLU 30	10	5	2268	428.89	-2.92	-3.66
25	SLU 31	13	7	2636	490.49	-3.52	-4.53
25	SLU 32	13	7	2636	490.49	-3.52	-4.53
25	SLU 33	13	7	2636	490.49	-3.52	-4.53
25	SLU 34	13	7	2636	490.49	-3.52	-4.53
25	SLU 35	13	7	2636	490.49	-3.52	-4.53
25	SLU 36	13	7	2636	490.49	-3.52	-4.53
25	SLU 37	13	7	2636	490.49	-3.52	-4.53
25	SLU 38	13	7	2636	490.49	-3.52	-4.53
25	SLU 39	14	8	2794	516.89	-3.77	-4.91
25	SLU 40	14	8	2794	516.89	-3.77	-4.91
25	SLU 41	14	8	2794	516.89	-3.77	-4.91
25	SLU 42	14	8	2794	516.89	-3.77	-4.91
25	SLU 43	11	4	2500	482.69	-3.09	-3.81
25	SLU 44	11	4	2500	482.69	-3.09	-3.81
25	SLU 45	11	4	2500	482.69	-3.09	-3.81
25	SLU 46	11	4	2500	482.69	-3.09	-3.81
25	SLU 47	11	4	2500	482.69	-3.09	-3.81
25	SLU 48	11	4	2500	482.69	-3.09	-3.81
25	SLU 49	11	4	2500	482.69	-3.09	-3.81
25	SLU 50	11	4	2500	482.69	-3.09	-3.81
25	SLU 51	11	4	2500	482.69	-3.09	-3.81
25	SLU 52	13	6	2868	544.29	-3.68	-4.67
25	SLU 53	13	6	2868	544.29	-3.68	-4.67
25	SLU 54	13	6	2868	544.29	-3.68	-4.67
25	SLU 55	13	6	2868	544.29	-3.68	-4.67
25	SLU 56	13	6	2868	544.29	-3.68	-4.67
25	SLU 57	13	6	2868	544.29	-3.68	-4.67
25	SLU 58	13	6	2868	544.29	-3.68	-4.67
25	SLU 59	13	6	2868	544.29	-3.68	-4.67
25	SLU 60	14	7	3026	570.69	-3.93	-5.05
25	SLU 61	14	7	3026	570.69	-3.93	-5.05
25	SLU 62	14	7	3026	570.69	-3.93	-5.05
25	SLU 63	14	7	3026	570.69	-3.93	-5.05
25	SLU 64	12	6	2773	528.26	-3.52	-4.39
25	SLU 65	12	6	2773	528.26	-3.52	-4.39
25	SLU 66	12	6	2773	528.26	-3.52	-4.39
25	SLU 67	12	6	2773	528.26	-3.52	-4.39
25	SLU 68	12	6	2773	528.26	-3.52	-4.39
25	SLU 69	12	6	2773	528.26	-3.52	-4.39
25	SLU 70	12	6	2773	528.26	-3.52	-4.39
25	SLU 71	12	6	2773	528.26	-3.52	-4.39
25	SLU 72	12	6	2773	528.26	-3.52	-4.39
25	SLU 73	15	7	3141	589.86	-4.11	-5.26
25	SLU 74	15	7	3141	589.86	-4.11	-5.26
25	SLU 75	15	7	3141	589.86	-4.11	-5.26
25	SLU 76	15	7	3141	589.86	-4.11	-5.26
25	SLU 77	15	7	3141	589.86	-4.11	-5.26
25	SLU 78	15	7	3141	589.86	-4.11	-5.26
25	SLU 79	15	7	3141	589.86	-4.11	-5.26
25	SLU 80	15	7	3141	589.86	-4.11	-5.26
25	SLU 81	16	8	3298	616.26	-4.37	-5.63
25	SLU 82	16	8	3298	616.26	-4.37	-5.63
25	SLU 83	16	8	3298	616.26	-4.37	-5.63
25	SLU 84	16	8	3298	616.26	-4.37	-5.63
25	SLE RA 1	9	4	2073	396.34	-2.61	-3.25
25	SLE RA 2	9	4	2073	396.34	-2.61	-3.25
25	SLE RA 3	9	4	2073	396.34	-2.61	-3.25
25	SLE RA 4	9	4	2073	396.34	-2.61	-3.25
25	SLE RA 5	9	4	2073	396.34	-2.61	-3.25
25	SLE RA 6	9	4	2073	396.34	-2.61	-3.25
25	SLE RA 7	9	4	2073	396.34	-2.61	-3.25



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
25	SLE RA 8	9	4	2073	396.34	-2.61	-3.25
25	SLE RA 9	9	4	2073	396.34	-2.61	-3.25
25	SLE RA 10	11	5	2318	437.41	-3.01	-3.83
25	SLE RA 11	11	5	2318	437.41	-3.01	-3.83
25	SLE RA 12	11	5	2318	437.41	-3.01	-3.83
25	SLE RA 13	11	5	2318	437.41	-3.01	-3.83
25	SLE RA 14	11	5	2318	437.41	-3.01	-3.83
25	SLE RA 15	11	5	2318	437.41	-3.01	-3.83
25	SLE RA 16	11	5	2318	437.41	-3.01	-3.83
25	SLE RA 17	11	5	2318	437.41	-3.01	-3.83
25	SLE RA 18	12	6	2423	455.01	-3.18	-4.08
25	SLE RA 19	12	6	2423	455.01	-3.18	-4.08
25	SLE RA 20	12	6	2423	455.01	-3.18	-4.08
25	SLE RA 21	12	6	2423	455.01	-3.18	-4.08
25	SLE FR 1	9	4	2073	396.34	-2.61	-3.25
25	SLE FR 2	9	4	2073	396.34	-2.61	-3.25
25	SLE FR 3	9	4	2073	396.34	-2.61	-3.25
25	SLE FR 4	10	5	2178	413.94	-2.78	-3.5
25	SLE FR 5	10	5	2178	413.94	-2.78	-3.5
25	SLE FR 6	10	5	2248	425.67	-2.9	-3.66
25	SLE QP 1	9	4	2073	396.34	-2.61	-3.25
25	SLE QP 2	10	5	2178	413.94	-2.78	-3.5
25	SLD 1	191	33	2357	428.99	-2.42	-67.02
25	SLD 2	232	24	2355	429.12	-2.44	-81.4
25	SLD 3	200	-10	2154	403.22	-2.18	-70.04
25	SLD 4	242	-18	2152	403.35	-2.2	-84.42
25	SLD 5	35	81	2540	457.5	-3.02	-12.78
25	SLD 6	77	72	2538	457.63	-3.04	-27.48
25	SLD 7	67	-62	1864	371.59	-2.24	-22.85
25	SLD 8	109	-70	1862	371.72	-2.26	-37.55
25	SLD 9	-89	79	2494	456.16	-3.31	30.55
25	SLD 10	-47	71	2492	456.29	-3.32	15.85
25	SLD 11	-57	-63	1818	370.25	-2.52	20.49
25	SLD 12	-15	-72	1816	370.38	-2.54	5.79
25	SLD 13	-222	27	2204	424.53	-3.36	77.43
25	SLD 14	-181	19	2202	424.65	-3.38	63.05
25	SLD 15	-212	-15	2001	398.76	-3.13	74.41
25	SLD 16	-171	-24	1999	398.88	-3.14	60.03
25	SLV 1	420	70	2592	449.83	-1.97	-147.49
25	SLV 2	514	51	2587	450.12	-2.01	-180.39
25	SLV 3	442	-30	2115	389.01	-1.42	-154.55
25	SLV 4	536	-49	2111	389.3	-1.46	-187.45
25	SLV 5	64	184	3026	516.84	-3.36	-23.85
25	SLV 6	162	164	3022	517.14	-3.4	-58
25	SLV 7	138	-151	1438	314.11	-1.52	-47.38
25	SLV 8	236	-171	1434	314.41	-1.56	-81.53
25	SLV 9	-217	180	2922	513.46	-4	74.54
25	SLV 10	-119	160	2918	513.76	-4.04	40.38
25	SLV 11	-143	-155	1334	310.74	-2.16	51.01
25	SLV 12	-45	-175	1330	311.04	-2.21	16.85
25	SLV 13	-517	58	2245	438.57	-4.11	180.46
25	SLV 14	-422	39	2241	438.86	-4.15	147.56
25	SLV 15	-494	-42	1769	377.76	-3.56	173.4
25	SLV 16	-400	-61	1764	378.04	-3.6	140.5
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	9	5	1925	326.26	-1.91	-3.11
26	SLU 2	9	5	1925	326.26	-1.91	-3.11
26	SLU 3	9	5	1925	326.26	-1.91	-3.11
26	SLU 4	9	5	1925	326.26	-1.91	-3.11
26	SLU 5	9	5	1925	326.26	-1.91	-3.11
26	SLU 6	9	5	1925	326.26	-1.91	-3.11
26	SLU 7	9	5	1925	326.26	-1.91	-3.11
26	SLU 8	9	5	1925	326.26	-1.91	-3.11
26	SLU 9	9	5	1925	326.26	-1.91	-3.11
26	SLU 10	11	7	2276	375.09	-2.39	-4.06
26	SLU 11	11	7	2276	375.09	-2.39	-4.06
26	SLU 12	11	7	2276	375.09	-2.39	-4.06
26	SLU 13	11	7	2276	375.09	-2.39	-4.06
26	SLU 14	11	7	2276	375.09	-2.39	-4.06
26	SLU 15	11	7	2276	375.09	-2.39	-4.06
26	SLU 16	11	7	2276	375.09	-2.39	-4.06
26	SLU 17	11	7	2276	375.09	-2.39	-4.06
26	SLU 18	13	8	2426	396.01	-2.59	-4.46
26	SLU 19	13	8	2426	396.01	-2.59	-4.46
26	SLU 20	13	8	2426	396.01	-2.59	-4.46
26	SLU 21	13	8	2426	396.01	-2.59	-4.46
26	SLU 22	11	6	2186	362.39	-2.26	-3.74
26	SLU 23	11	6	2186	362.39	-2.26	-3.74
26	SLU 24	11	6	2186	362.39	-2.26	-3.74
26	SLU 25	11	6	2186	362.39	-2.26	-3.74
26	SLU 26	11	6	2186	362.39	-2.26	-3.74
26	SLU 27	11	6	2186	362.39	-2.26	-3.74
26	SLU 28	11	6	2186	362.39	-2.26	-3.74
26	SLU 29	11	6	2186	362.39	-2.26	-3.74
26	SLU 30	11	6	2186	362.39	-2.26	-3.74
26	SLU 31	13	8	2537	411.21	-2.73	-4.69
26	SLU 32	13	8	2537	411.21	-2.73	-4.69



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
26	SLU 33	13	8	2537	411.21	-2.73	-4.69
26	SLU 34	13	8	2537	411.21	-2.73	-4.69
26	SLU 35	13	8	2537	411.21	-2.73	-4.69
26	SLU 36	13	8	2537	411.21	-2.73	-4.69
26	SLU 37	13	8	2537	411.21	-2.73	-4.69
26	SLU 38	13	8	2537	411.21	-2.73	-4.69
26	SLU 39	14	9	2687	432.14	-2.94	-5.09
26	SLU 40	14	9	2687	432.14	-2.94	-5.09
26	SLU 41	14	9	2687	432.14	-2.94	-5.09
26	SLU 42	14	9	2687	432.14	-2.94	-5.09
26	SLU 43	11	6	2413	411.75	-2.37	-3.83
26	SLU 44	11	6	2413	411.75	-2.37	-3.83
26	SLU 45	11	6	2413	411.75	-2.37	-3.83
26	SLU 46	11	6	2413	411.75	-2.37	-3.83
26	SLU 47	11	6	2413	411.75	-2.37	-3.83
26	SLU 48	11	6	2413	411.75	-2.37	-3.83
26	SLU 49	11	6	2413	411.75	-2.37	-3.83
26	SLU 50	11	6	2413	411.75	-2.37	-3.83
26	SLU 51	11	6	2413	411.75	-2.37	-3.83
26	SLU 52	13	8	2764	460.58	-2.84	-4.77
26	SLU 53	13	8	2764	460.58	-2.84	-4.77
26	SLU 54	13	8	2764	460.58	-2.84	-4.77
26	SLU 55	13	8	2764	460.58	-2.84	-4.77
26	SLU 56	13	8	2764	460.58	-2.84	-4.77
26	SLU 57	13	8	2764	460.58	-2.84	-4.77
26	SLU 58	13	8	2764	460.58	-2.84	-4.77
26	SLU 59	13	8	2764	460.58	-2.84	-4.77
26	SLU 60	15	9	2915	481.5	-3.05	-5.18
26	SLU 61	15	9	2915	481.5	-3.05	-5.18
26	SLU 62	15	9	2915	481.5	-3.05	-5.18
26	SLU 63	15	9	2915	481.5	-3.05	-5.18
26	SLU 64	13	7	2674	447.88	-2.71	-4.46
26	SLU 65	13	7	2674	447.88	-2.71	-4.46
26	SLU 66	13	7	2674	447.88	-2.71	-4.46
26	SLU 67	13	7	2674	447.88	-2.71	-4.46
26	SLU 68	13	7	2674	447.88	-2.71	-4.46
26	SLU 69	13	7	2674	447.88	-2.71	-4.46
26	SLU 70	13	7	2674	447.88	-2.71	-4.46
26	SLU 71	13	7	2674	447.88	-2.71	-4.46
26	SLU 72	13	7	2674	447.88	-2.71	-4.46
26	SLU 73	15	9	3025	496.7	-3.19	-5.41
26	SLU 74	15	9	3025	496.7	-3.19	-5.41
26	SLU 75	15	9	3025	496.7	-3.19	-5.41
26	SLU 76	15	9	3025	496.7	-3.19	-5.41
26	SLU 77	15	9	3025	496.7	-3.19	-5.41
26	SLU 78	15	9	3025	496.7	-3.19	-5.41
26	SLU 79	15	9	3025	496.7	-3.19	-5.41
26	SLU 80	15	9	3025	496.7	-3.19	-5.41
26	SLU 81	16	10	3175	517.63	-3.39	-5.81
26	SLU 82	16	10	3175	517.63	-3.39	-5.81
26	SLU 83	16	10	3175	517.63	-3.39	-5.81
26	SLU 84	16	10	3175	517.63	-3.39	-5.81
26	SLE RA 1	9	5	1999	336.58	-2.01	-3.29
26	SLE RA 2	9	5	1999	336.58	-2.01	-3.29
26	SLE RA 3	9	5	1999	336.58	-2.01	-3.29
26	SLE RA 4	9	5	1999	336.58	-2.01	-3.29
26	SLE RA 5	9	5	1999	336.58	-2.01	-3.29
26	SLE RA 6	9	5	1999	336.58	-2.01	-3.29
26	SLE RA 7	9	5	1999	336.58	-2.01	-3.29
26	SLE RA 8	9	5	1999	336.58	-2.01	-3.29
26	SLE RA 9	9	5	1999	336.58	-2.01	-3.29
26	SLE RA 10	11	7	2233	369.13	-2.33	-3.92
26	SLE RA 11	11	7	2233	369.13	-2.33	-3.92
26	SLE RA 12	11	7	2233	369.13	-2.33	-3.92
26	SLE RA 13	11	7	2233	369.13	-2.33	-3.92
26	SLE RA 14	11	7	2233	369.13	-2.33	-3.92
26	SLE RA 15	11	7	2233	369.13	-2.33	-3.92
26	SLE RA 16	11	7	2233	369.13	-2.33	-3.92
26	SLE RA 17	11	7	2233	369.13	-2.33	-3.92
26	SLE RA 18	12	7	2334	383.08	-2.46	-4.19
26	SLE RA 19	12	7	2334	383.08	-2.46	-4.19
26	SLE RA 20	12	7	2334	383.08	-2.46	-4.19
26	SLE RA 21	12	7	2334	383.08	-2.46	-4.19
26	SLE FR 1	9	5	1999	336.58	-2.01	-3.29
26	SLE FR 2	9	5	1999	336.58	-2.01	-3.29
26	SLE FR 3	9	5	1999	336.58	-2.01	-3.29
26	SLE FR 4	10	6	2100	350.53	-2.15	-3.56
26	SLE FR 5	10	6	2100	350.53	-2.15	-3.56
26	SLE FR 6	11	6	2167	359.83	-2.24	-3.74
26	SLE QP 1	9	5	1999	336.58	-2.01	-3.29
26	SLE QP 2	10	6	2100	350.53	-2.15	-3.56
26	SLD 1	191	42	2291	363.27	-1.69	-67.06
26	SLD 2	232	32	2289	363.4	-1.72	-81.44
26	SLD 3	201	-13	2094	343.41	-1.56	-70.11
26	SLD 4	242	-23	2092	343.54	-1.58	-84.49
26	SLD 5	35	104	2457	384.43	-2.21	-12.8
26	SLD 6	77	93	2454	384.56	-2.23	-27.49
26	SLD 7	67	-79	1800	318.22	-1.76	-22.97
26	SLD 8	109	-90	1798	318.35	-1.78	-37.65
26	SLD 9	-89	102	2402	382.71	-2.52	30.53



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
26	SLD 10	-47	91	2399	382.84	-2.54	15.84
26	SLD 11	-57	-81	1745	316.5	-2.06	20.36
26	SLD 12	-14	-92	1743	316.63	-2.08	5.67
26	SLD 13	-222	35	2108	357.53	-2.72	77.36
26	SLD 14	-180	24	2105	357.65	-2.74	62.99
26	SLD 15	-212	-20	1911	337.66	-2.58	74.31
26	SLD 16	-171	-31	1908	337.79	-2.6	59.94
26	SLV 1	420	91	2543	380.99	-1.12	-147.51
26	SLV 2	514	67	2537	381.28	-1.17	-180.38
26	SLV 3	442	-38	2080	333.93	-0.8	-154.64
26	SLV 4	537	-62	2074	334.22	-0.85	-187.51
26	SLV 5	63	235	2936	430.94	-2.31	-23.8
26	SLV 6	161	210	2930	431.24	-2.36	-57.93
26	SLV 7	140	-193	1394	274.07	-1.24	-47.56
26	SLV 8	238	-218	1388	274.37	-1.29	-81.69
26	SLV 9	-218	230	2811	426.7	-3	74.57
26	SLV 10	-120	205	2805	427	-3.05	40.44
26	SLV 11	-141	-199	1269	269.82	-1.94	50.8
26	SLV 12	-43	-224	1263	270.12	-1.99	16.67
26	SLV 13	-517	73	2125	366.85	-3.44	180.38
26	SLV 14	-422	49	2119	367.14	-3.49	147.51
26	SLV 15	-494	-55	1663	319.78	-3.12	173.25
26	SLV 16	-399	-79	1657	320.07	-3.17	140.38
26	CRTFP Ux+	0	0	0	0	0	0
26	CRTFP Ux-	0	0	0	0	0	0
26	CRTFP Uy+	0	0	0	0	0	0
26	CRTFP Uy-	0	0	0	0	0	0
27	SLU 1	9	6	1875	284.74	-1.22	-3.15
27	SLU 2	9	6	1875	284.74	-1.22	-3.15
27	SLU 3	9	6	1875	284.74	-1.22	-3.15
27	SLU 4	9	6	1875	284.74	-1.22	-3.15
27	SLU 5	9	6	1875	284.74	-1.22	-3.15
27	SLU 6	9	6	1875	284.74	-1.22	-3.15
27	SLU 7	9	6	1875	284.74	-1.22	-3.15
27	SLU 8	9	6	1875	284.74	-1.22	-3.15
27	SLU 9	9	6	1875	284.74	-1.22	-3.15
27	SLU 10	12	8	2214	324.14	-1.55	-4.17
27	SLU 11	12	8	2214	324.14	-1.55	-4.17
27	SLU 12	12	8	2214	324.14	-1.55	-4.17
27	SLU 13	12	8	2214	324.14	-1.55	-4.17
27	SLU 14	12	8	2214	324.14	-1.55	-4.17
27	SLU 15	12	8	2214	324.14	-1.55	-4.17
27	SLU 16	12	8	2214	324.14	-1.55	-4.17
27	SLU 17	12	8	2214	324.14	-1.55	-4.17
27	SLU 18	13	9	2359	341.03	-1.69	-4.6
27	SLU 19	13	9	2359	341.03	-1.69	-4.6
27	SLU 20	13	9	2359	341.03	-1.69	-4.6
27	SLU 21	13	9	2359	341.03	-1.69	-4.6
27	SLU 22	11	8	2127	313.92	-1.45	-3.83
27	SLU 23	11	8	2127	313.92	-1.45	-3.83
27	SLU 24	11	8	2127	313.92	-1.45	-3.83
27	SLU 25	11	8	2127	313.92	-1.45	-3.83
27	SLU 26	11	8	2127	313.92	-1.45	-3.83
27	SLU 27	11	8	2127	313.92	-1.45	-3.83
27	SLU 28	11	8	2127	313.92	-1.45	-3.83
27	SLU 29	11	8	2127	313.92	-1.45	-3.83
27	SLU 30	11	8	2127	313.92	-1.45	-3.83
27	SLU 31	14	10	2465	353.32	-1.78	-4.85
27	SLU 32	14	10	2465	353.32	-1.78	-4.85
27	SLU 33	14	10	2465	353.32	-1.78	-4.85
27	SLU 34	14	10	2465	353.32	-1.78	-4.85
27	SLU 35	14	10	2465	353.32	-1.78	-4.85
27	SLU 36	14	10	2465	353.32	-1.78	-4.85
27	SLU 37	14	10	2465	353.32	-1.78	-4.85
27	SLU 38	14	10	2465	353.32	-1.78	-4.85
27	SLU 39	15	11	2610	370.21	-1.92	-5.28
27	SLU 40	15	11	2610	370.21	-1.92	-5.28
27	SLU 41	15	11	2610	370.21	-1.92	-5.28
27	SLU 42	15	11	2610	370.21	-1.92	-5.28
27	SLU 43	11	7	2352	360.16	-1.5	-3.87
27	SLU 44	11	7	2352	360.16	-1.5	-3.87
27	SLU 45	11	7	2352	360.16	-1.5	-3.87
27	SLU 46	11	7	2352	360.16	-1.5	-3.87
27	SLU 47	11	7	2352	360.16	-1.5	-3.87
27	SLU 48	11	7	2352	360.16	-1.5	-3.87
27	SLU 49	11	7	2352	360.16	-1.5	-3.87
27	SLU 50	11	7	2352	360.16	-1.5	-3.87
27	SLU 51	11	7	2352	360.16	-1.5	-3.87
27	SLU 52	14	10	2690	399.56	-1.83	-4.88
27	SLU 53	14	10	2690	399.56	-1.83	-4.88
27	SLU 54	14	10	2690	399.56	-1.83	-4.88
27	SLU 55	14	10	2690	399.56	-1.83	-4.88
27	SLU 56	14	10	2690	399.56	-1.83	-4.88
27	SLU 57	14	10	2690	399.56	-1.83	-4.88
27	SLU 58	14	10	2690	399.56	-1.83	-4.88
27	SLU 59	14	10	2690	399.56	-1.83	-4.88
27	SLU 60	15	10	2835	416.44	-1.97	-5.32
27	SLU 61	15	10	2835	416.44	-1.97	-5.32
27	SLU 62	15	10	2835	416.44	-1.97	-5.32
27	SLU 63	15	10	2835	416.44	-1.97	-5.32



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
27	SLU 64	13	9	2603	389.34	-1.74	-4.55
27	SLU 65	13	9	2603	389.34	-1.74	-4.55
27	SLU 66	13	9	2603	389.34	-1.74	-4.55
27	SLU 67	13	9	2603	389.34	-1.74	-4.55
27	SLU 68	13	9	2603	389.34	-1.74	-4.55
27	SLU 69	13	9	2603	389.34	-1.74	-4.55
27	SLU 70	13	9	2603	389.34	-1.74	-4.55
27	SLU 71	13	9	2603	389.34	-1.74	-4.55
27	SLU 72	13	9	2603	389.34	-1.74	-4.55
27	SLU 73	16	11	2942	428.74	-2.07	-5.56
27	SLU 74	16	11	2942	428.74	-2.07	-5.56
27	SLU 75	16	11	2942	428.74	-2.07	-5.56
27	SLU 76	16	11	2942	428.74	-2.07	-5.56
27	SLU 77	16	11	2942	428.74	-2.07	-5.56
27	SLU 78	16	11	2942	428.74	-2.07	-5.56
27	SLU 79	16	11	2942	428.74	-2.07	-5.56
27	SLU 80	16	11	2942	428.74	-2.07	-5.56
27	SLU 81	17	12	3086	445.62	-2.21	-6
27	SLU 82	17	12	3086	445.62	-2.21	-6
27	SLU 83	17	12	3086	445.62	-2.21	-6
27	SLU 84	17	12	3086	445.62	-2.21	-6
27	SLE RA 1	9	6	1947	293.08	-1.28	-3.35
27	SLE RA 2	9	6	1947	293.08	-1.28	-3.35
27	SLE RA 3	9	6	1947	293.08	-1.28	-3.35
27	SLE RA 4	9	6	1947	293.08	-1.28	-3.35
27	SLE RA 5	9	6	1947	293.08	-1.28	-3.35
27	SLE RA 6	9	6	1947	293.08	-1.28	-3.35
27	SLE RA 7	9	6	1947	293.08	-1.28	-3.35
27	SLE RA 8	9	6	1947	293.08	-1.28	-3.35
27	SLE RA 9	9	6	1947	293.08	-1.28	-3.35
27	SLE RA 10	11	8	2173	319.34	-1.5	-4.02
27	SLE RA 11	11	8	2173	319.34	-1.5	-4.02
27	SLE RA 12	11	8	2173	319.34	-1.5	-4.02
27	SLE RA 13	11	8	2173	319.34	-1.5	-4.02
27	SLE RA 14	11	8	2173	319.34	-1.5	-4.02
27	SLE RA 15	11	8	2173	319.34	-1.5	-4.02
27	SLE RA 16	11	8	2173	319.34	-1.5	-4.02
27	SLE RA 17	11	8	2173	319.34	-1.5	-4.02
27	SLE RA 18	12	9	2269	330.6	-1.6	-4.31
27	SLE RA 19	12	9	2269	330.6	-1.6	-4.31
27	SLE RA 20	12	9	2269	330.6	-1.6	-4.31
27	SLE RA 21	12	9	2269	330.6	-1.6	-4.31
27	SLE FR 1	9	6	1947	293.08	-1.28	-3.35
27	SLE FR 2	9	6	1947	293.08	-1.28	-3.35
27	SLE FR 3	9	6	1947	293.08	-1.28	-3.35
27	SLE FR 4	10	7	2044	304.34	-1.38	-3.64
27	SLE FR 5	10	7	2044	304.34	-1.38	-3.64
27	SLE FR 6	11	8	2108	311.84	-1.44	-3.83
27	SLE QP 1	9	6	1947	293.08	-1.28	-3.35
27	SLE QP 2	10	7	2044	304.34	-1.38	-3.64
27	SLD 1	191	53	2252	317.04	-0.81	-67.1
27	SLD 2	232	41	2249	317.11	-0.84	-81.46
27	SLD 3	201	-16	2057	300.91	-0.79	-70.18
27	SLD 4	242	-29	2054	300.98	-0.82	-84.54
27	SLD 5	34	131	2403	332.59	-1.23	-12.82
27	SLD 6	76	118	2399	332.66	-1.26	-27.5
27	SLD 7	68	-100	1754	278.81	-1.16	-23.09
27	SLD 8	110	-113	1751	278.88	-1.18	-37.76
27	SLD 9	-89	128	2337	329.79	-1.57	30.48
27	SLD 10	-47	115	2334	329.86	-1.6	15.81
27	SLD 11	-56	-103	1689	276.01	-1.49	20.22
27	SLD 12	-14	-117	1685	276.08	-1.52	5.55
27	SLD 13	-221	43	2034	307.7	-1.94	77.26
27	SLD 14	-180	30	2031	307.76	-1.97	62.9
27	SLD 15	-211	-26	1839	291.56	-1.92	74.18
27	SLD 16	-170	-39	1836	291.63	-1.94	59.82
27	SLV 1	419	115	2524	334.47	-0.1	-147.49
27	SLV 2	514	86	2516	334.62	-0.16	-180.33
27	SLV 3	443	-48	2067	296.05	-0.04	-154.69
27	SLV 4	537	-77	2059	296.2	-0.1	-187.53
27	SLV 5	62	297	2884	371.59	-1.05	-23.76
27	SLV 6	160	266	2876	371.75	-1.12	-57.85
27	SLV 7	141	-245	1360	243.52	-0.87	-47.75
27	SLV 8	239	-275	1352	243.68	-0.93	-81.85
27	SLV 9	-218	290	2735	364.99	-1.82	74.57
27	SLV 10	-120	259	2727	365.15	-1.88	40.48
27	SLV 11	-140	-252	1212	236.92	-1.64	50.57
27	SLV 12	-42	-282	1204	237.08	-1.7	16.48
27	SLV 13	-517	91	2029	312.47	-2.65	180.25
27	SLV 14	-422	62	2021	312.62	-2.71	147.42
27	SLV 15	-493	-71	1572	274.05	-2.6	173.05
27	SLV 16	-399	-101	1564	274.2	-2.66	140.22
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	9	7	1850	261.07	-0.44	-3.21
28	SLU 2	9	7	1850	261.07	-0.44	-3.21
28	SLU 3	9	7	1850	261.07	-0.44	-3.21
28	SLU 4	9	7	1850	261.07	-0.44	-3.21



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
28	SLU 5	9	7	1850	261.07	-0.44	-3.21
28	SLU 6	9	7	1850	261.07	-0.44	-3.21
28	SLU 7	9	7	1850	261.07	-0.44	-3.21
28	SLU 8	9	7	1850	261.07	-0.44	-3.21
28	SLU 9	9	7	1850	261.07	-0.44	-3.21
28	SLU 10	12	10	2180	294.89	-0.6	-4.29
28	SLU 11	12	10	2180	294.89	-0.6	-4.29
28	SLU 12	12	10	2180	294.89	-0.6	-4.29
28	SLU 13	12	10	2180	294.89	-0.6	-4.29
28	SLU 14	12	10	2180	294.89	-0.6	-4.29
28	SLU 15	12	10	2180	294.89	-0.6	-4.29
28	SLU 16	12	10	2180	294.89	-0.6	-4.29
28	SLU 17	12	10	2180	294.89	-0.6	-4.29
28	SLU 18	13	11	2321	309.38	-0.68	-4.75
28	SLU 19	13	11	2321	309.38	-0.68	-4.75
28	SLU 20	13	11	2321	309.38	-0.68	-4.75
28	SLU 21	13	11	2321	309.38	-0.68	-4.75
28	SLU 22	11	9	2095	286.17	-0.55	-3.93
28	SLU 23	11	9	2095	286.17	-0.55	-3.93
28	SLU 24	11	9	2095	286.17	-0.55	-3.93
28	SLU 25	11	9	2095	286.17	-0.55	-3.93
28	SLU 26	11	9	2095	286.17	-0.55	-3.93
28	SLU 27	11	9	2095	286.17	-0.55	-3.93
28	SLU 28	11	9	2095	286.17	-0.55	-3.93
28	SLU 29	11	9	2095	286.17	-0.55	-3.93
28	SLU 30	11	9	2095	286.17	-0.55	-3.93
28	SLU 31	14	11	2426	319.99	-0.72	-5.01
28	SLU 32	14	11	2426	319.99	-0.72	-5.01
28	SLU 33	14	11	2426	319.99	-0.72	-5.01
28	SLU 34	14	11	2426	319.99	-0.72	-5.01
28	SLU 35	14	11	2426	319.99	-0.72	-5.01
28	SLU 36	14	11	2426	319.99	-0.72	-5.01
28	SLU 37	14	11	2426	319.99	-0.72	-5.01
28	SLU 38	14	11	2426	319.99	-0.72	-5.01
28	SLU 39	16	12	2567	334.48	-0.79	-5.47
28	SLU 40	16	12	2567	334.48	-0.79	-5.47
28	SLU 41	16	12	2567	334.48	-0.79	-5.47
28	SLU 42	16	12	2567	334.48	-0.79	-5.47
28	SLU 43	11	9	2320	330.79	-0.53	-3.92
28	SLU 44	11	9	2320	330.79	-0.53	-3.92
28	SLU 45	11	9	2320	330.79	-0.53	-3.92
28	SLU 46	11	9	2320	330.79	-0.53	-3.92
28	SLU 47	11	9	2320	330.79	-0.53	-3.92
28	SLU 48	11	9	2320	330.79	-0.53	-3.92
28	SLU 49	11	9	2320	330.79	-0.53	-3.92
28	SLU 50	11	9	2320	330.79	-0.53	-3.92
28	SLU 51	11	9	2320	330.79	-0.53	-3.92
28	SLU 52	14	11	2651	364.6	-0.7	-5
28	SLU 53	14	11	2651	364.6	-0.7	-5
28	SLU 54	14	11	2651	364.6	-0.7	-5
28	SLU 55	14	11	2651	364.6	-0.7	-5
28	SLU 56	14	11	2651	364.6	-0.7	-5
28	SLU 57	14	11	2651	364.6	-0.7	-5
28	SLU 58	14	11	2651	364.6	-0.7	-5
28	SLU 59	14	11	2651	364.6	-0.7	-5
28	SLU 60	15	12	2792	379.1	-0.77	-5.47
28	SLU 61	15	12	2792	379.1	-0.77	-5.47
28	SLU 62	15	12	2792	379.1	-0.77	-5.47
28	SLU 63	15	12	2792	379.1	-0.77	-5.47
28	SLU 64	13	10	2566	355.89	-0.64	-4.64
28	SLU 65	13	10	2566	355.89	-0.64	-4.64
28	SLU 66	13	10	2566	355.89	-0.64	-4.64
28	SLU 67	13	10	2566	355.89	-0.64	-4.64
28	SLU 68	13	10	2566	355.89	-0.64	-4.64
28	SLU 69	13	10	2566	355.89	-0.64	-4.64
28	SLU 70	13	10	2566	355.89	-0.64	-4.64
28	SLU 71	13	10	2566	355.89	-0.64	-4.64
28	SLU 72	13	10	2566	355.89	-0.64	-4.64
28	SLU 73	16	13	2896	389.7	-0.81	-5.72
28	SLU 74	16	13	2896	389.7	-0.81	-5.72
28	SLU 75	16	13	2896	389.7	-0.81	-5.72
28	SLU 76	16	13	2896	389.7	-0.81	-5.72
28	SLU 77	16	13	2896	389.7	-0.81	-5.72
28	SLU 78	16	13	2896	389.7	-0.81	-5.72
28	SLU 79	16	13	2896	389.7	-0.81	-5.72
28	SLU 80	16	13	2896	389.7	-0.81	-5.72
28	SLU 81	18	14	3038	404.2	-0.88	-6.19
28	SLU 82	18	14	3038	404.2	-0.88	-6.19
28	SLU 83	18	14	3038	404.2	-0.88	-6.19
28	SLU 84	18	14	3038	404.2	-0.88	-6.19
28	SLE RA 1	10	8	1920	268.25	-0.47	-3.41
28	SLE RA 2	10	8	1920	268.25	-0.47	-3.41
28	SLE RA 3	10	8	1920	268.25	-0.47	-3.41
28	SLE RA 4	10	8	1920	268.25	-0.47	-3.41
28	SLE RA 5	10	8	1920	268.25	-0.47	-3.41
28	SLE RA 6	10	8	1920	268.25	-0.47	-3.41
28	SLE RA 7	10	8	1920	268.25	-0.47	-3.41
28	SLE RA 8	10	8	1920	268.25	-0.47	-3.41
28	SLE RA 9	10	8	1920	268.25	-0.47	-3.41
28	SLE RA 10	12	9	2140	290.79	-0.58	-4.13



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
28	SLE RA 11	12	9	2140	290.79	-0.58	-4.13
28	SLE RA 12	12	9	2140	290.79	-0.58	-4.13
28	SLE RA 13	12	9	2140	290.79	-0.58	-4.13
28	SLE RA 14	12	9	2140	290.79	-0.58	-4.13
28	SLE RA 15	12	9	2140	290.79	-0.58	-4.13
28	SLE RA 16	12	9	2140	290.79	-0.58	-4.13
28	SLE RA 17	12	9	2140	290.79	-0.58	-4.13
28	SLE RA 18	13	10	2234	300.45	-0.63	-4.44
28	SLE RA 19	13	10	2234	300.45	-0.63	-4.44
28	SLE RA 20	13	10	2234	300.45	-0.63	-4.44
28	SLE RA 21	13	10	2234	300.45	-0.63	-4.44
28	SLE FR 1	10	8	1920	268.25	-0.47	-3.41
28	SLE FR 2	10	8	1920	268.25	-0.47	-3.41
28	SLE FR 3	10	8	1920	268.25	-0.47	-3.41
28	SLE FR 4	11	8	2014	277.91	-0.52	-3.72
28	SLE FR 5	11	8	2014	277.91	-0.52	-3.72
28	SLE FR 6	11	9	2077	284.35	-0.55	-3.93
28	SLE QP 1	10	8	1920	268.25	-0.47	-3.41
28	SLE QP 2	11	8	2014	277.91	-0.52	-3.72
28	SLD 1	191	66	2243	293.41	0.19	-67.13
28	SLD 2	232	50	2238	293.33	0.16	-81.47
28	SLD 3	201	-20	2046	278.6	0.07	-70.24
28	SLD 4	242	-36	2042	278.53	0.04	-84.58
28	SLD 5	34	162	2382	305.04	-0.12	-12.85
28	SLD 6	76	146	2377	304.96	-0.15	-27.5
28	SLD 7	68	-125	1728	255.69	-0.5	-23.22
28	SLD 8	111	-141	1723	255.61	-0.54	-37.87
28	SLD 9	-90	158	2305	300.2	-0.5	30.43
28	SLD 10	-47	142	2301	300.13	-0.53	15.78
28	SLD 11	-55	-129	1651	250.85	-0.88	20.06
28	SLD 12	-13	-145	1647	250.78	-0.92	5.41
28	SLD 13	-221	52	1986	277.28	-1.07	77.13
28	SLD 14	-180	37	1982	277.21	-1.11	62.8
28	SLD 15	-211	-34	1790	262.48	-1.19	74.02
28	SLD 16	-170	-49	1786	262.41	-1.22	59.69
28	SLV 1	419	142	2540	314.2	1.09	-147.45
28	SLV 2	513	107	2531	314.04	1.01	-180.24
28	SLV 3	443	-59	2079	278.84	0.82	-154.73
28	SLV 4	537	-95	2070	278.67	0.74	-187.52
28	SLV 5	62	367	2875	342.49	0.41	-23.71
28	SLV 6	159	331	2864	342.32	0.33	-57.75
28	SLV 7	142	-305	1338	224.61	-0.5	-47.95
28	SLV 8	240	-342	1328	224.44	-0.58	-81.99
28	SLV 9	-219	358	2700	331.37	-0.45	74.55
28	SLV 10	-121	321	2690	331.2	-0.53	40.5
28	SLV 11	-138	-314	1164	213.49	-1.36	50.31
28	SLV 12	-41	-351	1154	213.32	-1.44	16.27
28	SLV 13	-516	112	1959	277.14	-1.78	180.07
28	SLV 14	-422	76	1949	276.97	-1.85	147.28
28	SLV 15	-492	-90	1498	241.77	-2.05	172.8
28	SLV 16	-398	-126	1488	241.61	-2.12	140.01
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	9	8	1850	256.87	0.4	-3.27
29	SLU 2	9	8	1850	256.87	0.4	-3.27
29	SLU 3	9	8	1850	256.87	0.4	-3.27
29	SLU 4	9	8	1850	256.87	0.4	-3.27
29	SLU 5	9	8	1850	256.87	0.4	-3.27
29	SLU 6	9	8	1850	256.87	0.4	-3.27
29	SLU 7	9	8	1850	256.87	0.4	-3.27
29	SLU 8	9	8	1850	256.87	0.4	-3.27
29	SLU 9	9	8	1850	256.87	0.4	-3.27
29	SLU 10	13	11	2177	289.28	0.41	-4.41
29	SLU 11	13	11	2177	289.28	0.41	-4.41
29	SLU 12	13	11	2177	289.28	0.41	-4.41
29	SLU 13	13	11	2177	289.28	0.41	-4.41
29	SLU 14	13	11	2177	289.28	0.41	-4.41
29	SLU 15	13	11	2177	289.28	0.41	-4.41
29	SLU 16	13	11	2177	289.28	0.41	-4.41
29	SLU 17	13	11	2177	289.28	0.41	-4.41
29	SLU 18	14	12	2318	303.17	0.41	-4.9
29	SLU 19	14	12	2318	303.17	0.41	-4.9
29	SLU 20	14	12	2318	303.17	0.41	-4.9
29	SLU 21	14	12	2318	303.17	0.41	-4.9
29	SLU 22	11	10	2094	281	0.42	-4.03
29	SLU 23	11	10	2094	281	0.42	-4.03
29	SLU 24	11	10	2094	281	0.42	-4.03
29	SLU 25	11	10	2094	281	0.42	-4.03
29	SLU 26	11	10	2094	281	0.42	-4.03
29	SLU 27	11	10	2094	281	0.42	-4.03
29	SLU 28	11	10	2094	281	0.42	-4.03
29	SLU 29	11	10	2094	281	0.42	-4.03
29	SLU 30	11	10	2094	281	0.42	-4.03
29	SLU 31	15	12	2422	313.41	0.42	-5.17
29	SLU 32	15	12	2422	313.41	0.42	-5.17
29	SLU 33	15	12	2422	313.41	0.42	-5.17
29	SLU 34	15	12	2422	313.41	0.42	-5.17
29	SLU 35	15	12	2422	313.41	0.42	-5.17



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
Ind.	N.br.	x	y	z		x	y	z	
29	SLU 36	15	12	2422		313.41	0.42	-5.17	
29	SLU 37	15	12	2422		313.41	0.42	-5.17	
29	SLU 38	15	12	2422		313.41	0.42	-5.17	
29	SLU 39	16	13	2562		327.3	0.42	-5.66	
29	SLU 40	16	13	2562		327.3	0.42	-5.66	
29	SLU 41	16	13	2562		327.3	0.42	-5.66	
29	SLU 42	16	13	2562		327.3	0.42	-5.66	
29	SLU 43	11	10	2321		325.65	0.52	-3.99	
29	SLU 44	11	10	2321		325.65	0.52	-3.99	
29	SLU 45	11	10	2321		325.65	0.52	-3.99	
29	SLU 46	11	10	2321		325.65	0.52	-3.99	
29	SLU 47	11	10	2321		325.65	0.52	-3.99	
29	SLU 48	11	10	2321		325.65	0.52	-3.99	
29	SLU 49	11	10	2321		325.65	0.52	-3.99	
29	SLU 50	11	10	2321		325.65	0.52	-3.99	
29	SLU 51	11	10	2321		325.65	0.52	-3.99	
29	SLU 52	15	13	2649		358.06	0.52	-5.13	
29	SLU 53	15	13	2649		358.06	0.52	-5.13	
29	SLU 54	15	13	2649		358.06	0.52	-5.13	
29	SLU 55	15	13	2649		358.06	0.52	-5.13	
29	SLU 56	15	13	2649		358.06	0.52	-5.13	
29	SLU 57	15	13	2649		358.06	0.52	-5.13	
29	SLU 58	15	13	2649		358.06	0.52	-5.13	
29	SLU 59	15	13	2649		358.06	0.52	-5.13	
29	SLU 60	16	14	2789		371.95	0.52	-5.62	
29	SLU 61	16	14	2789		371.95	0.52	-5.62	
29	SLU 62	16	14	2789		371.95	0.52	-5.62	
29	SLU 63	16	14	2789		371.95	0.52	-5.62	
29	SLU 64	13	12	2565		349.79	0.53	-4.75	
29	SLU 65	13	12	2565		349.79	0.53	-4.75	
29	SLU 66	13	12	2565		349.79	0.53	-4.75	
29	SLU 67	13	12	2565		349.79	0.53	-4.75	
29	SLU 68	13	12	2565		349.79	0.53	-4.75	
29	SLU 69	13	12	2565		349.79	0.53	-4.75	
29	SLU 70	13	12	2565		349.79	0.53	-4.75	
29	SLU 71	13	12	2565		349.79	0.53	-4.75	
29	SLU 72	13	12	2565		349.79	0.53	-4.75	
29	SLU 73	17	14	2893		382.2	0.54	-5.89	
29	SLU 74	17	14	2893		382.2	0.54	-5.89	
29	SLU 75	17	14	2893		382.2	0.54	-5.89	
29	SLU 76	17	14	2893		382.2	0.54	-5.89	
29	SLU 77	17	14	2893		382.2	0.54	-5.89	
29	SLU 78	17	14	2893		382.2	0.54	-5.89	
29	SLU 79	17	14	2893		382.2	0.54	-5.89	
29	SLU 80	17	14	2893		382.2	0.54	-5.89	
29	SLU 81	18	15	3033		396.09	0.54	-6.38	
29	SLU 82	18	15	3033		396.09	0.54	-6.38	
29	SLU 83	18	15	3033		396.09	0.54	-6.38	
29	SLU 84	18	15	3033		396.09	0.54	-6.38	
29	SLE RA 1	10	9	1919		263.76	0.4	-3.49	
29	SLE RA 2	10	9	1919		263.76	0.4	-3.49	
29	SLE RA 3	10	9	1919		263.76	0.4	-3.49	
29	SLE RA 4	10	9	1919		263.76	0.4	-3.49	
29	SLE RA 5	10	9	1919		263.76	0.4	-3.49	
29	SLE RA 6	10	9	1919		263.76	0.4	-3.49	
29	SLE RA 7	10	9	1919		263.76	0.4	-3.49	
29	SLE RA 8	10	9	1919		263.76	0.4	-3.49	
29	SLE RA 9	10	9	1919		263.76	0.4	-3.49	
29	SLE RA 10	12	10	2138		285.37	0.41	-4.25	
29	SLE RA 11	12	10	2138		285.37	0.41	-4.25	
29	SLE RA 12	12	10	2138		285.37	0.41	-4.25	
29	SLE RA 13	12	10	2138		285.37	0.41	-4.25	
29	SLE RA 14	12	10	2138		285.37	0.41	-4.25	
29	SLE RA 15	12	10	2138		285.37	0.41	-4.25	
29	SLE RA 16	12	10	2138		285.37	0.41	-4.25	
29	SLE RA 17	12	10	2138		285.37	0.41	-4.25	
29	SLE RA 18	13	11	2232		294.63	0.41	-4.57	
29	SLE RA 19	13	11	2232		294.63	0.41	-4.57	
29	SLE RA 20	13	11	2232		294.63	0.41	-4.57	
29	SLE RA 21	13	11	2232		294.63	0.41	-4.57	
29	SLE FR 1	10	9	1919		263.76	0.4	-3.49	
29	SLE FR 2	10	9	1919		263.76	0.4	-3.49	
29	SLE FR 3	10	9	1919		263.76	0.4	-3.49	
29	SLE FR 4	11	9	2013		273.02	0.41	-3.81	
29	SLE FR 5	11	9	2013		273.02	0.41	-3.81	
29	SLE FR 6	11	10	2075		279.2	0.41	-4.03	
29	SLE QP 1	10	9	1919		263.76	0.4	-3.49	
29	SLE QP 2	11	9	2013		273.02	0.41	-3.81	
29	SLD 1	191	79	2266		294.47	1.27	-67.15	
29	SLD 2	232	61	2261		294.16	1.23	-81.46	
29	SLD 3	201	-26	2064		278.46	1.01	-70.29	
29	SLD 4	242	-44	2059		278.15	0.97	-84.61	
29	SLD 5	34	196	2398		303.86	1.07	-12.88	
29	SLD 6	76	177	2392		303.54	1.03	-27.5	
29	SLD 7	69	-153	1724		250.48	0.21	-23.36	
29	SLD 8	111	-172	1718		250.16	0.17	-37.99	
29	SLD 9	-90	191	2308		295.89	0.64	30.36	
29	SLD 10	-48	172	2302		295.57	0.6	15.74	
29	SLD 11	-54	-158	1634		242.51	-0.22	19.88	
29	SLD 12	-12	-177	1628		242.19	-0.26	5.25	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
29	SLD 13	-221	63	1967	267.9	-0.16	76.98
29	SLD 14	-180	44	1962	267.59	-0.2	62.67
29	SLD 15	-210	-42	1765	251.89	-0.42	73.84
29	SLD 16	-169	-61	1760	251.57	-0.46	59.53
29	SLV 1	418	172	2596	322.77	2.38	-147.38
29	SLV 2	513	130	2584	322.05	2.29	-180.12
29	SLV 3	443	-74	2121	284.58	1.77	-154.73
29	SLV 4	537	-116	2109	283.86	1.68	-187.47
29	SLV 5	61	447	2913	346.13	1.95	-23.65
29	SLV 6	158	403	2900	345.39	1.86	-57.64
29	SLV 7	143	-373	1330	218.83	-0.07	-48.16
29	SLV 8	241	-417	1317	218.09	-0.16	-82.14
29	SLV 9	-220	436	2709	327.96	0.98	74.52
29	SLV 10	-122	392	2696	327.21	0.88	40.53
29	SLV 11	-137	-384	1126	200.66	-1.05	50.01
29	SLV 12	-39	-428	1113	199.91	-1.14	16.02
29	SLV 13	-516	135	1917	262.19	-0.87	179.85
29	SLV 14	-422	92	1905	261.47	-0.96	147.11
29	SLV 15	-491	-111	1442	224	-1.48	172.49
29	SLV 16	-397	-153	1430	223.28	-1.57	139.76
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	9	9	1877	273.32	1.28	-3.34
30	SLU 2	9	9	1877	273.32	1.28	-3.34
30	SLU 3	9	9	1877	273.32	1.28	-3.34
30	SLU 4	9	9	1877	273.32	1.28	-3.34
30	SLU 5	9	9	1877	273.32	1.28	-3.34
30	SLU 6	9	9	1877	273.32	1.28	-3.34
30	SLU 7	9	9	1877	273.32	1.28	-3.34
30	SLU 8	9	9	1877	273.32	1.28	-3.34
30	SLU 9	9	9	1877	273.32	1.28	-3.34
30	SLU 10	13	12	2208	308.73	1.47	-4.53
30	SLU 11	13	12	2208	308.73	1.47	-4.53
30	SLU 12	13	12	2208	308.73	1.47	-4.53
30	SLU 13	13	12	2208	308.73	1.47	-4.53
30	SLU 14	13	12	2208	308.73	1.47	-4.53
30	SLU 15	13	12	2208	308.73	1.47	-4.53
30	SLU 16	13	12	2208	308.73	1.47	-4.53
30	SLU 17	13	12	2208	308.73	1.47	-4.53
30	SLU 18	14	13	2350	323.9	1.55	-5.05
30	SLU 19	14	13	2350	323.9	1.55	-5.05
30	SLU 20	14	13	2350	323.9	1.55	-5.05
30	SLU 21	14	13	2350	323.9	1.55	-5.05
30	SLU 22	12	11	2124	299.77	1.44	-4.13
30	SLU 23	12	11	2124	299.77	1.44	-4.13
30	SLU 24	12	11	2124	299.77	1.44	-4.13
30	SLU 25	12	11	2124	299.77	1.44	-4.13
30	SLU 26	12	11	2124	299.77	1.44	-4.13
30	SLU 27	12	11	2124	299.77	1.44	-4.13
30	SLU 28	12	11	2124	299.77	1.44	-4.13
30	SLU 29	12	11	2124	299.77	1.44	-4.13
30	SLU 30	12	11	2124	299.77	1.44	-4.13
30	SLU 31	15	13	2455	335.18	1.62	-5.33
30	SLU 32	15	13	2455	335.18	1.62	-5.33
30	SLU 33	15	13	2455	335.18	1.62	-5.33
30	SLU 34	15	13	2455	335.18	1.62	-5.33
30	SLU 35	15	13	2455	335.18	1.62	-5.33
30	SLU 36	15	13	2455	335.18	1.62	-5.33
30	SLU 37	15	13	2455	335.18	1.62	-5.33
30	SLU 38	15	13	2455	335.18	1.62	-5.33
30	SLU 39	17	14	2597	350.35	1.71	-5.85
30	SLU 40	17	14	2597	350.35	1.71	-5.85
30	SLU 41	17	14	2597	350.35	1.71	-5.85
30	SLU 42	17	14	2597	350.35	1.71	-5.85
30	SLU 43	11	12	2356	346.25	1.62	-4.06
30	SLU 44	11	12	2356	346.25	1.62	-4.06
30	SLU 45	11	12	2356	346.25	1.62	-4.06
30	SLU 46	11	12	2356	346.25	1.62	-4.06
30	SLU 47	11	12	2356	346.25	1.62	-4.06
30	SLU 48	11	12	2356	346.25	1.62	-4.06
30	SLU 49	11	12	2356	346.25	1.62	-4.06
30	SLU 50	11	12	2356	346.25	1.62	-4.06
30	SLU 51	11	12	2356	346.25	1.62	-4.06
30	SLU 52	15	14	2687	381.66	1.8	-5.26
30	SLU 53	15	14	2687	381.66	1.8	-5.26
30	SLU 54	15	14	2687	381.66	1.8	-5.26
30	SLU 55	15	14	2687	381.66	1.8	-5.26
30	SLU 56	15	14	2687	381.66	1.8	-5.26
30	SLU 57	15	14	2687	381.66	1.8	-5.26
30	SLU 58	15	14	2687	381.66	1.8	-5.26
30	SLU 59	15	14	2687	381.66	1.8	-5.26
30	SLU 60	16	15	2828	396.83	1.89	-5.77
30	SLU 61	16	15	2828	396.83	1.89	-5.77
30	SLU 62	16	15	2828	396.83	1.89	-5.77
30	SLU 63	16	15	2828	396.83	1.89	-5.77
30	SLU 64	14	13	2602	372.7	1.77	-4.86
30	SLU 65	14	13	2602	372.7	1.77	-4.86
30	SLU 66	14	13	2602	372.7	1.77	-4.86



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione		
		x	y	z		x	y	z
30	SLU 67	14	13	2602	372.7	1.77	-4.86	
30	SLU 68	14	13	2602	372.7	1.77	-4.86	
30	SLU 69	14	13	2602	372.7	1.77	-4.86	
30	SLU 70	14	13	2602	372.7	1.77	-4.86	
30	SLU 71	14	13	2602	372.7	1.77	-4.86	
30	SLU 72	14	13	2602	372.7	1.77	-4.86	
30	SLU 73	17	16	2933	408.11	1.96	-6.06	
30	SLU 74	17	16	2933	408.11	1.96	-6.06	
30	SLU 75	17	16	2933	408.11	1.96	-6.06	
30	SLU 76	17	16	2933	408.11	1.96	-6.06	
30	SLU 77	17	16	2933	408.11	1.96	-6.06	
30	SLU 78	17	16	2933	408.11	1.96	-6.06	
30	SLU 79	17	16	2933	408.11	1.96	-6.06	
30	SLU 80	17	16	2933	408.11	1.96	-6.06	
30	SLU 81	19	17	3075	423.28	2.04	-6.57	
30	SLU 82	19	17	3075	423.28	2.04	-6.57	
30	SLU 83	19	17	3075	423.28	2.04	-6.57	
30	SLU 84	19	17	3075	423.28	2.04	-6.57	
30	SLE RA 1	10	10	1948	280.88	1.33	-3.56	
30	SLE RA 2	10	10	1948	280.88	1.33	-3.56	
30	SLE RA 3	10	10	1948	280.88	1.33	-3.56	
30	SLE RA 4	10	10	1948	280.88	1.33	-3.56	
30	SLE RA 5	10	10	1948	280.88	1.33	-3.56	
30	SLE RA 6	10	10	1948	280.88	1.33	-3.56	
30	SLE RA 7	10	10	1948	280.88	1.33	-3.56	
30	SLE RA 8	10	10	1948	280.88	1.33	-3.56	
30	SLE RA 9	10	10	1948	280.88	1.33	-3.56	
30	SLE RA 10	12	11	2168	304.48	1.45	-4.36	
30	SLE RA 11	12	11	2168	304.48	1.45	-4.36	
30	SLE RA 12	12	11	2168	304.48	1.45	-4.36	
30	SLE RA 13	12	11	2168	304.48	1.45	-4.36	
30	SLE RA 14	12	11	2168	304.48	1.45	-4.36	
30	SLE RA 15	12	11	2168	304.48	1.45	-4.36	
30	SLE RA 16	12	11	2168	304.48	1.45	-4.36	
30	SLE RA 17	12	11	2168	304.48	1.45	-4.36	
30	SLE RA 18	13	12	2263	314.6	1.51	-4.7	
30	SLE RA 19	13	12	2263	314.6	1.51	-4.7	
30	SLE RA 20	13	12	2263	314.6	1.51	-4.7	
30	SLE RA 21	13	12	2263	314.6	1.51	-4.7	
30	SLE FR 1	10	10	1948	280.88	1.33	-3.56	
30	SLE FR 2	10	10	1948	280.88	1.33	-3.56	
30	SLE FR 3	10	10	1948	280.88	1.33	-3.56	
30	SLE FR 4	11	10	2042	290.99	1.38	-3.91	
30	SLE FR 5	11	10	2042	290.99	1.38	-3.91	
30	SLE FR 6	12	11	2105	297.74	1.42	-4.13	
30	SLE QP 1	10	10	1948	280.88	1.33	-3.56	
30	SLE QP 2	11	10	2042	290.99	1.38	-3.91	
30	SLD 1	191	94	2326	322	2.43	-67.16	
30	SLD 2	232	72	2319	321.32	2.38	-81.44	
30	SLD 3	201	-32	2113	301.99	2.02	-70.34	
30	SLD 4	243	-54	2106	301.31	1.97	-84.63	
30	SLD 5	34	234	2453	330.88	2.33	-12.89	
30	SLD 6	76	212	2446	330.19	2.29	-27.49	
30	SLD 7	70	-185	1743	264.2	0.97	-23.51	
30	SLD 8	112	-207	1736	263.5	0.92	-38.11	
30	SLD 9	-90	228	2348	318.48	1.84	30.3	
30	SLD 10	-48	206	2341	317.79	1.79	15.7	
30	SLD 11	-53	-191	1639	251.8	0.48	19.68	
30	SLD 12	-11	-213	1632	251.11	0.43	5.08	
30	SLD 13	-220	75	1978	280.67	0.79	76.81	
30	SLD 14	-179	53	1971	279.99	0.75	62.53	
30	SLD 15	-210	-51	1765	260.67	0.38	73.63	
30	SLD 16	-168	-73	1758	259.99	0.33	59.34	
30	SLV 1	418	205	2695	362.47	3.77	-147.27	
30	SLV 2	512	155	2680	360.92	3.66	-179.95	
30	SLV 3	443	-90	2195	315	2.81	-154.72	
30	SLV 4	538	-140	2180	313.44	2.7	-187.4	
30	SLV 5	60	534	3002	385.02	3.6	-23.56	
30	SLV 6	157	482	2986	383.4	3.48	-57.49	
30	SLV 7	145	-448	1335	226.76	0.39	-48.39	
30	SLV 8	242	-500	1319	225.15	0.28	-82.31	
30	SLV 9	-220	521	2765	356.84	2.48	74.5	
30	SLV 10	-123	469	2749	355.22	2.37	40.57	
30	SLV 11	-135	-461	1098	198.58	-0.72	49.67	
30	SLV 12	-38	-513	1082	196.97	-0.83	15.75	
30	SLV 13	-515	161	1905	268.54	0.06	179.59	
30	SLV 14	-421	111	1889	266.99	-0.05	146.91	
30	SLV 15	-490	-134	1405	221.07	-0.9	172.14	
30	SLV 16	-396	-184	1389	219.51	-1.01	139.46	
30	CRTFP Ux+	0	0	0	0	0	0	
30	CRTFP Ux-	0	0	0	0	0	0	
30	CRTFP Uy+	0	0	0	0	0	0	
30	CRTFP Uy-	0	0	0	0	0	0	
31	SLU 1	10	10	1934	311.47	2.2	-3.41	
31	SLU 2	10	10	1934	311.47	2.2	-3.41	
31	SLU 3	10	10	1934	311.47	2.2	-3.41	
31	SLU 4	10	10	1934	311.47	2.2	-3.41	
31	SLU 5	10	10	1934	311.47	2.2	-3.41	
31	SLU 6	10	10	1934	311.47	2.2	-3.41	
31	SLU 7	10	10	1934	311.47	2.2	-3.41	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
31	SLU 8	10	10	1934	311.47	2.2	-3.41
31	SLU 9	10	10	1934	311.47	2.2	-3.41
31	SLU 10	13	13	2274	354.43	2.58	-4.66
31	SLU 11	13	13	2274	354.43	2.58	-4.66
31	SLU 12	13	13	2274	354.43	2.58	-4.66
31	SLU 13	13	13	2274	354.43	2.58	-4.66
31	SLU 14	13	13	2274	354.43	2.58	-4.66
31	SLU 15	13	13	2274	354.43	2.58	-4.66
31	SLU 16	13	13	2274	354.43	2.58	-4.66
31	SLU 17	13	13	2274	354.43	2.58	-4.66
31	SLU 18	15	14	2419	372.85	2.74	-5.19
31	SLU 19	15	14	2419	372.85	2.74	-5.19
31	SLU 20	15	14	2419	372.85	2.74	-5.19
31	SLU 21	15	14	2419	372.85	2.74	-5.19
31	SLU 22	12	12	2188	343.63	2.5	-4.24
31	SLU 23	12	12	2188	343.63	2.5	-4.24
31	SLU 24	12	12	2188	343.63	2.5	-4.24
31	SLU 25	12	12	2188	343.63	2.5	-4.24
31	SLU 26	12	12	2188	343.63	2.5	-4.24
31	SLU 27	12	12	2188	343.63	2.5	-4.24
31	SLU 28	12	12	2188	343.63	2.5	-4.24
31	SLU 29	12	12	2188	343.63	2.5	-4.24
31	SLU 30	12	12	2188	343.63	2.5	-4.24
31	SLU 31	16	14	2528	386.6	2.87	-5.49
31	SLU 32	16	14	2528	386.6	2.87	-5.49
31	SLU 33	16	14	2528	386.6	2.87	-5.49
31	SLU 34	16	14	2528	386.6	2.87	-5.49
31	SLU 35	16	14	2528	386.6	2.87	-5.49
31	SLU 36	16	14	2528	386.6	2.87	-5.49
31	SLU 37	16	14	2528	386.6	2.87	-5.49
31	SLU 38	16	14	2528	386.6	2.87	-5.49
31	SLU 39	17	15	2674	405.01	3.04	-6.02
31	SLU 40	17	15	2674	405.01	3.04	-6.02
31	SLU 41	17	15	2674	405.01	3.04	-6.02
31	SLU 42	17	15	2674	405.01	3.04	-6.02
31	SLU 43	12	13	2426	393.88	2.76	-4.15
31	SLU 44	12	13	2426	393.88	2.76	-4.15
31	SLU 45	12	13	2426	393.88	2.76	-4.15
31	SLU 46	12	13	2426	393.88	2.76	-4.15
31	SLU 47	12	13	2426	393.88	2.76	-4.15
31	SLU 48	12	13	2426	393.88	2.76	-4.15
31	SLU 49	12	13	2426	393.88	2.76	-4.15
31	SLU 50	12	13	2426	393.88	2.76	-4.15
31	SLU 51	12	13	2426	393.88	2.76	-4.15
31	SLU 52	15	15	2767	436.85	3.14	-5.4
31	SLU 53	15	15	2767	436.85	3.14	-5.4
31	SLU 54	15	15	2767	436.85	3.14	-5.4
31	SLU 55	15	15	2767	436.85	3.14	-5.4
31	SLU 56	15	15	2767	436.85	3.14	-5.4
31	SLU 57	15	15	2767	436.85	3.14	-5.4
31	SLU 58	15	15	2767	436.85	3.14	-5.4
31	SLU 59	15	15	2767	436.85	3.14	-5.4
31	SLU 60	17	16	2912	455.26	3.3	-5.93
31	SLU 61	17	16	2912	455.26	3.3	-5.93
31	SLU 62	17	16	2912	455.26	3.3	-5.93
31	SLU 63	17	16	2912	455.26	3.3	-5.93
31	SLU 64	14	15	2681	426.04	3.05	-4.98
31	SLU 65	14	15	2681	426.04	3.05	-4.98
31	SLU 66	14	15	2681	426.04	3.05	-4.98
31	SLU 67	14	15	2681	426.04	3.05	-4.98
31	SLU 68	14	15	2681	426.04	3.05	-4.98
31	SLU 69	14	15	2681	426.04	3.05	-4.98
31	SLU 70	14	15	2681	426.04	3.05	-4.98
31	SLU 71	14	15	2681	426.04	3.05	-4.98
31	SLU 72	14	15	2681	426.04	3.05	-4.98
31	SLU 73	18	17	3021	469.01	3.43	-6.23
31	SLU 74	18	17	3021	469.01	3.43	-6.23
31	SLU 75	18	17	3021	469.01	3.43	-6.23
31	SLU 76	18	17	3021	469.01	3.43	-6.23
31	SLU 77	18	17	3021	469.01	3.43	-6.23
31	SLU 78	18	17	3021	469.01	3.43	-6.23
31	SLU 79	18	17	3021	469.01	3.43	-6.23
31	SLU 80	18	17	3021	469.01	3.43	-6.23
31	SLU 81	19	18	3166	487.42	3.6	-6.76
31	SLU 82	19	18	3166	487.42	3.6	-6.76
31	SLU 83	19	18	3166	487.42	3.6	-6.76
31	SLU 84	19	18	3166	487.42	3.6	-6.76
31	SLE RA 1	10	11	2006	320.66	2.28	-3.65
31	SLE RA 2	10	11	2006	320.66	2.28	-3.65
31	SLE RA 3	10	11	2006	320.66	2.28	-3.65
31	SLE RA 4	10	11	2006	320.66	2.28	-3.65
31	SLE RA 5	10	11	2006	320.66	2.28	-3.65
31	SLE RA 6	10	11	2006	320.66	2.28	-3.65
31	SLE RA 7	10	11	2006	320.66	2.28	-3.65
31	SLE RA 8	10	11	2006	320.66	2.28	-3.65
31	SLE RA 9	10	11	2006	320.66	2.28	-3.65
31	SLE RA 10	13	12	2233	349.3	2.54	-4.48
31	SLE RA 11	13	12	2233	349.3	2.54	-4.48
31	SLE RA 12	13	12	2233	349.3	2.54	-4.48
31	SLE RA 13	13	12	2233	349.3	2.54	-4.48



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione		
Ind.	N.br.	x	y	z		x	y	z
31	SLE RA 14	13	12	2233		349.3	2.54	-4.48
31	SLE RA 15	13	12	2233		349.3	2.54	-4.48
31	SLE RA 16	13	12	2233		349.3	2.54	-4.48
31	SLE RA 17	13	12	2233		349.3	2.54	-4.48
31	SLE RA 18	14	13	2330		361.58	2.65	-4.84
31	SLE RA 19	14	13	2330		361.58	2.65	-4.84
31	SLE RA 20	14	13	2330		361.58	2.65	-4.84
31	SLE RA 21	14	13	2330		361.58	2.65	-4.84
31	SLE FR 1	10	11	2006		320.66	2.28	-3.65
31	SLE FR 2	10	11	2006		320.66	2.28	-3.65
31	SLE FR 3	10	11	2006		320.66	2.28	-3.65
31	SLE FR 4	11	11	2103		332.93	2.39	-4.01
31	SLE FR 5	11	11	2103		332.93	2.39	-4.01
31	SLE FR 6	12	12	2168		341.12	2.47	-4.24
31	SLE QP 1	10	11	2006		320.66	2.28	-3.65
31	SLE QP 2	11	11	2103		332.93	2.39	-4.01
31	SLD 1	191	109	2424		377.59	3.64	-67.15
31	SLD 2	232	84	2415		376.4	3.58	-81.41
31	SLD 3	202	-39	2195		350.5	3.07	-70.38
31	SLD 4	243	-64	2187		349.31	3.02	-84.64
31	SLD 5	33	275	2549		387.85	3.65	-12.89
31	SLD 6	75	248	2541		386.63	3.59	-27.47
31	SLD 7	71	-219	1787		297.54	1.76	-23.68
31	SLD 8	113	-245	1779		296.33	1.7	-38.25
31	SLD 9	-90	268	2428		369.54	3.09	30.24
31	SLD 10	-48	242	2419		368.32	3.03	15.67
31	SLD 11	-53	-226	1666		279.23	1.2	19.46
31	SLD 12	-11	-252	1657		278.01	1.14	4.88
31	SLD 13	-220	87	2020		316.55	1.77	76.63
31	SLD 14	-179	62	2011		315.36	1.72	62.37
31	SLD 15	-209	-61	1791		289.46	1.2	73.39
31	SLD 16	-168	-86	1783		288.27	1.15	59.14
31	SLV 1	417	240	2840		435.6	5.24	-147.13
31	SLV 2	511	181	2821		432.88	5.12	-179.74
31	SLV 3	444	-108	2303		371.6	3.91	-154.69
31	SLV 4	538	-167	2284		368.88	3.78	-187.31
31	SLV 5	59	628	3146		461.8	5.31	-23.43
31	SLV 6	157	567	3125		458.97	5.18	-57.29
31	SLV 7	146	-530	1356		248.48	0.88	-48.65
31	SLV 8	243	-590	1336		245.65	0.75	-82.51
31	SLV 9	-221	613	2870		420.22	4.04	74.5
31	SLV 10	-123	552	2850		417.39	3.91	40.64
31	SLV 11	-134	-545	1081		206.89	-0.39	49.28
31	SLV 12	-36	-606	1061		204.06	-0.53	15.42
31	SLV 13	-515	189	1923		296.98	1	179.29
31	SLV 14	-421	131	1903		294.26	0.87	146.68
31	SLV 15	-489	-158	1386		232.99	-0.33	171.73
31	SLV 16	-395	-217	1366		230.26	-0.46	139.12
31	CRTFP Ux+	0	0	0		0	0	0
31	CRTFP Ux-	0	0	0		0	0	0
31	CRTFP Uy+	0	0	0		0	0	0
31	CRTFP Uy-	0	0	0		0	0	0
32	SLU 1	10	11	2020		372.31	3.13	-3.5
32	SLU 2	10	11	2020		372.31	3.13	-3.5
32	SLU 3	10	11	2020		372.31	3.13	-3.5
32	SLU 4	10	11	2020		372.31	3.13	-3.5
32	SLU 5	10	11	2020		372.31	3.13	-3.5
32	SLU 6	10	11	2020		372.31	3.13	-3.5
32	SLU 7	10	11	2020		372.31	3.13	-3.5
32	SLU 8	10	11	2020		372.31	3.13	-3.5
32	SLU 9	10	11	2020		372.31	3.13	-3.5
32	SLU 10	14	13	2375		427.51	3.7	-4.78
32	SLU 11	14	13	2375		427.51	3.7	-4.78
32	SLU 12	14	13	2375		427.51	3.7	-4.78
32	SLU 13	14	13	2375		427.51	3.7	-4.78
32	SLU 14	14	13	2375		427.51	3.7	-4.78
32	SLU 15	14	13	2375		427.51	3.7	-4.78
32	SLU 16	14	13	2375		427.51	3.7	-4.78
32	SLU 17	14	13	2375		427.51	3.7	-4.78
32	SLU 18	15	14	2528		451.17	3.95	-5.34
32	SLU 19	15	14	2528		451.17	3.95	-5.34
32	SLU 20	15	14	2528		451.17	3.95	-5.34
32	SLU 21	15	14	2528		451.17	3.95	-5.34
32	SLU 22	12	13	2286		413.69	3.57	-4.36
32	SLU 23	12	13	2286		413.69	3.57	-4.36
32	SLU 24	12	13	2286		413.69	3.57	-4.36
32	SLU 25	12	13	2286		413.69	3.57	-4.36
32	SLU 26	12	13	2286		413.69	3.57	-4.36
32	SLU 27	12	13	2286		413.69	3.57	-4.36
32	SLU 28	12	13	2286		413.69	3.57	-4.36
32	SLU 29	12	13	2286		413.69	3.57	-4.36
32	SLU 30	12	13	2286		413.69	3.57	-4.36
32	SLU 31	16	15	2641		468.89	4.14	-5.64
32	SLU 32	16	15	2641		468.89	4.14	-5.64
32	SLU 33	16	15	2641		468.89	4.14	-5.64
32	SLU 34	16	15	2641		468.89	4.14	-5.64
32	SLU 35	16	15	2641		468.89	4.14	-5.64
32	SLU 36	16	15	2641		468.89	4.14	-5.64
32	SLU 37	16	15	2641		468.89	4.14	-5.64
32	SLU 38	16	15	2641		468.89	4.14	-5.64



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
32	SLU 39	18	16	2793	492.55	4.39	-6.19
32	SLU 40	18	16	2793	492.55	4.39	-6.19
32	SLU 41	18	16	2793	492.55	4.39	-6.19
32	SLU 42	18	16	2793	492.55	4.39	-6.19
32	SLU 43	12	14	2534	469.81	3.92	-4.25
32	SLU 44	12	14	2534	469.81	3.92	-4.25
32	SLU 45	12	14	2534	469.81	3.92	-4.25
32	SLU 46	12	14	2534	469.81	3.92	-4.25
32	SLU 47	12	14	2534	469.81	3.92	-4.25
32	SLU 48	12	14	2534	469.81	3.92	-4.25
32	SLU 49	12	14	2534	469.81	3.92	-4.25
32	SLU 50	12	14	2534	469.81	3.92	-4.25
32	SLU 51	12	14	2534	469.81	3.92	-4.25
32	SLU 52	16	16	2890	525.01	4.49	-5.54
32	SLU 53	16	16	2890	525.01	4.49	-5.54
32	SLU 54	16	16	2890	525.01	4.49	-5.54
32	SLU 55	16	16	2890	525.01	4.49	-5.54
32	SLU 56	16	16	2890	525.01	4.49	-5.54
32	SLU 57	16	16	2890	525.01	4.49	-5.54
32	SLU 58	16	16	2890	525.01	4.49	-5.54
32	SLU 59	16	16	2890	525.01	4.49	-5.54
32	SLU 60	17	17	3042	548.67	4.74	-6.09
32	SLU 61	17	17	3042	548.67	4.74	-6.09
32	SLU 62	17	17	3042	548.67	4.74	-6.09
32	SLU 63	17	17	3042	548.67	4.74	-6.09
32	SLU 64	15	16	2800	511.19	4.36	-5.11
32	SLU 65	15	16	2800	511.19	4.36	-5.11
32	SLU 66	15	16	2800	511.19	4.36	-5.11
32	SLU 67	15	16	2800	511.19	4.36	-5.11
32	SLU 68	15	16	2800	511.19	4.36	-5.11
32	SLU 69	15	16	2800	511.19	4.36	-5.11
32	SLU 70	15	16	2800	511.19	4.36	-5.11
32	SLU 71	15	16	2800	511.19	4.36	-5.11
32	SLU 72	15	16	2800	511.19	4.36	-5.11
32	SLU 73	18	18	3156	566.4	4.93	-6.4
32	SLU 74	18	18	3156	566.4	4.93	-6.4
32	SLU 75	18	18	3156	566.4	4.93	-6.4
32	SLU 76	18	18	3156	566.4	4.93	-6.4
32	SLU 77	18	18	3156	566.4	4.93	-6.4
32	SLU 78	18	18	3156	566.4	4.93	-6.4
32	SLU 79	18	18	3156	566.4	4.93	-6.4
32	SLU 80	18	18	3156	566.4	4.93	-6.4
32	SLU 81	20	19	3308	590.06	5.18	-6.95
32	SLU 82	20	19	3308	590.06	5.18	-6.95
32	SLU 83	20	19	3308	590.06	5.18	-6.95
32	SLU 84	20	19	3308	590.06	5.18	-6.95
32	SLE RA 1	11	12	2096	384.13	3.26	-3.74
32	SLE RA 2	11	12	2096	384.13	3.26	-3.74
32	SLE RA 3	11	12	2096	384.13	3.26	-3.74
32	SLE RA 4	11	12	2096	384.13	3.26	-3.74
32	SLE RA 5	11	12	2096	384.13	3.26	-3.74
32	SLE RA 6	11	12	2096	384.13	3.26	-3.74
32	SLE RA 7	11	12	2096	384.13	3.26	-3.74
32	SLE RA 8	11	12	2096	384.13	3.26	-3.74
32	SLE RA 9	11	12	2096	384.13	3.26	-3.74
32	SLE RA 10	13	13	2333	420.93	3.64	-4.6
32	SLE RA 11	13	13	2333	420.93	3.64	-4.6
32	SLE RA 12	13	13	2333	420.93	3.64	-4.6
32	SLE RA 13	13	13	2333	420.93	3.64	-4.6
32	SLE RA 14	13	13	2333	420.93	3.64	-4.6
32	SLE RA 15	13	13	2333	420.93	3.64	-4.6
32	SLE RA 16	13	13	2333	420.93	3.64	-4.6
32	SLE RA 17	13	13	2333	420.93	3.64	-4.6
32	SLE RA 18	14	14	2434	436.71	3.8	-4.97
32	SLE RA 19	14	14	2434	436.71	3.8	-4.97
32	SLE RA 20	14	14	2434	436.71	3.8	-4.97
32	SLE RA 21	14	14	2434	436.71	3.8	-4.97
32	SLE FR 1	11	12	2096	384.13	3.26	-3.74
32	SLE FR 2	11	12	2096	384.13	3.26	-3.74
32	SLE FR 3	11	12	2096	384.13	3.26	-3.74
32	SLE FR 4	12	12	2197	399.9	3.42	-4.11
32	SLE FR 5	12	12	2197	399.9	3.42	-4.11
32	SLE FR 6	12	13	2265	410.42	3.53	-4.36
32	SLE QP 1	11	12	2096	384.13	3.26	-3.74
32	SLE QP 2	12	12	2197	399.9	3.42	-4.11
32	SLD 1	191	125	2561	462.77	4.88	-67.13
32	SLD 2	232	95	2551	460.9	4.82	-81.36
32	SLD 3	202	-47	2312	425.27	4.15	-70.42
32	SLD 4	243	-77	2301	423.4	4.09	-84.65
32	SLD 5	33	317	2688	476.31	4.98	-12.88
32	SLD 6	75	287	2678	474.4	4.92	-27.42
32	SLD 7	71	-255	1857	351.31	2.56	-23.87
32	SLD 8	113	-286	1847	349.4	2.5	-38.41
32	SLD 9	-90	310	2548	450.4	4.35	30.19
32	SLD 10	-48	280	2537	448.49	4.28	15.65
32	SLD 11	-52	-262	1717	325.41	1.93	19.2
32	SLD 12	-10	-293	1706	323.5	1.86	4.65
32	SLD 13	-220	101	2093	376.4	2.75	76.43
32	SLD 14	-179	71	2083	374.54	2.69	62.2
32	SLD 15	-208	-71	1844	338.91	2.03	73.13



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
32	SLD 16	-167	-100	1833	337.04	1.96	58.9
32	SLV 1	417	275	3033	544.23	6.76	-146.94
32	SLV 2	511	207	3009	539.95	6.61	-179.49
32	SLV 3	444	-128	2448	455.92	5.06	-154.65
32	SLV 4	537	-196	2424	451.65	4.91	-187.2
32	SLV 5	58	727	3345	578.71	7.06	-23.25
32	SLV 6	156	656	3320	574.27	6.91	-57.04
32	SLV 7	147	-615	1393	284.35	1.38	-48.96
32	SLV 8	245	-686	1369	279.92	1.23	-82.75
32	SLV 9	-221	711	3026	519.89	5.61	74.53
32	SLV 10	-124	640	3001	515.45	5.46	40.74
32	SLV 11	-132	-632	1075	225.53	-0.06	48.82
32	SLV 12	-35	-703	1050	221.09	-0.22	15.02
32	SLV 13	-514	220	1970	348.16	1.93	178.98
32	SLV 14	-420	152	1947	343.88	1.79	146.43
32	SLV 15	-487	-182	1385	259.85	0.23	171.27
32	SLV 16	-394	-251	1361	255.58	0.08	138.72
32	CRTFP Ux+	0	0	0	0	0	0
32	CRTFP Ux-	0	0	0	0	0	0
32	CRTFP Uy+	0	0	0	0	0	0
32	CRTFP Uy-	0	0	0	0	0	0
33	SLU 1	10	12	2136	457.12	4.04	-3.59
33	SLU 2	10	12	2136	457.12	4.04	-3.59
33	SLU 3	10	12	2136	457.12	4.04	-3.59
33	SLU 4	10	12	2136	457.12	4.04	-3.59
33	SLU 5	10	12	2136	457.12	4.04	-3.59
33	SLU 6	10	12	2136	457.12	4.04	-3.59
33	SLU 7	10	12	2136	457.12	4.04	-3.59
33	SLU 8	10	12	2136	457.12	4.04	-3.59
33	SLU 9	10	12	2136	457.12	4.04	-3.59
33	SLU 10	14	14	2513	529.42	4.8	-4.92
33	SLU 11	14	14	2513	529.42	4.8	-4.92
33	SLU 12	14	14	2513	529.42	4.8	-4.92
33	SLU 13	14	14	2513	529.42	4.8	-4.92
33	SLU 14	14	14	2513	529.42	4.8	-4.92
33	SLU 15	14	14	2513	529.42	4.8	-4.92
33	SLU 16	14	14	2513	529.42	4.8	-4.92
33	SLU 17	14	14	2513	529.42	4.8	-4.92
33	SLU 18	16	14	2674	560.41	5.13	-5.48
33	SLU 19	16	14	2674	560.41	5.13	-5.48
33	SLU 20	16	14	2674	560.41	5.13	-5.48
33	SLU 21	16	14	2674	560.41	5.13	-5.48
33	SLU 22	13	13	2418	511.36	4.62	-4.48
33	SLU 23	13	13	2418	511.36	4.62	-4.48
33	SLU 24	13	13	2418	511.36	4.62	-4.48
33	SLU 25	13	13	2418	511.36	4.62	-4.48
33	SLU 26	13	13	2418	511.36	4.62	-4.48
33	SLU 27	13	13	2418	511.36	4.62	-4.48
33	SLU 28	13	13	2418	511.36	4.62	-4.48
33	SLU 29	13	13	2418	511.36	4.62	-4.48
33	SLU 30	13	13	2418	511.36	4.62	-4.48
33	SLU 31	17	15	2795	583.67	5.38	-5.8
33	SLU 32	17	15	2795	583.67	5.38	-5.8
33	SLU 33	17	15	2795	583.67	5.38	-5.8
33	SLU 34	17	15	2795	583.67	5.38	-5.8
33	SLU 35	17	15	2795	583.67	5.38	-5.8
33	SLU 36	17	15	2795	583.67	5.38	-5.8
33	SLU 37	17	15	2795	583.67	5.38	-5.8
33	SLU 38	17	15	2795	583.67	5.38	-5.8
33	SLU 39	18	16	2956	614.66	5.7	-6.37
33	SLU 40	18	16	2956	614.66	5.7	-6.37
33	SLU 41	18	16	2956	614.66	5.7	-6.37
33	SLU 42	18	16	2956	614.66	5.7	-6.37
33	SLU 43	12	15	2680	575.65	5.06	-4.37
33	SLU 44	12	15	2680	575.65	5.06	-4.37
33	SLU 45	12	15	2680	575.65	5.06	-4.37
33	SLU 46	12	15	2680	575.65	5.06	-4.37
33	SLU 47	12	15	2680	575.65	5.06	-4.37
33	SLU 48	12	15	2680	575.65	5.06	-4.37
33	SLU 49	12	15	2680	575.65	5.06	-4.37
33	SLU 50	12	15	2680	575.65	5.06	-4.37
33	SLU 51	12	15	2680	575.65	5.06	-4.37
33	SLU 52	16	17	3056	647.96	5.82	-5.69
33	SLU 53	16	17	3056	647.96	5.82	-5.69
33	SLU 54	16	17	3056	647.96	5.82	-5.69
33	SLU 55	16	17	3056	647.96	5.82	-5.69
33	SLU 56	16	17	3056	647.96	5.82	-5.69
33	SLU 57	16	17	3056	647.96	5.82	-5.69
33	SLU 58	16	17	3056	647.96	5.82	-5.69
33	SLU 59	16	17	3056	647.96	5.82	-5.69
33	SLU 60	18	18	3218	678.94	6.14	-6.26
33	SLU 61	18	18	3218	678.94	6.14	-6.26
33	SLU 62	18	18	3218	678.94	6.14	-6.26
33	SLU 63	18	18	3218	678.94	6.14	-6.26
33	SLU 64	15	16	2962	629.9	5.64	-5.25
33	SLU 65	15	16	2962	629.9	5.64	-5.25
33	SLU 66	15	16	2962	629.9	5.64	-5.25
33	SLU 67	15	16	2962	629.9	5.64	-5.25
33	SLU 68	15	16	2962	629.9	5.64	-5.25
33	SLU 69	15	16	2962	629.9	5.64	-5.25



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
33	SLU 70	15	16	2962	629.9	5.64	-5.25
33	SLU 71	15	16	2962	629.9	5.64	-5.25
33	SLU 72	15	16	2962	629.9	5.64	-5.25
33	SLU 73	19	18	3339	702.2	6.39	-6.57
33	SLU 74	19	18	3339	702.2	6.39	-6.57
33	SLU 75	19	18	3339	702.2	6.39	-6.57
33	SLU 76	19	18	3339	702.2	6.39	-6.57
33	SLU 77	19	18	3339	702.2	6.39	-6.57
33	SLU 78	19	18	3339	702.2	6.39	-6.57
33	SLU 79	19	18	3339	702.2	6.39	-6.57
33	SLU 80	19	18	3339	702.2	6.39	-6.57
33	SLU 81	20	19	3500	733.19	6.72	-7.14
33	SLU 82	20	19	3500	733.19	6.72	-7.14
33	SLU 83	20	19	3500	733.19	6.72	-7.14
33	SLU 84	20	19	3500	733.19	6.72	-7.14
33	SLE RA 1	11	12	2216	472.62	4.21	-3.85
33	SLE RA 2	11	12	2216	472.62	4.21	-3.85
33	SLE RA 3	11	12	2216	472.62	4.21	-3.85
33	SLE RA 4	11	12	2216	472.62	4.21	-3.85
33	SLE RA 5	11	12	2216	472.62	4.21	-3.85
33	SLE RA 6	11	12	2216	472.62	4.21	-3.85
33	SLE RA 7	11	12	2216	472.62	4.21	-3.85
33	SLE RA 8	11	12	2216	472.62	4.21	-3.85
33	SLE RA 9	11	12	2216	472.62	4.21	-3.85
33	SLE RA 10	13	13	2468	520.82	4.71	-4.73
33	SLE RA 11	13	13	2468	520.82	4.71	-4.73
33	SLE RA 12	13	13	2468	520.82	4.71	-4.73
33	SLE RA 13	13	13	2468	520.82	4.71	-4.73
33	SLE RA 14	13	13	2468	520.82	4.71	-4.73
33	SLE RA 15	13	13	2468	520.82	4.71	-4.73
33	SLE RA 16	13	13	2468	520.82	4.71	-4.73
33	SLE RA 17	13	13	2468	520.82	4.71	-4.73
33	SLE RA 18	15	14	2575	541.48	4.93	-5.11
33	SLE RA 19	15	14	2575	541.48	4.93	-5.11
33	SLE RA 20	15	14	2575	541.48	4.93	-5.11
33	SLE RA 21	15	14	2575	541.48	4.93	-5.11
33	SLE FR 1	11	12	2216	472.62	4.21	-3.85
33	SLE FR 2	11	12	2216	472.62	4.21	-3.85
33	SLE FR 3	11	12	2216	472.62	4.21	-3.85
33	SLE FR 4	12	13	2324	493.27	4.42	-4.22
33	SLE FR 5	12	13	2324	493.27	4.42	-4.22
33	SLE FR 6	13	13	2396	507.05	4.57	-4.48
33	SLE QP 1	11	12	2216	472.62	4.21	-3.85
33	SLE QP 2	12	13	2324	493.27	4.42	-4.22
33	SLD 1	190	140	2738	579.26	6.1	-67.09
33	SLD 2	231	106	2726	576.54	6.02	-81.3
33	SLD 3	202	-55	2463	527.96	5.22	-70.47
33	SLD 4	243	-90	2450	525.24	5.14	-84.67
33	SLD 5	33	360	2870	597.85	6.28	-12.83
33	SLD 6	75	325	2857	595.07	6.21	-27.35
33	SLD 7	72	-292	1953	426.86	3.36	-24.09
33	SLD 8	114	-327	1940	424.08	3.28	-38.61
33	SLD 9	-90	353	2708	562.47	5.57	30.16
33	SLD 10	-48	318	2695	559.69	5.49	15.65
33	SLD 11	-51	-300	1791	391.48	2.64	18.9
33	SLD 12	-9	-335	1778	388.7	2.56	4.38
33	SLD 13	-219	115	2198	461.31	3.71	76.23
33	SLD 14	-178	81	2185	458.59	3.63	62.02
33	SLD 15	-207	-80	1922	410.01	2.83	72.85
33	SLD 16	-166	-115	1910	407.29	2.75	58.64
33	SLV 1	416	310	3275	690.56	8.25	-146.71
33	SLV 2	510	232	3246	684.33	8.08	-179.2
33	SLV 3	444	-149	2629	569.97	6.19	-154.62
33	SLV 4	537	-228	2600	563.75	6.02	-187.11
33	SLV 5	57	828	3599	737.64	8.76	-22.99
33	SLV 6	155	746	3569	731.18	8.58	-56.72
33	SLV 7	148	-704	1447	335.69	1.89	-49.34
33	SLV 8	246	-785	1417	329.23	1.72	-83.07
33	SLV 9	-222	811	3231	657.32	7.13	74.62
33	SLV 10	-124	729	3201	650.86	6.95	40.89
33	SLV 11	-131	-721	1079	255.37	0.27	48.28
33	SLV 12	-33	-802	1049	248.91	0.09	14.54
33	SLV 13	-513	253	2048	422.8	2.82	178.66
33	SLV 14	-420	175	2019	416.58	2.66	146.17
33	SLV 15	-486	-206	1402	302.22	0.77	170.76
33	SLV 16	-392	-285	1373	295.99	0.6	138.27
33	CRTFP Ux+	0	0	0	0	0	0
33	CRTFP Ux-	0	0	0	0	0	0
33	CRTFP Uy+	0	0	0	0	0	0
33	CRTFP Uy-	0	0	0	0	0	0
34	SLU 1	9	10	1936	478.26	-51.06	-2.86
34	SLU 2	9	10	1936	478.26	-51.06	-2.86
34	SLU 3	9	10	1936	478.26	-51.06	-2.86
34	SLU 4	9	10	1936	478.26	-51.06	-2.86
34	SLU 5	9	10	1936	478.26	-51.06	-2.86
34	SLU 6	9	10	1936	478.26	-51.06	-2.86
34	SLU 7	9	10	1936	478.26	-51.06	-2.86
34	SLU 8	9	10	1936	478.26	-51.06	-2.86
34	SLU 9	9	10	1936	478.26	-51.06	-2.86
34	SLU 10	12	12	2279	557.72	-60.07	-3.97



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione		
Ind.	N.br.	x	y	z		x	y	z
34	SLU 11	12	12	2279	557.72	-60.07	-3.97	
34	SLU 12	12	12	2279	557.72	-60.07	-3.97	
34	SLU 13	12	12	2279	557.72	-60.07	-3.97	
34	SLU 14	12	12	2279	557.72	-60.07	-3.97	
34	SLU 15	12	12	2279	557.72	-60.07	-3.97	
34	SLU 16	12	12	2279	557.72	-60.07	-3.97	
34	SLU 17	12	12	2279	557.72	-60.07	-3.97	
34	SLU 18	14	12	2426	591.77	-63.93	-4.45	
34	SLU 19	14	12	2426	591.77	-63.93	-4.45	
34	SLU 20	14	12	2426	591.77	-63.93	-4.45	
34	SLU 21	14	12	2426	591.77	-63.93	-4.45	
34	SLU 22	11	11	2193	537.91	-57.81	-3.6	
34	SLU 23	11	11	2193	537.91	-57.81	-3.6	
34	SLU 24	11	11	2193	537.91	-57.81	-3.6	
34	SLU 25	11	11	2193	537.91	-57.81	-3.6	
34	SLU 26	11	11	2193	537.91	-57.81	-3.6	
34	SLU 27	11	11	2193	537.91	-57.81	-3.6	
34	SLU 28	11	11	2193	537.91	-57.81	-3.6	
34	SLU 29	11	11	2193	537.91	-57.81	-3.6	
34	SLU 30	11	11	2193	537.91	-57.81	-3.6	
34	SLU 31	15	13	2536	617.37	-66.82	-4.72	
34	SLU 32	15	13	2536	617.37	-66.82	-4.72	
34	SLU 33	15	13	2536	617.37	-66.82	-4.72	
34	SLU 34	15	13	2536	617.37	-66.82	-4.72	
34	SLU 35	15	13	2536	617.37	-66.82	-4.72	
34	SLU 36	15	13	2536	617.37	-66.82	-4.72	
34	SLU 37	15	13	2536	617.37	-66.82	-4.72	
34	SLU 38	15	13	2536	617.37	-66.82	-4.72	
34	SLU 39	16	13	2683	651.42	-70.68	-5.2	
34	SLU 40	16	13	2683	651.42	-70.68	-5.2	
34	SLU 41	16	13	2683	651.42	-70.68	-5.2	
34	SLU 42	16	13	2683	651.42	-70.68	-5.2	
34	SLU 43	11	13	2428	601.28	-64.06	-3.46	
34	SLU 44	11	13	2428	601.28	-64.06	-3.46	
34	SLU 45	11	13	2428	601.28	-64.06	-3.46	
34	SLU 46	11	13	2428	601.28	-64.06	-3.46	
34	SLU 47	11	13	2428	601.28	-64.06	-3.46	
34	SLU 48	11	13	2428	601.28	-64.06	-3.46	
34	SLU 49	11	13	2428	601.28	-64.06	-3.46	
34	SLU 50	11	13	2428	601.28	-64.06	-3.46	
34	SLU 51	11	13	2428	601.28	-64.06	-3.46	
34	SLU 52	14	14	2771	680.74	-73.07	-4.58	
34	SLU 53	14	14	2771	680.74	-73.07	-4.58	
34	SLU 54	14	14	2771	680.74	-73.07	-4.58	
34	SLU 55	14	14	2771	680.74	-73.07	-4.58	
34	SLU 56	14	14	2771	680.74	-73.07	-4.58	
34	SLU 57	14	14	2771	680.74	-73.07	-4.58	
34	SLU 58	14	14	2771	680.74	-73.07	-4.58	
34	SLU 59	14	14	2771	680.74	-73.07	-4.58	
34	SLU 60	16	15	2918	714.8	-76.93	-5.06	
34	SLU 61	16	15	2918	714.8	-76.93	-5.06	
34	SLU 62	16	15	2918	714.8	-76.93	-5.06	
34	SLU 63	16	15	2918	714.8	-76.93	-5.06	
34	SLU 64	13	14	2686	660.93	-70.81	-4.2	
34	SLU 65	13	14	2686	660.93	-70.81	-4.2	
34	SLU 66	13	14	2686	660.93	-70.81	-4.2	
34	SLU 67	13	14	2686	660.93	-70.81	-4.2	
34	SLU 68	13	14	2686	660.93	-70.81	-4.2	
34	SLU 69	13	14	2686	660.93	-70.81	-4.2	
34	SLU 70	13	14	2686	660.93	-70.81	-4.2	
34	SLU 71	13	14	2686	660.93	-70.81	-4.2	
34	SLU 72	13	14	2686	660.93	-70.81	-4.2	
34	SLU 73	16	15	3029	740.39	-79.82	-5.32	
34	SLU 74	16	15	3029	740.39	-79.82	-5.32	
34	SLU 75	16	15	3029	740.39	-79.82	-5.32	
34	SLU 76	16	15	3029	740.39	-79.82	-5.32	
34	SLU 77	16	15	3029	740.39	-79.82	-5.32	
34	SLU 78	16	15	3029	740.39	-79.82	-5.32	
34	SLU 79	16	15	3029	740.39	-79.82	-5.32	
34	SLU 80	16	15	3029	740.39	-79.82	-5.32	
34	SLU 81	18	16	3176	774.45	-83.68	-5.8	
34	SLU 82	18	16	3176	774.45	-83.68	-5.8	
34	SLU 83	18	16	3176	774.45	-83.68	-5.8	
34	SLU 84	18	16	3176	774.45	-83.68	-5.8	
34	SLE RA 1	10	11	2009	495.3	-52.99	-3.07	
34	SLE RA 2	10	11	2009	495.3	-52.99	-3.07	
34	SLE RA 3	10	11	2009	495.3	-52.99	-3.07	
34	SLE RA 4	10	11	2009	495.3	-52.99	-3.07	
34	SLE RA 5	10	11	2009	495.3	-52.99	-3.07	
34	SLE RA 6	10	11	2009	495.3	-52.99	-3.07	
34	SLE RA 7	10	11	2009	495.3	-52.99	-3.07	
34	SLE RA 8	10	11	2009	495.3	-52.99	-3.07	
34	SLE RA 9	10	11	2009	495.3	-52.99	-3.07	
34	SLE RA 10	12	12	2238	548.27	-58.99	-3.81	
34	SLE RA 11	12	12	2238	548.27	-58.99	-3.81	
34	SLE RA 12	12	12	2238	548.27	-58.99	-3.81	
34	SLE RA 13	12	12	2238	548.27	-58.99	-3.81	
34	SLE RA 14	12	12	2238	548.27	-58.99	-3.81	
34	SLE RA 15	12	12	2238	548.27	-58.99	-3.81	
34	SLE RA 16	12	12	2238	548.27	-58.99	-3.81	



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
Ind.	N.br.	x	y	z		x	y	z	
34	SLE RA 17	12	12	2238		548.27	-58.99	-3.81	
34	SLE RA 18	13	12	2336		570.98	-61.57	-4.13	
34	SLE RA 19	13	12	2336		570.98	-61.57	-4.13	
34	SLE RA 20	13	12	2336		570.98	-61.57	-4.13	
34	SLE RA 21	13	12	2336		570.98	-61.57	-4.13	
34	SLE FR 1	10	11	2009		495.3	-52.99	-3.07	
34	SLE FR 2	10	11	2009		495.3	-52.99	-3.07	
34	SLE FR 3	10	11	2009		495.3	-52.99	-3.07	
34	SLE FR 4	11	11	2107		518	-55.56	-3.39	
34	SLE FR 5	11	11	2107		518	-55.56	-3.39	
34	SLE FR 6	11	11	2173		533.14	-57.28	-3.6	
34	SLE QP 1	10	11	2009		495.3	-52.99	-3.07	
34	SLE QP 2	11	11	2107		518	-55.56	-3.39	
34	SLD 1	163	131	2506		613.73	-65.53	-53.6	
34	SLD 2	198	98	2493		610.65	-65.22	-66.67	
34	SLD 3	173	-55	2247		556.6	-58.93	-61.78	
34	SLD 4	208	-88	2234		553.51	-58.62	-74.84	
34	SLD 5	28	341	2624		634.48	-68.67	-1.33	
34	SLD 6	64	307	2611		631.33	-68.36	-14.69	
34	SLD 7	62	-279	1761		444.04	-46.67	-28.59	
34	SLD 8	98	-313	1748		440.89	-46.36	-41.94	
34	SLD 9	-77	335	2466		595.11	-64.76	35.17	
34	SLD 10	-41	301	2453		591.96	-64.45	21.81	
34	SLD 11	-43	-285	1604		404.67	-42.76	7.91	
34	SLD 12	-7	-319	1591		401.52	-42.45	-5.44	
34	SLD 13	-187	110	1981		482.49	-52.5	68.07	
34	SLD 14	-152	77	1968		479.41	-52.19	55	
34	SLD 15	-176	-76	1722		425.36	-45.9	59.89	
34	SLD 16	-141	-109	1709		422.28	-45.59	46.82	
34	SLV 1	355	291	3021		737.58	-78.44	-116.97	
34	SLV 2	435	216	2992		730.53	-77.75	-146.85	
34	SLV 3	379	-145	2414		603.41	-62.95	-136.15	
34	SLV 4	459	-221	2385		596.37	-62.26	-166.04	
34	SLV 5	48	785	3313		789.96	-86.18	2.66	
34	SLV 6	131	707	3283		782.64	-85.46	-28.36	
34	SLV 7	128	-670	1289		342.74	-34.54	-61.28	
34	SLV 8	211	-749	1259		335.43	-33.81	-92.31	
34	SLV 9	-189	771	2956		700.58	-77.31	85.53	
34	SLV 10	-106	692	2925		693.26	-76.58	54.51	
34	SLV 11	-110	-685	932		253.36	-25.66	21.58	
34	SLV 12	-27	-763	901		246.04	-24.94	-9.44	
34	SLV 13	-438	243	1829		439.64	-48.86	159.26	
34	SLV 14	-358	167	1800		432.59	-48.17	129.38	
34	SLV 15	-414	-194	1222		305.47	-33.37	140.07	
34	SLV 16	-334	-269	1193		298.43	-32.68	110.19	
34	CRTFP Ux+	0	0	0		0	0	0	
34	CRTFP Ux-	0	0	0		0	0	0	
34	CRTFP Uy+	0	0	0		0	0	0	
34	CRTFP Uy-	0	0	0		0	0	0	
36	SLU 1	25	29	5629		1991.29	-1160.74	-3.47	
36	SLU 2	25	29	5629		1991.29	-1160.74	-3.47	
36	SLU 3	25	29	5629		1991.29	-1160.74	-3.47	
36	SLU 4	25	29	5629		1991.29	-1160.74	-3.47	
36	SLU 5	25	29	5629		1991.29	-1160.74	-3.47	
36	SLU 6	25	29	5629		1991.29	-1160.74	-3.47	
36	SLU 7	25	29	5629		1991.29	-1160.74	-3.47	
36	SLU 8	25	29	5629		1991.29	-1160.74	-3.47	
36	SLU 9	25	29	5629		1991.29	-1160.74	-3.47	
36	SLU 10	35	32	6628		2340.49	-1366.02	-6.32	
36	SLU 11	35	32	6628		2340.49	-1366.02	-6.32	
36	SLU 12	35	32	6628		2340.49	-1366.02	-6.32	
36	SLU 13	35	32	6628		2340.49	-1366.02	-6.32	
36	SLU 14	35	32	6628		2340.49	-1366.02	-6.32	
36	SLU 15	35	32	6628		2340.49	-1366.02	-6.32	
36	SLU 16	35	32	6628		2340.49	-1366.02	-6.32	
36	SLU 17	35	32	6628		2340.49	-1366.02	-6.32	
36	SLU 18	39	33	7057		2490.14	-1454	-7.54	
36	SLU 19	39	33	7057		2490.14	-1454	-7.54	
36	SLU 20	39	33	7057		2490.14	-1454	-7.54	
36	SLU 21	39	33	7057		2490.14	-1454	-7.54	
36	SLU 22	32	31	6379		2253.31	-1314.64	-5.28	
36	SLU 23	32	31	6379		2253.31	-1314.64	-5.28	
36	SLU 24	32	31	6379		2253.31	-1314.64	-5.28	
36	SLU 25	32	31	6379		2253.31	-1314.64	-5.28	
36	SLU 26	32	31	6379		2253.31	-1314.64	-5.28	
36	SLU 27	32	31	6379		2253.31	-1314.64	-5.28	
36	SLU 28	32	31	6379		2253.31	-1314.64	-5.28	
36	SLU 29	32	31	6379		2253.31	-1314.64	-5.28	
36	SLU 30	32	31	6379		2253.31	-1314.64	-5.28	
36	SLU 31	41	34	7378		2602.5	-1519.92	-8.13	
36	SLU 32	41	34	7378		2602.5	-1519.92	-8.13	
36	SLU 33	41	34	7378		2602.5	-1519.92	-8.13	
36	SLU 34	41	34	7378		2602.5	-1519.92	-8.13	
36	SLU 35	41	34	7378		2602.5	-1519.92	-8.13	
36	SLU 36	41	34	7378		2602.5	-1519.92	-8.13	
36	SLU 37	41	34	7378		2602.5	-1519.92	-8.13	
36	SLU 38	41	34	7378		2602.5	-1519.92	-8.13	
36	SLU 39	45	36	7806		2752.16	-1607.9	-9.35	
36	SLU 40	45	36	7806		2752.16	-1607.9	-9.35	
36	SLU 41	45	36	7806		2752.16	-1607.9	-9.35	



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione		
Ind.	N.br.	x	y	z		x	y	z
36	SLU 42	45	36	7806	2752.16	-1607.9	-9.35	
36	SLU 43	31	37	7061	2498.85	-1456.2	-3.89	
36	SLU 44	31	37	7061	2498.85	-1456.2	-3.89	
36	SLU 45	31	37	7061	2498.85	-1456.2	-3.89	
36	SLU 46	31	37	7061	2498.85	-1456.2	-3.89	
36	SLU 47	31	37	7061	2498.85	-1456.2	-3.89	
36	SLU 48	31	37	7061	2498.85	-1456.2	-3.89	
36	SLU 49	31	37	7061	2498.85	-1456.2	-3.89	
36	SLU 50	31	37	7061	2498.85	-1456.2	-3.89	
36	SLU 51	31	37	7061	2498.85	-1456.2	-3.89	
36	SLU 52	40	40	8060	2848.04	-1661.48	-6.74	
36	SLU 53	40	40	8060	2848.04	-1661.48	-6.74	
36	SLU 54	40	40	8060	2848.04	-1661.48	-6.74	
36	SLU 55	40	40	8060	2848.04	-1661.48	-6.74	
36	SLU 56	40	40	8060	2848.04	-1661.48	-6.74	
36	SLU 57	40	40	8060	2848.04	-1661.48	-6.74	
36	SLU 58	40	40	8060	2848.04	-1661.48	-6.74	
36	SLU 59	40	40	8060	2848.04	-1661.48	-6.74	
36	SLU 60	44	41	8488	2997.69	-1749.46	-7.96	
36	SLU 61	44	41	8488	2997.69	-1749.46	-7.96	
36	SLU 62	44	41	8488	2997.69	-1749.46	-7.96	
36	SLU 63	44	41	8488	2997.69	-1749.46	-7.96	
36	SLU 64	37	39	7811	2760.86	-1610.1	-5.7	
36	SLU 65	37	39	7811	2760.86	-1610.1	-5.7	
36	SLU 66	37	39	7811	2760.86	-1610.1	-5.7	
36	SLU 67	37	39	7811	2760.86	-1610.1	-5.7	
36	SLU 68	37	39	7811	2760.86	-1610.1	-5.7	
36	SLU 69	37	39	7811	2760.86	-1610.1	-5.7	
36	SLU 70	37	39	7811	2760.86	-1610.1	-5.7	
36	SLU 71	37	39	7811	2760.86	-1610.1	-5.7	
36	SLU 72	37	39	7811	2760.86	-1610.1	-5.7	
36	SLU 73	47	42	8810	3110.06	-1815.38	-8.55	
36	SLU 74	47	42	8810	3110.06	-1815.38	-8.55	
36	SLU 75	47	42	8810	3110.06	-1815.38	-8.55	
36	SLU 76	47	42	8810	3110.06	-1815.38	-8.55	
36	SLU 77	47	42	8810	3110.06	-1815.38	-8.55	
36	SLU 78	47	42	8810	3110.06	-1815.38	-8.55	
36	SLU 79	47	42	8810	3110.06	-1815.38	-8.55	
36	SLU 80	47	42	8810	3110.06	-1815.38	-8.55	
36	SLU 81	51	43	9238	3259.71	-1903.36	-9.77	
36	SLU 82	51	43	9238	3259.71	-1903.36	-9.77	
36	SLU 83	51	43	9238	3259.71	-1903.36	-9.77	
36	SLU 84	51	43	9238	3259.71	-1903.36	-9.77	
36	SLE RA 1	27	30	5843	2066.16	-1204.72	-3.99	
36	SLE RA 2	27	30	5843	2066.16	-1204.72	-3.99	
36	SLE RA 3	27	30	5843	2066.16	-1204.72	-3.99	
36	SLE RA 4	27	30	5843	2066.16	-1204.72	-3.99	
36	SLE RA 5	27	30	5843	2066.16	-1204.72	-3.99	
36	SLE RA 6	27	30	5843	2066.16	-1204.72	-3.99	
36	SLE RA 7	27	30	5843	2066.16	-1204.72	-3.99	
36	SLE RA 8	27	30	5843	2066.16	-1204.72	-3.99	
36	SLE RA 9	27	30	5843	2066.16	-1204.72	-3.99	
36	SLE RA 10	34	32	6510	2298.95	-1341.57	-5.89	
36	SLE RA 11	34	32	6510	2298.95	-1341.57	-5.89	
36	SLE RA 12	34	32	6510	2298.95	-1341.57	-5.89	
36	SLE RA 13	34	32	6510	2298.95	-1341.57	-5.89	
36	SLE RA 14	34	32	6510	2298.95	-1341.57	-5.89	
36	SLE RA 15	34	32	6510	2298.95	-1341.57	-5.89	
36	SLE RA 16	34	32	6510	2298.95	-1341.57	-5.89	
36	SLE RA 17	34	32	6510	2298.95	-1341.57	-5.89	
36	SLE RA 18	36	32	6795	2398.72	-1400.22	-6.7	
36	SLE RA 19	36	32	6795	2398.72	-1400.22	-6.7	
36	SLE RA 20	36	32	6795	2398.72	-1400.22	-6.7	
36	SLE RA 21	36	32	6795	2398.72	-1400.22	-6.7	
36	SLE FR 1	27	30	5843	2066.16	-1204.72	-3.99	
36	SLE FR 2	27	30	5843	2066.16	-1204.72	-3.99	
36	SLE FR 3	27	30	5843	2066.16	-1204.72	-3.99	
36	SLE FR 4	30	30	6129	2165.92	-1263.37	-4.8	
36	SLE FR 5	30	30	6129	2165.92	-1263.37	-4.8	
36	SLE FR 6	32	31	6319	2232.44	-1302.47	-5.34	
36	SLE QP 1	27	30	5843	2066.16	-1204.72	-3.99	
36	SLE QP 2	30	30	6129	2165.92	-1263.37	-4.8	
36	SLD 1	455	387	7317	2576.69	-1499.5	-95.02	
36	SLD 2	553	288	7278	2563.84	-1492.06	-152.9	
36	SLD 3	487	-168	6557	2323.09	-1346.73	-222.57	
36	SLD 4	584	-267	6518	2310.24	-1339.28	-280.45	
36	SLD 5	74	1015	7651	2678.41	-1568.6	182.47	
36	SLD 6	174	913	7612	2665.28	-1560.99	123.31	
36	SLD 7	180	-835	5119	1833.09	-1059.36	-242.68	
36	SLD 8	280	-937	5080	1819.96	-1051.75	-301.83	
36	SLD 9	-220	997	7178	2511.89	-1474.99	292.23	
36	SLD 10	-120	896	7139	2498.76	-1467.38	233.08	
36	SLD 11	-114	-852	4646	1666.57	-965.74	-132.92	
36	SLD 12	-14	-954	4606	1653.44	-958.13	-192.07	
36	SLD 13	-524	328	5739	2021.61	-1187.45	270.85	
36	SLD 14	-427	229	5701	2008.76	-1180	212.97	
36	SLD 15	-493	-227	4980	1768.01	-1034.67	143.3	
36	SLD 16	-395	-326	4941	1755.16	-1027.23	85.42	
36	SLV 1	993	863	8855	3108.33	-1805.41	-204.33	
36	SLV 2	1216	635	8766	3078.94	-1788.38	-336.72	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
36	SLV 3	1067	-440	7072	2513.16	-1446.84	-503.62
36	SLV 4	1291	-667	6984	2483.77	-1429.81	-636.01
36	SLV 5	124	2339	9683	3362.17	-1976.1	438.13
36	SLV 6	356	2103	9592	3331.66	-1958.42	300.67
36	SLV 7	371	-2001	3740	1378.27	-780.87	-559.5
36	SLV 8	603	-2238	3649	1347.76	-763.18	-696.95
36	SLV 9	-543	2299	8609	2984.09	-1763.55	687.35
36	SLV 10	-311	2062	8517	2953.58	-1745.87	549.89
36	SLV 11	-296	-2042	2666	1000.19	-568.32	-310.27
36	SLV 12	-64	-2278	2574	969.68	-550.64	-447.73
36	SLV 13	-1231	728	5274	1848.08	-1096.92	626.41
36	SLV 14	-1007	500	5186	1818.69	-1079.89	494.02
36	SLV 15	-1156	-574	3491	1252.91	-738.35	327.12
36	SLV 16	-933	-802	3403	1223.52	-721.32	194.73
36	CRTFP Ux+	0	0	0	-0.01	0.01	0.01
36	CRTFP Ux-	0	0	0	0.01	-0.01	-0.01
36	CRTFP Uy+	0	0	0	-0.02	0.01	-0.01
36	CRTFP Uy-	0	0	0	0.02	-0.01	0.01
36	CRTFP Rz+	0	0	0	0	0	0
36	CRTFP Rz-	0	0	0	0	0	0
68	SLU 1	6	-1	1639	43.5	0.57	-0.17
68	SLU 2	6	-1	1639	43.5	0.57	-0.17
68	SLU 3	6	-1	1639	43.5	0.57	-0.17
68	SLU 4	6	-1	1639	43.5	0.57	-0.17
68	SLU 5	6	-1	1639	43.5	0.57	-0.17
68	SLU 6	6	-1	1639	43.5	0.57	-0.17
68	SLU 7	6	-1	1639	43.5	0.57	-0.17
68	SLU 8	6	-1	1639	43.5	0.57	-0.17
68	SLU 9	6	-1	1639	43.5	0.57	-0.17
68	SLU 10	7	-1	1954	51.82	0.66	-0.2
68	SLU 11	7	-1	1954	51.82	0.66	-0.2
68	SLU 12	7	-1	1954	51.82	0.66	-0.2
68	SLU 13	7	-1	1954	51.82	0.66	-0.2
68	SLU 14	7	-1	1954	51.82	0.66	-0.2
68	SLU 15	7	-1	1954	51.82	0.66	-0.2
68	SLU 16	7	-1	1954	51.82	0.66	-0.2
68	SLU 17	7	-1	1954	51.82	0.66	-0.2
68	SLU 18	8	-1	2089	55.39	0.69	-0.21
68	SLU 19	8	-1	2089	55.39	0.69	-0.21
68	SLU 20	8	-1	2089	55.39	0.69	-0.21
68	SLU 21	8	-1	2089	55.39	0.69	-0.21
68	SLU 22	7	-1	1872	49.66	0.64	-0.19
68	SLU 23	7	-1	1872	49.66	0.64	-0.19
68	SLU 24	7	-1	1872	49.66	0.64	-0.19
68	SLU 25	7	-1	1872	49.66	0.64	-0.19
68	SLU 26	7	-1	1872	49.66	0.64	-0.19
68	SLU 27	7	-1	1872	49.66	0.64	-0.19
68	SLU 28	7	-1	1872	49.66	0.64	-0.19
68	SLU 29	7	-1	1872	49.66	0.64	-0.19
68	SLU 30	7	-1	1872	49.66	0.64	-0.19
68	SLU 31	8	-1	2187	57.98	0.73	-0.22
68	SLU 32	8	-1	2187	57.98	0.73	-0.22
68	SLU 33	8	-1	2187	57.98	0.73	-0.22
68	SLU 34	8	-1	2187	57.98	0.73	-0.22
68	SLU 35	8	-1	2187	57.98	0.73	-0.22
68	SLU 36	8	-1	2187	57.98	0.73	-0.22
68	SLU 37	8	-1	2187	57.98	0.73	-0.22
68	SLU 38	8	-1	2187	57.98	0.73	-0.22
68	SLU 39	8	-1	2321	61.55	0.76	-0.23
68	SLU 40	8	-1	2321	61.55	0.76	-0.23
68	SLU 41	8	-1	2321	61.55	0.76	-0.23
68	SLU 42	8	-1	2321	61.55	0.76	-0.23
68	SLU 43	8	-2	2051	54.44	0.72	-0.22
68	SLU 44	8	-2	2051	54.44	0.72	-0.22
68	SLU 45	8	-2	2051	54.44	0.72	-0.22
68	SLU 46	8	-2	2051	54.44	0.72	-0.22
68	SLU 47	8	-2	2051	54.44	0.72	-0.22
68	SLU 48	8	-2	2051	54.44	0.72	-0.22
68	SLU 49	8	-2	2051	54.44	0.72	-0.22
68	SLU 50	8	-2	2051	54.44	0.72	-0.22
68	SLU 51	8	-2	2051	54.44	0.72	-0.22
68	SLU 52	9	-2	2365	62.76	0.8	-0.25
68	SLU 53	9	-2	2365	62.76	0.8	-0.25
68	SLU 54	9	-2	2365	62.76	0.8	-0.25
68	SLU 55	9	-2	2365	62.76	0.8	-0.25
68	SLU 56	9	-2	2365	62.76	0.8	-0.25
68	SLU 57	9	-2	2365	62.76	0.8	-0.25
68	SLU 58	9	-2	2365	62.76	0.8	-0.25
68	SLU 59	9	-2	2365	62.76	0.8	-0.25
68	SLU 60	9	-1	2500	66.32	0.84	-0.26
68	SLU 61	9	-1	2500	66.32	0.84	-0.26
68	SLU 62	9	-1	2500	66.32	0.84	-0.26
68	SLU 63	9	-1	2500	66.32	0.84	-0.26
68	SLU 64	9	-2	2284	60.6	0.79	-0.24
68	SLU 65	9	-2	2284	60.6	0.79	-0.24
68	SLU 66	9	-2	2284	60.6	0.79	-0.24
68	SLU 67	9	-2	2284	60.6	0.79	-0.24
68	SLU 68	9	-2	2284	60.6	0.79	-0.24
68	SLU 69	9	-2	2284	60.6	0.79	-0.24
68	SLU 70	9	-2	2284	60.6	0.79	-0.24



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
68	SLU 71	9	-2	2284	60.6	0.79	-0.24
68	SLU 72	9	-2	2284	60.6	0.79	-0.24
68	SLU 73	10	-1	2598	68.92	0.87	-0.26
68	SLU 74	10	-1	2598	68.92	0.87	-0.26
68	SLU 75	10	-1	2598	68.92	0.87	-0.26
68	SLU 76	10	-1	2598	68.92	0.87	-0.26
68	SLU 77	10	-1	2598	68.92	0.87	-0.26
68	SLU 78	10	-1	2598	68.92	0.87	-0.26
68	SLU 79	10	-1	2598	68.92	0.87	-0.26
68	SLU 80	10	-1	2598	68.92	0.87	-0.26
68	SLU 81	10	-1	2733	72.49	0.91	-0.28
68	SLU 82	10	-1	2733	72.49	0.91	-0.28
68	SLU 83	10	-1	2733	72.49	0.91	-0.28
68	SLU 84	10	-1	2733	72.49	0.91	-0.28
68	SLE RA 1	7	-1	1705	45.26	0.59	-0.18
68	SLE RA 2	7	-1	1705	45.26	0.59	-0.18
68	SLE RA 3	7	-1	1705	45.26	0.59	-0.18
68	SLE RA 4	7	-1	1705	45.26	0.59	-0.18
68	SLE RA 5	7	-1	1705	45.26	0.59	-0.18
68	SLE RA 6	7	-1	1705	45.26	0.59	-0.18
68	SLE RA 7	7	-1	1705	45.26	0.59	-0.18
68	SLE RA 8	7	-1	1705	45.26	0.59	-0.18
68	SLE RA 9	7	-1	1705	45.26	0.59	-0.18
68	SLE RA 10	7	-1	1915	50.81	0.65	-0.2
68	SLE RA 11	7	-1	1915	50.81	0.65	-0.2
68	SLE RA 12	7	-1	1915	50.81	0.65	-0.2
68	SLE RA 13	7	-1	1915	50.81	0.65	-0.2
68	SLE RA 14	7	-1	1915	50.81	0.65	-0.2
68	SLE RA 15	7	-1	1915	50.81	0.65	-0.2
68	SLE RA 16	7	-1	1915	50.81	0.65	-0.2
68	SLE RA 17	7	-1	1915	50.81	0.65	-0.2
68	SLE RA 18	7	-1	2005	53.19	0.67	-0.2
68	SLE RA 19	7	-1	2005	53.19	0.67	-0.2
68	SLE RA 20	7	-1	2005	53.19	0.67	-0.2
68	SLE RA 21	7	-1	2005	53.19	0.67	-0.2
68	SLE FR 1	7	-1	1705	45.26	0.59	-0.18
68	SLE FR 2	7	-1	1705	45.26	0.59	-0.18
68	SLE FR 3	7	-1	1705	45.26	0.59	-0.18
68	SLE FR 4	7	-1	1795	47.64	0.61	-0.19
68	SLE FR 5	7	-1	1795	47.64	0.61	-0.19
68	SLE FR 6	7	-1	1855	49.22	0.63	-0.19
68	SLE QP 1	7	-1	1705	45.26	0.59	-0.18
68	SLE QP 2	7	-1	1795	47.64	0.61	-0.19
68	SLD 1	133	4	1886	49.84	2.3	-3.66
68	SLD 2	161	4	1886	49.84	2.27	-4.41
68	SLD 3	138	-8	1717	45.75	2.39	-3.81
68	SLD 4	167	-7	1717	45.75	2.36	-4.56
68	SLD 5	26	18	2078	54.51	1	-0.73
68	SLD 6	55	19	2078	54.51	0.97	-1.49
68	SLD 7	44	-21	1517	40.86	1.29	-1.23
68	SLD 8	73	-21	1517	40.86	1.26	-1.99
68	SLD 9	-60	19	2074	54.42	-0.03	1.62
68	SLD 10	-31	19	2074	54.42	-0.06	0.86
68	SLD 11	-41	-21	1513	40.76	0.26	1.12
68	SLD 12	-12	-21	1513	40.76	0.23	0.36
68	SLD 13	-153	5	1873	49.53	-1.13	4.18
68	SLD 14	-125	5	1873	49.53	-1.16	3.44
68	SLD 15	-147	-7	1705	45.43	-1.04	4.03
68	SLD 16	-119	-7	1705	45.43	-1.08	3.29
68	SLV 1	292	12	2007	52.8	4.48	-8.06
68	SLV 2	357	12	2007	52.8	4.4	-9.77
68	SLV 3	305	-16	1612	43.19	4.69	-8.41
68	SLV 4	370	-16	1612	43.19	4.61	-10.12
68	SLV 5	49	45	2458	63.77	1.49	-1.39
68	SLV 6	116	45	2458	63.77	1.41	-3.16
68	SLV 7	92	-48	1141	31.72	2.18	-2.55
68	SLV 8	159	-48	1141	31.72	2.09	-4.33
68	SLV 9	-145	45	2450	63.56	-0.87	3.95
68	SLV 10	-78	46	2450	63.55	-0.95	2.18
68	SLV 11	-103	-48	1133	31.51	-0.18	2.79
68	SLV 12	-35	-47	1133	31.51	-0.27	1.01
68	SLV 13	-356	13	1979	52.09	-3.38	9.75
68	SLV 14	-291	14	1979	52.09	-3.46	8.04
68	SLV 15	-343	-15	1584	42.47	-3.18	9.4
68	SLV 16	-278	-14	1584	42.47	-3.26	7.69
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	6	-5	1846	47.61	343.55	1.2
70	SLU 2	6	-5	1846	47.61	343.55	1.2
70	SLU 3	6	-5	1846	47.61	343.55	1.2
70	SLU 4	6	-5	1846	47.61	343.55	1.2
70	SLU 5	6	-5	1846	47.61	343.55	1.2
70	SLU 6	6	-5	1846	47.61	343.55	1.2
70	SLU 7	6	-5	1846	47.61	343.55	1.2
70	SLU 8	6	-5	1846	47.61	343.55	1.2
70	SLU 9	6	-5	1846	47.61	343.55	1.2
70	SLU 10	5	-7	2181	56.11	403.44	1.63
70	SLU 11	5	-7	2181	56.11	403.44	1.63



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
Ind.	N.br.	x	y	z		x	y	z	
70	SLU 12	5	-7	2181		56.11	403.44	1.63	
70	SLU 13	5	-7	2181		56.11	403.44	1.63	
70	SLU 14	5	-7	2181		56.11	403.44	1.63	
70	SLU 15	5	-7	2181		56.11	403.44	1.63	
70	SLU 16	5	-7	2181		56.11	403.44	1.63	
70	SLU 17	5	-7	2181		56.11	403.44	1.63	
70	SLU 18	5	-8	2324		59.75	429.1	1.81	
70	SLU 19	5	-8	2324		59.75	429.1	1.81	
70	SLU 20	5	-8	2324		59.75	429.1	1.81	
70	SLU 21	5	-8	2324		59.75	429.1	1.81	
70	SLU 22	6	-7	2095		53.95	388.11	1.49	
70	SLU 23	6	-7	2095		53.95	388.11	1.49	
70	SLU 24	6	-7	2095		53.95	388.11	1.49	
70	SLU 25	6	-7	2095		53.95	388.11	1.49	
70	SLU 26	6	-7	2095		53.95	388.11	1.49	
70	SLU 27	6	-7	2095		53.95	388.11	1.49	
70	SLU 28	6	-7	2095		53.95	388.11	1.49	
70	SLU 29	6	-7	2095		53.95	388.11	1.49	
70	SLU 30	6	-7	2095		53.95	388.11	1.49	
70	SLU 31	5	-8	2430		62.45	448	1.91	
70	SLU 32	5	-8	2430		62.45	448	1.91	
70	SLU 33	5	-8	2430		62.45	448	1.91	
70	SLU 34	5	-8	2430		62.45	448	1.91	
70	SLU 35	5	-8	2430		62.45	448	1.91	
70	SLU 36	5	-8	2430		62.45	448	1.91	
70	SLU 37	5	-8	2430		62.45	448	1.91	
70	SLU 38	5	-8	2430		62.45	448	1.91	
70	SLU 39	4	-9	2573		66.1	473.67	2.1	
70	SLU 40	4	-9	2573		66.1	473.67	2.1	
70	SLU 41	4	-9	2573		66.1	473.67	2.1	
70	SLU 42	4	-9	2573		66.1	473.67	2.1	
70	SLU 43	8	-7	2315		59.71	431.34	1.46	
70	SLU 44	8	-7	2315		59.71	431.34	1.46	
70	SLU 45	8	-7	2315		59.71	431.34	1.46	
70	SLU 46	8	-7	2315		59.71	431.34	1.46	
70	SLU 47	8	-7	2315		59.71	431.34	1.46	
70	SLU 48	8	-7	2315		59.71	431.34	1.46	
70	SLU 49	8	-7	2315		59.71	431.34	1.46	
70	SLU 50	8	-7	2315		59.71	431.34	1.46	
70	SLU 51	8	-7	2315		59.71	431.34	1.46	
70	SLU 52	7	-8	2649		68.22	491.22	1.89	
70	SLU 53	7	-8	2649		68.22	491.22	1.89	
70	SLU 54	7	-8	2649		68.22	491.22	1.89	
70	SLU 55	7	-8	2649		68.22	491.22	1.89	
70	SLU 56	7	-8	2649		68.22	491.22	1.89	
70	SLU 57	7	-8	2649		68.22	491.22	1.89	
70	SLU 58	7	-8	2649		68.22	491.22	1.89	
70	SLU 59	7	-8	2649		68.22	491.22	1.89	
70	SLU 60	7	-9	2792		71.86	516.89	2.07	
70	SLU 61	7	-9	2792		71.86	516.89	2.07	
70	SLU 62	7	-9	2792		71.86	516.89	2.07	
70	SLU 63	7	-9	2792		71.86	516.89	2.07	
70	SLU 64	8	-8	2564		66.06	475.9	1.75	
70	SLU 65	8	-8	2564		66.06	475.9	1.75	
70	SLU 66	8	-8	2564		66.06	475.9	1.75	
70	SLU 67	8	-8	2564		66.06	475.9	1.75	
70	SLU 68	8	-8	2564		66.06	475.9	1.75	
70	SLU 69	8	-8	2564		66.06	475.9	1.75	
70	SLU 70	8	-8	2564		66.06	475.9	1.75	
70	SLU 71	8	-8	2564		66.06	475.9	1.75	
70	SLU 72	8	-8	2564		66.06	475.9	1.75	
70	SLU 73	7	-9	2898		74.56	535.79	2.18	
70	SLU 74	7	-9	2898		74.56	535.79	2.18	
70	SLU 75	7	-9	2898		74.56	535.79	2.18	
70	SLU 76	7	-9	2898		74.56	535.79	2.18	
70	SLU 77	7	-9	2898		74.56	535.79	2.18	
70	SLU 78	7	-9	2898		74.56	535.79	2.18	
70	SLU 79	7	-9	2898		74.56	535.79	2.18	
70	SLU 80	7	-9	2898		74.56	535.79	2.18	
70	SLU 81	6	-10	3042		78.2	561.45	2.36	
70	SLU 82	6	-10	3042		78.2	561.45	2.36	
70	SLU 83	6	-10	3042		78.2	561.45	2.36	
70	SLU 84	6	-10	3042		78.2	561.45	2.36	
70	SLE RA 1	6	-6	1918		49.42	356.28	1.28	
70	SLE RA 2	6	-6	1918		49.42	356.28	1.28	
70	SLE RA 3	6	-6	1918		49.42	356.28	1.28	
70	SLE RA 4	6	-6	1918		49.42	356.28	1.28	
70	SLE RA 5	6	-6	1918		49.42	356.28	1.28	
70	SLE RA 6	6	-6	1918		49.42	356.28	1.28	
70	SLE RA 7	6	-6	1918		49.42	356.28	1.28	
70	SLE RA 8	6	-6	1918		49.42	356.28	1.28	
70	SLE RA 9	6	-6	1918		49.42	356.28	1.28	
70	SLE RA 10	5	-7	2140		55.09	396.21	1.57	
70	SLE RA 11	5	-7	2140		55.09	396.21	1.57	
70	SLE RA 12	5	-7	2140		55.09	396.21	1.57	
70	SLE RA 13	5	-7	2140		55.09	396.21	1.57	
70	SLE RA 14	5	-7	2140		55.09	396.21	1.57	
70	SLE RA 15	5	-7	2140		55.09	396.21	1.57	
70	SLE RA 16	5	-7	2140		55.09	396.21	1.57	
70	SLE RA 17	5	-7	2140		55.09	396.21	1.57	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
70	SLE RA 18	5	-7	2236	57.52	413.32	1.69
70	SLE RA 19	5	-7	2236	57.52	413.32	1.69
70	SLE RA 20	5	-7	2236	57.52	413.32	1.69
70	SLE RA 21	5	-7	2236	57.52	413.32	1.69
70	SLE FR 1	6	-6	1918	49.42	356.28	1.28
70	SLE FR 2	6	-6	1918	49.42	356.28	1.28
70	SLE FR 3	6	-6	1918	49.42	356.28	1.28
70	SLE FR 4	6	-6	2013	51.85	373.39	1.4
70	SLE FR 5	6	-6	2013	51.85	373.39	1.4
70	SLE FR 6	5	-7	2077	53.47	384.8	1.48
70	SLE QP 1	6	-6	1918	49.42	356.28	1.28
70	SLE QP 2	6	-6	2013	51.85	373.39	1.4
70	SLD 1	159	64	1877	48.05	353.88	-21.26
70	SLD 2	191	97	1891	48.35	356.28	-30.28
70	SLD 3	155	-124	1598	41.67	302.55	25.41
70	SLD 4	188	-91	1611	41.96	304.96	16.4
70	SLD 5	46	288	2391	60.29	444.51	-72.94
70	SLD 6	79	322	2405	60.59	446.97	-82.15
70	SLD 7	33	-339	1460	39	273.43	82.65
70	SLD 8	66	-305	1473	39.3	275.89	73.44
70	SLD 9	-55	293	2553	64.39	470.9	-70.63
70	SLD 10	-21	326	2566	64.69	473.36	-79.85
70	SLD 11	-68	-334	1621	43.1	299.81	84.95
70	SLD 12	-34	-300	1635	43.41	302.27	75.74
70	SLD 13	-176	79	2415	61.73	441.83	-13.59
70	SLD 14	-143	112	2428	62.03	444.24	-22.61
70	SLD 15	-180	-109	2135	55.34	390.5	33.08
70	SLD 16	-147	-76	2149	55.64	392.91	24.07
70	SLV 1	353	159	1716	43.47	330.99	-51.78
70	SLV 2	428	235	1746	44.15	336.49	-72.4
70	SLV 3	344	-282	1060	28.49	210.53	57.74
70	SLV 4	419	-206	1090	29.16	216.03	37.13
70	SLV 5	96	685	2907	71.81	541.34	-173.06
70	SLV 6	174	763	2939	72.52	547.05	-194.47
70	SLV 7	66	-785	721	21.86	139.8	192.03
70	SLV 8	144	-707	753	22.56	145.51	170.63
70	SLV 9	-132	695	3273	81.13	601.27	-167.82
70	SLV 10	-54	773	3305	81.83	606.98	-189.23
70	SLV 11	-162	-775	1087	31.18	199.73	197.27
70	SLV 12	-84	-697	1119	31.88	205.44	175.87
70	SLV 13	-408	194	2936	74.53	530.76	-34.32
70	SLV 14	-332	269	2966	75.21	536.26	-54.94
70	SLV 15	-417	-247	2280	59.54	410.3	75.21
70	SLV 16	-341	-172	2310	60.22	415.8	54.59
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
72	SLU 1	7	-1	1843	-2.13	0.37	0.01
72	SLU 2	7	-1	1843	-2.13	0.37	0.01
72	SLU 3	7	-1	1843	-2.13	0.37	0.01
72	SLU 4	7	-1	1843	-2.13	0.37	0.01
72	SLU 5	7	-1	1843	-2.13	0.37	0.01
72	SLU 6	7	-1	1843	-2.13	0.37	0.01
72	SLU 7	7	-1	1843	-2.13	0.37	0.01
72	SLU 8	7	-1	1843	-2.13	0.37	0.01
72	SLU 9	7	-1	1843	-2.13	0.37	0.01
72	SLU 10	8	-1	2196	-2.55	0.42	0.02
72	SLU 11	8	-1	2196	-2.55	0.42	0.02
72	SLU 12	8	-1	2196	-2.55	0.42	0.02
72	SLU 13	8	-1	2196	-2.55	0.42	0.02
72	SLU 14	8	-1	2196	-2.55	0.42	0.02
72	SLU 15	8	-1	2196	-2.55	0.42	0.02
72	SLU 16	8	-1	2196	-2.55	0.42	0.02
72	SLU 17	8	-1	2196	-2.55	0.42	0.02
72	SLU 18	9	-1	2347	-2.72	0.45	0.02
72	SLU 19	9	-1	2347	-2.72	0.45	0.02
72	SLU 20	9	-1	2347	-2.72	0.45	0.02
72	SLU 21	9	-1	2347	-2.72	0.45	0.02
72	SLU 22	8	-1	2105	-2.43	0.41	0.02
72	SLU 23	8	-1	2105	-2.43	0.41	0.02
72	SLU 24	8	-1	2105	-2.43	0.41	0.02
72	SLU 25	8	-1	2105	-2.43	0.41	0.02
72	SLU 26	8	-1	2105	-2.43	0.41	0.02
72	SLU 27	8	-1	2105	-2.43	0.41	0.02
72	SLU 28	8	-1	2105	-2.43	0.41	0.02
72	SLU 29	8	-1	2105	-2.43	0.41	0.02
72	SLU 30	8	-1	2105	-2.43	0.41	0.02
72	SLU 31	9	-1	2458	-2.85	0.47	0.02
72	SLU 32	9	-1	2458	-2.85	0.47	0.02
72	SLU 33	9	-1	2458	-2.85	0.47	0.02
72	SLU 34	9	-1	2458	-2.85	0.47	0.02
72	SLU 35	9	-1	2458	-2.85	0.47	0.02
72	SLU 36	9	-1	2458	-2.85	0.47	0.02
72	SLU 37	9	-1	2458	-2.85	0.47	0.02
72	SLU 38	9	-1	2458	-2.85	0.47	0.02
72	SLU 39	10	-1	2609	-3.03	0.49	0.02
72	SLU 40	10	-1	2609	-3.03	0.49	0.02
72	SLU 41	10	-1	2609	-3.03	0.49	0.02
72	SLU 42	10	-1	2609	-3.03	0.49	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
72	SLU 43	9	-2	2306	-2.67	0.46	0.02
72	SLU 44	9	-2	2306	-2.67	0.46	0.02
72	SLU 45	9	-2	2306	-2.67	0.46	0.02
72	SLU 46	9	-2	2306	-2.67	0.46	0.02
72	SLU 47	9	-2	2306	-2.67	0.46	0.02
72	SLU 48	9	-2	2306	-2.67	0.46	0.02
72	SLU 49	9	-2	2306	-2.67	0.46	0.02
72	SLU 50	9	-2	2306	-2.67	0.46	0.02
72	SLU 51	9	-2	2306	-2.67	0.46	0.02
72	SLU 52	10	-2	2659	-3.08	0.52	0.02
72	SLU 53	10	-2	2659	-3.08	0.52	0.02
72	SLU 54	10	-2	2659	-3.08	0.52	0.02
72	SLU 55	10	-2	2659	-3.08	0.52	0.02
72	SLU 56	10	-2	2659	-3.08	0.52	0.02
72	SLU 57	10	-2	2659	-3.08	0.52	0.02
72	SLU 58	10	-2	2659	-3.08	0.52	0.02
72	SLU 59	10	-2	2659	-3.08	0.52	0.02
72	SLU 60	11	-1	2811	-3.26	0.54	0.02
72	SLU 61	11	-1	2811	-3.26	0.54	0.02
72	SLU 62	11	-1	2811	-3.26	0.54	0.02
72	SLU 63	11	-1	2811	-3.26	0.54	0.02
72	SLU 64	10	-2	2568	-2.97	0.51	0.02
72	SLU 65	10	-2	2568	-2.97	0.51	0.02
72	SLU 66	10	-2	2568	-2.97	0.51	0.02
72	SLU 67	10	-2	2568	-2.97	0.51	0.02
72	SLU 68	10	-2	2568	-2.97	0.51	0.02
72	SLU 69	10	-2	2568	-2.97	0.51	0.02
72	SLU 70	10	-2	2568	-2.97	0.51	0.02
72	SLU 71	10	-2	2568	-2.97	0.51	0.02
72	SLU 72	10	-2	2568	-2.97	0.51	0.02
72	SLU 73	11	-1	2921	-3.38	0.56	0.02
72	SLU 74	11	-1	2921	-3.38	0.56	0.02
72	SLU 75	11	-1	2921	-3.38	0.56	0.02
72	SLU 76	11	-1	2921	-3.38	0.56	0.02
72	SLU 77	11	-1	2921	-3.38	0.56	0.02
72	SLU 78	11	-1	2921	-3.38	0.56	0.02
72	SLU 79	11	-1	2921	-3.38	0.56	0.02
72	SLU 80	11	-1	2921	-3.38	0.56	0.02
72	SLU 81	11	-1	3072	-3.56	0.59	0.02
72	SLU 82	11	-1	3072	-3.56	0.59	0.02
72	SLU 83	11	-1	3072	-3.56	0.59	0.02
72	SLU 84	11	-1	3072	-3.56	0.59	0.02
72	SLE RA 1	7	-1	1918	-2.22	0.38	0.02
72	SLE RA 2	7	-1	1918	-2.22	0.38	0.02
72	SLE RA 3	7	-1	1918	-2.22	0.38	0.02
72	SLE RA 4	7	-1	1918	-2.22	0.38	0.02
72	SLE RA 5	7	-1	1918	-2.22	0.38	0.02
72	SLE RA 6	7	-1	1918	-2.22	0.38	0.02
72	SLE RA 7	7	-1	1918	-2.22	0.38	0.02
72	SLE RA 8	7	-1	1918	-2.22	0.38	0.02
72	SLE RA 9	7	-1	1918	-2.22	0.38	0.02
72	SLE RA 10	8	-1	2153	-2.49	0.42	0.02
72	SLE RA 11	8	-1	2153	-2.49	0.42	0.02
72	SLE RA 12	8	-1	2153	-2.49	0.42	0.02
72	SLE RA 13	8	-1	2153	-2.49	0.42	0.02
72	SLE RA 14	8	-1	2153	-2.49	0.42	0.02
72	SLE RA 15	8	-1	2153	-2.49	0.42	0.02
72	SLE RA 16	8	-1	2153	-2.49	0.42	0.02
72	SLE RA 17	8	-1	2153	-2.49	0.42	0.02
72	SLE RA 18	8	-1	2254	-2.61	0.43	0.02
72	SLE RA 19	8	-1	2254	-2.61	0.43	0.02
72	SLE RA 20	8	-1	2254	-2.61	0.43	0.02
72	SLE RA 21	8	-1	2254	-2.61	0.43	0.02
72	SLE FR 1	7	-1	1918	-2.22	0.38	0.02
72	SLE FR 2	7	-1	1918	-2.22	0.38	0.02
72	SLE FR 3	7	-1	1918	-2.22	0.38	0.02
72	SLE FR 4	8	-1	2019	-2.34	0.4	0.02
72	SLE FR 5	8	-1	2019	-2.34	0.4	0.02
72	SLE FR 6	8	-1	2086	-2.42	0.41	0.02
72	SLE QP 1	7	-1	1918	-2.22	0.38	0.02
72	SLE QP 2	8	-1	2019	-2.34	0.4	0.02
72	SLD 1	153	5	2111	-2.75	2.42	0.13
72	SLD 2	184	5	2111	-2.76	2.39	0.22
72	SLD 3	159	-9	1940	-1.96	2.62	0.14
72	SLD 4	190	-9	1940	-1.96	2.6	0.23
72	SLD 5	31	22	2306	-3.67	0.69	-0.01
72	SLD 6	62	22	2306	-3.67	0.67	0.09
72	SLD 7	51	-25	1735	-1.02	1.39	0.04
72	SLD 8	83	-25	1735	-1.02	1.37	0.14
72	SLD 9	-68	22	2302	-3.65	-0.57	-0.1
72	SLD 10	-36	22	2302	-3.66	-0.6	-0.01
72	SLD 11	-47	-25	1731	-1.01	0.12	-0.06
72	SLD 12	-15	-24	1731	-1.01	0.1	0.04
72	SLD 13	-175	6	2098	-2.71	-1.81	-0.2
72	SLD 14	-144	6	2098	-2.71	-1.83	-0.11
72	SLD 15	-169	-8	1926	-1.92	-1.6	-0.19
72	SLD 16	-138	-8	1926	-1.92	-1.62	-0.09
72	SLV 1	337	14	2235	-3.31	5.21	0.27
72	SLV 2	408	14	2235	-3.32	5.16	0.48
72	SLV 3	352	-19	1833	-1.45	5.7	0.3



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
72	SLV 4	422	-18	1833	-1.45	5.65	0.51
72	SLV 5	59	53	2693	-5.45	1.12	-0.04
72	SLV 6	132	54	2693	-5.46	1.07	0.19
72	SLV 7	107	-57	1353	0.76	2.75	0.07
72	SLV 8	180	-56	1353	0.75	2.69	0.29
72	SLV 9	-165	54	2684	-5.43	-1.9	-0.26
72	SLV 10	-91	54	2684	-5.43	-1.95	-0.04
72	SLV 11	-116	-56	1344	0.78	-0.28	-0.15
72	SLV 12	-43	-56	1344	0.78	-0.33	0.07
72	SLV 13	-407	16	2205	-3.22	-4.86	-0.48
72	SLV 14	-336	16	2205	-3.22	-4.91	-0.27
72	SLV 15	-392	-17	1802	-1.36	-4.37	-0.45
72	SLV 16	-322	-17	1802	-1.36	-4.42	-0.23
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
74	SLU 1	6	-7	1984	-4.41	303.19	1.72
74	SLU 2	6	-7	1984	-4.41	303.19	1.72
74	SLU 3	6	-7	1984	-4.41	303.19	1.72
74	SLU 4	6	-7	1984	-4.41	303.19	1.72
74	SLU 5	6	-7	1984	-4.41	303.19	1.72
74	SLU 6	6	-7	1984	-4.41	303.19	1.72
74	SLU 7	6	-7	1984	-4.41	303.19	1.72
74	SLU 8	6	-7	1984	-4.41	303.19	1.72
74	SLU 9	6	-7	1984	-4.41	303.19	1.72
74	SLU 10	5	-9	2339	-5.34	353.47	2.19
74	SLU 11	5	-9	2339	-5.34	353.47	2.19
74	SLU 12	5	-9	2339	-5.34	353.47	2.19
74	SLU 13	5	-9	2339	-5.34	353.47	2.19
74	SLU 14	5	-9	2339	-5.34	353.47	2.19
74	SLU 15	5	-9	2339	-5.34	353.47	2.19
74	SLU 16	5	-9	2339	-5.34	353.47	2.19
74	SLU 17	5	-9	2339	-5.34	353.47	2.19
74	SLU 18	5	-9	2491	-5.74	375.02	2.4
74	SLU 19	5	-9	2491	-5.74	375.02	2.4
74	SLU 20	5	-9	2491	-5.74	375.02	2.4
74	SLU 21	5	-9	2491	-5.74	375.02	2.4
74	SLU 22	5	-8	2249	-5.1	340.6	2.04
74	SLU 23	5	-8	2249	-5.1	340.6	2.04
74	SLU 24	5	-8	2249	-5.1	340.6	2.04
74	SLU 25	5	-8	2249	-5.1	340.6	2.04
74	SLU 26	5	-8	2249	-5.1	340.6	2.04
74	SLU 27	5	-8	2249	-5.1	340.6	2.04
74	SLU 28	5	-8	2249	-5.1	340.6	2.04
74	SLU 29	5	-8	2249	-5.1	340.6	2.04
74	SLU 30	5	-8	2249	-5.1	340.6	2.04
74	SLU 31	5	-10	2604	-6.03	390.88	2.52
74	SLU 32	5	-10	2604	-6.03	390.88	2.52
74	SLU 33	5	-10	2604	-6.03	390.88	2.52
74	SLU 34	5	-10	2604	-6.03	390.88	2.52
74	SLU 35	5	-10	2604	-6.03	390.88	2.52
74	SLU 36	5	-10	2604	-6.03	390.88	2.52
74	SLU 37	5	-10	2604	-6.03	390.88	2.52
74	SLU 38	5	-10	2604	-6.03	390.88	2.52
74	SLU 39	4	-11	2756	-6.42	412.44	2.72
74	SLU 40	4	-11	2756	-6.42	412.44	2.72
74	SLU 41	4	-11	2756	-6.42	412.44	2.72
74	SLU 42	4	-11	2756	-6.42	412.44	2.72
74	SLU 43	8	-8	2488	-5.5	381.32	2.12
74	SLU 44	8	-8	2488	-5.5	381.32	2.12
74	SLU 45	8	-8	2488	-5.5	381.32	2.12
74	SLU 46	8	-8	2488	-5.5	381.32	2.12
74	SLU 47	8	-8	2488	-5.5	381.32	2.12
74	SLU 48	8	-8	2488	-5.5	381.32	2.12
74	SLU 49	8	-8	2488	-5.5	381.32	2.12
74	SLU 50	8	-8	2488	-5.5	381.32	2.12
74	SLU 51	8	-8	2488	-5.5	381.32	2.12
74	SLU 52	7	-10	2843	-6.43	431.6	2.6
74	SLU 53	7	-10	2843	-6.43	431.6	2.6
74	SLU 54	7	-10	2843	-6.43	431.6	2.6
74	SLU 55	7	-10	2843	-6.43	431.6	2.6
74	SLU 56	7	-10	2843	-6.43	431.6	2.6
74	SLU 57	7	-10	2843	-6.43	431.6	2.6
74	SLU 58	7	-10	2843	-6.43	431.6	2.6
74	SLU 59	7	-10	2843	-6.43	431.6	2.6
74	SLU 60	7	-11	2996	-6.83	453.15	2.8
74	SLU 61	7	-11	2996	-6.83	453.15	2.8
74	SLU 62	7	-11	2996	-6.83	453.15	2.8
74	SLU 63	7	-11	2996	-6.83	453.15	2.8
74	SLU 64	7	-9	2753	-6.19	418.73	2.44
74	SLU 65	7	-9	2753	-6.19	418.73	2.44
74	SLU 66	7	-9	2753	-6.19	418.73	2.44
74	SLU 67	7	-9	2753	-6.19	418.73	2.44
74	SLU 68	7	-9	2753	-6.19	418.73	2.44
74	SLU 69	7	-9	2753	-6.19	418.73	2.44
74	SLU 70	7	-9	2753	-6.19	418.73	2.44
74	SLU 71	7	-9	2753	-6.19	418.73	2.44
74	SLU 72	7	-9	2753	-6.19	418.73	2.44
74	SLU 73	7	-11	3108	-7.12	469.01	2.92



Nodo	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
74	SLU 74	7	-11	3108	-7.12	469.01	2.92
74	SLU 75	7	-11	3108	-7.12	469.01	2.92
74	SLU 76	7	-11	3108	-7.12	469.01	2.92
74	SLU 77	7	-11	3108	-7.12	469.01	2.92
74	SLU 78	7	-11	3108	-7.12	469.01	2.92
74	SLU 79	7	-11	3108	-7.12	469.01	2.92
74	SLU 80	7	-11	3108	-7.12	469.01	2.92
74	SLU 81	6	-12	3261	-7.51	490.56	3.13
74	SLU 82	6	-12	3261	-7.51	490.56	3.13
74	SLU 83	6	-12	3261	-7.51	490.56	3.13
74	SLU 84	6	-12	3261	-7.51	490.56	3.13
74	SLE RA 1	6	-7	2060	-4.61	313.88	1.81
74	SLE RA 2	6	-7	2060	-4.61	313.88	1.81
74	SLE RA 3	6	-7	2060	-4.61	313.88	1.81
74	SLE RA 4	6	-7	2060	-4.61	313.88	1.81
74	SLE RA 5	6	-7	2060	-4.61	313.88	1.81
74	SLE RA 6	6	-7	2060	-4.61	313.88	1.81
74	SLE RA 7	6	-7	2060	-4.61	313.88	1.81
74	SLE RA 8	6	-7	2060	-4.61	313.88	1.81
74	SLE RA 9	6	-7	2060	-4.61	313.88	1.81
74	SLE RA 10	5	-8	2296	-5.23	347.4	2.13
74	SLE RA 11	5	-8	2296	-5.23	347.4	2.13
74	SLE RA 12	5	-8	2296	-5.23	347.4	2.13
74	SLE RA 13	5	-8	2296	-5.23	347.4	2.13
74	SLE RA 14	5	-8	2296	-5.23	347.4	2.13
74	SLE RA 15	5	-8	2296	-5.23	347.4	2.13
74	SLE RA 16	5	-8	2296	-5.23	347.4	2.13
74	SLE RA 17	5	-8	2296	-5.23	347.4	2.13
74	SLE RA 18	5	-9	2398	-5.49	361.77	2.26
74	SLE RA 19	5	-9	2398	-5.49	361.77	2.26
74	SLE RA 20	5	-9	2398	-5.49	361.77	2.26
74	SLE RA 21	5	-9	2398	-5.49	361.77	2.26
74	SLE FR 1	6	-7	2060	-4.61	313.88	1.81
74	SLE FR 2	6	-7	2060	-4.61	313.88	1.81
74	SLE FR 3	6	-7	2060	-4.61	313.88	1.81
74	SLE FR 4	6	-8	2161	-4.87	328.24	1.95
74	SLE FR 5	6	-8	2161	-4.87	328.24	1.95
74	SLE FR 6	5	-8	2229	-5.05	337.82	2.04
74	SLE QP 1	6	-7	2060	-4.61	313.88	1.81
74	SLE QP 2	6	-8	2161	-4.87	328.24	1.95
74	SLD 1	170	73	2003	-5.02	311.55	-18.09
74	SLD 2	203	111	2016	-5.12	313.37	-27.36
74	SLD 3	180	-144	1736	-3.09	271.6	35.94
74	SLD 4	213	-106	1748	-3.19	273.42	26.67
74	SLD 5	28	332	2514	-7.8	383.18	-82.67
74	SLD 6	62	370	2527	-7.9	385.04	-92.15
74	SLD 7	61	-391	1624	-1.39	249.99	97.45
74	SLD 8	94	-352	1637	-1.49	251.85	87.97
74	SLD 9	-83	337	2686	-8.26	404.63	-84.08
74	SLD 10	-50	375	2698	-8.36	406.49	-93.56
74	SLD 11	-51	-385	1795	-1.85	271.45	96.04
74	SLD 12	-17	-347	1808	-1.95	273.31	86.57
74	SLD 13	-202	91	2574	-6.55	383.07	-22.78
74	SLD 14	-169	128	2586	-6.66	384.89	-32.05
74	SLD 15	-192	-126	2307	-4.63	343.11	31.25
74	SLD 16	-159	-88	2319	-4.73	344.93	21.98
74	SLV 1	378	183	1812	-5.27	291.76	-45.49
74	SLV 2	454	270	1841	-5.5	295.92	-66.69
74	SLV 3	401	-325	1186	-0.76	198	81.31
74	SLV 4	477	-239	1214	-0.99	202.16	60.11
74	SLV 5	55	789	2997	-11.75	457.96	-196.77
74	SLV 6	134	879	3026	-11.99	462.29	-218.79
74	SLV 7	131	-906	907	3.29	145.43	225.9
74	SLV 8	209	-816	937	3.05	149.75	203.88
74	SLV 9	-198	801	3386	-12.8	506.73	-199.99
74	SLV 10	-120	891	3415	-13.04	511.06	-222.01
74	SLV 11	-122	-894	1296	2.24	194.2	222.68
74	SLV 12	-44	-804	1325	2	198.52	200.66
74	SLV 13	-466	224	3108	-8.76	454.33	-56.22
74	SLV 14	-390	310	3137	-8.99	458.49	-77.42
74	SLV 15	-443	-285	2481	-4.25	360.57	70.58
74	SLV 16	-367	-198	2510	-4.48	364.73	49.38
74	CRTFP Ux+	0	0	0	0	0	0
74	CRTFP Ux-	0	0	0	0	0	0
74	CRTFP Uy+	0	0	0	0	0	0
74	CRTFP Uy-	0	0	0	0	0	0
76	SLU 1	7	-1	1793	-0.98	0.2	0.02
76	SLU 2	7	-1	1793	-0.98	0.2	0.02
76	SLU 3	7	-1	1793	-0.98	0.2	0.02
76	SLU 4	7	-1	1793	-0.98	0.2	0.02
76	SLU 5	7	-1	1793	-0.98	0.2	0.02
76	SLU 6	7	-1	1793	-0.98	0.2	0.02
76	SLU 7	7	-1	1793	-0.98	0.2	0.02
76	SLU 8	7	-1	1793	-0.98	0.2	0.02
76	SLU 9	7	-1	1793	-0.98	0.2	0.02
76	SLU 10	8	-1	2137	-1.14	0.23	0.02
76	SLU 11	8	-1	2137	-1.14	0.23	0.02
76	SLU 12	8	-1	2137	-1.14	0.23	0.02
76	SLU 13	8	-1	2137	-1.14	0.23	0.02
76	SLU 14	8	-1	2137	-1.14	0.23	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
76	SLU 15	8	-1	2137	-1.14	0.23	0.02
76	SLU 16	8	-1	2137	-1.14	0.23	0.02
76	SLU 17	8	-1	2137	-1.14	0.23	0.02
76	SLU 18	8	-1	2284	-1.2	0.24	0.02
76	SLU 19	8	-1	2284	-1.2	0.24	0.02
76	SLU 20	8	-1	2284	-1.2	0.24	0.02
76	SLU 21	8	-1	2284	-1.2	0.24	0.02
76	SLU 22	7	-1	2048	-1.09	0.22	0.02
76	SLU 23	7	-1	2048	-1.09	0.22	0.02
76	SLU 24	7	-1	2048	-1.09	0.22	0.02
76	SLU 25	7	-1	2048	-1.09	0.22	0.02
76	SLU 26	7	-1	2048	-1.09	0.22	0.02
76	SLU 27	7	-1	2048	-1.09	0.22	0.02
76	SLU 28	7	-1	2048	-1.09	0.22	0.02
76	SLU 29	7	-1	2048	-1.09	0.22	0.02
76	SLU 30	7	-1	2048	-1.09	0.22	0.02
76	SLU 31	8	-1	2392	-1.25	0.25	0.03
76	SLU 32	8	-1	2392	-1.25	0.25	0.03
76	SLU 33	8	-1	2392	-1.25	0.25	0.03
76	SLU 34	8	-1	2392	-1.25	0.25	0.03
76	SLU 35	8	-1	2392	-1.25	0.25	0.03
76	SLU 36	8	-1	2392	-1.25	0.25	0.03
76	SLU 37	8	-1	2392	-1.25	0.25	0.03
76	SLU 38	8	-1	2392	-1.25	0.25	0.03
76	SLU 39	9	-1	2539	-1.31	0.26	0.03
76	SLU 40	9	-1	2539	-1.31	0.26	0.03
76	SLU 41	9	-1	2539	-1.31	0.26	0.03
76	SLU 42	9	-1	2539	-1.31	0.26	0.03
76	SLU 43	8	-2	2243	-1.24	0.25	0.03
76	SLU 44	8	-2	2243	-1.24	0.25	0.03
76	SLU 45	8	-2	2243	-1.24	0.25	0.03
76	SLU 46	8	-2	2243	-1.24	0.25	0.03
76	SLU 47	8	-2	2243	-1.24	0.25	0.03
76	SLU 48	8	-2	2243	-1.24	0.25	0.03
76	SLU 49	8	-2	2243	-1.24	0.25	0.03
76	SLU 50	8	-2	2243	-1.24	0.25	0.03
76	SLU 51	8	-2	2243	-1.24	0.25	0.03
76	SLU 52	9	-1	2587	-1.39	0.28	0.03
76	SLU 53	9	-1	2587	-1.39	0.28	0.03
76	SLU 54	9	-1	2587	-1.39	0.28	0.03
76	SLU 55	9	-1	2587	-1.39	0.28	0.03
76	SLU 56	9	-1	2587	-1.39	0.28	0.03
76	SLU 57	9	-1	2587	-1.39	0.28	0.03
76	SLU 58	9	-1	2587	-1.39	0.28	0.03
76	SLU 59	9	-1	2587	-1.39	0.28	0.03
76	SLU 60	10	-1	2735	-1.46	0.29	0.03
76	SLU 61	10	-1	2735	-1.46	0.29	0.03
76	SLU 62	10	-1	2735	-1.46	0.29	0.03
76	SLU 63	10	-1	2735	-1.46	0.29	0.03
76	SLU 64	9	-1	2498	-1.35	0.27	0.03
76	SLU 65	9	-1	2498	-1.35	0.27	0.03
76	SLU 66	9	-1	2498	-1.35	0.27	0.03
76	SLU 67	9	-1	2498	-1.35	0.27	0.03
76	SLU 68	9	-1	2498	-1.35	0.27	0.03
76	SLU 69	9	-1	2498	-1.35	0.27	0.03
76	SLU 70	9	-1	2498	-1.35	0.27	0.03
76	SLU 71	9	-1	2498	-1.35	0.27	0.03
76	SLU 72	9	-1	2498	-1.35	0.27	0.03
76	SLU 73	10	-1	2842	-1.5	0.3	0.03
76	SLU 74	10	-1	2842	-1.5	0.3	0.03
76	SLU 75	10	-1	2842	-1.5	0.3	0.03
76	SLU 76	10	-1	2842	-1.5	0.3	0.03
76	SLU 77	10	-1	2842	-1.5	0.3	0.03
76	SLU 78	10	-1	2842	-1.5	0.3	0.03
76	SLU 79	10	-1	2842	-1.5	0.3	0.03
76	SLU 80	10	-1	2842	-1.5	0.3	0.03
76	SLU 81	10	-1	2990	-1.57	0.31	0.03
76	SLU 82	10	-1	2990	-1.57	0.31	0.03
76	SLU 83	10	-1	2990	-1.57	0.31	0.03
76	SLU 84	10	-1	2990	-1.57	0.31	0.03
76	SLE RA 1	7	-1	1866	-1.01	0.2	0.02
76	SLE RA 2	7	-1	1866	-1.01	0.2	0.02
76	SLE RA 3	7	-1	1866	-1.01	0.2	0.02
76	SLE RA 4	7	-1	1866	-1.01	0.2	0.02
76	SLE RA 5	7	-1	1866	-1.01	0.2	0.02
76	SLE RA 6	7	-1	1866	-1.01	0.2	0.02
76	SLE RA 7	7	-1	1866	-1.01	0.2	0.02
76	SLE RA 8	7	-1	1866	-1.01	0.2	0.02
76	SLE RA 9	7	-1	1866	-1.01	0.2	0.02
76	SLE RA 10	7	-1	2095	-1.12	0.22	0.02
76	SLE RA 11	7	-1	2095	-1.12	0.22	0.02
76	SLE RA 12	7	-1	2095	-1.12	0.22	0.02
76	SLE RA 13	7	-1	2095	-1.12	0.22	0.02
76	SLE RA 14	7	-1	2095	-1.12	0.22	0.02
76	SLE RA 15	7	-1	2095	-1.12	0.22	0.02
76	SLE RA 16	7	-1	2095	-1.12	0.22	0.02
76	SLE RA 17	7	-1	2095	-1.12	0.22	0.02
76	SLE RA 18	8	-1	2193	-1.16	0.23	0.02
76	SLE RA 19	8	-1	2193	-1.16	0.23	0.02
76	SLE RA 20	8	-1	2193	-1.16	0.23	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
76	SLE RA 21	8	-1	2193	-1.16	0.23	0.02
76	SLE FR 1	7	-1	1866	-1.01	0.2	0.02
76	SLE FR 2	7	-1	1866	-1.01	0.2	0.02
76	SLE FR 3	7	-1	1866	-1.01	0.2	0.02
76	SLE FR 4	7	-1	1964	-1.06	0.21	0.02
76	SLE FR 5	7	-1	1964	-1.06	0.21	0.02
76	SLE FR 6	7	-1	2030	-1.09	0.22	0.02
76	SLE QP 1	7	-1	1866	-1.01	0.2	0.02
76	SLE QP 2	7	-1	1964	-1.06	0.21	0.02
76	SLD 1	149	5	2044	-1.4	-2.82	0.14
76	SLD 2	176	6	2044	-1.4	-2.83	0.25
76	SLD 3	154	-9	1896	-0.74	-2.48	0.16
76	SLD 4	182	-8	1896	-0.74	-2.49	0.27
76	SLD 5	31	22	2212	-2.15	-1.21	-0.01
76	SLD 6	59	22	2212	-2.15	-1.22	0.1
76	SLD 7	50	-25	1720	0.03	-0.08	0.05
76	SLD 8	78	-25	1720	0.03	-0.09	0.16
76	SLD 9	-64	22	2208	-2.14	0.52	-0.12
76	SLD 10	-36	23	2208	-2.14	0.5	-0.01
76	SLD 11	-45	-25	1716	0.04	1.64	-0.06
76	SLD 12	-17	-24	1716	0.04	1.63	0.05
76	SLD 13	-168	6	2032	-1.37	2.92	-0.23
76	SLD 14	-140	6	2032	-1.37	2.91	-0.12
76	SLD 15	-162	-8	1884	-0.72	3.25	-0.21
76	SLD 16	-134	-8	1884	-0.72	3.24	-0.1
76	SLV 1	328	14	2151	-1.85	-7.14	0.3
76	SLV 2	391	15	2151	-1.86	-7.17	0.55
76	SLV 3	341	-19	1805	-0.32	-6.35	0.34
76	SLV 4	404	-18	1804	-0.32	-6.38	0.59
76	SLV 5	60	53	2546	-3.62	-3.18	-0.05
76	SLV 6	125	54	2546	-3.63	-3.21	0.21
76	SLV 7	104	-57	1391	1.5	-0.55	0.09
76	SLV 8	169	-56	1390	1.49	-0.58	0.35
76	SLV 9	-155	54	2538	-3.61	1	-0.3
76	SLV 10	-90	54	2537	-3.61	0.98	-0.05
76	SLV 11	-111	-56	1382	1.51	3.63	-0.16
76	SLV 12	-46	-56	1382	1.51	3.61	0.1
76	SLV 13	-390	16	2124	-1.79	6.8	-0.55
76	SLV 14	-327	17	2123	-1.8	6.78	-0.3
76	SLV 15	-377	-17	1777	-0.26	7.59	-0.5
76	SLV 16	-314	-16	1777	-0.26	7.57	-0.26
76	CRTFP Ux+	0	0	0	0	0	0
76	CRTFP Ux-	0	0	0	0	0	0
76	CRTFP Uy+	0	0	0	0	0	0
76	CRTFP Uy-	0	0	0	0	0	0
78	SLU 1	4	-7	1881	-2.77	238.22	1.87
78	SLU 2	4	-7	1881	-2.77	238.22	1.87
78	SLU 3	4	-7	1881	-2.77	238.22	1.87
78	SLU 4	4	-7	1881	-2.77	238.22	1.87
78	SLU 5	4	-7	1881	-2.77	238.22	1.87
78	SLU 6	4	-7	1881	-2.77	238.22	1.87
78	SLU 7	4	-7	1881	-2.77	238.22	1.87
78	SLU 8	4	-7	1881	-2.77	238.22	1.87
78	SLU 9	4	-7	1881	-2.77	238.22	1.87
78	SLU 10	3	-9	2215	-3.34	275.56	2.36
78	SLU 11	3	-9	2215	-3.34	275.56	2.36
78	SLU 12	3	-9	2215	-3.34	275.56	2.36
78	SLU 13	3	-9	2215	-3.34	275.56	2.36
78	SLU 14	3	-9	2215	-3.34	275.56	2.36
78	SLU 15	3	-9	2215	-3.34	275.56	2.36
78	SLU 16	3	-9	2215	-3.34	275.56	2.36
78	SLU 17	3	-9	2215	-3.34	275.56	2.36
78	SLU 18	3	-10	2358	-3.59	291.56	2.57
78	SLU 19	3	-10	2358	-3.59	291.56	2.57
78	SLU 20	3	-10	2358	-3.59	291.56	2.57
78	SLU 21	3	-10	2358	-3.59	291.56	2.57
78	SLU 22	3	-8	2131	-3.19	266	2.21
78	SLU 23	3	-8	2131	-3.19	266	2.21
78	SLU 24	3	-8	2131	-3.19	266	2.21
78	SLU 25	3	-8	2131	-3.19	266	2.21
78	SLU 26	3	-8	2131	-3.19	266	2.21
78	SLU 27	3	-8	2131	-3.19	266	2.21
78	SLU 28	3	-8	2131	-3.19	266	2.21
78	SLU 29	3	-8	2131	-3.19	266	2.21
78	SLU 30	3	-8	2131	-3.19	266	2.21
78	SLU 31	3	-10	2464	-3.77	303.34	2.7
78	SLU 32	3	-10	2464	-3.77	303.34	2.7
78	SLU 33	3	-10	2464	-3.77	303.34	2.7
78	SLU 34	3	-10	2464	-3.77	303.34	2.7
78	SLU 35	3	-10	2464	-3.77	303.34	2.7
78	SLU 36	3	-10	2464	-3.77	303.34	2.7
78	SLU 37	3	-10	2464	-3.77	303.34	2.7
78	SLU 38	3	-10	2464	-3.77	303.34	2.7
78	SLU 39	3	-11	2607	-4.02	319.34	2.91
78	SLU 40	3	-11	2607	-4.02	319.34	2.91
78	SLU 41	3	-11	2607	-4.02	319.34	2.91
78	SLU 42	3	-11	2607	-4.02	319.34	2.91
78	SLU 43	5	-9	2360	-3.45	300.16	2.31
78	SLU 44	5	-9	2360	-3.45	300.16	2.31
78	SLU 45	5	-9	2360	-3.45	300.16	2.31



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
78	SLU 46	5	-9	2360	-3.45	300.16	2.31		
78	SLU 47	5	-9	2360	-3.45	300.16	2.31		
78	SLU 48	5	-9	2360	-3.45	300.16	2.31		
78	SLU 49	5	-9	2360	-3.45	300.16	2.31		
78	SLU 50	5	-9	2360	-3.45	300.16	2.31		
78	SLU 51	5	-9	2360	-3.45	300.16	2.31		
78	SLU 52	4	-11	2694	-4.03	337.5	2.81		
78	SLU 53	4	-11	2694	-4.03	337.5	2.81		
78	SLU 54	4	-11	2694	-4.03	337.5	2.81		
78	SLU 55	4	-11	2694	-4.03	337.5	2.81		
78	SLU 56	4	-11	2694	-4.03	337.5	2.81		
78	SLU 57	4	-11	2694	-4.03	337.5	2.81		
78	SLU 58	4	-11	2694	-4.03	337.5	2.81		
78	SLU 59	4	-11	2694	-4.03	337.5	2.81		
78	SLU 60	4	-12	2837	-4.28	353.5	3.02		
78	SLU 61	4	-12	2837	-4.28	353.5	3.02		
78	SLU 62	4	-12	2837	-4.28	353.5	3.02		
78	SLU 63	4	-12	2837	-4.28	353.5	3.02		
78	SLU 64	5	-10	2610	-3.88	327.94	2.65		
78	SLU 65	5	-10	2610	-3.88	327.94	2.65		
78	SLU 66	5	-10	2610	-3.88	327.94	2.65		
78	SLU 67	5	-10	2610	-3.88	327.94	2.65		
78	SLU 68	5	-10	2610	-3.88	327.94	2.65		
78	SLU 69	5	-10	2610	-3.88	327.94	2.65		
78	SLU 70	5	-10	2610	-3.88	327.94	2.65		
78	SLU 71	5	-10	2610	-3.88	327.94	2.65		
78	SLU 72	5	-10	2610	-3.88	327.94	2.65		
78	SLU 73	4	-12	2943	-4.45	365.28	3.14		
78	SLU 74	4	-12	2943	-4.45	365.28	3.14		
78	SLU 75	4	-12	2943	-4.45	365.28	3.14		
78	SLU 76	4	-12	2943	-4.45	365.28	3.14		
78	SLU 77	4	-12	2943	-4.45	365.28	3.14		
78	SLU 78	4	-12	2943	-4.45	365.28	3.14		
78	SLU 79	4	-12	2943	-4.45	365.28	3.14		
78	SLU 80	4	-12	2943	-4.45	365.28	3.14		
78	SLU 81	4	-13	3086	-4.7	381.28	3.36		
78	SLU 82	4	-13	3086	-4.7	381.28	3.36		
78	SLU 83	4	-13	3086	-4.7	381.28	3.36		
78	SLU 84	4	-13	3086	-4.7	381.28	3.36		
78	SLE RA 1	4	-8	1953	-2.89	246.16	1.96		
78	SLE RA 2	4	-8	1953	-2.89	246.16	1.96		
78	SLE RA 3	4	-8	1953	-2.89	246.16	1.96		
78	SLE RA 4	4	-8	1953	-2.89	246.16	1.96		
78	SLE RA 5	4	-8	1953	-2.89	246.16	1.96		
78	SLE RA 6	4	-8	1953	-2.89	246.16	1.96		
78	SLE RA 7	4	-8	1953	-2.89	246.16	1.96		
78	SLE RA 8	4	-8	1953	-2.89	246.16	1.96		
78	SLE RA 9	4	-8	1953	-2.89	246.16	1.96		
78	SLE RA 10	3	-9	2175	-3.27	271.05	2.29		
78	SLE RA 11	3	-9	2175	-3.27	271.05	2.29		
78	SLE RA 12	3	-9	2175	-3.27	271.05	2.29		
78	SLE RA 13	3	-9	2175	-3.27	271.05	2.29		
78	SLE RA 14	3	-9	2175	-3.27	271.05	2.29		
78	SLE RA 15	3	-9	2175	-3.27	271.05	2.29		
78	SLE RA 16	3	-9	2175	-3.27	271.05	2.29		
78	SLE RA 17	3	-9	2175	-3.27	271.05	2.29		
78	SLE RA 18	3	-9	2270	-3.44	281.72	2.43		
78	SLE RA 19	3	-9	2270	-3.44	281.72	2.43		
78	SLE RA 20	3	-9	2270	-3.44	281.72	2.43		
78	SLE RA 21	3	-9	2270	-3.44	281.72	2.43		
78	SLE FR 1	4	-8	1953	-2.89	246.16	1.96		
78	SLE FR 2	4	-8	1953	-2.89	246.16	1.96		
78	SLE FR 3	4	-8	1953	-2.89	246.16	1.96		
78	SLE FR 4	4	-8	2048	-3.05	256.83	2.1		
78	SLE FR 5	4	-8	2048	-3.05	256.83	2.1		
78	SLE FR 6	3	-8	2112	-3.16	263.94	2.2		
78	SLE QP 1	4	-8	1953	-2.89	246.16	1.96		
78	SLE QP 2	4	-8	2048	-3.05	256.83	2.1		
78	SLD 1	163	73	1883	-3.37	243.09	-18.06		
78	SLD 2	191	111	1893	-3.46	244.07	-27.34		
78	SLD 3	173	-144	1668	-1.68	218.65	36.29		
78	SLD 4	201	-107	1677	-1.77	219.64	27.01		
78	SLD 5	25	332	2322	-5.68	289.41	-83.02		
78	SLD 6	54	371	2332	-5.78	290.41	-92.51		
78	SLD 7	60	-392	1603	-0.04	207.96	98.14		
78	SLD 8	89	-353	1613	-0.13	208.97	88.65		
78	SLD 9	-81	337	2483	-5.97	304.68	-84.44		
78	SLD 10	-53	376	2493	-6.07	305.69	-93.93		
78	SLD 11	-47	-387	1764	-0.33	223.24	96.72		
78	SLD 12	-18	-348	1774	-0.42	224.24	87.23		
78	SLD 13	-194	90	2419	-4.34	294.01	-22.8		
78	SLD 14	-166	128	2428	-4.43	295	-32.08		
78	SLD 15	-183	-127	2203	-2.65	269.58	31.55		
78	SLD 16	-155	-89	2213	-2.74	270.56	22.27		
78	SLV 1	364	183	1682	-3.84	226.37	-45.63		
78	SLV 2	428	270	1704	-4.04	228.63	-66.87		
78	SLV 3	388	-326	1176	0.14	169.05	81.91		
78	SLV 4	452	-240	1198	-0.07	171.31	60.67		
78	SLV 5	51	790	2698	-9.24	333.79	-197.81		
78	SLV 6	118	880	2721	-9.46	336.13	-219.86		



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
78	SLV 7	132	-908	1010	4.01	142.73	227.31
78	SLV 8	199	-819	1033	3.79	145.07	205.27
78	SLV 9	-191	802	3063	-9.9	368.58	-201.06
78	SLV 10	-125	892	3086	-10.12	370.92	-223.1
78	SLV 11	-111	-896	1375	3.35	177.52	224.06
78	SLV 12	-44	-806	1398	3.13	179.87	202.02
78	SLV 13	-445	224	2898	-6.04	342.34	-56.46
78	SLV 14	-381	310	2920	-6.25	344.6	-77.7
78	SLV 15	-421	-286	2392	-2.06	285.03	71.08
78	SLV 16	-357	-199	2414	-2.27	287.28	49.84
78	CRTFP Ux+	0	0	0	0	0	0
78	CRTFP Ux-	0	0	0	0	0	0
78	CRTFP Uy+	0	0	0	0	0	0
78	CRTFP Uy-	0	0	0	0	0	0
80	SLU 1	6	-1	1773	-0.26	0.11	0.02
80	SLU 2	6	-1	1773	-0.26	0.11	0.02
80	SLU 3	6	-1	1773	-0.26	0.11	0.02
80	SLU 4	6	-1	1773	-0.26	0.11	0.02
80	SLU 5	6	-1	1773	-0.26	0.11	0.02
80	SLU 6	6	-1	1773	-0.26	0.11	0.02
80	SLU 7	6	-1	1773	-0.26	0.11	0.02
80	SLU 8	6	-1	1773	-0.26	0.11	0.02
80	SLU 9	6	-1	1773	-0.26	0.11	0.02
80	SLU 10	7	-1	2115	-0.24	0.13	0.03
80	SLU 11	7	-1	2115	-0.24	0.13	0.03
80	SLU 12	7	-1	2115	-0.24	0.13	0.03
80	SLU 13	7	-1	2115	-0.24	0.13	0.03
80	SLU 14	7	-1	2115	-0.24	0.13	0.03
80	SLU 15	7	-1	2115	-0.24	0.13	0.03
80	SLU 16	7	-1	2115	-0.24	0.13	0.03
80	SLU 17	7	-1	2115	-0.24	0.13	0.03
80	SLU 18	7	-1	2262	-0.24	0.14	0.03
80	SLU 19	7	-1	2262	-0.24	0.14	0.03
80	SLU 20	7	-1	2262	-0.24	0.14	0.03
80	SLU 21	7	-1	2262	-0.24	0.14	0.03
80	SLU 22	6	-1	2027	-0.24	0.13	0.03
80	SLU 23	6	-1	2027	-0.24	0.13	0.03
80	SLU 24	6	-1	2027	-0.24	0.13	0.03
80	SLU 25	6	-1	2027	-0.24	0.13	0.03
80	SLU 26	6	-1	2027	-0.24	0.13	0.03
80	SLU 27	6	-1	2027	-0.24	0.13	0.03
80	SLU 28	6	-1	2027	-0.24	0.13	0.03
80	SLU 29	6	-1	2027	-0.24	0.13	0.03
80	SLU 30	6	-1	2027	-0.24	0.13	0.03
80	SLU 31	7	-1	2369	-0.23	0.15	0.03
80	SLU 32	7	-1	2369	-0.23	0.15	0.03
80	SLU 33	7	-1	2369	-0.23	0.15	0.03
80	SLU 34	7	-1	2369	-0.23	0.15	0.03
80	SLU 35	7	-1	2369	-0.23	0.15	0.03
80	SLU 36	7	-1	2369	-0.23	0.15	0.03
80	SLU 37	7	-1	2369	-0.23	0.15	0.03
80	SLU 38	7	-1	2369	-0.23	0.15	0.03
80	SLU 39	8	-1	2515	-0.22	0.15	0.03
80	SLU 40	8	-1	2515	-0.22	0.15	0.03
80	SLU 41	8	-1	2515	-0.22	0.15	0.03
80	SLU 42	8	-1	2515	-0.22	0.15	0.03
80	SLU 43	7	-1	2218	-0.34	0.14	0.03
80	SLU 44	7	-1	2218	-0.34	0.14	0.03
80	SLU 45	7	-1	2218	-0.34	0.14	0.03
80	SLU 46	7	-1	2218	-0.34	0.14	0.03
80	SLU 47	7	-1	2218	-0.34	0.14	0.03
80	SLU 48	7	-1	2218	-0.34	0.14	0.03
80	SLU 49	7	-1	2218	-0.34	0.14	0.03
80	SLU 50	7	-1	2218	-0.34	0.14	0.03
80	SLU 51	7	-1	2218	-0.34	0.14	0.03
80	SLU 52	8	-1	2560	-0.32	0.16	0.03
80	SLU 53	8	-1	2560	-0.32	0.16	0.03
80	SLU 54	8	-1	2560	-0.32	0.16	0.03
80	SLU 55	8	-1	2560	-0.32	0.16	0.03
80	SLU 56	8	-1	2560	-0.32	0.16	0.03
80	SLU 57	8	-1	2560	-0.32	0.16	0.03
80	SLU 58	8	-1	2560	-0.32	0.16	0.03
80	SLU 59	8	-1	2560	-0.32	0.16	0.03
80	SLU 60	9	-1	2707	-0.32	0.17	0.04
80	SLU 61	9	-1	2707	-0.32	0.17	0.04
80	SLU 62	9	-1	2707	-0.32	0.17	0.04
80	SLU 63	9	-1	2707	-0.32	0.17	0.04
80	SLU 64	8	-1	2472	-0.33	0.16	0.03
80	SLU 65	8	-1	2472	-0.33	0.16	0.03
80	SLU 66	8	-1	2472	-0.33	0.16	0.03
80	SLU 67	8	-1	2472	-0.33	0.16	0.03
80	SLU 68	8	-1	2472	-0.33	0.16	0.03
80	SLU 69	8	-1	2472	-0.33	0.16	0.03
80	SLU 70	8	-1	2472	-0.33	0.16	0.03
80	SLU 71	8	-1	2472	-0.33	0.16	0.03
80	SLU 72	8	-1	2472	-0.33	0.16	0.03
80	SLU 73	9	-1	2814	-0.31	0.17	0.04
80	SLU 74	9	-1	2814	-0.31	0.17	0.04
80	SLU 75	9	-1	2814	-0.31	0.17	0.04
80	SLU 76	9	-1	2814	-0.31	0.17	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
80	SLU 77	9	-1	2814	-0.31	0.17	0.04
80	SLU 78	9	-1	2814	-0.31	0.17	0.04
80	SLU 79	9	-1	2814	-0.31	0.17	0.04
80	SLU 80	9	-1	2814	-0.31	0.17	0.04
80	SLU 81	9	-1	2960	-0.31	0.18	0.04
80	SLU 82	9	-1	2960	-0.31	0.18	0.04
80	SLU 83	9	-1	2960	-0.31	0.18	0.04
80	SLU 84	9	-1	2960	-0.31	0.18	0.04
80	SLE RA 1	6	-1	1846	-0.25	0.12	0.02
80	SLE RA 2	6	-1	1846	-0.25	0.12	0.02
80	SLE RA 3	6	-1	1846	-0.25	0.12	0.02
80	SLE RA 4	6	-1	1846	-0.25	0.12	0.02
80	SLE RA 5	6	-1	1846	-0.25	0.12	0.02
80	SLE RA 6	6	-1	1846	-0.25	0.12	0.02
80	SLE RA 7	6	-1	1846	-0.25	0.12	0.02
80	SLE RA 8	6	-1	1846	-0.25	0.12	0.02
80	SLE RA 9	6	-1	1846	-0.25	0.12	0.02
80	SLE RA 10	7	-1	2074	-0.24	0.13	0.03
80	SLE RA 11	7	-1	2074	-0.24	0.13	0.03
80	SLE RA 12	7	-1	2074	-0.24	0.13	0.03
80	SLE RA 13	7	-1	2074	-0.24	0.13	0.03
80	SLE RA 14	7	-1	2074	-0.24	0.13	0.03
80	SLE RA 15	7	-1	2074	-0.24	0.13	0.03
80	SLE RA 16	7	-1	2074	-0.24	0.13	0.03
80	SLE RA 17	7	-1	2074	-0.24	0.13	0.03
80	SLE RA 18	7	-1	2171	-0.24	0.13	0.03
80	SLE RA 19	7	-1	2171	-0.24	0.13	0.03
80	SLE RA 20	7	-1	2171	-0.24	0.13	0.03
80	SLE RA 21	7	-1	2171	-0.24	0.13	0.03
80	SLE FR 1	6	-1	1846	-0.25	0.12	0.02
80	SLE FR 2	6	-1	1846	-0.25	0.12	0.02
80	SLE FR 3	6	-1	1846	-0.25	0.12	0.02
80	SLE FR 4	6	-1	1943	-0.25	0.12	0.03
80	SLE FR 5	6	-1	1943	-0.25	0.12	0.03
80	SLE FR 6	6	-1	2009	-0.25	0.13	0.03
80	SLE QP 1	6	-1	1846	-0.25	0.12	0.02
80	SLE QP 2	6	-1	1943	-0.25	0.12	0.03
80	SLD 1	144	6	2013	-0.54	-3.8	0.13
80	SLD 2	168	6	2013	-0.54	-3.8	0.25
80	SLD 3	149	-9	1885	0.03	-3.34	0.15
80	SLD 4	173	-8	1885	0.03	-3.35	0.27
80	SLD 5	31	22	2158	-1.2	-1.74	-0.02
80	SLD 6	56	23	2158	-1.2	-1.75	0.1
80	SLD 7	48	-25	1732	0.7	-0.22	0.05
80	SLD 8	72	-25	1732	0.7	-0.23	0.17
80	SLD 9	-60	23	2155	-1.19	0.48	-0.12
80	SLD 10	-36	23	2154	-1.2	0.47	0
80	SLD 11	-43	-25	1729	0.7	1.99	-0.05
80	SLD 12	-19	-24	1729	0.7	1.99	0.07
80	SLD 13	-160	6	2002	-0.53	3.59	-0.22
80	SLD 14	-136	7	2001	-0.53	3.59	-0.1
80	SLD 15	-155	-8	1874	0.04	4.05	-0.19
80	SLD 16	-131	-7	1874	0.04	4.04	-0.08
80	SLV 1	319	14	2107	-0.94	-9.43	0.26
80	SLV 2	373	15	2106	-0.94	-9.44	0.53
80	SLV 3	330	-19	1807	0.4	-8.37	0.31
80	SLV 4	385	-18	1807	0.4	-8.38	0.58
80	SLV 5	62	54	2447	-2.48	-4.35	-0.07
80	SLV 6	119	54	2447	-2.48	-4.37	0.2
80	SLV 7	101	-57	1448	1.97	-0.81	0.09
80	SLV 8	158	-56	1448	1.97	-0.82	0.36
80	SLV 9	-145	54	2439	-2.47	1.06	-0.31
80	SLV 10	-89	55	2439	-2.47	1.05	-0.04
80	SLV 11	-106	-56	1440	1.98	4.61	-0.15
80	SLV 12	-50	-56	1440	1.98	4.6	0.13
80	SLV 13	-372	16	2080	-0.9	8.63	-0.52
80	SLV 14	-318	17	2080	-0.9	8.61	-0.26
80	SLV 15	-360	-17	1781	0.44	9.69	-0.48
80	SLV 16	-306	-16	1780	0.44	9.68	-0.21
80	CRTFP Ux+	0	0	0	0	0	0
80	CRTFP Ux-	0	0	0	0	0	0
80	CRTFP Uy+	0	0	0	0	0	0
80	CRTFP Uy-	0	0	0	0	0	0
81	SLU 1	23	33	5358	21.82	14.11	1.22
81	SLU 2	23	33	5358	21.82	14.11	1.22
81	SLU 3	23	33	5358	21.82	14.11	1.22
81	SLU 4	23	33	5358	21.82	14.11	1.22
81	SLU 5	23	33	5358	21.82	14.11	1.22
81	SLU 6	23	33	5358	21.82	14.11	1.22
81	SLU 7	23	33	5358	21.82	14.11	1.22
81	SLU 8	23	33	5358	21.82	14.11	1.22
81	SLU 9	23	33	5358	21.82	14.11	1.22
81	SLU 10	32	37	6262	21.34	16.74	1.46
81	SLU 11	32	37	6262	21.34	16.74	1.46
81	SLU 12	32	37	6262	21.34	16.74	1.46
81	SLU 13	32	37	6262	21.34	16.74	1.46
81	SLU 14	32	37	6262	21.34	16.74	1.46
81	SLU 15	32	37	6262	21.34	16.74	1.46
81	SLU 16	32	37	6262	21.34	16.74	1.46
81	SLU 17	32	37	6262	21.34	16.74	1.46



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
81	SLU 18	35	39	6650	21.14	17.86	1.56
81	SLU 19	35	39	6650	21.14	17.86	1.56
81	SLU 20	35	39	6650	21.14	17.86	1.56
81	SLU 21	35	39	6650	21.14	17.86	1.56
81	SLU 22	29	36	6037	21.68	16.11	1.38
81	SLU 23	29	36	6037	21.68	16.11	1.38
81	SLU 24	29	36	6037	21.68	16.11	1.38
81	SLU 25	29	36	6037	21.68	16.11	1.38
81	SLU 26	29	36	6037	21.68	16.11	1.38
81	SLU 27	29	36	6037	21.68	16.11	1.38
81	SLU 28	29	36	6037	21.68	16.11	1.38
81	SLU 29	29	36	6037	21.68	16.11	1.38
81	SLU 30	29	36	6037	21.68	16.11	1.38
81	SLU 31	38	40	6942	21.2	18.74	1.62
81	SLU 32	38	40	6942	21.2	18.74	1.62
81	SLU 33	38	40	6942	21.2	18.74	1.62
81	SLU 34	38	40	6942	21.2	18.74	1.62
81	SLU 35	38	40	6942	21.2	18.74	1.62
81	SLU 36	38	40	6942	21.2	18.74	1.62
81	SLU 37	38	40	6942	21.2	18.74	1.62
81	SLU 38	38	40	6942	21.2	18.74	1.62
81	SLU 39	41	42	7329	21	19.86	1.72
81	SLU 40	41	42	7329	21	19.86	1.72
81	SLU 41	41	42	7329	21	19.86	1.72
81	SLU 42	41	42	7329	21	19.86	1.72
81	SLU 43	28	42	6732	28.41	17.66	1.53
81	SLU 44	28	42	6732	28.41	17.66	1.53
81	SLU 45	28	42	6732	28.41	17.66	1.53
81	SLU 46	28	42	6732	28.41	17.66	1.53
81	SLU 47	28	42	6732	28.41	17.66	1.53
81	SLU 48	28	42	6732	28.41	17.66	1.53
81	SLU 49	28	42	6732	28.41	17.66	1.53
81	SLU 50	28	42	6732	28.41	17.66	1.53
81	SLU 51	28	42	6732	28.41	17.66	1.53
81	SLU 52	37	46	7636	27.93	20.29	1.77
81	SLU 53	37	46	7636	27.93	20.29	1.77
81	SLU 54	37	46	7636	27.93	20.29	1.77
81	SLU 55	37	46	7636	27.93	20.29	1.77
81	SLU 56	37	46	7636	27.93	20.29	1.77
81	SLU 57	37	46	7636	27.93	20.29	1.77
81	SLU 58	37	46	7636	27.93	20.29	1.77
81	SLU 59	37	46	7636	27.93	20.29	1.77
81	SLU 60	40	47	8024	27.73	21.41	1.87
81	SLU 61	40	47	8024	27.73	21.41	1.87
81	SLU 62	40	47	8024	27.73	21.41	1.87
81	SLU 63	40	47	8024	27.73	21.41	1.87
81	SLU 64	34	45	7412	28.27	19.66	1.69
81	SLU 65	34	45	7412	28.27	19.66	1.69
81	SLU 66	34	45	7412	28.27	19.66	1.69
81	SLU 67	34	45	7412	28.27	19.66	1.69
81	SLU 68	34	45	7412	28.27	19.66	1.69
81	SLU 69	34	45	7412	28.27	19.66	1.69
81	SLU 70	34	45	7412	28.27	19.66	1.69
81	SLU 71	34	45	7412	28.27	19.66	1.69
81	SLU 72	34	45	7412	28.27	19.66	1.69
81	SLU 73	43	49	8316	27.79	22.29	1.93
81	SLU 74	43	49	8316	27.79	22.29	1.93
81	SLU 75	43	49	8316	27.79	22.29	1.93
81	SLU 76	43	49	8316	27.79	22.29	1.93
81	SLU 77	43	49	8316	27.79	22.29	1.93
81	SLU 78	43	49	8316	27.79	22.29	1.93
81	SLU 79	43	49	8316	27.79	22.29	1.93
81	SLU 80	43	49	8316	27.79	22.29	1.93
81	SLU 81	46	50	8703	27.59	23.41	2.03
81	SLU 82	46	50	8703	27.59	23.41	2.03
81	SLU 83	46	50	8703	27.59	23.41	2.03
81	SLU 84	46	50	8703	27.59	23.41	2.03
81	SLE RA 1	25	34	5552	21.78	14.68	1.27
81	SLE RA 2	25	34	5552	21.78	14.68	1.27
81	SLE RA 3	25	34	5552	21.78	14.68	1.27
81	SLE RA 4	25	34	5552	21.78	14.68	1.27
81	SLE RA 5	25	34	5552	21.78	14.68	1.27
81	SLE RA 6	25	34	5552	21.78	14.68	1.27
81	SLE RA 7	25	34	5552	21.78	14.68	1.27
81	SLE RA 8	25	34	5552	21.78	14.68	1.27
81	SLE RA 9	25	34	5552	21.78	14.68	1.27
81	SLE RA 10	31	37	6155	21.46	16.43	1.43
81	SLE RA 11	31	37	6155	21.46	16.43	1.43
81	SLE RA 12	31	37	6155	21.46	16.43	1.43
81	SLE RA 13	31	37	6155	21.46	16.43	1.43
81	SLE RA 14	31	37	6155	21.46	16.43	1.43
81	SLE RA 15	31	37	6155	21.46	16.43	1.43
81	SLE RA 16	31	37	6155	21.46	16.43	1.43
81	SLE RA 17	31	37	6155	21.46	16.43	1.43
81	SLE RA 18	33	38	6413	21.32	17.18	1.49
81	SLE RA 19	33	38	6413	21.32	17.18	1.49
81	SLE RA 20	33	38	6413	21.32	17.18	1.49
81	SLE RA 21	33	38	6413	21.32	17.18	1.49
81	SLE FR 1	25	34	5552	21.78	14.68	1.27
81	SLE FR 2	25	34	5552	21.78	14.68	1.27



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
81	SLE FR 3	25	34	5552	21.78	14.68	1.27
81	SLE FR 4	27	35	5810	21.64	15.43	1.33
81	SLE FR 5	27	35	5810	21.64	15.43	1.33
81	SLE FR 6	29	36	5983	21.55	15.93	1.38
81	SLE QP 1	25	34	5552	21.78	14.68	1.27
81	SLE QP 2	27	35	5810	21.64	15.43	1.33
81	SLD 1	565	498	6755	-3.83	20.51	-4.06
81	SLD 2	649	370	6735	-1.04	20.29	-0.5
81	SLD 3	554	-220	6341	48.73	17.79	-9.21
81	SLD 4	638	-349	6321	51.52	17.57	-5.65
81	SLD 5	174	1311	6729	-66.72	21.17	6.25
81	SLD 6	260	1179	6709	-63.87	20.95	9.88
81	SLD 7	139	-1085	5348	108.47	12.09	-10.92
81	SLD 8	225	-1216	5328	111.33	11.86	-7.29
81	SLD 9	-170	1287	6293	-68.04	19	9.96
81	SLD 10	-84	1155	6273	-65.19	18.78	13.59
81	SLD 11	-206	-1109	4911	107.15	9.92	-7.21
81	SLD 12	-120	-1240	4891	110	9.7	-3.58
81	SLD 13	-584	419	5300	-8.24	13.3	8.32
81	SLD 14	-500	290	5280	-5.45	13.08	11.88
81	SLD 15	-594	-299	4885	44.32	10.57	3.17
81	SLD 16	-510	-428	4866	47.11	10.36	6.73
81	SLV 1	1247	1116	7971	-38.2	27.07	-10.73
81	SLV 2	1440	821	7926	-31.81	26.57	-2.61
81	SLV 3	1223	-570	6999	85.17	20.68	-22.83
81	SLV 4	1415	-865	6953	91.55	20.18	-14.7
81	SLV 5	360	3025	7951	-185.77	28.79	13.06
81	SLV 6	559	2720	7903	-179.14	28.28	21.5
81	SLV 7	278	-2595	4708	225.44	7.5	-27.26
81	SLV 8	477	-2901	4661	232.07	6.99	-18.82
81	SLV 9	-423	2971	6959	-188.79	23.88	21.49
81	SLV 10	-223	2666	6912	-182.16	23.36	29.93
81	SLV 11	-505	-2649	3717	222.42	2.59	-18.83
81	SLV 12	-305	-2955	3670	229.05	2.07	-10.39
81	SLV 13	-1360	935	4667	-48.26	10.68	17.37
81	SLV 14	-1168	641	4622	-41.88	10.19	25.5
81	SLV 15	-1385	-751	3695	75.1	4.3	5.28
81	SLV 16	-1193	-1045	3649	81.48	3.8	13.4
81	CRTFP Ux+	0	0	0	0	0	0
81	CRTFP Ux-	0	0	0	0	0	0
81	CRTFP Uy+	0	0	0	0	0	0
81	CRTFP Uy-	0	0	0	0	0	0
83	SLU 1	1	-8	1824	-1.26	203.04	2.01
83	SLU 2	1	-8	1824	-1.26	203.04	2.01
83	SLU 3	1	-8	1824	-1.26	203.04	2.01
83	SLU 4	1	-8	1824	-1.26	203.04	2.01
83	SLU 5	1	-8	1824	-1.26	203.04	2.01
83	SLU 6	1	-8	1824	-1.26	203.04	2.01
83	SLU 7	1	-8	1824	-1.26	203.04	2.01
83	SLU 8	1	-8	1824	-1.26	203.04	2.01
83	SLU 9	1	-8	1824	-1.26	203.04	2.01
83	SLU 10	0	-10	2146	-1.51	233.66	2.52
83	SLU 11	0	-10	2146	-1.51	233.66	2.52
83	SLU 12	0	-10	2146	-1.51	233.66	2.52
83	SLU 13	0	-10	2146	-1.51	233.66	2.52
83	SLU 14	0	-10	2146	-1.51	233.66	2.52
83	SLU 15	0	-10	2146	-1.51	233.66	2.52
83	SLU 16	0	-10	2146	-1.51	233.66	2.52
83	SLU 17	0	-10	2146	-1.51	233.66	2.52
83	SLU 18	0	-11	2284	-1.61	246.78	2.74
83	SLU 19	0	-11	2284	-1.61	246.78	2.74
83	SLU 20	0	-11	2284	-1.61	246.78	2.74
83	SLU 21	0	-11	2284	-1.61	246.78	2.74
83	SLU 22	1	-9	2065	-1.44	225.83	2.37
83	SLU 23	1	-9	2065	-1.44	225.83	2.37
83	SLU 24	1	-9	2065	-1.44	225.83	2.37
83	SLU 25	1	-9	2065	-1.44	225.83	2.37
83	SLU 26	1	-9	2065	-1.44	225.83	2.37
83	SLU 27	1	-9	2065	-1.44	225.83	2.37
83	SLU 28	1	-9	2065	-1.44	225.83	2.37
83	SLU 29	1	-9	2065	-1.44	225.83	2.37
83	SLU 30	1	-9	2065	-1.44	225.83	2.37
83	SLU 31	0	-11	2387	-1.69	256.45	2.88
83	SLU 32	0	-11	2387	-1.69	256.45	2.88
83	SLU 33	0	-11	2387	-1.69	256.45	2.88
83	SLU 34	0	-11	2387	-1.69	256.45	2.88
83	SLU 35	0	-11	2387	-1.69	256.45	2.88
83	SLU 36	0	-11	2387	-1.69	256.45	2.88
83	SLU 37	0	-11	2387	-1.69	256.45	2.88
83	SLU 38	0	-11	2387	-1.69	256.45	2.88
83	SLU 39	0	-12	2525	-1.79	269.57	3.1
83	SLU 40	0	-12	2525	-1.79	269.57	3.1
83	SLU 41	0	-12	2525	-1.79	269.57	3.1
83	SLU 42	0	-12	2525	-1.79	269.57	3.1
83	SLU 43	2	-9	2289	-1.57	256.14	2.5
83	SLU 44	2	-9	2289	-1.57	256.14	2.5
83	SLU 45	2	-9	2289	-1.57	256.14	2.5
83	SLU 46	2	-9	2289	-1.57	256.14	2.5
83	SLU 47	2	-9	2289	-1.57	256.14	2.5
83	SLU 48	2	-9	2289	-1.57	256.14	2.5



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
83	SLU 49	2	-9	2289	-1.57	256.14	2.5
83	SLU 50	2	-9	2289	-1.57	256.14	2.5
83	SLU 51	2	-9	2289	-1.57	256.14	2.5
83	SLU 52	1	-11	2611	-1.82	286.76	3.01
83	SLU 53	1	-11	2611	-1.82	286.76	3.01
83	SLU 54	1	-11	2611	-1.82	286.76	3.01
83	SLU 55	1	-11	2611	-1.82	286.76	3.01
83	SLU 56	1	-11	2611	-1.82	286.76	3.01
83	SLU 57	1	-11	2611	-1.82	286.76	3.01
83	SLU 58	1	-11	2611	-1.82	286.76	3.01
83	SLU 59	1	-11	2611	-1.82	286.76	3.01
83	SLU 60	1	-12	2749	-1.93	299.88	3.23
83	SLU 61	1	-12	2749	-1.93	299.88	3.23
83	SLU 62	1	-12	2749	-1.93	299.88	3.23
83	SLU 63	1	-12	2749	-1.93	299.88	3.23
83	SLU 64	1	-11	2529	-1.75	278.93	2.85
83	SLU 65	1	-11	2529	-1.75	278.93	2.85
83	SLU 66	1	-11	2529	-1.75	278.93	2.85
83	SLU 67	1	-11	2529	-1.75	278.93	2.85
83	SLU 68	1	-11	2529	-1.75	278.93	2.85
83	SLU 69	1	-11	2529	-1.75	278.93	2.85
83	SLU 70	1	-11	2529	-1.75	278.93	2.85
83	SLU 71	1	-11	2529	-1.75	278.93	2.85
83	SLU 72	1	-11	2529	-1.75	278.93	2.85
83	SLU 73	1	-13	2851	-2	309.55	3.36
83	SLU 74	1	-13	2851	-2	309.55	3.36
83	SLU 75	1	-13	2851	-2	309.55	3.36
83	SLU 76	1	-13	2851	-2	309.55	3.36
83	SLU 77	1	-13	2851	-2	309.55	3.36
83	SLU 78	1	-13	2851	-2	309.55	3.36
83	SLU 79	1	-13	2851	-2	309.55	3.36
83	SLU 80	1	-13	2851	-2	309.55	3.36
83	SLU 81	0	-14	2989	-2.11	322.67	3.58
83	SLU 82	0	-14	2989	-2.11	322.67	3.58
83	SLU 83	0	-14	2989	-2.11	322.67	3.58
83	SLU 84	0	-14	2989	-2.11	322.67	3.58
83	SLE RA 1	1	-8	1893	-1.31	209.55	2.11
83	SLE RA 2	1	-8	1893	-1.31	209.55	2.11
83	SLE RA 3	1	-8	1893	-1.31	209.55	2.11
83	SLE RA 4	1	-8	1893	-1.31	209.55	2.11
83	SLE RA 5	1	-8	1893	-1.31	209.55	2.11
83	SLE RA 6	1	-8	1893	-1.31	209.55	2.11
83	SLE RA 7	1	-8	1893	-1.31	209.55	2.11
83	SLE RA 8	1	-8	1893	-1.31	209.55	2.11
83	SLE RA 9	1	-8	1893	-1.31	209.55	2.11
83	SLE RA 10	1	-9	2107	-1.47	229.96	2.46
83	SLE RA 11	1	-9	2107	-1.47	229.96	2.46
83	SLE RA 12	1	-9	2107	-1.47	229.96	2.46
83	SLE RA 13	1	-9	2107	-1.47	229.96	2.46
83	SLE RA 14	1	-9	2107	-1.47	229.96	2.46
83	SLE RA 15	1	-9	2107	-1.47	229.96	2.46
83	SLE RA 16	1	-9	2107	-1.47	229.96	2.46
83	SLE RA 17	1	-9	2107	-1.47	229.96	2.46
83	SLE RA 18	0	-10	2199	-1.55	238.71	2.6
83	SLE RA 19	0	-10	2199	-1.55	238.71	2.6
83	SLE RA 20	0	-10	2199	-1.55	238.71	2.6
83	SLE RA 21	0	-10	2199	-1.55	238.71	2.6
83	SLE FR 1	1	-8	1893	-1.31	209.55	2.11
83	SLE FR 2	1	-8	1893	-1.31	209.55	2.11
83	SLE FR 3	1	-8	1893	-1.31	209.55	2.11
83	SLE FR 4	1	-9	1985	-1.38	218.3	2.26
83	SLE FR 5	1	-9	1985	-1.38	218.3	2.26
83	SLE FR 6	1	-9	2046	-1.43	224.13	2.36
83	SLE QP 1	1	-8	1893	-1.31	209.55	2.11
83	SLE QP 2	1	-9	1985	-1.38	218.3	2.26
83	SLD 1	157	72	1808	-1.88	204.21	-18.01
83	SLD 2	180	110	1816	-1.97	204.52	-27.31
83	SLD 3	164	-145	1638	-0.39	191.39	36.53
83	SLD 4	187	-107	1645	-0.47	191.7	27.23
83	SLD 5	29	332	2188	-3.77	233.4	-83.18
83	SLD 6	53	370	2195	-3.85	233.72	-92.68
83	SLD 7	52	-393	1619	1.22	190.67	98.62
83	SLD 8	76	-354	1627	1.13	190.99	89.11
83	SLD 9	-74	337	2343	-3.89	245.61	-84.59
83	SLD 10	-50	376	2350	-3.97	245.93	-94.09
83	SLD 11	-51	-388	1774	1.1	202.87	97.21
83	SLD 12	-27	-349	1782	1.01	203.2	87.7
83	SLD 13	-185	90	2325	-2.29	244.89	-22.71
83	SLD 14	-162	128	2332	-2.37	245.21	-32.01
83	SLD 15	-179	-127	2154	-0.79	232.07	31.83
83	SLD 16	-155	-90	2161	-0.87	232.39	22.53
83	SLV 1	355	183	1590	-2.58	186.52	-45.72
83	SLV 2	408	269	1607	-2.77	187.24	-66.99
83	SLV 3	371	-327	1190	0.93	156.47	82.26
83	SLV 4	424	-241	1207	0.74	157.19	60.99
83	SLV 5	63	791	2467	-6.99	254.07	-198.38
83	SLV 6	118	881	2484	-7.19	254.82	-220.47
83	SLV 7	117	-910	1133	4.71	153.91	228.22
83	SLV 8	172	-820	1151	4.51	154.66	206.13
83	SLV 9	-170	803	2819	-7.27	281.94	-201.61



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
83	SLV 10	-115	893	2836	-7.46	282.69	-223.69
83	SLV 11	-117	-898	1485	4.43	181.78	224.99
83	SLV 12	-61	-808	1502	4.24	182.53	202.91
83	SLV 13	-422	224	2763	-3.5	279.41	-56.46
83	SLV 14	-369	310	2780	-3.69	280.13	-77.74
83	SLV 15	-406	-287	2363	0.01	249.36	71.52
83	SLV 16	-353	-200	2379	-0.18	250.08	50.24
83	CRTFP Ux+	0	0	0	0	0	0
83	CRTFP Ux-	0	0	0	0	0	0
83	CRTFP Uy+	0	0	0	0	0	0
83	CRTFP Uy-	0	0	0	0	0	0
85	SLU 1	5	-1	1772	0.16	0.08	0.03
85	SLU 2	5	-1	1772	0.16	0.08	0.03
85	SLU 3	5	-1	1772	0.16	0.08	0.03
85	SLU 4	5	-1	1772	0.16	0.08	0.03
85	SLU 5	5	-1	1772	0.16	0.08	0.03
85	SLU 6	5	-1	1772	0.16	0.08	0.03
85	SLU 7	5	-1	1772	0.16	0.08	0.03
85	SLU 8	5	-1	1772	0.16	0.08	0.03
85	SLU 9	5	-1	1772	0.16	0.08	0.03
85	SLU 10	6	-1	2116	0.27	0.09	0.03
85	SLU 11	6	-1	2116	0.27	0.09	0.03
85	SLU 12	6	-1	2116	0.27	0.09	0.03
85	SLU 13	6	-1	2116	0.27	0.09	0.03
85	SLU 14	6	-1	2116	0.27	0.09	0.03
85	SLU 15	6	-1	2116	0.27	0.09	0.03
85	SLU 16	6	-1	2116	0.27	0.09	0.03
85	SLU 17	6	-1	2116	0.27	0.09	0.03
85	SLU 18	6	0	2264	0.32	0.09	0.03
85	SLU 19	6	0	2264	0.32	0.09	0.03
85	SLU 20	6	0	2264	0.32	0.09	0.03
85	SLU 21	6	0	2264	0.32	0.09	0.03
85	SLU 22	6	-1	2027	0.24	0.09	0.03
85	SLU 23	6	-1	2027	0.24	0.09	0.03
85	SLU 24	6	-1	2027	0.24	0.09	0.03
85	SLU 25	6	-1	2027	0.24	0.09	0.03
85	SLU 26	6	-1	2027	0.24	0.09	0.03
85	SLU 27	6	-1	2027	0.24	0.09	0.03
85	SLU 28	6	-1	2027	0.24	0.09	0.03
85	SLU 29	6	-1	2027	0.24	0.09	0.03
85	SLU 30	6	-1	2027	0.24	0.09	0.03
85	SLU 31	6	0	2372	0.36	0.1	0.03
85	SLU 32	6	0	2372	0.36	0.1	0.03
85	SLU 33	6	0	2372	0.36	0.1	0.03
85	SLU 34	6	0	2372	0.36	0.1	0.03
85	SLU 35	6	0	2372	0.36	0.1	0.03
85	SLU 36	6	0	2372	0.36	0.1	0.03
85	SLU 37	6	0	2372	0.36	0.1	0.03
85	SLU 38	6	0	2372	0.36	0.1	0.03
85	SLU 39	7	0	2519	0.41	0.1	0.03
85	SLU 40	7	0	2519	0.41	0.1	0.03
85	SLU 41	7	0	2519	0.41	0.1	0.03
85	SLU 42	7	0	2519	0.41	0.1	0.03
85	SLU 43	6	-1	2216	0.17	0.1	0.03
85	SLU 44	6	-1	2216	0.17	0.1	0.03
85	SLU 45	6	-1	2216	0.17	0.1	0.03
85	SLU 46	6	-1	2216	0.17	0.1	0.03
85	SLU 47	6	-1	2216	0.17	0.1	0.03
85	SLU 48	6	-1	2216	0.17	0.1	0.03
85	SLU 49	6	-1	2216	0.17	0.1	0.03
85	SLU 50	6	-1	2216	0.17	0.1	0.03
85	SLU 51	6	-1	2216	0.17	0.1	0.03
85	SLU 52	7	-1	2560	0.29	0.11	0.04
85	SLU 53	7	-1	2560	0.29	0.11	0.04
85	SLU 54	7	-1	2560	0.29	0.11	0.04
85	SLU 55	7	-1	2560	0.29	0.11	0.04
85	SLU 56	7	-1	2560	0.29	0.11	0.04
85	SLU 57	7	-1	2560	0.29	0.11	0.04
85	SLU 58	7	-1	2560	0.29	0.11	0.04
85	SLU 59	7	-1	2560	0.29	0.11	0.04
85	SLU 60	7	-1	2708	0.34	0.11	0.04
85	SLU 61	7	-1	2708	0.34	0.11	0.04
85	SLU 62	7	-1	2708	0.34	0.11	0.04
85	SLU 63	7	-1	2708	0.34	0.11	0.04
85	SLU 64	7	-1	2472	0.26	0.11	0.03
85	SLU 65	7	-1	2472	0.26	0.11	0.03
85	SLU 66	7	-1	2472	0.26	0.11	0.03
85	SLU 67	7	-1	2472	0.26	0.11	0.03
85	SLU 68	7	-1	2472	0.26	0.11	0.03
85	SLU 69	7	-1	2472	0.26	0.11	0.03
85	SLU 70	7	-1	2472	0.26	0.11	0.03
85	SLU 71	7	-1	2472	0.26	0.11	0.03
85	SLU 72	7	-1	2472	0.26	0.11	0.03
85	SLU 73	8	-1	2816	0.38	0.12	0.04
85	SLU 74	8	-1	2816	0.38	0.12	0.04
85	SLU 75	8	-1	2816	0.38	0.12	0.04
85	SLU 76	8	-1	2816	0.38	0.12	0.04
85	SLU 77	8	-1	2816	0.38	0.12	0.04
85	SLU 78	8	-1	2816	0.38	0.12	0.04
85	SLU 79	8	-1	2816	0.38	0.12	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
85	SLU 80	8	-1	2816	0.38	0.12	0.04
85	SLU 81	8	-1	2963	0.43	0.12	0.04
85	SLU 82	8	-1	2963	0.43	0.12	0.04
85	SLU 83	8	-1	2963	0.43	0.12	0.04
85	SLU 84	8	-1	2963	0.43	0.12	0.04
85	SLE RA 1	5	-1	1845	0.18	0.08	0.03
85	SLE RA 2	5	-1	1845	0.18	0.08	0.03
85	SLE RA 3	5	-1	1845	0.18	0.08	0.03
85	SLE RA 4	5	-1	1845	0.18	0.08	0.03
85	SLE RA 5	5	-1	1845	0.18	0.08	0.03
85	SLE RA 6	5	-1	1845	0.18	0.08	0.03
85	SLE RA 7	5	-1	1845	0.18	0.08	0.03
85	SLE RA 8	5	-1	1845	0.18	0.08	0.03
85	SLE RA 9	5	-1	1845	0.18	0.08	0.03
85	SLE RA 10	6	-1	2075	0.26	0.09	0.03
85	SLE RA 11	6	-1	2075	0.26	0.09	0.03
85	SLE RA 12	6	-1	2075	0.26	0.09	0.03
85	SLE RA 13	6	-1	2075	0.26	0.09	0.03
85	SLE RA 14	6	-1	2075	0.26	0.09	0.03
85	SLE RA 15	6	-1	2075	0.26	0.09	0.03
85	SLE RA 16	6	-1	2075	0.26	0.09	0.03
85	SLE RA 17	6	-1	2075	0.26	0.09	0.03
85	SLE RA 18	6	-1	2173	0.29	0.09	0.03
85	SLE RA 19	6	-1	2173	0.29	0.09	0.03
85	SLE RA 20	6	-1	2173	0.29	0.09	0.03
85	SLE RA 21	6	-1	2173	0.29	0.09	0.03
85	SLE FR 1	5	-1	1845	0.18	0.08	0.03
85	SLE FR 2	5	-1	1845	0.18	0.08	0.03
85	SLE FR 3	5	-1	1845	0.18	0.08	0.03
85	SLE FR 4	5	-1	1943	0.21	0.08	0.03
85	SLE FR 5	5	-1	1943	0.21	0.08	0.03
85	SLE FR 6	6	-1	2009	0.24	0.09	0.03
85	SLE QP 1	5	-1	1845	0.18	0.08	0.03
85	SLE QP 2	5	-1	1943	0.21	0.08	0.03
85	SLD 1	140	6	2004	-0.04	-4.53	0.1
85	SLD 2	160	6	2004	-0.04	-4.53	0.21
85	SLD 3	145	-8	1894	0.48	-3.99	0.12
85	SLD 4	165	-8	1894	0.48	-3.99	0.23
85	SLD 5	32	23	2128	-0.65	-2.12	-0.03
85	SLD 6	53	23	2128	-0.65	-2.13	0.09
85	SLD 7	46	-25	1762	1.09	-0.31	0.05
85	SLD 8	67	-25	1762	1.09	-0.31	0.16
85	SLD 9	-56	23	2125	-0.66	0.48	-0.11
85	SLD 10	-36	23	2125	-0.66	0.48	0.01
85	SLD 11	-42	-24	1759	1.08	2.29	-0.04
85	SLD 12	-21	-24	1759	1.08	2.29	0.08
85	SLD 13	-154	7	1993	-0.05	4.16	-0.18
85	SLD 14	-134	7	1993	-0.05	4.16	-0.06
85	SLD 15	-149	-8	1883	0.47	4.7	-0.16
85	SLD 16	-129	-7	1883	0.47	4.7	-0.04
85	SLV 1	311	15	2085	-0.38	-11.17	0.18
85	SLV 2	357	15	2085	-0.38	-11.17	0.45
85	SLV 3	321	-19	1828	0.84	-9.9	0.23
85	SLV 4	367	-18	1827	0.84	-9.9	0.5
85	SLV 5	65	54	2377	-1.83	-5.22	-0.1
85	SLV 6	112	55	2377	-1.83	-5.22	0.17
85	SLV 7	98	-57	1518	2.26	-0.98	0.07
85	SLV 8	146	-56	1518	2.26	-0.98	0.34
85	SLV 9	-135	55	2369	-1.83	1.15	-0.29
85	SLV 10	-88	55	2369	-1.83	1.15	-0.01
85	SLV 11	-102	-56	1510	2.25	5.39	-0.12
85	SLV 12	-54	-56	1510	2.25	5.39	0.16
85	SLV 13	-356	17	2059	-0.41	10.07	-0.44
85	SLV 14	-310	17	2059	-0.41	10.06	-0.18
85	SLV 15	-346	-17	1802	0.81	11.34	-0.39
85	SLV 16	-300	-16	1802	0.81	11.34	-0.13
85	CRTFP Ux+	0	0	0	0	0	0
85	CRTFP Ux-	0	0	0	0	0	0
85	CRTFP Uy+	0	0	0	0	0	0
85	CRTFP Uy-	0	0	0	0	0	0
87	SLU 1	-2	-8	1807	0.07	194.12	2.16
87	SLU 2	-2	-8	1807	0.07	194.12	2.16
87	SLU 3	-2	-8	1807	0.07	194.12	2.16
87	SLU 4	-2	-8	1807	0.07	194.12	2.16
87	SLU 5	-2	-8	1807	0.07	194.12	2.16
87	SLU 6	-2	-8	1807	0.07	194.12	2.16
87	SLU 7	-2	-8	1807	0.07	194.12	2.16
87	SLU 8	-2	-8	1807	0.07	194.12	2.16
87	SLU 9	-2	-8	1807	0.07	194.12	2.16
87	SLU 10	-3	-10	2126	0.1	223.53	2.68
87	SLU 11	-3	-10	2126	0.1	223.53	2.68
87	SLU 12	-3	-10	2126	0.1	223.53	2.68
87	SLU 13	-3	-10	2126	0.1	223.53	2.68
87	SLU 14	-3	-10	2126	0.1	223.53	2.68
87	SLU 15	-3	-10	2126	0.1	223.53	2.68
87	SLU 16	-3	-10	2126	0.1	223.53	2.68
87	SLU 17	-3	-10	2126	0.1	223.53	2.68
87	SLU 18	-3	-11	2263	0.12	236.13	2.91
87	SLU 19	-3	-11	2263	0.12	236.13	2.91
87	SLU 20	-3	-11	2263	0.12	236.13	2.91



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
87	SLU 21	-3	-11	2263	0.12	236.13	2.91
87	SLU 22	-2	-10	2046	0.1	216.02	2.52
87	SLU 23	-2	-10	2046	0.1	216.02	2.52
87	SLU 24	-2	-10	2046	0.1	216.02	2.52
87	SLU 25	-2	-10	2046	0.1	216.02	2.52
87	SLU 26	-2	-10	2046	0.1	216.02	2.52
87	SLU 27	-2	-10	2046	0.1	216.02	2.52
87	SLU 28	-2	-10	2046	0.1	216.02	2.52
87	SLU 29	-2	-10	2046	0.1	216.02	2.52
87	SLU 30	-2	-10	2046	0.1	216.02	2.52
87	SLU 31	-3	-12	2365	0.14	245.43	3.05
87	SLU 32	-3	-12	2365	0.14	245.43	3.05
87	SLU 33	-3	-12	2365	0.14	245.43	3.05
87	SLU 34	-3	-12	2365	0.14	245.43	3.05
87	SLU 35	-3	-12	2365	0.14	245.43	3.05
87	SLU 36	-3	-12	2365	0.14	245.43	3.05
87	SLU 37	-3	-12	2365	0.14	245.43	3.05
87	SLU 38	-3	-12	2365	0.14	245.43	3.05
87	SLU 39	-4	-13	2501	0.15	258.03	3.27
87	SLU 40	-4	-13	2501	0.15	258.03	3.27
87	SLU 41	-4	-13	2501	0.15	258.03	3.27
87	SLU 42	-4	-13	2501	0.15	258.03	3.27
87	SLU 43	-2	-10	2268	0.08	244.84	2.68
87	SLU 44	-2	-10	2268	0.08	244.84	2.68
87	SLU 45	-2	-10	2268	0.08	244.84	2.68
87	SLU 46	-2	-10	2268	0.08	244.84	2.68
87	SLU 47	-2	-10	2268	0.08	244.84	2.68
87	SLU 48	-2	-10	2268	0.08	244.84	2.68
87	SLU 49	-2	-10	2268	0.08	244.84	2.68
87	SLU 50	-2	-10	2268	0.08	244.84	2.68
87	SLU 51	-2	-10	2268	0.08	244.84	2.68
87	SLU 52	-3	-12	2587	0.11	274.26	3.2
87	SLU 53	-3	-12	2587	0.11	274.26	3.2
87	SLU 54	-3	-12	2587	0.11	274.26	3.2
87	SLU 55	-3	-12	2587	0.11	274.26	3.2
87	SLU 56	-3	-12	2587	0.11	274.26	3.2
87	SLU 57	-3	-12	2587	0.11	274.26	3.2
87	SLU 58	-3	-12	2587	0.11	274.26	3.2
87	SLU 59	-3	-12	2587	0.11	274.26	3.2
87	SLU 60	-3	-13	2723	0.13	286.86	3.43
87	SLU 61	-3	-13	2723	0.13	286.86	3.43
87	SLU 62	-3	-13	2723	0.13	286.86	3.43
87	SLU 63	-3	-13	2723	0.13	286.86	3.43
87	SLU 64	-3	-12	2506	0.11	266.74	3.04
87	SLU 65	-3	-12	2506	0.11	266.74	3.04
87	SLU 66	-3	-12	2506	0.11	266.74	3.04
87	SLU 67	-3	-12	2506	0.11	266.74	3.04
87	SLU 68	-3	-12	2506	0.11	266.74	3.04
87	SLU 69	-3	-12	2506	0.11	266.74	3.04
87	SLU 70	-3	-12	2506	0.11	266.74	3.04
87	SLU 71	-3	-12	2506	0.11	266.74	3.04
87	SLU 72	-3	-12	2506	0.11	266.74	3.04
87	SLU 73	-4	-14	2825	0.15	296.16	3.57
87	SLU 74	-4	-14	2825	0.15	296.16	3.57
87	SLU 75	-4	-14	2825	0.15	296.16	3.57
87	SLU 76	-4	-14	2825	0.15	296.16	3.57
87	SLU 77	-4	-14	2825	0.15	296.16	3.57
87	SLU 78	-4	-14	2825	0.15	296.16	3.57
87	SLU 79	-4	-14	2825	0.15	296.16	3.57
87	SLU 80	-4	-14	2825	0.15	296.16	3.57
87	SLU 81	-4	-15	2962	0.16	308.76	3.79
87	SLU 82	-4	-15	2962	0.16	308.76	3.79
87	SLU 83	-4	-15	2962	0.16	308.76	3.79
87	SLU 84	-4	-15	2962	0.16	308.76	3.79
87	SLE RA 1	-2	-9	1875	0.08	200.37	2.26
87	SLE RA 2	-2	-9	1875	0.08	200.37	2.26
87	SLE RA 3	-2	-9	1875	0.08	200.37	2.26
87	SLE RA 4	-2	-9	1875	0.08	200.37	2.26
87	SLE RA 5	-2	-9	1875	0.08	200.37	2.26
87	SLE RA 6	-2	-9	1875	0.08	200.37	2.26
87	SLE RA 7	-2	-9	1875	0.08	200.37	2.26
87	SLE RA 8	-2	-9	1875	0.08	200.37	2.26
87	SLE RA 9	-2	-9	1875	0.08	200.37	2.26
87	SLE RA 10	-3	-10	2088	0.1	219.98	2.61
87	SLE RA 11	-3	-10	2088	0.1	219.98	2.61
87	SLE RA 12	-3	-10	2088	0.1	219.98	2.61
87	SLE RA 13	-3	-10	2088	0.1	219.98	2.61
87	SLE RA 14	-3	-10	2088	0.1	219.98	2.61
87	SLE RA 15	-3	-10	2088	0.1	219.98	2.61
87	SLE RA 16	-3	-10	2088	0.1	219.98	2.61
87	SLE RA 17	-3	-10	2088	0.1	219.98	2.61
87	SLE RA 18	-3	-11	2179	0.11	228.39	2.76
87	SLE RA 19	-3	-11	2179	0.11	228.39	2.76
87	SLE RA 20	-3	-11	2179	0.11	228.39	2.76
87	SLE RA 21	-3	-11	2179	0.11	228.39	2.76
87	SLE FR 1	-2	-9	1875	0.08	200.37	2.26
87	SLE FR 2	-2	-9	1875	0.08	200.37	2.26
87	SLE FR 3	-2	-9	1875	0.08	200.37	2.26
87	SLE FR 4	-2	-9	1966	0.09	208.78	2.41
87	SLE FR 5	-2	-9	1966	0.09	208.78	2.41



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
87	SLE FR 6	-2	-10	2027	0.09	214.38	2.51
87	SLE QP 1	-2	-9	1875	0.08	200.37	2.26
87	SLE QP 2	-2	-9	1966	0.09	208.78	2.41
87	SLD 1	156	72	1773	-0.62	191.42	-17.93
87	SLD 2	175	110	1778	-0.7	191.19	-27.24
87	SLD 3	153	-146	1642	0.71	187.02	36.67
87	SLD 4	172	-108	1647	0.64	186.8	27.36
87	SLD 5	42	331	2104	-2.12	210.32	-83.14
87	SLD 6	61	370	2109	-2.2	210.09	-92.66
87	SLD 7	34	-394	1670	2.32	195.66	98.87
87	SLD 8	54	-355	1675	2.25	195.43	89.35
87	SLD 9	-58	337	2258	-2.07	222.12	-84.52
87	SLD 10	-39	375	2263	-2.15	221.89	-94.04
87	SLD 11	-65	-388	1823	2.37	207.47	97.48
87	SLD 12	-46	-350	1829	2.29	207.24	87.96
87	SLD 13	-177	90	2286	-0.46	230.76	-22.54
87	SLD 14	-158	127	2291	-0.54	230.53	-31.85
87	SLD 15	-179	-128	2155	0.87	226.36	32.07
87	SLD 16	-160	-90	2160	0.79	226.14	22.75
87	SLV 1	356	182	1531	-1.57	169.22	-45.73
87	SLV 2	399	269	1543	-1.75	168.71	-67.04
87	SLV 3	351	-328	1225	1.56	158.94	82.4
87	SLV 4	394	-242	1237	1.38	158.43	61.09
87	SLV 5	97	790	2296	-5.09	212.7	-198.5
87	SLV 6	142	880	2308	-5.27	212.16	-220.62
87	SLV 7	80	-911	1276	5.34	178.42	228.6
87	SLV 8	125	-821	1288	5.16	177.89	206.48
87	SLV 9	-129	803	2645	-4.98	239.67	-201.66
87	SLV 10	-84	892	2657	-5.16	239.14	-223.78
87	SLV 11	-146	-899	1625	5.45	205.39	225.44
87	SLV 12	-101	-809	1637	5.26	204.86	203.32
87	SLV 13	-398	223	2696	-1.21	259.13	-56.27
87	SLV 14	-355	310	2708	-1.38	258.62	-77.58
87	SLV 15	-404	-287	2390	1.92	248.85	71.86
87	SLV 16	-360	-201	2402	1.74	248.33	50.55
87	CRTFP Ux+	0	0	0	0	0	0
87	CRTFP Ux-	0	0	0	0	0	0
87	CRTFP Uy+	0	0	0	0	0	0
87	CRTFP Uy-	0	0	0	0	0	0
89	SLU 1	4	-1	1781	0.36	0.07	0.03
89	SLU 2	4	-1	1781	0.36	0.07	0.03
89	SLU 3	4	-1	1781	0.36	0.07	0.03
89	SLU 4	4	-1	1781	0.36	0.07	0.03
89	SLU 5	4	-1	1781	0.36	0.07	0.03
89	SLU 6	4	-1	1781	0.36	0.07	0.03
89	SLU 7	4	-1	1781	0.36	0.07	0.03
89	SLU 8	4	-1	1781	0.36	0.07	0.03
89	SLU 9	4	-1	1781	0.36	0.07	0.03
89	SLU 10	5	0	2130	0.54	0.08	0.03
89	SLU 11	5	0	2130	0.54	0.08	0.03
89	SLU 12	5	0	2130	0.54	0.08	0.03
89	SLU 13	5	0	2130	0.54	0.08	0.03
89	SLU 14	5	0	2130	0.54	0.08	0.03
89	SLU 15	5	0	2130	0.54	0.08	0.03
89	SLU 16	5	0	2130	0.54	0.08	0.03
89	SLU 17	5	0	2130	0.54	0.08	0.03
89	SLU 18	5	0	2280	0.61	0.09	0.03
89	SLU 19	5	0	2280	0.61	0.09	0.03
89	SLU 20	5	0	2280	0.61	0.09	0.03
89	SLU 21	5	0	2280	0.61	0.09	0.03
89	SLU 22	5	-1	2040	0.49	0.08	0.03
89	SLU 23	5	-1	2040	0.49	0.08	0.03
89	SLU 24	5	-1	2040	0.49	0.08	0.03
89	SLU 25	5	-1	2040	0.49	0.08	0.03
89	SLU 26	5	-1	2040	0.49	0.08	0.03
89	SLU 27	5	-1	2040	0.49	0.08	0.03
89	SLU 28	5	-1	2040	0.49	0.08	0.03
89	SLU 29	5	-1	2040	0.49	0.08	0.03
89	SLU 30	5	-1	2040	0.49	0.08	0.03
89	SLU 31	5	0	2389	0.67	0.09	0.03
89	SLU 32	5	0	2389	0.67	0.09	0.03
89	SLU 33	5	0	2389	0.67	0.09	0.03
89	SLU 34	5	0	2389	0.67	0.09	0.03
89	SLU 35	5	0	2389	0.67	0.09	0.03
89	SLU 36	5	0	2389	0.67	0.09	0.03
89	SLU 37	5	0	2389	0.67	0.09	0.03
89	SLU 38	5	0	2389	0.67	0.09	0.03
89	SLU 39	6	0	2539	0.74	0.1	0.03
89	SLU 40	6	0	2539	0.74	0.1	0.03
89	SLU 41	6	0	2539	0.74	0.1	0.03
89	SLU 42	6	0	2539	0.74	0.1	0.03
89	SLU 43	5	-1	2227	0.42	0.09	0.03
89	SLU 44	5	-1	2227	0.42	0.09	0.03
89	SLU 45	5	-1	2227	0.42	0.09	0.03
89	SLU 46	5	-1	2227	0.42	0.09	0.03
89	SLU 47	5	-1	2227	0.42	0.09	0.03
89	SLU 48	5	-1	2227	0.42	0.09	0.03
89	SLU 49	5	-1	2227	0.42	0.09	0.03
89	SLU 50	5	-1	2227	0.42	0.09	0.03
89	SLU 51	5	-1	2227	0.42	0.09	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
89	SLU 52	6	-1	2576	0.6	0.1	0.04
89	SLU 53	6	-1	2576	0.6	0.1	0.04
89	SLU 54	6	-1	2576	0.6	0.1	0.04
89	SLU 55	6	-1	2576	0.6	0.1	0.04
89	SLU 56	6	-1	2576	0.6	0.1	0.04
89	SLU 57	6	-1	2576	0.6	0.1	0.04
89	SLU 58	6	-1	2576	0.6	0.1	0.04
89	SLU 59	6	-1	2576	0.6	0.1	0.04
89	SLU 60	6	-1	2725	0.67	0.11	0.04
89	SLU 61	6	-1	2725	0.67	0.11	0.04
89	SLU 62	6	-1	2725	0.67	0.11	0.04
89	SLU 63	6	-1	2725	0.67	0.11	0.04
89	SLU 64	6	-1	2485	0.55	0.1	0.03
89	SLU 65	6	-1	2485	0.55	0.1	0.03
89	SLU 66	6	-1	2485	0.55	0.1	0.03
89	SLU 67	6	-1	2485	0.55	0.1	0.03
89	SLU 68	6	-1	2485	0.55	0.1	0.03
89	SLU 69	6	-1	2485	0.55	0.1	0.03
89	SLU 70	6	-1	2485	0.55	0.1	0.03
89	SLU 71	6	-1	2485	0.55	0.1	0.03
89	SLU 72	6	-1	2485	0.55	0.1	0.03
89	SLU 73	6	-1	2834	0.73	0.11	0.04
89	SLU 74	6	-1	2834	0.73	0.11	0.04
89	SLU 75	6	-1	2834	0.73	0.11	0.04
89	SLU 76	6	-1	2834	0.73	0.11	0.04
89	SLU 77	6	-1	2834	0.73	0.11	0.04
89	SLU 78	6	-1	2834	0.73	0.11	0.04
89	SLU 79	6	-1	2834	0.73	0.11	0.04
89	SLU 80	6	-1	2834	0.73	0.11	0.04
89	SLU 81	7	0	2984	0.81	0.11	0.04
89	SLU 82	7	0	2984	0.81	0.11	0.04
89	SLU 83	7	0	2984	0.81	0.11	0.04
89	SLU 84	7	0	2984	0.81	0.11	0.04
89	SLE RA 1	4	-1	1855	0.4	0.07	0.03
89	SLE RA 2	4	-1	1855	0.4	0.07	0.03
89	SLE RA 3	4	-1	1855	0.4	0.07	0.03
89	SLE RA 4	4	-1	1855	0.4	0.07	0.03
89	SLE RA 5	4	-1	1855	0.4	0.07	0.03
89	SLE RA 6	4	-1	1855	0.4	0.07	0.03
89	SLE RA 7	4	-1	1855	0.4	0.07	0.03
89	SLE RA 8	4	-1	1855	0.4	0.07	0.03
89	SLE RA 9	4	-1	1855	0.4	0.07	0.03
89	SLE RA 10	5	0	2088	0.51	0.08	0.03
89	SLE RA 11	5	0	2088	0.51	0.08	0.03
89	SLE RA 12	5	0	2088	0.51	0.08	0.03
89	SLE RA 13	5	0	2088	0.51	0.08	0.03
89	SLE RA 14	5	0	2088	0.51	0.08	0.03
89	SLE RA 15	5	0	2088	0.51	0.08	0.03
89	SLE RA 16	5	0	2088	0.51	0.08	0.03
89	SLE RA 17	5	0	2088	0.51	0.08	0.03
89	SLE RA 18	5	0	2187	0.56	0.08	0.03
89	SLE RA 19	5	0	2187	0.56	0.08	0.03
89	SLE RA 20	5	0	2187	0.56	0.08	0.03
89	SLE RA 21	5	0	2187	0.56	0.08	0.03
89	SLE FR 1	4	-1	1855	0.4	0.07	0.03
89	SLE FR 2	4	-1	1855	0.4	0.07	0.03
89	SLE FR 3	4	-1	1855	0.4	0.07	0.03
89	SLE FR 4	4	-1	1955	0.45	0.08	0.03
89	SLE FR 5	4	-1	1955	0.45	0.08	0.03
89	SLE FR 6	5	-1	2021	0.48	0.08	0.03
89	SLE QP 1	4	-1	1855	0.4	0.07	0.03
89	SLE QP 2	4	-1	1955	0.45	0.08	0.03
89	SLD 1	138	6	2007	0.2	-4.93	0.05
89	SLD 2	154	6	2007	0.2	-4.93	0.16
89	SLD 3	141	-8	1914	0.7	-4.34	0.07
89	SLD 4	158	-8	1914	0.71	-4.34	0.18
89	SLD 5	33	23	2112	-0.39	-2.32	-0.04
89	SLD 6	50	23	2111	-0.39	-2.32	0.08
89	SLD 7	45	-25	1801	1.28	-0.35	0.03
89	SLD 8	62	-24	1801	1.29	-0.35	0.15
89	SLD 9	-53	23	2108	-0.39	0.51	-0.09
89	SLD 10	-36	24	2108	-0.39	0.51	0.02
89	SLD 11	-41	-24	1798	1.28	2.47	-0.02
89	SLD 12	-24	-24	1798	1.28	2.47	0.09
89	SLD 13	-149	7	1996	0.19	4.49	-0.13
89	SLD 14	-132	7	1995	0.19	4.49	-0.01
89	SLD 15	-145	-7	1903	0.69	5.08	-0.11
89	SLD 16	-129	-7	1902	0.69	5.08	0.01
89	SLV 1	307	15	2077	-0.13	-12.09	0.07
89	SLV 2	344	15	2077	-0.12	-12.09	0.33
89	SLV 3	315	-19	1859	1.05	-10.71	0.12
89	SLV 4	352	-18	1858	1.05	-10.71	0.38
89	SLV 5	69	55	2322	-1.51	-5.67	-0.13
89	SLV 6	107	55	2322	-1.51	-5.67	0.14
89	SLV 7	97	-57	1595	2.41	-1.07	0.04
89	SLV 8	135	-56	1595	2.42	-1.07	0.3
89	SLV 9	-126	55	2315	-1.52	1.22	-0.25
89	SLV 10	-88	56	2314	-1.52	1.22	0.02
89	SLV 11	-98	-56	1587	2.4	5.82	-0.08
89	SLV 12	-60	-56	1587	2.41	5.82	0.18



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
89	SLV 13	-343	17	2051	-0.16	10.87	-0.33
89	SLV 14	-306	17	2051	-0.16	10.87	-0.07
89	SLV 15	-335	-17	1833	1.02	12.25	-0.28
89	SLV 16	-298	-16	1832	1.02	12.25	-0.02
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
91	SLU 1	-4	-9	1825	1.16	207.86	2.3
91	SLU 2	-4	-9	1825	1.16	207.86	2.3
91	SLU 3	-4	-9	1825	1.16	207.86	2.3
91	SLU 4	-4	-9	1825	1.16	207.86	2.3
91	SLU 5	-4	-9	1825	1.16	207.86	2.3
91	SLU 6	-4	-9	1825	1.16	207.86	2.3
91	SLU 7	-4	-9	1825	1.16	207.86	2.3
91	SLU 8	-4	-9	1825	1.16	207.86	2.3
91	SLU 9	-4	-9	1825	1.16	207.86	2.3
91	SLU 10	-6	-11	2148	1.43	240.81	2.83
91	SLU 11	-6	-11	2148	1.43	240.81	2.83
91	SLU 12	-6	-11	2148	1.43	240.81	2.83
91	SLU 13	-6	-11	2148	1.43	240.81	2.83
91	SLU 14	-6	-11	2148	1.43	240.81	2.83
91	SLU 15	-6	-11	2148	1.43	240.81	2.83
91	SLU 16	-6	-11	2148	1.43	240.81	2.83
91	SLU 17	-6	-11	2148	1.43	240.81	2.83
91	SLU 18	-7	-12	2287	1.55	254.94	3.06
91	SLU 19	-7	-12	2287	1.55	254.94	3.06
91	SLU 20	-7	-12	2287	1.55	254.94	3.06
91	SLU 21	-7	-12	2287	1.55	254.94	3.06
91	SLU 22	-5	-10	2067	1.37	232.42	2.67
91	SLU 23	-5	-10	2067	1.37	232.42	2.67
91	SLU 24	-5	-10	2067	1.37	232.42	2.67
91	SLU 25	-5	-10	2067	1.37	232.42	2.67
91	SLU 26	-5	-10	2067	1.37	232.42	2.67
91	SLU 27	-5	-10	2067	1.37	232.42	2.67
91	SLU 28	-5	-10	2067	1.37	232.42	2.67
91	SLU 29	-5	-10	2067	1.37	232.42	2.67
91	SLU 30	-5	-10	2067	1.37	232.42	2.67
91	SLU 31	-7	-12	2390	1.64	265.37	3.21
91	SLU 32	-7	-12	2390	1.64	265.37	3.21
91	SLU 33	-7	-12	2390	1.64	265.37	3.21
91	SLU 34	-7	-12	2390	1.64	265.37	3.21
91	SLU 35	-7	-12	2390	1.64	265.37	3.21
91	SLU 36	-7	-12	2390	1.64	265.37	3.21
91	SLU 37	-7	-12	2390	1.64	265.37	3.21
91	SLU 38	-7	-12	2390	1.64	265.37	3.21
91	SLU 39	-8	-13	2529	1.76	279.5	3.44
91	SLU 40	-8	-13	2529	1.76	279.5	3.44
91	SLU 41	-8	-13	2529	1.76	279.5	3.44
91	SLU 42	-8	-13	2529	1.76	279.5	3.44
91	SLU 43	-5	-11	2289	1.43	261.79	2.85
91	SLU 44	-5	-11	2289	1.43	261.79	2.85
91	SLU 45	-5	-11	2289	1.43	261.79	2.85
91	SLU 46	-5	-11	2289	1.43	261.79	2.85
91	SLU 47	-5	-11	2289	1.43	261.79	2.85
91	SLU 48	-5	-11	2289	1.43	261.79	2.85
91	SLU 49	-5	-11	2289	1.43	261.79	2.85
91	SLU 50	-5	-11	2289	1.43	261.79	2.85
91	SLU 51	-5	-11	2289	1.43	261.79	2.85
91	SLU 52	-7	-13	2613	1.71	294.75	3.39
91	SLU 53	-7	-13	2613	1.71	294.75	3.39
91	SLU 54	-7	-13	2613	1.71	294.75	3.39
91	SLU 55	-7	-13	2613	1.71	294.75	3.39
91	SLU 56	-7	-13	2613	1.71	294.75	3.39
91	SLU 57	-7	-13	2613	1.71	294.75	3.39
91	SLU 58	-7	-13	2613	1.71	294.75	3.39
91	SLU 59	-7	-13	2613	1.71	294.75	3.39
91	SLU 60	-7	-14	2751	1.82	308.88	3.62
91	SLU 61	-7	-14	2751	1.82	308.88	3.62
91	SLU 62	-7	-14	2751	1.82	308.88	3.62
91	SLU 63	-7	-14	2751	1.82	308.88	3.62
91	SLU 64	-6	-12	2531	1.64	286.35	3.23
91	SLU 65	-6	-12	2531	1.64	286.35	3.23
91	SLU 66	-6	-12	2531	1.64	286.35	3.23
91	SLU 67	-6	-12	2531	1.64	286.35	3.23
91	SLU 68	-6	-12	2531	1.64	286.35	3.23
91	SLU 69	-6	-12	2531	1.64	286.35	3.23
91	SLU 70	-6	-12	2531	1.64	286.35	3.23
91	SLU 71	-6	-12	2531	1.64	286.35	3.23
91	SLU 72	-6	-12	2531	1.64	286.35	3.23
91	SLU 73	-8	-15	2854	1.92	319.31	3.77
91	SLU 74	-8	-15	2854	1.92	319.31	3.77
91	SLU 75	-8	-15	2854	1.92	319.31	3.77
91	SLU 76	-8	-15	2854	1.92	319.31	3.77
91	SLU 77	-8	-15	2854	1.92	319.31	3.77
91	SLU 78	-8	-15	2854	1.92	319.31	3.77
91	SLU 79	-8	-15	2854	1.92	319.31	3.77
91	SLU 80	-8	-15	2854	1.92	319.31	3.77
91	SLU 81	-9	-15	2993	2.03	333.44	4
91	SLU 82	-9	-15	2993	2.03	333.44	4



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
91	SLU 83	-9	-15	2993	2.03	333.44	4
91	SLU 84	-9	-15	2993	2.03	333.44	4
91	SLE RA 1	-5	-9	1894	1.22	214.87	2.4
91	SLE RA 2	-5	-9	1894	1.22	214.87	2.4
91	SLE RA 3	-5	-9	1894	1.22	214.87	2.4
91	SLE RA 4	-5	-9	1894	1.22	214.87	2.4
91	SLE RA 5	-5	-9	1894	1.22	214.87	2.4
91	SLE RA 6	-5	-9	1894	1.22	214.87	2.4
91	SLE RA 7	-5	-9	1894	1.22	214.87	2.4
91	SLE RA 8	-5	-9	1894	1.22	214.87	2.4
91	SLE RA 9	-5	-9	1894	1.22	214.87	2.4
91	SLE RA 10	-6	-11	2109	1.4	236.85	2.76
91	SLE RA 11	-6	-11	2109	1.4	236.85	2.76
91	SLE RA 12	-6	-11	2109	1.4	236.85	2.76
91	SLE RA 13	-6	-11	2109	1.4	236.85	2.76
91	SLE RA 14	-6	-11	2109	1.4	236.85	2.76
91	SLE RA 15	-6	-11	2109	1.4	236.85	2.76
91	SLE RA 16	-6	-11	2109	1.4	236.85	2.76
91	SLE RA 17	-6	-11	2109	1.4	236.85	2.76
91	SLE RA 18	-6	-11	2202	1.48	246.26	2.92
91	SLE RA 19	-6	-11	2202	1.48	246.26	2.92
91	SLE RA 20	-6	-11	2202	1.48	246.26	2.92
91	SLE RA 21	-6	-11	2202	1.48	246.26	2.92
91	SLE FR 1	-5	-9	1894	1.22	214.87	2.4
91	SLE FR 2	-5	-9	1894	1.22	214.87	2.4
91	SLE FR 3	-5	-9	1894	1.22	214.87	2.4
91	SLE FR 4	-5	-10	1986	1.3	224.29	2.56
91	SLE FR 5	-5	-10	1986	1.3	224.29	2.56
91	SLE FR 6	-5	-10	2048	1.35	230.57	2.66
91	SLE QP 1	-5	-9	1894	1.22	214.87	2.4
91	SLE QP 2	-5	-10	1986	1.3	224.29	2.56
91	SLD 1	154	71	1770	0.43	200.91	-17.8
91	SLD 2	169	109	1773	0.35	200.26	-27.13
91	SLD 3	148	-146	1676	1.63	202.7	36.74
91	SLD 4	163	-108	1678	1.55	202.05	27.41
91	SLD 5	47	330	2064	-0.76	214.8	-82.9
91	SLD 6	62	369	2067	-0.83	214.13	-92.43
91	SLD 7	26	-394	1749	3.24	220.76	98.9
91	SLD 8	41	-355	1751	3.17	220.1	89.37
91	SLD 9	-51	336	2221	-0.58	228.48	-84.25
91	SLD 10	-36	374	2224	-0.65	227.82	-93.78
91	SLD 11	-73	-389	1906	3.42	234.44	97.55
91	SLD 12	-57	-350	1909	3.35	233.78	88.02
91	SLD 13	-173	89	2294	1.04	246.53	-22.3
91	SLD 14	-158	127	2297	0.96	245.88	-31.62
91	SLD 15	-179	-128	2199	2.24	248.32	32.24
91	SLD 16	-164	-91	2202	2.16	247.67	22.92
91	SLV 1	357	181	1499	-0.72	170.85	-45.63
91	SLV 2	391	268	1505	-0.89	169.36	-66.95
91	SLV 3	341	-328	1277	2.09	175.13	82.36
91	SLV 4	375	-242	1284	1.93	173.65	61.03
91	SLV 5	114	789	2174	-3.52	202.31	-198.14
91	SLV 6	149	879	2181	-3.69	200.76	-220.28
91	SLV 7	63	-911	1435	5.87	216.59	228.48
91	SLV 8	99	-821	1442	5.7	215.05	206.34
91	SLV 9	-109	801	2531	-3.11	233.53	-201.22
91	SLV 10	-73	891	2538	-3.28	231.99	-223.37
91	SLV 11	-159	-898	1792	6.28	247.82	225.39
91	SLV 12	-124	-809	1798	6.11	246.27	203.25
91	SLV 13	-386	222	2689	0.66	274.93	-55.92
91	SLV 14	-351	309	2695	0.5	273.44	-77.25
91	SLV 15	-401	-288	2467	3.48	279.22	72.07
91	SLV 16	-367	-201	2473	3.31	277.73	50.74
91	CRTFP Ux+	0	0	0	0	0	0
91	CRTFP Ux-	0	0	0	0	0	0
91	CRTFP Uy+	0	0	0	0	0	0
91	CRTFP Uy-	0	0	0	0	0	0
93	SLU 1	3	-1	1794	0.43	0.09	0.02
93	SLU 2	3	-1	1794	0.43	0.09	0.02
93	SLU 3	3	-1	1794	0.43	0.09	0.02
93	SLU 4	3	-1	1794	0.43	0.09	0.02
93	SLU 5	3	-1	1794	0.43	0.09	0.02
93	SLU 6	3	-1	1794	0.43	0.09	0.02
93	SLU 7	3	-1	1794	0.43	0.09	0.02
93	SLU 8	3	-1	1794	0.43	0.09	0.02
93	SLU 9	3	-1	1794	0.43	0.09	0.02
93	SLU 10	4	0	2150	0.64	0.11	0.03
93	SLU 11	4	0	2150	0.64	0.11	0.03
93	SLU 12	4	0	2150	0.64	0.11	0.03
93	SLU 13	4	0	2150	0.64	0.11	0.03
93	SLU 14	4	0	2150	0.64	0.11	0.03
93	SLU 15	4	0	2150	0.64	0.11	0.03
93	SLU 16	4	0	2150	0.64	0.11	0.03
93	SLU 17	4	0	2150	0.64	0.11	0.03
93	SLU 18	4	0	2302	0.73	0.11	0.03
93	SLU 19	4	0	2302	0.73	0.11	0.03
93	SLU 20	4	0	2302	0.73	0.11	0.03
93	SLU 21	4	0	2302	0.73	0.11	0.03
93	SLU 22	4	0	2058	0.59	0.1	0.03
93	SLU 23	4	0	2058	0.59	0.1	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
93	SLU 24	4	0	2058	0.59	0.1	0.03
93	SLU 25	4	0	2058	0.59	0.1	0.03
93	SLU 26	4	0	2058	0.59	0.1	0.03
93	SLU 27	4	0	2058	0.59	0.1	0.03
93	SLU 28	4	0	2058	0.59	0.1	0.03
93	SLU 29	4	0	2058	0.59	0.1	0.03
93	SLU 30	4	0	2058	0.59	0.1	0.03
93	SLU 31	4	0	2413	0.79	0.12	0.03
93	SLU 32	4	0	2413	0.79	0.12	0.03
93	SLU 33	4	0	2413	0.79	0.12	0.03
93	SLU 34	4	0	2413	0.79	0.12	0.03
93	SLU 35	4	0	2413	0.79	0.12	0.03
93	SLU 36	4	0	2413	0.79	0.12	0.03
93	SLU 37	4	0	2413	0.79	0.12	0.03
93	SLU 38	4	0	2413	0.79	0.12	0.03
93	SLU 39	5	0	2566	0.88	0.12	0.03
93	SLU 40	5	0	2566	0.88	0.12	0.03
93	SLU 41	5	0	2566	0.88	0.12	0.03
93	SLU 42	5	0	2566	0.88	0.12	0.03
93	SLU 43	4	-1	2242	0.51	0.12	0.03
93	SLU 44	4	-1	2242	0.51	0.12	0.03
93	SLU 45	4	-1	2242	0.51	0.12	0.03
93	SLU 46	4	-1	2242	0.51	0.12	0.03
93	SLU 47	4	-1	2242	0.51	0.12	0.03
93	SLU 48	4	-1	2242	0.51	0.12	0.03
93	SLU 49	4	-1	2242	0.51	0.12	0.03
93	SLU 50	4	-1	2242	0.51	0.12	0.03
93	SLU 51	4	-1	2242	0.51	0.12	0.03
93	SLU 52	5	0	2598	0.72	0.13	0.03
93	SLU 53	5	0	2598	0.72	0.13	0.03
93	SLU 54	5	0	2598	0.72	0.13	0.03
93	SLU 55	5	0	2598	0.72	0.13	0.03
93	SLU 56	5	0	2598	0.72	0.13	0.03
93	SLU 57	5	0	2598	0.72	0.13	0.03
93	SLU 58	5	0	2598	0.72	0.13	0.03
93	SLU 59	5	0	2598	0.72	0.13	0.03
93	SLU 60	5	0	2750	0.81	0.14	0.04
93	SLU 61	5	0	2750	0.81	0.14	0.04
93	SLU 62	5	0	2750	0.81	0.14	0.04
93	SLU 63	5	0	2750	0.81	0.14	0.04
93	SLU 64	5	-1	2506	0.66	0.13	0.03
93	SLU 65	5	-1	2506	0.66	0.13	0.03
93	SLU 66	5	-1	2506	0.66	0.13	0.03
93	SLU 67	5	-1	2506	0.66	0.13	0.03
93	SLU 68	5	-1	2506	0.66	0.13	0.03
93	SLU 69	5	-1	2506	0.66	0.13	0.03
93	SLU 70	5	-1	2506	0.66	0.13	0.03
93	SLU 71	5	-1	2506	0.66	0.13	0.03
93	SLU 72	5	-1	2506	0.66	0.13	0.03
93	SLU 73	5	0	2861	0.87	0.14	0.04
93	SLU 74	5	0	2861	0.87	0.14	0.04
93	SLU 75	5	0	2861	0.87	0.14	0.04
93	SLU 76	5	0	2861	0.87	0.14	0.04
93	SLU 77	5	0	2861	0.87	0.14	0.04
93	SLU 78	5	0	2861	0.87	0.14	0.04
93	SLU 79	5	0	2861	0.87	0.14	0.04
93	SLU 80	5	0	2861	0.87	0.14	0.04
93	SLU 81	5	0	3013	0.96	0.15	0.04
93	SLU 82	5	0	3013	0.96	0.15	0.04
93	SLU 83	5	0	3013	0.96	0.15	0.04
93	SLU 84	5	0	3013	0.96	0.15	0.04
93	SLE RA 1	3	0	1870	0.48	0.09	0.02
93	SLE RA 2	3	0	1870	0.48	0.09	0.02
93	SLE RA 3	3	0	1870	0.48	0.09	0.02
93	SLE RA 4	3	0	1870	0.48	0.09	0.02
93	SLE RA 5	3	0	1870	0.48	0.09	0.02
93	SLE RA 6	3	0	1870	0.48	0.09	0.02
93	SLE RA 7	3	0	1870	0.48	0.09	0.02
93	SLE RA 8	3	0	1870	0.48	0.09	0.02
93	SLE RA 9	3	0	1870	0.48	0.09	0.02
93	SLE RA 10	4	0	2107	0.62	0.1	0.03
93	SLE RA 11	4	0	2107	0.62	0.1	0.03
93	SLE RA 12	4	0	2107	0.62	0.1	0.03
93	SLE RA 13	4	0	2107	0.62	0.1	0.03
93	SLE RA 14	4	0	2107	0.62	0.1	0.03
93	SLE RA 15	4	0	2107	0.62	0.1	0.03
93	SLE RA 16	4	0	2107	0.62	0.1	0.03
93	SLE RA 17	4	0	2107	0.62	0.1	0.03
93	SLE RA 18	4	0	2208	0.67	0.11	0.03
93	SLE RA 19	4	0	2208	0.67	0.11	0.03
93	SLE RA 20	4	0	2208	0.67	0.11	0.03
93	SLE RA 21	4	0	2208	0.67	0.11	0.03
93	SLE FR 1	3	0	1870	0.48	0.09	0.02
93	SLE FR 2	3	0	1870	0.48	0.09	0.02
93	SLE FR 3	3	0	1870	0.48	0.09	0.02
93	SLE FR 4	4	0	1971	0.54	0.1	0.03
93	SLE FR 5	4	0	1971	0.54	0.1	0.03
93	SLE FR 6	4	0	2039	0.58	0.1	0.03
93	SLE QP 1	3	0	1870	0.48	0.09	0.02
93	SLE QP 2	4	0	1971	0.54	0.1	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
93	SLD 1	137	6	2015	0.3	-4.95	0
93	SLD 2	150	7	2015	0.3	-4.95	0.1
93	SLD 3	140	-8	1939	0.79	-4.36	0.02
93	SLD 4	153	-8	1939	0.79	-4.36	0.12
93	SLD 5	35	23	2101	-0.29	-2.31	-0.05
93	SLD 6	48	24	2101	-0.28	-2.31	0.06
93	SLD 7	44	-25	1845	1.36	-0.35	0.01
93	SLD 8	57	-24	1845	1.36	-0.34	0.12
93	SLD 9	-50	24	2097	-0.29	0.54	-0.07
93	SLD 10	-37	24	2097	-0.29	0.54	0.04
93	SLD 11	-40	-24	1842	1.36	2.51	-0.01
93	SLD 12	-27	-24	1842	1.36	2.51	0.1
93	SLD 13	-145	7	2004	0.28	4.56	-0.07
93	SLD 14	-133	7	2004	0.28	4.56	0.04
93	SLD 15	-143	-7	1927	0.77	5.15	-0.05
93	SLD 16	-130	-7	1927	0.78	5.15	0.05
93	SLV 1	307	15	2074	-0.03	-12.15	-0.04
93	SLV 2	335	16	2074	-0.02	-12.14	0.2
93	SLV 3	313	-18	1895	1.14	-10.77	0
93	SLV 4	342	-18	1894	1.14	-10.76	0.25
93	SLV 5	73	55	2275	-1.39	-5.67	-0.15
93	SLV 6	103	56	2275	-1.39	-5.67	0.1
93	SLV 7	96	-57	1675	2.48	-1.07	0
93	SLV 8	126	-57	1675	2.48	-1.06	0.25
93	SLV 9	-119	56	2267	-1.41	1.26	-0.2
93	SLV 10	-89	56	2267	-1.4	1.27	0.05
93	SLV 11	-96	-56	1667	2.46	5.86	-0.05
93	SLV 12	-66	-56	1667	2.47	5.87	0.2
93	SLV 13	-335	17	2048	-0.07	10.96	-0.19
93	SLV 14	-306	18	2048	-0.06	10.96	0.05
93	SLV 15	-328	-16	1868	1.1	12.34	-0.15
93	SLV 16	-299	-16	1868	1.1	12.34	0.09
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
95	SLU 1	3	0	1809	0.44	0.15	0.02
95	SLU 2	3	0	1809	0.44	0.15	0.02
95	SLU 3	3	0	1809	0.44	0.15	0.02
95	SLU 4	3	0	1809	0.44	0.15	0.02
95	SLU 5	3	0	1809	0.44	0.15	0.02
95	SLU 6	3	0	1809	0.44	0.15	0.02
95	SLU 7	3	0	1809	0.44	0.15	0.02
95	SLU 8	3	0	1809	0.44	0.15	0.02
95	SLU 9	3	0	1809	0.44	0.15	0.02
95	SLU 10	3	0	2171	0.65	0.17	0.02
95	SLU 11	3	0	2171	0.65	0.17	0.02
95	SLU 12	3	0	2171	0.65	0.17	0.02
95	SLU 13	3	0	2171	0.65	0.17	0.02
95	SLU 14	3	0	2171	0.65	0.17	0.02
95	SLU 15	3	0	2171	0.65	0.17	0.02
95	SLU 16	3	0	2171	0.65	0.17	0.02
95	SLU 17	3	0	2171	0.65	0.17	0.02
95	SLU 18	3	0	2326	0.74	0.18	0.03
95	SLU 19	3	0	2326	0.74	0.18	0.03
95	SLU 20	3	0	2326	0.74	0.18	0.03
95	SLU 21	3	0	2326	0.74	0.18	0.03
95	SLU 22	3	0	2077	0.59	0.17	0.02
95	SLU 23	3	0	2077	0.59	0.17	0.02
95	SLU 24	3	0	2077	0.59	0.17	0.02
95	SLU 25	3	0	2077	0.59	0.17	0.02
95	SLU 26	3	0	2077	0.59	0.17	0.02
95	SLU 27	3	0	2077	0.59	0.17	0.02
95	SLU 28	3	0	2077	0.59	0.17	0.02
95	SLU 29	3	0	2077	0.59	0.17	0.02
95	SLU 30	3	0	2077	0.59	0.17	0.02
95	SLU 31	3	0	2440	0.81	0.19	0.03
95	SLU 32	3	0	2440	0.81	0.19	0.03
95	SLU 33	3	0	2440	0.81	0.19	0.03
95	SLU 34	3	0	2440	0.81	0.19	0.03
95	SLU 35	3	0	2440	0.81	0.19	0.03
95	SLU 36	3	0	2440	0.81	0.19	0.03
95	SLU 37	3	0	2440	0.81	0.19	0.03
95	SLU 38	3	0	2440	0.81	0.19	0.03
95	SLU 39	4	0	2595	0.9	0.2	0.03
95	SLU 40	4	0	2595	0.9	0.2	0.03
95	SLU 41	4	0	2595	0.9	0.2	0.03
95	SLU 42	4	0	2595	0.9	0.2	0.03
95	SLU 43	3	0	2259	0.52	0.19	0.03
95	SLU 44	3	0	2259	0.52	0.19	0.03
95	SLU 45	3	0	2259	0.52	0.19	0.03
95	SLU 46	3	0	2259	0.52	0.19	0.03
95	SLU 47	3	0	2259	0.52	0.19	0.03
95	SLU 48	3	0	2259	0.52	0.19	0.03
95	SLU 49	3	0	2259	0.52	0.19	0.03
95	SLU 50	3	0	2259	0.52	0.19	0.03
95	SLU 51	3	0	2259	0.52	0.19	0.03
95	SLU 52	4	0	2622	0.73	0.21	0.03
95	SLU 53	4	0	2622	0.73	0.21	0.03
95	SLU 54	4	0	2622	0.73	0.21	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
95	SLU 55	4	0	2622	0.73	0.21	0.03
95	SLU 56	4	0	2622	0.73	0.21	0.03
95	SLU 57	4	0	2622	0.73	0.21	0.03
95	SLU 58	4	0	2622	0.73	0.21	0.03
95	SLU 59	4	0	2622	0.73	0.21	0.03
95	SLU 60	4	0	2777	0.82	0.22	0.03
95	SLU 61	4	0	2777	0.82	0.22	0.03
95	SLU 62	4	0	2777	0.82	0.22	0.03
95	SLU 63	4	0	2777	0.82	0.22	0.03
95	SLU 64	4	0	2528	0.67	0.21	0.03
95	SLU 65	4	0	2528	0.67	0.21	0.03
95	SLU 66	4	0	2528	0.67	0.21	0.03
95	SLU 67	4	0	2528	0.67	0.21	0.03
95	SLU 68	4	0	2528	0.67	0.21	0.03
95	SLU 69	4	0	2528	0.67	0.21	0.03
95	SLU 70	4	0	2528	0.67	0.21	0.03
95	SLU 71	4	0	2528	0.67	0.21	0.03
95	SLU 72	4	0	2528	0.67	0.21	0.03
95	SLU 73	4	0	2890	0.89	0.23	0.03
95	SLU 74	4	0	2890	0.89	0.23	0.03
95	SLU 75	4	0	2890	0.89	0.23	0.03
95	SLU 76	4	0	2890	0.89	0.23	0.03
95	SLU 77	4	0	2890	0.89	0.23	0.03
95	SLU 78	4	0	2890	0.89	0.23	0.03
95	SLU 79	4	0	2890	0.89	0.23	0.03
95	SLU 80	4	0	2890	0.89	0.23	0.03
95	SLU 81	4	0	3046	0.98	0.24	0.03
95	SLU 82	4	0	3046	0.98	0.24	0.03
95	SLU 83	4	0	3046	0.98	0.24	0.03
95	SLU 84	4	0	3046	0.98	0.24	0.03
95	SLE RA 1	3	0	1885	0.48	0.16	0.02
95	SLE RA 2	3	0	1885	0.48	0.16	0.02
95	SLE RA 3	3	0	1885	0.48	0.16	0.02
95	SLE RA 4	3	0	1885	0.48	0.16	0.02
95	SLE RA 5	3	0	1885	0.48	0.16	0.02
95	SLE RA 6	3	0	1885	0.48	0.16	0.02
95	SLE RA 7	3	0	1885	0.48	0.16	0.02
95	SLE RA 8	3	0	1885	0.48	0.16	0.02
95	SLE RA 9	3	0	1885	0.48	0.16	0.02
95	SLE RA 10	3	0	2127	0.63	0.17	0.02
95	SLE RA 11	3	0	2127	0.63	0.17	0.02
95	SLE RA 12	3	0	2127	0.63	0.17	0.02
95	SLE RA 13	3	0	2127	0.63	0.17	0.02
95	SLE RA 14	3	0	2127	0.63	0.17	0.02
95	SLE RA 15	3	0	2127	0.63	0.17	0.02
95	SLE RA 16	3	0	2127	0.63	0.17	0.02
95	SLE RA 17	3	0	2127	0.63	0.17	0.02
95	SLE RA 18	3	0	2231	0.69	0.18	0.02
95	SLE RA 19	3	0	2231	0.69	0.18	0.02
95	SLE RA 20	3	0	2231	0.69	0.18	0.02
95	SLE RA 21	3	0	2231	0.69	0.18	0.02
95	SLE FR 1	3	0	1885	0.48	0.16	0.02
95	SLE FR 2	3	0	1885	0.48	0.16	0.02
95	SLE FR 3	3	0	1885	0.48	0.16	0.02
95	SLE FR 4	3	0	1989	0.54	0.16	0.02
95	SLE FR 5	3	0	1989	0.54	0.16	0.02
95	SLE FR 6	3	0	2058	0.58	0.17	0.02
95	SLE QP 1	3	0	1885	0.48	0.16	0.02
95	SLE QP 2	3	0	1989	0.54	0.16	0.02
95	SLD 1	138	6	2025	0.31	-4.64	-0.06
95	SLD 2	147	7	2025	0.31	-4.63	0.04
95	SLD 3	140	-8	1965	0.8	-4.09	-0.04
95	SLD 4	150	-8	1965	0.8	-4.09	0.06
95	SLD 5	36	24	2092	-0.27	-2.11	-0.06
95	SLD 6	46	24	2092	-0.27	-2.1	0.04
95	SLD 7	44	-25	1890	1.36	-0.29	-0.01
95	SLD 8	54	-24	1890	1.37	-0.28	0.09
95	SLD 9	-48	24	2088	-0.28	0.61	-0.05
95	SLD 10	-39	24	2088	-0.28	0.61	0.05
95	SLD 11	-40	-24	1886	1.36	2.43	0.01
95	SLD 12	-31	-24	1886	1.36	2.43	0.11
95	SLD 13	-144	7	2013	0.29	4.41	-0.01
95	SLD 14	-135	8	2013	0.29	4.41	0.08
95	SLD 15	-142	-7	1953	0.78	4.96	0
95	SLD 16	-132	-7	1953	0.78	4.96	0.1
95	SLV 1	310	15	2074	-0.01	-11.4	-0.16
95	SLV 2	331	16	2074	-0.01	-11.39	0.06
95	SLV 3	315	-18	1932	1.14	-10.12	-0.12
95	SLV 4	337	-18	1932	1.14	-10.11	0.1
95	SLV 5	79	56	2230	-1.37	-5.25	-0.17
95	SLV 6	101	56	2229	-1.37	-5.24	0.06
95	SLV 7	97	-57	1757	2.47	-0.99	-0.04
95	SLV 8	119	-57	1757	2.47	-0.98	0.19
95	SLV 9	-114	56	2221	-1.39	1.3	-0.14
95	SLV 10	-91	57	2221	-1.38	1.31	0.09
95	SLV 11	-95	-57	1749	2.46	5.56	-0.01
95	SLV 12	-73	-56	1748	2.46	5.57	0.22
95	SLV 13	-331	17	2046	-0.06	10.44	-0.06
95	SLV 14	-310	18	2046	-0.05	10.44	0.16
95	SLV 15	-325	-16	1904	1.1	11.71	-0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
95	SLV 16	-304	-16	1904	1.1	11.72	0.2
95	CRTFP Ux+	0	0	0	0	0	0
95	CRTFP Ux-	0	0	0	0	0	0
95	CRTFP Uy+	0	0	0	0	0	0
95	CRTFP Uy-	0	0	0	0	0	0
96	SLU 1	9	28	6062	79.71	10.12	1.54
96	SLU 2	9	28	6062	79.71	10.12	1.54
96	SLU 3	9	28	6062	79.71	10.12	1.54
96	SLU 4	9	28	6062	79.71	10.12	1.54
96	SLU 5	9	28	6062	79.71	10.12	1.54
96	SLU 6	9	28	6062	79.71	10.12	1.54
96	SLU 7	9	28	6062	79.71	10.12	1.54
96	SLU 8	9	28	6062	79.71	10.12	1.54
96	SLU 9	9	28	6062	79.71	10.12	1.54
96	SLU 10	15	31	7105	100.01	10.93	1.83
96	SLU 11	15	31	7105	100.01	10.93	1.83
96	SLU 12	15	31	7105	100.01	10.93	1.83
96	SLU 13	15	31	7105	100.01	10.93	1.83
96	SLU 14	15	31	7105	100.01	10.93	1.83
96	SLU 15	15	31	7105	100.01	10.93	1.83
96	SLU 16	15	31	7105	100.01	10.93	1.83
96	SLU 17	15	31	7105	100.01	10.93	1.83
96	SLU 18	17	32	7552	108.72	11.28	1.95
96	SLU 19	17	32	7552	108.72	11.28	1.95
96	SLU 20	17	32	7552	108.72	11.28	1.95
96	SLU 21	17	32	7552	108.72	11.28	1.95
96	SLU 22	13	30	6847	95.09	10.82	1.74
96	SLU 23	13	30	6847	95.09	10.82	1.74
96	SLU 24	13	30	6847	95.09	10.82	1.74
96	SLU 25	13	30	6847	95.09	10.82	1.74
96	SLU 26	13	30	6847	95.09	10.82	1.74
96	SLU 27	13	30	6847	95.09	10.82	1.74
96	SLU 28	13	30	6847	95.09	10.82	1.74
96	SLU 29	13	30	6847	95.09	10.82	1.74
96	SLU 30	13	30	6847	95.09	10.82	1.74
96	SLU 31	19	34	7890	115.4	11.64	2.03
96	SLU 32	19	34	7890	115.4	11.64	2.03
96	SLU 33	19	34	7890	115.4	11.64	2.03
96	SLU 34	19	34	7890	115.4	11.64	2.03
96	SLU 35	19	34	7890	115.4	11.64	2.03
96	SLU 36	19	34	7890	115.4	11.64	2.03
96	SLU 37	19	34	7890	115.4	11.64	2.03
96	SLU 38	19	34	7890	115.4	11.64	2.03
96	SLU 39	21	35	8337	124.1	11.99	2.15
96	SLU 40	21	35	8337	124.1	11.99	2.15
96	SLU 41	21	35	8337	124.1	11.99	2.15
96	SLU 42	21	35	8337	124.1	11.99	2.15
96	SLU 43	10	35	7611	98.34	12.91	1.94
96	SLU 44	10	35	7611	98.34	12.91	1.94
96	SLU 45	10	35	7611	98.34	12.91	1.94
96	SLU 46	10	35	7611	98.34	12.91	1.94
96	SLU 47	10	35	7611	98.34	12.91	1.94
96	SLU 48	10	35	7611	98.34	12.91	1.94
96	SLU 49	10	35	7611	98.34	12.91	1.94
96	SLU 50	10	35	7611	98.34	12.91	1.94
96	SLU 51	10	35	7611	98.34	12.91	1.94
96	SLU 52	16	39	8654	118.65	13.73	2.22
96	SLU 53	16	39	8654	118.65	13.73	2.22
96	SLU 54	16	39	8654	118.65	13.73	2.22
96	SLU 55	16	39	8654	118.65	13.73	2.22
96	SLU 56	16	39	8654	118.65	13.73	2.22
96	SLU 57	16	39	8654	118.65	13.73	2.22
96	SLU 58	16	39	8654	118.65	13.73	2.22
96	SLU 59	16	39	8654	118.65	13.73	2.22
96	SLU 60	18	40	9101	127.35	14.08	2.35
96	SLU 61	18	40	9101	127.35	14.08	2.35
96	SLU 62	18	40	9101	127.35	14.08	2.35
96	SLU 63	18	40	9101	127.35	14.08	2.35
96	SLU 64	14	38	8396	113.73	13.61	2.13
96	SLU 65	14	38	8396	113.73	13.61	2.13
96	SLU 66	14	38	8396	113.73	13.61	2.13
96	SLU 67	14	38	8396	113.73	13.61	2.13
96	SLU 68	14	38	8396	113.73	13.61	2.13
96	SLU 69	14	38	8396	113.73	13.61	2.13
96	SLU 70	14	38	8396	113.73	13.61	2.13
96	SLU 71	14	38	8396	113.73	13.61	2.13
96	SLU 72	14	38	8396	113.73	13.61	2.13
96	SLU 73	20	41	9439	134.04	14.43	2.42
96	SLU 74	20	41	9439	134.04	14.43	2.42
96	SLU 75	20	41	9439	134.04	14.43	2.42
96	SLU 76	20	41	9439	134.04	14.43	2.42
96	SLU 77	20	41	9439	134.04	14.43	2.42
96	SLU 78	20	41	9439	134.04	14.43	2.42
96	SLU 79	20	41	9439	134.04	14.43	2.42
96	SLU 80	20	41	9439	134.04	14.43	2.42
96	SLU 81	22	43	9886	142.74	14.78	2.54
96	SLU 82	22	43	9886	142.74	14.78	2.54
96	SLU 83	22	43	9886	142.74	14.78	2.54
96	SLU 84	22	43	9886	142.74	14.78	2.54
96	SLE RA 1	10	29	6286	84.1	10.32	1.6



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione		
		x	y	z		x	y	z
96	SLE RA 2	10	29	6286		84.1	10.32	1.6
96	SLE RA 3	10	29	6286		84.1	10.32	1.6
96	SLE RA 4	10	29	6286		84.1	10.32	1.6
96	SLE RA 5	10	29	6286		84.1	10.32	1.6
96	SLE RA 6	10	29	6286		84.1	10.32	1.6
96	SLE RA 7	10	29	6286		84.1	10.32	1.6
96	SLE RA 8	10	29	6286		84.1	10.32	1.6
96	SLE RA 9	10	29	6286		84.1	10.32	1.6
96	SLE RA 10	14	31	6981		97.64	10.86	1.79
96	SLE RA 11	14	31	6981		97.64	10.86	1.79
96	SLE RA 12	14	31	6981		97.64	10.86	1.79
96	SLE RA 13	14	31	6981		97.64	10.86	1.79
96	SLE RA 14	14	31	6981		97.64	10.86	1.79
96	SLE RA 15	14	31	6981		97.64	10.86	1.79
96	SLE RA 16	14	31	6981		97.64	10.86	1.79
96	SLE RA 17	14	31	6981		97.64	10.86	1.79
96	SLE RA 18	15	32	7279		103.44	11.1	1.87
96	SLE RA 19	15	32	7279		103.44	11.1	1.87
96	SLE RA 20	15	32	7279		103.44	11.1	1.87
96	SLE RA 21	15	32	7279		103.44	11.1	1.87
96	SLE FR 1	10	29	6286		84.1	10.32	1.6
96	SLE FR 2	10	29	6286		84.1	10.32	1.6
96	SLE FR 3	10	29	6286		84.1	10.32	1.6
96	SLE FR 4	12	30	6584		89.9	10.55	1.68
96	SLE FR 5	12	30	6584		89.9	10.55	1.68
96	SLE FR 6	13	30	6783		93.77	10.71	1.74
96	SLE QP 1	10	29	6286		84.1	10.32	1.6
96	SLE QP 2	12	30	6584		89.9	10.55	1.68
96	SLD 1	486	494	7474		95.76	12.57	15.35
96	SLD 2	527	365	7472		96.69	12.54	20.83
96	SLD 3	562	-225	7390		115.16	12.36	10.84
96	SLD 4	604	-353	7387		116.1	12.32	16.32
96	SLD 5	23	1305	6980		61.89	11.5	10.64
96	SLD 6	65	1173	6977		62.84	11.46	16.25
96	SLD 7	278	-1090	6699		126.58	10.78	-4.39
96	SLD 8	320	-1221	6696		127.53	10.74	1.22
96	SLD 9	-297	1281	6472		52.28	10.36	2.15
96	SLD 10	-255	1149	6469		53.23	10.32	7.75
96	SLD 11	-42	-1114	6191		-116.96	9.64	-12.88
96	SLD 12	0	-1246	6188		-117.92	9.6	-7.28
96	SLD 13	-581	413	5781		63.71	8.78	-12.96
96	SLD 14	-539	284	5778		64.64	8.75	-7.48
96	SLD 15	-504	-306	5697		83.12	8.57	-17.47
96	SLD 16	-463	-435	5694		84.05	8.53	-11.99
96	SLV 1	1086	1112	8609		102.45	15.15	32.84
96	SLV 2	1180	818	8602		104.58	15.07	45.39
96	SLV 3	1265	-574	8411		148	14.64	22.25
96	SLV 4	1359	-868	8405		150.14	14.56	34.8
96	SLV 5	27	3020	7493		23.79	12.73	22.46
96	SLV 6	125	2714	7487		26.01	12.64	35.49
96	SLV 7	624	-2599	6835		175.63	11.04	-12.84
96	SLV 8	722	-2905	6828		177.85	10.95	0.19
96	SLV 9	-699	2964	6340		1.96	10.15	3.17
96	SLV 10	-601	2659	6333		4.18	10.06	16.2
96	SLV 11	-102	-2655	5681		153.8	8.46	-32.13
96	SLV 12	-4	-2961	5675		156.02	8.37	-19.1
96	SLV 13	-1336	927	4763		29.67	6.54	-31.44
96	SLV 14	-1242	633	4757		31.81	6.46	-18.89
96	SLV 15	-1157	-759	4566		75.22	6.04	-42.03
96	SLV 16	-1063	-1053	4560		77.36	5.95	-29.48
96	CRTFP Ux+	0	0	0		0	0	0
96	CRTFP Ux-	0	0	0		0	0	0
96	CRTFP Uy+	0	0	0		0	0	0
96	CRTFP Uy-	0	0	0		0	0	0
98	SLU 1	-6	-10	1869		1.95	240.2	2.43
98	SLU 2	-6	-10	1869		1.95	240.2	2.43
98	SLU 3	-6	-10	1869		1.95	240.2	2.43
98	SLU 4	-6	-10	1869		1.95	240.2	2.43
98	SLU 5	-6	-10	1869		1.95	240.2	2.43
98	SLU 6	-6	-10	1869		1.95	240.2	2.43
98	SLU 7	-6	-10	1869		1.95	240.2	2.43
98	SLU 8	-6	-10	1869		1.95	240.2	2.43
98	SLU 9	-6	-10	1869		1.95	240.2	2.43
98	SLU 10	-8	-12	2203		2.4	280.58	2.98
98	SLU 11	-8	-12	2203		2.4	280.58	2.98
98	SLU 12	-8	-12	2203		2.4	280.58	2.98
98	SLU 13	-8	-12	2203		2.4	280.58	2.98
98	SLU 14	-8	-12	2203		2.4	280.58	2.98
98	SLU 15	-8	-12	2203		2.4	280.58	2.98
98	SLU 16	-8	-12	2203		2.4	280.58	2.98
98	SLU 17	-8	-12	2203		2.4	280.58	2.98
98	SLU 18	-9	-13	2346		2.59	297.89	3.21
98	SLU 19	-9	-13	2346		2.59	297.89	3.21
98	SLU 20	-9	-13	2346		2.59	297.89	3.21
98	SLU 21	-9	-13	2346		2.59	297.89	3.21
98	SLU 22	-8	-11	2119		2.29	270.31	2.81
98	SLU 23	-8	-11	2119		2.29	270.31	2.81
98	SLU 24	-8	-11	2119		2.29	270.31	2.81
98	SLU 25	-8	-11	2119		2.29	270.31	2.81
98	SLU 26	-8	-11	2119		2.29	270.31	2.81



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
98	N.br.						
98	SLU 27	-8	-11	2119	2.29	270.31	2.81
98	SLU 28	-8	-11	2119	2.29	270.31	2.81
98	SLU 29	-8	-11	2119	2.29	270.31	2.81
98	SLU 30	-8	-11	2119	2.29	270.31	2.81
98	SLU 31	-10	-13	2452	2.73	310.7	3.36
98	SLU 32	-10	-13	2452	2.73	310.7	3.36
98	SLU 33	-10	-13	2452	2.73	310.7	3.36
98	SLU 34	-10	-13	2452	2.73	310.7	3.36
98	SLU 35	-10	-13	2452	2.73	310.7	3.36
98	SLU 36	-10	-13	2452	2.73	310.7	3.36
98	SLU 37	-10	-13	2452	2.73	310.7	3.36
98	SLU 38	-10	-13	2452	2.73	310.7	3.36
98	SLU 39	-11	-14	2595	2.92	328	3.6
98	SLU 40	-11	-14	2595	2.92	328	3.6
98	SLU 41	-11	-14	2595	2.92	328	3.6
98	SLU 42	-11	-14	2595	2.92	328	3.6
98	SLU 43	-8	-12	2344	2.42	301.94	3.02
98	SLU 44	-8	-12	2344	2.42	301.94	3.02
98	SLU 45	-8	-12	2344	2.42	301.94	3.02
98	SLU 46	-8	-12	2344	2.42	301.94	3.02
98	SLU 47	-8	-12	2344	2.42	301.94	3.02
98	SLU 48	-8	-12	2344	2.42	301.94	3.02
98	SLU 49	-8	-12	2344	2.42	301.94	3.02
98	SLU 50	-8	-12	2344	2.42	301.94	3.02
98	SLU 51	-8	-12	2344	2.42	301.94	3.02
98	SLU 52	-10	-14	2678	2.87	342.32	3.57
98	SLU 53	-10	-14	2678	2.87	342.32	3.57
98	SLU 54	-10	-14	2678	2.87	342.32	3.57
98	SLU 55	-10	-14	2678	2.87	342.32	3.57
98	SLU 56	-10	-14	2678	2.87	342.32	3.57
98	SLU 57	-10	-14	2678	2.87	342.32	3.57
98	SLU 58	-10	-14	2678	2.87	342.32	3.57
98	SLU 59	-10	-14	2678	2.87	342.32	3.57
98	SLU 60	-11	-15	2821	3.06	359.62	3.81
98	SLU 61	-11	-15	2821	3.06	359.62	3.81
98	SLU 62	-11	-15	2821	3.06	359.62	3.81
98	SLU 63	-11	-15	2821	3.06	359.62	3.81
98	SLU 64	-9	-13	2594	2.76	332.05	3.41
98	SLU 65	-9	-13	2594	2.76	332.05	3.41
98	SLU 66	-9	-13	2594	2.76	332.05	3.41
98	SLU 67	-9	-13	2594	2.76	332.05	3.41
98	SLU 68	-9	-13	2594	2.76	332.05	3.41
98	SLU 69	-9	-13	2594	2.76	332.05	3.41
98	SLU 70	-9	-13	2594	2.76	332.05	3.41
98	SLU 71	-9	-13	2594	2.76	332.05	3.41
98	SLU 72	-9	-13	2594	2.76	332.05	3.41
98	SLU 73	-11	-15	2927	3.2	372.43	3.96
98	SLU 74	-11	-15	2927	3.2	372.43	3.96
98	SLU 75	-11	-15	2927	3.2	372.43	3.96
98	SLU 76	-11	-15	2927	3.2	372.43	3.96
98	SLU 77	-11	-15	2927	3.2	372.43	3.96
98	SLU 78	-11	-15	2927	3.2	372.43	3.96
98	SLU 79	-11	-15	2927	3.2	372.43	3.96
98	SLU 80	-11	-15	2927	3.2	372.43	3.96
98	SLU 81	-12	-16	3070	3.39	389.74	4.19
98	SLU 82	-12	-16	3070	3.39	389.74	4.19
98	SLU 83	-12	-16	3070	3.39	389.74	4.19
98	SLU 84	-12	-16	3070	3.39	389.74	4.19
98	SLE RA 1	-7	-10	1940	2.05	248.8	2.54
98	SLE RA 2	-7	-10	1940	2.05	248.8	2.54
98	SLE RA 3	-7	-10	1940	2.05	248.8	2.54
98	SLE RA 4	-7	-10	1940	2.05	248.8	2.54
98	SLE RA 5	-7	-10	1940	2.05	248.8	2.54
98	SLE RA 6	-7	-10	1940	2.05	248.8	2.54
98	SLE RA 7	-7	-10	1940	2.05	248.8	2.54
98	SLE RA 8	-7	-10	1940	2.05	248.8	2.54
98	SLE RA 9	-7	-10	1940	2.05	248.8	2.54
98	SLE RA 10	-8	-11	2163	2.34	275.73	2.9
98	SLE RA 11	-8	-11	2163	2.34	275.73	2.9
98	SLE RA 12	-8	-11	2163	2.34	275.73	2.9
98	SLE RA 13	-8	-11	2163	2.34	275.73	2.9
98	SLE RA 14	-8	-11	2163	2.34	275.73	2.9
98	SLE RA 15	-8	-11	2163	2.34	275.73	2.9
98	SLE RA 16	-8	-11	2163	2.34	275.73	2.9
98	SLE RA 17	-8	-11	2163	2.34	275.73	2.9
98	SLE RA 18	-9	-12	2258	2.47	287.26	3.06
98	SLE RA 19	-9	-12	2258	2.47	287.26	3.06
98	SLE RA 20	-9	-12	2258	2.47	287.26	3.06
98	SLE RA 21	-9	-12	2258	2.47	287.26	3.06
98	SLE FR 1	-7	-10	1940	2.05	248.8	2.54
98	SLE FR 2	-7	-10	1940	2.05	248.8	2.54
98	SLE FR 3	-7	-10	1940	2.05	248.8	2.54
98	SLE FR 4	-7	-11	2036	2.17	260.34	2.69
98	SLE FR 5	-7	-11	2036	2.17	260.34	2.69
98	SLE FR 6	-8	-11	2099	2.26	268.03	2.8
98	SLE QP 1	-7	-10	1940	2.05	248.8	2.54
98	SLE QP 2	-7	-11	2036	2.17	260.34	2.69
98	SLD 1	156	70	1793	1.19	228.82	-17.62
98	SLD 2	167	108	1794	1.12	227.87	-26.95
98	SLD 3	144	-147	1731	2.27	234.07	36.73



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
98	SLD 4	155	-109	1732	2.2	233.11	27.4
98	SLD 5	56	329	2057	0.26	243.27	-82.47
98	SLD 6	67	367	2058	0.19	242.3	-92
98	SLD 7	16	-394	1850	3.87	260.76	98.71
98	SLD 8	28	-355	1851	3.81	259.79	89.17
98	SLD 9	-42	334	2221	0.54	260.9	-83.79
98	SLD 10	-31	373	2222	0.47	259.92	-93.32
98	SLD 11	-82	-388	2014	4.16	278.39	97.39
98	SLD 12	-70	-350	2014	4.09	277.41	87.86
98	SLD 13	-170	88	2339	2.15	287.57	-22.02
98	SLD 14	-159	126	2340	2.08	286.62	-31.34
98	SLD 15	-182	-129	2277	3.23	292.82	32.34
98	SLD 16	-171	-91	2278	3.16	291.86	23.01
98	SLV 1	364	180	1487	-0.11	188.36	-45.38
98	SLV 2	390	267	1489	-0.27	186.18	-66.71
98	SLV 3	336	-328	1342	2.44	200.74	82.16
98	SLV 4	362	-242	1344	2.28	198.56	60.83
98	SLV 5	137	786	2091	-2.32	220.77	-197.3
98	SLV 6	164	876	2094	-2.48	218.51	-219.44
98	SLV 7	44	-909	1606	6.17	262.05	227.85
98	SLV 8	70	-820	1608	6.01	259.78	205.7
98	SLV 9	-85	798	2464	-1.66	260.9	-200.31
98	SLV 10	-58	888	2466	-1.83	258.64	-222.46
98	SLV 11	-178	-897	1978	6.83	302.18	224.83
98	SLV 12	-152	-807	1980	6.67	299.91	202.68
98	SLV 13	-376	221	2728	2.07	322.12	-55.44
98	SLV 14	-350	307	2730	1.91	319.94	-76.77
98	SLV 15	-404	-288	2582	4.62	334.5	72.1
98	SLV 16	-378	-201	2584	4.46	332.32	50.77
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
100	SLU 1	2	0	1823	0.4	0.28	0.02
100	SLU 2	2	0	1823	0.4	0.28	0.02
100	SLU 3	2	0	1823	0.4	0.28	0.02
100	SLU 4	2	0	1823	0.4	0.28	0.02
100	SLU 5	2	0	1823	0.4	0.28	0.02
100	SLU 6	2	0	1823	0.4	0.28	0.02
100	SLU 7	2	0	1823	0.4	0.28	0.02
100	SLU 8	2	0	1823	0.4	0.28	0.02
100	SLU 9	2	0	1823	0.4	0.28	0.02
100	SLU 10	2	0	2192	0.6	0.32	0.02
100	SLU 11	2	0	2192	0.6	0.32	0.02
100	SLU 12	2	0	2192	0.6	0.32	0.02
100	SLU 13	2	0	2192	0.6	0.32	0.02
100	SLU 14	2	0	2192	0.6	0.32	0.02
100	SLU 15	2	0	2192	0.6	0.32	0.02
100	SLU 16	2	0	2192	0.6	0.32	0.02
100	SLU 17	2	0	2192	0.6	0.32	0.02
100	SLU 18	3	0	2350	0.69	0.33	0.02
100	SLU 19	3	0	2350	0.69	0.33	0.02
100	SLU 20	3	0	2350	0.69	0.33	0.02
100	SLU 21	3	0	2350	0.69	0.33	0.02
100	SLU 22	2	0	2096	0.55	0.31	0.02
100	SLU 23	2	0	2096	0.55	0.31	0.02
100	SLU 24	2	0	2096	0.55	0.31	0.02
100	SLU 25	2	0	2096	0.55	0.31	0.02
100	SLU 26	2	0	2096	0.55	0.31	0.02
100	SLU 27	2	0	2096	0.55	0.31	0.02
100	SLU 28	2	0	2096	0.55	0.31	0.02
100	SLU 29	2	0	2096	0.55	0.31	0.02
100	SLU 30	2	0	2096	0.55	0.31	0.02
100	SLU 31	3	0	2465	0.75	0.35	0.02
100	SLU 32	3	0	2465	0.75	0.35	0.02
100	SLU 33	3	0	2465	0.75	0.35	0.02
100	SLU 34	3	0	2465	0.75	0.35	0.02
100	SLU 35	3	0	2465	0.75	0.35	0.02
100	SLU 36	3	0	2465	0.75	0.35	0.02
100	SLU 37	3	0	2465	0.75	0.35	0.02
100	SLU 38	3	0	2465	0.75	0.35	0.02
100	SLU 39	3	0	2624	0.84	0.37	0.02
100	SLU 40	3	0	2624	0.84	0.37	0.02
100	SLU 41	3	0	2624	0.84	0.37	0.02
100	SLU 42	3	0	2624	0.84	0.37	0.02
100	SLU 43	2	0	2276	0.47	0.35	0.02
100	SLU 44	2	0	2276	0.47	0.35	0.02
100	SLU 45	2	0	2276	0.47	0.35	0.02
100	SLU 46	2	0	2276	0.47	0.35	0.02
100	SLU 47	2	0	2276	0.47	0.35	0.02
100	SLU 48	2	0	2276	0.47	0.35	0.02
100	SLU 49	2	0	2276	0.47	0.35	0.02
100	SLU 50	2	0	2276	0.47	0.35	0.02
100	SLU 51	2	0	2276	0.47	0.35	0.02
100	SLU 52	3	0	2645	0.68	0.39	0.03
100	SLU 53	3	0	2645	0.68	0.39	0.03
100	SLU 54	3	0	2645	0.68	0.39	0.03
100	SLU 55	3	0	2645	0.68	0.39	0.03
100	SLU 56	3	0	2645	0.68	0.39	0.03
100	SLU 57	3	0	2645	0.68	0.39	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
100	SLU 58	3	0	2645	0.68	0.39	0.03
100	SLU 59	3	0	2645	0.68	0.39	0.03
100	SLU 60	3	0	2803	0.76	0.41	0.03
100	SLU 61	3	0	2803	0.76	0.41	0.03
100	SLU 62	3	0	2803	0.76	0.41	0.03
100	SLU 63	3	0	2803	0.76	0.41	0.03
100	SLU 64	3	0	2549	0.62	0.38	0.02
100	SLU 65	3	0	2549	0.62	0.38	0.02
100	SLU 66	3	0	2549	0.62	0.38	0.02
100	SLU 67	3	0	2549	0.62	0.38	0.02
100	SLU 68	3	0	2549	0.62	0.38	0.02
100	SLU 69	3	0	2549	0.62	0.38	0.02
100	SLU 70	3	0	2549	0.62	0.38	0.02
100	SLU 71	3	0	2549	0.62	0.38	0.02
100	SLU 72	3	0	2549	0.62	0.38	0.02
100	SLU 73	3	0	2918	0.82	0.42	0.03
100	SLU 74	3	0	2918	0.82	0.42	0.03
100	SLU 75	3	0	2918	0.82	0.42	0.03
100	SLU 76	3	0	2918	0.82	0.42	0.03
100	SLU 77	3	0	2918	0.82	0.42	0.03
100	SLU 78	3	0	2918	0.82	0.42	0.03
100	SLU 79	3	0	2918	0.82	0.42	0.03
100	SLU 80	3	0	2918	0.82	0.42	0.03
100	SLU 81	3	0	3077	0.91	0.44	0.03
100	SLU 82	3	0	3077	0.91	0.44	0.03
100	SLU 83	3	0	3077	0.91	0.44	0.03
100	SLU 84	3	0	3077	0.91	0.44	0.03
100	SLE RA 1	2	0	1901	0.45	0.28	0.02
100	SLE RA 2	2	0	1901	0.45	0.28	0.02
100	SLE RA 3	2	0	1901	0.45	0.28	0.02
100	SLE RA 4	2	0	1901	0.45	0.28	0.02
100	SLE RA 5	2	0	1901	0.45	0.28	0.02
100	SLE RA 6	2	0	1901	0.45	0.28	0.02
100	SLE RA 7	2	0	1901	0.45	0.28	0.02
100	SLE RA 8	2	0	1901	0.45	0.28	0.02
100	SLE RA 9	2	0	1901	0.45	0.28	0.02
100	SLE RA 10	2	0	2147	0.58	0.31	0.02
100	SLE RA 11	2	0	2147	0.58	0.31	0.02
100	SLE RA 12	2	0	2147	0.58	0.31	0.02
100	SLE RA 13	2	0	2147	0.58	0.31	0.02
100	SLE RA 14	2	0	2147	0.58	0.31	0.02
100	SLE RA 15	2	0	2147	0.58	0.31	0.02
100	SLE RA 16	2	0	2147	0.58	0.31	0.02
100	SLE RA 17	2	0	2147	0.58	0.31	0.02
100	SLE RA 18	2	0	2252	0.64	0.32	0.02
100	SLE RA 19	2	0	2252	0.64	0.32	0.02
100	SLE RA 20	2	0	2252	0.64	0.32	0.02
100	SLE RA 21	2	0	2252	0.64	0.32	0.02
100	SLE FR 1	2	0	1901	0.45	0.28	0.02
100	SLE FR 2	2	0	1901	0.45	0.28	0.02
100	SLE FR 3	2	0	1901	0.45	0.28	0.02
100	SLE FR 4	2	0	2006	0.5	0.3	0.02
100	SLE FR 5	2	0	2006	0.5	0.3	0.02
100	SLE FR 6	2	0	2077	0.54	0.3	0.02
100	SLE QP 1	2	0	1901	0.45	0.28	0.02
100	SLE QP 2	2	0	2006	0.5	0.3	0.02
100	SLD 1	140	7	2035	0.27	-4.03	-0.09
100	SLD 2	147	7	2035	0.27	-4.03	0
100	SLD 3	142	-8	1990	0.75	-3.57	-0.07
100	SLD 4	149	-8	1990	0.75	-3.57	0.01
100	SLD 5	38	24	2082	-0.3	-1.7	-0.06
100	SLD 6	45	24	2082	-0.3	-1.7	0.02
100	SLD 7	45	-25	1934	1.31	-0.17	-0.02
100	SLD 8	51	-24	1934	1.31	-0.16	0.07
100	SLD 9	-47	24	2078	-0.31	0.75	-0.03
100	SLD 10	-41	25	2078	-0.31	0.76	0.06
100	SLD 11	-41	-24	1930	1.31	2.29	0.01
100	SLD 12	-34	-24	1930	1.31	2.3	0.1
100	SLD 13	-144	8	2022	0.25	4.16	0.03
100	SLD 14	-138	8	2022	0.25	4.16	0.11
100	SLD 15	-142	-7	1978	0.74	4.62	0.04
100	SLD 16	-136	-7	1978	0.74	4.62	0.12
100	SLV 1	316	16	2072	-0.05	-10.04	-0.22
100	SLV 2	330	16	2072	-0.05	-10.02	-0.03
100	SLV 3	320	-18	1968	1.09	-8.96	-0.19
100	SLV 4	335	-18	1968	1.09	-8.94	0
100	SLV 5	84	56	2184	-1.39	-4.44	-0.17
100	SLV 6	99	57	2184	-1.38	-4.43	0.03
100	SLV 7	99	-57	1837	2.4	-0.85	-0.07
100	SLV 8	114	-57	1837	2.4	-0.84	0.13
100	SLV 9	-110	57	2176	-1.4	1.43	-0.09
100	SLV 10	-95	57	2176	-1.4	1.45	0.11
100	SLV 11	-95	-57	1829	2.39	5.02	0.01
100	SLV 12	-80	-56	1828	2.39	5.03	0.21
100	SLV 13	-331	18	2044	-0.08	9.54	0.03
100	SLV 14	-316	18	2044	-0.08	9.55	0.23
100	SLV 15	-326	-16	1940	1.05	10.61	0.06
100	SLV 16	-312	-16	1940	1.05	10.63	0.26
100	CRTFP Ux+	0	0	0	0	0	0
100	CRTFP Ux-	0	0	0	0	0	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
100	CRTFP Uy+	0	0	0	0	0	0
100	CRTFP Uy-	0	0	0	0	0	0
102	SLU 1	-7	-10	1930	2.34	286.47	2.55
102	SLU 2	-7	-10	1930	2.34	286.47	2.55
102	SLU 3	-7	-10	1930	2.34	286.47	2.55
102	SLU 4	-7	-10	1930	2.34	286.47	2.55
102	SLU 5	-7	-10	1930	2.34	286.47	2.55
102	SLU 6	-7	-10	1930	2.34	286.47	2.55
102	SLU 7	-7	-10	1930	2.34	286.47	2.55
102	SLU 8	-7	-10	1930	2.34	286.47	2.55
102	SLU 9	-7	-10	1930	2.34	286.47	2.55
102	SLU 10	-9	-12	2278	2.86	337.08	3.11
102	SLU 11	-9	-12	2278	2.86	337.08	3.11
102	SLU 12	-9	-12	2278	2.86	337.08	3.11
102	SLU 13	-9	-12	2278	2.86	337.08	3.11
102	SLU 14	-9	-12	2278	2.86	337.08	3.11
102	SLU 15	-9	-12	2278	2.86	337.08	3.11
102	SLU 16	-9	-12	2278	2.86	337.08	3.11
102	SLU 17	-9	-12	2278	2.86	337.08	3.11
102	SLU 18	-10	-13	2427	3.09	358.77	3.35
102	SLU 19	-10	-13	2427	3.09	358.77	3.35
102	SLU 20	-10	-13	2427	3.09	358.77	3.35
102	SLU 21	-10	-13	2427	3.09	358.77	3.35
102	SLU 22	-8	-12	2190	2.73	324.23	2.94
102	SLU 23	-8	-12	2190	2.73	324.23	2.94
102	SLU 24	-8	-12	2190	2.73	324.23	2.94
102	SLU 25	-8	-12	2190	2.73	324.23	2.94
102	SLU 26	-8	-12	2190	2.73	324.23	2.94
102	SLU 27	-8	-12	2190	2.73	324.23	2.94
102	SLU 28	-8	-12	2190	2.73	324.23	2.94
102	SLU 29	-8	-12	2190	2.73	324.23	2.94
102	SLU 30	-8	-12	2190	2.73	324.23	2.94
102	SLU 31	-11	-14	2538	3.26	374.84	3.5
102	SLU 32	-11	-14	2538	3.26	374.84	3.5
102	SLU 33	-11	-14	2538	3.26	374.84	3.5
102	SLU 34	-11	-14	2538	3.26	374.84	3.5
102	SLU 35	-11	-14	2538	3.26	374.84	3.5
102	SLU 36	-11	-14	2538	3.26	374.84	3.5
102	SLU 37	-11	-14	2538	3.26	374.84	3.5
102	SLU 38	-11	-14	2538	3.26	374.84	3.5
102	SLU 39	-12	-15	2687	3.48	396.53	3.74
102	SLU 40	-12	-15	2687	3.48	396.53	3.74
102	SLU 41	-12	-15	2687	3.48	396.53	3.74
102	SLU 42	-12	-15	2687	3.48	396.53	3.74
102	SLU 43	-8	-13	2420	2.91	359.47	3.17
102	SLU 44	-8	-13	2420	2.91	359.47	3.17
102	SLU 45	-8	-13	2420	2.91	359.47	3.17
102	SLU 46	-8	-13	2420	2.91	359.47	3.17
102	SLU 47	-8	-13	2420	2.91	359.47	3.17
102	SLU 48	-8	-13	2420	2.91	359.47	3.17
102	SLU 49	-8	-13	2420	2.91	359.47	3.17
102	SLU 50	-8	-13	2420	2.91	359.47	3.17
102	SLU 51	-8	-13	2420	2.91	359.47	3.17
102	SLU 52	-11	-15	2768	3.43	410.08	3.73
102	SLU 53	-11	-15	2768	3.43	410.08	3.73
102	SLU 54	-11	-15	2768	3.43	410.08	3.73
102	SLU 55	-11	-15	2768	3.43	410.08	3.73
102	SLU 56	-11	-15	2768	3.43	410.08	3.73
102	SLU 57	-11	-15	2768	3.43	410.08	3.73
102	SLU 58	-11	-15	2768	3.43	410.08	3.73
102	SLU 59	-11	-15	2768	3.43	410.08	3.73
102	SLU 60	-12	-16	2917	3.66	431.77	3.97
102	SLU 61	-12	-16	2917	3.66	431.77	3.97
102	SLU 62	-12	-16	2917	3.66	431.77	3.97
102	SLU 63	-12	-16	2917	3.66	431.77	3.97
102	SLU 64	-10	-14	2680	3.3	397.23	3.57
102	SLU 65	-10	-14	2680	3.3	397.23	3.57
102	SLU 66	-10	-14	2680	3.3	397.23	3.57
102	SLU 67	-10	-14	2680	3.3	397.23	3.57
102	SLU 68	-10	-14	2680	3.3	397.23	3.57
102	SLU 69	-10	-14	2680	3.3	397.23	3.57
102	SLU 70	-10	-14	2680	3.3	397.23	3.57
102	SLU 71	-10	-14	2680	3.3	397.23	3.57
102	SLU 72	-10	-14	2680	3.3	397.23	3.57
102	SLU 73	-12	-17	3028	3.83	447.84	4.13
102	SLU 74	-12	-17	3028	3.83	447.84	4.13
102	SLU 75	-12	-17	3028	3.83	447.84	4.13
102	SLU 76	-12	-17	3028	3.83	447.84	4.13
102	SLU 77	-12	-17	3028	3.83	447.84	4.13
102	SLU 78	-12	-17	3028	3.83	447.84	4.13
102	SLU 79	-12	-17	3028	3.83	447.84	4.13
102	SLU 80	-12	-17	3028	3.83	447.84	4.13
102	SLU 81	-13	-17	3177	4.05	469.53	4.37
102	SLU 82	-13	-17	3177	4.05	469.53	4.37
102	SLU 83	-13	-17	3177	4.05	469.53	4.37
102	SLU 84	-13	-17	3177	4.05	469.53	4.37
102	SLE RA 1	-7	-11	2005	2.45	297.26	2.66
102	SLE RA 2	-7	-11	2005	2.45	297.26	2.66
102	SLE RA 3	-7	-11	2005	2.45	297.26	2.66
102	SLE RA 4	-7	-11	2005	2.45	297.26	2.66



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
102	SLE RA 5	-7	-11	2005	2.45	297.26	2.66
102	SLE RA 6	-7	-11	2005	2.45	297.26	2.66
102	SLE RA 7	-7	-11	2005	2.45	297.26	2.66
102	SLE RA 8	-7	-11	2005	2.45	297.26	2.66
102	SLE RA 9	-7	-11	2005	2.45	297.26	2.66
102	SLE RA 10	-9	-12	2236	2.8	331	3.03
102	SLE RA 11	-9	-12	2236	2.8	331	3.03
102	SLE RA 12	-9	-12	2236	2.8	331	3.03
102	SLE RA 13	-9	-12	2236	2.8	331	3.03
102	SLE RA 14	-9	-12	2236	2.8	331	3.03
102	SLE RA 15	-9	-12	2236	2.8	331	3.03
102	SLE RA 16	-9	-12	2236	2.8	331	3.03
102	SLE RA 17	-9	-12	2236	2.8	331	3.03
102	SLE RA 18	-10	-13	2336	2.95	345.46	3.19
102	SLE RA 19	-10	-13	2336	2.95	345.46	3.19
102	SLE RA 20	-10	-13	2336	2.95	345.46	3.19
102	SLE RA 21	-10	-13	2336	2.95	345.46	3.19
102	SLE FR 1	-7	-11	2005	2.45	297.26	2.66
102	SLE FR 2	-7	-11	2005	2.45	297.26	2.66
102	SLE FR 3	-7	-11	2005	2.45	297.26	2.66
102	SLE FR 4	-8	-11	2104	2.6	311.72	2.82
102	SLE FR 5	-8	-11	2104	2.6	311.72	2.82
102	SLE FR 6	-8	-12	2170	2.7	321.36	2.93
102	SLE QP 1	-7	-11	2005	2.45	297.26	2.66
102	SLE QP 2	-8	-11	2104	2.6	311.72	2.82
102	SLD 1	160	69	1833	1.58	270.3	-17.38
102	SLD 2	167	107	1832	1.52	269.21	-26.7
102	SLD 3	145	-147	1800	2.56	276.95	36.66
102	SLD 4	153	-109	1799	2.5	275.85	27.34
102	SLD 5	62	327	2073	0.84	289.61	-81.83
102	SLD 6	70	365	2072	0.78	288.49	-91.36
102	SLD 7	13	-393	1963	4.09	311.77	98.29
102	SLD 8	21	-355	1962	4.03	310.65	88.77
102	SLD 9	-37	332	2246	1.18	312.79	-83.13
102	SLD 10	-29	371	2245	1.12	311.67	-92.65
102	SLD 11	-86	-388	2136	4.43	334.95	97
102	SLD 12	-78	-349	2135	4.36	333.83	87.47
102	SLD 13	-169	87	2409	2.71	347.59	-21.7
102	SLD 14	-161	124	2408	2.65	346.49	-31.02
102	SLD 15	-184	-129	2376	3.68	354.23	32.34
102	SLD 16	-176	-92	2375	3.62	353.14	23.02
102	SLV 1	373	179	1490	0.25	217.28	-44.98
102	SLV 2	391	265	1488	0.11	214.78	-66.29
102	SLV 3	339	-328	1413	2.54	232.94	81.83
102	SLV 4	357	-242	1411	2.4	230.44	60.51
102	SLV 5	152	783	2038	-1.51	260.56	-195.97
102	SLV 6	170	872	2035	-1.66	257.97	-218.1
102	SLV 7	37	-907	1780	6.1	312.76	226.71
102	SLV 8	56	-817	1778	5.95	310.16	204.58
102	SLV 9	-72	795	2430	-0.75	313.28	-198.94
102	SLV 10	-53	885	2428	-0.89	310.68	-221.07
102	SLV 11	-186	-895	2172	6.86	365.47	223.74
102	SLV 12	-168	-805	2170	6.72	362.88	201.61
102	SLV 13	-373	219	2797	2.81	393	-54.87
102	SLV 14	-355	306	2795	2.67	390.5	-76.19
102	SLV 15	-407	-288	2720	5.09	408.66	71.93
102	SLV 16	-389	-201	2718	4.95	406.16	50.62
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
104	SLU 1	1	0	1835	0.35	0.53	0.01
104	SLU 2	1	0	1835	0.35	0.53	0.01
104	SLU 3	1	0	1835	0.35	0.53	0.01
104	SLU 4	1	0	1835	0.35	0.53	0.01
104	SLU 5	1	0	1835	0.35	0.53	0.01
104	SLU 6	1	0	1835	0.35	0.53	0.01
104	SLU 7	1	0	1835	0.35	0.53	0.01
104	SLU 8	1	0	1835	0.35	0.53	0.01
104	SLU 9	1	0	1835	0.35	0.53	0.01
104	SLU 10	2	0	2210	0.51	0.61	0.02
104	SLU 11	2	0	2210	0.51	0.61	0.02
104	SLU 12	2	0	2210	0.51	0.61	0.02
104	SLU 13	2	0	2210	0.51	0.61	0.02
104	SLU 14	2	0	2210	0.51	0.61	0.02
104	SLU 15	2	0	2210	0.51	0.61	0.02
104	SLU 16	2	0	2210	0.51	0.61	0.02
104	SLU 17	2	0	2210	0.51	0.61	0.02
104	SLU 18	2	0	2371	0.58	0.64	0.02
104	SLU 19	2	0	2371	0.58	0.64	0.02
104	SLU 20	2	0	2371	0.58	0.64	0.02
104	SLU 21	2	0	2371	0.58	0.64	0.02
104	SLU 22	2	0	2113	0.46	0.6	0.02
104	SLU 23	2	0	2113	0.46	0.6	0.02
104	SLU 24	2	0	2113	0.46	0.6	0.02
104	SLU 25	2	0	2113	0.46	0.6	0.02
104	SLU 26	2	0	2113	0.46	0.6	0.02
104	SLU 27	2	0	2113	0.46	0.6	0.02
104	SLU 28	2	0	2113	0.46	0.6	0.02
104	SLU 29	2	0	2113	0.46	0.6	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
104	SLU 30	2	0	2113	0.46	0.6	0.02
104	SLU 31	2	0	2488	0.63	0.67	0.02
104	SLU 32	2	0	2488	0.63	0.67	0.02
104	SLU 33	2	0	2488	0.63	0.67	0.02
104	SLU 34	2	0	2488	0.63	0.67	0.02
104	SLU 35	2	0	2488	0.63	0.67	0.02
104	SLU 36	2	0	2488	0.63	0.67	0.02
104	SLU 37	2	0	2488	0.63	0.67	0.02
104	SLU 38	2	0	2488	0.63	0.67	0.02
104	SLU 39	2	1	2649	0.69	0.71	0.02
104	SLU 40	2	1	2649	0.69	0.71	0.02
104	SLU 41	2	1	2649	0.69	0.71	0.02
104	SLU 42	2	1	2649	0.69	0.71	0.02
104	SLU 43	2	0	2290	0.41	0.67	0.02
104	SLU 44	2	0	2290	0.41	0.67	0.02
104	SLU 45	2	0	2290	0.41	0.67	0.02
104	SLU 46	2	0	2290	0.41	0.67	0.02
104	SLU 47	2	0	2290	0.41	0.67	0.02
104	SLU 48	2	0	2290	0.41	0.67	0.02
104	SLU 49	2	0	2290	0.41	0.67	0.02
104	SLU 50	2	0	2290	0.41	0.67	0.02
104	SLU 51	2	0	2290	0.41	0.67	0.02
104	SLU 52	2	0	2665	0.57	0.75	0.02
104	SLU 53	2	0	2665	0.57	0.75	0.02
104	SLU 54	2	0	2665	0.57	0.75	0.02
104	SLU 55	2	0	2665	0.57	0.75	0.02
104	SLU 56	2	0	2665	0.57	0.75	0.02
104	SLU 57	2	0	2665	0.57	0.75	0.02
104	SLU 58	2	0	2665	0.57	0.75	0.02
104	SLU 59	2	0	2665	0.57	0.75	0.02
104	SLU 60	2	0	2826	0.64	0.78	0.02
104	SLU 61	2	0	2826	0.64	0.78	0.02
104	SLU 62	2	0	2826	0.64	0.78	0.02
104	SLU 63	2	0	2826	0.64	0.78	0.02
104	SLU 64	2	0	2568	0.53	0.73	0.02
104	SLU 65	2	0	2568	0.53	0.73	0.02
104	SLU 66	2	0	2568	0.53	0.73	0.02
104	SLU 67	2	0	2568	0.53	0.73	0.02
104	SLU 68	2	0	2568	0.53	0.73	0.02
104	SLU 69	2	0	2568	0.53	0.73	0.02
104	SLU 70	2	0	2568	0.53	0.73	0.02
104	SLU 71	2	0	2568	0.53	0.73	0.02
104	SLU 72	2	0	2568	0.53	0.73	0.02
104	SLU 73	2	0	2943	0.69	0.81	0.02
104	SLU 74	2	0	2943	0.69	0.81	0.02
104	SLU 75	2	0	2943	0.69	0.81	0.02
104	SLU 76	2	0	2943	0.69	0.81	0.02
104	SLU 77	2	0	2943	0.69	0.81	0.02
104	SLU 78	2	0	2943	0.69	0.81	0.02
104	SLU 79	2	0	2943	0.69	0.81	0.02
104	SLU 80	2	0	2943	0.69	0.81	0.02
104	SLU 81	2	1	3104	0.76	0.85	0.02
104	SLU 82	2	1	3104	0.76	0.85	0.02
104	SLU 83	2	1	3104	0.76	0.85	0.02
104	SLU 84	2	1	3104	0.76	0.85	0.02
104	SLE RA 1	1	0	1914	0.38	0.55	0.01
104	SLE RA 2	1	0	1914	0.38	0.55	0.01
104	SLE RA 3	1	0	1914	0.38	0.55	0.01
104	SLE RA 4	1	0	1914	0.38	0.55	0.01
104	SLE RA 5	1	0	1914	0.38	0.55	0.01
104	SLE RA 6	1	0	1914	0.38	0.55	0.01
104	SLE RA 7	1	0	1914	0.38	0.55	0.01
104	SLE RA 8	1	0	1914	0.38	0.55	0.01
104	SLE RA 9	1	0	1914	0.38	0.55	0.01
104	SLE RA 10	2	0	2165	0.49	0.6	0.02
104	SLE RA 11	2	0	2165	0.49	0.6	0.02
104	SLE RA 12	2	0	2165	0.49	0.6	0.02
104	SLE RA 13	2	0	2165	0.49	0.6	0.02
104	SLE RA 14	2	0	2165	0.49	0.6	0.02
104	SLE RA 15	2	0	2165	0.49	0.6	0.02
104	SLE RA 16	2	0	2165	0.49	0.6	0.02
104	SLE RA 17	2	0	2165	0.49	0.6	0.02
104	SLE RA 18	2	0	2272	0.53	0.63	0.02
104	SLE RA 19	2	0	2272	0.53	0.63	0.02
104	SLE RA 20	2	0	2272	0.53	0.63	0.02
104	SLE RA 21	2	0	2272	0.53	0.63	0.02
104	SLE FR 1	1	0	1914	0.38	0.55	0.01
104	SLE FR 2	1	0	1914	0.38	0.55	0.01
104	SLE FR 3	1	0	1914	0.38	0.55	0.01
104	SLE FR 4	2	0	2022	0.43	0.57	0.01
104	SLE FR 5	2	0	2022	0.43	0.57	0.01
104	SLE FR 6	2	0	2093	0.46	0.59	0.02
104	SLE QP 1	1	0	1914	0.38	0.55	0.01
104	SLE QP 2	2	0	2022	0.43	0.57	0.01
104	SLD 1	143	7	2042	0.2	4.11	-0.09
104	SLD 2	147	7	2042	0.2	4.12	-0.02
104	SLD 3	145	-8	2014	0.66	4.44	-0.09
104	SLD 4	149	-7	2014	0.67	4.45	-0.01
104	SLD 5	40	24	2071	-0.35	1.12	-0.06
104	SLD 6	44	25	2071	-0.35	1.13	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
104	SLD 7	46	-25	1976	1.2	2.24	-0.03
104	SLD 8	50	-24	1976	1.2	2.25	0.05
104	SLD 9	-46	25	2068	-0.35	-1.1	-0.02
104	SLD 10	-43	25	2068	-0.35	-1.09	0.06
104	SLD 11	-41	-24	1972	1.2	0.01	0.01
104	SLD 12	-37	-24	1972	1.2	0.03	0.09
104	SLD 13	-146	8	2030	0.19	-3.3	0.04
104	SLD 14	-142	8	2030	0.19	-3.29	0.12
104	SLD 15	-144	-7	2001	0.65	-2.97	0.05
104	SLD 16	-140	-7	2001	0.65	-2.96	0.12
104	SLV 1	323	16	2070	-0.11	8.86	-0.23
104	SLV 2	332	17	2070	-0.11	8.89	-0.07
104	SLV 3	327	-18	2002	0.99	9.64	-0.21
104	SLV 4	336	-18	2002	0.99	9.67	-0.05
104	SLV 5	89	57	2138	-1.39	1.86	-0.15
104	SLV 6	98	57	2138	-1.39	1.89	0.02
104	SLV 7	102	-58	1914	2.25	4.47	-0.09
104	SLV 8	111	-57	1914	2.25	4.5	0.09
104	SLV 9	-108	57	2130	-1.4	-3.35	-0.06
104	SLV 10	-99	58	2130	-1.4	-3.33	0.12
104	SLV 11	-95	-57	1905	2.24	-0.74	0.01
104	SLV 12	-86	-56	1905	2.24	-0.72	0.18
104	SLV 13	-333	18	2041	-0.14	-8.52	0.08
104	SLV 14	-324	19	2041	-0.13	-8.5	0.24
104	SLV 15	-329	-16	1974	0.96	-7.74	0.1
104	SLV 16	-320	-16	1974	0.96	-7.71	0.26
104	CRTFP Ux+	0	0	0	0	0	0
104	CRTFP Ux-	0	0	0	0	0	0
104	CRTFP Uy+	0	0	0	0	0	0
104	CRTFP Uy-	0	0	0	0	0	0
106	SLU 1	-6	-11	1995	2.15	341.13	2.65
106	SLU 2	-6	-11	1995	2.15	341.13	2.65
106	SLU 3	-6	-11	1995	2.15	341.13	2.65
106	SLU 4	-6	-11	1995	2.15	341.13	2.65
106	SLU 5	-6	-11	1995	2.15	341.13	2.65
106	SLU 6	-6	-11	1995	2.15	341.13	2.65
106	SLU 7	-6	-11	1995	2.15	341.13	2.65
106	SLU 8	-6	-11	1995	2.15	341.13	2.65
106	SLU 9	-6	-11	1995	2.15	341.13	2.65
106	SLU 10	-8	-13	2357	2.61	403.43	3.22
106	SLU 11	-8	-13	2357	2.61	403.43	3.22
106	SLU 12	-8	-13	2357	2.61	403.43	3.22
106	SLU 13	-8	-13	2357	2.61	403.43	3.22
106	SLU 14	-8	-13	2357	2.61	403.43	3.22
106	SLU 15	-8	-13	2357	2.61	403.43	3.22
106	SLU 16	-8	-13	2357	2.61	403.43	3.22
106	SLU 17	-8	-13	2357	2.61	403.43	3.22
106	SLU 18	-9	-14	2512	2.81	430.13	3.46
106	SLU 19	-9	-14	2512	2.81	430.13	3.46
106	SLU 20	-9	-14	2512	2.81	430.13	3.46
106	SLU 21	-9	-14	2512	2.81	430.13	3.46
106	SLU 22	-7	-13	2266	2.5	387.63	3.06
106	SLU 23	-7	-13	2266	2.5	387.63	3.06
106	SLU 24	-7	-13	2266	2.5	387.63	3.06
106	SLU 25	-7	-13	2266	2.5	387.63	3.06
106	SLU 26	-7	-13	2266	2.5	387.63	3.06
106	SLU 27	-7	-13	2266	2.5	387.63	3.06
106	SLU 28	-7	-13	2266	2.5	387.63	3.06
106	SLU 29	-7	-13	2266	2.5	387.63	3.06
106	SLU 30	-7	-13	2266	2.5	387.63	3.06
106	SLU 31	-9	-15	2627	2.96	449.94	3.62
106	SLU 32	-9	-15	2627	2.96	449.94	3.62
106	SLU 33	-9	-15	2627	2.96	449.94	3.62
106	SLU 34	-9	-15	2627	2.96	449.94	3.62
106	SLU 35	-9	-15	2627	2.96	449.94	3.62
106	SLU 36	-9	-15	2627	2.96	449.94	3.62
106	SLU 37	-9	-15	2627	2.96	449.94	3.62
106	SLU 38	-9	-15	2627	2.96	449.94	3.62
106	SLU 39	-10	-16	2782	3.16	476.64	3.87
106	SLU 40	-10	-16	2782	3.16	476.64	3.87
106	SLU 41	-10	-16	2782	3.16	476.64	3.87
106	SLU 42	-10	-16	2782	3.16	476.64	3.87
106	SLU 43	-7	-14	2500	2.68	427.52	3.3
106	SLU 44	-7	-14	2500	2.68	427.52	3.3
106	SLU 45	-7	-14	2500	2.68	427.52	3.3
106	SLU 46	-7	-14	2500	2.68	427.52	3.3
106	SLU 47	-7	-14	2500	2.68	427.52	3.3
106	SLU 48	-7	-14	2500	2.68	427.52	3.3
106	SLU 49	-7	-14	2500	2.68	427.52	3.3
106	SLU 50	-7	-14	2500	2.68	427.52	3.3
106	SLU 51	-7	-14	2500	2.68	427.52	3.3
106	SLU 52	-9	-16	2862	3.14	489.83	3.87
106	SLU 53	-9	-16	2862	3.14	489.83	3.87
106	SLU 54	-9	-16	2862	3.14	489.83	3.87
106	SLU 55	-9	-16	2862	3.14	489.83	3.87
106	SLU 56	-9	-16	2862	3.14	489.83	3.87
106	SLU 57	-9	-16	2862	3.14	489.83	3.87
106	SLU 58	-9	-16	2862	3.14	489.83	3.87
106	SLU 59	-9	-16	2862	3.14	489.83	3.87
106	SLU 60	-10	-17	3017	3.34	516.53	4.11



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
106	SLU 61	-10	-17	3017	3.34	516.53	4.11
106	SLU 62	-10	-17	3017	3.34	516.53	4.11
106	SLU 63	-10	-17	3017	3.34	516.53	4.11
106	SLU 64	-8	-15	2771	3.03	474.03	3.71
106	SLU 65	-8	-15	2771	3.03	474.03	3.71
106	SLU 66	-8	-15	2771	3.03	474.03	3.71
106	SLU 67	-8	-15	2771	3.03	474.03	3.71
106	SLU 68	-8	-15	2771	3.03	474.03	3.71
106	SLU 69	-8	-15	2771	3.03	474.03	3.71
106	SLU 70	-8	-15	2771	3.03	474.03	3.71
106	SLU 71	-8	-15	2771	3.03	474.03	3.71
106	SLU 72	-8	-15	2771	3.03	474.03	3.71
106	SLU 73	-11	-18	3133	3.49	536.33	4.28
106	SLU 74	-11	-18	3133	3.49	536.33	4.28
106	SLU 75	-11	-18	3133	3.49	536.33	4.28
106	SLU 76	-11	-18	3133	3.49	536.33	4.28
106	SLU 77	-11	-18	3133	3.49	536.33	4.28
106	SLU 78	-11	-18	3133	3.49	536.33	4.28
106	SLU 79	-11	-18	3133	3.49	536.33	4.28
106	SLU 80	-11	-18	3133	3.49	536.33	4.28
106	SLU 81	-12	-19	3288	3.69	563.03	4.52
106	SLU 82	-12	-19	3288	3.69	563.03	4.52
106	SLU 83	-12	-19	3288	3.69	563.03	4.52
106	SLU 84	-12	-19	3288	3.69	563.03	4.52
106	SLE RA 1	-6	-11	2072	2.25	354.42	2.77
106	SLE RA 2	-6	-11	2072	2.25	354.42	2.77
106	SLE RA 3	-6	-11	2072	2.25	354.42	2.77
106	SLE RA 4	-6	-11	2072	2.25	354.42	2.77
106	SLE RA 5	-6	-11	2072	2.25	354.42	2.77
106	SLE RA 6	-6	-11	2072	2.25	354.42	2.77
106	SLE RA 7	-6	-11	2072	2.25	354.42	2.77
106	SLE RA 8	-6	-11	2072	2.25	354.42	2.77
106	SLE RA 9	-6	-11	2072	2.25	354.42	2.77
106	SLE RA 10	-8	-13	2313	2.56	395.95	3.14
106	SLE RA 11	-8	-13	2313	2.56	395.95	3.14
106	SLE RA 12	-8	-13	2313	2.56	395.95	3.14
106	SLE RA 13	-8	-13	2313	2.56	395.95	3.14
106	SLE RA 14	-8	-13	2313	2.56	395.95	3.14
106	SLE RA 15	-8	-13	2313	2.56	395.95	3.14
106	SLE RA 16	-8	-13	2313	2.56	395.95	3.14
106	SLE RA 17	-8	-13	2313	2.56	395.95	3.14
106	SLE RA 18	-8	-14	2417	2.69	413.75	3.31
106	SLE RA 19	-8	-14	2417	2.69	413.75	3.31
106	SLE RA 20	-8	-14	2417	2.69	413.75	3.31
106	SLE RA 21	-8	-14	2417	2.69	413.75	3.31
106	SLE FR 1	-6	-11	2072	2.25	354.42	2.77
106	SLE FR 2	-6	-11	2072	2.25	354.42	2.77
106	SLE FR 3	-6	-11	2072	2.25	354.42	2.77
106	SLE FR 4	-7	-12	2176	2.38	372.22	2.93
106	SLE FR 5	-7	-12	2176	2.38	372.22	2.93
106	SLE FR 6	-7	-12	2244	2.47	384.08	3.04
106	SLE QP 1	-6	-11	2072	2.25	354.42	2.77
106	SLE QP 2	-7	-12	2176	2.38	372.22	2.93
106	SLD 1	164	68	1877	1.48	320.48	-17.07
106	SLD 2	168	106	1875	1.43	319.47	-26.37
106	SLD 3	151	-147	1870	2.32	326.41	36.53
106	SLD 4	155	-110	1867	2.27	325.4	27.23
106	SLD 5	62	325	2098	0.85	348.06	-81
106	SLD 6	67	363	2096	0.8	347.03	-90.51
106	SLD 7	20	-392	2073	3.66	367.84	97.65
106	SLD 8	24	-354	2071	3.61	366.81	88.15
106	SLD 9	-38	330	2280	1.15	377.62	-82.29
106	SLD 10	-33	368	2278	1.1	376.59	-91.8
106	SLD 11	-80	-387	2255	3.97	397.41	96.36
106	SLD 12	-76	-349	2253	3.92	396.38	86.86
106	SLD 13	-169	85	2484	2.49	419.03	-21.37
106	SLD 14	-165	123	2481	2.44	418.02	-30.67
106	SLD 15	-182	-130	2476	3.33	424.97	32.22
106	SLD 16	-177	-92	2474	3.29	423.96	22.92
106	SLV 1	381	177	1499	0.3	254.43	-44.39
106	SLV 2	391	263	1493	0.19	252.13	-65.67
106	SLV 3	351	-328	1481	2.28	268.41	81.38
106	SLV 4	361	-242	1476	2.17	266.1	60.1
106	SLV 5	151	778	2001	-1.2	316.54	-194.17
106	SLV 6	161	868	1995	-1.32	314.15	-216.25
106	SLV 7	52	-904	1943	5.39	363.12	225.07
106	SLV 8	62	-815	1937	5.28	360.72	202.98
106	SLV 9	-76	791	2414	-0.51	383.71	-197.12
106	SLV 10	-65	880	2408	-0.63	381.32	-219.21
106	SLV 11	-175	-892	2356	6.08	430.29	222.11
106	SLV 12	-164	-802	2350	5.97	427.89	200.02
106	SLV 13	-375	217	2875	2.6	478.33	-54.25
106	SLV 14	-364	304	2870	2.49	476.03	-75.52
106	SLV 15	-404	-287	2858	4.58	492.31	71.52
106	SLV 16	-394	-201	2852	4.47	490	50.25
106	CRTFP Ux+	0	0	0	0	0	0
106	CRTFP Ux-	0	0	0	0	0	0
106	CRTFP Uy+	0	0	0	0	0	0
106	CRTFP Uy-	0	0	0	0	0	0
108	SLU 1	1	0	1567	-43.56	0.85	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
108	SLU 2	1	0	1567	-43.56	0.85	0.03
108	SLU 3	1	0	1567	-43.56	0.85	0.03
108	SLU 4	1	0	1567	-43.56	0.85	0.03
108	SLU 5	1	0	1567	-43.56	0.85	0.03
108	SLU 6	1	0	1567	-43.56	0.85	0.03
108	SLU 7	1	0	1567	-43.56	0.85	0.03
108	SLU 8	1	0	1567	-43.56	0.85	0.03
108	SLU 9	1	0	1567	-43.56	0.85	0.03
108	SLU 10	1	0	1889	-52.49	0.97	0.04
108	SLU 11	1	0	1889	-52.49	0.97	0.04
108	SLU 12	1	0	1889	-52.49	0.97	0.04
108	SLU 13	1	0	1889	-52.49	0.97	0.04
108	SLU 14	1	0	1889	-52.49	0.97	0.04
108	SLU 15	1	0	1889	-52.49	0.97	0.04
108	SLU 16	1	0	1889	-52.49	0.97	0.04
108	SLU 17	1	0	1889	-52.49	0.97	0.04
108	SLU 18	1	0	2027	-56.32	1.02	0.04
108	SLU 19	1	0	2027	-56.32	1.02	0.04
108	SLU 20	1	0	2027	-56.32	1.02	0.04
108	SLU 21	1	0	2027	-56.32	1.02	0.04
108	SLU 22	1	0	1805	-50.18	0.95	0.04
108	SLU 23	1	0	1805	-50.18	0.95	0.04
108	SLU 24	1	0	1805	-50.18	0.95	0.04
108	SLU 25	1	0	1805	-50.18	0.95	0.04
108	SLU 26	1	0	1805	-50.18	0.95	0.04
108	SLU 27	1	0	1805	-50.18	0.95	0.04
108	SLU 28	1	0	1805	-50.18	0.95	0.04
108	SLU 29	1	0	1805	-50.18	0.95	0.04
108	SLU 30	1	0	1805	-50.18	0.95	0.04
108	SLU 31	1	1	2127	-59.11	1.07	0.04
108	SLU 32	1	1	2127	-59.11	1.07	0.04
108	SLU 33	1	1	2127	-59.11	1.07	0.04
108	SLU 34	1	1	2127	-59.11	1.07	0.04
108	SLU 35	1	1	2127	-59.11	1.07	0.04
108	SLU 36	1	1	2127	-59.11	1.07	0.04
108	SLU 37	1	1	2127	-59.11	1.07	0.04
108	SLU 38	1	1	2127	-59.11	1.07	0.04
108	SLU 39	1	1	2265	-62.94	1.12	0.05
108	SLU 40	1	1	2265	-62.94	1.12	0.05
108	SLU 41	1	1	2265	-62.94	1.12	0.05
108	SLU 42	1	1	2265	-62.94	1.12	0.05
108	SLU 43	1	0	1955	-54.36	1.07	0.04
108	SLU 44	1	0	1955	-54.36	1.07	0.04
108	SLU 45	1	0	1955	-54.36	1.07	0.04
108	SLU 46	1	0	1955	-54.36	1.07	0.04
108	SLU 47	1	0	1955	-54.36	1.07	0.04
108	SLU 48	1	0	1955	-54.36	1.07	0.04
108	SLU 49	1	0	1955	-54.36	1.07	0.04
108	SLU 50	1	0	1955	-54.36	1.07	0.04
108	SLU 51	1	0	1955	-54.36	1.07	0.04
108	SLU 52	1	0	2277	-63.29	1.19	0.05
108	SLU 53	1	0	2277	-63.29	1.19	0.05
108	SLU 54	1	0	2277	-63.29	1.19	0.05
108	SLU 55	1	0	2277	-63.29	1.19	0.05
108	SLU 56	1	0	2277	-63.29	1.19	0.05
108	SLU 57	1	0	2277	-63.29	1.19	0.05
108	SLU 58	1	0	2277	-63.29	1.19	0.05
108	SLU 59	1	0	2277	-63.29	1.19	0.05
108	SLU 60	1	0	2415	-67.12	1.25	0.05
108	SLU 61	1	0	2415	-67.12	1.25	0.05
108	SLU 62	1	0	2415	-67.12	1.25	0.05
108	SLU 63	1	0	2415	-67.12	1.25	0.05
108	SLU 64	1	0	2193	-60.98	1.17	0.04
108	SLU 65	1	0	2193	-60.98	1.17	0.04
108	SLU 66	1	0	2193	-60.98	1.17	0.04
108	SLU 67	1	0	2193	-60.98	1.17	0.04
108	SLU 68	1	0	2193	-60.98	1.17	0.04
108	SLU 69	1	0	2193	-60.98	1.17	0.04
108	SLU 70	1	0	2193	-60.98	1.17	0.04
108	SLU 71	1	0	2193	-60.98	1.17	0.04
108	SLU 72	1	0	2193	-60.98	1.17	0.04
108	SLU 73	2	1	2515	-69.91	1.29	0.05
108	SLU 74	2	1	2515	-69.91	1.29	0.05
108	SLU 75	2	1	2515	-69.91	1.29	0.05
108	SLU 76	2	1	2515	-69.91	1.29	0.05
108	SLU 77	2	1	2515	-69.91	1.29	0.05
108	SLU 78	2	1	2515	-69.91	1.29	0.05
108	SLU 79	2	1	2515	-69.91	1.29	0.05
108	SLU 80	2	1	2515	-69.91	1.29	0.05
108	SLU 81	2	1	2653	-73.74	1.34	0.05
108	SLU 82	2	1	2653	-73.74	1.34	0.05
108	SLU 83	2	1	2653	-73.74	1.34	0.05
108	SLU 84	2	1	2653	-73.74	1.34	0.05
108	SLE RA 1	1	0	1635	-45.45	0.88	0.03
108	SLE RA 2	1	0	1635	-45.45	0.88	0.03
108	SLE RA 3	1	0	1635	-45.45	0.88	0.03
108	SLE RA 4	1	0	1635	-45.45	0.88	0.03
108	SLE RA 5	1	0	1635	-45.45	0.88	0.03
108	SLE RA 6	1	0	1635	-45.45	0.88	0.03
108	SLE RA 7	1	0	1635	-45.45	0.88	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
108	SLE RA 8	1	0	1635	-45.45	0.88	0.03
108	SLE RA 9	1	0	1635	-45.45	0.88	0.03
108	SLE RA 10	1	0	1849	-51.41	0.96	0.04
108	SLE RA 11	1	0	1849	-51.41	0.96	0.04
108	SLE RA 12	1	0	1849	-51.41	0.96	0.04
108	SLE RA 13	1	0	1849	-51.41	0.96	0.04
108	SLE RA 14	1	0	1849	-51.41	0.96	0.04
108	SLE RA 15	1	0	1849	-51.41	0.96	0.04
108	SLE RA 16	1	0	1849	-51.41	0.96	0.04
108	SLE RA 17	1	0	1849	-51.41	0.96	0.04
108	SLE RA 18	1	0	1941	-53.96	0.99	0.04
108	SLE RA 19	1	0	1941	-53.96	0.99	0.04
108	SLE RA 20	1	0	1941	-53.96	0.99	0.04
108	SLE RA 21	1	0	1941	-53.96	0.99	0.04
108	SLE FR 1	1	0	1635	-45.45	0.88	0.03
108	SLE FR 2	1	0	1635	-45.45	0.88	0.03
108	SLE FR 3	1	0	1635	-45.45	0.88	0.03
108	SLE FR 4	1	0	1727	-48	0.91	0.03
108	SLE FR 5	1	0	1727	-48	0.91	0.03
108	SLE FR 6	1	0	1788	-49.71	0.93	0.04
108	SLE QP 1	1	0	1635	-45.45	0.88	0.03
108	SLE QP 2	1	0	1727	-48	0.91	0.03
108	SLD 1	124	6	1738	-48.47	4.31	3.42
108	SLD 2	125	6	1738	-48.47	4.33	3.49
108	SLD 3	125	-6	1726	-47.84	4.46	3.45
108	SLD 4	127	-6	1726	-47.84	4.48	3.53
108	SLD 5	35	21	1750	-49.09	1.7	0.96
108	SLD 6	37	21	1750	-49.09	1.71	1.04
108	SLD 7	40	-21	1707	-47.01	2.2	1.09
108	SLD 8	41	-21	1707	-47.01	2.22	1.17
108	SLD 9	-39	21	1746	-49	-0.39	-1.1
108	SLD 10	-38	21	1746	-49	-0.38	-1.02
108	SLD 11	-35	-21	1704	-46.92	0.11	-0.97
108	SLD 12	-33	-20	1704	-46.92	0.13	-0.9
108	SLD 13	-125	7	1728	-48.16	-2.66	-3.46
108	SLD 14	-123	7	1728	-48.16	-2.64	-3.38
108	SLD 15	-123	-6	1715	-47.54	-2.5	-3.42
108	SLD 16	-122	-6	1715	-47.54	-2.49	-3.35
108	SLV 1	280	14	1754	-49.08	8.68	7.71
108	SLV 2	283	14	1754	-49.08	8.72	7.88
108	SLV 3	283	-15	1724	-47.62	9.04	7.79
108	SLV 4	286	-15	1724	-47.62	9.07	7.97
108	SLV 5	79	49	1780	-50.54	2.69	2.14
108	SLV 6	82	49	1780	-50.54	2.73	2.32
108	SLV 7	89	-49	1680	-45.68	3.87	2.43
108	SLV 8	92	-49	1681	-45.68	3.91	2.61
108	SLV 9	-90	49	1773	-50.33	-2.09	-2.54
108	SLV 10	-87	50	1773	-50.33	-2.05	-2.36
108	SLV 11	-80	-48	1673	-45.47	-0.91	-2.26
108	SLV 12	-77	-48	1673	-45.47	-0.87	-2.07
108	SLV 13	-284	16	1730	-48.39	-7.25	-7.9
108	SLV 14	-281	16	1730	-48.39	-7.22	-7.73
108	SLV 15	-281	-14	1700	-46.93	-6.9	-7.82
108	SLV 16	-278	-13	1700	-46.93	-6.86	-7.64
108	CRTFP Ux+	0	0	0	0	0	0
108	CRTFP Ux-	0	0	0	0	0	0
108	CRTFP Uy+	0	0	0	0	0	0
108	CRTFP Uy-	0	0	0	0	0	0
137	SLU 1	-2	-8	1390	-94.39	268.13	1.76
137	SLU 2	-2	-8	1390	-94.39	268.13	1.76
137	SLU 3	-2	-8	1390	-94.39	268.13	1.76
137	SLU 4	-2	-8	1390	-94.39	268.13	1.76
137	SLU 5	-2	-8	1390	-94.39	268.13	1.76
137	SLU 6	-2	-8	1390	-94.39	268.13	1.76
137	SLU 7	-2	-8	1390	-94.39	268.13	1.76
137	SLU 8	-2	-8	1390	-94.39	268.13	1.76
137	SLU 9	-2	-8	1390	-94.39	268.13	1.76
137	SLU 10	-3	-9	1643	-111.56	317.91	2.07
137	SLU 11	-3	-9	1643	-111.56	317.91	2.07
137	SLU 12	-3	-9	1643	-111.56	317.91	2.07
137	SLU 13	-3	-9	1643	-111.56	317.91	2.07
137	SLU 14	-3	-9	1643	-111.56	317.91	2.07
137	SLU 15	-3	-9	1643	-111.56	317.91	2.07
137	SLU 16	-3	-9	1643	-111.56	317.91	2.07
137	SLU 17	-3	-9	1643	-111.56	317.91	2.07
137	SLU 18	-4	-10	1751	-118.92	339.25	2.2
137	SLU 19	-4	-10	1751	-118.92	339.25	2.2
137	SLU 20	-4	-10	1751	-118.92	339.25	2.2
137	SLU 21	-4	-10	1751	-118.92	339.25	2.2
137	SLU 22	-3	-9	1579	-107.24	305.3	1.99
137	SLU 23	-3	-9	1579	-107.24	305.3	1.99
137	SLU 24	-3	-9	1579	-107.24	305.3	1.99
137	SLU 25	-3	-9	1579	-107.24	305.3	1.99
137	SLU 26	-3	-9	1579	-107.24	305.3	1.99
137	SLU 27	-3	-9	1579	-107.24	305.3	1.99
137	SLU 28	-3	-9	1579	-107.24	305.3	1.99
137	SLU 29	-3	-9	1579	-107.24	305.3	1.99
137	SLU 30	-3	-9	1579	-107.24	305.3	1.99
137	SLU 31	-4	-11	1832	-124.41	355.08	2.3
137	SLU 32	-4	-11	1832	-124.41	355.08	2.3



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
137	SLU 33	-4	-11	1832	-124.41	355.08	2.3
137	SLU 34	-4	-11	1832	-124.41	355.08	2.3
137	SLU 35	-4	-11	1832	-124.41	355.08	2.3
137	SLU 36	-4	-11	1832	-124.41	355.08	2.3
137	SLU 37	-4	-11	1832	-124.41	355.08	2.3
137	SLU 38	-4	-11	1832	-124.41	355.08	2.3
137	SLU 39	-5	-11	1940	-131.77	376.41	2.44
137	SLU 40	-5	-11	1940	-131.77	376.41	2.44
137	SLU 41	-5	-11	1940	-131.77	376.41	2.44
137	SLU 42	-5	-11	1940	-131.77	376.41	2.44
137	SLU 43	-3	-10	1742	-118.3	335.82	2.2
137	SLU 44	-3	-10	1742	-118.3	335.82	2.2
137	SLU 45	-3	-10	1742	-118.3	335.82	2.2
137	SLU 46	-3	-10	1742	-118.3	335.82	2.2
137	SLU 47	-3	-10	1742	-118.3	335.82	2.2
137	SLU 48	-3	-10	1742	-118.3	335.82	2.2
137	SLU 49	-3	-10	1742	-118.3	335.82	2.2
137	SLU 50	-3	-10	1742	-118.3	335.82	2.2
137	SLU 51	-3	-10	1742	-118.3	335.82	2.2
137	SLU 52	-4	-11	1995	-135.47	385.61	2.52
137	SLU 53	-4	-11	1995	-135.47	385.61	2.52
137	SLU 54	-4	-11	1995	-135.47	385.61	2.52
137	SLU 55	-4	-11	1995	-135.47	385.61	2.52
137	SLU 56	-4	-11	1995	-135.47	385.61	2.52
137	SLU 57	-4	-11	1995	-135.47	385.61	2.52
137	SLU 58	-4	-11	1995	-135.47	385.61	2.52
137	SLU 59	-4	-11	1995	-135.47	385.61	2.52
137	SLU 60	-4	-12	2103	-142.83	406.94	2.65
137	SLU 61	-4	-12	2103	-142.83	406.94	2.65
137	SLU 62	-4	-12	2103	-142.83	406.94	2.65
137	SLU 63	-4	-12	2103	-142.83	406.94	2.65
137	SLU 64	-3	-11	1931	-131.15	372.99	2.44
137	SLU 65	-3	-11	1931	-131.15	372.99	2.44
137	SLU 66	-3	-11	1931	-131.15	372.99	2.44
137	SLU 67	-3	-11	1931	-131.15	372.99	2.44
137	SLU 68	-3	-11	1931	-131.15	372.99	2.44
137	SLU 69	-3	-11	1931	-131.15	372.99	2.44
137	SLU 70	-3	-11	1931	-131.15	372.99	2.44
137	SLU 71	-3	-11	1931	-131.15	372.99	2.44
137	SLU 72	-3	-11	1931	-131.15	372.99	2.44
137	SLU 73	-5	-13	2184	-148.32	422.77	2.75
137	SLU 74	-5	-13	2184	-148.32	422.77	2.75
137	SLU 75	-5	-13	2184	-148.32	422.77	2.75
137	SLU 76	-5	-13	2184	-148.32	422.77	2.75
137	SLU 77	-5	-13	2184	-148.32	422.77	2.75
137	SLU 78	-5	-13	2184	-148.32	422.77	2.75
137	SLU 79	-5	-13	2184	-148.32	422.77	2.75
137	SLU 80	-5	-13	2184	-148.32	422.77	2.75
137	SLU 81	-5	-13	2292	-155.68	444.11	2.88
137	SLU 82	-5	-13	2292	-155.68	444.11	2.88
137	SLU 83	-5	-13	2292	-155.68	444.11	2.88
137	SLU 84	-5	-13	2292	-155.68	444.11	2.88
137	SLE RA 1	-2	-8	1444	-98.06	278.75	1.82
137	SLE RA 2	-2	-8	1444	-98.06	278.75	1.82
137	SLE RA 3	-2	-8	1444	-98.06	278.75	1.82
137	SLE RA 4	-2	-8	1444	-98.06	278.75	1.82
137	SLE RA 5	-2	-8	1444	-98.06	278.75	1.82
137	SLE RA 6	-2	-8	1444	-98.06	278.75	1.82
137	SLE RA 7	-2	-8	1444	-98.06	278.75	1.82
137	SLE RA 8	-2	-8	1444	-98.06	278.75	1.82
137	SLE RA 9	-2	-8	1444	-98.06	278.75	1.82
137	SLE RA 10	-3	-9	1612	-109.51	311.94	2.03
137	SLE RA 11	-3	-9	1612	-109.51	311.94	2.03
137	SLE RA 12	-3	-9	1612	-109.51	311.94	2.03
137	SLE RA 13	-3	-9	1612	-109.51	311.94	2.03
137	SLE RA 14	-3	-9	1612	-109.51	311.94	2.03
137	SLE RA 15	-3	-9	1612	-109.51	311.94	2.03
137	SLE RA 16	-3	-9	1612	-109.51	311.94	2.03
137	SLE RA 17	-3	-9	1612	-109.51	311.94	2.03
137	SLE RA 18	-4	-10	1685	-114.41	326.16	2.12
137	SLE RA 19	-4	-10	1685	-114.41	326.16	2.12
137	SLE RA 20	-4	-10	1685	-114.41	326.16	2.12
137	SLE RA 21	-4	-10	1685	-114.41	326.16	2.12
137	SLE FR 1	-2	-8	1444	-98.06	278.75	1.82
137	SLE FR 2	-2	-8	1444	-98.06	278.75	1.82
137	SLE FR 3	-2	-8	1444	-98.06	278.75	1.82
137	SLE FR 4	-3	-9	1516	-102.97	292.97	1.91
137	SLE FR 5	-3	-9	1516	-102.97	292.97	1.91
137	SLE FR 6	-3	-9	1564	-106.24	302.45	1.97
137	SLE QP 1	-2	-8	1444	-98.06	278.75	1.82
137	SLE QP 2	-3	-9	1516	-102.97	292.97	1.91
137	SLD 1	113	46	1300	-88.4	252	-4.22
137	SLD 2	114	71	1297	-88.25	251.54	-10.51
137	SLD 3	109	-100	1308	-88.74	254.4	31.9
137	SLD 4	110	-75	1305	-88.59	253.94	25.6
137	SLD 5	38	220	1440	-98.15	277.21	-52.42
137	SLD 6	39	246	1437	-97.99	276.74	-58.86
137	SLD 7	24	-267	1467	-99.26	285.2	67.95
137	SLD 8	25	-241	1464	-99.11	284.73	61.51
137	SLD 9	-31	224	1568	-106.83	301.22	-57.69



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
137	SLD 10	-30	250	1566	-106.67	300.74	-64.12
137	SLD 11	-44	-263	1595	-107.94	309.2	62.68
137	SLD 12	-43	-237	1592	-107.79	308.73	56.24
137	SLD 13	-116	58	1727	-117.35	332.01	-21.77
137	SLD 14	-114	83	1724	-117.19	331.55	-28.07
137	SLD 15	-120	-88	1735	-117.68	334.4	14.34
137	SLD 16	-119	-63	1732	-117.53	333.94	8.04
137	SLV 1	260	120	1025	-69.89	199.83	-13.32
137	SLV 2	263	178	1019	-69.54	198.78	-27.73
137	SLV 3	251	-223	1043	-70.68	205.46	71.41
137	SLV 4	253	-164	1038	-70.33	204.41	57.01
137	SLV 5	90	528	1342	-91.98	256.87	-125.86
137	SLV 6	92	589	1336	-91.62	255.78	-140.81
137	SLV 7	58	-614	1405	-94.6	275.66	156.6
137	SLV 8	61	-553	1399	-94.24	274.56	141.64
137	SLV 9	-66	536	1633	-111.69	311.38	-137.82
137	SLV 10	-63	597	1627	-111.33	310.29	-152.77
137	SLV 11	-98	-606	1696	-114.32	330.17	144.64
137	SLV 12	-95	-545	1690	-113.95	329.07	129.68
137	SLV 13	-259	147	1994	-135.61	381.53	-53.18
137	SLV 14	-256	206	1989	-135.26	380.48	-67.59
137	SLV 15	-268	-195	2013	-136.39	387.17	31.55
137	SLV 16	-266	-137	2008	-136.04	386.11	17.15
137	CRTFP Ux+	0	0	0	0	0	0
137	CRTFP Ux-	0	0	0	0	0	0
137	CRTFP Uy+	0	0	0	0	0	0
137	CRTFP Uy-	0	0	0	0	0	0
139	SLU 1	-1	-2	331	-76.1	11.28	-0.06
139	SLU 2	-1	-2	331	-76.1	11.28	-0.06
139	SLU 3	-1	-2	331	-76.1	11.28	-0.06
139	SLU 4	-1	-2	331	-76.1	11.28	-0.06
139	SLU 5	-1	-2	331	-76.1	11.28	-0.06
139	SLU 6	-1	-2	331	-76.1	11.28	-0.06
139	SLU 7	-1	-2	331	-76.1	11.28	-0.06
139	SLU 8	-1	-2	331	-76.1	11.28	-0.06
139	SLU 9	-1	-2	331	-76.1	11.28	-0.06
139	SLU 10	-1	-3	390	-89.36	13.3	-0.12
139	SLU 11	-1	-3	390	-89.36	13.3	-0.12
139	SLU 12	-1	-3	390	-89.36	13.3	-0.12
139	SLU 13	-1	-3	390	-89.36	13.3	-0.12
139	SLU 14	-1	-3	390	-89.36	13.3	-0.12
139	SLU 15	-1	-3	390	-89.36	13.3	-0.12
139	SLU 16	-1	-3	390	-89.36	13.3	-0.12
139	SLU 17	-1	-3	390	-89.36	13.3	-0.12
139	SLU 18	-1	-3	415	-95.04	14.16	-0.15
139	SLU 19	-1	-3	415	-95.04	14.16	-0.15
139	SLU 20	-1	-3	415	-95.04	14.16	-0.15
139	SLU 21	-1	-3	415	-95.04	14.16	-0.15
139	SLU 22	-1	-2	375	-86.02	12.79	-0.1
139	SLU 23	-1	-2	375	-86.02	12.79	-0.1
139	SLU 24	-1	-2	375	-86.02	12.79	-0.1
139	SLU 25	-1	-2	375	-86.02	12.79	-0.1
139	SLU 26	-1	-2	375	-86.02	12.79	-0.1
139	SLU 27	-1	-2	375	-86.02	12.79	-0.1
139	SLU 28	-1	-2	375	-86.02	12.79	-0.1
139	SLU 29	-1	-2	375	-86.02	12.79	-0.1
139	SLU 30	-1	-2	375	-86.02	12.79	-0.1
139	SLU 31	-1	-3	434	-99.29	14.81	-0.16
139	SLU 32	-1	-3	434	-99.29	14.81	-0.16
139	SLU 33	-1	-3	434	-99.29	14.81	-0.16
139	SLU 34	-1	-3	434	-99.29	14.81	-0.16
139	SLU 35	-1	-3	434	-99.29	14.81	-0.16
139	SLU 36	-1	-3	434	-99.29	14.81	-0.16
139	SLU 37	-1	-3	434	-99.29	14.81	-0.16
139	SLU 38	-1	-3	434	-99.29	14.81	-0.16
139	SLU 39	-1	-3	460	-104.97	15.68	-0.18
139	SLU 40	-1	-3	460	-104.97	15.68	-0.18
139	SLU 41	-1	-3	460	-104.97	15.68	-0.18
139	SLU 42	-1	-3	460	-104.97	15.68	-0.18
139	SLU 43	-1	-3	415	-95.52	14.14	-0.07
139	SLU 44	-1	-3	415	-95.52	14.14	-0.07
139	SLU 45	-1	-3	415	-95.52	14.14	-0.07
139	SLU 46	-1	-3	415	-95.52	14.14	-0.07
139	SLU 47	-1	-3	415	-95.52	14.14	-0.07
139	SLU 48	-1	-3	415	-95.52	14.14	-0.07
139	SLU 49	-1	-3	415	-95.52	14.14	-0.07
139	SLU 50	-1	-3	415	-95.52	14.14	-0.07
139	SLU 51	-1	-3	415	-95.52	14.14	-0.07
139	SLU 52	-1	-3	474	-108.78	16.16	-0.13
139	SLU 53	-1	-3	474	-108.78	16.16	-0.13
139	SLU 54	-1	-3	474	-108.78	16.16	-0.13
139	SLU 55	-1	-3	474	-108.78	16.16	-0.13
139	SLU 56	-1	-3	474	-108.78	16.16	-0.13
139	SLU 57	-1	-3	474	-108.78	16.16	-0.13
139	SLU 58	-1	-3	474	-108.78	16.16	-0.13
139	SLU 59	-1	-3	474	-108.78	16.16	-0.13
139	SLU 60	-1	-3	499	-114.47	17.03	-0.15
139	SLU 61	-1	-3	499	-114.47	17.03	-0.15
139	SLU 62	-1	-3	499	-114.47	17.03	-0.15
139	SLU 63	-1	-3	499	-114.47	17.03	-0.15



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
139	SLU 64	-1	-3	459	-105.45	15.66	-0.11
139	SLU 65	-1	-3	459	-105.45	15.66	-0.11
139	SLU 66	-1	-3	459	-105.45	15.66	-0.11
139	SLU 67	-1	-3	459	-105.45	15.66	-0.11
139	SLU 68	-1	-3	459	-105.45	15.66	-0.11
139	SLU 69	-1	-3	459	-105.45	15.66	-0.11
139	SLU 70	-1	-3	459	-105.45	15.66	-0.11
139	SLU 71	-1	-3	459	-105.45	15.66	-0.11
139	SLU 72	-1	-3	459	-105.45	15.66	-0.11
139	SLU 73	-1	-3	518	-118.71	17.68	-0.17
139	SLU 74	-1	-3	518	-118.71	17.68	-0.17
139	SLU 75	-1	-3	518	-118.71	17.68	-0.17
139	SLU 76	-1	-3	518	-118.71	17.68	-0.17
139	SLU 77	-1	-3	518	-118.71	17.68	-0.17
139	SLU 78	-1	-3	518	-118.71	17.68	-0.17
139	SLU 79	-1	-3	518	-118.71	17.68	-0.17
139	SLU 80	-1	-3	518	-118.71	17.68	-0.17
139	SLU 81	-1	-4	544	-124.39	18.54	-0.19
139	SLU 82	-1	-4	544	-124.39	18.54	-0.19
139	SLU 83	-1	-4	544	-124.39	18.54	-0.19
139	SLU 84	-1	-4	544	-124.39	18.54	-0.19
139	SLE RA 1	-1	-2	343	-78.93	11.71	-0.07
139	SLE RA 2	-1	-2	343	-78.93	11.71	-0.07
139	SLE RA 3	-1	-2	343	-78.93	11.71	-0.07
139	SLE RA 4	-1	-2	343	-78.93	11.71	-0.07
139	SLE RA 5	-1	-2	343	-78.93	11.71	-0.07
139	SLE RA 6	-1	-2	343	-78.93	11.71	-0.07
139	SLE RA 7	-1	-2	343	-78.93	11.71	-0.07
139	SLE RA 8	-1	-2	343	-78.93	11.71	-0.07
139	SLE RA 9	-1	-2	343	-78.93	11.71	-0.07
139	SLE RA 10	-1	-3	383	-87.77	13.06	-0.11
139	SLE RA 11	-1	-3	383	-87.77	13.06	-0.11
139	SLE RA 12	-1	-3	383	-87.77	13.06	-0.11
139	SLE RA 13	-1	-3	383	-87.77	13.06	-0.11
139	SLE RA 14	-1	-3	383	-87.77	13.06	-0.11
139	SLE RA 15	-1	-3	383	-87.77	13.06	-0.11
139	SLE RA 16	-1	-3	383	-87.77	13.06	-0.11
139	SLE RA 17	-1	-3	383	-87.77	13.06	-0.11
139	SLE RA 18	-1	-3	400	-91.56	13.63	-0.13
139	SLE RA 19	-1	-3	400	-91.56	13.63	-0.13
139	SLE RA 20	-1	-3	400	-91.56	13.63	-0.13
139	SLE RA 21	-1	-3	400	-91.56	13.63	-0.13
139	SLE FR 1	-1	-2	343	-78.93	11.71	-0.07
139	SLE FR 2	-1	-2	343	-78.93	11.71	-0.07
139	SLE FR 3	-1	-2	343	-78.93	11.71	-0.07
139	SLE FR 4	-1	-2	360	-82.72	12.29	-0.09
139	SLE FR 5	-1	-2	360	-82.72	12.29	-0.09
139	SLE FR 6	-1	-2	372	-85.25	12.67	-0.1
139	SLE QP 1	-1	-2	343	-78.93	11.71	-0.07
139	SLE QP 2	-1	-2	360	-82.72	12.29	-0.09
139	SLD 1	27	11	308	-71.32	10.5	6.27
139	SLD 2	27	17	307	-71.13	10.48	6.13
139	SLD 3	25	-25	311	-71.7	10.59	7.13
139	SLD 4	26	-18	310	-71.51	10.57	6.99
139	SLD 5	9	53	341	-78.8	11.63	0.55
139	SLD 6	10	59	340	-78.6	11.61	0.41
139	SLD 7	5	-65	350	-80.06	11.92	3.45
139	SLD 8	5	-58	349	-79.87	11.9	3.3
139	SLD 9	-7	54	372	-85.58	12.68	-3.48
139	SLD 10	-6	60	371	-85.38	12.66	-3.63
139	SLD 11	-11	-64	380	-86.85	12.97	-0.59
139	SLD 12	-11	-58	380	-86.65	12.95	-0.73
139	SLD 13	-27	14	411	-93.93	14.01	-7.17
139	SLD 14	-27	20	410	-93.74	13.98	-7.32
139	SLD 15	-28	-22	413	-94.31	14.09	-6.31
139	SLD 16	-28	-15	413	-94.12	14.07	-6.45
139	SLV 1	61	29	241	-56.82	8.24	14.31
139	SLV 2	62	43	240	-56.38	8.19	13.99
139	SLV 3	58	-54	248	-57.72	8.44	16.35
139	SLV 4	59	-40	246	-57.28	8.39	16.02
139	SLV 5	22	127	316	-73.75	10.78	1.26
139	SLV 6	23	142	314	-73.29	10.73	0.92
139	SLV 7	12	-149	336	-76.75	11.46	8.05
139	SLV 8	13	-134	335	-76.29	11.41	7.72
139	SLV 9	-14	129	386	-89.15	13.16	-7.9
139	SLV 10	-13	144	384	-88.69	13.11	-8.23
139	SLV 11	-25	-147	406	-92.16	13.85	-1.1
139	SLV 12	-24	-132	405	-91.69	13.8	-1.44
139	SLV 13	-60	35	475	-108.17	16.18	-16.2
139	SLV 14	-59	50	473	-107.72	16.13	-16.53
139	SLV 15	-63	-48	481	-109.07	16.39	-14.17
139	SLV 16	-63	-33	479	-108.62	16.34	-14.49
139	CRTFP Ux+	0	0	0	0	0	0
139	CRTFP Ux-	0	0	0	0	0	0
139	CRTFP Uy+	0	0	0	0	0	0
139	CRTFP Uy-	0	0	0	0	0	0
140	SLU 1	-2	-55	10801	1001.75	1138.26	1.27
140	SLU 2	-2	-55	10801	1001.75	1138.26	1.27
140	SLU 3	-2	-55	10801	1001.75	1138.26	1.27
140	SLU 4	-2	-55	10801	1001.75	1138.26	1.27



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
140	SLU 5	-2	-55	10801	1001.75	1138.26	1.27
140	SLU 6	-2	-55	10801	1001.75	1138.26	1.27
140	SLU 7	-2	-55	10801	1001.75	1138.26	1.27
140	SLU 8	-2	-55	10801	1001.75	1138.26	1.27
140	SLU 9	-2	-55	10801	1001.75	1138.26	1.27
140	SLU 10	-8	-66	12784	1180.66	1358.22	2.11
140	SLU 11	-8	-66	12784	1180.66	1358.22	2.11
140	SLU 12	-8	-66	12784	1180.66	1358.22	2.11
140	SLU 13	-8	-66	12784	1180.66	1358.22	2.11
140	SLU 14	-8	-66	12784	1180.66	1358.22	2.11
140	SLU 15	-8	-66	12784	1180.66	1358.22	2.11
140	SLU 16	-8	-66	12784	1180.66	1358.22	2.11
140	SLU 17	-8	-66	12784	1180.66	1358.22	2.11
140	SLU 18	-11	-71	13633	1257.33	1452.49	2.47
140	SLU 19	-11	-71	13633	1257.33	1452.49	2.47
140	SLU 20	-11	-71	13633	1257.33	1452.49	2.47
140	SLU 21	-11	-71	13633	1257.33	1452.49	2.47
140	SLU 22	-6	-63	12284	1135.97	1302.13	1.79
140	SLU 23	-6	-63	12284	1135.97	1302.13	1.79
140	SLU 24	-6	-63	12284	1135.97	1302.13	1.79
140	SLU 25	-6	-63	12284	1135.97	1302.13	1.79
140	SLU 26	-6	-63	12284	1135.97	1302.13	1.79
140	SLU 27	-6	-63	12284	1135.97	1302.13	1.79
140	SLU 28	-6	-63	12284	1135.97	1302.13	1.79
140	SLU 29	-6	-63	12284	1135.97	1302.13	1.79
140	SLU 30	-6	-63	12284	1135.97	1302.13	1.79
140	SLU 31	-12	-75	14267	1314.87	1522.09	2.63
140	SLU 32	-12	-75	14267	1314.87	1522.09	2.63
140	SLU 33	-12	-75	14267	1314.87	1522.09	2.63
140	SLU 34	-12	-75	14267	1314.87	1522.09	2.63
140	SLU 35	-12	-75	14267	1314.87	1522.09	2.63
140	SLU 36	-12	-75	14267	1314.87	1522.09	2.63
140	SLU 37	-12	-75	14267	1314.87	1522.09	2.63
140	SLU 38	-12	-75	14267	1314.87	1522.09	2.63
140	SLU 39	-15	-80	15117	1391.54	1616.36	2.99
140	SLU 40	-15	-80	15117	1391.54	1616.36	2.99
140	SLU 41	-15	-80	15117	1391.54	1616.36	2.99
140	SLU 42	-15	-80	15117	1391.54	1616.36	2.99
140	SLU 43	-1	-69	13533	1256.26	1423.55	1.48
140	SLU 44	-1	-69	13533	1256.26	1423.55	1.48
140	SLU 45	-1	-69	13533	1256.26	1423.55	1.48
140	SLU 46	-1	-69	13533	1256.26	1423.55	1.48
140	SLU 47	-1	-69	13533	1256.26	1423.55	1.48
140	SLU 48	-1	-69	13533	1256.26	1423.55	1.48
140	SLU 49	-1	-69	13533	1256.26	1423.55	1.48
140	SLU 50	-1	-69	13533	1256.26	1423.55	1.48
140	SLU 51	-1	-69	13533	1256.26	1423.55	1.48
140	SLU 52	-8	-80	15515	1435.17	1643.51	2.32
140	SLU 53	-8	-80	15515	1435.17	1643.51	2.32
140	SLU 54	-8	-80	15515	1435.17	1643.51	2.32
140	SLU 55	-8	-80	15515	1435.17	1643.51	2.32
140	SLU 56	-8	-80	15515	1435.17	1643.51	2.32
140	SLU 57	-8	-80	15515	1435.17	1643.51	2.32
140	SLU 58	-8	-80	15515	1435.17	1643.51	2.32
140	SLU 59	-8	-80	15515	1435.17	1643.51	2.32
140	SLU 60	-10	-85	16365	1511.84	1737.78	2.68
140	SLU 61	-10	-85	16365	1511.84	1737.78	2.68
140	SLU 62	-10	-85	16365	1511.84	1737.78	2.68
140	SLU 63	-10	-85	16365	1511.84	1737.78	2.68
140	SLU 64	-5	-77	15016	1390.48	1587.42	2
140	SLU 65	-5	-77	15016	1390.48	1587.42	2
140	SLU 66	-5	-77	15016	1390.48	1587.42	2
140	SLU 67	-5	-77	15016	1390.48	1587.42	2
140	SLU 68	-5	-77	15016	1390.48	1587.42	2
140	SLU 69	-5	-77	15016	1390.48	1587.42	2
140	SLU 70	-5	-77	15016	1390.48	1587.42	2
140	SLU 71	-5	-77	15016	1390.48	1587.42	2
140	SLU 72	-5	-77	15016	1390.48	1587.42	2
140	SLU 73	-12	-88	16999	1569.38	1807.39	2.84
140	SLU 74	-12	-88	16999	1569.38	1807.39	2.84
140	SLU 75	-12	-88	16999	1569.38	1807.39	2.84
140	SLU 76	-12	-88	16999	1569.38	1807.39	2.84
140	SLU 77	-12	-88	16999	1569.38	1807.39	2.84
140	SLU 78	-12	-88	16999	1569.38	1807.39	2.84
140	SLU 79	-12	-88	16999	1569.38	1807.39	2.84
140	SLU 80	-12	-88	16999	1569.38	1807.39	2.84
140	SLU 81	-14	-93	17848	1646.05	1901.66	3.2
140	SLU 82	-14	-93	17848	1646.05	1901.66	3.2
140	SLU 83	-14	-93	17848	1646.05	1901.66	3.2
140	SLU 84	-14	-93	17848	1646.05	1901.66	3.2
140	SLE RA 1	-3	-57	11225	1040.1	1185.08	1.42
140	SLE RA 2	-3	-57	11225	1040.1	1185.08	1.42
140	SLE RA 3	-3	-57	11225	1040.1	1185.08	1.42
140	SLE RA 4	-3	-57	11225	1040.1	1185.08	1.42
140	SLE RA 5	-3	-57	11225	1040.1	1185.08	1.42
140	SLE RA 6	-3	-57	11225	1040.1	1185.08	1.42
140	SLE RA 7	-3	-57	11225	1040.1	1185.08	1.42
140	SLE RA 8	-3	-57	11225	1040.1	1185.08	1.42
140	SLE RA 9	-3	-57	11225	1040.1	1185.08	1.42
140	SLE RA 10	-7	-65	12547	1159.37	1331.72	1.98



Nodo	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
140	SLE RA 11	-7	-65	12547	1159.37	1331.72	1.98
140	SLE RA 12	-7	-65	12547	1159.37	1331.72	1.98
140	SLE RA 13	-7	-65	12547	1159.37	1331.72	1.98
140	SLE RA 14	-7	-65	12547	1159.37	1331.72	1.98
140	SLE RA 15	-7	-65	12547	1159.37	1331.72	1.98
140	SLE RA 16	-7	-65	12547	1159.37	1331.72	1.98
140	SLE RA 17	-7	-65	12547	1159.37	1331.72	1.98
140	SLE RA 18	-9	-68	13113	1210.48	1394.57	2.22
140	SLE RA 19	-9	-68	13113	1210.48	1394.57	2.22
140	SLE RA 20	-9	-68	13113	1210.48	1394.57	2.22
140	SLE RA 21	-9	-68	13113	1210.48	1394.57	2.22
140	SLE FR 1	-3	-57	11225	1040.1	1185.08	1.42
140	SLE FR 2	-3	-57	11225	1040.1	1185.08	1.42
140	SLE FR 3	-3	-57	11225	1040.1	1185.08	1.42
140	SLE FR 4	-5	-61	11791	1091.22	1247.92	1.66
140	SLE FR 5	-5	-61	11791	1091.22	1247.92	1.66
140	SLE FR 6	-6	-63	12169	1125.29	1289.82	1.82
140	SLE QP 1	-3	-57	11225	1040.1	1185.08	1.42
140	SLE QP 2	-5	-61	11791	1091.22	1247.92	1.66
140	SLD 1	874	348	10086	917.85	1077.02	-115.38
140	SLD 2	869	541	10067	915.33	1075.11	-131.94
140	SLD 3	898	-756	10204	956.97	1082.44	-15.06
140	SLD 4	893	-563	10185	954.45	1080.53	-31.62
140	SLD 5	225	1667	11108	980.79	1189.12	-179.63
140	SLD 6	220	1864	11088	978.21	1187.17	-196.56
140	SLD 7	303	-2014	11501	1111.18	1207.19	154.78
140	SLD 8	298	-1816	11482	1108.61	1205.24	137.86
140	SLD 9	-308	1695	12101	1073.82	1290.61	-134.53
140	SLD 10	-313	1893	12082	1071.25	1288.66	-151.46
140	SLD 11	-230	-1986	12495	1204.22	1308.68	199.88
140	SLD 12	-235	-1788	12475	1201.64	1306.73	182.95
140	SLD 13	-902	441	13398	1227.98	1415.31	34.95
140	SLD 14	-908	635	13378	1225.46	1413.41	18.38
140	SLD 15	-879	-663	13516	1267.1	1420.74	135.27
140	SLD 16	-884	-469	13497	1264.58	1418.83	118.71
140	SLV 1	1990	906	7915	696.18	859.67	-267.72
140	SLV 2	1978	1349	7872	690.42	855.31	-305.6
140	SLV 3	2045	-1685	8192	787.86	872.39	-32.36
140	SLV 4	2033	-1242	8149	782.1	868.03	-70.24
140	SLV 5	515	3996	10225	835.78	1113.76	-422.13
140	SLV 6	503	4455	10179	829.8	1109.23	-461.47
140	SLV 7	698	-4641	11148	1141.39	1156.17	362.41
140	SLV 8	685	-4181	11103	1135.41	1151.64	323.07
140	SLV 9	-695	4060	12480	1047.02	1344.2	-319.75
140	SLV 10	-708	4520	12435	1041.04	1339.68	-359.08
140	SLV 11	-512	-4577	13403	1352.63	1386.62	464.79
140	SLV 12	-525	-4117	13358	1346.65	1382.09	425.46
140	SLV 13	-2043	1120	15434	1400.33	1627.82	73.57
140	SLV 14	-2055	1563	15390	1394.57	1623.46	35.68
140	SLV 15	-1988	-1471	15711	1492.01	1640.54	308.93
140	SLV 16	-2000	-1028	15667	1486.25	1636.18	271.05
140	CRTFP Ux+	0	0	0	0.01	0.01	0
140	CRTFP Ux-	0	0	0	-0.01	-0.01	0
140	CRTFP Uy+	0	0	0	0	0	0.01
140	CRTFP Uy-	0	0	0	0	0	-0.01
142	SLU 1	-5	-17	7083	161.46	-1301.33	-5.35
142	SLU 2	-5	-17	7083	161.46	-1301.33	-5.35
142	SLU 3	-5	-17	7083	161.46	-1301.33	-5.35
142	SLU 4	-5	-17	7083	161.46	-1301.33	-5.35
142	SLU 5	-5	-17	7083	161.46	-1301.33	-5.35
142	SLU 6	-5	-17	7083	161.46	-1301.33	-5.35
142	SLU 7	-5	-17	7083	161.46	-1301.33	-5.35
142	SLU 8	-5	-17	7083	161.46	-1301.33	-5.35
142	SLU 9	-5	-17	7083	161.46	-1301.33	-5.35
142	SLU 10	-10	-21	8474	191.29	-1551.86	-6.38
142	SLU 11	-10	-21	8474	191.29	-1551.86	-6.38
142	SLU 12	-10	-21	8474	191.29	-1551.86	-6.38
142	SLU 13	-10	-21	8474	191.29	-1551.86	-6.38
142	SLU 14	-10	-21	8474	191.29	-1551.86	-6.38
142	SLU 15	-10	-21	8474	191.29	-1551.86	-6.38
142	SLU 16	-10	-21	8474	191.29	-1551.86	-6.38
142	SLU 17	-10	-21	8474	191.29	-1551.86	-6.38
142	SLU 18	-12	-22	9070	204.07	-1659.23	-6.82
142	SLU 19	-12	-22	9070	204.07	-1659.23	-6.82
142	SLU 20	-12	-22	9070	204.07	-1659.23	-6.82
142	SLU 21	-12	-22	9070	204.07	-1659.23	-6.82
142	SLU 22	-8	-19	8118	183.86	-1488.11	-6.1
142	SLU 23	-8	-19	8118	183.86	-1488.11	-6.1
142	SLU 24	-8	-19	8118	183.86	-1488.11	-6.1
142	SLU 25	-8	-19	8118	183.86	-1488.11	-6.1
142	SLU 26	-8	-19	8118	183.86	-1488.11	-6.1
142	SLU 27	-8	-19	8118	183.86	-1488.11	-6.1
142	SLU 28	-8	-19	8118	183.86	-1488.11	-6.1
142	SLU 29	-8	-19	8118	183.86	-1488.11	-6.1
142	SLU 30	-8	-19	8118	183.86	-1488.11	-6.1
142	SLU 31	-13	-23	9509	213.7	-1738.64	-7.13
142	SLU 32	-13	-23	9509	213.7	-1738.64	-7.13
142	SLU 33	-13	-23	9509	213.7	-1738.64	-7.13
142	SLU 34	-13	-23	9509	213.7	-1738.64	-7.13
142	SLU 35	-13	-23	9509	213.7	-1738.64	-7.13



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
142	SLU 36	-13	-23	9509	213.7	-1738.64	-7.13
142	SLU 37	-13	-23	9509	213.7	-1738.64	-7.13
142	SLU 38	-13	-23	9509	213.7	-1738.64	-7.13
142	SLU 39	-15	-25	10105	226.48	-1846.02	-7.57
142	SLU 40	-15	-25	10105	226.48	-1846.02	-7.57
142	SLU 41	-15	-25	10105	226.48	-1846.02	-7.57
142	SLU 42	-15	-25	10105	226.48	-1846.02	-7.57
142	SLU 43	-5	-21	8853	202.21	-1627.68	-6.69
142	SLU 44	-5	-21	8853	202.21	-1627.68	-6.69
142	SLU 45	-5	-21	8853	202.21	-1627.68	-6.69
142	SLU 46	-5	-21	8853	202.21	-1627.68	-6.69
142	SLU 47	-5	-21	8853	202.21	-1627.68	-6.69
142	SLU 48	-5	-21	8853	202.21	-1627.68	-6.69
142	SLU 49	-5	-21	8853	202.21	-1627.68	-6.69
142	SLU 50	-5	-21	8853	202.21	-1627.68	-6.69
142	SLU 51	-5	-21	8853	202.21	-1627.68	-6.69
142	SLU 52	-10	-25	10243	232.05	-1878.22	-7.72
142	SLU 53	-10	-25	10243	232.05	-1878.22	-7.72
142	SLU 54	-10	-25	10243	232.05	-1878.22	-7.72
142	SLU 55	-10	-25	10243	232.05	-1878.22	-7.72
142	SLU 56	-10	-25	10243	232.05	-1878.22	-7.72
142	SLU 57	-10	-25	10243	232.05	-1878.22	-7.72
142	SLU 58	-10	-25	10243	232.05	-1878.22	-7.72
142	SLU 59	-10	-25	10243	232.05	-1878.22	-7.72
142	SLU 60	-12	-26	10839	244.83	-1985.59	-8.16
142	SLU 61	-12	-26	10839	244.83	-1985.59	-8.16
142	SLU 62	-12	-26	10839	244.83	-1985.59	-8.16
142	SLU 63	-12	-26	10839	244.83	-1985.59	-8.16
142	SLU 64	-8	-24	9888	224.62	-1814.47	-7.45
142	SLU 65	-8	-24	9888	224.62	-1814.47	-7.45
142	SLU 66	-8	-24	9888	224.62	-1814.47	-7.45
142	SLU 67	-8	-24	9888	224.62	-1814.47	-7.45
142	SLU 68	-8	-24	9888	224.62	-1814.47	-7.45
142	SLU 69	-8	-24	9888	224.62	-1814.47	-7.45
142	SLU 70	-8	-24	9888	224.62	-1814.47	-7.45
142	SLU 71	-8	-24	9888	224.62	-1814.47	-7.45
142	SLU 72	-8	-24	9888	224.62	-1814.47	-7.45
142	SLU 73	-13	-27	11279	254.45	-2065	-8.48
142	SLU 74	-13	-27	11279	254.45	-2065	-8.48
142	SLU 75	-13	-27	11279	254.45	-2065	-8.48
142	SLU 76	-13	-27	11279	254.45	-2065	-8.48
142	SLU 77	-13	-27	11279	254.45	-2065	-8.48
142	SLU 78	-13	-27	11279	254.45	-2065	-8.48
142	SLU 79	-13	-27	11279	254.45	-2065	-8.48
142	SLU 80	-13	-27	11279	254.45	-2065	-8.48
142	SLU 81	-15	-29	11875	267.24	-2172.37	-8.92
142	SLU 82	-15	-29	11875	267.24	-2172.37	-8.92
142	SLU 83	-15	-29	11875	267.24	-2172.37	-8.92
142	SLU 84	-15	-29	11875	267.24	-2172.37	-8.92
142	SLE RA 1	-5	-18	7379	167.86	-1354.69	-5.56
142	SLE RA 2	-5	-18	7379	167.86	-1354.69	-5.56
142	SLE RA 3	-5	-18	7379	167.86	-1354.69	-5.56
142	SLE RA 4	-5	-18	7379	167.86	-1354.69	-5.56
142	SLE RA 5	-5	-18	7379	167.86	-1354.69	-5.56
142	SLE RA 6	-5	-18	7379	167.86	-1354.69	-5.56
142	SLE RA 7	-5	-18	7379	167.86	-1354.69	-5.56
142	SLE RA 8	-5	-18	7379	167.86	-1354.69	-5.56
142	SLE RA 9	-5	-18	7379	167.86	-1354.69	-5.56
142	SLE RA 10	-9	-20	8306	187.75	-1521.72	-6.25
142	SLE RA 11	-9	-20	8306	187.75	-1521.72	-6.25
142	SLE RA 12	-9	-20	8306	187.75	-1521.72	-6.25
142	SLE RA 13	-9	-20	8306	187.75	-1521.72	-6.25
142	SLE RA 14	-9	-20	8306	187.75	-1521.72	-6.25
142	SLE RA 15	-9	-20	8306	187.75	-1521.72	-6.25
142	SLE RA 16	-9	-20	8306	187.75	-1521.72	-6.25
142	SLE RA 17	-9	-20	8306	187.75	-1521.72	-6.25
142	SLE RA 18	-10	-21	8703	196.27	-1593.3	-6.54
142	SLE RA 19	-10	-21	8703	196.27	-1593.3	-6.54
142	SLE RA 20	-10	-21	8703	196.27	-1593.3	-6.54
142	SLE RA 21	-10	-21	8703	196.27	-1593.3	-6.54
142	SLE FR 1	-5	-18	7379	167.86	-1354.69	-5.56
142	SLE FR 2	-5	-18	7379	167.86	-1354.69	-5.56
142	SLE FR 3	-5	-18	7379	167.86	-1354.69	-5.56
142	SLE FR 4	-7	-19	7776	176.38	-1426.27	-5.86
142	SLE FR 5	-7	-19	7776	176.38	-1426.27	-5.86
142	SLE FR 6	-8	-19	8041	182.07	-1473.99	-6.05
142	SLE QP 1	-5	-18	7379	167.86	-1354.69	-5.56
142	SLE QP 2	-7	-19	7776	176.38	-1426.27	-5.86
142	SLD 1	592	200	6735	141.76	-1228.45	31.25
142	SLD 2	591	304	6728	141.28	-1226.91	53.82
142	SLD 3	602	-398	6759	162.62	-1235.95	-98.45
142	SLD 4	600	-294	6752	162.14	-1234.41	-75.87
142	SLD 5	158	916	7430	134.54	-1356.1	193.82
142	SLD 6	157	1023	7423	134.05	-1354.53	216.9
142	SLD 7	191	-1077	7509	204.06	-1381.11	-238.48
142	SLD 8	190	-971	7502	203.57	-1379.54	-215.41
142	SLD 9	-204	933	8050	149.2	-1473.01	203.7
142	SLD 10	-205	1040	8043	148.71	-1471.44	226.77
142	SLD 11	-171	-1060	8129	218.72	-1498.02	-228.61
142	SLD 12	-172	-954	8122	218.23	-1496.45	-205.54



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
142	SLD 13	-614	256	8800	190.63	-1618.14	64.16
142	SLD 14	-616	361	8793	190.15	-1616.6	86.73
142	SLD 15	-604	-342	8824	211.48	-1625.64	-65.53
142	SLD 16	-606	-237	8817	211.01	-1624.1	-42.96
142	SLV 1	1352	499	5412	97.06	-976.85	83.1
142	SLV 2	1349	737	5396	95.97	-973.33	134.73
142	SLV 3	1376	-904	5467	145.85	-994.43	-221.22
142	SLV 4	1372	-666	5451	144.76	-990.91	-169.58
142	SLV 5	367	2176	6989	78.99	-1266.09	463.31
142	SLV 6	363	2424	6972	77.86	-1262.43	516.92
142	SLV 7	444	-2501	7173	241.63	-1324.68	-551.07
142	SLV 8	441	-2253	7156	240.5	-1321.02	-497.45
142	SLV 9	-454	2215	8395	112.27	-1531.52	485.74
142	SLV 10	-458	2463	8379	111.14	-1527.87	539.35
142	SLV 11	-377	-2462	8580	274.91	-1590.12	-528.64
142	SLV 12	-381	-2214	8563	273.78	-1586.46	-475.02
142	SLV 13	-1386	628	10101	208	-1861.64	157.87
142	SLV 14	-1389	867	10085	206.91	-1858.12	209.5
142	SLV 15	-1363	-775	10156	256.8	-1879.22	-146.45
142	SLV 16	-1366	-536	10140	255.71	-1875.7	-94.81
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	-0.01
142	CRTFP Uy-	0	0	0	0	0	0.01
143	SLU 1	-3	-4	3774	9.57	1.61	-0.57
143	SLU 2	-3	-4	3774	9.57	1.61	-0.57
143	SLU 3	-3	-4	3774	9.57	1.61	-0.57
143	SLU 4	-3	-4	3774	9.57	1.61	-0.57
143	SLU 5	-3	-4	3774	9.57	1.61	-0.57
143	SLU 6	-3	-4	3774	9.57	1.61	-0.57
143	SLU 7	-3	-4	3774	9.57	1.61	-0.57
143	SLU 8	-3	-4	3774	9.57	1.61	-0.57
143	SLU 9	-3	-4	3774	9.57	1.61	-0.57
143	SLU 10	-5	-4	4540	10.83	2.36	-0.69
143	SLU 11	-5	-4	4540	10.83	2.36	-0.69
143	SLU 12	-5	-4	4540	10.83	2.36	-0.69
143	SLU 13	-5	-4	4540	10.83	2.36	-0.69
143	SLU 14	-5	-4	4540	10.83	2.36	-0.69
143	SLU 15	-5	-4	4540	10.83	2.36	-0.69
143	SLU 16	-5	-4	4540	10.83	2.36	-0.69
143	SLU 17	-5	-4	4540	10.83	2.36	-0.69
143	SLU 18	-6	-5	4869	11.36	2.68	-0.74
143	SLU 19	-6	-5	4869	11.36	2.68	-0.74
143	SLU 20	-6	-5	4869	11.36	2.68	-0.74
143	SLU 21	-6	-5	4869	11.36	2.68	-0.74
143	SLU 22	-4	-4	4343	10.6	2.15	-0.66
143	SLU 23	-4	-4	4343	10.6	2.15	-0.66
143	SLU 24	-4	-4	4343	10.6	2.15	-0.66
143	SLU 25	-4	-4	4343	10.6	2.15	-0.66
143	SLU 26	-4	-4	4343	10.6	2.15	-0.66
143	SLU 27	-4	-4	4343	10.6	2.15	-0.66
143	SLU 28	-4	-4	4343	10.6	2.15	-0.66
143	SLU 29	-4	-4	4343	10.6	2.15	-0.66
143	SLU 30	-4	-4	4343	10.6	2.15	-0.66
143	SLU 31	-7	-5	5110	11.86	2.9	-0.78
143	SLU 32	-7	-5	5110	11.86	2.9	-0.78
143	SLU 33	-7	-5	5110	11.86	2.9	-0.78
143	SLU 34	-7	-5	5110	11.86	2.9	-0.78
143	SLU 35	-7	-5	5110	11.86	2.9	-0.78
143	SLU 36	-7	-5	5110	11.86	2.9	-0.78
143	SLU 37	-7	-5	5110	11.86	2.9	-0.78
143	SLU 38	-7	-5	5110	11.86	2.9	-0.78
143	SLU 39	-8	-5	5438	12.39	3.22	-0.83
143	SLU 40	-8	-5	5438	12.39	3.22	-0.83
143	SLU 41	-8	-5	5438	12.39	3.22	-0.83
143	SLU 42	-8	-5	5438	12.39	3.22	-0.83
143	SLU 43	-3	-4	4710	12.09	1.91	-0.71
143	SLU 44	-3	-4	4710	12.09	1.91	-0.71
143	SLU 45	-3	-4	4710	12.09	1.91	-0.71
143	SLU 46	-3	-4	4710	12.09	1.91	-0.71
143	SLU 47	-3	-4	4710	12.09	1.91	-0.71
143	SLU 48	-3	-4	4710	12.09	1.91	-0.71
143	SLU 49	-3	-4	4710	12.09	1.91	-0.71
143	SLU 50	-3	-4	4710	12.09	1.91	-0.71
143	SLU 51	-3	-4	4710	12.09	1.91	-0.71
143	SLU 52	-6	-5	5477	13.35	2.66	-0.83
143	SLU 53	-6	-5	5477	13.35	2.66	-0.83
143	SLU 54	-6	-5	5477	13.35	2.66	-0.83
143	SLU 55	-6	-5	5477	13.35	2.66	-0.83
143	SLU 56	-6	-5	5477	13.35	2.66	-0.83
143	SLU 57	-6	-5	5477	13.35	2.66	-0.83
143	SLU 58	-6	-5	5477	13.35	2.66	-0.83
143	SLU 59	-6	-5	5477	13.35	2.66	-0.83
143	SLU 60	-7	-5	5806	13.88	2.98	-0.88
143	SLU 61	-7	-5	5806	13.88	2.98	-0.88
143	SLU 62	-7	-5	5806	13.88	2.98	-0.88
143	SLU 63	-7	-5	5806	13.88	2.98	-0.88
143	SLU 64	-5	-5	5280	13.12	2.44	-0.8
143	SLU 65	-5	-5	5280	13.12	2.44	-0.8
143	SLU 66	-5	-5	5280	13.12	2.44	-0.8



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
143	SLU 67	-5	-5	5280	13.12	2.44	-0.8
143	SLU 68	-5	-5	5280	13.12	2.44	-0.8
143	SLU 69	-5	-5	5280	13.12	2.44	-0.8
143	SLU 70	-5	-5	5280	13.12	2.44	-0.8
143	SLU 71	-5	-5	5280	13.12	2.44	-0.8
143	SLU 72	-5	-5	5280	13.12	2.44	-0.8
143	SLU 73	-7	-6	6047	14.38	3.19	-0.92
143	SLU 74	-7	-6	6047	14.38	3.19	-0.92
143	SLU 75	-7	-6	6047	14.38	3.19	-0.92
143	SLU 76	-7	-6	6047	14.38	3.19	-0.92
143	SLU 77	-7	-6	6047	14.38	3.19	-0.92
143	SLU 78	-7	-6	6047	14.38	3.19	-0.92
143	SLU 79	-7	-6	6047	14.38	3.19	-0.92
143	SLU 80	-7	-6	6047	14.38	3.19	-0.92
143	SLU 81	-8	-6	6375	14.91	3.52	-0.97
143	SLU 82	-8	-6	6375	14.91	3.52	-0.97
143	SLU 83	-8	-6	6375	14.91	3.52	-0.97
143	SLU 84	-8	-6	6375	14.91	3.52	-0.97
143	SLE RA 1	-3	-4	3936	9.87	1.76	-0.59
143	SLE RA 2	-3	-4	3936	9.87	1.76	-0.59
143	SLE RA 3	-3	-4	3936	9.87	1.76	-0.59
143	SLE RA 4	-3	-4	3936	9.87	1.76	-0.59
143	SLE RA 5	-3	-4	3936	9.87	1.76	-0.59
143	SLE RA 6	-3	-4	3936	9.87	1.76	-0.59
143	SLE RA 7	-3	-4	3936	9.87	1.76	-0.59
143	SLE RA 8	-3	-4	3936	9.87	1.76	-0.59
143	SLE RA 9	-3	-4	3936	9.87	1.76	-0.59
143	SLE RA 10	-5	-4	4447	10.7	2.26	-0.68
143	SLE RA 11	-5	-4	4447	10.7	2.26	-0.68
143	SLE RA 12	-5	-4	4447	10.7	2.26	-0.68
143	SLE RA 13	-5	-4	4447	10.7	2.26	-0.68
143	SLE RA 14	-5	-4	4447	10.7	2.26	-0.68
143	SLE RA 15	-5	-4	4447	10.7	2.26	-0.68
143	SLE RA 16	-5	-4	4447	10.7	2.26	-0.68
143	SLE RA 17	-5	-4	4447	10.7	2.26	-0.68
143	SLE RA 18	-6	-4	4666	11.06	2.48	-0.71
143	SLE RA 19	-6	-4	4666	11.06	2.48	-0.71
143	SLE RA 20	-6	-4	4666	11.06	2.48	-0.71
143	SLE RA 21	-6	-4	4666	11.06	2.48	-0.71
143	SLE FR 1	-3	-4	3936	9.87	1.76	-0.59
143	SLE FR 2	-3	-4	3936	9.87	1.76	-0.59
143	SLE FR 3	-3	-4	3936	9.87	1.76	-0.59
143	SLE FR 4	-4	-4	4155	10.23	1.98	-0.63
143	SLE FR 5	-4	-4	4155	10.23	1.98	-0.63
143	SLE FR 6	-4	-4	4301	10.47	2.12	-0.65
143	SLE QP 1	-3	-4	3936	9.87	1.76	-0.59
143	SLE QP 2	-4	-4	4155	10.23	1.98	-0.63
143	SLD 1	314	90	3649	2.94	3.18	2.1
143	SLD 2	313	135	3647	2.8	3.2	3.23
143	SLD 3	317	-170	3652	14.72	3.04	-4.92
143	SLD 4	317	-124	3650	14.58	3.06	-3.8
143	SLD 5	86	401	4000	-9.77	2.54	10.43
143	SLD 6	86	448	3997	-9.91	2.56	11.59
143	SLD 7	98	-464	4010	29.49	2.08	-12.97
143	SLD 8	98	-417	4007	29.35	2.09	-11.82
143	SLD 9	-105	409	4303	-8.89	1.86	10.57
143	SLD 10	-106	456	4301	-9.03	1.88	11.72
143	SLD 11	-93	-456	4313	30.37	1.39	-12.84
143	SLD 12	-94	-409	4311	30.23	1.41	-11.69
143	SLD 13	-325	116	4661	5.87	0.9	2.54
143	SLD 14	-325	162	4659	5.74	0.91	3.67
143	SLD 15	-321	-143	4664	17.65	0.76	-4.48
143	SLD 16	-322	-97	4662	17.51	0.77	-3.36
143	SLV 1	717	218	3006	-6.72	4.71	5.83
143	SLV 2	716	322	3000	-7.03	4.75	8.4
143	SLV 3	726	-391	3013	20.83	4.38	-10.67
143	SLV 4	724	-286	3007	20.52	4.42	-8.09
143	SLV 5	200	947	3802	-36.52	3.28	25.37
143	SLV 6	199	1056	3796	-36.85	3.33	28.04
143	SLV 7	228	-1082	3825	55.3	2.18	-29.6
143	SLV 8	227	-973	3819	54.98	2.23	-26.93
143	SLV 9	-235	966	4491	-34.53	1.73	25.67
143	SLV 10	-236	1075	4486	-34.85	1.77	28.35
143	SLV 11	-207	-1064	4514	57.3	0.63	-29.3
143	SLV 12	-208	-955	4509	56.98	0.67	-26.63
143	SLV 13	-732	279	5303	-0.06	-0.47	6.83
143	SLV 14	-733	384	5298	-0.37	-0.43	9.41
143	SLV 15	-724	-330	5310	27.48	-0.8	-9.66
143	SLV 16	-725	-225	5305	27.17	-0.76	-7.08
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	-2	-1	3824	9.05	1.7	-0.41
144	SLU 2	-2	-1	3824	9.05	1.7	-0.41
144	SLU 3	-2	-1	3824	9.05	1.7	-0.41
144	SLU 4	-2	-1	3824	9.05	1.7	-0.41
144	SLU 5	-2	-1	3824	9.05	1.7	-0.41
144	SLU 6	-2	-1	3824	9.05	1.7	-0.41
144	SLU 7	-2	-1	3824	9.05	1.7	-0.41



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
144	SLU 8	-2	-1	3824	9.05	1.7	-0.41
144	SLU 9	-2	-1	3824	9.05	1.7	-0.41
144	SLU 10	-5	-1	4611	10.19	2.3	-0.51
144	SLU 11	-5	-1	4611	10.19	2.3	-0.51
144	SLU 12	-5	-1	4611	10.19	2.3	-0.51
144	SLU 13	-5	-1	4611	10.19	2.3	-0.51
144	SLU 14	-5	-1	4611	10.19	2.3	-0.51
144	SLU 15	-5	-1	4611	10.19	2.3	-0.51
144	SLU 16	-5	-1	4611	10.19	2.3	-0.51
144	SLU 17	-5	-1	4611	10.19	2.3	-0.51
144	SLU 18	-6	-1	4949	10.68	2.55	-0.55
144	SLU 19	-6	-1	4949	10.68	2.55	-0.55
144	SLU 20	-6	-1	4949	10.68	2.55	-0.55
144	SLU 21	-6	-1	4949	10.68	2.55	-0.55
144	SLU 22	-4	-1	4408	9.99	2.13	-0.48
144	SLU 23	-4	-1	4408	9.99	2.13	-0.48
144	SLU 24	-4	-1	4408	9.99	2.13	-0.48
144	SLU 25	-4	-1	4408	9.99	2.13	-0.48
144	SLU 26	-4	-1	4408	9.99	2.13	-0.48
144	SLU 27	-4	-1	4408	9.99	2.13	-0.48
144	SLU 28	-4	-1	4408	9.99	2.13	-0.48
144	SLU 29	-4	-1	4408	9.99	2.13	-0.48
144	SLU 30	-4	-1	4408	9.99	2.13	-0.48
144	SLU 31	-6	-1	5195	11.14	2.72	-0.57
144	SLU 32	-6	-1	5195	11.14	2.72	-0.57
144	SLU 33	-6	-1	5195	11.14	2.72	-0.57
144	SLU 34	-6	-1	5195	11.14	2.72	-0.57
144	SLU 35	-6	-1	5195	11.14	2.72	-0.57
144	SLU 36	-6	-1	5195	11.14	2.72	-0.57
144	SLU 37	-6	-1	5195	11.14	2.72	-0.57
144	SLU 38	-6	-1	5195	11.14	2.72	-0.57
144	SLU 39	-7	-1	5533	11.63	2.98	-0.61
144	SLU 40	-7	-1	5533	11.63	2.98	-0.61
144	SLU 41	-7	-1	5533	11.63	2.98	-0.61
144	SLU 42	-7	-1	5533	11.63	2.98	-0.61
144	SLU 43	-3	-1	4771	11.43	2.06	-0.52
144	SLU 44	-3	-1	4771	11.43	2.06	-0.52
144	SLU 45	-3	-1	4771	11.43	2.06	-0.52
144	SLU 46	-3	-1	4771	11.43	2.06	-0.52
144	SLU 47	-3	-1	4771	11.43	2.06	-0.52
144	SLU 48	-3	-1	4771	11.43	2.06	-0.52
144	SLU 49	-3	-1	4771	11.43	2.06	-0.52
144	SLU 50	-3	-1	4771	11.43	2.06	-0.52
144	SLU 51	-3	-1	4771	11.43	2.06	-0.52
144	SLU 52	-5	-1	5558	12.58	2.66	-0.61
144	SLU 53	-5	-1	5558	12.58	2.66	-0.61
144	SLU 54	-5	-1	5558	12.58	2.66	-0.61
144	SLU 55	-5	-1	5558	12.58	2.66	-0.61
144	SLU 56	-5	-1	5558	12.58	2.66	-0.61
144	SLU 57	-5	-1	5558	12.58	2.66	-0.61
144	SLU 58	-5	-1	5558	12.58	2.66	-0.61
144	SLU 59	-5	-1	5558	12.58	2.66	-0.61
144	SLU 60	-6	-1	5896	13.07	2.91	-0.65
144	SLU 61	-6	-1	5896	13.07	2.91	-0.65
144	SLU 62	-6	-1	5896	13.07	2.91	-0.65
144	SLU 63	-6	-1	5896	13.07	2.91	-0.65
144	SLU 64	-4	-1	5355	12.38	2.49	-0.58
144	SLU 65	-4	-1	5355	12.38	2.49	-0.58
144	SLU 66	-4	-1	5355	12.38	2.49	-0.58
144	SLU 67	-4	-1	5355	12.38	2.49	-0.58
144	SLU 68	-4	-1	5355	12.38	2.49	-0.58
144	SLU 69	-4	-1	5355	12.38	2.49	-0.58
144	SLU 70	-4	-1	5355	12.38	2.49	-0.58
144	SLU 71	-4	-1	5355	12.38	2.49	-0.58
144	SLU 72	-4	-1	5355	12.38	2.49	-0.58
144	SLU 73	-7	-1	6143	13.52	3.09	-0.68
144	SLU 74	-7	-1	6143	13.52	3.09	-0.68
144	SLU 75	-7	-1	6143	13.52	3.09	-0.68
144	SLU 76	-7	-1	6143	13.52	3.09	-0.68
144	SLU 77	-7	-1	6143	13.52	3.09	-0.68
144	SLU 78	-7	-1	6143	13.52	3.09	-0.68
144	SLU 79	-7	-1	6143	13.52	3.09	-0.68
144	SLU 80	-7	-1	6143	13.52	3.09	-0.68
144	SLU 81	-8	-1	6480	14.01	3.34	-0.72
144	SLU 82	-8	-1	6480	14.01	3.34	-0.72
144	SLU 83	-8	-1	6480	14.01	3.34	-0.72
144	SLU 84	-8	-1	6480	14.01	3.34	-0.72
144	SLE RA 1	-3	-1	3991	9.32	1.82	-0.43
144	SLE RA 2	-3	-1	3991	9.32	1.82	-0.43
144	SLE RA 3	-3	-1	3991	9.32	1.82	-0.43
144	SLE RA 4	-3	-1	3991	9.32	1.82	-0.43
144	SLE RA 5	-3	-1	3991	9.32	1.82	-0.43
144	SLE RA 6	-3	-1	3991	9.32	1.82	-0.43
144	SLE RA 7	-3	-1	3991	9.32	1.82	-0.43
144	SLE RA 8	-3	-1	3991	9.32	1.82	-0.43
144	SLE RA 9	-3	-1	3991	9.32	1.82	-0.43
144	SLE RA 10	-4	-1	4516	10.08	2.22	-0.5
144	SLE RA 11	-4	-1	4516	10.08	2.22	-0.5
144	SLE RA 12	-4	-1	4516	10.08	2.22	-0.5
144	SLE RA 13	-4	-1	4516	10.08	2.22	-0.5



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
144	SLE RA 14	-4	-1	4516	10.08	2.22	-0.5
144	SLE RA 15	-4	-1	4516	10.08	2.22	-0.5
144	SLE RA 16	-4	-1	4516	10.08	2.22	-0.5
144	SLE RA 17	-4	-1	4516	10.08	2.22	-0.5
144	SLE RA 18	-5	-1	4741	10.4	2.39	-0.52
144	SLE RA 19	-5	-1	4741	10.4	2.39	-0.52
144	SLE RA 20	-5	-1	4741	10.4	2.39	-0.52
144	SLE RA 21	-5	-1	4741	10.4	2.39	-0.52
144	SLE FR 1	-3	-1	3991	9.32	1.82	-0.43
144	SLE FR 2	-3	-1	3991	9.32	1.82	-0.43
144	SLE FR 3	-3	-1	3991	9.32	1.82	-0.43
144	SLE FR 4	-3	-1	4216	9.64	1.99	-0.46
144	SLE FR 5	-3	-1	4216	9.64	1.99	-0.46
144	SLE FR 6	-4	-1	4366	9.86	2.1	-0.48
144	SLE QP 1	-3	-1	3991	9.32	1.82	-0.43
144	SLE QP 2	-3	-1	4216	9.64	1.99	-0.46
144	SLD 1	315	78	3753	2.46	3.5	2.2
144	SLD 2	314	118	3751	2.34	3.51	3.26
144	SLD 3	318	-144	3749	14.23	3.44	-4.63
144	SLD 4	318	-104	3747	14.11	3.45	-3.56
144	SLD 5	87	345	4083	-10.33	2.54	10.3
144	SLD 6	86	386	4081	-10.45	2.55	11.39
144	SLD 7	99	-395	4071	28.92	2.32	-12.44
144	SLD 8	98	-355	4069	28.8	2.33	-11.35
144	SLD 9	-105	353	4363	-9.51	1.65	10.43
144	SLD 10	-106	393	4361	-9.64	1.66	11.52
144	SLD 11	-93	-388	4351	29.74	1.43	-12.31
144	SLD 12	-94	-347	4349	29.61	1.44	-11.22
144	SLD 13	-325	102	4685	5.17	0.53	2.64
144	SLD 14	-325	142	4683	5.05	0.54	3.71
144	SLD 15	-321	-120	4681	16.95	0.47	-4.18
144	SLD 16	-322	-80	4680	16.83	0.48	-3.12
144	SLV 1	719	186	3164	-7.07	5.43	5.82
144	SLV 2	718	278	3160	-7.35	5.45	8.26
144	SLV 3	728	-335	3156	20.47	5.27	-10.2
144	SLV 4	726	-244	3151	20.19	5.3	-7.77
144	SLV 5	201	812	3915	-37.04	3.24	24.82
144	SLV 6	200	907	3910	-37.33	3.27	27.35
144	SLV 7	229	-925	3887	54.77	2.74	-28.58
144	SLV 8	228	-830	3882	54.47	2.76	-26.05
144	SLV 9	-235	828	4550	-35.19	1.22	25.13
144	SLV 10	-236	923	4545	-35.48	1.25	27.66
144	SLV 11	-207	-909	4522	56.62	0.71	-28.27
144	SLV 12	-208	-814	4517	56.32	0.74	-25.75
144	SLV 13	-733	242	5281	-0.91	-1.32	6.85
144	SLV 14	-735	333	5277	-1.19	-1.29	9.28
144	SLV 15	-725	-280	5273	26.64	-1.47	-9.18
144	SLV 16	-726	-188	5268	26.35	-1.44	-6.74
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	-2	1	3873	8.53	1.48	-0.28
145	SLU 2	-2	1	3873	8.53	1.48	-0.28
145	SLU 3	-2	1	3873	8.53	1.48	-0.28
145	SLU 4	-2	1	3873	8.53	1.48	-0.28
145	SLU 5	-2	1	3873	8.53	1.48	-0.28
145	SLU 6	-2	1	3873	8.53	1.48	-0.28
145	SLU 7	-2	1	3873	8.53	1.48	-0.28
145	SLU 8	-2	1	3873	8.53	1.48	-0.28
145	SLU 9	-2	1	3873	8.53	1.48	-0.28
145	SLU 10	-4	1	4675	9.57	1.92	-0.35
145	SLU 11	-4	1	4675	9.57	1.92	-0.35
145	SLU 12	-4	1	4675	9.57	1.92	-0.35
145	SLU 13	-4	1	4675	9.57	1.92	-0.35
145	SLU 14	-4	1	4675	9.57	1.92	-0.35
145	SLU 15	-4	1	4675	9.57	1.92	-0.35
145	SLU 16	-4	1	4675	9.57	1.92	-0.35
145	SLU 17	-4	1	4675	9.57	1.92	-0.35
145	SLU 18	-5	1	5019	10.01	2.1	-0.38
145	SLU 19	-5	1	5019	10.01	2.1	-0.38
145	SLU 20	-5	1	5019	10.01	2.1	-0.38
145	SLU 21	-5	1	5019	10.01	2.1	-0.38
145	SLU 22	-3	1	4468	9.4	1.79	-0.33
145	SLU 23	-3	1	4468	9.4	1.79	-0.33
145	SLU 24	-3	1	4468	9.4	1.79	-0.33
145	SLU 25	-3	1	4468	9.4	1.79	-0.33
145	SLU 26	-3	1	4468	9.4	1.79	-0.33
145	SLU 27	-3	1	4468	9.4	1.79	-0.33
145	SLU 28	-3	1	4468	9.4	1.79	-0.33
145	SLU 29	-3	1	4468	9.4	1.79	-0.33
145	SLU 30	-3	1	4468	9.4	1.79	-0.33
145	SLU 31	-5	1	5270	10.44	2.23	-0.4
145	SLU 32	-5	1	5270	10.44	2.23	-0.4
145	SLU 33	-5	1	5270	10.44	2.23	-0.4
145	SLU 34	-5	1	5270	10.44	2.23	-0.4
145	SLU 35	-5	1	5270	10.44	2.23	-0.4
145	SLU 36	-5	1	5270	10.44	2.23	-0.4
145	SLU 37	-5	1	5270	10.44	2.23	-0.4
145	SLU 38	-5	1	5270	10.44	2.23	-0.4



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
145	N.br.						
145	SLU 39	-6	2	5614	10.88	2.42	-0.43
145	SLU 40	-6	2	5614	10.88	2.42	-0.43
145	SLU 41	-6	2	5614	10.88	2.42	-0.43
145	SLU 42	-6	2	5614	10.88	2.42	-0.43
145	SLU 43	-2	1	4830	10.79	1.82	-0.35
145	SLU 44	-2	1	4830	10.79	1.82	-0.35
145	SLU 45	-2	1	4830	10.79	1.82	-0.35
145	SLU 46	-2	1	4830	10.79	1.82	-0.35
145	SLU 47	-2	1	4830	10.79	1.82	-0.35
145	SLU 48	-2	1	4830	10.79	1.82	-0.35
145	SLU 49	-2	1	4830	10.79	1.82	-0.35
145	SLU 50	-2	1	4830	10.79	1.82	-0.35
145	SLU 51	-2	1	4830	10.79	1.82	-0.35
145	SLU 52	-4	1	5633	11.83	2.26	-0.42
145	SLU 53	-4	1	5633	11.83	2.26	-0.42
145	SLU 54	-4	1	5633	11.83	2.26	-0.42
145	SLU 55	-4	1	5633	11.83	2.26	-0.42
145	SLU 56	-4	1	5633	11.83	2.26	-0.42
145	SLU 57	-4	1	5633	11.83	2.26	-0.42
145	SLU 58	-4	1	5633	11.83	2.26	-0.42
145	SLU 59	-4	1	5633	11.83	2.26	-0.42
145	SLU 60	-5	1	5977	12.27	2.44	-0.45
145	SLU 61	-5	1	5977	12.27	2.44	-0.45
145	SLU 62	-5	1	5977	12.27	2.44	-0.45
145	SLU 63	-5	1	5977	12.27	2.44	-0.45
145	SLU 64	-3	1	5426	11.66	2.13	-0.4
145	SLU 65	-3	1	5426	11.66	2.13	-0.4
145	SLU 66	-3	1	5426	11.66	2.13	-0.4
145	SLU 67	-3	1	5426	11.66	2.13	-0.4
145	SLU 68	-3	1	5426	11.66	2.13	-0.4
145	SLU 69	-3	1	5426	11.66	2.13	-0.4
145	SLU 70	-3	1	5426	11.66	2.13	-0.4
145	SLU 71	-3	1	5426	11.66	2.13	-0.4
145	SLU 72	-3	1	5426	11.66	2.13	-0.4
145	SLU 73	-6	2	6228	12.7	2.57	-0.46
145	SLU 74	-6	2	6228	12.7	2.57	-0.46
145	SLU 75	-6	2	6228	12.7	2.57	-0.46
145	SLU 76	-6	2	6228	12.7	2.57	-0.46
145	SLU 77	-6	2	6228	12.7	2.57	-0.46
145	SLU 78	-6	2	6228	12.7	2.57	-0.46
145	SLU 79	-6	2	6228	12.7	2.57	-0.46
145	SLU 80	-6	2	6228	12.7	2.57	-0.46
145	SLU 81	-6	2	6572	13.14	2.75	-0.49
145	SLU 82	-6	2	6572	13.14	2.75	-0.49
145	SLU 83	-6	2	6572	13.14	2.75	-0.49
145	SLU 84	-6	2	6572	13.14	2.75	-0.49
145	SLE RA 1	-2	1	4043	8.78	1.57	-0.29
145	SLE RA 2	-2	1	4043	8.78	1.57	-0.29
145	SLE RA 3	-2	1	4043	8.78	1.57	-0.29
145	SLE RA 4	-2	1	4043	8.78	1.57	-0.29
145	SLE RA 5	-2	1	4043	8.78	1.57	-0.29
145	SLE RA 6	-2	1	4043	8.78	1.57	-0.29
145	SLE RA 7	-2	1	4043	8.78	1.57	-0.29
145	SLE RA 8	-2	1	4043	8.78	1.57	-0.29
145	SLE RA 9	-2	1	4043	8.78	1.57	-0.29
145	SLE RA 10	-4	1	4578	9.47	1.86	-0.34
145	SLE RA 11	-4	1	4578	9.47	1.86	-0.34
145	SLE RA 12	-4	1	4578	9.47	1.86	-0.34
145	SLE RA 13	-4	1	4578	9.47	1.86	-0.34
145	SLE RA 14	-4	1	4578	9.47	1.86	-0.34
145	SLE RA 15	-4	1	4578	9.47	1.86	-0.34
145	SLE RA 16	-4	1	4578	9.47	1.86	-0.34
145	SLE RA 17	-4	1	4578	9.47	1.86	-0.34
145	SLE RA 18	-4	1	4807	9.77	1.99	-0.36
145	SLE RA 19	-4	1	4807	9.77	1.99	-0.36
145	SLE RA 20	-4	1	4807	9.77	1.99	-0.36
145	SLE RA 21	-4	1	4807	9.77	1.99	-0.36
145	SLE FR 1	-2	1	4043	8.78	1.57	-0.29
145	SLE FR 2	-2	1	4043	8.78	1.57	-0.29
145	SLE FR 3	-2	1	4043	8.78	1.57	-0.29
145	SLE FR 4	-3	1	4272	9.08	1.7	-0.31
145	SLE FR 5	-3	1	4272	9.08	1.7	-0.31
145	SLE FR 6	-3	1	4425	9.27	1.78	-0.33
145	SLE QP 1	-2	1	4043	8.78	1.57	-0.29
145	SLE QP 2	-3	1	4272	9.08	1.7	-0.31
145	SLD 1	316	66	3857	1.99	3.41	2.19
145	SLD 2	316	101	3855	1.88	3.41	3.19
145	SLD 3	320	-120	3853	13.77	3.38	-4.26
145	SLD 4	319	-86	3851	13.66	3.39	-3.27
145	SLD 5	88	291	4155	-10.88	2.24	9.86
145	SLD 6	87	326	4153	-10.99	2.25	10.88
145	SLD 7	99	-331	4140	28.39	2.17	-11.65
145	SLD 8	99	-295	4139	28.28	2.17	-10.63
145	SLD 9	-105	297	4405	-10.13	1.22	10
145	SLD 10	-105	333	4404	-10.24	1.22	11.02
145	SLD 11	-93	-324	4391	29.14	1.14	-11.51
145	SLD 12	-93	-289	4389	29.03	1.15	-10.49
145	SLD 13	-325	88	4693	4.49	0	2.64
145	SLD 14	-325	122	4691	4.38	0.01	3.64
145	SLD 15	-321	-99	4689	16.27	-0.02	-3.81



Nodo	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
145	SLD 16	-322	-64	4687	16.16	-0.01	-2.82
145	SLV 1	721	155	3330	-7.42	5.58	5.61
145	SLV 2	720	234	3326	-7.67	5.59	7.89
145	SLV 3	729	-282	3320	20.14	5.53	-9.55
145	SLV 4	728	-203	3316	19.88	5.54	-7.27
145	SLV 5	202	681	4006	-37.57	2.93	23.61
145	SLV 6	201	763	4002	-37.83	2.95	25.97
145	SLV 7	230	-776	3973	54.27	2.76	-26.91
145	SLV 8	229	-694	3969	54.01	2.78	-24.54
145	SLV 9	-234	696	4575	-35.86	0.61	23.92
145	SLV 10	-236	778	4571	-36.12	0.63	26.28
145	SLV 11	-207	-761	4542	55.98	0.44	-26.6
145	SLV 12	-208	-679	4538	55.72	0.46	-24.23
145	SLV 13	-734	205	5228	-1.73	-2.15	6.64
145	SLV 14	-735	284	5224	-1.99	-2.14	8.92
145	SLV 15	-726	-232	5218	25.82	-2.2	-8.51
145	SLV 16	-727	-153	5214	25.57	-2.19	-6.24
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	-1	2	3913	8.03	1.18	-0.17
146	SLU 2	-1	2	3913	8.03	1.18	-0.17
146	SLU 3	-1	2	3913	8.03	1.18	-0.17
146	SLU 4	-1	2	3913	8.03	1.18	-0.17
146	SLU 5	-1	2	3913	8.03	1.18	-0.17
146	SLU 6	-1	2	3913	8.03	1.18	-0.17
146	SLU 7	-1	2	3913	8.03	1.18	-0.17
146	SLU 8	-1	2	3913	8.03	1.18	-0.17
146	SLU 9	-1	2	3913	8.03	1.18	-0.17
146	SLU 10	-3	3	4726	8.96	1.48	-0.21
146	SLU 11	-3	3	4726	8.96	1.48	-0.21
146	SLU 12	-3	3	4726	8.96	1.48	-0.21
146	SLU 13	-3	3	4726	8.96	1.48	-0.21
146	SLU 14	-3	3	4726	8.96	1.48	-0.21
146	SLU 15	-3	3	4726	8.96	1.48	-0.21
146	SLU 16	-3	3	4726	8.96	1.48	-0.21
146	SLU 17	-3	3	4726	8.96	1.48	-0.21
146	SLU 18	-4	3	5075	9.36	1.61	-0.23
146	SLU 19	-4	3	5075	9.36	1.61	-0.23
146	SLU 20	-4	3	5075	9.36	1.61	-0.23
146	SLU 21	-4	3	5075	9.36	1.61	-0.23
146	SLU 22	-2	2	4516	8.82	1.4	-0.2
146	SLU 23	-2	2	4516	8.82	1.4	-0.2
146	SLU 24	-2	2	4516	8.82	1.4	-0.2
146	SLU 25	-2	2	4516	8.82	1.4	-0.2
146	SLU 26	-2	2	4516	8.82	1.4	-0.2
146	SLU 27	-2	2	4516	8.82	1.4	-0.2
146	SLU 28	-2	2	4516	8.82	1.4	-0.2
146	SLU 29	-2	2	4516	8.82	1.4	-0.2
146	SLU 30	-2	2	4516	8.82	1.4	-0.2
146	SLU 31	-4	3	5330	9.75	1.7	-0.25
146	SLU 32	-4	3	5330	9.75	1.7	-0.25
146	SLU 33	-4	3	5330	9.75	1.7	-0.25
146	SLU 34	-4	3	5330	9.75	1.7	-0.25
146	SLU 35	-4	3	5330	9.75	1.7	-0.25
146	SLU 36	-4	3	5330	9.75	1.7	-0.25
146	SLU 37	-4	3	5330	9.75	1.7	-0.25
146	SLU 38	-4	3	5330	9.75	1.7	-0.25
146	SLU 39	-5	3	5678	10.15	1.82	-0.26
146	SLU 40	-5	3	5678	10.15	1.82	-0.26
146	SLU 41	-5	3	5678	10.15	1.82	-0.26
146	SLU 42	-5	3	5678	10.15	1.82	-0.26
146	SLU 43	-1	3	4880	10.17	1.46	-0.21
146	SLU 44	-1	3	4880	10.17	1.46	-0.21
146	SLU 45	-1	3	4880	10.17	1.46	-0.21
146	SLU 46	-1	3	4880	10.17	1.46	-0.21
146	SLU 47	-1	3	4880	10.17	1.46	-0.21
146	SLU 48	-1	3	4880	10.17	1.46	-0.21
146	SLU 49	-1	3	4880	10.17	1.46	-0.21
146	SLU 50	-1	3	4880	10.17	1.46	-0.21
146	SLU 51	-1	3	4880	10.17	1.46	-0.21
146	SLU 52	-3	3	5694	11.1	1.76	-0.25
146	SLU 53	-3	3	5694	11.1	1.76	-0.25
146	SLU 54	-3	3	5694	11.1	1.76	-0.25
146	SLU 55	-3	3	5694	11.1	1.76	-0.25
146	SLU 56	-3	3	5694	11.1	1.76	-0.25
146	SLU 57	-3	3	5694	11.1	1.76	-0.25
146	SLU 58	-3	3	5694	11.1	1.76	-0.25
146	SLU 59	-3	3	5694	11.1	1.76	-0.25
146	SLU 60	-4	3	6042	11.5	1.89	-0.27
146	SLU 61	-4	3	6042	11.5	1.89	-0.27
146	SLU 62	-4	3	6042	11.5	1.89	-0.27
146	SLU 63	-4	3	6042	11.5	1.89	-0.27
146	SLU 64	-2	3	5483	10.96	1.68	-0.24
146	SLU 65	-2	3	5483	10.96	1.68	-0.24
146	SLU 66	-2	3	5483	10.96	1.68	-0.24
146	SLU 67	-2	3	5483	10.96	1.68	-0.24
146	SLU 68	-2	3	5483	10.96	1.68	-0.24
146	SLU 69	-2	3	5483	10.96	1.68	-0.24



Nodo	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
146	SLU 70	-2	3	5483	10.96	1.68	-0.24
146	SLU 71	-2	3	5483	10.96	1.68	-0.24
146	SLU 72	-2	3	5483	10.96	1.68	-0.24
146	SLU 73	-4	4	6297	11.89	1.98	-0.28
146	SLU 74	-4	4	6297	11.89	1.98	-0.28
146	SLU 75	-4	4	6297	11.89	1.98	-0.28
146	SLU 76	-4	4	6297	11.89	1.98	-0.28
146	SLU 77	-4	4	6297	11.89	1.98	-0.28
146	SLU 78	-4	4	6297	11.89	1.98	-0.28
146	SLU 79	-4	4	6297	11.89	1.98	-0.28
146	SLU 80	-4	4	6297	11.89	1.98	-0.28
146	SLU 81	-5	4	6645	12.29	2.11	-0.3
146	SLU 82	-5	4	6645	12.29	2.11	-0.3
146	SLU 83	-5	4	6645	12.29	2.11	-0.3
146	SLU 84	-5	4	6645	12.29	2.11	-0.3
146	SLE RA 1	-2	2	4085	8.26	1.24	-0.18
146	SLE RA 2	-2	2	4085	8.26	1.24	-0.18
146	SLE RA 3	-2	2	4085	8.26	1.24	-0.18
146	SLE RA 4	-2	2	4085	8.26	1.24	-0.18
146	SLE RA 5	-2	2	4085	8.26	1.24	-0.18
146	SLE RA 6	-2	2	4085	8.26	1.24	-0.18
146	SLE RA 7	-2	2	4085	8.26	1.24	-0.18
146	SLE RA 8	-2	2	4085	8.26	1.24	-0.18
146	SLE RA 9	-2	2	4085	8.26	1.24	-0.18
146	SLE RA 10	-3	3	4628	8.88	1.44	-0.21
146	SLE RA 11	-3	3	4628	8.88	1.44	-0.21
146	SLE RA 12	-3	3	4628	8.88	1.44	-0.21
146	SLE RA 13	-3	3	4628	8.88	1.44	-0.21
146	SLE RA 14	-3	3	4628	8.88	1.44	-0.21
146	SLE RA 15	-3	3	4628	8.88	1.44	-0.21
146	SLE RA 16	-3	3	4628	8.88	1.44	-0.21
146	SLE RA 17	-3	3	4628	8.88	1.44	-0.21
146	SLE RA 18	-3	3	4860	9.14	1.53	-0.22
146	SLE RA 19	-3	3	4860	9.14	1.53	-0.22
146	SLE RA 20	-3	3	4860	9.14	1.53	-0.22
146	SLE RA 21	-3	3	4860	9.14	1.53	-0.22
146	SLE FR 1	-2	2	4085	8.26	1.24	-0.18
146	SLE FR 2	-2	2	4085	8.26	1.24	-0.18
146	SLE FR 3	-2	2	4085	8.26	1.24	-0.18
146	SLE FR 4	-2	2	4318	8.52	1.33	-0.19
146	SLE FR 5	-2	2	4318	8.52	1.33	-0.19
146	SLE FR 6	-3	2	4473	8.7	1.39	-0.2
146	SLE QP 1	-2	2	4085	8.26	1.24	-0.18
146	SLE QP 2	-2	2	4318	8.52	1.33	-0.19
146	SLD 1	317	55	3956	1.53	3.14	2.09
146	SLD 2	317	84	3954	1.43	3.14	3.02
146	SLD 3	321	-98	3951	13.32	3.13	-3.85
146	SLD 4	320	-69	3950	13.22	3.13	-2.92
146	SLD 5	88	240	4216	-11.42	1.89	9.18
146	SLD 6	88	270	4214	-11.52	1.89	10.12
146	SLD 7	100	-271	4202	27.88	1.85	-10.64
146	SLD 8	100	-241	4200	27.78	1.85	-9.69
146	SLD 9	-104	245	4435	-10.73	0.8	9.31
146	SLD 10	-105	275	4433	-10.83	0.81	10.26
146	SLD 11	-92	-265	4421	28.57	0.76	-10.5
146	SLD 12	-93	-235	4419	28.47	0.77	-9.56
146	SLD 13	-325	74	4685	3.83	-0.48	2.54
146	SLD 14	-325	103	4684	3.73	-0.47	3.47
146	SLD 15	-321	-79	4681	15.62	-0.49	-3.4
146	SLD 16	-322	-50	4680	15.52	-0.48	-2.47
146	SLV 1	723	126	3496	-7.76	5.44	5.21
146	SLV 2	722	193	3492	-7.99	5.45	7.33
146	SLV 3	731	-232	3486	19.82	5.41	-8.74
146	SLV 4	730	-165	3482	19.59	5.42	-6.62
146	SLV 5	203	559	4088	-38.11	2.6	21.82
146	SLV 6	202	628	4084	-38.34	2.61	24.02
146	SLV 7	231	-637	4054	53.82	2.51	-24.71
146	SLV 8	229	-567	4051	53.59	2.52	-22.51
146	SLV 9	-234	572	4585	-36.54	0.13	22.13
146	SLV 10	-235	642	4581	-36.78	0.15	24.33
146	SLV 11	-207	-624	4551	55.39	0.05	-24.4
146	SLV 12	-208	-554	4548	55.16	0.06	-22.2
146	SLV 13	-734	170	5153	-2.54	-2.77	6.24
146	SLV 14	-736	237	5149	-2.77	-2.75	8.36
146	SLV 15	-726	-189	5143	25.04	-2.79	-7.72
146	SLV 16	-727	-122	5139	24.81	-2.78	-5.59
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	-1	3	3944	7.55	0.91	-0.08
147	SLU 2	-1	3	3944	7.55	0.91	-0.08
147	SLU 3	-1	3	3944	7.55	0.91	-0.08
147	SLU 4	-1	3	3944	7.55	0.91	-0.08
147	SLU 5	-1	3	3944	7.55	0.91	-0.08
147	SLU 6	-1	3	3944	7.55	0.91	-0.08
147	SLU 7	-1	3	3944	7.55	0.91	-0.08
147	SLU 8	-1	3	3944	7.55	0.91	-0.08
147	SLU 9	-1	3	3944	7.55	0.91	-0.08
147	SLU 10	-2	3	4765	8.37	1.1	-0.1



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
147	SLU 11	-2	3	4765	8.37	1.1	-0.1
147	SLU 12	-2	3	4765	8.37	1.1	-0.1
147	SLU 13	-2	3	4765	8.37	1.1	-0.1
147	SLU 14	-2	3	4765	8.37	1.1	-0.1
147	SLU 15	-2	3	4765	8.37	1.1	-0.1
147	SLU 16	-2	3	4765	8.37	1.1	-0.1
147	SLU 17	-2	3	4765	8.37	1.1	-0.1
147	SLU 18	-3	4	5117	8.73	1.19	-0.11
147	SLU 19	-3	4	5117	8.73	1.19	-0.11
147	SLU 20	-3	4	5117	8.73	1.19	-0.11
147	SLU 21	-3	4	5117	8.73	1.19	-0.11
147	SLU 22	-2	3	4553	8.26	1.04	-0.09
147	SLU 23	-2	3	4553	8.26	1.04	-0.09
147	SLU 24	-2	3	4553	8.26	1.04	-0.09
147	SLU 25	-2	3	4553	8.26	1.04	-0.09
147	SLU 26	-2	3	4553	8.26	1.04	-0.09
147	SLU 27	-2	3	4553	8.26	1.04	-0.09
147	SLU 28	-2	3	4553	8.26	1.04	-0.09
147	SLU 29	-2	3	4553	8.26	1.04	-0.09
147	SLU 30	-2	3	4553	8.26	1.04	-0.09
147	SLU 31	-3	4	5374	9.09	1.24	-0.12
147	SLU 32	-3	4	5374	9.09	1.24	-0.12
147	SLU 33	-3	4	5374	9.09	1.24	-0.12
147	SLU 34	-3	4	5374	9.09	1.24	-0.12
147	SLU 35	-3	4	5374	9.09	1.24	-0.12
147	SLU 36	-3	4	5374	9.09	1.24	-0.12
147	SLU 37	-3	4	5374	9.09	1.24	-0.12
147	SLU 38	-3	4	5374	9.09	1.24	-0.12
147	SLU 39	-4	4	5725	9.44	1.32	-0.13
147	SLU 40	-4	4	5725	9.44	1.32	-0.13
147	SLU 41	-4	4	5725	9.44	1.32	-0.13
147	SLU 42	-4	4	5725	9.44	1.32	-0.13
147	SLU 43	-1	3	4919	9.57	1.13	-0.09
147	SLU 44	-1	3	4919	9.57	1.13	-0.09
147	SLU 45	-1	3	4919	9.57	1.13	-0.09
147	SLU 46	-1	3	4919	9.57	1.13	-0.09
147	SLU 47	-1	3	4919	9.57	1.13	-0.09
147	SLU 48	-1	3	4919	9.57	1.13	-0.09
147	SLU 49	-1	3	4919	9.57	1.13	-0.09
147	SLU 50	-1	3	4919	9.57	1.13	-0.09
147	SLU 51	-1	3	4919	9.57	1.13	-0.09
147	SLU 52	-2	4	5740	10.39	1.33	-0.12
147	SLU 53	-2	4	5740	10.39	1.33	-0.12
147	SLU 54	-2	4	5740	10.39	1.33	-0.12
147	SLU 55	-2	4	5740	10.39	1.33	-0.12
147	SLU 56	-2	4	5740	10.39	1.33	-0.12
147	SLU 57	-2	4	5740	10.39	1.33	-0.12
147	SLU 58	-2	4	5740	10.39	1.33	-0.12
147	SLU 59	-2	4	5740	10.39	1.33	-0.12
147	SLU 60	-3	4	6092	10.75	1.41	-0.13
147	SLU 61	-3	4	6092	10.75	1.41	-0.13
147	SLU 62	-3	4	6092	10.75	1.41	-0.13
147	SLU 63	-3	4	6092	10.75	1.41	-0.13
147	SLU 64	-2	4	5527	10.28	1.27	-0.11
147	SLU 65	-2	4	5527	10.28	1.27	-0.11
147	SLU 66	-2	4	5527	10.28	1.27	-0.11
147	SLU 67	-2	4	5527	10.28	1.27	-0.11
147	SLU 68	-2	4	5527	10.28	1.27	-0.11
147	SLU 69	-2	4	5527	10.28	1.27	-0.11
147	SLU 70	-2	4	5527	10.28	1.27	-0.11
147	SLU 71	-2	4	5527	10.28	1.27	-0.11
147	SLU 72	-2	4	5527	10.28	1.27	-0.11
147	SLU 73	-3	5	6348	11.11	1.46	-0.14
147	SLU 74	-3	5	6348	11.11	1.46	-0.14
147	SLU 75	-3	5	6348	11.11	1.46	-0.14
147	SLU 76	-3	5	6348	11.11	1.46	-0.14
147	SLU 77	-3	5	6348	11.11	1.46	-0.14
147	SLU 78	-3	5	6348	11.11	1.46	-0.14
147	SLU 79	-3	5	6348	11.11	1.46	-0.14
147	SLU 80	-3	5	6348	11.11	1.46	-0.14
147	SLU 81	-4	5	6700	11.46	1.55	-0.15
147	SLU 82	-4	5	6700	11.46	1.55	-0.15
147	SLU 83	-4	5	6700	11.46	1.55	-0.15
147	SLU 84	-4	5	6700	11.46	1.55	-0.15
147	SLE RA 1	-1	3	4118	7.75	0.95	-0.08
147	SLE RA 2	-1	3	4118	7.75	0.95	-0.08
147	SLE RA 3	-1	3	4118	7.75	0.95	-0.08
147	SLE RA 4	-1	3	4118	7.75	0.95	-0.08
147	SLE RA 5	-1	3	4118	7.75	0.95	-0.08
147	SLE RA 6	-1	3	4118	7.75	0.95	-0.08
147	SLE RA 7	-1	3	4118	7.75	0.95	-0.08
147	SLE RA 8	-1	3	4118	7.75	0.95	-0.08
147	SLE RA 9	-1	3	4118	7.75	0.95	-0.08
147	SLE RA 10	-2	3	4665	8.3	1.08	-0.1
147	SLE RA 11	-2	3	4665	8.3	1.08	-0.1
147	SLE RA 12	-2	3	4665	8.3	1.08	-0.1
147	SLE RA 13	-2	3	4665	8.3	1.08	-0.1
147	SLE RA 14	-2	3	4665	8.3	1.08	-0.1
147	SLE RA 15	-2	3	4665	8.3	1.08	-0.1
147	SLE RA 16	-2	3	4665	8.3	1.08	-0.1



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
147	SLE RA 17	-2	3	4665	8.3	1.08	-0.1
147	SLE RA 18	-3	4	4900	8.54	1.13	-0.11
147	SLE RA 19	-3	4	4900	8.54	1.13	-0.11
147	SLE RA 20	-3	4	4900	8.54	1.13	-0.11
147	SLE RA 21	-3	4	4900	8.54	1.13	-0.11
147	SLE FR 1	-1	3	4118	7.75	0.95	-0.08
147	SLE FR 2	-1	3	4118	7.75	0.95	-0.08
147	SLE FR 3	-1	3	4118	7.75	0.95	-0.08
147	SLE FR 4	-1	3	4353	7.99	1	-0.09
147	SLE FR 5	-1	3	4353	7.99	1	-0.09
147	SLE FR 6	-2	3	4509	8.15	1.04	-0.09
147	SLE QP 1	-1	3	4118	7.75	0.95	-0.08
147	SLE QP 2	-1	3	4353	7.99	1	-0.09
147	SLD 1	318	44	4045	1.08	2.83	1.92
147	SLD 2	318	69	4044	0.99	2.83	2.78
147	SLD 3	322	-79	4042	12.89	2.84	-3.4
147	SLD 4	321	-54	4040	12.8	2.85	-2.54
147	SLD 5	89	193	4267	-11.97	1.52	8.27
147	SLD 6	89	218	4265	-12.05	1.53	9.15
147	SLD 7	101	-217	4254	27.4	1.58	-9.46
147	SLD 8	100	-191	4253	27.31	1.58	-8.58
147	SLD 9	-103	198	4453	-11.34	0.42	8.4
147	SLD 10	-104	223	4451	-11.42	0.42	9.28
147	SLD 11	-92	-212	4440	28.03	0.48	-9.33
147	SLD 12	-92	-187	4438	27.94	0.48	-8.44
147	SLD 13	-324	60	4665	3.18	-0.85	2.36
147	SLD 14	-325	85	4664	3.09	-0.84	3.22
147	SLD 15	-321	-62	4661	14.99	-0.83	-2.96
147	SLD 16	-321	-38	4660	14.9	-0.82	-2.09
147	SLV 1	725	100	3655	-8.11	5.15	4.66
147	SLV 2	724	156	3652	-8.31	5.16	6.64
147	SLV 3	733	-187	3646	19.51	5.19	-7.82
147	SLV 4	732	-131	3643	19.32	5.2	-5.85
147	SLV 5	205	448	4158	-38.66	2.18	19.55
147	SLV 6	203	506	4155	-38.87	2.19	21.6
147	SLV 7	231	-511	4128	53.42	2.31	-22.08
147	SLV 8	230	-453	4125	53.21	2.33	-20.03
147	SLV 9	-233	459	4580	-37.23	-0.32	19.85
147	SLV 10	-234	517	4577	-37.44	-0.31	21.9
147	SLV 11	-206	-500	4550	54.85	-0.19	-21.77
147	SLV 12	-207	-442	4547	54.64	-0.18	-19.72
147	SLV 13	-735	137	5062	-3.34	-3.2	5.67
147	SLV 14	-736	194	5059	-3.54	-3.18	7.65
147	SLV 15	-726	-150	5053	24.28	-3.16	-6.81
147	SLV 16	-728	-94	5050	24.09	-3.14	-4.84
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
148	SLU 1	0	3	3968	7.08	0.69	0
148	SLU 2	0	3	3968	7.08	0.69	0
148	SLU 3	0	3	3968	7.08	0.69	0
148	SLU 4	0	3	3968	7.08	0.69	0
148	SLU 5	0	3	3968	7.08	0.69	0
148	SLU 6	0	3	3968	7.08	0.69	0
148	SLU 7	0	3	3968	7.08	0.69	0
148	SLU 8	0	3	3968	7.08	0.69	0
148	SLU 9	0	3	3968	7.08	0.69	0
148	SLU 10	-1	4	4794	7.8	0.81	-0.01
148	SLU 11	-1	4	4794	7.8	0.81	-0.01
148	SLU 12	-1	4	4794	7.8	0.81	-0.01
148	SLU 13	-1	4	4794	7.8	0.81	-0.01
148	SLU 14	-1	4	4794	7.8	0.81	-0.01
148	SLU 15	-1	4	4794	7.8	0.81	-0.01
148	SLU 16	-1	4	4794	7.8	0.81	-0.01
148	SLU 17	-1	4	4794	7.8	0.81	-0.01
148	SLU 18	-2	4	5148	8.11	0.86	-0.02
148	SLU 19	-2	4	5148	8.11	0.86	-0.02
148	SLU 20	-2	4	5148	8.11	0.86	-0.02
148	SLU 21	-2	4	5148	8.11	0.86	-0.02
148	SLU 22	-1	3	4580	7.72	0.78	-0.01
148	SLU 23	-1	3	4580	7.72	0.78	-0.01
148	SLU 24	-1	3	4580	7.72	0.78	-0.01
148	SLU 25	-1	3	4580	7.72	0.78	-0.01
148	SLU 26	-1	3	4580	7.72	0.78	-0.01
148	SLU 27	-1	3	4580	7.72	0.78	-0.01
148	SLU 28	-1	3	4580	7.72	0.78	-0.01
148	SLU 29	-1	3	4580	7.72	0.78	-0.01
148	SLU 30	-1	3	4580	7.72	0.78	-0.01
148	SLU 31	-2	4	5406	8.44	0.89	-0.02
148	SLU 32	-2	4	5406	8.44	0.89	-0.02
148	SLU 33	-2	4	5406	8.44	0.89	-0.02
148	SLU 34	-2	4	5406	8.44	0.89	-0.02
148	SLU 35	-2	4	5406	8.44	0.89	-0.02
148	SLU 36	-2	4	5406	8.44	0.89	-0.02
148	SLU 37	-2	4	5406	8.44	0.89	-0.02
148	SLU 38	-2	4	5406	8.44	0.89	-0.02
148	SLU 39	-3	5	5759	8.76	0.94	-0.03
148	SLU 40	-3	5	5759	8.76	0.94	-0.03
148	SLU 41	-3	5	5759	8.76	0.94	-0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
148	SLU 42	-3	5	5759	8.76	0.94	-0.03
148	SLU 43	0	3	4949	8.98	0.87	0
148	SLU 44	0	3	4949	8.98	0.87	0
148	SLU 45	0	3	4949	8.98	0.87	0
148	SLU 46	0	3	4949	8.98	0.87	0
148	SLU 47	0	3	4949	8.98	0.87	0
148	SLU 48	0	3	4949	8.98	0.87	0
148	SLU 49	0	3	4949	8.98	0.87	0
148	SLU 50	0	3	4949	8.98	0.87	0
148	SLU 51	0	3	4949	8.98	0.87	0
148	SLU 52	-1	4	5775	9.7	0.99	-0.01
148	SLU 53	-1	4	5775	9.7	0.99	-0.01
148	SLU 54	-1	4	5775	9.7	0.99	-0.01
148	SLU 55	-1	4	5775	9.7	0.99	-0.01
148	SLU 56	-1	4	5775	9.7	0.99	-0.01
148	SLU 57	-1	4	5775	9.7	0.99	-0.01
148	SLU 58	-1	4	5775	9.7	0.99	-0.01
148	SLU 59	-1	4	5775	9.7	0.99	-0.01
148	SLU 60	-2	5	6129	10.01	1.04	-0.02
148	SLU 61	-2	5	6129	10.01	1.04	-0.02
148	SLU 62	-2	5	6129	10.01	1.04	-0.02
148	SLU 63	-2	5	6129	10.01	1.04	-0.02
148	SLU 64	-1	4	5561	9.62	0.95	-0.01
148	SLU 65	-1	4	5561	9.62	0.95	-0.01
148	SLU 66	-1	4	5561	9.62	0.95	-0.01
148	SLU 67	-1	4	5561	9.62	0.95	-0.01
148	SLU 68	-1	4	5561	9.62	0.95	-0.01
148	SLU 69	-1	4	5561	9.62	0.95	-0.01
148	SLU 70	-1	4	5561	9.62	0.95	-0.01
148	SLU 71	-1	4	5561	9.62	0.95	-0.01
148	SLU 72	-1	4	5561	9.62	0.95	-0.01
148	SLU 73	-2	5	6386	10.35	1.07	-0.02
148	SLU 74	-2	5	6386	10.35	1.07	-0.02
148	SLU 75	-2	5	6386	10.35	1.07	-0.02
148	SLU 76	-2	5	6386	10.35	1.07	-0.02
148	SLU 77	-2	5	6386	10.35	1.07	-0.02
148	SLU 78	-2	5	6386	10.35	1.07	-0.02
148	SLU 79	-2	5	6386	10.35	1.07	-0.02
148	SLU 80	-2	5	6386	10.35	1.07	-0.02
148	SLU 81	-2	5	6740	10.66	1.12	-0.03
148	SLU 82	-2	5	6740	10.66	1.12	-0.03
148	SLU 83	-2	5	6740	10.66	1.12	-0.03
148	SLU 84	-2	5	6740	10.66	1.12	-0.03
148	SLE RA 1	0	3	4143	7.26	0.72	-0.01
148	SLE RA 2	0	3	4143	7.26	0.72	-0.01
148	SLE RA 3	0	3	4143	7.26	0.72	-0.01
148	SLE RA 4	0	3	4143	7.26	0.72	-0.01
148	SLE RA 5	0	3	4143	7.26	0.72	-0.01
148	SLE RA 6	0	3	4143	7.26	0.72	-0.01
148	SLE RA 7	0	3	4143	7.26	0.72	-0.01
148	SLE RA 8	0	3	4143	7.26	0.72	-0.01
148	SLE RA 9	0	3	4143	7.26	0.72	-0.01
148	SLE RA 10	-1	4	4693	7.74	0.79	-0.01
148	SLE RA 11	-1	4	4693	7.74	0.79	-0.01
148	SLE RA 12	-1	4	4693	7.74	0.79	-0.01
148	SLE RA 13	-1	4	4693	7.74	0.79	-0.01
148	SLE RA 14	-1	4	4693	7.74	0.79	-0.01
148	SLE RA 15	-1	4	4693	7.74	0.79	-0.01
148	SLE RA 16	-1	4	4693	7.74	0.79	-0.01
148	SLE RA 17	-1	4	4693	7.74	0.79	-0.01
148	SLE RA 18	-2	4	4929	7.95	0.83	-0.02
148	SLE RA 19	-2	4	4929	7.95	0.83	-0.02
148	SLE RA 20	-2	4	4929	7.95	0.83	-0.02
148	SLE RA 21	-2	4	4929	7.95	0.83	-0.02
148	SLE FR 1	0	3	4143	7.26	0.72	-0.01
148	SLE FR 2	0	3	4143	7.26	0.72	-0.01
148	SLE FR 3	0	3	4143	7.26	0.72	-0.01
148	SLE FR 4	-1	3	4379	7.47	0.75	-0.01
148	SLE FR 5	-1	3	4379	7.47	0.75	-0.01
148	SLE FR 6	-1	3	4536	7.61	0.77	-0.01
148	SLE QP 1	0	3	4143	7.26	0.72	-0.01
148	SLE QP 2	-1	3	4379	7.47	0.75	-0.01
148	SLD 1	319	34	4127	0.63	2.57	1.67
148	SLD 2	319	55	4125	0.56	2.57	2.48
148	SLD 3	323	-62	4123	12.47	2.58	-2.92
148	SLD 4	322	-42	4122	12.4	2.59	-2.12
148	SLD 5	90	151	4309	-12.51	1.26	7.17
148	SLD 6	90	172	4307	-12.58	1.27	7.99
148	SLD 7	102	-169	4298	26.95	1.33	-8.14
148	SLD 8	101	-149	4296	26.87	1.33	-7.32
148	SLD 9	-103	155	4461	-11.94	0.17	7.3
148	SLD 10	-103	176	4460	-12.01	0.17	8.12
148	SLD 11	-91	-165	4450	27.52	0.23	-8.01
148	SLD 12	-92	-145	4449	27.44	0.24	-7.19
148	SLD 13	-324	48	4636	2.54	-1.09	2.1
148	SLD 14	-324	68	4634	2.47	-1.08	2.91
148	SLD 15	-320	-48	4632	14.38	-1.07	-2.49
148	SLD 16	-321	-28	4631	14.3	-1.07	-1.69
148	SLV 1	726	77	3806	-8.46	4.87	3.97
148	SLV 2	725	123	3804	-8.62	4.89	5.81



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
148	SLV 3	734	-148	3798	19.23	4.92	-6.82
148	SLV 4	733	-102	3796	19.06	4.93	-4.97
148	SLV 5	206	350	4220	-39.24	1.91	16.86
148	SLV 6	204	398	4217	-39.42	1.93	18.78
148	SLV 7	232	-400	4194	53.05	2.06	-19.09
148	SLV 8	231	-353	4191	52.88	2.08	-17.18
148	SLV 9	-233	359	4567	-37.94	-0.58	17.16
148	SLV 10	-234	407	4564	-38.12	-0.56	19.07
148	SLV 11	-206	-391	4541	54.35	-0.43	-18.79
148	SLV 12	-207	-343	4538	54.18	-0.41	-16.88
148	SLV 13	-734	108	4962	-4.13	-3.43	4.95
148	SLV 14	-736	154	4959	-4.3	-3.42	6.8
148	SLV 15	-726	-117	4954	23.56	-3.39	-5.83
148	SLV 16	-728	-71	4952	23.39	-3.37	-3.99
148	CRTFP Ux+	0	0	0	0	0	0
148	CRTFP Ux-	0	0	0	0	0	0
148	CRTFP Uy+	0	0	0	0	0	0
148	CRTFP Uy-	0	0	0	0	0	0
149	SLU 1	0	3	3987	6.62	0.55	0.05
149	SLU 2	0	3	3987	6.62	0.55	0.05
149	SLU 3	0	3	3987	6.62	0.55	0.05
149	SLU 4	0	3	3987	6.62	0.55	0.05
149	SLU 5	0	3	3987	6.62	0.55	0.05
149	SLU 6	0	3	3987	6.62	0.55	0.05
149	SLU 7	0	3	3987	6.62	0.55	0.05
149	SLU 8	0	3	3987	6.62	0.55	0.05
149	SLU 9	0	3	3987	6.62	0.55	0.05
149	SLU 10	-1	4	4815	7.24	0.6	0.05
149	SLU 11	-1	4	4815	7.24	0.6	0.05
149	SLU 12	-1	4	4815	7.24	0.6	0.05
149	SLU 13	-1	4	4815	7.24	0.6	0.05
149	SLU 14	-1	4	4815	7.24	0.6	0.05
149	SLU 15	-1	4	4815	7.24	0.6	0.05
149	SLU 16	-1	4	4815	7.24	0.6	0.05
149	SLU 17	-1	4	4815	7.24	0.6	0.05
149	SLU 18	-1	4	5170	7.51	0.63	0.05
149	SLU 19	-1	4	5170	7.51	0.63	0.05
149	SLU 20	-1	4	5170	7.51	0.63	0.05
149	SLU 21	-1	4	5170	7.51	0.63	0.05
149	SLU 22	0	3	4600	7.19	0.59	0.05
149	SLU 23	0	3	4600	7.19	0.59	0.05
149	SLU 24	0	3	4600	7.19	0.59	0.05
149	SLU 25	0	3	4600	7.19	0.59	0.05
149	SLU 26	0	3	4600	7.19	0.59	0.05
149	SLU 27	0	3	4600	7.19	0.59	0.05
149	SLU 28	0	3	4600	7.19	0.59	0.05
149	SLU 29	0	3	4600	7.19	0.59	0.05
149	SLU 30	0	3	4600	7.19	0.59	0.05
149	SLU 31	-1	4	5429	7.81	0.65	0.05
149	SLU 32	-1	4	5429	7.81	0.65	0.05
149	SLU 33	-1	4	5429	7.81	0.65	0.05
149	SLU 34	-1	4	5429	7.81	0.65	0.05
149	SLU 35	-1	4	5429	7.81	0.65	0.05
149	SLU 36	-1	4	5429	7.81	0.65	0.05
149	SLU 37	-1	4	5429	7.81	0.65	0.05
149	SLU 38	-1	4	5429	7.81	0.65	0.05
149	SLU 39	-1	5	5784	8.08	0.67	0.05
149	SLU 40	-1	5	5784	8.08	0.67	0.05
149	SLU 41	-1	5	5784	8.08	0.67	0.05
149	SLU 42	-1	5	5784	8.08	0.67	0.05
149	SLU 43	0	3	4972	8.41	0.69	0.06
149	SLU 44	0	3	4972	8.41	0.69	0.06
149	SLU 45	0	3	4972	8.41	0.69	0.06
149	SLU 46	0	3	4972	8.41	0.69	0.06
149	SLU 47	0	3	4972	8.41	0.69	0.06
149	SLU 48	0	3	4972	8.41	0.69	0.06
149	SLU 49	0	3	4972	8.41	0.69	0.06
149	SLU 50	0	3	4972	8.41	0.69	0.06
149	SLU 51	0	3	4972	8.41	0.69	0.06
149	SLU 52	0	4	5801	9.03	0.75	0.06
149	SLU 53	0	4	5801	9.03	0.75	0.06
149	SLU 54	0	4	5801	9.03	0.75	0.06
149	SLU 55	0	4	5801	9.03	0.75	0.06
149	SLU 56	0	4	5801	9.03	0.75	0.06
149	SLU 57	0	4	5801	9.03	0.75	0.06
149	SLU 58	0	4	5801	9.03	0.75	0.06
149	SLU 59	0	4	5801	9.03	0.75	0.06
149	SLU 60	-1	5	6156	9.3	0.78	0.06
149	SLU 61	-1	5	6156	9.3	0.78	0.06
149	SLU 62	-1	5	6156	9.3	0.78	0.06
149	SLU 63	-1	5	6156	9.3	0.78	0.06
149	SLU 64	0	4	5586	8.98	0.74	0.07
149	SLU 65	0	4	5586	8.98	0.74	0.07
149	SLU 66	0	4	5586	8.98	0.74	0.07
149	SLU 67	0	4	5586	8.98	0.74	0.07
149	SLU 68	0	4	5586	8.98	0.74	0.07
149	SLU 69	0	4	5586	8.98	0.74	0.07
149	SLU 70	0	4	5586	8.98	0.74	0.07
149	SLU 71	0	4	5586	8.98	0.74	0.07
149	SLU 72	0	4	5586	8.98	0.74	0.07



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
149	SLU 73	-1	5	6414	9.6	0.8	0.07
149	SLU 74	-1	5	6414	9.6	0.8	0.07
149	SLU 75	-1	5	6414	9.6	0.8	0.07
149	SLU 76	-1	5	6414	9.6	0.8	0.07
149	SLU 77	-1	5	6414	9.6	0.8	0.07
149	SLU 78	-1	5	6414	9.6	0.8	0.07
149	SLU 79	-1	5	6414	9.6	0.8	0.07
149	SLU 80	-1	5	6414	9.6	0.8	0.07
149	SLU 81	-1	5	6769	9.87	0.82	0.07
149	SLU 82	-1	5	6769	9.87	0.82	0.07
149	SLU 83	-1	5	6769	9.87	0.82	0.07
149	SLU 84	-1	5	6769	9.87	0.82	0.07
149	SLE RA 1	0	3	4162	6.78	0.56	0.05
149	SLE RA 2	0	3	4162	6.78	0.56	0.05
149	SLE RA 3	0	3	4162	6.78	0.56	0.05
149	SLE RA 4	0	3	4162	6.78	0.56	0.05
149	SLE RA 5	0	3	4162	6.78	0.56	0.05
149	SLE RA 6	0	3	4162	6.78	0.56	0.05
149	SLE RA 7	0	3	4162	6.78	0.56	0.05
149	SLE RA 8	0	3	4162	6.78	0.56	0.05
149	SLE RA 9	0	3	4162	6.78	0.56	0.05
149	SLE RA 10	0	3	4714	7.2	0.6	0.05
149	SLE RA 11	0	3	4714	7.2	0.6	0.05
149	SLE RA 12	0	3	4714	7.2	0.6	0.05
149	SLE RA 13	0	3	4714	7.2	0.6	0.05
149	SLE RA 14	0	3	4714	7.2	0.6	0.05
149	SLE RA 15	0	3	4714	7.2	0.6	0.05
149	SLE RA 16	0	3	4714	7.2	0.6	0.05
149	SLE RA 17	0	3	4714	7.2	0.6	0.05
149	SLE RA 18	-1	4	4951	7.38	0.61	0.05
149	SLE RA 19	-1	4	4951	7.38	0.61	0.05
149	SLE RA 20	-1	4	4951	7.38	0.61	0.05
149	SLE RA 21	-1	4	4951	7.38	0.61	0.05
149	SLE FR 1	0	3	4162	6.78	0.56	0.05
149	SLE FR 2	0	3	4162	6.78	0.56	0.05
149	SLE FR 3	0	3	4162	6.78	0.56	0.05
149	SLE FR 4	0	3	4399	6.96	0.57	0.05
149	SLE FR 5	0	3	4399	6.96	0.57	0.05
149	SLE FR 6	0	3	4556	7.08	0.59	0.05
149	SLE QP 1	0	3	4162	6.78	0.56	0.05
149	SLE QP 2	0	3	4399	6.96	0.57	0.05
149	SLD 1	320	26	4201	0.2	2.36	1.36
149	SLD 2	320	42	4200	0.13	2.37	2.12
149	SLD 3	324	-47	4198	12.07	2.38	-2.43
149	SLD 4	323	-31	4197	12.01	2.39	-1.67
149	SLD 5	91	116	4344	-13.05	1.08	5.91
149	SLD 6	91	132	4343	-13.12	1.09	6.69
149	SLD 7	102	-129	4335	26.52	1.14	-6.71
149	SLD 8	102	-113	4334	26.46	1.15	-5.93
149	SLD 9	-102	119	4464	-12.54	0	6.03
149	SLD 10	-103	136	4463	-12.6	0.01	6.81
149	SLD 11	-91	-126	4455	27.04	0.06	-6.59
149	SLD 12	-91	-110	4454	26.97	0.07	-5.81
149	SLD 13	-323	37	4600	1.91	-1.24	1.77
149	SLD 14	-324	53	4599	1.85	-1.23	2.53
149	SLD 15	-320	-36	4598	13.79	-1.22	-2.02
149	SLD 16	-320	-20	4597	13.72	-1.22	-1.26
149	SLV 1	727	59	3949	-8.8	4.64	3.15
149	SLV 2	726	95	3947	-8.95	4.66	4.89
149	SLV 3	735	-114	3943	18.97	4.68	-5.74
149	SLV 4	734	-77	3941	18.83	4.7	-4
149	SLV 5	206	268	4275	-39.84	1.72	13.82
149	SLV 6	205	305	4272	-39.99	1.74	15.63
149	SLV 7	233	-307	4253	52.74	1.87	-15.81
149	SLV 8	232	-269	4251	52.59	1.88	-14
149	SLV 9	-232	275	4547	-38.67	-0.73	14.11
149	SLV 10	-233	313	4544	-38.82	-0.72	15.91
149	SLV 11	-206	-299	4525	53.91	-0.59	-15.53
149	SLV 12	-207	-261	4523	53.76	-0.57	-13.72
149	SLV 13	-734	84	4857	-4.91	-3.55	4.1
149	SLV 14	-735	120	4854	-5.05	-3.53	5.84
149	SLV 15	-726	-89	4850	22.87	-3.51	-4.79
149	SLV 16	-727	-52	4848	22.72	-3.49	-3.05
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	1	2	4002	6.17	0.45	0.08
150	SLU 2	1	2	4002	6.17	0.45	0.08
150	SLU 3	1	2	4002	6.17	0.45	0.08
150	SLU 4	1	2	4002	6.17	0.45	0.08
150	SLU 5	1	2	4002	6.17	0.45	0.08
150	SLU 6	1	2	4002	6.17	0.45	0.08
150	SLU 7	1	2	4002	6.17	0.45	0.08
150	SLU 8	1	2	4002	6.17	0.45	0.08
150	SLU 9	1	2	4002	6.17	0.45	0.08
150	SLU 10	0	3	4831	6.7	0.47	0.09
150	SLU 11	0	3	4831	6.7	0.47	0.09
150	SLU 12	0	3	4831	6.7	0.47	0.09
150	SLU 13	0	3	4831	6.7	0.47	0.09



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
150	SLU 14	0	3	4831	6.7	0.47	0.09
150	SLU 15	0	3	4831	6.7	0.47	0.09
150	SLU 16	0	3	4831	6.7	0.47	0.09
150	SLU 17	0	3	4831	6.7	0.47	0.09
150	SLU 18	0	3	5187	6.92	0.48	0.1
150	SLU 19	0	3	5187	6.92	0.48	0.1
150	SLU 20	0	3	5187	6.92	0.48	0.1
150	SLU 21	0	3	5187	6.92	0.48	0.1
150	SLU 22	1	3	4616	6.67	0.47	0.09
150	SLU 23	1	3	4616	6.67	0.47	0.09
150	SLU 24	1	3	4616	6.67	0.47	0.09
150	SLU 25	1	3	4616	6.67	0.47	0.09
150	SLU 26	1	3	4616	6.67	0.47	0.09
150	SLU 27	1	3	4616	6.67	0.47	0.09
150	SLU 28	1	3	4616	6.67	0.47	0.09
150	SLU 29	1	3	4616	6.67	0.47	0.09
150	SLU 30	1	3	4616	6.67	0.47	0.09
150	SLU 31	0	4	5445	7.2	0.49	0.1
150	SLU 32	0	4	5445	7.2	0.49	0.1
150	SLU 33	0	4	5445	7.2	0.49	0.1
150	SLU 34	0	4	5445	7.2	0.49	0.1
150	SLU 35	0	4	5445	7.2	0.49	0.1
150	SLU 36	0	4	5445	7.2	0.49	0.1
150	SLU 37	0	4	5445	7.2	0.49	0.1
150	SLU 38	0	4	5445	7.2	0.49	0.1
150	SLU 39	0	4	5801	7.42	0.5	0.1
150	SLU 40	0	4	5801	7.42	0.5	0.1
150	SLU 41	0	4	5801	7.42	0.5	0.1
150	SLU 42	0	4	5801	7.42	0.5	0.1
150	SLU 43	1	3	4992	7.85	0.58	0.11
150	SLU 44	1	3	4992	7.85	0.58	0.11
150	SLU 45	1	3	4992	7.85	0.58	0.11
150	SLU 46	1	3	4992	7.85	0.58	0.11
150	SLU 47	1	3	4992	7.85	0.58	0.11
150	SLU 48	1	3	4992	7.85	0.58	0.11
150	SLU 49	1	3	4992	7.85	0.58	0.11
150	SLU 50	1	3	4992	7.85	0.58	0.11
150	SLU 51	1	3	4992	7.85	0.58	0.11
150	SLU 52	1	4	5821	8.38	0.6	0.11
150	SLU 53	1	4	5821	8.38	0.6	0.11
150	SLU 54	1	4	5821	8.38	0.6	0.11
150	SLU 55	1	4	5821	8.38	0.6	0.11
150	SLU 56	1	4	5821	8.38	0.6	0.11
150	SLU 57	1	4	5821	8.38	0.6	0.11
150	SLU 58	1	4	5821	8.38	0.6	0.11
150	SLU 59	1	4	5821	8.38	0.6	0.11
150	SLU 60	0	4	6177	8.6	0.61	0.12
150	SLU 61	0	4	6177	8.6	0.61	0.12
150	SLU 62	0	4	6177	8.6	0.61	0.12
150	SLU 63	0	4	6177	8.6	0.61	0.12
150	SLU 64	1	3	5606	8.35	0.6	0.11
150	SLU 65	1	3	5606	8.35	0.6	0.11
150	SLU 66	1	3	5606	8.35	0.6	0.11
150	SLU 67	1	3	5606	8.35	0.6	0.11
150	SLU 68	1	3	5606	8.35	0.6	0.11
150	SLU 69	1	3	5606	8.35	0.6	0.11
150	SLU 70	1	3	5606	8.35	0.6	0.11
150	SLU 71	1	3	5606	8.35	0.6	0.11
150	SLU 72	1	3	5606	8.35	0.6	0.11
150	SLU 73	0	4	6435	8.88	0.62	0.12
150	SLU 74	0	4	6435	8.88	0.62	0.12
150	SLU 75	0	4	6435	8.88	0.62	0.12
150	SLU 76	0	4	6435	8.88	0.62	0.12
150	SLU 77	0	4	6435	8.88	0.62	0.12
150	SLU 78	0	4	6435	8.88	0.62	0.12
150	SLU 79	0	4	6435	8.88	0.62	0.12
150	SLU 80	0	4	6435	8.88	0.62	0.12
150	SLU 81	0	5	6791	9.1	0.63	0.13
150	SLU 82	0	5	6791	9.1	0.63	0.13
150	SLU 83	0	5	6791	9.1	0.63	0.13
150	SLU 84	0	5	6791	9.1	0.63	0.13
150	SLE RA 1	1	2	4177	6.31	0.46	0.09
150	SLE RA 2	1	2	4177	6.31	0.46	0.09
150	SLE RA 3	1	2	4177	6.31	0.46	0.09
150	SLE RA 4	1	2	4177	6.31	0.46	0.09
150	SLE RA 5	1	2	4177	6.31	0.46	0.09
150	SLE RA 6	1	2	4177	6.31	0.46	0.09
150	SLE RA 7	1	2	4177	6.31	0.46	0.09
150	SLE RA 8	1	2	4177	6.31	0.46	0.09
150	SLE RA 9	1	2	4177	6.31	0.46	0.09
150	SLE RA 10	0	3	4730	6.67	0.47	0.09
150	SLE RA 11	0	3	4730	6.67	0.47	0.09
150	SLE RA 12	0	3	4730	6.67	0.47	0.09
150	SLE RA 13	0	3	4730	6.67	0.47	0.09
150	SLE RA 14	0	3	4730	6.67	0.47	0.09
150	SLE RA 15	0	3	4730	6.67	0.47	0.09
150	SLE RA 16	0	3	4730	6.67	0.47	0.09
150	SLE RA 17	0	3	4730	6.67	0.47	0.09
150	SLE RA 18	0	3	4967	6.82	0.48	0.09
150	SLE RA 19	0	3	4967	6.82	0.48	0.09



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
150	SLE RA 20	0	3	4967	6.82	0.48	0.09
150	SLE RA 21	0	3	4967	6.82	0.48	0.09
150	SLE FR 1	1	2	4177	6.31	0.46	0.09
150	SLE FR 2	1	2	4177	6.31	0.46	0.09
150	SLE FR 3	1	2	4177	6.31	0.46	0.09
150	SLE FR 4	1	3	4414	6.47	0.46	0.09
150	SLE FR 5	1	3	4414	6.47	0.46	0.09
150	SLE FR 6	0	3	4572	6.57	0.47	0.09
150	SLE QP 1	1	2	4177	6.31	0.46	0.09
150	SLE QP 2	1	3	4414	6.47	0.46	0.09
150	SLD 1	321	20	4270	-0.23	2.23	0.98
150	SLD 2	321	32	4269	-0.28	2.24	1.71
150	SLD 3	324	-35	4268	11.68	2.25	-1.93
150	SLD 4	324	-23	4267	11.63	2.25	-1.2
150	SLD 5	92	88	4375	-13.6	0.96	4.5
150	SLD 6	91	100	4374	-13.65	0.97	5.25
150	SLD 7	103	-98	4367	26.12	1.02	-5.19
150	SLD 8	102	-85	4366	26.07	1.03	-4.44
150	SLD 9	-101	91	4462	-13.14	-0.1	4.62
150	SLD 10	-102	103	4461	-13.19	-0.09	5.36
150	SLD 11	-90	-95	4455	26.58	-0.05	-5.07
150	SLD 12	-91	-83	4454	26.53	-0.04	-4.32
150	SLD 13	-323	29	4562	1.3	-1.33	1.37
150	SLD 14	-323	41	4561	1.25	-1.32	2.1
150	SLD 15	-319	-27	4559	13.21	-1.31	-1.53
150	SLD 16	-320	-15	4559	13.16	-1.3	-0.8
150	SLV 1	728	45	4087	-9.16	4.47	2.22
150	SLV 2	727	72	4085	-9.27	4.49	3.88
150	SLV 3	736	-86	4081	18.73	4.51	-4.61
150	SLV 4	735	-58	4080	18.61	4.53	-2.94
150	SLV 5	207	203	4325	-40.47	1.6	10.46
150	SLV 6	206	231	4323	-40.59	1.62	12.19
150	SLV 7	233	-232	4307	52.48	1.73	-12.29
150	SLV 8	232	-203	4305	52.36	1.75	-10.56
150	SLV 9	-231	209	4523	-39.43	-0.82	10.73
150	SLV 10	-232	237	4521	-39.55	-0.8	12.46
150	SLV 11	-205	-226	4506	53.52	-0.69	-12.02
150	SLV 12	-206	-197	4504	53.4	-0.67	-10.29
150	SLV 13	-734	64	4749	-5.68	-3.6	3.12
150	SLV 14	-735	91	4747	-5.8	-3.58	4.78
150	SLV 15	-726	-67	4744	22.2	-3.56	-3.71
150	SLV 16	-727	-39	4742	22.09	-3.54	-2.04
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	1	2	4015	5.74	0.41	0.1
151	SLU 2	1	2	4015	5.74	0.41	0.1
151	SLU 3	1	2	4015	5.74	0.41	0.1
151	SLU 4	1	2	4015	5.74	0.41	0.1
151	SLU 5	1	2	4015	5.74	0.41	0.1
151	SLU 6	1	2	4015	5.74	0.41	0.1
151	SLU 7	1	2	4015	5.74	0.41	0.1
151	SLU 8	1	2	4015	5.74	0.41	0.1
151	SLU 9	1	2	4015	5.74	0.41	0.1
151	SLU 10	1	3	4844	6.16	0.41	0.11
151	SLU 11	1	3	4844	6.16	0.41	0.11
151	SLU 12	1	3	4844	6.16	0.41	0.11
151	SLU 13	1	3	4844	6.16	0.41	0.11
151	SLU 14	1	3	4844	6.16	0.41	0.11
151	SLU 15	1	3	4844	6.16	0.41	0.11
151	SLU 16	1	3	4844	6.16	0.41	0.11
151	SLU 17	1	3	4844	6.16	0.41	0.11
151	SLU 18	1	3	5200	6.35	0.41	0.12
151	SLU 19	1	3	5200	6.35	0.41	0.12
151	SLU 20	1	3	5200	6.35	0.41	0.12
151	SLU 21	1	3	5200	6.35	0.41	0.12
151	SLU 22	1	2	4629	6.17	0.41	0.11
151	SLU 23	1	2	4629	6.17	0.41	0.11
151	SLU 24	1	2	4629	6.17	0.41	0.11
151	SLU 25	1	2	4629	6.17	0.41	0.11
151	SLU 26	1	2	4629	6.17	0.41	0.11
151	SLU 27	1	2	4629	6.17	0.41	0.11
151	SLU 28	1	2	4629	6.17	0.41	0.11
151	SLU 29	1	2	4629	6.17	0.41	0.11
151	SLU 30	1	2	4629	6.17	0.41	0.11
151	SLU 31	1	3	5459	6.59	0.42	0.12
151	SLU 32	1	3	5459	6.59	0.42	0.12
151	SLU 33	1	3	5459	6.59	0.42	0.12
151	SLU 34	1	3	5459	6.59	0.42	0.12
151	SLU 35	1	3	5459	6.59	0.42	0.12
151	SLU 36	1	3	5459	6.59	0.42	0.12
151	SLU 37	1	3	5459	6.59	0.42	0.12
151	SLU 38	1	3	5459	6.59	0.42	0.12
151	SLU 39	1	3	5815	6.78	0.42	0.13
151	SLU 40	1	3	5815	6.78	0.42	0.13
151	SLU 41	1	3	5815	6.78	0.42	0.13
151	SLU 42	1	3	5815	6.78	0.42	0.13
151	SLU 43	1	2	5008	7.31	0.53	0.12
151	SLU 44	1	2	5008	7.31	0.53	0.12



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
151	SLU 45	1	2	5008	7.31	0.53	0.12
151	SLU 46	1	2	5008	7.31	0.53	0.12
151	SLU 47	1	2	5008	7.31	0.53	0.12
151	SLU 48	1	2	5008	7.31	0.53	0.12
151	SLU 49	1	2	5008	7.31	0.53	0.12
151	SLU 50	1	2	5008	7.31	0.53	0.12
151	SLU 51	1	2	5008	7.31	0.53	0.12
151	SLU 52	1	3	5838	7.74	0.53	0.14
151	SLU 53	1	3	5838	7.74	0.53	0.14
151	SLU 54	1	3	5838	7.74	0.53	0.14
151	SLU 55	1	3	5838	7.74	0.53	0.14
151	SLU 56	1	3	5838	7.74	0.53	0.14
151	SLU 57	1	3	5838	7.74	0.53	0.14
151	SLU 58	1	3	5838	7.74	0.53	0.14
151	SLU 59	1	3	5838	7.74	0.53	0.14
151	SLU 60	1	3	6194	7.92	0.53	0.14
151	SLU 61	1	3	6194	7.92	0.53	0.14
151	SLU 62	1	3	6194	7.92	0.53	0.14
151	SLU 63	1	3	6194	7.92	0.53	0.14
151	SLU 64	1	3	5623	7.74	0.54	0.14
151	SLU 65	1	3	5623	7.74	0.54	0.14
151	SLU 66	1	3	5623	7.74	0.54	0.14
151	SLU 67	1	3	5623	7.74	0.54	0.14
151	SLU 68	1	3	5623	7.74	0.54	0.14
151	SLU 69	1	3	5623	7.74	0.54	0.14
151	SLU 70	1	3	5623	7.74	0.54	0.14
151	SLU 71	1	3	5623	7.74	0.54	0.14
151	SLU 72	1	3	5623	7.74	0.54	0.14
151	SLU 73	1	3	6453	8.17	0.54	0.15
151	SLU 74	1	3	6453	8.17	0.54	0.15
151	SLU 75	1	3	6453	8.17	0.54	0.15
151	SLU 76	1	3	6453	8.17	0.54	0.15
151	SLU 77	1	3	6453	8.17	0.54	0.15
151	SLU 78	1	3	6453	8.17	0.54	0.15
151	SLU 79	1	3	6453	8.17	0.54	0.15
151	SLU 80	1	3	6453	8.17	0.54	0.15
151	SLU 81	1	4	6808	8.35	0.54	0.16
151	SLU 82	1	4	6808	8.35	0.54	0.16
151	SLU 83	1	4	6808	8.35	0.54	0.16
151	SLU 84	1	4	6808	8.35	0.54	0.16
151	SLE RA 1	1	2	4190	5.86	0.41	0.1
151	SLE RA 2	1	2	4190	5.86	0.41	0.1
151	SLE RA 3	1	2	4190	5.86	0.41	0.1
151	SLE RA 4	1	2	4190	5.86	0.41	0.1
151	SLE RA 5	1	2	4190	5.86	0.41	0.1
151	SLE RA 6	1	2	4190	5.86	0.41	0.1
151	SLE RA 7	1	2	4190	5.86	0.41	0.1
151	SLE RA 8	1	2	4190	5.86	0.41	0.1
151	SLE RA 9	1	2	4190	5.86	0.41	0.1
151	SLE RA 10	1	2	4743	6.14	0.41	0.11
151	SLE RA 11	1	2	4743	6.14	0.41	0.11
151	SLE RA 12	1	2	4743	6.14	0.41	0.11
151	SLE RA 13	1	2	4743	6.14	0.41	0.11
151	SLE RA 14	1	2	4743	6.14	0.41	0.11
151	SLE RA 15	1	2	4743	6.14	0.41	0.11
151	SLE RA 16	1	2	4743	6.14	0.41	0.11
151	SLE RA 17	1	2	4743	6.14	0.41	0.11
151	SLE RA 18	1	3	4980	6.27	0.41	0.12
151	SLE RA 19	1	3	4980	6.27	0.41	0.12
151	SLE RA 20	1	3	4980	6.27	0.41	0.12
151	SLE RA 21	1	3	4980	6.27	0.41	0.12
151	SLE FR 1	1	2	4190	5.86	0.41	0.1
151	SLE FR 2	1	2	4190	5.86	0.41	0.1
151	SLE FR 3	1	2	4190	5.86	0.41	0.1
151	SLE FR 4	1	2	4427	5.98	0.41	0.11
151	SLE FR 5	1	2	4427	5.98	0.41	0.11
151	SLE FR 6	1	2	4585	6.06	0.41	0.11
151	SLE QP 1	1	2	4190	5.86	0.41	0.1
151	SLE QP 2	1	2	4427	5.98	0.41	0.11
151	SLD 1	322	16	4336	-0.66	2.16	0.54
151	SLD 2	321	25	4335	-0.7	2.16	1.26
151	SLD 3	325	-26	4334	11.31	2.17	-1.42
151	SLD 4	324	-18	4334	11.28	2.18	-0.71
151	SLD 5	92	68	4403	-14.16	0.91	2.96
151	SLD 6	92	77	4402	-14.2	0.92	3.69
151	SLD 7	103	-74	4397	25.75	0.96	-3.59
151	SLD 8	103	-66	4396	25.71	0.97	-2.86
151	SLD 9	-101	70	4458	-13.75	-0.14	3.07
151	SLD 10	-101	78	4458	-13.79	-0.14	3.8
151	SLD 11	-90	-72	4452	26.16	-0.09	-3.48
151	SLD 12	-90	-64	4452	26.12	-0.08	-2.75
151	SLD 13	-322	22	4521	0.69	-1.36	0.92
151	SLD 14	-323	31	4521	0.65	-1.35	1.63
151	SLD 15	-319	-20	4519	12.66	-1.34	-1.05
151	SLD 16	-319	-12	4519	12.62	-1.33	-0.33
151	SLV 1	728	36	4220	-9.51	4.37	1.17
151	SLV 2	727	55	4219	-9.6	4.39	2.8
151	SLV 3	736	-64	4215	18.5	4.41	-3.44
151	SLV 4	735	-45	4214	18.42	4.43	-1.81
151	SLV 5	208	157	4372	-41.13	1.54	6.82



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
151	SLV 6	207	176	4371	-41.22	1.56	8.51
151	SLV 7	234	-176	4358	52.26	1.66	-8.55
151	SLV 8	233	-157	4357	52.17	1.68	-6.86
151	SLV 9	-231	161	4498	-40.21	-0.85	7.07
151	SLV 10	-232	180	4497	-40.3	-0.83	8.76
151	SLV 11	-205	-172	4484	53.18	-0.73	-8.3
151	SLV 12	-206	-153	4483	53.09	-0.71	-6.6
151	SLV 13	-733	50	4640	-6.46	-3.6	2.02
151	SLV 14	-734	68	4639	-6.54	-3.58	3.65
151	SLV 15	-725	-50	4636	21.56	-3.57	-2.59
151	SLV 16	-726	-32	4635	21.47	-3.55	-0.96
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	1	1	3767	5	-48.73	0.1
152	SLU 2	1	1	3767	5	-48.73	0.1
152	SLU 3	1	1	3767	5	-48.73	0.1
152	SLU 4	1	1	3767	5	-48.73	0.1
152	SLU 5	1	1	3767	5	-48.73	0.1
152	SLU 6	1	1	3767	5	-48.73	0.1
152	SLU 7	1	1	3767	5	-48.73	0.1
152	SLU 8	1	1	3767	5	-48.73	0.1
152	SLU 9	1	1	3767	5	-48.73	0.1
152	SLU 10	2	2	4543	5.31	-58.83	0.13
152	SLU 11	2	2	4543	5.31	-58.83	0.13
152	SLU 12	2	2	4543	5.31	-58.83	0.13
152	SLU 13	2	2	4543	5.31	-58.83	0.13
152	SLU 14	2	2	4543	5.31	-58.83	0.13
152	SLU 15	2	2	4543	5.31	-58.83	0.13
152	SLU 16	2	2	4543	5.31	-58.83	0.13
152	SLU 17	2	2	4543	5.31	-58.83	0.13
152	SLU 18	2	2	4876	5.45	-63.16	0.14
152	SLU 19	2	2	4876	5.45	-63.16	0.14
152	SLU 20	2	2	4876	5.45	-63.16	0.14
152	SLU 21	2	2	4876	5.45	-63.16	0.14
152	SLU 22	2	2	4342	5.34	-56.21	0.12
152	SLU 23	2	2	4342	5.34	-56.21	0.12
152	SLU 24	2	2	4342	5.34	-56.21	0.12
152	SLU 25	2	2	4342	5.34	-56.21	0.12
152	SLU 26	2	2	4342	5.34	-56.21	0.12
152	SLU 27	2	2	4342	5.34	-56.21	0.12
152	SLU 28	2	2	4342	5.34	-56.21	0.12
152	SLU 29	2	2	4342	5.34	-56.21	0.12
152	SLU 30	2	2	4342	5.34	-56.21	0.12
152	SLU 31	2	2	5119	5.65	-66.31	0.14
152	SLU 32	2	2	5119	5.65	-66.31	0.14
152	SLU 33	2	2	5119	5.65	-66.31	0.14
152	SLU 34	2	2	5119	5.65	-66.31	0.14
152	SLU 35	2	2	5119	5.65	-66.31	0.14
152	SLU 36	2	2	5119	5.65	-66.31	0.14
152	SLU 37	2	2	5119	5.65	-66.31	0.14
152	SLU 38	2	2	5119	5.65	-66.31	0.14
152	SLU 39	2	2	5451	5.79	-70.64	0.15
152	SLU 40	2	2	5451	5.79	-70.64	0.15
152	SLU 41	2	2	5451	5.79	-70.64	0.15
152	SLU 42	2	2	5451	5.79	-70.64	0.15
152	SLU 43	2	1	4700	6.38	-60.78	0.13
152	SLU 44	2	1	4700	6.38	-60.78	0.13
152	SLU 45	2	1	4700	6.38	-60.78	0.13
152	SLU 46	2	1	4700	6.38	-60.78	0.13
152	SLU 47	2	1	4700	6.38	-60.78	0.13
152	SLU 48	2	1	4700	6.38	-60.78	0.13
152	SLU 49	2	1	4700	6.38	-60.78	0.13
152	SLU 50	2	1	4700	6.38	-60.78	0.13
152	SLU 51	2	1	4700	6.38	-60.78	0.13
152	SLU 52	2	2	5476	6.7	-70.88	0.15
152	SLU 53	2	2	5476	6.7	-70.88	0.15
152	SLU 54	2	2	5476	6.7	-70.88	0.15
152	SLU 55	2	2	5476	6.7	-70.88	0.15
152	SLU 56	2	2	5476	6.7	-70.88	0.15
152	SLU 57	2	2	5476	6.7	-70.88	0.15
152	SLU 58	2	2	5476	6.7	-70.88	0.15
152	SLU 59	2	2	5476	6.7	-70.88	0.15
152	SLU 60	2	2	5809	6.83	-75.21	0.16
152	SLU 61	2	2	5809	6.83	-75.21	0.16
152	SLU 62	2	2	5809	6.83	-75.21	0.16
152	SLU 63	2	2	5809	6.83	-75.21	0.16
152	SLU 64	2	2	5275	6.72	-68.26	0.14
152	SLU 65	2	2	5275	6.72	-68.26	0.14
152	SLU 66	2	2	5275	6.72	-68.26	0.14
152	SLU 67	2	2	5275	6.72	-68.26	0.14
152	SLU 68	2	2	5275	6.72	-68.26	0.14
152	SLU 69	2	2	5275	6.72	-68.26	0.14
152	SLU 70	2	2	5275	6.72	-68.26	0.14
152	SLU 71	2	2	5275	6.72	-68.26	0.14
152	SLU 72	2	2	5275	6.72	-68.26	0.14
152	SLU 73	2	2	6052	7.04	-78.36	0.17
152	SLU 74	2	2	6052	7.04	-78.36	0.17
152	SLU 75	2	2	6052	7.04	-78.36	0.17



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
152	SLU 76	2	2	6052	7.04	-78.36	0.17
152	SLU 77	2	2	6052	7.04	-78.36	0.17
152	SLU 78	2	2	6052	7.04	-78.36	0.17
152	SLU 79	2	2	6052	7.04	-78.36	0.17
152	SLU 80	2	2	6052	7.04	-78.36	0.17
152	SLU 81	2	3	6384	7.17	-82.69	0.18
152	SLU 82	2	3	6384	7.17	-82.69	0.18
152	SLU 83	2	3	6384	7.17	-82.69	0.18
152	SLU 84	2	3	6384	7.17	-82.69	0.18
152	SLE RA 1	1	1	3931	5.1	-50.86	0.11
152	SLE RA 2	1	1	3931	5.1	-50.86	0.11
152	SLE RA 3	1	1	3931	5.1	-50.86	0.11
152	SLE RA 4	1	1	3931	5.1	-50.86	0.11
152	SLE RA 5	1	1	3931	5.1	-50.86	0.11
152	SLE RA 6	1	1	3931	5.1	-50.86	0.11
152	SLE RA 7	1	1	3931	5.1	-50.86	0.11
152	SLE RA 8	1	1	3931	5.1	-50.86	0.11
152	SLE RA 9	1	1	3931	5.1	-50.86	0.11
152	SLE RA 10	2	2	4449	5.31	-57.6	0.12
152	SLE RA 11	2	2	4449	5.31	-57.6	0.12
152	SLE RA 12	2	2	4449	5.31	-57.6	0.12
152	SLE RA 13	2	2	4449	5.31	-57.6	0.12
152	SLE RA 14	2	2	4449	5.31	-57.6	0.12
152	SLE RA 15	2	2	4449	5.31	-57.6	0.12
152	SLE RA 16	2	2	4449	5.31	-57.6	0.12
152	SLE RA 17	2	2	4449	5.31	-57.6	0.12
152	SLE RA 18	2	2	4671	5.4	-60.49	0.13
152	SLE RA 19	2	2	4671	5.4	-60.49	0.13
152	SLE RA 20	2	2	4671	5.4	-60.49	0.13
152	SLE RA 21	2	2	4671	5.4	-60.49	0.13
152	SLE FR 1	1	1	3931	5.1	-50.86	0.11
152	SLE FR 2	1	1	3931	5.1	-50.86	0.11
152	SLE FR 3	1	1	3931	5.1	-50.86	0.11
152	SLE FR 4	1	1	4153	5.19	-53.75	0.11
152	SLE FR 5	1	1	4153	5.19	-53.75	0.11
152	SLE FR 6	2	2	4301	5.25	-55.68	0.12
152	SLE QP 1	1	1	3931	5.1	-50.86	0.11
152	SLE QP 2	1	1	4153	5.19	-53.75	0.11
152	SLD 1	301	14	4115	-1	-51.84	0.25
152	SLD 2	301	18	4115	-1.03	-51.83	0.95
152	SLD 3	304	-19	4114	10.29	-51.81	-1.09
152	SLD 4	304	-15	4114	10.27	-51.8	-0.38
152	SLD 5	87	53	4144	-13.79	-53.22	1.92
152	SLD 6	86	58	4144	-13.82	-53.21	2.64
152	SLD 7	97	-56	4139	23.86	-53.13	-2.52
152	SLD 8	97	-52	4139	23.83	-53.12	-1.8
152	SLD 9	-94	55	4167	-13.46	-54.38	2.03
152	SLD 10	-94	59	4167	-13.49	-54.37	2.75
152	SLD 11	-83	-55	4163	24.19	-54.29	-2.41
152	SLD 12	-84	-51	4163	24.16	-54.28	-1.69
152	SLD 13	-301	18	4193	0.1	-55.7	0.61
152	SLD 14	-301	22	4193	0.08	-55.69	1.31
152	SLD 15	-298	-15	4192	11.4	-55.68	-0.73
152	SLD 16	-298	-11	4191	11.37	-55.67	-0.02
152	SLV 1	682	31	4067	-9.26	-49.4	0.45
152	SLV 2	681	41	4066	-9.31	-49.38	2.07
152	SLV 3	689	-46	4064	17.18	-49.34	-2.67
152	SLV 4	688	-36	4063	17.12	-49.32	-1.05
152	SLV 5	195	123	4133	-39.22	-52.55	4.35
152	SLV 6	194	133	4132	-39.27	-52.52	6.03
152	SLV 7	219	-133	4122	48.9	-52.34	-6.05
152	SLV 8	218	-123	4121	48.84	-52.32	-4.37
152	SLV 9	-215	126	4186	-38.46	-55.18	4.6
152	SLV 10	-216	136	4185	-38.52	-55.16	6.28
152	SLV 11	-191	-130	4175	49.65	-54.98	-5.8
152	SLV 12	-192	-120	4174	49.59	-54.95	-4.12
152	SLV 13	-685	39	4244	-6.75	-58.18	1.28
152	SLV 14	-686	49	4243	-6.8	-58.16	2.89
152	SLV 15	-678	-38	4240	19.68	-58.12	-1.84
152	SLV 16	-679	-28	4240	19.63	-58.1	-0.22
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	3	1	6939	8.64	-6.98	0.1
153	SLU 2	3	1	6939	8.64	-6.98	0.1
153	SLU 3	3	1	6939	8.64	-6.98	0.1
153	SLU 4	3	1	6939	8.64	-6.98	0.1
153	SLU 5	3	1	6939	8.64	-6.98	0.1
153	SLU 6	3	1	6939	8.64	-6.98	0.1
153	SLU 7	3	1	6939	8.64	-6.98	0.1
153	SLU 8	3	1	6939	8.64	-6.98	0.1
153	SLU 9	3	1	6939	8.64	-6.98	0.1
153	SLU 10	4	2	8366	9.5	-8.57	0.12
153	SLU 11	4	2	8366	9.5	-8.57	0.12
153	SLU 12	4	2	8366	9.5	-8.57	0.12
153	SLU 13	4	2	8366	9.5	-8.57	0.12
153	SLU 14	4	2	8366	9.5	-8.57	0.12
153	SLU 15	4	2	8366	9.5	-8.57	0.12
153	SLU 16	4	2	8366	9.5	-8.57	0.12



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
153	SLU 17	4	2	8366	9.5	-8.57	0.12
153	SLU 18	4	3	8978	9.86	-9.26	0.13
153	SLU 19	4	3	8978	9.86	-9.26	0.13
153	SLU 20	4	3	8978	9.86	-9.26	0.13
153	SLU 21	4	3	8978	9.86	-9.26	0.13
153	SLU 22	4	2	7997	9.42	-8.14	0.12
153	SLU 23	4	2	7997	9.42	-8.14	0.12
153	SLU 24	4	2	7997	9.42	-8.14	0.12
153	SLU 25	4	2	7997	9.42	-8.14	0.12
153	SLU 26	4	2	7997	9.42	-8.14	0.12
153	SLU 27	4	2	7997	9.42	-8.14	0.12
153	SLU 28	4	2	7997	9.42	-8.14	0.12
153	SLU 29	4	2	7997	9.42	-8.14	0.12
153	SLU 30	4	2	7997	9.42	-8.14	0.12
153	SLU 31	5	3	9424	10.27	-9.74	0.14
153	SLU 32	5	3	9424	10.27	-9.74	0.14
153	SLU 33	5	3	9424	10.27	-9.74	0.14
153	SLU 34	5	3	9424	10.27	-9.74	0.14
153	SLU 35	5	3	9424	10.27	-9.74	0.14
153	SLU 36	5	3	9424	10.27	-9.74	0.14
153	SLU 37	5	3	9424	10.27	-9.74	0.14
153	SLU 38	5	3	9424	10.27	-9.74	0.14
153	SLU 39	5	3	10036	10.63	-10.42	0.15
153	SLU 40	5	3	10036	10.63	-10.42	0.15
153	SLU 41	5	3	10036	10.63	-10.42	0.15
153	SLU 42	5	3	10036	10.63	-10.42	0.15
153	SLU 43	4	1	8658	10.97	-8.67	0.13
153	SLU 44	4	1	8658	10.97	-8.67	0.13
153	SLU 45	4	1	8658	10.97	-8.67	0.13
153	SLU 46	4	1	8658	10.97	-8.67	0.13
153	SLU 47	4	1	8658	10.97	-8.67	0.13
153	SLU 48	4	1	8658	10.97	-8.67	0.13
153	SLU 49	4	1	8658	10.97	-8.67	0.13
153	SLU 50	4	1	8658	10.97	-8.67	0.13
153	SLU 51	4	1	8658	10.97	-8.67	0.13
153	SLU 52	5	2	10086	11.83	-10.27	0.15
153	SLU 53	5	2	10086	11.83	-10.27	0.15
153	SLU 54	5	2	10086	11.83	-10.27	0.15
153	SLU 55	5	2	10086	11.83	-10.27	0.15
153	SLU 56	5	2	10086	11.83	-10.27	0.15
153	SLU 57	5	2	10086	11.83	-10.27	0.15
153	SLU 58	5	2	10086	11.83	-10.27	0.15
153	SLU 59	5	2	10086	11.83	-10.27	0.15
153	SLU 60	5	3	10697	12.19	-10.95	0.16
153	SLU 61	5	3	10697	12.19	-10.95	0.16
153	SLU 62	5	3	10697	12.19	-10.95	0.16
153	SLU 63	5	3	10697	12.19	-10.95	0.16
153	SLU 64	4	2	9716	11.74	-9.83	0.14
153	SLU 65	4	2	9716	11.74	-9.83	0.14
153	SLU 66	4	2	9716	11.74	-9.83	0.14
153	SLU 67	4	2	9716	11.74	-9.83	0.14
153	SLU 68	4	2	9716	11.74	-9.83	0.14
153	SLU 69	4	2	9716	11.74	-9.83	0.14
153	SLU 70	4	2	9716	11.74	-9.83	0.14
153	SLU 71	4	2	9716	11.74	-9.83	0.14
153	SLU 72	4	2	9716	11.74	-9.83	0.14
153	SLU 73	5	3	11143	12.6	-11.43	0.17
153	SLU 74	5	3	11143	12.6	-11.43	0.17
153	SLU 75	5	3	11143	12.6	-11.43	0.17
153	SLU 76	5	3	11143	12.6	-11.43	0.17
153	SLU 77	5	3	11143	12.6	-11.43	0.17
153	SLU 78	5	3	11143	12.6	-11.43	0.17
153	SLU 79	5	3	11143	12.6	-11.43	0.17
153	SLU 80	5	3	11143	12.6	-11.43	0.17
153	SLU 81	6	4	11755	12.96	-12.12	0.18
153	SLU 82	6	4	11755	12.96	-12.12	0.18
153	SLU 83	6	4	11755	12.96	-12.12	0.18
153	SLU 84	6	4	11755	12.96	-12.12	0.18
153	SLE RA 1	3	1	7241	8.86	-7.31	0.11
153	SLE RA 2	3	1	7241	8.86	-7.31	0.11
153	SLE RA 3	3	1	7241	8.86	-7.31	0.11
153	SLE RA 4	3	1	7241	8.86	-7.31	0.11
153	SLE RA 5	3	1	7241	8.86	-7.31	0.11
153	SLE RA 6	3	1	7241	8.86	-7.31	0.11
153	SLE RA 7	3	1	7241	8.86	-7.31	0.11
153	SLE RA 8	3	1	7241	8.86	-7.31	0.11
153	SLE RA 9	3	1	7241	8.86	-7.31	0.11
153	SLE RA 10	4	2	8193	9.43	-8.37	0.12
153	SLE RA 11	4	2	8193	9.43	-8.37	0.12
153	SLE RA 12	4	2	8193	9.43	-8.37	0.12
153	SLE RA 13	4	2	8193	9.43	-8.37	0.12
153	SLE RA 14	4	2	8193	9.43	-8.37	0.12
153	SLE RA 15	4	2	8193	9.43	-8.37	0.12
153	SLE RA 16	4	2	8193	9.43	-8.37	0.12
153	SLE RA 17	4	2	8193	9.43	-8.37	0.12
153	SLE RA 18	4	2	8601	9.68	-8.83	0.13
153	SLE RA 19	4	2	8601	9.68	-8.83	0.13
153	SLE RA 20	4	2	8601	9.68	-8.83	0.13
153	SLE RA 21	4	2	8601	9.68	-8.83	0.13
153	SLE FR 1	3	1	7241	8.86	-7.31	0.11



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
Ind.	N.br.	x	y	z		x	y	z	
153	SLE FR 2	3	1	7241		8.86	-7.31	0.11	
153	SLE FR 3	3	1	7241		8.86	-7.31	0.11	
153	SLE FR 4	3	2	7649		9.11	-7.77	0.11	
153	SLE FR 5	3	2	7649		9.11	-7.77	0.11	
153	SLE FR 6	4	2	7921		9.27	-8.07	0.12	
153	SLE QP 1	3	1	7241		8.86	-7.31	0.11	
153	SLE QP 2	3	2	7649		9.11	-7.77	0.11	
153	SLD 1	553	27	7672		1.2	1.94	-0.68	
153	SLD 2	552	28	7672		1.18	1.99	0.28	
153	SLD 3	559	-28	7669		15.76	2.01	-0.85	
153	SLD 4	558	-27	7669		15.74	2.06	0.11	
153	SLD 5	160	94	7659		-15.34	-4.98	-0.21	
153	SLD 6	159	94	7659		-15.36	-4.93	0.77	
153	SLD 7	179	-92	7652		33.2	-4.74	-0.79	
153	SLD 8	178	-91	7652		33.17	-4.69	0.2	
153	SLD 9	-171	95	7646		-14.96	-10.84	0.02	
153	SLD 10	-172	95	7646		-14.98	-10.79	1.01	
153	SLD 11	-152	-91	7639		33.58	-10.6	-0.55	
153	SLD 12	-153	-90	7639		33.55	-10.55	0.44	
153	SLD 13	-551	31	7629		2.47	-17.59	0.12	
153	SLD 14	-552	32	7629		2.45	-17.54	1.08	
153	SLD 15	-545	-25	7627		17.03	-17.52	-0.06	
153	SLD 16	-546	-24	7627		17.01	-17.47	0.91	
153	SLV 1	1251	62	7700		-9.35	14.27	-1.7	
153	SLV 2	1249	64	7700		-9.4	14.38	0.51	
153	SLV 3	1264	-68	7695		24.73	14.43	-2.1	
153	SLV 4	1262	-66	7695		24.68	14.54	0.11	
153	SLV 5	358	216	7672		-48.09	-1.45	-0.64	
153	SLV 6	356	218	7672		-48.15	-1.34	1.65	
153	SLV 7	402	-217	7655		65.5	-0.89	-1.97	
153	SLV 8	400	-215	7655		65.45	-0.78	0.32	
153	SLV 9	-394	219	7643		-47.23	-14.75	-0.1	
153	SLV 10	-396	221	7643		-47.28	-14.64	2.2	
153	SLV 11	-350	-215	7626		66.36	-14.19	-1.43	
153	SLV 12	-352	-213	7626		66.31	-14.08	0.87	
153	SLV 13	-1256	70	7603		-6.47	-30.07	0.12	
153	SLV 14	-1257	72	7603		-6.52	-29.96	2.32	
153	SLV 15	-1242	-61	7598		27.61	-29.91	-0.28	
153	SLV 16	-1244	-58	7598		27.56	-29.8	1.93	
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	
154	SLU 1	2	0	3709		4.46	48.74	0.02	
154	SLU 2	2	0	3709		4.46	48.74	0.02	
154	SLU 3	2	0	3709		4.46	48.74	0.02	
154	SLU 4	2	0	3709		4.46	48.74	0.02	
154	SLU 5	2	0	3709		4.46	48.74	0.02	
154	SLU 6	2	0	3709		4.46	48.74	0.02	
154	SLU 7	2	0	3709		4.46	48.74	0.02	
154	SLU 8	2	0	3709		4.46	48.74	0.02	
154	SLU 9	2	0	3709		4.46	48.74	0.02	
154	SLU 10	3	1	4472		4.7	58.78	0.02	
154	SLU 11	3	1	4472		4.7	58.78	0.02	
154	SLU 12	3	1	4472		4.7	58.78	0.02	
154	SLU 13	3	1	4472		4.7	58.78	0.02	
154	SLU 14	3	1	4472		4.7	58.78	0.02	
154	SLU 15	3	1	4472		4.7	58.78	0.02	
154	SLU 16	3	1	4472		4.7	58.78	0.02	
154	SLU 17	3	1	4472		4.7	58.78	0.02	
154	SLU 18	3	1	4799		4.8	63.08	0.02	
154	SLU 19	3	1	4799		4.8	63.08	0.02	
154	SLU 20	3	1	4799		4.8	63.08	0.02	
154	SLU 21	3	1	4799		4.8	63.08	0.02	
154	SLU 22	2	1	4274		4.74	56.18	0.02	
154	SLU 23	2	1	4274		4.74	56.18	0.02	
154	SLU 24	2	1	4274		4.74	56.18	0.02	
154	SLU 25	2	1	4274		4.74	56.18	0.02	
154	SLU 26	2	1	4274		4.74	56.18	0.02	
154	SLU 27	2	1	4274		4.74	56.18	0.02	
154	SLU 28	2	1	4274		4.74	56.18	0.02	
154	SLU 29	2	1	4274		4.74	56.18	0.02	
154	SLU 30	2	1	4274		4.74	56.18	0.02	
154	SLU 31	3	1	5037		4.97	66.21	0.02	
154	SLU 32	3	1	5037		4.97	66.21	0.02	
154	SLU 33	3	1	5037		4.97	66.21	0.02	
154	SLU 34	3	1	5037		4.97	66.21	0.02	
154	SLU 35	3	1	5037		4.97	66.21	0.02	
154	SLU 36	3	1	5037		4.97	66.21	0.02	
154	SLU 37	3	1	5037		4.97	66.21	0.02	
154	SLU 38	3	1	5037		4.97	66.21	0.02	
154	SLU 39	3	1	5364		5.07	70.51	0.02	
154	SLU 40	3	1	5364		5.07	70.51	0.02	
154	SLU 41	3	1	5364		5.07	70.51	0.02	
154	SLU 42	3	1	5364		5.07	70.51	0.02	
154	SLU 43	2	0	4628		5.71	60.82	0.02	
154	SLU 44	2	0	4628		5.71	60.82	0.02	
154	SLU 45	2	0	4628		5.71	60.82	0.02	
154	SLU 46	2	0	4628		5.71	60.82	0.02	
154	SLU 47	2	0	4628		5.71	60.82	0.02	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
154	SLU 48	2	0	4628	5.71	60.82	0.02
154	SLU 49	2	0	4628	5.71	60.82	0.02
154	SLU 50	2	0	4628	5.71	60.82	0.02
154	SLU 51	2	0	4628	5.71	60.82	0.02
154	SLU 52	3	1	5391	5.94	70.85	0.02
154	SLU 53	3	1	5391	5.94	70.85	0.02
154	SLU 54	3	1	5391	5.94	70.85	0.02
154	SLU 55	3	1	5391	5.94	70.85	0.02
154	SLU 56	3	1	5391	5.94	70.85	0.02
154	SLU 57	3	1	5391	5.94	70.85	0.02
154	SLU 58	3	1	5391	5.94	70.85	0.02
154	SLU 59	3	1	5391	5.94	70.85	0.02
154	SLU 60	3	1	5718	6.04	75.15	0.02
154	SLU 61	3	1	5718	6.04	75.15	0.02
154	SLU 62	3	1	5718	6.04	75.15	0.02
154	SLU 63	3	1	5718	6.04	75.15	0.02
154	SLU 64	3	1	5193	5.98	68.25	0.02
154	SLU 65	3	1	5193	5.98	68.25	0.02
154	SLU 66	3	1	5193	5.98	68.25	0.02
154	SLU 67	3	1	5193	5.98	68.25	0.02
154	SLU 68	3	1	5193	5.98	68.25	0.02
154	SLU 69	3	1	5193	5.98	68.25	0.02
154	SLU 70	3	1	5193	5.98	68.25	0.02
154	SLU 71	3	1	5193	5.98	68.25	0.02
154	SLU 72	3	1	5193	5.98	68.25	0.02
154	SLU 73	3	1	5956	6.22	78.29	0.03
154	SLU 74	3	1	5956	6.22	78.29	0.03
154	SLU 75	3	1	5956	6.22	78.29	0.03
154	SLU 76	3	1	5956	6.22	78.29	0.03
154	SLU 77	3	1	5956	6.22	78.29	0.03
154	SLU 78	3	1	5956	6.22	78.29	0.03
154	SLU 79	3	1	5956	6.22	78.29	0.03
154	SLU 80	3	1	5956	6.22	78.29	0.03
154	SLU 81	4	1	6283	6.32	82.59	0.03
154	SLU 82	4	1	6283	6.32	82.59	0.03
154	SLU 83	4	1	6283	6.32	82.59	0.03
154	SLU 84	4	1	6283	6.32	82.59	0.03
154	SLE RA 1	2	0	3871	4.54	50.87	0.02
154	SLE RA 2	2	0	3871	4.54	50.87	0.02
154	SLE RA 3	2	0	3871	4.54	50.87	0.02
154	SLE RA 4	2	0	3871	4.54	50.87	0.02
154	SLE RA 5	2	0	3871	4.54	50.87	0.02
154	SLE RA 6	2	0	3871	4.54	50.87	0.02
154	SLE RA 7	2	0	3871	4.54	50.87	0.02
154	SLE RA 8	2	0	3871	4.54	50.87	0.02
154	SLE RA 9	2	0	3871	4.54	50.87	0.02
154	SLE RA 10	2	1	4379	4.7	57.56	0.02
154	SLE RA 11	2	1	4379	4.7	57.56	0.02
154	SLE RA 12	2	1	4379	4.7	57.56	0.02
154	SLE RA 13	2	1	4379	4.7	57.56	0.02
154	SLE RA 14	2	1	4379	4.7	57.56	0.02
154	SLE RA 15	2	1	4379	4.7	57.56	0.02
154	SLE RA 16	2	1	4379	4.7	57.56	0.02
154	SLE RA 17	2	1	4379	4.7	57.56	0.02
154	SLE RA 18	3	1	4597	4.76	60.42	0.02
154	SLE RA 19	3	1	4597	4.76	60.42	0.02
154	SLE RA 20	3	1	4597	4.76	60.42	0.02
154	SLE RA 21	3	1	4597	4.76	60.42	0.02
154	SLE FR 1	2	0	3871	4.54	50.87	0.02
154	SLE FR 2	2	0	3871	4.54	50.87	0.02
154	SLE FR 3	2	0	3871	4.54	50.87	0.02
154	SLE FR 4	2	1	4088	4.61	53.73	0.02
154	SLE FR 5	2	1	4088	4.61	53.73	0.02
154	SLE FR 6	2	1	4234	4.65	55.65	0.02
154	SLE QP 1	2	0	3871	4.54	50.87	0.02
154	SLE QP 2	2	1	4088	4.61	53.73	0.02
154	SLD 1	295	19	4149	-1.29	55.86	-1.07
154	SLD 2	295	16	4149	-1.31	55.87	-0.39
154	SLD 3	298	-13	4148	9.55	55.84	0.09
154	SLD 4	298	-16	4148	9.54	55.85	0.77
154	SLD 5	86	55	4108	-13.61	54.4	-2.31
154	SLD 6	85	52	4109	-13.62	54.41	-1.62
154	SLD 7	96	-50	4104	22.55	54.33	1.56
154	SLD 8	95	-53	4105	22.53	54.34	2.25
154	SLD 9	-91	54	4072	-13.32	53.13	-2.22
154	SLD 10	-91	51	4073	-13.33	53.14	-1.52
154	SLD 11	-81	-50	4068	22.84	53.06	1.66
154	SLD 12	-81	-54	4069	22.82	53.07	2.35
154	SLD 13	-293	17	4029	-0.32	51.62	-0.74
154	SLD 14	-294	14	4029	-0.34	51.63	-0.06
154	SLD 15	-290	-14	4028	10.52	51.6	0.42
154	SLD 16	-291	-17	4028	10.51	51.61	1.1
154	SLV 1	667	43	4226	-9.17	58.56	-2.49
154	SLV 2	666	36	4226	-9.2	58.58	-0.94
154	SLV 3	674	-31	4223	16.22	58.51	0.23
154	SLV 4	673	-38	4224	16.18	58.53	1.78
154	SLV 5	191	127	4134	-38.01	55.24	-5.43
154	SLV 6	190	120	4134	-38.05	55.26	-3.82
154	SLV 7	215	-118	4124	46.6	55.09	3.63
154	SLV 8	214	-125	4125	46.57	55.11	5.24



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
154	SLV 9	-209	126	4052	-37.35	52.35	-5.21
154	SLV 10	-210	119	4053	-37.39	52.38	-3.6
154	SLV 11	-186	-119	4043	47.26	52.2	3.86
154	SLV 12	-187	-126	4043	47.23	52.23	5.47
154	SLV 13	-668	39	3953	-6.97	48.93	-1.74
154	SLV 14	-669	32	3954	-7	48.96	-0.19
154	SLV 15	-661	-35	3950	18.42	48.89	0.98
154	SLV 16	-662	-42	3951	18.38	48.91	2.53
154	CRTFP Ux+	0	0	0	0	0	0
154	CRTFP Ux-	0	0	0	0	0	0
154	CRTFP Uy+	0	0	0	0	0	0
154	CRTFP Uy-	0	0	0	0	0	0
155	SLU 1	2	0	3986	4.53	0.53	-0.03
155	SLU 2	2	0	3986	4.53	0.53	-0.03
155	SLU 3	2	0	3986	4.53	0.53	-0.03
155	SLU 4	2	0	3986	4.53	0.53	-0.03
155	SLU 5	2	0	3986	4.53	0.53	-0.03
155	SLU 6	2	0	3986	4.53	0.53	-0.03
155	SLU 7	2	0	3986	4.53	0.53	-0.03
155	SLU 8	2	0	3986	4.53	0.53	-0.03
155	SLU 9	2	0	3986	4.53	0.53	-0.03
155	SLU 10	3	1	4807	4.76	0.66	-0.02
155	SLU 11	3	1	4807	4.76	0.66	-0.02
155	SLU 12	3	1	4807	4.76	0.66	-0.02
155	SLU 13	3	1	4807	4.76	0.66	-0.02
155	SLU 14	3	1	4807	4.76	0.66	-0.02
155	SLU 15	3	1	4807	4.76	0.66	-0.02
155	SLU 16	3	1	4807	4.76	0.66	-0.02
155	SLU 17	3	1	4807	4.76	0.66	-0.02
155	SLU 18	4	1	5158	4.86	0.72	-0.02
155	SLU 19	4	1	5158	4.86	0.72	-0.02
155	SLU 20	4	1	5158	4.86	0.72	-0.02
155	SLU 21	4	1	5158	4.86	0.72	-0.02
155	SLU 22	3	1	4594	4.8	0.63	-0.03
155	SLU 23	3	1	4594	4.8	0.63	-0.03
155	SLU 24	3	1	4594	4.8	0.63	-0.03
155	SLU 25	3	1	4594	4.8	0.63	-0.03
155	SLU 26	3	1	4594	4.8	0.63	-0.03
155	SLU 27	3	1	4594	4.8	0.63	-0.03
155	SLU 28	3	1	4594	4.8	0.63	-0.03
155	SLU 29	3	1	4594	4.8	0.63	-0.03
155	SLU 30	3	1	4594	4.8	0.63	-0.03
155	SLU 31	4	1	5415	5.03	0.76	-0.02
155	SLU 32	4	1	5415	5.03	0.76	-0.02
155	SLU 33	4	1	5415	5.03	0.76	-0.02
155	SLU 34	4	1	5415	5.03	0.76	-0.02
155	SLU 35	4	1	5415	5.03	0.76	-0.02
155	SLU 36	4	1	5415	5.03	0.76	-0.02
155	SLU 37	4	1	5415	5.03	0.76	-0.02
155	SLU 38	4	1	5415	5.03	0.76	-0.02
155	SLU 39	5	1	5766	5.13	0.82	-0.02
155	SLU 40	5	1	5766	5.13	0.82	-0.02
155	SLU 41	5	1	5766	5.13	0.82	-0.02
155	SLU 42	5	1	5766	5.13	0.82	-0.02
155	SLU 43	3	0	4974	5.79	0.65	-0.04
155	SLU 44	3	0	4974	5.79	0.65	-0.04
155	SLU 45	3	0	4974	5.79	0.65	-0.04
155	SLU 46	3	0	4974	5.79	0.65	-0.04
155	SLU 47	3	0	4974	5.79	0.65	-0.04
155	SLU 48	3	0	4974	5.79	0.65	-0.04
155	SLU 49	3	0	4974	5.79	0.65	-0.04
155	SLU 50	3	0	4974	5.79	0.65	-0.04
155	SLU 51	3	0	4974	5.79	0.65	-0.04
155	SLU 52	4	1	5794	6.02	0.79	-0.03
155	SLU 53	4	1	5794	6.02	0.79	-0.03
155	SLU 54	4	1	5794	6.02	0.79	-0.03
155	SLU 55	4	1	5794	6.02	0.79	-0.03
155	SLU 56	4	1	5794	6.02	0.79	-0.03
155	SLU 57	4	1	5794	6.02	0.79	-0.03
155	SLU 58	4	1	5794	6.02	0.79	-0.03
155	SLU 59	4	1	5794	6.02	0.79	-0.03
155	SLU 60	4	1	6146	6.12	0.84	-0.03
155	SLU 61	4	1	6146	6.12	0.84	-0.03
155	SLU 62	4	1	6146	6.12	0.84	-0.03
155	SLU 63	4	1	6146	6.12	0.84	-0.03
155	SLU 64	3	1	5582	6.07	0.75	-0.04
155	SLU 65	3	1	5582	6.07	0.75	-0.04
155	SLU 66	3	1	5582	6.07	0.75	-0.04
155	SLU 67	3	1	5582	6.07	0.75	-0.04
155	SLU 68	3	1	5582	6.07	0.75	-0.04
155	SLU 69	3	1	5582	6.07	0.75	-0.04
155	SLU 70	3	1	5582	6.07	0.75	-0.04
155	SLU 71	3	1	5582	6.07	0.75	-0.04
155	SLU 72	3	1	5582	6.07	0.75	-0.04
155	SLU 73	5	1	6402	6.3	0.89	-0.03
155	SLU 74	5	1	6402	6.3	0.89	-0.03
155	SLU 75	5	1	6402	6.3	0.89	-0.03
155	SLU 76	5	1	6402	6.3	0.89	-0.03
155	SLU 77	5	1	6402	6.3	0.89	-0.03
155	SLU 78	5	1	6402	6.3	0.89	-0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
155	SLU 79	5	1	6402	6.3	0.89	-0.03
155	SLU 80	5	1	6402	6.3	0.89	-0.03
155	SLU 81	5	1	6754	6.4	0.94	-0.03
155	SLU 82	5	1	6754	6.4	0.94	-0.03
155	SLU 83	5	1	6754	6.4	0.94	-0.03
155	SLU 84	5	1	6754	6.4	0.94	-0.03
155	SLE RA 1	2	1	4160	4.61	0.56	-0.03
155	SLE RA 2	2	1	4160	4.61	0.56	-0.03
155	SLE RA 3	2	1	4160	4.61	0.56	-0.03
155	SLE RA 4	2	1	4160	4.61	0.56	-0.03
155	SLE RA 5	2	1	4160	4.61	0.56	-0.03
155	SLE RA 6	2	1	4160	4.61	0.56	-0.03
155	SLE RA 7	2	1	4160	4.61	0.56	-0.03
155	SLE RA 8	2	1	4160	4.61	0.56	-0.03
155	SLE RA 9	2	1	4160	4.61	0.56	-0.03
155	SLE RA 10	3	1	4707	4.76	0.65	-0.02
155	SLE RA 11	3	1	4707	4.76	0.65	-0.02
155	SLE RA 12	3	1	4707	4.76	0.65	-0.02
155	SLE RA 13	3	1	4707	4.76	0.65	-0.02
155	SLE RA 14	3	1	4707	4.76	0.65	-0.02
155	SLE RA 15	3	1	4707	4.76	0.65	-0.02
155	SLE RA 16	3	1	4707	4.76	0.65	-0.02
155	SLE RA 17	3	1	4707	4.76	0.65	-0.02
155	SLE RA 18	4	1	4941	4.83	0.68	-0.02
155	SLE RA 19	4	1	4941	4.83	0.68	-0.02
155	SLE RA 20	4	1	4941	4.83	0.68	-0.02
155	SLE RA 21	4	1	4941	4.83	0.68	-0.02
155	SLE FR 1	2	1	4160	4.61	0.56	-0.03
155	SLE FR 2	2	1	4160	4.61	0.56	-0.03
155	SLE FR 3	2	1	4160	4.61	0.56	-0.03
155	SLE FR 4	3	1	4394	4.67	0.6	-0.03
155	SLE FR 5	3	1	4394	4.67	0.6	-0.03
155	SLE FR 6	3	1	4551	4.72	0.62	-0.03
155	SLE QP 1	2	1	4160	4.61	0.56	-0.03
155	SLE QP 2	3	1	4394	4.67	0.6	-0.03
155	SLD 1	316	26	4508	-1.45	2.25	-1.44
155	SLD 2	316	19	4509	-1.46	2.26	-0.74
155	SLD 3	320	-14	4507	9.78	2.24	0.3
155	SLD 4	319	-21	4507	9.76	2.25	1.01
155	SLD 5	92	72	4431	-14.18	1.11	-3.35
155	SLD 6	92	65	4431	-14.19	1.11	-2.63
155	SLD 7	103	-62	4426	23.23	1.07	2.46
155	SLD 8	102	-69	4426	23.21	1.08	3.18
155	SLD 9	-97	71	4362	-13.87	0.11	-3.23
155	SLD 10	-97	64	4363	-13.88	0.12	-2.52
155	SLD 11	-86	-63	4358	23.54	0.08	2.58
155	SLD 12	-87	-70	4358	23.52	0.09	3.3
155	SLD 13	-313	22	4282	-0.42	-1.06	-1.06
155	SLD 14	-314	16	4282	-0.43	-1.05	-0.36
155	SLD 15	-310	-18	4280	10.8	-1.07	0.68
155	SLD 16	-311	-25	4281	10.79	-1.06	1.39
155	SLV 1	714	60	4653	-9.61	4.36	-3.31
155	SLV 2	713	44	4654	-9.64	4.38	-1.7
155	SLV 3	722	-34	4650	16.65	4.34	0.78
155	SLV 4	721	-50	4651	16.62	4.35	2.39
155	SLV 5	205	167	4476	-39.42	1.75	-7.81
155	SLV 6	204	150	4478	-39.45	1.77	-6.14
155	SLV 7	230	-146	4466	48.1	1.68	5.83
155	SLV 8	229	-163	4467	48.07	1.69	7.5
155	SLV 9	-224	164	4322	-38.72	-0.5	-7.55
155	SLV 10	-225	148	4323	-38.75	-0.48	-5.88
155	SLV 11	-199	-149	4311	48.8	-0.58	6.09
155	SLV 12	-200	-165	4312	48.77	-0.56	7.76
155	SLV 13	-715	51	4138	-7.27	-3.16	-2.44
155	SLV 14	-716	36	4139	-7.3	-3.14	-0.83
155	SLV 15	-708	-43	4135	18.98	-3.19	1.65
155	SLV 16	-709	-58	4136	18.95	-3.17	3.26
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
156	SLU 1	3	1	4002	4.3	0.48	-0.08
156	SLU 2	3	1	4002	4.3	0.48	-0.08
156	SLU 3	3	1	4002	4.3	0.48	-0.08
156	SLU 4	3	1	4002	4.3	0.48	-0.08
156	SLU 5	3	1	4002	4.3	0.48	-0.08
156	SLU 6	3	1	4002	4.3	0.48	-0.08
156	SLU 7	3	1	4002	4.3	0.48	-0.08
156	SLU 8	3	1	4002	4.3	0.48	-0.08
156	SLU 9	3	1	4002	4.3	0.48	-0.08
156	SLU 10	4	1	4826	4.51	0.59	-0.08
156	SLU 11	4	1	4826	4.51	0.59	-0.08
156	SLU 12	4	1	4826	4.51	0.59	-0.08
156	SLU 13	4	1	4826	4.51	0.59	-0.08
156	SLU 14	4	1	4826	4.51	0.59	-0.08
156	SLU 15	4	1	4826	4.51	0.59	-0.08
156	SLU 16	4	1	4826	4.51	0.59	-0.08
156	SLU 17	4	1	4826	4.51	0.59	-0.08
156	SLU 18	5	1	5179	4.59	0.64	-0.08
156	SLU 19	5	1	5179	4.59	0.64	-0.08



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
156	SLU 20	5	1	5179	4.59	0.64	-0.08
156	SLU 21	5	1	5179	4.59	0.64	-0.08
156	SLU 22	4	1	4613	4.55	0.57	-0.08
156	SLU 23	4	1	4613	4.55	0.57	-0.08
156	SLU 24	4	1	4613	4.55	0.57	-0.08
156	SLU 25	4	1	4613	4.55	0.57	-0.08
156	SLU 26	4	1	4613	4.55	0.57	-0.08
156	SLU 27	4	1	4613	4.55	0.57	-0.08
156	SLU 28	4	1	4613	4.55	0.57	-0.08
156	SLU 29	4	1	4613	4.55	0.57	-0.08
156	SLU 30	4	1	4613	4.55	0.57	-0.08
156	SLU 31	5	2	5437	4.76	0.68	-0.08
156	SLU 32	5	2	5437	4.76	0.68	-0.08
156	SLU 33	5	2	5437	4.76	0.68	-0.08
156	SLU 34	5	2	5437	4.76	0.68	-0.08
156	SLU 35	5	2	5437	4.76	0.68	-0.08
156	SLU 36	5	2	5437	4.76	0.68	-0.08
156	SLU 37	5	2	5437	4.76	0.68	-0.08
156	SLU 38	5	2	5437	4.76	0.68	-0.08
156	SLU 39	6	2	5790	4.85	0.73	-0.08
156	SLU 40	6	2	5790	4.85	0.73	-0.08
156	SLU 41	6	2	5790	4.85	0.73	-0.08
156	SLU 42	6	2	5790	4.85	0.73	-0.08
156	SLU 43	3	1	4993	5.5	0.59	-0.1
156	SLU 44	3	1	4993	5.5	0.59	-0.1
156	SLU 45	3	1	4993	5.5	0.59	-0.1
156	SLU 46	3	1	4993	5.5	0.59	-0.1
156	SLU 47	3	1	4993	5.5	0.59	-0.1
156	SLU 48	3	1	4993	5.5	0.59	-0.1
156	SLU 49	3	1	4993	5.5	0.59	-0.1
156	SLU 50	3	1	4993	5.5	0.59	-0.1
156	SLU 51	3	1	4993	5.5	0.59	-0.1
156	SLU 52	4	1	5817	5.71	0.71	-0.1
156	SLU 53	4	1	5817	5.71	0.71	-0.1
156	SLU 54	4	1	5817	5.71	0.71	-0.1
156	SLU 55	4	1	5817	5.71	0.71	-0.1
156	SLU 56	4	1	5817	5.71	0.71	-0.1
156	SLU 57	4	1	5817	5.71	0.71	-0.1
156	SLU 58	4	1	5817	5.71	0.71	-0.1
156	SLU 59	4	1	5817	5.71	0.71	-0.1
156	SLU 60	5	2	6170	5.8	0.76	-0.1
156	SLU 61	5	2	6170	5.8	0.76	-0.1
156	SLU 62	5	2	6170	5.8	0.76	-0.1
156	SLU 63	5	2	6170	5.8	0.76	-0.1
156	SLU 64	4	1	5604	5.75	0.68	-0.1
156	SLU 65	4	1	5604	5.75	0.68	-0.1
156	SLU 66	4	1	5604	5.75	0.68	-0.1
156	SLU 67	4	1	5604	5.75	0.68	-0.1
156	SLU 68	4	1	5604	5.75	0.68	-0.1
156	SLU 69	4	1	5604	5.75	0.68	-0.1
156	SLU 70	4	1	5604	5.75	0.68	-0.1
156	SLU 71	4	1	5604	5.75	0.68	-0.1
156	SLU 72	4	1	5604	5.75	0.68	-0.1
156	SLU 73	5	2	6428	5.96	0.8	-0.1
156	SLU 74	5	2	6428	5.96	0.8	-0.1
156	SLU 75	5	2	6428	5.96	0.8	-0.1
156	SLU 76	5	2	6428	5.96	0.8	-0.1
156	SLU 77	5	2	6428	5.96	0.8	-0.1
156	SLU 78	5	2	6428	5.96	0.8	-0.1
156	SLU 79	5	2	6428	5.96	0.8	-0.1
156	SLU 80	5	2	6428	5.96	0.8	-0.1
156	SLU 81	6	2	6782	6.05	0.85	-0.1
156	SLU 82	6	2	6782	6.05	0.85	-0.1
156	SLU 83	6	2	6782	6.05	0.85	-0.1
156	SLU 84	6	2	6782	6.05	0.85	-0.1
156	SLE RA 1	3	1	4177	4.37	0.51	-0.08
156	SLE RA 2	3	1	4177	4.37	0.51	-0.08
156	SLE RA 3	3	1	4177	4.37	0.51	-0.08
156	SLE RA 4	3	1	4177	4.37	0.51	-0.08
156	SLE RA 5	3	1	4177	4.37	0.51	-0.08
156	SLE RA 6	3	1	4177	4.37	0.51	-0.08
156	SLE RA 7	3	1	4177	4.37	0.51	-0.08
156	SLE RA 8	3	1	4177	4.37	0.51	-0.08
156	SLE RA 9	3	1	4177	4.37	0.51	-0.08
156	SLE RA 10	4	1	4726	4.51	0.58	-0.08
156	SLE RA 11	4	1	4726	4.51	0.58	-0.08
156	SLE RA 12	4	1	4726	4.51	0.58	-0.08
156	SLE RA 13	4	1	4726	4.51	0.58	-0.08
156	SLE RA 14	4	1	4726	4.51	0.58	-0.08
156	SLE RA 15	4	1	4726	4.51	0.58	-0.08
156	SLE RA 16	4	1	4726	4.51	0.58	-0.08
156	SLE RA 17	4	1	4726	4.51	0.58	-0.08
156	SLE RA 18	4	1	4962	4.57	0.61	-0.08
156	SLE RA 19	4	1	4962	4.57	0.61	-0.08
156	SLE RA 20	4	1	4962	4.57	0.61	-0.08
156	SLE RA 21	4	1	4962	4.57	0.61	-0.08
156	SLE FR 1	3	1	4177	4.37	0.51	-0.08
156	SLE FR 2	3	1	4177	4.37	0.51	-0.08
156	SLE FR 3	3	1	4177	4.37	0.51	-0.08
156	SLE FR 4	3	1	4412	4.43	0.54	-0.08



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
156	SLE FR 5	3	1	4412	4.43	0.54	-0.08
156	SLE FR 6	4	1	4569	4.47	0.56	-0.08
156	SLE QP 1	3	1	4177	4.37	0.51	-0.08
156	SLE QP 2	3	1	4412	4.43	0.54	-0.08
156	SLD 1	317	35	4577	-1.51	2.22	-1.98
156	SLD 2	316	25	4578	-1.51	2.22	-1.25
156	SLD 3	320	-17	4576	9.35	2.21	0.67
156	SLD 4	319	-27	4576	9.34	2.21	1.4
156	SLD 5	93	93	4464	-13.81	1.05	-4.93
156	SLD 6	92	83	4464	-13.82	1.06	-4.19
156	SLD 7	103	-79	4459	22.37	1.02	3.91
156	SLD 8	103	-90	4459	22.36	1.03	4.65
156	SLD 9	-96	92	4365	-13.51	0.05	-4.8
156	SLD 10	-97	81	4366	-13.52	0.06	-4.06
156	SLD 11	-86	-81	4360	22.68	0.01	4.03
156	SLD 12	-86	-91	4360	22.67	0.02	4.77
156	SLD 13	-313	29	4248	-0.48	-1.14	-1.55
156	SLD 14	-313	18	4249	-0.49	-1.13	-0.83
156	SLD 15	-310	-23	4246	10.37	-1.15	1.1
156	SLD 16	-310	-33	4247	10.36	-1.14	1.82
156	SLV 1	715	80	4787	-9.42	4.35	-4.5
156	SLV 2	714	56	4789	-9.44	4.37	-2.84
156	SLV 3	722	-40	4783	15.98	4.33	1.72
156	SLV 4	721	-65	4785	15.96	4.34	3.38
156	SLV 5	206	217	4529	-38.24	1.71	-11.46
156	SLV 6	205	192	4531	-38.26	1.73	-9.73
156	SLV 7	231	-186	4517	46.42	1.63	9.29
156	SLV 8	230	-211	4519	46.4	1.65	11.01
156	SLV 9	-223	213	4305	-37.54	-0.57	-11.17
156	SLV 10	-224	188	4307	-37.56	-0.56	-9.45
156	SLV 11	-198	-190	4293	47.12	-0.65	9.58
156	SLV 12	-199	-215	4295	47.09	-0.63	11.3
156	SLV 13	-715	67	4039	-7.1	-3.27	-3.54
156	SLV 14	-716	42	4041	-7.12	-3.25	-1.88
156	SLV 15	-707	-54	4035	18.3	-3.29	2.69
156	SLV 16	-708	-78	4037	18.28	-3.27	4.34
156	CRTFP Ux+	0	0	0	0	0	0
156	CRTFP Ux-	0	0	0	0	0	0
156	CRTFP Uy+	0	0	0	0	0	0
156	CRTFP Uy-	0	0	0	0	0	0
157	SLU 1	3	1	4015	4.07	0.38	-0.12
157	SLU 2	3	1	4015	4.07	0.38	-0.12
157	SLU 3	3	1	4015	4.07	0.38	-0.12
157	SLU 4	3	1	4015	4.07	0.38	-0.12
157	SLU 5	3	1	4015	4.07	0.38	-0.12
157	SLU 6	3	1	4015	4.07	0.38	-0.12
157	SLU 7	3	1	4015	4.07	0.38	-0.12
157	SLU 8	3	1	4015	4.07	0.38	-0.12
157	SLU 9	3	1	4015	4.07	0.38	-0.12
157	SLU 10	5	2	4842	4.26	0.45	-0.13
157	SLU 11	5	2	4842	4.26	0.45	-0.13
157	SLU 12	5	2	4842	4.26	0.45	-0.13
157	SLU 13	5	2	4842	4.26	0.45	-0.13
157	SLU 14	5	2	4842	4.26	0.45	-0.13
157	SLU 15	5	2	4842	4.26	0.45	-0.13
157	SLU 16	5	2	4842	4.26	0.45	-0.13
157	SLU 17	5	2	4842	4.26	0.45	-0.13
157	SLU 18	5	2	5197	4.34	0.49	-0.13
157	SLU 19	5	2	5197	4.34	0.49	-0.13
157	SLU 20	5	2	5197	4.34	0.49	-0.13
157	SLU 21	5	2	5197	4.34	0.49	-0.13
157	SLU 22	4	2	4629	4.31	0.44	-0.13
157	SLU 23	4	2	4629	4.31	0.44	-0.13
157	SLU 24	4	2	4629	4.31	0.44	-0.13
157	SLU 25	4	2	4629	4.31	0.44	-0.13
157	SLU 26	4	2	4629	4.31	0.44	-0.13
157	SLU 27	4	2	4629	4.31	0.44	-0.13
157	SLU 28	4	2	4629	4.31	0.44	-0.13
157	SLU 29	4	2	4629	4.31	0.44	-0.13
157	SLU 30	4	2	4629	4.31	0.44	-0.13
157	SLU 31	6	2	5456	4.5	0.52	-0.13
157	SLU 32	6	2	5456	4.5	0.52	-0.13
157	SLU 33	6	2	5456	4.5	0.52	-0.13
157	SLU 34	6	2	5456	4.5	0.52	-0.13
157	SLU 35	6	2	5456	4.5	0.52	-0.13
157	SLU 36	6	2	5456	4.5	0.52	-0.13
157	SLU 37	6	2	5456	4.5	0.52	-0.13
157	SLU 38	6	2	5456	4.5	0.52	-0.13
157	SLU 39	7	2	5810	4.58	0.55	-0.14
157	SLU 40	7	2	5810	4.58	0.55	-0.14
157	SLU 41	7	2	5810	4.58	0.55	-0.14
157	SLU 42	7	2	5810	4.58	0.55	-0.14
157	SLU 43	3	2	5010	5.21	0.47	-0.15
157	SLU 44	3	2	5010	5.21	0.47	-0.15
157	SLU 45	3	2	5010	5.21	0.47	-0.15
157	SLU 46	3	2	5010	5.21	0.47	-0.15
157	SLU 47	3	2	5010	5.21	0.47	-0.15
157	SLU 48	3	2	5010	5.21	0.47	-0.15
157	SLU 49	3	2	5010	5.21	0.47	-0.15
157	SLU 50	3	2	5010	5.21	0.47	-0.15



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
157	SLU 51	3	2	5010	5.21	0.47	-0.15
157	SLU 52	5	2	5837	5.4	0.55	-0.16
157	SLU 53	5	2	5837	5.4	0.55	-0.16
157	SLU 54	5	2	5837	5.4	0.55	-0.16
157	SLU 55	5	2	5837	5.4	0.55	-0.16
157	SLU 56	5	2	5837	5.4	0.55	-0.16
157	SLU 57	5	2	5837	5.4	0.55	-0.16
157	SLU 58	5	2	5837	5.4	0.55	-0.16
157	SLU 59	5	2	5837	5.4	0.55	-0.16
157	SLU 60	6	2	6191	5.48	0.58	-0.16
157	SLU 61	6	2	6191	5.48	0.58	-0.16
157	SLU 62	6	2	6191	5.48	0.58	-0.16
157	SLU 63	6	2	6191	5.48	0.58	-0.16
157	SLU 64	5	2	5623	5.45	0.53	-0.16
157	SLU 65	5	2	5623	5.45	0.53	-0.16
157	SLU 66	5	2	5623	5.45	0.53	-0.16
157	SLU 67	5	2	5623	5.45	0.53	-0.16
157	SLU 68	5	2	5623	5.45	0.53	-0.16
157	SLU 69	5	2	5623	5.45	0.53	-0.16
157	SLU 70	5	2	5623	5.45	0.53	-0.16
157	SLU 71	5	2	5623	5.45	0.53	-0.16
157	SLU 72	5	2	5623	5.45	0.53	-0.16
157	SLU 73	6	2	6450	5.64	0.61	-0.17
157	SLU 74	6	2	6450	5.64	0.61	-0.17
157	SLU 75	6	2	6450	5.64	0.61	-0.17
157	SLU 76	6	2	6450	5.64	0.61	-0.17
157	SLU 77	6	2	6450	5.64	0.61	-0.17
157	SLU 78	6	2	6450	5.64	0.61	-0.17
157	SLU 79	6	2	6450	5.64	0.61	-0.17
157	SLU 80	6	2	6450	5.64	0.61	-0.17
157	SLU 81	7	3	6805	5.72	0.64	-0.17
157	SLU 82	7	3	6805	5.72	0.64	-0.17
157	SLU 83	7	3	6805	5.72	0.64	-0.17
157	SLU 84	7	3	6805	5.72	0.64	-0.17
157	SLE RA 1	3	1	4191	4.14	0.4	-0.12
157	SLE RA 2	3	1	4191	4.14	0.4	-0.12
157	SLE RA 3	3	1	4191	4.14	0.4	-0.12
157	SLE RA 4	3	1	4191	4.14	0.4	-0.12
157	SLE RA 5	3	1	4191	4.14	0.4	-0.12
157	SLE RA 6	3	1	4191	4.14	0.4	-0.12
157	SLE RA 7	3	1	4191	4.14	0.4	-0.12
157	SLE RA 8	3	1	4191	4.14	0.4	-0.12
157	SLE RA 9	3	1	4191	4.14	0.4	-0.12
157	SLE RA 10	4	2	4742	4.26	0.45	-0.13
157	SLE RA 11	4	2	4742	4.26	0.45	-0.13
157	SLE RA 12	4	2	4742	4.26	0.45	-0.13
157	SLE RA 13	4	2	4742	4.26	0.45	-0.13
157	SLE RA 14	4	2	4742	4.26	0.45	-0.13
157	SLE RA 15	4	2	4742	4.26	0.45	-0.13
157	SLE RA 16	4	2	4742	4.26	0.45	-0.13
157	SLE RA 17	4	2	4742	4.26	0.45	-0.13
157	SLE RA 18	5	2	4978	4.32	0.47	-0.13
157	SLE RA 19	5	2	4978	4.32	0.47	-0.13
157	SLE RA 20	5	2	4978	4.32	0.47	-0.13
157	SLE RA 21	5	2	4978	4.32	0.47	-0.13
157	SLE FR 1	3	1	4191	4.14	0.4	-0.12
157	SLE FR 2	3	1	4191	4.14	0.4	-0.12
157	SLE FR 3	3	1	4191	4.14	0.4	-0.12
157	SLE FR 4	4	2	4427	4.19	0.42	-0.12
157	SLE FR 5	4	2	4427	4.19	0.42	-0.12
157	SLE FR 6	4	2	4584	4.23	0.43	-0.12
157	SLE QP 1	3	1	4191	4.14	0.4	-0.12
157	SLE QP 2	4	2	4427	4.19	0.42	-0.12
157	SLD 1	317	47	4644	-1.56	2.12	-2.5
157	SLD 2	317	33	4645	-1.57	2.13	-1.73
157	SLD 3	320	-21	4642	8.94	2.11	1.02
157	SLD 4	320	-35	4643	8.93	2.12	1.78
157	SLD 5	93	123	4494	-13.45	0.94	-6.45
157	SLD 6	93	109	4495	-13.46	0.95	-5.67
157	SLD 7	104	-103	4488	21.54	0.91	5.28
157	SLD 8	103	-118	4489	21.53	0.91	6.06
157	SLD 9	-96	121	4364	-13.15	-0.08	-6.31
157	SLD 10	-96	106	4365	-13.16	-0.07	-5.53
157	SLD 11	-85	-106	4358	21.85	-0.11	5.42
157	SLD 12	-86	-120	4359	21.84	-0.11	6.2
157	SLD 13	-312	38	4211	-0.54	-1.28	-2.03
157	SLD 14	-313	24	4212	-0.55	-1.27	-1.27
157	SLD 15	-309	-30	4209	9.95	-1.29	1.49
157	SLD 16	-310	-44	4210	9.95	-1.28	2.25
157	SLV 1	715	107	4920	-9.23	4.28	-5.66
157	SLV 2	714	74	4922	-9.25	4.3	-3.91
157	SLV 3	722	-51	4916	15.32	4.26	2.6
157	SLV 4	721	-85	4918	15.31	4.28	4.35
157	SLV 5	206	287	4580	-37.08	1.61	-14.95
157	SLV 6	205	252	4583	-37.09	1.62	-13.14
157	SLV 7	231	-243	4566	44.78	1.53	12.57
157	SLV 8	230	-278	4569	44.77	1.55	14.38
157	SLV 9	-222	281	4285	-36.38	-0.71	-14.63
157	SLV 10	-223	246	4287	-36.4	-0.69	-12.82
157	SLV 11	-198	-249	4271	45.48	-0.79	12.89



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
157	SLV 12	-199	-283	4274	45.46	-0.77	14.7
157	SLV 13	-714	88	3936	-6.92	-3.44	-4.59
157	SLV 14	-715	54	3938	-6.94	-3.42	-2.85
157	SLV 15	-706	-71	3932	17.64	-3.46	3.66
157	SLV 16	-707	-104	3934	17.62	-3.45	5.41
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	3	2	4025	3.85	0.22	-0.16
158	SLU 2	3	2	4025	3.85	0.22	-0.16
158	SLU 3	3	2	4025	3.85	0.22	-0.16
158	SLU 4	3	2	4025	3.85	0.22	-0.16
158	SLU 5	3	2	4025	3.85	0.22	-0.16
158	SLU 6	3	2	4025	3.85	0.22	-0.16
158	SLU 7	3	2	4025	3.85	0.22	-0.16
158	SLU 8	3	2	4025	3.85	0.22	-0.16
158	SLU 9	3	2	4025	3.85	0.22	-0.16
158	SLU 10	5	3	4853	4.02	0.24	-0.17
158	SLU 11	5	3	4853	4.02	0.24	-0.17
158	SLU 12	5	3	4853	4.02	0.24	-0.17
158	SLU 13	5	3	4853	4.02	0.24	-0.17
158	SLU 14	5	3	4853	4.02	0.24	-0.17
158	SLU 15	5	3	4853	4.02	0.24	-0.17
158	SLU 16	5	3	4853	4.02	0.24	-0.17
158	SLU 17	5	3	4853	4.02	0.24	-0.17
158	SLU 18	6	3	5208	4.1	0.24	-0.17
158	SLU 19	6	3	5208	4.1	0.24	-0.17
158	SLU 20	6	3	5208	4.1	0.24	-0.17
158	SLU 21	6	3	5208	4.1	0.24	-0.17
158	SLU 22	5	2	4639	4.07	0.24	-0.17
158	SLU 23	5	2	4639	4.07	0.24	-0.17
158	SLU 24	5	2	4639	4.07	0.24	-0.17
158	SLU 25	5	2	4639	4.07	0.24	-0.17
158	SLU 26	5	2	4639	4.07	0.24	-0.17
158	SLU 27	5	2	4639	4.07	0.24	-0.17
158	SLU 28	5	2	4639	4.07	0.24	-0.17
158	SLU 29	5	2	4639	4.07	0.24	-0.17
158	SLU 30	5	2	4639	4.07	0.24	-0.17
158	SLU 31	7	3	5468	4.24	0.26	-0.18
158	SLU 32	7	3	5468	4.24	0.26	-0.18
158	SLU 33	7	3	5468	4.24	0.26	-0.18
158	SLU 34	7	3	5468	4.24	0.26	-0.18
158	SLU 35	7	3	5468	4.24	0.26	-0.18
158	SLU 36	7	3	5468	4.24	0.26	-0.18
158	SLU 37	7	3	5468	4.24	0.26	-0.18
158	SLU 38	7	3	5468	4.24	0.26	-0.18
158	SLU 39	8	3	5823	4.32	0.27	-0.18
158	SLU 40	8	3	5823	4.32	0.27	-0.18
158	SLU 41	8	3	5823	4.32	0.27	-0.18
158	SLU 42	8	3	5823	4.32	0.27	-0.18
158	SLU 43	4	3	5021	4.93	0.28	-0.2
158	SLU 44	4	3	5021	4.93	0.28	-0.2
158	SLU 45	4	3	5021	4.93	0.28	-0.2
158	SLU 46	4	3	5021	4.93	0.28	-0.2
158	SLU 47	4	3	5021	4.93	0.28	-0.2
158	SLU 48	4	3	5021	4.93	0.28	-0.2
158	SLU 49	4	3	5021	4.93	0.28	-0.2
158	SLU 50	4	3	5021	4.93	0.28	-0.2
158	SLU 51	4	3	5021	4.93	0.28	-0.2
158	SLU 52	6	3	5850	5.1	0.3	-0.21
158	SLU 53	6	3	5850	5.1	0.3	-0.21
158	SLU 54	6	3	5850	5.1	0.3	-0.21
158	SLU 55	6	3	5850	5.1	0.3	-0.21
158	SLU 56	6	3	5850	5.1	0.3	-0.21
158	SLU 57	6	3	5850	5.1	0.3	-0.21
158	SLU 58	6	3	5850	5.1	0.3	-0.21
158	SLU 59	6	3	5850	5.1	0.3	-0.21
158	SLU 60	7	3	6205	5.18	0.3	-0.22
158	SLU 61	7	3	6205	5.18	0.3	-0.22
158	SLU 62	7	3	6205	5.18	0.3	-0.22
158	SLU 63	7	3	6205	5.18	0.3	-0.22
158	SLU 64	5	3	5636	5.15	0.3	-0.21
158	SLU 65	5	3	5636	5.15	0.3	-0.21
158	SLU 66	5	3	5636	5.15	0.3	-0.21
158	SLU 67	5	3	5636	5.15	0.3	-0.21
158	SLU 68	5	3	5636	5.15	0.3	-0.21
158	SLU 69	5	3	5636	5.15	0.3	-0.21
158	SLU 70	5	3	5636	5.15	0.3	-0.21
158	SLU 71	5	3	5636	5.15	0.3	-0.21
158	SLU 72	5	3	5636	5.15	0.3	-0.21
158	SLU 73	7	3	6465	5.32	0.32	-0.22
158	SLU 74	7	3	6465	5.32	0.32	-0.22
158	SLU 75	7	3	6465	5.32	0.32	-0.22
158	SLU 76	7	3	6465	5.32	0.32	-0.22
158	SLU 77	7	3	6465	5.32	0.32	-0.22
158	SLU 78	7	3	6465	5.32	0.32	-0.22
158	SLU 79	7	3	6465	5.32	0.32	-0.22
158	SLU 80	7	3	6465	5.32	0.32	-0.22
158	SLU 81	8	4	6820	5.4	0.32	-0.23



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
158	SLU 82	8	4	6820	5.4	0.32	-0.23
158	SLU 83	8	4	6820	5.4	0.32	-0.23
158	SLU 84	8	4	6820	5.4	0.32	-0.23
158	SLE RA 1	4	2	4200	3.91	0.23	-0.16
158	SLE RA 2	4	2	4200	3.91	0.23	-0.16
158	SLE RA 3	4	2	4200	3.91	0.23	-0.16
158	SLE RA 4	4	2	4200	3.91	0.23	-0.16
158	SLE RA 5	4	2	4200	3.91	0.23	-0.16
158	SLE RA 6	4	2	4200	3.91	0.23	-0.16
158	SLE RA 7	4	2	4200	3.91	0.23	-0.16
158	SLE RA 8	4	2	4200	3.91	0.23	-0.16
158	SLE RA 9	4	2	4200	3.91	0.23	-0.16
158	SLE RA 10	5	2	4753	4.03	0.24	-0.17
158	SLE RA 11	5	2	4753	4.03	0.24	-0.17
158	SLE RA 12	5	2	4753	4.03	0.24	-0.17
158	SLE RA 13	5	2	4753	4.03	0.24	-0.17
158	SLE RA 14	5	2	4753	4.03	0.24	-0.17
158	SLE RA 15	5	2	4753	4.03	0.24	-0.17
158	SLE RA 16	5	2	4753	4.03	0.24	-0.17
158	SLE RA 17	5	2	4753	4.03	0.24	-0.17
158	SLE RA 18	6	3	4989	4.08	0.24	-0.17
158	SLE RA 19	6	3	4989	4.08	0.24	-0.17
158	SLE RA 20	6	3	4989	4.08	0.24	-0.17
158	SLE RA 21	6	3	4989	4.08	0.24	-0.17
158	SLE FR 1	4	2	4200	3.91	0.23	-0.16
158	SLE FR 2	4	2	4200	3.91	0.23	-0.16
158	SLE FR 3	4	2	4200	3.91	0.23	-0.16
158	SLE FR 4	4	2	4437	3.96	0.23	-0.16
158	SLE FR 5	4	2	4437	3.96	0.23	-0.16
158	SLE FR 6	5	2	4595	4	0.23	-0.17
158	SLE QP 1	4	2	4200	3.91	0.23	-0.16
158	SLE QP 2	4	2	4437	3.96	0.23	-0.16
158	SLD 1	317	62	4707	-1.62	1.95	-3
158	SLD 2	317	43	4708	-1.62	1.96	-2.18
158	SLD 3	321	-27	4705	8.53	1.94	1.34
158	SLD 4	320	-45	4706	8.53	1.95	2.15
158	SLD 5	94	161	4521	-13.1	0.76	-7.88
158	SLD 6	93	142	4522	-13.11	0.77	-7.05
158	SLD 7	104	-134	4514	20.73	0.73	6.57
158	SLD 8	104	-153	4515	20.72	0.73	7.4
158	SLD 9	-95	158	4359	-12.8	-0.27	-7.73
158	SLD 10	-96	139	4360	-12.8	-0.26	-6.89
158	SLD 11	-85	-138	4352	21.03	-0.31	6.72
158	SLD 12	-85	-157	4353	21.03	-0.3	7.55
158	SLD 13	-312	50	4168	-0.6	-1.49	-2.48
158	SLD 14	-312	31	4169	-0.61	-1.48	-1.66
158	SLD 15	-308	-39	4166	9.55	-1.5	1.85
158	SLD 16	-309	-57	4167	9.54	-1.49	2.67
158	SLV 1	715	141	5050	-9.05	4.14	-6.77
158	SLV 2	714	98	5052	-9.06	4.15	-4.91
158	SLV 3	722	-67	5045	14.68	4.11	3.41
158	SLV 4	721	-109	5048	14.67	4.13	5.27
158	SLV 5	207	374	4627	-35.94	1.43	-18.27
158	SLV 6	206	330	4630	-35.95	1.45	-16.33
158	SLV 7	231	-317	4611	43.18	1.35	15.65
158	SLV 8	230	-362	4614	43.17	1.37	17.59
158	SLV 9	-222	366	4260	-35.25	-0.91	-17.92
158	SLV 10	-223	322	4263	-35.26	-0.89	-15.98
158	SLV 11	-197	-325	4244	43.87	-0.99	16
158	SLV 12	-198	-370	4247	43.86	-0.97	17.94
158	SLV 13	-713	114	3826	-6.75	-3.67	-5.6
158	SLV 14	-714	71	3829	-6.76	-3.65	-3.73
158	SLV 15	-705	-93	3822	16.99	-3.69	4.58
158	SLV 16	-706	-136	3824	16.98	-3.68	6.44
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	4	3	4028	3.64	0	-0.19
159	SLU 2	4	3	4028	3.64	0	-0.19
159	SLU 3	4	3	4028	3.64	0	-0.19
159	SLU 4	4	3	4028	3.64	0	-0.19
159	SLU 5	4	3	4028	3.64	0	-0.19
159	SLU 6	4	3	4028	3.64	0	-0.19
159	SLU 7	4	3	4028	3.64	0	-0.19
159	SLU 8	4	3	4028	3.64	0	-0.19
159	SLU 9	4	3	4028	3.64	0	-0.19
159	SLU 10	6	4	4856	3.79	-0.06	-0.2
159	SLU 11	6	4	4856	3.79	-0.06	-0.2
159	SLU 12	6	4	4856	3.79	-0.06	-0.2
159	SLU 13	6	4	4856	3.79	-0.06	-0.2
159	SLU 14	6	4	4856	3.79	-0.06	-0.2
159	SLU 15	6	4	4856	3.79	-0.06	-0.2
159	SLU 16	6	4	4856	3.79	-0.06	-0.2
159	SLU 17	6	4	4856	3.79	-0.06	-0.2
159	SLU 18	7	4	5211	3.86	-0.09	-0.21
159	SLU 19	7	4	5211	3.86	-0.09	-0.21
159	SLU 20	7	4	5211	3.86	-0.09	-0.21
159	SLU 21	7	4	5211	3.86	-0.09	-0.21
159	SLU 22	5	3	4643	3.84	-0.03	-0.2



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
159	SLU 23	5	3	4643	3.84	-0.03	-0.2
159	SLU 24	5	3	4643	3.84	-0.03	-0.2
159	SLU 25	5	3	4643	3.84	-0.03	-0.2
159	SLU 26	5	3	4643	3.84	-0.03	-0.2
159	SLU 27	5	3	4643	3.84	-0.03	-0.2
159	SLU 28	5	3	4643	3.84	-0.03	-0.2
159	SLU 29	5	3	4643	3.84	-0.03	-0.2
159	SLU 30	5	3	4643	3.84	-0.03	-0.2
159	SLU 31	8	4	5471	4	-0.1	-0.22
159	SLU 32	8	4	5471	4	-0.1	-0.22
159	SLU 33	8	4	5471	4	-0.1	-0.22
159	SLU 34	8	4	5471	4	-0.1	-0.22
159	SLU 35	8	4	5471	4	-0.1	-0.22
159	SLU 36	8	4	5471	4	-0.1	-0.22
159	SLU 37	8	4	5471	4	-0.1	-0.22
159	SLU 38	8	4	5471	4	-0.1	-0.22
159	SLU 39	9	4	5826	4.06	-0.12	-0.22
159	SLU 40	9	4	5826	4.06	-0.12	-0.22
159	SLU 41	9	4	5826	4.06	-0.12	-0.22
159	SLU 42	9	4	5826	4.06	-0.12	-0.22
159	SLU 43	4	4	5026	4.66	0.01	-0.24
159	SLU 44	4	4	5026	4.66	0.01	-0.24
159	SLU 45	4	4	5026	4.66	0.01	-0.24
159	SLU 46	4	4	5026	4.66	0.01	-0.24
159	SLU 47	4	4	5026	4.66	0.01	-0.24
159	SLU 48	4	4	5026	4.66	0.01	-0.24
159	SLU 49	4	4	5026	4.66	0.01	-0.24
159	SLU 50	4	4	5026	4.66	0.01	-0.24
159	SLU 51	4	4	5026	4.66	0.01	-0.24
159	SLU 52	7	4	5854	4.81	-0.05	-0.26
159	SLU 53	7	4	5854	4.81	-0.05	-0.26
159	SLU 54	7	4	5854	4.81	-0.05	-0.26
159	SLU 55	7	4	5854	4.81	-0.05	-0.26
159	SLU 56	7	4	5854	4.81	-0.05	-0.26
159	SLU 57	7	4	5854	4.81	-0.05	-0.26
159	SLU 58	7	4	5854	4.81	-0.05	-0.26
159	SLU 59	7	4	5854	4.81	-0.05	-0.26
159	SLU 60	8	5	6209	4.88	-0.08	-0.26
159	SLU 61	8	5	6209	4.88	-0.08	-0.26
159	SLU 62	8	5	6209	4.88	-0.08	-0.26
159	SLU 63	8	5	6209	4.88	-0.08	-0.26
159	SLU 64	6	4	5641	4.86	-0.02	-0.25
159	SLU 65	6	4	5641	4.86	-0.02	-0.25
159	SLU 66	6	4	5641	4.86	-0.02	-0.25
159	SLU 67	6	4	5641	4.86	-0.02	-0.25
159	SLU 68	6	4	5641	4.86	-0.02	-0.25
159	SLU 69	6	4	5641	4.86	-0.02	-0.25
159	SLU 70	6	4	5641	4.86	-0.02	-0.25
159	SLU 71	6	4	5641	4.86	-0.02	-0.25
159	SLU 72	6	4	5641	4.86	-0.02	-0.25
159	SLU 73	8	5	6469	5.02	-0.08	-0.27
159	SLU 74	8	5	6469	5.02	-0.08	-0.27
159	SLU 75	8	5	6469	5.02	-0.08	-0.27
159	SLU 76	8	5	6469	5.02	-0.08	-0.27
159	SLU 77	8	5	6469	5.02	-0.08	-0.27
159	SLU 78	8	5	6469	5.02	-0.08	-0.27
159	SLU 79	8	5	6469	5.02	-0.08	-0.27
159	SLU 80	8	5	6469	5.02	-0.08	-0.27
159	SLU 81	9	5	6823	5.08	-0.11	-0.28
159	SLU 82	9	5	6823	5.08	-0.11	-0.28
159	SLU 83	9	5	6823	5.08	-0.11	-0.28
159	SLU 84	9	5	6823	5.08	-0.11	-0.28
159	SLE RA 1	4	3	4204	3.7	-0.01	-0.19
159	SLE RA 2	4	3	4204	3.7	-0.01	-0.19
159	SLE RA 3	4	3	4204	3.7	-0.01	-0.19
159	SLE RA 4	4	3	4204	3.7	-0.01	-0.19
159	SLE RA 5	4	3	4204	3.7	-0.01	-0.19
159	SLE RA 6	4	3	4204	3.7	-0.01	-0.19
159	SLE RA 7	4	3	4204	3.7	-0.01	-0.19
159	SLE RA 8	4	3	4204	3.7	-0.01	-0.19
159	SLE RA 9	4	3	4204	3.7	-0.01	-0.19
159	SLE RA 10	6	3	4756	3.8	-0.05	-0.2
159	SLE RA 11	6	3	4756	3.8	-0.05	-0.2
159	SLE RA 12	6	3	4756	3.8	-0.05	-0.2
159	SLE RA 13	6	3	4756	3.8	-0.05	-0.2
159	SLE RA 14	6	3	4756	3.8	-0.05	-0.2
159	SLE RA 15	6	3	4756	3.8	-0.05	-0.2
159	SLE RA 16	6	3	4756	3.8	-0.05	-0.2
159	SLE RA 17	6	3	4756	3.8	-0.05	-0.2
159	SLE RA 18	6	4	4992	3.84	-0.07	-0.21
159	SLE RA 19	6	4	4992	3.84	-0.07	-0.21
159	SLE RA 20	6	4	4992	3.84	-0.07	-0.21
159	SLE RA 21	6	4	4992	3.84	-0.07	-0.21
159	SLE FR 1	4	3	4204	3.7	-0.01	-0.19
159	SLE FR 2	4	3	4204	3.7	-0.01	-0.19
159	SLE FR 3	4	3	4204	3.7	-0.01	-0.19
159	SLE FR 4	5	3	4440	3.74	-0.03	-0.2
159	SLE FR 5	5	3	4440	3.74	-0.03	-0.2
159	SLE FR 6	5	3	4598	3.77	-0.04	-0.2
159	SLE QP 1	4	3	4204	3.7	-0.01	-0.19



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
159	SLE QP 2	5	3	4440	3.74	-0.03	-0.2
159	SLD 1	318	79	4763	-1.67	1.7	-3.46
159	SLD 2	317	56	4765	-1.67	1.7	-2.59
159	SLD 3	321	-34	4761	8.14	1.69	1.63
159	SLD 4	320	-58	4762	8.14	1.69	2.51
159	SLD 5	94	207	4540	-12.75	0.5	-9.22
159	SLD 6	94	183	4542	-12.75	0.51	-8.32
159	SLD 7	104	-172	4533	19.93	0.47	7.76
159	SLD 8	104	-196	4534	19.93	0.48	8.66
159	SLD 9	-95	202	4347	-12.45	-0.53	-9.05
159	SLD 10	-95	178	4348	-12.45	-0.52	-8.15
159	SLD 11	-84	-176	4339	20.23	-0.56	7.93
159	SLD 12	-84	-200	4341	20.23	-0.56	8.82
159	SLD 13	-311	64	4118	-0.65	-1.75	-2.9
159	SLD 14	-311	41	4120	-0.66	-1.74	-2.02
159	SLD 15	-308	-49	4116	9.15	-1.76	2.19
159	SLD 16	-308	-73	4118	9.15	-1.75	3.07
159	SLV 1	715	180	5174	-8.87	3.88	-7.82
159	SLV 2	714	127	5177	-8.87	3.9	-5.81
159	SLV 3	722	-86	5168	14.06	3.86	4.13
159	SLV 4	721	-139	5171	14.05	3.87	6.15
159	SLV 5	207	479	4667	-34.82	1.18	-21.36
159	SLV 6	206	424	4671	-34.82	1.19	-19.27
159	SLV 7	231	-408	4649	41.61	1.1	18.49
159	SLV 8	230	-462	4653	41.61	1.11	20.58
159	SLV 9	-221	469	4228	-34.13	-1.17	-20.98
159	SLV 10	-222	414	4231	-34.13	-1.15	-18.89
159	SLV 11	-196	-418	4210	42.3	-1.25	18.88
159	SLV 12	-197	-473	4213	42.3	-1.23	20.97
159	SLV 13	-712	146	3709	-6.57	-3.93	-6.54
159	SLV 14	-713	93	3713	-6.58	-3.91	-4.53
159	SLV 15	-704	-120	3704	16.36	-3.95	5.42
159	SLV 16	-705	-173	3707	16.35	-3.94	7.43
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	4	4	4024	3.43	-0.27	-0.21
160	SLU 2	4	4	4024	3.43	-0.27	-0.21
160	SLU 3	4	4	4024	3.43	-0.27	-0.21
160	SLU 4	4	4	4024	3.43	-0.27	-0.21
160	SLU 5	4	4	4024	3.43	-0.27	-0.21
160	SLU 6	4	4	4024	3.43	-0.27	-0.21
160	SLU 7	4	4	4024	3.43	-0.27	-0.21
160	SLU 8	4	4	4024	3.43	-0.27	-0.21
160	SLU 9	4	4	4024	3.43	-0.27	-0.21
160	SLU 10	7	5	4849	3.57	-0.43	-0.23
160	SLU 11	7	5	4849	3.57	-0.43	-0.23
160	SLU 12	7	5	4849	3.57	-0.43	-0.23
160	SLU 13	7	5	4849	3.57	-0.43	-0.23
160	SLU 14	7	5	4849	3.57	-0.43	-0.23
160	SLU 15	7	5	4849	3.57	-0.43	-0.23
160	SLU 16	7	5	4849	3.57	-0.43	-0.23
160	SLU 17	7	5	4849	3.57	-0.43	-0.23
160	SLU 18	8	5	5202	3.63	-0.5	-0.24
160	SLU 19	8	5	5202	3.63	-0.5	-0.24
160	SLU 20	8	5	5202	3.63	-0.5	-0.24
160	SLU 21	8	5	5202	3.63	-0.5	-0.24
160	SLU 22	6	5	4637	3.62	-0.38	-0.23
160	SLU 23	6	5	4637	3.62	-0.38	-0.23
160	SLU 24	6	5	4637	3.62	-0.38	-0.23
160	SLU 25	6	5	4637	3.62	-0.38	-0.23
160	SLU 26	6	5	4637	3.62	-0.38	-0.23
160	SLU 27	6	5	4637	3.62	-0.38	-0.23
160	SLU 28	6	5	4637	3.62	-0.38	-0.23
160	SLU 29	6	5	4637	3.62	-0.38	-0.23
160	SLU 30	6	5	4637	3.62	-0.38	-0.23
160	SLU 31	9	5	5461	3.76	-0.54	-0.25
160	SLU 32	9	5	5461	3.76	-0.54	-0.25
160	SLU 33	9	5	5461	3.76	-0.54	-0.25
160	SLU 34	9	5	5461	3.76	-0.54	-0.25
160	SLU 35	9	5	5461	3.76	-0.54	-0.25
160	SLU 36	9	5	5461	3.76	-0.54	-0.25
160	SLU 37	9	5	5461	3.76	-0.54	-0.25
160	SLU 38	9	5	5461	3.76	-0.54	-0.25
160	SLU 39	10	6	5814	3.81	-0.61	-0.26
160	SLU 40	10	6	5814	3.81	-0.61	-0.26
160	SLU 41	10	6	5814	3.81	-0.61	-0.26
160	SLU 42	10	6	5814	3.81	-0.61	-0.26
160	SLU 43	5	5	5022	4.4	-0.31	-0.27
160	SLU 44	5	5	5022	4.4	-0.31	-0.27
160	SLU 45	5	5	5022	4.4	-0.31	-0.27
160	SLU 46	5	5	5022	4.4	-0.31	-0.27
160	SLU 47	5	5	5022	4.4	-0.31	-0.27
160	SLU 48	5	5	5022	4.4	-0.31	-0.27
160	SLU 49	5	5	5022	4.4	-0.31	-0.27
160	SLU 50	5	5	5022	4.4	-0.31	-0.27
160	SLU 51	5	5	5022	4.4	-0.31	-0.27
160	SLU 52	7	6	5846	4.53	-0.48	-0.29
160	SLU 53	7	6	5846	4.53	-0.48	-0.29



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
160	SLU 54	7	6	5846	4.53	-0.48	-0.29
160	SLU 55	7	6	5846	4.53	-0.48	-0.29
160	SLU 56	7	6	5846	4.53	-0.48	-0.29
160	SLU 57	7	6	5846	4.53	-0.48	-0.29
160	SLU 58	7	6	5846	4.53	-0.48	-0.29
160	SLU 59	7	6	5846	4.53	-0.48	-0.29
160	SLU 60	8	6	6199	4.59	-0.55	-0.3
160	SLU 61	8	6	6199	4.59	-0.55	-0.3
160	SLU 62	8	6	6199	4.59	-0.55	-0.3
160	SLU 63	8	6	6199	4.59	-0.55	-0.3
160	SLU 64	6	6	5634	4.59	-0.42	-0.29
160	SLU 65	6	6	5634	4.59	-0.42	-0.29
160	SLU 66	6	6	5634	4.59	-0.42	-0.29
160	SLU 67	6	6	5634	4.59	-0.42	-0.29
160	SLU 68	6	6	5634	4.59	-0.42	-0.29
160	SLU 69	6	6	5634	4.59	-0.42	-0.29
160	SLU 70	6	6	5634	4.59	-0.42	-0.29
160	SLU 71	6	6	5634	4.59	-0.42	-0.29
160	SLU 72	6	6	5634	4.59	-0.42	-0.29
160	SLU 73	9	6	6458	4.72	-0.58	-0.31
160	SLU 74	9	6	6458	4.72	-0.58	-0.31
160	SLU 75	9	6	6458	4.72	-0.58	-0.31
160	SLU 76	9	6	6458	4.72	-0.58	-0.31
160	SLU 77	9	6	6458	4.72	-0.58	-0.31
160	SLU 78	9	6	6458	4.72	-0.58	-0.31
160	SLU 79	9	6	6458	4.72	-0.58	-0.31
160	SLU 80	9	6	6458	4.72	-0.58	-0.31
160	SLU 81	10	7	6812	4.78	-0.66	-0.32
160	SLU 82	10	7	6812	4.78	-0.66	-0.32
160	SLU 83	10	7	6812	4.78	-0.66	-0.32
160	SLU 84	10	7	6812	4.78	-0.66	-0.32
160	SLE RA 1	4	4	4199	3.49	-0.3	-0.22
160	SLE RA 2	4	4	4199	3.49	-0.3	-0.22
160	SLE RA 3	4	4	4199	3.49	-0.3	-0.22
160	SLE RA 4	4	4	4199	3.49	-0.3	-0.22
160	SLE RA 5	4	4	4199	3.49	-0.3	-0.22
160	SLE RA 6	4	4	4199	3.49	-0.3	-0.22
160	SLE RA 7	4	4	4199	3.49	-0.3	-0.22
160	SLE RA 8	4	4	4199	3.49	-0.3	-0.22
160	SLE RA 9	4	4	4199	3.49	-0.3	-0.22
160	SLE RA 10	6	5	4749	3.58	-0.41	-0.23
160	SLE RA 11	6	5	4749	3.58	-0.41	-0.23
160	SLE RA 12	6	5	4749	3.58	-0.41	-0.23
160	SLE RA 13	6	5	4749	3.58	-0.41	-0.23
160	SLE RA 14	6	5	4749	3.58	-0.41	-0.23
160	SLE RA 15	6	5	4749	3.58	-0.41	-0.23
160	SLE RA 16	6	5	4749	3.58	-0.41	-0.23
160	SLE RA 17	6	5	4749	3.58	-0.41	-0.23
160	SLE RA 18	7	5	4984	3.62	-0.46	-0.24
160	SLE RA 19	7	5	4984	3.62	-0.46	-0.24
160	SLE RA 20	7	5	4984	3.62	-0.46	-0.24
160	SLE RA 21	7	5	4984	3.62	-0.46	-0.24
160	SLE FR 1	4	4	4199	3.49	-0.3	-0.22
160	SLE FR 2	4	4	4199	3.49	-0.3	-0.22
160	SLE FR 3	4	4	4199	3.49	-0.3	-0.22
160	SLE FR 4	5	4	4435	3.53	-0.34	-0.22
160	SLE FR 5	5	4	4435	3.53	-0.34	-0.22
160	SLE FR 6	6	5	4592	3.55	-0.38	-0.23
160	SLE QP 1	4	4	4199	3.49	-0.3	-0.22
160	SLE QP 2	5	4	4435	3.53	-0.34	-0.22
160	SLD 1	318	99	4810	-1.71	1.34	-3.9
160	SLD 2	317	71	4812	-1.71	1.35	-2.94
160	SLD 3	321	-44	4808	7.75	1.33	1.88
160	SLD 4	320	-71	4809	7.75	1.34	2.84
160	SLD 5	94	259	4551	-12.4	0.17	-10.44
160	SLD 6	94	230	4552	-12.4	0.18	-9.46
160	SLD 7	105	-216	4542	19.15	0.14	8.83
160	SLD 8	104	-244	4544	19.15	0.15	9.8
160	SLD 9	-94	253	4326	-12.1	-0.84	-10.25
160	SLD 10	-94	225	4327	-12.1	-0.83	-9.28
160	SLD 11	-83	-221	4317	19.45	-0.87	9.01
160	SLD 12	-84	-250	4319	19.45	-0.86	9.99
160	SLD 13	-310	80	4060	-0.7	-2.03	-3.29
160	SLD 14	-310	52	4062	-0.7	-2.02	-2.33
160	SLD 15	-307	-62	4058	8.76	-2.04	2.49
160	SLD 16	-307	-90	4059	8.76	-2.03	3.45
160	SLV 1	714	224	5287	-8.69	3.49	-8.79
160	SLV 2	713	160	5291	-8.68	3.5	-6.61
160	SLV 3	722	-110	5281	13.45	3.46	4.78
160	SLV 4	721	-173	5285	13.45	3.47	6.96
160	SLV 5	207	600	4698	-33.71	0.84	-24.18
160	SLV 6	206	533	4702	-33.7	0.85	-21.92
160	SLV 7	232	-512	4678	40.07	0.76	21.05
160	SLV 8	231	-578	4682	40.07	0.77	23.32
160	SLV 9	-220	587	4188	-33.02	-1.46	-23.77
160	SLV 10	-221	521	4191	-33.02	-1.45	-21.5
160	SLV 11	-196	-525	4167	40.75	-1.54	21.47
160	SLV 12	-197	-591	4171	40.76	-1.53	23.73
160	SLV 13	-710	182	3585	-6.4	-4.16	-7.41
160	SLV 14	-711	118	3588	-6.39	-4.15	-5.23



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
160	SLV 15	-703	-151	3579	15.74	-4.19	6.16
160	SLV 16	-704	-215	3582	15.74	-4.18	8.34
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	4	5	4012	3.23	-0.52	-0.23
161	SLU 2	4	5	4012	3.23	-0.52	-0.23
161	SLU 3	4	5	4012	3.23	-0.52	-0.23
161	SLU 4	4	5	4012	3.23	-0.52	-0.23
161	SLU 5	4	5	4012	3.23	-0.52	-0.23
161	SLU 6	4	5	4012	3.23	-0.52	-0.23
161	SLU 7	4	5	4012	3.23	-0.52	-0.23
161	SLU 8	4	5	4012	3.23	-0.52	-0.23
161	SLU 9	4	5	4012	3.23	-0.52	-0.23
161	SLU 10	7	6	4829	3.35	-0.82	-0.25
161	SLU 11	7	6	4829	3.35	-0.82	-0.25
161	SLU 12	7	6	4829	3.35	-0.82	-0.25
161	SLU 13	7	6	4829	3.35	-0.82	-0.25
161	SLU 14	7	6	4829	3.35	-0.82	-0.25
161	SLU 15	7	6	4829	3.35	-0.82	-0.25
161	SLU 16	7	6	4829	3.35	-0.82	-0.25
161	SLU 17	7	6	4829	3.35	-0.82	-0.25
161	SLU 18	9	6	5180	3.4	-0.94	-0.26
161	SLU 19	9	6	5180	3.4	-0.94	-0.26
161	SLU 20	9	6	5180	3.4	-0.94	-0.26
161	SLU 21	9	6	5180	3.4	-0.94	-0.26
161	SLU 22	6	6	4620	3.4	-0.72	-0.25
161	SLU 23	6	6	4620	3.4	-0.72	-0.25
161	SLU 24	6	6	4620	3.4	-0.72	-0.25
161	SLU 25	6	6	4620	3.4	-0.72	-0.25
161	SLU 26	6	6	4620	3.4	-0.72	-0.25
161	SLU 27	6	6	4620	3.4	-0.72	-0.25
161	SLU 28	6	6	4620	3.4	-0.72	-0.25
161	SLU 29	6	6	4620	3.4	-0.72	-0.25
161	SLU 30	6	6	4620	3.4	-0.72	-0.25
161	SLU 31	9	7	5437	3.52	-1.02	-0.27
161	SLU 32	9	7	5437	3.52	-1.02	-0.27
161	SLU 33	9	7	5437	3.52	-1.02	-0.27
161	SLU 34	9	7	5437	3.52	-1.02	-0.27
161	SLU 35	9	7	5437	3.52	-1.02	-0.27
161	SLU 36	9	7	5437	3.52	-1.02	-0.27
161	SLU 37	9	7	5437	3.52	-1.02	-0.27
161	SLU 38	9	7	5437	3.52	-1.02	-0.27
161	SLU 39	11	7	5787	3.57	-1.14	-0.28
161	SLU 40	11	7	5787	3.57	-1.14	-0.28
161	SLU 41	11	7	5787	3.57	-1.14	-0.28
161	SLU 42	11	7	5787	3.57	-1.14	-0.28
161	SLU 43	5	7	5007	4.15	-0.61	-0.3
161	SLU 44	5	7	5007	4.15	-0.61	-0.3
161	SLU 45	5	7	5007	4.15	-0.61	-0.3
161	SLU 46	5	7	5007	4.15	-0.61	-0.3
161	SLU 47	5	7	5007	4.15	-0.61	-0.3
161	SLU 48	5	7	5007	4.15	-0.61	-0.3
161	SLU 49	5	7	5007	4.15	-0.61	-0.3
161	SLU 50	5	7	5007	4.15	-0.61	-0.3
161	SLU 51	5	7	5007	4.15	-0.61	-0.3
161	SLU 52	8	7	5825	4.26	-0.9	-0.32
161	SLU 53	8	7	5825	4.26	-0.9	-0.32
161	SLU 54	8	7	5825	4.26	-0.9	-0.32
161	SLU 55	8	7	5825	4.26	-0.9	-0.32
161	SLU 56	8	7	5825	4.26	-0.9	-0.32
161	SLU 57	8	7	5825	4.26	-0.9	-0.32
161	SLU 58	8	7	5825	4.26	-0.9	-0.32
161	SLU 59	8	7	5825	4.26	-0.9	-0.32
161	SLU 60	9	8	6175	4.32	-1.03	-0.33
161	SLU 61	9	8	6175	4.32	-1.03	-0.33
161	SLU 62	9	8	6175	4.32	-1.03	-0.33
161	SLU 63	9	8	6175	4.32	-1.03	-0.33
161	SLU 64	7	7	5615	4.32	-0.81	-0.32
161	SLU 65	7	7	5615	4.32	-0.81	-0.32
161	SLU 66	7	7	5615	4.32	-0.81	-0.32
161	SLU 67	7	7	5615	4.32	-0.81	-0.32
161	SLU 68	7	7	5615	4.32	-0.81	-0.32
161	SLU 69	7	7	5615	4.32	-0.81	-0.32
161	SLU 70	7	7	5615	4.32	-0.81	-0.32
161	SLU 71	7	7	5615	4.32	-0.81	-0.32
161	SLU 72	7	7	5615	4.32	-0.81	-0.32
161	SLU 73	10	8	6432	4.43	-1.1	-0.34
161	SLU 74	10	8	6432	4.43	-1.1	-0.34
161	SLU 75	10	8	6432	4.43	-1.1	-0.34
161	SLU 76	10	8	6432	4.43	-1.1	-0.34
161	SLU 77	10	8	6432	4.43	-1.1	-0.34
161	SLU 78	10	8	6432	4.43	-1.1	-0.34
161	SLU 79	10	8	6432	4.43	-1.1	-0.34
161	SLU 80	10	8	6432	4.43	-1.1	-0.34
161	SLU 81	11	8	6783	4.49	-1.23	-0.34
161	SLU 82	11	8	6783	4.49	-1.23	-0.34
161	SLU 83	11	8	6783	4.49	-1.23	-0.34
161	SLU 84	11	8	6783	4.49	-1.23	-0.34



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
161	SLE RA 1	5	5	4186	3.28	-0.58	-0.24
161	SLE RA 2	5	5	4186	3.28	-0.58	-0.24
161	SLE RA 3	5	5	4186	3.28	-0.58	-0.24
161	SLE RA 4	5	5	4186	3.28	-0.58	-0.24
161	SLE RA 5	5	5	4186	3.28	-0.58	-0.24
161	SLE RA 6	5	5	4186	3.28	-0.58	-0.24
161	SLE RA 7	5	5	4186	3.28	-0.58	-0.24
161	SLE RA 8	5	5	4186	3.28	-0.58	-0.24
161	SLE RA 9	5	5	4186	3.28	-0.58	-0.24
161	SLE RA 10	7	6	4731	3.36	-0.77	-0.25
161	SLE RA 11	7	6	4731	3.36	-0.77	-0.25
161	SLE RA 12	7	6	4731	3.36	-0.77	-0.25
161	SLE RA 13	7	6	4731	3.36	-0.77	-0.25
161	SLE RA 14	7	6	4731	3.36	-0.77	-0.25
161	SLE RA 15	7	6	4731	3.36	-0.77	-0.25
161	SLE RA 16	7	6	4731	3.36	-0.77	-0.25
161	SLE RA 17	7	6	4731	3.36	-0.77	-0.25
161	SLE RA 18	8	6	4964	3.4	-0.86	-0.26
161	SLE RA 19	8	6	4964	3.4	-0.86	-0.26
161	SLE RA 20	8	6	4964	3.4	-0.86	-0.26
161	SLE RA 21	8	6	4964	3.4	-0.86	-0.26
161	SLE FR 1	5	5	4186	3.28	-0.58	-0.24
161	SLE FR 2	5	5	4186	3.28	-0.58	-0.24
161	SLE FR 3	5	5	4186	3.28	-0.58	-0.24
161	SLE FR 4	6	6	4419	3.32	-0.66	-0.24
161	SLE FR 5	6	6	4419	3.32	-0.66	-0.24
161	SLE FR 6	6	6	4575	3.34	-0.72	-0.25
161	SLE QP 1	5	5	4186	3.28	-0.58	-0.24
161	SLE QP 2	6	6	4419	3.32	-0.66	-0.24
161	SLD 1	318	121	4845	-1.75	0.92	-4.28
161	SLD 2	317	87	4847	-1.75	0.93	-3.24
161	SLD 3	321	-54	4842	7.38	0.91	2.1
161	SLD 4	320	-87	4844	7.38	0.92	3.14
161	SLD 5	95	317	4551	-12.05	-0.17	-11.5
161	SLD 6	94	283	4552	-12.05	-0.17	-10.45
161	SLD 7	105	-265	4541	18.38	-0.21	9.76
161	SLD 8	105	-299	4543	18.38	-0.2	10.82
161	SLD 9	-93	310	4296	-11.75	-1.12	-11.31
161	SLD 10	-94	276	4297	-11.74	-1.12	-10.25
161	SLD 11	-83	-272	4286	18.68	-1.15	9.96
161	SLD 12	-83	-306	4288	18.68	-1.15	11.01
161	SLD 13	-309	98	3994	-0.75	-2.24	-3.63
161	SLD 14	-309	65	3996	-0.74	-2.24	-2.59
161	SLD 15	-306	-76	3991	8.38	-2.25	2.75
161	SLD 16	-306	-109	3993	8.38	-2.25	3.79
161	SLV 1	714	273	5386	-8.5	2.94	-9.66
161	SLV 2	713	198	5390	-8.49	2.94	-7.29
161	SLV 3	721	-136	5380	12.84	2.92	5.32
161	SLV 4	720	-212	5384	12.85	2.92	7.69
161	SLV 5	207	735	4718	-32.6	0.45	-26.66
161	SLV 6	206	656	4722	-32.59	0.46	-24.21
161	SLV 7	232	-629	4696	38.54	0.38	23.27
161	SLV 8	231	-708	4700	38.55	0.38	25.73
161	SLV 9	-219	719	4139	-31.92	-1.71	-26.22
161	SLV 10	-220	641	4143	-31.91	-1.7	-23.76
161	SLV 11	-195	-645	4116	39.23	-1.78	23.72
161	SLV 12	-196	-723	4120	39.24	-1.77	26.17
161	SLV 13	-708	223	3455	-6.22	-4.25	-8.18
161	SLV 14	-709	147	3459	-6.21	-4.24	-5.81
161	SLV 15	-701	-186	3448	15.13	-4.27	6.8
161	SLV 16	-702	-262	3452	15.13	-4.26	9.17
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	4	7	3994	3.04	-0.62	-0.25
162	SLU 2	4	7	3994	3.04	-0.62	-0.25
162	SLU 3	4	7	3994	3.04	-0.62	-0.25
162	SLU 4	4	7	3994	3.04	-0.62	-0.25
162	SLU 5	4	7	3994	3.04	-0.62	-0.25
162	SLU 6	4	7	3994	3.04	-0.62	-0.25
162	SLU 7	4	7	3994	3.04	-0.62	-0.25
162	SLU 8	4	7	3994	3.04	-0.62	-0.25
162	SLU 9	4	7	3994	3.04	-0.62	-0.25
162	SLU 10	8	7	4800	3.14	-1.06	-0.27
162	SLU 11	8	7	4800	3.14	-1.06	-0.27
162	SLU 12	8	7	4800	3.14	-1.06	-0.27
162	SLU 13	8	7	4800	3.14	-1.06	-0.27
162	SLU 14	8	7	4800	3.14	-1.06	-0.27
162	SLU 15	8	7	4800	3.14	-1.06	-0.27
162	SLU 16	8	7	4800	3.14	-1.06	-0.27
162	SLU 17	8	7	4800	3.14	-1.06	-0.27
162	SLU 18	9	8	5145	3.19	-1.24	-0.28
162	SLU 19	9	8	5145	3.19	-1.24	-0.28
162	SLU 20	9	8	5145	3.19	-1.24	-0.28
162	SLU 21	9	8	5145	3.19	-1.24	-0.28
162	SLU 22	7	7	4594	3.2	-0.92	-0.26
162	SLU 23	7	7	4594	3.2	-0.92	-0.26
162	SLU 24	7	7	4594	3.2	-0.92	-0.26
162	SLU 25	7	7	4594	3.2	-0.92	-0.26



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
162	SLU 26	7	7	4594	3.2	-0.92	-0.26
162	SLU 27	7	7	4594	3.2	-0.92	-0.26
162	SLU 28	7	7	4594	3.2	-0.92	-0.26
162	SLU 29	7	7	4594	3.2	-0.92	-0.26
162	SLU 30	7	7	4594	3.2	-0.92	-0.26
162	SLU 31	10	8	5400	3.3	-1.36	-0.29
162	SLU 32	10	8	5400	3.3	-1.36	-0.29
162	SLU 33	10	8	5400	3.3	-1.36	-0.29
162	SLU 34	10	8	5400	3.3	-1.36	-0.29
162	SLU 35	10	8	5400	3.3	-1.36	-0.29
162	SLU 36	10	8	5400	3.3	-1.36	-0.29
162	SLU 37	10	8	5400	3.3	-1.36	-0.29
162	SLU 38	10	8	5400	3.3	-1.36	-0.29
162	SLU 39	11	9	5745	3.34	-1.54	-0.3
162	SLU 40	11	9	5745	3.34	-1.54	-0.3
162	SLU 41	11	9	5745	3.34	-1.54	-0.3
162	SLU 42	11	9	5745	3.34	-1.54	-0.3
162	SLU 43	5	8	4986	3.9	-0.71	-0.31
162	SLU 44	5	8	4986	3.9	-0.71	-0.31
162	SLU 45	5	8	4986	3.9	-0.71	-0.31
162	SLU 46	5	8	4986	3.9	-0.71	-0.31
162	SLU 47	5	8	4986	3.9	-0.71	-0.31
162	SLU 48	5	8	4986	3.9	-0.71	-0.31
162	SLU 49	5	8	4986	3.9	-0.71	-0.31
162	SLU 50	5	8	4986	3.9	-0.71	-0.31
162	SLU 51	5	8	4986	3.9	-0.71	-0.31
162	SLU 52	8	9	5793	4	-1.14	-0.34
162	SLU 53	8	9	5793	4	-1.14	-0.34
162	SLU 54	8	9	5793	4	-1.14	-0.34
162	SLU 55	8	9	5793	4	-1.14	-0.34
162	SLU 56	8	9	5793	4	-1.14	-0.34
162	SLU 57	8	9	5793	4	-1.14	-0.34
162	SLU 58	8	9	5793	4	-1.14	-0.34
162	SLU 59	8	9	5793	4	-1.14	-0.34
162	SLU 60	10	10	6138	4.05	-1.33	-0.35
162	SLU 61	10	10	6138	4.05	-1.33	-0.35
162	SLU 62	10	10	6138	4.05	-1.33	-0.35
162	SLU 63	10	10	6138	4.05	-1.33	-0.35
162	SLU 64	7	9	5586	4.05	-1.01	-0.33
162	SLU 65	7	9	5586	4.05	-1.01	-0.33
162	SLU 66	7	9	5586	4.05	-1.01	-0.33
162	SLU 67	7	9	5586	4.05	-1.01	-0.33
162	SLU 68	7	9	5586	4.05	-1.01	-0.33
162	SLU 69	7	9	5586	4.05	-1.01	-0.33
162	SLU 70	7	9	5586	4.05	-1.01	-0.33
162	SLU 71	7	9	5586	4.05	-1.01	-0.33
162	SLU 72	7	9	5586	4.05	-1.01	-0.33
162	SLU 73	10	10	6392	4.16	-1.44	-0.35
162	SLU 74	10	10	6392	4.16	-1.44	-0.35
162	SLU 75	10	10	6392	4.16	-1.44	-0.35
162	SLU 76	10	10	6392	4.16	-1.44	-0.35
162	SLU 77	10	10	6392	4.16	-1.44	-0.35
162	SLU 78	10	10	6392	4.16	-1.44	-0.35
162	SLU 79	10	10	6392	4.16	-1.44	-0.35
162	SLU 80	10	10	6392	4.16	-1.44	-0.35
162	SLU 81	12	10	6738	4.2	-1.63	-0.36
162	SLU 82	12	10	6738	4.2	-1.63	-0.36
162	SLU 83	12	10	6738	4.2	-1.63	-0.36
162	SLU 84	12	10	6738	4.2	-1.63	-0.36
162	SLE RA 1	5	7	4165	3.08	-0.71	-0.25
162	SLE RA 2	5	7	4165	3.08	-0.71	-0.25
162	SLE RA 3	5	7	4165	3.08	-0.71	-0.25
162	SLE RA 4	5	7	4165	3.08	-0.71	-0.25
162	SLE RA 5	5	7	4165	3.08	-0.71	-0.25
162	SLE RA 6	5	7	4165	3.08	-0.71	-0.25
162	SLE RA 7	5	7	4165	3.08	-0.71	-0.25
162	SLE RA 8	5	7	4165	3.08	-0.71	-0.25
162	SLE RA 9	5	7	4165	3.08	-0.71	-0.25
162	SLE RA 10	7	7	4703	3.15	-1	-0.27
162	SLE RA 11	7	7	4703	3.15	-1	-0.27
162	SLE RA 12	7	7	4703	3.15	-1	-0.27
162	SLE RA 13	7	7	4703	3.15	-1	-0.27
162	SLE RA 14	7	7	4703	3.15	-1	-0.27
162	SLE RA 15	7	7	4703	3.15	-1	-0.27
162	SLE RA 16	7	7	4703	3.15	-1	-0.27
162	SLE RA 17	7	7	4703	3.15	-1	-0.27
162	SLE RA 18	8	8	4933	3.18	-1.12	-0.27
162	SLE RA 19	8	8	4933	3.18	-1.12	-0.27
162	SLE RA 20	8	8	4933	3.18	-1.12	-0.27
162	SLE RA 21	8	8	4933	3.18	-1.12	-0.27
162	SLE FR 1	5	7	4165	3.08	-0.71	-0.25
162	SLE FR 2	5	7	4165	3.08	-0.71	-0.25
162	SLE FR 3	5	7	4165	3.08	-0.71	-0.25
162	SLE FR 4	6	7	4396	3.11	-0.83	-0.26
162	SLE FR 5	6	7	4396	3.11	-0.83	-0.26
162	SLE FR 6	7	7	4549	3.13	-0.92	-0.26
162	SLE QP 1	5	7	4165	3.08	-0.71	-0.25
162	SLE QP 2	6	7	4396	3.11	-0.83	-0.26
162	SLD 1	317	144	4868	-1.79	0.56	-4.59
162	SLD 2	317	105	4869	-1.78	0.56	-3.48



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
162	SLD 3	320	-65	4865	7.01	0.55	2.28
162	SLD 4	320	-104	4866	7.01	0.55	3.39
162	SLD 5	95	380	4541	-11.7	-0.4	-12.38
162	SLD 6	94	341	4543	-11.69	-0.4	-11.24
162	SLD 7	105	-319	4531	17.62	-0.43	10.52
162	SLD 8	105	-358	4533	17.62	-0.43	11.66
162	SLD 9	-93	372	4259	-11.4	-1.23	-12.18
162	SLD 10	-93	333	4260	-11.39	-1.23	-11.04
162	SLD 11	-82	-327	4248	17.92	-1.27	10.73
162	SLD 12	-83	-366	4250	17.92	-1.27	11.87
162	SLD 13	-308	118	3925	-0.79	-2.22	-3.91
162	SLD 14	-308	79	3927	-0.78	-2.22	-2.79
162	SLD 15	-305	-92	3922	8.01	-2.23	2.96
162	SLD 16	-305	-130	3924	8.01	-2.23	4.08
162	SLV 1	712	327	5468	-8.31	2.33	-10.38
162	SLV 2	711	238	5471	-8.3	2.33	-7.83
162	SLV 3	720	-165	5460	12.25	2.31	5.75
162	SLV 4	719	-254	5464	12.27	2.31	8.3
162	SLV 5	207	882	4727	-31.5	0.15	-28.71
162	SLV 6	206	789	4731	-31.49	0.15	-26.06
162	SLV 7	231	-758	4702	37.04	0.08	25.08
162	SLV 8	230	-850	4706	37.05	0.08	27.73
162	SLV 9	-218	864	4085	-30.82	-1.74	-28.24
162	SLV 10	-220	772	4089	-30.81	-1.74	-25.59
162	SLV 11	-194	-775	4060	37.72	-1.81	25.55
162	SLV 12	-195	-868	4064	37.73	-1.82	28.2
162	SLV 13	-707	268	3327	-6.04	-3.97	-8.82
162	SLV 14	-708	179	3331	-6.03	-3.98	-6.27
162	SLV 15	-700	-224	3320	14.52	-4	7.32
162	SLV 16	-701	-313	3324	14.54	-4	9.87
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	4	8	3978	2.85	-0.31	-0.25
163	SLU 2	4	8	3978	2.85	-0.31	-0.25
163	SLU 3	4	8	3978	2.85	-0.31	-0.25
163	SLU 4	4	8	3978	2.85	-0.31	-0.25
163	SLU 5	4	8	3978	2.85	-0.31	-0.25
163	SLU 6	4	8	3978	2.85	-0.31	-0.25
163	SLU 7	4	8	3978	2.85	-0.31	-0.25
163	SLU 8	4	8	3978	2.85	-0.31	-0.25
163	SLU 9	4	8	3978	2.85	-0.31	-0.25
163	SLU 10	8	9	4769	2.94	-0.86	-0.27
163	SLU 11	8	9	4769	2.94	-0.86	-0.27
163	SLU 12	8	9	4769	2.94	-0.86	-0.27
163	SLU 13	8	9	4769	2.94	-0.86	-0.27
163	SLU 14	8	9	4769	2.94	-0.86	-0.27
163	SLU 15	8	9	4769	2.94	-0.86	-0.27
163	SLU 16	8	9	4769	2.94	-0.86	-0.27
163	SLU 17	8	9	4769	2.94	-0.86	-0.27
163	SLU 18	9	9	5108	2.98	-1.09	-0.28
163	SLU 19	9	9	5108	2.98	-1.09	-0.28
163	SLU 20	9	9	5108	2.98	-1.09	-0.28
163	SLU 21	9	9	5108	2.98	-1.09	-0.28
163	SLU 22	7	9	4568	2.99	-0.69	-0.27
163	SLU 23	7	9	4568	2.99	-0.69	-0.27
163	SLU 24	7	9	4568	2.99	-0.69	-0.27
163	SLU 25	7	9	4568	2.99	-0.69	-0.27
163	SLU 26	7	9	4568	2.99	-0.69	-0.27
163	SLU 27	7	9	4568	2.99	-0.69	-0.27
163	SLU 28	7	9	4568	2.99	-0.69	-0.27
163	SLU 29	7	9	4568	2.99	-0.69	-0.27
163	SLU 30	7	9	4568	2.99	-0.69	-0.27
163	SLU 31	10	10	5359	3.08	-1.23	-0.29
163	SLU 32	10	10	5359	3.08	-1.23	-0.29
163	SLU 33	10	10	5359	3.08	-1.23	-0.29
163	SLU 34	10	10	5359	3.08	-1.23	-0.29
163	SLU 35	10	10	5359	3.08	-1.23	-0.29
163	SLU 36	10	10	5359	3.08	-1.23	-0.29
163	SLU 37	10	10	5359	3.08	-1.23	-0.29
163	SLU 38	10	10	5359	3.08	-1.23	-0.29
163	SLU 39	12	10	5698	3.12	-1.46	-0.3
163	SLU 40	12	10	5698	3.12	-1.46	-0.3
163	SLU 41	12	10	5698	3.12	-1.46	-0.3
163	SLU 42	12	10	5698	3.12	-1.46	-0.3
163	SLU 43	5	10	4970	3.66	-0.28	-0.32
163	SLU 44	5	10	4970	3.66	-0.28	-0.32
163	SLU 45	5	10	4970	3.66	-0.28	-0.32
163	SLU 46	5	10	4970	3.66	-0.28	-0.32
163	SLU 47	5	10	4970	3.66	-0.28	-0.32
163	SLU 48	5	10	4970	3.66	-0.28	-0.32
163	SLU 49	5	10	4970	3.66	-0.28	-0.32
163	SLU 50	5	10	4970	3.66	-0.28	-0.32
163	SLU 51	5	10	4970	3.66	-0.28	-0.32
163	SLU 52	8	11	5761	3.74	-0.82	-0.34
163	SLU 53	8	11	5761	3.74	-0.82	-0.34
163	SLU 54	8	11	5761	3.74	-0.82	-0.34
163	SLU 55	8	11	5761	3.74	-0.82	-0.34
163	SLU 56	8	11	5761	3.74	-0.82	-0.34



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
163	SLU 57	8	11	5761	3.74	-0.82	-0.34
163	SLU 58	8	11	5761	3.74	-0.82	-0.34
163	SLU 59	8	11	5761	3.74	-0.82	-0.34
163	SLU 60	10	11	6100	3.78	-1.06	-0.35
163	SLU 61	10	11	6100	3.78	-1.06	-0.35
163	SLU 62	10	11	6100	3.78	-1.06	-0.35
163	SLU 63	10	11	6100	3.78	-1.06	-0.35
163	SLU 64	7	11	5559	3.8	-0.65	-0.34
163	SLU 65	7	11	5559	3.8	-0.65	-0.34
163	SLU 66	7	11	5559	3.8	-0.65	-0.34
163	SLU 67	7	11	5559	3.8	-0.65	-0.34
163	SLU 68	7	11	5559	3.8	-0.65	-0.34
163	SLU 69	7	11	5559	3.8	-0.65	-0.34
163	SLU 70	7	11	5559	3.8	-0.65	-0.34
163	SLU 71	7	11	5559	3.8	-0.65	-0.34
163	SLU 72	7	11	5559	3.8	-0.65	-0.34
163	SLU 73	11	12	6350	3.89	-1.2	-0.36
163	SLU 74	11	12	6350	3.89	-1.2	-0.36
163	SLU 75	11	12	6350	3.89	-1.2	-0.36
163	SLU 76	11	12	6350	3.89	-1.2	-0.36
163	SLU 77	11	12	6350	3.89	-1.2	-0.36
163	SLU 78	11	12	6350	3.89	-1.2	-0.36
163	SLU 79	11	12	6350	3.89	-1.2	-0.36
163	SLU 80	11	12	6350	3.89	-1.2	-0.36
163	SLU 81	12	12	6689	3.92	-1.43	-0.37
163	SLU 82	12	12	6689	3.92	-1.43	-0.37
163	SLU 83	12	12	6689	3.92	-1.43	-0.37
163	SLU 84	12	12	6689	3.92	-1.43	-0.37
163	SLE RA 1	5	8	4147	2.89	-0.42	-0.26
163	SLE RA 2	5	8	4147	2.89	-0.42	-0.26
163	SLE RA 3	5	8	4147	2.89	-0.42	-0.26
163	SLE RA 4	5	8	4147	2.89	-0.42	-0.26
163	SLE RA 5	5	8	4147	2.89	-0.42	-0.26
163	SLE RA 6	5	8	4147	2.89	-0.42	-0.26
163	SLE RA 7	5	8	4147	2.89	-0.42	-0.26
163	SLE RA 8	5	8	4147	2.89	-0.42	-0.26
163	SLE RA 9	5	8	4147	2.89	-0.42	-0.26
163	SLE RA 10	7	9	4674	2.95	-0.78	-0.27
163	SLE RA 11	7	9	4674	2.95	-0.78	-0.27
163	SLE RA 12	7	9	4674	2.95	-0.78	-0.27
163	SLE RA 13	7	9	4674	2.95	-0.78	-0.27
163	SLE RA 14	7	9	4674	2.95	-0.78	-0.27
163	SLE RA 15	7	9	4674	2.95	-0.78	-0.27
163	SLE RA 16	7	9	4674	2.95	-0.78	-0.27
163	SLE RA 17	7	9	4674	2.95	-0.78	-0.27
163	SLE RA 18	8	9	4900	2.97	-0.94	-0.28
163	SLE RA 19	8	9	4900	2.97	-0.94	-0.28
163	SLE RA 20	8	9	4900	2.97	-0.94	-0.28
163	SLE RA 21	8	9	4900	2.97	-0.94	-0.28
163	SLE FR 1	5	8	4147	2.89	-0.42	-0.26
163	SLE FR 2	5	8	4147	2.89	-0.42	-0.26
163	SLE FR 3	5	8	4147	2.89	-0.42	-0.26
163	SLE FR 4	6	8	4373	2.92	-0.58	-0.26
163	SLE FR 5	6	8	4373	2.92	-0.58	-0.26
163	SLE FR 6	7	9	4523	2.93	-0.68	-0.27
163	SLE QP 1	5	8	4147	2.89	-0.42	-0.26
163	SLE QP 2	6	8	4373	2.92	-0.58	-0.26
163	SLD 1	317	170	4883	-1.82	0.54	-4.83
163	SLD 2	316	125	4885	-1.81	0.53	-3.64
163	SLD 3	320	-78	4880	6.65	0.53	2.4
163	SLD 4	319	-123	4882	6.65	0.52	3.59
163	SLD 5	95	448	4531	-11.34	-0.22	-13.03
163	SLD 6	94	402	4532	-11.33	-0.23	-11.81
163	SLD 7	105	-376	4519	16.86	-0.26	11.07
163	SLD 8	105	-422	4521	16.87	-0.27	12.29
163	SLD 9	-92	439	4225	-11.04	-0.89	-12.82
163	SLD 10	-93	393	4226	-11.03	-0.89	-11.6
163	SLD 11	-82	-385	4213	17.16	-0.92	11.29
163	SLD 12	-83	-431	4215	17.17	-0.93	12.51
163	SLD 13	-307	139	3864	-0.82	-1.67	-4.12
163	SLD 14	-308	94	3865	-0.82	-1.68	-2.92
163	SLD 15	-304	-108	3860	7.64	-1.68	3.11
163	SLD 16	-304	-153	3862	7.65	-1.69	4.31
163	SLV 1	711	384	5532	-8.11	1.95	-10.93
163	SLV 2	710	281	5536	-8.1	1.94	-8.2
163	SLV 3	718	-196	5525	11.67	1.92	6.05
163	SLV 4	717	-299	5528	11.69	1.91	8.78
163	SLV 5	207	1038	4731	-30.4	0.23	-30.23
163	SLV 6	206	932	4735	-30.39	0.21	-27.39
163	SLV 7	231	-894	4705	35.54	0.14	26.38
163	SLV 8	230	-1001	4709	35.56	0.13	29.22
163	SLV 9	-218	1018	4037	-29.73	-1.28	-29.74
163	SLV 10	-219	911	4041	-29.71	-1.29	-26.9
163	SLV 11	-194	-915	4010	36.22	-1.37	26.87
163	SLV 12	-195	-1021	4014	36.23	-1.38	29.7
163	SLV 13	-705	315	3217	-5.86	-3.06	-9.31
163	SLV 14	-706	213	3221	-5.84	-3.07	-6.58
163	SLV 15	-698	-264	3209	13.93	-3.09	7.67
163	SLV 16	-699	-367	3213	13.94	-3.1	10.41
163	CRTFP Ux+	0	0	0	0	0	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
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	7	17	7022	3.7	1055.92	-3.11
164	SLU 2	7	17	7022	3.7	1055.92	-3.11
164	SLU 3	7	17	7022	3.7	1055.92	-3.11
164	SLU 4	7	17	7022	3.7	1055.92	-3.11
164	SLU 5	7	17	7022	3.7	1055.92	-3.11
164	SLU 6	7	17	7022	3.7	1055.92	-3.11
164	SLU 7	7	17	7022	3.7	1055.92	-3.11
164	SLU 8	7	17	7022	3.7	1055.92	-3.11
164	SLU 9	7	17	7022	3.7	1055.92	-3.11
164	SLU 10	13	19	8371	3.77	1254.96	-3.48
164	SLU 11	13	19	8371	3.77	1254.96	-3.48
164	SLU 12	13	19	8371	3.77	1254.96	-3.48
164	SLU 13	13	19	8371	3.77	1254.96	-3.48
164	SLU 14	13	19	8371	3.77	1254.96	-3.48
164	SLU 15	13	19	8371	3.77	1254.96	-3.48
164	SLU 16	13	19	8371	3.77	1254.96	-3.48
164	SLU 17	13	19	8371	3.77	1254.96	-3.48
164	SLU 18	16	20	8949	3.79	1340.26	-3.64
164	SLU 19	16	20	8949	3.79	1340.26	-3.64
164	SLU 20	16	20	8949	3.79	1340.26	-3.64
164	SLU 21	16	20	8949	3.79	1340.26	-3.64
164	SLU 22	11	19	8030	3.86	1204.96	-3.4
164	SLU 23	11	19	8030	3.86	1204.96	-3.4
164	SLU 24	11	19	8030	3.86	1204.96	-3.4
164	SLU 25	11	19	8030	3.86	1204.96	-3.4
164	SLU 26	11	19	8030	3.86	1204.96	-3.4
164	SLU 27	11	19	8030	3.86	1204.96	-3.4
164	SLU 28	11	19	8030	3.86	1204.96	-3.4
164	SLU 29	11	19	8030	3.86	1204.96	-3.4
164	SLU 30	11	19	8030	3.86	1204.96	-3.4
164	SLU 31	17	21	9380	3.92	1404	-3.77
164	SLU 32	17	21	9380	3.92	1404	-3.77
164	SLU 33	17	21	9380	3.92	1404	-3.77
164	SLU 34	17	21	9380	3.92	1404	-3.77
164	SLU 35	17	21	9380	3.92	1404	-3.77
164	SLU 36	17	21	9380	3.92	1404	-3.77
164	SLU 37	17	21	9380	3.92	1404	-3.77
164	SLU 38	17	21	9380	3.92	1404	-3.77
164	SLU 39	20	22	9958	3.95	1489.3	-3.93
164	SLU 40	20	22	9958	3.95	1489.3	-3.93
164	SLU 41	20	22	9958	3.95	1489.3	-3.93
164	SLU 42	20	22	9958	3.95	1489.3	-3.93
164	SLU 43	8	22	8782	4.76	1321.6	-3.95
164	SLU 44	8	22	8782	4.76	1321.6	-3.95
164	SLU 45	8	22	8782	4.76	1321.6	-3.95
164	SLU 46	8	22	8782	4.76	1321.6	-3.95
164	SLU 47	8	22	8782	4.76	1321.6	-3.95
164	SLU 48	8	22	8782	4.76	1321.6	-3.95
164	SLU 49	8	22	8782	4.76	1321.6	-3.95
164	SLU 50	8	22	8782	4.76	1321.6	-3.95
164	SLU 51	8	22	8782	4.76	1321.6	-3.95
164	SLU 52	14	24	10132	4.82	1520.64	-4.32
164	SLU 53	14	24	10132	4.82	1520.64	-4.32
164	SLU 54	14	24	10132	4.82	1520.64	-4.32
164	SLU 55	14	24	10132	4.82	1520.64	-4.32
164	SLU 56	14	24	10132	4.82	1520.64	-4.32
164	SLU 57	14	24	10132	4.82	1520.64	-4.32
164	SLU 58	14	24	10132	4.82	1520.64	-4.32
164	SLU 59	14	24	10132	4.82	1520.64	-4.32
164	SLU 60	16	25	10710	4.85	1605.94	-4.48
164	SLU 61	16	25	10710	4.85	1605.94	-4.48
164	SLU 62	16	25	10710	4.85	1605.94	-4.48
164	SLU 63	16	25	10710	4.85	1605.94	-4.48
164	SLU 64	12	23	9791	4.91	1470.64	-4.24
164	SLU 65	12	23	9791	4.91	1470.64	-4.24
164	SLU 66	12	23	9791	4.91	1470.64	-4.24
164	SLU 67	12	23	9791	4.91	1470.64	-4.24
164	SLU 68	12	23	9791	4.91	1470.64	-4.24
164	SLU 69	12	23	9791	4.91	1470.64	-4.24
164	SLU 70	12	23	9791	4.91	1470.64	-4.24
164	SLU 71	12	23	9791	4.91	1470.64	-4.24
164	SLU 72	12	23	9791	4.91	1470.64	-4.24
164	SLU 73	18	25	11140	4.98	1669.68	-4.61
164	SLU 74	18	25	11140	4.98	1669.68	-4.61
164	SLU 75	18	25	11140	4.98	1669.68	-4.61
164	SLU 76	18	25	11140	4.98	1669.68	-4.61
164	SLU 77	18	25	11140	4.98	1669.68	-4.61
164	SLU 78	18	25	11140	4.98	1669.68	-4.61
164	SLU 79	18	25	11140	4.98	1669.68	-4.61
164	SLU 80	18	25	11140	4.98	1669.68	-4.61
164	SLU 81	20	26	11719	5	1754.98	-4.76
164	SLU 82	20	26	11719	5	1754.98	-4.76
164	SLU 83	20	26	11719	5	1754.98	-4.76
164	SLU 84	20	26	11719	5	1754.98	-4.76
164	SLE RA 1	8	17	7310	3.75	1098.51	-3.2
164	SLE RA 2	8	17	7310	3.75	1098.51	-3.2
164	SLE RA 3	8	17	7310	3.75	1098.51	-3.2



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione		
		x	y	z		x	y	z
164	SLE RA 4	8	17	7310		3.75	1098.51	-3.2
164	SLE RA 5	8	17	7310		3.75	1098.51	-3.2
164	SLE RA 6	8	17	7310		3.75	1098.51	-3.2
164	SLE RA 7	8	17	7310		3.75	1098.51	-3.2
164	SLE RA 8	8	17	7310		3.75	1098.51	-3.2
164	SLE RA 9	8	17	7310		3.75	1098.51	-3.2
164	SLE RA 10	12	19	8209		3.79	1231.2	-3.44
164	SLE RA 11	12	19	8209		3.79	1231.2	-3.44
164	SLE RA 12	12	19	8209		3.79	1231.2	-3.44
164	SLE RA 13	12	19	8209		3.79	1231.2	-3.44
164	SLE RA 14	12	19	8209		3.79	1231.2	-3.44
164	SLE RA 15	12	19	8209		3.79	1231.2	-3.44
164	SLE RA 16	12	19	8209		3.79	1231.2	-3.44
164	SLE RA 17	12	19	8209		3.79	1231.2	-3.44
164	SLE RA 18	14	20	8595		3.81	1288.07	-3.55
164	SLE RA 19	14	20	8595		3.81	1288.07	-3.55
164	SLE RA 20	14	20	8595		3.81	1288.07	-3.55
164	SLE RA 21	14	20	8595		3.81	1288.07	-3.55
164	SLE FR 1	8	17	7310		3.75	1098.51	-3.2
164	SLE FR 2	8	17	7310		3.75	1098.51	-3.2
164	SLE FR 3	8	17	7310		3.75	1098.51	-3.2
164	SLE FR 4	10	18	7695		3.76	1155.37	-3.3
164	SLE FR 5	10	18	7695		3.76	1155.37	-3.3
164	SLE FR 6	11	18	7952		3.78	1193.29	-3.37
164	SLE QP 1	8	17	7310		3.75	1098.51	-3.2
164	SLE QP 2	10	18	7695		3.76	1155.37	-3.3
164	SLD 1	553	362	8660		-3.07	1303.8	-65.89
164	SLD 2	552	267	8663		-3.05	1304.07	-48.67
164	SLD 3	558	-167	8654		9.03	1302.73	30.86
164	SLD 4	557	-262	8656		9.05	1303	48.08
164	SLD 5	165	958	7994		-16.64	1201.44	-175.03
164	SLD 6	164	861	7997		-16.62	1201.72	-157.43
164	SLD 7	183	-806	7972		23.68	1197.85	147.47
164	SLD 8	182	-903	7974		23.71	1198.12	165.06
164	SLD 9	-162	939	7417		-16.18	1112.62	-171.66
164	SLD 10	-163	842	7419		-16.15	1112.9	-154.07
164	SLD 11	-144	-825	7394		24.15	1109.03	150.83
164	SLD 12	-145	-922	7396		24.17	1109.31	168.42
164	SLD 13	-538	298	6735		-1.52	1007.75	-54.68
164	SLD 14	-538	204	6737		-1.5	1008.02	-37.46
164	SLD 15	-532	-231	6728		10.57	1006.67	42.07
164	SLD 16	-533	-325	6730		10.6	1006.94	59.28
164	SLV 1	1242	819	9887		-12.15	1492.41	-149.24
164	SLV 2	1240	602	9892		-12.11	1493.03	-109.86
164	SLV 3	1255	-422	9871		16.13	1489.92	77.77
164	SLV 4	1253	-639	9876		16.18	1490.54	117.14
164	SLV 5	361	2221	8375		-43.93	1260.03	-405.91
164	SLV 6	359	1996	8380		-43.88	1260.67	-365.03
164	SLV 7	403	-1916	8322		50.35	1251.73	350.78
164	SLV 8	401	-2142	8328		50.4	1252.38	391.66
164	SLV 9	-381	2178	7063		-42.87	1058.37	-398.26
164	SLV 10	-383	1953	7068		-42.83	1059.02	-357.38
164	SLV 11	-340	-1960	7011		51.41	1050.07	358.42
164	SLV 12	-341	-2185	7016		51.45	1050.72	399.31
164	SLV 13	-1233	675	5514		-8.65	820.21	-123.75
164	SLV 14	-1235	458	5520		-8.6	820.83	-84.37
164	SLV 15	-1221	-566	5499		19.63	817.72	103.26
164	SLV 16	-1222	-783	5504		19.68	818.34	142.64
164	CRTFP Ux+	0	0	0		0	-0.01	0
164	CRTFP Ux-	0	0	0		0	0.01	0
164	CRTFP Uy+	0	0	0		0	0	0
164	CRTFP Uy-	0	0	0		0	0	0
165	SLU 1	11	44	15188		33.9	-51.16	-0.7
165	SLU 2	11	44	15188		33.9	-51.16	-0.7
165	SLU 3	11	44	15188		33.9	-51.16	-0.7
165	SLU 4	11	44	15188		33.9	-51.16	-0.7
165	SLU 5	11	44	15188		33.9	-51.16	-0.7
165	SLU 6	11	44	15188		33.9	-51.16	-0.7
165	SLU 7	11	44	15188		33.9	-51.16	-0.7
165	SLU 8	11	44	15188		33.9	-51.16	-0.7
165	SLU 9	11	44	15188		33.9	-51.16	-0.7
165	SLU 10	23	50	17914		39.22	-76.57	-0.72
165	SLU 11	23	50	17914		39.22	-76.57	-0.72
165	SLU 12	23	50	17914		39.22	-76.57	-0.72
165	SLU 13	23	50	17914		39.22	-76.57	-0.72
165	SLU 14	23	50	17914		39.22	-76.57	-0.72
165	SLU 15	23	50	17914		39.22	-76.57	-0.72
165	SLU 16	23	50	17914		39.22	-76.57	-0.72
165	SLU 17	23	50	17914		39.22	-76.57	-0.72
165	SLU 18	28	52	19083		41.5	-87.47	-0.73
165	SLU 19	28	52	19083		41.5	-87.47	-0.73
165	SLU 20	28	52	19083		41.5	-87.47	-0.73
165	SLU 21	28	52	19083		41.5	-87.47	-0.73
165	SLU 22	19	48	17240		38.02	-68.97	-0.73
165	SLU 23	19	48	17240		38.02	-68.97	-0.73
165	SLU 24	19	48	17240		38.02	-68.97	-0.73
165	SLU 25	19	48	17240		38.02	-68.97	-0.73
165	SLU 26	19	48	17240		38.02	-68.97	-0.73
165	SLU 27	19	48	17240		38.02	-68.97	-0.73
165	SLU 28	19	48	17240		38.02	-68.97	-0.73



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		x	y	z		x	y	z	
165	SLU 29	19	48	17240		38.02	-68.97	-0.73	
165	SLU 30	19	48	17240		38.02	-68.97	-0.73	
165	SLU 31	31	54	19966		43.34	-94.38	-0.75	
165	SLU 32	31	54	19966		43.34	-94.38	-0.75	
165	SLU 33	31	54	19966		43.34	-94.38	-0.75	
165	SLU 34	31	54	19966		43.34	-94.38	-0.75	
165	SLU 35	31	54	19966		43.34	-94.38	-0.75	
165	SLU 36	31	54	19966		43.34	-94.38	-0.75	
165	SLU 37	31	54	19966		43.34	-94.38	-0.75	
165	SLU 38	31	54	19966		43.34	-94.38	-0.75	
165	SLU 39	36	56	21134		45.62	-105.28	-0.76	
165	SLU 40	36	56	21134		45.62	-105.28	-0.76	
165	SLU 41	36	56	21134		45.62	-105.28	-0.76	
165	SLU 42	36	56	21134		45.62	-105.28	-0.76	
165	SLU 43	11	56	19041		42.66	-60.41	-0.9	
165	SLU 44	11	56	19041		42.66	-60.41	-0.9	
165	SLU 45	11	56	19041		42.66	-60.41	-0.9	
165	SLU 46	11	56	19041		42.66	-60.41	-0.9	
165	SLU 47	11	56	19041		42.66	-60.41	-0.9	
165	SLU 48	11	56	19041		42.66	-60.41	-0.9	
165	SLU 49	11	56	19041		42.66	-60.41	-0.9	
165	SLU 50	11	56	19041		42.66	-60.41	-0.9	
165	SLU 51	11	56	19041		42.66	-60.41	-0.9	
165	SLU 52	23	62	21768		47.98	-85.82	-0.92	
165	SLU 53	23	62	21768		47.98	-85.82	-0.92	
165	SLU 54	23	62	21768		47.98	-85.82	-0.92	
165	SLU 55	23	62	21768		47.98	-85.82	-0.92	
165	SLU 56	23	62	21768		47.98	-85.82	-0.92	
165	SLU 57	23	62	21768		47.98	-85.82	-0.92	
165	SLU 58	23	62	21768		47.98	-85.82	-0.92	
165	SLU 59	23	62	21768		47.98	-85.82	-0.92	
165	SLU 60	28	64	22936		50.26	-96.71	-0.93	
165	SLU 61	28	64	22936		50.26	-96.71	-0.93	
165	SLU 62	28	64	22936		50.26	-96.71	-0.93	
165	SLU 63	28	64	22936		50.26	-96.71	-0.93	
165	SLU 64	19	60	21093		46.78	-78.22	-0.93	
165	SLU 65	19	60	21093		46.78	-78.22	-0.93	
165	SLU 66	19	60	21093		46.78	-78.22	-0.93	
165	SLU 67	19	60	21093		46.78	-78.22	-0.93	
165	SLU 68	19	60	21093		46.78	-78.22	-0.93	
165	SLU 69	19	60	21093		46.78	-78.22	-0.93	
165	SLU 70	19	60	21093		46.78	-78.22	-0.93	
165	SLU 71	19	60	21093		46.78	-78.22	-0.93	
165	SLU 72	19	60	21093		46.78	-78.22	-0.93	
165	SLU 73	31	66	23819		52.1	-103.63	-0.95	
165	SLU 74	31	66	23819		52.1	-103.63	-0.95	
165	SLU 75	31	66	23819		52.1	-103.63	-0.95	
165	SLU 76	31	66	23819		52.1	-103.63	-0.95	
165	SLU 77	31	66	23819		52.1	-103.63	-0.95	
165	SLU 78	31	66	23819		52.1	-103.63	-0.95	
165	SLU 79	31	66	23819		52.1	-103.63	-0.95	
165	SLU 80	31	66	23819		52.1	-103.63	-0.95	
165	SLU 81	36	68	24987		54.38	-114.52	-0.96	
165	SLU 82	36	68	24987		54.38	-114.52	-0.96	
165	SLU 83	36	68	24987		54.38	-114.52	-0.96	
165	SLU 84	36	68	24987		54.38	-114.52	-0.96	
165	SLE RA 1	13	46	15774		35.08	-56.25	-0.71	
165	SLE RA 2	13	46	15774		35.08	-56.25	-0.71	
165	SLE RA 3	13	46	15774		35.08	-56.25	-0.71	
165	SLE RA 4	13	46	15774		35.08	-56.25	-0.71	
165	SLE RA 5	13	46	15774		35.08	-56.25	-0.71	
165	SLE RA 6	13	46	15774		35.08	-56.25	-0.71	
165	SLE RA 7	13	46	15774		35.08	-56.25	-0.71	
165	SLE RA 8	13	46	15774		35.08	-56.25	-0.71	
165	SLE RA 9	13	46	15774		35.08	-56.25	-0.71	
165	SLE RA 10	21	49	17592		38.63	-73.19	-0.72	
165	SLE RA 11	21	49	17592		38.63	-73.19	-0.72	
165	SLE RA 12	21	49	17592		38.63	-73.19	-0.72	
165	SLE RA 13	21	49	17592		38.63	-73.19	-0.72	
165	SLE RA 14	21	49	17592		38.63	-73.19	-0.72	
165	SLE RA 15	21	49	17592		38.63	-73.19	-0.72	
165	SLE RA 16	21	49	17592		38.63	-73.19	-0.72	
165	SLE RA 17	21	49	17592		38.63	-73.19	-0.72	
165	SLE RA 18	24	51	18371		40.15	-80.45	-0.73	
165	SLE RA 19	24	51	18371		40.15	-80.45	-0.73	
165	SLE RA 20	24	51	18371		40.15	-80.45	-0.73	
165	SLE RA 21	24	51	18371		40.15	-80.45	-0.73	
165	SLE FR 1	13	46	15774		35.08	-56.25	-0.71	
165	SLE FR 2	13	46	15774		35.08	-56.25	-0.71	
165	SLE FR 3	13	46	15774		35.08	-56.25	-0.71	
165	SLE FR 4	17	47	16553		36.6	-63.51	-0.72	
165	SLE FR 5	17	47	16553		36.6	-63.51	-0.72	
165	SLE FR 6	19	48	17073		37.61	-68.35	-0.72	
165	SLE QP 1	13	46	15774		35.08	-56.25	-0.71	
165	SLE QP 2	17	47	16553		36.6	-63.51	-0.72	
165	SLD 1	1124	951	18730		33.49	-65.92	-28.38	
165	SLD 2	1122	701	18732		33.64	-66.27	-19.46	
165	SLD 3	1134	-445	18713		46.54	-66.31	9.89	
165	SLD 4	1132	-695	18714		46.69	-66.66	18.81	
165	SLD 5	333	2526	17233		15.81	-63.51	-70.29	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
165	SLD 6	332	2271	17234	15.96	-63.87	-61.17
165	SLD 7	368	-2128	17174	59.33	-64.82	57.29
165	SLD 8	367	-2383	17175	59.48	-65.18	66.41
165	SLD 9	-333	2477	15931	13.72	-61.85	-67.85
165	SLD 10	-335	2222	15932	13.87	-62.2	-58.73
165	SLD 11	-299	-2176	15873	57.23	-63.16	59.74
165	SLD 12	-300	-2432	15874	57.38	-63.51	68.85
165	SLD 13	-1099	789	14392	26.51	-60.36	-20.25
165	SLD 14	-1101	539	14394	26.65	-60.71	-11.32
165	SLD 15	-1089	-607	14375	39.56	-60.76	18.03
165	SLD 16	-1091	-857	14376	39.71	-61.1	26.95
165	SLV 1	2530	2155	21497	29.09	-69.01	-65.11
165	SLV 2	2526	1584	21500	29.43	-69.81	-44.7
165	SLV 3	2554	-1120	21457	59.63	-69.93	24.8
165	SLV 4	2550	-1692	21459	59.96	-70.73	45.2
165	SLV 5	735	5859	18097	-12.09	-63.47	-163.92
165	SLV 6	731	5266	18100	-11.74	-64.29	-142.73
165	SLV 7	816	-5060	17962	89.69	-66.55	135.76
165	SLV 8	812	-5654	17965	90.04	-67.37	156.95
165	SLV 9	-779	5748	15142	-16.85	-59.65	-158.38
165	SLV 10	-783	5155	15145	-16.5	-60.48	-137.19
165	SLV 11	-698	-5171	15007	84.93	-62.73	141.3
165	SLV 12	-702	-5765	15010	85.29	-63.56	162.49
165	SLV 13	-2517	1786	11647	13.23	-56.29	-46.64
165	SLV 14	-2521	1215	11650	13.57	-57.09	-26.23
165	SLV 15	-2493	-1490	11607	43.77	-57.22	43.27
165	SLV 16	-2497	-2061	11609	44.1	-58.02	63.68
165	CRTFP Ux+	0	0	0	0	0	0
165	CRTFP Ux-	0	0	0	0	0	0
165	CRTFP Uy+	0	0	0	0	0	0
165	CRTFP Uy-	0	0	0	0	0	0
167	SLU 1	2	8	2707	-0.18	-327.13	0.86
167	SLU 2	2	8	2707	-0.18	-327.13	0.86
167	SLU 3	2	8	2707	-0.18	-327.13	0.86
167	SLU 4	2	8	2707	-0.18	-327.13	0.86
167	SLU 5	2	8	2707	-0.18	-327.13	0.86
167	SLU 6	2	8	2707	-0.18	-327.13	0.86
167	SLU 7	2	8	2707	-0.18	-327.13	0.86
167	SLU 8	2	8	2707	-0.18	-327.13	0.86
167	SLU 9	2	8	2707	-0.18	-327.13	0.86
167	SLU 10	4	9	3184	-0.31	-384.96	0.97
167	SLU 11	4	9	3184	-0.31	-384.96	0.97
167	SLU 12	4	9	3184	-0.31	-384.96	0.97
167	SLU 13	4	9	3184	-0.31	-384.96	0.97
167	SLU 14	4	9	3184	-0.31	-384.96	0.97
167	SLU 15	4	9	3184	-0.31	-384.96	0.97
167	SLU 16	4	9	3184	-0.31	-384.96	0.97
167	SLU 17	4	9	3184	-0.31	-384.96	0.97
167	SLU 18	5	9	3388	-0.36	-409.74	1.01
167	SLU 19	5	9	3388	-0.36	-409.74	1.01
167	SLU 20	5	9	3388	-0.36	-409.74	1.01
167	SLU 21	5	9	3388	-0.36	-409.74	1.01
167	SLU 22	3	9	3067	-0.26	-370.73	0.94
167	SLU 23	3	9	3067	-0.26	-370.73	0.94
167	SLU 24	3	9	3067	-0.26	-370.73	0.94
167	SLU 25	3	9	3067	-0.26	-370.73	0.94
167	SLU 26	3	9	3067	-0.26	-370.73	0.94
167	SLU 27	3	9	3067	-0.26	-370.73	0.94
167	SLU 28	3	9	3067	-0.26	-370.73	0.94
167	SLU 29	3	9	3067	-0.26	-370.73	0.94
167	SLU 30	3	9	3067	-0.26	-370.73	0.94
167	SLU 31	5	10	3544	-0.39	-428.56	1.05
167	SLU 32	5	10	3544	-0.39	-428.56	1.05
167	SLU 33	5	10	3544	-0.39	-428.56	1.05
167	SLU 34	5	10	3544	-0.39	-428.56	1.05
167	SLU 35	5	10	3544	-0.39	-428.56	1.05
167	SLU 36	5	10	3544	-0.39	-428.56	1.05
167	SLU 37	5	10	3544	-0.39	-428.56	1.05
167	SLU 38	5	10	3544	-0.39	-428.56	1.05
167	SLU 39	6	10	3748	-0.44	-453.34	1.09
167	SLU 40	6	10	3748	-0.44	-453.34	1.09
167	SLU 41	6	10	3748	-0.44	-453.34	1.09
167	SLU 42	6	10	3748	-0.44	-453.34	1.09
167	SLU 43	2	10	3395	-0.21	-410.32	1.09
167	SLU 44	2	10	3395	-0.21	-410.32	1.09
167	SLU 45	2	10	3395	-0.21	-410.32	1.09
167	SLU 46	2	10	3395	-0.21	-410.32	1.09
167	SLU 47	2	10	3395	-0.21	-410.32	1.09
167	SLU 48	2	10	3395	-0.21	-410.32	1.09
167	SLU 49	2	10	3395	-0.21	-410.32	1.09
167	SLU 50	2	10	3395	-0.21	-410.32	1.09
167	SLU 51	2	10	3395	-0.21	-410.32	1.09
167	SLU 52	4	11	3872	-0.33	-468.15	1.2
167	SLU 53	4	11	3872	-0.33	-468.15	1.2
167	SLU 54	4	11	3872	-0.33	-468.15	1.2
167	SLU 55	4	11	3872	-0.33	-468.15	1.2
167	SLU 56	4	11	3872	-0.33	-468.15	1.2
167	SLU 57	4	11	3872	-0.33	-468.15	1.2
167	SLU 58	4	11	3872	-0.33	-468.15	1.2
167	SLU 59	4	11	3872	-0.33	-468.15	1.2



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
167	SLU 60	5	11	4077	-0.39	-492.93	1.24
167	SLU 61	5	11	4077	-0.39	-492.93	1.24
167	SLU 62	5	11	4077	-0.39	-492.93	1.24
167	SLU 63	5	11	4077	-0.39	-492.93	1.24
167	SLU 64	3	11	3755	-0.29	-453.92	1.17
167	SLU 65	3	11	3755	-0.29	-453.92	1.17
167	SLU 66	3	11	3755	-0.29	-453.92	1.17
167	SLU 67	3	11	3755	-0.29	-453.92	1.17
167	SLU 68	3	11	3755	-0.29	-453.92	1.17
167	SLU 69	3	11	3755	-0.29	-453.92	1.17
167	SLU 70	3	11	3755	-0.29	-453.92	1.17
167	SLU 71	3	11	3755	-0.29	-453.92	1.17
167	SLU 72	3	11	3755	-0.29	-453.92	1.17
167	SLU 73	5	12	4232	-0.41	-511.75	1.28
167	SLU 74	5	12	4232	-0.41	-511.75	1.28
167	SLU 75	5	12	4232	-0.41	-511.75	1.28
167	SLU 76	5	12	4232	-0.41	-511.75	1.28
167	SLU 77	5	12	4232	-0.41	-511.75	1.28
167	SLU 78	5	12	4232	-0.41	-511.75	1.28
167	SLU 79	5	12	4232	-0.41	-511.75	1.28
167	SLU 80	5	12	4232	-0.41	-511.75	1.28
167	SLU 81	6	12	4437	-0.47	-536.53	1.32
167	SLU 82	6	12	4437	-0.47	-536.53	1.32
167	SLU 83	6	12	4437	-0.47	-536.53	1.32
167	SLU 84	6	12	4437	-0.47	-536.53	1.32
167	SLE RA 1	2	8	2810	-0.2	-339.59	0.89
167	SLE RA 2	2	8	2810	-0.2	-339.59	0.89
167	SLE RA 3	2	8	2810	-0.2	-339.59	0.89
167	SLE RA 4	2	8	2810	-0.2	-339.59	0.89
167	SLE RA 5	2	8	2810	-0.2	-339.59	0.89
167	SLE RA 6	2	8	2810	-0.2	-339.59	0.89
167	SLE RA 7	2	8	2810	-0.2	-339.59	0.89
167	SLE RA 8	2	8	2810	-0.2	-339.59	0.89
167	SLE RA 9	2	8	2810	-0.2	-339.59	0.89
167	SLE RA 10	4	9	3128	-0.29	-378.14	0.96
167	SLE RA 11	4	9	3128	-0.29	-378.14	0.96
167	SLE RA 12	4	9	3128	-0.29	-378.14	0.96
167	SLE RA 13	4	9	3128	-0.29	-378.14	0.96
167	SLE RA 14	4	9	3128	-0.29	-378.14	0.96
167	SLE RA 15	4	9	3128	-0.29	-378.14	0.96
167	SLE RA 16	4	9	3128	-0.29	-378.14	0.96
167	SLE RA 17	4	9	3128	-0.29	-378.14	0.96
167	SLE RA 18	4	9	3264	-0.32	-394.66	0.99
167	SLE RA 19	4	9	3264	-0.32	-394.66	0.99
167	SLE RA 20	4	9	3264	-0.32	-394.66	0.99
167	SLE RA 21	4	9	3264	-0.32	-394.66	0.99
167	SLE FR 1	2	8	2810	-0.2	-339.59	0.89
167	SLE FR 2	2	8	2810	-0.2	-339.59	0.89
167	SLE FR 3	2	8	2810	-0.2	-339.59	0.89
167	SLE FR 4	3	8	2946	-0.24	-356.11	0.92
167	SLE FR 5	3	8	2946	-0.24	-356.11	0.92
167	SLE FR 6	3	9	3037	-0.26	-367.13	0.94
167	SLE QP 1	2	8	2810	-0.2	-339.59	0.89
167	SLE QP 2	3	8	2946	-0.24	-356.11	0.92
167	SLD 1	191	172	3338	-1.49	-403.45	18.26
167	SLD 2	191	127	3338	-1.46	-403.45	13.51
167	SLD 3	193	-80	3335	0.49	-403.05	-8.5
167	SLD 4	193	-126	3335	0.51	-403.06	-13.25
167	SLD 5	57	457	3069	-3.62	-370.91	48.42
167	SLD 6	56	410	3069	-3.59	-370.91	43.56
167	SLD 7	63	-385	3058	2.96	-369.59	-40.77
167	SLD 8	62	-431	3058	2.99	-369.6	-45.63
167	SLD 9	-57	448	2834	-3.47	-342.63	47.46
167	SLD 10	-57	402	2834	-3.44	-342.63	42.6
167	SLD 11	-51	-393	2823	3.11	-341.31	-41.73
167	SLD 12	-51	-440	2823	3.14	-341.31	-46.59
167	SLD 13	-187	143	2557	-0.99	-309.16	15.08
167	SLD 14	-187	97	2557	-0.96	-309.17	10.33
167	SLD 15	-185	-110	2554	0.98	-308.77	-11.68
167	SLD 16	-185	-155	2554	1.01	-308.77	-16.43
167	SLV 1	430	390	3837	-3.14	-463.61	41.36
167	SLV 2	429	286	3837	-3.08	-463.61	30.49
167	SLV 3	434	-203	3829	1.48	-462.69	-21.42
167	SLV 4	434	-306	3829	1.54	-462.7	-32.29
167	SLV 5	125	1060	3225	-8.13	-389.75	112.28
167	SLV 6	124	952	3225	-8.07	-389.76	100.99
167	SLV 7	139	-915	3199	7.25	-386.69	-96.99
167	SLV 8	138	-1023	3199	7.32	-386.7	-108.28
167	SLV 9	-133	1040	2693	-7.79	-325.53	110.11
167	SLV 10	-133	932	2693	-7.73	-325.53	98.82
167	SLV 11	-118	-935	2667	7.59	-322.47	-99.16
167	SLV 12	-119	-1043	2667	7.65	-322.47	-110.45
167	SLV 13	-428	323	2063	-2.01	-249.53	34.12
167	SLV 14	-429	220	2063	-1.95	-249.53	23.25
167	SLV 15	-424	-269	2055	2.6	-248.61	-28.66
167	SLV 16	-424	-373	2055	2.66	-248.61	-39.53
167	CRTFP Ux+	0	0	0	0	0	0
167	CRTFP Ux-	0	0	0	0	0	0
167	CRTFP Uy+	0	0	0	0	0	0
167	CRTFP Uy-	0	0	0	0	0	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
195	SLU 1	0	0	1598	44.65	0.85	0
195	SLU 2	0	0	1598	44.65	0.85	0
195	SLU 3	0	0	1598	44.65	0.85	0
195	SLU 4	0	0	1598	44.65	0.85	0
195	SLU 5	0	0	1598	44.65	0.85	0
195	SLU 6	0	0	1598	44.65	0.85	0
195	SLU 7	0	0	1598	44.65	0.85	0
195	SLU 8	0	0	1598	44.65	0.85	0
195	SLU 9	0	0	1598	44.65	0.85	0
195	SLU 10	1	1	1925	53.73	0.98	-0.01
195	SLU 11	1	1	1925	53.73	0.98	-0.01
195	SLU 12	1	1	1925	53.73	0.98	-0.01
195	SLU 13	1	1	1925	53.73	0.98	-0.01
195	SLU 14	1	1	1925	53.73	0.98	-0.01
195	SLU 15	1	1	1925	53.73	0.98	-0.01
195	SLU 16	1	1	1925	53.73	0.98	-0.01
195	SLU 17	1	1	1925	53.73	0.98	-0.01
195	SLU 18	1	1	2065	57.62	1.03	-0.01
195	SLU 19	1	1	2065	57.62	1.03	-0.01
195	SLU 20	1	1	2065	57.62	1.03	-0.01
195	SLU 21	1	1	2065	57.62	1.03	-0.01
195	SLU 22	1	1	1841	51.39	0.95	-0.01
195	SLU 23	1	1	1841	51.39	0.95	-0.01
195	SLU 24	1	1	1841	51.39	0.95	-0.01
195	SLU 25	1	1	1841	51.39	0.95	-0.01
195	SLU 26	1	1	1841	51.39	0.95	-0.01
195	SLU 27	1	1	1841	51.39	0.95	-0.01
195	SLU 28	1	1	1841	51.39	0.95	-0.01
195	SLU 29	1	1	1841	51.39	0.95	-0.01
195	SLU 30	1	1	1841	51.39	0.95	-0.01
195	SLU 31	1	1	2167	60.46	1.07	-0.01
195	SLU 32	1	1	2167	60.46	1.07	-0.01
195	SLU 33	1	1	2167	60.46	1.07	-0.01
195	SLU 34	1	1	2167	60.46	1.07	-0.01
195	SLU 35	1	1	2167	60.46	1.07	-0.01
195	SLU 36	1	1	2167	60.46	1.07	-0.01
195	SLU 37	1	1	2167	60.46	1.07	-0.01
195	SLU 38	1	1	2167	60.46	1.07	-0.01
195	SLU 39	1	1	2308	64.35	1.13	-0.01
195	SLU 40	1	1	2308	64.35	1.13	-0.01
195	SLU 41	1	1	2308	64.35	1.13	-0.01
195	SLU 42	1	1	2308	64.35	1.13	-0.01
195	SLU 43	1	0	1994	55.74	1.07	0
195	SLU 44	1	0	1994	55.74	1.07	0
195	SLU 45	1	0	1994	55.74	1.07	0
195	SLU 46	1	0	1994	55.74	1.07	0
195	SLU 47	1	0	1994	55.74	1.07	0
195	SLU 48	1	0	1994	55.74	1.07	0
195	SLU 49	1	0	1994	55.74	1.07	0
195	SLU 50	1	0	1994	55.74	1.07	0
195	SLU 51	1	0	1994	55.74	1.07	0
195	SLU 52	1	1	2321	64.81	1.2	-0.01
195	SLU 53	1	1	2321	64.81	1.2	-0.01
195	SLU 54	1	1	2321	64.81	1.2	-0.01
195	SLU 55	1	1	2321	64.81	1.2	-0.01
195	SLU 56	1	1	2321	64.81	1.2	-0.01
195	SLU 57	1	1	2321	64.81	1.2	-0.01
195	SLU 58	1	1	2321	64.81	1.2	-0.01
195	SLU 59	1	1	2321	64.81	1.2	-0.01
195	SLU 60	1	1	2461	68.7	1.25	-0.01
195	SLU 61	1	1	2461	68.7	1.25	-0.01
195	SLU 62	1	1	2461	68.7	1.25	-0.01
195	SLU 63	1	1	2461	68.7	1.25	-0.01
195	SLU 64	1	1	2237	62.47	1.17	-0.01
195	SLU 65	1	1	2237	62.47	1.17	-0.01
195	SLU 66	1	1	2237	62.47	1.17	-0.01
195	SLU 67	1	1	2237	62.47	1.17	-0.01
195	SLU 68	1	1	2237	62.47	1.17	-0.01
195	SLU 69	1	1	2237	62.47	1.17	-0.01
195	SLU 70	1	1	2237	62.47	1.17	-0.01
195	SLU 71	1	1	2237	62.47	1.17	-0.01
195	SLU 72	1	1	2237	62.47	1.17	-0.01
195	SLU 73	1	1	2564	71.55	1.3	-0.01
195	SLU 74	1	1	2564	71.55	1.3	-0.01
195	SLU 75	1	1	2564	71.55	1.3	-0.01
195	SLU 76	1	1	2564	71.55	1.3	-0.01
195	SLU 77	1	1	2564	71.55	1.3	-0.01
195	SLU 78	1	1	2564	71.55	1.3	-0.01
195	SLU 79	1	1	2564	71.55	1.3	-0.01
195	SLU 80	1	1	2564	71.55	1.3	-0.01
195	SLU 81	1	1	2704	75.44	1.35	-0.01
195	SLU 82	1	1	2704	75.44	1.35	-0.01
195	SLU 83	1	1	2704	75.44	1.35	-0.01
195	SLU 84	1	1	2704	75.44	1.35	-0.01
195	SLE RA 1	0	0	1667	46.58	0.88	0
195	SLE RA 2	0	0	1667	46.58	0.88	0
195	SLE RA 3	0	0	1667	46.58	0.88	0
195	SLE RA 4	0	0	1667	46.58	0.88	0
195	SLE RA 5	0	0	1667	46.58	0.88	0
195	SLE RA 6	0	0	1667	46.58	0.88	0



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
195	SLE RA 7	0	0	1667	46.58	0.88	0
195	SLE RA 8	0	0	1667	46.58	0.88	0
195	SLE RA 9	0	0	1667	46.58	0.88	0
195	SLE RA 10	1	1	1885	52.63	0.96	-0.01
195	SLE RA 11	1	1	1885	52.63	0.96	-0.01
195	SLE RA 12	1	1	1885	52.63	0.96	-0.01
195	SLE RA 13	1	1	1885	52.63	0.96	-0.01
195	SLE RA 14	1	1	1885	52.63	0.96	-0.01
195	SLE RA 15	1	1	1885	52.63	0.96	-0.01
195	SLE RA 16	1	1	1885	52.63	0.96	-0.01
195	SLE RA 17	1	1	1885	52.63	0.96	-0.01
195	SLE RA 18	1	1	1979	55.22	1	-0.01
195	SLE RA 19	1	1	1979	55.22	1	-0.01
195	SLE RA 20	1	1	1979	55.22	1	-0.01
195	SLE RA 21	1	1	1979	55.22	1	-0.01
195	SLE FR 1	0	0	1667	46.58	0.88	0
195	SLE FR 2	0	0	1667	46.58	0.88	0
195	SLE FR 3	0	0	1667	46.58	0.88	0
195	SLE FR 4	1	0	1761	49.17	0.92	0
195	SLE FR 5	1	0	1761	49.17	0.92	0
195	SLE FR 6	1	1	1823	50.9	0.94	-0.01
195	SLE QP 1	0	0	1667	46.58	0.88	0
195	SLE QP 2	1	0	1761	49.17	0.92	0
195	SLD 1	127	6	1759	48.98	4.37	-3.54
195	SLD 2	125	7	1759	48.98	4.38	-3.45
195	SLD 3	129	-6	1771	49.6	4.46	-3.57
195	SLD 4	127	-6	1771	49.6	4.48	-3.48
195	SLD 5	37	21	1742	48.17	1.8	-1.05
195	SLD 6	35	22	1742	48.17	1.81	-0.95
195	SLD 7	42	-21	1783	50.25	2.12	-1.16
195	SLD 8	40	-21	1783	50.25	2.14	-1.07
195	SLD 9	-39	22	1739	48.09	-0.31	1.06
195	SLD 10	-41	22	1739	48.09	-0.29	1.15
195	SLD 11	-34	-21	1780	50.17	0.02	0.95
195	SLD 12	-36	-20	1780	50.17	0.03	1.04
195	SLD 13	-126	7	1750	48.74	-2.65	3.47
195	SLD 14	-128	7	1750	48.74	-2.63	3.56
195	SLD 15	-124	-6	1762	49.36	-2.55	3.44
195	SLD 16	-126	-5	1762	49.36	-2.54	3.53
195	SLV 1	288	14	1757	48.72	8.81	-8.02
195	SLV 2	284	15	1757	48.72	8.84	-7.82
195	SLV 3	291	-15	1786	50.18	9.04	-8.1
195	SLV 4	287	-15	1786	50.18	9.07	-7.9
195	SLV 5	84	49	1716	46.82	2.92	-2.37
195	SLV 6	79	50	1716	46.82	2.96	-2.16
195	SLV 7	94	-49	1812	51.69	3.69	-2.63
195	SLV 8	89	-49	1812	51.69	3.72	-2.42
195	SLV 9	-88	50	1709	46.65	-1.89	2.41
195	SLV 10	-93	50	1709	46.65	-1.86	2.62
195	SLV 11	-78	-49	1806	51.52	-1.13	2.15
195	SLV 12	-83	-48	1806	51.52	-1.09	2.36
195	SLV 13	-286	16	1736	48.16	-7.24	7.89
195	SLV 14	-290	16	1736	48.16	-7.2	8.09
195	SLV 15	-283	-14	1765	49.62	-7.01	7.81
195	SLV 16	-287	-13	1765	49.62	-6.98	8.01
195	CRTFP Ux+	0	0	0	0	0	0
195	CRTFP Ux-	0	0	0	0	0	0
195	CRTFP Uy+	0	0	0	0	0	0
195	CRTFP Uy-	0	0	0	0	0	0
197	SLU 1	0	1	1878	-0.03	0.53	0.02
197	SLU 2	0	1	1878	-0.03	0.53	0.02
197	SLU 3	0	1	1878	-0.03	0.53	0.02
197	SLU 4	0	1	1878	-0.03	0.53	0.02
197	SLU 5	0	1	1878	-0.03	0.53	0.02
197	SLU 6	0	1	1878	-0.03	0.53	0.02
197	SLU 7	0	1	1878	-0.03	0.53	0.02
197	SLU 8	0	1	1878	-0.03	0.53	0.02
197	SLU 9	0	1	1878	-0.03	0.53	0.02
197	SLU 10	0	1	2259	-0.19	0.61	0.03
197	SLU 11	0	1	2259	-0.19	0.61	0.03
197	SLU 12	0	1	2259	-0.19	0.61	0.03
197	SLU 13	0	1	2259	-0.19	0.61	0.03
197	SLU 14	0	1	2259	-0.19	0.61	0.03
197	SLU 15	0	1	2259	-0.19	0.61	0.03
197	SLU 16	0	1	2259	-0.19	0.61	0.03
197	SLU 17	0	1	2259	-0.19	0.61	0.03
197	SLU 18	0	1	2422	-0.26	0.64	0.03
197	SLU 19	0	1	2422	-0.26	0.64	0.03
197	SLU 20	0	1	2422	-0.26	0.64	0.03
197	SLU 21	0	1	2422	-0.26	0.64	0.03
197	SLU 22	0	1	2161	-0.14	0.59	0.03
197	SLU 23	0	1	2161	-0.14	0.59	0.03
197	SLU 24	0	1	2161	-0.14	0.59	0.03
197	SLU 25	0	1	2161	-0.14	0.59	0.03
197	SLU 26	0	1	2161	-0.14	0.59	0.03
197	SLU 27	0	1	2161	-0.14	0.59	0.03
197	SLU 28	0	1	2161	-0.14	0.59	0.03
197	SLU 29	0	1	2161	-0.14	0.59	0.03
197	SLU 30	0	1	2161	-0.14	0.59	0.03
197	SLU 31	0	1	2541	-0.3	0.67	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
197	SLU 32	0	1	2541	-0.3	0.67	0.03
197	SLU 33	0	1	2541	-0.3	0.67	0.03
197	SLU 34	0	1	2541	-0.3	0.67	0.03
197	SLU 35	0	1	2541	-0.3	0.67	0.03
197	SLU 36	0	1	2541	-0.3	0.67	0.03
197	SLU 37	0	1	2541	-0.3	0.67	0.03
197	SLU 38	0	1	2541	-0.3	0.67	0.03
197	SLU 39	0	1	2704	-0.37	0.7	0.03
197	SLU 40	0	1	2704	-0.37	0.7	0.03
197	SLU 41	0	1	2704	-0.37	0.7	0.03
197	SLU 42	0	1	2704	-0.37	0.7	0.03
197	SLU 43	0	1	2345	0	0.67	0.03
197	SLU 44	0	1	2345	0	0.67	0.03
197	SLU 45	0	1	2345	0	0.67	0.03
197	SLU 46	0	1	2345	0	0.67	0.03
197	SLU 47	0	1	2345	0	0.67	0.03
197	SLU 48	0	1	2345	0	0.67	0.03
197	SLU 49	0	1	2345	0	0.67	0.03
197	SLU 50	0	1	2345	0	0.67	0.03
197	SLU 51	0	1	2345	0	0.67	0.03
197	SLU 52	0	1	2726	-0.16	0.75	0.03
197	SLU 53	0	1	2726	-0.16	0.75	0.03
197	SLU 54	0	1	2726	-0.16	0.75	0.03
197	SLU 55	0	1	2726	-0.16	0.75	0.03
197	SLU 56	0	1	2726	-0.16	0.75	0.03
197	SLU 57	0	1	2726	-0.16	0.75	0.03
197	SLU 58	0	1	2726	-0.16	0.75	0.03
197	SLU 59	0	1	2726	-0.16	0.75	0.03
197	SLU 60	0	1	2889	-0.23	0.78	0.03
197	SLU 61	0	1	2889	-0.23	0.78	0.03
197	SLU 62	0	1	2889	-0.23	0.78	0.03
197	SLU 63	0	1	2889	-0.23	0.78	0.03
197	SLU 64	0	1	2628	-0.11	0.73	0.03
197	SLU 65	0	1	2628	-0.11	0.73	0.03
197	SLU 66	0	1	2628	-0.11	0.73	0.03
197	SLU 67	0	1	2628	-0.11	0.73	0.03
197	SLU 68	0	1	2628	-0.11	0.73	0.03
197	SLU 69	0	1	2628	-0.11	0.73	0.03
197	SLU 70	0	1	2628	-0.11	0.73	0.03
197	SLU 71	0	1	2628	-0.11	0.73	0.03
197	SLU 72	0	1	2628	-0.11	0.73	0.03
197	SLU 73	0	1	3008	-0.27	0.81	0.04
197	SLU 74	0	1	3008	-0.27	0.81	0.04
197	SLU 75	0	1	3008	-0.27	0.81	0.04
197	SLU 76	0	1	3008	-0.27	0.81	0.04
197	SLU 77	0	1	3008	-0.27	0.81	0.04
197	SLU 78	0	1	3008	-0.27	0.81	0.04
197	SLU 79	0	1	3008	-0.27	0.81	0.04
197	SLU 80	0	1	3008	-0.27	0.81	0.04
197	SLU 81	0	1	3171	-0.34	0.84	0.04
197	SLU 82	0	1	3171	-0.34	0.84	0.04
197	SLU 83	0	1	3171	-0.34	0.84	0.04
197	SLU 84	0	1	3171	-0.34	0.84	0.04
197	SLE RA 1	0	1	1959	-0.06	0.55	0.02
197	SLE RA 2	0	1	1959	-0.06	0.55	0.02
197	SLE RA 3	0	1	1959	-0.06	0.55	0.02
197	SLE RA 4	0	1	1959	-0.06	0.55	0.02
197	SLE RA 5	0	1	1959	-0.06	0.55	0.02
197	SLE RA 6	0	1	1959	-0.06	0.55	0.02
197	SLE RA 7	0	1	1959	-0.06	0.55	0.02
197	SLE RA 8	0	1	1959	-0.06	0.55	0.02
197	SLE RA 9	0	1	1959	-0.06	0.55	0.02
197	SLE RA 10	0	1	2213	-0.17	0.6	0.03
197	SLE RA 11	0	1	2213	-0.17	0.6	0.03
197	SLE RA 12	0	1	2213	-0.17	0.6	0.03
197	SLE RA 13	0	1	2213	-0.17	0.6	0.03
197	SLE RA 14	0	1	2213	-0.17	0.6	0.03
197	SLE RA 15	0	1	2213	-0.17	0.6	0.03
197	SLE RA 16	0	1	2213	-0.17	0.6	0.03
197	SLE RA 17	0	1	2213	-0.17	0.6	0.03
197	SLE RA 18	0	1	2321	-0.21	0.62	0.03
197	SLE RA 19	0	1	2321	-0.21	0.62	0.03
197	SLE RA 20	0	1	2321	-0.21	0.62	0.03
197	SLE RA 21	0	1	2321	-0.21	0.62	0.03
197	SLE FR 1	0	1	1959	-0.06	0.55	0.02
197	SLE FR 2	0	1	1959	-0.06	0.55	0.02
197	SLE FR 3	0	1	1959	-0.06	0.55	0.02
197	SLE FR 4	0	1	2068	-0.1	0.57	0.02
197	SLE FR 5	0	1	2068	-0.1	0.57	0.02
197	SLE FR 6	0	1	2140	-0.14	0.58	0.03
197	SLE QP 1	0	1	1959	-0.06	0.55	0.02
197	SLE QP 2	0	1	2068	-0.1	0.57	0.02
197	SLD 1	148	8	2059	-0.36	4.4	0.05
197	SLD 2	144	8	2059	-0.36	4.41	0.12
197	SLD 3	150	-7	2087	0.13	4.18	0.07
197	SLD 4	145	-7	2087	0.13	4.19	0.14
197	SLD 5	44	25	2021	-0.93	2.05	-0.02
197	SLD 6	40	25	2021	-0.92	2.05	0.06
197	SLD 7	48	-24	2117	0.71	1.32	0.03
197	SLD 8	44	-24	2117	0.71	1.33	0.11



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
197	SLD 9	-44	25	2018	-0.92	-0.19	-0.06
197	SLD 10	-48	26	2018	-0.92	-0.18	0.02
197	SLD 11	-40	-24	2114	0.72	-0.91	-0.01
197	SLD 12	-44	-24	2114	0.72	-0.91	0.06
197	SLD 13	-145	8	2048	-0.34	-3.05	-0.09
197	SLD 14	-150	9	2048	-0.34	-3.04	-0.02
197	SLD 15	-144	-6	2077	0.15	-3.27	-0.08
197	SLD 16	-148	-6	2077	0.15	-3.26	0
197	SLV 1	337	17	2046	-0.7	9.56	0.09
197	SLV 2	327	17	2046	-0.7	9.57	0.25
197	SLV 3	340	-18	2113	0.45	9.05	0.12
197	SLV 4	330	-17	2113	0.45	9.06	0.28
197	SLV 5	100	58	1959	-2.03	4.03	-0.07
197	SLV 6	90	59	1959	-2.03	4.05	0.1
197	SLV 7	110	-58	2184	1.81	2.33	0.04
197	SLV 8	100	-57	2184	1.81	2.35	0.21
197	SLV 9	-100	59	1952	-2.02	-1.21	-0.17
197	SLV 10	-110	59	1952	-2.02	-1.19	0.01
197	SLV 11	-90	-57	2177	1.82	-2.91	-0.05
197	SLV 12	-100	-57	2177	1.82	-2.9	0.12
197	SLV 13	-330	19	2022	-0.66	-7.92	-0.24
197	SLV 14	-340	19	2022	-0.66	-7.91	-0.07
197	SLV 15	-327	-16	2090	0.49	-8.43	-0.2
197	SLV 16	-337	-15	2090	0.49	-8.42	-0.04
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
199	SLU 1	-1	1	1876	-0.1	0.27	0.03
199	SLU 2	-1	1	1876	-0.1	0.27	0.03
199	SLU 3	-1	1	1876	-0.1	0.27	0.03
199	SLU 4	-1	1	1876	-0.1	0.27	0.03
199	SLU 5	-1	1	1876	-0.1	0.27	0.03
199	SLU 6	-1	1	1876	-0.1	0.27	0.03
199	SLU 7	-1	1	1876	-0.1	0.27	0.03
199	SLU 8	-1	1	1876	-0.1	0.27	0.03
199	SLU 9	-1	1	1876	-0.1	0.27	0.03
199	SLU 10	-1	1	2250	-0.32	0.31	0.03
199	SLU 11	-1	1	2250	-0.32	0.31	0.03
199	SLU 12	-1	1	2250	-0.32	0.31	0.03
199	SLU 13	-1	1	2250	-0.32	0.31	0.03
199	SLU 14	-1	1	2250	-0.32	0.31	0.03
199	SLU 15	-1	1	2250	-0.32	0.31	0.03
199	SLU 16	-1	1	2250	-0.32	0.31	0.03
199	SLU 17	-1	1	2250	-0.32	0.31	0.03
199	SLU 18	-1	1	2411	-0.41	0.33	0.04
199	SLU 19	-1	1	2411	-0.41	0.33	0.04
199	SLU 20	-1	1	2411	-0.41	0.33	0.04
199	SLU 21	-1	1	2411	-0.41	0.33	0.04
199	SLU 22	-1	1	2154	-0.25	0.3	0.03
199	SLU 23	-1	1	2154	-0.25	0.3	0.03
199	SLU 24	-1	1	2154	-0.25	0.3	0.03
199	SLU 25	-1	1	2154	-0.25	0.3	0.03
199	SLU 26	-1	1	2154	-0.25	0.3	0.03
199	SLU 27	-1	1	2154	-0.25	0.3	0.03
199	SLU 28	-1	1	2154	-0.25	0.3	0.03
199	SLU 29	-1	1	2154	-0.25	0.3	0.03
199	SLU 30	-1	1	2154	-0.25	0.3	0.03
199	SLU 31	-1	1	2529	-0.46	0.34	0.04
199	SLU 32	-1	1	2529	-0.46	0.34	0.04
199	SLU 33	-1	1	2529	-0.46	0.34	0.04
199	SLU 34	-1	1	2529	-0.46	0.34	0.04
199	SLU 35	-1	1	2529	-0.46	0.34	0.04
199	SLU 36	-1	1	2529	-0.46	0.34	0.04
199	SLU 37	-1	1	2529	-0.46	0.34	0.04
199	SLU 38	-1	1	2529	-0.46	0.34	0.04
199	SLU 39	-1	1	2689	-0.55	0.36	0.04
199	SLU 40	-1	1	2689	-0.55	0.36	0.04
199	SLU 41	-1	1	2689	-0.55	0.36	0.04
199	SLU 42	-1	1	2689	-0.55	0.36	0.04
199	SLU 43	-1	1	2344	-0.09	0.34	0.04
199	SLU 44	-1	1	2344	-0.09	0.34	0.04
199	SLU 45	-1	1	2344	-0.09	0.34	0.04
199	SLU 46	-1	1	2344	-0.09	0.34	0.04
199	SLU 47	-1	1	2344	-0.09	0.34	0.04
199	SLU 48	-1	1	2344	-0.09	0.34	0.04
199	SLU 49	-1	1	2344	-0.09	0.34	0.04
199	SLU 50	-1	1	2344	-0.09	0.34	0.04
199	SLU 51	-1	1	2344	-0.09	0.34	0.04
199	SLU 52	-1	1	2718	-0.3	0.38	0.04
199	SLU 53	-1	1	2718	-0.3	0.38	0.04
199	SLU 54	-1	1	2718	-0.3	0.38	0.04
199	SLU 55	-1	1	2718	-0.3	0.38	0.04
199	SLU 56	-1	1	2718	-0.3	0.38	0.04
199	SLU 57	-1	1	2718	-0.3	0.38	0.04
199	SLU 58	-1	1	2718	-0.3	0.38	0.04
199	SLU 59	-1	1	2718	-0.3	0.38	0.04
199	SLU 60	-1	1	2878	-0.39	0.4	0.04
199	SLU 61	-1	1	2878	-0.39	0.4	0.04
199	SLU 62	-1	1	2878	-0.39	0.4	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
199	SLU 63	-1	1	2878	-0.39	0.4	0.04
199	SLU 64	-1	1	2622	-0.23	0.37	0.04
199	SLU 65	-1	1	2622	-0.23	0.37	0.04
199	SLU 66	-1	1	2622	-0.23	0.37	0.04
199	SLU 67	-1	1	2622	-0.23	0.37	0.04
199	SLU 68	-1	1	2622	-0.23	0.37	0.04
199	SLU 69	-1	1	2622	-0.23	0.37	0.04
199	SLU 70	-1	1	2622	-0.23	0.37	0.04
199	SLU 71	-1	1	2622	-0.23	0.37	0.04
199	SLU 72	-1	1	2622	-0.23	0.37	0.04
199	SLU 73	-1	1	2996	-0.44	0.41	0.05
199	SLU 74	-1	1	2996	-0.44	0.41	0.05
199	SLU 75	-1	1	2996	-0.44	0.41	0.05
199	SLU 76	-1	1	2996	-0.44	0.41	0.05
199	SLU 77	-1	1	2996	-0.44	0.41	0.05
199	SLU 78	-1	1	2996	-0.44	0.41	0.05
199	SLU 79	-1	1	2996	-0.44	0.41	0.05
199	SLU 80	-1	1	2996	-0.44	0.41	0.05
199	SLU 81	-1	1	3156	-0.53	0.43	0.05
199	SLU 82	-1	1	3156	-0.53	0.43	0.05
199	SLU 83	-1	1	3156	-0.53	0.43	0.05
199	SLU 84	-1	1	3156	-0.53	0.43	0.05
199	SLE RA 1	-1	1	1956	-0.14	0.28	0.03
199	SLE RA 2	-1	1	1956	-0.14	0.28	0.03
199	SLE RA 3	-1	1	1956	-0.14	0.28	0.03
199	SLE RA 4	-1	1	1956	-0.14	0.28	0.03
199	SLE RA 5	-1	1	1956	-0.14	0.28	0.03
199	SLE RA 6	-1	1	1956	-0.14	0.28	0.03
199	SLE RA 7	-1	1	1956	-0.14	0.28	0.03
199	SLE RA 8	-1	1	1956	-0.14	0.28	0.03
199	SLE RA 9	-1	1	1956	-0.14	0.28	0.03
199	SLE RA 10	-1	1	2205	-0.29	0.31	0.03
199	SLE RA 11	-1	1	2205	-0.29	0.31	0.03
199	SLE RA 12	-1	1	2205	-0.29	0.31	0.03
199	SLE RA 13	-1	1	2205	-0.29	0.31	0.03
199	SLE RA 14	-1	1	2205	-0.29	0.31	0.03
199	SLE RA 15	-1	1	2205	-0.29	0.31	0.03
199	SLE RA 16	-1	1	2205	-0.29	0.31	0.03
199	SLE RA 17	-1	1	2205	-0.29	0.31	0.03
199	SLE RA 18	-1	1	2312	-0.35	0.32	0.04
199	SLE RA 19	-1	1	2312	-0.35	0.32	0.04
199	SLE RA 20	-1	1	2312	-0.35	0.32	0.04
199	SLE RA 21	-1	1	2312	-0.35	0.32	0.04
199	SLE FR 1	-1	1	1956	-0.14	0.28	0.03
199	SLE FR 2	-1	1	1956	-0.14	0.28	0.03
199	SLE FR 3	-1	1	1956	-0.14	0.28	0.03
199	SLE FR 4	-1	1	2063	-0.21	0.29	0.03
199	SLE FR 5	-1	1	2063	-0.21	0.29	0.03
199	SLE FR 6	-1	1	2134	-0.25	0.3	0.03
199	SLE QP 1	-1	1	1956	-0.14	0.28	0.03
199	SLE QP 2	-1	1	2063	-0.21	0.29	0.03
199	SLD 1	147	8	2045	-0.45	-3.68	0.05
199	SLD 2	140	8	2045	-0.45	-3.68	0.13
199	SLD 3	147	-7	2090	0.06	-4	0.07
199	SLD 4	141	-7	2090	0.06	-4	0.15
199	SLD 5	44	25	1989	-1.06	-0.41	-0.03
199	SLD 6	37	25	1989	-1.05	-0.41	0.06
199	SLD 7	47	-24	2139	0.65	-1.48	0.05
199	SLD 8	41	-24	2139	0.65	-1.48	0.13
199	SLD 9	-42	25	1986	-1.06	2.07	-0.07
199	SLD 10	-49	26	1986	-1.06	2.07	0.02
199	SLD 11	-39	-24	2136	0.64	1	0.01
199	SLD 12	-46	-24	2136	0.65	1	0.09
199	SLD 13	-143	9	2035	-0.47	4.58	-0.09
199	SLD 14	-149	9	2035	-0.47	4.59	0
199	SLD 15	-142	-6	2080	0.04	4.26	-0.07
199	SLD 16	-148	-6	2080	0.04	4.27	0.02
199	SLV 1	334	17	2021	-0.79	-9.21	0.06
199	SLV 2	318	17	2021	-0.79	-9.21	0.25
199	SLV 3	336	-18	2127	0.41	-9.96	0.11
199	SLV 4	321	-17	2127	0.41	-9.96	0.3
199	SLV 5	102	58	1890	-2.2	-1.42	-0.11
199	SLV 6	86	58	1890	-2.2	-1.42	0.09
199	SLV 7	109	-57	2242	1.8	-3.92	0.06
199	SLV 8	93	-57	2242	1.8	-3.92	0.26
199	SLV 9	-95	58	1883	-2.21	4.5	-0.2
199	SLV 10	-111	59	1883	-2.21	4.51	0
199	SLV 11	-88	-57	2235	1.79	2	-0.03
199	SLV 12	-104	-56	2235	1.79	2.01	0.17
199	SLV 13	-323	19	1998	-0.82	10.54	-0.24
199	SLV 14	-338	19	1998	-0.82	10.54	-0.05
199	SLV 15	-320	-16	2104	0.38	9.79	-0.19
199	SLV 16	-336	-15	2104	0.38	9.79	0
199	CRTFP Ux+	0	0	0	0	0	0
199	CRTFP Ux-	0	0	0	0	0	0
199	CRTFP Uy+	0	0	0	0	0	0
199	CRTFP Uy-	0	0	0	0	0	0
201	SLU 1	10	-16	3520	-619.88	559.12	5.54
201	SLU 2	10	-16	3520	-619.88	559.12	5.54
201	SLU 3	10	-16	3520	-619.88	559.12	5.54



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
201	SLU 4	10	-16	3520	-619.88	559.12	5.54
201	SLU 5	10	-16	3520	-619.88	559.12	5.54
201	SLU 6	10	-16	3520	-619.88	559.12	5.54
201	SLU 7	10	-16	3520	-619.88	559.12	5.54
201	SLU 8	10	-16	3520	-619.88	559.12	5.54
201	SLU 9	10	-16	3520	-619.88	559.12	5.54
201	SLU 10	10	-19	4148	-731.28	658.96	6.3
201	SLU 11	10	-19	4148	-731.28	658.96	6.3
201	SLU 12	10	-19	4148	-731.28	658.96	6.3
201	SLU 13	10	-19	4148	-731.28	658.96	6.3
201	SLU 14	10	-19	4148	-731.28	658.96	6.3
201	SLU 15	10	-19	4148	-731.28	658.96	6.3
201	SLU 16	10	-19	4148	-731.28	658.96	6.3
201	SLU 17	10	-19	4148	-731.28	658.96	6.3
201	SLU 18	10	-20	4417	-779.02	701.75	6.63
201	SLU 19	10	-20	4417	-779.02	701.75	6.63
201	SLU 20	10	-20	4417	-779.02	701.75	6.63
201	SLU 21	10	-20	4417	-779.02	701.75	6.63
201	SLU 22	11	-18	3991	-703.35	633.63	6.15
201	SLU 23	11	-18	3991	-703.35	633.63	6.15
201	SLU 24	11	-18	3991	-703.35	633.63	6.15
201	SLU 25	11	-18	3991	-703.35	633.63	6.15
201	SLU 26	11	-18	3991	-703.35	633.63	6.15
201	SLU 27	11	-18	3991	-703.35	633.63	6.15
201	SLU 28	11	-18	3991	-703.35	633.63	6.15
201	SLU 29	11	-18	3991	-703.35	633.63	6.15
201	SLU 30	11	-18	3991	-703.35	633.63	6.15
201	SLU 31	11	-21	4618	-814.74	733.47	6.91
201	SLU 32	11	-21	4618	-814.74	733.47	6.91
201	SLU 33	11	-21	4618	-814.74	733.47	6.91
201	SLU 34	11	-21	4618	-814.74	733.47	6.91
201	SLU 35	11	-21	4618	-814.74	733.47	6.91
201	SLU 36	11	-21	4618	-814.74	733.47	6.91
201	SLU 37	11	-21	4618	-814.74	733.47	6.91
201	SLU 38	11	-21	4618	-814.74	733.47	6.91
201	SLU 39	11	-23	4887	-862.48	776.26	7.24
201	SLU 40	11	-23	4887	-862.48	776.26	7.24
201	SLU 41	11	-23	4887	-862.48	776.26	7.24
201	SLU 42	11	-23	4887	-862.48	776.26	7.24
201	SLU 43	13	-20	4415	-777.23	701.31	6.99
201	SLU 44	13	-20	4415	-777.23	701.31	6.99
201	SLU 45	13	-20	4415	-777.23	701.31	6.99
201	SLU 46	13	-20	4415	-777.23	701.31	6.99
201	SLU 47	13	-20	4415	-777.23	701.31	6.99
201	SLU 48	13	-20	4415	-777.23	701.31	6.99
201	SLU 49	13	-20	4415	-777.23	701.31	6.99
201	SLU 50	13	-20	4415	-777.23	701.31	6.99
201	SLU 51	13	-20	4415	-777.23	701.31	6.99
201	SLU 52	13	-23	5043	-888.63	801.15	7.75
201	SLU 53	13	-23	5043	-888.63	801.15	7.75
201	SLU 54	13	-23	5043	-888.63	801.15	7.75
201	SLU 55	13	-23	5043	-888.63	801.15	7.75
201	SLU 56	13	-23	5043	-888.63	801.15	7.75
201	SLU 57	13	-23	5043	-888.63	801.15	7.75
201	SLU 58	13	-23	5043	-888.63	801.15	7.75
201	SLU 59	13	-23	5043	-888.63	801.15	7.75
201	SLU 60	13	-24	5312	-936.37	843.94	8.08
201	SLU 61	13	-24	5312	-936.37	843.94	8.08
201	SLU 62	13	-24	5312	-936.37	843.94	8.08
201	SLU 63	13	-24	5312	-936.37	843.94	8.08
201	SLU 64	13	-22	4885	-860.7	775.82	7.6
201	SLU 65	13	-22	4885	-860.7	775.82	7.6
201	SLU 66	13	-22	4885	-860.7	775.82	7.6
201	SLU 67	13	-22	4885	-860.7	775.82	7.6
201	SLU 68	13	-22	4885	-860.7	775.82	7.6
201	SLU 69	13	-22	4885	-860.7	775.82	7.6
201	SLU 70	13	-22	4885	-860.7	775.82	7.6
201	SLU 71	13	-22	4885	-860.7	775.82	7.6
201	SLU 72	13	-22	4885	-860.7	775.82	7.6
201	SLU 73	14	-25	5513	-972.09	875.66	8.36
201	SLU 74	14	-25	5513	-972.09	875.66	8.36
201	SLU 75	14	-25	5513	-972.09	875.66	8.36
201	SLU 76	14	-25	5513	-972.09	875.66	8.36
201	SLU 77	14	-25	5513	-972.09	875.66	8.36
201	SLU 78	14	-25	5513	-972.09	875.66	8.36
201	SLU 79	14	-25	5513	-972.09	875.66	8.36
201	SLU 80	14	-25	5513	-972.09	875.66	8.36
201	SLU 81	14	-27	5782	-1019.83	918.45	8.69
201	SLU 82	14	-27	5782	-1019.83	918.45	8.69
201	SLU 83	14	-27	5782	-1019.83	918.45	8.69
201	SLU 84	14	-27	5782	-1019.83	918.45	8.69
201	SLE RA 1	10	-17	3655	-643.73	580.41	5.71
201	SLE RA 2	10	-17	3655	-643.73	580.41	5.71
201	SLE RA 3	10	-17	3655	-643.73	580.41	5.71
201	SLE RA 4	10	-17	3655	-643.73	580.41	5.71
201	SLE RA 5	10	-17	3655	-643.73	580.41	5.71
201	SLE RA 6	10	-17	3655	-643.73	580.41	5.71
201	SLE RA 7	10	-17	3655	-643.73	580.41	5.71
201	SLE RA 8	10	-17	3655	-643.73	580.41	5.71
201	SLE RA 9	10	-17	3655	-643.73	580.41	5.71



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
201	SLE RA 10	10	-19	4073	-717.99	646.97	6.22
201	SLE RA 11	10	-19	4073	-717.99	646.97	6.22
201	SLE RA 12	10	-19	4073	-717.99	646.97	6.22
201	SLE RA 13	10	-19	4073	-717.99	646.97	6.22
201	SLE RA 14	10	-19	4073	-717.99	646.97	6.22
201	SLE RA 15	10	-19	4073	-717.99	646.97	6.22
201	SLE RA 16	10	-19	4073	-717.99	646.97	6.22
201	SLE RA 17	10	-19	4073	-717.99	646.97	6.22
201	SLE RA 18	10	-20	4252	-749.82	675.5	6.44
201	SLE RA 19	10	-20	4252	-749.82	675.5	6.44
201	SLE RA 20	10	-20	4252	-749.82	675.5	6.44
201	SLE RA 21	10	-20	4252	-749.82	675.5	6.44
201	SLE FR 1	10	-17	3655	-643.73	580.41	5.71
201	SLE FR 2	10	-17	3655	-643.73	580.41	5.71
201	SLE FR 3	10	-17	3655	-643.73	580.41	5.71
201	SLE FR 4	10	-17	3834	-675.56	608.93	5.93
201	SLE FR 5	10	-17	3834	-675.56	608.93	5.93
201	SLE FR 6	10	-18	3954	-696.78	627.95	6.08
201	SLE QP 1	10	-17	3655	-643.73	580.41	5.71
201	SLE QP 2	10	-17	3834	-675.56	608.93	5.93
201	SLD 1	288	122	3258	-574.69	515.96	17.99
201	SLD 2	273	188	3252	-573.58	510.26	-0.51
201	SLD 3	320	-256	3352	-588.51	555.24	118.43
201	SLD 4	305	-190	3346	-587.4	549.54	99.93
201	SLD 5	50	573	3521	-624.73	523.53	-136.1
201	SLD 6	36	641	3515	-623.6	517.7	-155.01
201	SLD 7	157	-686	3833	-670.8	654.46	198.69
201	SLD 8	142	-618	3828	-669.67	648.63	179.78
201	SLD 9	-121	583	3840	-681.44	589.24	-167.92
201	SLD 10	-136	651	3835	-680.31	563.41	-186.83
201	SLD 11	-15	-676	4153	-727.51	700.17	166.87
201	SLD 12	-30	-608	4147	-726.38	694.34	147.96
201	SLD 13	-285	155	4322	-763.72	668.33	-88.07
201	SLD 14	-299	221	4316	-762.61	662.63	-106.57
201	SLD 15	-253	-223	4416	-777.54	707.61	12.37
201	SLD 16	-267	-157	4410	-776.43	701.91	-6.13
201	SLV 1	639	312	2523	-446.01	396.24	29.62
201	SLV 2	606	464	2509	-443.48	383.19	-12.69
201	SLV 3	714	-575	2742	-478.41	488.36	265.32
201	SLV 4	681	-423	2729	-475.88	475.31	223
201	SLV 5	97	1370	3112	-558.48	410.23	-328.81
201	SLV 6	63	1527	3099	-555.86	396.69	-372.75
201	SLV 7	347	-1585	3845	-666.49	717.29	456.84
201	SLV 8	313	-1427	3831	-663.87	703.74	412.9
201	SLV 9	-292	1392	3837	-687.25	514.13	-401.04
201	SLV 10	-326	1550	3823	-684.62	500.58	-444.98
201	SLV 11	-43	-1562	4569	-795.26	821.18	384.61
201	SLV 12	-77	-1405	4556	-792.64	807.64	340.67
201	SLV 13	-660	388	4939	-875.23	742.56	-211.14
201	SLV 14	-693	540	4926	-872.7	729.51	-253.46
201	SLV 15	-586	-499	5159	-907.64	834.68	24.55
201	SLV 16	-618	-347	5145	-905.11	821.63	-17.76
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	0.01
201	CRTFP Uy-	0	0	0	0	0	-0.01
203	SLU 1	-2	1	1872	-0.15	0.15	0.03
203	SLU 2	-2	1	1872	-0.15	0.15	0.03
203	SLU 3	-2	1	1872	-0.15	0.15	0.03
203	SLU 4	-2	1	1872	-0.15	0.15	0.03
203	SLU 5	-2	1	1872	-0.15	0.15	0.03
203	SLU 6	-2	1	1872	-0.15	0.15	0.03
203	SLU 7	-2	1	1872	-0.15	0.15	0.03
203	SLU 8	-2	1	1872	-0.15	0.15	0.03
203	SLU 9	-2	1	1872	-0.15	0.15	0.03
203	SLU 10	-2	1	2239	-0.38	0.17	0.04
203	SLU 11	-2	1	2239	-0.38	0.17	0.04
203	SLU 12	-2	1	2239	-0.38	0.17	0.04
203	SLU 13	-2	1	2239	-0.38	0.17	0.04
203	SLU 14	-2	1	2239	-0.38	0.17	0.04
203	SLU 15	-2	1	2239	-0.38	0.17	0.04
203	SLU 16	-2	1	2239	-0.38	0.17	0.04
203	SLU 17	-2	1	2239	-0.38	0.17	0.04
203	SLU 18	-2	1	2396	-0.48	0.18	0.04
203	SLU 19	-2	1	2396	-0.48	0.18	0.04
203	SLU 20	-2	1	2396	-0.48	0.18	0.04
203	SLU 21	-2	1	2396	-0.48	0.18	0.04
203	SLU 22	-2	1	2145	-0.31	0.16	0.04
203	SLU 23	-2	1	2145	-0.31	0.16	0.04
203	SLU 24	-2	1	2145	-0.31	0.16	0.04
203	SLU 25	-2	1	2145	-0.31	0.16	0.04
203	SLU 26	-2	1	2145	-0.31	0.16	0.04
203	SLU 27	-2	1	2145	-0.31	0.16	0.04
203	SLU 28	-2	1	2145	-0.31	0.16	0.04
203	SLU 29	-2	1	2145	-0.31	0.16	0.04
203	SLU 30	-2	1	2145	-0.31	0.16	0.04
203	SLU 31	-2	1	2512	-0.54	0.19	0.05
203	SLU 32	-2	1	2512	-0.54	0.19	0.05
203	SLU 33	-2	1	2512	-0.54	0.19	0.05
203	SLU 34	-2	1	2512	-0.54	0.19	0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
203	SLU 35	-2	1	2512	-0.54	0.19	0.05
203	SLU 36	-2	1	2512	-0.54	0.19	0.05
203	SLU 37	-2	1	2512	-0.54	0.19	0.05
203	SLU 38	-2	1	2512	-0.54	0.19	0.05
203	SLU 39	-3	1	2670	-0.63	0.2	0.05
203	SLU 40	-3	1	2670	-0.63	0.2	0.05
203	SLU 41	-3	1	2670	-0.63	0.2	0.05
203	SLU 42	-3	1	2670	-0.63	0.2	0.05
203	SLU 43	-2	1	2340	-0.14	0.19	0.04
203	SLU 44	-2	1	2340	-0.14	0.19	0.04
203	SLU 45	-2	1	2340	-0.14	0.19	0.04
203	SLU 46	-2	1	2340	-0.14	0.19	0.04
203	SLU 47	-2	1	2340	-0.14	0.19	0.04
203	SLU 48	-2	1	2340	-0.14	0.19	0.04
203	SLU 49	-2	1	2340	-0.14	0.19	0.04
203	SLU 50	-2	1	2340	-0.14	0.19	0.04
203	SLU 51	-2	1	2340	-0.14	0.19	0.04
203	SLU 52	-3	1	2707	-0.37	0.21	0.05
203	SLU 53	-3	1	2707	-0.37	0.21	0.05
203	SLU 54	-3	1	2707	-0.37	0.21	0.05
203	SLU 55	-3	1	2707	-0.37	0.21	0.05
203	SLU 56	-3	1	2707	-0.37	0.21	0.05
203	SLU 57	-3	1	2707	-0.37	0.21	0.05
203	SLU 58	-3	1	2707	-0.37	0.21	0.05
203	SLU 59	-3	1	2707	-0.37	0.21	0.05
203	SLU 60	-3	1	2864	-0.47	0.22	0.05
203	SLU 61	-3	1	2864	-0.47	0.22	0.05
203	SLU 62	-3	1	2864	-0.47	0.22	0.05
203	SLU 63	-3	1	2864	-0.47	0.22	0.05
203	SLU 64	-3	1	2613	-0.3	0.2	0.05
203	SLU 65	-3	1	2613	-0.3	0.2	0.05
203	SLU 66	-3	1	2613	-0.3	0.2	0.05
203	SLU 67	-3	1	2613	-0.3	0.2	0.05
203	SLU 68	-3	1	2613	-0.3	0.2	0.05
203	SLU 69	-3	1	2613	-0.3	0.2	0.05
203	SLU 70	-3	1	2613	-0.3	0.2	0.05
203	SLU 71	-3	1	2613	-0.3	0.2	0.05
203	SLU 72	-3	1	2613	-0.3	0.2	0.05
203	SLU 73	-3	1	2980	-0.53	0.22	0.05
203	SLU 74	-3	1	2980	-0.53	0.22	0.05
203	SLU 75	-3	1	2980	-0.53	0.22	0.05
203	SLU 76	-3	1	2980	-0.53	0.22	0.05
203	SLU 77	-3	1	2980	-0.53	0.22	0.05
203	SLU 78	-3	1	2980	-0.53	0.22	0.05
203	SLU 79	-3	1	2980	-0.53	0.22	0.05
203	SLU 80	-3	1	2980	-0.53	0.22	0.05
203	SLU 81	-3	2	3137	-0.63	0.23	0.06
203	SLU 82	-3	2	3137	-0.63	0.23	0.06
203	SLU 83	-3	2	3137	-0.63	0.23	0.06
203	SLU 84	-3	2	3137	-0.63	0.23	0.06
203	SLE RA 1	-2	1	1950	-0.2	0.15	0.04
203	SLE RA 2	-2	1	1950	-0.2	0.15	0.04
203	SLE RA 3	-2	1	1950	-0.2	0.15	0.04
203	SLE RA 4	-2	1	1950	-0.2	0.15	0.04
203	SLE RA 5	-2	1	1950	-0.2	0.15	0.04
203	SLE RA 6	-2	1	1950	-0.2	0.15	0.04
203	SLE RA 7	-2	1	1950	-0.2	0.15	0.04
203	SLE RA 8	-2	1	1950	-0.2	0.15	0.04
203	SLE RA 9	-2	1	1950	-0.2	0.15	0.04
203	SLE RA 10	-2	1	2195	-0.35	0.17	0.04
203	SLE RA 11	-2	1	2195	-0.35	0.17	0.04
203	SLE RA 12	-2	1	2195	-0.35	0.17	0.04
203	SLE RA 13	-2	1	2195	-0.35	0.17	0.04
203	SLE RA 14	-2	1	2195	-0.35	0.17	0.04
203	SLE RA 15	-2	1	2195	-0.35	0.17	0.04
203	SLE RA 16	-2	1	2195	-0.35	0.17	0.04
203	SLE RA 17	-2	1	2195	-0.35	0.17	0.04
203	SLE RA 18	-2	1	2300	-0.41	0.17	0.04
203	SLE RA 19	-2	1	2300	-0.41	0.17	0.04
203	SLE RA 20	-2	1	2300	-0.41	0.17	0.04
203	SLE RA 21	-2	1	2300	-0.41	0.17	0.04
203	SLE FR 1	-2	1	1950	-0.2	0.15	0.04
203	SLE FR 2	-2	1	1950	-0.2	0.15	0.04
203	SLE FR 3	-2	1	1950	-0.2	0.15	0.04
203	SLE FR 4	-2	1	2055	-0.26	0.16	0.04
203	SLE FR 5	-2	1	2055	-0.26	0.16	0.04
203	SLE FR 6	-2	1	2125	-0.3	0.16	0.04
203	SLE QP 1	-2	1	1950	-0.2	0.15	0.04
203	SLE QP 2	-2	1	2055	-0.26	0.16	0.04
203	SLD 1	146	8	2029	-0.51	-4.22	0.01
203	SLD 2	137	8	2029	-0.51	-4.22	0.11
203	SLD 3	145	-7	2091	0	-4.62	0.04
203	SLD 4	136	-7	2091	0.01	-4.62	0.13
203	SLD 5	47	25	1953	-1.12	-0.54	-0.05
203	SLD 6	38	25	1954	-1.12	-0.54	0.05
203	SLD 7	44	-24	2160	0.6	-1.89	0.05
203	SLD 8	34	-24	2160	0.61	-1.89	0.14
203	SLD 9	-38	25	1950	-1.13	2.21	-0.07
203	SLD 10	-48	26	1951	-1.13	2.2	0.03
203	SLD 11	-42	-24	2156	0.6	0.86	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
203	SLD 12	-52	-23	2157	0.6	0.86	0.12
203	SLD 13	-140	9	2019	-0.53	4.94	-0.06
203	SLD 14	-149	9	2019	-0.53	4.94	0.04
203	SLD 15	-141	-6	2081	-0.01	4.53	-0.03
203	SLD 16	-150	-6	2081	-0.01	4.53	0.06
203	SLV 1	335	17	1994	-0.86	-10.41	-0.02
203	SLV 2	313	17	1994	-0.85	-10.41	0.19
203	SLV 3	332	-18	2139	0.36	-11.35	0.04
203	SLV 4	310	-17	2139	0.36	-11.36	0.26
203	SLV 5	111	58	1817	-2.29	-1.58	-0.16
203	SLV 6	88	58	1817	-2.28	-1.58	0.07
203	SLV 7	103	-57	2300	1.77	-4.73	0.06
203	SLV 8	80	-56	2300	1.77	-4.73	0.28
203	SLV 9	-84	58	1810	-2.3	5.05	-0.2
203	SLV 10	-107	59	1810	-2.29	5.05	0.02
203	SLV 11	-92	-56	2293	1.76	1.9	0.01
203	SLV 12	-115	-56	2293	1.77	1.89	0.23
203	SLV 13	-314	19	1971	-0.89	11.67	-0.18
203	SLV 14	-336	19	1971	-0.88	11.67	0.03
203	SLV 15	-317	-16	2116	0.33	10.73	-0.12
203	SLV 16	-339	-15	2116	0.33	10.73	0.1
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
204	SLU 1	0	18	6107	-84.27	10.01	1.61
204	SLU 2	0	18	6107	-84.27	10.01	1.61
204	SLU 3	0	18	6107	-84.27	10.01	1.61
204	SLU 4	0	18	6107	-84.27	10.01	1.61
204	SLU 5	0	18	6107	-84.27	10.01	1.61
204	SLU 6	0	18	6107	-84.27	10.01	1.61
204	SLU 7	0	18	6107	-84.27	10.01	1.61
204	SLU 8	0	18	6107	-84.27	10.01	1.61
204	SLU 9	0	18	6107	-84.27	10.01	1.61
204	SLU 10	4	20	7151	-106.76	10.82	1.88
204	SLU 11	4	20	7151	-106.76	10.82	1.88
204	SLU 12	4	20	7151	-106.76	10.82	1.88
204	SLU 13	4	20	7151	-106.76	10.82	1.88
204	SLU 14	4	20	7151	-106.76	10.82	1.88
204	SLU 15	4	20	7151	-106.76	10.82	1.88
204	SLU 16	4	20	7151	-106.76	10.82	1.88
204	SLU 17	4	20	7151	-106.76	10.82	1.88
204	SLU 18	6	21	7599	-116.4	11.17	2
204	SLU 19	6	21	7599	-116.4	11.17	2
204	SLU 20	6	21	7599	-116.4	11.17	2
204	SLU 21	6	21	7599	-116.4	11.17	2
204	SLU 22	3	19	6894	-101.17	10.71	1.82
204	SLU 23	3	19	6894	-101.17	10.71	1.82
204	SLU 24	3	19	6894	-101.17	10.71	1.82
204	SLU 25	3	19	6894	-101.17	10.71	1.82
204	SLU 26	3	19	6894	-101.17	10.71	1.82
204	SLU 27	3	19	6894	-101.17	10.71	1.82
204	SLU 28	3	19	6894	-101.17	10.71	1.82
204	SLU 29	3	19	6894	-101.17	10.71	1.82
204	SLU 30	3	19	6894	-101.17	10.71	1.82
204	SLU 31	7	22	7938	-123.67	11.52	2.09
204	SLU 32	7	22	7938	-123.67	11.52	2.09
204	SLU 33	7	22	7938	-123.67	11.52	2.09
204	SLU 34	7	22	7938	-123.67	11.52	2.09
204	SLU 35	7	22	7938	-123.67	11.52	2.09
204	SLU 36	7	22	7938	-123.67	11.52	2.09
204	SLU 37	7	22	7938	-123.67	11.52	2.09
204	SLU 38	7	22	7938	-123.67	11.52	2.09
204	SLU 39	8	23	8386	-133.31	11.87	2.21
204	SLU 40	8	23	8386	-133.31	11.87	2.21
204	SLU 41	8	23	8386	-133.31	11.87	2.21
204	SLU 42	8	23	8386	-133.31	11.87	2.21
204	SLU 43	-1	23	7669	-103.75	12.78	2.02
204	SLU 44	-1	23	7669	-103.75	12.78	2.02
204	SLU 45	-1	23	7669	-103.75	12.78	2.02
204	SLU 46	-1	23	7669	-103.75	12.78	2.02
204	SLU 47	-1	23	7669	-103.75	12.78	2.02
204	SLU 48	-1	23	7669	-103.75	12.78	2.02
204	SLU 49	-1	23	7669	-103.75	12.78	2.02
204	SLU 50	-1	23	7669	-103.75	12.78	2.02
204	SLU 51	-1	23	7669	-103.75	12.78	2.02
204	SLU 52	3	25	8714	-126.25	13.59	2.29
204	SLU 53	3	25	8714	-126.25	13.59	2.29
204	SLU 54	3	25	8714	-126.25	13.59	2.29
204	SLU 55	3	25	8714	-126.25	13.59	2.29
204	SLU 56	3	25	8714	-126.25	13.59	2.29
204	SLU 57	3	25	8714	-126.25	13.59	2.29
204	SLU 58	3	25	8714	-126.25	13.59	2.29
204	SLU 59	3	25	8714	-126.25	13.59	2.29
204	SLU 60	5	26	9161	-135.89	13.93	2.41
204	SLU 61	5	26	9161	-135.89	13.93	2.41
204	SLU 62	5	26	9161	-135.89	13.93	2.41
204	SLU 63	5	26	9161	-135.89	13.93	2.41
204	SLU 64	2	24	8456	-120.66	13.47	2.23
204	SLU 65	2	24	8456	-120.66	13.47	2.23



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
204	SLU 66	2	24	8456	-120.66	13.47	2.23
204	SLU 67	2	24	8456	-120.66	13.47	2.23
204	SLU 68	2	24	8456	-120.66	13.47	2.23
204	SLU 69	2	24	8456	-120.66	13.47	2.23
204	SLU 70	2	24	8456	-120.66	13.47	2.23
204	SLU 71	2	24	8456	-120.66	13.47	2.23
204	SLU 72	2	24	8456	-120.66	13.47	2.23
204	SLU 73	6	26	9501	-143.15	14.28	2.5
204	SLU 74	6	26	9501	-143.15	14.28	2.5
204	SLU 75	6	26	9501	-143.15	14.28	2.5
204	SLU 76	6	26	9501	-143.15	14.28	2.5
204	SLU 77	6	26	9501	-143.15	14.28	2.5
204	SLU 78	6	26	9501	-143.15	14.28	2.5
204	SLU 79	6	26	9501	-143.15	14.28	2.5
204	SLU 80	6	26	9501	-143.15	14.28	2.5
204	SLU 81	7	27	9948	-152.79	14.63	2.62
204	SLU 82	7	27	9948	-152.79	14.63	2.62
204	SLU 83	7	27	9948	-152.79	14.63	2.62
204	SLU 84	7	27	9948	-152.79	14.63	2.62
204	SLE RA 1	1	18	6332	-89.1	10.21	1.67
204	SLE RA 2	1	18	6332	-89.1	10.21	1.67
204	SLE RA 3	1	18	6332	-89.1	10.21	1.67
204	SLE RA 4	1	18	6332	-89.1	10.21	1.67
204	SLE RA 5	1	18	6332	-89.1	10.21	1.67
204	SLE RA 6	1	18	6332	-89.1	10.21	1.67
204	SLE RA 7	1	18	6332	-89.1	10.21	1.67
204	SLE RA 8	1	18	6332	-89.1	10.21	1.67
204	SLE RA 9	1	18	6332	-89.1	10.21	1.67
204	SLE RA 10	3	20	7028	-104.09	10.75	1.85
204	SLE RA 11	3	20	7028	-104.09	10.75	1.85
204	SLE RA 12	3	20	7028	-104.09	10.75	1.85
204	SLE RA 13	3	20	7028	-104.09	10.75	1.85
204	SLE RA 14	3	20	7028	-104.09	10.75	1.85
204	SLE RA 15	3	20	7028	-104.09	10.75	1.85
204	SLE RA 16	3	20	7028	-104.09	10.75	1.85
204	SLE RA 17	3	20	7028	-104.09	10.75	1.85
204	SLE RA 18	5	20	7326	-110.52	10.98	1.93
204	SLE RA 19	5	20	7326	-110.52	10.98	1.93
204	SLE RA 20	5	20	7326	-110.52	10.98	1.93
204	SLE RA 21	5	20	7326	-110.52	10.98	1.93
204	SLE FR 1	1	18	6332	-89.1	10.21	1.67
204	SLE FR 2	1	18	6332	-89.1	10.21	1.67
204	SLE FR 3	1	18	6332	-89.1	10.21	1.67
204	SLE FR 4	2	19	6630	-95.53	10.44	1.75
204	SLE FR 5	2	19	6630	-95.53	10.44	1.75
204	SLE FR 6	3	19	6829	-99.81	10.6	1.8
204	SLE QP 1	1	18	6332	-89.1	10.21	1.67
204	SLE QP 2	2	19	6630	-95.53	10.44	1.75
204	SLD 1	600	490	7442	-121.8	12.27	-11.82
204	SLD 2	558	360	7444	-121.04	12.26	-6.41
204	SLD 3	529	-236	7516	-102.2	12.4	-16.26
204	SLD 4	486	-366	7519	-101.44	12.39	-10.85
204	SLD 5	305	1309	6760	-133.41	10.79	2.46
204	SLD 6	261	1176	6762	-132.63	10.78	7.99
204	SLD 7	67	-1112	7008	-68.07	11.24	-12.34
204	SLD 8	24	-1246	7011	-67.29	11.23	-6.81
204	SLD 9	-20	1283	6250	-123.76	9.66	10.3
204	SLD 10	-63	1150	6252	-122.98	9.65	15.83
204	SLD 11	-258	-1138	6498	-58.42	10.11	-4.5
204	SLD 12	-301	-1271	6501	-57.64	10.1	1.03
204	SLD 13	-482	404	5742	-89.62	8.49	14.34
204	SLD 14	-525	274	5744	-88.85	8.48	19.75
204	SLD 15	-554	-322	5816	-70.01	8.63	9.9
204	SLD 16	-596	-453	5819	-69.25	8.62	15.31
204	SLV 1	1362	1118	8470	-155.95	14.58	-28.91
204	SLV 2	1266	820	8476	-154.21	14.55	-16.54
204	SLV 3	1195	-587	8645	-109.94	14.9	-39.34
204	SLV 4	1098	-885	8651	-108.19	14.87	-26.97
204	SLV 5	700	3044	6915	-184.09	11.21	3.8
204	SLV 6	599	2734	6921	-182.28	11.18	16.65
204	SLV 7	142	-2638	7497	-30.7	12.27	-30.97
204	SLV 8	41	-2948	7503	-28.89	12.25	-18.12
204	SLV 9	-37	2985	5757	-162.16	8.64	21.62
204	SLV 10	-138	2676	5763	-160.35	8.61	34.46
204	SLV 11	-595	-2697	6339	-8.78	9.7	-13.16
204	SLV 12	-696	-3006	6345	-6.96	9.68	-0.31
204	SLV 13	-1094	922	4610	-82.86	6.01	30.46
204	SLV 14	-1191	624	4616	-81.11	5.99	42.84
204	SLV 15	-1262	-782	4785	-36.85	6.33	20.03
204	SLV 16	-1358	-1080	4791	-35.1	6.31	32.4
204	CRTFP Ux+	0	0	0	0	0	0
204	CRTFP Ux-	0	0	0	0	0	0
204	CRTFP Uy+	0	0	0	0	0	0
204	CRTFP Uy-	0	0	0	0	0	0
206	SLU 1	5	-7	1849	-1.11	211.57	1.87
206	SLU 2	5	-7	1849	-1.11	211.57	1.87
206	SLU 3	5	-7	1849	-1.11	211.57	1.87
206	SLU 4	5	-7	1849	-1.11	211.57	1.87
206	SLU 5	5	-7	1849	-1.11	211.57	1.87
206	SLU 6	5	-7	1849	-1.11	211.57	1.87



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
206	SLU 7	5	-7	1849	-1.11	211.57	1.87
206	SLU 8	5	-7	1849	-1.11	211.57	1.87
206	SLU 9	5	-7	1849	-1.11	211.57	1.87
206	SLU 10	6	-9	2173	-1.43	246.74	2.22
206	SLU 11	6	-9	2173	-1.43	246.74	2.22
206	SLU 12	6	-9	2173	-1.43	246.74	2.22
206	SLU 13	6	-9	2173	-1.43	246.74	2.22
206	SLU 14	6	-9	2173	-1.43	246.74	2.22
206	SLU 15	6	-9	2173	-1.43	246.74	2.22
206	SLU 16	6	-9	2173	-1.43	246.74	2.22
206	SLU 17	6	-9	2173	-1.43	246.74	2.22
206	SLU 18	6	-9	2312	-1.57	261.81	2.37
206	SLU 19	6	-9	2312	-1.57	261.81	2.37
206	SLU 20	6	-9	2312	-1.57	261.81	2.37
206	SLU 21	6	-9	2312	-1.57	261.81	2.37
206	SLU 22	6	-8	2092	-1.35	237.76	2.13
206	SLU 23	6	-8	2092	-1.35	237.76	2.13
206	SLU 24	6	-8	2092	-1.35	237.76	2.13
206	SLU 25	6	-8	2092	-1.35	237.76	2.13
206	SLU 26	6	-8	2092	-1.35	237.76	2.13
206	SLU 27	6	-8	2092	-1.35	237.76	2.13
206	SLU 28	6	-8	2092	-1.35	237.76	2.13
206	SLU 29	6	-8	2092	-1.35	237.76	2.13
206	SLU 30	6	-8	2092	-1.35	237.76	2.13
206	SLU 31	6	-10	2416	-1.67	272.93	2.49
206	SLU 32	6	-10	2416	-1.67	272.93	2.49
206	SLU 33	6	-10	2416	-1.67	272.93	2.49
206	SLU 34	6	-10	2416	-1.67	272.93	2.49
206	SLU 35	6	-10	2416	-1.67	272.93	2.49
206	SLU 36	6	-10	2416	-1.67	272.93	2.49
206	SLU 37	6	-10	2416	-1.67	272.93	2.49
206	SLU 38	6	-10	2416	-1.67	272.93	2.49
206	SLU 39	6	-10	2555	-1.81	288	2.64
206	SLU 40	6	-10	2555	-1.81	288	2.64
206	SLU 41	6	-10	2555	-1.81	288	2.64
206	SLU 42	6	-10	2555	-1.81	288	2.64
206	SLU 43	7	-9	2321	-1.36	266.06	2.33
206	SLU 44	7	-9	2321	-1.36	266.06	2.33
206	SLU 45	7	-9	2321	-1.36	266.06	2.33
206	SLU 46	7	-9	2321	-1.36	266.06	2.33
206	SLU 47	7	-9	2321	-1.36	266.06	2.33
206	SLU 48	7	-9	2321	-1.36	266.06	2.33
206	SLU 49	7	-9	2321	-1.36	266.06	2.33
206	SLU 50	7	-9	2321	-1.36	266.06	2.33
206	SLU 51	7	-9	2321	-1.36	266.06	2.33
206	SLU 52	7	-11	2645	-1.68	301.23	2.69
206	SLU 53	7	-11	2645	-1.68	301.23	2.69
206	SLU 54	7	-11	2645	-1.68	301.23	2.69
206	SLU 55	7	-11	2645	-1.68	301.23	2.69
206	SLU 56	7	-11	2645	-1.68	301.23	2.69
206	SLU 57	7	-11	2645	-1.68	301.23	2.69
206	SLU 58	7	-11	2645	-1.68	301.23	2.69
206	SLU 59	7	-11	2645	-1.68	301.23	2.69
206	SLU 60	7	-11	2784	-1.82	316.3	2.84
206	SLU 61	7	-11	2784	-1.82	316.3	2.84
206	SLU 62	7	-11	2784	-1.82	316.3	2.84
206	SLU 63	7	-11	2784	-1.82	316.3	2.84
206	SLU 64	7	-10	2564	-1.6	292.25	2.6
206	SLU 65	7	-10	2564	-1.6	292.25	2.6
206	SLU 66	7	-10	2564	-1.6	292.25	2.6
206	SLU 67	7	-10	2564	-1.6	292.25	2.6
206	SLU 68	7	-10	2564	-1.6	292.25	2.6
206	SLU 69	7	-10	2564	-1.6	292.25	2.6
206	SLU 70	7	-10	2564	-1.6	292.25	2.6
206	SLU 71	7	-10	2564	-1.6	292.25	2.6
206	SLU 72	7	-10	2564	-1.6	292.25	2.6
206	SLU 73	8	-12	2888	-1.92	327.42	2.95
206	SLU 74	8	-12	2888	-1.92	327.42	2.95
206	SLU 75	8	-12	2888	-1.92	327.42	2.95
206	SLU 76	8	-12	2888	-1.92	327.42	2.95
206	SLU 77	8	-12	2888	-1.92	327.42	2.95
206	SLU 78	8	-12	2888	-1.92	327.42	2.95
206	SLU 79	8	-12	2888	-1.92	327.42	2.95
206	SLU 80	8	-12	2888	-1.92	327.42	2.95
206	SLU 81	8	-12	3027	-2.06	342.49	3.11
206	SLU 82	8	-12	3027	-2.06	342.49	3.11
206	SLU 83	8	-12	3027	-2.06	342.49	3.11
206	SLU 84	8	-12	3027	-2.06	342.49	3.11
206	SLE RA 1	6	-8	1919	-1.18	219.05	1.94
206	SLE RA 2	6	-8	1919	-1.18	219.05	1.94
206	SLE RA 3	6	-8	1919	-1.18	219.05	1.94
206	SLE RA 4	6	-8	1919	-1.18	219.05	1.94
206	SLE RA 5	6	-8	1919	-1.18	219.05	1.94
206	SLE RA 6	6	-8	1919	-1.18	219.05	1.94
206	SLE RA 7	6	-8	1919	-1.18	219.05	1.94
206	SLE RA 8	6	-8	1919	-1.18	219.05	1.94
206	SLE RA 9	6	-8	1919	-1.18	219.05	1.94
206	SLE RA 10	6	-9	2135	-1.39	242.5	2.18
206	SLE RA 11	6	-9	2135	-1.39	242.5	2.18
206	SLE RA 12	6	-9	2135	-1.39	242.5	2.18



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
		Ind.	N.br.	x	y	z	x	y	z
206	SLE RA 13		6	-9	2135	-1.39	242.5	2.18	
206	SLE RA 14		6	-9	2135	-1.39	242.5	2.18	
206	SLE RA 15		6	-9	2135	-1.39	242.5	2.18	
206	SLE RA 16		6	-9	2135	-1.39	242.5	2.18	
206	SLE RA 17		6	-9	2135	-1.39	242.5	2.18	
206	SLE RA 18		6	-9	2227	-1.48	252.55	2.28	
206	SLE RA 19		6	-9	2227	-1.48	252.55	2.28	
206	SLE RA 20		6	-9	2227	-1.48	252.55	2.28	
206	SLE RA 21		6	-9	2227	-1.48	252.55	2.28	
206	SLE FR 1		6	-8	1919	-1.18	219.05	1.94	
206	SLE FR 2		6	-8	1919	-1.18	219.05	1.94	
206	SLE FR 3		6	-8	1919	-1.18	219.05	1.94	
206	SLE FR 4		6	-8	2011	-1.27	229.1	2.04	
206	SLE FR 5		6	-8	2011	-1.27	229.1	2.04	
206	SLE FR 6		6	-8	2073	-1.33	235.8	2.11	
206	SLE QP 1		6	-8	1919	-1.18	219.05	1.94	
206	SLE QP 2		6	-8	2011	-1.27	229.1	2.04	
206	SLD 1		159	67	1703	-1.31	195.84	-16.92	
206	SLD 2		147	103	1700	-1.31	192.97	-25.82	
206	SLD 3		170	-138	1774	-0.68	216.38	34.55	
206	SLD 4		158	-102	1771	-0.68	213.51	25.64	
206	SLD 5		39	312	1812	-2.24	189	-78.48	
206	SLD 6		27	349	1809	-2.24	186.07	-87.58	
206	SLD 7		76	-371	2049	-0.13	257.48	93.06	
206	SLD 8		64	-334	2047	-0.14	254.55	83.96	
206	SLD 9		-52	318	1976	-2.4	203.65	-79.87	
206	SLD 10		-64	355	1973	-2.41	200.73	-88.97	
206	SLD 11		-16	-365	2214	-0.3	272.13	91.67	
206	SLD 12		-28	-328	2211	-0.3	269.2	82.57	
206	SLD 13		-147	86	2251	-1.86	244.69	-21.56	
206	SLD 14		-158	122	2249	-1.86	241.82	-30.46	
206	SLD 15		-136	-119	2323	-1.23	265.23	29.91	
206	SLD 16		-148	-83	2320	-1.23	262.36	21	
206	SLV 1		353	170	1308	-1.38	152.62	-42.85	
206	SLV 2		326	252	1301	-1.39	146.06	-63.22	
206	SLV 3		379	-311	1475	0.1	200.78	77.91	
206	SLV 4		352	-228	1469	0.09	194.22	57.54	
206	SLV 5		81	744	1549	-3.55	135.54	-187.06	
206	SLV 6		53	830	1542	-3.56	128.73	-208.21	
206	SLV 7		166	-859	2107	1.4	296.06	215.47	
206	SLV 8		138	-773	2100	1.38	289.26	194.33	
206	SLV 9		-127	757	1923	-3.92	168.94	-190.24	
206	SLV 10		-155	843	1916	-3.94	162.14	-211.39	
206	SLV 11		-42	-846	2480	1.02	329.47	212.29	
206	SLV 12		-70	-760	2474	1.01	322.67	191.15	
206	SLV 13		-340	212	2554	-2.63	263.98	-53.45	
206	SLV 14		-367	295	2548	-2.64	257.42	-73.82	
206	SLV 15		-315	-269	2721	-1.15	312.14	67.31	
206	SLV 16		-342	-186	2715	-1.16	305.58	46.94	
206	CRTFP Ux+		0	0	0	0	0	0	
206	CRTFP Ux-		0	0	0	0	0	0	
206	CRTFP Uy+		0	0	0	0	0	0	
206	CRTFP Uy-		0	0	0	0	0	0	
208	SLU 1		-3	1	1867	-0.16	0.09	0.04	
208	SLU 2		-3	1	1867	-0.16	0.09	0.04	
208	SLU 3		-3	1	1867	-0.16	0.09	0.04	
208	SLU 4		-3	1	1867	-0.16	0.09	0.04	
208	SLU 5		-3	1	1867	-0.16	0.09	0.04	
208	SLU 6		-3	1	1867	-0.16	0.09	0.04	
208	SLU 7		-3	1	1867	-0.16	0.09	0.04	
208	SLU 8		-3	1	1867	-0.16	0.09	0.04	
208	SLU 9		-3	1	1867	-0.16	0.09	0.04	
208	SLU 10		-4	1	2227	-0.38	0.1	0.05	
208	SLU 11		-4	1	2227	-0.38	0.1	0.05	
208	SLU 12		-4	1	2227	-0.38	0.1	0.05	
208	SLU 13		-4	1	2227	-0.38	0.1	0.05	
208	SLU 14		-4	1	2227	-0.38	0.1	0.05	
208	SLU 15		-4	1	2227	-0.38	0.1	0.05	
208	SLU 16		-4	1	2227	-0.38	0.1	0.05	
208	SLU 17		-4	1	2227	-0.38	0.1	0.05	
208	SLU 18		-4	1	2381	-0.47	0.11	0.05	
208	SLU 19		-4	1	2381	-0.47	0.11	0.05	
208	SLU 20		-4	1	2381	-0.47	0.11	0.05	
208	SLU 21		-4	1	2381	-0.47	0.11	0.05	
208	SLU 22		-3	1	2135	-0.31	0.1	0.04	
208	SLU 23		-3	1	2135	-0.31	0.1	0.04	
208	SLU 24		-3	1	2135	-0.31	0.1	0.04	
208	SLU 25		-3	1	2135	-0.31	0.1	0.04	
208	SLU 26		-3	1	2135	-0.31	0.1	0.04	
208	SLU 27		-3	1	2135	-0.31	0.1	0.04	
208	SLU 28		-3	1	2135	-0.31	0.1	0.04	
208	SLU 29		-3	1	2135	-0.31	0.1	0.04	
208	SLU 30		-3	1	2135	-0.31	0.1	0.04	
208	SLU 31		-4	1	2495	-0.53	0.11	0.05	
208	SLU 32		-4	1	2495	-0.53	0.11	0.05	
208	SLU 33		-4	1	2495	-0.53	0.11	0.05	
208	SLU 34		-4	1	2495	-0.53	0.11	0.05	
208	SLU 35		-4	1	2495	-0.53	0.11	0.05	
208	SLU 36		-4	1	2495	-0.53	0.11	0.05	
208	SLU 37		-4	1	2495	-0.53	0.11	0.05	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
208	SLU 38	-4	1	2495	-0.53	0.11	0.05
208	SLU 39	-4	1	2649	-0.62	0.12	0.05
208	SLU 40	-4	1	2649	-0.62	0.12	0.05
208	SLU 41	-4	1	2649	-0.62	0.12	0.05
208	SLU 42	-4	1	2649	-0.62	0.12	0.05
208	SLU 43	-4	1	2335	-0.15	0.11	0.05
208	SLU 44	-4	1	2335	-0.15	0.11	0.05
208	SLU 45	-4	1	2335	-0.15	0.11	0.05
208	SLU 46	-4	1	2335	-0.15	0.11	0.05
208	SLU 47	-4	1	2335	-0.15	0.11	0.05
208	SLU 48	-4	1	2335	-0.15	0.11	0.05
208	SLU 49	-4	1	2335	-0.15	0.11	0.05
208	SLU 50	-4	1	2335	-0.15	0.11	0.05
208	SLU 51	-4	1	2335	-0.15	0.11	0.05
208	SLU 52	-4	1	2695	-0.37	0.13	0.05
208	SLU 53	-4	1	2695	-0.37	0.13	0.05
208	SLU 54	-4	1	2695	-0.37	0.13	0.05
208	SLU 55	-4	1	2695	-0.37	0.13	0.05
208	SLU 56	-4	1	2695	-0.37	0.13	0.05
208	SLU 57	-4	1	2695	-0.37	0.13	0.05
208	SLU 58	-4	1	2695	-0.37	0.13	0.05
208	SLU 59	-4	1	2695	-0.37	0.13	0.05
208	SLU 60	-5	2	2849	-0.46	0.13	0.06
208	SLU 61	-5	2	2849	-0.46	0.13	0.06
208	SLU 62	-5	2	2849	-0.46	0.13	0.06
208	SLU 63	-5	2	2849	-0.46	0.13	0.06
208	SLU 64	-4	1	2603	-0.3	0.12	0.05
208	SLU 65	-4	1	2603	-0.3	0.12	0.05
208	SLU 66	-4	1	2603	-0.3	0.12	0.05
208	SLU 67	-4	1	2603	-0.3	0.12	0.05
208	SLU 68	-4	1	2603	-0.3	0.12	0.05
208	SLU 69	-4	1	2603	-0.3	0.12	0.05
208	SLU 70	-4	1	2603	-0.3	0.12	0.05
208	SLU 71	-4	1	2603	-0.3	0.12	0.05
208	SLU 72	-4	1	2603	-0.3	0.12	0.05
208	SLU 73	-5	2	2963	-0.52	0.14	0.06
208	SLU 74	-5	2	2963	-0.52	0.14	0.06
208	SLU 75	-5	2	2963	-0.52	0.14	0.06
208	SLU 76	-5	2	2963	-0.52	0.14	0.06
208	SLU 77	-5	2	2963	-0.52	0.14	0.06
208	SLU 78	-5	2	2963	-0.52	0.14	0.06
208	SLU 79	-5	2	2963	-0.52	0.14	0.06
208	SLU 80	-5	2	2963	-0.52	0.14	0.06
208	SLU 81	-5	2	3117	-0.62	0.14	0.06
208	SLU 82	-5	2	3117	-0.62	0.14	0.06
208	SLU 83	-5	2	3117	-0.62	0.14	0.06
208	SLU 84	-5	2	3117	-0.62	0.14	0.06
208	SLE RA 1	-3	1	1944	-0.2	0.09	0.04
208	SLE RA 2	-3	1	1944	-0.2	0.09	0.04
208	SLE RA 3	-3	1	1944	-0.2	0.09	0.04
208	SLE RA 4	-3	1	1944	-0.2	0.09	0.04
208	SLE RA 5	-3	1	1944	-0.2	0.09	0.04
208	SLE RA 6	-3	1	1944	-0.2	0.09	0.04
208	SLE RA 7	-3	1	1944	-0.2	0.09	0.04
208	SLE RA 8	-3	1	1944	-0.2	0.09	0.04
208	SLE RA 9	-3	1	1944	-0.2	0.09	0.04
208	SLE RA 10	-4	1	2183	-0.35	0.1	0.04
208	SLE RA 11	-4	1	2183	-0.35	0.1	0.04
208	SLE RA 12	-4	1	2183	-0.35	0.1	0.04
208	SLE RA 13	-4	1	2183	-0.35	0.1	0.04
208	SLE RA 14	-4	1	2183	-0.35	0.1	0.04
208	SLE RA 15	-4	1	2183	-0.35	0.1	0.04
208	SLE RA 16	-4	1	2183	-0.35	0.1	0.04
208	SLE RA 17	-4	1	2183	-0.35	0.1	0.04
208	SLE RA 18	-4	1	2286	-0.41	0.11	0.05
208	SLE RA 19	-4	1	2286	-0.41	0.11	0.05
208	SLE RA 20	-4	1	2286	-0.41	0.11	0.05
208	SLE RA 21	-4	1	2286	-0.41	0.11	0.05
208	SLE FR 1	-3	1	1944	-0.2	0.09	0.04
208	SLE FR 2	-3	1	1944	-0.2	0.09	0.04
208	SLE FR 3	-3	1	1944	-0.2	0.09	0.04
208	SLE FR 4	-3	1	2046	-0.26	0.1	0.04
208	SLE FR 5	-3	1	2046	-0.26	0.1	0.04
208	SLE FR 6	-3	1	2115	-0.3	0.1	0.04
208	SLE QP 1	-3	1	1944	-0.2	0.09	0.04
208	SLE QP 2	-3	1	2046	-0.26	0.1	0.04
208	SLD 1	147	8	2012	-0.52	-4.5	-0.05
208	SLD 2	134	8	2012	-0.51	-4.5	0.06
208	SLD 3	145	-7	2091	0	-4.95	-0.02
208	SLD 4	132	-7	2091	0.01	-4.95	0.09
208	SLD 5	49	25	1917	-1.13	-0.58	-0.07
208	SLD 6	36	26	1917	-1.13	-0.59	0.04
208	SLD 7	43	-24	2179	0.61	-2.11	0.03
208	SLD 8	30	-23	2179	0.61	-2.11	0.14
208	SLD 9	-37	26	1914	-1.13	2.31	-0.06
208	SLD 10	-50	26	1914	-1.13	2.31	0.05
208	SLD 11	-42	-23	2176	0.6	0.78	0.05
208	SLD 12	-56	-23	2176	0.6	0.78	0.15
208	SLD 13	-139	9	2002	-0.53	5.15	-0.01
208	SLD 14	-152	9	2002	-0.53	5.15	0.1



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
208	SLD 15	-140	-6	2081	-0.01	4.69	0.03
208	SLD 16	-153	-6	2081	-0.01	4.69	0.13
208	SLV 1	337	17	1966	-0.86	-11.07	-0.16
208	SLV 2	308	18	1966	-0.86	-11.07	0.08
208	SLV 3	333	-17	2150	0.36	-12.14	-0.09
208	SLV 4	304	-17	2151	0.37	-12.14	0.15
208	SLV 5	115	58	1742	-2.3	-1.63	-0.22
208	SLV 6	85	58	1742	-2.29	-1.63	0.03
208	SLV 7	103	-57	2357	1.78	-5.2	0.03
208	SLV 8	72	-56	2358	1.78	-5.2	0.27
208	SLV 9	-79	58	1735	-2.31	5.4	-0.19
208	SLV 10	-109	59	1735	-2.3	5.39	0.06
208	SLV 11	-92	-56	2350	1.77	1.82	0.05
208	SLV 12	-122	-56	2351	1.77	1.82	0.3
208	SLV 13	-310	19	1942	-0.89	12.34	-0.07
208	SLV 14	-340	19	1942	-0.89	12.34	0.17
208	SLV 15	-314	-15	2127	0.33	11.27	0
208	SLV 16	-344	-15	2127	0.34	11.26	0.24
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	4	-7	1825	-0.47	196.22	1.73
210	SLU 2	4	-7	1825	-0.47	196.22	1.73
210	SLU 3	4	-7	1825	-0.47	196.22	1.73
210	SLU 4	4	-7	1825	-0.47	196.22	1.73
210	SLU 5	4	-7	1825	-0.47	196.22	1.73
210	SLU 6	4	-7	1825	-0.47	196.22	1.73
210	SLU 7	4	-7	1825	-0.47	196.22	1.73
210	SLU 8	4	-7	1825	-0.47	196.22	1.73
210	SLU 9	4	-7	1825	-0.47	196.22	1.73
210	SLU 10	4	-8	2141	-0.65	226.95	2.05
210	SLU 11	4	-8	2141	-0.65	226.95	2.05
210	SLU 12	4	-8	2141	-0.65	226.95	2.05
210	SLU 13	4	-8	2141	-0.65	226.95	2.05
210	SLU 14	4	-8	2141	-0.65	226.95	2.05
210	SLU 15	4	-8	2141	-0.65	226.95	2.05
210	SLU 16	4	-8	2141	-0.65	226.95	2.05
210	SLU 17	4	-8	2141	-0.65	226.95	2.05
210	SLU 18	4	-8	2277	-0.73	240.12	2.18
210	SLU 19	4	-8	2277	-0.73	240.12	2.18
210	SLU 20	4	-8	2277	-0.73	240.12	2.18
210	SLU 21	4	-8	2277	-0.73	240.12	2.18
210	SLU 22	4	-8	2062	-0.6	219.13	1.96
210	SLU 23	4	-8	2062	-0.6	219.13	1.96
210	SLU 24	4	-8	2062	-0.6	219.13	1.96
210	SLU 25	4	-8	2062	-0.6	219.13	1.96
210	SLU 26	4	-8	2062	-0.6	219.13	1.96
210	SLU 27	4	-8	2062	-0.6	219.13	1.96
210	SLU 28	4	-8	2062	-0.6	219.13	1.96
210	SLU 29	4	-8	2062	-0.6	219.13	1.96
210	SLU 30	4	-8	2062	-0.6	219.13	1.96
210	SLU 31	4	-9	2379	-0.78	249.85	2.28
210	SLU 32	4	-9	2379	-0.78	249.85	2.28
210	SLU 33	4	-9	2379	-0.78	249.85	2.28
210	SLU 34	4	-9	2379	-0.78	249.85	2.28
210	SLU 35	4	-9	2379	-0.78	249.85	2.28
210	SLU 36	4	-9	2379	-0.78	249.85	2.28
210	SLU 37	4	-9	2379	-0.78	249.85	2.28
210	SLU 38	4	-9	2379	-0.78	249.85	2.28
210	SLU 39	4	-9	2514	-0.86	263.02	2.42
210	SLU 40	4	-9	2514	-0.86	263.02	2.42
210	SLU 41	4	-9	2514	-0.86	263.02	2.42
210	SLU 42	4	-9	2514	-0.86	263.02	2.42
210	SLU 43	5	-8	2291	-0.57	247.23	2.16
210	SLU 44	5	-8	2291	-0.57	247.23	2.16
210	SLU 45	5	-8	2291	-0.57	247.23	2.16
210	SLU 46	5	-8	2291	-0.57	247.23	2.16
210	SLU 47	5	-8	2291	-0.57	247.23	2.16
210	SLU 48	5	-8	2291	-0.57	247.23	2.16
210	SLU 49	5	-8	2291	-0.57	247.23	2.16
210	SLU 50	5	-8	2291	-0.57	247.23	2.16
210	SLU 51	5	-8	2291	-0.57	247.23	2.16
210	SLU 52	5	-10	2607	-0.75	277.96	2.48
210	SLU 53	5	-10	2607	-0.75	277.96	2.48
210	SLU 54	5	-10	2607	-0.75	277.96	2.48
210	SLU 55	5	-10	2607	-0.75	277.96	2.48
210	SLU 56	5	-10	2607	-0.75	277.96	2.48
210	SLU 57	5	-10	2607	-0.75	277.96	2.48
210	SLU 58	5	-10	2607	-0.75	277.96	2.48
210	SLU 59	5	-10	2607	-0.75	277.96	2.48
210	SLU 60	5	-10	2743	-0.83	291.13	2.62
210	SLU 61	5	-10	2743	-0.83	291.13	2.62
210	SLU 62	5	-10	2743	-0.83	291.13	2.62
210	SLU 63	5	-10	2743	-0.83	291.13	2.62
210	SLU 64	5	-9	2528	-0.7	270.14	2.4
210	SLU 65	5	-9	2528	-0.7	270.14	2.4
210	SLU 66	5	-9	2528	-0.7	270.14	2.4
210	SLU 67	5	-9	2528	-0.7	270.14	2.4
210	SLU 68	5	-9	2528	-0.7	270.14	2.4



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
210	SLU 69	5	-9	2528	-0.7	270.14	2.4
210	SLU 70	5	-9	2528	-0.7	270.14	2.4
210	SLU 71	5	-9	2528	-0.7	270.14	2.4
210	SLU 72	5	-9	2528	-0.7	270.14	2.4
210	SLU 73	5	-10	2845	-0.88	300.87	2.72
210	SLU 74	5	-10	2845	-0.88	300.87	2.72
210	SLU 75	5	-10	2845	-0.88	300.87	2.72
210	SLU 76	5	-10	2845	-0.88	300.87	2.72
210	SLU 77	5	-10	2845	-0.88	300.87	2.72
210	SLU 78	5	-10	2845	-0.88	300.87	2.72
210	SLU 79	5	-10	2845	-0.88	300.87	2.72
210	SLU 80	5	-10	2845	-0.88	300.87	2.72
210	SLU 81	5	-11	2980	-0.96	314.03	2.86
210	SLU 82	5	-11	2980	-0.96	314.03	2.86
210	SLU 83	5	-11	2980	-0.96	314.03	2.86
210	SLU 84	5	-11	2980	-0.96	314.03	2.86
210	SLE RA 1	4	-7	1893	-0.51	202.76	1.79
210	SLE RA 2	4	-7	1893	-0.51	202.76	1.79
210	SLE RA 3	4	-7	1893	-0.51	202.76	1.79
210	SLE RA 4	4	-7	1893	-0.51	202.76	1.79
210	SLE RA 5	4	-7	1893	-0.51	202.76	1.79
210	SLE RA 6	4	-7	1893	-0.51	202.76	1.79
210	SLE RA 7	4	-7	1893	-0.51	202.76	1.79
210	SLE RA 8	4	-7	1893	-0.51	202.76	1.79
210	SLE RA 9	4	-7	1893	-0.51	202.76	1.79
210	SLE RA 10	4	-8	2104	-0.63	223.25	2.01
210	SLE RA 11	4	-8	2104	-0.63	223.25	2.01
210	SLE RA 12	4	-8	2104	-0.63	223.25	2.01
210	SLE RA 13	4	-8	2104	-0.63	223.25	2.01
210	SLE RA 14	4	-8	2104	-0.63	223.25	2.01
210	SLE RA 15	4	-8	2104	-0.63	223.25	2.01
210	SLE RA 16	4	-8	2104	-0.63	223.25	2.01
210	SLE RA 17	4	-8	2104	-0.63	223.25	2.01
210	SLE RA 18	4	-8	2194	-0.68	232.03	2.1
210	SLE RA 19	4	-8	2194	-0.68	232.03	2.1
210	SLE RA 20	4	-8	2194	-0.68	232.03	2.1
210	SLE RA 21	4	-8	2194	-0.68	232.03	2.1
210	SLE FR 1	4	-7	1893	-0.51	202.76	1.79
210	SLE FR 2	4	-7	1893	-0.51	202.76	1.79
210	SLE FR 3	4	-7	1893	-0.51	202.76	1.79
210	SLE FR 4	4	-7	1983	-0.56	211.54	1.89
210	SLE FR 5	4	-7	1983	-0.56	211.54	1.89
210	SLE FR 6	4	-7	2043	-0.6	217.4	1.95
210	SLE QP 1	4	-7	1893	-0.51	202.76	1.79
210	SLE QP 2	4	-7	1983	-0.56	211.54	1.89
210	SLD 1	163	68	1670	-0.85	183.61	-17.12
210	SLD 2	148	104	1666	-0.87	181.7	-26.02
210	SLD 3	167	-137	1763	-0.02	199.6	34.41
210	SLD 4	152	-101	1759	-0.04	197.69	25.51
210	SLD 5	51	313	1749	-1.9	179.6	-78.76
210	SLD 6	36	350	1746	-1.92	177.65	-87.86
210	SLD 7	64	-370	2059	0.87	232.9	93.01
210	SLD 8	49	-334	2056	0.85	230.95	83.92
210	SLD 9	-41	319	1910	-1.97	192.14	-80.15
210	SLD 10	-56	356	1907	-1.99	190.19	-89.24
210	SLD 11	-28	-365	2220	0.8	245.43	91.63
210	SLD 12	-43	-328	2217	0.77	243.48	82.53
210	SLD 13	-144	87	2207	-1.09	225.4	-21.74
210	SLD 14	-159	123	2203	-1.11	223.49	-30.64
210	SLD 15	-140	-118	2300	-0.26	241.39	29.79
210	SLD 16	-155	-82	2296	-0.28	239.48	20.89
210	SLV 1	365	171	1268	-1.24	147.28	-43.12
210	SLV 2	331	253	1261	-1.29	142.91	-63.48
210	SLV 3	374	-311	1486	0.71	184.75	77.8
210	SLV 4	340	-228	1479	0.66	180.38	57.44
210	SLV 5	111	746	1440	-3.7	137.06	-187.5
210	SLV 6	76	831	1433	-3.75	132.52	-208.64
210	SLV 7	141	-859	2167	2.79	261.94	215.58
210	SLV 8	106	-773	2160	2.74	257.4	194.44
210	SLV 9	-98	759	1806	-3.86	165.68	-190.67
210	SLV 10	-133	844	1799	-3.91	161.15	-211.81
210	SLV 11	-68	-846	2533	2.63	290.57	212.41
210	SLV 12	-103	-760	2526	2.58	286.03	191.27
210	SLV 13	-332	214	2487	-1.78	242.71	-53.67
210	SLV 14	-366	296	2480	-1.83	238.34	-74.03
210	SLV 15	-323	-268	2706	0.16	280.17	67.26
210	SLV 16	-357	-185	2698	0.12	275.81	46.89
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	-4	1	1863	-0.08	0.07	0.04
212	SLU 2	-4	1	1863	-0.08	0.07	0.04
212	SLU 3	-4	1	1863	-0.08	0.07	0.04
212	SLU 4	-4	1	1863	-0.08	0.07	0.04
212	SLU 5	-4	1	1863	-0.08	0.07	0.04
212	SLU 6	-4	1	1863	-0.08	0.07	0.04
212	SLU 7	-4	1	1863	-0.08	0.07	0.04
212	SLU 8	-4	1	1863	-0.08	0.07	0.04
212	SLU 9	-4	1	1863	-0.08	0.07	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
212	SLU 10	-5	1	2216	-0.27	0.08	0.05
212	SLU 11	-5	1	2216	-0.27	0.08	0.05
212	SLU 12	-5	1	2216	-0.27	0.08	0.05
212	SLU 13	-5	1	2216	-0.27	0.08	0.05
212	SLU 14	-5	1	2216	-0.27	0.08	0.05
212	SLU 15	-5	1	2216	-0.27	0.08	0.05
212	SLU 16	-5	1	2216	-0.27	0.08	0.05
212	SLU 17	-5	1	2216	-0.27	0.08	0.05
212	SLU 18	-5	1	2367	-0.35	0.09	0.05
212	SLU 19	-5	1	2367	-0.35	0.09	0.05
212	SLU 20	-5	1	2367	-0.35	0.09	0.05
212	SLU 21	-5	1	2367	-0.35	0.09	0.05
212	SLU 22	-5	1	2127	-0.21	0.08	0.04
212	SLU 23	-5	1	2127	-0.21	0.08	0.04
212	SLU 24	-5	1	2127	-0.21	0.08	0.04
212	SLU 25	-5	1	2127	-0.21	0.08	0.04
212	SLU 26	-5	1	2127	-0.21	0.08	0.04
212	SLU 27	-5	1	2127	-0.21	0.08	0.04
212	SLU 28	-5	1	2127	-0.21	0.08	0.04
212	SLU 29	-5	1	2127	-0.21	0.08	0.04
212	SLU 30	-5	1	2127	-0.21	0.08	0.04
212	SLU 31	-6	1	2479	-0.4	0.09	0.05
212	SLU 32	-6	1	2479	-0.4	0.09	0.05
212	SLU 33	-6	1	2479	-0.4	0.09	0.05
212	SLU 34	-6	1	2479	-0.4	0.09	0.05
212	SLU 35	-6	1	2479	-0.4	0.09	0.05
212	SLU 36	-6	1	2479	-0.4	0.09	0.05
212	SLU 37	-6	1	2479	-0.4	0.09	0.05
212	SLU 38	-6	1	2479	-0.4	0.09	0.05
212	SLU 39	-6	2	2631	-0.48	0.1	0.06
212	SLU 40	-6	2	2631	-0.48	0.1	0.06
212	SLU 41	-6	2	2631	-0.48	0.1	0.06
212	SLU 42	-6	2	2631	-0.48	0.1	0.06
212	SLU 43	-5	1	2331	-0.06	0.09	0.05
212	SLU 44	-5	1	2331	-0.06	0.09	0.05
212	SLU 45	-5	1	2331	-0.06	0.09	0.05
212	SLU 46	-5	1	2331	-0.06	0.09	0.05
212	SLU 47	-5	1	2331	-0.06	0.09	0.05
212	SLU 48	-5	1	2331	-0.06	0.09	0.05
212	SLU 49	-5	1	2331	-0.06	0.09	0.05
212	SLU 50	-5	1	2331	-0.06	0.09	0.05
212	SLU 51	-5	1	2331	-0.06	0.09	0.05
212	SLU 52	-6	2	2684	-0.25	0.1	0.06
212	SLU 53	-6	2	2684	-0.25	0.1	0.06
212	SLU 54	-6	2	2684	-0.25	0.1	0.06
212	SLU 55	-6	2	2684	-0.25	0.1	0.06
212	SLU 56	-6	2	2684	-0.25	0.1	0.06
212	SLU 57	-6	2	2684	-0.25	0.1	0.06
212	SLU 58	-6	2	2684	-0.25	0.1	0.06
212	SLU 59	-6	2	2684	-0.25	0.1	0.06
212	SLU 60	-7	2	2836	-0.33	0.11	0.06
212	SLU 61	-7	2	2836	-0.33	0.11	0.06
212	SLU 62	-7	2	2836	-0.33	0.11	0.06
212	SLU 63	-7	2	2836	-0.33	0.11	0.06
212	SLU 64	-6	1	2595	-0.19	0.1	0.05
212	SLU 65	-6	1	2595	-0.19	0.1	0.05
212	SLU 66	-6	1	2595	-0.19	0.1	0.05
212	SLU 67	-6	1	2595	-0.19	0.1	0.05
212	SLU 68	-6	1	2595	-0.19	0.1	0.05
212	SLU 69	-6	1	2595	-0.19	0.1	0.05
212	SLU 70	-6	1	2595	-0.19	0.1	0.05
212	SLU 71	-6	1	2595	-0.19	0.1	0.05
212	SLU 72	-6	1	2595	-0.19	0.1	0.05
212	SLU 73	-7	2	2948	-0.38	0.11	0.06
212	SLU 74	-7	2	2948	-0.38	0.11	0.06
212	SLU 75	-7	2	2948	-0.38	0.11	0.06
212	SLU 76	-7	2	2948	-0.38	0.11	0.06
212	SLU 77	-7	2	2948	-0.38	0.11	0.06
212	SLU 78	-7	2	2948	-0.38	0.11	0.06
212	SLU 79	-7	2	2948	-0.38	0.11	0.06
212	SLU 80	-7	2	2948	-0.38	0.11	0.06
212	SLU 81	-7	2	3099	-0.46	0.12	0.06
212	SLU 82	-7	2	3099	-0.46	0.12	0.06
212	SLU 83	-7	2	3099	-0.46	0.12	0.06
212	SLU 84	-7	2	3099	-0.46	0.12	0.06
212	SLE RA 1	-5	1	1938	-0.12	0.07	0.04
212	SLE RA 2	-5	1	1938	-0.12	0.07	0.04
212	SLE RA 3	-5	1	1938	-0.12	0.07	0.04
212	SLE RA 4	-5	1	1938	-0.12	0.07	0.04
212	SLE RA 5	-5	1	1938	-0.12	0.07	0.04
212	SLE RA 6	-5	1	1938	-0.12	0.07	0.04
212	SLE RA 7	-5	1	1938	-0.12	0.07	0.04
212	SLE RA 8	-5	1	1938	-0.12	0.07	0.04
212	SLE RA 9	-5	1	1938	-0.12	0.07	0.04
212	SLE RA 10	-5	1	2173	-0.24	0.08	0.05
212	SLE RA 11	-5	1	2173	-0.24	0.08	0.05
212	SLE RA 12	-5	1	2173	-0.24	0.08	0.05
212	SLE RA 13	-5	1	2173	-0.24	0.08	0.05
212	SLE RA 14	-5	1	2173	-0.24	0.08	0.05
212	SLE RA 15	-5	1	2173	-0.24	0.08	0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
212	SLE RA 16	-5	1	2173	-0.24	0.08	0.05
212	SLE RA 17	-5	1	2173	-0.24	0.08	0.05
212	SLE RA 18	-5	1	2274	-0.3	0.09	0.05
212	SLE RA 19	-5	1	2274	-0.3	0.09	0.05
212	SLE RA 20	-5	1	2274	-0.3	0.09	0.05
212	SLE RA 21	-5	1	2274	-0.3	0.09	0.05
212	SLE FR 1	-5	1	1938	-0.12	0.07	0.04
212	SLE FR 2	-5	1	1938	-0.12	0.07	0.04
212	SLE FR 3	-5	1	1938	-0.12	0.07	0.04
212	SLE FR 4	-5	1	2039	-0.17	0.08	0.04
212	SLE FR 5	-5	1	2039	-0.17	0.08	0.04
212	SLE FR 6	-5	1	2106	-0.21	0.08	0.04
212	SLE QP 1	-5	1	1938	-0.12	0.07	0.04
212	SLE QP 2	-5	1	2039	-0.17	0.08	0.04
212	SLD 1	149	8	1996	-0.43	-4.94	-0.1
212	SLD 2	132	8	1997	-0.43	-4.94	0.01
212	SLD 3	146	-7	2092	0.1	-4.46	-0.07
212	SLD 4	130	-6	2092	0.1	-4.47	0.04
212	SLD 5	51	25	1881	-1.05	-2.15	-0.09
212	SLD 6	34	26	1881	-1.05	-2.15	0.02
212	SLD 7	42	-23	2200	0.71	-0.57	0.02
212	SLD 8	26	-23	2200	0.71	-0.57	0.13
212	SLD 9	-35	26	1878	-1.05	0.72	-0.05
212	SLD 10	-52	26	1878	-1.05	0.72	0.07
212	SLD 11	-44	-23	2197	0.7	2.3	0.06
212	SLD 12	-61	-23	2197	0.7	2.3	0.18
212	SLD 13	-139	9	1986	-0.44	4.62	0.04
212	SLD 14	-156	9	1986	-0.44	4.62	0.16
212	SLD 15	-142	-6	2082	0.08	5.1	0.08
212	SLD 16	-158	-6	2082	0.08	5.09	0.19
212	SLV 1	344	17	1939	-0.78	-12.12	-0.29
212	SLV 2	307	18	1939	-0.77	-12.12	-0.04
212	SLV 3	338	-17	2163	0.46	-11.01	-0.21
212	SLV 4	301	-17	2164	0.46	-11.02	0.04
212	SLV 5	123	58	1668	-2.23	-5.26	-0.27
212	SLV 6	84	58	1669	-2.23	-5.27	-0.01
212	SLV 7	103	-56	2417	1.89	-1.57	-0.01
212	SLV 8	64	-56	2417	1.89	-1.57	0.25
212	SLV 9	-73	58	1661	-2.24	1.72	-0.17
212	SLV 10	-112	59	1661	-2.24	1.72	0.09
212	SLV 11	-94	-56	2409	1.88	5.42	0.09
212	SLV 12	-132	-55	2410	1.88	5.42	0.35
212	SLV 13	-310	19	1915	-0.81	11.17	0.04
212	SLV 14	-347	19	1915	-0.81	11.17	0.3
212	SLV 15	-316	-15	2139	0.43	12.28	0.12
212	SLV 16	-354	-15	2139	0.43	12.28	0.38
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
214	SLU 1	1	-6	1823	0.41	194.95	1.62
214	SLU 2	1	-6	1823	0.41	194.95	1.62
214	SLU 3	1	-6	1823	0.41	194.95	1.62
214	SLU 4	1	-6	1823	0.41	194.95	1.62
214	SLU 5	1	-6	1823	0.41	194.95	1.62
214	SLU 6	1	-6	1823	0.41	194.95	1.62
214	SLU 7	1	-6	1823	0.41	194.95	1.62
214	SLU 8	1	-6	1823	0.41	194.95	1.62
214	SLU 9	1	-6	1823	0.41	194.95	1.62
214	SLU 10	1	-7	2137	0.43	224.24	1.9
214	SLU 11	1	-7	2137	0.43	224.24	1.9
214	SLU 12	1	-7	2137	0.43	224.24	1.9
214	SLU 13	1	-7	2137	0.43	224.24	1.9
214	SLU 14	1	-7	2137	0.43	224.24	1.9
214	SLU 15	1	-7	2137	0.43	224.24	1.9
214	SLU 16	1	-7	2137	0.43	224.24	1.9
214	SLU 17	1	-7	2137	0.43	224.24	1.9
214	SLU 18	1	-8	2271	0.43	236.79	2.03
214	SLU 19	1	-8	2271	0.43	236.79	2.03
214	SLU 20	1	-8	2271	0.43	236.79	2.03
214	SLU 21	1	-8	2271	0.43	236.79	2.03
214	SLU 22	1	-7	2059	0.43	216.82	1.83
214	SLU 23	1	-7	2059	0.43	216.82	1.83
214	SLU 24	1	-7	2059	0.43	216.82	1.83
214	SLU 25	1	-7	2059	0.43	216.82	1.83
214	SLU 26	1	-7	2059	0.43	216.82	1.83
214	SLU 27	1	-7	2059	0.43	216.82	1.83
214	SLU 28	1	-7	2059	0.43	216.82	1.83
214	SLU 29	1	-7	2059	0.43	216.82	1.83
214	SLU 30	1	-7	2059	0.43	216.82	1.83
214	SLU 31	1	-8	2372	0.44	246.11	2.12
214	SLU 32	1	-8	2372	0.44	246.11	2.12
214	SLU 33	1	-8	2372	0.44	246.11	2.12
214	SLU 34	1	-8	2372	0.44	246.11	2.12
214	SLU 35	1	-8	2372	0.44	246.11	2.12
214	SLU 36	1	-8	2372	0.44	246.11	2.12
214	SLU 37	1	-8	2372	0.44	246.11	2.12
214	SLU 38	1	-8	2372	0.44	246.11	2.12
214	SLU 39	1	-8	2507	0.44	258.66	2.25
214	SLU 40	1	-8	2507	0.44	258.66	2.25



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
214	SLU 41	1	-8	2507	0.44	258.66	2.25
214	SLU 42	1	-8	2507	0.44	258.66	2.25
214	SLU 43	2	-8	2289	0.53	245.93	2.03
214	SLU 44	2	-8	2289	0.53	245.93	2.03
214	SLU 45	2	-8	2289	0.53	245.93	2.03
214	SLU 46	2	-8	2289	0.53	245.93	2.03
214	SLU 47	2	-8	2289	0.53	245.93	2.03
214	SLU 48	2	-8	2289	0.53	245.93	2.03
214	SLU 49	2	-8	2289	0.53	245.93	2.03
214	SLU 50	2	-8	2289	0.53	245.93	2.03
214	SLU 51	2	-8	2289	0.53	245.93	2.03
214	SLU 52	2	-9	2603	0.55	275.22	2.31
214	SLU 53	2	-9	2603	0.55	275.22	2.31
214	SLU 54	2	-9	2603	0.55	275.22	2.31
214	SLU 55	2	-9	2603	0.55	275.22	2.31
214	SLU 56	2	-9	2603	0.55	275.22	2.31
214	SLU 57	2	-9	2603	0.55	275.22	2.31
214	SLU 58	2	-9	2603	0.55	275.22	2.31
214	SLU 59	2	-9	2603	0.55	275.22	2.31
214	SLU 60	1	-9	2737	0.55	287.78	2.44
214	SLU 61	1	-9	2737	0.55	287.78	2.44
214	SLU 62	1	-9	2737	0.55	287.78	2.44
214	SLU 63	1	-9	2737	0.55	287.78	2.44
214	SLU 64	2	-8	2525	0.55	267.81	2.24
214	SLU 65	2	-8	2525	0.55	267.81	2.24
214	SLU 66	2	-8	2525	0.55	267.81	2.24
214	SLU 67	2	-8	2525	0.55	267.81	2.24
214	SLU 68	2	-8	2525	0.55	267.81	2.24
214	SLU 69	2	-8	2525	0.55	267.81	2.24
214	SLU 70	2	-8	2525	0.55	267.81	2.24
214	SLU 71	2	-8	2525	0.55	267.81	2.24
214	SLU 72	2	-8	2525	0.55	267.81	2.24
214	SLU 73	1	-10	2839	0.56	297.1	2.53
214	SLU 74	1	-10	2839	0.56	297.1	2.53
214	SLU 75	1	-10	2839	0.56	297.1	2.53
214	SLU 76	1	-10	2839	0.56	297.1	2.53
214	SLU 77	1	-10	2839	0.56	297.1	2.53
214	SLU 78	1	-10	2839	0.56	297.1	2.53
214	SLU 79	1	-10	2839	0.56	297.1	2.53
214	SLU 80	1	-10	2839	0.56	297.1	2.53
214	SLU 81	1	-10	2973	0.56	309.65	2.66
214	SLU 82	1	-10	2973	0.56	309.65	2.66
214	SLU 83	1	-10	2973	0.56	309.65	2.66
214	SLU 84	1	-10	2973	0.56	309.65	2.66
214	SLE RA 1	1	-6	1890	0.42	201.2	1.68
214	SLE RA 2	1	-6	1890	0.42	201.2	1.68
214	SLE RA 3	1	-6	1890	0.42	201.2	1.68
214	SLE RA 4	1	-6	1890	0.42	201.2	1.68
214	SLE RA 5	1	-6	1890	0.42	201.2	1.68
214	SLE RA 6	1	-6	1890	0.42	201.2	1.68
214	SLE RA 7	1	-6	1890	0.42	201.2	1.68
214	SLE RA 8	1	-6	1890	0.42	201.2	1.68
214	SLE RA 9	1	-6	1890	0.42	201.2	1.68
214	SLE RA 10	1	-7	2100	0.43	220.72	1.87
214	SLE RA 11	1	-7	2100	0.43	220.72	1.87
214	SLE RA 12	1	-7	2100	0.43	220.72	1.87
214	SLE RA 13	1	-7	2100	0.43	220.72	1.87
214	SLE RA 14	1	-7	2100	0.43	220.72	1.87
214	SLE RA 15	1	-7	2100	0.43	220.72	1.87
214	SLE RA 16	1	-7	2100	0.43	220.72	1.87
214	SLE RA 17	1	-7	2100	0.43	220.72	1.87
214	SLE RA 18	1	-7	2189	0.43	229.09	1.95
214	SLE RA 19	1	-7	2189	0.43	229.09	1.95
214	SLE RA 20	1	-7	2189	0.43	229.09	1.95
214	SLE RA 21	1	-7	2189	0.43	229.09	1.95
214	SLE FR 1	1	-6	1890	0.42	201.2	1.68
214	SLE FR 2	1	-6	1890	0.42	201.2	1.68
214	SLE FR 3	1	-6	1890	0.42	201.2	1.68
214	SLE FR 4	1	-7	1980	0.42	209.57	1.76
214	SLE FR 5	1	-7	1980	0.42	209.57	1.76
214	SLE FR 6	1	-7	2040	0.42	215.14	1.81
214	SLE QP 1	1	-6	1890	0.42	201.2	1.68
214	SLE QP 2	1	-7	1980	0.42	209.57	1.76
214	SLD 1	169	68	1654	-0.16	182.48	-17.26
214	SLD 2	151	104	1650	-0.2	181.11	-26.16
214	SLD 3	165	-137	1774	0.86	198.06	34.25
214	SLD 4	147	-101	1770	0.83	196.69	25.36
214	SLD 5	64	314	1701	-1.29	178.31	-78.87
214	SLD 6	45	351	1697	-1.33	176.91	-87.96
214	SLD 7	51	-370	2102	2.11	230.23	92.85
214	SLD 8	32	-333	2098	2.08	228.83	83.76
214	SLD 9	-30	320	1862	-1.24	190.3	-80.24
214	SLD 10	-48	357	1858	-1.27	188.9	-89.33
214	SLD 11	-43	-364	2263	2.17	242.22	91.48
214	SLD 12	-62	-327	2259	2.13	240.82	82.39
214	SLD 13	-144	87	2190	0.02	222.44	-21.84
214	SLD 14	-162	124	2186	-0.02	221.07	-30.73
214	SLD 15	-148	-118	2310	1.04	238.02	29.68
214	SLD 16	-166	-82	2306	1	236.65	20.78
214	SLV 1	382	171	1235	-0.94	147.23	-43.29



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
214	SLV 2	340	254	1226	-1.02	144.11	-63.63
214	SLV 3	373	-310	1517	1.46	183.73	77.6
214	SLV 4	331	-228	1508	1.38	180.61	57.25
214	SLV 5	146	746	1331	-3.6	136.66	-187.58
214	SLV 6	101	832	1322	-3.68	133.42	-208.7
214	SLV 7	114	-858	2273	4.4	258.33	215.36
214	SLV 8	70	-773	2263	4.32	255.08	194.24
214	SLV 9	-68	759	1697	-3.47	164.05	-190.72
214	SLV 10	-112	845	1687	-3.55	160.8	-211.84
214	SLV 11	-99	-845	2638	4.52	285.72	212.22
214	SLV 12	-143	-760	2629	4.44	282.47	191.1
214	SLV 13	-328	215	2452	-0.54	238.53	-53.73
214	SLV 14	-371	297	2443	-0.61	235.4	-74.08
214	SLV 15	-337	-267	2734	1.86	275.03	67.15
214	SLV 16	-380	-184	2725	1.78	271.9	46.81
214	CRTFP Ux+	0	0	0	0	0	0
214	CRTFP Ux-	0	0	0	0	0	0
214	CRTFP Uy+	0	0	0	0	0	0
214	CRTFP Uy-	0	0	0	0	0	0
216	SLU 1	-6	1	1863	0.13	0.08	0.04
216	SLU 2	-6	1	1863	0.13	0.08	0.04
216	SLU 3	-6	1	1863	0.13	0.08	0.04
216	SLU 4	-6	1	1863	0.13	0.08	0.04
216	SLU 5	-6	1	1863	0.13	0.08	0.04
216	SLU 6	-6	1	1863	0.13	0.08	0.04
216	SLU 7	-6	1	1863	0.13	0.08	0.04
216	SLU 8	-6	1	1863	0.13	0.08	0.04
216	SLU 9	-6	1	1863	0.13	0.08	0.04
216	SLU 10	-7	1	2211	0.01	0.09	0.04
216	SLU 11	-7	1	2211	0.01	0.09	0.04
216	SLU 12	-7	1	2211	0.01	0.09	0.04
216	SLU 13	-7	1	2211	0.01	0.09	0.04
216	SLU 14	-7	1	2211	0.01	0.09	0.04
216	SLU 15	-7	1	2211	0.01	0.09	0.04
216	SLU 16	-7	1	2211	0.01	0.09	0.04
216	SLU 17	-7	1	2211	0.01	0.09	0.04
216	SLU 18	-7	2	2360	-0.04	0.1	0.05
216	SLU 19	-7	2	2360	-0.04	0.1	0.05
216	SLU 20	-7	2	2360	-0.04	0.1	0.05
216	SLU 21	-7	2	2360	-0.04	0.1	0.05
216	SLU 22	-6	1	2123	0.05	0.09	0.04
216	SLU 23	-6	1	2123	0.05	0.09	0.04
216	SLU 24	-6	1	2123	0.05	0.09	0.04
216	SLU 25	-6	1	2123	0.05	0.09	0.04
216	SLU 26	-6	1	2123	0.05	0.09	0.04
216	SLU 27	-6	1	2123	0.05	0.09	0.04
216	SLU 28	-6	1	2123	0.05	0.09	0.04
216	SLU 29	-6	1	2123	0.05	0.09	0.04
216	SLU 30	-6	1	2123	0.05	0.09	0.04
216	SLU 31	-7	2	2471	-0.07	0.1	0.05
216	SLU 32	-7	2	2471	-0.07	0.1	0.05
216	SLU 33	-7	2	2471	-0.07	0.1	0.05
216	SLU 34	-7	2	2471	-0.07	0.1	0.05
216	SLU 35	-7	2	2471	-0.07	0.1	0.05
216	SLU 36	-7	2	2471	-0.07	0.1	0.05
216	SLU 37	-7	2	2471	-0.07	0.1	0.05
216	SLU 38	-7	2	2471	-0.07	0.1	0.05
216	SLU 39	-8	2	2620	-0.13	0.11	0.05
216	SLU 40	-8	2	2620	-0.13	0.11	0.05
216	SLU 41	-8	2	2620	-0.13	0.11	0.05
216	SLU 42	-8	2	2620	-0.13	0.11	0.05
216	SLU 43	-7	1	2333	0.2	0.1	0.05
216	SLU 44	-7	1	2333	0.2	0.1	0.05
216	SLU 45	-7	1	2333	0.2	0.1	0.05
216	SLU 46	-7	1	2333	0.2	0.1	0.05
216	SLU 47	-7	1	2333	0.2	0.1	0.05
216	SLU 48	-7	1	2333	0.2	0.1	0.05
216	SLU 49	-7	1	2333	0.2	0.1	0.05
216	SLU 50	-7	1	2333	0.2	0.1	0.05
216	SLU 51	-7	1	2333	0.2	0.1	0.05
216	SLU 52	-8	2	2681	0.08	0.11	0.05
216	SLU 53	-8	2	2681	0.08	0.11	0.05
216	SLU 54	-8	2	2681	0.08	0.11	0.05
216	SLU 55	-8	2	2681	0.08	0.11	0.05
216	SLU 56	-8	2	2681	0.08	0.11	0.05
216	SLU 57	-8	2	2681	0.08	0.11	0.05
216	SLU 58	-8	2	2681	0.08	0.11	0.05
216	SLU 59	-8	2	2681	0.08	0.11	0.05
216	SLU 60	-8	2	2830	0.03	0.12	0.06
216	SLU 61	-8	2	2830	0.03	0.12	0.06
216	SLU 62	-8	2	2830	0.03	0.12	0.06
216	SLU 63	-8	2	2830	0.03	0.12	0.06
216	SLU 64	-8	2	2593	0.12	0.11	0.05
216	SLU 65	-8	2	2593	0.12	0.11	0.05
216	SLU 66	-8	2	2593	0.12	0.11	0.05
216	SLU 67	-8	2	2593	0.12	0.11	0.05
216	SLU 68	-8	2	2593	0.12	0.11	0.05
216	SLU 69	-8	2	2593	0.12	0.11	0.05
216	SLU 70	-8	2	2593	0.12	0.11	0.05
216	SLU 71	-8	2	2593	0.12	0.11	0.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
216	SLU 72	-8	2	2593	0.12	0.11	0.05
216	SLU 73	-9	2	2941	-0.01	0.12	0.06
216	SLU 74	-9	2	2941	-0.01	0.12	0.06
216	SLU 75	-9	2	2941	-0.01	0.12	0.06
216	SLU 76	-9	2	2941	-0.01	0.12	0.06
216	SLU 77	-9	2	2941	-0.01	0.12	0.06
216	SLU 78	-9	2	2941	-0.01	0.12	0.06
216	SLU 79	-9	2	2941	-0.01	0.12	0.06
216	SLU 80	-9	2	2941	-0.01	0.12	0.06
216	SLU 81	-9	2	3090	-0.06	0.13	0.06
216	SLU 82	-9	2	3090	-0.06	0.13	0.06
216	SLU 83	-9	2	3090	-0.06	0.13	0.06
216	SLU 84	-9	2	3090	-0.06	0.13	0.06
216	SLE RA 1	-6	1	1938	0.11	0.08	0.04
216	SLE RA 2	-6	1	1938	0.11	0.08	0.04
216	SLE RA 3	-6	1	1938	0.11	0.08	0.04
216	SLE RA 4	-6	1	1938	0.11	0.08	0.04
216	SLE RA 5	-6	1	1938	0.11	0.08	0.04
216	SLE RA 6	-6	1	1938	0.11	0.08	0.04
216	SLE RA 7	-6	1	1938	0.11	0.08	0.04
216	SLE RA 8	-6	1	1938	0.11	0.08	0.04
216	SLE RA 9	-6	1	1938	0.11	0.08	0.04
216	SLE RA 10	-6	1	2170	0.03	0.09	0.04
216	SLE RA 11	-6	1	2170	0.03	0.09	0.04
216	SLE RA 12	-6	1	2170	0.03	0.09	0.04
216	SLE RA 13	-6	1	2170	0.03	0.09	0.04
216	SLE RA 14	-6	1	2170	0.03	0.09	0.04
216	SLE RA 15	-6	1	2170	0.03	0.09	0.04
216	SLE RA 16	-6	1	2170	0.03	0.09	0.04
216	SLE RA 17	-6	1	2170	0.03	0.09	0.04
216	SLE RA 18	-7	1	2269	-0.01	0.1	0.05
216	SLE RA 19	-7	1	2269	-0.01	0.1	0.05
216	SLE RA 20	-7	1	2269	-0.01	0.1	0.05
216	SLE RA 21	-7	1	2269	-0.01	0.1	0.05
216	SLE FR 1	-6	1	1938	0.11	0.08	0.04
216	SLE FR 2	-6	1	1938	0.11	0.08	0.04
216	SLE FR 3	-6	1	1938	0.11	0.08	0.04
216	SLE FR 4	-6	1	2037	0.07	0.09	0.04
216	SLE FR 5	-6	1	2037	0.07	0.09	0.04
216	SLE FR 6	-6	1	2103	0.05	0.09	0.04
216	SLE QP 1	-6	1	1938	0.11	0.08	0.04
216	SLE QP 2	-6	1	2037	0.07	0.09	0.04
216	SLD 1	153	8	1986	-0.19	-4.55	-0.16
216	SLD 2	133	8	1986	-0.19	-4.55	-0.04
216	SLD 3	149	-7	2099	0.35	-4.1	-0.13
216	SLD 4	129	-6	2099	0.36	-4.1	-0.01
216	SLD 5	54	25	1850	-0.83	-1.99	-0.11
216	SLD 6	34	26	1850	-0.83	-1.99	0.01
216	SLD 7	42	-23	2227	0.99	-0.49	0
216	SLD 8	22	-23	2227	0.99	-0.49	0.12
216	SLD 9	-34	26	1847	-0.84	0.66	-0.04
216	SLD 10	-54	26	1847	-0.84	0.66	0.08
216	SLD 11	-46	-23	2224	0.98	2.16	0.08
216	SLD 12	-67	-23	2224	0.98	2.16	0.19
216	SLD 13	-142	9	1975	-0.21	4.28	0.09
216	SLD 14	-162	9	1975	-0.21	4.28	0.21
216	SLD 15	-145	-6	2088	0.34	4.73	0.13
216	SLD 16	-165	-5	2088	0.34	4.73	0.24
216	SLV 1	355	17	1917	-0.55	-11.22	-0.42
216	SLV 2	310	18	1917	-0.55	-11.22	-0.15
216	SLV 3	347	-17	2182	0.73	-10.17	-0.34
216	SLV 4	301	-16	2182	0.74	-10.17	-0.08
216	SLV 5	132	58	1598	-2.06	-4.9	-0.31
216	SLV 6	85	58	1599	-2.06	-4.9	-0.04
216	SLV 7	104	-56	2483	2.21	-1.4	-0.05
216	SLV 8	56	-55	2483	2.22	-1.4	0.22
216	SLV 9	-68	58	1591	-2.07	1.57	-0.14
216	SLV 10	-116	59	1591	-2.07	1.57	0.13
216	SLV 11	-97	-55	2475	2.2	5.07	0.12
216	SLV 12	-144	-55	2476	2.21	5.07	0.4
216	SLV 13	-313	19	1892	-0.59	10.34	0.16
216	SLV 14	-359	20	1892	-0.58	10.34	0.42
216	SLV 15	-322	-15	2157	0.69	11.39	0.24
216	SLV 16	-368	-15	2158	0.7	11.39	0.5
216	CRTFP Ux+	0	0	0	0	0	0
216	CRTFP Ux-	0	0	0	0	0	0
216	CRTFP Uy+	0	0	0	0	0	0
216	CRTFP Uy-	0	0	0	0	0	0
218	SLU 1	-2	-6	1851	1.51	211.89	1.53
218	SLU 2	-2	-6	1851	1.51	211.89	1.53
218	SLU 3	-2	-6	1851	1.51	211.89	1.53
218	SLU 4	-2	-6	1851	1.51	211.89	1.53
218	SLU 5	-2	-6	1851	1.51	211.89	1.53
218	SLU 6	-2	-6	1851	1.51	211.89	1.53
218	SLU 7	-2	-6	1851	1.51	211.89	1.53
218	SLU 8	-2	-6	1851	1.51	211.89	1.53
218	SLU 9	-2	-6	1851	1.51	211.89	1.53
218	SLU 10	-3	-7	2168	1.75	243.57	1.8
218	SLU 11	-3	-7	2168	1.75	243.57	1.8
218	SLU 12	-3	-7	2168	1.75	243.57	1.8



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
218	SLU 13	-3	-7	2168	1.75	243.57	1.8
218	SLU 14	-3	-7	2168	1.75	243.57	1.8
218	SLU 15	-3	-7	2168	1.75	243.57	1.8
218	SLU 16	-3	-7	2168	1.75	243.57	1.8
218	SLU 17	-3	-7	2168	1.75	243.57	1.8
218	SLU 18	-3	-7	2304	1.85	257.15	1.91
218	SLU 19	-3	-7	2304	1.85	257.15	1.91
218	SLU 20	-3	-7	2304	1.85	257.15	1.91
218	SLU 21	-3	-7	2304	1.85	257.15	1.91
218	SLU 22	-2	-6	2089	1.69	235.59	1.73
218	SLU 23	-2	-6	2089	1.69	235.59	1.73
218	SLU 24	-2	-6	2089	1.69	235.59	1.73
218	SLU 25	-2	-6	2089	1.69	235.59	1.73
218	SLU 26	-2	-6	2089	1.69	235.59	1.73
218	SLU 27	-2	-6	2089	1.69	235.59	1.73
218	SLU 28	-2	-6	2089	1.69	235.59	1.73
218	SLU 29	-2	-6	2089	1.69	235.59	1.73
218	SLU 30	-2	-6	2089	1.69	235.59	1.73
218	SLU 31	-4	-7	2407	1.94	267.27	2
218	SLU 32	-4	-7	2407	1.94	267.27	2
218	SLU 33	-4	-7	2407	1.94	267.27	2
218	SLU 34	-4	-7	2407	1.94	267.27	2
218	SLU 35	-4	-7	2407	1.94	267.27	2
218	SLU 36	-4	-7	2407	1.94	267.27	2
218	SLU 37	-4	-7	2407	1.94	267.27	2
218	SLU 38	-4	-7	2407	1.94	267.27	2
218	SLU 39	-4	-8	2543	2.04	280.85	2.11
218	SLU 40	-4	-8	2543	2.04	280.85	2.11
218	SLU 41	-4	-8	2543	2.04	280.85	2.11
218	SLU 42	-4	-8	2543	2.04	280.85	2.11
218	SLU 43	-2	-7	2324	1.89	267.34	1.92
218	SLU 44	-2	-7	2324	1.89	267.34	1.92
218	SLU 45	-2	-7	2324	1.89	267.34	1.92
218	SLU 46	-2	-7	2324	1.89	267.34	1.92
218	SLU 47	-2	-7	2324	1.89	267.34	1.92
218	SLU 48	-2	-7	2324	1.89	267.34	1.92
218	SLU 49	-2	-7	2324	1.89	267.34	1.92
218	SLU 50	-2	-7	2324	1.89	267.34	1.92
218	SLU 51	-2	-7	2324	1.89	267.34	1.92
218	SLU 52	-3	-8	2642	2.14	299.02	2.19
218	SLU 53	-3	-8	2642	2.14	299.02	2.19
218	SLU 54	-3	-8	2642	2.14	299.02	2.19
218	SLU 55	-3	-8	2642	2.14	299.02	2.19
218	SLU 56	-3	-8	2642	2.14	299.02	2.19
218	SLU 57	-3	-8	2642	2.14	299.02	2.19
218	SLU 58	-3	-8	2642	2.14	299.02	2.19
218	SLU 59	-3	-8	2642	2.14	299.02	2.19
218	SLU 60	-4	-8	2778	2.24	312.59	2.3
218	SLU 61	-4	-8	2778	2.24	312.59	2.3
218	SLU 62	-4	-8	2778	2.24	312.59	2.3
218	SLU 63	-4	-8	2778	2.24	312.59	2.3
218	SLU 64	-3	-8	2563	2.08	291.04	2.12
218	SLU 65	-3	-8	2563	2.08	291.04	2.12
218	SLU 66	-3	-8	2563	2.08	291.04	2.12
218	SLU 67	-3	-8	2563	2.08	291.04	2.12
218	SLU 68	-3	-8	2563	2.08	291.04	2.12
218	SLU 69	-3	-8	2563	2.08	291.04	2.12
218	SLU 70	-3	-8	2563	2.08	291.04	2.12
218	SLU 71	-3	-8	2563	2.08	291.04	2.12
218	SLU 72	-3	-8	2563	2.08	291.04	2.12
218	SLU 73	-4	-9	2880	2.32	322.71	2.39
218	SLU 74	-4	-9	2880	2.32	322.71	2.39
218	SLU 75	-4	-9	2880	2.32	322.71	2.39
218	SLU 76	-4	-9	2880	2.32	322.71	2.39
218	SLU 77	-4	-9	2880	2.32	322.71	2.39
218	SLU 78	-4	-9	2880	2.32	322.71	2.39
218	SLU 79	-4	-9	2880	2.32	322.71	2.39
218	SLU 80	-4	-9	2880	2.32	322.71	2.39
218	SLU 81	-4	-9	3016	2.43	336.29	2.5
218	SLU 82	-4	-9	3016	2.43	336.29	2.5
218	SLU 83	-4	-9	3016	2.43	336.29	2.5
218	SLU 84	-4	-9	3016	2.43	336.29	2.5
218	SLE RA 1	-2	-6	1919	1.56	218.67	1.59
218	SLE RA 2	-2	-6	1919	1.56	218.67	1.59
218	SLE RA 3	-2	-6	1919	1.56	218.67	1.59
218	SLE RA 4	-2	-6	1919	1.56	218.67	1.59
218	SLE RA 5	-2	-6	1919	1.56	218.67	1.59
218	SLE RA 6	-2	-6	1919	1.56	218.67	1.59
218	SLE RA 7	-2	-6	1919	1.56	218.67	1.59
218	SLE RA 8	-2	-6	1919	1.56	218.67	1.59
218	SLE RA 9	-2	-6	1919	1.56	218.67	1.59
218	SLE RA 10	-3	-6	2130	1.72	239.78	1.77
218	SLE RA 11	-3	-6	2130	1.72	239.78	1.77
218	SLE RA 12	-3	-6	2130	1.72	239.78	1.77
218	SLE RA 13	-3	-6	2130	1.72	239.78	1.77
218	SLE RA 14	-3	-6	2130	1.72	239.78	1.77
218	SLE RA 15	-3	-6	2130	1.72	239.78	1.77
218	SLE RA 16	-3	-6	2130	1.72	239.78	1.77
218	SLE RA 17	-3	-6	2130	1.72	239.78	1.77
218	SLE RA 18	-3	-7	2221	1.79	248.83	1.84



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
218	SLE RA 19	-3	-7	2221	1.79	248.83	1.84
218	SLE RA 20	-3	-7	2221	1.79	248.83	1.84
218	SLE RA 21	-3	-7	2221	1.79	248.83	1.84
218	SLE FR 1	-2	-6	1919	1.56	218.67	1.59
218	SLE FR 2	-2	-6	1919	1.56	218.67	1.59
218	SLE FR 3	-2	-6	1919	1.56	218.67	1.59
218	SLE FR 4	-2	-6	2010	1.63	227.72	1.67
218	SLE FR 5	-2	-6	2010	1.63	227.72	1.67
218	SLE FR 6	-2	-6	2070	1.67	233.75	1.72
218	SLE QP 1	-2	-6	1919	1.56	218.67	1.59
218	SLE QP 2	-2	-6	2010	1.63	227.72	1.67
218	SLD 1	175	69	1661	0.72	196.25	-17.33
218	SLD 2	153	105	1656	0.68	195.06	-26.21
218	SLD 3	166	-136	1815	1.94	215.6	34.08
218	SLD 4	143	-100	1810	1.89	214.42	25.19
218	SLD 5	74	314	1674	-0.47	189.34	-78.79
218	SLD 6	51	351	1669	-0.52	188.14	-87.87
218	SLD 7	42	-369	2186	3.58	253.87	92.56
218	SLD 8	19	-332	2181	3.53	252.66	83.48
218	SLD 9	-23	320	1838	-0.28	202.77	-80.15
218	SLD 10	-46	357	1833	-0.32	201.57	-89.23
218	SLD 11	-55	-363	2350	3.77	267.3	91.2
218	SLD 12	-78	-326	2345	3.72	266.09	82.12
218	SLD 13	-148	88	2209	1.37	241.01	-21.86
218	SLD 14	-170	124	2204	1.32	239.83	-30.74
218	SLD 15	-157	-117	2363	2.58	260.37	29.54
218	SLD 16	-180	-81	2358	2.53	259.19	20.66
218	SLV 1	402	171	1213	-0.47	155.33	-43.31
218	SLV 2	350	254	1201	-0.58	152.63	-63.63
218	SLV 3	379	-310	1574	2.38	200.7	77.32
218	SLV 4	328	-228	1562	2.27	198	57
218	SLV 5	172	746	1229	-3.29	138.18	-187.28
218	SLV 6	118	832	1216	-3.39	135.37	-208.37
218	SLV 7	97	-857	2429	6.21	289.43	214.81
218	SLV 8	44	-772	2417	6.1	286.62	193.72
218	SLV 9	-48	759	1602	-2.85	168.81	-190.39
218	SLV 10	-102	845	1590	-2.96	166	-211.48
218	SLV 11	-123	-844	2803	6.65	320.06	211.7
218	SLV 12	-176	-758	2790	6.54	317.26	190.61
218	SLV 13	-332	215	2457	0.99	257.43	-53.67
218	SLV 14	-384	298	2446	0.88	254.73	-73.99
218	SLV 15	-355	-266	2818	3.83	302.81	66.96
218	SLV 16	-406	-183	2806	3.73	300.1	46.64
218	CRTFP Ux+	0	0	0	0	0	0
218	CRTFP Ux-	0	0	0	0	0	0
218	CRTFP Uy+	0	0	0	0	0	0
218	CRTFP Uy-	0	0	0	0	0	0
220	SLU 1	-7	1	1874	0.58	0.12	0.03
220	SLU 2	-7	1	1874	0.58	0.12	0.03
220	SLU 3	-7	1	1874	0.58	0.12	0.03
220	SLU 4	-7	1	1874	0.58	0.12	0.03
220	SLU 5	-7	1	1874	0.58	0.12	0.03
220	SLU 6	-7	1	1874	0.58	0.12	0.03
220	SLU 7	-7	1	1874	0.58	0.12	0.03
220	SLU 8	-7	1	1874	0.58	0.12	0.03
220	SLU 9	-7	1	1874	0.58	0.12	0.03
220	SLU 10	-8	2	2220	0.57	0.14	0.04
220	SLU 11	-8	2	2220	0.57	0.14	0.04
220	SLU 12	-8	2	2220	0.57	0.14	0.04
220	SLU 13	-8	2	2220	0.57	0.14	0.04
220	SLU 14	-8	2	2220	0.57	0.14	0.04
220	SLU 15	-8	2	2220	0.57	0.14	0.04
220	SLU 16	-8	2	2220	0.57	0.14	0.04
220	SLU 17	-8	2	2220	0.57	0.14	0.04
220	SLU 18	-9	2	2368	0.56	0.15	0.04
220	SLU 19	-9	2	2368	0.56	0.15	0.04
220	SLU 20	-9	2	2368	0.56	0.15	0.04
220	SLU 21	-9	2	2368	0.56	0.15	0.04
220	SLU 22	-8	1	2133	0.57	0.14	0.04
220	SLU 23	-8	1	2133	0.57	0.14	0.04
220	SLU 24	-8	1	2133	0.57	0.14	0.04
220	SLU 25	-8	1	2133	0.57	0.14	0.04
220	SLU 26	-8	1	2133	0.57	0.14	0.04
220	SLU 27	-8	1	2133	0.57	0.14	0.04
220	SLU 28	-8	1	2133	0.57	0.14	0.04
220	SLU 29	-8	1	2133	0.57	0.14	0.04
220	SLU 30	-8	1	2133	0.57	0.14	0.04
220	SLU 31	-9	2	2478	0.56	0.16	0.04
220	SLU 32	-9	2	2478	0.56	0.16	0.04
220	SLU 33	-9	2	2478	0.56	0.16	0.04
220	SLU 34	-9	2	2478	0.56	0.16	0.04
220	SLU 35	-9	2	2478	0.56	0.16	0.04
220	SLU 36	-9	2	2478	0.56	0.16	0.04
220	SLU 37	-9	2	2478	0.56	0.16	0.04
220	SLU 38	-9	2	2478	0.56	0.16	0.04
220	SLU 39	-9	2	2626	0.56	0.16	0.05
220	SLU 40	-9	2	2626	0.56	0.16	0.05
220	SLU 41	-9	2	2626	0.56	0.16	0.05
220	SLU 42	-9	2	2626	0.56	0.16	0.05
220	SLU 43	-8	2	2348	0.75	0.15	0.04



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
220	SLU 44	-8	2	2348	0.75	0.15	0.04
220	SLU 45	-8	2	2348	0.75	0.15	0.04
220	SLU 46	-8	2	2348	0.75	0.15	0.04
220	SLU 47	-8	2	2348	0.75	0.15	0.04
220	SLU 48	-8	2	2348	0.75	0.15	0.04
220	SLU 49	-8	2	2348	0.75	0.15	0.04
220	SLU 50	-8	2	2348	0.75	0.15	0.04
220	SLU 51	-8	2	2348	0.75	0.15	0.04
220	SLU 52	-10	2	2694	0.74	0.17	0.05
220	SLU 53	-10	2	2694	0.74	0.17	0.05
220	SLU 54	-10	2	2694	0.74	0.17	0.05
220	SLU 55	-10	2	2694	0.74	0.17	0.05
220	SLU 56	-10	2	2694	0.74	0.17	0.05
220	SLU 57	-10	2	2694	0.74	0.17	0.05
220	SLU 58	-10	2	2694	0.74	0.17	0.05
220	SLU 59	-10	2	2694	0.74	0.17	0.05
220	SLU 60	-10	2	2842	0.74	0.18	0.05
220	SLU 61	-10	2	2842	0.74	0.18	0.05
220	SLU 62	-10	2	2842	0.74	0.18	0.05
220	SLU 63	-10	2	2842	0.74	0.18	0.05
220	SLU 64	-9	2	2606	0.75	0.17	0.05
220	SLU 65	-9	2	2606	0.75	0.17	0.05
220	SLU 66	-9	2	2606	0.75	0.17	0.05
220	SLU 67	-9	2	2606	0.75	0.17	0.05
220	SLU 68	-9	2	2606	0.75	0.17	0.05
220	SLU 69	-9	2	2606	0.75	0.17	0.05
220	SLU 70	-9	2	2606	0.75	0.17	0.05
220	SLU 71	-9	2	2606	0.75	0.17	0.05
220	SLU 72	-9	2	2606	0.75	0.17	0.05
220	SLU 73	-11	2	2952	0.74	0.19	0.05
220	SLU 74	-11	2	2952	0.74	0.19	0.05
220	SLU 75	-11	2	2952	0.74	0.19	0.05
220	SLU 76	-11	2	2952	0.74	0.19	0.05
220	SLU 77	-11	2	2952	0.74	0.19	0.05
220	SLU 78	-11	2	2952	0.74	0.19	0.05
220	SLU 79	-11	2	2952	0.74	0.19	0.05
220	SLU 80	-11	2	2952	0.74	0.19	0.05
220	SLU 81	-11	2	3100	0.73	0.19	0.06
220	SLU 82	-11	2	3100	0.73	0.19	0.06
220	SLU 83	-11	2	3100	0.73	0.19	0.06
220	SLU 84	-11	2	3100	0.73	0.19	0.06
220	SLE RA 1	-7	1	1948	0.58	0.13	0.03
220	SLE RA 2	-7	1	1948	0.58	0.13	0.03
220	SLE RA 3	-7	1	1948	0.58	0.13	0.03
220	SLE RA 4	-7	1	1948	0.58	0.13	0.03
220	SLE RA 5	-7	1	1948	0.58	0.13	0.03
220	SLE RA 6	-7	1	1948	0.58	0.13	0.03
220	SLE RA 7	-7	1	1948	0.58	0.13	0.03
220	SLE RA 8	-7	1	1948	0.58	0.13	0.03
220	SLE RA 9	-7	1	1948	0.58	0.13	0.03
220	SLE RA 10	-8	2	2179	0.57	0.14	0.04
220	SLE RA 11	-8	2	2179	0.57	0.14	0.04
220	SLE RA 12	-8	2	2179	0.57	0.14	0.04
220	SLE RA 13	-8	2	2179	0.57	0.14	0.04
220	SLE RA 14	-8	2	2179	0.57	0.14	0.04
220	SLE RA 15	-8	2	2179	0.57	0.14	0.04
220	SLE RA 16	-8	2	2179	0.57	0.14	0.04
220	SLE RA 17	-8	2	2179	0.57	0.14	0.04
220	SLE RA 18	-8	2	2277	0.57	0.14	0.04
220	SLE RA 19	-8	2	2277	0.57	0.14	0.04
220	SLE RA 20	-8	2	2277	0.57	0.14	0.04
220	SLE RA 21	-8	2	2277	0.57	0.14	0.04
220	SLE FR 1	-7	1	1948	0.58	0.13	0.03
220	SLE FR 2	-7	1	1948	0.58	0.13	0.03
220	SLE FR 3	-7	1	1948	0.58	0.13	0.03
220	SLE FR 4	-7	1	2047	0.57	0.13	0.04
220	SLE FR 5	-7	1	2047	0.57	0.13	0.04
220	SLE FR 6	-8	1	2113	0.57	0.13	0.04
220	SLE QP 1	-7	1	1948	0.58	0.13	0.03
220	SLE QP 2	-7	1	2047	0.57	0.13	0.04
220	SLD 1	159	8	1987	0.29	-3.82	-0.2
220	SLD 2	135	8	1987	0.29	-3.82	-0.09
220	SLD 3	154	-6	2118	0.88	-3.44	-0.17
220	SLD 4	130	-6	2119	0.88	-3.44	-0.06
220	SLD 5	58	25	1829	-0.41	-1.64	-0.13
220	SLD 6	34	26	1830	-0.41	-1.64	-0.01
220	SLD 7	43	-23	2268	1.56	-0.36	-0.02
220	SLD 8	18	-23	2268	1.57	-0.36	0.1
220	SLD 9	-33	26	1826	-0.42	0.62	-0.02
220	SLD 10	-57	26	1826	-0.42	0.62	0.09
220	SLD 11	-49	-23	2264	1.56	1.9	0.08
220	SLD 12	-73	-23	2265	1.56	1.9	0.2
220	SLD 13	-145	9	1975	0.27	3.7	0.13
220	SLD 14	-169	9	1976	0.27	3.7	0.25
220	SLD 15	-150	-6	2107	0.86	4.08	0.16
220	SLD 16	-174	-5	2107	0.86	4.09	0.28
220	SLV 1	371	17	1905	-0.1	-9.5	-0.51
220	SLV 2	316	18	1906	-0.1	-9.49	-0.25
220	SLV 3	360	-17	2214	1.29	-8.6	-0.44
220	SLV 4	305	-16	2215	1.29	-8.59	-0.18



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
220	SLV 5	143	57	1536	-1.74	-4.12	-0.34
220	SLV 6	86	58	1537	-1.74	-4.12	-0.07
220	SLV 7	106	-56	2565	2.9	-1.13	-0.09
220	SLV 8	50	-55	2566	2.9	-1.12	0.18
220	SLV 9	-64	58	1528	-1.75	1.38	-0.11
220	SLV 10	-121	59	1529	-1.75	1.39	0.16
220	SLV 11	-101	-55	2557	2.88	4.38	0.14
220	SLV 12	-158	-55	2558	2.89	4.39	0.41
220	SLV 13	-320	19	1879	-0.15	8.86	0.25
220	SLV 14	-374	20	1880	-0.14	8.86	0.51
220	SLV 15	-331	-15	2188	1.24	9.75	0.32
220	SLV 16	-385	-14	2189	1.25	9.76	0.59
220	CRTFP Ux+	0	0	0	0	0	0
220	CRTFP Ux-	0	0	0	0	0	0
220	CRTFP Uy+	0	0	0	0	0	0
220	CRTFP Uy-	0	0	0	0	0	0
221	SLU 1	-15	12	5521	9.17	14.6	1.15
221	SLU 2	-15	12	5521	9.17	14.6	1.15
221	SLU 3	-15	12	5521	9.17	14.6	1.15
221	SLU 4	-15	12	5521	9.17	14.6	1.15
221	SLU 5	-15	12	5521	9.17	14.6	1.15
221	SLU 6	-15	12	5521	9.17	14.6	1.15
221	SLU 7	-15	12	5521	9.17	14.6	1.15
221	SLU 8	-15	12	5521	9.17	14.6	1.15
221	SLU 9	-15	12	5521	9.17	14.6	1.15
221	SLU 10	-13	14	6430	12.71	17.28	1.35
221	SLU 11	-13	14	6430	12.71	17.28	1.35
221	SLU 12	-13	14	6430	12.71	17.28	1.35
221	SLU 13	-13	14	6430	12.71	17.28	1.35
221	SLU 14	-13	14	6430	12.71	17.28	1.35
221	SLU 15	-13	14	6430	12.71	17.28	1.35
221	SLU 16	-13	14	6430	12.71	17.28	1.35
221	SLU 17	-13	14	6430	12.71	17.28	1.35
221	SLU 18	-13	15	6820	14.23	18.42	1.43
221	SLU 19	-13	15	6820	14.23	18.42	1.43
221	SLU 20	-13	15	6820	14.23	18.42	1.43
221	SLU 21	-13	15	6820	14.23	18.42	1.43
221	SLU 22	-14	14	6207	11.91	16.64	1.31
221	SLU 23	-14	14	6207	11.91	16.64	1.31
221	SLU 24	-14	14	6207	11.91	16.64	1.31
221	SLU 25	-14	14	6207	11.91	16.64	1.31
221	SLU 26	-14	14	6207	11.91	16.64	1.31
221	SLU 27	-14	14	6207	11.91	16.64	1.31
221	SLU 28	-14	14	6207	11.91	16.64	1.31
221	SLU 29	-14	14	6207	11.91	16.64	1.31
221	SLU 30	-14	14	6207	11.91	16.64	1.31
221	SLU 31	-13	15	7116	15.45	19.31	1.51
221	SLU 32	-13	15	7116	15.45	19.31	1.51
221	SLU 33	-13	15	7116	15.45	19.31	1.51
221	SLU 34	-13	15	7116	15.45	19.31	1.51
221	SLU 35	-13	15	7116	15.45	19.31	1.51
221	SLU 36	-13	15	7116	15.45	19.31	1.51
221	SLU 37	-13	15	7116	15.45	19.31	1.51
221	SLU 38	-13	15	7116	15.45	19.31	1.51
221	SLU 39	-12	16	7505	16.97	20.46	1.59
221	SLU 40	-12	16	7505	16.97	20.46	1.59
221	SLU 41	-12	16	7505	16.97	20.46	1.59
221	SLU 42	-12	16	7505	16.97	20.46	1.59
221	SLU 43	-19	16	6942	10.98	18.28	1.44
221	SLU 44	-19	16	6942	10.98	18.28	1.44
221	SLU 45	-19	16	6942	10.98	18.28	1.44
221	SLU 46	-19	16	6942	10.98	18.28	1.44
221	SLU 47	-19	16	6942	10.98	18.28	1.44
221	SLU 48	-19	16	6942	10.98	18.28	1.44
221	SLU 49	-19	16	6942	10.98	18.28	1.44
221	SLU 50	-19	16	6942	10.98	18.28	1.44
221	SLU 51	-19	16	6942	10.98	18.28	1.44
221	SLU 52	-18	17	7851	14.52	20.96	1.64
221	SLU 53	-18	17	7851	14.52	20.96	1.64
221	SLU 54	-18	17	7851	14.52	20.96	1.64
221	SLU 55	-18	17	7851	14.52	20.96	1.64
221	SLU 56	-18	17	7851	14.52	20.96	1.64
221	SLU 57	-18	17	7851	14.52	20.96	1.64
221	SLU 58	-18	17	7851	14.52	20.96	1.64
221	SLU 59	-18	17	7851	14.52	20.96	1.64
221	SLU 60	-18	18	8241	16.04	22.1	1.72
221	SLU 61	-18	18	8241	16.04	22.1	1.72
221	SLU 62	-18	18	8241	16.04	22.1	1.72
221	SLU 63	-18	18	8241	16.04	22.1	1.72
221	SLU 64	-19	17	7628	13.72	20.32	1.6
221	SLU 65	-19	17	7628	13.72	20.32	1.6
221	SLU 66	-19	17	7628	13.72	20.32	1.6
221	SLU 67	-19	17	7628	13.72	20.32	1.6
221	SLU 68	-19	17	7628	13.72	20.32	1.6
221	SLU 69	-19	17	7628	13.72	20.32	1.6
221	SLU 70	-19	17	7628	13.72	20.32	1.6
221	SLU 71	-19	17	7628	13.72	20.32	1.6
221	SLU 72	-19	17	7628	13.72	20.32	1.6
221	SLU 73	-18	19	8537	17.26	23	1.8
221	SLU 74	-18	19	8537	17.26	23	1.8



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
221	SLU 75	-18	19	8537	17.26	23	1.8
221	SLU 76	-18	19	8537	17.26	23	1.8
221	SLU 77	-18	19	8537	17.26	23	1.8
221	SLU 78	-18	19	8537	17.26	23	1.8
221	SLU 79	-18	19	8537	17.26	23	1.8
221	SLU 80	-18	19	8537	17.26	23	1.8
221	SLU 81	-17	19	8927	18.78	24.14	1.88
221	SLU 82	-17	19	8927	18.78	24.14	1.88
221	SLU 83	-17	19	8927	18.78	24.14	1.88
221	SLU 84	-17	19	8927	18.78	24.14	1.88
221	SLE RA 1	-15	13	5717	9.95	15.19	1.19
221	SLE RA 2	-15	13	5717	9.95	15.19	1.19
221	SLE RA 3	-15	13	5717	9.95	15.19	1.19
221	SLE RA 4	-15	13	5717	9.95	15.19	1.19
221	SLE RA 5	-15	13	5717	9.95	15.19	1.19
221	SLE RA 6	-15	13	5717	9.95	15.19	1.19
221	SLE RA 7	-15	13	5717	9.95	15.19	1.19
221	SLE RA 8	-15	13	5717	9.95	15.19	1.19
221	SLE RA 9	-15	13	5717	9.95	15.19	1.19
221	SLE RA 10	-14	14	6323	12.31	16.97	1.33
221	SLE RA 11	-14	14	6323	12.31	16.97	1.33
221	SLE RA 12	-14	14	6323	12.31	16.97	1.33
221	SLE RA 13	-14	14	6323	12.31	16.97	1.33
221	SLE RA 14	-14	14	6323	12.31	16.97	1.33
221	SLE RA 15	-14	14	6323	12.31	16.97	1.33
221	SLE RA 16	-14	14	6323	12.31	16.97	1.33
221	SLE RA 17	-14	14	6323	12.31	16.97	1.33
221	SLE RA 18	-13	14	6583	13.33	17.73	1.38
221	SLE RA 19	-13	14	6583	13.33	17.73	1.38
221	SLE RA 20	-13	14	6583	13.33	17.73	1.38
221	SLE RA 21	-13	14	6583	13.33	17.73	1.38
221	SLE FR 1	-15	13	5717	9.95	15.19	1.19
221	SLE FR 2	-15	13	5717	9.95	15.19	1.19
221	SLE FR 3	-15	13	5717	9.95	15.19	1.19
221	SLE FR 4	-14	13	5977	10.96	15.95	1.25
221	SLE FR 5	-14	13	5977	10.96	15.95	1.25
221	SLE FR 6	-14	13	6150	11.64	16.46	1.29
221	SLE OP 1	-15	13	5717	9.95	15.19	1.19
221	SLE OP 2	-14	13	5977	10.96	15.95	1.25
221	SLD 1	596	486	6527	-12.09	18.43	8.61
221	SLD 2	512	355	6544	-9.6	18.61	12.14
221	SLD 3	603	-241	6939	42.87	21.05	3.65
221	SLD 4	519	-371	6956	45.36	21.23	7.18
221	SLD 5	188	1304	5511	-80.2	12.65	9.72
221	SLD 6	102	1170	5529	-77.66	12.83	13.32
221	SLD 7	212	-1118	6883	102.99	21.4	-6.84
221	SLD 8	126	-1251	6901	105.53	21.58	-3.23
221	SLD 9	-155	1277	5052	-83.6	10.32	5.73
221	SLD 10	-241	1144	5070	-81.06	10.5	9.34
221	SLD 11	-131	-1144	6424	99.59	19.07	-10.82
221	SLD 12	-217	-1277	6442	102.13	19.25	-7.21
221	SLD 13	-548	398	4997	-23.43	10.67	-4.67
221	SLD 14	-632	267	5014	-20.94	10.84	-1.14
221	SLD 15	-541	-329	5409	31.53	13.29	-9.64
221	SLD 16	-625	-459	5426	34.02	13.47	-6.11
221	SLV 1	1372	1114	7210	-43.5	21.48	18.12
221	SLV 2	1180	816	7250	-37.81	21.89	26.2
221	SLV 3	1388	-590	8177	85.5	27.64	6.46
221	SLV 4	1196	-888	8216	91.18	28.05	14.54
221	SLV 5	447	3039	4867	-203.12	8.13	21.01
221	SLV 6	248	2729	4908	-197.22	8.55	29.4
221	SLV 7	503	-2643	8087	226.87	28.64	-17.85
221	SLV 8	303	-2952	8128	232.78	29.06	-9.46
221	SLV 9	-332	2979	3825	-210.85	2.84	11.97
221	SLV 10	-531	2669	3866	-204.94	3.26	20.35
221	SLV 11	-276	-2703	7045	219.14	23.35	-26.89
221	SLV 12	-476	-3012	7086	225.05	23.77	-18.51
221	SLV 13	-1225	915	3737	-69.26	3.85	-12.04
221	SLV 14	-1417	616	3777	-63.57	4.26	-3.96
221	SLV 15	-1208	-790	4703	59.74	10.01	-23.69
221	SLV 16	-1400	-1088	4743	65.43	10.41	-15.62
221	CRTFP Ux+	0	0	0	0	0	0
221	CRTFP Ux-	0	0	0	0	0	0
221	CRTFP Uy+	0	0	0	0	0	0
221	CRTFP Uy-	0	0	0	0	0	0
223	SLU 1	-5	-5	1913	2.77	251.05	1.48
223	SLU 2	-5	-5	1913	2.77	251.05	1.48
223	SLU 3	-5	-5	1913	2.77	251.05	1.48
223	SLU 4	-5	-5	1913	2.77	251.05	1.48
223	SLU 5	-5	-5	1913	2.77	251.05	1.48
223	SLU 6	-5	-5	1913	2.77	251.05	1.48
223	SLU 7	-5	-5	1913	2.77	251.05	1.48
223	SLU 8	-5	-5	1913	2.77	251.05	1.48
223	SLU 9	-5	-5	1913	2.77	251.05	1.48
223	SLU 10	-7	-6	2242	3.28	289.67	1.72
223	SLU 11	-7	-6	2242	3.28	289.67	1.72
223	SLU 12	-7	-6	2242	3.28	289.67	1.72
223	SLU 13	-7	-6	2242	3.28	289.67	1.72
223	SLU 14	-7	-6	2242	3.28	289.67	1.72
223	SLU 15	-7	-6	2242	3.28	289.67	1.72



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
223	SLU 16	-7	-6	2242	3.28	289.67	1.72
223	SLU 17	-7	-6	2242	3.28	289.67	1.72
223	SLU 18	-8	-7	2383	3.5	306.23	1.83
223	SLU 19	-8	-7	2383	3.5	306.23	1.83
223	SLU 20	-8	-7	2383	3.5	306.23	1.83
223	SLU 21	-8	-7	2383	3.5	306.23	1.83
223	SLU 22	-7	-6	2160	3.15	279.99	1.66
223	SLU 23	-7	-6	2160	3.15	279.99	1.66
223	SLU 24	-7	-6	2160	3.15	279.99	1.66
223	SLU 25	-7	-6	2160	3.15	279.99	1.66
223	SLU 26	-7	-6	2160	3.15	279.99	1.66
223	SLU 27	-7	-6	2160	3.15	279.99	1.66
223	SLU 28	-7	-6	2160	3.15	279.99	1.66
223	SLU 29	-7	-6	2160	3.15	279.99	1.66
223	SLU 30	-7	-6	2160	3.15	279.99	1.66
223	SLU 31	-9	-7	2489	3.66	318.61	1.91
223	SLU 32	-9	-7	2489	3.66	318.61	1.91
223	SLU 33	-9	-7	2489	3.66	318.61	1.91
223	SLU 34	-9	-7	2489	3.66	318.61	1.91
223	SLU 35	-9	-7	2489	3.66	318.61	1.91
223	SLU 36	-9	-7	2489	3.66	318.61	1.91
223	SLU 37	-9	-7	2489	3.66	318.61	1.91
223	SLU 38	-9	-7	2489	3.66	318.61	1.91
223	SLU 39	-10	-7	2630	3.88	335.17	2.01
223	SLU 40	-10	-7	2630	3.88	335.17	2.01
223	SLU 41	-10	-7	2630	3.88	335.17	2.01
223	SLU 42	-10	-7	2630	3.88	335.17	2.01
223	SLU 43	-7	-7	2403	3.47	316.44	1.86
223	SLU 44	-7	-7	2403	3.47	316.44	1.86
223	SLU 45	-7	-7	2403	3.47	316.44	1.86
223	SLU 46	-7	-7	2403	3.47	316.44	1.86
223	SLU 47	-7	-7	2403	3.47	316.44	1.86
223	SLU 48	-7	-7	2403	3.47	316.44	1.86
223	SLU 49	-7	-7	2403	3.47	316.44	1.86
223	SLU 50	-7	-7	2403	3.47	316.44	1.86
223	SLU 51	-7	-7	2403	3.47	316.44	1.86
223	SLU 52	-9	-8	2731	3.98	355.06	2.1
223	SLU 53	-9	-8	2731	3.98	355.06	2.1
223	SLU 54	-9	-8	2731	3.98	355.06	2.1
223	SLU 55	-9	-8	2731	3.98	355.06	2.1
223	SLU 56	-9	-8	2731	3.98	355.06	2.1
223	SLU 57	-9	-8	2731	3.98	355.06	2.1
223	SLU 58	-9	-8	2731	3.98	355.06	2.1
223	SLU 59	-9	-8	2731	3.98	355.06	2.1
223	SLU 60	-9	-8	2872	4.2	371.62	2.2
223	SLU 61	-9	-8	2872	4.2	371.62	2.2
223	SLU 62	-9	-8	2872	4.2	371.62	2.2
223	SLU 63	-9	-8	2872	4.2	371.62	2.2
223	SLU 64	-8	-7	2650	3.86	345.38	2.04
223	SLU 65	-8	-7	2650	3.86	345.38	2.04
223	SLU 66	-8	-7	2650	3.86	345.38	2.04
223	SLU 67	-8	-7	2650	3.86	345.38	2.04
223	SLU 68	-8	-7	2650	3.86	345.38	2.04
223	SLU 69	-8	-7	2650	3.86	345.38	2.04
223	SLU 70	-8	-7	2650	3.86	345.38	2.04
223	SLU 71	-8	-7	2650	3.86	345.38	2.04
223	SLU 72	-8	-7	2650	3.86	345.38	2.04
223	SLU 73	-10	-8	2978	4.36	384.01	2.29
223	SLU 74	-10	-8	2978	4.36	384.01	2.29
223	SLU 75	-10	-8	2978	4.36	384.01	2.29
223	SLU 76	-10	-8	2978	4.36	384.01	2.29
223	SLU 77	-10	-8	2978	4.36	384.01	2.29
223	SLU 78	-10	-8	2978	4.36	384.01	2.29
223	SLU 79	-10	-8	2978	4.36	384.01	2.29
223	SLU 80	-10	-8	2978	4.36	384.01	2.29
223	SLU 81	-11	-9	3119	4.58	400.56	2.39
223	SLU 82	-11	-9	3119	4.58	400.56	2.39
223	SLU 83	-11	-9	3119	4.58	400.56	2.39
223	SLU 84	-11	-9	3119	4.58	400.56	2.39
223	SLE RA 1	-6	-6	1984	2.88	259.32	1.53
223	SLE RA 2	-6	-6	1984	2.88	259.32	1.53
223	SLE RA 3	-6	-6	1984	2.88	259.32	1.53
223	SLE RA 4	-6	-6	1984	2.88	259.32	1.53
223	SLE RA 5	-6	-6	1984	2.88	259.32	1.53
223	SLE RA 6	-6	-6	1984	2.88	259.32	1.53
223	SLE RA 7	-6	-6	1984	2.88	259.32	1.53
223	SLE RA 8	-6	-6	1984	2.88	259.32	1.53
223	SLE RA 9	-6	-6	1984	2.88	259.32	1.53
223	SLE RA 10	-7	-6	2203	3.22	285.07	1.69
223	SLE RA 11	-7	-6	2203	3.22	285.07	1.69
223	SLE RA 12	-7	-6	2203	3.22	285.07	1.69
223	SLE RA 13	-7	-6	2203	3.22	285.07	1.69
223	SLE RA 14	-7	-6	2203	3.22	285.07	1.69
223	SLE RA 15	-7	-6	2203	3.22	285.07	1.69
223	SLE RA 16	-7	-6	2203	3.22	285.07	1.69
223	SLE RA 17	-7	-6	2203	3.22	285.07	1.69
223	SLE RA 18	-8	-6	2297	3.37	296.1	1.76
223	SLE RA 19	-8	-6	2297	3.37	296.1	1.76
223	SLE RA 20	-8	-6	2297	3.37	296.1	1.76
223	SLE RA 21	-8	-6	2297	3.37	296.1	1.76



Nodo	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
223	SLE FR 1	-6	-6	1984	2.88	259.32	1.53
223	SLE FR 2	-6	-6	1984	2.88	259.32	1.53
223	SLE FR 3	-6	-6	1984	2.88	259.32	1.53
223	SLE FR 4	-6	-6	2078	3.03	270.35	1.6
223	SLE FR 5	-6	-6	2078	3.03	270.35	1.6
223	SLE FR 6	-7	-6	2140	3.12	277.71	1.65
223	SLE QP 1	-6	-6	1984	2.88	259.32	1.53
223	SLE QP 2	-6	-6	2078	3.03	270.35	1.6
223	SLD 1	182	69	1698	1.78	228.48	-17.31
223	SLD 2	155	105	1691	1.72	227.19	-26.18
223	SLD 3	169	-136	1890	3.19	255.69	33.9
223	SLD 4	142	-100	1884	3.13	254.4	25.03
223	SLD 5	79	314	1674	0.53	217	-78.53
223	SLD 6	51	351	1668	0.47	215.68	-87.6
223	SLD 7	37	-368	2316	5.24	307.68	92.15
223	SLD 8	10	-331	2309	5.18	306.36	83.09
223	SLD 9	-22	320	1847	0.87	234.34	-79.89
223	SLD 10	-50	357	1840	0.82	233.03	-88.95
223	SLD 11	-64	-362	2488	5.58	325.03	90.8
223	SLD 12	-91	-326	2481	5.52	323.71	81.73
223	SLD 13	-155	88	2272	2.92	286.31	-21.83
223	SLD 14	-182	124	2265	2.86	285.02	-30.7
223	SLD 15	-167	-116	2464	4.33	313.52	29.38
223	SLD 16	-194	-80	2458	4.28	312.23	20.51
223	SLV 1	421	171	1208	0.14	174.12	-43.17
223	SLV 2	360	253	1193	0.01	171.17	-63.45
223	SLV 3	392	-310	1660	3.45	237.93	76.99
223	SLV 4	330	-227	1644	3.32	234.98	56.7
223	SLV 5	189	745	1138	-2.82	145.8	-186.58
223	SLV 6	125	831	1122	-2.96	142.74	-207.64
223	SLV 7	91	-856	2643	8.23	358.49	213.94
223	SLV 8	28	-770	2627	8.1	355.43	192.88
223	SLV 9	-40	759	1529	-2.04	185.28	-189.68
223	SLV 10	-104	844	1513	-2.18	182.22	-210.74
223	SLV 11	-138	-842	3034	9.01	397.97	210.84
223	SLV 12	-202	-757	3018	8.87	394.91	189.78
223	SLV 13	-343	215	2511	2.73	305.73	-53.5
223	SLV 14	-405	298	2496	2.6	302.78	-73.79
223	SLV 15	-372	-265	2963	6.05	369.53	66.66
223	SLV 16	-434	-182	2948	5.92	366.58	46.37
223	CRTFP Ux+	0	0	0	0	0	0
223	CRTFP Ux-	0	0	0	0	0	0
223	CRTFP Uy+	0	0	0	0	0	0
223	CRTFP Uy-	0	0	0	0	0	0
225	SLU 1	-8	1	1905	1.37	0.21	0.03
225	SLU 2	-8	1	1905	1.37	0.21	0.03
225	SLU 3	-8	1	1905	1.37	0.21	0.03
225	SLU 4	-8	1	1905	1.37	0.21	0.03
225	SLU 5	-8	1	1905	1.37	0.21	0.03
225	SLU 6	-8	1	1905	1.37	0.21	0.03
225	SLU 7	-8	1	1905	1.37	0.21	0.03
225	SLU 8	-8	1	1905	1.37	0.21	0.03
225	SLU 9	-8	1	1905	1.37	0.21	0.03
225	SLU 10	-9	2	2253	1.54	0.25	0.03
225	SLU 11	-9	2	2253	1.54	0.25	0.03
225	SLU 12	-9	2	2253	1.54	0.25	0.03
225	SLU 13	-9	2	2253	1.54	0.25	0.03
225	SLU 14	-9	2	2253	1.54	0.25	0.03
225	SLU 15	-9	2	2253	1.54	0.25	0.03
225	SLU 16	-9	2	2253	1.54	0.25	0.03
225	SLU 17	-9	2	2253	1.54	0.25	0.03
225	SLU 18	-10	2	2402	1.61	0.26	0.03
225	SLU 19	-10	2	2402	1.61	0.26	0.03
225	SLU 20	-10	2	2402	1.61	0.26	0.03
225	SLU 21	-10	2	2402	1.61	0.26	0.03
225	SLU 22	-9	2	2165	1.5	0.24	0.03
225	SLU 23	-9	2	2165	1.5	0.24	0.03
225	SLU 24	-9	2	2165	1.5	0.24	0.03
225	SLU 25	-9	2	2165	1.5	0.24	0.03
225	SLU 26	-9	2	2165	1.5	0.24	0.03
225	SLU 27	-9	2	2165	1.5	0.24	0.03
225	SLU 28	-9	2	2165	1.5	0.24	0.03
225	SLU 29	-9	2	2165	1.5	0.24	0.03
225	SLU 30	-9	2	2165	1.5	0.24	0.03
225	SLU 31	-10	2	2513	1.67	0.27	0.03
225	SLU 32	-10	2	2513	1.67	0.27	0.03
225	SLU 33	-10	2	2513	1.67	0.27	0.03
225	SLU 34	-10	2	2513	1.67	0.27	0.03
225	SLU 35	-10	2	2513	1.67	0.27	0.03
225	SLU 36	-10	2	2513	1.67	0.27	0.03
225	SLU 37	-10	2	2513	1.67	0.27	0.03
225	SLU 38	-10	2	2513	1.67	0.27	0.03
225	SLU 39	-11	2	2662	1.74	0.29	0.04
225	SLU 40	-11	2	2662	1.74	0.29	0.04
225	SLU 41	-11	2	2662	1.74	0.29	0.04
225	SLU 42	-11	2	2662	1.74	0.29	0.04
225	SLU 43	-10	2	2387	1.74	0.27	0.03
225	SLU 44	-10	2	2387	1.74	0.27	0.03
225	SLU 45	-10	2	2387	1.74	0.27	0.03
225	SLU 46	-10	2	2387	1.74	0.27	0.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
225	SLU 47	-10	2	2387	1.74	0.27	0.03
225	SLU 48	-10	2	2387	1.74	0.27	0.03
225	SLU 49	-10	2	2387	1.74	0.27	0.03
225	SLU 50	-10	2	2387	1.74	0.27	0.03
225	SLU 51	-10	2	2387	1.74	0.27	0.03
225	SLU 52	-11	2	2735	1.91	0.3	0.04
225	SLU 53	-11	2	2735	1.91	0.3	0.04
225	SLU 54	-11	2	2735	1.91	0.3	0.04
225	SLU 55	-11	2	2735	1.91	0.3	0.04
225	SLU 56	-11	2	2735	1.91	0.3	0.04
225	SLU 57	-11	2	2735	1.91	0.3	0.04
225	SLU 58	-11	2	2735	1.91	0.3	0.04
225	SLU 59	-11	2	2735	1.91	0.3	0.04
225	SLU 60	-12	2	2884	1.98	0.31	0.04
225	SLU 61	-12	2	2884	1.98	0.31	0.04
225	SLU 62	-12	2	2884	1.98	0.31	0.04
225	SLU 63	-12	2	2884	1.98	0.31	0.04
225	SLU 64	-11	2	2648	1.86	0.29	0.04
225	SLU 65	-11	2	2648	1.86	0.29	0.04
225	SLU 66	-11	2	2648	1.86	0.29	0.04
225	SLU 67	-11	2	2648	1.86	0.29	0.04
225	SLU 68	-11	2	2648	1.86	0.29	0.04
225	SLU 69	-11	2	2648	1.86	0.29	0.04
225	SLU 70	-11	2	2648	1.86	0.29	0.04
225	SLU 71	-11	2	2648	1.86	0.29	0.04
225	SLU 72	-11	2	2648	1.86	0.29	0.04
225	SLU 73	-12	2	2996	2.03	0.33	0.04
225	SLU 74	-12	2	2996	2.03	0.33	0.04
225	SLU 75	-12	2	2996	2.03	0.33	0.04
225	SLU 76	-12	2	2996	2.03	0.33	0.04
225	SLU 77	-12	2	2996	2.03	0.33	0.04
225	SLU 78	-12	2	2996	2.03	0.33	0.04
225	SLU 79	-12	2	2996	2.03	0.33	0.04
225	SLU 80	-12	2	2996	2.03	0.33	0.04
225	SLU 81	-13	2	3145	2.11	0.34	0.04
225	SLU 82	-13	2	3145	2.11	0.34	0.04
225	SLU 83	-13	2	3145	2.11	0.34	0.04
225	SLU 84	-13	2	3145	2.11	0.34	0.04
225	SLE RA 1	-8	2	1980	1.41	0.22	0.03
225	SLE RA 2	-8	2	1980	1.41	0.22	0.03
225	SLE RA 3	-8	2	1980	1.41	0.22	0.03
225	SLE RA 4	-8	2	1980	1.41	0.22	0.03
225	SLE RA 5	-8	2	1980	1.41	0.22	0.03
225	SLE RA 6	-8	2	1980	1.41	0.22	0.03
225	SLE RA 7	-8	2	1980	1.41	0.22	0.03
225	SLE RA 8	-8	2	1980	1.41	0.22	0.03
225	SLE RA 9	-8	2	1980	1.41	0.22	0.03
225	SLE RA 10	-9	2	2211	1.52	0.24	0.03
225	SLE RA 11	-9	2	2211	1.52	0.24	0.03
225	SLE RA 12	-9	2	2211	1.52	0.24	0.03
225	SLE RA 13	-9	2	2211	1.52	0.24	0.03
225	SLE RA 14	-9	2	2211	1.52	0.24	0.03
225	SLE RA 15	-9	2	2211	1.52	0.24	0.03
225	SLE RA 16	-9	2	2211	1.52	0.24	0.03
225	SLE RA 17	-9	2	2211	1.52	0.24	0.03
225	SLE RA 18	-9	2	2311	1.57	0.25	0.03
225	SLE RA 19	-9	2	2311	1.57	0.25	0.03
225	SLE RA 20	-9	2	2311	1.57	0.25	0.03
225	SLE RA 21	-9	2	2311	1.57	0.25	0.03
225	SLE FR 1	-8	2	1980	1.41	0.22	0.03
225	SLE FR 2	-8	2	1980	1.41	0.22	0.03
225	SLE FR 3	-8	2	1980	1.41	0.22	0.03
225	SLE FR 4	-8	2	2079	1.46	0.23	0.03
225	SLE FR 5	-8	2	2079	1.46	0.23	0.03
225	SLE FR 6	-9	2	2145	1.49	0.24	0.03
225	SLE QP 1	-8	2	1980	1.41	0.22	0.03
225	SLE QP 2	-8	2	2079	1.46	0.23	0.03
225	SLD 1	166	8	2009	1.13	-2.85	-0.22
225	SLD 2	139	9	2009	1.13	-2.84	-0.12
225	SLD 3	160	-6	2161	1.81	-2.56	-0.2
225	SLD 4	133	-6	2161	1.81	-2.55	-0.09
225	SLD 5	62	25	1827	0.32	-1.14	-0.13
225	SLD 6	34	26	1827	0.33	-1.13	-0.02
225	SLD 7	44	-23	2334	2.59	-0.17	-0.04
225	SLD 8	15	-23	2334	2.59	-0.16	0.07
225	SLD 9	-32	26	1823	0.32	0.62	-0.02
225	SLD 10	-60	26	1824	0.32	0.63	0.09
225	SLD 11	-51	-23	2330	2.58	1.59	0.07
225	SLD 12	-79	-22	2331	2.59	1.6	0.18
225	SLD 13	-150	9	1997	1.1	3.01	0.15
225	SLD 14	-177	9	1997	1.1	3.02	0.25
225	SLD 15	-155	-5	2149	1.78	3.3	0.17
225	SLD 16	-183	-5	2149	1.78	3.31	0.28
225	SLV 1	388	17	1914	0.68	-7.23	-0.55
225	SLV 2	325	18	1915	0.69	-7.22	-0.3
225	SLV 3	375	-17	2271	2.28	-6.55	-0.48
225	SLV 4	312	-16	2272	2.29	-6.53	-0.24
225	SLV 5	154	57	1488	-1.2	-3.05	-0.33
225	SLV 6	89	58	1489	-1.2	-3.03	-0.08
225	SLV 7	110	-55	2678	4.12	-0.77	-0.12



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
225	SLV 8	44	-55	2678	4.13	-0.76	0.14
225	SLV 9	-61	58	1479	-1.22	1.22	-0.08
225	SLV 10	-126	59	1480	-1.21	1.23	0.18
225	SLV 11	-105	-55	2669	4.11	3.49	0.13
225	SLV 12	-171	-54	2670	4.11	3.51	0.39
225	SLV 13	-329	19	1886	0.62	6.99	0.29
225	SLV 14	-392	20	1887	0.63	7.01	0.54
225	SLV 15	-342	-15	2243	2.22	7.67	0.36
225	SLV 16	-405	-14	2244	2.23	7.69	0.6
225	CRTFP Ux+	0	0	0	0	0	0
225	CRTFP Ux-	0	0	0	0	0	0
225	CRTFP Uy+	0	0	0	0	0	0
225	CRTFP Uy-	0	0	0	0	0	0
227	SLU 1	-9	-5	2016	4.17	316.28	1.45
227	SLU 2	-9	-5	2016	4.17	316.28	1.45
227	SLU 3	-9	-5	2016	4.17	316.28	1.45
227	SLU 4	-9	-5	2016	4.17	316.28	1.45
227	SLU 5	-9	-5	2016	4.17	316.28	1.45
227	SLU 6	-9	-5	2016	4.17	316.28	1.45
227	SLU 7	-9	-5	2016	4.17	316.28	1.45
227	SLU 8	-9	-5	2016	4.17	316.28	1.45
227	SLU 9	-9	-5	2016	4.17	316.28	1.45
227	SLU 10	-12	-6	2364	4.97	367.11	1.68
227	SLU 11	-12	-6	2364	4.97	367.11	1.68
227	SLU 12	-12	-6	2364	4.97	367.11	1.68
227	SLU 13	-12	-6	2364	4.97	367.11	1.68
227	SLU 14	-12	-6	2364	4.97	367.11	1.68
227	SLU 15	-12	-6	2364	4.97	367.11	1.68
227	SLU 16	-12	-6	2364	4.97	367.11	1.68
227	SLU 17	-12	-6	2364	4.97	367.11	1.68
227	SLU 18	-13	-6	2513	5.31	388.89	1.77
227	SLU 19	-13	-6	2513	5.31	388.89	1.77
227	SLU 20	-13	-6	2513	5.31	388.89	1.77
227	SLU 21	-13	-6	2513	5.31	388.89	1.77
227	SLU 22	-11	-6	2277	4.77	354.41	1.62
227	SLU 23	-11	-6	2277	4.77	354.41	1.62
227	SLU 24	-11	-6	2277	4.77	354.41	1.62
227	SLU 25	-11	-6	2277	4.77	354.41	1.62
227	SLU 26	-11	-6	2277	4.77	354.41	1.62
227	SLU 27	-11	-6	2277	4.77	354.41	1.62
227	SLU 28	-11	-6	2277	4.77	354.41	1.62
227	SLU 29	-11	-6	2277	4.77	354.41	1.62
227	SLU 30	-11	-6	2277	4.77	354.41	1.62
227	SLU 31	-14	-7	2625	5.56	405.24	1.85
227	SLU 32	-14	-7	2625	5.56	405.24	1.85
227	SLU 33	-14	-7	2625	5.56	405.24	1.85
227	SLU 34	-14	-7	2625	5.56	405.24	1.85
227	SLU 35	-14	-7	2625	5.56	405.24	1.85
227	SLU 36	-14	-7	2625	5.56	405.24	1.85
227	SLU 37	-14	-7	2625	5.56	405.24	1.85
227	SLU 38	-14	-7	2625	5.56	405.24	1.85
227	SLU 39	-15	-7	2774	5.91	427.02	1.95
227	SLU 40	-15	-7	2774	5.91	427.02	1.95
227	SLU 41	-15	-7	2774	5.91	427.02	1.95
227	SLU 42	-15	-7	2774	5.91	427.02	1.95
227	SLU 43	-11	-7	2531	5.22	398.09	1.82
227	SLU 44	-11	-7	2531	5.22	398.09	1.82
227	SLU 45	-11	-7	2531	5.22	398.09	1.82
227	SLU 46	-11	-7	2531	5.22	398.09	1.82
227	SLU 47	-11	-7	2531	5.22	398.09	1.82
227	SLU 48	-11	-7	2531	5.22	398.09	1.82
227	SLU 49	-11	-7	2531	5.22	398.09	1.82
227	SLU 50	-11	-7	2531	5.22	398.09	1.82
227	SLU 51	-11	-7	2531	5.22	398.09	1.82
227	SLU 52	-14	-7	2879	6.01	448.92	2.05
227	SLU 53	-14	-7	2879	6.01	448.92	2.05
227	SLU 54	-14	-7	2879	6.01	448.92	2.05
227	SLU 55	-14	-7	2879	6.01	448.92	2.05
227	SLU 56	-14	-7	2879	6.01	448.92	2.05
227	SLU 57	-14	-7	2879	6.01	448.92	2.05
227	SLU 58	-14	-7	2879	6.01	448.92	2.05
227	SLU 59	-14	-7	2879	6.01	448.92	2.05
227	SLU 60	-15	-8	3028	6.36	470.7	2.15
227	SLU 61	-15	-8	3028	6.36	470.7	2.15
227	SLU 62	-15	-8	3028	6.36	470.7	2.15
227	SLU 63	-15	-8	3028	6.36	470.7	2.15
227	SLU 64	-13	-7	2792	5.82	436.22	2
227	SLU 65	-13	-7	2792	5.82	436.22	2
227	SLU 66	-13	-7	2792	5.82	436.22	2
227	SLU 67	-13	-7	2792	5.82	436.22	2
227	SLU 68	-13	-7	2792	5.82	436.22	2
227	SLU 69	-13	-7	2792	5.82	436.22	2
227	SLU 70	-13	-7	2792	5.82	436.22	2
227	SLU 71	-13	-7	2792	5.82	436.22	2
227	SLU 72	-13	-7	2792	5.82	436.22	2
227	SLU 73	-16	-8	3140	6.61	487.05	2.23
227	SLU 74	-16	-8	3140	6.61	487.05	2.23
227	SLU 75	-16	-8	3140	6.61	487.05	2.23
227	SLU 76	-16	-8	3140	6.61	487.05	2.23
227	SLU 77	-16	-8	3140	6.61	487.05	2.23



Nodo	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
227	SLU 78	-16	-8	3140	6.61	487.05	2.23
227	SLU 79	-16	-8	3140	6.61	487.05	2.23
227	SLU 80	-16	-8	3140	6.61	487.05	2.23
227	SLU 81	-17	-8	3289	6.95	508.83	2.32
227	SLU 82	-17	-8	3289	6.95	508.83	2.32
227	SLU 83	-17	-8	3289	6.95	508.83	2.32
227	SLU 84	-17	-8	3289	6.95	508.83	2.32
227	SLE RA 1	-10	-5	2091	4.34	327.17	1.5
227	SLE RA 2	-10	-5	2091	4.34	327.17	1.5
227	SLE RA 3	-10	-5	2091	4.34	327.17	1.5
227	SLE RA 4	-10	-5	2091	4.34	327.17	1.5
227	SLE RA 5	-10	-5	2091	4.34	327.17	1.5
227	SLE RA 6	-10	-5	2091	4.34	327.17	1.5
227	SLE RA 7	-10	-5	2091	4.34	327.17	1.5
227	SLE RA 8	-10	-5	2091	4.34	327.17	1.5
227	SLE RA 9	-10	-5	2091	4.34	327.17	1.5
227	SLE RA 10	-12	-6	2322	4.87	361.06	1.65
227	SLE RA 11	-12	-6	2322	4.87	361.06	1.65
227	SLE RA 12	-12	-6	2322	4.87	361.06	1.65
227	SLE RA 13	-12	-6	2322	4.87	361.06	1.65
227	SLE RA 14	-12	-6	2322	4.87	361.06	1.65
227	SLE RA 15	-12	-6	2322	4.87	361.06	1.65
227	SLE RA 16	-12	-6	2322	4.87	361.06	1.65
227	SLE RA 17	-12	-6	2322	4.87	361.06	1.65
227	SLE RA 18	-13	-6	2422	5.1	375.58	1.72
227	SLE RA 19	-13	-6	2422	5.1	375.58	1.72
227	SLE RA 20	-13	-6	2422	5.1	375.58	1.72
227	SLE RA 21	-13	-6	2422	5.1	375.58	1.72
227	SLE FR 1	-10	-5	2091	4.34	327.17	1.5
227	SLE FR 2	-10	-5	2091	4.34	327.17	1.5
227	SLE FR 3	-10	-5	2091	4.34	327.17	1.5
227	SLE FR 4	-11	-6	2190	4.57	341.69	1.56
227	SLE FR 5	-11	-6	2190	4.57	341.69	1.56
227	SLE FR 6	-11	-6	2256	4.72	351.38	1.61
227	SLE QP 1	-10	-5	2091	4.34	327.17	1.5
227	SLE QP 2	-11	-6	2190	4.57	341.69	1.56
227	SLD 1	187	68	1768	2.97	282.67	-17.18
227	SLD 2	155	105	1759	2.9	281.03	-26.04
227	SLD 3	175	-136	2005	4.59	321.84	33.73
227	SLD 4	144	-100	1997	4.52	320.21	24.87
227	SLD 5	77	313	1706	1.66	265.16	-78.08
227	SLD 6	45	350	1698	1.59	263.49	-87.14
227	SLD 7	40	-367	2498	7.05	395.74	91.63
227	SLD 8	7	-331	2489	6.98	394.07	82.58
227	SLD 9	-29	319	1891	2.16	289.32	-79.45
227	SLD 10	-61	356	1882	2.09	287.65	-88.5
227	SLD 11	-66	-361	2682	7.55	419.9	90.26
227	SLD 12	-98	-325	2674	7.48	418.23	81.21
227	SLD 13	-165	88	2383	4.62	363.18	-21.75
227	SLD 14	-197	124	2375	4.55	361.55	-30.6
227	SLD 15	-176	-116	2621	6.24	402.35	29.17
227	SLD 16	-208	-80	2612	6.17	400.72	20.31
227	SLV 1	438	170	1223	0.88	206.12	-42.83
227	SLV 2	366	253	1203	0.72	202.39	-63.09
227	SLV 3	411	-309	1780	4.67	298.04	76.64
227	SLV 4	340	-227	1760	4.52	294.3	56.38
227	SLV 5	190	743	1062	-2.24	163	-185.48
227	SLV 6	116	829	1042	-2.4	159.12	-206.51
227	SLV 7	103	-854	2919	10.42	469.38	212.77
227	SLV 8	28	-768	2899	10.26	465.5	191.73
227	SLV 9	-49	757	1481	-1.12	217.89	-188.6
227	SLV 10	-124	843	1461	-1.28	214.01	-209.64
227	SLV 11	-137	-840	3338	11.54	524.27	209.64
227	SLV 12	-211	-755	3318	11.38	520.39	188.6
227	SLV 13	-361	215	2620	4.62	389.09	-53.26
227	SLV 14	-433	298	2600	4.47	385.35	-73.52
227	SLV 15	-387	-264	3177	8.42	481	66.22
227	SLV 16	-459	-181	3157	8.27	477.26	45.96
227	CRTFP Ux+	0	0	0	0	0	0
227	CRTFP Ux-	0	0	0	0	0	0
227	CRTFP Uy+	0	0	0	0	0	0
227	CRTFP Uy-	0	0	0	0	0	0
229	SLU 1	-8	2	1969	2.64	0.4	0.01
229	SLU 2	-8	2	1969	2.64	0.4	0.01
229	SLU 3	-8	2	1969	2.64	0.4	0.01
229	SLU 4	-8	2	1969	2.64	0.4	0.01
229	SLU 5	-8	2	1969	2.64	0.4	0.01
229	SLU 6	-8	2	1969	2.64	0.4	0.01
229	SLU 7	-8	2	1969	2.64	0.4	0.01
229	SLU 8	-8	2	1969	2.64	0.4	0.01
229	SLU 9	-8	2	1969	2.64	0.4	0.01
229	SLU 10	-10	2	2327	3.09	0.46	0.02
229	SLU 11	-10	2	2327	3.09	0.46	0.02
229	SLU 12	-10	2	2327	3.09	0.46	0.02
229	SLU 13	-10	2	2327	3.09	0.46	0.02
229	SLU 14	-10	2	2327	3.09	0.46	0.02
229	SLU 15	-10	2	2327	3.09	0.46	0.02
229	SLU 16	-10	2	2327	3.09	0.46	0.02
229	SLU 17	-10	2	2327	3.09	0.46	0.02
229	SLU 18	-11	2	2480	3.28	0.49	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
229	SLU 19	-11	2	2480	3.28	0.49	0.02
229	SLU 20	-11	2	2480	3.28	0.49	0.02
229	SLU 21	-11	2	2480	3.28	0.49	0.02
229	SLU 22	-10	2	2237	2.97	0.45	0.02
229	SLU 23	-10	2	2237	2.97	0.45	0.02
229	SLU 24	-10	2	2237	2.97	0.45	0.02
229	SLU 25	-10	2	2237	2.97	0.45	0.02
229	SLU 26	-10	2	2237	2.97	0.45	0.02
229	SLU 27	-10	2	2237	2.97	0.45	0.02
229	SLU 28	-10	2	2237	2.97	0.45	0.02
229	SLU 29	-10	2	2237	2.97	0.45	0.02
229	SLU 30	-10	2	2237	2.97	0.45	0.02
229	SLU 31	-11	2	2594	3.41	0.51	0.02
229	SLU 32	-11	2	2594	3.41	0.51	0.02
229	SLU 33	-11	2	2594	3.41	0.51	0.02
229	SLU 34	-11	2	2594	3.41	0.51	0.02
229	SLU 35	-11	2	2594	3.41	0.51	0.02
229	SLU 36	-11	2	2594	3.41	0.51	0.02
229	SLU 37	-11	2	2594	3.41	0.51	0.02
229	SLU 38	-11	2	2594	3.41	0.51	0.02
229	SLU 39	-12	2	2748	3.6	0.54	0.02
229	SLU 40	-12	2	2748	3.6	0.54	0.02
229	SLU 41	-12	2	2748	3.6	0.54	0.02
229	SLU 42	-12	2	2748	3.6	0.54	0.02
229	SLU 43	-11	2	2468	3.32	0.5	0.02
229	SLU 44	-11	2	2468	3.32	0.5	0.02
229	SLU 45	-11	2	2468	3.32	0.5	0.02
229	SLU 46	-11	2	2468	3.32	0.5	0.02
229	SLU 47	-11	2	2468	3.32	0.5	0.02
229	SLU 48	-11	2	2468	3.32	0.5	0.02
229	SLU 49	-11	2	2468	3.32	0.5	0.02
229	SLU 50	-11	2	2468	3.32	0.5	0.02
229	SLU 51	-11	2	2468	3.32	0.5	0.02
229	SLU 52	-12	2	2826	3.77	0.56	0.02
229	SLU 53	-12	2	2826	3.77	0.56	0.02
229	SLU 54	-12	2	2826	3.77	0.56	0.02
229	SLU 55	-12	2	2826	3.77	0.56	0.02
229	SLU 56	-12	2	2826	3.77	0.56	0.02
229	SLU 57	-12	2	2826	3.77	0.56	0.02
229	SLU 58	-12	2	2826	3.77	0.56	0.02
229	SLU 59	-12	2	2826	3.77	0.56	0.02
229	SLU 60	-13	2	2979	3.96	0.59	0.02
229	SLU 61	-13	2	2979	3.96	0.59	0.02
229	SLU 62	-13	2	2979	3.96	0.59	0.02
229	SLU 63	-13	2	2979	3.96	0.59	0.02
229	SLU 64	-12	2	2736	3.65	0.55	0.02
229	SLU 65	-12	2	2736	3.65	0.55	0.02
229	SLU 66	-12	2	2736	3.65	0.55	0.02
229	SLU 67	-12	2	2736	3.65	0.55	0.02
229	SLU 68	-12	2	2736	3.65	0.55	0.02
229	SLU 69	-12	2	2736	3.65	0.55	0.02
229	SLU 70	-12	2	2736	3.65	0.55	0.02
229	SLU 71	-12	2	2736	3.65	0.55	0.02
229	SLU 72	-12	2	2736	3.65	0.55	0.02
229	SLU 73	-13	2	3093	4.09	0.61	0.02
229	SLU 74	-13	2	3093	4.09	0.61	0.02
229	SLU 75	-13	2	3093	4.09	0.61	0.02
229	SLU 76	-13	2	3093	4.09	0.61	0.02
229	SLU 77	-13	2	3093	4.09	0.61	0.02
229	SLU 78	-13	2	3093	4.09	0.61	0.02
229	SLU 79	-13	2	3093	4.09	0.61	0.02
229	SLU 80	-13	2	3093	4.09	0.61	0.02
229	SLU 81	-14	2	3247	4.28	0.64	0.02
229	SLU 82	-14	2	3247	4.28	0.64	0.02
229	SLU 83	-14	2	3247	4.28	0.64	0.02
229	SLU 84	-14	2	3247	4.28	0.64	0.02
229	SLE RA 1	-9	2	2046	2.74	0.41	0.02
229	SLE RA 2	-9	2	2046	2.74	0.41	0.02
229	SLE RA 3	-9	2	2046	2.74	0.41	0.02
229	SLE RA 4	-9	2	2046	2.74	0.41	0.02
229	SLE RA 5	-9	2	2046	2.74	0.41	0.02
229	SLE RA 6	-9	2	2046	2.74	0.41	0.02
229	SLE RA 7	-9	2	2046	2.74	0.41	0.02
229	SLE RA 8	-9	2	2046	2.74	0.41	0.02
229	SLE RA 9	-9	2	2046	2.74	0.41	0.02
229	SLE RA 10	-10	2	2284	3.03	0.45	0.02
229	SLE RA 11	-10	2	2284	3.03	0.45	0.02
229	SLE RA 12	-10	2	2284	3.03	0.45	0.02
229	SLE RA 13	-10	2	2284	3.03	0.45	0.02
229	SLE RA 14	-10	2	2284	3.03	0.45	0.02
229	SLE RA 15	-10	2	2284	3.03	0.45	0.02
229	SLE RA 16	-10	2	2284	3.03	0.45	0.02
229	SLE RA 17	-10	2	2284	3.03	0.45	0.02
229	SLE RA 18	-10	2	2386	3.16	0.47	0.02
229	SLE RA 19	-10	2	2386	3.16	0.47	0.02
229	SLE RA 20	-10	2	2386	3.16	0.47	0.02
229	SLE RA 21	-10	2	2386	3.16	0.47	0.02
229	SLE FR 1	-9	2	2046	2.74	0.41	0.02
229	SLE FR 2	-9	2	2046	2.74	0.41	0.02
229	SLE FR 3	-9	2	2046	2.74	0.41	0.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
229	SLE FR 4	-9	2	2148	2.86	0.43	0.02
229	SLE FR 5	-9	2	2148	2.86	0.43	0.02
229	SLE FR 6	-9	2	2216	2.95	0.44	0.02
229	SLE QP 1	-9	2	2046	2.74	0.41	0.02
229	SLE QP 2	-9	2	2148	2.86	0.43	0.02
229	SLD 1	173	8	2066	2.47	2.54	-0.21
229	SLD 2	142	9	2066	2.47	2.55	-0.12
229	SLD 3	167	-6	2242	3.29	2.73	-0.19
229	SLD 4	136	-6	2243	3.29	2.74	-0.1
229	SLD 5	66	26	1855	1.49	0.77	-0.12
229	SLD 6	35	26	1856	1.49	0.79	-0.02
229	SLD 7	45	-23	2444	4.24	1.4	-0.05
229	SLD 8	14	-22	2444	4.25	1.41	0.05
229	SLD 9	-32	26	1852	1.48	-0.55	-0.02
229	SLD 10	-63	26	1852	1.48	-0.54	0.08
229	SLD 11	-53	-22	2440	4.23	0.07	0.05
229	SLD 12	-85	-22	2440	4.24	0.09	0.15
229	SLD 13	-154	9	2053	2.43	-1.88	0.13
229	SLD 14	-185	9	2053	2.43	-1.87	0.22
229	SLD 15	-161	-5	2229	3.26	-1.7	0.15
229	SLD 16	-191	-5	2230	3.26	-1.68	0.24
229	SLV 1	405	17	1955	1.93	5.44	-0.5
229	SLV 2	335	18	1956	1.94	5.48	-0.28
229	SLV 3	390	-16	2369	3.87	5.88	-0.45
229	SLV 4	320	-16	2370	3.88	5.91	-0.24
229	SLV 5	164	57	1462	-0.36	1.26	-0.29
229	SLV 6	91	58	1463	-0.35	1.29	-0.07
229	SLV 7	114	-55	2842	6.1	2.72	-0.13
229	SLV 8	41	-55	2843	6.11	2.75	0.09
229	SLV 9	-59	58	1453	-0.38	-1.89	-0.06
229	SLV 10	-132	59	1454	-0.38	-1.86	0.16
229	SLV 11	-109	-55	2833	6.08	-0.43	0.1
229	SLV 12	-182	-54	2834	6.08	-0.4	0.32
229	SLV 13	-338	19	1925	1.85	-5.05	0.27
229	SLV 14	-408	20	1926	1.86	-5.02	0.48
229	SLV 15	-353	-15	2340	3.79	-4.62	0.32
229	SLV 16	-424	-14	2341	3.79	-4.58	0.53
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	-11	-5	1857	-48.26	350.05	0.91
231	SLU 2	-11	-5	1857	-48.26	350.05	0.91
231	SLU 3	-11	-5	1857	-48.26	350.05	0.91
231	SLU 4	-11	-5	1857	-48.26	350.05	0.91
231	SLU 5	-11	-5	1857	-48.26	350.05	0.91
231	SLU 6	-11	-5	1857	-48.26	350.05	0.91
231	SLU 7	-11	-5	1857	-48.26	350.05	0.91
231	SLU 8	-11	-5	1857	-48.26	350.05	0.91
231	SLU 9	-11	-5	1857	-48.26	350.05	0.91
231	SLU 10	-14	-5	2179	-56.57	408.63	1
231	SLU 11	-14	-5	2179	-56.57	408.63	1
231	SLU 12	-14	-5	2179	-56.57	408.63	1
231	SLU 13	-14	-5	2179	-56.57	408.63	1
231	SLU 14	-14	-5	2179	-56.57	408.63	1
231	SLU 15	-14	-5	2179	-56.57	408.63	1
231	SLU 16	-14	-5	2179	-56.57	408.63	1
231	SLU 17	-14	-5	2179	-56.57	408.63	1
231	SLU 18	-16	-5	2317	-60.13	433.73	1.04
231	SLU 19	-16	-5	2317	-60.13	433.73	1.04
231	SLU 20	-16	-5	2317	-60.13	433.73	1.04
231	SLU 21	-16	-5	2317	-60.13	433.73	1.04
231	SLU 22	-13	-5	2099	-54.5	394.02	0.99
231	SLU 23	-13	-5	2099	-54.5	394.02	0.99
231	SLU 24	-13	-5	2099	-54.5	394.02	0.99
231	SLU 25	-13	-5	2099	-54.5	394.02	0.99
231	SLU 26	-13	-5	2099	-54.5	394.02	0.99
231	SLU 27	-13	-5	2099	-54.5	394.02	0.99
231	SLU 28	-13	-5	2099	-54.5	394.02	0.99
231	SLU 29	-13	-5	2099	-54.5	394.02	0.99
231	SLU 30	-13	-5	2099	-54.5	394.02	0.99
231	SLU 31	-16	-6	2422	-62.82	452.6	1.08
231	SLU 32	-16	-6	2422	-62.82	452.6	1.08
231	SLU 33	-16	-6	2422	-62.82	452.6	1.08
231	SLU 34	-16	-6	2422	-62.82	452.6	1.08
231	SLU 35	-16	-6	2422	-62.82	452.6	1.08
231	SLU 36	-16	-6	2422	-62.82	452.6	1.08
231	SLU 37	-16	-6	2422	-62.82	452.6	1.08
231	SLU 38	-16	-6	2422	-62.82	452.6	1.08
231	SLU 39	-18	-6	2560	-66.38	477.7	1.12
231	SLU 40	-18	-6	2560	-66.38	477.7	1.12
231	SLU 41	-18	-6	2560	-66.38	477.7	1.12
231	SLU 42	-18	-6	2560	-66.38	477.7	1.12
231	SLU 43	-13	-6	2331	-60.59	439.99	1.16
231	SLU 44	-13	-6	2331	-60.59	439.99	1.16
231	SLU 45	-13	-6	2331	-60.59	439.99	1.16
231	SLU 46	-13	-6	2331	-60.59	439.99	1.16
231	SLU 47	-13	-6	2331	-60.59	439.99	1.16
231	SLU 48	-13	-6	2331	-60.59	439.99	1.16
231	SLU 49	-13	-6	2331	-60.59	439.99	1.16



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
231	SLU 50	-13	-6	2331	-60.59	439.99	1.16
231	SLU 51	-13	-6	2331	-60.59	439.99	1.16
231	SLU 52	-17	-6	2653	-68.91	498.57	1.25
231	SLU 53	-17	-6	2653	-68.91	498.57	1.25
231	SLU 54	-17	-6	2653	-68.91	498.57	1.25
231	SLU 55	-17	-6	2653	-68.91	498.57	1.25
231	SLU 56	-17	-6	2653	-68.91	498.57	1.25
231	SLU 57	-17	-6	2653	-68.91	498.57	1.25
231	SLU 58	-17	-6	2653	-68.91	498.57	1.25
231	SLU 59	-17	-6	2653	-68.91	498.57	1.25
231	SLU 60	-18	-7	2791	-72.47	523.67	1.29
231	SLU 61	-18	-7	2791	-72.47	523.67	1.29
231	SLU 62	-18	-7	2791	-72.47	523.67	1.29
231	SLU 63	-18	-7	2791	-72.47	523.67	1.29
231	SLU 64	-16	-6	2573	-66.84	483.96	1.24
231	SLU 65	-16	-6	2573	-66.84	483.96	1.24
231	SLU 66	-16	-6	2573	-66.84	483.96	1.24
231	SLU 67	-16	-6	2573	-66.84	483.96	1.24
231	SLU 68	-16	-6	2573	-66.84	483.96	1.24
231	SLU 69	-16	-6	2573	-66.84	483.96	1.24
231	SLU 70	-16	-6	2573	-66.84	483.96	1.24
231	SLU 71	-16	-6	2573	-66.84	483.96	1.24
231	SLU 72	-16	-6	2573	-66.84	483.96	1.24
231	SLU 73	-19	-7	2895	-75.15	542.54	1.33
231	SLU 74	-19	-7	2895	-75.15	542.54	1.33
231	SLU 75	-19	-7	2895	-75.15	542.54	1.33
231	SLU 76	-19	-7	2895	-75.15	542.54	1.33
231	SLU 77	-19	-7	2895	-75.15	542.54	1.33
231	SLU 78	-19	-7	2895	-75.15	542.54	1.33
231	SLU 79	-19	-7	2895	-75.15	542.54	1.33
231	SLU 80	-19	-7	2895	-75.15	542.54	1.33
231	SLU 81	-20	-7	3034	-78.71	567.64	1.36
231	SLU 82	-20	-7	3034	-78.71	567.64	1.36
231	SLU 83	-20	-7	3034	-78.71	567.64	1.36
231	SLU 84	-20	-7	3034	-78.71	567.64	1.36
231	SLE RA 1	-12	-5	1926	-50.04	362.62	0.93
231	SLE RA 2	-12	-5	1926	-50.04	362.62	0.93
231	SLE RA 3	-12	-5	1926	-50.04	362.62	0.93
231	SLE RA 4	-12	-5	1926	-50.04	362.62	0.93
231	SLE RA 5	-12	-5	1926	-50.04	362.62	0.93
231	SLE RA 6	-12	-5	1926	-50.04	362.62	0.93
231	SLE RA 7	-12	-5	1926	-50.04	362.62	0.93
231	SLE RA 8	-12	-5	1926	-50.04	362.62	0.93
231	SLE RA 9	-12	-5	1926	-50.04	362.62	0.93
231	SLE RA 10	-14	-5	2141	-55.58	401.67	0.99
231	SLE RA 11	-14	-5	2141	-55.58	401.67	0.99
231	SLE RA 12	-14	-5	2141	-55.58	401.67	0.99
231	SLE RA 13	-14	-5	2141	-55.58	401.67	0.99
231	SLE RA 14	-14	-5	2141	-55.58	401.67	0.99
231	SLE RA 15	-14	-5	2141	-55.58	401.67	0.99
231	SLE RA 16	-14	-5	2141	-55.58	401.67	0.99
231	SLE RA 17	-14	-5	2141	-55.58	401.67	0.99
231	SLE RA 18	-15	-5	2233	-57.96	418.4	1.02
231	SLE RA 19	-15	-5	2233	-57.96	418.4	1.02
231	SLE RA 20	-15	-5	2233	-57.96	418.4	1.02
231	SLE RA 21	-15	-5	2233	-57.96	418.4	1.02
231	SLE FR 1	-12	-5	1926	-50.04	362.62	0.93
231	SLE FR 2	-12	-5	1926	-50.04	362.62	0.93
231	SLE FR 3	-12	-5	1926	-50.04	362.62	0.93
231	SLE FR 4	-12	-5	2018	-52.42	379.35	0.96
231	SLE FR 5	-12	-5	2018	-52.42	379.35	0.96
231	SLE FR 6	-13	-5	2079	-54	390.51	0.98
231	SLE QP 1	-12	-5	1926	-50.04	362.62	0.93
231	SLE QP 2	-12	-5	2018	-52.42	379.35	0.96
231	SLD 1	163	59	1612	-42.31	308.59	-10.53
231	SLD 2	132	90	1603	-42.1	306.76	-19.07
231	SLD 3	158	-117	1858	-48.01	355.64	33.12
231	SLD 4	127	-86	1849	-47.8	353.82	24.58
231	SLD 5	58	270	1526	-40.81	287.42	-65.6
231	SLD 6	27	302	1517	-40.6	285.55	-74.33
231	SLD 7	43	-317	2346	-59.81	444.26	79.89
231	SLD 8	11	-285	2337	-59.6	442.39	71.16
231	SLD 9	-36	275	1699	-45.23	316.31	-69.24
231	SLD 10	-68	307	1690	-45.02	314.44	-77.97
231	SLD 11	-52	-311	2519	-64.23	473.15	76.25
231	SLD 12	-83	-280	2510	-64.02	471.28	67.52
231	SLD 13	-152	76	2188	-57.03	404.89	-22.66
231	SLD 14	-183	107	2178	-56.83	403.06	-31.2
231	SLD 15	-157	-100	2434	-62.73	451.94	20.99
231	SLD 16	-188	-69	2424	-62.53	450.11	12.44
231	SLV 1	386	146	1086	-29.25	216.89	-26.7
231	SLV 2	315	217	1065	-28.78	212.71	-46.24
231	SLV 3	375	-267	1663	-42.62	327.31	75.72
231	SLV 4	305	-195	1643	-42.15	323.13	56.18
231	SLV 5	149	640	871	-25.36	164.68	-155.46
231	SLV 6	76	714	849	-24.87	160.34	-175.76
231	SLV 7	114	-736	2795	-69.93	532.76	185.94
231	SLV 8	40	-662	2773	-69.44	528.42	165.65
231	SLV 9	-65	652	1263	-35.39	230.28	-163.73
231	SLV 10	-139	726	1241	-34.9	225.94	-184.02



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
231	SLV 11	-101	-724	3187	-79.96	598.36	177.67
231	SLV 12	-174	-650	3165	-79.47	594.02	157.38
231	SLV 13	-329	186	2394	-62.68	435.57	-54.26
231	SLV 14	-400	257	2373	-62.21	431.39	-73.81
231	SLV 15	-340	-227	2971	-76.05	545.99	48.16
231	SLV 16	-411	-156	2950	-75.58	541.81	28.62
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	1	1764	-46.55	0.62	-0.21
233	SLU 2	-7	1	1764	-46.55	0.62	-0.21
233	SLU 3	-7	1	1764	-46.55	0.62	-0.21
233	SLU 4	-7	1	1764	-46.55	0.62	-0.21
233	SLU 5	-7	1	1764	-46.55	0.62	-0.21
233	SLU 6	-7	1	1764	-46.55	0.62	-0.21
233	SLU 7	-7	1	1764	-46.55	0.62	-0.21
233	SLU 8	-7	1	1764	-46.55	0.62	-0.21
233	SLU 9	-7	1	1764	-46.55	0.62	-0.21
233	SLU 10	-9	2	2084	-54.99	0.72	-0.24
233	SLU 11	-9	2	2084	-54.99	0.72	-0.24
233	SLU 12	-9	2	2084	-54.99	0.72	-0.24
233	SLU 13	-9	2	2084	-54.99	0.72	-0.24
233	SLU 14	-9	2	2084	-54.99	0.72	-0.24
233	SLU 15	-9	2	2084	-54.99	0.72	-0.24
233	SLU 16	-9	2	2084	-54.99	0.72	-0.24
233	SLU 17	-9	2	2084	-54.99	0.72	-0.24
233	SLU 18	-9	2	2221	-58.61	0.76	-0.26
233	SLU 19	-9	2	2221	-58.61	0.76	-0.26
233	SLU 20	-9	2	2221	-58.61	0.76	-0.26
233	SLU 21	-9	2	2221	-58.61	0.76	-0.26
233	SLU 22	-8	2	2003	-52.86	0.7	-0.23
233	SLU 23	-8	2	2003	-52.86	0.7	-0.23
233	SLU 24	-8	2	2003	-52.86	0.7	-0.23
233	SLU 25	-8	2	2003	-52.86	0.7	-0.23
233	SLU 26	-8	2	2003	-52.86	0.7	-0.23
233	SLU 27	-8	2	2003	-52.86	0.7	-0.23
233	SLU 28	-8	2	2003	-52.86	0.7	-0.23
233	SLU 29	-8	2	2003	-52.86	0.7	-0.23
233	SLU 30	-8	2	2003	-52.86	0.7	-0.23
233	SLU 31	-10	2	2323	-61.3	0.8	-0.27
233	SLU 32	-10	2	2323	-61.3	0.8	-0.27
233	SLU 33	-10	2	2323	-61.3	0.8	-0.27
233	SLU 34	-10	2	2323	-61.3	0.8	-0.27
233	SLU 35	-10	2	2323	-61.3	0.8	-0.27
233	SLU 36	-10	2	2323	-61.3	0.8	-0.27
233	SLU 37	-10	2	2323	-61.3	0.8	-0.27
233	SLU 38	-10	2	2323	-61.3	0.8	-0.27
233	SLU 39	-10	2	2460	-64.92	0.84	-0.29
233	SLU 40	-10	2	2460	-64.92	0.84	-0.29
233	SLU 41	-10	2	2460	-64.92	0.84	-0.29
233	SLU 42	-10	2	2460	-64.92	0.84	-0.29
233	SLU 43	-9	2	2211	-58.36	0.78	-0.26
233	SLU 44	-9	2	2211	-58.36	0.78	-0.26
233	SLU 45	-9	2	2211	-58.36	0.78	-0.26
233	SLU 46	-9	2	2211	-58.36	0.78	-0.26
233	SLU 47	-9	2	2211	-58.36	0.78	-0.26
233	SLU 48	-9	2	2211	-58.36	0.78	-0.26
233	SLU 49	-9	2	2211	-58.36	0.78	-0.26
233	SLU 50	-9	2	2211	-58.36	0.78	-0.26
233	SLU 51	-9	2	2211	-58.36	0.78	-0.26
233	SLU 52	-11	2	2531	-66.79	0.88	-0.29
233	SLU 53	-11	2	2531	-66.79	0.88	-0.29
233	SLU 54	-11	2	2531	-66.79	0.88	-0.29
233	SLU 55	-11	2	2531	-66.79	0.88	-0.29
233	SLU 56	-11	2	2531	-66.79	0.88	-0.29
233	SLU 57	-11	2	2531	-66.79	0.88	-0.29
233	SLU 58	-11	2	2531	-66.79	0.88	-0.29
233	SLU 59	-11	2	2531	-66.79	0.88	-0.29
233	SLU 60	-11	2	2668	-70.41	0.92	-0.31
233	SLU 61	-11	2	2668	-70.41	0.92	-0.31
233	SLU 62	-11	2	2668	-70.41	0.92	-0.31
233	SLU 63	-11	2	2668	-70.41	0.92	-0.31
233	SLU 64	-10	2	2450	-64.67	0.86	-0.29
233	SLU 65	-10	2	2450	-64.67	0.86	-0.29
233	SLU 66	-10	2	2450	-64.67	0.86	-0.29
233	SLU 67	-10	2	2450	-64.67	0.86	-0.29
233	SLU 68	-10	2	2450	-64.67	0.86	-0.29
233	SLU 69	-10	2	2450	-64.67	0.86	-0.29
233	SLU 70	-10	2	2450	-64.67	0.86	-0.29
233	SLU 71	-10	2	2450	-64.67	0.86	-0.29
233	SLU 72	-10	2	2450	-64.67	0.86	-0.29
233	SLU 73	-12	2	2770	-73.1	0.96	-0.32
233	SLU 74	-12	2	2770	-73.1	0.96	-0.32
233	SLU 75	-12	2	2770	-73.1	0.96	-0.32
233	SLU 76	-12	2	2770	-73.1	0.96	-0.32
233	SLU 77	-12	2	2770	-73.1	0.96	-0.32
233	SLU 78	-12	2	2770	-73.1	0.96	-0.32
233	SLU 79	-12	2	2770	-73.1	0.96	-0.32
233	SLU 80	-12	2	2770	-73.1	0.96	-0.32



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
233	SLU 81	-12	2	2907	-76.72	1	-0.34
233	SLU 82	-12	2	2907	-76.72	1	-0.34
233	SLU 83	-12	2	2907	-76.72	1	-0.34
233	SLU 84	-12	2	2907	-76.72	1	-0.34
233	SLE RA 1	-8	1	1832	-48.36	0.64	-0.21
233	SLE RA 2	-8	1	1832	-48.36	0.64	-0.21
233	SLE RA 3	-8	1	1832	-48.36	0.64	-0.21
233	SLE RA 4	-8	1	1832	-48.36	0.64	-0.21
233	SLE RA 5	-8	1	1832	-48.36	0.64	-0.21
233	SLE RA 6	-8	1	1832	-48.36	0.64	-0.21
233	SLE RA 7	-8	1	1832	-48.36	0.64	-0.21
233	SLE RA 8	-8	1	1832	-48.36	0.64	-0.21
233	SLE RA 9	-8	1	1832	-48.36	0.64	-0.21
233	SLE RA 10	-9	2	2046	-53.98	0.71	-0.24
233	SLE RA 11	-9	2	2046	-53.98	0.71	-0.24
233	SLE RA 12	-9	2	2046	-53.98	0.71	-0.24
233	SLE RA 13	-9	2	2046	-53.98	0.71	-0.24
233	SLE RA 14	-9	2	2046	-53.98	0.71	-0.24
233	SLE RA 15	-9	2	2046	-53.98	0.71	-0.24
233	SLE RA 16	-9	2	2046	-53.98	0.71	-0.24
233	SLE RA 17	-9	2	2046	-53.98	0.71	-0.24
233	SLE RA 18	-9	2	2137	-56.39	0.74	-0.25
233	SLE RA 19	-9	2	2137	-56.39	0.74	-0.25
233	SLE RA 20	-9	2	2137	-56.39	0.74	-0.25
233	SLE RA 21	-9	2	2137	-56.39	0.74	-0.25
233	SLE FR 1	-8	1	1832	-48.36	0.64	-0.21
233	SLE FR 2	-8	1	1832	-48.36	0.64	-0.21
233	SLE FR 3	-8	1	1832	-48.36	0.64	-0.21
233	SLE FR 4	-8	2	1924	-50.77	0.67	-0.22
233	SLE FR 5	-8	2	1924	-50.77	0.67	-0.22
233	SLE FR 6	-8	2	1985	-52.37	0.69	-0.23
233	SLE QP 1	-8	1	1832	-48.36	0.64	-0.21
233	SLE QP 2	-8	2	1924	-50.77	0.67	-0.22
233	SLD 1	152	7	1843	-48.81	2.53	4.15
233	SLD 2	124	7	1843	-48.82	2.56	3.4
233	SLD 3	146	-5	2016	-53.03	2.61	3.99
233	SLD 4	118	-5	2017	-53.04	2.64	3.25
233	SLD 5	59	22	1636	-43.78	1.1	1.6
233	SLD 6	30	22	1636	-43.79	1.13	0.83
233	SLD 7	40	-19	2215	-57.84	1.37	1.07
233	SLD 8	11	-19	2215	-57.85	1.39	0.31
233	SLD 9	-27	22	1632	-43.69	-0.05	-0.76
233	SLD 10	-56	22	1633	-43.7	-0.02	-1.52
233	SLD 11	-46	-19	2211	-57.74	0.22	-1.28
233	SLD 12	-75	-19	2212	-57.76	0.24	-2.04
233	SLD 13	-134	8	1831	-48.5	-1.29	-3.69
233	SLD 14	-162	8	1831	-48.51	-1.27	-4.44
233	SLD 15	-140	-4	2004	-52.72	-1.21	-3.85
233	SLD 16	-168	-4	2005	-52.73	-1.19	-4.6
233	SLV 1	356	15	1733	-46.16	4.92	9.72
233	SLV 2	291	15	1734	-46.18	4.98	8.01
233	SLV 3	342	-14	2141	-56.06	5.11	9.35
233	SLV 4	277	-13	2142	-56.08	5.17	7.64
233	SLV 5	146	49	1248	-34.37	1.64	3.95
233	SLV 6	79	49	1249	-34.39	1.7	2.18
233	SLV 7	100	-47	2607	-67.36	2.26	2.72
233	SLV 8	33	-46	2608	-67.38	2.32	0.95
233	SLV 9	-49	49	1240	-34.15	-0.98	-1.4
233	SLV 10	-116	50	1241	-34.18	-0.92	-3.17
233	SLV 11	-95	-46	2598	-67.14	-0.36	-2.62
233	SLV 12	-162	-46	2600	-67.17	-0.3	-4.4
233	SLV 13	-293	16	1706	-45.45	-3.83	-8.09
233	SLV 14	-358	17	1707	-45.48	-3.77	-9.8
233	SLV 15	-307	-12	2113	-55.35	-3.64	-8.46
233	SLV 16	-372	-12	2114	-55.38	-3.58	-10.17
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
266	SLU 1	-19	-7	3058	-693.69	527.33	-3.33
266	SLU 2	-19	-7	3058	-693.69	527.33	-3.33
266	SLU 3	-19	-7	3058	-693.69	527.33	-3.33
266	SLU 4	-19	-7	3058	-693.69	527.33	-3.33
266	SLU 5	-19	-7	3058	-693.69	527.33	-3.33
266	SLU 6	-19	-7	3058	-693.69	527.33	-3.33
266	SLU 7	-19	-7	3058	-693.69	527.33	-3.33
266	SLU 8	-19	-7	3058	-693.69	527.33	-3.33
266	SLU 9	-19	-7	3058	-693.69	527.33	-3.33
266	SLU 10	-25	-7	3592	-813.57	618.76	-4.53
266	SLU 11	-25	-7	3592	-813.57	618.76	-4.53
266	SLU 12	-25	-7	3592	-813.57	618.76	-4.53
266	SLU 13	-25	-7	3592	-813.57	618.76	-4.53
266	SLU 14	-25	-7	3592	-813.57	618.76	-4.53
266	SLU 15	-25	-7	3592	-813.57	618.76	-4.53
266	SLU 16	-25	-7	3592	-813.57	618.76	-4.53
266	SLU 17	-25	-7	3592	-813.57	618.76	-4.53
266	SLU 18	-27	-8	3821	-864.94	657.95	-5.05
266	SLU 19	-27	-8	3821	-864.94	657.95	-5.05
266	SLU 20	-27	-8	3821	-864.94	657.95	-5.05
266	SLU 21	-27	-8	3821	-864.94	657.95	-5.05



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
266	SLU 22	-23	-7	3459	-783.76	596	-4.17
266	SLU 23	-23	-7	3459	-783.76	596	-4.17
266	SLU 24	-23	-7	3459	-783.76	596	-4.17
266	SLU 25	-23	-7	3459	-783.76	596	-4.17
266	SLU 26	-23	-7	3459	-783.76	596	-4.17
266	SLU 27	-23	-7	3459	-783.76	596	-4.17
266	SLU 28	-23	-7	3459	-783.76	596	-4.17
266	SLU 29	-23	-7	3459	-783.76	596	-4.17
266	SLU 30	-23	-7	3459	-783.76	596	-4.17
266	SLU 31	-29	-8	3994	-903.63	687.44	-5.37
266	SLU 32	-29	-8	3994	-903.63	687.44	-5.37
266	SLU 33	-29	-8	3994	-903.63	687.44	-5.37
266	SLU 34	-29	-8	3994	-903.63	687.44	-5.37
266	SLU 35	-29	-8	3994	-903.63	687.44	-5.37
266	SLU 36	-29	-8	3994	-903.63	687.44	-5.37
266	SLU 37	-29	-8	3994	-903.63	687.44	-5.37
266	SLU 38	-29	-8	3994	-903.63	687.44	-5.37
266	SLU 39	-31	-8	4223	-955.01	726.62	-5.88
266	SLU 40	-31	-8	4223	-955.01	726.62	-5.88
266	SLU 41	-31	-8	4223	-955.01	726.62	-5.88
266	SLU 42	-31	-8	4223	-955.01	726.62	-5.88
266	SLU 43	-24	-8	3838	-870.92	661.98	-4.04
266	SLU 44	-24	-8	3838	-870.92	661.98	-4.04
266	SLU 45	-24	-8	3838	-870.92	661.98	-4.04
266	SLU 46	-24	-8	3838	-870.92	661.98	-4.04
266	SLU 47	-24	-8	3838	-870.92	661.98	-4.04
266	SLU 48	-24	-8	3838	-870.92	661.98	-4.04
266	SLU 49	-24	-8	3838	-870.92	661.98	-4.04
266	SLU 50	-24	-8	3838	-870.92	661.98	-4.04
266	SLU 51	-24	-8	3838	-870.92	661.98	-4.04
266	SLU 52	-29	-9	4372	-990.79	753.42	-5.24
266	SLU 53	-29	-9	4372	-990.79	753.42	-5.24
266	SLU 54	-29	-9	4372	-990.79	753.42	-5.24
266	SLU 55	-29	-9	4372	-990.79	753.42	-5.24
266	SLU 56	-29	-9	4372	-990.79	753.42	-5.24
266	SLU 57	-29	-9	4372	-990.79	753.42	-5.24
266	SLU 58	-29	-9	4372	-990.79	753.42	-5.24
266	SLU 59	-29	-9	4372	-990.79	753.42	-5.24
266	SLU 60	-32	-9	4601	-1042.17	792.6	-5.76
266	SLU 61	-32	-9	4601	-1042.17	792.6	-5.76
266	SLU 62	-32	-9	4601	-1042.17	792.6	-5.76
266	SLU 63	-32	-9	4601	-1042.17	792.6	-5.76
266	SLU 64	-28	-9	4239	-960.99	730.65	-4.88
266	SLU 65	-28	-9	4239	-960.99	730.65	-4.88
266	SLU 66	-28	-9	4239	-960.99	730.65	-4.88
266	SLU 67	-28	-9	4239	-960.99	730.65	-4.88
266	SLU 68	-28	-9	4239	-960.99	730.65	-4.88
266	SLU 69	-28	-9	4239	-960.99	730.65	-4.88
266	SLU 70	-28	-9	4239	-960.99	730.65	-4.88
266	SLU 71	-28	-9	4239	-960.99	730.65	-4.88
266	SLU 72	-28	-9	4239	-960.99	730.65	-4.88
266	SLU 73	-33	-10	4773	-1080.86	822.09	-6.08
266	SLU 74	-33	-10	4773	-1080.86	822.09	-6.08
266	SLU 75	-33	-10	4773	-1080.86	822.09	-6.08
266	SLU 76	-33	-10	4773	-1080.86	822.09	-6.08
266	SLU 77	-33	-10	4773	-1080.86	822.09	-6.08
266	SLU 78	-33	-10	4773	-1080.86	822.09	-6.08
266	SLU 79	-33	-10	4773	-1080.86	822.09	-6.08
266	SLU 80	-33	-10	4773	-1080.86	822.09	-6.08
266	SLU 81	-36	-10	5002	-1132.23	861.28	-6.6
266	SLU 82	-36	-10	5002	-1132.23	861.28	-6.6
266	SLU 83	-36	-10	5002	-1132.23	861.28	-6.6
266	SLU 84	-36	-10	5002	-1132.23	861.28	-6.6
266	SLE RA 1	-20	-7	3173	-719.43	546.95	-3.57
266	SLE RA 2	-20	-7	3173	-719.43	546.95	-3.57
266	SLE RA 3	-20	-7	3173	-719.43	546.95	-3.57
266	SLE RA 4	-20	-7	3173	-719.43	546.95	-3.57
266	SLE RA 5	-20	-7	3173	-719.43	546.95	-3.57
266	SLE RA 6	-20	-7	3173	-719.43	546.95	-3.57
266	SLE RA 7	-20	-7	3173	-719.43	546.95	-3.57
266	SLE RA 8	-20	-7	3173	-719.43	546.95	-3.57
266	SLE RA 9	-20	-7	3173	-719.43	546.95	-3.57
266	SLE RA 10	-24	-7	3529	-799.34	607.91	-4.37
266	SLE RA 11	-24	-7	3529	-799.34	607.91	-4.37
266	SLE RA 12	-24	-7	3529	-799.34	607.91	-4.37
266	SLE RA 13	-24	-7	3529	-799.34	607.91	-4.37
266	SLE RA 14	-24	-7	3529	-799.34	607.91	-4.37
266	SLE RA 15	-24	-7	3529	-799.34	607.91	-4.37
266	SLE RA 16	-24	-7	3529	-799.34	607.91	-4.37
266	SLE RA 17	-24	-7	3529	-799.34	607.91	-4.37
266	SLE RA 18	-26	-8	3682	-833.59	634.03	-4.71
266	SLE RA 19	-26	-8	3682	-833.59	634.03	-4.71
266	SLE RA 20	-26	-8	3682	-833.59	634.03	-4.71
266	SLE RA 21	-26	-8	3682	-833.59	634.03	-4.71
266	SLE FR 1	-20	-7	3173	-719.43	546.95	-3.57
266	SLE FR 2	-20	-7	3173	-719.43	546.95	-3.57
266	SLE FR 3	-20	-7	3173	-719.43	546.95	-3.57
266	SLE FR 4	-22	-7	3325	-753.68	573.07	-3.91
266	SLE FR 5	-22	-7	3325	-753.68	573.07	-3.91
266	SLE FR 6	-23	-7	3427	-776.51	590.49	-4.14



Nodo	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
266	SLE QP 1	-20	-7	3173	-719.43	546.95	-3.57
266	SLE QP 2	-22	-7	3325	-753.68	573.07	-3.91
266	SLD 1	253	93	2637	-602.11	458.65	45.65
266	SLD 2	201	143	2620	-598.81	455.95	24.07
266	SLD 3	257	-186	3064	-690.45	531.95	95.99
266	SLD 4	206	-136	3048	-687.16	529.25	74.41
266	SLD 5	73	428	2476	-575.41	428.56	-57.6
266	SLD 6	20	479	2460	-572.04	425.79	-79.65
266	SLD 7	87	-502	3901	-869.89	672.88	110.19
266	SLD 8	34	-451	3885	-866.52	670.12	88.14
266	SLD 9	-78	437	2766	-640.84	476.03	-95.97
266	SLD 10	-131	488	2750	-637.47	473.27	-118.02
266	SLD 11	-64	-493	4191	-935.31	720.35	71.83
266	SLD 12	-117	-442	4175	-931.94	717.59	49.78
266	SLD 13	-249	122	3603	-820.2	616.9	-82.23
266	SLD 14	-301	172	3587	-816.9	614.2	-103.81
266	SLD 15	-245	-157	4030	-908.54	690.2	-31.89
266	SLD 16	-297	-107	4014	-905.24	687.49	-53.47
266	SLV 1	602	231	1745	-406.22	310.52	106.85
266	SLV 2	484	344	1708	-398.68	304.34	57.51
266	SLV 3	612	-424	2749	-613.52	482.54	224.98
266	SLV 4	494	-310	2712	-605.98	476.36	175.63
266	SLV 5	194	1015	1344	-337.82	235.7	-131.62
266	SLV 6	72	1134	1305	-329.99	229.28	-182.86
266	SLV 7	226	-1167	4688	-1028.82	809.09	262.13
266	SLV 8	104	-1049	4649	-1020.99	802.67	210.89
266	SLV 9	-148	1035	2002	-486.37	343.48	-218.71
266	SLV 10	-270	1153	1963	-478.53	337.06	-269.95
266	SLV 11	-116	-1148	5346	-1177.36	916.87	175.04
266	SLV 12	-238	-1029	5307	-1169.53	910.45	123.8
266	SLV 13	-538	296	3939	-901.37	669.79	-183.45
266	SLV 14	-656	410	3902	-893.83	663.61	-232.8
266	SLV 15	-528	-358	4942	-1108.67	841.81	-65.33
266	SLV 16	-646	-245	4905	-1101.13	835.62	-114.68
266	CRTFP Ux+	0	0	0	-0.01	0	0
266	CRTFP Ux-	0	0	0	0.01	0	0
266	CRTFP Uy+	0	0	0	-0.01	0.01	0
266	CRTFP Uy-	0	0	0	0.01	-0.01	0
268	SLU 1	-13	-6	2018	-556.05	52.96	-4.22
268	SLU 2	-13	-6	2018	-556.05	52.96	-4.22
268	SLU 3	-13	-6	2018	-556.05	52.96	-4.22
268	SLU 4	-13	-6	2018	-556.05	52.96	-4.22
268	SLU 5	-13	-6	2018	-556.05	52.96	-4.22
268	SLU 6	-13	-6	2018	-556.05	52.96	-4.22
268	SLU 7	-13	-6	2018	-556.05	52.96	-4.22
268	SLU 8	-13	-6	2018	-556.05	52.96	-4.22
268	SLU 9	-13	-6	2018	-556.05	52.96	-4.22
268	SLU 10	-16	-7	2368	-648.69	62.07	-5.5
268	SLU 11	-16	-7	2368	-648.69	62.07	-5.5
268	SLU 12	-16	-7	2368	-648.69	62.07	-5.5
268	SLU 13	-16	-7	2368	-648.69	62.07	-5.5
268	SLU 14	-16	-7	2368	-648.69	62.07	-5.5
268	SLU 15	-16	-7	2368	-648.69	62.07	-5.5
268	SLU 16	-16	-7	2368	-648.69	62.07	-5.5
268	SLU 17	-16	-7	2368	-648.69	62.07	-5.5
268	SLU 18	-18	-7	2518	-688.39	65.97	-6.05
268	SLU 19	-18	-7	2518	-688.39	65.97	-6.05
268	SLU 20	-18	-7	2518	-688.39	65.97	-6.05
268	SLU 21	-18	-7	2518	-688.39	65.97	-6.05
268	SLU 22	-15	-7	2281	-625.66	59.8	-5.12
268	SLU 23	-15	-7	2281	-625.66	59.8	-5.12
268	SLU 24	-15	-7	2281	-625.66	59.8	-5.12
268	SLU 25	-15	-7	2281	-625.66	59.8	-5.12
268	SLU 26	-15	-7	2281	-625.66	59.8	-5.12
268	SLU 27	-15	-7	2281	-625.66	59.8	-5.12
268	SLU 28	-15	-7	2281	-625.66	59.8	-5.12
268	SLU 29	-15	-7	2281	-625.66	59.8	-5.12
268	SLU 30	-15	-7	2281	-625.66	59.8	-5.12
268	SLU 31	-19	-8	2631	-718.29	68.91	-6.41
268	SLU 32	-19	-8	2631	-718.29	68.91	-6.41
268	SLU 33	-19	-8	2631	-718.29	68.91	-6.41
268	SLU 34	-19	-8	2631	-718.29	68.91	-6.41
268	SLU 35	-19	-8	2631	-718.29	68.91	-6.41
268	SLU 36	-19	-8	2631	-718.29	68.91	-6.41
268	SLU 37	-19	-8	2631	-718.29	68.91	-6.41
268	SLU 38	-19	-8	2631	-718.29	68.91	-6.41
268	SLU 39	-21	-8	2781	-757.99	72.81	-6.96
268	SLU 40	-21	-8	2781	-757.99	72.81	-6.96
268	SLU 41	-21	-8	2781	-757.99	72.81	-6.96
268	SLU 42	-21	-8	2781	-757.99	72.81	-6.96
268	SLU 43	-16	-8	2533	-699	66.5	-5.17
268	SLU 44	-16	-8	2533	-699	66.5	-5.17
268	SLU 45	-16	-8	2533	-699	66.5	-5.17
268	SLU 46	-16	-8	2533	-699	66.5	-5.17
268	SLU 47	-16	-8	2533	-699	66.5	-5.17
268	SLU 48	-16	-8	2533	-699	66.5	-5.17
268	SLU 49	-16	-8	2533	-699	66.5	-5.17
268	SLU 50	-16	-8	2533	-699	66.5	-5.17
268	SLU 51	-16	-8	2533	-699	66.5	-5.17
268	SLU 52	-19	-9	2883	-791.64	75.61	-6.46



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
268	SLU 53	-19	-9	2883	-791.64	75.61	-6.46
268	SLU 54	-19	-9	2883	-791.64	75.61	-6.46
268	SLU 55	-19	-9	2883	-791.64	75.61	-6.46
268	SLU 56	-19	-9	2883	-791.64	75.61	-6.46
268	SLU 57	-19	-9	2883	-791.64	75.61	-6.46
268	SLU 58	-19	-9	2883	-791.64	75.61	-6.46
268	SLU 59	-19	-9	2883	-791.64	75.61	-6.46
268	SLU 60	-21	-9	3033	-831.34	79.51	-7.01
268	SLU 61	-21	-9	3033	-831.34	79.51	-7.01
268	SLU 62	-21	-9	3033	-831.34	79.51	-7.01
268	SLU 63	-21	-9	3033	-831.34	79.51	-7.01
268	SLU 64	-18	-8	2796	-768.61	73.34	-6.08
268	SLU 65	-18	-8	2796	-768.61	73.34	-6.08
268	SLU 66	-18	-8	2796	-768.61	73.34	-6.08
268	SLU 67	-18	-8	2796	-768.61	73.34	-6.08
268	SLU 68	-18	-8	2796	-768.61	73.34	-6.08
268	SLU 69	-18	-8	2796	-768.61	73.34	-6.08
268	SLU 70	-18	-8	2796	-768.61	73.34	-6.08
268	SLU 71	-18	-8	2796	-768.61	73.34	-6.08
268	SLU 72	-18	-8	2796	-768.61	73.34	-6.08
268	SLU 73	-22	-9	3146	-861.24	82.45	-7.36
268	SLU 74	-22	-9	3146	-861.24	82.45	-7.36
268	SLU 75	-22	-9	3146	-861.24	82.45	-7.36
268	SLU 76	-22	-9	3146	-861.24	82.45	-7.36
268	SLU 77	-22	-9	3146	-861.24	82.45	-7.36
268	SLU 78	-22	-9	3146	-861.24	82.45	-7.36
268	SLU 79	-22	-9	3146	-861.24	82.45	-7.36
268	SLU 80	-22	-9	3146	-861.24	82.45	-7.36
268	SLU 81	-24	-10	3296	-900.94	86.35	-7.92
268	SLU 82	-24	-10	3296	-900.94	86.35	-7.92
268	SLU 83	-24	-10	3296	-900.94	86.35	-7.92
268	SLU 84	-24	-10	3296	-900.94	86.35	-7.92
268	SLE RA 1	-13	-6	2093	-575.94	54.91	-4.47
268	SLE RA 2	-13	-6	2093	-575.94	54.91	-4.47
268	SLE RA 3	-13	-6	2093	-575.94	54.91	-4.47
268	SLE RA 4	-13	-6	2093	-575.94	54.91	-4.47
268	SLE RA 5	-13	-6	2093	-575.94	54.91	-4.47
268	SLE RA 6	-13	-6	2093	-575.94	54.91	-4.47
268	SLE RA 7	-13	-6	2093	-575.94	54.91	-4.47
268	SLE RA 8	-13	-6	2093	-575.94	54.91	-4.47
268	SLE RA 9	-13	-6	2093	-575.94	54.91	-4.47
268	SLE RA 10	-16	-7	2326	-637.7	60.99	-5.33
268	SLE RA 11	-16	-7	2326	-637.7	60.99	-5.33
268	SLE RA 12	-16	-7	2326	-637.7	60.99	-5.33
268	SLE RA 13	-16	-7	2326	-637.7	60.99	-5.33
268	SLE RA 14	-16	-7	2326	-637.7	60.99	-5.33
268	SLE RA 15	-16	-7	2326	-637.7	60.99	-5.33
268	SLE RA 16	-16	-7	2326	-637.7	60.99	-5.33
268	SLE RA 17	-16	-7	2326	-637.7	60.99	-5.33
268	SLE RA 18	-17	-7	2426	-664.16	63.59	-5.7
268	SLE RA 19	-17	-7	2426	-664.16	63.59	-5.7
268	SLE RA 20	-17	-7	2426	-664.16	63.59	-5.7
268	SLE RA 21	-17	-7	2426	-664.16	63.59	-5.7
268	SLE FR 1	-13	-6	2093	-575.94	54.91	-4.47
268	SLE FR 2	-13	-6	2093	-575.94	54.91	-4.47
268	SLE FR 3	-13	-6	2093	-575.94	54.91	-4.47
268	SLE FR 4	-15	-7	2193	-602.41	57.52	-4.84
268	SLE FR 5	-15	-7	2193	-602.41	57.52	-4.84
268	SLE FR 6	-15	-7	2260	-620.05	59.25	-5.09
268	SLE QP 1	-13	-6	2093	-575.94	54.91	-4.47
268	SLE QP 2	-15	-7	2193	-602.41	57.52	-4.84
268	SLD 1	182	62	1758	-486.02	46.71	61.79
268	SLD 2	147	94	1748	-483.57	46.47	48.62
268	SLD 3	177	-125	2028	-551.34	53.61	65.43
268	SLD 4	142	-92	2019	-548.9	53.37	52.26
268	SLD 5	64	285	1656	-469.3	43.89	14.38
268	SLD 6	28	319	1646	-466.8	43.65	0.92
268	SLD 7	49	-337	2557	-687.04	66.9	26.51
268	SLD 8	13	-303	2547	-684.54	66.65	13.05
268	SLD 9	-42	290	1839	-520.27	48.38	-22.74
268	SLD 10	-78	324	1829	-517.77	48.14	-36.2
268	SLD 11	-57	-332	2740	-738.01	71.38	-10.61
268	SLD 12	-93	-298	2730	-735.51	71.14	-24.06
268	SLD 13	-171	79	2368	-655.92	61.66	-61.94
268	SLD 14	-206	112	2358	-653.47	61.42	-75.11
268	SLD 15	-176	-107	2638	-721.24	68.56	-58.3
268	SLD 16	-211	-75	2628	-718.8	68.32	-71.47
268	SLV 1	432	155	1195	-335.65	32.72	146.39
268	SLV 2	351	230	1173	-330.05	32.17	116.27
268	SLV 3	421	-283	1830	-489.01	48.91	154.92
268	SLV 4	340	-208	1807	-483.41	48.37	124.8
268	SLV 5	166	678	940	-291.85	25.71	38.71
268	SLV 6	82	756	916	-286.04	25.15	7.43
268	SLV 7	129	-781	3055	-803.05	79.7	67.14
268	SLV 8	45	-703	3031	-797.24	79.14	35.87
268	SLV 9	-74	690	1355	-407.58	35.9	-45.56
268	SLV 10	-158	768	1332	-401.77	35.33	-76.83
268	SLV 11	-111	-769	3470	-918.77	89.89	-17.12
268	SLV 12	-195	-691	3446	-912.97	89.32	-48.39
268	SLV 13	-369	195	2579	-721.4	66.66	-134.49



Nodo	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
268	SLV 14	-450	270	2557	-715.81	66.12	-164.61
268	SLV 15	-380	-243	3214	-874.76	82.86	-125.96
268	SLV 16	-461	-168	3191	-869.17	82.32	-156.08
268	CRTFP Ux+	0	0	0	0	0	0
268	CRTFP Ux-	0	0	0	0	0	0
268	CRTFP Uy+	0	0	0	0	0	0
268	CRTFP Uy-	0	0	0	0	0	0
269	SLU 1	-15	-9	2211	-527.93	-4.57	-5.02
269	SLU 2	-15	-9	2211	-527.93	-4.57	-5.02
269	SLU 3	-15	-9	2211	-527.93	-4.57	-5.02
269	SLU 4	-15	-9	2211	-527.93	-4.57	-5.02
269	SLU 5	-15	-9	2211	-527.93	-4.57	-5.02
269	SLU 6	-15	-9	2211	-527.93	-4.57	-5.02
269	SLU 7	-15	-9	2211	-527.93	-4.57	-5.02
269	SLU 8	-15	-9	2211	-527.93	-4.57	-5.02
269	SLU 9	-15	-9	2211	-527.93	-4.57	-5.02
269	SLU 10	-19	-11	2591	-612.04	-5.45	-6.53
269	SLU 11	-19	-11	2591	-612.04	-5.45	-6.53
269	SLU 12	-19	-11	2591	-612.04	-5.45	-6.53
269	SLU 13	-19	-11	2591	-612.04	-5.45	-6.53
269	SLU 14	-19	-11	2591	-612.04	-5.45	-6.53
269	SLU 15	-19	-11	2591	-612.04	-5.45	-6.53
269	SLU 16	-19	-11	2591	-612.04	-5.45	-6.53
269	SLU 17	-19	-11	2591	-612.04	-5.45	-6.53
269	SLU 18	-21	-12	2754	-648.08	-5.83	-7.17
269	SLU 19	-21	-12	2754	-648.08	-5.83	-7.17
269	SLU 20	-21	-12	2754	-648.08	-5.83	-7.17
269	SLU 21	-21	-12	2754	-648.08	-5.83	-7.17
269	SLU 22	-18	-10	2496	-591.11	-5.23	-6.08
269	SLU 23	-18	-10	2496	-591.11	-5.23	-6.08
269	SLU 24	-18	-10	2496	-591.11	-5.23	-6.08
269	SLU 25	-18	-10	2496	-591.11	-5.23	-6.08
269	SLU 26	-18	-10	2496	-591.11	-5.23	-6.08
269	SLU 27	-18	-10	2496	-591.11	-5.23	-6.08
269	SLU 28	-18	-10	2496	-591.11	-5.23	-6.08
269	SLU 29	-18	-10	2496	-591.11	-5.23	-6.08
269	SLU 30	-18	-10	2496	-591.11	-5.23	-6.08
269	SLU 31	-22	-12	2876	-675.22	-6.12	-7.59
269	SLU 32	-22	-12	2876	-675.22	-6.12	-7.59
269	SLU 33	-22	-12	2876	-675.22	-6.12	-7.59
269	SLU 34	-22	-12	2876	-675.22	-6.12	-7.59
269	SLU 35	-22	-12	2876	-675.22	-6.12	-7.59
269	SLU 36	-22	-12	2876	-675.22	-6.12	-7.59
269	SLU 37	-22	-12	2876	-675.22	-6.12	-7.59
269	SLU 38	-22	-12	2876	-675.22	-6.12	-7.59
269	SLU 39	-24	-13	3039	-711.26	-6.5	-8.24
269	SLU 40	-24	-13	3039	-711.26	-6.5	-8.24
269	SLU 41	-24	-13	3039	-711.26	-6.5	-8.24
269	SLU 42	-24	-13	3039	-711.26	-6.5	-8.24
269	SLU 43	-18	-11	2776	-664.65	-5.71	-6.16
269	SLU 44	-18	-11	2776	-664.65	-5.71	-6.16
269	SLU 45	-18	-11	2776	-664.65	-5.71	-6.16
269	SLU 46	-18	-11	2776	-664.65	-5.71	-6.16
269	SLU 47	-18	-11	2776	-664.65	-5.71	-6.16
269	SLU 48	-18	-11	2776	-664.65	-5.71	-6.16
269	SLU 49	-18	-11	2776	-664.65	-5.71	-6.16
269	SLU 50	-18	-11	2776	-664.65	-5.71	-6.16
269	SLU 51	-18	-11	2776	-664.65	-5.71	-6.16
269	SLU 52	-22	-13	3156	-748.76	-6.59	-7.67
269	SLU 53	-22	-13	3156	-748.76	-6.59	-7.67
269	SLU 54	-22	-13	3156	-748.76	-6.59	-7.67
269	SLU 55	-22	-13	3156	-748.76	-6.59	-7.67
269	SLU 56	-22	-13	3156	-748.76	-6.59	-7.67
269	SLU 57	-22	-13	3156	-748.76	-6.59	-7.67
269	SLU 58	-22	-13	3156	-748.76	-6.59	-7.67
269	SLU 59	-22	-13	3156	-748.76	-6.59	-7.67
269	SLU 60	-24	-14	3319	-784.8	-6.97	-8.31
269	SLU 61	-24	-14	3319	-784.8	-6.97	-8.31
269	SLU 62	-24	-14	3319	-784.8	-6.97	-8.31
269	SLU 63	-24	-14	3319	-784.8	-6.97	-8.31
269	SLU 64	-21	-13	3062	-727.83	-6.38	-7.22
269	SLU 65	-21	-13	3062	-727.83	-6.38	-7.22
269	SLU 66	-21	-13	3062	-727.83	-6.38	-7.22
269	SLU 67	-21	-13	3062	-727.83	-6.38	-7.22
269	SLU 68	-21	-13	3062	-727.83	-6.38	-7.22
269	SLU 69	-21	-13	3062	-727.83	-6.38	-7.22
269	SLU 70	-21	-13	3062	-727.83	-6.38	-7.22
269	SLU 71	-21	-13	3062	-727.83	-6.38	-7.22
269	SLU 72	-21	-13	3062	-727.83	-6.38	-7.22
269	SLU 73	-25	-14	3442	-811.94	-7.26	-8.73
269	SLU 74	-25	-14	3442	-811.94	-7.26	-8.73
269	SLU 75	-25	-14	3442	-811.94	-7.26	-8.73
269	SLU 76	-25	-14	3442	-811.94	-7.26	-8.73
269	SLU 77	-25	-14	3442	-811.94	-7.26	-8.73
269	SLU 78	-25	-14	3442	-811.94	-7.26	-8.73
269	SLU 79	-25	-14	3442	-811.94	-7.26	-8.73
269	SLU 80	-25	-14	3442	-811.94	-7.26	-8.73
269	SLU 81	-27	-15	3605	-847.98	-7.64	-9.38
269	SLU 82	-27	-15	3605	-847.98	-7.64	-9.38
269	SLU 83	-27	-15	3605	-847.98	-7.64	-9.38



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
269	SLU 84	-27	-15	3605	-847.98	-7.64	-9.38
269	SLE RA 1	-15	-10	2292	-545.99	-4.76	-5.32
269	SLE RA 2	-15	-10	2292	-545.99	-4.76	-5.32
269	SLE RA 3	-15	-10	2292	-545.99	-4.76	-5.32
269	SLE RA 4	-15	-10	2292	-545.99	-4.76	-5.32
269	SLE RA 5	-15	-10	2292	-545.99	-4.76	-5.32
269	SLE RA 6	-15	-10	2292	-545.99	-4.76	-5.32
269	SLE RA 7	-15	-10	2292	-545.99	-4.76	-5.32
269	SLE RA 8	-15	-10	2292	-545.99	-4.76	-5.32
269	SLE RA 9	-15	-10	2292	-545.99	-4.76	-5.32
269	SLE RA 10	-18	-11	2546	-602.06	-5.35	-6.33
269	SLE RA 11	-18	-11	2546	-602.06	-5.35	-6.33
269	SLE RA 12	-18	-11	2546	-602.06	-5.35	-6.33
269	SLE RA 13	-18	-11	2546	-602.06	-5.35	-6.33
269	SLE RA 14	-18	-11	2546	-602.06	-5.35	-6.33
269	SLE RA 15	-18	-11	2546	-602.06	-5.35	-6.33
269	SLE RA 16	-18	-11	2546	-602.06	-5.35	-6.33
269	SLE RA 17	-18	-11	2546	-602.06	-5.35	-6.33
269	SLE RA 18	-20	-11	2654	-626.09	-5.6	-6.76
269	SLE RA 19	-20	-11	2654	-626.09	-5.6	-6.76
269	SLE RA 20	-20	-11	2654	-626.09	-5.6	-6.76
269	SLE RA 21	-20	-11	2654	-626.09	-5.6	-6.76
269	SLE FR 1	-15	-10	2292	-545.99	-4.76	-5.32
269	SLE FR 2	-15	-10	2292	-545.99	-4.76	-5.32
269	SLE FR 3	-15	-10	2292	-545.99	-4.76	-5.32
269	SLE FR 4	-17	-10	2401	-570.02	-5.01	-5.75
269	SLE FR 5	-17	-10	2401	-570.02	-5.01	-5.75
269	SLE FR 6	-17	-10	2473	-586.04	-5.18	-6.04
269	SLE QP 1	-15	-10	2292	-545.99	-4.76	-5.32
269	SLE QP 2	-17	-10	2401	-570.02	-5.01	-5.75
269	SLD 1	213	64	1952	-465.41	-3.07	74.86
269	SLD 2	172	98	1943	-463.27	-3.02	60.56
269	SLD 3	207	-134	2240	-523.98	-3.99	72.25
269	SLD 4	166	-100	2230	-521.85	-3.94	57.96
269	SLD 5	76	301	1834	-450.56	-3.05	27.54
269	SLD 6	34	335	1824	-448.38	-3	12.93
269	SLD 7	57	-360	2792	-645.81	-6.12	18.86
269	SLD 8	15	-326	2782	-643.63	-6.07	4.25
269	SLD 9	-48	306	2020	-496.4	-3.95	-15.76
269	SLD 10	-90	340	2010	-494.22	-3.9	-30.37
269	SLD 11	-67	-355	2978	-691.65	-7.03	-24.43
269	SLD 12	-109	-321	2968	-689.47	-6.97	-39.05
269	SLD 13	-199	80	2572	-618.18	-6.08	-69.46
269	SLD 14	-241	114	2562	-616.05	-6.03	-83.76
269	SLD 15	-205	-118	2859	-676.76	-7	-72.07
269	SLD 16	-246	-84	2849	-674.62	-6.95	-86.36
269	SLV 1	506	165	1372	-330.19	-0.58	177.46
269	SLV 2	411	243	1349	-325.31	-0.45	144.75
269	SLV 3	492	-300	2046	-467.84	-2.73	171.37
269	SLV 4	398	-222	2023	-462.96	-2.61	138.66
269	SLV 5	195	719	1078	-291.09	-0.45	70.52
269	SLV 6	97	800	1055	-286.03	-0.32	36.57
269	SLV 7	151	-832	3325	-749.94	-7.65	50.21
269	SLV 8	53	-751	3302	-744.88	-7.52	16.26
269	SLV 9	-86	731	1500	-395.16	-2.5	-27.77
269	SLV 10	-184	812	1477	-390.09	-2.37	-61.72
269	SLV 11	-131	-820	3747	-854	-9.7	-48.07
269	SLV 12	-229	-739	3724	-848.94	-9.57	-82.03
269	SLV 13	-431	202	2779	-677.07	-7.41	-150.17
269	SLV 14	-526	280	2756	-672.19	-7.29	-182.87
269	SLV 15	-445	-263	3453	-814.72	-9.57	-156.26
269	SLV 16	-539	-185	3430	-809.84	-9.45	-188.96
269	CRTFP Ux+	0	0	0	0	0	0
269	CRTFP Ux-	0	0	0	0	0	0
269	CRTFP Uy+	0	0	0	0	0	0
269	CRTFP Uy-	0	0	0	0	0	0
270	SLU 1	-14	-11	2082	-425.04	-3.53	-4.91
270	SLU 2	-14	-11	2082	-425.04	-3.53	-4.91
270	SLU 3	-14	-11	2082	-425.04	-3.53	-4.91
270	SLU 4	-14	-11	2082	-425.04	-3.53	-4.91
270	SLU 5	-14	-11	2082	-425.04	-3.53	-4.91
270	SLU 6	-14	-11	2082	-425.04	-3.53	-4.91
270	SLU 7	-14	-11	2082	-425.04	-3.53	-4.91
270	SLU 8	-14	-11	2082	-425.04	-3.53	-4.91
270	SLU 9	-14	-11	2082	-425.04	-3.53	-4.91
270	SLU 10	-18	-13	2437	-488.79	-4.2	-6.39
270	SLU 11	-18	-13	2437	-488.79	-4.2	-6.39
270	SLU 12	-18	-13	2437	-488.79	-4.2	-6.39
270	SLU 13	-18	-13	2437	-488.79	-4.2	-6.39
270	SLU 14	-18	-13	2437	-488.79	-4.2	-6.39
270	SLU 15	-18	-13	2437	-488.79	-4.2	-6.39
270	SLU 16	-18	-13	2437	-488.79	-4.2	-6.39
270	SLU 17	-18	-13	2437	-488.79	-4.2	-6.39
270	SLU 18	-20	-14	2590	-516.11	-4.49	-7.02
270	SLU 19	-20	-14	2590	-516.11	-4.49	-7.02
270	SLU 20	-20	-14	2590	-516.11	-4.49	-7.02
270	SLU 21	-20	-14	2590	-516.11	-4.49	-7.02
270	SLU 22	-17	-12	2349	-472.91	-4.04	-5.96
270	SLU 23	-17	-12	2349	-472.91	-4.04	-5.96
270	SLU 24	-17	-12	2349	-472.91	-4.04	-5.96



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
270	SLU 25	-17	-12	2349	-472.91	-4.04	-5.96
270	SLU 26	-17	-12	2349	-472.91	-4.04	-5.96
270	SLU 27	-17	-12	2349	-472.91	-4.04	-5.96
270	SLU 28	-17	-12	2349	-472.91	-4.04	-5.96
270	SLU 29	-17	-12	2349	-472.91	-4.04	-5.96
270	SLU 30	-17	-12	2349	-472.91	-4.04	-5.96
270	SLU 31	-21	-14	2704	-536.66	-4.71	-7.43
270	SLU 32	-21	-14	2704	-536.66	-4.71	-7.43
270	SLU 33	-21	-14	2704	-536.66	-4.71	-7.43
270	SLU 34	-21	-14	2704	-536.66	-4.71	-7.43
270	SLU 35	-21	-14	2704	-536.66	-4.71	-7.43
270	SLU 36	-21	-14	2704	-536.66	-4.71	-7.43
270	SLU 37	-21	-14	2704	-536.66	-4.71	-7.43
270	SLU 38	-21	-14	2704	-536.66	-4.71	-7.43
270	SLU 39	-23	-15	2857	-563.98	-5	-8.06
270	SLU 40	-23	-15	2857	-563.98	-5	-8.06
270	SLU 41	-23	-15	2857	-563.98	-5	-8.06
270	SLU 42	-23	-15	2857	-563.98	-5	-8.06
270	SLU 43	-17	-13	2615	-536.15	-4.41	-6.03
270	SLU 44	-17	-13	2615	-536.15	-4.41	-6.03
270	SLU 45	-17	-13	2615	-536.15	-4.41	-6.03
270	SLU 46	-17	-13	2615	-536.15	-4.41	-6.03
270	SLU 47	-17	-13	2615	-536.15	-4.41	-6.03
270	SLU 48	-17	-13	2615	-536.15	-4.41	-6.03
270	SLU 49	-17	-13	2615	-536.15	-4.41	-6.03
270	SLU 50	-17	-13	2615	-536.15	-4.41	-6.03
270	SLU 51	-17	-13	2615	-536.15	-4.41	-6.03
270	SLU 52	-22	-15	2971	-599.9	-5.09	-7.5
270	SLU 53	-22	-15	2971	-599.9	-5.09	-7.5
270	SLU 54	-22	-15	2971	-599.9	-5.09	-7.5
270	SLU 55	-22	-15	2971	-599.9	-5.09	-7.5
270	SLU 56	-22	-15	2971	-599.9	-5.09	-7.5
270	SLU 57	-22	-15	2971	-599.9	-5.09	-7.5
270	SLU 58	-22	-15	2971	-599.9	-5.09	-7.5
270	SLU 59	-22	-15	2971	-599.9	-5.09	-7.5
270	SLU 60	-23	-16	3123	-627.22	-5.37	-8.14
270	SLU 61	-23	-16	3123	-627.22	-5.37	-8.14
270	SLU 62	-23	-16	3123	-627.22	-5.37	-8.14
270	SLU 63	-23	-16	3123	-627.22	-5.37	-8.14
270	SLU 64	-20	-15	2882	-584.01	-4.92	-7.07
270	SLU 65	-20	-15	2882	-584.01	-4.92	-7.07
270	SLU 66	-20	-15	2882	-584.01	-4.92	-7.07
270	SLU 67	-20	-15	2882	-584.01	-4.92	-7.07
270	SLU 68	-20	-15	2882	-584.01	-4.92	-7.07
270	SLU 69	-20	-15	2882	-584.01	-4.92	-7.07
270	SLU 70	-20	-15	2882	-584.01	-4.92	-7.07
270	SLU 71	-20	-15	2882	-584.01	-4.92	-7.07
270	SLU 72	-20	-15	2882	-584.01	-4.92	-7.07
270	SLU 73	-25	-17	3237	-647.76	-5.6	-8.55
270	SLU 74	-25	-17	3237	-647.76	-5.6	-8.55
270	SLU 75	-25	-17	3237	-647.76	-5.6	-8.55
270	SLU 76	-25	-17	3237	-647.76	-5.6	-8.55
270	SLU 77	-25	-17	3237	-647.76	-5.6	-8.55
270	SLU 78	-25	-17	3237	-647.76	-5.6	-8.55
270	SLU 79	-25	-17	3237	-647.76	-5.6	-8.55
270	SLU 80	-25	-17	3237	-647.76	-5.6	-8.55
270	SLU 81	-26	-18	3390	-675.08	-5.89	-9.18
270	SLU 82	-26	-18	3390	-675.08	-5.89	-9.18
270	SLU 83	-26	-18	3390	-675.08	-5.89	-9.18
270	SLU 84	-26	-18	3390	-675.08	-5.89	-9.18
270	SLE RA 1	-15	-11	2158	-438.72	-3.67	-5.21
270	SLE RA 2	-15	-11	2158	-438.72	-3.67	-5.21
270	SLE RA 3	-15	-11	2158	-438.72	-3.67	-5.21
270	SLE RA 4	-15	-11	2158	-438.72	-3.67	-5.21
270	SLE RA 5	-15	-11	2158	-438.72	-3.67	-5.21
270	SLE RA 6	-15	-11	2158	-438.72	-3.67	-5.21
270	SLE RA 7	-15	-11	2158	-438.72	-3.67	-5.21
270	SLE RA 8	-15	-11	2158	-438.72	-3.67	-5.21
270	SLE RA 9	-15	-11	2158	-438.72	-3.67	-5.21
270	SLE RA 10	-18	-12	2395	-481.22	-4.12	-6.19
270	SLE RA 11	-18	-12	2395	-481.22	-4.12	-6.19
270	SLE RA 12	-18	-12	2395	-481.22	-4.12	-6.19
270	SLE RA 13	-18	-12	2395	-481.22	-4.12	-6.19
270	SLE RA 14	-18	-12	2395	-481.22	-4.12	-6.19
270	SLE RA 15	-18	-12	2395	-481.22	-4.12	-6.19
270	SLE RA 16	-18	-12	2395	-481.22	-4.12	-6.19
270	SLE RA 17	-18	-12	2395	-481.22	-4.12	-6.19
270	SLE RA 18	-19	-13	2497	-499.43	-4.32	-6.62
270	SLE RA 19	-19	-13	2497	-499.43	-4.32	-6.62
270	SLE RA 20	-19	-13	2497	-499.43	-4.32	-6.62
270	SLE RA 21	-19	-13	2497	-499.43	-4.32	-6.62
270	SLE FR 1	-15	-11	2158	-438.72	-3.67	-5.21
270	SLE FR 2	-15	-11	2158	-438.72	-3.67	-5.21
270	SLE FR 3	-15	-11	2158	-438.72	-3.67	-5.21
270	SLE FR 4	-16	-12	2260	-456.93	-3.87	-5.63
270	SLE FR 5	-16	-12	2260	-456.93	-3.87	-5.63
270	SLE FR 6	-17	-12	2327	-469.08	-3.99	-5.91
270	SLE QP 1	-15	-11	2158	-438.72	-3.67	-5.21
270	SLE QP 2	-16	-12	2260	-456.93	-3.87	-5.63
270	SLD 1	214	55	1869	-380.04	-2.17	75.17



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
270	SLD 2	173	85	1860	-378.59	-2.12	60.84
270	SLD 3	208	-121	2129	-423.12	-2.94	72.44
270	SLD 4	167	-91	2121	-421.67	-2.89	58.12
270	SLD 5	77	265	1750	-369.05	-2.2	27.91
270	SLD 6	35	295	1742	-367.57	-2.15	13.28
270	SLD 7	57	-322	2618	-512.65	-4.78	18.83
270	SLD 8	15	-292	2610	-511.17	-4.73	4.19
270	SLD 9	-47	269	1909	-402.7	-3	-15.45
270	SLD 10	-89	299	1901	-401.22	-2.95	-30.09
270	SLD 11	-67	-318	2777	-546.29	-5.58	-24.54
270	SLD 12	-109	-288	2769	-544.81	-5.53	-39.18
270	SLD 13	-199	68	2399	-492.19	-4.84	-69.38
270	SLD 14	-240	98	2390	-490.75	-4.79	-83.7
270	SLD 15	-205	-108	2659	-535.27	-5.61	-72.11
270	SLD 16	-246	-78	2651	-533.82	-5.56	-86.43
270	SLV 1	507	146	1362	-280.54	0.01	178.01
270	SLV 2	413	214	1343	-277.24	0.13	145.25
270	SLV 3	493	-267	1973	-381.97	-1.8	171.63
270	SLV 4	399	-199	1955	-378.67	-1.68	138.87
270	SLV 5	197	637	1070	-251.4	0	71.23
270	SLV 6	99	708	1051	-247.97	0.12	37.22
270	SLV 7	150	-740	3108	-589.5	-6.03	49.96
270	SLV 8	52	-669	3089	-586.06	-5.91	15.95
270	SLV 9	-84	646	1431	-327.8	-1.82	-27.21
270	SLV 10	-183	717	1411	-324.37	-1.7	-61.22
270	SLV 11	-131	-731	3469	-665.89	-7.85	-48.48
270	SLV 12	-229	-660	3450	-662.46	-7.73	-82.5
270	SLV 13	-431	176	2565	-535.2	-6.05	-150.14
270	SLV 14	-525	244	2546	-531.89	-5.94	-182.89
270	SLV 15	-445	-237	3176	-636.63	-7.86	-156.52
270	SLV 16	-539	-169	3158	-633.32	-7.75	-189.27
270	CRTFP Ux+	0	0	0	0	0	0
270	CRTFP Ux-	0	0	0	0	0	0
270	CRTFP Uy+	0	0	0	0	0	0
270	CRTFP Uy-	0	0	0	0	0	0
271	SLU 1	-14	-11	1987	-349.45	-2.44	-4.8
271	SLU 2	-14	-11	1987	-349.45	-2.44	-4.8
271	SLU 3	-14	-11	1987	-349.45	-2.44	-4.8
271	SLU 4	-14	-11	1987	-349.45	-2.44	-4.8
271	SLU 5	-14	-11	1987	-349.45	-2.44	-4.8
271	SLU 6	-14	-11	1987	-349.45	-2.44	-4.8
271	SLU 7	-14	-11	1987	-349.45	-2.44	-4.8
271	SLU 8	-14	-11	1987	-349.45	-2.44	-4.8
271	SLU 9	-14	-11	1987	-349.45	-2.44	-4.8
271	SLU 10	-18	-14	2325	-398.3	-2.89	-6.24
271	SLU 11	-18	-14	2325	-398.3	-2.89	-6.24
271	SLU 12	-18	-14	2325	-398.3	-2.89	-6.24
271	SLU 13	-18	-14	2325	-398.3	-2.89	-6.24
271	SLU 14	-18	-14	2325	-398.3	-2.89	-6.24
271	SLU 15	-18	-14	2325	-398.3	-2.89	-6.24
271	SLU 16	-18	-14	2325	-398.3	-2.89	-6.24
271	SLU 17	-18	-14	2325	-398.3	-2.89	-6.24
271	SLU 18	-20	-15	2469	-419.23	-3.09	-6.85
271	SLU 19	-20	-15	2469	-419.23	-3.09	-6.85
271	SLU 20	-20	-15	2469	-419.23	-3.09	-6.85
271	SLU 21	-20	-15	2469	-419.23	-3.09	-6.85
271	SLU 22	-17	-13	2240	-386.09	-2.78	-5.82
271	SLU 23	-17	-13	2240	-386.09	-2.78	-5.82
271	SLU 24	-17	-13	2240	-386.09	-2.78	-5.82
271	SLU 25	-17	-13	2240	-386.09	-2.78	-5.82
271	SLU 26	-17	-13	2240	-386.09	-2.78	-5.82
271	SLU 27	-17	-13	2240	-386.09	-2.78	-5.82
271	SLU 28	-17	-13	2240	-386.09	-2.78	-5.82
271	SLU 29	-17	-13	2240	-386.09	-2.78	-5.82
271	SLU 30	-17	-13	2240	-386.09	-2.78	-5.82
271	SLU 31	-21	-15	2578	-434.94	-3.24	-7.25
271	SLU 32	-21	-15	2578	-434.94	-3.24	-7.25
271	SLU 33	-21	-15	2578	-434.94	-3.24	-7.25
271	SLU 34	-21	-15	2578	-434.94	-3.24	-7.25
271	SLU 35	-21	-15	2578	-434.94	-3.24	-7.25
271	SLU 36	-21	-15	2578	-434.94	-3.24	-7.25
271	SLU 37	-21	-15	2578	-434.94	-3.24	-7.25
271	SLU 38	-21	-15	2578	-434.94	-3.24	-7.25
271	SLU 39	-23	-16	2723	-455.88	-3.43	-7.87
271	SLU 40	-23	-16	2723	-455.88	-3.43	-7.87
271	SLU 41	-23	-16	2723	-455.88	-3.43	-7.87
271	SLU 42	-23	-16	2723	-455.88	-3.43	-7.87
271	SLU 43	-17	-14	2496	-441.72	-3.05	-5.89
271	SLU 44	-17	-14	2496	-441.72	-3.05	-5.89
271	SLU 45	-17	-14	2496	-441.72	-3.05	-5.89
271	SLU 46	-17	-14	2496	-441.72	-3.05	-5.89
271	SLU 47	-17	-14	2496	-441.72	-3.05	-5.89
271	SLU 48	-17	-14	2496	-441.72	-3.05	-5.89
271	SLU 49	-17	-14	2496	-441.72	-3.05	-5.89
271	SLU 50	-17	-14	2496	-441.72	-3.05	-5.89
271	SLU 51	-17	-14	2496	-441.72	-3.05	-5.89
271	SLU 52	-21	-16	2834	-490.57	-3.5	-7.33
271	SLU 53	-21	-16	2834	-490.57	-3.5	-7.33
271	SLU 54	-21	-16	2834	-490.57	-3.5	-7.33
271	SLU 55	-21	-16	2834	-490.57	-3.5	-7.33



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
271	SLU 56	-21	-16	2834	-490.57	-3.5	-7.33
271	SLU 57	-21	-16	2834	-490.57	-3.5	-7.33
271	SLU 58	-21	-16	2834	-490.57	-3.5	-7.33
271	SLU 59	-21	-16	2834	-490.57	-3.5	-7.33
271	SLU 60	-23	-17	2979	-511.5	-3.7	-7.94
271	SLU 61	-23	-17	2979	-511.5	-3.7	-7.94
271	SLU 62	-23	-17	2979	-511.5	-3.7	-7.94
271	SLU 63	-23	-17	2979	-511.5	-3.7	-7.94
271	SLU 64	-20	-16	2750	-478.36	-3.39	-6.91
271	SLU 65	-20	-16	2750	-478.36	-3.39	-6.91
271	SLU 66	-20	-16	2750	-478.36	-3.39	-6.91
271	SLU 67	-20	-16	2750	-478.36	-3.39	-6.91
271	SLU 68	-20	-16	2750	-478.36	-3.39	-6.91
271	SLU 69	-20	-16	2750	-478.36	-3.39	-6.91
271	SLU 70	-20	-16	2750	-478.36	-3.39	-6.91
271	SLU 71	-20	-16	2750	-478.36	-3.39	-6.91
271	SLU 72	-20	-16	2750	-478.36	-3.39	-6.91
271	SLU 73	-24	-18	3087	-527.21	-3.85	-8.34
271	SLU 74	-24	-18	3087	-527.21	-3.85	-8.34
271	SLU 75	-24	-18	3087	-527.21	-3.85	-8.34
271	SLU 76	-24	-18	3087	-527.21	-3.85	-8.34
271	SLU 77	-24	-18	3087	-527.21	-3.85	-8.34
271	SLU 78	-24	-18	3087	-527.21	-3.85	-8.34
271	SLU 79	-24	-18	3087	-527.21	-3.85	-8.34
271	SLU 80	-24	-18	3087	-527.21	-3.85	-8.34
271	SLU 81	-26	-19	3232	-548.15	-4.04	-8.96
271	SLU 82	-26	-19	3232	-548.15	-4.04	-8.96
271	SLU 83	-26	-19	3232	-548.15	-4.04	-8.96
271	SLU 84	-26	-19	3232	-548.15	-4.04	-8.96
271	SLE RA 1	-15	-12	2059	-359.91	-2.53	-5.09
271	SLE RA 2	-15	-12	2059	-359.91	-2.53	-5.09
271	SLE RA 3	-15	-12	2059	-359.91	-2.53	-5.09
271	SLE RA 4	-15	-12	2059	-359.91	-2.53	-5.09
271	SLE RA 5	-15	-12	2059	-359.91	-2.53	-5.09
271	SLE RA 6	-15	-12	2059	-359.91	-2.53	-5.09
271	SLE RA 7	-15	-12	2059	-359.91	-2.53	-5.09
271	SLE RA 8	-15	-12	2059	-359.91	-2.53	-5.09
271	SLE RA 9	-15	-12	2059	-359.91	-2.53	-5.09
271	SLE RA 10	-17	-13	2284	-392.48	-2.84	-6.05
271	SLE RA 11	-17	-13	2284	-392.48	-2.84	-6.05
271	SLE RA 12	-17	-13	2284	-392.48	-2.84	-6.05
271	SLE RA 13	-17	-13	2284	-392.48	-2.84	-6.05
271	SLE RA 14	-17	-13	2284	-392.48	-2.84	-6.05
271	SLE RA 15	-17	-13	2284	-392.48	-2.84	-6.05
271	SLE RA 16	-17	-13	2284	-392.48	-2.84	-6.05
271	SLE RA 17	-17	-13	2284	-392.48	-2.84	-6.05
271	SLE RA 18	-18	-14	2381	-406.44	-2.97	-6.46
271	SLE RA 19	-18	-14	2381	-406.44	-2.97	-6.46
271	SLE RA 20	-18	-14	2381	-406.44	-2.97	-6.46
271	SLE RA 21	-18	-14	2381	-406.44	-2.97	-6.46
271	SLE FR 1	-15	-12	2059	-359.91	-2.53	-5.09
271	SLE FR 2	-15	-12	2059	-359.91	-2.53	-5.09
271	SLE FR 3	-15	-12	2059	-359.91	-2.53	-5.09
271	SLE FR 4	-16	-12	2156	-373.87	-2.66	-5.5
271	SLE FR 5	-16	-12	2156	-373.87	-2.66	-5.5
271	SLE FR 6	-17	-13	2220	-383.18	-2.75	-5.77
271	SLE QP 1	-15	-12	2059	-359.91	-2.53	-5.09
271	SLE QP 2	-16	-12	2156	-373.87	-2.66	-5.5
271	SLD 1	215	46	1814	-319	-1.21	75.46
271	SLD 2	174	72	1808	-318.12	-1.17	61.12
271	SLD 3	209	-108	2053	-350.21	-1.83	72.64
271	SLD 4	167	-82	2046	-349.32	-1.78	58.3
271	SLD 5	78	229	1694	-310.41	-1.32	28.25
271	SLD 6	36	255	1687	-309.5	-1.27	13.59
271	SLD 7	57	-283	2489	-414.42	-3.36	18.84
271	SLD 8	15	-257	2482	-413.51	-3.31	4.18
271	SLD 9	-46	232	1829	-334.24	-2.02	-15.18
271	SLD 10	-88	259	1822	-333.33	-1.97	-29.84
271	SLD 11	-67	-280	2625	-438.24	-4.06	-24.59
271	SLD 12	-109	-254	2618	-437.33	-4.01	-39.25
271	SLD 13	-199	57	2266	-398.43	-3.55	-69.3
271	SLD 14	-240	83	2259	-397.54	-3.5	-83.64
271	SLD 15	-205	-97	2504	-429.63	-4.16	-72.12
271	SLD 16	-246	-71	2497	-428.74	-4.11	-86.47
271	SLV 1	508	126	1371	-247.83	0.65	178.52
271	SLV 2	414	185	1356	-245.8	0.75	145.71
271	SLV 3	494	-235	1932	-321.54	-0.78	171.92
271	SLV 4	399	-176	1916	-319.51	-0.68	139.1
271	SLV 5	199	554	1076	-225.02	0.46	71.84
271	SLV 6	101	615	1060	-222.91	0.57	37.77
271	SLV 7	150	-647	2944	-470.72	-4.31	49.82
271	SLV 8	52	-586	2928	-468.61	-4.2	15.74
271	SLV 9	-83	561	1384	-279.13	-1.12	-26.75
271	SLV 10	-181	623	1368	-277.03	-1.02	-60.82
271	SLV 11	-132	-640	3251	-524.84	-5.9	-48.77
271	SLV 12	-230	-578	3235	-522.73	-5.79	-82.84
271	SLV 13	-431	151	2396	-428.23	-4.65	-150.1
271	SLV 14	-525	210	2380	-426.2	-4.55	-182.92
271	SLV 15	-445	-209	2956	-501.94	-6.08	-156.71
271	SLV 16	-540	-150	2941	-499.91	-5.98	-189.52



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
271	CRTFP Ux+	0	0	0	0	0	0
271	CRTFP Ux-	0	0	0	0	0	0
271	CRTFP Uy+	0	0	0	0	0	0
271	CRTFP Uy-	0	0	0	0	0	0
272	SLU 1	-13	-11	1927	-300.5	-1.35	-4.69
272	SLU 2	-13	-11	1927	-300.5	-1.35	-4.69
272	SLU 3	-13	-11	1927	-300.5	-1.35	-4.69
272	SLU 4	-13	-11	1927	-300.5	-1.35	-4.69
272	SLU 5	-13	-11	1927	-300.5	-1.35	-4.69
272	SLU 6	-13	-11	1927	-300.5	-1.35	-4.69
272	SLU 7	-13	-11	1927	-300.5	-1.35	-4.69
272	SLU 8	-13	-11	1927	-300.5	-1.35	-4.69
272	SLU 9	-13	-11	1927	-300.5	-1.35	-4.69
272	SLU 10	-17	-14	2253	-339.8	-1.59	-6.08
272	SLU 11	-17	-14	2253	-339.8	-1.59	-6.08
272	SLU 12	-17	-14	2253	-339.8	-1.59	-6.08
272	SLU 13	-17	-14	2253	-339.8	-1.59	-6.08
272	SLU 14	-17	-14	2253	-339.8	-1.59	-6.08
272	SLU 15	-17	-14	2253	-339.8	-1.59	-6.08
272	SLU 16	-17	-14	2253	-339.8	-1.59	-6.08
272	SLU 17	-17	-14	2253	-339.8	-1.59	-6.08
272	SLU 18	-19	-15	2393	-356.64	-1.69	-6.68
272	SLU 19	-19	-15	2393	-356.64	-1.69	-6.68
272	SLU 20	-19	-15	2393	-356.64	-1.69	-6.68
272	SLU 21	-19	-15	2393	-356.64	-1.69	-6.68
272	SLU 22	-16	-13	2172	-329.94	-1.53	-5.67
272	SLU 23	-16	-13	2172	-329.94	-1.53	-5.67
272	SLU 24	-16	-13	2172	-329.94	-1.53	-5.67
272	SLU 25	-16	-13	2172	-329.94	-1.53	-5.67
272	SLU 26	-16	-13	2172	-329.94	-1.53	-5.67
272	SLU 27	-16	-13	2172	-329.94	-1.53	-5.67
272	SLU 28	-16	-13	2172	-329.94	-1.53	-5.67
272	SLU 29	-16	-13	2172	-329.94	-1.53	-5.67
272	SLU 30	-16	-13	2172	-329.94	-1.53	-5.67
272	SLU 31	-20	-15	2498	-369.23	-1.77	-7.06
272	SLU 32	-20	-15	2498	-369.23	-1.77	-7.06
272	SLU 33	-20	-15	2498	-369.23	-1.77	-7.06
272	SLU 34	-20	-15	2498	-369.23	-1.77	-7.06
272	SLU 35	-20	-15	2498	-369.23	-1.77	-7.06
272	SLU 36	-20	-15	2498	-369.23	-1.77	-7.06
272	SLU 37	-20	-15	2498	-369.23	-1.77	-7.06
272	SLU 38	-20	-15	2498	-369.23	-1.77	-7.06
272	SLU 39	-22	-17	2638	-386.08	-1.87	-7.66
272	SLU 40	-22	-17	2638	-386.08	-1.87	-7.66
272	SLU 41	-22	-17	2638	-386.08	-1.87	-7.66
272	SLU 42	-22	-17	2638	-386.08	-1.87	-7.66
272	SLU 43	-16	-14	2421	-380.56	-1.7	-5.75
272	SLU 44	-16	-14	2421	-380.56	-1.7	-5.75
272	SLU 45	-16	-14	2421	-380.56	-1.7	-5.75
272	SLU 46	-16	-14	2421	-380.56	-1.7	-5.75
272	SLU 47	-16	-14	2421	-380.56	-1.7	-5.75
272	SLU 48	-16	-14	2421	-380.56	-1.7	-5.75
272	SLU 49	-16	-14	2421	-380.56	-1.7	-5.75
272	SLU 50	-16	-14	2421	-380.56	-1.7	-5.75
272	SLU 51	-16	-14	2421	-380.56	-1.7	-5.75
272	SLU 52	-20	-16	2747	-419.85	-1.93	-7.15
272	SLU 53	-20	-16	2747	-419.85	-1.93	-7.15
272	SLU 54	-20	-16	2747	-419.85	-1.93	-7.15
272	SLU 55	-20	-16	2747	-419.85	-1.93	-7.15
272	SLU 56	-20	-16	2747	-419.85	-1.93	-7.15
272	SLU 57	-20	-16	2747	-419.85	-1.93	-7.15
272	SLU 58	-20	-16	2747	-419.85	-1.93	-7.15
272	SLU 59	-20	-16	2747	-419.85	-1.93	-7.15
272	SLU 60	-22	-17	2887	-436.69	-2.03	-7.74
272	SLU 61	-22	-17	2887	-436.69	-2.03	-7.74
272	SLU 62	-22	-17	2887	-436.69	-2.03	-7.74
272	SLU 63	-22	-17	2887	-436.69	-2.03	-7.74
272	SLU 64	-19	-16	2666	-410	-1.88	-6.74
272	SLU 65	-19	-16	2666	-410	-1.88	-6.74
272	SLU 66	-19	-16	2666	-410	-1.88	-6.74
272	SLU 67	-19	-16	2666	-410	-1.88	-6.74
272	SLU 68	-19	-16	2666	-410	-1.88	-6.74
272	SLU 69	-19	-16	2666	-410	-1.88	-6.74
272	SLU 70	-19	-16	2666	-410	-1.88	-6.74
272	SLU 71	-19	-16	2666	-410	-1.88	-6.74
272	SLU 72	-19	-16	2666	-410	-1.88	-6.74
272	SLU 73	-23	-18	2992	-449.29	-2.11	-8.13
272	SLU 74	-23	-18	2992	-449.29	-2.11	-8.13
272	SLU 75	-23	-18	2992	-449.29	-2.11	-8.13
272	SLU 76	-23	-18	2992	-449.29	-2.11	-8.13
272	SLU 77	-23	-18	2992	-449.29	-2.11	-8.13
272	SLU 78	-23	-18	2992	-449.29	-2.11	-8.13
272	SLU 79	-23	-18	2992	-449.29	-2.11	-8.13
272	SLU 80	-23	-18	2992	-449.29	-2.11	-8.13
272	SLU 81	-25	-19	3132	-466.13	-2.21	-8.73
272	SLU 82	-25	-19	3132	-466.13	-2.21	-8.73
272	SLU 83	-25	-19	3132	-466.13	-2.21	-8.73
272	SLU 84	-25	-19	3132	-466.13	-2.21	-8.73
272	SLE RA 1	-14	-12	1997	-308.91	-1.4	-4.97
272	SLE RA 2	-14	-12	1997	-308.91	-1.4	-4.97



Nodo	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
272	SLE RA 3	-14	-12	1997	-308.91	-1.4	-4.97
272	SLE RA 4	-14	-12	1997	-308.91	-1.4	-4.97
272	SLE RA 5	-14	-12	1997	-308.91	-1.4	-4.97
272	SLE RA 6	-14	-12	1997	-308.91	-1.4	-4.97
272	SLE RA 7	-14	-12	1997	-308.91	-1.4	-4.97
272	SLE RA 8	-14	-12	1997	-308.91	-1.4	-4.97
272	SLE RA 9	-14	-12	1997	-308.91	-1.4	-4.97
272	SLE RA 10	-17	-13	2214	-335.11	-1.56	-5.9
272	SLE RA 11	-17	-13	2214	-335.11	-1.56	-5.9
272	SLE RA 12	-17	-13	2214	-335.11	-1.56	-5.9
272	SLE RA 13	-17	-13	2214	-335.11	-1.56	-5.9
272	SLE RA 14	-17	-13	2214	-335.11	-1.56	-5.9
272	SLE RA 15	-17	-13	2214	-335.11	-1.56	-5.9
272	SLE RA 16	-17	-13	2214	-335.11	-1.56	-5.9
272	SLE RA 17	-17	-13	2214	-335.11	-1.56	-5.9
272	SLE RA 18	-18	-14	2308	-346.34	-1.63	-6.29
272	SLE RA 19	-18	-14	2308	-346.34	-1.63	-6.29
272	SLE RA 20	-18	-14	2308	-346.34	-1.63	-6.29
272	SLE RA 21	-18	-14	2308	-346.34	-1.63	-6.29
272	SLE FR 1	-14	-12	1997	-308.91	-1.4	-4.97
272	SLE FR 2	-14	-12	1997	-308.91	-1.4	-4.97
272	SLE FR 3	-14	-12	1997	-308.91	-1.4	-4.97
272	SLE FR 4	-15	-12	2090	-320.14	-1.47	-5.37
272	SLE FR 5	-15	-12	2090	-320.14	-1.47	-5.37
272	SLE FR 6	-16	-13	2152	-327.62	-1.52	-5.63
272	SLE QP 1	-14	-12	1997	-308.91	-1.4	-4.97
272	SLE QP 2	-15	-12	2090	-320.14	-1.47	-5.37
272	SLD 1	216	38	1790	-282.03	-0.26	75.74
272	SLD 2	174	60	1785	-281.55	-0.22	61.37
272	SLD 3	209	-94	2012	-305	-0.7	72.85
272	SLD 4	168	-72	2007	-304.52	-0.66	58.48
272	SLD 5	79	194	1665	-274.04	-0.44	28.55
272	SLD 6	37	217	1660	-273.56	-0.4	13.86
272	SLD 7	57	-245	2405	-350.6	-1.93	18.9
272	SLD 8	15	-222	2400	-350.12	-1.89	4.21
272	SLD 9	-45	197	1780	-290.16	-1.05	-14.94
272	SLD 10	-88	220	1775	-289.68	-1.01	-29.63
272	SLD 11	-67	-242	2520	-366.72	-2.54	-24.59
272	SLD 12	-110	-219	2515	-366.23	-2.5	-39.28
272	SLD 13	-198	47	2173	-335.76	-2.28	-69.21
272	SLD 14	-240	69	2168	-335.28	-2.24	-83.58
272	SLD 15	-205	-85	2395	-358.72	-2.73	-72.1
272	SLD 16	-246	-62	2390	-358.25	-2.69	-86.47
272	SLV 1	510	106	1401	-232.33	1.31	178.99
272	SLV 2	415	157	1389	-231.24	1.39	146.11
272	SLV 3	495	-203	1923	-286.88	0.26	172.21
272	SLV 4	400	-152	1910	-285.79	0.35	139.33
272	SLV 5	200	473	1097	-211.46	0.92	72.36
272	SLV 6	102	526	1084	-210.33	1.01	38.22
272	SLV 7	149	-557	2835	-393.3	-2.57	49.76
272	SLV 8	51	-504	2822	-392.17	-2.48	15.63
272	SLV 9	-82	479	1358	-248.11	-0.46	-26.36
272	SLV 10	-180	532	1345	-246.98	-0.37	-60.49
272	SLV 11	-133	-550	3096	-429.95	-3.95	-48.95
272	SLV 12	-231	-498	3083	-428.82	-3.86	-83.09
272	SLV 13	-430	128	2270	-354.49	-3.29	-150.06
272	SLV 14	-525	178	2257	-353.4	-3.2	-182.94
272	SLV 15	-446	-181	2791	-409.04	-4.34	-156.84
272	SLV 16	-540	-130	2779	-407.95	-4.25	-189.72
272	CRTFP Ux+	0	0	0	0	0	0
272	CRTFP Ux-	0	0	0	0	0	0
272	CRTFP Uy+	0	0	0	0	0	0
272	CRTFP Uy-	0	0	0	0	0	0
273	SLU 1	-13	-11	1900	-277	-0.31	-4.57
273	SLU 2	-13	-11	1900	-277	-0.31	-4.57
273	SLU 3	-13	-11	1900	-277	-0.31	-4.57
273	SLU 4	-13	-11	1900	-277	-0.31	-4.57
273	SLU 5	-13	-11	1900	-277	-0.31	-4.57
273	SLU 6	-13	-11	1900	-277	-0.31	-4.57
273	SLU 7	-13	-11	1900	-277	-0.31	-4.57
273	SLU 8	-13	-11	1900	-277	-0.31	-4.57
273	SLU 9	-13	-11	1900	-277	-0.31	-4.57
273	SLU 10	-17	-13	2222	-311.84	-0.33	-5.92
273	SLU 11	-17	-13	2222	-311.84	-0.33	-5.92
273	SLU 12	-17	-13	2222	-311.84	-0.33	-5.92
273	SLU 13	-17	-13	2222	-311.84	-0.33	-5.92
273	SLU 14	-17	-13	2222	-311.84	-0.33	-5.92
273	SLU 15	-17	-13	2222	-311.84	-0.33	-5.92
273	SLU 16	-17	-13	2222	-311.84	-0.33	-5.92
273	SLU 17	-17	-13	2222	-311.84	-0.33	-5.92
273	SLU 18	-18	-14	2361	-326.77	-0.34	-6.49
273	SLU 19	-18	-14	2361	-326.77	-0.34	-6.49
273	SLU 20	-18	-14	2361	-326.77	-0.34	-6.49
273	SLU 21	-18	-14	2361	-326.77	-0.34	-6.49
273	SLU 22	-16	-12	2142	-303.07	-0.33	-5.52
273	SLU 23	-16	-12	2142	-303.07	-0.33	-5.52
273	SLU 24	-16	-12	2142	-303.07	-0.33	-5.52
273	SLU 25	-16	-12	2142	-303.07	-0.33	-5.52
273	SLU 26	-16	-12	2142	-303.07	-0.33	-5.52
273	SLU 27	-16	-12	2142	-303.07	-0.33	-5.52



Nodo	Cont. N.br.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
273	SLU 28	-16	-12	2142	-303.07	-0.33	-5.52
273	SLU 29	-16	-12	2142	-303.07	-0.33	-5.52
273	SLU 30	-16	-12	2142	-303.07	-0.33	-5.52
273	SLU 31	-20	-15	2464	-337.91	-0.35	-6.87
273	SLU 32	-20	-15	2464	-337.91	-0.35	-6.87
273	SLU 33	-20	-15	2464	-337.91	-0.35	-6.87
273	SLU 34	-20	-15	2464	-337.91	-0.35	-6.87
273	SLU 35	-20	-15	2464	-337.91	-0.35	-6.87
273	SLU 36	-20	-15	2464	-337.91	-0.35	-6.87
273	SLU 37	-20	-15	2464	-337.91	-0.35	-6.87
273	SLU 38	-20	-15	2464	-337.91	-0.35	-6.87
273	SLU 39	-21	-16	2602	-352.84	-0.36	-7.44
273	SLU 40	-21	-16	2602	-352.84	-0.36	-7.44
273	SLU 41	-21	-16	2602	-352.84	-0.36	-7.44
273	SLU 42	-21	-16	2602	-352.84	-0.36	-7.44
273	SLU 43	-16	-13	2387	-351.16	-0.39	-5.62
273	SLU 44	-16	-13	2387	-351.16	-0.39	-5.62
273	SLU 45	-16	-13	2387	-351.16	-0.39	-5.62
273	SLU 46	-16	-13	2387	-351.16	-0.39	-5.62
273	SLU 47	-16	-13	2387	-351.16	-0.39	-5.62
273	SLU 48	-16	-13	2387	-351.16	-0.39	-5.62
273	SLU 49	-16	-13	2387	-351.16	-0.39	-5.62
273	SLU 50	-16	-13	2387	-351.16	-0.39	-5.62
273	SLU 51	-16	-13	2387	-351.16	-0.39	-5.62
273	SLU 52	-20	-16	2710	-386	-0.42	-6.96
273	SLU 53	-20	-16	2710	-386	-0.42	-6.96
273	SLU 54	-20	-16	2710	-386	-0.42	-6.96
273	SLU 55	-20	-16	2710	-386	-0.42	-6.96
273	SLU 56	-20	-16	2710	-386	-0.42	-6.96
273	SLU 57	-20	-16	2710	-386	-0.42	-6.96
273	SLU 58	-20	-16	2710	-386	-0.42	-6.96
273	SLU 59	-20	-16	2710	-386	-0.42	-6.96
273	SLU 60	-21	-17	2848	-400.93	-0.43	-7.54
273	SLU 61	-21	-17	2848	-400.93	-0.43	-7.54
273	SLU 62	-21	-17	2848	-400.93	-0.43	-7.54
273	SLU 63	-21	-17	2848	-400.93	-0.43	-7.54
273	SLU 64	-19	-15	2629	-377.23	-0.41	-6.57
273	SLU 65	-19	-15	2629	-377.23	-0.41	-6.57
273	SLU 66	-19	-15	2629	-377.23	-0.41	-6.57
273	SLU 67	-19	-15	2629	-377.23	-0.41	-6.57
273	SLU 68	-19	-15	2629	-377.23	-0.41	-6.57
273	SLU 69	-19	-15	2629	-377.23	-0.41	-6.57
273	SLU 70	-19	-15	2629	-377.23	-0.41	-6.57
273	SLU 71	-19	-15	2629	-377.23	-0.41	-6.57
273	SLU 72	-19	-15	2629	-377.23	-0.41	-6.57
273	SLU 73	-23	-17	2951	-412.07	-0.44	-7.91
273	SLU 74	-23	-17	2951	-412.07	-0.44	-7.91
273	SLU 75	-23	-17	2951	-412.07	-0.44	-7.91
273	SLU 76	-23	-17	2951	-412.07	-0.44	-7.91
273	SLU 77	-23	-17	2951	-412.07	-0.44	-7.91
273	SLU 78	-23	-17	2951	-412.07	-0.44	-7.91
273	SLU 79	-23	-17	2951	-412.07	-0.44	-7.91
273	SLU 80	-23	-17	2951	-412.07	-0.44	-7.91
273	SLU 81	-24	-19	3089	-427	-0.45	-8.49
273	SLU 82	-24	-19	3089	-427	-0.45	-8.49
273	SLU 83	-24	-19	3089	-427	-0.45	-8.49
273	SLU 84	-24	-19	3089	-427	-0.45	-8.49
273	SLE RA 1	-14	-11	1969	-284.45	-0.31	-4.85
273	SLE RA 2	-14	-11	1969	-284.45	-0.31	-4.85
273	SLE RA 3	-14	-11	1969	-284.45	-0.31	-4.85
273	SLE RA 4	-14	-11	1969	-284.45	-0.31	-4.85
273	SLE RA 5	-14	-11	1969	-284.45	-0.31	-4.85
273	SLE RA 6	-14	-11	1969	-284.45	-0.31	-4.85
273	SLE RA 7	-14	-11	1969	-284.45	-0.31	-4.85
273	SLE RA 8	-14	-11	1969	-284.45	-0.31	-4.85
273	SLE RA 9	-14	-11	1969	-284.45	-0.31	-4.85
273	SLE RA 10	-16	-13	2184	-307.67	-0.33	-5.74
273	SLE RA 11	-16	-13	2184	-307.67	-0.33	-5.74
273	SLE RA 12	-16	-13	2184	-307.67	-0.33	-5.74
273	SLE RA 13	-16	-13	2184	-307.67	-0.33	-5.74
273	SLE RA 14	-16	-13	2184	-307.67	-0.33	-5.74
273	SLE RA 15	-16	-13	2184	-307.67	-0.33	-5.74
273	SLE RA 16	-16	-13	2184	-307.67	-0.33	-5.74
273	SLE RA 17	-16	-13	2184	-307.67	-0.33	-5.74
273	SLE RA 18	-17	-13	2276	-317.63	-0.34	-6.13
273	SLE RA 19	-17	-13	2276	-317.63	-0.34	-6.13
273	SLE RA 20	-17	-13	2276	-317.63	-0.34	-6.13
273	SLE RA 21	-17	-13	2276	-317.63	-0.34	-6.13
273	SLE FR 1	-14	-11	1969	-284.45	-0.31	-4.85
273	SLE FR 2	-14	-11	1969	-284.45	-0.31	-4.85
273	SLE FR 3	-14	-11	1969	-284.45	-0.31	-4.85
273	SLE FR 4	-15	-12	2061	-294.4	-0.32	-5.23
273	SLE FR 5	-15	-12	2061	-294.4	-0.32	-5.23
273	SLE FR 6	-16	-12	2123	-301.04	-0.32	-5.49
273	SLE QP 1	-14	-11	1969	-284.45	-0.31	-4.85
273	SLE QP 2	-15	-12	2061	-294.4	-0.32	-5.23
273	SLD 1	217	30	1796	-268.34	0.68	76
273	SLD 2	175	49	1792	-268.13	0.72	61.6
273	SLD 3	210	-81	2007	-286.54	0.4	73.05
273	SLD 4	168	-62	2003	-286.33	0.43	58.65



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
273	SLD 5	80	162	1664	-259.04	0.4	28.81
273	SLD 6	37	182	1660	-258.83	0.44	14.09
273	SLD 7	57	-208	2366	-319.74	-0.55	18.98
273	SLD 8	15	-188	2361	-319.52	-0.52	4.26
273	SLD 9	-45	165	1761	-269.28	-0.12	-14.72
273	SLD 10	-87	184	1757	-269.06	-0.09	-29.44
273	SLD 11	-67	-205	2462	-329.97	-1.08	-24.55
273	SLD 12	-110	-186	2458	-329.76	-1.04	-39.27
273	SLD 13	-198	38	2120	-302.47	-1.07	-69.11
273	SLD 14	-239	57	2115	-302.26	-1.04	-83.51
273	SLD 15	-205	-73	2330	-320.67	-1.36	-72.06
273	SLD 16	-246	-54	2326	-320.46	-1.33	-86.46
273	SLV 1	511	87	1452	-233.94	1.97	179.39
273	SLV 2	416	130	1442	-233.46	2.05	146.46
273	SLV 3	495	-173	1946	-277.47	1.3	172.49
273	SLV 4	400	-130	1937	-276.99	1.38	139.56
273	SLV 5	202	397	1132	-210.43	1.36	72.78
273	SLV 6	104	441	1122	-209.93	1.44	38.59
273	SLV 7	149	-471	2780	-355.51	-0.88	49.77
273	SLV 8	51	-426	2770	-355.01	-0.8	15.58
273	SLV 9	-80	402	1352	-233.79	0.16	-26.04
273	SLV 10	-179	447	1342	-233.29	0.24	-60.23
273	SLV 11	-133	-465	3000	-378.87	-2.08	-49.05
273	SLV 12	-232	-420	2990	-378.38	-2	-83.24
273	SLV 13	-430	106	2186	-311.81	-2.02	-150.02
273	SLV 14	-525	150	2176	-311.33	-1.94	-182.95
273	SLV 15	-446	-154	2680	-355.34	-2.69	-156.92
273	SLV 16	-541	-111	2670	-354.86	-2.61	-189.85
273	CRTFP Ux+	0	0	0	0	0	0
273	CRTFP Ux-	0	0	0	0	0	0
273	CRTFP Uy+	0	0	0	0	0	0
273	CRTFP Uy-	0	0	0	0	0	0
274	SLU 1	-13	-10	1905	-277.37	0.68	-4.47
274	SLU 2	-13	-10	1905	-277.37	0.68	-4.47
274	SLU 3	-13	-10	1905	-277.37	0.68	-4.47
274	SLU 4	-13	-10	1905	-277.37	0.68	-4.47
274	SLU 5	-13	-10	1905	-277.37	0.68	-4.47
274	SLU 6	-13	-10	1905	-277.37	0.68	-4.47
274	SLU 7	-13	-10	1905	-277.37	0.68	-4.47
274	SLU 8	-13	-10	1905	-277.37	0.68	-4.47
274	SLU 9	-13	-10	1905	-277.37	0.68	-4.47
274	SLU 10	-16	-12	2230	-312.54	0.86	-5.75
274	SLU 11	-16	-12	2230	-312.54	0.86	-5.75
274	SLU 12	-16	-12	2230	-312.54	0.86	-5.75
274	SLU 13	-16	-12	2230	-312.54	0.86	-5.75
274	SLU 14	-16	-12	2230	-312.54	0.86	-5.75
274	SLU 15	-16	-12	2230	-312.54	0.86	-5.75
274	SLU 16	-16	-12	2230	-312.54	0.86	-5.75
274	SLU 17	-16	-12	2230	-312.54	0.86	-5.75
274	SLU 18	-18	-13	2369	-327.61	0.93	-6.31
274	SLU 19	-18	-13	2369	-327.61	0.93	-6.31
274	SLU 20	-18	-13	2369	-327.61	0.93	-6.31
274	SLU 21	-18	-13	2369	-327.61	0.93	-6.31
274	SLU 22	-15	-12	2148	-303.67	0.81	-5.38
274	SLU 23	-15	-12	2148	-303.67	0.81	-5.38
274	SLU 24	-15	-12	2148	-303.67	0.81	-5.38
274	SLU 25	-15	-12	2148	-303.67	0.81	-5.38
274	SLU 26	-15	-12	2148	-303.67	0.81	-5.38
274	SLU 27	-15	-12	2148	-303.67	0.81	-5.38
274	SLU 28	-15	-12	2148	-303.67	0.81	-5.38
274	SLU 29	-15	-12	2148	-303.67	0.81	-5.38
274	SLU 30	-15	-12	2148	-303.67	0.81	-5.38
274	SLU 31	-19	-14	2473	-338.85	0.99	-6.67
274	SLU 32	-19	-14	2473	-338.85	0.99	-6.67
274	SLU 33	-19	-14	2473	-338.85	0.99	-6.67
274	SLU 34	-19	-14	2473	-338.85	0.99	-6.67
274	SLU 35	-19	-14	2473	-338.85	0.99	-6.67
274	SLU 36	-19	-14	2473	-338.85	0.99	-6.67
274	SLU 37	-19	-14	2473	-338.85	0.99	-6.67
274	SLU 38	-19	-14	2473	-338.85	0.99	-6.67
274	SLU 39	-21	-15	2612	-353.92	1.06	-7.22
274	SLU 40	-21	-15	2612	-353.92	1.06	-7.22
274	SLU 41	-21	-15	2612	-353.92	1.06	-7.22
274	SLU 42	-21	-15	2612	-353.92	1.06	-7.22
274	SLU 43	-16	-12	2394	-351.56	0.84	-5.49
274	SLU 44	-16	-12	2394	-351.56	0.84	-5.49
274	SLU 45	-16	-12	2394	-351.56	0.84	-5.49
274	SLU 46	-16	-12	2394	-351.56	0.84	-5.49
274	SLU 47	-16	-12	2394	-351.56	0.84	-5.49
274	SLU 48	-16	-12	2394	-351.56	0.84	-5.49
274	SLU 49	-16	-12	2394	-351.56	0.84	-5.49
274	SLU 50	-16	-12	2394	-351.56	0.84	-5.49
274	SLU 51	-16	-12	2394	-351.56	0.84	-5.49
274	SLU 52	-19	-14	2718	-386.73	1.02	-6.78
274	SLU 53	-19	-14	2718	-386.73	1.02	-6.78
274	SLU 54	-19	-14	2718	-386.73	1.02	-6.78
274	SLU 55	-19	-14	2718	-386.73	1.02	-6.78
274	SLU 56	-19	-14	2718	-386.73	1.02	-6.78
274	SLU 57	-19	-14	2718	-386.73	1.02	-6.78
274	SLU 58	-19	-14	2718	-386.73	1.02	-6.78



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
274	SLU 59	-19	-14	2718	-386.73	1.02	-6.78
274	SLU 60	-21	-15	2858	-401.81	1.1	-7.33
274	SLU 61	-21	-15	2858	-401.81	1.1	-7.33
274	SLU 62	-21	-15	2858	-401.81	1.1	-7.33
274	SLU 63	-21	-15	2858	-401.81	1.1	-7.33
274	SLU 64	-18	-14	2637	-377.86	0.97	-6.41
274	SLU 65	-18	-14	2637	-377.86	0.97	-6.41
274	SLU 66	-18	-14	2637	-377.86	0.97	-6.41
274	SLU 67	-18	-14	2637	-377.86	0.97	-6.41
274	SLU 68	-18	-14	2637	-377.86	0.97	-6.41
274	SLU 69	-18	-14	2637	-377.86	0.97	-6.41
274	SLU 70	-18	-14	2637	-377.86	0.97	-6.41
274	SLU 71	-18	-14	2637	-377.86	0.97	-6.41
274	SLU 72	-18	-14	2637	-377.86	0.97	-6.41
274	SLU 73	-22	-16	2962	-413.04	1.15	-7.69
274	SLU 74	-22	-16	2962	-413.04	1.15	-7.69
274	SLU 75	-22	-16	2962	-413.04	1.15	-7.69
274	SLU 76	-22	-16	2962	-413.04	1.15	-7.69
274	SLU 77	-22	-16	2962	-413.04	1.15	-7.69
274	SLU 78	-22	-16	2962	-413.04	1.15	-7.69
274	SLU 79	-22	-16	2962	-413.04	1.15	-7.69
274	SLU 80	-22	-16	2962	-413.04	1.15	-7.69
274	SLU 81	-23	-17	3101	-428.11	1.22	-8.25
274	SLU 82	-23	-17	3101	-428.11	1.22	-8.25
274	SLU 83	-23	-17	3101	-428.11	1.22	-8.25
274	SLU 84	-23	-17	3101	-428.11	1.22	-8.25
274	SLE RA 1	-13	-10	1975	-284.88	0.72	-4.73
274	SLE RA 2	-13	-10	1975	-284.88	0.72	-4.73
274	SLE RA 3	-13	-10	1975	-284.88	0.72	-4.73
274	SLE RA 4	-13	-10	1975	-284.88	0.72	-4.73
274	SLE RA 5	-13	-10	1975	-284.88	0.72	-4.73
274	SLE RA 6	-13	-10	1975	-284.88	0.72	-4.73
274	SLE RA 7	-13	-10	1975	-284.88	0.72	-4.73
274	SLE RA 8	-13	-10	1975	-284.88	0.72	-4.73
274	SLE RA 9	-13	-10	1975	-284.88	0.72	-4.73
274	SLE RA 10	-16	-12	2191	-308.33	0.84	-5.59
274	SLE RA 11	-16	-12	2191	-308.33	0.84	-5.59
274	SLE RA 12	-16	-12	2191	-308.33	0.84	-5.59
274	SLE RA 13	-16	-12	2191	-308.33	0.84	-5.59
274	SLE RA 14	-16	-12	2191	-308.33	0.84	-5.59
274	SLE RA 15	-16	-12	2191	-308.33	0.84	-5.59
274	SLE RA 16	-16	-12	2191	-308.33	0.84	-5.59
274	SLE RA 17	-16	-12	2191	-308.33	0.84	-5.59
274	SLE RA 18	-17	-13	2284	-318.38	0.89	-5.95
274	SLE RA 19	-17	-13	2284	-318.38	0.89	-5.95
274	SLE RA 20	-17	-13	2284	-318.38	0.89	-5.95
274	SLE RA 21	-17	-13	2284	-318.38	0.89	-5.95
274	SLE FR 1	-13	-10	1975	-284.88	0.72	-4.73
274	SLE FR 2	-13	-10	1975	-284.88	0.72	-4.73
274	SLE FR 3	-13	-10	1975	-284.88	0.72	-4.73
274	SLE FR 4	-14	-11	2068	-294.93	0.77	-5.09
274	SLE FR 5	-14	-11	2068	-294.93	0.77	-5.09
274	SLE FR 6	-15	-11	2129	-301.63	0.8	-5.34
274	SLE QP 1	-13	-10	1975	-284.88	0.72	-4.73
274	SLE QP 2	-14	-11	2068	-294.93	0.77	-5.09
274	SLD 1	217	23	1832	-276.77	1.59	76.22
274	SLD 2	176	39	1828	-276.71	1.62	61.8
274	SLD 3	210	-69	2035	-293.28	1.46	73.23
274	SLD 4	169	-53	2032	-293.22	1.49	58.82
274	SLD 5	81	133	1689	-264.47	1.21	29.04
274	SLD 6	38	149	1686	-264.4	1.24	14.3
274	SLD 7	57	-173	2368	-319.5	0.76	19.08
274	SLD 8	15	-157	2365	-319.44	0.79	4.34
274	SLD 9	-44	135	1770	-270.43	0.75	-14.53
274	SLD 10	-86	151	1767	-270.37	0.78	-29.27
274	SLD 11	-67	-171	2450	-325.46	0.3	-24.49
274	SLD 12	-110	-155	2446	-325.4	0.33	-39.23
274	SLD 13	-198	31	2103	-296.65	0.05	-69.01
274	SLD 14	-239	47	2100	-296.58	0.08	-83.42
274	SLD 15	-205	-61	2307	-313.16	-0.08	-71.99
274	SLD 16	-246	-45	2304	-313.09	-0.05	-86.41
274	SLV 1	512	70	1524	-252.25	2.64	179.73
274	SLV 2	417	106	1516	-252.11	2.71	146.75
274	SLV 3	496	-146	2003	-291.85	2.33	172.74
274	SLV 4	401	-109	1995	-291.71	2.39	139.76
274	SLV 5	204	326	1181	-222.12	1.78	73.13
274	SLV 6	105	364	1173	-221.97	1.85	38.89
274	SLV 7	149	-391	2777	-354.12	0.73	49.82
274	SLV 8	50	-353	2769	-353.97	0.8	15.58
274	SLV 9	-79	331	1366	-235.89	0.74	-25.77
274	SLV 10	-178	369	1358	-235.74	0.8	-60.01
274	SLV 11	-134	-386	2962	-367.89	-0.31	-49.08
274	SLV 12	-232	-348	2954	-367.74	-0.25	-83.32
274	SLV 13	-430	87	2140	-298.15	-0.85	-149.95
274	SLV 14	-525	124	2133	-298.01	-0.79	-182.93
274	SLV 15	-446	-128	2619	-337.75	-1.17	-156.94
274	SLV 16	-541	-92	2611	-337.61	-1.1	-189.92
274	CRTFP Ux+	0	0	0	0	0	0
274	CRTFP Ux-	0	0	0	0	0	0
274	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
274	CRIFP Uy-	0	0	0	0	0	0
275	SLU 1	-12	-9	1941	-299.88	1.6	-4.36
275	SLU 2	-12	-9	1941	-299.88	1.6	-4.36
275	SLU 3	-12	-9	1941	-299.88	1.6	-4.36
275	SLU 4	-12	-9	1941	-299.88	1.6	-4.36
275	SLU 5	-12	-9	1941	-299.88	1.6	-4.36
275	SLU 6	-12	-9	1941	-299.88	1.6	-4.36
275	SLU 7	-12	-9	1941	-299.88	1.6	-4.36
275	SLU 8	-12	-9	1941	-299.88	1.6	-4.36
275	SLU 9	-12	-9	1941	-299.88	1.6	-4.36
275	SLU 10	-16	-11	2274	-339.86	1.96	-5.59
275	SLU 11	-16	-11	2274	-339.86	1.96	-5.59
275	SLU 12	-16	-11	2274	-339.86	1.96	-5.59
275	SLU 13	-16	-11	2274	-339.86	1.96	-5.59
275	SLU 14	-16	-11	2274	-339.86	1.96	-5.59
275	SLU 15	-16	-11	2274	-339.86	1.96	-5.59
275	SLU 16	-16	-11	2274	-339.86	1.96	-5.59
275	SLU 17	-16	-11	2274	-339.86	1.96	-5.59
275	SLU 18	-17	-12	2417	-356.99	2.12	-6.11
275	SLU 19	-17	-12	2417	-356.99	2.12	-6.11
275	SLU 20	-17	-12	2417	-356.99	2.12	-6.11
275	SLU 21	-17	-12	2417	-356.99	2.12	-6.11
275	SLU 22	-15	-10	2190	-329.78	1.87	-5.23
275	SLU 23	-15	-10	2190	-329.78	1.87	-5.23
275	SLU 24	-15	-10	2190	-329.78	1.87	-5.23
275	SLU 25	-15	-10	2190	-329.78	1.87	-5.23
275	SLU 26	-15	-10	2190	-329.78	1.87	-5.23
275	SLU 27	-15	-10	2190	-329.78	1.87	-5.23
275	SLU 28	-15	-10	2190	-329.78	1.87	-5.23
275	SLU 29	-15	-10	2190	-329.78	1.87	-5.23
275	SLU 30	-15	-10	2190	-329.78	1.87	-5.23
275	SLU 31	-18	-13	2523	-369.76	2.23	-6.46
275	SLU 32	-18	-13	2523	-369.76	2.23	-6.46
275	SLU 33	-18	-13	2523	-369.76	2.23	-6.46
275	SLU 34	-18	-13	2523	-369.76	2.23	-6.46
275	SLU 35	-18	-13	2523	-369.76	2.23	-6.46
275	SLU 36	-18	-13	2523	-369.76	2.23	-6.46
275	SLU 37	-18	-13	2523	-369.76	2.23	-6.46
275	SLU 38	-18	-13	2523	-369.76	2.23	-6.46
275	SLU 39	-20	-13	2666	-386.89	2.39	-6.98
275	SLU 40	-20	-13	2666	-386.89	2.39	-6.98
275	SLU 41	-20	-13	2666	-386.89	2.39	-6.98
275	SLU 42	-20	-13	2666	-386.89	2.39	-6.98
275	SLU 43	-15	-11	2437	-379.59	1.99	-5.37
275	SLU 44	-15	-11	2437	-379.59	1.99	-5.37
275	SLU 45	-15	-11	2437	-379.59	1.99	-5.37
275	SLU 46	-15	-11	2437	-379.59	1.99	-5.37
275	SLU 47	-15	-11	2437	-379.59	1.99	-5.37
275	SLU 48	-15	-11	2437	-379.59	1.99	-5.37
275	SLU 49	-15	-11	2437	-379.59	1.99	-5.37
275	SLU 50	-15	-11	2437	-379.59	1.99	-5.37
275	SLU 51	-15	-11	2437	-379.59	1.99	-5.37
275	SLU 52	-19	-13	2771	-419.57	2.35	-6.6
275	SLU 53	-19	-13	2771	-419.57	2.35	-6.6
275	SLU 54	-19	-13	2771	-419.57	2.35	-6.6
275	SLU 55	-19	-13	2771	-419.57	2.35	-6.6
275	SLU 56	-19	-13	2771	-419.57	2.35	-6.6
275	SLU 57	-19	-13	2771	-419.57	2.35	-6.6
275	SLU 58	-19	-13	2771	-419.57	2.35	-6.6
275	SLU 59	-19	-13	2771	-419.57	2.35	-6.6
275	SLU 60	-20	-14	2913	-436.7	2.51	-7.12
275	SLU 61	-20	-14	2913	-436.7	2.51	-7.12
275	SLU 62	-20	-14	2913	-436.7	2.51	-7.12
275	SLU 63	-20	-14	2913	-436.7	2.51	-7.12
275	SLU 64	-18	-12	2687	-409.49	2.26	-6.24
275	SLU 65	-18	-12	2687	-409.49	2.26	-6.24
275	SLU 66	-18	-12	2687	-409.49	2.26	-6.24
275	SLU 67	-18	-12	2687	-409.49	2.26	-6.24
275	SLU 68	-18	-12	2687	-409.49	2.26	-6.24
275	SLU 69	-18	-12	2687	-409.49	2.26	-6.24
275	SLU 70	-18	-12	2687	-409.49	2.26	-6.24
275	SLU 71	-18	-12	2687	-409.49	2.26	-6.24
275	SLU 72	-18	-12	2687	-409.49	2.26	-6.24
275	SLU 73	-21	-15	3020	-449.47	2.62	-7.47
275	SLU 74	-21	-15	3020	-449.47	2.62	-7.47
275	SLU 75	-21	-15	3020	-449.47	2.62	-7.47
275	SLU 76	-21	-15	3020	-449.47	2.62	-7.47
275	SLU 77	-21	-15	3020	-449.47	2.62	-7.47
275	SLU 78	-21	-15	3020	-449.47	2.62	-7.47
275	SLU 79	-21	-15	3020	-449.47	2.62	-7.47
275	SLU 80	-21	-15	3020	-449.47	2.62	-7.47
275	SLU 81	-23	-16	3163	-466.6	2.78	-7.99
275	SLU 82	-23	-16	3163	-466.6	2.78	-7.99
275	SLU 83	-23	-16	3163	-466.6	2.78	-7.99
275	SLU 84	-23	-16	3163	-466.6	2.78	-7.99
275	SLE RA 1	-13	-9	2012	-308.42	1.68	-4.61
275	SLE RA 2	-13	-9	2012	-308.42	1.68	-4.61
275	SLE RA 3	-13	-9	2012	-308.42	1.68	-4.61
275	SLE RA 4	-13	-9	2012	-308.42	1.68	-4.61
275	SLE RA 5	-13	-9	2012	-308.42	1.68	-4.61



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
Ind.	N.br.	x	y	z		x	y	z	
275	SLE RA 6	-13	-9	2012		-308.42	1.68	-4.61	
275	SLE RA 7	-13	-9	2012		-308.42	1.68	-4.61	
275	SLE RA 8	-13	-9	2012		-308.42	1.68	-4.61	
275	SLE RA 9	-13	-9	2012		-308.42	1.68	-4.61	
275	SLE RA 10	-15	-11	2234		-335.07	1.92	-5.43	
275	SLE RA 11	-15	-11	2234		-335.07	1.92	-5.43	
275	SLE RA 12	-15	-11	2234		-335.07	1.92	-5.43	
275	SLE RA 13	-15	-11	2234		-335.07	1.92	-5.43	
275	SLE RA 14	-15	-11	2234		-335.07	1.92	-5.43	
275	SLE RA 15	-15	-11	2234		-335.07	1.92	-5.43	
275	SLE RA 16	-15	-11	2234		-335.07	1.92	-5.43	
275	SLE RA 17	-15	-11	2234		-335.07	1.92	-5.43	
275	SLE RA 18	-16	-11	2329		-346.5	2.02	-5.78	
275	SLE RA 19	-16	-11	2329		-346.5	2.02	-5.78	
275	SLE RA 20	-16	-11	2329		-346.5	2.02	-5.78	
275	SLE RA 21	-16	-11	2329		-346.5	2.02	-5.78	
275	SLE FR 1	-13	-9	2012		-308.42	1.68	-4.61	
275	SLE FR 2	-13	-9	2012		-308.42	1.68	-4.61	
275	SLE FR 3	-13	-9	2012		-308.42	1.68	-4.61	
275	SLE FR 4	-14	-10	2107		-319.84	1.78	-4.96	
275	SLE FR 5	-14	-10	2107		-319.84	1.78	-4.96	
275	SLE FR 6	-15	-10	2171		-327.46	1.85	-5.19	
275	SLE QP 1	-13	-9	2012		-308.42	1.68	-4.61	
275	SLE QP 2	-14	-10	2107		-319.84	1.78	-4.96	
275	SLD 1	218	17	1895		-305.72	2.44	76.42	
275	SLD 2	176	31	1892		-305.72	2.47	61.98	
275	SLD 3	211	-57	2096		-323.18	2.47	73.41	
275	SLD 4	169	-44	2094		-323.19	2.49	58.97	
275	SLD 5	82	107	1738		-289.12	1.94	29.24	
275	SLD 6	39	120	1736		-289.12	1.96	14.48	
275	SLD 7	57	-142	2411		-347.33	2.01	19.19	
275	SLD 8	15	-128	2408		-347.34	2.04	4.44	
275	SLD 9	-43	109	1806		-292.35	1.53	-14.36	
275	SLD 10	-85	122	1803		-292.36	1.55	-29.11	
275	SLD 11	-67	-140	2479		-350.56	1.6	-24.4	
275	SLD 12	-110	-126	2476		-350.57	1.63	-39.15	
275	SLD 13	-197	24	2120		-316.5	1.07	-68.89	
275	SLD 14	-239	38	2118		-316.5	1.1	-83.32	
275	SLD 15	-205	-50	2322		-333.96	1.1	-71.9	
275	SLD 16	-246	-37	2320		-333.97	1.12	-86.34	
275	SLV 1	513	54	1617		-285.96	3.28	180.01	
275	SLV 2	418	85	1611		-285.97	3.34	146.99	
275	SLV 3	496	-120	2091		-327.75	3.33	172.96	
275	SLV 4	401	-90	2085		-327.76	3.39	139.94	
275	SLV 5	205	263	1243		-246.29	2.13	73.42	
275	SLV 6	106	295	1237		-246.3	2.19	39.14	
275	SLV 7	148	-319	2823		-385.59	2.31	49.9	
275	SLV 8	50	-288	2818		-385.61	2.36	15.62	
275	SLV 9	-78	268	1397		-254.08	1.2	-25.54	
275	SLV 10	-176	300	1391		-254.09	1.26	-59.82	
275	SLV 11	-135	-315	2977		-393.38	1.37	-49.06	
275	SLV 12	-233	-283	2971		-393.4	1.43	-83.34	
275	SLV 13	-429	70	2129		-311.92	0.17	-149.86	
275	SLV 14	-524	101	2124		-311.94	0.23	-182.87	
275	SLV 15	-446	-105	2603		-353.72	0.23	-156.91	
275	SLV 16	-541	-74	2598		-353.73	0.28	-189.93	
275	CRTFP Ux+	0	0	0		0	0	0	
275	CRTFP Ux-	0	0	0		0	0	0	
275	CRTFP Uy+	0	0	0		0	0	0	
275	CRTFP Uy-	0	0	0		0	0	0	
276	SLU 1	-12	-7	2004		-342.6	2.43	-4.25	
276	SLU 2	-12	-7	2004		-342.6	2.43	-4.25	
276	SLU 3	-12	-7	2004		-342.6	2.43	-4.25	
276	SLU 4	-12	-7	2004		-342.6	2.43	-4.25	
276	SLU 5	-12	-7	2004		-342.6	2.43	-4.25	
276	SLU 6	-12	-7	2004		-342.6	2.43	-4.25	
276	SLU 7	-12	-7	2004		-342.6	2.43	-4.25	
276	SLU 8	-12	-7	2004		-342.6	2.43	-4.25	
276	SLU 9	-12	-7	2004		-342.6	2.43	-4.25	
276	SLU 10	-15	-9	2351		-391.5	2.96	-5.41	
276	SLU 11	-15	-9	2351		-391.5	2.96	-5.41	
276	SLU 12	-15	-9	2351		-391.5	2.96	-5.41	
276	SLU 13	-15	-9	2351		-391.5	2.96	-5.41	
276	SLU 14	-15	-9	2351		-391.5	2.96	-5.41	
276	SLU 15	-15	-9	2351		-391.5	2.96	-5.41	
276	SLU 16	-15	-9	2351		-391.5	2.96	-5.41	
276	SLU 17	-15	-9	2351		-391.5	2.96	-5.41	
276	SLU 18	-17	-10	2500		-412.46	3.18	-5.91	
276	SLU 19	-17	-10	2500		-412.46	3.18	-5.91	
276	SLU 20	-17	-10	2500		-412.46	3.18	-5.91	
276	SLU 21	-17	-10	2500		-412.46	3.18	-5.91	
276	SLU 22	-14	-9	2263		-379.19	2.82	-5.08	
276	SLU 23	-14	-9	2263		-379.19	2.82	-5.08	
276	SLU 24	-14	-9	2263		-379.19	2.82	-5.08	
276	SLU 25	-14	-9	2263		-379.19	2.82	-5.08	
276	SLU 26	-14	-9	2263		-379.19	2.82	-5.08	
276	SLU 27	-14	-9	2263		-379.19	2.82	-5.08	
276	SLU 28	-14	-9	2263		-379.19	2.82	-5.08	
276	SLU 29	-14	-9	2263		-379.19	2.82	-5.08	
276	SLU 30	-14	-9	2263		-379.19	2.82	-5.08	



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
276	SLU 31	-18	-11	2610	-428.09	3.35	-6.24
276	SLU 32	-18	-11	2610	-428.09	3.35	-6.24
276	SLU 33	-18	-11	2610	-428.09	3.35	-6.24
276	SLU 34	-18	-11	2610	-428.09	3.35	-6.24
276	SLU 35	-18	-11	2610	-428.09	3.35	-6.24
276	SLU 36	-18	-11	2610	-428.09	3.35	-6.24
276	SLU 37	-18	-11	2610	-428.09	3.35	-6.24
276	SLU 38	-18	-11	2610	-428.09	3.35	-6.24
276	SLU 39	-19	-12	2759	-449.04	3.57	-6.73
276	SLU 40	-19	-12	2759	-449.04	3.57	-6.73
276	SLU 41	-19	-12	2759	-449.04	3.57	-6.73
276	SLU 42	-19	-12	2759	-449.04	3.57	-6.73
276	SLU 43	-15	-9	2516	-432.84	3.02	-5.25
276	SLU 44	-15	-9	2516	-432.84	3.02	-5.25
276	SLU 45	-15	-9	2516	-432.84	3.02	-5.25
276	SLU 46	-15	-9	2516	-432.84	3.02	-5.25
276	SLU 47	-15	-9	2516	-432.84	3.02	-5.25
276	SLU 48	-15	-9	2516	-432.84	3.02	-5.25
276	SLU 49	-15	-9	2516	-432.84	3.02	-5.25
276	SLU 50	-15	-9	2516	-432.84	3.02	-5.25
276	SLU 51	-15	-9	2516	-432.84	3.02	-5.25
276	SLU 52	-18	-11	2863	-481.74	3.55	-6.4
276	SLU 53	-18	-11	2863	-481.74	3.55	-6.4
276	SLU 54	-18	-11	2863	-481.74	3.55	-6.4
276	SLU 55	-18	-11	2863	-481.74	3.55	-6.4
276	SLU 56	-18	-11	2863	-481.74	3.55	-6.4
276	SLU 57	-18	-11	2863	-481.74	3.55	-6.4
276	SLU 58	-18	-11	2863	-481.74	3.55	-6.4
276	SLU 59	-18	-11	2863	-481.74	3.55	-6.4
276	SLU 60	-20	-12	3012	-502.7	3.78	-6.9
276	SLU 61	-20	-12	3012	-502.7	3.78	-6.9
276	SLU 62	-20	-12	3012	-502.7	3.78	-6.9
276	SLU 63	-20	-12	3012	-502.7	3.78	-6.9
276	SLU 64	-17	-11	2775	-469.43	3.41	-6.07
276	SLU 65	-17	-11	2775	-469.43	3.41	-6.07
276	SLU 66	-17	-11	2775	-469.43	3.41	-6.07
276	SLU 67	-17	-11	2775	-469.43	3.41	-6.07
276	SLU 68	-17	-11	2775	-469.43	3.41	-6.07
276	SLU 69	-17	-11	2775	-469.43	3.41	-6.07
276	SLU 70	-17	-11	2775	-469.43	3.41	-6.07
276	SLU 71	-17	-11	2775	-469.43	3.41	-6.07
276	SLU 72	-17	-11	2775	-469.43	3.41	-6.07
276	SLU 73	-20	-13	3122	-518.32	3.94	-7.23
276	SLU 74	-20	-13	3122	-518.32	3.94	-7.23
276	SLU 75	-20	-13	3122	-518.32	3.94	-7.23
276	SLU 76	-20	-13	3122	-518.32	3.94	-7.23
276	SLU 77	-20	-13	3122	-518.32	3.94	-7.23
276	SLU 78	-20	-13	3122	-518.32	3.94	-7.23
276	SLU 79	-20	-13	3122	-518.32	3.94	-7.23
276	SLU 80	-20	-13	3122	-518.32	3.94	-7.23
276	SLU 81	-22	-13	3271	-539.28	4.17	-7.73
276	SLU 82	-22	-13	3271	-539.28	4.17	-7.73
276	SLU 83	-22	-13	3271	-539.28	4.17	-7.73
276	SLU 84	-22	-13	3271	-539.28	4.17	-7.73
276	SLE RA 1	-13	-8	2078	-353.06	2.54	-4.49
276	SLE RA 2	-13	-8	2078	-353.06	2.54	-4.49
276	SLE RA 3	-13	-8	2078	-353.06	2.54	-4.49
276	SLE RA 4	-13	-8	2078	-353.06	2.54	-4.49
276	SLE RA 5	-13	-8	2078	-353.06	2.54	-4.49
276	SLE RA 6	-13	-8	2078	-353.06	2.54	-4.49
276	SLE RA 7	-13	-8	2078	-353.06	2.54	-4.49
276	SLE RA 8	-13	-8	2078	-353.06	2.54	-4.49
276	SLE RA 9	-13	-8	2078	-353.06	2.54	-4.49
276	SLE RA 10	-15	-9	2309	-385.66	2.89	-5.26
276	SLE RA 11	-15	-9	2309	-385.66	2.89	-5.26
276	SLE RA 12	-15	-9	2309	-385.66	2.89	-5.26
276	SLE RA 13	-15	-9	2309	-385.66	2.89	-5.26
276	SLE RA 14	-15	-9	2309	-385.66	2.89	-5.26
276	SLE RA 15	-15	-9	2309	-385.66	2.89	-5.26
276	SLE RA 16	-15	-9	2309	-385.66	2.89	-5.26
276	SLE RA 17	-15	-9	2309	-385.66	2.89	-5.26
276	SLE RA 18	-16	-10	2408	-399.63	3.04	-5.59
276	SLE RA 19	-16	-10	2408	-399.63	3.04	-5.59
276	SLE RA 20	-16	-10	2408	-399.63	3.04	-5.59
276	SLE RA 21	-16	-10	2408	-399.63	3.04	-5.59
276	SLE FR 1	-13	-8	2078	-353.06	2.54	-4.49
276	SLE FR 2	-13	-8	2078	-353.06	2.54	-4.49
276	SLE FR 3	-13	-8	2078	-353.06	2.54	-4.49
276	SLE FR 4	-14	-8	2177	-367.03	2.69	-4.82
276	SLE FR 5	-14	-8	2177	-367.03	2.69	-4.82
276	SLE FR 6	-14	-9	2243	-376.34	2.79	-5.04
276	SLE QP 1	-13	-8	2078	-353.06	2.54	-4.49
276	SLE QP 2	-14	-8	2177	-367.03	2.69	-4.82
276	SLD 1	218	13	1983	-352.77	3.23	76.59
276	SLD 2	177	24	1982	-352.81	3.25	62.14
276	SLD 3	211	-47	2187	-373.69	3.37	73.56
276	SLD 4	169	-36	2186	-373.72	3.39	59.11
276	SLD 5	82	84	1810	-331.02	2.63	29.41
276	SLD 6	40	95	1808	-331.05	2.65	14.65
276	SLD 7	57	-114	2490	-400.74	3.1	19.32



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione			
Ind.	N.br.	x	y	z		x	y	z	
276	SLD 8	15	-103	2488		-400.77	3.12	4.55	
276	SLD 9	-42	86	1865		-333.28	2.26	-14.19	
276	SLD 10	-85	97	1864		-333.32	2.28	-28.96	
276	SLD 11	-67	-112	2546		-403	2.73	-24.29	
276	SLD 12	-110	-101	2544		-403.04	2.75	-39.05	
276	SLD 13	-197	19	2168		-360.33	1.99	-68.76	
276	SLD 14	-238	30	2166		-360.37	2.01	-83.2	
276	SLD 15	-204	-41	2372		-381.25	2.13	-71.78	
276	SLD 16	-246	-30	2371		-381.28	2.15	-86.23	
276	SLV 1	514	41	1729		-332.53	3.91	180.23	
276	SLV 2	419	67	1725		-332.61	3.96	147.18	
276	SLV 3	496	-98	2209		-382.29	4.24	173.13	
276	SLV 4	401	-73	2205		-382.37	4.29	140.09	
276	SLV 5	206	208	1317		-281.18	2.54	73.65	
276	SLV 6	108	235	1313		-281.26	2.59	39.34	
276	SLV 7	148	-256	2915		-447.05	3.64	50.01	
276	SLV 8	49	-230	2911		-447.13	3.69	15.7	
276	SLV 9	-77	213	1443		-286.92	1.69	-25.34	
276	SLV 10	-175	239	1439		-287.01	1.74	-59.65	
276	SLV 11	-135	-251	3041		-452.8	2.79	-48.98	
276	SLV 12	-234	-225	3037		-452.88	2.84	-83.29	
276	SLV 13	-429	56	2149		-351.69	1.09	-149.73	
276	SLV 14	-524	81	2145		-351.76	1.14	-182.78	
276	SLV 15	-446	-83	2629		-401.45	1.42	-156.82	
276	SLV 16	-541	-58	2625		-401.53	1.47	-189.87	
276	CRTFP Ux+	0	0	0		0	0	0	
276	CRTFP Ux-	0	0	0		0	0	0	
276	CRTFP Uy+	0	0	0		0	0	0	
276	CRTFP Uy-	0	0	0		0	0	0	
277	SLU 1	-12	-6	2090		-403.09	3.11	-4.14	
277	SLU 2	-12	-6	2090		-403.09	3.11	-4.14	
277	SLU 3	-12	-6	2090		-403.09	3.11	-4.14	
277	SLU 4	-12	-6	2090		-403.09	3.11	-4.14	
277	SLU 5	-12	-6	2090		-403.09	3.11	-4.14	
277	SLU 6	-12	-6	2090		-403.09	3.11	-4.14	
277	SLU 7	-12	-6	2090		-403.09	3.11	-4.14	
277	SLU 8	-12	-6	2090		-403.09	3.11	-4.14	
277	SLU 9	-12	-6	2090		-403.09	3.11	-4.14	
277	SLU 10	-15	-8	2456		-464.57	3.78	-5.23	
277	SLU 11	-15	-8	2456		-464.57	3.78	-5.23	
277	SLU 12	-15	-8	2456		-464.57	3.78	-5.23	
277	SLU 13	-15	-8	2456		-464.57	3.78	-5.23	
277	SLU 14	-15	-8	2456		-464.57	3.78	-5.23	
277	SLU 15	-15	-8	2456		-464.57	3.78	-5.23	
277	SLU 16	-15	-8	2456		-464.57	3.78	-5.23	
277	SLU 17	-15	-8	2456		-464.57	3.78	-5.23	
277	SLU 18	-16	-9	2613		-490.91	4.06	-5.69	
277	SLU 19	-16	-9	2613		-490.91	4.06	-5.69	
277	SLU 20	-16	-9	2613		-490.91	4.06	-5.69	
277	SLU 21	-16	-9	2613		-490.91	4.06	-5.69	
277	SLU 22	-14	-7	2364		-449.1	3.6	-4.92	
277	SLU 23	-14	-7	2364		-449.1	3.6	-4.92	
277	SLU 24	-14	-7	2364		-449.1	3.6	-4.92	
277	SLU 25	-14	-7	2364		-449.1	3.6	-4.92	
277	SLU 26	-14	-7	2364		-449.1	3.6	-4.92	
277	SLU 27	-14	-7	2364		-449.1	3.6	-4.92	
277	SLU 28	-14	-7	2364		-449.1	3.6	-4.92	
277	SLU 29	-14	-7	2364		-449.1	3.6	-4.92	
277	SLU 30	-14	-7	2364		-449.1	3.6	-4.92	
277	SLU 31	-17	-9	2730		-510.57	4.27	-6.01	
277	SLU 32	-17	-9	2730		-510.57	4.27	-6.01	
277	SLU 33	-17	-9	2730		-510.57	4.27	-6.01	
277	SLU 34	-17	-9	2730		-510.57	4.27	-6.01	
277	SLU 35	-17	-9	2730		-510.57	4.27	-6.01	
277	SLU 36	-17	-9	2730		-510.57	4.27	-6.01	
277	SLU 37	-17	-9	2730		-510.57	4.27	-6.01	
277	SLU 38	-17	-9	2730		-510.57	4.27	-6.01	
277	SLU 39	-18	-10	2886		-536.92	4.56	-6.47	
277	SLU 40	-18	-10	2886		-536.92	4.56	-6.47	
277	SLU 41	-18	-10	2886		-536.92	4.56	-6.47	
277	SLU 42	-18	-10	2886		-536.92	4.56	-6.47	
277	SLU 43	-14	-8	2623		-508.25	3.87	-5.12	
277	SLU 44	-14	-8	2623		-508.25	3.87	-5.12	
277	SLU 45	-14	-8	2623		-508.25	3.87	-5.12	
277	SLU 46	-14	-8	2623		-508.25	3.87	-5.12	
277	SLU 47	-14	-8	2623		-508.25	3.87	-5.12	
277	SLU 48	-14	-8	2623		-508.25	3.87	-5.12	
277	SLU 49	-14	-8	2623		-508.25	3.87	-5.12	
277	SLU 50	-14	-8	2623		-508.25	3.87	-5.12	
277	SLU 51	-14	-8	2623		-508.25	3.87	-5.12	
277	SLU 52	-18	-9	2989		-569.72	4.54	-6.21	
277	SLU 53	-18	-9	2989		-569.72	4.54	-6.21	
277	SLU 54	-18	-9	2989		-569.72	4.54	-6.21	
277	SLU 55	-18	-9	2989		-569.72	4.54	-6.21	
277	SLU 56	-18	-9	2989		-569.72	4.54	-6.21	
277	SLU 57	-18	-9	2989		-569.72	4.54	-6.21	
277	SLU 58	-18	-9	2989		-569.72	4.54	-6.21	
277	SLU 59	-18	-9	2989		-569.72	4.54	-6.21	
277	SLU 60	-19	-10	3146		-596.07	4.82	-6.67	
277	SLU 61	-19	-10	3146		-596.07	4.82	-6.67	



Nodo	Cont.	Reazione a traslazione				Reazione a rotazione		
		x	y	z		x	y	z
277	SLU 62	-19	-10	3146		-596.07	4.82	-6.67
277	SLU 63	-19	-10	3146		-596.07	4.82	-6.67
277	SLU 64	-17	-9	2897		-554.25	4.37	-5.9
277	SLU 65	-17	-9	2897		-554.25	4.37	-5.9
277	SLU 66	-17	-9	2897		-554.25	4.37	-5.9
277	SLU 67	-17	-9	2897		-554.25	4.37	-5.9
277	SLU 68	-17	-9	2897		-554.25	4.37	-5.9
277	SLU 69	-17	-9	2897		-554.25	4.37	-5.9
277	SLU 70	-17	-9	2897		-554.25	4.37	-5.9
277	SLU 71	-17	-9	2897		-554.25	4.37	-5.9
277	SLU 72	-17	-9	2897		-554.25	4.37	-5.9
277	SLU 73	-20	-10	3263		-615.73	5.03	-6.98
277	SLU 74	-20	-10	3263		-615.73	5.03	-6.98
277	SLU 75	-20	-10	3263		-615.73	5.03	-6.98
277	SLU 76	-20	-10	3263		-615.73	5.03	-6.98
277	SLU 77	-20	-10	3263		-615.73	5.03	-6.98
277	SLU 78	-20	-10	3263		-615.73	5.03	-6.98
277	SLU 79	-20	-10	3263		-615.73	5.03	-6.98
277	SLU 80	-20	-10	3263		-615.73	5.03	-6.98
277	SLU 81	-21	-11	3420		-642.07	5.32	-7.45
277	SLU 82	-21	-11	3420		-642.07	5.32	-7.45
277	SLU 83	-21	-11	3420		-642.07	5.32	-7.45
277	SLU 84	-21	-11	3420		-642.07	5.32	-7.45
277	SLE RA 1	-12	-6	2168		-416.24	3.25	-4.37
277	SLE RA 2	-12	-6	2168		-416.24	3.25	-4.37
277	SLE RA 3	-12	-6	2168		-416.24	3.25	-4.37
277	SLE RA 4	-12	-6	2168		-416.24	3.25	-4.37
277	SLE RA 5	-12	-6	2168		-416.24	3.25	-4.37
277	SLE RA 6	-12	-6	2168		-416.24	3.25	-4.37
277	SLE RA 7	-12	-6	2168		-416.24	3.25	-4.37
277	SLE RA 8	-12	-6	2168		-416.24	3.25	-4.37
277	SLE RA 9	-12	-6	2168		-416.24	3.25	-4.37
277	SLE RA 10	-14	-8	2412		-457.22	3.69	-5.09
277	SLE RA 11	-14	-8	2412		-457.22	3.69	-5.09
277	SLE RA 12	-14	-8	2412		-457.22	3.69	-5.09
277	SLE RA 13	-14	-8	2412		-457.22	3.69	-5.09
277	SLE RA 14	-14	-8	2412		-457.22	3.69	-5.09
277	SLE RA 15	-14	-8	2412		-457.22	3.69	-5.09
277	SLE RA 16	-14	-8	2412		-457.22	3.69	-5.09
277	SLE RA 17	-14	-8	2412		-457.22	3.69	-5.09
277	SLE RA 18	-15	-8	2517		-474.78	3.88	-5.4
277	SLE RA 19	-15	-8	2517		-474.78	3.88	-5.4
277	SLE RA 20	-15	-8	2517		-474.78	3.88	-5.4
277	SLE RA 21	-15	-8	2517		-474.78	3.88	-5.4
277	SLE FR 1	-12	-6	2168		-416.24	3.25	-4.37
277	SLE FR 2	-12	-6	2168		-416.24	3.25	-4.37
277	SLE FR 3	-12	-6	2168		-416.24	3.25	-4.37
277	SLE FR 4	-13	-7	2273		-433.8	3.44	-4.68
277	SLE FR 5	-13	-7	2273		-433.8	3.44	-4.68
277	SLE FR 6	-14	-7	2343		-445.51	3.57	-4.88
277	SLE QP 1	-12	-6	2168		-416.24	3.25	-4.37
277	SLE QP 2	-13	-7	2273		-433.8	3.44	-4.68
277	SLD 1	219	9	2095		-424.58	3.88	76.74
277	SLD 2	178	18	2093		-424.64	3.9	62.29
277	SLD 3	211	-38	2305		-451.31	4.13	73.71
277	SLD 4	170	-29	2304		-451.37	4.15	59.25
277	SLD 5	83	65	1901		-390.47	3.19	29.57
277	SLD 6	41	74	1900		-390.53	3.21	14.8
277	SLD 7	57	-90	2601		-479.58	4.02	19.45
277	SLD 8	15	-81	2600		-479.63	4.04	4.68
277	SLD 9	-41	67	1945		-387.97	2.84	-14.03
277	SLD 10	-84	76	1944		-388.03	2.86	-28.8
277	SLD 11	-67	-88	2646		-477.07	3.68	-24.15
277	SLD 12	-110	-79	2645		-477.13	3.69	-38.93
277	SLD 13	-196	15	2242		-416.23	2.73	-68.6
277	SLD 14	-238	24	2241		-416.29	2.75	-83.06
277	SLD 15	-204	-32	2452		-442.97	2.98	-71.64
277	SLD 16	-245	-23	2451		-443.02	3	-86.09
277	SLV 1	515	30	1860		-412.38	4.44	180.39
277	SLV 2	420	51	1857		-412.51	4.48	147.32
277	SLV 3	497	-79	2353		-475.63	5.02	173.28
277	SLV 4	402	-58	2351		-475.76	5.06	140.21
277	SLV 5	207	162	1402		-331.4	2.84	73.83
277	SLV 6	109	183	1399		-331.53	2.88	39.5
277	SLV 7	147	-201	3046		-542.24	4.79	50.13
277	SLV 8	49	-180	3044		-542.37	4.83	15.8
277	SLV 9	-75	166	1502		-325.24	2.05	-25.16
277	SLV 10	-174	187	1499		-325.37	2.1	-59.48
277	SLV 11	-135	-197	3147		-536.08	4	-48.85
277	SLV 12	-234	-176	3144		-536.21	4.04	-83.18
277	SLV 13	-428	44	2195		-391.85	1.82	-149.57
277	SLV 14	-523	65	2192		-391.97	1.86	-182.63
277	SLV 15	-446	-65	2688		-455.1	2.41	-156.68
277	SLV 16	-541	-44	2686		-455.22	2.45	-189.74
277	CRTFP Ux+	0	0	0		0	0	0
277	CRTFP Ux-	0	0	0		0	0	0
277	CRTFP Uy+	0	0	0		0	0	0
277	CRTFP Uy-	0	0	0		0	0	0
278	SLU 1	-11	-5	2195		-477.72	3.57	-4.03
278	SLU 2	-11	-5	2195		-477.72	3.57	-4.03



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
278	SLU 3	-11	-5	2195	-477.72	3.57	-4.03
278	SLU 4	-11	-5	2195	-477.72	3.57	-4.03
278	SLU 5	-11	-5	2195	-477.72	3.57	-4.03
278	SLU 6	-11	-5	2195	-477.72	3.57	-4.03
278	SLU 7	-11	-5	2195	-477.72	3.57	-4.03
278	SLU 8	-11	-5	2195	-477.72	3.57	-4.03
278	SLU 9	-11	-5	2195	-477.72	3.57	-4.03
278	SLU 10	-14	-6	2583	-554.7	4.32	-5.04
278	SLU 11	-14	-6	2583	-554.7	4.32	-5.04
278	SLU 12	-14	-6	2583	-554.7	4.32	-5.04
278	SLU 13	-14	-6	2583	-554.7	4.32	-5.04
278	SLU 14	-14	-6	2583	-554.7	4.32	-5.04
278	SLU 15	-14	-6	2583	-554.7	4.32	-5.04
278	SLU 16	-14	-6	2583	-554.7	4.32	-5.04
278	SLU 17	-14	-6	2583	-554.7	4.32	-5.04
278	SLU 18	-15	-6	2749	-587.7	4.65	-5.47
278	SLU 19	-15	-6	2749	-587.7	4.65	-5.47
278	SLU 20	-15	-6	2749	-587.7	4.65	-5.47
278	SLU 21	-15	-6	2749	-587.7	4.65	-5.47
278	SLU 22	-13	-6	2485	-535.34	4.13	-4.76
278	SLU 23	-13	-6	2485	-535.34	4.13	-4.76
278	SLU 24	-13	-6	2485	-535.34	4.13	-4.76
278	SLU 25	-13	-6	2485	-535.34	4.13	-4.76
278	SLU 26	-13	-6	2485	-535.34	4.13	-4.76
278	SLU 27	-13	-6	2485	-535.34	4.13	-4.76
278	SLU 28	-13	-6	2485	-535.34	4.13	-4.76
278	SLU 29	-13	-6	2485	-535.34	4.13	-4.76
278	SLU 30	-13	-6	2485	-535.34	4.13	-4.76
278	SLU 31	-16	-7	2873	-612.32	4.89	-5.76
278	SLU 32	-16	-7	2873	-612.32	4.89	-5.76
278	SLU 33	-16	-7	2873	-612.32	4.89	-5.76
278	SLU 34	-16	-7	2873	-612.32	4.89	-5.76
278	SLU 35	-16	-7	2873	-612.32	4.89	-5.76
278	SLU 36	-16	-7	2873	-612.32	4.89	-5.76
278	SLU 37	-16	-7	2873	-612.32	4.89	-5.76
278	SLU 38	-16	-7	2873	-612.32	4.89	-5.76
278	SLU 39	-17	-7	3039	-645.31	5.21	-6.19
278	SLU 40	-17	-7	3039	-645.31	5.21	-6.19
278	SLU 41	-17	-7	3039	-645.31	5.21	-6.19
278	SLU 42	-17	-7	3039	-645.31	5.21	-6.19
278	SLU 43	-14	-6	2754	-601.28	4.45	-5
278	SLU 44	-14	-6	2754	-601.28	4.45	-5
278	SLU 45	-14	-6	2754	-601.28	4.45	-5
278	SLU 46	-14	-6	2754	-601.28	4.45	-5
278	SLU 47	-14	-6	2754	-601.28	4.45	-5
278	SLU 48	-14	-6	2754	-601.28	4.45	-5
278	SLU 49	-14	-6	2754	-601.28	4.45	-5
278	SLU 50	-14	-6	2754	-601.28	4.45	-5
278	SLU 51	-14	-6	2754	-601.28	4.45	-5
278	SLU 52	-17	-7	3142	-678.26	5.2	-6
278	SLU 53	-17	-7	3142	-678.26	5.2	-6
278	SLU 54	-17	-7	3142	-678.26	5.2	-6
278	SLU 55	-17	-7	3142	-678.26	5.2	-6
278	SLU 56	-17	-7	3142	-678.26	5.2	-6
278	SLU 57	-17	-7	3142	-678.26	5.2	-6
278	SLU 58	-17	-7	3142	-678.26	5.2	-6
278	SLU 59	-17	-7	3142	-678.26	5.2	-6
278	SLU 60	-18	-8	3308	-711.26	5.53	-6.43
278	SLU 61	-18	-8	3308	-711.26	5.53	-6.43
278	SLU 62	-18	-8	3308	-711.26	5.53	-6.43
278	SLU 63	-18	-8	3308	-711.26	5.53	-6.43
278	SLU 64	-16	-7	3044	-658.9	5.01	-5.72
278	SLU 65	-16	-7	3044	-658.9	5.01	-5.72
278	SLU 66	-16	-7	3044	-658.9	5.01	-5.72
278	SLU 67	-16	-7	3044	-658.9	5.01	-5.72
278	SLU 68	-16	-7	3044	-658.9	5.01	-5.72
278	SLU 69	-16	-7	3044	-658.9	5.01	-5.72
278	SLU 70	-16	-7	3044	-658.9	5.01	-5.72
278	SLU 71	-16	-7	3044	-658.9	5.01	-5.72
278	SLU 72	-16	-7	3044	-658.9	5.01	-5.72
278	SLU 73	-19	-8	3432	-735.88	5.77	-6.72
278	SLU 74	-19	-8	3432	-735.88	5.77	-6.72
278	SLU 75	-19	-8	3432	-735.88	5.77	-6.72
278	SLU 76	-19	-8	3432	-735.88	5.77	-6.72
278	SLU 77	-19	-8	3432	-735.88	5.77	-6.72
278	SLU 78	-19	-8	3432	-735.88	5.77	-6.72
278	SLU 79	-19	-8	3432	-735.88	5.77	-6.72
278	SLU 80	-19	-8	3432	-735.88	5.77	-6.72
278	SLU 81	-20	-9	3598	-768.87	6.09	-7.15
278	SLU 82	-20	-9	3598	-768.87	6.09	-7.15
278	SLU 83	-20	-9	3598	-768.87	6.09	-7.15
278	SLU 84	-20	-9	3598	-768.87	6.09	-7.15
278	SLE RA 1	-12	-5	2278	-494.18	3.73	-4.24
278	SLE RA 2	-12	-5	2278	-494.18	3.73	-4.24
278	SLE RA 3	-12	-5	2278	-494.18	3.73	-4.24
278	SLE RA 4	-12	-5	2278	-494.18	3.73	-4.24
278	SLE RA 5	-12	-5	2278	-494.18	3.73	-4.24
278	SLE RA 6	-12	-5	2278	-494.18	3.73	-4.24
278	SLE RA 7	-12	-5	2278	-494.18	3.73	-4.24
278	SLE RA 8	-12	-5	2278	-494.18	3.73	-4.24



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
278	SLE RA 9	-12	-5	2278	-494.18	3.73	-4.24
278	SLE RA 10	-14	-6	2536	-545.5	4.23	-4.91
278	SLE RA 11	-14	-6	2536	-545.5	4.23	-4.91
278	SLE RA 12	-14	-6	2536	-545.5	4.23	-4.91
278	SLE RA 13	-14	-6	2536	-545.5	4.23	-4.91
278	SLE RA 14	-14	-6	2536	-545.5	4.23	-4.91
278	SLE RA 15	-14	-6	2536	-545.5	4.23	-4.91
278	SLE RA 16	-14	-6	2536	-545.5	4.23	-4.91
278	SLE RA 17	-14	-6	2536	-545.5	4.23	-4.91
278	SLE RA 18	-15	-6	2647	-567.5	4.45	-5.2
278	SLE RA 19	-15	-6	2647	-567.5	4.45	-5.2
278	SLE RA 20	-15	-6	2647	-567.5	4.45	-5.2
278	SLE RA 21	-15	-6	2647	-567.5	4.45	-5.2
278	SLE FR 1	-12	-5	2278	-494.18	3.73	-4.24
278	SLE FR 2	-12	-5	2278	-494.18	3.73	-4.24
278	SLE FR 3	-12	-5	2278	-494.18	3.73	-4.24
278	SLE FR 4	-13	-5	2389	-516.18	3.95	-4.53
278	SLE FR 5	-13	-5	2389	-516.18	3.95	-4.53
278	SLE FR 6	-13	-5	2462	-530.84	4.09	-4.72
278	SLE QP 1	-12	-5	2278	-494.18	3.73	-4.24
278	SLE QP 2	-13	-5	2389	-516.18	3.95	-4.53
278	SLD 1	219	6	2223	-503.49	4.32	76.87
278	SLD 2	178	14	2222	-503.57	4.33	62.42
278	SLD 3	212	-30	2442	-538.01	4.65	73.83
278	SLD 4	170	-22	2442	-538.09	4.66	59.38
278	SLD 5	84	50	2007	-459.99	3.55	29.72
278	SLD 6	41	58	2006	-460.07	3.57	14.94
278	SLD 7	58	-70	2737	-575.05	4.65	19.59
278	SLD 8	15	-62	2736	-575.14	4.67	4.82
278	SLD 9	-41	52	2041	-457.22	3.23	-13.87
278	SLD 10	-83	59	2040	-457.3	3.24	-28.65
278	SLD 11	-67	-68	2771	-572.28	4.32	-24
278	SLD 12	-109	-61	2770	-572.37	4.34	-38.77
278	SLD 13	-196	12	2335	-494.26	3.23	-68.43
278	SLD 14	-237	19	2335	-494.34	3.24	-82.89
278	SLD 15	-204	-24	2555	-528.78	3.56	-71.47
278	SLD 16	-245	-17	2554	-528.86	3.57	-85.93
278	SLV 1	515	22	2004	-486.42	4.78	180.49
278	SLV 2	420	39	2003	-486.61	4.81	147.43
278	SLV 3	497	-62	2519	-567.81	5.55	173.38
278	SLV 4	402	-46	2517	-568	5.58	140.31
278	SLV 5	209	125	1494	-383.75	3.02	73.97
278	SLV 6	110	142	1492	-383.94	3.05	39.64
278	SLV 7	147	-156	3208	-655.03	5.58	50.26
278	SLV 8	49	-139	3207	-655.23	5.62	15.93
278	SLV 9	-74	129	1570	-377.13	2.27	-24.99
278	SLV 10	-173	146	1569	-377.32	2.31	-59.32
278	SLV 11	-136	-152	3285	-648.41	4.84	-48.69
278	SLV 12	-234	-135	3283	-648.61	4.88	-83.03
278	SLV 13	-427	35	2260	-464.36	2.31	-149.37
278	SLV 14	-522	51	2258	-464.54	2.34	-182.44
278	SLV 15	-446	-49	2774	-545.74	3.08	-156.48
278	SLV 16	-541	-33	2773	-545.93	3.11	-189.55
278	CRTFP Ux+	0	0	0	0	0	0
278	CRTFP Ux-	0	0	0	0	0	0
278	CRTFP Uy+	0	0	0	0	0	0
278	CRTFP Uy-	0	0	0	0	0	0
279	SLU 1	-11	-3	2308	-560.9	3.68	-3.93
279	SLU 2	-11	-3	2308	-560.9	3.68	-3.93
279	SLU 3	-11	-3	2308	-560.9	3.68	-3.93
279	SLU 4	-11	-3	2308	-560.9	3.68	-3.93
279	SLU 5	-11	-3	2308	-560.9	3.68	-3.93
279	SLU 6	-11	-3	2308	-560.9	3.68	-3.93
279	SLU 7	-11	-3	2308	-560.9	3.68	-3.93
279	SLU 8	-11	-3	2308	-560.9	3.68	-3.93
279	SLU 9	-11	-3	2308	-560.9	3.68	-3.93
279	SLU 10	-14	-4	2721	-655.18	4.45	-4.84
279	SLU 11	-14	-4	2721	-655.18	4.45	-4.84
279	SLU 12	-14	-4	2721	-655.18	4.45	-4.84
279	SLU 13	-14	-4	2721	-655.18	4.45	-4.84
279	SLU 14	-14	-4	2721	-655.18	4.45	-4.84
279	SLU 15	-14	-4	2721	-655.18	4.45	-4.84
279	SLU 16	-14	-4	2721	-655.18	4.45	-4.84
279	SLU 17	-14	-4	2721	-655.18	4.45	-4.84
279	SLU 18	-15	-4	2897	-695.58	4.78	-5.24
279	SLU 19	-15	-4	2897	-695.58	4.78	-5.24
279	SLU 20	-15	-4	2897	-695.58	4.78	-5.24
279	SLU 21	-15	-4	2897	-695.58	4.78	-5.24
279	SLU 22	-13	-3	2616	-631.46	4.26	-4.59
279	SLU 23	-13	-3	2616	-631.46	4.26	-4.59
279	SLU 24	-13	-3	2616	-631.46	4.26	-4.59
279	SLU 25	-13	-3	2616	-631.46	4.26	-4.59
279	SLU 26	-13	-3	2616	-631.46	4.26	-4.59
279	SLU 27	-13	-3	2616	-631.46	4.26	-4.59
279	SLU 28	-13	-3	2616	-631.46	4.26	-4.59
279	SLU 29	-13	-3	2616	-631.46	4.26	-4.59
279	SLU 30	-13	-3	2616	-631.46	4.26	-4.59
279	SLU 31	-16	-4	3029	-725.74	5.03	-5.51
279	SLU 32	-16	-4	3029	-725.74	5.03	-5.51
279	SLU 33	-16	-4	3029	-725.74	5.03	-5.51



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
279	SLU 34	-16	-4	3029	-725.74	5.03	-5.51
279	SLU 35	-16	-4	3029	-725.74	5.03	-5.51
279	SLU 36	-16	-4	3029	-725.74	5.03	-5.51
279	SLU 37	-16	-4	3029	-725.74	5.03	-5.51
279	SLU 38	-16	-4	3029	-725.74	5.03	-5.51
279	SLU 39	-17	-5	3205	-766.15	5.36	-5.9
279	SLU 40	-17	-5	3205	-766.15	5.36	-5.9
279	SLU 41	-17	-5	3205	-766.15	5.36	-5.9
279	SLU 42	-17	-5	3205	-766.15	5.36	-5.9
279	SLU 43	-14	-3	2895	-704.97	4.59	-4.88
279	SLU 44	-14	-3	2895	-704.97	4.59	-4.88
279	SLU 45	-14	-3	2895	-704.97	4.59	-4.88
279	SLU 46	-14	-3	2895	-704.97	4.59	-4.88
279	SLU 47	-14	-3	2895	-704.97	4.59	-4.88
279	SLU 48	-14	-3	2895	-704.97	4.59	-4.88
279	SLU 49	-14	-3	2895	-704.97	4.59	-4.88
279	SLU 50	-14	-3	2895	-704.97	4.59	-4.88
279	SLU 51	-14	-3	2895	-704.97	4.59	-4.88
279	SLU 52	-16	-4	3307	-799.25	5.36	-5.79
279	SLU 53	-16	-4	3307	-799.25	5.36	-5.79
279	SLU 54	-16	-4	3307	-799.25	5.36	-5.79
279	SLU 55	-16	-4	3307	-799.25	5.36	-5.79
279	SLU 56	-16	-4	3307	-799.25	5.36	-5.79
279	SLU 57	-16	-4	3307	-799.25	5.36	-5.79
279	SLU 58	-16	-4	3307	-799.25	5.36	-5.79
279	SLU 59	-16	-4	3307	-799.25	5.36	-5.79
279	SLU 60	-17	-5	3484	-839.66	5.69	-6.19
279	SLU 61	-17	-5	3484	-839.66	5.69	-6.19
279	SLU 62	-17	-5	3484	-839.66	5.69	-6.19
279	SLU 63	-17	-5	3484	-839.66	5.69	-6.19
279	SLU 64	-16	-4	3203	-775.53	5.16	-5.54
279	SLU 65	-16	-4	3203	-775.53	5.16	-5.54
279	SLU 66	-16	-4	3203	-775.53	5.16	-5.54
279	SLU 67	-16	-4	3203	-775.53	5.16	-5.54
279	SLU 68	-16	-4	3203	-775.53	5.16	-5.54
279	SLU 69	-16	-4	3203	-775.53	5.16	-5.54
279	SLU 70	-16	-4	3203	-775.53	5.16	-5.54
279	SLU 71	-16	-4	3203	-775.53	5.16	-5.54
279	SLU 72	-16	-4	3203	-775.53	5.16	-5.54
279	SLU 73	-18	-5	3616	-869.81	5.93	-6.46
279	SLU 74	-18	-5	3616	-869.81	5.93	-6.46
279	SLU 75	-18	-5	3616	-869.81	5.93	-6.46
279	SLU 76	-18	-5	3616	-869.81	5.93	-6.46
279	SLU 77	-18	-5	3616	-869.81	5.93	-6.46
279	SLU 78	-18	-5	3616	-869.81	5.93	-6.46
279	SLU 79	-18	-5	3616	-869.81	5.93	-6.46
279	SLU 80	-18	-5	3616	-869.81	5.93	-6.46
279	SLU 81	-19	-5	3792	-910.22	6.26	-6.85
279	SLU 82	-19	-5	3792	-910.22	6.26	-6.85
279	SLU 83	-19	-5	3792	-910.22	6.26	-6.85
279	SLU 84	-19	-5	3792	-910.22	6.26	-6.85
279	SLE RA 1	-12	-3	2396	-581.06	3.84	-4.12
279	SLE RA 2	-12	-3	2396	-581.06	3.84	-4.12
279	SLE RA 3	-12	-3	2396	-581.06	3.84	-4.12
279	SLE RA 4	-12	-3	2396	-581.06	3.84	-4.12
279	SLE RA 5	-12	-3	2396	-581.06	3.84	-4.12
279	SLE RA 6	-12	-3	2396	-581.06	3.84	-4.12
279	SLE RA 7	-12	-3	2396	-581.06	3.84	-4.12
279	SLE RA 8	-12	-3	2396	-581.06	3.84	-4.12
279	SLE RA 9	-12	-3	2396	-581.06	3.84	-4.12
279	SLE RA 10	-13	-4	2671	-643.91	4.36	-4.73
279	SLE RA 11	-13	-4	2671	-643.91	4.36	-4.73
279	SLE RA 12	-13	-4	2671	-643.91	4.36	-4.73
279	SLE RA 13	-13	-4	2671	-643.91	4.36	-4.73
279	SLE RA 14	-13	-4	2671	-643.91	4.36	-4.73
279	SLE RA 15	-13	-4	2671	-643.91	4.36	-4.73
279	SLE RA 16	-13	-4	2671	-643.91	4.36	-4.73
279	SLE RA 17	-13	-4	2671	-643.91	4.36	-4.73
279	SLE RA 18	-14	-4	2789	-670.85	4.58	-4.99
279	SLE RA 19	-14	-4	2789	-670.85	4.58	-4.99
279	SLE RA 20	-14	-4	2789	-670.85	4.58	-4.99
279	SLE RA 21	-14	-4	2789	-670.85	4.58	-4.99
279	SLE FR 1	-12	-3	2396	-581.06	3.84	-4.12
279	SLE FR 2	-12	-3	2396	-581.06	3.84	-4.12
279	SLE FR 3	-12	-3	2396	-581.06	3.84	-4.12
279	SLE FR 4	-12	-3	2514	-607.99	4.06	-4.38
279	SLE FR 5	-12	-3	2514	-607.99	4.06	-4.38
279	SLE FR 6	-13	-3	2593	-625.95	4.21	-4.55
279	SLE QP 1	-12	-3	2396	-581.06	3.84	-4.12
279	SLE QP 2	-12	-3	2514	-607.99	4.06	-4.38
279	SLD 1	220	5	2360	-590.69	4.4	76.98
279	SLD 2	178	11	2360	-590.81	4.41	62.53
279	SLD 3	212	-22	2590	-634.28	4.76	73.95
279	SLD 4	170	-17	2589	-634.39	4.78	59.49
279	SLD 5	85	40	2119	-536.66	3.61	29.85
279	SLD 6	42	45	2119	-536.77	3.62	15.08
279	SLD 7	58	-53	2886	-681.94	4.82	19.74
279	SLD 8	15	-48	2885	-682.06	4.84	4.96
279	SLD 9	-40	41	2143	-533.93	3.29	-13.72
279	SLD 10	-82	47	2143	-534.04	3.31	-28.49



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
279	SLD 11	-67	-52	2909	-679.21	4.51	-23.83
279	SLD 12	-109	-46	2909	-679.33	4.52	-38.61
279	SLD 13	-195	10	2439	-581.59	3.35	-68.25
279	SLD 14	-236	16	2439	-581.71	3.37	-82.7
279	SLD 15	-203	-17	2669	-625.18	3.72	-71.28
279	SLD 16	-245	-12	2668	-625.3	3.73	-85.74
279	SLV 1	516	17	2155	-567.3	4.81	180.55
279	SLV 2	421	30	2154	-567.57	4.84	147.49
279	SLV 3	497	-48	2695	-669.84	5.66	173.45
279	SLV 4	402	-35	2694	-670.1	5.69	140.39
279	SLV 5	210	97	1588	-440.17	2.99	74.08
279	SLV 6	111	110	1587	-440.45	3.01	39.75
279	SLV 7	147	-120	3387	-781.97	5.83	50.4
279	SLV 8	48	-107	3386	-782.24	5.86	16.08
279	SLV 9	-73	101	1642	-433.75	2.27	-24.83
279	SLV 10	-171	113	1641	-434.02	2.3	-59.16
279	SLV 11	-136	-116	3441	-775.54	5.12	-48.51
279	SLV 12	-234	-104	3440	-775.81	5.14	-82.83
279	SLV 13	-426	29	2334	-545.88	2.44	-149.15
279	SLV 14	-521	41	2334	-546.15	2.47	-182.21
279	SLV 15	-445	-36	2874	-648.42	3.29	-156.25
279	SLV 16	-540	-24	2873	-648.69	3.32	-189.31
279	CRTFP Ux+	0	0	0	0	0	0
279	CRTFP Ux-	0	0	0	0	0	0
279	CRTFP Uy+	0	0	0	0	0	0
279	CRTFP Uy-	0	0	0	0	0	0
280	SLU 1	-11	-1	2417	-644.58	3.26	-3.83
280	SLU 2	-11	-1	2417	-644.58	3.26	-3.83
280	SLU 3	-11	-1	2417	-644.58	3.26	-3.83
280	SLU 4	-11	-1	2417	-644.58	3.26	-3.83
280	SLU 5	-11	-1	2417	-644.58	3.26	-3.83
280	SLU 6	-11	-1	2417	-644.58	3.26	-3.83
280	SLU 7	-11	-1	2417	-644.58	3.26	-3.83
280	SLU 8	-11	-1	2417	-644.58	3.26	-3.83
280	SLU 9	-11	-1	2417	-644.58	3.26	-3.83
280	SLU 10	-13	-1	2852	-756.28	3.94	-4.66
280	SLU 11	-13	-1	2852	-756.28	3.94	-4.66
280	SLU 12	-13	-1	2852	-756.28	3.94	-4.66
280	SLU 13	-13	-1	2852	-756.28	3.94	-4.66
280	SLU 14	-13	-1	2852	-756.28	3.94	-4.66
280	SLU 15	-13	-1	2852	-756.28	3.94	-4.66
280	SLU 16	-13	-1	2852	-756.28	3.94	-4.66
280	SLU 17	-13	-1	2852	-756.28	3.94	-4.66
280	SLU 18	-14	-2	3039	-804.14	4.23	-5.01
280	SLU 19	-14	-2	3039	-804.14	4.23	-5.01
280	SLU 20	-14	-2	3039	-804.14	4.23	-5.01
280	SLU 21	-14	-2	3039	-804.14	4.23	-5.01
280	SLU 22	-12	-1	2743	-728.18	3.77	-4.44
280	SLU 23	-12	-1	2743	-728.18	3.77	-4.44
280	SLU 24	-12	-1	2743	-728.18	3.77	-4.44
280	SLU 25	-12	-1	2743	-728.18	3.77	-4.44
280	SLU 26	-12	-1	2743	-728.18	3.77	-4.44
280	SLU 27	-12	-1	2743	-728.18	3.77	-4.44
280	SLU 28	-12	-1	2743	-728.18	3.77	-4.44
280	SLU 29	-12	-1	2743	-728.18	3.77	-4.44
280	SLU 30	-12	-1	2743	-728.18	3.77	-4.44
280	SLU 31	-15	-2	3178	-839.87	4.44	-5.27
280	SLU 32	-15	-2	3178	-839.87	4.44	-5.27
280	SLU 33	-15	-2	3178	-839.87	4.44	-5.27
280	SLU 34	-15	-2	3178	-839.87	4.44	-5.27
280	SLU 35	-15	-2	3178	-839.87	4.44	-5.27
280	SLU 36	-15	-2	3178	-839.87	4.44	-5.27
280	SLU 37	-15	-2	3178	-839.87	4.44	-5.27
280	SLU 38	-15	-2	3178	-839.87	4.44	-5.27
280	SLU 39	-16	-2	3364	-887.74	4.73	-5.62
280	SLU 40	-16	-2	3364	-887.74	4.73	-5.62
280	SLU 41	-16	-2	3364	-887.74	4.73	-5.62
280	SLU 42	-16	-2	3364	-887.74	4.73	-5.62
280	SLU 43	-13	-1	3031	-809.3	4.06	-4.77
280	SLU 44	-13	-1	3031	-809.3	4.06	-4.77
280	SLU 45	-13	-1	3031	-809.3	4.06	-4.77
280	SLU 46	-13	-1	3031	-809.3	4.06	-4.77
280	SLU 47	-13	-1	3031	-809.3	4.06	-4.77
280	SLU 48	-13	-1	3031	-809.3	4.06	-4.77
280	SLU 49	-13	-1	3031	-809.3	4.06	-4.77
280	SLU 50	-13	-1	3031	-809.3	4.06	-4.77
280	SLU 51	-13	-1	3031	-809.3	4.06	-4.77
280	SLU 52	-16	-1	3466	-920.99	4.74	-5.6
280	SLU 53	-16	-1	3466	-920.99	4.74	-5.6
280	SLU 54	-16	-1	3466	-920.99	4.74	-5.6
280	SLU 55	-16	-1	3466	-920.99	4.74	-5.6
280	SLU 56	-16	-1	3466	-920.99	4.74	-5.6
280	SLU 57	-16	-1	3466	-920.99	4.74	-5.6
280	SLU 58	-16	-1	3466	-920.99	4.74	-5.6
280	SLU 59	-16	-1	3466	-920.99	4.74	-5.6
280	SLU 60	-17	-2	3653	-968.86	5.03	-5.95
280	SLU 61	-17	-2	3653	-968.86	5.03	-5.95
280	SLU 62	-17	-2	3653	-968.86	5.03	-5.95
280	SLU 63	-17	-2	3653	-968.86	5.03	-5.95
280	SLU 64	-15	-1	3356	-892.89	4.57	-5.38



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
280	SLU 65	-15	-1	3356	-892.89	4.57	-5.38
280	SLU 66	-15	-1	3356	-892.89	4.57	-5.38
280	SLU 67	-15	-1	3356	-892.89	4.57	-5.38
280	SLU 68	-15	-1	3356	-892.89	4.57	-5.38
280	SLU 69	-15	-1	3356	-892.89	4.57	-5.38
280	SLU 70	-15	-1	3356	-892.89	4.57	-5.38
280	SLU 71	-15	-1	3356	-892.89	4.57	-5.38
280	SLU 72	-15	-1	3356	-892.89	4.57	-5.38
280	SLU 73	-17	-2	3791	-1004.58	5.25	-6.21
280	SLU 74	-17	-2	3791	-1004.58	5.25	-6.21
280	SLU 75	-17	-2	3791	-1004.58	5.25	-6.21
280	SLU 76	-17	-2	3791	-1004.58	5.25	-6.21
280	SLU 77	-17	-2	3791	-1004.58	5.25	-6.21
280	SLU 78	-17	-2	3791	-1004.58	5.25	-6.21
280	SLU 79	-17	-2	3791	-1004.58	5.25	-6.21
280	SLU 80	-17	-2	3791	-1004.58	5.25	-6.21
280	SLU 81	-18	-2	3978	-1052.45	5.54	-6.56
280	SLU 82	-18	-2	3978	-1052.45	5.54	-6.56
280	SLU 83	-18	-2	3978	-1052.45	5.54	-6.56
280	SLU 84	-18	-2	3978	-1052.45	5.54	-6.56
280	SLE RA 1	-11	-1	2510	-668.47	3.4	-4
280	SLE RA 2	-11	-1	2510	-668.47	3.4	-4
280	SLE RA 3	-11	-1	2510	-668.47	3.4	-4
280	SLE RA 4	-11	-1	2510	-668.47	3.4	-4
280	SLE RA 5	-11	-1	2510	-668.47	3.4	-4
280	SLE RA 6	-11	-1	2510	-668.47	3.4	-4
280	SLE RA 7	-11	-1	2510	-668.47	3.4	-4
280	SLE RA 8	-11	-1	2510	-668.47	3.4	-4
280	SLE RA 9	-11	-1	2510	-668.47	3.4	-4
280	SLE RA 10	-13	-1	2800	-742.93	3.86	-4.55
280	SLE RA 11	-13	-1	2800	-742.93	3.86	-4.55
280	SLE RA 12	-13	-1	2800	-742.93	3.86	-4.55
280	SLE RA 13	-13	-1	2800	-742.93	3.86	-4.55
280	SLE RA 14	-13	-1	2800	-742.93	3.86	-4.55
280	SLE RA 15	-13	-1	2800	-742.93	3.86	-4.55
280	SLE RA 16	-13	-1	2800	-742.93	3.86	-4.55
280	SLE RA 17	-13	-1	2800	-742.93	3.86	-4.55
280	SLE RA 18	-13	-1	2925	-774.84	4.05	-4.79
280	SLE RA 19	-13	-1	2925	-774.84	4.05	-4.79
280	SLE RA 20	-13	-1	2925	-774.84	4.05	-4.79
280	SLE RA 21	-13	-1	2925	-774.84	4.05	-4.79
280	SLE FR 1	-11	-1	2510	-668.47	3.4	-4
280	SLE FR 2	-11	-1	2510	-668.47	3.4	-4
280	SLE FR 3	-11	-1	2510	-668.47	3.4	-4
280	SLE FR 4	-12	-1	2635	-700.38	3.6	-4.24
280	SLE FR 5	-12	-1	2635	-700.38	3.6	-4.24
280	SLE FR 6	-12	-1	2717	-721.65	3.73	-4.4
280	SLE QP 1	-11	-1	2510	-668.47	3.4	-4
280	SLE QP 2	-12	-1	2635	-700.38	3.6	-4.24
280	SLD 1	220	6	2491	-677.88	3.93	77.06
280	SLD 2	179	10	2491	-678.03	3.94	62.61
280	SLD 3	212	-16	2732	-730.82	4.27	74.03
280	SLD 4	171	-12	2732	-730.96	4.28	59.59
280	SLD 5	85	33	2226	-613.29	3.19	29.96
280	SLD 6	43	37	2226	-613.44	3.2	15.19
280	SLD 7	58	-40	3029	-789.74	4.3	19.87
280	SLD 8	15	-37	3029	-789.89	4.31	5.1
280	SLD 9	-39	34	2240	-610.87	2.88	-13.58
280	SLD 10	-82	38	2240	-611.02	2.89	-28.35
280	SLD 11	-67	-39	3043	-787.32	4	-23.67
280	SLD 12	-109	-35	3043	-787.47	4.01	-38.43
280	SLD 13	-194	10	2538	-669.8	2.92	-68.07
280	SLD 14	-236	14	2538	-669.94	2.93	-82.51
280	SLD 15	-203	-12	2778	-722.73	3.25	-71.09
280	SLD 16	-244	-8	2778	-722.88	3.26	-85.54
280	SLV 1	516	15	2299	-647.43	4.35	180.55
280	SLV 2	421	24	2299	-647.77	4.37	147.51
280	SLV 3	497	-36	2864	-771.8	5.13	173.47
280	SLV 4	402	-28	2864	-772.14	5.15	140.43
280	SLV 5	211	79	1676	-495.73	2.63	74.14
280	SLV 6	112	88	1676	-496.09	2.65	39.84
280	SLV 7	146	-93	3561	-910.32	5.24	50.52
280	SLV 8	48	-84	3561	-910.67	5.26	16.22
280	SLV 9	-72	82	1708	-490.09	1.93	-24.69
280	SLV 10	-170	91	1708	-490.44	1.96	-59
280	SLV 11	-136	-90	3593	-904.67	4.54	-48.31
280	SLV 12	-235	-81	3593	-905.03	4.57	-82.62
280	SLV 13	-426	25	2405	-628.62	2.04	-148.9
280	SLV 14	-520	34	2405	-628.95	2.06	-181.94
280	SLV 15	-445	-26	2970	-752.99	2.82	-155.99
280	SLV 16	-540	-18	2971	-753.33	2.85	-189.03
280	CRTFP Ux+	0	0	0	0	0	0
280	CRTFP Ux-	0	0	0	0	0	0
280	CRTFP Uy+	0	0	0	0	0	0
280	CRTFP Uy-	0	0	0	0	0	0
281	SLU 1	-10	1	2331	-669.46	-28.64	-3.49
281	SLU 2	-10	1	2331	-669.46	-28.64	-3.49
281	SLU 3	-10	1	2331	-669.46	-28.64	-3.49
281	SLU 4	-10	1	2331	-669.46	-28.64	-3.49
281	SLU 5	-10	1	2331	-669.46	-28.64	-3.49



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
281	SLU 6	-10	1	2331	-669.46	-28.64	-3.49
281	SLU 7	-10	1	2331	-669.46	-28.64	-3.49
281	SLU 8	-10	1	2331	-669.46	-28.64	-3.49
281	SLU 9	-10	1	2331	-669.46	-28.64	-3.49
281	SLU 10	-12	1	2753	-787.84	-33.78	-4.19
281	SLU 11	-12	1	2753	-787.84	-33.78	-4.19
281	SLU 12	-12	1	2753	-787.84	-33.78	-4.19
281	SLU 13	-12	1	2753	-787.84	-33.78	-4.19
281	SLU 14	-12	1	2753	-787.84	-33.78	-4.19
281	SLU 15	-12	1	2753	-787.84	-33.78	-4.19
281	SLU 16	-12	1	2753	-787.84	-33.78	-4.19
281	SLU 17	-12	1	2753	-787.84	-33.78	-4.19
281	SLU 18	-13	1	2934	-838.58	-35.98	-4.49
281	SLU 19	-13	1	2934	-838.58	-35.98	-4.49
281	SLU 20	-13	1	2934	-838.58	-35.98	-4.49
281	SLU 21	-13	1	2934	-838.58	-35.98	-4.49
281	SLU 22	-11	1	2647	-758.05	-32.48	-4.01
281	SLU 23	-11	1	2647	-758.05	-32.48	-4.01
281	SLU 24	-11	1	2647	-758.05	-32.48	-4.01
281	SLU 25	-11	1	2647	-758.05	-32.48	-4.01
281	SLU 26	-11	1	2647	-758.05	-32.48	-4.01
281	SLU 27	-11	1	2647	-758.05	-32.48	-4.01
281	SLU 28	-11	1	2647	-758.05	-32.48	-4.01
281	SLU 29	-11	1	2647	-758.05	-32.48	-4.01
281	SLU 30	-11	1	2647	-758.05	-32.48	-4.01
281	SLU 31	-13	1	3068	-876.44	-37.62	-4.71
281	SLU 32	-13	1	3068	-876.44	-37.62	-4.71
281	SLU 33	-13	1	3068	-876.44	-37.62	-4.71
281	SLU 34	-13	1	3068	-876.44	-37.62	-4.71
281	SLU 35	-13	1	3068	-876.44	-37.62	-4.71
281	SLU 36	-13	1	3068	-876.44	-37.62	-4.71
281	SLU 37	-13	1	3068	-876.44	-37.62	-4.71
281	SLU 38	-13	1	3068	-876.44	-37.62	-4.71
281	SLU 39	-14	1	3249	-927.17	-39.82	-5.01
281	SLU 40	-14	1	3249	-927.17	-39.82	-5.01
281	SLU 41	-14	1	3249	-927.17	-39.82	-5.01
281	SLU 42	-14	1	3249	-927.17	-39.82	-5.01
281	SLU 43	-12	1	2923	-839.92	-35.91	-4.37
281	SLU 44	-12	1	2923	-839.92	-35.91	-4.37
281	SLU 45	-12	1	2923	-839.92	-35.91	-4.37
281	SLU 46	-12	1	2923	-839.92	-35.91	-4.37
281	SLU 47	-12	1	2923	-839.92	-35.91	-4.37
281	SLU 48	-12	1	2923	-839.92	-35.91	-4.37
281	SLU 49	-12	1	2923	-839.92	-35.91	-4.37
281	SLU 50	-12	1	2923	-839.92	-35.91	-4.37
281	SLU 51	-12	1	2923	-839.92	-35.91	-4.37
281	SLU 52	-14	1	3344	-958.31	-41.05	-5.06
281	SLU 53	-14	1	3344	-958.31	-41.05	-5.06
281	SLU 54	-14	1	3344	-958.31	-41.05	-5.06
281	SLU 55	-14	1	3344	-958.31	-41.05	-5.06
281	SLU 56	-14	1	3344	-958.31	-41.05	-5.06
281	SLU 57	-14	1	3344	-958.31	-41.05	-5.06
281	SLU 58	-14	1	3344	-958.31	-41.05	-5.06
281	SLU 59	-14	1	3344	-958.31	-41.05	-5.06
281	SLU 60	-15	1	3525	-1009.04	-43.26	-5.36
281	SLU 61	-15	1	3525	-1009.04	-43.26	-5.36
281	SLU 62	-15	1	3525	-1009.04	-43.26	-5.36
281	SLU 63	-15	1	3525	-1009.04	-43.26	-5.36
281	SLU 64	-14	1	3238	-928.51	-39.75	-4.88
281	SLU 65	-14	1	3238	-928.51	-39.75	-4.88
281	SLU 66	-14	1	3238	-928.51	-39.75	-4.88
281	SLU 67	-14	1	3238	-928.51	-39.75	-4.88
281	SLU 68	-14	1	3238	-928.51	-39.75	-4.88
281	SLU 69	-14	1	3238	-928.51	-39.75	-4.88
281	SLU 70	-14	1	3238	-928.51	-39.75	-4.88
281	SLU 71	-14	1	3238	-928.51	-39.75	-4.88
281	SLU 72	-14	1	3238	-928.51	-39.75	-4.88
281	SLU 73	-16	1	3660	-1046.9	-44.89	-5.58
281	SLU 74	-16	1	3660	-1046.9	-44.89	-5.58
281	SLU 75	-16	1	3660	-1046.9	-44.89	-5.58
281	SLU 76	-16	1	3660	-1046.9	-44.89	-5.58
281	SLU 77	-16	1	3660	-1046.9	-44.89	-5.58
281	SLU 78	-16	1	3660	-1046.9	-44.89	-5.58
281	SLU 79	-16	1	3660	-1046.9	-44.89	-5.58
281	SLU 80	-16	1	3660	-1046.9	-44.89	-5.58
281	SLU 81	-17	1	3840	-1097.64	-47.1	-5.88
281	SLU 82	-17	1	3840	-1097.64	-47.1	-5.88
281	SLU 83	-17	1	3840	-1097.64	-47.1	-5.88
281	SLU 84	-17	1	3840	-1097.64	-47.1	-5.88
281	SLE RA 1	-10	1	2421	-694.77	-29.74	-3.64
281	SLE RA 2	-10	1	2421	-694.77	-29.74	-3.64
281	SLE RA 3	-10	1	2421	-694.77	-29.74	-3.64
281	SLE RA 4	-10	1	2421	-694.77	-29.74	-3.64
281	SLE RA 5	-10	1	2421	-694.77	-29.74	-3.64
281	SLE RA 6	-10	1	2421	-694.77	-29.74	-3.64
281	SLE RA 7	-10	1	2421	-694.77	-29.74	-3.64
281	SLE RA 8	-10	1	2421	-694.77	-29.74	-3.64
281	SLE RA 9	-10	1	2421	-694.77	-29.74	-3.64
281	SLE RA 10	-12	1	2703	-773.69	-33.16	-4.11
281	SLE RA 11	-12	1	2703	-773.69	-33.16	-4.11



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
281	SLE RA 12	-12	1	2703	-773.69	-33.16	-4.11
281	SLE RA 13	-12	1	2703	-773.69	-33.16	-4.11
281	SLE RA 14	-12	1	2703	-773.69	-33.16	-4.11
281	SLE RA 15	-12	1	2703	-773.69	-33.16	-4.11
281	SLE RA 16	-12	1	2703	-773.69	-33.16	-4.11
281	SLE RA 17	-12	1	2703	-773.69	-33.16	-4.11
281	SLE RA 18	-12	1	2823	-807.52	-34.63	-4.31
281	SLE RA 19	-12	1	2823	-807.52	-34.63	-4.31
281	SLE RA 20	-12	1	2823	-807.52	-34.63	-4.31
281	SLE RA 21	-12	1	2823	-807.52	-34.63	-4.31
281	SLE FR 1	-10	1	2421	-694.77	-29.74	-3.64
281	SLE FR 2	-10	1	2421	-694.77	-29.74	-3.64
281	SLE FR 3	-10	1	2421	-694.77	-29.74	-3.64
281	SLE FR 4	-11	1	2542	-728.59	-31.2	-3.84
281	SLE FR 5	-11	1	2542	-728.59	-31.2	-3.84
281	SLE FR 6	-11	1	2622	-751.14	-32.18	-3.97
281	SLE QP 1	-10	1	2421	-694.77	-29.74	-3.64
281	SLE QP 2	-11	1	2542	-728.59	-31.2	-3.84
281	SLD 1	206	7	2417	-702.98	-29.28	72
281	SLD 2	167	9	2418	-703.14	-29.28	58.55
281	SLD 3	198	-10	2650	-760.07	-32.13	68.98
281	SLD 4	159	-8	2650	-760.23	-32.13	55.54
281	SLD 5	80	29	2152	-634.27	-26.3	28.34
281	SLD 6	41	31	2152	-634.43	-26.3	14.6
281	SLD 7	54	-30	2927	-824.57	-35.81	18.28
281	SLD 8	14	-28	2927	-824.73	-35.81	4.55
281	SLD 9	-36	29	2157	-632.46	-26.6	-12.23
281	SLD 10	-75	31	2157	-632.62	-26.6	-25.97
281	SLD 11	-62	-29	2932	-822.76	-36.11	-22.28
281	SLD 12	-102	-27	2932	-822.92	-36.11	-36.02
281	SLD 13	-181	10	2434	-696.96	-30.28	-63.22
281	SLD 14	-220	12	2434	-697.12	-30.28	-76.66
281	SLD 15	-189	-7	2666	-754.05	-33.13	-66.24
281	SLD 16	-227	-5	2666	-754.21	-33.13	-79.68
281	SLV 1	481	16	2250	-668.32	-26.72	168.54
281	SLV 2	393	20	2251	-668.68	-26.71	137.8
281	SLV 3	463	-25	2796	-802.37	-33.42	161.48
281	SLV 4	375	-20	2797	-802.73	-33.41	130.74
281	SLV 5	197	66	1626	-507.07	-19.7	69.93
281	SLV 6	106	70	1627	-507.45	-19.7	38
281	SLV 7	136	-70	3446	-953.9	-42.03	46.4
281	SLV 8	44	-66	3446	-954.27	-42.02	14.48
281	SLV 9	-66	68	1638	-502.91	-20.39	-22.16
281	SLV 10	-158	72	1638	-503.29	-20.38	-54.08
281	SLV 11	-127	-69	3457	-949.74	-42.71	-45.69
281	SLV 12	-219	-64	3457	-950.11	-42.71	-77.61
281	SLV 13	-396	22	2287	-654.46	-29	-138.42
281	SLV 14	-485	27	2288	-654.81	-28.99	-169.17
281	SLV 15	-415	-19	2833	-788.5	-35.7	-145.48
281	SLV 16	-503	-14	2834	-788.86	-35.69	-176.23
281	CRTFP Ux+	0	0	0	0	0	0
281	CRTFP Ux-	0	0	0	0	0	0
281	CRTFP Uy+	0	0	0	0	0	0
281	CRTFP Uy-	0	0	0	0	0	0
282	SLU 1	-18	4	4282	-1055.08	-3.46	-4.94
282	SLU 2	-18	4	4282	-1055.08	-3.46	-4.94
282	SLU 3	-18	4	4282	-1055.08	-3.46	-4.94
282	SLU 4	-18	4	4282	-1055.08	-3.46	-4.94
282	SLU 5	-18	4	4282	-1055.08	-3.46	-4.94
282	SLU 6	-18	4	4282	-1055.08	-3.46	-4.94
282	SLU 7	-18	4	4282	-1055.08	-3.46	-4.94
282	SLU 8	-18	4	4282	-1055.08	-3.46	-4.94
282	SLU 9	-18	4	4282	-1055.08	-3.46	-4.94
282	SLU 10	-21	4	5058	-1244.83	-4.11	-5.84
282	SLU 11	-21	4	5058	-1244.83	-4.11	-5.84
282	SLU 12	-21	4	5058	-1244.83	-4.11	-5.84
282	SLU 13	-21	4	5058	-1244.83	-4.11	-5.84
282	SLU 14	-21	4	5058	-1244.83	-4.11	-5.84
282	SLU 15	-21	4	5058	-1244.83	-4.11	-5.84
282	SLU 16	-21	4	5058	-1244.83	-4.11	-5.84
282	SLU 17	-21	4	5058	-1244.83	-4.11	-5.84
282	SLU 18	-22	4	5391	-1326.16	-4.39	-6.22
282	SLU 19	-22	4	5391	-1326.16	-4.39	-6.22
282	SLU 20	-22	4	5391	-1326.16	-4.39	-6.22
282	SLU 21	-22	4	5391	-1326.16	-4.39	-6.22
282	SLU 22	-20	4	4862	-1197.02	-3.94	-5.62
282	SLU 23	-20	4	4862	-1197.02	-3.94	-5.62
282	SLU 24	-20	4	4862	-1197.02	-3.94	-5.62
282	SLU 25	-20	4	4862	-1197.02	-3.94	-5.62
282	SLU 26	-20	4	4862	-1197.02	-3.94	-5.62
282	SLU 27	-20	4	4862	-1197.02	-3.94	-5.62
282	SLU 28	-20	4	4862	-1197.02	-3.94	-5.62
282	SLU 29	-20	4	4862	-1197.02	-3.94	-5.62
282	SLU 30	-20	4	4862	-1197.02	-3.94	-5.62
282	SLU 31	-23	4	5639	-1386.77	-4.59	-6.51
282	SLU 32	-23	4	5639	-1386.77	-4.59	-6.51
282	SLU 33	-23	4	5639	-1386.77	-4.59	-6.51
282	SLU 34	-23	4	5639	-1386.77	-4.59	-6.51
282	SLU 35	-23	4	5639	-1386.77	-4.59	-6.51
282	SLU 36	-23	4	5639	-1386.77	-4.59	-6.51



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
282	SLU 37	-23	4	5639	-1386.77	-4.59	-6.51
282	SLU 38	-23	4	5639	-1386.77	-4.59	-6.51
282	SLU 39	-25	5	5972	-1468.1	-4.87	-6.9
282	SLU 40	-25	5	5972	-1468.1	-4.87	-6.9
282	SLU 41	-25	5	5972	-1468.1	-4.87	-6.9
282	SLU 42	-25	5	5972	-1468.1	-4.87	-6.9
282	SLU 43	-22	5	5367	-1322.94	-4.33	-6.19
282	SLU 44	-22	5	5367	-1322.94	-4.33	-6.19
282	SLU 45	-22	5	5367	-1322.94	-4.33	-6.19
282	SLU 46	-22	5	5367	-1322.94	-4.33	-6.19
282	SLU 47	-22	5	5367	-1322.94	-4.33	-6.19
282	SLU 48	-22	5	5367	-1322.94	-4.33	-6.19
282	SLU 49	-22	5	5367	-1322.94	-4.33	-6.19
282	SLU 50	-22	5	5367	-1322.94	-4.33	-6.19
282	SLU 51	-22	5	5367	-1322.94	-4.33	-6.19
282	SLU 52	-25	5	6144	-1512.69	-4.98	-7.09
282	SLU 53	-25	5	6144	-1512.69	-4.98	-7.09
282	SLU 54	-25	5	6144	-1512.69	-4.98	-7.09
282	SLU 55	-25	5	6144	-1512.69	-4.98	-7.09
282	SLU 56	-25	5	6144	-1512.69	-4.98	-7.09
282	SLU 57	-25	5	6144	-1512.69	-4.98	-7.09
282	SLU 58	-25	5	6144	-1512.69	-4.98	-7.09
282	SLU 59	-25	5	6144	-1512.69	-4.98	-7.09
282	SLU 60	-27	5	6477	-1594.02	-5.26	-7.47
282	SLU 61	-27	5	6477	-1594.02	-5.26	-7.47
282	SLU 62	-27	5	6477	-1594.02	-5.26	-7.47
282	SLU 63	-27	5	6477	-1594.02	-5.26	-7.47
282	SLU 64	-25	5	5948	-1464.88	-4.81	-6.87
282	SLU 65	-25	5	5948	-1464.88	-4.81	-6.87
282	SLU 66	-25	5	5948	-1464.88	-4.81	-6.87
282	SLU 67	-25	5	5948	-1464.88	-4.81	-6.87
282	SLU 68	-25	5	5948	-1464.88	-4.81	-6.87
282	SLU 69	-25	5	5948	-1464.88	-4.81	-6.87
282	SLU 70	-25	5	5948	-1464.88	-4.81	-6.87
282	SLU 71	-25	5	5948	-1464.88	-4.81	-6.87
282	SLU 72	-25	5	5948	-1464.88	-4.81	-6.87
282	SLU 73	-28	5	6724	-1654.63	-5.46	-7.76
282	SLU 74	-28	5	6724	-1654.63	-5.46	-7.76
282	SLU 75	-28	5	6724	-1654.63	-5.46	-7.76
282	SLU 76	-28	5	6724	-1654.63	-5.46	-7.76
282	SLU 77	-28	5	6724	-1654.63	-5.46	-7.76
282	SLU 78	-28	5	6724	-1654.63	-5.46	-7.76
282	SLU 79	-28	5	6724	-1654.63	-5.46	-7.76
282	SLU 80	-28	5	6724	-1654.63	-5.46	-7.76
282	SLU 81	-29	6	7057	-1735.96	-5.74	-8.15
282	SLU 82	-29	6	7057	-1735.96	-5.74	-8.15
282	SLU 83	-29	6	7057	-1735.96	-5.74	-8.15
282	SLU 84	-29	6	7057	-1735.96	-5.74	-8.15
282	SLE RA 1	-18	4	4448	-1095.63	-3.59	-5.13
282	SLE RA 2	-18	4	4448	-1095.63	-3.59	-5.13
282	SLE RA 3	-18	4	4448	-1095.63	-3.59	-5.13
282	SLE RA 4	-18	4	4448	-1095.63	-3.59	-5.13
282	SLE RA 5	-18	4	4448	-1095.63	-3.59	-5.13
282	SLE RA 6	-18	4	4448	-1095.63	-3.59	-5.13
282	SLE RA 7	-18	4	4448	-1095.63	-3.59	-5.13
282	SLE RA 8	-18	4	4448	-1095.63	-3.59	-5.13
282	SLE RA 9	-18	4	4448	-1095.63	-3.59	-5.13
282	SLE RA 10	-20	4	4965	-1222.14	-4.03	-5.73
282	SLE RA 11	-20	4	4965	-1222.14	-4.03	-5.73
282	SLE RA 12	-20	4	4965	-1222.14	-4.03	-5.73
282	SLE RA 13	-20	4	4965	-1222.14	-4.03	-5.73
282	SLE RA 14	-20	4	4965	-1222.14	-4.03	-5.73
282	SLE RA 15	-20	4	4965	-1222.14	-4.03	-5.73
282	SLE RA 16	-20	4	4965	-1222.14	-4.03	-5.73
282	SLE RA 17	-20	4	4965	-1222.14	-4.03	-5.73
282	SLE RA 18	-21	4	5187	-1276.35	-4.21	-5.99
282	SLE RA 19	-21	4	5187	-1276.35	-4.21	-5.99
282	SLE RA 20	-21	4	5187	-1276.35	-4.21	-5.99
282	SLE RA 21	-21	4	5187	-1276.35	-4.21	-5.99
282	SLE FR 1	-18	4	4448	-1095.63	-3.59	-5.13
282	SLE FR 2	-18	4	4448	-1095.63	-3.59	-5.13
282	SLE FR 3	-18	4	4448	-1095.63	-3.59	-5.13
282	SLE FR 4	-19	4	4670	-1149.85	-3.78	-5.39
282	SLE FR 5	-19	4	4670	-1149.85	-3.78	-5.39
282	SLE FR 6	-20	4	4817	-1185.99	-3.9	-5.56
282	SLE QP 1	-18	4	4448	-1095.63	-3.59	-5.13
282	SLE QP 2	-19	4	4670	-1149.85	-3.78	-5.39
282	SLD 1	366	17	4466	-1105.52	-0.9	101.14
282	SLD 2	297	18	4467	-1105.75	-0.86	82.17
282	SLD 3	352	-12	4901	-1200.97	-1.33	97.14
282	SLD 4	283	-11	4902	-1201.21	-1.29	78.18
282	SLD 5	143	52	3949	-991.7	-2.29	39.47
282	SLD 6	72	53	3950	-991.94	-2.24	20.09
282	SLD 7	95	-45	5398	-1309.87	-3.7	26.16
282	SLD 8	25	-45	5399	-1310.11	-3.66	6.78
282	SLD 9	-63	53	3940	-989.59	-3.9	-17.56
282	SLD 10	-134	53	3941	-989.83	-3.86	-36.94
282	SLD 11	-111	-45	5389	-1307.76	-5.31	-30.87
282	SLD 12	-182	-44	5390	-1308	-5.27	-50.25
282	SLD 13	-321	19	4437	-1098.49	-6.27	-88.96



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
282	SLD 14	-390	19	4438	-1098.73	-6.23	-107.92
282	SLD 15	-335	-10	4872	-1193.94	-6.7	-92.95
282	SLD 16	-405	-10	4873	-1194.18	-6.66	-111.92
282	SLV 1	857	36	4192	-1045.58	2.77	236.74
282	SLV 2	698	37	4194	-1046.13	2.87	193.37
282	SLV 3	823	-33	5212	-1269.61	1.77	227.39
282	SLV 4	665	-32	5215	-1270.15	1.87	184.02
282	SLV 5	353	117	2978	-778.6	-0.34	97.44
282	SLV 6	189	118	2980	-779.16	-0.24	52.41
282	SLV 7	241	-111	6379	-1525.35	-3.66	66.27
282	SLV 8	77	-110	6382	-1525.91	-3.56	21.24
282	SLV 9	-115	118	2957	-773.78	-4	-32.02
282	SLV 10	-279	119	2960	-774.35	-3.9	-77.05
282	SLV 11	-227	-110	6359	-1520.54	-7.32	-63.19
282	SLV 12	-391	-109	6361	-1521.1	-7.22	-108.22
282	SLV 13	-703	39	4124	-1029.54	-9.43	-194.8
282	SLV 14	-861	40	4127	-1030.09	-9.33	-238.17
282	SLV 15	-737	-29	5145	-1253.57	-10.42	-204.15
282	SLV 16	-895	-28	5147	-1254.11	-10.33	-247.52
282	CRTFP Ux+	0	0	0	0	0	0
282	CRTFP Ux-	0	0	0	0	0	0
282	CRTFP Uy+	0	0	0	-0.01	0	0
282	CRTFP Uy-	0	0	0	0.01	0	0
283	SLU 1	-10	2	2302	-659.14	28.75	-3.52
283	SLU 2	-10	2	2302	-659.14	28.75	-3.52
283	SLU 3	-10	2	2302	-659.14	28.75	-3.52
283	SLU 4	-10	2	2302	-659.14	28.75	-3.52
283	SLU 5	-10	2	2302	-659.14	28.75	-3.52
283	SLU 6	-10	2	2302	-659.14	28.75	-3.52
283	SLU 7	-10	2	2302	-659.14	28.75	-3.52
283	SLU 8	-10	2	2302	-659.14	28.75	-3.52
283	SLU 9	-10	2	2302	-659.14	28.75	-3.52
283	SLU 10	-12	2	2718	-775.75	33.91	-4.1
283	SLU 11	-12	2	2718	-775.75	33.91	-4.1
283	SLU 12	-12	2	2718	-775.75	33.91	-4.1
283	SLU 13	-12	2	2718	-775.75	33.91	-4.1
283	SLU 14	-12	2	2718	-775.75	33.91	-4.1
283	SLU 15	-12	2	2718	-775.75	33.91	-4.1
283	SLU 16	-12	2	2718	-775.75	33.91	-4.1
283	SLU 17	-12	2	2718	-775.75	33.91	-4.1
283	SLU 18	-12	2	2897	-825.73	36.11	-4.35
283	SLU 19	-12	2	2897	-825.73	36.11	-4.35
283	SLU 20	-12	2	2897	-825.73	36.11	-4.35
283	SLU 21	-12	2	2897	-825.73	36.11	-4.35
283	SLU 22	-11	2	2613	-746.4	32.61	-3.97
283	SLU 23	-11	2	2613	-746.4	32.61	-3.97
283	SLU 24	-11	2	2613	-746.4	32.61	-3.97
283	SLU 25	-11	2	2613	-746.4	32.61	-3.97
283	SLU 26	-11	2	2613	-746.4	32.61	-3.97
283	SLU 27	-11	2	2613	-746.4	32.61	-3.97
283	SLU 28	-11	2	2613	-746.4	32.61	-3.97
283	SLU 29	-11	2	2613	-746.4	32.61	-3.97
283	SLU 30	-11	2	2613	-746.4	32.61	-3.97
283	SLU 31	-13	3	3030	-863.02	37.76	-4.55
283	SLU 32	-13	3	3030	-863.02	37.76	-4.55
283	SLU 33	-13	3	3030	-863.02	37.76	-4.55
283	SLU 34	-13	3	3030	-863.02	37.76	-4.55
283	SLU 35	-13	3	3030	-863.02	37.76	-4.55
283	SLU 36	-13	3	3030	-863.02	37.76	-4.55
283	SLU 37	-13	3	3030	-863.02	37.76	-4.55
283	SLU 38	-13	3	3030	-863.02	37.76	-4.55
283	SLU 39	-14	3	3208	-912.99	39.97	-4.79
283	SLU 40	-14	3	3208	-912.99	39.97	-4.79
283	SLU 41	-14	3	3208	-912.99	39.97	-4.79
283	SLU 42	-14	3	3208	-912.99	39.97	-4.79
283	SLU 43	-13	3	2886	-826.97	36.06	-4.43
283	SLU 44	-13	3	2886	-826.97	36.06	-4.43
283	SLU 45	-13	3	2886	-826.97	36.06	-4.43
283	SLU 46	-13	3	2886	-826.97	36.06	-4.43
283	SLU 47	-13	3	2886	-826.97	36.06	-4.43
283	SLU 48	-13	3	2886	-826.97	36.06	-4.43
283	SLU 49	-13	3	2886	-826.97	36.06	-4.43
283	SLU 50	-13	3	2886	-826.97	36.06	-4.43
283	SLU 51	-13	3	2886	-826.97	36.06	-4.43
283	SLU 52	-14	3	3302	-943.58	41.21	-5.01
283	SLU 53	-14	3	3302	-943.58	41.21	-5.01
283	SLU 54	-14	3	3302	-943.58	41.21	-5.01
283	SLU 55	-14	3	3302	-943.58	41.21	-5.01
283	SLU 56	-14	3	3302	-943.58	41.21	-5.01
283	SLU 57	-14	3	3302	-943.58	41.21	-5.01
283	SLU 58	-14	3	3302	-943.58	41.21	-5.01
283	SLU 59	-14	3	3302	-943.58	41.21	-5.01
283	SLU 60	-15	3	3481	-993.55	43.42	-5.25
283	SLU 61	-15	3	3481	-993.55	43.42	-5.25
283	SLU 62	-15	3	3481	-993.55	43.42	-5.25
283	SLU 63	-15	3	3481	-993.55	43.42	-5.25
283	SLU 64	-14	3	3197	-914.23	39.91	-4.87
283	SLU 65	-14	3	3197	-914.23	39.91	-4.87
283	SLU 66	-14	3	3197	-914.23	39.91	-4.87
283	SLU 67	-14	3	3197	-914.23	39.91	-4.87



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
283	SLU 68	-14	3	3197	-914.23	39.91	-4.87
283	SLU 69	-14	3	3197	-914.23	39.91	-4.87
283	SLU 70	-14	3	3197	-914.23	39.91	-4.87
283	SLU 71	-14	3	3197	-914.23	39.91	-4.87
283	SLU 72	-14	3	3197	-914.23	39.91	-4.87
283	SLU 73	-16	3	3613	-1030.84	45.06	-5.45
283	SLU 74	-16	3	3613	-1030.84	45.06	-5.45
283	SLU 75	-16	3	3613	-1030.84	45.06	-5.45
283	SLU 76	-16	3	3613	-1030.84	45.06	-5.45
283	SLU 77	-16	3	3613	-1030.84	45.06	-5.45
283	SLU 78	-16	3	3613	-1030.84	45.06	-5.45
283	SLU 79	-16	3	3613	-1030.84	45.06	-5.45
283	SLU 80	-16	3	3613	-1030.84	45.06	-5.45
283	SLU 81	-16	3	3792	-1080.82	47.27	-5.7
283	SLU 82	-16	3	3792	-1080.82	47.27	-5.7
283	SLU 83	-16	3	3792	-1080.82	47.27	-5.7
283	SLU 84	-16	3	3792	-1080.82	47.27	-5.7
283	SLE RA 1	-10	2	2391	-684.07	29.86	-3.65
283	SLE RA 2	-10	2	2391	-684.07	29.86	-3.65
283	SLE RA 3	-10	2	2391	-684.07	29.86	-3.65
283	SLE RA 4	-10	2	2391	-684.07	29.86	-3.65
283	SLE RA 5	-10	2	2391	-684.07	29.86	-3.65
283	SLE RA 6	-10	2	2391	-684.07	29.86	-3.65
283	SLE RA 7	-10	2	2391	-684.07	29.86	-3.65
283	SLE RA 8	-10	2	2391	-684.07	29.86	-3.65
283	SLE RA 9	-10	2	2391	-684.07	29.86	-3.65
283	SLE RA 10	-11	2	2669	-761.81	33.29	-4.04
283	SLE RA 11	-11	2	2669	-761.81	33.29	-4.04
283	SLE RA 12	-11	2	2669	-761.81	33.29	-4.04
283	SLE RA 13	-11	2	2669	-761.81	33.29	-4.04
283	SLE RA 14	-11	2	2669	-761.81	33.29	-4.04
283	SLE RA 15	-11	2	2669	-761.81	33.29	-4.04
283	SLE RA 16	-11	2	2669	-761.81	33.29	-4.04
283	SLE RA 17	-11	2	2669	-761.81	33.29	-4.04
283	SLE RA 18	-12	2	2787	-795.13	34.76	-4.2
283	SLE RA 19	-12	2	2787	-795.13	34.76	-4.2
283	SLE RA 20	-12	2	2787	-795.13	34.76	-4.2
283	SLE RA 21	-12	2	2787	-795.13	34.76	-4.2
283	SLE FR 1	-10	2	2391	-684.07	29.86	-3.65
283	SLE FR 2	-10	2	2391	-684.07	29.86	-3.65
283	SLE FR 3	-10	2	2391	-684.07	29.86	-3.65
283	SLE FR 4	-11	2	2510	-717.39	31.33	-3.82
283	SLE FR 5	-11	2	2510	-717.39	31.33	-3.82
283	SLE FR 6	-11	2	2589	-739.6	32.31	-3.93
283	SLE QP 1	-10	2	2391	-684.07	29.86	-3.65
283	SLE QP 2	-11	2	2510	-717.39	31.33	-3.82
283	SLD 1	202	12	2417	-691.02	30.56	70.49
283	SLD 2	164	11	2418	-691.14	30.58	57.28
283	SLD 3	194	-5	2646	-747.15	33.39	67.9
283	SLD 4	156	-6	2647	-747.27	33.41	54.69
283	SLD 5	79	32	2135	-624.31	26.8	27.17
283	SLD 6	40	30	2136	-624.43	26.82	13.67
283	SLD 7	52	-25	2897	-811.4	36.23	18.54
283	SLD 8	13	-27	2898	-811.53	36.25	5.04
283	SLD 9	-35	31	2122	-623.26	26.4	-12.67
283	SLD 10	-74	30	2123	-623.38	26.42	-26.17
283	SLD 11	-62	-26	2884	-810.35	35.84	-21.3
283	SLD 12	-101	-27	2885	-810.47	35.86	-34.8
283	SLD 13	-178	11	2373	-687.51	29.25	-62.32
283	SLD 14	-216	9	2374	-687.63	29.26	-75.53
283	SLD 15	-186	-7	2602	-743.64	32.08	-64.91
283	SLD 16	-224	-8	2603	-743.76	32.09	-78.12
283	SLV 1	473	26	2290	-655.44	29.48	165.07
283	SLV 2	386	23	2292	-655.71	29.52	134.85
283	SLV 3	454	-14	2827	-787.23	36.12	159.01
283	SLV 4	367	-17	2829	-787.5	36.16	128.79
283	SLV 5	195	71	1629	-498.84	20.68	67.2
283	SLV 6	105	68	1631	-499.12	20.72	35.82
283	SLV 7	132	-62	3419	-938.11	42.83	46.99
283	SLV 8	42	-65	3421	-938.39	42.87	15.62
283	SLV 9	-63	70	1599	-496.39	19.79	-23.25
283	SLV 10	-154	66	1601	-496.67	19.83	-54.62
283	SLV 11	-127	-63	3389	-935.67	41.93	-43.46
283	SLV 12	-217	-67	3391	-935.95	41.97	-74.83
283	SLV 13	-389	22	2191	-647.29	26.49	-136.42
283	SLV 14	-476	18	2193	-647.56	26.53	-166.64
283	SLV 15	-408	-18	2728	-779.07	33.14	-142.48
283	SLV 16	-495	-21	2730	-779.34	33.17	-172.7
283	CRTFP Ux+	0	0	0	0	0	0
283	CRTFP Ux-	0	0	0	0	0	0
283	CRTFP Uy+	0	0	0	0	0	0
283	CRTFP Uy-	0	0	0	0	0	0
284	SLU 1	-11	2	2403	-637.32	-2.63	-3.71
284	SLU 2	-11	2	2403	-637.32	-2.63	-3.71
284	SLU 3	-11	2	2403	-637.32	-2.63	-3.71
284	SLU 4	-11	2	2403	-637.32	-2.63	-3.71
284	SLU 5	-11	2	2403	-637.32	-2.63	-3.71
284	SLU 6	-11	2	2403	-637.32	-2.63	-3.71
284	SLU 7	-11	2	2403	-637.32	-2.63	-3.71
284	SLU 8	-11	2	2403	-637.32	-2.63	-3.71



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
284	SLU 9	-11	2	2403	-637.32	-2.63	-3.71
284	SLU 10	-12	2	2835	-747.88	-3.2	-4.25
284	SLU 11	-12	2	2835	-747.88	-3.2	-4.25
284	SLU 12	-12	2	2835	-747.88	-3.2	-4.25
284	SLU 13	-12	2	2835	-747.88	-3.2	-4.25
284	SLU 14	-12	2	2835	-747.88	-3.2	-4.25
284	SLU 15	-12	2	2835	-747.88	-3.2	-4.25
284	SLU 16	-12	2	2835	-747.88	-3.2	-4.25
284	SLU 17	-12	2	2835	-747.88	-3.2	-4.25
284	SLU 18	-13	2	3021	-795.27	-3.44	-4.49
284	SLU 19	-13	2	3021	-795.27	-3.44	-4.49
284	SLU 20	-13	2	3021	-795.27	-3.44	-4.49
284	SLU 21	-13	2	3021	-795.27	-3.44	-4.49
284	SLU 22	-12	2	2726	-720.06	-3.05	-4.14
284	SLU 23	-12	2	2726	-720.06	-3.05	-4.14
284	SLU 24	-12	2	2726	-720.06	-3.05	-4.14
284	SLU 25	-12	2	2726	-720.06	-3.05	-4.14
284	SLU 26	-12	2	2726	-720.06	-3.05	-4.14
284	SLU 27	-12	2	2726	-720.06	-3.05	-4.14
284	SLU 28	-12	2	2726	-720.06	-3.05	-4.14
284	SLU 29	-12	2	2726	-720.06	-3.05	-4.14
284	SLU 30	-12	2	2726	-720.06	-3.05	-4.14
284	SLU 31	-13	2	3158	-830.62	-3.62	-4.68
284	SLU 32	-13	2	3158	-830.62	-3.62	-4.68
284	SLU 33	-13	2	3158	-830.62	-3.62	-4.68
284	SLU 34	-13	2	3158	-830.62	-3.62	-4.68
284	SLU 35	-13	2	3158	-830.62	-3.62	-4.68
284	SLU 36	-13	2	3158	-830.62	-3.62	-4.68
284	SLU 37	-13	2	3158	-830.62	-3.62	-4.68
284	SLU 38	-13	2	3158	-830.62	-3.62	-4.68
284	SLU 39	-14	2	3344	-878.01	-3.87	-4.91
284	SLU 40	-14	2	3344	-878.01	-3.87	-4.91
284	SLU 41	-14	2	3344	-878.01	-3.87	-4.91
284	SLU 42	-14	2	3344	-878.01	-3.87	-4.91
284	SLU 43	-13	2	3013	-800.15	-3.27	-4.68
284	SLU 44	-13	2	3013	-800.15	-3.27	-4.68
284	SLU 45	-13	2	3013	-800.15	-3.27	-4.68
284	SLU 46	-13	2	3013	-800.15	-3.27	-4.68
284	SLU 47	-13	2	3013	-800.15	-3.27	-4.68
284	SLU 48	-13	2	3013	-800.15	-3.27	-4.68
284	SLU 49	-13	2	3013	-800.15	-3.27	-4.68
284	SLU 50	-13	2	3013	-800.15	-3.27	-4.68
284	SLU 51	-13	2	3013	-800.15	-3.27	-4.68
284	SLU 52	-15	2	3446	-910.71	-3.84	-5.22
284	SLU 53	-15	2	3446	-910.71	-3.84	-5.22
284	SLU 54	-15	2	3446	-910.71	-3.84	-5.22
284	SLU 55	-15	2	3446	-910.71	-3.84	-5.22
284	SLU 56	-15	2	3446	-910.71	-3.84	-5.22
284	SLU 57	-15	2	3446	-910.71	-3.84	-5.22
284	SLU 58	-15	2	3446	-910.71	-3.84	-5.22
284	SLU 59	-15	2	3446	-910.71	-3.84	-5.22
284	SLU 60	-16	2	3631	-958.09	-4.09	-5.45
284	SLU 61	-16	2	3631	-958.09	-4.09	-5.45
284	SLU 62	-16	2	3631	-958.09	-4.09	-5.45
284	SLU 63	-16	2	3631	-958.09	-4.09	-5.45
284	SLU 64	-15	2	3337	-882.89	-3.7	-5.1
284	SLU 65	-15	2	3337	-882.89	-3.7	-5.1
284	SLU 66	-15	2	3337	-882.89	-3.7	-5.1
284	SLU 67	-15	2	3337	-882.89	-3.7	-5.1
284	SLU 68	-15	2	3337	-882.89	-3.7	-5.1
284	SLU 69	-15	2	3337	-882.89	-3.7	-5.1
284	SLU 70	-15	2	3337	-882.89	-3.7	-5.1
284	SLU 71	-15	2	3337	-882.89	-3.7	-5.1
284	SLU 72	-15	2	3337	-882.89	-3.7	-5.1
284	SLU 73	-16	3	3769	-993.45	-4.27	-5.65
284	SLU 74	-16	3	3769	-993.45	-4.27	-5.65
284	SLU 75	-16	3	3769	-993.45	-4.27	-5.65
284	SLU 76	-16	3	3769	-993.45	-4.27	-5.65
284	SLU 77	-16	3	3769	-993.45	-4.27	-5.65
284	SLU 78	-16	3	3769	-993.45	-4.27	-5.65
284	SLU 79	-16	3	3769	-993.45	-4.27	-5.65
284	SLU 80	-16	3	3769	-993.45	-4.27	-5.65
284	SLU 81	-17	3	3954	-1040.83	-4.51	-5.88
284	SLU 82	-17	3	3954	-1040.83	-4.51	-5.88
284	SLU 83	-17	3	3954	-1040.83	-4.51	-5.88
284	SLU 84	-17	3	3954	-1040.83	-4.51	-5.88
284	SLE RA 1	-11	2	2496	-660.96	-2.75	-3.83
284	SLE RA 2	-11	2	2496	-660.96	-2.75	-3.83
284	SLE RA 3	-11	2	2496	-660.96	-2.75	-3.83
284	SLE RA 4	-11	2	2496	-660.96	-2.75	-3.83
284	SLE RA 5	-11	2	2496	-660.96	-2.75	-3.83
284	SLE RA 6	-11	2	2496	-660.96	-2.75	-3.83
284	SLE RA 7	-11	2	2496	-660.96	-2.75	-3.83
284	SLE RA 8	-11	2	2496	-660.96	-2.75	-3.83
284	SLE RA 9	-11	2	2496	-660.96	-2.75	-3.83
284	SLE RA 10	-12	2	2784	-734.67	-3.13	-4.19
284	SLE RA 11	-12	2	2784	-734.67	-3.13	-4.19
284	SLE RA 12	-12	2	2784	-734.67	-3.13	-4.19
284	SLE RA 13	-12	2	2784	-734.67	-3.13	-4.19
284	SLE RA 14	-12	2	2784	-734.67	-3.13	-4.19



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
284	SLE RA 15	-12	2	2784	-734.67	-3.13	-4.19
284	SLE RA 16	-12	2	2784	-734.67	-3.13	-4.19
284	SLE RA 17	-12	2	2784	-734.67	-3.13	-4.19
284	SLE RA 18	-12	2	2907	-766.26	-3.29	-4.35
284	SLE RA 19	-12	2	2907	-766.26	-3.29	-4.35
284	SLE RA 20	-12	2	2907	-766.26	-3.29	-4.35
284	SLE RA 21	-12	2	2907	-766.26	-3.29	-4.35
284	SLE FR 1	-11	2	2496	-660.96	-2.75	-3.83
284	SLE FR 2	-11	2	2496	-660.96	-2.75	-3.83
284	SLE FR 3	-11	2	2496	-660.96	-2.75	-3.83
284	SLE FR 4	-11	2	2619	-692.55	-2.91	-3.99
284	SLE FR 5	-11	2	2619	-692.55	-2.91	-3.99
284	SLE FR 6	-12	2	2701	-713.61	-3.02	-4.09
284	SLE QP 1	-11	2	2496	-660.96	-2.75	-3.83
284	SLE QP 2	-11	2	2619	-692.55	-2.91	-3.99
284	SLD 1	217	16	2537	-668.32	-2.3	75.93
284	SLD 2	176	13	2538	-668.42	-2.29	61.73
284	SLD 3	208	-5	2775	-720.53	-2.6	72.94
284	SLD 4	168	-9	2776	-720.62	-2.59	58.74
284	SLD 5	85	40	2234	-606.07	-2.27	29.64
284	SLD 6	44	36	2235	-606.17	-2.27	15.13
284	SLD 7	56	-31	3026	-780.08	-3.28	19.69
284	SLD 8	14	-35	3027	-780.18	-3.27	5.18
284	SLD 9	-37	38	2211	-604.92	-2.55	-13.15
284	SLD 10	-79	35	2212	-605.02	-2.55	-27.67
284	SLD 11	-67	-33	3003	-778.92	-3.56	-23.1
284	SLD 12	-108	-36	3004	-779.03	-3.55	-37.62
284	SLD 13	-190	12	2462	-664.47	-3.23	-66.72
284	SLD 14	-231	9	2463	-664.57	-3.23	-80.92
284	SLD 15	-199	-9	2700	-716.68	-3.53	-69.7
284	SLD 16	-240	-12	2701	-716.77	-3.53	-83.91
284	SLV 1	508	34	2424	-635.8	-1.51	177.66
284	SLV 2	415	27	2427	-636.02	-1.49	145.18
284	SLV 3	487	-15	2982	-758.44	-2.22	170.67
284	SLV 4	394	-23	2985	-758.66	-2.2	138.19
284	SLV 5	210	90	1714	-489.44	-1.43	73.1
284	SLV 6	114	82	1716	-489.67	-1.41	39.37
284	SLV 7	141	-76	3573	-898.24	-3.78	49.8
284	SLV 8	44	-84	3576	-898.47	-3.76	16.07
284	SLV 9	-67	87	1662	-486.63	-2.06	-24.05
284	SLV 10	-164	80	1665	-486.86	-2.05	-57.78
284	SLV 11	-137	-79	3522	-895.43	-4.42	-47.35
284	SLV 12	-233	-86	3524	-895.66	-4.4	-81.08
284	SLV 13	-417	26	2253	-626.44	-3.63	-146.16
284	SLV 14	-510	19	2256	-626.66	-3.61	-178.65
284	SLV 15	-438	-23	2811	-749.08	-4.33	-153.15
284	SLV 16	-531	-31	2814	-749.3	-4.32	-185.64
284	CRTFP Ux+	0	0	0	0	0	0
284	CRTFP Ux-	0	0	0	0	0	0
284	CRTFP Uy+	0	0	0	0	0	0
284	CRTFP Uy-	0	0	0	0	0	0
285	SLU 1	-10	1	2309	-556.79	-3.07	-3.63
285	SLU 2	-10	1	2309	-556.79	-3.07	-3.63
285	SLU 3	-10	1	2309	-556.79	-3.07	-3.63
285	SLU 4	-10	1	2309	-556.79	-3.07	-3.63
285	SLU 5	-10	1	2309	-556.79	-3.07	-3.63
285	SLU 6	-10	1	2309	-556.79	-3.07	-3.63
285	SLU 7	-10	1	2309	-556.79	-3.07	-3.63
285	SLU 8	-10	1	2309	-556.79	-3.07	-3.63
285	SLU 9	-10	1	2309	-556.79	-3.07	-3.63
285	SLU 10	-12	1	2721	-650.6	-3.73	-4.1
285	SLU 11	-12	1	2721	-650.6	-3.73	-4.1
285	SLU 12	-12	1	2721	-650.6	-3.73	-4.1
285	SLU 13	-12	1	2721	-650.6	-3.73	-4.1
285	SLU 14	-12	1	2721	-650.6	-3.73	-4.1
285	SLU 15	-12	1	2721	-650.6	-3.73	-4.1
285	SLU 16	-12	1	2721	-650.6	-3.73	-4.1
285	SLU 17	-12	1	2721	-650.6	-3.73	-4.1
285	SLU 18	-12	1	2898	-690.81	-4.02	-4.29
285	SLU 19	-12	1	2898	-690.81	-4.02	-4.29
285	SLU 20	-12	1	2898	-690.81	-4.02	-4.29
285	SLU 21	-12	1	2898	-690.81	-4.02	-4.29
285	SLU 22	-11	1	2617	-627	-3.56	-4.01
285	SLU 23	-11	1	2617	-627	-3.56	-4.01
285	SLU 24	-11	1	2617	-627	-3.56	-4.01
285	SLU 25	-11	1	2617	-627	-3.56	-4.01
285	SLU 26	-11	1	2617	-627	-3.56	-4.01
285	SLU 27	-11	1	2617	-627	-3.56	-4.01
285	SLU 28	-11	1	2617	-627	-3.56	-4.01
285	SLU 29	-11	1	2617	-627	-3.56	-4.01
285	SLU 30	-11	1	2617	-627	-3.56	-4.01
285	SLU 31	-13	1	3029	-720.81	-4.22	-4.47
285	SLU 32	-13	1	3029	-720.81	-4.22	-4.47
285	SLU 33	-13	1	3029	-720.81	-4.22	-4.47
285	SLU 34	-13	1	3029	-720.81	-4.22	-4.47
285	SLU 35	-13	1	3029	-720.81	-4.22	-4.47
285	SLU 36	-13	1	3029	-720.81	-4.22	-4.47
285	SLU 37	-13	1	3029	-720.81	-4.22	-4.47
285	SLU 38	-13	1	3029	-720.81	-4.22	-4.47
285	SLU 39	-13	1	3206	-761.02	-4.51	-4.67



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
285	SLU 40	-13	1	3206	-761.02	-4.51	-4.67
285	SLU 41	-13	1	3206	-761.02	-4.51	-4.67
285	SLU 42	-13	1	3206	-761.02	-4.51	-4.67
285	SLU 43	-13	2	2896	-699.75	-3.82	-4.6
285	SLU 44	-13	2	2896	-699.75	-3.82	-4.6
285	SLU 45	-13	2	2896	-699.75	-3.82	-4.6
285	SLU 46	-13	2	2896	-699.75	-3.82	-4.6
285	SLU 47	-13	2	2896	-699.75	-3.82	-4.6
285	SLU 48	-13	2	2896	-699.75	-3.82	-4.6
285	SLU 49	-13	2	2896	-699.75	-3.82	-4.6
285	SLU 50	-13	2	2896	-699.75	-3.82	-4.6
285	SLU 51	-13	2	2896	-699.75	-3.82	-4.6
285	SLU 52	-14	2	3308	-793.57	-4.48	-5.06
285	SLU 53	-14	2	3308	-793.57	-4.48	-5.06
285	SLU 54	-14	2	3308	-793.57	-4.48	-5.06
285	SLU 55	-14	2	3308	-793.57	-4.48	-5.06
285	SLU 56	-14	2	3308	-793.57	-4.48	-5.06
285	SLU 57	-14	2	3308	-793.57	-4.48	-5.06
285	SLU 58	-14	2	3308	-793.57	-4.48	-5.06
285	SLU 59	-14	2	3308	-793.57	-4.48	-5.06
285	SLU 60	-15	2	3485	-833.77	-4.77	-5.26
285	SLU 61	-15	2	3485	-833.77	-4.77	-5.26
285	SLU 62	-15	2	3485	-833.77	-4.77	-5.26
285	SLU 63	-15	2	3485	-833.77	-4.77	-5.26
285	SLU 64	-14	2	3205	-769.96	-4.31	-4.97
285	SLU 65	-14	2	3205	-769.96	-4.31	-4.97
285	SLU 66	-14	2	3205	-769.96	-4.31	-4.97
285	SLU 67	-14	2	3205	-769.96	-4.31	-4.97
285	SLU 68	-14	2	3205	-769.96	-4.31	-4.97
285	SLU 69	-14	2	3205	-769.96	-4.31	-4.97
285	SLU 70	-14	2	3205	-769.96	-4.31	-4.97
285	SLU 71	-14	2	3205	-769.96	-4.31	-4.97
285	SLU 72	-14	2	3205	-769.96	-4.31	-4.97
285	SLU 73	-16	2	3616	-863.78	-4.97	-5.43
285	SLU 74	-16	2	3616	-863.78	-4.97	-5.43
285	SLU 75	-16	2	3616	-863.78	-4.97	-5.43
285	SLU 76	-16	2	3616	-863.78	-4.97	-5.43
285	SLU 77	-16	2	3616	-863.78	-4.97	-5.43
285	SLU 78	-16	2	3616	-863.78	-4.97	-5.43
285	SLU 79	-16	2	3616	-863.78	-4.97	-5.43
285	SLU 80	-16	2	3616	-863.78	-4.97	-5.43
285	SLU 81	-16	2	3793	-903.98	-5.26	-5.63
285	SLU 82	-16	2	3793	-903.98	-5.26	-5.63
285	SLU 83	-16	2	3793	-903.98	-5.26	-5.63
285	SLU 84	-16	2	3793	-903.98	-5.26	-5.63
285	SLE RA 1	-11	1	2397	-576.85	-3.21	-3.74
285	SLE RA 2	-11	1	2397	-576.85	-3.21	-3.74
285	SLE RA 3	-11	1	2397	-576.85	-3.21	-3.74
285	SLE RA 4	-11	1	2397	-576.85	-3.21	-3.74
285	SLE RA 5	-11	1	2397	-576.85	-3.21	-3.74
285	SLE RA 6	-11	1	2397	-576.85	-3.21	-3.74
285	SLE RA 7	-11	1	2397	-576.85	-3.21	-3.74
285	SLE RA 8	-11	1	2397	-576.85	-3.21	-3.74
285	SLE RA 9	-11	1	2397	-576.85	-3.21	-3.74
285	SLE RA 10	-12	1	2672	-639.39	-3.65	-4.05
285	SLE RA 11	-12	1	2672	-639.39	-3.65	-4.05
285	SLE RA 12	-12	1	2672	-639.39	-3.65	-4.05
285	SLE RA 13	-12	1	2672	-639.39	-3.65	-4.05
285	SLE RA 14	-12	1	2672	-639.39	-3.65	-4.05
285	SLE RA 15	-12	1	2672	-639.39	-3.65	-4.05
285	SLE RA 16	-12	1	2672	-639.39	-3.65	-4.05
285	SLE RA 17	-12	1	2672	-639.39	-3.65	-4.05
285	SLE RA 18	-12	1	2790	-666.2	-3.84	-4.18
285	SLE RA 19	-12	1	2790	-666.2	-3.84	-4.18
285	SLE RA 20	-12	1	2790	-666.2	-3.84	-4.18
285	SLE RA 21	-12	1	2790	-666.2	-3.84	-4.18
285	SLE FR 1	-11	1	2397	-576.85	-3.21	-3.74
285	SLE FR 2	-11	1	2397	-576.85	-3.21	-3.74
285	SLE FR 3	-11	1	2397	-576.85	-3.21	-3.74
285	SLE FR 4	-11	1	2515	-603.65	-3.4	-3.87
285	SLE FR 5	-11	1	2515	-603.65	-3.4	-3.87
285	SLE FR 6	-11	1	2593	-621.52	-3.52	-3.96
285	SLE QP 1	-11	1	2397	-576.85	-3.21	-3.74
285	SLE QP 2	-11	1	2515	-603.65	-3.4	-3.87
285	SLD 1	218	19	2453	-584.62	-2.76	76.07
285	SLD 2	177	15	2455	-584.69	-2.75	61.86
285	SLD 3	209	-7	2681	-627.7	-3.09	73.09
285	SLD 4	168	-12	2682	-627.78	-3.08	58.88
285	SLD 5	86	49	2151	-532.57	-2.7	29.76
285	SLD 6	44	44	2153	-532.64	-2.69	15.24
285	SLD 7	56	-40	2909	-676.19	-3.82	19.83
285	SLD 8	14	-45	2910	-676.26	-3.81	5.31
285	SLD 9	-36	47	2120	-531.04	-2.99	-13.05
285	SLD 10	-78	43	2121	-531.11	-2.98	-27.57
285	SLD 11	-67	-41	2877	-674.67	-4.1	-22.98
285	SLD 12	-108	-46	2879	-674.74	-4.09	-37.51
285	SLD 13	-190	15	2348	-579.53	-3.71	-66.63
285	SLD 14	-231	10	2349	-579.6	-3.7	-80.84
285	SLD 15	-199	-12	2575	-622.62	-4.05	-69.61
285	SLD 16	-240	-17	2577	-622.69	-4.04	-83.82



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
285	SLV 1	509	43	2366	-559.17	-1.93	177.84
285	SLV 2	416	32	2369	-559.33	-1.91	145.34
285	SLV 3	488	-19	2900	-660.51	-2.71	170.86
285	SLV 4	395	-30	2903	-660.67	-2.69	138.37
285	SLV 5	211	112	1660	-436.55	-1.77	73.22
285	SLV 6	115	101	1663	-436.72	-1.75	39.48
285	SLV 7	141	-95	3439	-774.35	-4.39	49.96
285	SLV 8	44	-106	3442	-774.52	-4.37	16.22
285	SLV 9	-66	109	1588	-432.79	-2.43	-23.97
285	SLV 10	-163	98	1591	-432.96	-2.4	-57.71
285	SLV 11	-137	-98	3367	-770.59	-5.04	-47.22
285	SLV 12	-234	-109	3370	-770.76	-5.02	-80.96
285	SLV 13	-417	33	2127	-546.63	-4.1	-146.11
285	SLV 14	-510	22	2130	-546.8	-4.08	-178.61
285	SLV 15	-438	-29	2661	-647.97	-4.88	-153.09
285	SLV 16	-531	-40	2664	-648.14	-4.86	-185.59
285	CRTFP Ux+	0	0	0	0	0	0
285	CRTFP Ux-	0	0	0	0	0	0
285	CRTFP Uy+	0	0	0	0	0	0
285	CRTFP Uy-	0	0	0	0	0	0
286	SLU 1	-10	1	2210	-476.16	-3	-3.55
286	SLU 2	-10	1	2210	-476.16	-3	-3.55
286	SLU 3	-10	1	2210	-476.16	-3	-3.55
286	SLU 4	-10	1	2210	-476.16	-3	-3.55
286	SLU 5	-10	1	2210	-476.16	-3	-3.55
286	SLU 6	-10	1	2210	-476.16	-3	-3.55
286	SLU 7	-10	1	2210	-476.16	-3	-3.55
286	SLU 8	-10	1	2210	-476.16	-3	-3.55
286	SLU 9	-10	1	2210	-476.16	-3	-3.55
286	SLU 10	-11	1	2600	-553.21	-3.66	-3.93
286	SLU 11	-11	1	2600	-553.21	-3.66	-3.93
286	SLU 12	-11	1	2600	-553.21	-3.66	-3.93
286	SLU 13	-11	1	2600	-553.21	-3.66	-3.93
286	SLU 14	-11	1	2600	-553.21	-3.66	-3.93
286	SLU 15	-11	1	2600	-553.21	-3.66	-3.93
286	SLU 16	-11	1	2600	-553.21	-3.66	-3.93
286	SLU 17	-11	1	2600	-553.21	-3.66	-3.93
286	SLU 18	-12	1	2768	-586.23	-3.94	-4.09
286	SLU 19	-12	1	2768	-586.23	-3.94	-4.09
286	SLU 20	-12	1	2768	-586.23	-3.94	-4.09
286	SLU 21	-12	1	2768	-586.23	-3.94	-4.09
286	SLU 22	-11	1	2502	-533.82	-3.49	-3.87
286	SLU 23	-11	1	2502	-533.82	-3.49	-3.87
286	SLU 24	-11	1	2502	-533.82	-3.49	-3.87
286	SLU 25	-11	1	2502	-533.82	-3.49	-3.87
286	SLU 26	-11	1	2502	-533.82	-3.49	-3.87
286	SLU 27	-11	1	2502	-533.82	-3.49	-3.87
286	SLU 28	-11	1	2502	-533.82	-3.49	-3.87
286	SLU 29	-11	1	2502	-533.82	-3.49	-3.87
286	SLU 30	-11	1	2502	-533.82	-3.49	-3.87
286	SLU 31	-12	1	2892	-610.87	-4.15	-4.25
286	SLU 32	-12	1	2892	-610.87	-4.15	-4.25
286	SLU 33	-12	1	2892	-610.87	-4.15	-4.25
286	SLU 34	-12	1	2892	-610.87	-4.15	-4.25
286	SLU 35	-12	1	2892	-610.87	-4.15	-4.25
286	SLU 36	-12	1	2892	-610.87	-4.15	-4.25
286	SLU 37	-12	1	2892	-610.87	-4.15	-4.25
286	SLU 38	-12	1	2892	-610.87	-4.15	-4.25
286	SLU 39	-13	1	3060	-643.89	-4.43	-4.41
286	SLU 40	-13	1	3060	-643.89	-4.43	-4.41
286	SLU 41	-13	1	3060	-643.89	-4.43	-4.41
286	SLU 42	-13	1	3060	-643.89	-4.43	-4.41
286	SLU 43	-13	2	2773	-599.24	-3.74	-4.5
286	SLU 44	-13	2	2773	-599.24	-3.74	-4.5
286	SLU 45	-13	2	2773	-599.24	-3.74	-4.5
286	SLU 46	-13	2	2773	-599.24	-3.74	-4.5
286	SLU 47	-13	2	2773	-599.24	-3.74	-4.5
286	SLU 48	-13	2	2773	-599.24	-3.74	-4.5
286	SLU 49	-13	2	2773	-599.24	-3.74	-4.5
286	SLU 50	-13	2	2773	-599.24	-3.74	-4.5
286	SLU 51	-13	2	2773	-599.24	-3.74	-4.5
286	SLU 52	-14	1	3163	-676.29	-4.4	-4.88
286	SLU 53	-14	1	3163	-676.29	-4.4	-4.88
286	SLU 54	-14	1	3163	-676.29	-4.4	-4.88
286	SLU 55	-14	1	3163	-676.29	-4.4	-4.88
286	SLU 56	-14	1	3163	-676.29	-4.4	-4.88
286	SLU 57	-14	1	3163	-676.29	-4.4	-4.88
286	SLU 58	-14	1	3163	-676.29	-4.4	-4.88
286	SLU 59	-14	1	3163	-676.29	-4.4	-4.88
286	SLU 60	-14	1	3330	-709.31	-4.68	-5.05
286	SLU 61	-14	1	3330	-709.31	-4.68	-5.05
286	SLU 62	-14	1	3330	-709.31	-4.68	-5.05
286	SLU 63	-14	1	3330	-709.31	-4.68	-5.05
286	SLU 64	-14	2	3065	-656.9	-4.23	-4.82
286	SLU 65	-14	2	3065	-656.9	-4.23	-4.82
286	SLU 66	-14	2	3065	-656.9	-4.23	-4.82
286	SLU 67	-14	2	3065	-656.9	-4.23	-4.82
286	SLU 68	-14	2	3065	-656.9	-4.23	-4.82
286	SLU 69	-14	2	3065	-656.9	-4.23	-4.82
286	SLU 70	-14	2	3065	-656.9	-4.23	-4.82



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
286	SLU 71	-14	2	3065	-656.9	-4.23	-4.82
286	SLU 72	-14	2	3065	-656.9	-4.23	-4.82
286	SLU 73	-15	1	3455	-733.95	-4.88	-5.2
286	SLU 74	-15	1	3455	-733.95	-4.88	-5.2
286	SLU 75	-15	1	3455	-733.95	-4.88	-5.2
286	SLU 76	-15	1	3455	-733.95	-4.88	-5.2
286	SLU 77	-15	1	3455	-733.95	-4.88	-5.2
286	SLU 78	-15	1	3455	-733.95	-4.88	-5.2
286	SLU 79	-15	1	3455	-733.95	-4.88	-5.2
286	SLU 80	-15	1	3455	-733.95	-4.88	-5.2
286	SLU 81	-15	1	3622	-766.97	-5.17	-5.37
286	SLU 82	-15	1	3622	-766.97	-5.17	-5.37
286	SLU 83	-15	1	3622	-766.97	-5.17	-5.37
286	SLU 84	-15	1	3622	-766.97	-5.17	-5.37
286	SLE RA 1	-10	1	2293	-492.63	-3.14	-3.64
286	SLE RA 2	-10	1	2293	-492.63	-3.14	-3.64
286	SLE RA 3	-10	1	2293	-492.63	-3.14	-3.64
286	SLE RA 4	-10	1	2293	-492.63	-3.14	-3.64
286	SLE RA 5	-10	1	2293	-492.63	-3.14	-3.64
286	SLE RA 6	-10	1	2293	-492.63	-3.14	-3.64
286	SLE RA 7	-10	1	2293	-492.63	-3.14	-3.64
286	SLE RA 8	-10	1	2293	-492.63	-3.14	-3.64
286	SLE RA 9	-10	1	2293	-492.63	-3.14	-3.64
286	SLE RA 10	-11	1	2554	-544	-3.58	-3.89
286	SLE RA 11	-11	1	2554	-544	-3.58	-3.89
286	SLE RA 12	-11	1	2554	-544	-3.58	-3.89
286	SLE RA 13	-11	1	2554	-544	-3.58	-3.89
286	SLE RA 14	-11	1	2554	-544	-3.58	-3.89
286	SLE RA 15	-11	1	2554	-544	-3.58	-3.89
286	SLE RA 16	-11	1	2554	-544	-3.58	-3.89
286	SLE RA 17	-11	1	2554	-544	-3.58	-3.89
286	SLE RA 18	-11	1	2665	-566.02	-3.77	-4
286	SLE RA 19	-11	1	2665	-566.02	-3.77	-4
286	SLE RA 20	-11	1	2665	-566.02	-3.77	-4
286	SLE RA 21	-11	1	2665	-566.02	-3.77	-4
286	SLE FR 1	-10	1	2293	-492.63	-3.14	-3.64
286	SLE FR 2	-10	1	2293	-492.63	-3.14	-3.64
286	SLE FR 3	-10	1	2293	-492.63	-3.14	-3.64
286	SLE FR 4	-11	1	2405	-514.65	-3.33	-3.75
286	SLE FR 5	-11	1	2405	-514.65	-3.33	-3.75
286	SLE FR 6	-11	1	2479	-529.33	-3.46	-3.82
286	SLE QP 1	-10	1	2293	-492.63	-3.14	-3.64
286	SLE QP 2	-11	1	2405	-514.65	-3.33	-3.75
286	SLD 1	218	24	2364	-500.65	-2.69	76.21
286	SLD 2	177	18	2366	-500.69	-2.68	62
286	SLD 3	209	-10	2581	-534.81	-2.99	73.23
286	SLD 4	168	-16	2582	-534.85	-2.98	59.03
286	SLD 5	87	62	2063	-458.62	-2.68	29.87
286	SLD 6	45	55	2065	-458.67	-2.66	15.35
286	SLD 7	56	-52	2786	-572.49	-3.7	19.97
286	SLD 8	14	-58	2788	-572.53	-3.69	5.45
286	SLD 9	-36	60	2022	-456.77	-2.97	-12.94
286	SLD 10	-77	54	2024	-456.81	-2.96	-27.46
286	SLD 11	-66	-53	2745	-570.63	-4	-22.85
286	SLD 12	-108	-60	2747	-570.67	-3.99	-37.37
286	SLD 13	-190	19	2227	-494.45	-3.68	-66.52
286	SLD 14	-230	12	2229	-494.49	-3.67	-80.73
286	SLD 15	-199	-15	2444	-528.61	-3.99	-69.49
286	SLD 16	-240	-22	2446	-528.65	-3.98	-83.7
286	SLV 1	510	55	2303	-482.04	-1.86	177.99
286	SLV 2	416	40	2307	-482.13	-1.83	145.49
286	SLV 3	488	-25	2813	-562.54	-2.58	171.03
286	SLV 4	395	-40	2816	-562.64	-2.55	138.53
286	SLV 5	213	144	1601	-382.73	-1.81	73.32
286	SLV 6	116	128	1605	-382.83	-1.78	39.58
286	SLV 7	141	-122	3298	-651.08	-4.21	50.13
286	SLV 8	44	-138	3302	-651.18	-4.18	16.39
286	SLV 9	-65	140	1508	-378.12	-2.48	-23.88
286	SLV 10	-162	124	1512	-378.22	-2.46	-57.62
286	SLV 11	-137	-126	3205	-646.47	-4.88	-47.08
286	SLV 12	-234	-141	3209	-646.56	-4.86	-80.82
286	SLV 13	-416	42	1993	-466.66	-4.11	-146.03
286	SLV 14	-509	27	1997	-466.75	-4.08	-178.52
286	SLV 15	-438	-38	2503	-547.17	-4.83	-152.99
286	SLV 16	-531	-52	2507	-547.26	-4.8	-185.48
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	-10	1	2118	-403	-2.61	-3.46
287	SLU 2	-10	1	2118	-403	-2.61	-3.46
287	SLU 3	-10	1	2118	-403	-2.61	-3.46
287	SLU 4	-10	1	2118	-403	-2.61	-3.46
287	SLU 5	-10	1	2118	-403	-2.61	-3.46
287	SLU 6	-10	1	2118	-403	-2.61	-3.46
287	SLU 7	-10	1	2118	-403	-2.61	-3.46
287	SLU 8	-10	1	2118	-403	-2.61	-3.46
287	SLU 9	-10	1	2118	-403	-2.61	-3.46
287	SLU 10	-11	1	2489	-464.85	-3.2	-3.76
287	SLU 11	-11	1	2489	-464.85	-3.2	-3.76



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
287	SLU 12	-11	1	2489	-464.85	-3.2	-3.76
287	SLU 13	-11	1	2489	-464.85	-3.2	-3.76
287	SLU 14	-11	1	2489	-464.85	-3.2	-3.76
287	SLU 15	-11	1	2489	-464.85	-3.2	-3.76
287	SLU 16	-11	1	2489	-464.85	-3.2	-3.76
287	SLU 17	-11	1	2489	-464.85	-3.2	-3.76
287	SLU 18	-11	1	2647	-491.35	-3.45	-3.89
287	SLU 19	-11	1	2647	-491.35	-3.45	-3.89
287	SLU 20	-11	1	2647	-491.35	-3.45	-3.89
287	SLU 21	-11	1	2647	-491.35	-3.45	-3.89
287	SLU 22	-11	1	2396	-449.28	-3.04	-3.73
287	SLU 23	-11	1	2396	-449.28	-3.04	-3.73
287	SLU 24	-11	1	2396	-449.28	-3.04	-3.73
287	SLU 25	-11	1	2396	-449.28	-3.04	-3.73
287	SLU 26	-11	1	2396	-449.28	-3.04	-3.73
287	SLU 27	-11	1	2396	-449.28	-3.04	-3.73
287	SLU 28	-11	1	2396	-449.28	-3.04	-3.73
287	SLU 29	-11	1	2396	-449.28	-3.04	-3.73
287	SLU 30	-11	1	2396	-449.28	-3.04	-3.73
287	SLU 31	-12	1	2766	-511.12	-3.63	-4.04
287	SLU 32	-12	1	2766	-511.12	-3.63	-4.04
287	SLU 33	-12	1	2766	-511.12	-3.63	-4.04
287	SLU 34	-12	1	2766	-511.12	-3.63	-4.04
287	SLU 35	-12	1	2766	-511.12	-3.63	-4.04
287	SLU 36	-12	1	2766	-511.12	-3.63	-4.04
287	SLU 37	-12	1	2766	-511.12	-3.63	-4.04
287	SLU 38	-12	1	2766	-511.12	-3.63	-4.04
287	SLU 39	-12	1	2924	-537.63	-3.88	-4.17
287	SLU 40	-12	1	2924	-537.63	-3.88	-4.17
287	SLU 41	-12	1	2924	-537.63	-3.88	-4.17
287	SLU 42	-12	1	2924	-537.63	-3.88	-4.17
287	SLU 43	-13	2	2659	-508.03	-3.25	-4.4
287	SLU 44	-13	2	2659	-508.03	-3.25	-4.4
287	SLU 45	-13	2	2659	-508.03	-3.25	-4.4
287	SLU 46	-13	2	2659	-508.03	-3.25	-4.4
287	SLU 47	-13	2	2659	-508.03	-3.25	-4.4
287	SLU 48	-13	2	2659	-508.03	-3.25	-4.4
287	SLU 49	-13	2	2659	-508.03	-3.25	-4.4
287	SLU 50	-13	2	2659	-508.03	-3.25	-4.4
287	SLU 51	-13	2	2659	-508.03	-3.25	-4.4
287	SLU 52	-13	1	3029	-569.88	-3.83	-4.71
287	SLU 53	-13	1	3029	-569.88	-3.83	-4.71
287	SLU 54	-13	1	3029	-569.88	-3.83	-4.71
287	SLU 55	-13	1	3029	-569.88	-3.83	-4.71
287	SLU 56	-13	1	3029	-569.88	-3.83	-4.71
287	SLU 57	-13	1	3029	-569.88	-3.83	-4.71
287	SLU 58	-13	1	3029	-569.88	-3.83	-4.71
287	SLU 59	-13	1	3029	-569.88	-3.83	-4.71
287	SLU 60	-14	1	3188	-596.39	-4.08	-4.84
287	SLU 61	-14	1	3188	-596.39	-4.08	-4.84
287	SLU 62	-14	1	3188	-596.39	-4.08	-4.84
287	SLU 63	-14	1	3188	-596.39	-4.08	-4.84
287	SLU 64	-13	1	2936	-554.31	-3.68	-4.67
287	SLU 65	-13	1	2936	-554.31	-3.68	-4.67
287	SLU 66	-13	1	2936	-554.31	-3.68	-4.67
287	SLU 67	-13	1	2936	-554.31	-3.68	-4.67
287	SLU 68	-13	1	2936	-554.31	-3.68	-4.67
287	SLU 69	-13	1	2936	-554.31	-3.68	-4.67
287	SLU 70	-13	1	2936	-554.31	-3.68	-4.67
287	SLU 71	-13	1	2936	-554.31	-3.68	-4.67
287	SLU 72	-13	1	2936	-554.31	-3.68	-4.67
287	SLU 73	-14	1	3306	-616.16	-4.26	-4.98
287	SLU 74	-14	1	3306	-616.16	-4.26	-4.98
287	SLU 75	-14	1	3306	-616.16	-4.26	-4.98
287	SLU 76	-14	1	3306	-616.16	-4.26	-4.98
287	SLU 77	-14	1	3306	-616.16	-4.26	-4.98
287	SLU 78	-14	1	3306	-616.16	-4.26	-4.98
287	SLU 79	-14	1	3306	-616.16	-4.26	-4.98
287	SLU 80	-14	1	3306	-616.16	-4.26	-4.98
287	SLU 81	-15	1	3465	-642.66	-4.51	-5.11
287	SLU 82	-15	1	3465	-642.66	-4.51	-5.11
287	SLU 83	-15	1	3465	-642.66	-4.51	-5.11
287	SLU 84	-15	1	3465	-642.66	-4.51	-5.11
287	SLE RA 1	-10	1	2198	-416.22	-2.74	-3.53
287	SLE RA 2	-10	1	2198	-416.22	-2.74	-3.53
287	SLE RA 3	-10	1	2198	-416.22	-2.74	-3.53
287	SLE RA 4	-10	1	2198	-416.22	-2.74	-3.53
287	SLE RA 5	-10	1	2198	-416.22	-2.74	-3.53
287	SLE RA 6	-10	1	2198	-416.22	-2.74	-3.53
287	SLE RA 7	-10	1	2198	-416.22	-2.74	-3.53
287	SLE RA 8	-10	1	2198	-416.22	-2.74	-3.53
287	SLE RA 9	-10	1	2198	-416.22	-2.74	-3.53
287	SLE RA 10	-11	1	2444	-457.45	-3.12	-3.74
287	SLE RA 11	-11	1	2444	-457.45	-3.12	-3.74
287	SLE RA 12	-11	1	2444	-457.45	-3.12	-3.74
287	SLE RA 13	-11	1	2444	-457.45	-3.12	-3.74
287	SLE RA 14	-11	1	2444	-457.45	-3.12	-3.74
287	SLE RA 15	-11	1	2444	-457.45	-3.12	-3.74
287	SLE RA 16	-11	1	2444	-457.45	-3.12	-3.74
287	SLE RA 17	-11	1	2444	-457.45	-3.12	-3.74



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
287	SLE RA 18	-11	1	2550	-475.12	-3.29	-3.83
287	SLE RA 19	-11	1	2550	-475.12	-3.29	-3.83
287	SLE RA 20	-11	1	2550	-475.12	-3.29	-3.83
287	SLE RA 21	-11	1	2550	-475.12	-3.29	-3.83
287	SLE FR 1	-10	1	2198	-416.22	-2.74	-3.53
287	SLE FR 2	-10	1	2198	-416.22	-2.74	-3.53
287	SLE FR 3	-10	1	2198	-416.22	-2.74	-3.53
287	SLE FR 4	-10	1	2303	-433.89	-2.9	-3.62
287	SLE FR 5	-10	1	2303	-433.89	-2.9	-3.62
287	SLE FR 6	-11	1	2374	-445.67	-3.01	-3.68
287	SLE QP 1	-10	1	2198	-416.22	-2.74	-3.53
287	SLE QP 2	-10	1	2303	-433.89	-2.9	-3.62
287	SLD 1	219	30	2283	-424.15	-2.27	76.32
287	SLD 2	178	22	2285	-424.16	-2.25	62.12
287	SLD 3	209	-14	2491	-450.51	-2.5	73.36
287	SLD 4	168	-22	2493	-450.51	-2.49	59.16
287	SLD 5	87	80	1981	-391	-2.36	29.98
287	SLD 6	46	71	1983	-391	-2.34	15.47
287	SLD 7	56	-67	2675	-478.85	-3.15	20.11
287	SLD 8	14	-76	2677	-478.85	-3.14	5.59
287	SLD 9	-35	78	1930	-388.93	-2.67	-12.83
287	SLD 10	-77	69	1932	-388.94	-2.66	-27.35
287	SLD 11	-66	-69	2624	-476.78	-3.47	-22.71
287	SLD 12	-108	-77	2626	-476.79	-3.45	-37.23
287	SLD 13	-189	24	2114	-417.27	-3.32	-66.4
287	SLD 14	-230	16	2116	-417.28	-3.3	-80.6
287	SLD 15	-199	-20	2322	-443.63	-3.55	-69.37
287	SLD 16	-239	-28	2324	-443.63	-3.54	-83.57
287	SLV 1	510	69	2248	-411.33	-1.45	178.09
287	SLV 2	417	50	2253	-411.34	-1.42	145.61
287	SLV 3	488	-34	2737	-473.66	-2.01	171.15
287	SLV 4	395	-53	2742	-473.67	-1.97	138.67
287	SLV 5	214	185	1544	-332.59	-1.63	73.4
287	SLV 6	117	165	1549	-332.6	-1.6	39.68
287	SLV 7	140	-158	3173	-540.35	-3.49	50.28
287	SLV 8	43	-178	3178	-540.36	-3.46	16.55
287	SLV 9	-64	180	1429	-327.43	-2.35	-23.8
287	SLV 10	-161	160	1434	-327.44	-2.31	-57.52
287	SLV 11	-137	-162	3058	-535.18	-4.21	-46.92
287	SLV 12	-234	-182	3063	-535.19	-4.17	-80.65
287	SLV 13	-416	55	1865	-394.12	-3.83	-145.91
287	SLV 14	-509	36	1870	-394.13	-3.8	-178.4
287	SLV 15	-438	-48	2354	-456.44	-4.39	-152.85
287	SLV 16	-531	-67	2358	-456.45	-4.36	-185.33
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	-10	1	2043	-342.59	-2.01	-3.37
288	SLU 2	-10	1	2043	-342.59	-2.01	-3.37
288	SLU 3	-10	1	2043	-342.59	-2.01	-3.37
288	SLU 4	-10	1	2043	-342.59	-2.01	-3.37
288	SLU 5	-10	1	2043	-342.59	-2.01	-3.37
288	SLU 6	-10	1	2043	-342.59	-2.01	-3.37
288	SLU 7	-10	1	2043	-342.59	-2.01	-3.37
288	SLU 8	-10	1	2043	-342.59	-2.01	-3.37
288	SLU 9	-10	1	2043	-342.59	-2.01	-3.37
288	SLU 10	-10	1	2396	-391.87	-2.47	-3.6
288	SLU 11	-10	1	2396	-391.87	-2.47	-3.6
288	SLU 12	-10	1	2396	-391.87	-2.47	-3.6
288	SLU 13	-10	1	2396	-391.87	-2.47	-3.6
288	SLU 14	-10	1	2396	-391.87	-2.47	-3.6
288	SLU 15	-10	1	2396	-391.87	-2.47	-3.6
288	SLU 16	-10	1	2396	-391.87	-2.47	-3.6
288	SLU 17	-10	1	2396	-391.87	-2.47	-3.6
288	SLU 18	-11	1	2548	-412.99	-2.67	-3.7
288	SLU 19	-11	1	2548	-412.99	-2.67	-3.7
288	SLU 20	-11	1	2548	-412.99	-2.67	-3.7
288	SLU 21	-11	1	2548	-412.99	-2.67	-3.7
288	SLU 22	-10	1	2308	-379.46	-2.35	-3.59
288	SLU 23	-10	1	2308	-379.46	-2.35	-3.59
288	SLU 24	-10	1	2308	-379.46	-2.35	-3.59
288	SLU 25	-10	1	2308	-379.46	-2.35	-3.59
288	SLU 26	-10	1	2308	-379.46	-2.35	-3.59
288	SLU 27	-10	1	2308	-379.46	-2.35	-3.59
288	SLU 28	-10	1	2308	-379.46	-2.35	-3.59
288	SLU 29	-10	1	2308	-379.46	-2.35	-3.59
288	SLU 30	-10	1	2308	-379.46	-2.35	-3.59
288	SLU 31	-11	1	2661	-428.73	-2.82	-3.83
288	SLU 32	-11	1	2661	-428.73	-2.82	-3.83
288	SLU 33	-11	1	2661	-428.73	-2.82	-3.83
288	SLU 34	-11	1	2661	-428.73	-2.82	-3.83
288	SLU 35	-11	1	2661	-428.73	-2.82	-3.83
288	SLU 36	-11	1	2661	-428.73	-2.82	-3.83
288	SLU 37	-11	1	2661	-428.73	-2.82	-3.83
288	SLU 38	-11	1	2661	-428.73	-2.82	-3.83
288	SLU 39	-11	0	2812	-449.85	-3.01	-3.93
288	SLU 40	-11	0	2812	-449.85	-3.01	-3.93
288	SLU 41	-11	0	2812	-449.85	-3.01	-3.93
288	SLU 42	-11	0	2812	-449.85	-3.01	-3.93



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
288	N.br.						
288	SLU 43	-12	2	2565	-432.73	-2.5	-4.3
288	SLU 44	-12	2	2565	-432.73	-2.5	-4.3
288	SLU 45	-12	2	2565	-432.73	-2.5	-4.3
288	SLU 46	-12	2	2565	-432.73	-2.5	-4.3
288	SLU 47	-12	2	2565	-432.73	-2.5	-4.3
288	SLU 48	-12	2	2565	-432.73	-2.5	-4.3
288	SLU 49	-12	2	2565	-432.73	-2.5	-4.3
288	SLU 50	-12	2	2565	-432.73	-2.5	-4.3
288	SLU 51	-12	2	2565	-432.73	-2.5	-4.3
288	SLU 52	-13	1	2919	-482	-2.96	-4.53
288	SLU 53	-13	1	2919	-482	-2.96	-4.53
288	SLU 54	-13	1	2919	-482	-2.96	-4.53
288	SLU 55	-13	1	2919	-482	-2.96	-4.53
288	SLU 56	-13	1	2919	-482	-2.96	-4.53
288	SLU 57	-13	1	2919	-482	-2.96	-4.53
288	SLU 58	-13	1	2919	-482	-2.96	-4.53
288	SLU 59	-13	1	2919	-482	-2.96	-4.53
288	SLU 60	-13	1	3070	-503.12	-3.16	-4.64
288	SLU 61	-13	1	3070	-503.12	-3.16	-4.64
288	SLU 62	-13	1	3070	-503.12	-3.16	-4.64
288	SLU 63	-13	1	3070	-503.12	-3.16	-4.64
288	SLU 64	-13	1	2830	-469.59	-2.84	-4.52
288	SLU 65	-13	1	2830	-469.59	-2.84	-4.52
288	SLU 66	-13	1	2830	-469.59	-2.84	-4.52
288	SLU 67	-13	1	2830	-469.59	-2.84	-4.52
288	SLU 68	-13	1	2830	-469.59	-2.84	-4.52
288	SLU 69	-13	1	2830	-469.59	-2.84	-4.52
288	SLU 70	-13	1	2830	-469.59	-2.84	-4.52
288	SLU 71	-13	1	2830	-469.59	-2.84	-4.52
288	SLU 72	-13	1	2830	-469.59	-2.84	-4.52
288	SLU 73	-14	1	3183	-518.87	-3.3	-4.76
288	SLU 74	-14	1	3183	-518.87	-3.3	-4.76
288	SLU 75	-14	1	3183	-518.87	-3.3	-4.76
288	SLU 76	-14	1	3183	-518.87	-3.3	-4.76
288	SLU 77	-14	1	3183	-518.87	-3.3	-4.76
288	SLU 78	-14	1	3183	-518.87	-3.3	-4.76
288	SLU 79	-14	1	3183	-518.87	-3.3	-4.76
288	SLU 80	-14	1	3183	-518.87	-3.3	-4.76
288	SLU 81	-14	1	3335	-539.99	-3.5	-4.86
288	SLU 82	-14	1	3335	-539.99	-3.5	-4.86
288	SLU 83	-14	1	3335	-539.99	-3.5	-4.86
288	SLU 84	-14	1	3335	-539.99	-3.5	-4.86
288	SLE RA 1	-10	1	2119	-353.12	-2.11	-3.43
288	SLE RA 2	-10	1	2119	-353.12	-2.11	-3.43
288	SLE RA 3	-10	1	2119	-353.12	-2.11	-3.43
288	SLE RA 4	-10	1	2119	-353.12	-2.11	-3.43
288	SLE RA 5	-10	1	2119	-353.12	-2.11	-3.43
288	SLE RA 6	-10	1	2119	-353.12	-2.11	-3.43
288	SLE RA 7	-10	1	2119	-353.12	-2.11	-3.43
288	SLE RA 8	-10	1	2119	-353.12	-2.11	-3.43
288	SLE RA 9	-10	1	2119	-353.12	-2.11	-3.43
288	SLE RA 10	-10	1	2354	-385.97	-2.42	-3.59
288	SLE RA 11	-10	1	2354	-385.97	-2.42	-3.59
288	SLE RA 12	-10	1	2354	-385.97	-2.42	-3.59
288	SLE RA 13	-10	1	2354	-385.97	-2.42	-3.59
288	SLE RA 14	-10	1	2354	-385.97	-2.42	-3.59
288	SLE RA 15	-10	1	2354	-385.97	-2.42	-3.59
288	SLE RA 16	-10	1	2354	-385.97	-2.42	-3.59
288	SLE RA 17	-10	1	2354	-385.97	-2.42	-3.59
288	SLE RA 18	-10	1	2455	-400.05	-2.55	-3.66
288	SLE RA 19	-10	1	2455	-400.05	-2.55	-3.66
288	SLE RA 20	-10	1	2455	-400.05	-2.55	-3.66
288	SLE RA 21	-10	1	2455	-400.05	-2.55	-3.66
288	SLE FR 1	-10	1	2119	-353.12	-2.11	-3.43
288	SLE FR 2	-10	1	2119	-353.12	-2.11	-3.43
288	SLE FR 3	-10	1	2119	-353.12	-2.11	-3.43
288	SLE FR 4	-10	1	2220	-367.2	-2.24	-3.5
288	SLE FR 5	-10	1	2220	-367.2	-2.24	-3.5
288	SLE FR 6	-10	1	2287	-376.59	-2.33	-3.54
288	SLE QP 1	-10	1	2119	-353.12	-2.11	-3.43
288	SLE QP 2	-10	1	2220	-367.2	-2.24	-3.5
288	SLD 1	219	38	2219	-361.03	-1.61	76.42
288	SLD 2	178	27	2222	-361	-1.6	62.23
288	SLD 3	209	-18	2421	-381.38	-1.76	73.46
288	SLD 4	169	-29	2424	-381.35	-1.74	59.27
288	SLD 5	88	101	1912	-334.5	-1.84	30.08
288	SLD 6	46	90	1915	-334.47	-1.83	15.58
288	SLD 7	56	-86	2586	-402.33	-2.32	20.23
288	SLD 8	14	-97	2588	-402.29	-2.3	5.73
288	SLD 9	-34	99	1851	-332.11	-2.18	-12.72
288	SLD 10	-76	88	1854	-332.08	-2.17	-27.23
288	SLD 11	-66	-88	2525	-399.93	-2.66	-22.57
288	SLD 12	-108	-99	2527	-399.9	-2.64	-37.08
288	SLD 13	-189	31	2015	-353.05	-2.75	-66.27
288	SLD 14	-229	20	2018	-353.03	-2.73	-80.46
288	SLD 15	-198	-25	2218	-373.4	-2.89	-69.22
288	SLD 16	-239	-36	2220	-373.37	-2.87	-83.41
288	SLV 1	511	87	2211	-352.92	-0.81	178.15
288	SLV 2	417	63	2217	-352.86	-0.77	145.69
288	SLV 3	488	-45	2685	-401.3	-1.14	171.23



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
288	SLV 4	395	-69	2691	-401.23	-1.1	138.77
288	SLV 5	215	235	1495	-289.57	-1.33	73.47
288	SLV 6	118	210	1501	-289.5	-1.28	39.77
288	SLV 7	140	-203	3077	-450.83	-2.43	50.41
288	SLV 8	43	-228	3083	-450.76	-2.39	16.71
288	SLV 9	-63	230	1356	-283.64	-2.1	-23.71
288	SLV 10	-160	205	1362	-283.57	-2.05	-57.41
288	SLV 11	-138	-208	2938	-444.9	-3.2	-46.76
288	SLV 12	-235	-233	2945	-444.83	-3.16	-80.46
288	SLV 13	-415	71	1748	-333.17	-3.38	-145.77
288	SLV 14	-508	47	1754	-333.1	-3.34	-178.23
288	SLV 15	-437	-61	2223	-381.55	-3.71	-152.69
288	SLV 16	-531	-85	2229	-381.48	-3.67	-185.14
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	-9	1	1990	-298.34	-1.28	-3.27
289	SLU 2	-9	1	1990	-298.34	-1.28	-3.27
289	SLU 3	-9	1	1990	-298.34	-1.28	-3.27
289	SLU 4	-9	1	1990	-298.34	-1.28	-3.27
289	SLU 5	-9	1	1990	-298.34	-1.28	-3.27
289	SLU 6	-9	1	1990	-298.34	-1.28	-3.27
289	SLU 7	-9	1	1990	-298.34	-1.28	-3.27
289	SLU 8	-9	1	1990	-298.34	-1.28	-3.27
289	SLU 9	-9	1	1990	-298.34	-1.28	-3.27
289	SLU 10	-10	1	2330	-338.36	-1.59	-3.44
289	SLU 11	-10	1	2330	-338.36	-1.59	-3.44
289	SLU 12	-10	1	2330	-338.36	-1.59	-3.44
289	SLU 13	-10	1	2330	-338.36	-1.59	-3.44
289	SLU 14	-10	1	2330	-338.36	-1.59	-3.44
289	SLU 15	-10	1	2330	-338.36	-1.59	-3.44
289	SLU 16	-10	1	2330	-338.36	-1.59	-3.44
289	SLU 17	-10	1	2330	-338.36	-1.59	-3.44
289	SLU 18	-10	1	2476	-355.51	-1.73	-3.52
289	SLU 19	-10	1	2476	-355.51	-1.73	-3.52
289	SLU 20	-10	1	2476	-355.51	-1.73	-3.52
289	SLU 21	-10	1	2476	-355.51	-1.73	-3.52
289	SLU 22	-10	1	2245	-328.28	-1.51	-3.45
289	SLU 23	-10	1	2245	-328.28	-1.51	-3.45
289	SLU 24	-10	1	2245	-328.28	-1.51	-3.45
289	SLU 25	-10	1	2245	-328.28	-1.51	-3.45
289	SLU 26	-10	1	2245	-328.28	-1.51	-3.45
289	SLU 27	-10	1	2245	-328.28	-1.51	-3.45
289	SLU 28	-10	1	2245	-328.28	-1.51	-3.45
289	SLU 29	-10	1	2245	-328.28	-1.51	-3.45
289	SLU 30	-10	1	2245	-328.28	-1.51	-3.45
289	SLU 31	-10	1	2585	-368.3	-1.82	-3.63
289	SLU 32	-10	1	2585	-368.3	-1.82	-3.63
289	SLU 33	-10	1	2585	-368.3	-1.82	-3.63
289	SLU 34	-10	1	2585	-368.3	-1.82	-3.63
289	SLU 35	-10	1	2585	-368.3	-1.82	-3.63
289	SLU 36	-10	1	2585	-368.3	-1.82	-3.63
289	SLU 37	-10	1	2585	-368.3	-1.82	-3.63
289	SLU 38	-10	1	2585	-368.3	-1.82	-3.63
289	SLU 39	-11	0	2731	-385.45	-1.96	-3.7
289	SLU 40	-11	0	2731	-385.45	-1.96	-3.7
289	SLU 41	-11	0	2731	-385.45	-1.96	-3.7
289	SLU 42	-11	0	2731	-385.45	-1.96	-3.7
289	SLU 43	-12	2	2499	-377.58	-1.58	-4.19
289	SLU 44	-12	2	2499	-377.58	-1.58	-4.19
289	SLU 45	-12	2	2499	-377.58	-1.58	-4.19
289	SLU 46	-12	2	2499	-377.58	-1.58	-4.19
289	SLU 47	-12	2	2499	-377.58	-1.58	-4.19
289	SLU 48	-12	2	2499	-377.58	-1.58	-4.19
289	SLU 49	-12	2	2499	-377.58	-1.58	-4.19
289	SLU 50	-12	2	2499	-377.58	-1.58	-4.19
289	SLU 51	-12	2	2499	-377.58	-1.58	-4.19
289	SLU 52	-12	1	2839	-417.6	-1.9	-4.36
289	SLU 53	-12	1	2839	-417.6	-1.9	-4.36
289	SLU 54	-12	1	2839	-417.6	-1.9	-4.36
289	SLU 55	-12	1	2839	-417.6	-1.9	-4.36
289	SLU 56	-12	1	2839	-417.6	-1.9	-4.36
289	SLU 57	-12	1	2839	-417.6	-1.9	-4.36
289	SLU 58	-12	1	2839	-417.6	-1.9	-4.36
289	SLU 59	-12	1	2839	-417.6	-1.9	-4.36
289	SLU 60	-13	1	2985	-434.75	-2.03	-4.44
289	SLU 61	-13	1	2985	-434.75	-2.03	-4.44
289	SLU 62	-13	1	2985	-434.75	-2.03	-4.44
289	SLU 63	-13	1	2985	-434.75	-2.03	-4.44
289	SLU 64	-13	1	2754	-407.52	-1.81	-4.37
289	SLU 65	-13	1	2754	-407.52	-1.81	-4.37
289	SLU 66	-13	1	2754	-407.52	-1.81	-4.37
289	SLU 67	-13	1	2754	-407.52	-1.81	-4.37
289	SLU 68	-13	1	2754	-407.52	-1.81	-4.37
289	SLU 69	-13	1	2754	-407.52	-1.81	-4.37
289	SLU 70	-13	1	2754	-407.52	-1.81	-4.37
289	SLU 71	-13	1	2754	-407.52	-1.81	-4.37
289	SLU 72	-13	1	2754	-407.52	-1.81	-4.37
289	SLU 73	-13	1	3095	-447.54	-2.13	-4.55



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
289	SLU 74	-13	1	3095	-447.54	-2.13	-4.55
289	SLU 75	-13	1	3095	-447.54	-2.13	-4.55
289	SLU 76	-13	1	3095	-447.54	-2.13	-4.55
289	SLU 77	-13	1	3095	-447.54	-2.13	-4.55
289	SLU 78	-13	1	3095	-447.54	-2.13	-4.55
289	SLU 79	-13	1	3095	-447.54	-2.13	-4.55
289	SLU 80	-13	1	3095	-447.54	-2.13	-4.55
289	SLU 81	-13	1	3241	-464.69	-2.26	-4.62
289	SLU 82	-13	1	3241	-464.69	-2.26	-4.62
289	SLU 83	-13	1	3241	-464.69	-2.26	-4.62
289	SLU 84	-13	1	3241	-464.69	-2.26	-4.62
289	SLE RA 1	-10	1	2063	-306.9	-1.34	-3.32
289	SLE RA 2	-10	1	2063	-306.9	-1.34	-3.32
289	SLE RA 3	-10	1	2063	-306.9	-1.34	-3.32
289	SLE RA 4	-10	1	2063	-306.9	-1.34	-3.32
289	SLE RA 5	-10	1	2063	-306.9	-1.34	-3.32
289	SLE RA 6	-10	1	2063	-306.9	-1.34	-3.32
289	SLE RA 7	-10	1	2063	-306.9	-1.34	-3.32
289	SLE RA 8	-10	1	2063	-306.9	-1.34	-3.32
289	SLE RA 9	-10	1	2063	-306.9	-1.34	-3.32
289	SLE RA 10	-10	1	2290	-333.57	-1.55	-3.44
289	SLE RA 11	-10	1	2290	-333.57	-1.55	-3.44
289	SLE RA 12	-10	1	2290	-333.57	-1.55	-3.44
289	SLE RA 13	-10	1	2290	-333.57	-1.55	-3.44
289	SLE RA 14	-10	1	2290	-333.57	-1.55	-3.44
289	SLE RA 15	-10	1	2290	-333.57	-1.55	-3.44
289	SLE RA 16	-10	1	2290	-333.57	-1.55	-3.44
289	SLE RA 17	-10	1	2290	-333.57	-1.55	-3.44
289	SLE RA 18	-10	1	2387	-345.01	-1.64	-3.49
289	SLE RA 19	-10	1	2387	-345.01	-1.64	-3.49
289	SLE RA 20	-10	1	2387	-345.01	-1.64	-3.49
289	SLE RA 21	-10	1	2387	-345.01	-1.64	-3.49
289	SLE FR 1	-10	1	2063	-306.9	-1.34	-3.32
289	SLE FR 2	-10	1	2063	-306.9	-1.34	-3.32
289	SLE FR 3	-10	1	2063	-306.9	-1.34	-3.32
289	SLE FR 4	-10	1	2160	-318.33	-1.43	-3.37
289	SLE FR 5	-10	1	2160	-318.33	-1.43	-3.37
289	SLE FR 6	-10	1	2225	-325.95	-1.49	-3.41
289	SLE QP 1	-10	1	2063	-306.9	-1.34	-3.32
289	SLE QP 2	-10	1	2160	-318.33	-1.43	-3.37
289	SLD 1	219	47	2179	-315.83	-0.81	76.5
289	SLD 2	179	34	2182	-315.79	-0.78	62.32
289	SLD 3	210	-24	2379	-332.36	-0.84	73.55
289	SLD 4	169	-37	2382	-332.32	-0.81	59.37
289	SLD 5	89	126	1862	-292.53	-1.21	30.18
289	SLD 6	47	113	1865	-292.48	-1.18	15.69
289	SLD 7	56	-109	2527	-347.63	-1.31	20.35
289	SLD 8	14	-122	2530	-347.58	-1.28	5.86
289	SLD 9	-34	124	1789	-289.08	-1.58	-12.61
289	SLD 10	-75	111	1793	-289.03	-1.56	-27.1
289	SLD 11	-66	-111	2454	-344.18	-1.68	-22.44
289	SLD 12	-108	-124	2458	-344.13	-1.66	-36.92
289	SLD 13	-188	39	1938	-304.34	-2.05	-66.12
289	SLD 14	-229	26	1941	-304.3	-2.03	-80.29
289	SLD 15	-198	-32	2137	-320.87	-2.08	-69.07
289	SLD 16	-239	-45	2140	-320.83	-2.06	-83.24
289	SLV 1	511	107	2196	-312.27	-0.01	178.16
289	SLV 2	418	78	2203	-312.17	0.04	145.74
289	SLV 3	488	-58	2665	-351.83	-0.08	171.26
289	SLV 4	395	-87	2672	-351.73	-0.03	138.84
289	SLV 5	216	295	1457	-256.55	-0.92	73.52
289	SLV 6	119	264	1465	-256.45	-0.86	39.86
289	SLV 7	139	-256	3019	-388.41	-1.15	50.52
289	SLV 8	43	-287	3027	-388.31	-1.1	16.85
289	SLV 9	-62	289	1293	-248.35	-1.77	-23.6
289	SLV 10	-159	259	1300	-248.25	-1.71	-57.26
289	SLV 11	-138	-262	2855	-380.21	-2	-46.61
289	SLV 12	-235	-292	2863	-380.11	-1.94	-80.27
289	SLV 13	-414	90	1648	-284.93	-2.83	-145.59
289	SLV 14	-507	60	1655	-284.83	-2.78	-178.01
289	SLV 15	-437	-76	2116	-324.49	-2.9	-152.49
289	SLV 16	-530	-105	2124	-324.39	-2.85	-184.91
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	-9	1	1961	-272.53	-0.45	-3.17
290	SLU 2	-9	1	1961	-272.53	-0.45	-3.17
290	SLU 3	-9	1	1961	-272.53	-0.45	-3.17
290	SLU 4	-9	1	1961	-272.53	-0.45	-3.17
290	SLU 5	-9	1	1961	-272.53	-0.45	-3.17
290	SLU 6	-9	1	1961	-272.53	-0.45	-3.17
290	SLU 7	-9	1	1961	-272.53	-0.45	-3.17
290	SLU 8	-9	1	1961	-272.53	-0.45	-3.17
290	SLU 9	-9	1	1961	-272.53	-0.45	-3.17
290	SLU 10	-9	1	2294	-307.01	-0.6	-3.29
290	SLU 11	-9	1	2294	-307.01	-0.6	-3.29
290	SLU 12	-9	1	2294	-307.01	-0.6	-3.29
290	SLU 13	-9	1	2294	-307.01	-0.6	-3.29
290	SLU 14	-9	1	2294	-307.01	-0.6	-3.29



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
290	SLU 15	-9	1	2294	-307.01	-0.6	-3.29
290	SLU 16	-9	1	2294	-307.01	-0.6	-3.29
290	SLU 17	-9	1	2294	-307.01	-0.6	-3.29
290	SLU 18	-10	1	2437	-321.79	-0.67	-3.34
290	SLU 19	-10	1	2437	-321.79	-0.67	-3.34
290	SLU 20	-10	1	2437	-321.79	-0.67	-3.34
290	SLU 21	-10	1	2437	-321.79	-0.67	-3.34
290	SLU 22	-9	1	2211	-298.34	-0.56	-3.32
290	SLU 23	-9	1	2211	-298.34	-0.56	-3.32
290	SLU 24	-9	1	2211	-298.34	-0.56	-3.32
290	SLU 25	-9	1	2211	-298.34	-0.56	-3.32
290	SLU 26	-9	1	2211	-298.34	-0.56	-3.32
290	SLU 27	-9	1	2211	-298.34	-0.56	-3.32
290	SLU 28	-9	1	2211	-298.34	-0.56	-3.32
290	SLU 29	-9	1	2211	-298.34	-0.56	-3.32
290	SLU 30	-9	1	2211	-298.34	-0.56	-3.32
290	SLU 31	-10	0	2544	-332.82	-0.71	-3.43
290	SLU 32	-10	0	2544	-332.82	-0.71	-3.43
290	SLU 33	-10	0	2544	-332.82	-0.71	-3.43
290	SLU 34	-10	0	2544	-332.82	-0.71	-3.43
290	SLU 35	-10	0	2544	-332.82	-0.71	-3.43
290	SLU 36	-10	0	2544	-332.82	-0.71	-3.43
290	SLU 37	-10	0	2544	-332.82	-0.71	-3.43
290	SLU 38	-10	0	2544	-332.82	-0.71	-3.43
290	SLU 39	-10	0	2687	-347.6	-0.77	-3.48
290	SLU 40	-10	0	2687	-347.6	-0.77	-3.48
290	SLU 41	-10	0	2687	-347.6	-0.77	-3.48
290	SLU 42	-10	0	2687	-347.6	-0.77	-3.48
290	SLU 43	-12	2	2464	-345.44	-0.55	-4.08
290	SLU 44	-12	2	2464	-345.44	-0.55	-4.08
290	SLU 45	-12	2	2464	-345.44	-0.55	-4.08
290	SLU 46	-12	2	2464	-345.44	-0.55	-4.08
290	SLU 47	-12	2	2464	-345.44	-0.55	-4.08
290	SLU 48	-12	2	2464	-345.44	-0.55	-4.08
290	SLU 49	-12	2	2464	-345.44	-0.55	-4.08
290	SLU 50	-12	2	2464	-345.44	-0.55	-4.08
290	SLU 51	-12	2	2464	-345.44	-0.55	-4.08
290	SLU 52	-12	1	2797	-379.92	-0.7	-4.19
290	SLU 53	-12	1	2797	-379.92	-0.7	-4.19
290	SLU 54	-12	1	2797	-379.92	-0.7	-4.19
290	SLU 55	-12	1	2797	-379.92	-0.7	-4.19
290	SLU 56	-12	1	2797	-379.92	-0.7	-4.19
290	SLU 57	-12	1	2797	-379.92	-0.7	-4.19
290	SLU 58	-12	1	2797	-379.92	-0.7	-4.19
290	SLU 59	-12	1	2797	-379.92	-0.7	-4.19
290	SLU 60	-12	1	2939	-394.7	-0.77	-4.24
290	SLU 61	-12	1	2939	-394.7	-0.77	-4.24
290	SLU 62	-12	1	2939	-394.7	-0.77	-4.24
290	SLU 63	-12	1	2939	-394.7	-0.77	-4.24
290	SLU 64	-12	1	2714	-371.25	-0.66	-4.22
290	SLU 65	-12	1	2714	-371.25	-0.66	-4.22
290	SLU 66	-12	1	2714	-371.25	-0.66	-4.22
290	SLU 67	-12	1	2714	-371.25	-0.66	-4.22
290	SLU 68	-12	1	2714	-371.25	-0.66	-4.22
290	SLU 69	-12	1	2714	-371.25	-0.66	-4.22
290	SLU 70	-12	1	2714	-371.25	-0.66	-4.22
290	SLU 71	-12	1	2714	-371.25	-0.66	-4.22
290	SLU 72	-12	1	2714	-371.25	-0.66	-4.22
290	SLU 73	-12	1	3046	-405.73	-0.81	-4.33
290	SLU 74	-12	1	3046	-405.73	-0.81	-4.33
290	SLU 75	-12	1	3046	-405.73	-0.81	-4.33
290	SLU 76	-12	1	3046	-405.73	-0.81	-4.33
290	SLU 77	-12	1	3046	-405.73	-0.81	-4.33
290	SLU 78	-12	1	3046	-405.73	-0.81	-4.33
290	SLU 79	-12	1	3046	-405.73	-0.81	-4.33
290	SLU 80	-12	1	3046	-405.73	-0.81	-4.33
290	SLU 81	-13	1	3189	-420.51	-0.87	-4.38
290	SLU 82	-13	1	3189	-420.51	-0.87	-4.38
290	SLU 83	-13	1	3189	-420.51	-0.87	-4.38
290	SLU 84	-13	1	3189	-420.51	-0.87	-4.38
290	SLE RA 1	-9	1	2032	-279.9	-0.48	-3.21
290	SLE RA 2	-9	1	2032	-279.9	-0.48	-3.21
290	SLE RA 3	-9	1	2032	-279.9	-0.48	-3.21
290	SLE RA 4	-9	1	2032	-279.9	-0.48	-3.21
290	SLE RA 5	-9	1	2032	-279.9	-0.48	-3.21
290	SLE RA 6	-9	1	2032	-279.9	-0.48	-3.21
290	SLE RA 7	-9	1	2032	-279.9	-0.48	-3.21
290	SLE RA 8	-9	1	2032	-279.9	-0.48	-3.21
290	SLE RA 9	-9	1	2032	-279.9	-0.48	-3.21
290	SLE RA 10	-9	1	2254	-302.89	-0.58	-3.29
290	SLE RA 11	-9	1	2254	-302.89	-0.58	-3.29
290	SLE RA 12	-9	1	2254	-302.89	-0.58	-3.29
290	SLE RA 13	-9	1	2254	-302.89	-0.58	-3.29
290	SLE RA 14	-9	1	2254	-302.89	-0.58	-3.29
290	SLE RA 15	-9	1	2254	-302.89	-0.58	-3.29
290	SLE RA 16	-9	1	2254	-302.89	-0.58	-3.29
290	SLE RA 17	-9	1	2254	-302.89	-0.58	-3.29
290	SLE RA 18	-10	1	2350	-312.74	-0.62	-3.32
290	SLE RA 19	-10	1	2350	-312.74	-0.62	-3.32
290	SLE RA 20	-10	1	2350	-312.74	-0.62	-3.32



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
290	SLE RA 21	-10	1	2350	-312.74	-0.62	-3.32
290	SLE FR 1	-9	1	2032	-279.9	-0.48	-3.21
290	SLE FR 2	-9	1	2032	-279.9	-0.48	-3.21
290	SLE FR 3	-9	1	2032	-279.9	-0.48	-3.21
290	SLE FR 4	-9	1	2128	-289.76	-0.52	-3.25
290	SLE FR 5	-9	1	2128	-289.76	-0.52	-3.25
290	SLE FR 6	-9	1	2191	-296.32	-0.55	-3.27
290	SLE QP 1	-9	1	2032	-279.9	-0.48	-3.21
290	SLE QP 2	-9	1	2128	-289.76	-0.52	-3.25
290	SLD 1	220	57	2167	-291.63	0.1	76.55
290	SLD 2	179	41	2171	-291.63	0.13	62.4
290	SLD 3	210	-30	2368	-306.67	0.21	73.61
290	SLD 4	169	-46	2372	-306.67	0.24	59.46
290	SLD 5	89	156	1833	-267.51	-0.51	30.27
290	SLD 6	48	140	1837	-267.51	-0.48	15.8
290	SLD 7	56	-135	2503	-317.64	-0.15	20.45
290	SLD 8	14	-151	2507	-317.64	-0.12	5.99
290	SLD 9	-33	153	1748	-261.87	-0.93	-12.48
290	SLD 10	-75	137	1752	-261.88	-0.9	-26.95
290	SLD 11	-66	-138	2418	-312	-0.57	-22.3
290	SLD 12	-108	-154	2422	-312	-0.54	-36.76
290	SLD 13	-188	48	1883	-272.84	-1.29	-65.95
290	SLD 14	-228	32	1887	-272.84	-1.26	-80.1
290	SLD 15	-198	-39	2084	-287.88	-1.18	-68.9
290	SLD 16	-238	-55	2088	-287.88	-1.15	-83.05
290	SLV 1	511	131	2209	-293.39	0.9	178.14
290	SLV 2	418	95	2218	-293.4	0.96	145.76
290	SLV 3	488	-73	2681	-329.52	1.15	171.24
290	SLV 4	395	-109	2690	-329.53	1.21	138.87
290	SLV 5	216	363	1433	-236.05	-0.51	73.57
290	SLV 6	120	326	1443	-236.06	-0.44	39.96
290	SLV 7	139	-318	3006	-356.47	0.34	50.6
290	SLV 8	42	-355	3015	-356.48	0.41	16.98
290	SLV 9	-61	357	1240	-223.03	-1.46	-23.48
290	SLV 10	-158	320	1250	-223.04	-1.39	-57.09
290	SLV 11	-138	-324	2812	-343.45	-0.61	-46.46
290	SLV 12	-235	-361	2822	-343.46	-0.54	-80.07
290	SLV 13	-413	111	1565	-249.99	-2.26	-145.37
290	SLV 14	-506	75	1575	-250	-2.2	-177.74
290	SLV 15	-437	-94	2037	-286.11	-2.01	-152.26
290	SLV 16	-530	-129	2046	-286.12	-1.94	-184.63
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	-9	1	1960	-266.89	0.44	-3.07
291	SLU 2	-9	1	1960	-266.89	0.44	-3.07
291	SLU 3	-9	1	1960	-266.89	0.44	-3.07
291	SLU 4	-9	1	1960	-266.89	0.44	-3.07
291	SLU 5	-9	1	1960	-266.89	0.44	-3.07
291	SLU 6	-9	1	1960	-266.89	0.44	-3.07
291	SLU 7	-9	1	1960	-266.89	0.44	-3.07
291	SLU 8	-9	1	1960	-266.89	0.44	-3.07
291	SLU 9	-9	1	1960	-266.89	0.44	-3.07
291	SLU 10	-9	1	2291	-299.87	0.46	-3.13
291	SLU 11	-9	1	2291	-299.87	0.46	-3.13
291	SLU 12	-9	1	2291	-299.87	0.46	-3.13
291	SLU 13	-9	1	2291	-299.87	0.46	-3.13
291	SLU 14	-9	1	2291	-299.87	0.46	-3.13
291	SLU 15	-9	1	2291	-299.87	0.46	-3.13
291	SLU 16	-9	1	2291	-299.87	0.46	-3.13
291	SLU 17	-9	1	2291	-299.87	0.46	-3.13
291	SLU 18	-9	0	2433	-314.01	0.48	-3.15
291	SLU 19	-9	0	2433	-314.01	0.48	-3.15
291	SLU 20	-9	0	2433	-314.01	0.48	-3.15
291	SLU 21	-9	0	2433	-314.01	0.48	-3.15
291	SLU 22	-9	1	2209	-291.61	0.47	-3.17
291	SLU 23	-9	1	2209	-291.61	0.47	-3.17
291	SLU 24	-9	1	2209	-291.61	0.47	-3.17
291	SLU 25	-9	1	2209	-291.61	0.47	-3.17
291	SLU 26	-9	1	2209	-291.61	0.47	-3.17
291	SLU 27	-9	1	2209	-291.61	0.47	-3.17
291	SLU 28	-9	1	2209	-291.61	0.47	-3.17
291	SLU 29	-9	1	2209	-291.61	0.47	-3.17
291	SLU 30	-9	1	2209	-291.61	0.47	-3.17
291	SLU 31	-9	0	2539	-324.6	0.49	-3.24
291	SLU 32	-9	0	2539	-324.6	0.49	-3.24
291	SLU 33	-9	0	2539	-324.6	0.49	-3.24
291	SLU 34	-9	0	2539	-324.6	0.49	-3.24
291	SLU 35	-9	0	2539	-324.6	0.49	-3.24
291	SLU 36	-9	0	2539	-324.6	0.49	-3.24
291	SLU 37	-9	0	2539	-324.6	0.49	-3.24
291	SLU 38	-9	0	2539	-324.6	0.49	-3.24
291	SLU 39	-9	0	2681	-338.73	0.51	-3.26
291	SLU 40	-9	0	2681	-338.73	0.51	-3.26
291	SLU 41	-9	0	2681	-338.73	0.51	-3.26
291	SLU 42	-9	0	2681	-338.73	0.51	-3.26
291	SLU 43	-11	1	2463	-338.48	0.56	-3.95
291	SLU 44	-11	1	2463	-338.48	0.56	-3.95
291	SLU 45	-11	1	2463	-338.48	0.56	-3.95



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
291	SLU 46	-11	1	2463	-338.48	0.56	-3.95
291	SLU 47	-11	1	2463	-338.48	0.56	-3.95
291	SLU 48	-11	1	2463	-338.48	0.56	-3.95
291	SLU 49	-11	1	2463	-338.48	0.56	-3.95
291	SLU 50	-11	1	2463	-338.48	0.56	-3.95
291	SLU 51	-11	1	2463	-338.48	0.56	-3.95
291	SLU 52	-11	1	2794	-371.46	0.59	-4.01
291	SLU 53	-11	1	2794	-371.46	0.59	-4.01
291	SLU 54	-11	1	2794	-371.46	0.59	-4.01
291	SLU 55	-11	1	2794	-371.46	0.59	-4.01
291	SLU 56	-11	1	2794	-371.46	0.59	-4.01
291	SLU 57	-11	1	2794	-371.46	0.59	-4.01
291	SLU 58	-11	1	2794	-371.46	0.59	-4.01
291	SLU 59	-11	1	2794	-371.46	0.59	-4.01
291	SLU 60	-12	1	2935	-385.6	0.6	-4.04
291	SLU 61	-12	1	2935	-385.6	0.6	-4.04
291	SLU 62	-12	1	2935	-385.6	0.6	-4.04
291	SLU 63	-12	1	2935	-385.6	0.6	-4.04
291	SLU 64	-12	1	2711	-363.2	0.59	-4.06
291	SLU 65	-12	1	2711	-363.2	0.59	-4.06
291	SLU 66	-12	1	2711	-363.2	0.59	-4.06
291	SLU 67	-12	1	2711	-363.2	0.59	-4.06
291	SLU 68	-12	1	2711	-363.2	0.59	-4.06
291	SLU 69	-12	1	2711	-363.2	0.59	-4.06
291	SLU 70	-12	1	2711	-363.2	0.59	-4.06
291	SLU 71	-12	1	2711	-363.2	0.59	-4.06
291	SLU 72	-12	1	2711	-363.2	0.59	-4.06
291	SLU 73	-12	1	3042	-396.18	0.61	-4.12
291	SLU 74	-12	1	3042	-396.18	0.61	-4.12
291	SLU 75	-12	1	3042	-396.18	0.61	-4.12
291	SLU 76	-12	1	3042	-396.18	0.61	-4.12
291	SLU 77	-12	1	3042	-396.18	0.61	-4.12
291	SLU 78	-12	1	3042	-396.18	0.61	-4.12
291	SLU 79	-12	1	3042	-396.18	0.61	-4.12
291	SLU 80	-12	1	3042	-396.18	0.61	-4.12
291	SLU 81	-12	1	3184	-410.32	0.63	-4.14
291	SLU 82	-12	1	3184	-410.32	0.63	-4.14
291	SLU 83	-12	1	3184	-410.32	0.63	-4.14
291	SLU 84	-12	1	3184	-410.32	0.63	-4.14
291	SLE RA 1	-9	1	2031	-273.95	0.45	-3.1
291	SLE RA 2	-9	1	2031	-273.95	0.45	-3.1
291	SLE RA 3	-9	1	2031	-273.95	0.45	-3.1
291	SLE RA 4	-9	1	2031	-273.95	0.45	-3.1
291	SLE RA 5	-9	1	2031	-273.95	0.45	-3.1
291	SLE RA 6	-9	1	2031	-273.95	0.45	-3.1
291	SLE RA 7	-9	1	2031	-273.95	0.45	-3.1
291	SLE RA 8	-9	1	2031	-273.95	0.45	-3.1
291	SLE RA 9	-9	1	2031	-273.95	0.45	-3.1
291	SLE RA 10	-9	1	2252	-295.94	0.46	-3.14
291	SLE RA 11	-9	1	2252	-295.94	0.46	-3.14
291	SLE RA 12	-9	1	2252	-295.94	0.46	-3.14
291	SLE RA 13	-9	1	2252	-295.94	0.46	-3.14
291	SLE RA 14	-9	1	2252	-295.94	0.46	-3.14
291	SLE RA 15	-9	1	2252	-295.94	0.46	-3.14
291	SLE RA 16	-9	1	2252	-295.94	0.46	-3.14
291	SLE RA 17	-9	1	2252	-295.94	0.46	-3.14
291	SLE RA 18	-9	1	2346	-305.37	0.47	-3.16
291	SLE RA 19	-9	1	2346	-305.37	0.47	-3.16
291	SLE RA 20	-9	1	2346	-305.37	0.47	-3.16
291	SLE RA 21	-9	1	2346	-305.37	0.47	-3.16
291	SLE FR 1	-9	1	2031	-273.95	0.45	-3.1
291	SLE FR 2	-9	1	2031	-273.95	0.45	-3.1
291	SLE FR 3	-9	1	2031	-273.95	0.45	-3.1
291	SLE FR 4	-9	1	2126	-283.37	0.45	-3.12
291	SLE FR 5	-9	1	2126	-283.37	0.45	-3.12
291	SLE FR 6	-9	1	2189	-289.66	0.46	-3.13
291	SLE QP 1	-9	1	2031	-273.95	0.45	-3.1
291	SLE QP 2	-9	1	2126	-283.37	0.45	-3.12
291	SLD 1	220	68	2185	-290.41	1.1	76.6
291	SLD 2	179	50	2190	-290.56	1.13	62.47
291	SLD 3	210	-38	2392	-306.37	1.35	73.66
291	SLD 4	169	-57	2397	-306.52	1.38	59.53
291	SLD 5	90	189	1828	-261.22	0.26	30.37
291	SLD 6	48	170	1834	-261.38	0.29	15.93
291	SLD 7	56	-165	2517	-314.43	1.09	20.55
291	SLD 8	15	-184	2522	-314.58	1.12	6.11
291	SLD 9	-32	186	1729	-252.16	-0.22	-12.34
291	SLD 10	-74	166	1734	-252.32	-0.18	-26.78
291	SLD 11	-66	-168	2417	-305.37	0.61	-22.16
291	SLD 12	-108	-187	2423	-305.53	0.65	-36.6
291	SLD 13	-187	58	1854	-260.23	-0.48	-65.76
291	SLD 14	-228	39	1860	-260.38	-0.44	-79.89
291	SLD 15	-197	-48	2061	-276.19	-0.23	-68.7
291	SLD 16	-238	-67	2066	-276.34	-0.19	-82.83
291	SLV 1	511	158	2253	-298.52	1.91	178.08
291	SLV 2	418	115	2264	-298.87	1.99	145.76
291	SLV 3	488	-91	2738	-336.78	2.5	171.18
291	SLV 4	395	-133	2749	-337.13	2.57	138.86
291	SLV 5	217	441	1424	-229.76	-0.02	73.64
291	SLV 6	121	396	1436	-230.13	0.06	40.08



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
Ind.	N.br.						
291	SLV 7	138	-388	3040	-357.29	1.92	50.64
291	SLV 8	42	-432	3053	-357.66	2	17.09
291	SLV 9	-60	434	1199	-209.09	-1.1	-23.32
291	SLV 10	-156	389	1211	-209.46	-1.02	-56.87
291	SLV 11	-139	-395	2815	-336.62	0.85	-46.31
291	SLV 12	-235	-439	2827	-336.98	0.93	-79.87
291	SLV 13	-412	135	1502	-229.62	-1.67	-145.09
291	SLV 14	-505	92	1513	-229.97	-1.59	-177.41
291	SLV 15	-436	-114	1987	-267.88	-1.08	-151.99
291	SLV 16	-529	-156	1998	-268.23	-1.01	-184.31
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	-8	1	1988	-282.96	1.38	-2.95
292	SLU 2	-8	1	1988	-282.96	1.38	-2.95
292	SLU 3	-8	1	1988	-282.96	1.38	-2.95
292	SLU 4	-8	1	1988	-282.96	1.38	-2.95
292	SLU 5	-8	1	1988	-282.96	1.38	-2.95
292	SLU 6	-8	1	1988	-282.96	1.38	-2.95
292	SLU 7	-8	1	1988	-282.96	1.38	-2.95
292	SLU 8	-8	1	1988	-282.96	1.38	-2.95
292	SLU 9	-8	1	1988	-282.96	1.38	-2.95
292	SLU 10	-8	0	2323	-318.77	1.59	-2.96
292	SLU 11	-8	0	2323	-318.77	1.59	-2.96
292	SLU 12	-8	0	2323	-318.77	1.59	-2.96
292	SLU 13	-8	0	2323	-318.77	1.59	-2.96
292	SLU 14	-8	0	2323	-318.77	1.59	-2.96
292	SLU 15	-8	0	2323	-318.77	1.59	-2.96
292	SLU 16	-8	0	2323	-318.77	1.59	-2.96
292	SLU 17	-8	0	2323	-318.77	1.59	-2.96
292	SLU 18	-8	0	2466	-334.11	1.68	-2.97
292	SLU 19	-8	0	2466	-334.11	1.68	-2.97
292	SLU 20	-8	0	2466	-334.11	1.68	-2.97
292	SLU 21	-8	0	2466	-334.11	1.68	-2.97
292	SLU 22	-9	1	2240	-309.85	1.55	-3.02
292	SLU 23	-9	1	2240	-309.85	1.55	-3.02
292	SLU 24	-9	1	2240	-309.85	1.55	-3.02
292	SLU 25	-9	1	2240	-309.85	1.55	-3.02
292	SLU 26	-9	1	2240	-309.85	1.55	-3.02
292	SLU 27	-9	1	2240	-309.85	1.55	-3.02
292	SLU 28	-9	1	2240	-309.85	1.55	-3.02
292	SLU 29	-9	1	2240	-309.85	1.55	-3.02
292	SLU 30	-9	1	2240	-309.85	1.55	-3.02
292	SLU 31	-9	0	2574	-345.66	1.76	-3.03
292	SLU 32	-9	0	2574	-345.66	1.76	-3.03
292	SLU 33	-9	0	2574	-345.66	1.76	-3.03
292	SLU 34	-9	0	2574	-345.66	1.76	-3.03
292	SLU 35	-9	0	2574	-345.66	1.76	-3.03
292	SLU 36	-9	0	2574	-345.66	1.76	-3.03
292	SLU 37	-9	0	2574	-345.66	1.76	-3.03
292	SLU 38	-9	0	2574	-345.66	1.76	-3.03
292	SLU 39	-9	0	2718	-361.01	1.85	-3.04
292	SLU 40	-9	0	2718	-361.01	1.85	-3.04
292	SLU 41	-9	0	2718	-361.01	1.85	-3.04
292	SLU 42	-9	0	2718	-361.01	1.85	-3.04
292	SLU 43	-11	1	2498	-358.63	1.73	-3.81
292	SLU 44	-11	1	2498	-358.63	1.73	-3.81
292	SLU 45	-11	1	2498	-358.63	1.73	-3.81
292	SLU 46	-11	1	2498	-358.63	1.73	-3.81
292	SLU 47	-11	1	2498	-358.63	1.73	-3.81
292	SLU 48	-11	1	2498	-358.63	1.73	-3.81
292	SLU 49	-11	1	2498	-358.63	1.73	-3.81
292	SLU 50	-11	1	2498	-358.63	1.73	-3.81
292	SLU 51	-11	1	2498	-358.63	1.73	-3.81
292	SLU 52	-11	1	2833	-394.43	1.95	-3.82
292	SLU 53	-11	1	2833	-394.43	1.95	-3.82
292	SLU 54	-11	1	2833	-394.43	1.95	-3.82
292	SLU 55	-11	1	2833	-394.43	1.95	-3.82
292	SLU 56	-11	1	2833	-394.43	1.95	-3.82
292	SLU 57	-11	1	2833	-394.43	1.95	-3.82
292	SLU 58	-11	1	2833	-394.43	1.95	-3.82
292	SLU 59	-11	1	2833	-394.43	1.95	-3.82
292	SLU 60	-11	1	2976	-409.78	2.04	-3.83
292	SLU 61	-11	1	2976	-409.78	2.04	-3.83
292	SLU 62	-11	1	2976	-409.78	2.04	-3.83
292	SLU 63	-11	1	2976	-409.78	2.04	-3.83
292	SLU 64	-11	1	2750	-385.52	1.9	-3.88
292	SLU 65	-11	1	2750	-385.52	1.9	-3.88
292	SLU 66	-11	1	2750	-385.52	1.9	-3.88
292	SLU 67	-11	1	2750	-385.52	1.9	-3.88
292	SLU 68	-11	1	2750	-385.52	1.9	-3.88
292	SLU 69	-11	1	2750	-385.52	1.9	-3.88
292	SLU 70	-11	1	2750	-385.52	1.9	-3.88
292	SLU 71	-11	1	2750	-385.52	1.9	-3.88
292	SLU 72	-11	1	2750	-385.52	1.9	-3.88
292	SLU 73	-11	0	3085	-421.33	2.12	-3.89
292	SLU 74	-11	0	3085	-421.33	2.12	-3.89
292	SLU 75	-11	0	3085	-421.33	2.12	-3.89
292	SLU 76	-11	0	3085	-421.33	2.12	-3.89



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
292	SLU 77	-11	0	3085	-421.33	2.12	-3.89
292	SLU 78	-11	0	3085	-421.33	2.12	-3.89
292	SLU 79	-11	0	3085	-421.33	2.12	-3.89
292	SLU 80	-11	0	3085	-421.33	2.12	-3.89
292	SLU 81	-11	0	3228	-436.68	2.21	-3.9
292	SLU 82	-11	0	3228	-436.68	2.21	-3.9
292	SLU 83	-11	0	3228	-436.68	2.21	-3.9
292	SLU 84	-11	0	3228	-436.68	2.21	-3.9
292	SLE RA 1	-9	1	2060	-290.64	1.42	-2.97
292	SLE RA 2	-9	1	2060	-290.64	1.42	-2.97
292	SLE RA 3	-9	1	2060	-290.64	1.42	-2.97
292	SLE RA 4	-9	1	2060	-290.64	1.42	-2.97
292	SLE RA 5	-9	1	2060	-290.64	1.42	-2.97
292	SLE RA 6	-9	1	2060	-290.64	1.42	-2.97
292	SLE RA 7	-9	1	2060	-290.64	1.42	-2.97
292	SLE RA 8	-9	1	2060	-290.64	1.42	-2.97
292	SLE RA 9	-9	1	2060	-290.64	1.42	-2.97
292	SLE RA 10	-9	0	2283	-314.52	1.57	-2.98
292	SLE RA 11	-9	0	2283	-314.52	1.57	-2.98
292	SLE RA 12	-9	0	2283	-314.52	1.57	-2.98
292	SLE RA 13	-9	0	2283	-314.52	1.57	-2.98
292	SLE RA 14	-9	0	2283	-314.52	1.57	-2.98
292	SLE RA 15	-9	0	2283	-314.52	1.57	-2.98
292	SLE RA 16	-9	0	2283	-314.52	1.57	-2.98
292	SLE RA 17	-9	0	2283	-314.52	1.57	-2.98
292	SLE RA 18	-9	0	2379	-324.75	1.63	-2.98
292	SLE RA 19	-9	0	2379	-324.75	1.63	-2.98
292	SLE RA 20	-9	0	2379	-324.75	1.63	-2.98
292	SLE RA 21	-9	0	2379	-324.75	1.63	-2.98
292	SLE FR 1	-9	1	2060	-290.64	1.42	-2.97
292	SLE FR 2	-9	1	2060	-290.64	1.42	-2.97
292	SLE FR 3	-9	1	2060	-290.64	1.42	-2.97
292	SLE FR 4	-9	1	2156	-300.87	1.49	-2.97
292	SLE FR 5	-9	1	2156	-300.87	1.49	-2.97
292	SLE FR 6	-9	1	2219	-307.69	1.53	-2.98
292	SLE QP 1	-9	1	2060	-290.64	1.42	-2.97
292	SLE QP 2	-9	1	2156	-300.87	1.49	-2.97
292	SLD 1	220	81	2237	-313.82	2.17	76.65
292	SLD 2	180	59	2243	-314.27	2.21	62.55
292	SLD 3	210	-46	2453	-333.5	2.57	73.69
292	SLD 4	169	-68	2459	-333.95	2.61	59.59
292	SLD 5	90	225	1849	-274.74	1.07	30.49
292	SLD 6	49	202	1855	-275.2	1.11	16.08
292	SLD 7	56	-197	2571	-340.35	2.4	20.63
292	SLD 8	15	-220	2578	-340.81	2.44	6.22
292	SLD 9	-32	221	1734	-260.94	0.53	-12.16
292	SLD 10	-73	199	1740	-261.4	0.57	-26.58
292	SLD 11	-66	-201	2456	-326.55	1.86	-22.03
292	SLD 12	-107	-224	2462	-327.01	1.9	-36.44
292	SLD 13	-186	69	1852	-267.8	0.37	-65.54
292	SLD 14	-227	47	1858	-268.25	0.41	-79.64
292	SLD 15	-197	-58	2069	-287.48	0.77	-68.49
292	SLD 16	-237	-80	2075	-287.93	0.8	-82.6
292	SLV 1	511	188	2331	-329.26	3.02	178.01
292	SLV 2	418	137	2345	-330.29	3.11	145.75
292	SLV 3	487	-109	2840	-376.12	3.95	171.08
292	SLV 4	394	-160	2854	-377.15	4.04	138.83
292	SLV 5	218	526	1431	-237.94	0.5	73.73
292	SLV 6	122	473	1446	-239	0.59	40.24
292	SLV 7	138	-464	3128	-394.14	3.61	50.65
292	SLV 8	42	-517	3142	-395.21	3.7	17.16
292	SLV 9	-59	518	1169	-206.54	-0.73	-23.1
292	SLV 10	-155	465	1184	-207.6	-0.64	-56.59
292	SLV 11	-139	-472	2866	-362.75	2.38	-46.19
292	SLV 12	-235	-525	2881	-363.81	2.48	-79.68
292	SLV 13	-411	161	1458	-224.6	-1.07	-144.77
292	SLV 14	-504	111	1472	-225.63	-0.98	-177.03
292	SLV 15	-435	-136	1967	-271.46	-0.14	-151.7
292	SLV 16	-528	-186	1981	-272.49	-0.05	-183.96
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	-8	1	2047	-322.21	2.35	-2.82
293	SLU 2	-8	1	2047	-322.21	2.35	-2.82
293	SLU 3	-8	1	2047	-322.21	2.35	-2.82
293	SLU 4	-8	1	2047	-322.21	2.35	-2.82
293	SLU 5	-8	1	2047	-322.21	2.35	-2.82
293	SLU 6	-8	1	2047	-322.21	2.35	-2.82
293	SLU 7	-8	1	2047	-322.21	2.35	-2.82
293	SLU 8	-8	1	2047	-322.21	2.35	-2.82
293	SLU 9	-8	1	2047	-322.21	2.35	-2.82
293	SLU 10	-8	0	2392	-365.44	2.77	-2.78
293	SLU 11	-8	0	2392	-365.44	2.77	-2.78
293	SLU 12	-8	0	2392	-365.44	2.77	-2.78
293	SLU 13	-8	0	2392	-365.44	2.77	-2.78
293	SLU 14	-8	0	2392	-365.44	2.77	-2.78
293	SLU 15	-8	0	2392	-365.44	2.77	-2.78
293	SLU 16	-8	0	2392	-365.44	2.77	-2.78
293	SLU 17	-8	0	2392	-365.44	2.77	-2.78



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
293	N.br.						
293	SLU 18	-8	0	2539	-383.96	2.94	-2.77
293	SLU 19	-8	0	2539	-383.96	2.94	-2.77
293	SLU 20	-8	0	2539	-383.96	2.94	-2.77
293	SLU 21	-8	0	2539	-383.96	2.94	-2.77
293	SLU 22	-8	0	2306	-354.75	2.67	-2.86
293	SLU 23	-8	0	2306	-354.75	2.67	-2.86
293	SLU 24	-8	0	2306	-354.75	2.67	-2.86
293	SLU 25	-8	0	2306	-354.75	2.67	-2.86
293	SLU 26	-8	0	2306	-354.75	2.67	-2.86
293	SLU 27	-8	0	2306	-354.75	2.67	-2.86
293	SLU 28	-8	0	2306	-354.75	2.67	-2.86
293	SLU 29	-8	0	2306	-354.75	2.67	-2.86
293	SLU 30	-8	0	2306	-354.75	2.67	-2.86
293	SLU 31	-8	0	2651	-397.97	3.08	-2.82
293	SLU 32	-8	0	2651	-397.97	3.08	-2.82
293	SLU 33	-8	0	2651	-397.97	3.08	-2.82
293	SLU 34	-8	0	2651	-397.97	3.08	-2.82
293	SLU 35	-8	0	2651	-397.97	3.08	-2.82
293	SLU 36	-8	0	2651	-397.97	3.08	-2.82
293	SLU 37	-8	0	2651	-397.97	3.08	-2.82
293	SLU 38	-8	0	2651	-397.97	3.08	-2.82
293	SLU 39	-8	0	2799	-416.5	3.26	-2.81
293	SLU 40	-8	0	2799	-416.5	3.26	-2.81
293	SLU 41	-8	0	2799	-416.5	3.26	-2.81
293	SLU 42	-8	0	2799	-416.5	3.26	-2.81
293	SLU 43	-10	1	2572	-407.72	2.95	-3.65
293	SLU 44	-10	1	2572	-407.72	2.95	-3.65
293	SLU 45	-10	1	2572	-407.72	2.95	-3.65
293	SLU 46	-10	1	2572	-407.72	2.95	-3.65
293	SLU 47	-10	1	2572	-407.72	2.95	-3.65
293	SLU 48	-10	1	2572	-407.72	2.95	-3.65
293	SLU 49	-10	1	2572	-407.72	2.95	-3.65
293	SLU 50	-10	1	2572	-407.72	2.95	-3.65
293	SLU 51	-10	1	2572	-407.72	2.95	-3.65
293	SLU 52	-10	1	2917	-450.95	3.36	-3.62
293	SLU 53	-10	1	2917	-450.95	3.36	-3.62
293	SLU 54	-10	1	2917	-450.95	3.36	-3.62
293	SLU 55	-10	1	2917	-450.95	3.36	-3.62
293	SLU 56	-10	1	2917	-450.95	3.36	-3.62
293	SLU 57	-10	1	2917	-450.95	3.36	-3.62
293	SLU 58	-10	1	2917	-450.95	3.36	-3.62
293	SLU 59	-10	1	2917	-450.95	3.36	-3.62
293	SLU 60	-10	1	3065	-469.47	3.54	-3.6
293	SLU 61	-10	1	3065	-469.47	3.54	-3.6
293	SLU 62	-10	1	3065	-469.47	3.54	-3.6
293	SLU 63	-10	1	3065	-469.47	3.54	-3.6
293	SLU 64	-11	1	2832	-440.25	3.27	-3.69
293	SLU 65	-11	1	2832	-440.25	3.27	-3.69
293	SLU 66	-11	1	2832	-440.25	3.27	-3.69
293	SLU 67	-11	1	2832	-440.25	3.27	-3.69
293	SLU 68	-11	1	2832	-440.25	3.27	-3.69
293	SLU 69	-11	1	2832	-440.25	3.27	-3.69
293	SLU 70	-11	1	2832	-440.25	3.27	-3.69
293	SLU 71	-11	1	2832	-440.25	3.27	-3.69
293	SLU 72	-11	1	2832	-440.25	3.27	-3.69
293	SLU 73	-10	0	3176	-483.48	3.68	-3.66
293	SLU 74	-10	0	3176	-483.48	3.68	-3.66
293	SLU 75	-10	0	3176	-483.48	3.68	-3.66
293	SLU 76	-10	0	3176	-483.48	3.68	-3.66
293	SLU 77	-10	0	3176	-483.48	3.68	-3.66
293	SLU 78	-10	0	3176	-483.48	3.68	-3.66
293	SLU 79	-10	0	3176	-483.48	3.68	-3.66
293	SLU 80	-10	0	3176	-483.48	3.68	-3.66
293	SLU 81	-10	0	3324	-502.01	3.86	-3.64
293	SLU 82	-10	0	3324	-502.01	3.86	-3.64
293	SLU 83	-10	0	3324	-502.01	3.86	-3.64
293	SLU 84	-10	0	3324	-502.01	3.86	-3.64
293	SLE RA 1	-8	1	2121	-331.51	2.44	-2.83
293	SLE RA 2	-8	1	2121	-331.51	2.44	-2.83
293	SLE RA 3	-8	1	2121	-331.51	2.44	-2.83
293	SLE RA 4	-8	1	2121	-331.51	2.44	-2.83
293	SLE RA 5	-8	1	2121	-331.51	2.44	-2.83
293	SLE RA 6	-8	1	2121	-331.51	2.44	-2.83
293	SLE RA 7	-8	1	2121	-331.51	2.44	-2.83
293	SLE RA 8	-8	1	2121	-331.51	2.44	-2.83
293	SLE RA 9	-8	1	2121	-331.51	2.44	-2.83
293	SLE RA 10	-8	0	2351	-360.32	2.72	-2.81
293	SLE RA 11	-8	0	2351	-360.32	2.72	-2.81
293	SLE RA 12	-8	0	2351	-360.32	2.72	-2.81
293	SLE RA 13	-8	0	2351	-360.32	2.72	-2.81
293	SLE RA 14	-8	0	2351	-360.32	2.72	-2.81
293	SLE RA 15	-8	0	2351	-360.32	2.72	-2.81
293	SLE RA 16	-8	0	2351	-360.32	2.72	-2.81
293	SLE RA 17	-8	0	2351	-360.32	2.72	-2.81
293	SLE RA 18	-8	0	2449	-372.68	2.84	-2.8
293	SLE RA 19	-8	0	2449	-372.68	2.84	-2.8
293	SLE RA 20	-8	0	2449	-372.68	2.84	-2.8
293	SLE RA 21	-8	0	2449	-372.68	2.84	-2.8
293	SLE FR 1	-8	1	2121	-331.51	2.44	-2.83
293	SLE FR 2	-8	1	2121	-331.51	2.44	-2.83



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
293	SLE FR 3	-8	1	2121	-331.51	2.44	-2.83
293	SLE FR 4	-8	1	2220	-343.86	2.56	-2.82
293	SLE FR 5	-8	1	2220	-343.86	2.56	-2.82
293	SLE FR 6	-8	0	2285	-352.09	2.64	-2.81
293	SLE QP 1	-8	1	2121	-331.51	2.44	-2.83
293	SLE QP 2	-8	1	2220	-343.86	2.56	-2.82
293	SLD 1	220	95	2323	-363.54	3.29	76.7
293	SLD 2	180	69	2331	-364.46	3.34	62.63
293	SLD 3	210	-54	2555	-390.23	3.85	73.72
293	SLD 4	169	-80	2562	-391.15	3.89	59.64
293	SLD 5	91	264	1896	-308.95	1.92	30.64
293	SLD 6	50	237	1904	-309.89	1.97	16.26
293	SLD 7	56	-232	2669	-397.92	3.77	20.7
293	SLD 8	15	-259	2677	-398.86	3.82	6.31
293	SLD 9	-31	260	1762	-288.85	1.3	-11.95
293	SLD 10	-72	233	1770	-289.79	1.35	-26.34
293	SLD 11	-66	-236	2535	-377.83	3.15	-21.9
293	SLD 12	-107	-263	2543	-378.77	3.2	-36.28
293	SLD 13	-185	81	1877	-296.56	1.23	-65.29
293	SLD 14	-226	55	1884	-297.48	1.28	-79.36
293	SLD 15	-196	-68	2109	-323.25	1.79	-68.27
293	SLD 16	-237	-94	2116	-324.17	1.83	-82.34
293	SLV 1	511	220	2445	-387.3	4.2	177.93
293	SLV 2	419	161	2462	-389.4	4.31	145.74
293	SLV 3	487	-129	2990	-450.45	5.5	170.95
293	SLV 4	394	-188	3007	-452.55	5.61	138.76
293	SLV 5	219	618	1455	-260.34	1.04	73.88
293	SLV 6	123	556	1473	-262.52	1.15	40.46
293	SLV 7	137	-546	3270	-470.83	5.38	50.6
293	SLV 8	41	-607	3288	-473.02	5.49	17.18
293	SLV 9	-57	608	1151	-214.7	-0.36	-22.82
293	SLV 10	-154	547	1169	-216.88	-0.25	-56.24
293	SLV 11	-139	-555	2966	-425.19	3.97	-46.1
293	SLV 12	-235	-617	2984	-427.38	4.08	-79.52
293	SLV 13	-410	189	1432	-235.16	-0.48	-144.4
293	SLV 14	-503	130	1450	-237.27	-0.38	-176.59
293	SLV 15	-435	-160	1977	-298.31	0.82	-151.38
293	SLV 16	-527	-219	1994	-300.42	0.93	-183.57
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	-8	1	2137	-385.98	3.35	-2.68
294	SLU 2	-8	1	2137	-385.98	3.35	-2.68
294	SLU 3	-8	1	2137	-385.98	3.35	-2.68
294	SLU 4	-8	1	2137	-385.98	3.35	-2.68
294	SLU 5	-8	1	2137	-385.98	3.35	-2.68
294	SLU 6	-8	1	2137	-385.98	3.35	-2.68
294	SLU 7	-8	1	2137	-385.98	3.35	-2.68
294	SLU 8	-8	1	2137	-385.98	3.35	-2.68
294	SLU 9	-8	1	2137	-385.98	3.35	-2.68
294	SLU 10	-7	1	2498	-441.48	3.96	-2.6
294	SLU 11	-7	1	2498	-441.48	3.96	-2.6
294	SLU 12	-7	1	2498	-441.48	3.96	-2.6
294	SLU 13	-7	1	2498	-441.48	3.96	-2.6
294	SLU 14	-7	1	2498	-441.48	3.96	-2.6
294	SLU 15	-7	1	2498	-441.48	3.96	-2.6
294	SLU 16	-7	1	2498	-441.48	3.96	-2.6
294	SLU 17	-7	1	2498	-441.48	3.96	-2.6
294	SLU 18	-7	0	2653	-465.26	4.22	-2.57
294	SLU 19	-7	0	2653	-465.26	4.22	-2.57
294	SLU 20	-7	0	2653	-465.26	4.22	-2.57
294	SLU 21	-7	0	2653	-465.26	4.22	-2.57
294	SLU 22	-8	1	2409	-427.81	3.82	-2.69
294	SLU 23	-8	1	2409	-427.81	3.82	-2.69
294	SLU 24	-8	1	2409	-427.81	3.82	-2.69
294	SLU 25	-8	1	2409	-427.81	3.82	-2.69
294	SLU 26	-8	1	2409	-427.81	3.82	-2.69
294	SLU 27	-8	1	2409	-427.81	3.82	-2.69
294	SLU 28	-8	1	2409	-427.81	3.82	-2.69
294	SLU 29	-8	1	2409	-427.81	3.82	-2.69
294	SLU 30	-8	1	2409	-427.81	3.82	-2.69
294	SLU 31	-7	0	2770	-483.31	4.43	-2.61
294	SLU 32	-7	0	2770	-483.31	4.43	-2.61
294	SLU 33	-7	0	2770	-483.31	4.43	-2.61
294	SLU 34	-7	0	2770	-483.31	4.43	-2.61
294	SLU 35	-7	0	2770	-483.31	4.43	-2.61
294	SLU 36	-7	0	2770	-483.31	4.43	-2.61
294	SLU 37	-7	0	2770	-483.31	4.43	-2.61
294	SLU 38	-7	0	2770	-483.31	4.43	-2.61
294	SLU 39	-7	0	2925	-507.09	4.69	-2.58
294	SLU 40	-7	0	2925	-507.09	4.69	-2.58
294	SLU 41	-7	0	2925	-507.09	4.69	-2.58
294	SLU 42	-7	0	2925	-507.09	4.69	-2.58
294	SLU 43	-10	1	2685	-487.43	4.2	-3.48
294	SLU 44	-10	1	2685	-487.43	4.2	-3.48
294	SLU 45	-10	1	2685	-487.43	4.2	-3.48
294	SLU 46	-10	1	2685	-487.43	4.2	-3.48
294	SLU 47	-10	1	2685	-487.43	4.2	-3.48
294	SLU 48	-10	1	2685	-487.43	4.2	-3.48



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
294	N.br.						
294	SLU 49	-10	1	2685	-487.43	4.2	-3.48
294	SLU 50	-10	1	2685	-487.43	4.2	-3.48
294	SLU 51	-10	1	2685	-487.43	4.2	-3.48
294	SLU 52	-10	1	3046	-542.93	4.8	-3.4
294	SLU 53	-10	1	3046	-542.93	4.8	-3.4
294	SLU 54	-10	1	3046	-542.93	4.8	-3.4
294	SLU 55	-10	1	3046	-542.93	4.8	-3.4
294	SLU 56	-10	1	3046	-542.93	4.8	-3.4
294	SLU 57	-10	1	3046	-542.93	4.8	-3.4
294	SLU 58	-10	1	3046	-542.93	4.8	-3.4
294	SLU 59	-10	1	3046	-542.93	4.8	-3.4
294	SLU 60	-10	1	3201	-566.71	5.07	-3.37
294	SLU 61	-10	1	3201	-566.71	5.07	-3.37
294	SLU 62	-10	1	3201	-566.71	5.07	-3.37
294	SLU 63	-10	1	3201	-566.71	5.07	-3.37
294	SLU 64	-10	1	2957	-529.27	4.66	-3.49
294	SLU 65	-10	1	2957	-529.27	4.66	-3.49
294	SLU 66	-10	1	2957	-529.27	4.66	-3.49
294	SLU 67	-10	1	2957	-529.27	4.66	-3.49
294	SLU 68	-10	1	2957	-529.27	4.66	-3.49
294	SLU 69	-10	1	2957	-529.27	4.66	-3.49
294	SLU 70	-10	1	2957	-529.27	4.66	-3.49
294	SLU 71	-10	1	2957	-529.27	4.66	-3.49
294	SLU 72	-10	1	2957	-529.27	4.66	-3.49
294	SLU 73	-10	1	3318	-584.76	5.27	-3.41
294	SLU 74	-10	1	3318	-584.76	5.27	-3.41
294	SLU 75	-10	1	3318	-584.76	5.27	-3.41
294	SLU 76	-10	1	3318	-584.76	5.27	-3.41
294	SLU 77	-10	1	3318	-584.76	5.27	-3.41
294	SLU 78	-10	1	3318	-584.76	5.27	-3.41
294	SLU 79	-10	1	3318	-584.76	5.27	-3.41
294	SLU 80	-10	1	3318	-584.76	5.27	-3.41
294	SLU 81	-10	1	3473	-608.54	5.53	-3.38
294	SLU 82	-10	1	3473	-608.54	5.53	-3.38
294	SLU 83	-10	1	3473	-608.54	5.53	-3.38
294	SLU 84	-10	1	3473	-608.54	5.53	-3.38
294	SLE RA 1	-8	1	2215	-397.93	3.48	-2.68
294	SLE RA 2	-8	1	2215	-397.93	3.48	-2.68
294	SLE RA 3	-8	1	2215	-397.93	3.48	-2.68
294	SLE RA 4	-8	1	2215	-397.93	3.48	-2.68
294	SLE RA 5	-8	1	2215	-397.93	3.48	-2.68
294	SLE RA 6	-8	1	2215	-397.93	3.48	-2.68
294	SLE RA 7	-8	1	2215	-397.93	3.48	-2.68
294	SLE RA 8	-8	1	2215	-397.93	3.48	-2.68
294	SLE RA 9	-8	1	2215	-397.93	3.48	-2.68
294	SLE RA 10	-7	1	2456	-434.93	3.89	-2.63
294	SLE RA 11	-7	1	2456	-434.93	3.89	-2.63
294	SLE RA 12	-7	1	2456	-434.93	3.89	-2.63
294	SLE RA 13	-7	1	2456	-434.93	3.89	-2.63
294	SLE RA 14	-7	1	2456	-434.93	3.89	-2.63
294	SLE RA 15	-7	1	2456	-434.93	3.89	-2.63
294	SLE RA 16	-7	1	2456	-434.93	3.89	-2.63
294	SLE RA 17	-7	1	2456	-434.93	3.89	-2.63
294	SLE RA 18	-7	1	2559	-450.79	4.06	-2.61
294	SLE RA 19	-7	1	2559	-450.79	4.06	-2.61
294	SLE RA 20	-7	1	2559	-450.79	4.06	-2.61
294	SLE RA 21	-7	1	2559	-450.79	4.06	-2.61
294	SLE FR 1	-8	1	2215	-397.93	3.48	-2.68
294	SLE FR 2	-8	1	2215	-397.93	3.48	-2.68
294	SLE FR 3	-8	1	2215	-397.93	3.48	-2.68
294	SLE FR 4	-8	1	2318	-413.79	3.66	-2.66
294	SLE FR 5	-8	1	2318	-413.79	3.66	-2.66
294	SLE FR 6	-8	1	2387	-424.36	3.77	-2.64
294	SLE QP 1	-8	1	2215	-397.93	3.48	-2.68
294	SLE QP 2	-8	1	2318	-413.79	3.66	-2.66
294	SLD 1	221	110	2446	-441.35	4.45	76.76
294	SLD 2	180	80	2455	-442.92	4.5	62.72
294	SLD 3	210	-62	2698	-478.57	5.16	73.74
294	SLD 4	170	-92	2707	-480.14	5.22	59.69
294	SLD 5	92	305	1971	-365.04	2.79	30.83
294	SLD 6	50	275	1980	-366.64	2.85	16.48
294	SLD 7	56	-268	2811	-489.11	5.17	20.74
294	SLD 8	15	-299	2820	-490.71	5.23	6.38
294	SLD 9	-30	300	1816	-336.87	2.09	-11.7
294	SLD 10	-71	270	1825	-338.47	2.14	-26.06
294	SLD 11	-65	-273	2656	-460.94	4.47	-21.79
294	SLD 12	-107	-304	2665	-462.54	4.52	-36.15
294	SLD 13	-185	93	1929	-347.44	2.1	-65.01
294	SLD 14	-225	63	1939	-349.01	2.15	-79.06
294	SLD 15	-195	-79	2181	-384.66	2.81	-68.04
294	SLD 16	-236	-109	2191	-386.23	2.87	-82.08
294	SLV 1	511	256	2598	-474.74	5.42	177.87
294	SLV 2	419	187	2619	-478.33	5.55	145.74
294	SLV 3	486	-148	3190	-562.45	7.1	170.78
294	SLV 4	394	-216	3211	-566.04	7.22	138.66
294	SLV 5	220	715	1497	-297.73	1.6	74.11
294	SLV 6	124	644	1519	-301.45	1.73	40.75
294	SLV 7	137	-631	3469	-590.09	7.18	50.48
294	SLV 8	41	-702	3491	-593.81	7.31	17.13
294	SLV 9	-56	704	1145	-233.77	0.01	-22.45



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
294	SLV 10	-152	632	1167	-237.49	0.13	-55.8
294	SLV 11	-139	-642	3118	-526.12	5.58	-46.07
294	SLV 12	-235	-714	3139	-529.85	5.71	-79.43
294	SLV 13	-409	218	1426	-261.54	0.09	-143.98
294	SLV 14	-502	149	1447	-265.13	0.22	-176.1
294	SLV 15	-434	-186	2017	-349.25	1.77	-151.06
294	SLV 16	-527	-255	2038	-352.83	1.89	-183.19
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	-7	1	2259	-475.65	4.32	-2.53
295	SLU 2	-7	1	2259	-475.65	4.32	-2.53
295	SLU 3	-7	1	2259	-475.65	4.32	-2.53
295	SLU 4	-7	1	2259	-475.65	4.32	-2.53
295	SLU 5	-7	1	2259	-475.65	4.32	-2.53
295	SLU 6	-7	1	2259	-475.65	4.32	-2.53
295	SLU 7	-7	1	2259	-475.65	4.32	-2.53
295	SLU 8	-7	1	2259	-475.65	4.32	-2.53
295	SLU 9	-7	1	2259	-475.65	4.32	-2.53
295	SLU 10	-7	1	2642	-548.51	5.13	-2.41
295	SLU 11	-7	1	2642	-548.51	5.13	-2.41
295	SLU 12	-7	1	2642	-548.51	5.13	-2.41
295	SLU 13	-7	1	2642	-548.51	5.13	-2.41
295	SLU 14	-7	1	2642	-548.51	5.13	-2.41
295	SLU 15	-7	1	2642	-548.51	5.13	-2.41
295	SLU 16	-7	1	2642	-548.51	5.13	-2.41
295	SLU 17	-7	1	2642	-548.51	5.13	-2.41
295	SLU 18	-7	1	2807	-579.73	5.47	-2.36
295	SLU 19	-7	1	2807	-579.73	5.47	-2.36
295	SLU 20	-7	1	2807	-579.73	5.47	-2.36
295	SLU 21	-7	1	2807	-579.73	5.47	-2.36
295	SLU 22	-7	1	2548	-530.62	4.94	-2.51
295	SLU 23	-7	1	2548	-530.62	4.94	-2.51
295	SLU 24	-7	1	2548	-530.62	4.94	-2.51
295	SLU 25	-7	1	2548	-530.62	4.94	-2.51
295	SLU 26	-7	1	2548	-530.62	4.94	-2.51
295	SLU 27	-7	1	2548	-530.62	4.94	-2.51
295	SLU 28	-7	1	2548	-530.62	4.94	-2.51
295	SLU 29	-7	1	2548	-530.62	4.94	-2.51
295	SLU 30	-7	1	2548	-530.62	4.94	-2.51
295	SLU 31	-7	1	2931	-603.48	5.74	-2.39
295	SLU 32	-7	1	2931	-603.48	5.74	-2.39
295	SLU 33	-7	1	2931	-603.48	5.74	-2.39
295	SLU 34	-7	1	2931	-603.48	5.74	-2.39
295	SLU 35	-7	1	2931	-603.48	5.74	-2.39
295	SLU 36	-7	1	2931	-603.48	5.74	-2.39
295	SLU 37	-7	1	2931	-603.48	5.74	-2.39
295	SLU 38	-7	1	2931	-603.48	5.74	-2.39
295	SLU 39	-7	1	3095	-634.7	6.08	-2.34
295	SLU 40	-7	1	3095	-634.7	6.08	-2.34
295	SLU 41	-7	1	3095	-634.7	6.08	-2.34
295	SLU 42	-7	1	3095	-634.7	6.08	-2.34
295	SLU 43	-9	2	2838	-599.49	5.41	-3.3
295	SLU 44	-9	2	2838	-599.49	5.41	-3.3
295	SLU 45	-9	2	2838	-599.49	5.41	-3.3
295	SLU 46	-9	2	2838	-599.49	5.41	-3.3
295	SLU 47	-9	2	2838	-599.49	5.41	-3.3
295	SLU 48	-9	2	2838	-599.49	5.41	-3.3
295	SLU 49	-9	2	2838	-599.49	5.41	-3.3
295	SLU 50	-9	2	2838	-599.49	5.41	-3.3
295	SLU 51	-9	2	2838	-599.49	5.41	-3.3
295	SLU 52	-9	2	3221	-672.35	6.21	-3.18
295	SLU 53	-9	2	3221	-672.35	6.21	-3.18
295	SLU 54	-9	2	3221	-672.35	6.21	-3.18
295	SLU 55	-9	2	3221	-672.35	6.21	-3.18
295	SLU 56	-9	2	3221	-672.35	6.21	-3.18
295	SLU 57	-9	2	3221	-672.35	6.21	-3.18
295	SLU 58	-9	2	3221	-672.35	6.21	-3.18
295	SLU 59	-9	2	3221	-672.35	6.21	-3.18
295	SLU 60	-9	1	3385	-703.58	6.56	-3.13
295	SLU 61	-9	1	3385	-703.58	6.56	-3.13
295	SLU 62	-9	1	3385	-703.58	6.56	-3.13
295	SLU 63	-9	1	3385	-703.58	6.56	-3.13
295	SLU 64	-9	1	3127	-654.47	6.02	-3.28
295	SLU 65	-9	1	3127	-654.47	6.02	-3.28
295	SLU 66	-9	1	3127	-654.47	6.02	-3.28
295	SLU 67	-9	1	3127	-654.47	6.02	-3.28
295	SLU 68	-9	1	3127	-654.47	6.02	-3.28
295	SLU 69	-9	1	3127	-654.47	6.02	-3.28
295	SLU 70	-9	1	3127	-654.47	6.02	-3.28
295	SLU 71	-9	1	3127	-654.47	6.02	-3.28
295	SLU 72	-9	1	3127	-654.47	6.02	-3.28
295	SLU 73	-9	1	3510	-727.33	6.82	-3.16
295	SLU 74	-9	1	3510	-727.33	6.82	-3.16
295	SLU 75	-9	1	3510	-727.33	6.82	-3.16
295	SLU 76	-9	1	3510	-727.33	6.82	-3.16
295	SLU 77	-9	1	3510	-727.33	6.82	-3.16
295	SLU 78	-9	1	3510	-727.33	6.82	-3.16
295	SLU 79	-9	1	3510	-727.33	6.82	-3.16



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
295	SLU 80	-9	1	3510	-727.33	6.82	-3.16
295	SLU 81	-9	1	3674	-758.55	7.17	-3.11
295	SLU 82	-9	1	3674	-758.55	7.17	-3.11
295	SLU 83	-9	1	3674	-758.55	7.17	-3.11
295	SLU 84	-9	1	3674	-758.55	7.17	-3.11
295	SLE RA 1	-7	1	2342	-491.35	4.5	-2.52
295	SLE RA 2	-7	1	2342	-491.35	4.5	-2.52
295	SLE RA 3	-7	1	2342	-491.35	4.5	-2.52
295	SLE RA 4	-7	1	2342	-491.35	4.5	-2.52
295	SLE RA 5	-7	1	2342	-491.35	4.5	-2.52
295	SLE RA 6	-7	1	2342	-491.35	4.5	-2.52
295	SLE RA 7	-7	1	2342	-491.35	4.5	-2.52
295	SLE RA 8	-7	1	2342	-491.35	4.5	-2.52
295	SLE RA 9	-7	1	2342	-491.35	4.5	-2.52
295	SLE RA 10	-7	1	2597	-539.93	5.03	-2.45
295	SLE RA 11	-7	1	2597	-539.93	5.03	-2.45
295	SLE RA 12	-7	1	2597	-539.93	5.03	-2.45
295	SLE RA 13	-7	1	2597	-539.93	5.03	-2.45
295	SLE RA 14	-7	1	2597	-539.93	5.03	-2.45
295	SLE RA 15	-7	1	2597	-539.93	5.03	-2.45
295	SLE RA 16	-7	1	2597	-539.93	5.03	-2.45
295	SLE RA 17	-7	1	2597	-539.93	5.03	-2.45
295	SLE RA 18	-7	1	2707	-560.74	5.26	-2.41
295	SLE RA 19	-7	1	2707	-560.74	5.26	-2.41
295	SLE RA 20	-7	1	2707	-560.74	5.26	-2.41
295	SLE RA 21	-7	1	2707	-560.74	5.26	-2.41
295	SLE FR 1	-7	1	2342	-491.35	4.5	-2.52
295	SLE FR 2	-7	1	2342	-491.35	4.5	-2.52
295	SLE FR 3	-7	1	2342	-491.35	4.5	-2.52
295	SLE FR 4	-7	1	2451	-512.17	4.73	-2.49
295	SLE FR 5	-7	1	2451	-512.17	4.73	-2.49
295	SLE FR 6	-7	1	2524	-526.05	4.88	-2.47
295	SLE QP 1	-7	1	2342	-491.35	4.5	-2.52
295	SLE QP 2	-7	1	2451	-512.17	4.73	-2.49
295	SLD 1	221	127	2605	-549.25	5.58	76.84
295	SLD 2	181	92	2616	-551.62	5.65	62.82
295	SLD 3	210	-69	2882	-600.47	6.45	73.75
295	SLD 4	170	-104	2893	-602.85	6.51	59.73
295	SLD 5	92	348	2073	-444.75	3.65	31.06
295	SLD 6	51	313	2084	-447.18	3.71	16.74
295	SLD 7	56	-305	2997	-615.49	6.54	20.75
295	SLD 8	15	-340	3008	-617.92	6.6	6.42
295	SLD 9	-29	342	1894	-406.42	2.86	-11.4
295	SLD 10	-70	307	1906	-408.85	2.92	-25.73
295	SLD 11	-65	-311	2818	-577.16	5.75	-21.72
295	SLD 12	-107	-346	2829	-579.59	5.81	-36.04
295	SLD 13	-184	106	2009	-421.49	2.94	-64.71
295	SLD 14	-224	72	2020	-423.87	3.01	-78.73
295	SLD 15	-195	-90	2286	-472.72	3.81	-67.8
295	SLD 16	-235	-124	2298	-475.09	3.87	-81.82
295	SLV 1	511	294	2790	-594.26	6.64	177.83
295	SLV 2	419	215	2815	-599.69	6.78	145.77
295	SLV 3	486	-166	3440	-714.69	8.67	170.59
295	SLV 4	393	-245	3465	-720.12	8.81	138.52
295	SLV 5	221	815	1557	-352.13	2.17	74.43
295	SLV 6	125	734	1583	-357.77	2.32	41.14
295	SLV 7	136	-717	3725	-753.58	8.94	50.28
295	SLV 8	40	-799	3752	-759.22	9.09	16.99
295	SLV 9	-54	801	1151	-265.12	0.37	-21.97
295	SLV 10	-150	719	1177	-270.76	0.52	-55.26
295	SLV 11	-139	-731	3319	-666.57	7.14	-46.12
295	SLV 12	-235	-813	3346	-672.21	7.29	-79.41
295	SLV 13	-408	247	1437	-304.22	0.64	-143.5
295	SLV 14	-500	168	1462	-309.65	0.79	-175.57
295	SLV 15	-433	-213	2088	-424.65	2.67	-150.75
295	SLV 16	-526	-292	2113	-430.09	2.82	-182.81
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
296	SLU 1	-6	2	2047	-499.33	-53.93	-1.99
296	SLU 2	-6	2	2047	-499.33	-53.93	-1.99
296	SLU 3	-6	2	2047	-499.33	-53.93	-1.99
296	SLU 4	-6	2	2047	-499.33	-53.93	-1.99
296	SLU 5	-6	2	2047	-499.33	-53.93	-1.99
296	SLU 6	-6	2	2047	-499.33	-53.93	-1.99
296	SLU 7	-6	2	2047	-499.33	-53.93	-1.99
296	SLU 8	-6	2	2047	-499.33	-53.93	-1.99
296	SLU 9	-6	2	2047	-499.33	-53.93	-1.99
296	SLU 10	-5	2	2396	-579.65	-63.08	-1.86
296	SLU 11	-5	2	2396	-579.65	-63.08	-1.86
296	SLU 12	-5	2	2396	-579.65	-63.08	-1.86
296	SLU 13	-5	2	2396	-579.65	-63.08	-1.86
296	SLU 14	-5	2	2396	-579.65	-63.08	-1.86
296	SLU 15	-5	2	2396	-579.65	-63.08	-1.86
296	SLU 16	-5	2	2396	-579.65	-63.08	-1.86
296	SLU 17	-5	2	2396	-579.65	-63.08	-1.86
296	SLU 18	-5	2	2546	-614.07	-67	-1.8
296	SLU 19	-5	2	2546	-614.07	-67	-1.8
296	SLU 20	-5	2	2546	-614.07	-67	-1.8



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
296	SLU 21	-5	2	2546	-614.07	-67	-1.8
296	SLU 22	-6	2	2310	-559.95	-60.83	-1.95
296	SLU 23	-6	2	2310	-559.95	-60.83	-1.95
296	SLU 24	-6	2	2310	-559.95	-60.83	-1.95
296	SLU 25	-6	2	2310	-559.95	-60.83	-1.95
296	SLU 26	-6	2	2310	-559.95	-60.83	-1.95
296	SLU 27	-6	2	2310	-559.95	-60.83	-1.95
296	SLU 28	-6	2	2310	-559.95	-60.83	-1.95
296	SLU 29	-6	2	2310	-559.95	-60.83	-1.95
296	SLU 30	-6	2	2310	-559.95	-60.83	-1.95
296	SLU 31	-5	2	2660	-640.27	-69.97	-1.81
296	SLU 32	-5	2	2660	-640.27	-69.97	-1.81
296	SLU 33	-5	2	2660	-640.27	-69.97	-1.81
296	SLU 34	-5	2	2660	-640.27	-69.97	-1.81
296	SLU 35	-5	2	2660	-640.27	-69.97	-1.81
296	SLU 36	-5	2	2660	-640.27	-69.97	-1.81
296	SLU 37	-5	2	2660	-640.27	-69.97	-1.81
296	SLU 38	-5	2	2660	-640.27	-69.97	-1.81
296	SLU 39	-5	2	2809	-674.69	-73.89	-1.76
296	SLU 40	-5	2	2809	-674.69	-73.89	-1.76
296	SLU 41	-5	2	2809	-674.69	-73.89	-1.76
296	SLU 42	-5	2	2809	-674.69	-73.89	-1.76
296	SLU 43	-8	2	2571	-628.35	-67.74	-2.6
296	SLU 44	-8	2	2571	-628.35	-67.74	-2.6
296	SLU 45	-8	2	2571	-628.35	-67.74	-2.6
296	SLU 46	-8	2	2571	-628.35	-67.74	-2.6
296	SLU 47	-8	2	2571	-628.35	-67.74	-2.6
296	SLU 48	-8	2	2571	-628.35	-67.74	-2.6
296	SLU 49	-8	2	2571	-628.35	-67.74	-2.6
296	SLU 50	-8	2	2571	-628.35	-67.74	-2.6
296	SLU 51	-8	2	2571	-628.35	-67.74	-2.6
296	SLU 52	-7	2	2920	-708.66	-76.89	-2.47
296	SLU 53	-7	2	2920	-708.66	-76.89	-2.47
296	SLU 54	-7	2	2920	-708.66	-76.89	-2.47
296	SLU 55	-7	2	2920	-708.66	-76.89	-2.47
296	SLU 56	-7	2	2920	-708.66	-76.89	-2.47
296	SLU 57	-7	2	2920	-708.66	-76.89	-2.47
296	SLU 58	-7	2	2920	-708.66	-76.89	-2.47
296	SLU 59	-7	2	2920	-708.66	-76.89	-2.47
296	SLU 60	-7	2	3070	-743.08	-80.81	-2.41
296	SLU 61	-7	2	3070	-743.08	-80.81	-2.41
296	SLU 62	-7	2	3070	-743.08	-80.81	-2.41
296	SLU 63	-7	2	3070	-743.08	-80.81	-2.41
296	SLU 64	-7	2	2834	-688.97	-74.64	-2.56
296	SLU 65	-7	2	2834	-688.97	-74.64	-2.56
296	SLU 66	-7	2	2834	-688.97	-74.64	-2.56
296	SLU 67	-7	2	2834	-688.97	-74.64	-2.56
296	SLU 68	-7	2	2834	-688.97	-74.64	-2.56
296	SLU 69	-7	2	2834	-688.97	-74.64	-2.56
296	SLU 70	-7	2	2834	-688.97	-74.64	-2.56
296	SLU 71	-7	2	2834	-688.97	-74.64	-2.56
296	SLU 72	-7	2	2834	-688.97	-74.64	-2.56
296	SLU 73	-7	2	3183	-769.28	-83.79	-2.43
296	SLU 74	-7	2	3183	-769.28	-83.79	-2.43
296	SLU 75	-7	2	3183	-769.28	-83.79	-2.43
296	SLU 76	-7	2	3183	-769.28	-83.79	-2.43
296	SLU 77	-7	2	3183	-769.28	-83.79	-2.43
296	SLU 78	-7	2	3183	-769.28	-83.79	-2.43
296	SLU 79	-7	2	3183	-769.28	-83.79	-2.43
296	SLU 80	-7	2	3183	-769.28	-83.79	-2.43
296	SLU 81	-7	2	3333	-803.7	-87.71	-2.37
296	SLU 82	-7	2	3333	-803.7	-87.71	-2.37
296	SLU 83	-7	2	3333	-803.7	-87.71	-2.37
296	SLU 84	-7	2	3333	-803.7	-87.71	-2.37
296	SLE RA 1	-6	2	2122	-516.65	-55.9	-1.98
296	SLE RA 2	-6	2	2122	-516.65	-55.9	-1.98
296	SLE RA 3	-6	2	2122	-516.65	-55.9	-1.98
296	SLE RA 4	-6	2	2122	-516.65	-55.9	-1.98
296	SLE RA 5	-6	2	2122	-516.65	-55.9	-1.98
296	SLE RA 6	-6	2	2122	-516.65	-55.9	-1.98
296	SLE RA 7	-6	2	2122	-516.65	-55.9	-1.98
296	SLE RA 8	-6	2	2122	-516.65	-55.9	-1.98
296	SLE RA 9	-6	2	2122	-516.65	-55.9	-1.98
296	SLE RA 10	-5	2	2355	-570.2	-62	-1.89
296	SLE RA 11	-5	2	2355	-570.2	-62	-1.89
296	SLE RA 12	-5	2	2355	-570.2	-62	-1.89
296	SLE RA 13	-5	2	2355	-570.2	-62	-1.89
296	SLE RA 14	-5	2	2355	-570.2	-62	-1.89
296	SLE RA 15	-5	2	2355	-570.2	-62	-1.89
296	SLE RA 16	-5	2	2355	-570.2	-62	-1.89
296	SLE RA 17	-5	2	2355	-570.2	-62	-1.89
296	SLE RA 18	-5	2	2455	-593.14	-64.61	-1.85
296	SLE RA 19	-5	2	2455	-593.14	-64.61	-1.85
296	SLE RA 20	-5	2	2455	-593.14	-64.61	-1.85
296	SLE RA 21	-5	2	2455	-593.14	-64.61	-1.85
296	SLE FR 1	-6	2	2122	-516.65	-55.9	-1.98
296	SLE FR 2	-6	2	2122	-516.65	-55.9	-1.98
296	SLE FR 3	-6	2	2122	-516.65	-55.9	-1.98
296	SLE FR 4	-6	2	2222	-539.6	-58.51	-1.94
296	SLE FR 5	-6	2	2222	-539.6	-58.51	-1.94



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
Ind.	N.br.	x	y	z	x	y	z
296	SLE FR 6	-6	2	2289	-554.9	-60.26	-1.92
296	SLE QP 1	-6	2	2122	-516.65	-55.9	-1.98
296	SLE QP 2	-6	2	2222	-539.6	-58.51	-1.94
296	SLD 1	189	122	2376	-580.72	-62.23	69.09
296	SLD 2	154	89	2387	-583.43	-62.5	56.18
296	SLD 3	179	-64	2636	-637.91	-68.87	61.12
296	SLD 4	145	-97	2647	-640.63	-69.13	48.21
296	SLD 5	80	332	1870	-464.21	-49.46	36.11
296	SLD 6	44	298	1881	-466.99	-49.74	22.92
296	SLD 7	48	-288	2736	-654.86	-71.59	9.55
296	SLD 8	13	-322	2748	-657.63	-71.86	-3.64
296	SLD 9	-24	325	1697	-421.57	-45.16	-0.24
296	SLD 10	-59	291	1708	-424.34	-45.44	-13.43
296	SLD 11	-56	-295	2563	-612.21	-67.29	-26.8
296	SLD 12	-91	-328	2574	-614.99	-67.56	-39.99
296	SLD 13	-156	100	1798	-438.57	-47.89	-52.09
296	SLD 14	-191	67	1809	-441.29	-48.16	-65
296	SLD 15	-166	-86	2057	-495.77	-54.53	-60.06
296	SLD 16	-200	-119	2069	-498.48	-54.8	-72.97
296	SLV 1	437	283	2561	-630.7	-66.69	159.71
296	SLV 2	358	207	2586	-636.91	-67.3	130.19
296	SLV 3	414	-154	3171	-765.02	-82.27	141.02
296	SLV 4	336	-230	3196	-771.23	-82.88	111.5
296	SLV 5	190	776	1389	-360.92	-37.11	85.8
296	SLV 6	108	697	1416	-367.37	-37.74	55.15
296	SLV 7	116	-679	3422	-808.65	-89.05	23.5
296	SLV 8	34	-757	3449	-815.1	-89.68	-7.16
296	SLV 9	-45	761	995	-264.1	-27.35	3.27
296	SLV 10	-127	682	1022	-270.55	-27.98	-27.38
296	SLV 11	-119	-694	3029	-711.83	-79.28	-59.03
296	SLV 12	-201	-772	3055	-718.28	-79.92	-89.68
296	SLV 13	-347	233	1248	-307.97	-34.14	-115.38
296	SLV 14	-426	157	1273	-314.18	-34.75	-144.9
296	SLV 15	-369	-203	1858	-442.29	-49.73	-134.07
296	SLV 16	-448	-279	1883	-448.5	-50.34	-163.59
296	CRTFP Ux+	0	0	0	0	0	0
296	CRTFP Ux-	0	0	0	0	0	0
296	CRTFP Uy+	0	0	0	0	0	0
296	CRTFP Uy-	0	0	0	0	0	0
298	SLU 1	-15	6	5985	-1215.01	-1235.38	-4.71
298	SLU 2	-15	6	5985	-1215.01	-1235.38	-4.71
298	SLU 3	-15	6	5985	-1215.01	-1235.38	-4.71
298	SLU 4	-15	6	5985	-1215.01	-1235.38	-4.71
298	SLU 5	-15	6	5985	-1215.01	-1235.38	-4.71
298	SLU 6	-15	6	5985	-1215.01	-1235.38	-4.71
298	SLU 7	-15	6	5985	-1215.01	-1235.38	-4.71
298	SLU 8	-15	6	5985	-1215.01	-1235.38	-4.71
298	SLU 9	-15	6	5985	-1215.01	-1235.38	-4.71
298	SLU 10	-14	7	7009	-2484.68	-1445.67	-4.05
298	SLU 11	-14	7	7009	-2484.68	-1445.67	-4.05
298	SLU 12	-14	7	7009	-2484.68	-1445.67	-4.05
298	SLU 13	-14	7	7009	-2484.68	-1445.67	-4.05
298	SLU 14	-14	7	7009	-2484.68	-1445.67	-4.05
298	SLU 15	-14	7	7009	-2484.68	-1445.67	-4.05
298	SLU 16	-14	7	7009	-2484.68	-1445.67	-4.05
298	SLU 17	-14	7	7009	-2484.68	-1445.67	-4.05
298	SLU 18	-13	8	7448	-2638.83	-1535.79	-3.77
298	SLU 19	-13	8	7448	-2638.83	-1535.79	-3.77
298	SLU 20	-13	8	7448	-2638.83	-1535.79	-3.77
298	SLU 21	-13	8	7448	-2638.83	-1535.79	-3.77
298	SLU 22	-15	7	6758	-2396.43	-1394.01	-4.42
298	SLU 23	-15	7	6758	-2396.43	-1394.01	-4.42
298	SLU 24	-15	7	6758	-2396.43	-1394.01	-4.42
298	SLU 25	-15	7	6758	-2396.43	-1394.01	-4.42
298	SLU 26	-15	7	6758	-2396.43	-1394.01	-4.42
298	SLU 27	-15	7	6758	-2396.43	-1394.01	-4.42
298	SLU 28	-15	7	6758	-2396.43	-1394.01	-4.42
298	SLU 29	-15	7	6758	-2396.43	-1394.01	-4.42
298	SLU 30	-15	7	6758	-2396.43	-1394.01	-4.42
298	SLU 31	-14	8	7782	-2756.1	-1604.29	-3.76
298	SLU 32	-14	8	7782	-2756.1	-1604.29	-3.76
298	SLU 33	-14	8	7782	-2756.1	-1604.29	-3.76
298	SLU 34	-14	8	7782	-2756.1	-1604.29	-3.76
298	SLU 35	-14	8	7782	-2756.1	-1604.29	-3.76
298	SLU 36	-14	8	7782	-2756.1	-1604.29	-3.76
298	SLU 37	-14	8	7782	-2756.1	-1604.29	-3.76
298	SLU 38	-14	8	7782	-2756.1	-1604.29	-3.76
298	SLU 39	-13	8	8220	-2910.24	-1694.42	-3.48
298	SLU 40	-13	8	8220	-2910.24	-1694.42	-3.48
298	SLU 41	-13	8	8220	-2910.24	-1694.42	-3.48
298	SLU 42	-13	8	8220	-2910.24	-1694.42	-3.48
298	SLU 43	-20	8	7516	-2669.45	-1551.61	-6.22
298	SLU 44	-20	8	7516	-2669.45	-1551.61	-6.22
298	SLU 45	-20	8	7516	-2669.45	-1551.61	-6.22
298	SLU 46	-20	8	7516	-2669.45	-1551.61	-6.22
298	SLU 47	-20	8	7516	-2669.45	-1551.61	-6.22
298	SLU 48	-20	8	7516	-2669.45	-1551.61	-6.22
298	SLU 49	-20	8	7516	-2669.45	-1551.61	-6.22
298	SLU 50	-20	8	7516	-2669.45	-1551.61	-6.22
298	SLU 51	-20	8	7516	-2669.45	-1551.61	-6.22



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
298	SLU 52	-19	9	8540	-3029.13	-1761.9	-5.56
298	SLU 53	-19	9	8540	-3029.13	-1761.9	-5.56
298	SLU 54	-19	9	8540	-3029.13	-1761.9	-5.56
298	SLU 55	-19	9	8540	-3029.13	-1761.9	-5.56
298	SLU 56	-19	9	8540	-3029.13	-1761.9	-5.56
298	SLU 57	-19	9	8540	-3029.13	-1761.9	-5.56
298	SLU 58	-19	9	8540	-3029.13	-1761.9	-5.56
298	SLU 59	-19	9	8540	-3029.13	-1761.9	-5.56
298	SLU 60	-18	9	8979	-3183.27	-1852.02	-5.28
298	SLU 61	-18	9	8979	-3183.27	-1852.02	-5.28
298	SLU 62	-18	9	8979	-3183.27	-1852.02	-5.28
298	SLU 63	-18	9	8979	-3183.27	-1852.02	-5.28
298	SLU 64	-20	8	8289	-2940.87	-1710.24	-5.93
298	SLU 65	-20	8	8289	-2940.87	-1710.24	-5.93
298	SLU 66	-20	8	8289	-2940.87	-1710.24	-5.93
298	SLU 67	-20	8	8289	-2940.87	-1710.24	-5.93
298	SLU 68	-20	8	8289	-2940.87	-1710.24	-5.93
298	SLU 69	-20	8	8289	-2940.87	-1710.24	-5.93
298	SLU 70	-20	8	8289	-2940.87	-1710.24	-5.93
298	SLU 71	-20	8	8289	-2940.87	-1710.24	-5.93
298	SLU 72	-20	8	8289	-2940.87	-1710.24	-5.93
298	SLU 73	-18	10	9312	-3300.54	-1920.52	-5.27
298	SLU 74	-18	10	9312	-3300.54	-1920.52	-5.27
298	SLU 75	-18	10	9312	-3300.54	-1920.52	-5.27
298	SLU 76	-18	10	9312	-3300.54	-1920.52	-5.27
298	SLU 77	-18	10	9312	-3300.54	-1920.52	-5.27
298	SLU 78	-18	10	9312	-3300.54	-1920.52	-5.27
298	SLU 79	-18	10	9312	-3300.54	-1920.52	-5.27
298	SLU 80	-18	10	9312	-3300.54	-1920.52	-5.27
298	SLU 81	-18	10	9751	-3454.69	-2010.64	-4.99
298	SLU 82	-18	10	9751	-3454.69	-2010.64	-4.99
298	SLU 83	-18	10	9751	-3454.69	-2010.64	-4.99
298	SLU 84	-18	10	9751	-3454.69	-2010.64	-4.99
298	SLE RA 1	-15	6	6206	-2202.56	-1280.71	-4.63
298	SLE RA 2	-15	6	6206	-2202.56	-1280.71	-4.63
298	SLE RA 3	-15	6	6206	-2202.56	-1280.71	-4.63
298	SLE RA 4	-15	6	6206	-2202.56	-1280.71	-4.63
298	SLE RA 5	-15	6	6206	-2202.56	-1280.71	-4.63
298	SLE RA 6	-15	6	6206	-2202.56	-1280.71	-4.63
298	SLE RA 7	-15	6	6206	-2202.56	-1280.71	-4.63
298	SLE RA 8	-15	6	6206	-2202.56	-1280.71	-4.63
298	SLE RA 9	-15	6	6206	-2202.56	-1280.71	-4.63
298	SLE RA 10	-14	7	6889	-2442.34	-1420.89	-4.19
298	SLE RA 11	-14	7	6889	-2442.34	-1420.89	-4.19
298	SLE RA 12	-14	7	6889	-2442.34	-1420.89	-4.19
298	SLE RA 13	-14	7	6889	-2442.34	-1420.89	-4.19
298	SLE RA 14	-14	7	6889	-2442.34	-1420.89	-4.19
298	SLE RA 15	-14	7	6889	-2442.34	-1420.89	-4.19
298	SLE RA 16	-14	7	6889	-2442.34	-1420.89	-4.19
298	SLE RA 17	-14	7	6889	-2442.34	-1420.89	-4.19
298	SLE RA 18	-14	7	7181	-2545.1	-1480.98	-4
298	SLE RA 19	-14	7	7181	-2545.1	-1480.98	-4
298	SLE RA 20	-14	7	7181	-2545.1	-1480.98	-4
298	SLE RA 21	-14	7	7181	-2545.1	-1480.98	-4
298	SLE FR 1	-15	6	6206	-2202.56	-1280.71	-4.63
298	SLE FR 2	-15	6	6206	-2202.56	-1280.71	-4.63
298	SLE FR 3	-15	6	6206	-2202.56	-1280.71	-4.63
298	SLE FR 4	-15	7	6499	-2305.32	-1340.79	-4.44
298	SLE FR 5	-15	7	6499	-2305.32	-1340.79	-4.44
298	SLE FR 6	-15	7	6694	-2373.83	-1380.84	-4.31
298	SLE QP 1	-15	6	6206	-2202.56	-1280.71	-4.63
298	SLE QP 2	-15	7	6499	-2305.32	-1340.79	-4.44
298	SLD 1	537	371	6971	-2478.41	-1433.1	283.25
298	SLD 2	440	271	7005	-2489.74	-1439.65	225.08
298	SLD 3	507	-187	7738	-2736.16	-1587.61	155.43
298	SLD 4	410	-288	7771	-2747.49	-1594.16	97.26
298	SLD 5	231	999	5466	-1962.23	-1131.78	296.73
298	SLD 6	131	897	5500	-1973.81	-1138.48	237.28
298	SLD 7	132	-862	8021	-2821.4	-1646.8	-129.34
298	SLD 8	32	-965	8055	-2832.98	-1653.5	-188.79
298	SLD 9	-62	978	4942	-1777.66	-1028.07	179.91
298	SLD 10	-161	876	4977	-1789.24	-1034.77	120.47
298	SLD 11	-161	-883	7497	-2636.83	-1543.09	-246.16
298	SLD 12	-260	-986	7532	-2648.41	-1549.79	-305.6
298	SLD 13	-439	301	5226	-1863.15	-1087.41	-106.14
298	SLD 14	-537	201	5260	-1874.48	-1093.96	-164.3
298	SLD 15	-469	-257	5992	-2120.9	-1241.92	-233.96
298	SLD 16	-566	-358	6026	-2132.23	-1248.47	-292.12
298	SLV 1	1239	856	7542	-2688.39	-1544.43	653.98
298	SLV 2	1017	626	7619	-2714.3	-1559.42	520.95
298	SLV 3	1169	-454	9340	-3293.3	-1907.07	354.06
298	SLV 4	947	-684	9418	-3319.22	-1922.05	221.02
298	SLV 5	549	2334	4055	-1493.22	-846.35	697.08
298	SLV 6	318	2095	4135	-1520.13	-861.91	558.95
298	SLV 7	317	-2034	10051	-3509.6	-2055.14	-302.67
298	SLV 8	86	-2273	10131	-3536.51	-2070.7	-440.79
298	SLV 9	-116	2286	2866	-1074.13	-610.88	431.91
298	SLV 10	-347	2048	2947	-1101.04	-626.44	293.79
298	SLV 11	-348	-2082	8862	-3090.51	-1819.66	-567.83
298	SLV 12	-579	-2321	8942	-3117.42	-1835.22	-705.96



Nodo	Cont.	Reazione a traslazione			Reazione a rotazione		
		x	y	z	x	y	z
298	SLV 13	-977	698	3580	-1291.42	-759.52	-229.9
298	SLV 14	-1199	468	3657	-1317.34	-774.51	-362.93
298	SLV 15	-1047	-613	5378	-1896.34	-1122.16	-529.82
298	SLV 16	-1269	-843	5456	-1922.25	-1137.14	-662.86
298	CRTFP Ux+	0	0	0	0.01	0.01	-0.01
298	CRTFP Ux-	0	0	0	-0.01	-0.01	0.01
298	CRTFP Uy+	0	0	0	-0.02	-0.01	-0.01
298	CRTFP Uy-	0	0	0	0.02	0.01	0.01
298	CRTFP Rz+	0	0	0	0	0	0
298	CRTFP Rz-	0	0	0	0	0	0

1.3 Pressioni massime sul terreno

Nodo: Nodo che interagisce col terreno.

Ind.: indice del nodo.

Pressione minima: situazione in cui si verifica la pressione minima nel nodo.

Cont.: nome breve della condizione o combinazione di carico a cui si riferisce la pressione minima.

uz: spostamento massimo verticale del nodo. [m]

Valore: pressione minima sul terreno del nodo. [daN/m²]

Pressione massima: situazione in cui si verifica la pressione massima nel nodo.

Cont.: nome breve della condizione o combinazione di carico a cui si riferisce la pressione massima.

uz: spostamento minimo verticale del nodo. [m]

Valore: pressione massima sul terreno del nodo. [daN/m²]

Compressione estrema massima -9918.3 al nodo di indice 297, di coordinate x = -9.18, y = -8.72, z = -1.53, nel contesto SLV 8.

Spostamento estremo minimo -0.0033061 al nodo di indice 297, di coordinate x = -9.18, y = -8.72, z = -1.53, nel contesto SLV 8.

Spostamento estremo massimo -0.0005321 al nodo di indice 5, di coordinate x = 1.93, y = -17.73, z = -1.53, nel contesto SLV 7.

Nodo	Ind.	Cont.	Pressione minima		Cont.	Pressione massima	
			uz	Valore		uz	Valore
5	SLV 10		-0.0030307	-9092	SLV 7	-0.0005321	-1596.4
20	SLU 81		-0.0028395	-8518.4	SLV 11	-0.0011053	-3315.8
35	SLV 5		-0.003166	-9498.1	SLV 12	-0.0007372	-2211.5
37	SLV 10		-0.0029005	-8701.4	SLV 7	-0.0005688	-1706.4
38	SLV 10		-0.0026488	-7946.5	SLV 7	-0.0005657	-1697.2
39	SLV 10		-0.0024244	-7273.1	SLV 7	-0.0005684	-1705.2
40	SLV 10		-0.0022362	-6708.5	SLV 7	-0.0005781	-1734.4
41	SLV 10		-0.002088	-6264	SLV 7	-0.0005952	-1785.7
42	SLV 10		-0.0019805	-5941.5	SLV 7	-0.0006196	-1858.8
43	SLU 81		-0.0019333	-5799.8	SLV 7	-0.000651	-1952.9
44	SLU 81		-0.0019403	-5820.9	SLV 7	-0.0006891	-2067.3
45	SLU 81		-0.0019791	-5937.2	SLV 7	-0.0007337	-2201.2
46	SLU 81		-0.0020467	-6140	SLV 7	-0.0007844	-2353.3
47	SLU 81		-0.0021392	-6417.5	SLV 7	-0.0008404	-2521.1
48	SLU 81		-0.0022506	-6751.9	SLV 7	-0.0008999	-2699.7
49	SLU 81		-0.0023716	-7114.8	SLV 7	-0.0009601	-2880.3
50	SLU 81		-0.0024876	-7462.9	SLV 7	-0.001016	-3048.1
51	SLU 81		-0.0025774	-7732.1	SLV 7	-0.00106	-3180
52	SLU 81		-0.0026117	-7835.2	SLV 11	-0.0010748	-3224.3
53	SLU 81		-0.0025894	-7768.1	SLV 12	-0.0010629	-3188.7
54	SLU 81		-0.002513	-7538.9	SLV 12	-0.0010296	-3088.8
55	SLU 81		-0.0024103	-7230.8	SLV 12	-0.0009849	-2954.7
56	SLU 81		-0.0023019	-6905.8	SLV 12	-0.0009361	-2808.2
57	SLU 81		-0.0022019	-6605.8	SLV 12	-0.0008879	-2663.6
58	SLU 81		-0.0021194	-6358.1	SLV 12	-0.0008432	-2529.6
59	SLU 81		-0.00206	-6179.9	SLV 12	-0.0008037	-2411.1
60	SLU 81		-0.0020274	-6082.2	SLV 12	-0.0007702	-2310.6
61	SLU 81		-0.0020242	-6072.6	SLV 12	-0.0007431	-2229.2
62	SLU 81		-0.0020523	-6156.8	SLV 12	-0.0007224	-2167.1
63	SLU 81		-0.0021131	-6339.3	SLV 12	-0.0007083	-2124.9
64	SLV 5		-0.0022319	-6695.7	SLV 12	-0.0007008	-2102.5
65	SLV 5		-0.0024021	-7206.3	SLV 12	-0.0007	-2100.1
66	SLV 5		-0.0026073	-7821.9	SLV 12	-0.0007057	-2117.2
67	SLV 5		-0.0028414	-8524.1	SLV 12	-0.0007174	-2152.3
68	SLU 81		-0.0026222	-7866.5	SLV 11	-0.001082	-3245.9
71	SLV 10		-0.0026822	-8046.5	SLV 7	-0.0005773	-1732
72	SLU 81		-0.0024911	-7473.3	SLV 12	-0.0010898	-3269.3
75	SLV 10		-0.0023916	-7174.7	SLV 7	-0.0006354	-1906.2
76	SLU 81		-0.002425	-7275	SLV 12	-0.0011212	-3363.6
79	SLU 81		-0.0021614	-6484.2	SLV 7	-0.0007076	-2122.9
80	SLU 81		-0.0024017	-7205.2	SLV 12	-0.0011684	-3505.2
81	SLU 81		-0.0017821	-5346.3	SLV 16	-0.0007486	-2245.8
84	SLU 81		-0.0020936	-6280.9	SLV 7	-0.000794	-2382.1
85	SLU 81		-0.0024046	-7213.9	SLV 12	-0.0012254	-3676.3
88	SLU 81		-0.0020745	-6223.5	SLV 3	-0.0008584	-2575.1
89	SLU 81		-0.0024219	-7265.7	SLV 12	-0.001288	-3864.1
92	SLU 81		-0.0020968	-6290.5	SLV 3	-0.000895	-2684.9
93	SLU 81		-0.002446	-7337.9	SLV 12	-0.0013533	-4059.9
95	SLU 81		-0.0024721	-7416.3	SLV 12	-0.0014193	-4257.8
96	SLU 81		-0.00208	-6240.1	SLV 16	-0.0009628	-2888.5
99	SLU 81		-0.0021516	-6454.8	SLV 3	-0.0009404	-2821.2
100	SLU 81		-0.0024975	-7492.4	SLU 1	-0.0014794	-4438.3
103	SLU 81		-0.0022269	-6680.7	SLV 4	-0.0009889	-2966.6
104	SLU 81		-0.0025199	-7559.8	SLU 1	-0.0014895	-4468.5
107	SLU 81		-0.0023058	-6917.4	SLV 4	-0.0010348	-3104.5



Nodo	Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore
108	SLU 81	-0.0025372	-7611.5	SLU 1	-0.0014977	-4493.1
110	SLU 81	-0.0024013	-7204	SLV 2	-0.0010586	-3175.7
111	SLU 81	-0.0023637	-7091.1	SLV 2	-0.0010497	-3149.1
112	SLU 81	-0.0023258	-6977.5	SLV 4	-0.0010633	-3190
113	SLU 81	-0.0023625	-7087.5	SLV 4	-0.0011048	-3314.5
114	SLU 81	-0.0024023	-7206.9	SLV 4	-0.0011605	-3481.6
115	SLU 81	-0.0024372	-7311.7	SLV 4	-0.0012221	-3666.4
116	SLU 81	-0.0024649	-7394.8	SLV 4	-0.0012842	-3852.6
117	SLU 81	-0.0024858	-7457.3	SLV 4	-0.0013441	-4032.2
118	SLU 81	-0.0025011	-7503.2	SLV 4	-0.001401	-4202.9
119	SLU 81	-0.0025123	-7536.8	SLV 4	-0.001455	-4365
120	SLU 81	-0.0025207	-7562.2	SLU 1	-0.0014849	-4454.8
121	SLU 81	-0.0025276	-7582.7	SLU 1	-0.00149	-4469.9
122	SLU 81	-0.0025341	-7602.3	SLU 1	-0.0014948	-4484.5
123	SLU 81	-0.0025419	-7625.7	SLU 1	-0.0015001	-4500.2
124	SLU 81	-0.0025517	-7655.2	SLU 1	-0.001506	-4517.9
125	SLU 81	-0.002563	-7689	SLU 1	-0.0015124	-4537.1
126	SLU 81	-0.0025738	-7721.5	SLU 1	-0.0015185	-4555.4
127	SLU 81	-0.0025829	-7748.6	SLV 15	-0.0014844	-4453.1
128	SLU 81	-0.0025889	-7766.6	SLV 15	-0.0014431	-4329.2
129	SLU 81	-0.0025905	-7771.4	SLV 15	-0.0013989	-4196.7
130	SLU 81	-0.0025863	-7758.8	SLV 15	-0.0013517	-4055
131	SLU 81	-0.0025754	-7726.1	SLV 15	-0.0013024	-3907.1
132	SLU 81	-0.0025584	-7675.1	SLV 15	-0.0012538	-3761.4
133	SLU 81	-0.0025395	-7618.6	SLV 15	-0.0012118	-3635.3
134	SLU 81	-0.0025296	-7588.9	SLV 15	-0.001185	-3555.1
135	SLU 81	-0.0026689	-8006.7	SLV 15	-0.0012366	-3709.7
136	SLU 81	-0.0028048	-8414.3	SLV 16	-0.0012954	-3886.1
138	SLU 81	-0.0023641	-7092.3	SLV 2	-0.0010477	-3143.1
140	SLU 81	-0.0023742	-7122.7	SLV 2	-0.001046	-3138.1
153	SLU 81	-0.0025467	-7640	SLU 1	-0.0015034	-4510.1
166	SLU 81	-0.0027063	-8118.8	SLV 15	-0.001255	-3765.1
168	SLU 81	-0.002422	-7266.1	SLV 2	-0.001051	-3153.1
169	SLU 81	-0.0023455	-7036.4	SLV 2	-0.0010668	-3200.5
170	SLU 81	-0.0023811	-7143.3	SLV 2	-0.0011128	-3338.5
171	SLU 81	-0.0024198	-7259.5	SLV 2	-0.0011707	-3512.1
172	SLU 81	-0.0024538	-7361.3	SLV 2	-0.0012329	-3698.8
173	SLU 81	-0.0024805	-7441.5	SLV 2	-0.0012948	-3884.4
174	SLU 81	-0.0025004	-7501.1	SLV 2	-0.0013541	-4062.4
175	SLU 81	-0.0025147	-7544.1	SLV 2	-0.0014103	-4230.9
176	SLU 81	-0.002525	-7575	SLV 2	-0.0014636	-4390.9
177	SLU 81	-0.0025326	-7597.7	SLU 1	-0.0014929	-4478.6
178	SLU 81	-0.0025385	-7615.6	SLU 1	-0.0014974	-4492.2
179	SLU 81	-0.0025442	-7632.5	SLU 1	-0.0015017	-4505.2
180	SLU 81	-0.0025514	-7654.3	SLU 1	-0.0015067	-4520
181	SLU 81	-0.002561	-7683	SLU 1	-0.0015124	-4537.1
182	SLU 81	-0.0025718	-7715.5	SLU 1	-0.0015185	-4555.4
183	SLU 81	-0.0025823	-7746.8	SLU 1	-0.0015243	-4572.9
184	SLU 81	-0.0025909	-7772.7	SLV 13	-0.0014919	-4475.6
185	SLU 81	-0.0025965	-7789.5	SLV 13	-0.0014503	-4350.8
186	SLU 81	-0.0025977	-7793.2	SLV 13	-0.0014057	-4217.2
187	SLU 81	-0.0025932	-7779.5	SLV 13	-0.0013582	-4074.7
188	SLU 81	-0.0025819	-7745.7	SLV 13	-0.0013086	-3925.9
189	SLU 81	-0.0025646	-7693.7	SLV 13	-0.0012599	-3779.6
190	SLU 81	-0.0025454	-7636.2	SLV 13	-0.0012177	-3653.1
191	SLU 81	-0.0025351	-7605.4	SLV 13	-0.001191	-3573
192	SLU 81	-0.0026693	-8007.9	SLV 15	-0.0012395	-3718.6
193	SLU 81	-0.0028052	-8415.6	SLV 16	-0.0012988	-3896.5
195	SLU 81	-0.0025509	-7652.8	SLU 1	-0.0015074	-4522.1
197	SLU 81	-0.0025456	-7636.9	SLU 1	-0.001508	-4524.1
199	SLU 81	-0.002534	-7601.9	SLU 1	-0.0015063	-4518.8
202	SLU 81	-0.0022726	-6817.7	SLV 2	-0.0009853	-2955.8
203	SLU 81	-0.0025186	-7555.8	SLV 9	-0.0014529	-4358.7
204	SLU 81	-0.0020667	-6200.2	SLV 13	-0.0009616	-2884.9
207	SLU 81	-0.0022194	-6658.3	SLV 2	-0.0009546	-2863.8
208	SLU 81	-0.0025021	-7506.2	SLV 9	-0.0013927	-4178.2
211	SLU 81	-0.0021849	-6554.7	SLV 2	-0.0009244	-2773.3
212	SLU 81	-0.0024875	-7462.5	SLV 9	-0.0013333	-3999.8
215	SLU 81	-0.0021792	-6537.6	SLV 2	-0.0008986	-2695.9
216	SLU 81	-0.0024799	-7439.7	SLV 9	-0.0012767	-3830.1
219	SLU 81	-0.0022106	-6631.7	SLV 2	-0.0008808	-2642.5
220	SLU 81	-0.0024874	-7462.1	SLV 9	-0.0012263	-3679
221	SLU 81	-0.0018047	-5414	SLV 13	-0.000757	-2270.9
224	SLU 81	-0.0022858	-6857.5	SLV 6	-0.0008223	-2467
225	SLU 81	-0.0025225	-7567.5	SLV 9	-0.0011868	-3560.5
228	SLV 11	-0.0024462	-7338.6	SLV 6	-0.0007637	-2291
229	SLU 81	-0.0026033	-7810	SLV 9	-0.001165	-3495
232	SLV 11	-0.002725	-8175	SLV 6	-0.0007179	-2153.8
233	SLU 81	-0.0027538	-8261.3	SLV 9	-0.0011697	-3509
235	SLV 11	-0.0029251	-8775.3	SLV 6	-0.000723	-2169
236	SLV 11	-0.0026789	-8036.7	SLV 6	-0.0007042	-2112.6
237	SLV 11	-0.00246	-7380	SLV 6	-0.0006926	-2077.7
238	SLV 11	-0.0022772	-6831.5	SLV 6	-0.0006897	-2069.1
239	SLV 11	-0.0021342	-6402.6	SLV 6	-0.0006962	-2088.6
240	SLU 81	-0.002056	-6168.1	SLV 6	-0.0007119	-2135.8
241	SLU 81	-0.002028	-6083.9	SLV 6	-0.0007368	-2210.3
242	SLU 81	-0.0020355	-6106.5	SLV 6	-0.0007704	-2311.1
243	SLU 81	-0.0020764	-6229.2	SLV 6	-0.0008123	-2437
244	SLU 81	-0.0021478	-6443.4	SLV 6	-0.0008621	-2586.4
245	SLU 81	-0.0022456	-6736.7	SLV 6	-0.0009187	-2756.1



Nodo		Pressione minima			Pressione massima		
Ind.	Cont.	uz	Valore	Cont.	uz	Valore	
246	SLU 81	-0.0023634	-7090.1	SLV 6	-0.0009801	-2940.2	
247	SLU 81	-0.0024913	-7473.9	SLV 6	-0.0010429	-3128.8	
248	SLU 81	-0.0026141	-7842.3	SLV 5	-0.0011016	-3304.8	
249	SLU 81	-0.0027091	-8127.3	SLV 5	-0.0011475	-3442.5	
250	SLU 81	-0.0027456	-8236.9	SLV 9	-0.0011628	-3488.5	
251	SLU 81	-0.0027222	-8166.7	SLV 9	-0.0011483	-3444.8	
252	SLU 81	-0.0026417	-7925.1	SLV 9	-0.0011106	-3331.9	
253	SLU 81	-0.0025333	-7600	SLV 9	-0.0010608	-3182.4	
254	SLU 81	-0.0024189	-7256.8	SLV 9	-0.0010068	-3020.4	
255	SLU 81	-0.0023133	-6939.8	SLV 9	-0.0009539	-2861.7	
256	SLU 81	-0.002226	-6678	SLV 9	-0.0009053	-2716	
257	SLU 81	-0.0021632	-6489.5	SLV 9	-0.000863	-2588.9	
258	SLU 81	-0.0021287	-6386	SLV 9	-0.0008277	-2483.2	
259	SLU 81	-0.0021251	-6375.4	SLV 9	-0.0008002	-2400.5	
260	SLU 81	-0.0021545	-6463.6	SLV 9	-0.0007804	-2341.2	
261	SLU 81	-0.0022184	-6655.2	SLV 9	-0.0007685	-2305.5	
262	SLV 8	-0.00233	-6989.9	SLV 9	-0.0007645	-2293.6	
263	SLV 8	-0.002504	-7512	SLV 9	-0.0007684	-2305.1	
264	SLV 8	-0.0027142	-8142.6	SLV 9	-0.0007797	-2339.1	
265	SLV 8	-0.0029543	-8862.9	SLV 9	-0.0007978	-2393.5	
267	SLV 11	-0.0030573	-9172	SLV 6	-0.0006854	-2056.3	
282	SLU 81	-0.0029971	-8991.3	SLV 9	-0.0012094	-3628.1	
297	SLV 8	-0.0033061	-9918.3	SLV 9	-0.0008347	-2504.2	

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 -0.0025998 al nodo di indice 297, di coordinate x = -9.18, y = -8.72, z = -1.53, nel contesto SLD 8.

Spostamento estremo massimo -0.0009973 al nodo di indice 81, di coordinate x = -9.18, y = -16.23, z = -1.53, nel contesto SLD 16.

Cedimento elastico estremo massimo 0.000081 al nodo di indice 153, di coordinate x = -3.67, y = -13.25, z = -1.53, 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 7	-1.2E-03	-3740	SLD 10	-2.3E-03	-6948.4	SLE RA 18	2.82E-06					
20	SLD 11	-1.5E-03	-4620.8	SLD 6	-2.2E-03	-6559.9	SLE RA 18	1.23E-05					
35	SLD 12	-1.4E-03	-4294.8	SLD 5	-2.5E-03	-7414.8	SLE RA 18	6.67E-06					
37	SLD 7	-1.2E-03	-3706.2	SLD 10	-2.2E-03	-6701.5	SLE RA 18	2.69E-06					
38	SLD 7	-1.2E-03	-3484.2	SLD 10	-2.1E-03	-6159.5	SLE RA 18	0.000003					
39	SLD 7	-1.1E-03	-3297.7	SLD 10	-1.9E-03	-5680.6	SLE RA 18	8.53E-07					
40	SLD 7	-1.1E-03	-3157.4	SLD 10	-1.8E-03	-5285.4							
41	SLD 7	-1.0E-03	-3067.3	SLD 10	-1.7E-03	-4982.4							
42	SLD 7	-1.0E-03	-3027.6	SLD 10	-1.6E-03	-4772.8							
43	SLD 7	-1.0E-03	-3036.7	SLD 10	-1.6E-03	-4653.7							
44	SLD 7	-1.0E-03	-3092.2	SLD 10	-1.5E-03	-4620.3							
45	SLD 7	-1.1E-03	-3191.4	SLD 10	-1.6E-03	-4666.7							
46	SLD 7	-1.1E-03	-3330.5	SLD 10	-1.6E-03	-4785.6							
47	SLD 7	-1.2E-03	-3504.1	SLD 10	-1.7E-03	-4966.9							
48	SLD 7	-1.2E-03	-3703.4	SLD 10	-1.7E-03	-5196.3							
49	SLD 7	-1.3E-03	-3914.3	SLD 10	-1.8E-03	-5451.7	SLE RA 18	3.10E-06					
50	SLD 7	-1.4E-03	-4114.5	SLD 10	-1.9E-03	-5699.4	SLE RA 18	7.43E-06					
51	SLD 7	-1.4E-03	-4270.4	SLD 10	-2.0E-03	-5890.3	SLE RA 18	1.47E-05					
52	SLD 11	-1.4E-03	-4327.6	SLD 6	-2.0E-03	-5966.7	SLE RA 18	0.000019					
53	SLD 12	-1.4E-03	-4287.7	SLD 5	-2.0E-03	-5921.4	SLE RA 18	1.52E-05					
54	SLD 12	-1.4E-03	-4160.8	SLD 5	-1.9E-03	-5755	SLE RA 18	0.000008					
55	SLD 12	-1.3E-03	-3990.3	SLD 5	-1.8E-03	-5531.2	SLE RA 18	0.000004					
56	SLD 12	-1.3E-03	-3808.5	SLD 5	-1.8E-03	-5297.5	SLE RA 18	4.86E-07					
57	SLD 12	-1.2E-03	-3637	SLD 5	-1.7E-03	-5086.6							
58	SLD 12	-1.2E-03	-3489.5	SLD 5	-1.6E-03	-4919.7							
59	SLD 12	-1.1E-03	-3374.4	SLD 5	-1.6E-03	-4810.6							
60	SLD 12	-1.1E-03	-3297	SLD 5	-1.6E-03	-4768.6							
61	SLD 12	-1.1E-03	-3260.4	SLD 5	-0.0016	-4800.1							



Nodo		spostamento nodale massimo		spostamento nodale minimo		Cedimento elastico		Cedimento edometrico		Cedimento di consolidazione	
Ind.	Cont.	uz	Press.	Cont.	uz	Cont.	v.	Cont.	v.	Cont.	v.
62	SLD 12	-1.1E-03	-3266.9	SLD 5	-1.6E-03	-4910.3					
63	SLD 12	-1.1E-03	-3318.4	SLD 5	-1.7E-03	-5103.3					
64	SLD 12	-1.1E-03	-3416.2	SLD 5	-1.8E-03	-5382					
65	SLD 12	-1.2E-03	-3560.1	SLD 5	-1.9E-03	-5746.3	SLE RA 18	1.48E-06			
66	SLD 12	-1.2E-03	-3748	SLD 5	-2.1E-03	-6191.1	SLE RA 18	3.09E-06			
67	SLD 12	-1.3E-03	-3973.5	SLD 5	-2.2E-03	-6702.9	SLE RA 18	2.66E-06			
68	SLD 11	-1.4E-03	-4348.2	SLD 6	-2.0E-03	-5986	SLE RA 18	1.96E-05			
71	SLD 7	-1.2E-03	-3537.4	SLD 10	-2.1E-03	-6241.1	SLE RA 18	3.11E-06			
72	SLD 12	-1.4E-03	-4211	SLD 5	-0.00187	-5610	SLE RA 18	1.79E-05			
75	SLD 7	-1.1E-03	-3412	SLD 10	-1.9E-03	-5668.9	SLE RA 18	6.55E-07			
76	SLD 12	-1.4E-03	-4175.8	SLD 5	-1.8E-03	-5382.6	SLE RA 18	9.14E-06			
79	SLD 7	-1.1E-03	-3368.3	SLD 10	-1.7E-03	-5237.3					
80	SLD 12	-1.4E-03	-4208.1	SLE RA 18	-1.8E-03	-5285	SLE RA 18	5.15E-06			
81	SLD 16	-1.0E-03	-2991.9	SLD 1	-1.4E-03	-4151.1					
84	SLD 7	-1.1E-03	-3403	SLD 10	-1.6E-03	-4937.8					
85	SLD 12	-1.4E-03	-4281.6	SLE RA 18	-1.8E-03	-5289.9	SLE RA 18	3.53E-06			
88	SLD 3	-1.2E-03	-3451.2	SLD 14	-1.6E-03	-4813.3					
89	SLD 12	-1.5E-03	-4377.6	SLE RA 18	-1.8E-03	-5326	SLE RA 18	3.50E-06			
92	SLD 3	-1.2E-03	-3521.9	SLD 14	-1.6E-03	-4827					
93	SLD 12	-1.5E-03	-4484.2	SLE RA 18	-1.8E-03	-5376.7	SLE RA 18	0.000005			
95	SLE RA 1	-1.5E-03	-4591.3	SLE RA 18	-1.8E-03	-5431.8	SLE RA 18	8.18E-06			
96	SLD 16	-1.2E-03	-3598.5	SLD 1	-1.6E-03	-4713.6					
99	SLD 3	-1.2E-03	-3639.5	SLD 14	-1.6E-03	-4919.5					
100	SLE RA 1	-1.5E-03	-4628.7	SLE RA 18	-1.8E-03	-5485.2	SLE RA 18	2.24E-05			
103	SLD 4	-1.3E-03	-3783.6	SLD 13	-1.7E-03	-5065.3	SLE RA 18	2.46E-06			
104	SLE RA 1	-1.6E-03	-4662	SLE RA 18	-1.8E-03	-5532.5	SLE RA 18	3.08E-05			
107	SLD 4	-1.3E-03	-3928.7	SLD 13	-1.7E-03	-5225	SLE RA 18	0.000011			
108	SLE RA 1	-1.6E-03	-4688.8	SLE RA 18	-1.9E-03	-5569.1	SLE RA 18	0.000067			
110	SLD 2	-1.4E-03	-4071.8	SLD 15	-1.8E-03	-5480	SLE RA 18	1.15E-05			
111	SLD 2	-1.3E-03	-4011.3	SLD 15	-1.8E-03	-5366.8	SLE RA 18	1.86E-05			
112	SLD 4	-1.3E-03	-3956.8	SLD 13	-1.7E-03	-5163.1	SLE RA 18	2.02E-05			
113	SLD 4	-1.3E-03	-4044.5	SLD 13	-1.7E-03	-5192.6	SLE RA 18	2.07E-05			
114	SLD 4	-1.4E-03	-4157.1	SLE RA 18	-1.8E-03	-5272.4	SLE RA 18	1.99E-05			
115	SLD 4	-1.4E-03	-4274.1	SLE RA 18	-1.8E-03	-5347.7	SLE RA 18	1.92E-05			
116	SLD 4	-1.5E-03	-4385.1	SLE RA 18	-1.8E-03	-5407.9	SLE RA 18	1.95E-05			
117	SLD 4	-1.5E-03	-4486.5	SLE RA 18	-1.8E-03	-5453.4	SLE RA 18	2.09E-05			
118	SLD 4	-1.5E-03	-4578.5	SLE RA 18	-1.8E-03	-5487.1	SLE RA 18	2.36E-05			
119	SLE RA 1	-1.5E-03	-4632.7	SLE RA 18	-1.8E-03	-5512	SLE RA 18	2.81E-05			
120	SLE RA 1	-1.6E-03	-4650.4	SLE RA 18	-1.8E-03	-5531.1	SLE RA 18	3.55E-05			
121	SLE RA 1	-1.6E-03	-4665.7	SLE RA 18	-1.8E-03	-5546.8	SLE RA 18	3.91E-05			
122	SLE RA 1	-1.6E-03	-4680.3	SLE RA 18	-1.9E-03	-5561.7	SLE RA 18	0.000064			
123	SLE RA 1	-1.6E-03	-4696.4	SLE RA 18	-1.9E-03	-5579.2	SLE RA 18	7.44E-05			
124	SLE RA 1	-1.6E-03	-4714.9	SLE RA 18	-1.9E-03	-5600.8	SLE RA 18	6.76E-05			
125	SLE RA 1	-1.6E-03	-4735	SLE RA 18	-1.9E-03	-5625.4	SLE RA 18	4.68E-05			
126	SLE RA 1	-1.6E-03	-4754.3	SLE RA 18	-1.9E-03	-5649	SLE RA 18	3.84E-05			
127	SLE RA 1	-1.6E-03	-4770.8	SLE RA 18	-1.9E-03	-5668.7	SLE RA 18	3.18E-05			
128	SLD 15	-1.6E-03	-4734.1	SLE RA 18	-1.9E-03	-5681.9	SLE RA 18	2.79E-05			
129	SLD 15	-1.6E-03	-4678.1	SLE RA 18	-1.9E-03	-5685.7	SLE RA 18	2.58E-05			
130	SLD 15	-1.5E-03	-4612.4	SLE RA 18	-1.9E-03	-5677.2	SLE RA 18	0.000025			
131	SLD 15	-1.5E-03	-4537.4	SLE RA 18	-1.9E-03	-5654.3	SLE RA 18	2.52E-05			
132	SLD 15	-1.5E-03	-4458.2	SLE RA 18	-1.9E-03	-5619	SLE RA 18	2.64E-05			
133	SLD 15	-1.5E-03	-4387.7	SLE RA 18	-1.9E-03	-5580.7	SLE RA 18	2.81E-05			
134	SLD 15	-0.00145	-4350	SLD 2	-1.9E-03	-5600.6	SLE RA 18	2.99E-05			
135	SLD 15	-1.5E-03	-4601.8	SLD 2	-2.0E-03	-6005.5	SLE RA 18	3.62E-05			
136	SLD 16	-1.6E-03	-4841	SLD 1	-2.1E-03	-6343.6	SLE RA 18	2.52E-05			
138	SLD 2	-1.3E-03	-4009.5	SLD 15	-1.8E-03	-5371.4	SLE RA 18	1.93E-05			
140	SLD 2	-1.3E-03	-4018.9	SLD 15	-1.8E-03	-5402.7	SLE RA 18	1.91E-05			
153	SLE RA 1	-1.6E-03	-4706.5	SLE RA 18	-1.9E-03	-5589.9	SLE RA 18	0.000081			
166	SLD 15	-1.6E-03	-4671.3	SLD 2	-2.0E-03	-6097.7	SLE RA 18	3.73E-05			
168	SLD 2	-1.4E-03	-4086.5	SLD 15	-1.9E-03	-5551	SLE RA 18	8.87E-06			
169	SLD 2	-1.3E-03	-3984.1	SLD 15	-1.7E-03	-5216.2	SLE RA 18	0.00002			
170	SLD 2	-1.4E-03	-4076.4	SLD 15	-1.7E-03	-5237	SLE RA 18	0.000021			
171	SLD 2	-1.4E-03	-4190.6	SLE RA 18	-1.8E-03	-5311.5	SLE RA 18	2.03E-05			
172	SLD 2	-1.4E-03	-4307.3	SLE RA 18	-1.8E-03	-5384.5	SLE RA 18	1.96E-05			
173	SLD 2	-1.5E-03	-4417	SLE RA 18	-1.8E-03	-5442.5	SLE RA 18	1.98E-05			
174	SLD 2	-1.5E-03	-4516.7	SLE RA 18	-1.8E-03	-5485.9	SLE RA 18	2.12E-05			
175	SLD 2	-1.5E-03	-4606.7	SLE RA 18	-1.8E-03	-5517.5	SLE RA 18	2.38E-05			
176	SLE RA 1	-1.6E-03	-4658.7	SLE RA 18	-1.8E-03	-5540.5	SLE RA 18	2.84E-05			
177	SLE RA 1	-1.6E-03	-4674.8	SLE RA 18	-1.9E-03	-5557.6	SLE RA 18	3.57E-05			
178	SLE RA 1	-1.6E-03	-4688.4	SLE RA 18	-1.9E-03	-5571.3	SLE RA 18	4.01E-05			
179	SLE RA 1	-1.6E-03	-4701.5	SLE RA 18	-1.9E-03	-5584.4	SLE RA 18	0.000065			
180	SLE RA 1	-1.6E-03	-4716.6	SLE RA 18	-1.9E-03	-5600.7	SLE RA 18	7.55E-05			
181	SLE RA 1	-1.6E-03	-4734.5	SLE RA 18	-1.9E-03	-5621.7	SLE RA 18	6.86E-05			
182	SLE RA 1	-1.6E-03	-4753.7	SLE RA 18	-1.9E-03	-5645.3	SLE RA 18	4.77E-05			
183	SLE RA 1	-1.6E-03	-4772.2	SLE RA 18	-1.9E-03	-5668	SLE RA 18	3.87E-05			
184	SLE RA 1	-1.6E-03	-4787.9	SLE RA 18	-1.9E-03	-5686.8	SLE RA 18	3.19E-05			
185	SLD 13	-1.6E-03	-4752.9	SLE RA 18	-1.9E-03	-5699.2	SLE RA 18	0.000028			
186	SLD 13	-1.6E-03	-4696	SLE RA 18	-1.9E-03	-5702.2	SLE RA 18	2.59E-05			
187	SLD 13	-1.5E-03	-4629.4	SLE RA 18	-1.9E-03	-5692.8	SLE RA 18	2.51E-05			
188	SLD 13	-1.5E-03	-4553.7	SLE RA 18	-1.9E-03	-5669.1	SLE RA 18	2.53E-05			
189	SLD 13	-1.5E-03	-4473.8	SLE RA 18	-1.9E-03	-5633	SLE RA 18	2.65E-05			
190	SLD 13	-1.5E-03	-4402.7	SLE RA 18	-1.9E-03	-5593.9	SLE RA 18	2.82E-05			
191	SLD 13	-1.5E-03	-4364.6	SLD 4	-0.00187	-5610.1	SLE RA 18	2.99E-05			
192	SLD 15	-1.5E-03	-4606.3	SLD 2	-2.0E-03	-6003.4	SLE RA 18	3.61E-05			
193	SLD 16	-1.6E-03	-4846.2	SLD 1	-2.1E-03	-6340.9	SLE RA 18	2.51E-05			
195	SLE RA 1	-1.6E-03	-4718.2	SLE RA 18	-1.9E-03	-5600.1	SLE RA 18	6.82E-05			
197	SLE RA 1	-1.6E-03	-4718.4	SLE RA 18	-1.9E-03	-5590.9	SLE RA 18	3.28E-05			
199	SLE RA 1	-1.6E-03	-4710.2	SLE RA 18	-1.9E-03	-5568.3	SLE RA 18	0.000023			
202	SLD 2	-1.3E-03	-3835.2	SLD 15	-1.7E-03	-5212.1	SLE RA 18	0.000001			
203	SLE RA 1	-1.6E-03	-4696.5	SLE RA 18	-1.8E-03	-5538.1	SLE RA 18	8.94E-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.		
204	SLD 13	-1.2E-03	-3583.6	SLD 4	-1.6E-03	-4681.2								
207	SLD 2	-1.2E-03	-3739.9	SLD 15	-1.7E-03	-5109.4								
208	SLD 9	-1.5E-03	-4608.2	SLE RA 18	-1.8E-03	-5505.2	SLE RA 18	0.000006						
211	SLD 2	-1.2E-03	-3665.5	SLD 15	-1.7E-03	-5057.4								
212	SLD 9	-1.5E-03	-4521.8	SLE RA 18	-1.8E-03	-5476.4	SLE RA 18	4.77E-06						
215	SLD 2	-1.2E-03	-3628.3	SLD 15	-1.7E-03	-5079.8								
216	SLD 9	-1.5E-03	-4446.4	SLE RA 18	-1.8E-03	-5462.6	SLE RA 18	5.09E-06						
219	SLD 2	-1.2E-03	-3642.1	SLD 15	-1.7E-03	-5195.1								
220	SLD 9	-1.5E-03	-4395.1	SLE RA 18	-1.8E-03	-5481.6	SLE RA 18	0.000007						
221	SLD 13	-1.0E-03	-3034.2	SLD 4	-1.4E-03	-4220.6								
224	SLD 6	-1.2E-03	-3666.6	SLD 11	-1.8E-03	-5470.3	SLE RA 18	9.54E-08						
225	SLD 9	-1.5E-03	-4388.1	SLD 8	-1.9E-03	-5617.7	SLE RA 18	1.34E-05						
228	SLD 6	-1.2E-03	-3732.6	SLD 11	-2.0E-03	-5897.1	SLE RA 18	3.49E-06						
229	SLD 9	-1.5E-03	-4454.3	SLD 8	-2.0E-03	-5879.5	SLE RA 18	2.32E-05						
232	SLD 6	-1.3E-03	-3874.2	SLD 11	-2.2E-03	-6454.7	SLE RA 18	5.73E-06						
233	SLD 9	-1.5E-03	-4632	SLD 8	-2.1E-03	-6300.4	SLE RA 18	2.56E-05						
235	SLD 6	-1.4E-03	-4056.3	SLD 11	-2.3E-03	-6888	SLE RA 18	5.20E-06						
236	SLD 6	-1.3E-03	-3805.4	SLD 11	-2.1E-03	-6343.8	SLE RA 18	5.55E-06						
237	SLD 6	-1.2E-03	-3593.3	SLD 11	-2.0E-03	-5864.4	SLE RA 18	3.33E-06						
238	SLD 6	-1.1E-03	-3430.9	SLD 11	-1.8E-03	-5469.8								
239	SLD 6	-1.1E-03	-3322.6	SLD 11	-1.7E-03	-5168.6								
240	SLD 6	-1.1E-03	-3269	SLD 11	-1.7E-03	-4962.6								
241	SLD 6	-1.1E-03	-3268.9	SLD 11	-1.6E-03	-4849.2								
242	SLD 6	-1.1E-03	-3319.7	SLD 11	-1.6E-03	-4824.2								
243	SLD 6	-1.1E-03	-3418.7	SLD 11	-1.6E-03	-4881.6								
244	SLD 6	-1.2E-03	-3561.8	SLD 11	-1.7E-03	-5014.2								
245	SLD 6	-1.2E-03	-3743	SLD 11	-1.7E-03	-5211.8								
246	SLD 6	-1.3E-03	-3953	SLD 11	-1.8E-03	-5459.4	SLE RA 18	1.86E-06						
247	SLD 6	-1.4E-03	-4176.3	SLD 11	-1.9E-03	-5733.7	SLE RA 18	5.79E-06						
248	SLD 5	-1.5E-03	-4388.7	SLD 12	-2.0E-03	-5999.5	SLE RA 18	1.04E-05						
249	SLD 5	-1.5E-03	-4553.8	SLD 12	-2.1E-03	-6204.7	SLE RA 18	2.04E-05						
250	SLD 9	-1.5E-03	-4614.4	SLD 8	-2.1E-03	-6287.2	SLE RA 18	0.000025						
251	SLD 9	-1.5E-03	-4569.6	SLD 8	-2.1E-03	-6241.7	SLE RA 18	2.09E-05						
252	SLD 9	-1.5E-03	-4431.7	SLD 8	-2.0E-03	-6067.4	SLE RA 18	1.14E-05						
253	SLD 9	-1.4E-03	-4247.3	SLD 8	-1.9E-03	-5831.6	SLE RA 18	6.74E-06						
254	SLD 9	-1.4E-03	-4050.9	SLD 8	-1.9E-03	-5584.7	SLE RA 18	3.06E-06						
255	SLD 9	-1.3E-03	-3865.9	SLD 8	-1.8E-03	-5361.3	SLE RA 18	1.62E-07						
256	SLD 9	-1.2E-03	-3707	SLD 8	-1.7E-03	-5183.7								
257	SLD 9	-1.2E-03	-3583.5	SLD 8	-1.7E-03	-5066.6								
258	SLD 9	-1.2E-03	-3501	SLD 8	-1.7E-03	-5019.6								
259	SLD 9	-1.2E-03	-3462.8	SLD 8	-1.7E-03	-5049.4								
260	SLD 9	-1.2E-03	-3471.6	SLD 8	-1.7E-03	-5161.3								
261	SLD 9	-1.2E-03	-3529.1	SLD 8	-1.8E-03	-5359.6								
262	SLD 9	-1.2E-03	-3636.5	SLD 8	-1.9E-03	-5647	SLE RA 18	1.20E-06						
263	SLD 9	-1.3E-03	-3793.5	SLD 8	-2.0E-03	-6023.6	SLE RA 18	0.000004						
264	SLD 9	-1.3E-03	-3997.6	SLD 8	-2.2E-03	-6484.1	SLE RA 18	5.63E-06						
265	SLD 9	-1.4E-03	-4242	SLD 8	-2.3E-03	-7014.4	SLE RA 18	5.18E-06						
267	SLD 6	-1.4E-03	-4089.9	SLD 11	-2.4E-03	-7138.3	SLE RA 18	5.28E-06						
282	SLD 9	-1.7E-03	-4958.1	SLD 8	-2.3E-03	-6934.6	SLE RA 18	1.59E-05						
297	SLD 9	-1.5E-03	-4623.3	SLD 8	-2.6E-03	-7799.3	SLE RA 18	9.72E-06						

1.5 Baricentri delle rigidzze

Quota: quota alla quale è stato valutato il baricentro delle rigidzze. esprimibile come livello, falda, piano orizzontale alla Z specificata. [m]

Posizione: posizione in pianta del baricentro delle rigidzze.

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 rigidzze 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	-3.37	-13.243	-3.647	-13.205	0.277	-0.038
Primo	-3.445	-12.834	-3.622	-13.216	0.178	0.381

1.6 Rigidzze di interpiano

Quota inferiore: quota inferiore dell'interpiano per il quale è stata valutata la rigidzza relativa. esprimibile come livello, falda, piano orizzontale alla Z specificata. [m]

Quota superiore: quota superiore dell'interpiano per il quale è stata valutata la rigidzza relativa. esprimibile come livello, falda, piano orizzontale alla Z specificata. [m]

KUx: rigidzza relativa alla traslazione in direzione globale X. [daN/m]

KUy: rigidzza relativa alla traslazione in direzione globale Y. [daN/m]

Quota inferiore	Quota superiore	KUx	KUy
Fondazione	Rialzato	120759857	32288825
Rialzato	Primo	65263610	46433260



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: 0.999124
Traslazione Y: 0.999662
Traslazione Z: 0
Rotazione X: 0.939243
Rotazione Y: 0.952978
Rotazione Z: 0.906115

Modo	Periodo	Massa X	Massa Y	Massa Z	Massa rot. X	Massa rot. Y	Massa rot. Z	Massa sX	Massa sY
1	0.594450636	0.000102099	0.000003033	0	0.000004038	0.000111122	0.000205576	0.000102099	0.000003033
2	0.567312132	0.024933406	0.000011411	0	0.000013789	0.027393448	0.021397034	0.024933406	0.000011411
3	0.505621158	0.000005328	0.000809092	0	0.000920234	0.000005563	0.000308412	0.000005328	0.000809092
4	0.494671011	0.000220067	0.000802289	0	0.000963349	0.000249865	0.005395971	0.000220067	0.000802289
5	0.491451963	0.00020479	0.015181339	0	0.016634294	0.000228034	0.001227601	0.00020479	0.015181339
6	0.490475964	0.010010842	0.00082011	0	0.000940164	0.011137745	0.004449295	0.010010842	0.00082011
7	0.481662391	0.000219342	0.078744666	0	0.091717292	0.000241932	0.008527194	0.000219342	0.078744666
8	0.468269631	0.000142727	0.046225725	0	0.051640252	0.000155905	0.002280444	0.000142727	0.046225725
9	0.42140763	0.00003193	0.000050261	0	0.000060281	0.000035877	0.00077905	0.00003193	0.000050261
10	0.415364055	0.000060136	0.001871552	0	0.002302562	0.000066694	0.000050011	0.000060136	0.001871552
11	0.393922931	0.079090959	0.000005639	0	0.000006911	0.087815508	0.065968791	0.079090959	0.000005639
12	0.387977619	0.000018203	0.000859932	0	0.000913519	0.000026308	0.00001085	0.000018203	0.000859932
13	0.335839482	0.000833765	0.000007412	0	0.000010596	0.000911127	0.00012568	0.000833765	0.000007412
14	0.323686167	0.005291189	0.000002265	0	0.000001897	0.005824176	0.008952134	0.005291189	0.000002265
15	0.299727333	0.000014316	0.000146122	0	0.000186673	0.000014468	0.000013443	0.000014316	0.000146122
16	0.291893702	0.000064974	0.000016768	0	0.000010269	0.000072688	0.000565347	0.000064974	0.000016768
17	0.267574918	0.001180736	0.000007617	0	0.000015069	0.003664157	0.000992662	0.001180736	0.000007617
18	0.264990368	0.000007834	0.012802007	0	0.013962408	0.000014006	0.000638405	0.000007834	0.012802007
19	0.260309756	0.000028727	0.004449662	0	0.005757451	0.000067782	0.000631899	0.000028727	0.004449662
20	0.23537595	0.000126573	0.000229747	0	0.000240393	0.000064166	0.000075732	0.000126573	0.000229747
21	0.218947073	0.000059731	0.038168287	0	0.035638449	0.000072597	0.002451809	0.000059731	0.038168287
22	0.210556387	0.000795189	0.003411726	0	0.003544717	0.000874387	0.000253857	0.000795189	0.003411726
23	0.194878639	0.000029132	0.075752354	0	0.089507961	0.000025416	0.006243021	0.000029132	0.075752354
24	0.183229379	0.000005876	0.569325392	0	0.418856597	0.000001452	0.03506019	0.000005876	0.569325392
25	0.175396486	0.017618096	0.00599245	0	0.004105715	0.011004154	0.021602528	0.017618096	0.00599245
26	0.170747074	0.000548971	0.075931445	0	0.057008055	0.000369922	0.003834825	0.000548971	0.075931445
27	0.143790578	0.027049614	0.036488264	0	0.016841542	0.022777641	0.03532382	0.027049614	0.036488264
28	0.142363981	0.320866068	0.004352749	0	0.001778013	0.270407845	0.245236059	0.320866068	0.004352749
29	0.130921653	0.418133629	0.000030835	0	0.000000716	0.341237555	0.343886231	0.418133629	0.000030835
30	0.11134434	0.005165577	0.002405831	0	0.000000694	0.006721915	0.027240279	0.005165577	0.002405831
31	0.106065706	0.03434683	0.00019455	0	0.000004135	0.054070555	0.014608771	0.03434683	0.00019455
32	0.076722359	0.008170985	0.00001416	0	0.000004904	0.005280556	0.007540527	0.008170985	0.00001416
33	0.061554312	0.000046893	0.002970239	0	0.001922849	0.000000468	0.000202459	0.000046893	0.002970239
34	0.040149672	0.00000041	0.021577094	0	0.123726785	0.000000016	0.001188756	0.00000041	0.021577094
35	0.037143135	0.043698569	0.000000119	0	0.000000001	0.102032385	0.038846081	0.043698569	0.000000119

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	-0.008	0	-309064.773	4067987.96	-1129844.41	-0.1
Reazioni	0.008	0	309064.773	-4067987.96	1129844.41	0.1
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	-72974.699	964300.44	-264758.04	0
Reazioni	0	0	72974.699	-964300.44	264758.04	0



Contributo	Fx	Fy	Fz	Mx	My	Mz
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	-65221.757	862430.79	-236212.21	0
Reazioni	0	0	65221.757	-862430.79	236212.21	0
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	103352.687	0	0	0	382496.57	1358701.72
Reazioni	-103352.687	0	0	0	-382496.57	-1358701.72
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	110820.942	0	-410135.74	0	-401758.57
Reazioni	0	-110820.942	0	410135.74	0	401758.57
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	-26745.09
Reazioni	0	0	0	0	0	26745.09
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	28677.69
Reazioni	0	0	0	0	0	-28677.69
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	45505.787	0	0	0	168411.75	598231.09
Reazioni	-45505.787	0	0	0	-168411.75	-598231.09
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	47386.184	0	-175370.89	0	-171788.88
Reazioni	0	-47386.184	0	175370.89	0	171788.88
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	-11775.76
Reazioni	0	0	0	0	0	11775.76
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	12262.36
Reazioni	0	0	0	0	0	-12262.36
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Rig Ux

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	1	0	0	0	4.99	13.22
Reazioni	-1	0	0	0	-4.99	-13.22
P-Delta	0	0	0	0	0	0
Totale	0	0	0	0	0	0

Bilancio in condizione di carico: Rig Uy

Contributo	Fx	Fy	Fz	Mx	My	Mz
Forze applicate	0	1	0	-4.99	0	-3.62
Reazioni	0	-1	0	4.99	0	3.62
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	73397.52	786.36	0	1836.3573	2.068E05	9.623E05	73397.52	0	79832.63	90	0	0
SLV Y	786.36	79832.63	0	2.175E05	2262.2845	3.022E05	73397.52	0	79832.63	90	0	0
X SLD	32330.22	343.03	0	798.1134	9.105E04	4.239E05	32330.22	0	34044.03	90	0	0
Y SLD	343.03	34044.03	0	9.263E04	986.6642	1.289E05	32330.22	0	34044.03	90	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	15570
Elemento min. diagonale	4511.36785315
Elemento max diagonale	36842304378952.4
Rapporto max/min	8166548501.08006
Elementi non nulli	775156

TABULATI DI CALCOLO – VERIFICHE
CIVICI 43-45
STATO DI PROGETTO



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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 0,04 (limite=0,2) al livello Primo

No - Criterio A2 (Distribuzione rigidezze) NON rispettato, con rapporto massimo 1207598.6/322888.3=3.7 (limite=1,2) al livello Rialzato

Ok - Criterio A3 (Forma compatta) rispettato, con rapporto massimo 1 (limite=1,05) al livello Primo

Ok - Criterio B (Rapporto lati) rispettato, con rapporto massimo 1,28 (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 1207598.6/652636.1=1.9 (limite=1,3) tra il livello Primo ed il precedente

No - Criterio E3 (Incremento rigidezze) NON rispettato, con rapporto massimo 464332.6/322888.3=1.4 (limite=1,1) tra il livello Primo ed il precedente

No - Criterio F (Rapporto Capacità/Domanda) NON rispettato, con rapporto massimo 24.1/4.3=5.6 (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	1.07	0.28	12.06	0.02	1207599	322888	3.74	114.1199	114.1225	1	12.06	9.46	1.28	0	+∞	0
Primo	4.99	0.38	9.31	0.04	652636	464333	1.41	110.9191	110.9191	1	11.91	9.31	1.28	0	+∞	0

Verifiche di regolarità in elevazione

Rapporto di regolarità per la condizione D (Altezza elementi sismoresistenti): 6.52/6.52=0.01.

Livello			E1			E2			E3			F			G1			G2		
Descr	Q	Qjnf	E1n	E1d	E1r	E2n	E2d	E2r	E3n	E3d	E3r	Fn	Fd	Fr	G1n	G1d	G1r	G2n	G2d	G2r
Primo	4.99	1.07	84077	82851	1.01	120759857	65263610	1.85	46433260	32288825	1.44	24.1	4.3	5.64	0.07	9.46	0.01	0.07	9.46	0.01

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

Livello			Capacità/Domanda in X			Capacità/Domanda in Y		
Descr	Q	Comb	VrdX	VedX	Rd/Ed	VrdY	VedY	Rd/Ed
Rialzato	1.07	SLV 1	404600	-66181	6.1	329390	-22428	14.7
Rialzato	1.07	SLV 2	404615	-66181	6.1	329392	-22428	14.7
Rialzato	1.07	SLV 3	404714	-66415	6.1	343902	21734	15.8
Rialzato	1.07	SLV 4	404728	-66415	6.1	343991	21734	15.8
Rialzato	1.07	SLV 5	404364	-19499	20.7	324237	-73708	4.4
Rialzato	1.07	SLV 6	404379	-19499	20.7	323548	-73708	4.4
Rialzato	1.07	SLV 7	404744	-20280	20	314773	73500	4.3
Rialzato	1.07	SLV 8	404758	-20280	20	314785	73500	4.3
Rialzato	1.07	SLV 9	404276	20280	19.9	325013	-73500	4.4
Rialzato	1.07	SLV 10	404290	20280	19.9	324405	-73500	4.4
Rialzato	1.07	SLV 11	404655	19499	20.8	341223	73708	4.6
Rialzato	1.07	SLV 12	404670	19499	20.8	342552	73708	4.6
Rialzato	1.07	SLV 13	404306	66415	6.1	337566	-21734	15.5
Rialzato	1.07	SLV 14	404320	66415	6.1	333747	-21734	15.4
Rialzato	1.07	SLV 15	404419	66181	6.1	343397	22428	15.3
Rialzato	1.07	SLV 16	404434	66181	6.1	343486	22428	15.3
Primo	4.99	SLV 1	433551	-20391	21.3	473993	-5923	80
Primo	4.99	SLV 2	430716	-20391	21.1	473992	-5923	80
Primo	4.99	SLV 3	423575	-20586	20.6	473031	5863	80.7
Primo	4.99	SLV 4	431034	-20586	20.9	473971	5863	80.8
Primo	4.99	SLV 5	437710	-5822	75.2	474018	-19653	24.1
Primo	4.99	SLV 6	433035	-5822	74.4	474017	-19653	24.1
Primo	4.99	SLV 7	434612	-6471	67.2	473948	19635	24.1
Primo	4.99	SLV 8	434613	-6471	67.2	469242	19635	23.9
Primo	4.99	SLV 9	436798	6471	67.5	474019	-19635	24.1
Primo	4.99	SLV 10	436799	6471	67.5	474018	-19635	24.1
Primo	4.99	SLV 11	443015	5822	76.1	468021	19653	23.8
Primo	4.99	SLV 12	439854	5822	75.6	440100	19653	22.4
Primo	4.99	SLV 13	436094	20586	21.2	473995	-5863	80.8
Primo	4.99	SLV 14	438929	20586	21.3	473994	-5863	80.8
Primo	4.99	SLV 15	439337	20391	21.5	473974	5923	80
Primo	4.99	SLV 16	442499	20391	21.7	468521	5923	79.1

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]

γ_R : 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]

ys: 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.

Bordo: bordo interessato dalla fessura.

Rara: famiglia di combinazione per verifica inferiore.

Dmax: distanza massima tra le fessure. [m]

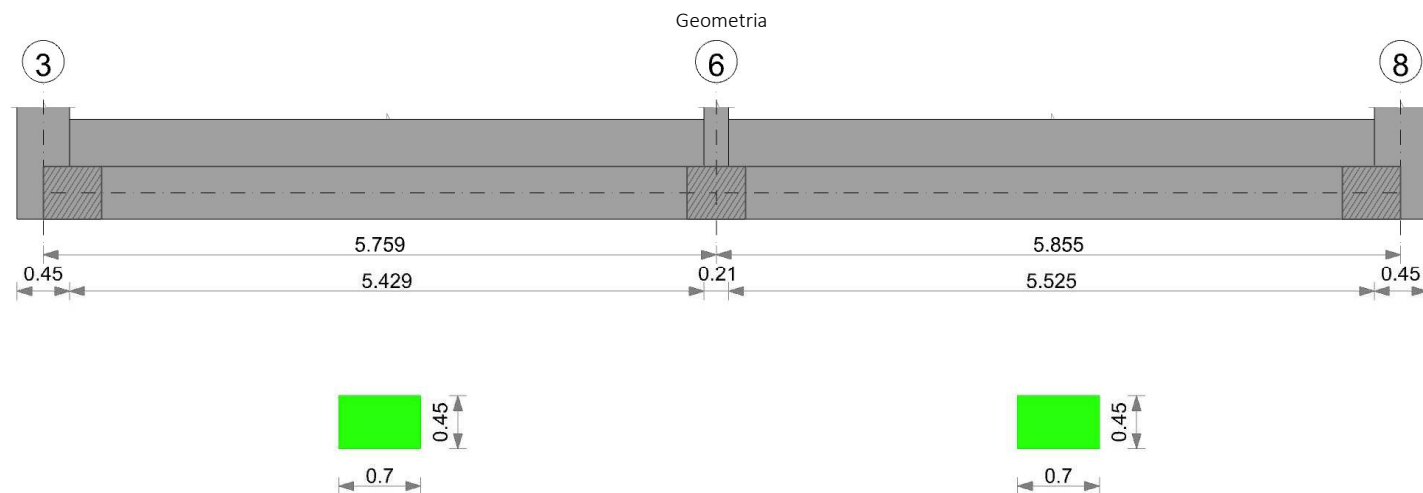
Esm: dilatazione media delle barre di armatura.

Wd: valore di calcolo di apertura delle fessure. [m]

Frequente: famiglia di combinazione per verifica inferiore.

Quasi permanente: famiglia di combinazione per verifica inferiore.

CORDOLO 1



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000

Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

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

Diagramma verifica stato limite ultimo flessione

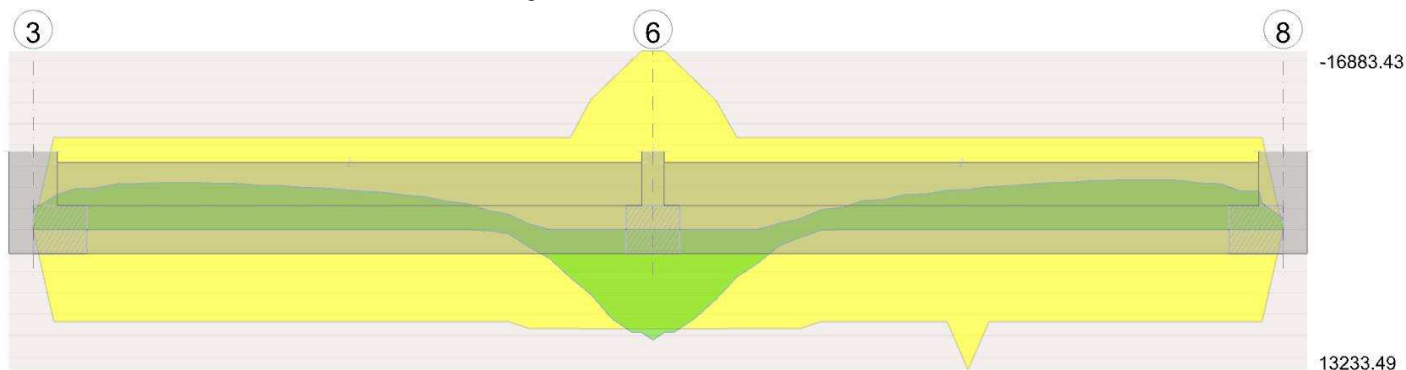
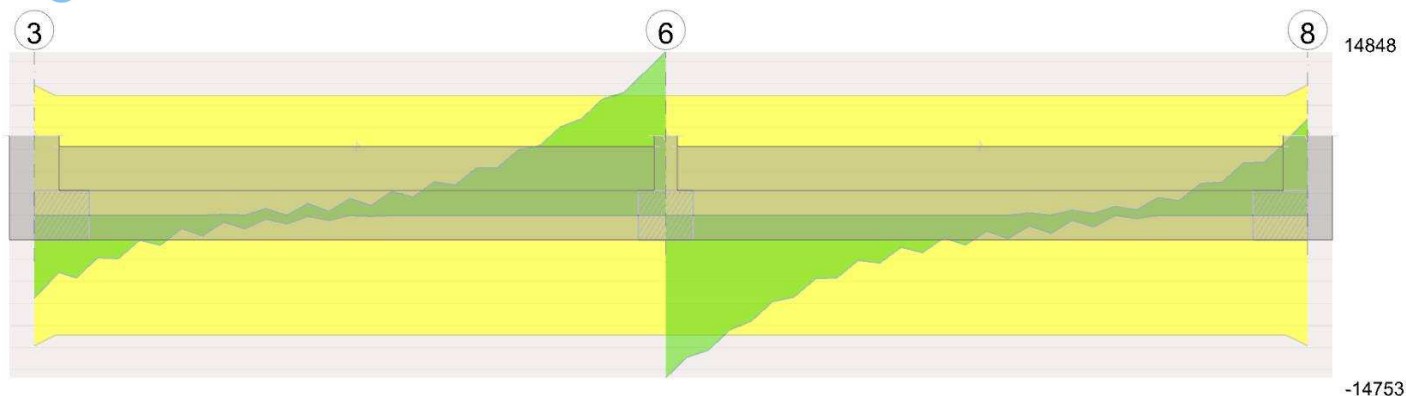


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 3 - 6, sezione R 70x45, aste 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2324	SLV 8	0.085	2654	5997	SLV 8	15877	Si
0.23	0.41	0.0002	2194	SLV 8	0.085	2654	5663	SLV 8	15877	Si
2.88	0.41	0.0002	1475	SLV 8	0.085	2654	3847	SLU 81	15877	Si
5.65	0.41	0.0002	2035	SLU 81	0.017	2728	5252	SLU 81	15877	Si
5.76	0.41	0.0002	2034	SLU 81	0.017	2728	5250	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

Rara									Quasi permanente				Verifica
x	d	Af	M	Comb	σc	σc limite	σf	σf limite	M	Comb	σc	σc limite	
0	0.41	0.00000171	1531	SLE RA 18	44317	1494000	549531	36000000	1352	SLE QP 2	39156	1120500	Si
0.23	0.41	0.00000171	1453	SLE RA 18	42063	1494000	521585	36000000	1283	SLE QP 2	37134	1120500	Si
2.88	0.41	0.00000171	1084	SLE RA 18	31381	1494000	389120	36000000	949	SLE QP 2	27480	1120500	Si
5.65	0.41	0.00000171	1481	SLE RA 18	42879	1494000	531703	36000000	1300	SLE QP 2	37628	1120500	Si
5.76	0.41	0.00000171	1480	SLE RA 18	42864	1494000	531512	36000000	1299	SLE QP 2	37614	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	35	25	159	SLV 8	0.36	1618	1.653	13.52	9.71	26.54	SLV 8	0.32	1090	1.406	Si
0.23	33	24	159	SLV 8	0.36	1618	1.653	12.83	9.12	26.54	SLV 8	0.36	1556	1.627	Si
2.88	24	14	159	SLV 8	0.36	1618	1.653	9.49	5.26	26.54	SLV 8	0.36	1618	1.653	Si
5.65	34	15	159	SLV 8	0.36	1618	1.653	13	5.91	26.54	SLV 8	0.36	1618	1.653	Si
5.76	34	15	159	SLV 8	0.36	1618	1.653	12.99	5.89	26.54	SLV 8	0.36	1618	1.653	Si

Campata 2 tra i fili 6 - 8, sezione R 70x45, aste 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2034	SLU 81	0.017	2728	5250	SLU 81	15877	Si
0.11	0.41	0.0002	2032	SLU 81	0.017	2728	5244	SLU 81	15877	Si
2.93	0.41	0.0002	1415	SLV 11	0.085	2654	3651	SLV 11	15877	Si
5.63	0.41	0.0002	2167	SLV 11	0.085	2654	5593	SLV 11	15877	Si
5.85	0.41	0.0002	2298	SLV 11	0.085	2654	5929	SLV 11	15877	Si

Verifiche delle tensioni di esercizio

Rara									Quasi permanente				Verifica
x	d	Af	M	Comb	σc	σc limite	σf	σf limite	M	Comb	σc	σc limite	
0	0.41	0.00000171	1480	SLE RA 18	42864	1494000	531512	36000000	1299	SLE QP 2	37614	1120500	Si
0.11	0.41	0.00000171	1479	SLE RA 18	42816	1494000	530921	36000000	1298	SLE QP 2	37571	1120500	Si
2.93	0.41	0.00000171	1024	SLE RA 18	29644	1494000	367580	36000000	894	SLE QP 2	25896	1120500	Si
5.63	0.41	0.00000171	1403	SLE RA 18	40627	1494000	503774	36000000	1235	SLE QP 2	35765	1120500	Si
5.85	0.41	0.00000171	1482	SLE RA 18	42902	1494000	531989	36000000	1306	SLE QP 2	37800	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	34	15	159	SLV 8	0.36	1618	1.653	12.99	5.89	26.54	SLV 8	0.36	1618	1.653	Si
0.11	33	15	159	SLV 8	0.36	1618	1.653	12.98	5.88	26.54	SLV 8	0.36	1618	1.653	Si
2.93	23	13	159	SLV 11	0.36	1618	1.653	8.94	5.2	26.54	SLV 11	0.36	1618	1.653	Si
5.63	32	24	159	SLV 11	0.36	1618	1.653	12.35	9.32	26.54	SLV 11	0.36	1616	1.652	Si
5.85	34	26	159	SLV 11	0.36	1618	1.653	13.06	9.92	26.54	SLV 11	0.33	1138	1.431	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	yR	Rd	Ed	Rd/Ed	Verifica
12.06	1.3	SLU 39	ST	LT	454	135	-101625	0	0	19	0	0	1.1	30912	474	65.27	Si
12.06	1.3	SLV 5	SIS	LT	-6290	-11428	-54792	-7	-12	19	0	0	1.1	16667	13045	1.28	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste										Size X	Size Y	Comb	Type	Cond	yR	Rd	Ed	Rd/Ed	Verifica
1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30										12.06	1.3	SLU 81	ST	BT	2.3	514879	121798	4.23	Si



Aste	Size X	Size Y	Comb	Type	Cond	yR	Rd	Ed	Rd/Ed	Verifica
1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30	12.06	1.3	SLV 8	SIS	BT	2.3	437747	110505	3.96	Si
1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30	12.06	1.3	SLD 8	SIS	BT	2.3	478870	94492	5.07	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	ys	Fi	Coes	Amax
0	153	-121798	-15169.82	-5322.23	0	0	-0.04	-0.12	1.05	11.98	1496	2060	0	14430	
0	11597	-110505	-20332.77	-17408.37	0	6	-0.16	-0.18	0.93	11.75	1496	2060	0	14430	0.07
0	4999	-94492	-14357.21	-9722.41	0	3	-0.1	-0.15	1	11.86	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	0.02	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.02	0	0	0.23	0	0	0.03	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.02	0	0	0.23	0	0	0.01	0	0	0	0	0	0	0	1	1	1	0	0	0

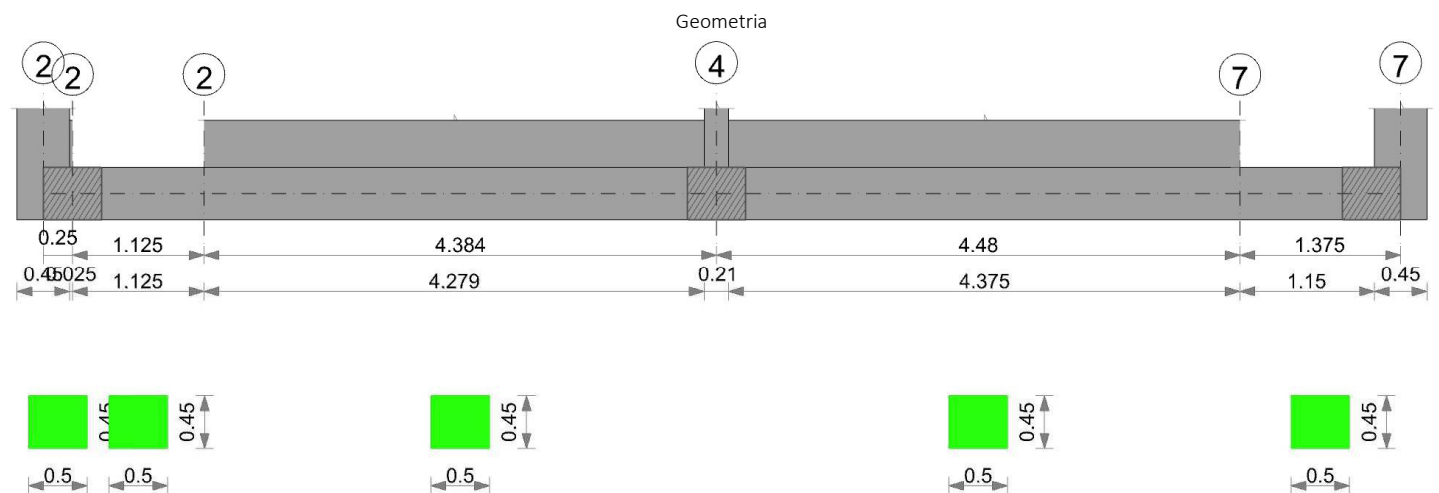
Verifiche geotecniche - Cedimenti assoluti e differenziali

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	250	SLE RA 18	0.05	0	250	265	SLE RA 18	0.05	0	250	SLE RA 18	0.0033	0	SLE RA 1	Si
D	0.05	0	235	SLE RA 1	0.05	0	235	235	SLE RA 1	0.05	0	250	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	235	SLE RA 1	0.05	0	235	235	SLE RA 1	0.05	0	250	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	250	265	SLE RA 18	0.19	0	250	SLE RA 18	0.1	0	235	SLE RA 1
D	0.19	0	SLE RA 1	0.19	0	235	250	SLE RA 1	0.19	0	235	SLE RA 1	0.1	0	250	SLE RA 1
Z	0.19	0	SLE RA 1	0.19	0	235	250	SLE RA 1	0.19	0	235	SLE RA 1	0.1	0	250	SLE RA 1

CORDOLO 2



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000

Calcestruzzo: C25/30 Rck 3000000

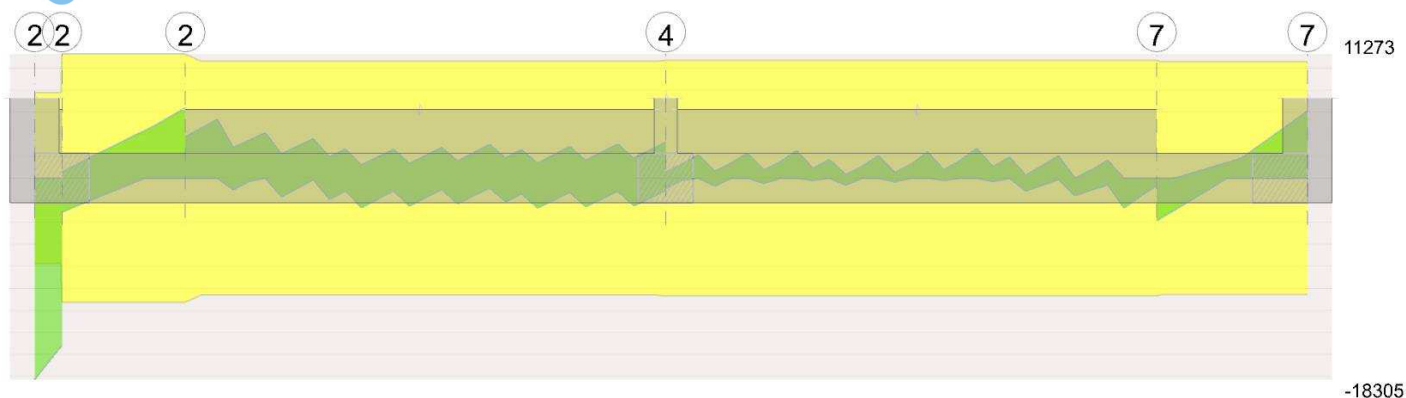
Elenco delle sezioni

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 2 - 2, sezione R 50x45, asta 110

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							-3961.35	SLU 81	-4141.73	-7755.45	0.113	1.87	Si
0.15	0.000509	0.052	0.000509	0.052							-4126.84	SLU 81	-4158.01	-7755.45	0.113	1.87	Si
0.56	0.000509	0.052	0.000509	0.052							-3857.64	SLU 81	-4102.93	-7755.45	0.113	1.89	Si
1.12	0.000509	0.052	0.000509	0.052							-1816.47	SLU 81	-2673.3	-7755.45	0.113	2.9	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: $\epsilon_{c2} = 0.002$, $\epsilon_{yd} = 0.0019$

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							-3685.85	SLV 3	-3692.54	-7266.79	0.197	1.97	Si
0.56	0.000509	0.052	0.000509	0.052							-2995.61	SLV 1	-3392.45	-7266.79	0.197	2.14	Si
1.12	0.000509	0.052	0.000509	0.052							-2305.16	SLV 9	-2480.08	-7266.79	0.197	2.93	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcl	Vrsl	Vult	cotgθ	coeff	Verifica
0	0.000008	0.000509	0	-1777	SLU 81	-1777	-7764	-63178	-11273	-11273	1	6.34	Si
0.56	0.000008	0.000509	0	2163	SLU 81	2163	7764	63178	11273	11273	1	5.21	Si
1.12	0.000008	0.000509	0	5995	SLU 81	5995	7764	63178	11273	11273	1	1.88	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcl	Vrsl	Vult	cotgθ	coeff	Verifica
0	0.000008	0.000509	0	544	SLV 8	544	7764	63178	11273	11273	1	20.71	Si
0	0.000008	0.000509	0	-3077	SLV 9	-3077	-7764	-63178	-11273	-11273	1	3.66	Si
0.56	0.000008	0.000509	0	3369	SLV 8	3369	7764	63178	11273	11273	1	3.35	Si
0.56	0.000008	0.000509	0	-775	SLV 9	-775	-7764	-63178	-11273	-11273	1	14.54	Si
1.12	0.000008	0.000509	0	6367	SLV 4	6367	7764	63178	11273	11273	1	1.77	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	-2901.48	18	-3038.84	160735	1494000	2411019	36000000	-2591.6	2	-2726.37	144207	1120500			Si
0.56	-2842.55	18	-3016.57	159557	1494000	2393354	36000000	-2578.56	2	-2720.79	143912	1120500			Si
1.12	-1367.61	18	-1988.33	105169	1494000	1577541	36000000	-1308.76	2	-1846.83	97685	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	-1267	-1811	-11273	SLV 9	0.36	1618	1.653	-2591.6	-1094.25	-7266.79	SLV 3	0.36	1618	1.653	Si
0.56	1297	2072	11273	SLV 8	0.36	1618	1.653	-2720.79	-671.66	-7266.79	SLV 3	0.36	1618	1.653	Si
1.12	3775	2592	11273	SLV 4	0.36	1618	1.653	-1308.76	-996.4	-7266.79	SLV 9	0.36	1618	1.653	Si

Campata 5 tra i fili 7 - 7, sezione R 50x45, asta 87

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	0.001018	0.052	0.000509	0.052							-1694.89	SLU 81	-2222.77	-14731.11	0.153	6.63	Si
0.6	0.000509	0.052	0.000788	0.052							-2587.84	SLU 81	-2611.38	-7768.87	0.117	2.98	Si
0.69	0.000509	0.052	0.000788	0.052							-2505.7	SLU 81	-2610.97	-7768.87	0.117	2.98	Si
1.15	0.000509	0.052	0.000509	0.052							-1190.47	SLU 81	-1878.33	-7755.45	0.113	4.13	Si
1.38	0.000509	0.052	0.000509	0.052	75.02	SLU 43	75.02	7755.45	0.113	103.38	-24.68	SLU 39	-24.68	-7755.45	0.113	314.24	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: $\epsilon_{c2} = 0.002$, $\epsilon_{yd} = 0.0019$

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	0.001018	0.052	0.000509	0.052							-1879.65	SLV 3	-2076.33	-14088.18	0.273	6.79	Si
0.6	0.000509	0.052	0.000788	0.052							-2144.65	SLV 11	-2176.05	-7262.42	0.193	3.34	Si
0.69	0.000509	0.052	0.000788	0.052							-2071.74	SLV 11	-2174.81	-7262.42	0.193	3.34	Si
1.15	0.000509	0.052	0.000509	0.052							-1126.04	SLV 15	-1635.25	-7266.79	0.197	4.44	Si
1.38	0.000509	0.052	0.000509	0.052	305.69	SLV 3	289.01	7266.79	0.197	25.14	-238.24	SLV 14	-238.24	-7266.79	0.197	30.5	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcl	Vrsl	Vult	cotgθ	coeff	Verifica
0	0.0000076	0.000794	0	-3577	SLU 81	-3577	-8772	-63178	-10695	-10695	1	2.99	Si
0.69	0.0000075	0.000509	0	1216	SLU 81	1216	7764	63178	10568	10568	1	8.69	Si



x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
1.15	0.0000075	0.000509	0	4482	SLU 81	4482	7764	63178	10568	10568	1	2.36	Si
1.38	0.0000075	0.000509	0	6103	SLU 81	6103	7764	63178	10568	10568	1	1.73	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcd	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000076	0.000794	0	-3859	SLV 14	-3859	-8772	-63178	-10695	-10695	1	2.77	Si
0.69	0.0000075	0.000509	0	1544	SLV 3	1544	7764	63178	10568	10568	1	6.85	Si
1.15	0.0000075	0.000509	0	3564	SLV 11	3564	7764	63178	10568	10568	1	2.97	Si
1.38	0.0000075	0.000509	0	4885	SLV 15	4885	7764	63178	10568	10568	1	2.16	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	-1279.64	18	-1658.01	85332	1494000	1220771	36000000	-1231.42	2	-1549.79	79762	1120500			Si
0.69	-1845.52	18	-1929.01	97850	1494000	1506975	36000000	-1671.19	2	-1760.58	89306	1120500			Si
1.15	-867.68	18	-1376.85	72826	1494000	1092397	36000000	-764.72	2	-1231.59	65143	1120500			Si
1.38	43.81	1	43.81	2318	1494000	34763	36000000	43.81	1	43.81	2318	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	-2182	-1677	-10695	SLV 14	0.36	1618	1.653	-1231.42	648.23	7258.71	SLV 14	0.36	1618	1.653	Si
0.69	905	638	10568	SLV 3	0.36	1618	1.653	-1760.58	-414.23	-7262.42	SLV 11	0.36	1618	1.653	Si
1.15	3023	541	10568	SLV 11	0.36	1618	1.653	-764.72	-361.32	-7266.79	SLV 15	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 2 - 2, sezione R 50x45, asta 111

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1150	SLU 81	0.02	3377	3998	SLU 81	15877	Si
0.12	0.41	0.0002	1114	SLU 81	0.02	3377	3873	SLU 81	15877	Si
0.23	0.41	0.0002	1088	SLU 81	0.02	3377	3784	SLU 81	15877	Si
0.25	0.41	0.0004	1082	SLU 81	0.034	6380	3764	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

x	d	Af	Rara						Quasi permanente				Verifica
			M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000212	838	SLE RA 18	24128	1494000	299186	36000000	739	SLE QP 2	21275	1120500	Si
0.12	0.41	0.00000212	811	SLE RA 18	23355	1494000	289599	36000000	714	SLE QP 2	20547	1120500	Si
0.23	0.41	0.00000212	792	SLE RA 18	22798	1494000	282692	36000000	695	SLE QP 2	20019	1120500	Si
0.25	0.41	0.00000402	787	SLE RA 18	22115	1494000	274222	36000000	691	SLE QP 2	19410	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	10	159	SLV 1	0.36	1618	1.653	7.39	2.81	32.75	SLV 1	0.36	1618	1.653	Si
0.12	25	9	159	SLV 2	0.36	1618	1.653	7.14	2.71	32.75	SLV 2	0.36	1618	1.653	Si
0.23	24	9	159	SLV 2	0.36	1618	1.653	6.95	2.64	32.75	SLV 2	0.36	1618	1.653	Si
0.25	24	9	159	SLV 2	0.36	1618	1.653	6.91	2.62	61.33	SLV 2	0.36	1618	1.653	Si

Campata 2 tra i fili 2 - 2, sezione R 50x45, asta 110

Campata 3 tra i fili 2 - 4, sezione R 50x45, aste 109, 108, 107, 106, 105, 104, 103, 102, 101, 100, 99

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1016	SLU 81	0.034	6380	3532	SLU 81	15877	Si
2.19	0.41	0.0004	1047	SLU 81	0.032	6007	3640	SLU 81	15877	Si
4.28	0.41	0.0004	1025	SLU 81	0.032	6007	3564	SLU 81	15877	Si
4.38	0.41	0.0004	1024	SLU 81	0.032	6057	3561	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

x	d	Af	Rara						Quasi permanente				Verifica
			M	Comb	σ c	σ c limite	σ f	σ f limite	M	Comb	σ c	σ c limite	
0	0.41	0.00000382	736	SLE RA 18	20669	1494000	256294	36000000	639	SLE QP 2	17935	1120500	Si
2.19	0.41	0.00000378	757	SLE RA 18	21319	1494000	264358	36000000	653	SLE QP 2	18383	1120500	Si
4.28	0.41	0.00000378	741	SLE RA 18	20871	1494000	258800	36000000	638	SLE QP 2	17986	1120500	Si
4.38	0.41	0.00000382	740	SLE RA 18	20839	1494000	258403	36000000	638	SLE QP 2	17957	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	8	159	SLV 4	0.36	1618	1.653	6.39	2.34	61.33	SLV 4	0.36	1618	1.653	Si
2.19	23	5	159	SLV 4	0.36	1618	1.653	6.53	1.3	57.79	SLV 4	0.36	1618	1.653	Si
4.28	22	0	22	SLV 16	0.36	1618	1.653	6.38	0	57.79	SLV 16	0.36	1618	1.653	Si
4.38	22	0	22	SLV 16	0.36	1618	1.653	6.38	0	58.26	SLV 16	0.36	1618	1.653	Si

Campata 4 tra i fili 4 - 7, sezione R 50x45, aste 98, 97, 96, 95, 94, 93, 92, 91, 90, 89, 88

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0004	1024	SLU 81	0.032	6057	3561	SLU 81	15877	Si
0.11	0.41	0.0004	1023	SLU 81	0.032	6057	3557	SLU 81	15877	Si
2.24	0.41	0.0004	1002	SLU 81	0.032	6057	3486	SLU 81	15877	Si
4.48	0.41	0.0004	922	SLU 81	0.032	6057	3205	SLU 81	15877	Si

Verifiche delle tensioni di esercizio



				Rara					Quasi permanente				Verifica
x	d	Af	M	Comb	σc	σc limite	σf	σf limite	M	Comb	σc	σc limite	
0	0.41	0.00000382	740	SLE RA 18	20839	1494000	258403	36000000	638	SLE QP 2	17957	1120500	Si
0.11	0.41	0.00000382	739	SLE RA 18	20816	1494000	258119	36000000	637	SLE QP 2	17936	1120500	Si
2.24	0.41	0.00000382	724	SLE RA 18	20384	1494000	252759	36000000	622	SLE QP 2	17525	1120500	Si
4.48	0.41	0.00000382	666	SLE RA 18	18762	1494000	232655	36000000	575	SLE QP 2	16180	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	0	22	SLV 16	0.36	1618	1.653	6.38	0	58.26	SLV 16	0.36	1618	1.653	Si
0.11	22	0	38	SLV 16	0.36	1618	1.653	6.37	0.05	58.26	SLV 16	0.36	1618	1.653	Si
2.24	22	4	159	SLV 15	0.36	1618	1.653	6.22	1.23	58.26	SLV 15	0.36	1618	1.653	Si
4.48	20	8	159	SLV 15	0.36	1618	1.653	5.75	2.31	58.26	SLV 15	0.36	1618	1.653	Si

Campata 5 tra i fili 7 - 7, sezione R 50x45, asta 87

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	yR	Rd	Ed	Rd/Ed	Verifica
12.06	1.1	SLU 39	ST	LT	-48	-22	-92259	0	0	19	0	0	1.1	28063	53	531.94	Si
12.06	1.1	SLV 14	SIS	LT	10443	-3044	-72463	8	-2	19	0	0	1.1	22041	10877	2.03	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste										Size X	Size Y	Comb	Type	Cond	yR	Rd	Ed	Rd/Ed	Verifica
111,110,109,108,107,106,105,104,103,102,101,100,99,98,97,96,95,94,93,92,91,90,89,88,87										12.06	1.1	SLU 81	ST	BT	2.3	552108	109514	5.04	Si
111,110,109,108,107,106,105,104,103,102,101,100,99,98,97,96,95,94,93,92,91,90,89,88,87										12.06	1.1	SLV 7	SIS	BT	2.3	462265	74104	6.24	Si
111,110,109,108,107,106,105,104,103,102,101,100,99,98,97,96,95,94,93,92,91,90,89,88,87										12.06	1.1	SLD 7	SIS	BT	2.3	512678	73481	6.98	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	ys	Fi	Coes	Amax
0	-27	-109514	-64.65	-10175.82	0	0	-0.09	0	1.1	11.88	1496	2060	0	14430	
0	10109	-74104	-4936.2	-19974.03	0	8	-0.27	-0.07	0.97	11.52	1496	2060	0	14430	0.07
0	4301	-73481	-2131.6	-12681.16	0	3	-0.17	-0.03	1.04	11.72	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	0.02	0	0	0.27	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.02	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	0.02	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

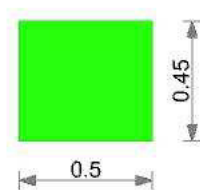
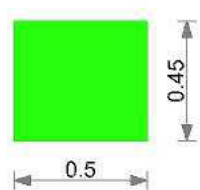
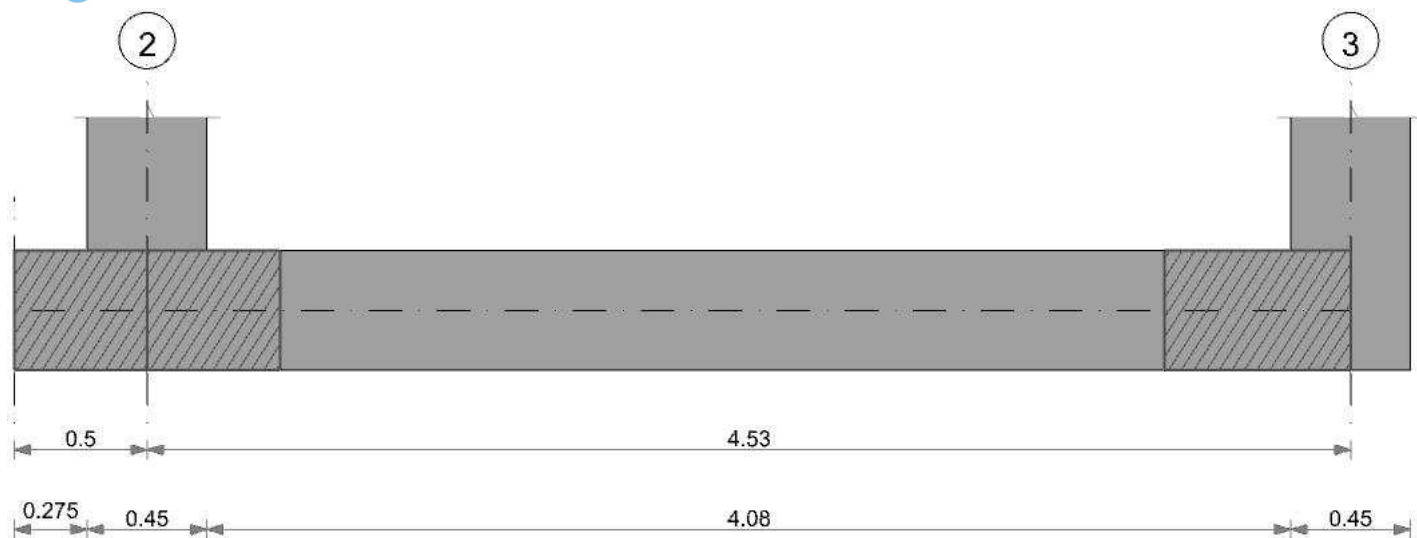
Tipo	Assoluto				Differenziale				Relativo				Rapp. inflessione				Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo J	Comb.	Sr adm	Sr	Nodo	Comb.	Ri adm	Ri	Comb.	
E	0.05	0	180	SLE RA 18	0.05	0	180	168	SLE RA 18	0.05	0	180	SLE RA 18	0.0033	0	SLE RA 18	Si
D	0.05	0	168	SLE RA 1	0.05	0	168	168	SLE RA 1	0.05	0	169	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	168	SLE RA 1	0.05	0	168	168	SLE RA 1	0.05	0	169	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	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	
E	0.19	0	SLE RA 18	0.19	0	192	193	0.19	0	192	SLE RA 18	0.1	0	191	SLE RA 18	Si
D	0.19	0	SLE RA 1	0.19	0	168	169	0.19	0	168	SLE RA 1	0.1	0	169	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	168	169	0.19	0	168	SLE RA 1	0.1	0	169	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

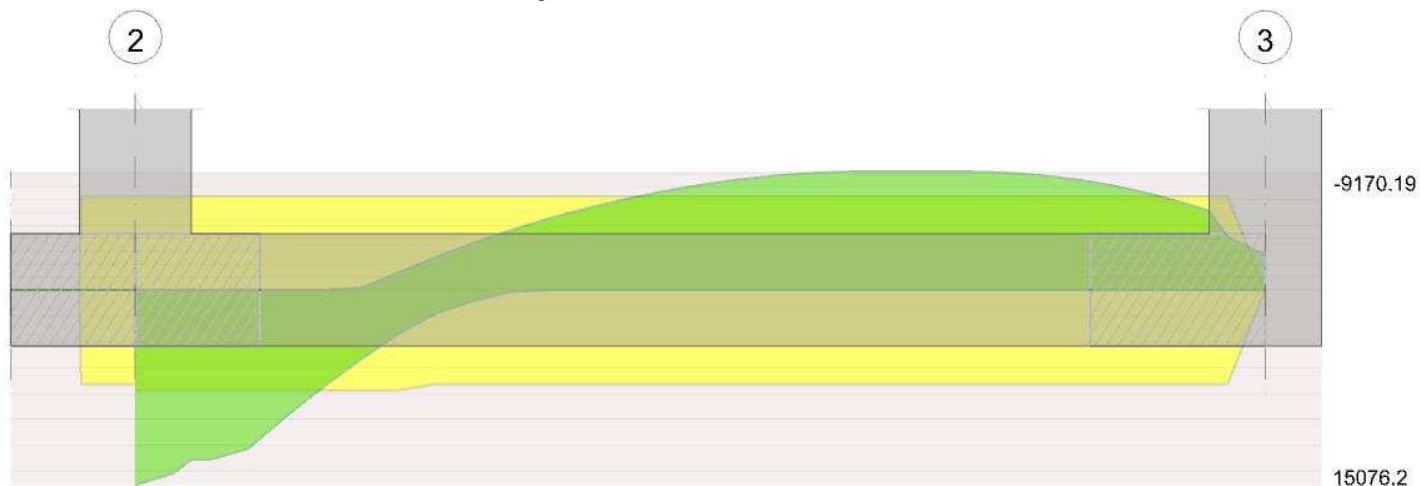


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 2 - 3, sezione R 50x45, aste 63, 62, 61

Verifiche a flessione in famiglia SLV

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
4.31	0.000509	0.052	0.000509	0.052							-4536.23	SLV 81	-5870.47	-7755.45	0.113	1.32	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: $\epsilon_{c2} = 0.002$, $\epsilon_{yd} = 0.0019$

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
4.31	0.000509	0.052	0.000509	0.052							-4784.42	SLV 8	-6093.31	-7266.79	0.197	1.19	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcl	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000078	0.000509	0	-19364	SLV 81	-19364	-7764	-63178	-10965	-10965	1	0.57	Si
2.27	0.0000078	0.000509	0	-4016	SLV 81	-4016	-7764	-63178	-10965	-10965	1	2.73	Si
4.31	0.0000078	0.000509	0	8301	SLV 81	8301	7764	63178	10965	10965	1	1.32	Si
4.53	0.0000078	0.000509	0	10344	SLV 81	10344	8455	71432	12397	12397	1	1.2	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcl	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000078	0.000509	0	-17208	SLV 4	-17208	-7764	-63178	-10965	-10965	1	0.64	Si
2.27	0.0000078	0.000509	0	-3778	SLV 8	-3778	-7764	-63178	-10965	-10965	1	2.9	Si
4.31	0.0000078	0.000509	0	8220	SLV 8	8220	7764	63178	10965	10965	1	1.33	Si
4.53	0.0000078	0.000509	0	10425	SLV 8	10425	8455	71432	12397	12397	1	1.19	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σc	$\sigma c \text{ lim.}$	$\sigma f.$	$\sigma f \text{ lim.}$	Mela	Comb.	Mdes	σc	$\sigma c \text{ lim.}$	$\sigma \text{ FRP}$	$\sigma \text{ FRP lim.}$	
2.27	-5610.38	18	-6071.97	642133	1494000	32681126	36000000	-5020.99	2	-5433.71	574634	1120500			Si
4.31	-3324.03	18	-4302.59	227579	1494000	3413681	36000000	-2970.97	2	-3847.51	203508	1120500			Si
4.53	-1789.85	18	-1789.85	-106065	1494000	0	36000000	-1596.63	2	-1596.63	-94615	1120500			Si

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
4.31	5453	2767	10965	SLV 8	0.36	1618	1.653	-2970.97	-1813.45	-7266.79	SLV 8	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	yR	Rd	Ed	Rd/Ed	Verifica
4.76	1.1	SLV 43	ST	LT	-60	-31	-30571	0	0	19	0	0	1.1	9299	67	138.29	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste		Size X	Size Y	Comb.	Type	Cond	yR	Rd	Ed	Rd/Ed	Verifica
63,62,61		4.76	1.1	SLV 81	ST	BT	2.3	222201	38121	5.83	Si
63,62,61		4.76	1.1	SLV 3	SIS	BT	2.3	192322	33607	5.72	Si
63,62,61		4.76	1.1	SLD 3	SIS	BT	2.3	208966	29298	7.13	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	ys	Fi	Coes	Amax
0	-12	-38121	-171.46	-765.77	0	0	-0.02	0	1.09	4.71	1496	2060	0	14430	
0	4124	-33607	-2049.78	1864.43	0	7	0.06	-0.06	0.98	4.64	1496	2060	0	14430	0.07
0	1808	-29298	-966.07	531.85	0	4	0.02	-0.03	1.03	4.72	1496	2060	0	14430	0.03

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

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

Verifiche geotecniche - Cedimenti assoluti e differenziali

Tipo	Assoluto				Differenziale				Relativo				Rapp. inflessione				Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo i	Nodo j	Comb.	Sr adm	Sr	Nodo	Comb.	Ri adm	Ri	Comb.	
E	0.05	0	166	SLE RA 18	0.05	0	166	297	SLE RA 18	0.05	0	297	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	297	SLE RA 1	0.05	0	297	297	SLE RA 1	0.05	0	297	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	297	SLE RA 1	0.05	0	297	297	SLE RA 1	0.05	0	297	SLE RA 1	0.0033	0	SLE RA 1	Si

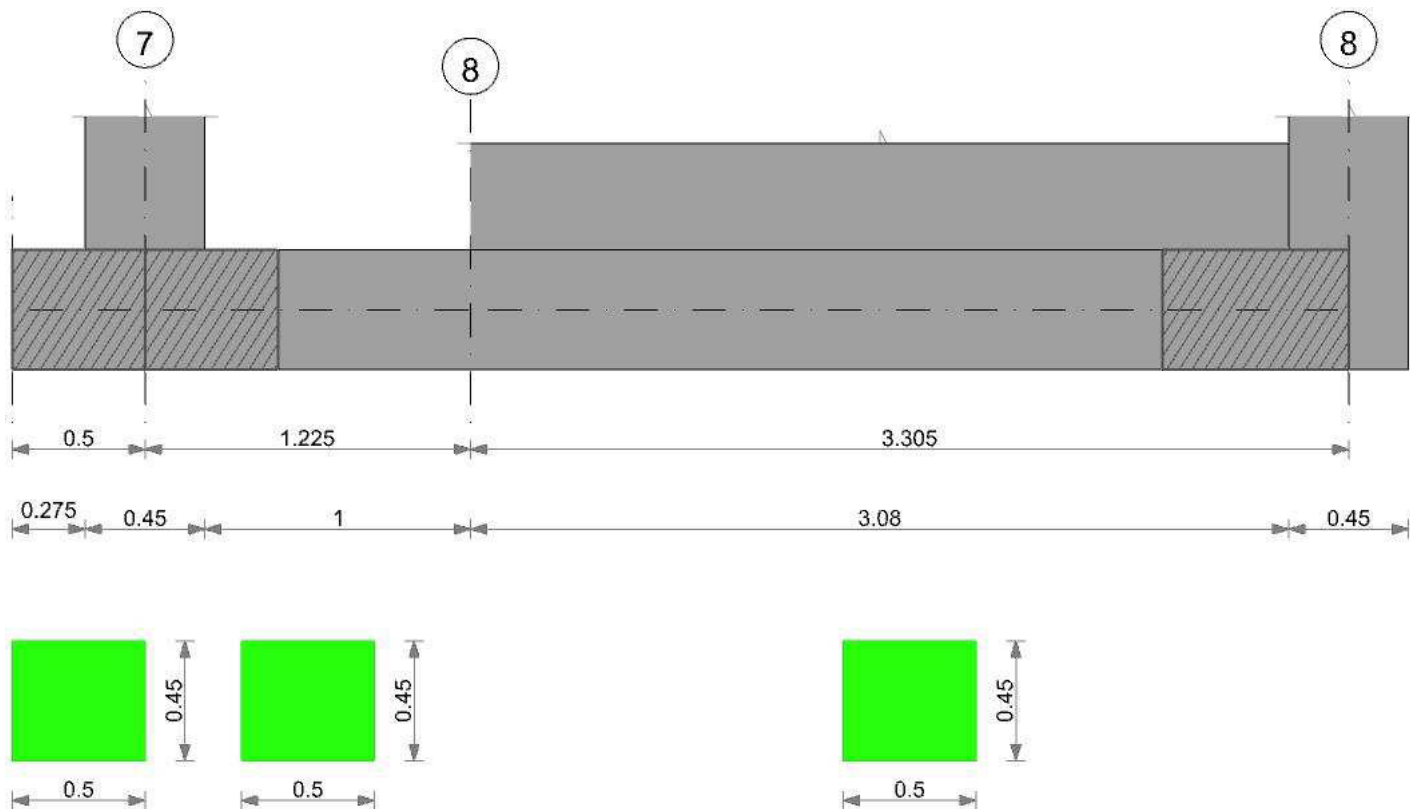
Verifiche geotecniche - Rotazioni assolute e differenziali



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	297	166	SLE RA 18	0.19	0	297	SLE RA 1	0.1	0	297	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	297	166	SLE RA 1	0.19	0	297	SLE RA 1	0.1	0	297	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	297	166	SLE RA 1	0.19	0	297	SLE RA 1	0.1	0	297	SLE RA 1	Si

CORDOLO 4

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000

Calcestruzzo: C25/30 Rck 3000000

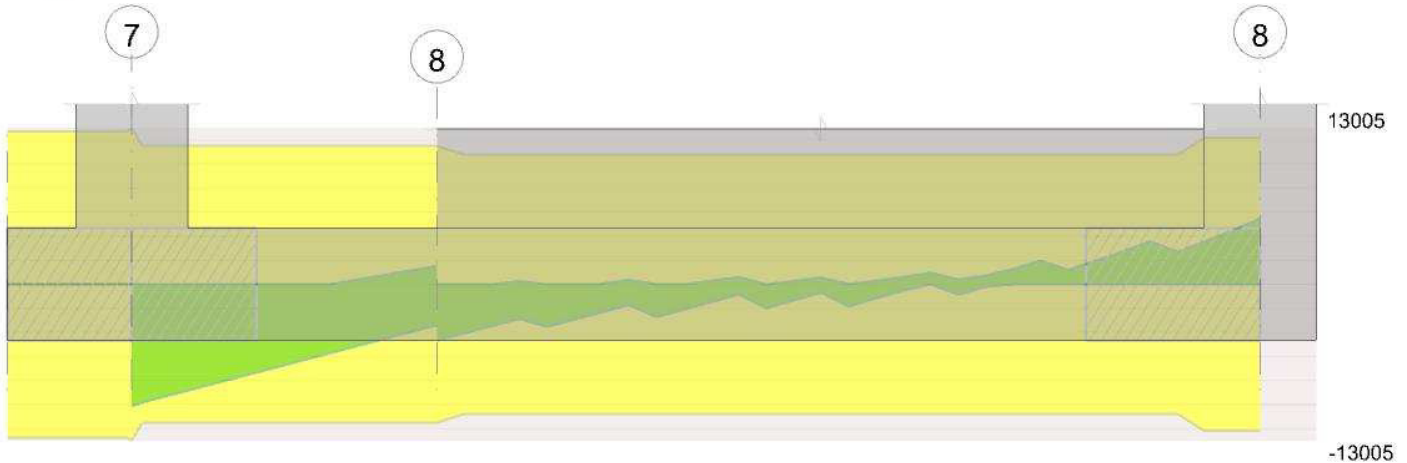
Elenco delle sezioni

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

Diagramma verifica stato limite ultimo flessione



Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 7 - 8, sezione R 50x45, asta 86

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.000509	0.052	0.000509	0.052	4677.83	SLU 81	4677.83	7755.45	0.113	1.66							Si
0.61	0.000509	0.052	0.000509	0.052	1909.75	SLU 81	3057.4	7755.45	0.113	2.54							Si
1.23	0.000509	0.052	0.000509	0.052	-178.76	SLU 1	67	7755.45	0.113	115.75	-318.45	SLU 81	-318.45	-7755.45	0.113	24.35	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: $\epsilon_{c2} = 0.002$, $\epsilon_{yd} = 0.0019$

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.000509	0.052	0.000509	0.052	4761.45	SLV 15	4761.45	7266.79	0.197	1.53							Si
0.61	0.000509	0.052	0.000509	0.052	1908.17	SLV 15	3108.43	7266.79	0.197	2.34							Si
1.23	0.000509	0.052	0.000509	0.052	977.37	SLV 6	977.37	7266.79	0.197	7.44	-1379.58	SLV 11	-1379.58	-7266.79	0.197	5.27	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcl	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000082	0.000509	0	-10118	SLU 81	-10118	-8455	-71432	-13005	-13005	1	1.29	Si
0.04	0.0000082	0.000509	0	-9828	SLU 81	-9828	-7764	-63178	-11503	-11503	1	1.17	Si
0.23	0.0000082	0.000509	0	-8517	SLU 81	-8517	-7764	-63178	-11503	-11503	1	1.35	Si
0.61	0.0000082	0.000509	0	-5768	SLU 81	-5768	-7764	-63178	-11503	-11503	1	1.99	Si
1.23	0.0000082	0.000509	0	-1536	SLU 81	-1536	-7764	-63178	-11503	-11503	1	7.49	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcl	Vrsd	Vult	cotgθ	coeff	Verifica
0	0.0000082	0.000509	0	-10033	SLV 15	-10033	-8455	-71432	-13005	-13005	1	1.3	Si
0.04	0.0000082	0.000509	0	-9814	SLV 11	-9814	-7764	-63178	-11503	-11503	1	1.17	Si
0.23	0.0000082	0.000509	0	-8823	SLV 11	-8823	-7764	-63178	-11503	-11503	1	1.3	Si
0.61	0.0000082	0.000509	0	-6712	SLV 11	-6712	-7764	-63178	-11503	-11503	1	1.71	Si
1.23	0.0000082	0.000509	0	1509	SLV 6	1509	7764	63178	11503	11503	1	7.62	Si
1.23	0.0000082	0.000509	0	-3390	SLV 11	-3390	-7764	-63178	-11503	-11503	1	3.39	Si

Verifiche delle tensioni in esercizio

x	Rara								Quasi permanente								Verifica
	Mela	Comb.	Mdes	σ_c	$\sigma_{clim.}$	σ_f	$\sigma_{flim.}$	Mela	Comb.	Mdes	σ_c	$\sigma_{clim.}$	σ_{FRP}	$\sigma_{FRP lim.}$			
0	4934.89	18	4105.19	243270	1494000	0	36000000	4344.33	2	3610.85	213976	1120500					Si
0.23	3406.25	18	3406.25	180168	1494000	2702522	36000000	2993.65	2	2993.65	158345	1120500					Si
0.61	1388.05	18	2224.48	117660	1494000	1764904	36000000	1213.97	2	1950.8	103185	1120500					Si
1.23	-231.07	18	-231.07	12222	1494000	183329	36000000	-201.11	2	-201.11	10637	1120500					Si

Verifica di apertura delle fessure

La campata non presenta apertura delle fessure

Indicatori di rischio sismico

x	T gravità	T sisma	T ultimo	Comb.	Pga	Tr	Ind. taglio	M gravità	M sisma	M ultimo	Comb.	Pga	Tr	Ind. momento	Ver
0.23	-5486	-3336	-11503	SLV 11	0.36	1618	1.653	2993.65	1767.8	7266.79	SLV 15	0.36	1618	1.653	Si
0.61	-3698	-3015	-11503	SLV 11	0.36	1618	1.653	1950.8	1157.63	7266.79	SLV 15	0.36	1618	1.653	Si
1.23	-941	-2449	-11503	SLV 11	0.36	1618	1.653	-201.11	-1178.47	-7266.79	SLV 11	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 2 tra i fili 7 - 8, sezione R 50x45, asta 86

Campata 3 tra i fili 8 - 8, sezione R 50x45, aste 85, 84, 83, 82, 81, 80, 79, 78

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb.	x/d	Mult	V	Comb.	Vult	Verifica
0	0.41	0.0004	885	SLU 81	0.035	6508	3079	SLU 81	16065	Si
1.65	0.41	0.0004	838	SLV 15	0.127	5870	2972	SLU 81	15877	Si
3.08	0.41	0.0004	1238	SLV 11	0.127	5870	4305	SLV 11	15877	Si
3.31	0.41	0.0004	1330	SLV 11	0.127	5870	4627	SLV 11	15877	Si

Verifiche delle tensioni di esercizio

x	d	Af	M	Comb.	σ_c	$\sigma_{climite}$	σ_f	$\sigma_{flimite}$	M	Comb.	σ_c	$\sigma_{climite}$	Verifica
0	0.41	0.0000041	643	SLE RA 18	18042	1494000	223721	36000000	562	SLE QP 2	15763	1120500	Si
1.65	0.41	0.00000384	621	SLE RA 18	17492	1494000	216905	36000000	544	SLE QP 2	15327	1120500	Si
3.08	0.41	0.00000384	795	SLE RA 18	22368	1494000	277359	36000000	700	SLE QP 2	19699	1120500	Si



				Rara					Quasi permanente				Verifica	
x	d	Af		M	Comb	σc	σc limite	σf	σf limite	M	Comb	σc	σc limite	
3.31	0.41	0.0000384		842	SLE RA 18	23700	1494000	293880	36000000	742	SLE QP 2	20891	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	161	SLV 15	0.36	1618	1.653	5.62	2.59	62.54	SLV 15	0.36	1618	1.653	Si
1.65	19	10	159	SLV 15	0.36	1618	1.653	5.44	2.94	58.7	SLV 15	0.36	1618	1.653	Si
3.08	24	19	159	SLV 11	0.36	1618	1.653	7	5.38	58.7	SLV 11	0.36	1618	1.653	Si
3.31	26	20	159	SLV 11	0.36	1618	1.653	7.42	5.88	58.7	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	yR	Rd	Ed	Rd/Ed	Verifica
4.76	1.1	SLU 39	ST	LT	108	-40	-33329	0	0	19	0	0	1.1	10138	115	88.22	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	yR	Rd	Ed	Rd/Ed	Verifica
86,85,84,83,82,81,80,79,78	4.76	1.1	SLU 81	ST	BT	2.3	188457	39932	4.72	Si
86,85,84,83,82,81,80,79,78	4.76	1.1	SLV 16	SIS	BT	2.3	156734	36025	4.35	Si
86,85,84,83,82,81,80,79,78	4.76	1.1	SLD 16	SIS	BT	2.3	172779	30990	5.58	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	ys	Fi	Coes	Amax
0	-41	-39932	3284.99	1366.74	0	0	0.03	0.08	0.94	4.69	1496	2060	0	14430	
0	-4275	-36025	5030.5	3650.11	0	-7	0.1	0.14	0.82	4.55	1496	2060	0	14430	0.07
0	-1894	-30990	3425.18	2111.61	0	-3	0.07	0.11	0.88	4.62	1496	2060	0	14430	0.03

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

Forme geometriche di capacità portante - fattori utilizzati nel calcolo di R_d																							
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	0.03	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

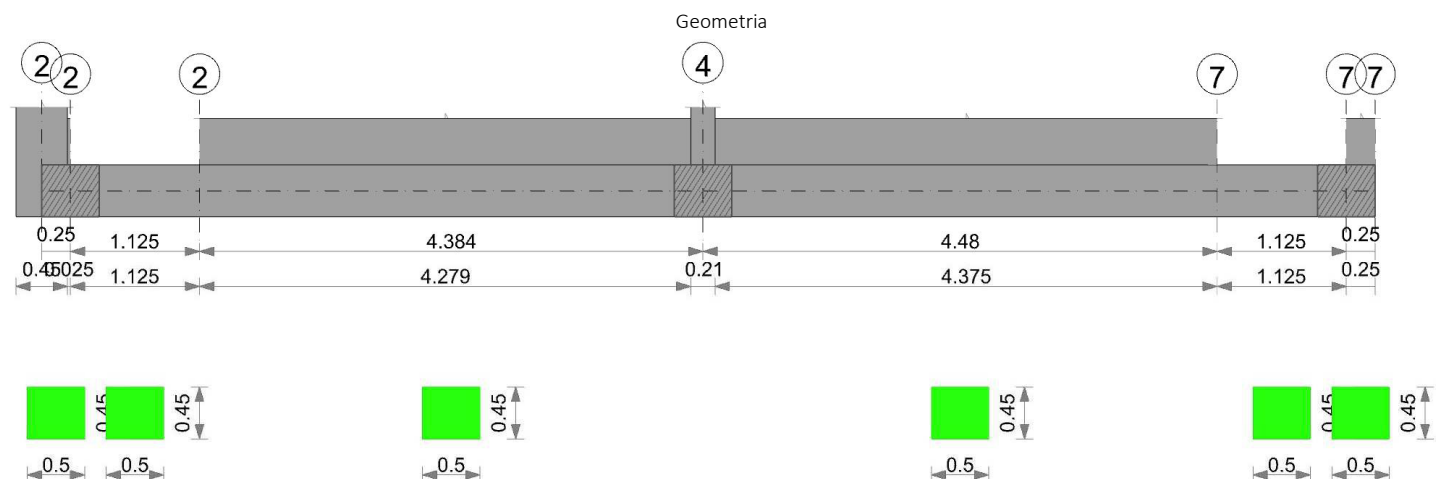
Verifiche geotecniche - Cedimenti assoluti e differenziali

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	202	SLE RA 18	0.05	0	202	SLE RA 18	0.0033	0	SLE RA 18	Si
D	0.05	0	267	SLE RA 1	0.05	0	267	267	SLE RA 1	0.05	0	202	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	267	SLE RA 1	0.05	0	267	267	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 18	0.19	0	202	140	SLE RA 18	0.19	0	267	SLE RA 1	0.1	0	202	SLE RA 18
D	0.19	0	SLE RA 1	0.19	0	267	202	SLE RA 1	0.19	0	267	SLE RA 1	0.1	0	202	SLE RA 1
Z	0.19	0	SLE RA 1	0.19	0	267	202	SLE RA 1	0.19	0	267	SLE RA 1	0.1	0	202	SLE RA 1

CORDOLO 5



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

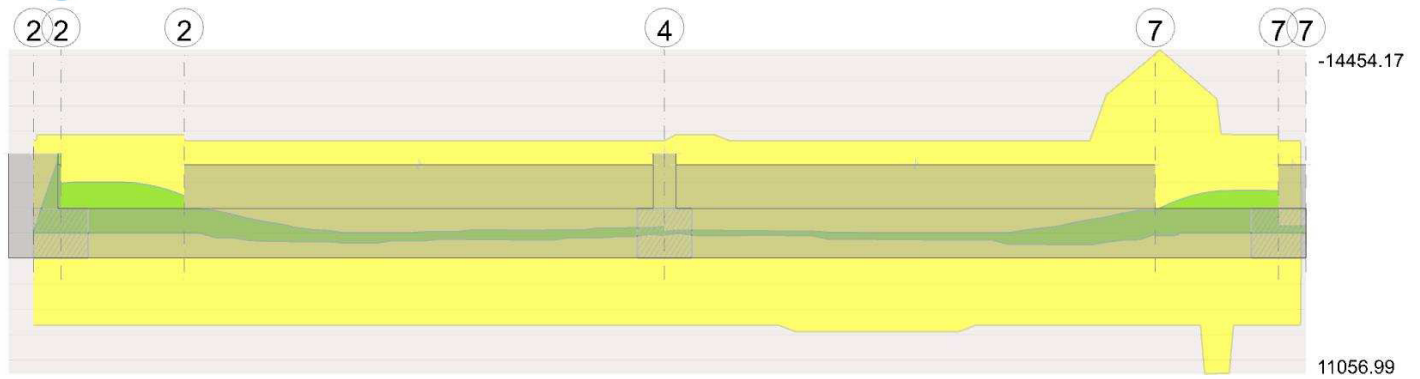


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 2 tra i fili 2 - 2, sezione R 50x45, asta 136

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							-3596	SLU 81	-3892.49	-7755.45	0.113	1.99	Si
0.41	0.000509	0.052	0.000509	0.052							-3979.27	SLU 81	-3988.45	-7755.45	0.113	1.94	Si
0.56	0.000509	0.052	0.000509	0.052							-3857.23	SLU 81	-3986.2	-7755.45	0.113	1.95	Si
1.12	0.000509	0.052	0.000509	0.052							-2183.44	SLU 81	-2922.87	-7755.45	0.113	2.65	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: $\epsilon_{c2} = 0.002$, $\epsilon_{yd} = 0.0019$

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							-3447.32	SLV 2	-3492.79	-7266.79	0.197	2.08	Si
0.07	0.000509	0.052	0.000509	0.052							-3485.37	SLV 2	-3492.79	-7266.79	0.197	2.08	Si
0.56	0.000509	0.052	0.000509	0.052							-2996.43	SLV 1	-3322.24	-7266.79	0.197	2.19	Si
1.12	0.000509	0.052	0.000509	0.052							-2527.6	SLV 11	-2620.93	-7266.79	0.197	2.77	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	0.0000085	0.000509	0	-2506	SLU 81	-2506	-7764	-63178	-11866	-11866	1	4.74	Si
0.56	0.000008	0.000509	0	1431	SLU 81	1431	7764	63178	11273	11273	1	7.88	Si
1.12	0.000008	0.000509	0	5256	SLU 81	5256	7764	63178	11273	11273	1	2.14	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	0.0000085	0.000509	0	5	SLV 6	5	7764	63178	11866	11866	1	2194.64	Si
0	0.0000085	0.000509	0	-3566	SLV 11	-3566	-7764	-63178	-11866	-11866	1	3.33	Si
0.56	0.000008	0.000509	0	2839	SLV 6	2839	7764	63178	11273	11273	1	3.97	Si
0.56	0.000008	0.000509	0	-1276	SLV 11	-1276	-7764	-63178	-11273	-11273	1	8.83	Si
1.12	0.000008	0.000509	0	5878	SLV 2	5878	7764	63178	11273	11273	1	1.92	Si

Verifiche delle tensioni in esercizio

x	Rara							Quasi permanente							Verifica
	Mela	Comb.	Mdes	σ_c	$\sigma_{c\lim.}$	σ_f	$\sigma_{f\lim.}$	Mela	Comb.	Mdes	σ_c	$\sigma_{c\lim.}$	σ_{FRP}	$\sigma_{FRP\lim.}$	
0	-2628.55	18	-2852.63	150886	1494000	2263285	36000000	-2334.21	2	-2550.75	134918	1120500			Si
0.56	-2842.24	18	-2929.36	154944	1494000	2324159	36000000	-2578.26	2	-2638.52	139561	1120500			Si
1.12	-1641.78	18	-2174.77	115031	1494000	1725469	36000000	-1567.37	2	-2022.69	106987	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	-1780	-1785	-11866	SLV 11	0.36	1618	1.653	-2334.21	-1113.11	-7266.79	SLV 2	0.36	1618	1.653	Si
0.56	782	2058	11273	SLV 6	0.36	1618	1.653	-2638.52	-683.72	-7266.79	SLV 1	0.36	1618	1.653	Si
1.12	3254	2624	11273	SLV 2	0.36	1618	1.653	-1567.37	-960.23	-7266.79	SLV 11	0.36	1618	1.653	Si



Campata 5 tra i fili 7 - 7, sezione R 50x45, asta 113

Verifiche a flessione in famiglia SLV

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	0.001018	0.052	0.000509	0.052							-862.34	SLU 43	-1751.01	-14731.11	0.153	8.41	Si
0.56	0.000712	0.052	0.000788	0.052							-3036.34	SLU 81	-3288.69	-10552.81	0.128	3.21	Si
0.71	0.000509	0.052	0.000509	0.052							-3263.45	SLU 81	-3335.12	-7755.45	0.113	2.33	Si
1.13	0.000509	0.052	0.000509	0.052							-3083.23	SLU 81	-3306.54	-7755.45	0.113	2.35	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: $\epsilon_{c2} = 0.002$, $\epsilon_{yd} = 0.0019$

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	0.001018	0.052	0.000509	0.052	209.59	SLV 14	209.59	7258.71	0.19	34.63	-1503.31	SLV 3	-1724.41	-14088.18	0.273	8.17	Si
0.56	0.000712	0.052	0.000788	0.052							-2535.24	SLV 11	-2832.84	-10031.3	0.225	3.54	Si
0.86	0.000509	0.052	0.000509	0.052							-2984.28	SLV 15	-3047.39	-7266.79	0.197	2.38	Si
1.13	0.000509	0.052	0.000509	0.052							-3003.35	SLV 15	-3047.39	-7266.79	0.197	2.38	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcl	Vrsl	Vult	cotgθ	coeff	Verifica
0	0.000008	0.000794	0	-5911	SLU 81	-5911	-8772	-63178	-11273	-11273	1	1.91	Si
0.56	0.000008	0.000509	0	-2031	SLU 81	-2031	-7764	-63178	-11273	-11273	1	5.55	Si
1.13	0.000008	0.000509	0	1881	SLU 81	1881	7764	63178	11273	11273	1	5.99	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcl	Vrsl	Vult	cotgθ	coeff	Verifica
0	0.000008	0.000509	0	-6076	SLV 15	-6076	-7764	-63178	-11273	-11273	1	1.86	Si
0.56	0.000008	0.000509	0	303	SLV 2	303	7764	63178	11273	11273	1	37.17	Si
0.56	0.000008	0.000509	0	-2723	SLV 15	-2723	-7764	-63178	-11273	-11273	1	4.14	Si
1.13	0.000008	0.000509	0	1931	SLV 2	1931	7764	63178	11273	11273	1	5.84	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	-655.67	1	-1311.43	67495	1494000	965586	36000000		-655.67	1	-1238.7	63752	1120500				Si
0.56	-2237.62	18	-2416.28	121182	1494000	1830694	36000000		-2029.08	2	-2173.86	109024	1120500				Si
1.13	-2254.04	18	-2422.9	128155	1494000	1922330	36000000		-2001.02	2	-2164.34	114480	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	-3706	-2370	-11273	SLV 15	0.36	1618	1.653	-646.86	856.45	7258.71	SLV 14	0.36	1618	1.653	Si
0.56	-1210	-1513	-11273	SLV 15	0.36	1618	1.653	-2173.86	-658.98	-10031.3	SLV 15	0.36	1618	1.653	Si
1.13	1324	607	11273	SLV 2	0.36	1618	1.653	-2001.02	-1002.32	-7266.79	SLV 15	0.36	1618	1.653	Si

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 2 - 2, sezione R 50x45, asta 137

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb.	x/d	Mult	V	Comb.	Vult	Verifica
0	0.41	0.0004	1151	SLU 81	0.036	6710	4000	SLU 81	16565	Si
0.13	0.41	0.0004	1115	SLU 81	0.036	6710	3875	SLU 81	16565	Si
0.23	0.41	0.0004	1089	SLU 81	0.036	6710	3785	SLU 81	16565	Si
0.25	0.41	0.0004	1083	SLU 81	0.036	6710	3765	SLU 81	16565	Si

Verifiche delle tensioni di esercizio

x	d	Af	M	Comb.	σ c	σ c limite	σ f	σ f limite	M	Comb.	σ c	σ c limite	Verifica
0	0.41	0.00000423	839	SLE RA 18	23487	1494000	291239	36000000	739	SLE QP 2	20709	1120500	Si
0.13	0.41	0.00000423	812	SLE RA 18	22734	1494000	281905	36000000	714	SLE QP 2	19999	1120500	Si
0.23	0.41	0.00000423	792	SLE RA 18	22192	1494000	275182	36000000	696	SLE QP 2	19485	1120500	Si
0.25	0.41	0.00000423	788	SLE RA 18	22072	1494000	273690	36000000	692	SLE QP 2	19370	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	10	166	SLV 1	0.36	1618	1.653	7.39	2.82	64.47	SLV 1	0.36	1618	1.653	Si
0.13	25	9	166	SLV 2	0.36	1618	1.653	7.14	2.73	64.47	SLV 2	0.36	1618	1.653	Si
0.23	24	9	166	SLV 2	0.36	1618	1.653	6.96	2.65	64.47	SLV 2	0.36	1618	1.653	Si
0.25	24	9	166	SLV 2	0.36	1618	1.653	6.92	2.64	64.47	SLV 2	0.36	1618	1.653	Si

Campata 2 tra i fili 2 - 2, sezione R 50x45, asta 136

Campata 3 tra i fili 2 - 4, sezione R 50x45, aste 135, 134, 133, 132, 131, 130, 129, 128, 127, 126, 125

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb.	x/d	Mult	V	Comb.	Vult	Verifica
0	0.41	0.0004	1014	SLU 81	0.034	6380	3525	SLU 81	15877	Si
2.19	0.41	0.0003	1044	SLU 81	0.029	5467	3629	SLU 81	15877	Si
4.28	0.41	0.0003	1021	SLU 81	0.029	5467	3550	SLU 81	15877	Si
4.38	0.41	0.0003	1020	SLU 81	0.029	5467	3546	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

x	d	Af	M	Comb.	σ c	σ c limite	σ f	σ f limite	M	Comb.	σ c	σ c limite	Verifica
0	0.41	0.00000402	735	SLE RA 18	20632	1494000	255835	36000000	637	SLE QP 2	17898	1120500	Si
2.19	0.41	0.00000344	755	SLE RA 18	21358	1494000	264838	36000000	651	SLE QP 2	18409	1120500	Si
4.28	0.41	0.00000344	738	SLE RA 18	20886	1494000	258981	36000000	636	SLE QP 2	17989	1120500	Si
4.38	0.41	0.00000344	737	SLE RA 18	20862	1494000	258686	36000000	635	SLE QP 2	17968	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	8	159	SLV 2	0.36	1618	1.653	6.37	2.35	61.33	SLV 2	0.36	1618	1.653	Si
2.19	23	5	159	SLV 2	0.36	1618	1.653	6.51	1.31	52.66	SLV 2	0.36	1618	1.653	Si
4.28	22	0	22	SLV 16	0.36	1618	1.653	6.36	0	52.66	SLV 16	0.36	1618	1.653	Si
4.38	22	0	22	SLV 16	0.36	1618	1.653	6.35	0	52.66	SLV 16	0.36	1618	1.653	Si

Campata 4 tra i fili 4 - 7, sezione R 50x45, aste 124, 123, 122, 121, 120, 119, 118, 117, 116, 115, 114

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb.	x/d	Mult	V	Comb.	Vult	Verifica
0	0.41	0.0003	1020	SLU 81	0.029	5467	3546	SLU 81	15877	Si
0.11	0.41	0.0003	1019	SLU 81	0.028	5352	3542	SLU 81	15877	Si
2.24	0.41	0.0003	996	SLU 81	0.028	5352	3463	SLU 81	15877	Si
4.48	0.41	0.0004	913	SLU 81	0.034	6379	3173	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	0.00000344		737	SLE RA 18	20862	1494000	258686	36000000	635	SLE QP 2	17968	1120500	Si
0.11	0.41	0.00000337		736	SLE RA 18	20858	1494000	258643	36000000	634	SLE QP 2	17963	1120500	Si
2.24	0.41	0.00000337		719	SLE RA 18	20376	1494000	252667	36000000	618	SLE QP 2	17508	1120500	Si
4.48	0.41	0.00000402		660	SLE RA 18	18529	1494000	229754	36000000	568	SLE QP 2	15967	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	0	22	SLV 16	0.36	1618	1.653	6.35	0	52.66	SLV 16	0.36	1618	1.653	Si
0.11	22	0	22	SLV 16	0.36	1618	1.653	6.34	0	51.57	SLV 16	0.36	1618	1.653	Si
2.24	21	4	159	SLV 13	0.36	1618	1.653	6.18	1.23	51.57	SLV 13	0.36	1618	1.653	Si
4.48	20	8	159	SLV 13	0.36	1618	1.653	5.68	2.27	61.33	SLV 13	0.36	1618	1.653	Si

Campata 5 tra i fili 7 - 7, sezione R 50x45, asta 113

Campata 6 tra i fili 7 - 7, sezione R 50x45, asta 112

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb.	x/d	Mult	V	Comb.	Vult	Verifica
0	0.41	0.0004	932	SLU 81	0.034	6379	3238	SLU 81	15877	Si
0.12	0.41	0.0004	941	SLU 81	0.034	6379	3270	SLU 81	15877	Si
0.25	0.41	0.0004	950	SLU 81	0.034	6379	3303	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	676	SLE RA 18	18994	1494000	235521	36000000	590	SLE QP 2	16567	1120500	Si
0.12	0.41	0.00000402	683	SLE RA 18	19193	1494000	237998	36000000	597	SLE QP 2	16767	1120500	Si
0.25	0.41	0.00000402	691	SLE RA 18	19397	1494000	240517	36000000	604	SLE QP 2	16971	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	9	159	SLV 15	0.36	1618	1.653	5.9	2.55	61.33	SLV 15	0.36	1618	1.653	Si
0.12	21	9	159	SLV 15	0.36	1618	1.653	5.97	2.6	61.33	SLV 15	0.36	1618	1.653	Si
0.25	21	9	159	SLV 15	0.36	1618	1.653	6.04	2.65	61.33	SLV 15	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	yR	Rd	Ed	Rd/Ed	Verifica
11.84	1.1	SLU 39	ST	LT	-14	-23	-91717	0	0	19	0	0	1.1	27898	27	1042.34	Si
11.84	1.1	SLV 13	SIS	LT	10425	-3038	-72457	8	-2	19	0	0	1.1	22040	10858	2.03	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste										Size X	Size Y	Comb.	Type	Cond	yR	Rd	Ed	Rd/Ed	Verifica
137,136,135,134,133,132,131,130,129,128,127,126,125,124,123,122,121,120,119,118,117,116,115,114,113,112										11.84	1.1	SLU 81	ST	BT	2.3	540944	108839	4.97	Si
137,136,135,134,133,132,131,130,129,128,127,126,125,124,123,122,121,120,119,118,117,116,115,114,113,112										11.84	1.1	SLV 6	SIS	BT	2.3	450677	73441	6.14	Si
137,136,135,134,133,132,131,130,129,128,127,126,125,124,123,122,121,120,119,118,117,116,115,114,113,112										11.84	1.1	SLD 6	SIS	BT	2.3	502149	72918	6.89	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	ys	Fi	Coes	Amax
0	-27	-108839	-80.91	-10943.48	0	0	-0.1	0	1.1	11.64	1496	2060	0	14430	
0	-10164	-73441	4857.25	-22467.61	0	-8	-0.31	0.07	0.97	11.23	1496	2060	0	14430	0.07
0	-4345	-72918	2039.64	-14040.63	0	-3	-0.19	0.03	1.04	11.45	1496	2060	0	14430	0.03

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

N			S			D			B			G			P			E		
Nq	Nc	Ng	Sq	Sc	Sg	Dq	Dc	Dg	Bq	Bc	Bg	Gq	Gc	Gg	Pq	Pc	Pg	Eq	Ec	Eg
1	5	0	0	0.02	0	0	0.27	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.02	0	0	0.27	0	0	0.02	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.02	0	0	0.27	0	0	0.01	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	123	SLE RA 18	0.05	0	123	110	SLE RA 18	0.05	0	123	SLE RA 18	0.0033	0	SLE RA 18	Si
D	0.05	0	110	SLE RA 1	0.05	0	110	110	SLE RA 1	0.05	0	111	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	110	SLE RA 1	0.05	0	110	110	SLE RA 1	0.05	0	111	SLE RA 1	0.0033	0	SLE RA 1	Si

Verifiche geotecniche - Rotazioni assolute e differenziali

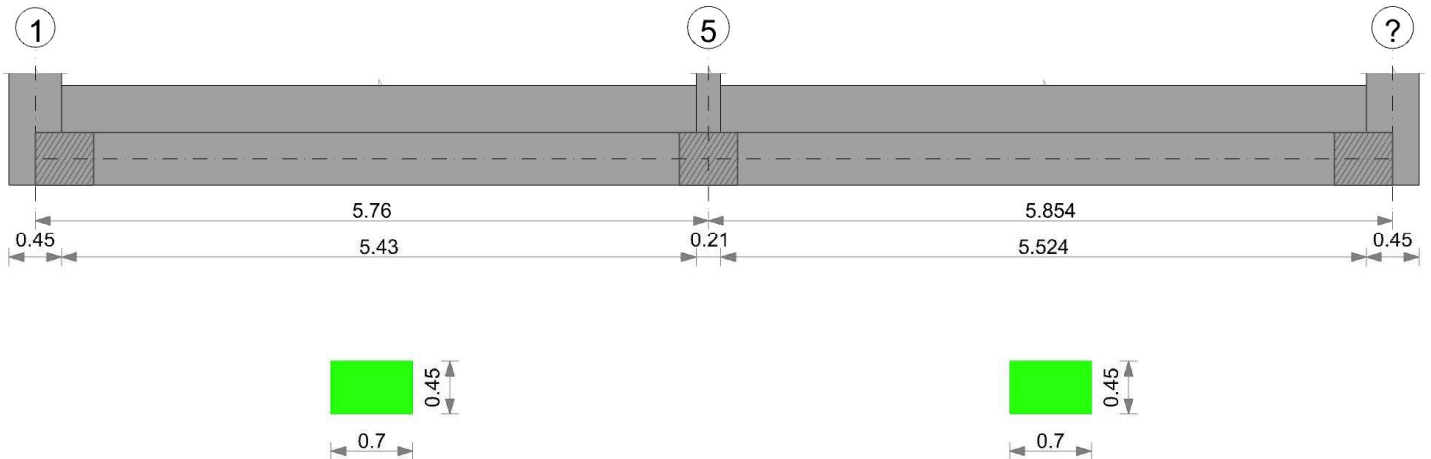
Tipo	Rotazione rigida			Rotazione assoluta					Distorsione angolare positiva					Distorsione angolare negativa					Verifica
	RR adm	RR	Comb.	R Adm	R Max	Nodo I	Nodo J	Comb.	D+ adm	D+	Nodo	Comb.	D- adm	D-	Nodo	Comb.	D- adm	D-	
E	0.19	0	SLE RA 18	0.19	0	135	136	SLE RA 18	0.19	0	135	SLE RA 18	0.1	0	134	SLE RA 18	0.1	0	Si



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.	
D	0.19	0	SLE RA 1	0.19	0	110	111	SLE RA 1	0.19	0	110	SLE RA 1	0.1	0	111	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	110	111	SLE RA 1	0.19	0	110	SLE RA 1	0.1	0	111	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 70x45	Rettangolare	0.7	0.45	0.035	0.035	0.035

Diagramma verifica stato limite ultimo flessione

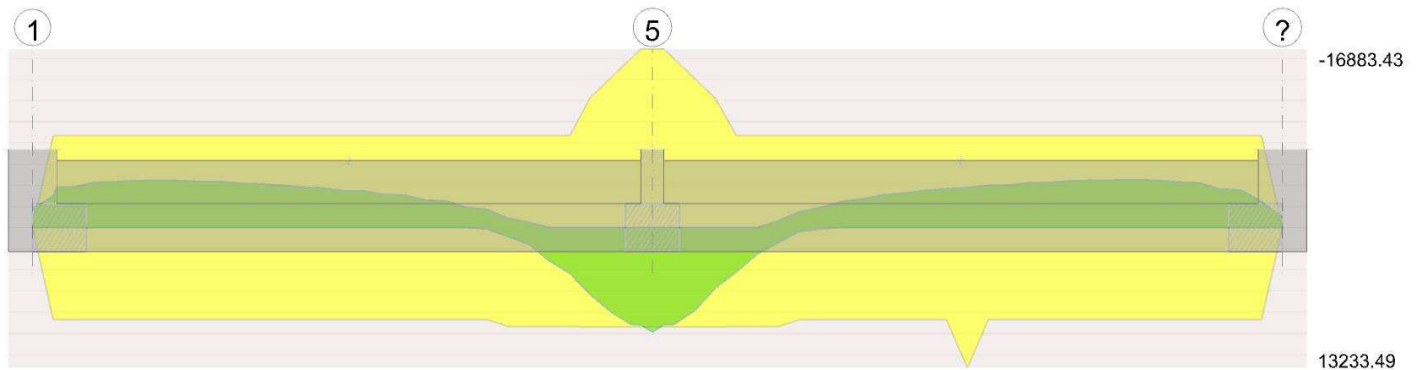
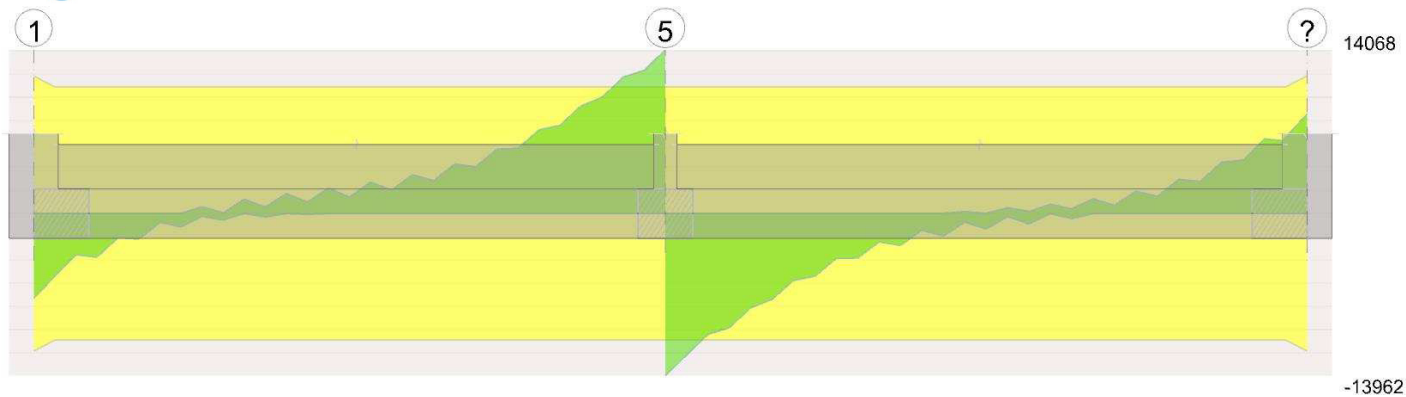


Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 1 - 5, sezione R 70x45, aste 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 44, 45

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	2222	SLV 5	0.085	2654	5734	SLV 5	15877	Si
0.23	0.41	0.0002	2096	SLV 5	0.085	2654	5409	SLV 5	15877	Si
2.88	0.41	0.0002	1390	SLV 5	0.085	2654	3610	SLU 81	15877	Si
5.65	0.41	0.0002	1914	SLU 81	0.017	2728	4940	SLU 81	15877	Si
5.76	0.41	0.0002	1914	SLU 81	0.017	2728	4939	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

Rara									Quasi permanente				Verifica
x	d	Af	M	Comb	σc	σc limite	σf	σf limite	M	Comb	σc	σc limite	
0	0.41	0.00000171	1440	SLE RA 18	41698	1494000	517054	36000000	1265	SLE QP 2	36634	1120500	Si
0.23	0.41	0.00000171	1366	SLE RA 18	39550	1494000	490415	36000000	1199	SLE QP 2	34710	1120500	Si
2.88	0.41	0.00000171	1014	SLE RA 18	29355	1494000	364002	36000000	880	SLE QP 2	25483	1120500	Si
5.65	0.41	0.00000171	1389	SLE RA 18	40214	1494000	498649	36000000	1208	SLE QP 2	34986	1120500	Si
5.76	0.41	0.00000171	1388	SLE RA 18	40200	1494000	498482	36000000	1208	SLE QP 2	34973	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	33	25	159	SLV 5	0.36	1618	1.653	12.65	9.57	26.54	SLV 5	0.35	1397	1.556	Si
0.23	31	23	159	SLV 5	0.36	1618	1.653	11.99	8.97	26.54	SLV 5	0.36	1618	1.653	Si
2.88	23	13	159	SLV 5	0.36	1618	1.653	8.8	5.1	26.54	SLV 5	0.36	1618	1.653	Si
5.65	31	15	159	SLV 5	0.36	1618	1.653	12.08	5.78	26.54	SLV 6	0.36	1618	1.653	Si
5.76	31	15	159	SLV 6	0.36	1618	1.653	12.08	5.77	26.54	SLV 6	0.36	1618	1.653	Si

Campata 2 tra i fili 5 - ?, sezione R 70x45, aste 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60

Verifiche di resistenza della suola di fondazione

x	d	Af	M	Comb	x/d	Mult	V	Comb	Vult	Verifica
0	0.41	0.0002	1914	SLU 81	0.017	2728	4939	SLU 81	15877	Si
0.11	0.41	0.0002	1912	SLU 81	0.017	2728	4934	SLU 81	15877	Si
2.93	0.41	0.0002	1356	SLV 10	0.085	2654	3498	SLV 10	15877	Si
5.63	0.41	0.0002	2142	SLV 10	0.085	2654	5529	SLV 10	15877	Si
5.85	0.41	0.0002	2275	SLV 10	0.085	2654	5872	SLV 10	15877	Si

Verifiche delle tensioni di esercizio

Rara									Quasi permanente				Verifica
x	d	Af	M	Comb	σc	σc limite	σf	σf limite	M	Comb	σc	σc limite	
0	0.41	0.00000171	1388	SLE RA 18	40200	1494000	498482	36000000	1208	SLE QP 2	34973	1120500	Si
0.11	0.41	0.00000171	1387	SLE RA 18	40156	1494000	497936	36000000	1207	SLE QP 2	34933	1120500	Si
2.93	0.41	0.00000171	958	SLE RA 18	27732	1494000	343879	36000000	829	SLE QP 2	24001	1120500	Si
5.63	0.41	0.00000171	1323	SLE RA 18	38319	1494000	475161	36000000	1157	SLE QP 2	33512	1120500	Si
5.85	0.41	0.00000171	1399	SLE RA 18	40511	1494000	502339	36000000	1225	SLE QP 2	35466	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	31	15	159	SLV 6	0.36	1618	1.653	12.08	5.77	26.54	SLV 6	0.36	1618	1.653	Si
0.11	31	15	159	SLV 6	0.36	1618	1.653	12.07	5.76	26.54	SLV 6	0.36	1618	1.653	Si
2.93	21	14	159	SLV 10	0.36	1618	1.653	8.29	5.27	26.54	SLV 10	0.36	1618	1.653	Si
5.63	30	25	159	SLV 10	0.36	1618	1.653	11.57	9.85	26.54	SLV 10	0.36	1608	1.649	Si
5.85	32	27	159	SLV 10	0.36	1618	1.653	12.25	10.5	26.54	SLV 10	0.33	1141	1.432	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	yR	Rd	Ed	Rd/Ed	Verifica
12.06	1.3	SLU 39	ST	LT	-368	-135	-97640	0	0	19	0	0	1.1	29700	392	75.79	Si
12.06	1.3	SLV 8	SIS	LT	-6767	11430	-50869	-8	13	19	0	0	1.1	15473	13283	1.16	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste										Size X	Size Y	Comb	Type	Cond	yR	Rd	Ed	Rd/Ed	Verifica
31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60										12.06	1.3	SLU 81	ST	BT	2.3	516570	116746	4.42	Si



Aste	Size X	Size Y	Comb	Type	Cond	yR	Rd	Ed	Rd/Ed	Verifica
31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60	12.06	1.3	SLV 5	SIS	BT	2.3	440089	106931	4.12	SI
31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60	12.06	1.3	SLD 5	SIS	BT	2.3	480961	90800	5.3	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	ys	Fi	Coes	Amax
0	-147	-116746	14327.3	-5280.77	0	0	-0.05	0.12	1.05	11.97	1496	2060	0	14430	
0	-11606	-106931	19676.22	-13490.79	0	-6	-0.13	0.18	0.93	11.81	1496	2060	0	14430	0.07
0	-4997	-90800	13710.65	-8031.43	0	-3	-0.09	0.15	1	11.89	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	0.02	0	0	0.23	0	0	0	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.02	0	0	0.23	0	0	0.03	0	0	0	0	0	0	0	1	1	1	0	0	0
1	5	0	0	0.02	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

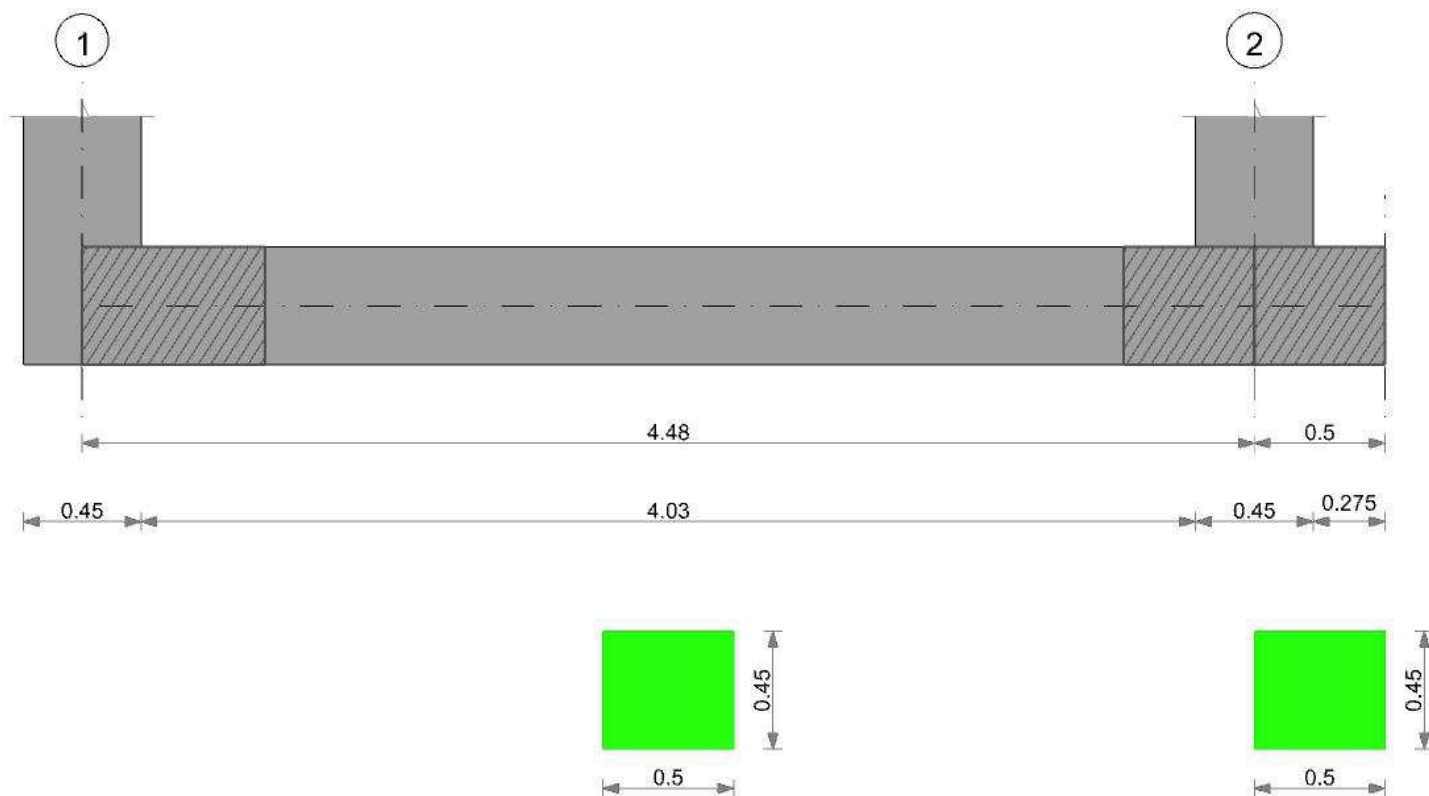
Tipo	Assoluto				Differenziale				Relativo				Rapp. inflessione				Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo J	Comb.	Sr adm	Sr	Nodo	Comb.	Ri adm	Ri	Comb.	
E	0.05	0	52	SLE RA 18	0.05	0	52	67	SLE RA 18	0.05	0	52	SLE RA 18	0.0033	0	SLE RA 1	SI
D	0.05	0	37	SLE RA 1	0.05	0	37	37	SLE RA 1	0.05	0	52	SLE RA 1	0.0033	0	SLE RA 1	SI
Z	0.05	0	37	SLE RA 1	0.05	0	37	37	SLE RA 1	0.05	0	52	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	52	67	SLE RA 18	0.19	0	52	SLE RA 18	0.1	0	37	SLE RA 1
D	0.19	0	SLE RA 1	0.19	0	37	52	SLE RA 1	0.19	0	37	SLE RA 1	0.1	0	52	SLE RA 1
Z	0.19	0	SLE RA 1	0.19	0	37	52	SLE RA 1	0.19	0	37	SLE RA 1	0.1	0	52	SLE RA 1

CORDOLO 7

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000

Calcestruzzo: C25/30 Rck 3000000

Elenco delle sezioni

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

Diagramma verifica stato limite ultimo flessione

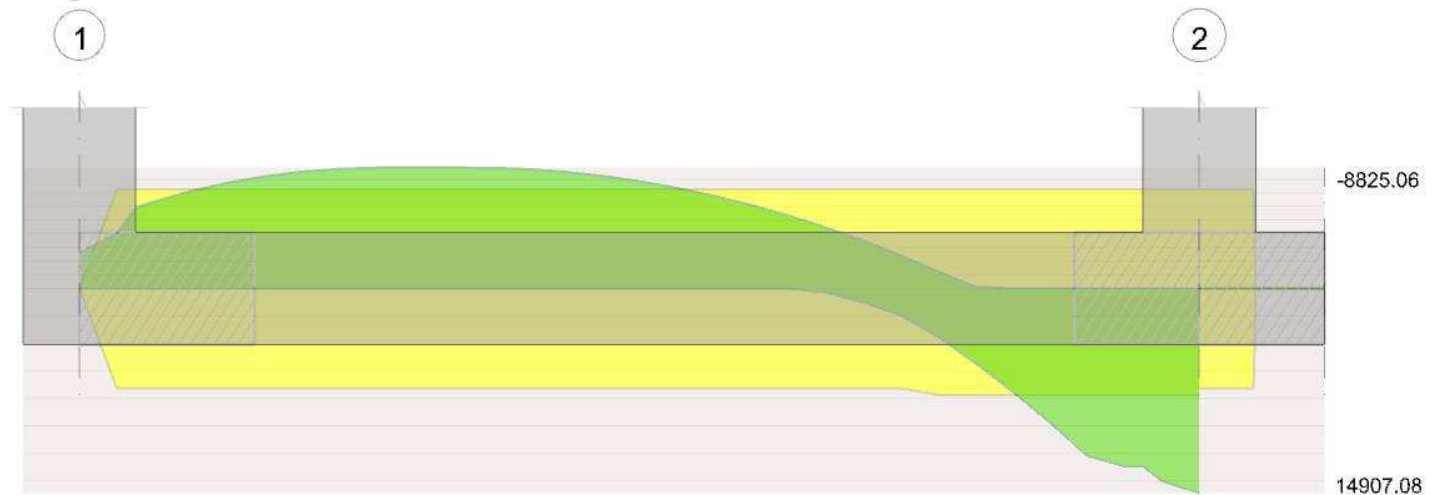


Diagramma verifica stato limite ultimo taglio



Output campate

Campata 1 tra i fili 1 - 2, sezione R 50x45, aste 66, 65, 64

Verifiche a flessione in famiglia SLU

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.000509	0.052	0.000509	0.052							-4352.96	SLU 81	-5625.44	-7755.45	0.113	1.38	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: $\epsilon_{c2} = 0.002$, $\epsilon_{yd} = 0.0019$

x	A sup.	C.b. sup.	A inf.	C.b. inf.	M+ela	Comb.	M+des	M+ult	x/d	coeff	M-ela	Comb.	M-des	M-ult	x/d	coeff	Verifica
0.23	0.000509	0.052	0.000509	0.052							-4633.72	SLV 5	-5891.2	-7266.79	0.197	1.23	Si

Verifiche a taglio in famiglia SLU

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcl	Vrsl	Vult	cotgθ	coeff	Verifica
0	0.0000079	0.000509	0	-9834	SLU 81	-9834	-8455	-71432	-12529	-12529	1	1.27	Si
0.23	0.0000079	0.000509	0	-7904	SLU 81	-7904	-7764	-63178	-11081	-11081	1	1.4	Si
2.24	0.0000079	0.000509	0	3933	SLU 81	3933	7764	63178	11081	11081	1	2.82	Si
4.48	0.0000079	0.000509	0	19170	SLU 81	19170	7764	63178	11081	11081	1	0.58	Si

Verifiche a taglio in famiglia SLV

x	A st	A sl	A sag	Vela	Comb.	Vdes	Vrd	Vrcl	Vrsl	Vult	cotgθ	coeff	Verifica
0	0.0000079	0.000509	0	-9994	SLV 5	-9994	-8455	-71432	-12529	-12529	1	1.25	Si
0.23	0.0000079	0.000509	0	-7886	SLV 5	-7886	-7764	-63178	-11081	-11081	1	1.41	Si
2.24	0.0000079	0.000509	0	3704	SLV 5	3704	7764	63178	11081	11081	1	2.99	Si
4.48	0.0000079	0.000509	0	17041	SLV 1	17041	7764	63178	11081	11081	1	0.65	Si

Verifiche delle tensioni in esercizio

x	Rara								Quasi permanente								Verifica
	Mela	Comb.	Mdes	σ_c	σ_{clim}	σ_f	σ_{flim}		Mela	Comb.	Mdes	σ_c	σ_{clim}	σ_{FRP}	$\sigma_{FRP lim}$		
0	-1727.78	18	-1727.78	-102387	1494000	0	36000000		-1534.18	2	-1534.18	-90914	1120500				Si
0.23	-3185.01	18	-4117.16	217771	1494000	3266561	36000000		-2835.06	2	-3667.33	193978	1120500				Si
2.24	-5343.15	18	-5792.98	612629	1494000	31179534	36000000		-4766.64	2	-5167.59	546491	1120500				Si

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	-5169	-2717	-11081	SLV 5	0.36	1618	1.653	-2835.06	-1798.67	-7266.79	SLV 5	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	yR	Rd	Ed	Rd/Ed	Verifica
4.7	1.1	SLU 39	ST	LT	-119	104	-31118	0	0	19	0	0	1.1	9465	159	59.66	Si

Verifiche geotecniche di capacità portante sul piano di posa



Aste	Size X	Size Y	Comb	Type	Cond	yR	Rd	Ed	Rd/Ed	Verifica
66,65,64	4.7	1.1	SLU 81	ST	BT	2.3	217595	37327	5.83	Si
66,65,64	4.7	1.1	SLV 2	SIS	BT	2.3	190881	32796	5.82	Si
66,65,64	4.7	1.1	SLD 4	SIS	BT	2.3	199012	27560	7.22	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	ys	Fi	Coes	Amax
0	115	-37327	-223.04	1420.82	0	0	0.04	-0.01	1.09	4.63	1496	2060	0	14430	
0	4168	-32796	-2062.29	-1251.85	0	7	-0.04	-0.06	0.97	4.63	1496	2060	0	14430	0.07
0	2005	-27560	-1036.65	2342.33	0	4	0.08	-0.04	1.02	4.53	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	Ik	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

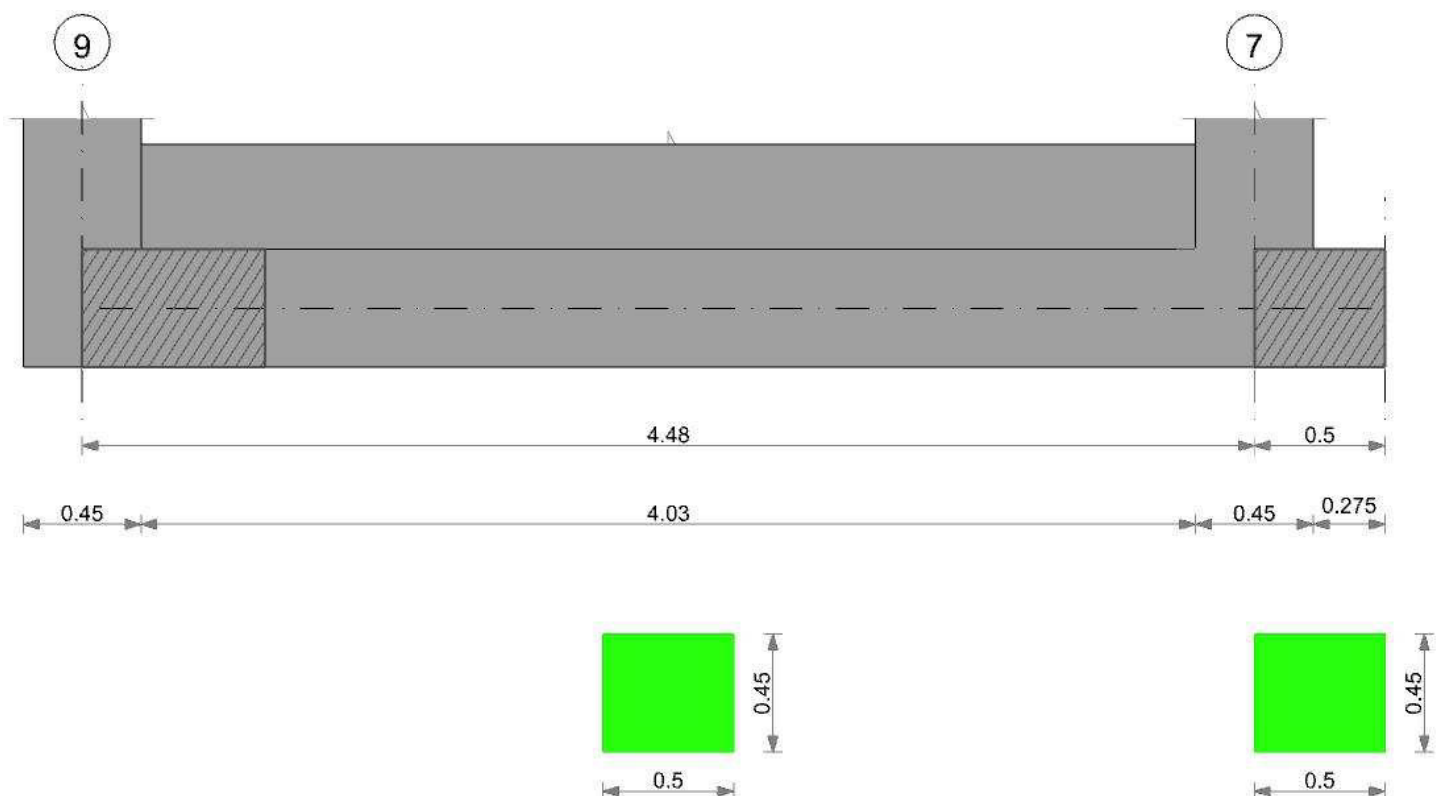
Tipo	Assoluto				Differenziale				Relativo				Rapp. inflessione				Verifica
	Sa adm	Sa	Nodo	Comb.	Sd adm	Sd	Nodo I	Nodo J	Comb.	Sr adm	Sr	Nodo	Comb.	RI adm	RI	Comb.	
E	0.05	0	166	SLE RA 18	0.05	0	166	35	SLE RA 18	0.05	0	166	SLE RA 1	0.0033	0	SLE RA 1	Si
D	0.05	0	166	SLE RA 1	0.05	0	166	166	SLE RA 1	0.05	0	166	SLE RA 1	0.0033	0	SLE RA 1	Si
Z	0.05	0	166	SLE RA 1	0.05	0	166	166	SLE RA 1	0.05	0	166	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	166	35	SLE RA 18	0.19	0	166	SLE RA 1	0.1	0	166	SLE RA 1	Si
D	0.19	0	SLE RA 1	0.19	0	166	35	SLE RA 1	0.19	0	166	SLE RA 1	0.1	0	166	SLE RA 1	Si
Z	0.19	0	SLE RA 1	0.19	0	166	35	SLE RA 1	0.19	0	166	SLE RA 1	0.1	0	166	SLE RA 1	Si

CORDOLO 8

Geometria



Caratteristiche dei materiali

Acciaio: B450C Fyk 45000000

Calcestruzzo: C25/30 Rck 3000000

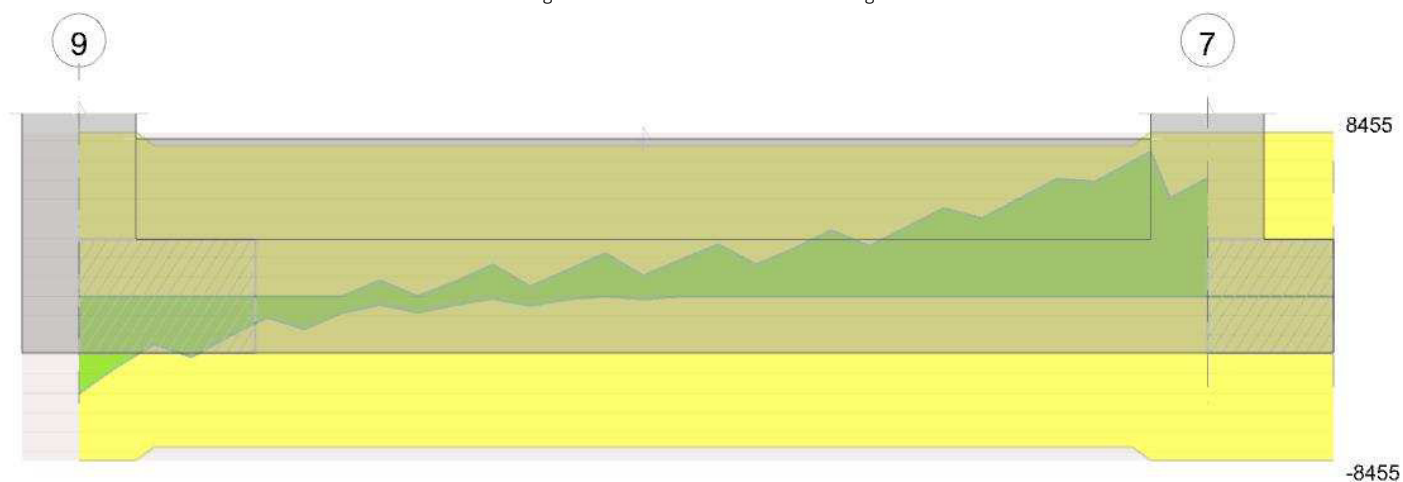
Elenco delle sezioni

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

Diagramma verifica stato limite ultimo flessione



Diagramma verifica stato limite ultimo taglio



Output campate

Funzionamento trasversale della suola di fondazione

Campata 1 tra i fili 9 - 7, sezione R 50x45, aste 77, 76, 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	1317	SLV 10	0.085	2655	4581	SLV 10	15877	Si
0.23	0.41	0.0002	1224	SLV 10	0.085	2655	4257	SLV 10	15877	Si
2.24	0.41	0.0002	788	SLU 81	0.017	2730	2740	SLU 81	15877	Si
4.25	0.41	0.0002	927	SLU 81	0.017	2730	3226	SLU 81	15877	Si
4.48	0.41	0.0002	936	SLU 81	0.017	2730	3255	SLU 81	15877	Si

Verifiche delle tensioni di esercizio

Caratteristiche delle tensioni di esercizio			Rara						Quasi permanente				Verifica
x	d	Af	M	Comb	σ_c	σ_c limite	σ_f	σ_f limite	M	Comb	σ_c	σ_c limite	
0	0.41	0.00000171	797	SLE RA 18	23064	1494000	285992	36000000	697	SLE QP 2	20194	1120500	Si
0.23	0.41	0.00000171	750	SLE RA 18	21723	1494000	269370	36000000	656	SLE QP 2	19005	1120500	Si
2.24	0.41	0.00000171	571	SLE RA 18	16544	1494000	205152	36000000	497	SLE QP 2	14404	1120500	Si
4.25	0.41	0.00000171	673	SLE RA 18	19495	1494000	241734	36000000	587	SLE QP 2	17005	1120500	Si
4.48	0.41	0.00000171	679	SLE RA 18	19670	1494000	243908	36000000	593	SLE QP 2	17163	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	24	22	159	SLV 10	0.36	1618	1.653	6.97	6.2	26.55	SLV 10	0.36	1618	1.653	Si
0.23	23	20	159	SLV 10	0.36	1618	1.653	6.56	5.67	26.55	SLV 10	0.36	1618	1.653	Si
2.24	17	9	159	SLV 14	0.36	1618	1.653	4.97	2.55	26.55	SLV 14	0.36	1618	1.653	Si
4.25	20	9	159	SLV 15	0.36	1618	1.653	5.87	2.54	26.55	SLV 15	0.36	1618	1.653	Si
4.48	21	9	159	SLV 15	0.36	1618	1.653	5.93	2.6	26.55	SLV 15	0.36	1618	1.653	Si

Verifiche geotecniche

Verifiche geotecniche di scorrimento sul piano di posa

Size X	Size Y	Comb.	Sis.	Cnd	Fx	Fy	Fz	IncX	IncY	Phi	Ad	RPI	yR	Rd	Ed	Rd/Ed	Verifica
4.7	1.1	SLU 39	ST	LT	134	-36	-31892	0	0	19	0	0	1.1	9701	139	69.84	Si

Verifiche geotecniche di capacità portante sul piano di posa

Aste	Size X	Size Y	Comb	Type	Cond	yR	Rd	Ed	Rd/Ed	Verifica
77,76,75,74,73,72,71,70,69,68,67	4.7	1.1	SLU 81	ST	BT	2.3	185293	38176	4.85	Si
77,76,75,74,73,72,71,70,69,68,67	4.7	1.1	SLV 13	SIS	BT	2.3	150681	34193	4.41	Si



Aste	Size X	Size Y	Comb	Type	Cond	yR	Rd	Ed	Rd/Ed	Verifica
77,76,75,74,73,72,71,70,69,68,67	4.7	1.1	SLD 13	SIS	BT	2.3	168320	29491	5.71	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	ys	Fi	Coes	Amax
0	-34	-38176	3363.3	-722.06	0	0	-0.02	0.09	0.92	4.67	1496	2060	0	14430	
0	-4283	-34193	5176.94	-3292.81	0	-7	-0.1	0.15	0.8	4.51	1496	2060	0	14430	0.07
0	-1893	-29491	3510.01	-1679.78	0	-4	-0.06	0.12	0.86	4.59	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	0.03	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 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

Verifica gestionale - 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	5	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	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

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 (ZE): 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.

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 ζ_E 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 (ζ_E)	TR	(TR/TRrif)^.41	fa
Maschio 13	PF	0.256	SLV 6	0.059	0.2416	14	0.2358	0.2351
Maschio 1	V	2.044	SLV 5	0.3624	1.4833	1618	1.6529	1.4831
Maschio 27	PFFP	0.468	SLV 4	0.1073	0.4393	62	0.4339	0.4391
Maschio 8	R	1.589	SLV 14	0.3624	1.4833	1618	1.6529	1.4831
Trave di accoppiamento 11	PF	0.278	SLV 10	0.0656	0.2685	19	0.2672	0.2672
Trave di accoppiamento 11	V	0.668	SLV 10	0.1593	0.6521	158	0.6368	0.6508

Coefficienti di sicurezza riferiti al solo materiale muratura

Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 1	PF SLU	232.274	SLU 43	Si
Maschio 1	V SLU	225.242	SLU 81	Si
Maschio 1	PF	2.763	SLV 12	Si
Maschio 1	V	3.36	SLV 12	Si
Maschio 1	PFFP	9.005	SLV 15	Si
Maschio 1	R	6.024	SLV 2	Si
Maschio 3	PF SLU	4.077	SLV 39	Si
Maschio 3	V SLU	39.043	SLU 43	Si
Maschio 3	PF	2.379	SLV 9	Si
Maschio 3	V	5.054	SLV 9	Si
Maschio 3	PFFP	13.866	SLV 12	Si
Maschio 3	R	5.027	SLV 1	Si
Maschio 4	PF SLU	78.821	SLU 43	Si
Maschio 4	V SLU	40.242	SLU 81	Si
Maschio 4	PF	11.236	SLV 3	Si
Maschio 4	V	3.339	SLV 4	Si
Maschio 4	PFFP	7.467	SLV 12	Si
Maschio 4	R	6.441	SLV 5	Si
Maschio 5	PF SLU	4.173	SLU 39	Si
Maschio 5	V SLU	19.655	SLU 39	Si
Maschio 5	PF	1.829	SLV 6	Si
Maschio 5	V	5.198	SLV 11	Si
Maschio 5	PFFP	9.649	SLV 7	Si
Maschio 5	R	5.994	SLV 4	Si
Maschio 7	PF SLU	37.872	SLU 43	Si
Maschio 7	V SLU	91.553	SLU 81	Si
Maschio 7	PF	4.543	SLV 4	Si
Maschio 7	V	4.542	SLV 3	Si
Maschio 7	PFFP	39.451	SLV 16	Si
Maschio 7	R	3.08	SLV 2	Si
Maschio 8	PF SLU	2.181	SLU 43	Si
Maschio 8	V SLU	22.206	SLU 81	Si
Maschio 8	PF	1.467	SLV 3	Si
Maschio 8	V	29.076	SLV 3	Si
Maschio 8	PFFP	41.539	SLV 3	Si
Maschio 8	R	1.77	SLV 14	Si
Maschio 9	PF SLU	11.919	SLU 39	Si
Maschio 9	V SLU	61.328	SLU 43	Si
Maschio 9	PF	4.155	SLV 12	Si
Maschio 9	V	5.984	SLV 12	Si
Maschio 9	PFFP	13.065	SLV 9	Si
Maschio 9	R	4.902	SLV 4	Si
Maschio 10	PF SLU	169.776	SLU 43	Si
Maschio 10	V SLU	87.803	SLU 81	Si
Maschio 10	PF	4.369	SLV 1	Si
Maschio 10	V	4.149	SLV 1	Si
Maschio 10	PFFP	8.163	SLV 5	Si
Maschio 10	R	5.35	SLV 12	Si
Maschio 11	PF SLU	15.13	SLU 39	Si
Maschio 11	V SLU	30.634	SLU 39	Si
Maschio 11	PF	3.54	SLV 7	Si
Maschio 11	V	6.295	SLV 10	Si
Maschio 11	PFFP	11.036	SLV 6	Si
Maschio 11	R	5.061	SLV 15	Si
Maschio 12	PF SLU	3.893	SLU 81	Si
Maschio 12	V SLU	21.241	SLU 81	Si
Maschio 12	PF	1.574	SLV 7	Si
Maschio 12	V	2.861	SLV 7	Si
Maschio 12	PFFP	11.304	SLV 3	Si
Maschio 12	R	4.882	SLV 14	Si
Maschio 13	PF SLU	2.56	SLU 43	Si
Maschio 13	V SLU	16.721	SLU 81	Si
Maschio 13	PF	0	SLV 5	No
Maschio 13	V	4.426	SLV 10	Si
Maschio 13	PFFP	4.361	SLV 6	Si
Maschio 13	R	6.268	SLV 15	Si
Maschio 14	PF SLU	125.452	SLU 39	Si
Maschio 14	V SLU	521.447	SLU 43	Si
Maschio 14	PF	10.671	SLV 5	Si



Desc.	Stato limite	Coeff.s.	Comb.	Verifica
Maschio 14	V	11.679	SLV 8	Si
Maschio 14	PFFP	0.895	SLV 16	No
Maschio 14	R	4.352	SLV 1	Si
Maschio 16	PF SLU	40.639	SLU 43	Si
Maschio 16	V SLU	254.462	SLU 43	Si
Maschio 16	PF	3.861	SLV 12	Si
Maschio 16	V	6.938	SLV 5	Si
Maschio 16	PFFP	2.262	SLV 10	Si
Maschio 16	R	4.901	SLV 4	Si
Maschio 17	PF SLU	2.504	SLU 39	Si
Maschio 17	V SLU	8.192	SLU 81	Si
Maschio 17	PF	0	SLV 4	No
Maschio 17	V	4.751	SLV 4	Si
Maschio 17	PFFP	1.408	SLV 9	Si
Maschio 17	R	2.465	SLV 4	Si
Maschio 18	PF SLU	6.094	SLU 39	Si
Maschio 18	V SLU	33.823	SLU 81	Si
Maschio 18	PF	0.505	SLV 13	No
Maschio 18	V	8.402	SLV 13	Si
Maschio 18	PFFP	1.405	SLV 11	Si
Maschio 18	R	2.323	SLV 2	Si
Maschio 19	PF SLU	3.799	SLU 43	Si
Maschio 19	V SLU	7.238	SLU 81	Si
Maschio 19	PF	1.937	SLV 15	Si
Maschio 19	V	7.668	SLV 15	Si
Maschio 19	PFFP	0	SLV 3	No
Maschio 19	R	2.39	SLV 13	Si
Maschio 20	PF SLU	1.427	SLU 43	Si
Maschio 20	V SLU	4.298	SLU 81	Si
Maschio 20	PF	1.164	SLV 4	Si
Maschio 20	V	4.497	SLV 2	Si
Maschio 20	PFFP	0	SLV 7	No
Maschio 20	R	2.114	SLV 2	Si
Maschio 21	PF SLU	5.117	SLU 39	Si
Maschio 21	V SLU	33.183	SLU 64	Si
Maschio 21	PF	0.699	SLV 2	No
Maschio 21	V	7.672	SLV 15	Si
Maschio 21	PFFP	1.467	SLV 7	Si
Maschio 21	R	2.371	SLV 13	Si
Maschio 22	PF SLU	2.194	SLU 39	Si
Maschio 22	V SLU	6.863	SLU 81	Si
Maschio 22	PF	0	SLV 11	No
Maschio 22	V	4.373	SLV 15	Si
Maschio 22	PFFP	0	SLV 5	No
Maschio 22	R	2.426	SLV 15	Si
Maschio 23	PF SLU	52.808	SLU 43	Si
Maschio 23	V SLU	191.717	SLU 81	Si
Maschio 23	PF	6.471	SLV 4	Si
Maschio 23	V	9.543	SLV 4	Si
Maschio 23	PFFP	4.355	SLV 16	Si
Maschio 23	R	1.655	SLV 1	Si
Maschio 24	PF SLU	6.961	SLU 39	Si
Maschio 24	V SLU	14.936	SLU 39	Si
Maschio 24	PF	1.432	SLV 5	Si
Maschio 24	V	7.404	SLV 5	Si
Maschio 24	PFFP	1.252	SLV 13	Si
Maschio 24	R	2.509	SLV 1	Si
Maschio 25	PF SLU	66.232	SLU 43	Si
Maschio 25	V SLU	5777.225	SLU 39	Si
Maschio 25	PF	1.83	SLV 1	Si
Maschio 25	V	5.876	SLV 14	Si
Maschio 25	PFFP	0	SLV 5	No
Maschio 25	R	2.518	SLV 3	Si
Maschio 26	PF SLU	6.202	SLU 39	Si
Maschio 26	V SLU	12.751	SLU 81	Si
Maschio 26	PF	2.041	SLV 10	Si
Maschio 26	V	5.992	SLV 10	Si
Maschio 26	PFFP	1.282	SLV 3	Si
Maschio 26	R	2.46	SLV 14	Si
Maschio 27	PF SLU	1.85	SLU 43	Si
Maschio 27	V SLU	5.887	SLU 43	Si
Maschio 27	PF	0	SLV 3	No
Maschio 27	V	5.736	SLV 4	Si
Maschio 27	PFFP	0	SLV 1	No
Maschio 27	R	1.87	SLV 13	Si
Maschio 28	PF SLU	26.191	SLU 81	Si
Maschio 28	V SLU	873.143	SLU 43	Si
Maschio 28	PF	7.707	SLV 6	Si
Maschio 28	V	12.006	SLV 11	Si
Maschio 28	PFFP	0.889	SLV 2	No
Maschio 28	R	4.346	SLV 14	Si

Verifica maschi in muratura

Maschio	Stato limite	Molt.	Comb.	PGA	iPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
1	PF	2.341	SLV 16	0.362	1.483	1618	1.653	Si
	V	2.044	SLV 5	0.362	1.483	1618	1.653	Si
	PFFP	2.421	SLV 15	0.362	1.483	1618	1.653	Si
	R	3.714	SLV 2	0.362	1.483	1618	1.653	Si
3	PF	1.616	SLV 8	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.608	SLV 12	0.362	1.483	1618	1.653	Si



Maschio	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
4	R	3.461	SLV 5	0.362	1.483	1618	1.653	Si
	PF	2.223	SLV 11	0.362	1.483	1618	1.653	Si
	V	3.052	SLV 8	0.362	1.483	1618	1.653	Si
	PFFP	1.896	SLV 12	0.362	1.483	1618	1.653	Si
5	R	3.815	SLV 5	0.362	1.483	1618	1.653	Si
	PF	1.907	SLV 11	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.436	SLV 7	0.362	1.483	1618	1.653	Si
7	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PF	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.103	SLV 13	0.362	1.483	1618	1.653	Si
	PFFP	1000	SLV 1	0.362	1.483	1618	1.653	Si
8	R	3	SLV 1	0.362	1.483	1618	1.653	Si
	PF	1.607	SLV 3	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.914	SLV 3	0.362	1.483	1618	1.653	Si
9	R	1.589	SLV 14	0.362	1.483	1618	1.653	Si
	PF	2.275	SLV 5	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.779	SLV 9	0.362	1.483	1618	1.653	Si
10	R	3.608	SLV 4	0.362	1.483	1618	1.653	Si
	PF	1.775	SLV 5	0.362	1.483	1618	1.653	Si
	V	2.399	SLV 14	0.362	1.483	1618	1.653	Si
	PFFP	1.828	SLV 5	0.362	1.483	1618	1.653	Si
11	R	3.15	SLV 12	0.362	1.483	1618	1.653	Si
	PF	2.95	SLV 10	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	2.536	SLV 6	0.362	1.483	1618	1.653	Si
12	R	3.838	SLV 15	0.362	1.483	1618	1.653	Si
	PF	1.331	SLV 7	0.319	1.306	1065	1.392	Si
	V	2.997	SLV 11	0.362	1.483	1618	1.653	Si
	PFFP	2.075	SLV 3	0.362	1.483	1618	1.653	Si
13	R	3.049	SLV 14	0.362	1.483	1618	1.653	Si
	PF	0.256	SLV 6	0.059	0.242	14	0.236	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.323	SLV 6	0.317	1.299	1045	1.382	Si
14	R	3.287	SLV 11	0.362	1.483	1618	1.653	Si
	PF	2.768	SLV 15	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.941	SLV 16	0.228	0.935	397	0.929	No
16	R	4.047	SLV 1	0.362	1.483	1618	1.653	Si
	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	1.751	SLV 10	0.362	1.483	1618	1.653	Si
17	R	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PF	0.321	SLV 8	0.075	0.308	26	0.304	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.313	SLV 9	0.315	1.29	1021	1.369	Si
18	R	2.249	SLV 4	0.362	1.483	1618	1.653	Si
	PF	0.689	SLV 13	0.163	0.665	166	0.65	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.205	SLV 11	0.291	1.19	798	1.237	Si
19	R	2.138	SLV 2	0.362	1.483	1618	1.653	Si
	PF	1.313	SLV 8	0.315	1.29	1021	1.369	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.6	SLV 8	0.142	0.583	122	0.573	No
20	R	2.225	SLV 13	0.362	1.483	1618	1.653	Si
	PF	1.044	SLV 15	0.255	1.042	537	1.052	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.874	SLV 11	0.212	0.869	327	0.858	No
21	R	1.871	SLV 2	0.362	1.483	1618	1.653	Si
	PF	0.804	SLV 2	0.192	0.787	251	0.77	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.254	SLV 7	0.302	1.235	892	1.295	Si
22	R	2.207	SLV 13	0.362	1.483	1618	1.653	Si
	PF	0.351	SLV 15	0.079	0.323	30	0.322	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.911	SLV 6	0.222	0.907	367	0.9	No
23	R	2.203	SLV 15	0.362	1.483	1618	1.653	Si
	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	3.836	SLV 16	0.362	1.483	1618	1.653	Si
24	R	1.643	SLV 1	0.362	1.483	1618	1.653	Si
	PF	1.186	SLV 5	0.286	1.172	763	1.214	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.2	SLV 13	0.291	1.19	799	1.238	Si
25	R	2.348	SLV 1	0.362	1.483	1618	1.653	Si
	PF	1.198	SLV 5	0.289	1.183	785	1.229	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.805	SLV 5	0.195	0.798	261	0.782	No
26	R	2.44	SLV 3	0.362	1.483	1618	1.653	Si
	PF	1.688	SLV 10	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	1.217	SLV 3	0.295	1.206	832	1.258	Si
27	R	2.293	SLV 14	0.362	1.483	1618	1.653	Si
	PF	0.487	SLV 4	0.112	0.46	69	0.453	No
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
	PFFP	0.468	SLV 4	0.107	0.439	62	0.434	No
28	R	1.792	SLV 13	0.362	1.483	1618	1.653	Si
	PF	2.331	SLV 4	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si



Maschio	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
	PFFP	0.933	SLV 1	0.226	0.926	387	0.919	No
	R	4.039	SLV 14	0.362	1.483	1618	1.653	Si

Verifica travi di collegamento in muratura

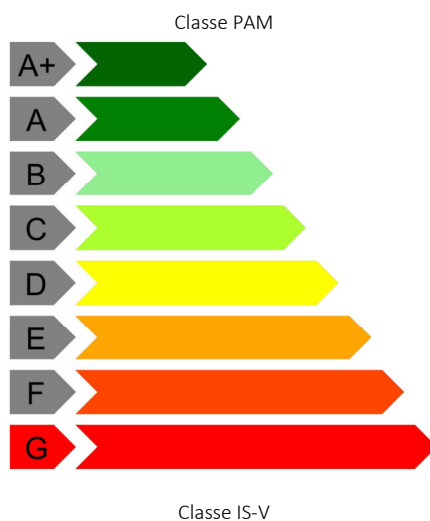
Trave	Stato limite	Molt.	Comb.	PGA	IPGA (ZE)	TR	(TR/TRrif)^.41	Verifica
1	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.625	SLV 8	0.362	1.483	1618	1.653	Si
3	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.749	SLV 11	0.362	1.483	1618	1.653	Si
4	F	1.008	SLV 11	0.246	1.007	485	1.009	Si
	V	3.192	SLV 6	0.362	1.483	1618	1.653	Si
7	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.885	SLV 16	0.362	1.483	1618	1.653	Si
9	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1.778	SLV 3	0.362	1.483	1618	1.653	Si
11	F	0.278	SLV 10	0.066	0.269	19	0.267	No
	V	0.668	SLV 10	0.159	0.652	158	0.637	No
12	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.703	SLV 13	0.166	0.68	174	0.662	No
13	F	3.728	SLV 8	0.362	1.483	1618	1.653	Si
	V	2.673	SLV 4	0.362	1.483	1618	1.653	Si
14	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.858	SLV 8	0.362	1.483	1618	1.653	Si
15	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.616	SLV 13	0.362	1.483	1618	1.653	Si
16	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.689	SLV 4	0.163	0.665	166	0.65	No
17	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
18	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	1000	SLV 1	0.362	1.483	1618	1.653	Si
19	F	3.639	SLV 15	0.362	1.483	1618	1.653	Si
	V	2.511	SLV 15	0.362	1.483	1618	1.653	Si
20	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.737	SLV 11	0.362	1.483	1618	1.653	Si
21	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.756	SLV 16	0.362	1.483	1618	1.653	Si
22	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.129	SLV 12	0.362	1.483	1618	1.653	Si
23	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	2.769	SLV 3	0.362	1.483	1618	1.653	Si
24	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	3.143	SLV 7	0.362	1.483	1618	1.653	Si
25	F	1000	SLV 1	0.362	1.483	1618	1.653	Si
	V	0.752	SLV 4	0.179	0.733	208	0.713	No

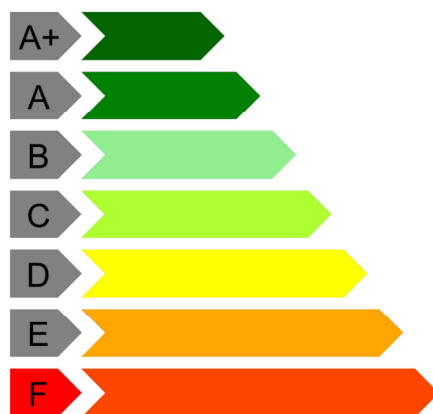
Periodi di ritorno e accelerazioni di aggancio per gli Stati Limite

S. L.	TR,C	PGA,C	TR,Rif	PGA,Rif	Tipo rottura
Stato limite di salvaguardia della vita	0	0	475	0.244	flessione travi

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
0	475	8.22	G	0	F	flessione travi





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]

f_b: resistenza normalizzata a compressione verticale dei blocchi. [daN/m²]

f_k: resistenza caratteristica a compressione della muratura utilizzata. [daN/m²]

f_{vk0}: resistenza caratteristica a taglio in assenza di carichi verticali. [daN/m²]

f_{medio}: 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]

f_{v0}: 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 ammortamento o ingranamento secondo Circolare 7 21-01-19 §C8.7.1.3.1.1.

f_{v,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]

t_{fv}: spessore di calcolo equivalente verticale di uno strato di rinforzo.

t_{fo}: spessore di calcolo equivalente orizzontale di uno strato di rinforzo.

E: modulo di elasticità longitudinale. [daN/m²]

ε_u: 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.

elim,conv / ε,CNR DT-200: dati relativi ai parametri per il calcolo della deformazione di progetto.

α_t: coefficiente che tiene conto della ridotta capacità estensionale delle fibre sollecitate a taglio secondo CNR-DT 215 §4.1.1.

α: coefficiente amplificativo tensione di distacco secondo CNR-DT 215 §3.1 ovvero secondo CNR-DT 200 R1/2013 §5.3.3.

elim,conv: deformazione limite convenzionale del rinforzo FRM.

ε_{f,d}: deformazione di progetto del rinforzo FRM ovvero CRM.

γ_{F,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 taglio tipo Fibrenet.

Comb.: combinazione.

Quota: quota della sezione di verifica. [m]

M: momento flettente nel piano. [daN*m]

N: sforzo normale. [daN]

em: deformazione della muratura.

em_e: deformazione elastica della muratura.

emu: 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.

N_{mur}: 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]

σ_N: tensione media nella zona compressa. [daN/m²]

f_{vd}: resistenza a taglio di calcolo. [daN/m²]

V_t: resistenza a taglio della muratura non rinforzata. [daN]

V_{t,f}: resistenza a taglio del rinforzo (CNR DT215 4.1a). [daN]

V_{t,c}: resistenza a taglio per schiacciamento delle bielle (CNR DT215 4.1b). [daN]

V_{t,c int.}: contributo di resistenza a taglio delle bielle dell'intonaco se considerato. [daN]

V_{t,R}: resistenza a taglio della sezione rinforzata. [daN]

res. > 50%: incremento resistenza superiore al 50% della resistenza non rinforzata in condizioni non sismiche.

f_d: resistenza a compressione di calcolo. [daN/m²]

S_a: accelerazione massima, adimensionalizzata rispetto a g, che l'elemento strutturale subisce durante il sisma.

σ₀: tensione media di compressione. [daN/m²]

M: momento flettente fuori piano. [daN*m]

M_c: momento di collasso per azioni perpendicolari al piano. [daN*m]

Coeff.s.: coefficiente di sicurezza.

N_{top}: sforzo normale in sommità. [daN]

N_{base}: sforzo normale al piede. [daN]

V_{orto}: taglio fuori piano. [daN]

α₀: moltiplicatore secondo [C8.7.1.1].

M*: massa partecipante al cinematisimo. [daN/(m/s²)]

e*: frazione di massa partecipante della muratura [C8.7.1.5].

α₀*: accelerazione spettrale di attivazione del meccanismo [C8.7.1.8]. [m/s²]

α_{lim}: 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.

S_a: accelerazione massima adimensionalizzata rispetto a quella di gravità.

Maschio 1

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-9.429	-17.728	-9.428	-8.718	L1	L2	9.01	0.45	2.6	2.6	2.6			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato _Corti

f _b	f _k	f _{vk0}	f _{medio}	τ ₀	f _{v0}	μ	φ	f _{v,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	t _{fv}	t _{fo}	E	e _u	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,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	α _t	α	elim,conv	ε _{f,d}	γ _{F,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 FRCC in combinazioni non sismiche, $\gamma_M = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	-1.53	591.35	-30147	-0.0000109	0.0004492	0.0035	9.01	127549.17	137355.28	137355.28	232.27	No	Si
SLU 43	1.07	-322.25	-24216	-0.0000087	0.0004492	0.0035	9.01	103758.59	152780.03	152780.03	474.1	No	Si
SLU 45	-1.53	591.35	-30147	-0.0000109	0.0004492	0.0035	9.01	127549.17	137355.28	137355.28	232.27	No	Si
SLU 45	1.07	-322.25	-24216	-0.0000087	0.0004492	0.0035	9.01	103758.59	152780.03	152780.03	474.1	No	Si
SLU 51	-1.53	591.35	-30147	-0.0000109	0.0004492	0.0035	9.01	127549.17	137355.28	137355.28	232.27	No	Si
SLU 51	1.07	-322.25	-24216	-0.0000087	0.0004492	0.0035	9.01	103758.59	152780.03	152780.03	474.1	No	Si
SLU 9	-1.53	446.19	-24137	-0.0000087	0.0004492	0.0035	9.01	103438.17	112385.6	112385.6	251.88	No	Si
SLU 9	1.07	-275.26	-19768	-0.0000071	0.0004492	0.0035	9.01	85499.6	134512.31	134512.31	488.68	No	Si
SLU 50	-1.53	591.35	-30147	-0.0000109	0.0004492	0.0035	9.01	127549.17	137355.28	137355.28	232.27	No	Si
SLU 50	1.07	-322.25	-24216	-0.0000087	0.0004492	0.0035	9.01	103758.59	152780.03	152780.03	474.1	No	Si
SLU 49	-1.53	591.35	-30147	-0.0000109	0.0004492	0.0035	9.01	127549.17	137355.28	137355.28	232.27	No	Si
SLU 49	1.07	-322.25	-24216	-0.0000087	0.0004492	0.0035	9.01	103758.59	152780.03	152780.03	474.1	No	Si
SLU 47	-1.53	591.35	-30147	-0.0000109	0.0004492	0.0035	9.01	127549.17	137355.28	137355.28	232.27	No	Si
SLU 47	1.07	-322.25	-24216	-0.0000087	0.0004492	0.0035	9.01	103758.59	152780.03	152780.03	474.1	No	Si
SLU 44	-1.53	591.35	-30147	-0.0000109	0.0004492	0.0035	9.01	127549.17	137355.28	137355.28	232.27	No	Si
SLU 44	1.07	-322.25	-24216	-0.0000087	0.0004492	0.0035	9.01	103758.59	152780.03	152780.03	474.1	No	Si
SLU 46	-1.53	591.35	-30147	-0.0000109	0.0004492	0.0035	9.01	127549.17	137355.28	137355.28	232.27	No	Si
SLU 46	1.07	-322.25	-24216	-0.0000087	0.0004492	0.0035	9.01	103758.59	152780.03	152780.03	474.1	No	Si
SLU 48	-1.53	591.35	-30147	-0.0000109	0.0004492	0.0035	9.01	127549.17	137355.28	137355.28	232.27	No	Si
SLU 48	1.07	-322.25	-24216	-0.0000087	0.0004492	0.0035	9.01	103758.59	152780.03	152780.03	474.1	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCC in combinazioni sismiche, $\gamma_M = 2$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	-1.53	40359.38	-29192	-0.00002	0.0006738	0.0035	9.01		134951.41	134951.41	3.34		Si
SLV 8	1.07	-8620.55	-24703	-0.0000108	0.0006738	0.0035	9.01		155795.69	155795.69	18.07		Si
SLV 6	-1.53	-37403.9	-29389	-0.0000193	0.0006738	0.0035	9.01		175558.13	175558.13	4.69		Si
SLV 6	1.07	7636.85	-26317	-0.0000111	0.0006738	0.0035	9.01		122703.23	122703.23	16.07		Si
SLV 11	-1.53	38240.43	-23679	-0.0000175	0.0006738	0.0035	9.01		111471.35	111471.35	2.92		Si
SLV 11	1.07	-8369.9	-19304	-0.0000088	0.0006738	0.0035	9.01		132899.21	132899.21	15.88		Si
SLV 10	-1.53	-37428.06	-23872	-0.0000174	0.0006738	0.0035	9.01		152286.99	152286.99	4.07		Si
SLV 10	1.07	7027.58	-20987	-0.0000091	0.0006738	0.0035	9.01		99965.65	99965.65	14.22		Si
SLV 7	-1.53	38264.58	-29196	-0.0000195	0.0006738	0.0035	9.01		134967.67	134967.67	3.53		Si
SLV 7	1.07	-7760.62	-24634	-0.0000106	0.0006738	0.0035	9.01		155502.52	155502.52	20.04		Si
SLV 12	-1.53	40335.23	-23675	-0.0000181	0.0006738	0.0035	9.01		111455.1	111455.1	2.76		Si
SLV 12	1.07	-9229.83	-19374	-0.000009	0.0006738	0.0035	9.01		133195.43	133195.43	14.43		Si
SLV 15	-1.53	11033.7	-17311	-0.0000087	0.0006738	0.0035	9.01		84075.97	84075.97	7.62		Si
SLV 15	1.07	-3406.48	-13652	-0.0000056	0.0006738	0.0035	9.01		108743.31	108743.31	31.92		Si
SLV 9	-1.53	-39522.86	-23876	-0.0000179	0.0006738	0.0035	9.01		152303.1	152303.1	3.85		Si
SLV 9	1.07	7887.5	-20917	-0.0000093	0.0006738	0.0035	9.01		99665.25	99665.25	12.64		Si
SLV 16	-1.53	13051.28	-17308	-0.0000092	0.0006738	0.0035	9.01		84060.07	84060.07	6.44		Si
SLV 16	1.07	-4234.72	-13719	-0.0000058	0.0006738	0.0035	9.01		109031.3	109031.3	25.75		Si
SLV 5	-1.53	-39498.7	-29393	-0.0000198	0.0006738	0.0035	9.01		175574.05	175574.05	4.45		Si
SLV 5	1.07	8496.78	-26247	-0.0000113	0.0006738	0.0035	9.01		122407.32	122407.32	14.41		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, $\gamma_M = 3$

Comb.	Quota	M	N	Nmur	V	df	I'	αN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 75	-1.53	493.59	-38538	-30831	-482	9.01	9.01	-7604	9347	37898	81562	145709	45951	119460	No	247.8	Si
SLU 75	1.07	-641.69	-34865	-27892	-507	9.01	9.01	-6879	9251	37506	81562	145709	45951	119068	No	234.96	Si
SLU 80	-1.53	493.59	-38538	-30831	-482	9.01	9.01	-7604	9347	37898	81562	145709	45951	119460	No	247.8	Si
SLU 80	1.07	-641.69	-34865	-27892	-507	9.01	9.01	-6879	9251	37506	81562	145709	45951	119068	No	234.96	Si
SLU 81	-1.53	465.82	-40596	-32477	-504	9.01	9.01	-8010	9401	38118	81562	145709	45951	119679	No	237.25	Si
SLU 81	1.07	-734.12	-37576	-30061	-530	9.01	9.01	-7414	9322	37796	81562	145709	45951	119357	No	225.24	Si
SLU 79	-1.53	493.59	-38538	-30831	-482	9.01	9.01	-7604	9347	37898	81562	145709	45951	119460	No	247.8	Si
SLU 79	1.07	-641.69	-34865	-27892	-507	9.01	9.01	-6879	9251	37506	81562	145709	45951	119068	No	234.96	Si
SLU 84	-1.53	465.82	-40596	-32477	-504	9.01	9.01	-8010	9401	38118	81562	145709	45951	119679	No	237.25	Si
SLU 84	1.07	-734.12	-37576	-30061	-530	9.01	9.01	-7414	9322	37796	81562	145709	45951	119357	No	225.24	Si
SLU 77	-1.53	493.59	-38538	-30831	-482	9.01	9.01	-7604	9347	37898	81562	145709	45951	119460	No	247.8	Si
SLU 77	1.07	-641.69	-34865	-27892	-507	9.01	9.01	-6879	9251	37506	81562	145709	45951	119068	No	234.96	Si
SLU 78	-1.53	493.59	-38538	-30831	-482	9.01	9.01	-7604	9347	37898	81562	145709	45951	119460	No	247.8	Si
SLU 78	1.07	-641.69	-34865	-27892	-507	9.01	9.01	-6879	9251	37506	81562	145709	45951	119068	No	234.96	Si
SLU 83	-1.53	465.82	-40596	-32477	-504	9.01	9.01	-8010	9401	38118	81562	145709	45951	119679	No	237.25	Si
SLU 83	1.07	-734.12	-37576	-30061	-530	9.01	9.01	-7414	9322	37796	81562	145709	45951	119357	No	225.24	Si
SLU 76	-1.53	493.59	-38538	-30831	-482	9.01	9.01	-7604	9347	37898	81562	145709	45951	119460	No	247.8	Si
SLU 76	1.07	-641.69	-34865	-27892	-507	9.01	9.01	-6879	9251	37506	81562	145709	45951	119068	No	234.96	Si
SLU 82	-1.53	465.82	-40596	-32477	-504	9.01	9.01	-8010	9401	38118	81562	145709	45951	119679	No	237.25	Si
SLU 82	1.07	-734.12	-37576	-30061	-530	9.01	9.01	-7414	9322	37796	81562	145709	45951	119357	No	225.24	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, $\gamma_M = 2$

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	-1.53	40335.23	-23675	-18940	39390	9.01	8.404	-4671	13434	50806	81562	218563	45951	132367		3.36	Si
SLV 12	1.07	-9229.83	-19374	-15499	38355	9.01	9.01	-3823	13265	53781	81562	218563	45951	135343		3.53	Si
SLV 11	-1.53	38240.43	-23679	-18943	36191	9.01	8.6702	-4672	13434	52416	81562	218563	45951	133977		3.7	Si
SLV 11	1.07	-8369.9	-19304	-15443	35123	9.01	9.01	-3809	13262	53770	81562	218563	45951	135331		3.85	Si
SLV 7	-1.53	38264.58	-29196	-23357	35591	9.01	9.01	-5761	13652	55353	81562	218563	45951	136914		3.85	Si
SLV 7	1.07	-7760.62	-24634	-19707	34461	9.01	9.01	-4861	13472	54623	81562	218563	45951	136184		3.95	Si
SLV 8	-1.53	40359.38	-29192	-23354	38790	9.01	9.01	-5760	13652	55352	81562	218563	45951	136914		3.53	Si
SLV 8	1.07	-8620.55	-24703	-19763	37692	9.01	9.01	-4874	13475	54634	81562	218563	45951	136195		3.61	Si
SLV 10	-1.53	-37428.06	-23872	-19097	-36266	9.01	8.8114	-4826	13465	53391	81562	218563	45951	134953		3.72	Si
SLV 10	1.07	7027.58	-20987	-16789	-35171	9.01	9.01	-4141	13328	54039	81562	218563	45951	135601		3.86	Si
SLV 9	-1.53	-39522.86	-23876	-19101	-39465	9.01	8.5489	-4975	13495	51915	81562	218563	45951	133477		3.38	Si
SLV 9	1.07	7887.5	-20917	-16734	-38402	9.01	9.01	-4127	13325	54028	81562	218563	45951	135590		3.53	Si



Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	-1.53	-37403.9	-29389	-23511	-36866	9.01	9.01	-5799	13660	55383	81562	218563	45951	136945		3.71	Si
SLV 6	1.07	7636.85	-26317	-21053	-35833	9.01	9.01	-5193	13539	54892	81562	218563	45951	136453		3.81	Si
SLV 16	-1.53	13051.28	-17308	-13846	13551	9.01	9.01	-3415	13183	53450	81562	218563	45951	135012		9.96	Si
SLV 16	1.07	-4234.72	-13719	-10975	13333	9.01	9.01	-2707	13041	52876	81562	218563	45951	134438		10.08	Si
SLV 1	-1.53	-12214.76	-35760	-28608	-14226	9.01	9.01	-7056	13911	56403	81562	218563	45951	137965		9.7	Si
SLV 1	1.07	3501.67	-31902	-25522	-14043	9.01	9.01	-6295	13759	55786	81562	218563	45951	137347		9.78	Si
SLV 5	-1.53	-39498.7	-29393	-23514	-40064	9.01	9.01	-5800	13660	55384	81562	218563	45951	136946		3.42	Si
SLV 5	1.07	8496.78	-26247	-20998	-39065	9.01	9.01	-5179	13536	54881	81562	218563	45951	136442		3.49	Si

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

quota -0.23 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 15	-16601	0.24	522.68	3651.86	5761.97	4706.92	9.01	Si
SLV 16	-16624	0.24	522.68	3656.65	5767.3	4711.97	9.01	Si
SLV 13	-16828	0.24	522.68	3700.61	5816.27	4758.44	9.1	Si
SLV 14	-16850	0.24	522.68	3705.39	5821.6	4763.49	9.11	Si
SLV 11	-22781	0.24	522.68	4968.6	7237.06	6102.83	11.68	Si
SLV 12	-22804	0.24	522.68	4973.48	7242.54	6108.01	11.69	Si
SLV 9	-23537	0.24	522.68	5128.12	7416.13	6272.13	12	Si
SLV 10	-23560	0.24	522.68	5132.99	7421.6	6277.3	12.01	Si
SLV 7	-28305	0.24	522.68	6126.06	8542.8	7334.43	14.03	Si
SLV 8	-28328	0.24	522.68	6130.86	8548.26	7339.56	14.04	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzera = -0.23 Wa = 0.08 Ta = 0.0251

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-31969	-35757	-541	1.314	4772	0.919	20.78288	3.45007	Si
SLV 1	-31902	-35760	-542	1.316	4765.3	0.919	20.81614	3.45007	Si
SLV 4	-31485	-35698	-528	1.329	4723.5	0.918	21.03133	3.45007	Si
SLV 3	-31418	-35701	-529	1.331	4716.8	0.918	21.06541	3.45007	Si
SLV 6	-26317	-29389	-166	1.518	4207.2	0.911	24.2156	3.04994	Si
SLV 5	-26247	-29393	-166	1.521	4200.3	0.911	24.26261	3.04994	Si
SLV 8	-24703	-29192	-122	1.587	4046.8	0.909	25.37932	3.04994	Si
SLV 7	-24634	-29196	-122	1.59	4039.9	0.909	25.43102	3.04994	Si
SLV 10	-20987	-23872	170	1.769	3679.2	0.903	28.45962	3.04994	Si
SLV 9	-20917	-23876	170	1.772	3672.3	0.903	28.525	3.04994	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	232.274	SLU 43	Si
V_SLU	225.242	SLU 81	Si
PF_SLV	2.763	SLV 12	Si
V_SLV	3.36	SLV 12	Si
PFFP_SLV	9.005	SLV 15	Si
R_SLV	6.024	SLV 2	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
-8.545	-17.728	-9.429	-17.728	L1	L2	0.884	0.45	2.6	2.6	2.6			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato _Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	φ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,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	elim,conv	ε _{f,d}	γ _{F,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 FRM 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	0.47	-551.86	-6889	-0.0000423	0.0003743	0.0035	0.8845	2528.69	2801.07	2801.07	5.08	No	Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLU 40	0.87	-658.9	-6543	-0.0000437	0.0003743	0.0035	0.8845	2426.4	2686.43	2686.43	4.08	No	Si
SLU 84	0.47	-642.84	-7911	-0.0000492	0.0003743	0.0035	0.8845	2815.69	3132.87	3132.87	4.87	No	Si
SLU 84	0.87	-729.65	-7421	-0.0000495	0.0003743	0.0035	0.8845	2680.89	2976.79	2976.79	4.08	No	Si
SLU 39	0.47	-551.86	-6889	-0.0000423	0.0003743	0.0035	0.8845	2528.69	2801.07	2801.07	5.08	No	Si
SLU 39	0.87	-658.9	-6543	-0.0000437	0.0003743	0.0035	0.8845	2426.4	2686.43	2686.43	4.08	No	Si
SLU 77	0.47	-610.57	-7421	-0.0000462	0.0003743	0.0035	0.8845	2680.85	2976.75	2976.75	4.88	No	Si
SLU 77	0.87	-670.74	-6910	-0.0000456	0.0003743	0.0035	0.8845	2534.7	2807.88	2807.88	4.19	No	Si
SLU 78	0.47	-610.57	-7421	-0.0000462	0.0003743	0.0035	0.8845	2680.85	2976.75	2976.75	4.88	No	Si
SLU 78	0.87	-670.74	-6910	-0.0000456	0.0003743	0.0035	0.8845	2534.7	2807.88	2807.88	4.19	No	Si
SLU 81	0.47	-642.84	-7911	-0.0000492	0.0003743	0.0035	0.8845	2815.69	3132.87	3132.87	4.87	No	Si
SLU 81	0.87	-729.65	-7421	-0.0000495	0.0003743	0.0035	0.8845	2680.89	2976.79	2976.79	4.08	No	Si
SLU 82	0.47	-642.84	-7911	-0.0000492	0.0003743	0.0035	0.8845	2815.69	3132.87	3132.87	4.87	No	Si
SLU 82	0.87	-729.65	-7421	-0.0000495	0.0003743	0.0035	0.8845	2680.89	2976.79	2976.79	4.08	No	Si
SLU 41	0.47	-551.86	-6889	-0.0000423	0.0003743	0.0035	0.8845	2528.69	2801.07	2801.07	5.08	No	Si
SLU 41	0.87	-658.9	-6543	-0.0000437	0.0003743	0.0035	0.8845	2426.4	2686.43	2686.43	4.08	No	Si
SLU 83	0.47	-642.84	-7911	-0.0000492	0.0003743	0.0035	0.8845	2815.69	3132.87	3132.87	4.87	No	Si
SLU 83	0.87	-729.65	-7421	-0.0000495	0.0003743	0.0035	0.8845	2680.89	2976.79	2976.79	4.08	No	Si
SLU 42	0.47	-551.86	-6889	-0.0000423	0.0003743	0.0035	0.8845	2528.69	2801.07	2801.07	5.08	No	Si
SLU 42	0.87	-658.9	-6543	-0.0000437	0.0003743	0.0035	0.8845	2426.4	2686.43	2686.43	4.08	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 5	0.47	-1077.64	-7009	-0.0000562	0.0005615	0.0035	0.8845		2961.46	2961.46	2.75		Si
SLV 5	0.87	-346.82	-5399	-0.00003	0.0005615	0.0035	0.8845		2361.42	2361.42	6.81		Si
SLV 9	0.47	-1219.82	-6847	-0.0000602	0.0005615	0.0035	0.8845		2901.87	2901.87	2.38		Si
SLV 9	0.87	-281.51	-5174	-0.0000273	0.0005615	0.0035	0.8845		2274.17	2274.17	8.08		Si
SLV 11	0.47	142.73	-3151	-0.0000158	0.0005615	0.0035	0.8845		1382.03	1382.03	9.68		Si
SLV 11	0.87	-485.91	-3802	-0.0000273	0.0005615	0.0035	0.8845		1738.38	1738.38	3.58		Si
SLV 10	0.47	-1122.52	-6619	-0.0000562	0.0005615	0.0035	0.8845		2817.38	2817.38	2.51		Si
SLV 10	0.87	-301.26	-5057	-0.0000274	0.0005615	0.0035	0.8845		2228.94	2228.94	7.4		Si
SLV 13	0.47	-907.02	-5362	-0.0000451	0.0005615	0.0035	0.8845		2346.74	2346.74	2.59		Si
SLV 13	0.87	-277.22	-4428	-0.0000243	0.0005615	0.0035	0.8845		1985.65	1985.65	7.16		Si
SLV 8	0.47	382.23	-3084	-0.0000217	0.0005615	0.0035	0.8845		1354.55	1354.55	3.54		Si
SLV 8	0.87	-570.97	-3910	-0.00003	0.0005615	0.0035	0.8845		1782.24	1782.24	3.12		Si
SLV 12	0.47	240.04	-2923	-0.0000174	0.0005615	0.0035	0.8845		1288.74	1288.74	5.37		Si
SLV 12	0.87	-505.66	-3685	-0.0000273	0.0005615	0.0035	0.8845		1691.18	1691.18	3.34		Si
SLV 6	0.47	-980.33	-6780	-0.0000526	0.0005615	0.0035	0.8845		2876.98	2876.98	2.93		Si
SLV 6	0.87	-366.57	-5283	-0.00003	0.0005615	0.0035	0.8845		2316.19	2316.19	6.32		Si
SLV 14	0.47	-813.31	-5141	-0.0000414	0.0005615	0.0035	0.8845		2261.56	2261.56	2.78		Si
SLV 14	0.87	-296.24	-4316	-0.0000243	0.0005615	0.0035	0.8845		1942.1	1942.1	6.56		Si
SLV 7	0.47	284.92	-3313	-0.0000201	0.0005615	0.0035	0.8845		1447.63	1447.63	5.08		Si
SLV 7	0.87	-551.22	-4027	-0.0000299	0.0005615	0.0035	0.8845		1829.45	1829.45	3.32		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 49	0.47	-469.46	-5415	-4813	-363	0.8845	0.8845	-12093	8557	3406	28547	11918	2255	14174	No	39.04	Si
SLU 49	0.87	-427.49	-4824	-4288	-360	0.8845	0.8845	-10774	8381	3336	28547	11918	2255	14174	No	39.38	Si
SLU 45	0.47	-469.46	-5415	-4813	-363	0.8845	0.8845	-12093	8557	3406	28547	11918	2255	14174	No	39.04	Si
SLU 45	0.87	-427.49	-4824	-4288	-360	0.8845	0.8845	-10774	8381	3336	28547	11918	2255	14174	No	39.38	Si
SLU 9	0.47	-378.48	-4393	-3905	-243	0.8845	0.8845	-9810	8252	3285	28547	11918	2255	14174	No	58.21	Si
SLU 9	0.87	-356.74	-3946	-3508	-241	0.8845	0.8845	-8813	8120	3232	28547	11918	2255	14174	No	58.81	Si
SLU 50	0.47	-469.46	-5415	-4813	-363	0.8845	0.8845	-12093	8557	3406	28547	11918	2255	14174	No	39.04	Si
SLU 50	0.87	-427.49	-4824	-4288	-360	0.8845	0.8845	-10774	8381	3336	28547	11918	2255	14174	No	39.38	Si
SLU 44	0.47	-469.46	-5415	-4813	-363	0.8845	0.8845	-12093	8557	3406	28547	11918	2255	14174	No	39.04	Si
SLU 44	0.87	-427.49	-4824	-4288	-360	0.8845	0.8845	-10774	8381	3336	28547	11918	2255	14174	No	39.38	Si
SLU 46	0.47	-469.46	-5415	-4813	-363	0.8845	0.8845	-12093	8557	3406	28547	11918	2255	14174	No	39.04	Si
SLU 46	0.87	-427.49	-4824	-4288	-360	0.8845	0.8845	-10774	8381	3336	28547	11918	2255	14174	No	39.38	Si
SLU 43	0.47	-469.46	-5415	-4813	-363	0.8845	0.8845	-12093	8557	3406	28547	11918	2255	14174	No	39.04	Si
SLU 43	0.87	-427.49	-4824	-4288	-360	0.8845	0.8845	-10774	8381	3336	28547	11918	2255	14174	No	39.38	Si
SLU 48	0.47	-469.46	-5415	-4813	-363	0.8845	0.8845	-12093	8557	3406	28547	11918	2255	14174	No	39.04	Si
SLU 48	0.87	-427.49	-4824	-4288	-360	0.8845	0.8845	-10774	8381	3336	28547	11918	2255	14174	No	39.38	Si
SLU 47	0.47	-469.46	-5415	-4813	-363	0.8845	0.8845	-12093	8557	3406	28547	11918	2255	14174	No	39.04	Si
SLU 47	0.87	-427.49	-4824	-4288	-360	0.8845	0.8845	-10774	8381	3336	28547	11918	2255	14174	No	39.38	Si
SLU 51	0.47	-469.46	-5415	-4813	-363	0.8845	0.8845	-12093	8557	3406	28547	11918	2255	14174	No	39.04	Si
SLU 51	0.87	-427.49	-4824	-4288	-360	0.8845	0.8845	-10774	8381	3336	28547	11918	2255	14174	No	39.38	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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	0.47	-980.33	-6780	-6027	-2913	0.8845	0.8845	-15142	13445	5351	28547	17878	2255	20133		6.91	Si
SLV 6	0.87	-366.57	-5283	-4696	-2913	0.8845	0.8845	-11798	12776	5085	28547	17878	2255	20133		6.91	Si
SLV 5	0.47	-1077.64	-7009	-6230	-3329	0.8845	0.8654	-15652	13547	5276	28547	17878	2255	20133		6.05	Si
SLV 5	0.87	-346.82	-5399	-4799	-3328	0.8845	0.8845	-12059	12828	5106	28547	17878	2255	20133		6.05	Si
SLV 7	0.47	284.92	-3313	-2945	3278	0.8845	0.8845	-7398	11896	4735	28547	17878	2255	20133		6.14	Si
SLV 7	0.87	-551.22	-4027	-3580	3249	0.8845	0.8845	-8993	12215	4862	28547	17878	2255	20133		6.2	Si
SLV 13	0.47	-907.02	-5362	-4766	-2427	0.8845	0.8192	-11974	12811	4723	28547	17878	2255	20133		8.3	Si
SLV 13	0.87	-277.22	-4428	-3936	-2364	0.8845	0.8845	-9890	12395	4933	28547	17878	2255	20133		8.52	Si
SLV 4	0.47	69.42	-4570	-4062	2137	0.8845	0.8845	-10206	12458	4958	28547	17878	2255	20133		9.42	Si
SLV 4	0.87	-575.26	-4656	-4138	2080	0.8845	0.8845	-10397	12496	4974	28547	17878	2255	20133		9.68	Si
SLV 10	0.47	-1122.52	-6619	-5883	-3568	0.8845	0.8179	-14782	13373	4922	28547	17878	2255	20133		5.64	Si
SLV 10	0.87	-301.26	-5057	-4495	-3534	0.8845	0.8845	-11294	12675	5045	28547	17878	2255	20133		5.7	Si
SLV 8	0.47	382.23	-3084	-2741	3694	0.8845	0.8845	-6888	11794	4694	28547	17878	2255	20133		5.45	Si
SLV 8	0.87	-570.97	-3910	-3476	3665	0.8845	0.8845	-8732	12163	4841	28547	17878	2255	20133		5.49	Si
SLV 11	0.47	142.73	-3151	-2801	2623	0.8845	0.8845	-7038	11824	4706	28547	17878	2255	20133		7.67	Si
SLV 11	0.87	-485.91	-3802	-3379	2628	0.8845	0.8845	-8490	12115	4822	28547	17878	2255	20133		7.66	Si
SLV 12	0.47	240.04	-2923	-2598	3039	0.8845	0.8845	-6528	11722	4666	28547	17878	2255	20133		6.62	Si



Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	0.87	-505.66	-3685	-3275	3043	0.8845	0.8845	-8229	12062	4801	28547	17878	2255	20133		6.62	Si
SLV 9	0.47	-1219.82	-6847	-6087	-3984	0.8845	0.7923	-15292	13475	4804	28547	17878	2255	20133		5.05	Si
SLV 9	0.87	-281.51	-5174	-4599	-3949	0.8845	0.8845	-11555	12728	5066	28547	17878	2255	20133		5.1	Si

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

quota -0.23 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.24	8259	-3287	50.46	699.64	13.87	Si
SLV 11	179667	0.24	8500	-3383	50.46	718.86	14.25	Si
SLV 8	179667	0.24	9332	-3714	50.46	784.62	15.55	Si
SLV 16	179667	0.24	9501	-3782	50.46	797.95	15.81	Si
SLV 7	179667	0.24	9573	-3810	50.46	803.53	15.92	Si
SLV 15	179667	0.24	9734	-3874	50.46	816.12	16.17	Si
SLV 14	179667	0.24	11635	-4631	50.46	962.56	19.08	Si
SLV 13	179667	0.24	11867	-4723	50.46	980.15	19.43	Si
SLV 4	179667	0.24	13076	-5205	50.46	1070.76	21.22	Si
SLV 3	179667	0.24	13308	-5297	50.46	1087.96	21.56	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non é 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 = -0.23 Wa = 0.08 Ta = 0.0251

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-4004	-9670	-5	1.109	555.5	0.929	17.34507	3.45007	Si
SLV 5	-4521	-9651	113	0.992	607.7	0.934	15.43589	3.04994	Si
SLV 9	-4479	-8455	136	0.995	603.5	0.933	15.48406	3.04994	Si
SLV 13	-3867	-5681	71	1.124	541.7	0.927	17.6132	3.45007	Si
SLV 2	-3834	-9678	-5	1.145	538.3	0.927	17.94913	3.45007	Si
SLV 6	-4344	-9660	113	1.022	589.8	0.932	15.93672	3.04994	Si
SLV 10	-4303	-8464	135	1.025	585.7	0.932	15.99062	3.04994	Si
SLV 14	-3697	-5690	70	1.162	524.5	0.926	18.24874	3.45007	Si
SLV 3	-3523	-8489	-83	1.201	507	0.924	18.9055	3.45007	Si
SLV 4	-3352	-8497	-83	1.246	489.9	0.922	19.64378	3.45007	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	4.077	SLU 39	Si
V_SLU	39.043	SLU 43	Si
PF_SLV	2.379	SLV 9	Si
V_SLV	5.054	SLV 9	Si
PFFP_SLV	13.866	SLV 12	Si
R_SLV	5.027	SLV 1	Si

Maschio 4

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
0.227	-17.728	-7.545	-17.728	L1	L2	7.772	0.45	2.6	2.6	2.6			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e_CNR DT-200						CRM / Fibrenet?				
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	α_t	α	elim,conv	ϵ_{fd}	$\gamma_{F,d}$	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	0.47	1255.75	-26250	-0.0000119	0.0003743	0.0035	7.7717	94482.53	98979.64	98979.64	78.82	No	Si
SLU 49	0.87	843.43	-23280	-0.0000104	0.0003743	0.0035	7.7717	84548.34	88670.85	88670.85	105.13	No	Si
SLU 1	0.47	992.01	-21803	-0.000098	0.0003743	0.0035	7.7717	79536.9	83464.4	83464.4	84.14	No	Si
SLU 1	0.87	662.65	-19513	-0.0000087	0.0003743	0.0035	7.7717	71669.13	75377.19	75377.19	113.75	No	Si
SLU 46	0.47	1255.75	-26250	-0.0000119	0.0003743	0.0035	7.7717	94482.53	98979.64	98979.64	78.82	No	Si
SLU 46	0.87	843.43	-23280	-0.0000104	0.0003743	0.0035	7.7717	84548.34	88670.85	88670.85	105.13	No	Si
SLU 43	0.47	1255.75	-26250	-0.0000119	0.0003743	0.0035	7.7717	94482.53	98979.64	98979.64	78.82	No	Si
SLU 43	0.87	843.43	-23280	-0.0000104	0.0003743	0.0035	7.7717	84548.34	88670.85	88670.85	105.13	No	Si
SLU 44	0.47	1255.75	-26250	-0.0000119	0.0003743	0.0035	7.7717	94482.53	98979.64	98979.64	78.82	No	Si
SLU 44	0.87	843.43	-23280	-0.0000104	0.0003743	0.0035	7.7717	84548.34	88670.85	88670.85	105.13	No	Si
SLU 47	0.47	1255.75	-26250	-0.0000119	0.0003743	0.0035	7.7717	94482.53	98979.64	98979.64	78.82	No	Si
SLU 47	0.87	843.43	-23280	-0.0000104	0.0003743	0.0035	7.7717	84548.34	88670.85	88670.85	105.13	No	Si
SLU 45	0.47	1255.75	-26250	-0.0000119	0.0003743	0.0035	7.7717	94482.53	98979.64	98979.64	78.82	No	Si
SLU 45	0.87	843.43	-23280	-0.0000104	0.0003743	0.0035	7.7717	84548.34	88670.85	88670.85	105.13	No	Si
SLU 51	0.47	1255.75	-26250	-0.0000119	0.0003743	0.0035	7.7717	94482.53	98979.64	98979.64	78.82	No	Si
SLU 51	0.87	843.43	-23280	-0.0000104	0.0003743	0.0035	7.7717	84548.34	88670.85	88670.85	105.13	No	Si
SLU 50	0.47	1255.75	-26250	-0.0000119	0.0003743	0.0035	7.7717	94482.53	98979.64	98979.64	78.82	No	Si
SLU 50	0.87	843.43	-23280	-0.0000104	0.0003743	0.0035	7.7717	84548.34	88670.85	88670.85	105.13	No	Si
SLU 48	0.47	1255.75	-26250	-0.0000119	0.0003743	0.0035	7.7717	94482.53	98979.64	98979.64	78.82	No	Si
SLU 48	0.87	843.43	-23280	-0.0000104	0.0003743	0.0035	7.7717	84548.34	88670.85	88670.85	105.13	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 7	0.47	3202.22	-15398	-0.0000077	0.0005615	0.0035	7.7717		61203.55	61203.55	19.11		Si
SLV 7	0.87	316.49	-13120	-0.0000058	0.0005615	0.0035	7.7717		52774.49	52774.49	166.75		Si
SLV 13	0.47	-5382.8	-29123	-0.0000145	0.0005615	0.0035	7.7717		125394.91	125394.91	23.3		Si
SLV 13	0.87	2489.43	-26787	-0.0000125	0.0005615	0.0035	7.7717		102676.53	102676.53	41.24		Si
SLV 16	0.47	-5876.05	-22697	-0.0000118	0.0005615	0.0035	7.7717		102696.9	102696.9	17.48		Si
SLV 16	0.87	223.36	-20363	-0.0000089	0.0005615	0.0035	7.7717		79442.89	79442.89	355.67		Si
SLV 8	0.47	2737.18	-15388	-0.0000076	0.0005615	0.0035	7.7717		61167	61167	22.35		Si
SLV 8	0.87	-1399.77	-13111	-0.0000061	0.0005615	0.0035	7.7717		67656.38	67656.38	48.33		Si
SLV 15	0.47	-5428.15	-22707	-0.0000117	0.0005615	0.0035	7.7717		102731.23	102731.23	18.93		Si
SLV 15	0.87	1876.37	-20372	-0.0000095	0.0005615	0.0035	7.7717		79475.36	79475.36	42.36		Si
SLV 2	0.47	7515.01	-29385	-0.0000153	0.0005615	0.0035	7.7717		111903.49	111903.49	14.89		Si
SLV 2	0.87	-511.66	-27134	-0.000012	0.0005615	0.0035	7.7717		118444.17	118444.17	231.49		Si
SLV 14	0.47	-5830.7	-29113	-0.0000146	0.0005615	0.0035	7.7717		125361.57	125361.57	21.5		Si
SLV 14	0.87	836.43	-26778	-0.0000119	0.0005615	0.0035	7.7717		102644.57	102644.57	122.72		Si
SLV 3	0.47	7917.56	-22978	-0.0000126	0.0005615	0.0035	7.7717		88963.52	88963.52	11.24		Si
SLV 3	0.87	528.28	-20728	-0.0000092	0.0005615	0.0035	7.7717		80777.56	80777.56	152.91		Si
SLV 4	0.47	7469.66	-22969	-0.0000125	0.0005615	0.0035	7.7717		88929.31	88929.31	11.91		Si
SLV 4	0.87	-1124.73	-20719	-0.0000094	0.0005615	0.0035	7.7717		95544.34	95544.34	84.95		Si
SLV 1	0.47	7962.91	-29395	-0.0000155	0.0005615	0.0035	7.7717		111937.32	111937.32	14.06		Si
SLV 1	0.87	1141.35	-27143	-0.0000122	0.0005615	0.0035	7.7717		103952.02	103952.02	91.08		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 81	0.47	1470.53	-44843	-39861	1436	7.7717	7.7717	-11398	8464	29601	28547	104724	19818	58148	No	40.49	Si
SLU 81	0.87	919.43	-41873	-37221	1436	7.7717	7.7717	-10643	8363	29249	28547	104724	19818	57796	No	40.24	Si
SLU 83	0.47	1470.53	-44843	-39861	1436	7.7717	7.7717	-11398	8464	29601	28547	104724	19818	58148	No	40.49	Si
SLU 83	0.87	919.43	-41873	-37221	1436	7.7717	7.7717	-10643	8363	29249	28547	104724	19818	57796	No	40.24	Si
SLU 77	0.47	1435.73	-41098	-36532	1367	7.7717	7.7717	-10446	8337	29158	28547	104724	19818	57704	No	42.22	Si
SLU 77	0.87	912.39	-38121	-33885	1367	7.7717	7.7717	-9689	8236	28805	28547	104724	19818	57351	No	41.97	Si
SLU 79	0.47	1435.73	-41098	-36532	1367	7.7717	7.7717	-10446	8337	29158	28547	104724	19818	57704	No	42.22	Si
SLU 79	0.87	912.39	-38121	-33885	1367	7.7717	7.7717	-9689	8236	28805	28547	104724	19818	57351	No	41.97	Si
SLU 78	0.47	1435.73	-41098	-36532	1367	7.7717	7.7717	-10446	8337	29158	28547	104724	19818	57704	No	42.22	Si
SLU 78	0.87	912.39	-38121	-33885	1367	7.7717	7.7717	-9689	8236	28805	28547	104724	19818	57351	No	41.97	Si
SLU 75	0.47	1435.73	-41098	-36532	1367	7.7717	7.7717	-10446	8337	29158	28547	104724	19818	57704	No	42.22	Si
SLU 75	0.87	912.39	-38121	-33885	1367	7.7717	7.7717	-9689	8236	28805	28547	104724	19818	57351	No	41.97	Si
SLU 82	0.47	1470.53	-44843	-39861	1436	7.7717	7.7717	-11398	8464	29601	28547	104724	19818	58148	No	40.49	Si
SLU 82	0.87	919.43	-41873	-37221	1436	7.7717	7.7717	-10643	8363	29249	28547	104724	19818	57796	No	40.24	Si
SLU 84	0.47	1470.53	-44843	-39861	1436	7.7717	7.7717	-11398	8464	29601	28547	104724	19818	58148	No	40.49	Si
SLU 84	0.87	919.43	-41873	-37221	1436	7.7717	7.7717	-10643	8363	29249	28547	104724	19818	57796	No	40.24	Si
SLU 76	0.47	1435.73	-41098	-36532	1367	7.7717	7.7717	-10446	8337	29158	28547	104724	19818	57704	No	42.22	Si
SLU 76	0.87	912.39	-38121	-33885	1367	7.7717	7.7717	-9689	8236	28805	28547	104724	19818	57351	No	41.97	Si
SLU 80	0.47	1435.73	-41098	-36532	1367	7.7717	7.7717	-10446	8337	29158	28547	104724	19818	57704	No	42.22	Si
SLU 80	0.87	912.39	-38121	-33885	1367	7.7717	7.7717	-9689	8236	28805	28547	104724	19818	57351	No	41.97	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	0.47	2737.18	-15388	-13678	9988	7.7717	7.7717	-3911	11199	39166	28547	157086	19818	67712		6.78	Si
SLV 8	0.87	-1399.77	-13111	-11654	9820	7.7717	7.7717	-3332	11083	38761	28547	157086	19818	67307		6.85	Si
SLV 14	0.47	-5830.7	-29113	-25878	-15778	7.7717	7.7717	-7400	11897	41606	28547	157086	19818	70152		4.45	Si
SLV 14	0.87	836.43	-26778	-23803	-15338	7.7717	7.7717	-6806	11778	41191	28547	157086	19818	69737		4.55	Si
SLV 13	0.47	-5382.8	-29123	-25887	-18791	7.7717	7.7717	-7402	11897	41607	28547	157086	19818	70154		3.73	Si
SLV 13	0.87	2489.43	-26787	-23811	-18351	7.7717	7.7717	-6808	11778	41192	28547	157086	19818	69739		3.8	Si
SLV 9	0.47	-650.31	-36704	-32625	-8094	7.7717	7.7717	-9329	12282	42955	28547	157086	19818	71502		8.83	Si
SLV 9	0.87	2764.48	-34396	-30574	-7926	7.7717	7.7717	-8742	12165	42545	28547	157086	19818	71091		8.97	Si
SLV 1	0.47	7962.91	-29395	-26128	16349	7.7717	7.7717	-7471	11911	41656	28547	157086	19818	70202		4.29	Si
SLV 1	0.87	1141.35	-27143	-24127	15933	7.7717	7.7717	-6899	11796	41255	28547	157086	19818	69802		4.38	Si
SLV 3	0.47	7917.56	-22978	-20425	17672	7.7717	7.7717	-5840	11585	40515	28547	157086	19818	69062		3.91	Si
SLV 3	0.87	528.28	-20728	-18425	17232	7.7717	7.7717	-5268	11470	40115	28547	157086	19818	68662		3.98	Si
SLV 2	0.47	7515.01	-29385	-26120	19362	7.7717	7.7717	-7469	11910	41654	28547	157086	19818	70201		3.63	Si
SLV 2	0.87	-511.66	-27134	-24119	18946	7.7717	7.7717	-6897	11796	41254	28547	157086	19818	69800		3.68	Si
SLV 16	0.47	-5876.05	-22697	-20175	-14455	7.7717	7.7717	-5769	11570	40465	28547	157086	19818	69012		4.77	Si
SLV 16	0.87	223.36	-20363	-18101	-14039	7.7717	7.7717	-5176	11452	40050	28547	157086	19818	68597		4.89	Si



Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	0.47	7469.66	-22969	-20417	20685	7.7717	7.7717	-5838	11584	40513	28547	157086	19818	69060		3.34	Si
SLV 4	0.87	-1124.73	-20719	-18417	20245	7.7717	7.7717	-5266	11470	40113	28547	157086	19818	68660		3.39	Si
SLV 15	0.47	-5428.15	-22707	-20184	-17468	7.7717	7.7717	-5771	11571	40467	28547	157086	19818	69013		3.95	Si
SLV 15	0.87	1876.37	-20372	-18108	-17051	7.7717	7.7717	-5178	11452	40052	28547	157086	19818	68598		4.02	Si

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

quota -0.23 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 12	179667	0.24	4330	-15142	443.36	3310.44	7.47	Si
SLV 11	179667	0.24	4332	-15150	443.36	3312.08	7.47	Si
SLV 8	179667	0.24	4363	-15258	443.36	3335.08	7.52	Si
SLV 7	179667	0.24	4365	-15266	443.36	3336.73	7.53	Si
SLV 16	179667	0.24	6820	-23850	443.36	5126.65	11.56	Si
SLV 15	179667	0.24	6822	-23858	443.36	5128.18	11.57	Si
SLV 4	179667	0.24	6930	-24237	443.36	5205.9	11.74	Si
SLV 3	179667	0.24	6932	-24245	443.36	5207.43	11.75	Si
SLV 14	179667	0.24	8987	-31430	443.36	6655.59	15.01	Si
SLV 13	179667	0.24	8989	-31437	443.36	6657.07	15.01	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 é 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 mezzera = -0.23 Wa = 0.08 Ta = 0.0251

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 5	-29880	-48502	-209	1.247	4347.4	0.922	19.64491	3.04994	Si
SLV 6	-29867	-48509	-209	1.247	4346.2	0.922	19.65109	3.04994	Si
SLV 9	-29647	-48293	-231	1.253	4324	0.922	19.75485	3.04994	Si
SLV 10	-29635	-48299	-232	1.253	4322.8	0.922	19.76111	3.04994	Si
SLV 1	-23504	-38374	-86	1.484	3709	0.913	23.63046	3.45007	Si
SLV 2	-23492	-38381	-86	1.484	3707.9	0.913	23.63919	3.45007	Si
SLV 13	-22728	-37677	-160	1.516	3631.8	0.911	24.18429	3.45007	Si
SLV 14	-22716	-37683	-161	1.517	3630.6	0.911	24.19347	3.45007	Si
SLV 3	-17806	-29484	-3	1.793	3144.3	0.903	28.87485	3.45007	Si
SLV 4	-17794	-29491	-3	1.794	3143.2	0.903	28.88799	3.45007	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_SLV	78.821	SLV 43	Si
V_SLV	40.242	SLV 81	Si
PF_SLV	11.236	SLV 3	Si
V_SLV	3.339	SLV 4	Si
PFFP_SLV	7.467	SLV 12	Si
R_SLV	6.441	SLV 5	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	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
2.185	-17.729	1.227	-17.729	L1	L2	0.958	0.45	2.6	2.6	2.6			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	t0	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	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,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 42	0.47	465.36	-6179	-0.000033	0.0003743	0.0035	0.9578	2542.21	2622.57	2622.57	5.64	No	Si
SLU 42	0.87	626.12	-6152	-0.0000367	0.0003743	0.0035	0.9578	2532.98	2612.78	2612.78	4.17	No	Si
SLU 81	0.47	544.27	-7030	-0.0000381	0.0003743	0.0035	0.9578	2827.13	2936.29	2936.29	5.39	No	Si
SLU 81	0.87	690.31	-6914	-0.0000411	0.0003743	0.0035	0.9578	2789.13	2893.09	2893.09	4.19	No	Si
SLU 82	0.47	544.27	-7030	-0.0000381	0.0003743	0.0035	0.9578	2827.13	2936.29	2936.29	5.39	No	Si
SLU 82	0.87	690.31	-6914	-0.0000411	0.0003743	0.0035	0.9578	2789.13	2893.09	2893.09	4.19	No	Si
SLU 84	0.47	544.27	-7030	-0.0000381	0.0003743	0.0035	0.9578	2827.13	2936.29	2936.29	5.39	No	Si
SLU 84	0.87	690.31	-6914	-0.0000411	0.0003743	0.0035	0.9578	2789.13	2893.09	2893.09	4.19	No	Si
SLU 37	0.47	439.94	-5706	-0.0000306	0.0003743	0.0035	0.9578	2377.13	2450.74	2450.74	5.57	No	Si
SLU 37	0.87	569.04	-5638	-0.0000333	0.0003743	0.0035	0.9578	2352.94	2426.12	2426.12	4.26	No	Si
SLU 39	0.47	465.36	-6179	-0.000033	0.0003743	0.0035	0.9578	2542.21	2622.57	2622.57	5.64	No	Si
SLU 39	0.87	626.12	-6152	-0.0000367	0.0003743	0.0035	0.9578	2532.98	2612.78	2612.78	4.17	No	Si
SLU 38	0.47	439.94	-5706	-0.0000306	0.0003743	0.0035	0.9578	2377.13	2450.74	2450.74	5.57	No	Si
SLU 38	0.87	569.04	-5638	-0.0000333	0.0003743	0.0035	0.9578	2352.94	2426.12	2426.12	4.26	No	Si
SLU 83	0.47	544.27	-7030	-0.0000381	0.0003743	0.0035	0.9578	2827.13	2936.29	2936.29	5.39	No	Si
SLU 83	0.87	690.31	-6914	-0.0000411	0.0003743	0.0035	0.9578	2789.13	2893.09	2893.09	4.19	No	Si
SLU 40	0.47	465.36	-6179	-0.000033	0.0003743	0.0035	0.9578	2542.21	2622.57	2622.57	5.64	No	Si
SLU 40	0.87	626.12	-6152	-0.0000367	0.0003743	0.0035	0.9578	2532.98	2612.78	2612.78	4.17	No	Si
SLU 41	0.47	465.36	-6179	-0.000033	0.0003743	0.0035	0.9578	2542.21	2622.57	2622.57	5.64	No	Si
SLU 41	0.87	626.12	-6152	-0.0000367	0.0003743	0.0035	0.9578	2532.98	2612.78	2612.78	4.17	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 5	0.47	1189.84	-4996	-0.0000477	0.0005615	0.0035	0.9578		2304.23	2304.23	1.94		Si
SLV 5	0.87	609.93	-3754	-0.0000269	0.0005615	0.0035	0.9578		1771.77	1771.77	2.9		Si
SLV 9	0.47	1010.4	-4916	-0.0000412	0.0005615	0.0035	0.9578		2270.2	2270.2	2.25		Si
SLV 9	0.87	650.35	-3876	-0.0000282	0.0005615	0.0035	0.9578		1824.38	1824.38	2.81		Si
SLV 10	0.47	1128.87	-5126	-0.0000455	0.0005615	0.0035	0.9578		2358.76	2358.76	2.09		Si
SLV 10	0.87	650.06	-3947	-0.0000285	0.0005615	0.0035	0.9578		1854.87	1854.87	2.85		Si
SLV 14	0.47	356.66	-4516	-0.000024	0.0005615	0.0035	0.9578		2100.14	2100.14	5.89		Si
SLV 14	0.87	536.19	-4295	-0.0000272	0.0005615	0.0035	0.9578		2005.64	2005.64	3.74		Si
SLV 11	0.47	-591.56	-3453	-0.0000254	0.0005615	0.0035	0.9578		1801.98	1801.98	3.05		Si
SLV 11	0.87	190.24	-4471	-0.0000201	0.0005615	0.0035	0.9578		2080.75	2080.75	10.94		Si
SLV 6	0.47	1308.3	-5206	-0.0000528	0.0005615	0.0035	0.9578		2392.39	2392.39	1.83		Si
SLV 6	0.87	609.64	-3825	-0.0000271	0.0005615	0.0035	0.9578		1802.29	1802.29	2.96		Si
SLV 12	0.47	-473.1	-3663	-0.0000235	0.0005615	0.0035	0.9578		1893	1893	4		Si
SLV 12	0.87	189.96	-4541	-0.0000203	0.0005615	0.0035	0.9578		2110.77	2110.77	11.11		Si
SLV 2	0.47	954.77	-4784	-0.0000391	0.0005615	0.0035	0.9578		2214.03	2214.03	2.32		Si
SLV 2	0.87	401.45	-3890	-0.0000227	0.0005615	0.0035	0.9578		1830.37	1830.37	4.56		Si
SLV 13	0.47	242.56	-4314	-0.0000207	0.0005615	0.0035	0.9578		2013.69	2013.69	8.3		Si
SLV 13	0.87	536.46	-4227	-0.0000269	0.0005615	0.0035	0.9578		1976.28	1976.28	3.68		Si
SLV 1	0.47	840.67	-4582	-0.0000353	0.0005615	0.0035	0.9578		2127.87	2127.87	2.53		Si
SLV 1	0.87	401.73	-3822	-0.0000224	0.0005615	0.0035	0.9578		1801.01	1801.01	4.48		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 42	0.47	465.36	-6179	-5492	-776	0.9578	0.9578	-12743	8644	3725	28547	12906	2442	15348	No	19.77	Si
SLU 42	0.87	626.12	-6152	-5468	-781	0.9578	0.9578	-12688	8636	3722	28547	12906	2442	15348	No	19.66	Si
SLU 38	0.47	439.94	-5706	-5072	-648	0.9578	0.9578	-11768	8514	3669	28547	12906	2442	15348	No	23.68	Si
SLU 38	0.87	569.04	-5638	-5011	-652	0.9578	0.9578	-11627	8495	3661	28547	12906	2442	15348	No	23.53	Si
SLU 41	0.47	465.36	-6179	-5492	-776	0.9578	0.9578	-12743	8644	3725	28547	12906	2442	15348	No	19.77	Si
SLU 41	0.87	626.12	-6152	-5468	-781	0.9578	0.9578	-12688	8636	3722	28547	12906	2442	15348	No	19.66	Si
SLU 40	0.47	465.36	-6179	-5492	-776	0.9578	0.9578	-12743	8644	3725	28547	12906	2442	15348	No	19.77	Si
SLU 40	0.87	626.12	-6152	-5468	-781	0.9578	0.9578	-12688	8636	3722	28547	12906	2442	15348	No	19.66	Si
SLU 81	0.47	544.27	-7030	-6249	-751	0.9578	0.9578	-14499	8878	3826	28547	12906	2442	15348	No	20.43	Si
SLU 81	0.87	690.31	-6914	-6145	-756	0.9578	0.9578	-14259	8846	3812	28547	12906	2442	15348	No	20.29	Si
SLU 37	0.47	439.94	-5706	-5072	-648	0.9578	0.9578	-11768	8514	3669	28547	12906	2442	15348	No	23.68	Si
SLU 37	0.87	569.04	-5638	-5011	-652	0.9578	0.9578	-11627	8495	3661	28547	12906	2442	15348	No	23.53	Si
SLU 82	0.47	544.27	-7030	-6249	-751	0.9578	0.9578	-14499	8878	3826	28547	12906	2442	15348	No	20.43	Si
SLU 82	0.87	690.31	-6914	-6145	-756	0.9578	0.9578	-14259	8846	3812	28547	12906	2442	15348	No	20.29	Si
SLU 83	0.47	544.27	-7030	-6249	-751	0.9578	0.9578	-14499	8878	3826	28547	12906	2442	15348	No	20.43	Si
SLU 83	0.87	690.31	-6914	-6145	-756	0.9578	0.9578	-14259	8846	3812	28547	12906	2442	15348	No	20.29	Si
SLU 84	0.47	544.27	-7030	-6249	-751	0.9578	0.9578	-14499	8878	3826	28547	12906	2442	15348	No	20.43	Si
SLU 84	0.87	690.31	-6914	-6145	-756	0.9578	0.9578	-14259	8846	3812	28547	12906	2442	15348	No	20.29	Si
SLU 39	0.47	465.36	-6179	-5492	-776	0.9578	0.9578	-12743	8644	3725	28547	12906	2442	15348	No	19.77	Si
SLU 39	0.87	626.12	-6152	-5468	-781	0.9578	0.9578	-12688	8636	3722	28547	12906	2442	15348	No	19.66	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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	0.47	-412.13	-3533	-3140	-3419	0.9578	0.9578	-7286	11874	5118	28547	19359	2442	21801		6.38	Si
SLV 7	0.87	149.82	-4349	-3866	-3432	0.9578	0.9578	-8970	12211	5263	28547	19359	2442	21801		6.35	Si
SLV 5	0.47	1189.84	-4996	-4441	3151	0.9578	0.7222	-10304	12478	4055	28547	19359	2442	21801		6.92	Si
SLV 5	0.87	609.93	-3754	-3337	3116	0.9578	0.9493	-7743	11965	5111	28547	19359	2442	21801		7	Si
SLV 15	0.47	-238.03	-3875	-3444	-2791	0.9578	0.9578	-7992	12015	5178	28547	19359	2442	21801		7.81	Si
SLV 15	0.87	398.43	-4406	-3916	-2720	0.9578	0.9578	-9087	12234	5273	28547	19359	2442	21801		8.02	Si
SLV 8	0.47	-293.66	-3743	-3327	-2956	0.9578	0.9578	-7720	11961	5155	28547	19359	2442	21801		7.38	Si
SLV 8	0.87	149.54	-4420	-3929	-2970	0.9578	0.9578	-9115	12240	5275	28547	19359	2442	21801		7.34	Si
SLV 12	0.47	-473.1	-3663	-3256	-3731	0.9578	0.9578	-7554	11927	5141	28547	19359	2442	21801		5.84	Si
SLV 12	0.87	189.96	-4541	-4037	-3703	0.9578	0.9578	-9366	12290	5297	28547	19359	2442	21801		5.89	Si
SLV 6	0.47	1308.3	-5206	-4628	3614	0.9578	0.6828	-10738	12564	3860	28547	19359	2442	21801		6.03	Si
SLV 6	0.87	609.64	-3825	-3400	3578	0.9578	0.9578	-7889	11994	5169	28547	19359	2442	21801		6.09	Si
SLV 11	0.47	-591.56	-3453	-3069	-4194	0.9578	0.9226	-7121	11841	4916	28547	19359	2442	21801		5.2	Si
SLV 11	0.87	190.24	-4471	-3974	-4165	0.9578	0.9578	-9221	12261	5284	28547	19359	2442	21801		5.23	Si
SLV 16	0.47	-123.93	-4077	-3624	-2345	0.9578	0.9578	-8409	12099	5214	28547	19359	2442	21801		9.3	Si
SLV 16	0.87	398.16	-4474	-3977	-2275	0.9578	0.9578	-9227	12262	5285	28547	19359	2442	21801		9.58	Si



Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	0.47	1010.4	-4916	-4370	2376	0.9578	0.82	-10139	12444	4592	28547	19359	2442	21801		9.18	Si
SLV 9	0.87	650.35	-3876	-3445	2383	0.9578	0.9333	-7994	12015	5046	28547	19359	2442	21801		9.15	Si
SLV 10	0.47	1128.87	-5126	-4557	2839	0.9578	0.776	-10572	12531	4376	28547	19359	2442	21801		7.68	Si
SLV 10	0.87	650.06	-3947	-3508	2845	0.9578	0.9425	-8139	12045	5108	28547	19359	2442	21801		7.66	Si

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

quota -0.23 Wa 0.08 denominatore 8 $\gamma M = 2$

Comb.	fd	Sa	$\alpha 0$	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.24	5646	-2433	54.64	527.22	9.65	Si
SLV 8	179667	0.24	5856	-2524	54.64	546.09	9.99	Si
SLV 11	179667	0.24	6333	-2730	54.64	588.71	10.77	Si
SLV 12	179667	0.24	6544	-2820	54.64	607.38	11.12	Si
SLV 3	179667	0.24	6609	-2848	54.64	613.16	11.22	Si
SLV 4	179667	0.24	6812	-2936	54.64	631.08	11.55	Si
SLV 1	179667	0.24	8119	-3499	54.64	745.51	13.64	Si
SLV 2	179667	0.24	8322	-3587	54.64	763.04	13.97	Si
SLV 15	179667	0.24	8902	-3837	54.64	812.95	14.88	Si
SLV 16	179667	0.24	9105	-3924	54.64	830.28	15.2	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 mezzera = -0.23 Wa = 0.08 Ta = 0.0251

Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 4	-3459	-2606	-8	1.309	513.3	0.92	20.67992	3.45007	Si
SLV 16	-3373	-5519	-73	1.318	504.7	0.919	20.84676	3.45007	Si
SLV 2	-3308	-4382	67	1.338	498.2	0.918	21.18132	3.45007	Si
SLV 3	-3347	-2521	-9	1.34	502.1	0.918	21.20391	3.45007	Si
SLV 15	-3261	-5435	-74	1.35	493.5	0.917	21.38597	3.45007	Si
SLV 1	-3196	-4297	66	1.371	487	0.916	21.7455	3.45007	Si
SLV 14	-3222	-7295	1	1.379	489.6	0.917	21.8541	3.45007	Si
SLV 8	-3607	-1555	-117	1.246	528.2	0.921	19.64863	3.04994	Si
SLV 12	-3581	-2429	-137	1.248	525.6	0.921	19.6904	3.04994	Si
SLV 13	-3110	-7211	0	1.414	478.4	0.915	22.44942	3.45007	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_SLV	4.173	SLV 39	Si
V_SLV	19.655	SLV 39	Si
PF_SLV	1.829	SLV 6	Si
V_SLV	5.198	SLV 11	Si
PFFP_SLV	9.649	SLV 7	Si
R_SLV	5.994	SLV 4	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	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
0.81	-13.248	-8.054	-13.248	L1	L2	8.864	0.45	2.6	2.6	2.6			

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	t0	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	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,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	elim,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, $\gamma M = 3$

Verifica condotta secondo CNR-DT 215



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	-1.53	11066.2	-110720	-0.0000443	0.0004492	0.0035	8.864	379233.46	419103.3	419103.3	37.87	No	Si
SLU 49	0.57	8694.81	-90314	-0.0000358	0.0004492	0.0035	8.864	326099.86	353283.1	353283.1	40.63	No	Si
SLU 44	-1.53	11066.2	-110720	-0.0000443	0.0004492	0.0035	8.864	379233.46	419103.3	419103.3	37.87	No	Si
SLU 44	0.57	8694.81	-90314	-0.0000358	0.0004492	0.0035	8.864	326099.86	353283.1	353283.1	40.63	No	Si
SLU 50	-1.53	11066.2	-110720	-0.0000443	0.0004492	0.0035	8.864	379233.46	419103.3	419103.3	37.87	No	Si
SLU 50	0.57	8694.81	-90314	-0.0000358	0.0004492	0.0035	8.864	326099.86	353283.1	353283.1	40.63	No	Si
SLU 51	-1.53	11066.2	-110720	-0.0000443	0.0004492	0.0035	8.864	379233.46	419103.3	419103.3	37.87	No	Si
SLU 51	0.57	8694.81	-90314	-0.0000358	0.0004492	0.0035	8.864	326099.86	353283.1	353283.1	40.63	No	Si
SLU 47	-1.53	11066.2	-110720	-0.0000443	0.0004492	0.0035	8.864	379233.46	419103.3	419103.3	37.87	No	Si
SLU 47	0.57	8694.81	-90314	-0.0000358	0.0004492	0.0035	8.864	326099.86	353283.1	353283.1	40.63	No	Si
SLU 67	-1.53	12278.87	-126736	-0.000051	0.0004492	0.0035	8.864	415632.4	470764.05	470764.05	38.34	No	Si
SLU 67	0.57	9728.06	-105980	-0.0000421	0.0004492	0.0035	8.864	367565.88	403813.4	403813.4	41.51	No	Si
SLU 46	-1.53	11066.2	-110720	-0.0000443	0.0004492	0.0035	8.864	379233.46	419103.3	419103.3	37.87	No	Si
SLU 46	0.57	8694.81	-90314	-0.0000358	0.0004492	0.0035	8.864	326099.86	353283.1	353283.1	40.63	No	Si
SLU 45	-1.53	11066.2	-110720	-0.0000443	0.0004492	0.0035	8.864	379233.46	419103.3	419103.3	37.87	No	Si
SLU 45	0.57	8694.81	-90314	-0.0000358	0.0004492	0.0035	8.864	326099.86	353283.1	353283.1	40.63	No	Si
SLU 43	-1.53	11066.2	-110720	-0.0000443	0.0004492	0.0035	8.864	379233.46	419103.3	419103.3	37.87	No	Si
SLU 43	0.57	8694.81	-90314	-0.0000358	0.0004492	0.0035	8.864	326099.86	353283.1	353283.1	40.63	No	Si
SLU 48	-1.53	11066.2	-110720	-0.0000443	0.0004492	0.0035	8.864	379233.46	419103.3	419103.3	37.87	No	Si
SLU 48	0.57	8694.81	-90314	-0.0000358	0.0004492	0.0035	8.864	326099.86	353283.1	353283.1	40.63	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM 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	-1.53	-70002.64	-99531	-0.0000545	0.0006738	0.0035	8.864		441333.23	441333.23	6.3		Si
SLV 14	0.57	-8693.92	-83723	-0.0000328	0.0006738	0.0035	8.864		383892.27	383892.27	44.16		Si
SLV 13	-1.53	-70336.36	-99535	-0.0000546	0.0006738	0.0035	8.864		441345.36	441345.36	6.27		Si
SLV 13	0.57	-9147.77	-83727	-0.0000329	0.0006738	0.0035	8.864		383905.04	383905.04	41.97		Si
SLV 4	-1.53	89598.9	-100808	-0.0000601	0.0006738	0.0035	8.864		407084.07	407084.07	4.54		Si
SLV 4	0.57	24437.26	-84838	-0.0000372	0.0006738	0.0035	8.864		351809.06	351809.06	14.4		Si
SLV 15	-1.53	-69938.7	-99376	-0.0000544	0.0006738	0.0035	8.864		440782.29	440782.29	6.3		Si
SLV 15	0.57	-8682.71	-83551	-0.0000328	0.0006738	0.0035	8.864		383248.21	383248.21	44.14		Si
SLV 2	-1.53	89201.24	-100967	-0.00006	0.0006738	0.0035	8.864		407600.89	407600.89	4.57		Si
SLV 2	0.57	23972.2	-85014	-0.0000372	0.0006738	0.0035	8.864		352457.12	352457.12	14.7		Si
SLV 7	-1.53	34001.37	-100124	-0.0000455	0.0006738	0.0035	8.864		404855.75	404855.75	11.91		Si
SLV 7	0.57	13084.15	-84185	-0.0000341	0.0006738	0.0035	8.864		349382.97	349382.97	26.7		Si
SLV 8	-1.53	34347.87	-100121	-0.0000456	0.0006738	0.0035	8.864		404844.19	404844.19	11.79		Si
SLV 8	0.57	13555.36	-84181	-0.0000342	0.0006738	0.0035	8.864		349369.66	349369.66	25.77		Si
SLV 3	-1.53	89265.18	-100812	-0.00006	0.0006738	0.0035	8.864		407095.21	407095.21	4.56		Si
SLV 3	0.57	23983.41	-84842	-0.0000371	0.0006738	0.0035	8.864		351821.66	351821.66	14.67		Si
SLV 1	-1.53	88867.51	-100970	-0.0000599	0.0006738	0.0035	8.864		407612.03	407612.03	4.59		Si
SLV 1	0.57	23518.35	-85017	-0.0000371	0.0006738	0.0035	8.864		352469.72	352469.72	14.99		Si
SLV 16	-1.53	-69604.98	-99373	-0.0000544	0.0006738	0.0035	8.864		440770.16	440770.16	6.33		Si
SLV 16	0.57	-8228.86	-83548	-0.0000326	0.0006738	0.0035	8.864		383235.44	383235.44	46.57		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 79	-1.53	13862.64	-148444	-118756	1317	8.864	8.864	-29772	10833	43212	81562	143347	45206	124773	No	94.72	Si
SLU 79	0.57	11088.54	-127688	-102151	1317	8.864	8.864	-25609	10833	43212	81562	143347	45206	124773	No	94.72	Si
SLU 78	-1.53	13862.64	-148444	-118756	1317	8.864	8.864	-29772	10833	43212	81562	143347	45206	124773	No	94.72	Si
SLU 78	0.57	11088.54	-127688	-102151	1317	8.864	8.864	-25609	10833	43212	81562	143347	45206	124773	No	94.72	Si
SLU 82	-1.53	14541.4	-157748	-126198	1363	8.864	8.864	-31638	10833	43212	81562	143347	45206	124773	No	91.55	Si
SLU 82	0.57	11671.61	-136992	-109594	1363	8.864	8.864	-27475	10833	43212	81562	143347	45206	124773	No	91.55	Si
SLU 83	-1.53	14541.4	-157748	-126198	1363	8.864	8.864	-31638	10833	43212	81562	143347	45206	124773	No	91.55	Si
SLU 83	0.57	11671.61	-136992	-109594	1363	8.864	8.864	-27475	10833	43212	81562	143347	45206	124773	No	91.55	Si
SLU 77	-1.53	13862.64	-148444	-118756	1317	8.864	8.864	-29772	10833	43212	81562	143347	45206	124773	No	94.72	Si
SLU 77	0.57	11088.54	-127688	-102151	1317	8.864	8.864	-25609	10833	43212	81562	143347	45206	124773	No	94.72	Si
SLU 84	-1.53	14541.4	-157748	-126198	1363	8.864	8.864	-31638	10833	43212	81562	143347	45206	124773	No	91.55	Si
SLU 84	0.57	11671.61	-136992	-109594	1363	8.864	8.864	-27475	10833	43212	81562	143347	45206	124773	No	91.55	Si
SLU 80	-1.53	13862.64	-148444	-118756	1317	8.864	8.864	-29772	10833	43212	81562	143347	45206	124773	No	94.72	Si
SLU 80	0.57	11088.54	-127688	-102151	1317	8.864	8.864	-25609	10833	43212	81562	143347	45206	124773	No	94.72	Si
SLU 81	-1.53	14541.4	-157748	-126198	1363	8.864	8.864	-31638	10833	43212	81562	143347	45206	124773	No	91.55	Si
SLU 81	0.57	11671.61	-136992	-109594	1363	8.864	8.864	-27475	10833	43212	81562	143347	45206	124773	No	91.55	Si
SLU 75	-1.53	13862.64	-148444	-118756	1317	8.864	8.864	-29772	10833	43212	81562	143347	45206	124773	No	94.72	Si
SLU 75	0.57	11088.54	-127688	-102151	1317	8.864	8.864	-25609	10833	43212	81562	143347	45206	124773	No	94.72	Si
SLU 76	-1.53	13862.64	-148444	-118756	1317	8.864	8.864	-29772	10833	43212	81562	143347	45206	124773	No	94.72	Si
SLU 76	0.57	11088.54	-127688	-102151	1317	8.864	8.864	-25609	10833	43212	81562	143347	45206	124773	No	94.72	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	-1.53	34347.87	-100121	-80097	10378	8.864	8.864	-20080	16250	64818	81562	215021	45206	146379		14.11	Si
SLV 8	0.57	13555.36	-84181	-67345	10237	8.864	8.864	-16884	15877	63329	81562	215021	45206	144891		14.15	Si
SLV 7	-1.53	34001.37	-100124	-80099	10437	8.864	8.864	-20081	16250	64818	81562	215021	45206	146379		14.03	Si
SLV 7	0.57	13084.15	-84185	-67348	10296	8.864	8.864	-16884	15877	63329	81562	215021	45206	144891		14.07	Si
SLV 15	-1.53	-69938.7	-99376	-79501	-30225	8.864	8.864	-19931	16250	64818	81562	215021	45206	146379		4.84	Si
SLV 15	0.57	-8682.71	-83551	-66841	-29874	8.864	8.864	-16757	15851	63228	81562	215021	45206	144790		4.85	Si
SLV 3	-1.53	89265.18	-100812	-80649	32226	8.864	8.864	-20219	16250	64818	81562	215021	45206	146379		4.54	Si
SLV 3	0.57	23983.41	-84842	-67873	31856	8.864	8.864	-17016	15903	63435	81562	215021	45206	144996		4.55	Si
SLV 13	-1.53	-70336.36	-99535	-79628	-30283	8.864	8.864	-19963	16250	64818	81562	215021	45206	146379		4.83	Si
SLV 13	0.57	-9147.77	-83727	-66981	-29913	8.864	8.864	-16792	15858	63256	81562	215021	45206	144818		4.84	Si
SLV 14	-1.53	-70002.64	-99531	-79625	-30340	8.864	8.864	-19962	16250	64818	81562	215021	45206	146379		4.82	Si
SLV 14	0.57	-8693.92	-83723	-66979	-29970	8.864	8.864	-16792	15858	63256	81562	215021	45206	144817		4.83	Si
SLV 2	-1.53	89201.24	-100967	-80774	32111	8.864	8.864	-20250	16250	64818	81562	215021	45206	146379		4.56	Si
SLV 2	0.57	23972.2	-85014	-68011	31761	8.864	8.864	-17051	15910	63462	81562	215021	45206	145024		4.57	Si
SLV 1	-1.53	88867.51	-100970	-80776	32168	8.864	8.864	-20251	16250	64818	81562	215021	45206	146379		4.55	Si
SLV 1	0.57	23518.35	-85017	-68014	31818	8.864	8.864	-17051	15910	63463	81562	215021	45206	145024		4.56	Si



Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 16	-1.53	-69604.98	-99373	-79498	-30282	8.864	8.864	-19930	16250	64818	81562	215021	45206	146379		4.83	Si
SLV 16	0.57	-8228.86	-83548	-66838	-29932	8.864	8.864	-16756	15851	63227	81562	215021	45206	144789		4.84	Si
SLV 4	-1.53	89598.9	-100808	-80647	32169	8.864	8.864	-20218	16250	64818	81562	215021	45206	146379		4.55	Si
SLV 4	0.57	24437.26	-84838	-67871	31799	8.864	8.864	-17015	15903	63434	81562	215021	45206	144996		4.56	Si

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

quota -0.23 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-89991	0.24	514.21	17755.55	22816.51	20286.03	39.45	Si
SLV 15	-89994	0.24	514.21	17756.13	22817.29	20286.71	39.45	Si
SLV 14	-90137	0.24	514.21	17780.33	22849.96	20315.14	39.51	Si
SLV 13	-90141	0.24	514.21	17780.91	22850.74	20315.82	39.51	Si
SLV 12	-90262	0.24	514.21	17801.51	22878.58	20340.05	39.56	Si
SLV 11	-90266	0.24	514.21	17802.11	22879.39	20340.75	39.56	Si
SLV 8	-90641	0.24	514.21	17865.61	22965.26	20415.44	39.7	Si
SLV 7	-90644	0.24	514.21	17866.21	22966.08	20416.14	39.7	Si
SLV 10	-90749	0.24	514.21	17883.96	22990.11	20437.03	39.74	Si
SLV 9	-90753	0.24	514.21	17884.56	22990.92	20437.74	39.75	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzera = -0.23 Wa = 0.08 Ta = 0.0251

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 2	-73047	-100967	-378	0.696	8902	0.952	10.62531	3.45007	Si
SLV 1	-73045	-100970	-377	0.696	8901.7	0.952	10.62563	3.45007	Si
SLV 4	-72979	-100808	222	0.699	8895	0.952	10.66226	3.45007	Si
SLV 3	-72976	-100812	223	0.699	8894.7	0.952	10.66246	3.45007	Si
SLV 16	-71884	-99373	381	0.705	8783.8	0.952	10.76442	3.45007	Si
SLV 15	-71882	-99376	381	0.705	8783.6	0.952	10.76463	3.45007	Si
SLV 14	-71953	-99531	-219	0.706	8790.8	0.952	10.78635	3.45007	Si
SLV 13	-71951	-99535	-219	0.706	8790.6	0.952	10.78669	3.45007	Si
SLV 6	-72745	-100650	-1023	0.691	8871.2	0.952	10.54133	3.04994	Si
SLV 5	-72742	-100653	-1022	0.691	8871	0.952	10.54167	3.04994	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_SLV	37.872	SLV 43	Si
V_SLV	91.553	SLV 81	Si
PF_SLV	4.543	SLV 4	Si
V_SLV	4.542	SLV 3	Si
PFFP_SLV	39.451	SLV 16	Si
R_SLV	3.08	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	I	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
2.185	-13.249	1.81	-13.249	L1	L2	0.375	0.45	2.6	2.6	2.6			

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 FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,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 FRM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 48	-1.53	494.14	-7395	-0.0001486	0.0004492	0.0035	0.375	889.28	1077.95	1077.95	2.18	No	Si
SLU 48	0.57	-176.79	-6548	-0.0000866	0.0004492	0.0035	0.375	837.89	1032.7	1032.7	5.84	No	Si
SLU 46	-1.53	494.14	-7395	-0.0001486	0.0004492	0.0035	0.375	889.28	1077.95	1077.95	2.18	No	Si
SLU 46	0.57	-176.79	-6548	-0.0000866	0.0004492	0.0035	0.375	837.89	1032.7	1032.7	5.84	No	Si
SLU 47	-1.53	494.14	-7395	-0.0001486	0.0004492	0.0035	0.375	889.28	1077.95	1077.95	2.18	No	Si



Comb.	Quota	M	N	em	em_	emu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLU 47	0.57	-176.79	-6548	-0.0000866	0.0004492	0.0035	0.375	837.89	1032.7	1032.7	5.84	No	Si
SLU 44	-1.53	494.14	-7395	-0.0001486	0.0004492	0.0035	0.375	889.28	1077.95	1077.95	2.18	No	Si
SLU 44	0.57	-176.79	-6548	-0.0000866	0.0004492	0.0035	0.375	837.89	1032.7	1032.7	5.84	No	Si
SLU 45	-1.53	494.14	-7395	-0.0001486	0.0004492	0.0035	0.375	889.28	1077.95	1077.95	2.18	No	Si
SLU 45	0.57	-176.79	-6548	-0.0000866	0.0004492	0.0035	0.375	837.89	1032.7	1032.7	5.84	No	Si
SLU 43	-1.53	494.14	-7395	-0.0001486	0.0004492	0.0035	0.375	889.28	1077.95	1077.95	2.18	No	Si
SLU 43	0.57	-176.79	-6548	-0.0000866	0.0004492	0.0035	0.375	837.89	1032.7	1032.7	5.84	No	Si
SLU 51	-1.53	494.14	-7395	-0.0001486	0.0004492	0.0035	0.375	889.28	1077.95	1077.95	2.18	No	Si
SLU 51	0.57	-176.79	-6548	-0.0000866	0.0004492	0.0035	0.375	837.89	1032.7	1032.7	5.84	No	Si
SLU 50	-1.53	494.14	-7395	-0.0001486	0.0004492	0.0035	0.375	889.28	1077.95	1077.95	2.18	No	Si
SLU 50	0.57	-176.79	-6548	-0.0000866	0.0004492	0.0035	0.375	837.89	1032.7	1032.7	5.84	No	Si
SLU 84	-1.53	592.38	-10026	-0.0001992	0.0004492	0.0035	0.375	965.81	1319.56	1319.56	2.23	No	Si
SLU 84	0.57	-162	-9164	-0.000112	0.0004492	0.0035	0.375	954.61	1279.4	1279.4	7.9	No	Si
SLU 49	-1.53	494.14	-7395	-0.0001486	0.0004492	0.0035	0.375	889.28	1077.95	1077.95	2.18	No	Si
SLU 49	0.57	-176.79	-6548	-0.0000866	0.0004492	0.0035	0.375	837.89	1032.7	1032.7	5.84	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche, $\gamma M = 2$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	em	em_	emu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 5	-1.53	396.4	-6696	-0.0001185	0.0006738	0.0035	0.375		1073.07	1073.07	2.71		Si
SLV 5	0.57	-120.02	-6035	-0.0000707	0.0006738	0.0035	0.375		1026.99	1026.99	8.56		Si
SLV 8	-1.53	480.94	-5320	-0.000125	0.0006738	0.0035	0.375		871.51	871.51	1.81		Si
SLV 8	0.57	-228.12	-4660	-0.0000736	0.0006738	0.0035	0.375		830.19	830.19	3.64		Si
SLV 11	-1.53	430.32	-6311	-0.0001203	0.0006738	0.0035	0.375		1016.7	1016.7	2.36		Si
SLV 11	0.57	-147.01	-5653	-0.000071	0.0006738	0.0035	0.375		973.43	973.43	6.62		Si
SLV 7	-1.53	484.1	-5260	-0.0001257	0.0006738	0.0035	0.375		862.84	862.84	1.78		Si
SLV 7	0.57	-233.02	-4601	-0.0000738	0.0006738	0.0035	0.375		821.52	821.52	3.53		Si
SLV 2	-1.53	486.74	-5026	-0.0001266	0.0006738	0.0035	0.375		828.5	828.5	1.7		Si
SLV 2	0.57	-255.1	-4364	-0.0000747	0.0006738	0.0035	0.375		785.65	785.65	3.08		Si
SLV 3	-1.53	516.1	-4538	-0.0001418	0.0006738	0.0035	0.375		757.08	757.08	1.47		Si
SLV 3	0.57	-293.72	-3877	-0.0000767	0.0006738	0.0035	0.375		711.32	711.32	2.42		Si
SLV 6	-1.53	393.23	-6756	-0.0001186	0.0006738	0.0035	0.375		1081.74	1081.74	2.75		Si
SLV 6	0.57	-115.12	-6095	-0.0000705	0.0006738	0.0035	0.375		1035.29	1035.29	8.99		Si
SLV 1	-1.53	489.79	-4969	-0.0001276	0.0006738	0.0035	0.375		820.15	820.15	1.67		Si
SLV 1	0.57	-259.82	-4307	-0.0000749	0.0006738	0.0035	0.375		776.95	776.95	2.99		Si
SLV 12	-1.53	427.15	-6370	-0.0001203	0.0006738	0.0035	0.375		1025.37	1025.37	2.4		Si
SLV 12	0.57	-142.12	-5712	-0.0000709	0.0006738	0.0035	0.375		981.73	981.73	6.91		Si
SLV 4	-1.53	513.05	-4595	-0.0001394	0.0006738	0.0035	0.375		765.43	765.43	1.49		Si
SLV 4	0.57	-289	-3934	-0.0000763	0.0006738	0.0035	0.375		720.02	720.02	2.49		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, $\gamma M = 3$

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 78	-1.53	573.23	-9510	-7608	351	0.375	0.375	-45085	10833	1828	81562	6065	1913	7977	No	22.7	Si
SLU 78	0.57	-164.75	-8649	-6919	351	0.375	0.375	-41000	10833	1828	81562	6065	1913	7977	No	22.7	Si
SLU 80	-1.53	573.23	-9510	-7608	351	0.375	0.375	-45085	10833	1828	81562	6065	1913	7977	No	22.7	Si
SLU 80	0.57	-164.75	-8649	-6919	351	0.375	0.375	-41000	10833	1828	81562	6065	1913	7977	No	22.7	Si
SLU 84	-1.53	592.38	-10026	-8021	359	0.375	0.375	-47530	10833	1828	81562	6065	1913	7977	No	22.21	Si
SLU 84	0.57	-162	-9164	-7331	359	0.375	0.375	-43444	10833	1828	81562	6065	1913	7977	No	22.21	Si
SLU 77	-1.53	573.23	-9510	-7608	351	0.375	0.375	-45085	10833	1828	81562	6065	1913	7977	No	22.7	Si
SLU 77	0.57	-164.75	-8649	-6919	351	0.375	0.375	-41000	10833	1828	81562	6065	1913	7977	No	22.7	Si
SLU 76	-1.53	573.23	-9510	-7608	351	0.375	0.375	-45085	10833	1828	81562	6065	1913	7977	No	22.7	Si
SLU 76	0.57	-164.75	-8649	-6919	351	0.375	0.375	-41000	10833	1828	81562	6065	1913	7977	No	22.7	Si
SLU 81	-1.53	592.38	-10026	-8021	359	0.375	0.375	-47530	10833	1828	81562	6065	1913	7977	No	22.21	Si
SLU 81	0.57	-162	-9164	-7331	359	0.375	0.375	-43444	10833	1828	81562	6065	1913	7977	No	22.21	Si
SLU 75	-1.53	573.23	-9510	-7608	351	0.375	0.375	-45085	10833	1828	81562	6065	1913	7977	No	22.7	Si
SLU 75	0.57	-164.75	-8649	-6919	351	0.375	0.375	-41000	10833	1828	81562	6065	1913	7977	No	22.7	Si
SLU 82	-1.53	592.38	-10026	-8021	359	0.375	0.375	-47530	10833	1828	81562	6065	1913	7977	No	22.21	Si
SLU 82	0.57	-162	-9164	-7331	359	0.375	0.375	-43444	10833	1828	81562	6065	1913	7977	No	22.21	Si
SLU 83	-1.53	592.38	-10026	-8021	359	0.375	0.375	-47530	10833	1828	81562	6065	1913	7977	No	22.21	Si
SLU 83	0.57	-162	-9164	-7331	359	0.375	0.375	-43444	10833	1828	81562	6065	1913	7977	No	22.21	Si
SLU 79	-1.53	573.23	-9510	-7608	351	0.375	0.375	-45085	10833	1828	81562	6065	1913	7977	No	22.7	Si
SLU 79	0.57	-164.75	-8649	-6919	351	0.375	0.375	-41000	10833	1828	81562	6065	1913	7977	No	22.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, $\gamma M = 2$

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	-1.53	480.94	-5320	-4256	335	0.375	0.2913	-25218	16250	2130	81562	9097	1913	11009		32.91	Si
SLV 8	0.57	-228.12	-4660	-3728	330	0.375	0.375	-22094	16250	2742	81562	9097	1913	11009		33.41	Si
SLV 5	-1.53	396.4	-6696	-5357	245	0.375	0.375	-31745	16250	2742	81562	9097	1913	11009		44.93	Si
SLV 5	0.57	-120.02	-6035	-4828	241	0.375	0.375	-28612	16250	2742	81562	9097	1913	11009		45.69	Si
SLV 7	-1.53	484.1	-5260	-4208	338	0.375	0.2864	-24937	16250	2094	81562	9097	1913	11009		32.53	Si
SLV 7	0.57	-233.02	-4601	-3681	333	0.375	0.375	-21813	16250	2742	81562	9097	1913	11009		33.03	Si
SLV 3	-1.53	516.1	-4538	-3630	379	0.375	0.2213	-21513	16250	1618	81562	9097	1913	11009		29.08	Si
SLV 3	0.57	-293.72	-3877	-3102	363	0.375	0.3352	-18380	16176	2440	81562	9097	1913	11009		30.3	Si
SLV 6	-1.53	393.23	-6756	-5404	241	0.375	0.375	-32026	16250	2742	81562	9097	1913	11009		45.65	Si
SLV 6	0.57	-115.12	-6095	-4876	237	0.375	0.375	-28893	16250	2742	81562	9097	1913	11009		46.43	Si
SLV 2	-1.53	486.74	-5026	-4021	347	0.375	0.272	-23825	16250	1989	81562	9097	1913	11009		31.73	Si
SLV 2	0.57	-255.1	-4364	-3491	332	0.375	0.375	-20690	16250	2742	81562	9097	1913	11009		33.17	Si
SLV 12	-1.53	427.15	-6370	-5096	272	0.375	0.3613	-30201	16250	2642	81562	9097	1913	11009		40.48	Si
SLV 12	0.57	-142.12	-5712	-4570	276	0.375	0.375	-27081	16250	2742	81562	9097	1913	11009		39.88	Si
SLV 4	-1.53	513.05	-4595	-3676	375	0.375	0.2275	-21783	16250	1664	81562	9097	1913	11009		29.36	Si
SLV 4	0.57	-289	-3934	-3147	360	0.375	0.3421	-18650	16230	2499	81562	9097	1913	11009		30.61	Si
SLV 11	-1.53	430.32	-6311	-5049	276	0.375	0.358	-29920	16250	2618	81562	9097	1913	11009		39.92	Si
SLV 11	0.57	-147.01	-5653	-4523	280	0.375	0.375	-26800	16250	2742	81562	9097	1913	11009		39.34	Si
SLV 1	-1.53	489.79	-4969	-3975	351	0.375	0.2668	-23555	16250	1951	81562	9097	1913	11009		31.4	Si
SLV 1	0.57	-259.82	-4307	-3446	336	0.375	0.375	-20419	16250	2742	81562	9097	1913	11009		32.8	Si



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

quota -0.23 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-4100	0.24	21.75	800.28	1007.03	903.66	41.54	Si
SLV 4	-4157	0.24	21.75	809.69	1020.17	914.93	42.06	Si
SLV 1	-4531	0.24	21.75	870.06	1105.43	987.74	45.4	Si
SLV 2	-4588	0.24	21.75	879.11	1118.45	998.78	45.91	Si
SLV 7	-4823	0.24	21.75	915.99	1171.64	1043.81	47.98	Si
SLV 8	-4882	0.24	21.75	925.14	1184.81	1054.97	48.49	Si
SLV 11	-5874	0.24	21.75	1070.63	1404.83	1237.73	56.9	Si
SLV 12	-5933	0.24	21.75	1078.87	1417.91	1248.39	57.39	Si
SLV 5	-6257	0.24	21.75	1123.04	1485.86	1304.45	59.96	Si
SLV 6	-6316	0.24	21.75	1130.95	1498.29	1314.62	60.43	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzera = -0.23 Wa = 0.08 Ta = 0.0251

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 14	-6136	-8529	37	0.409	686.5	0.972	6.10809	3.45007	Si
SLV 13	-6119	-8472	36	0.41	684.8	0.972	6.12159	3.45007	Si
SLV 16	-5928	-8098	-35	0.419	665.3	0.972	6.27506	3.45007	Si
SLV 15	-5911	-8041	-36	0.42	663.6	0.971	6.28826	3.45007	Si
SLV 10	-5426	-7807	121	0.433	614.2	0.969	6.49815	3.04994	Si
SLV 9	-5409	-7747	121	0.435	612.4	0.969	6.51514	3.04994	Si
SLV 12	-4733	-6370	-119	0.481	543.7	0.966	7.23632	3.04994	Si
SLV 11	-4716	-6311	-119	0.482	541.9	0.966	7.25671	3.04994	Si
SLV 6	-4610	-6756	122	0.49	531.1	0.965	7.37861	3.04994	Si
SLV 5	-4592	-6696	122	0.491	529.3	0.965	7.40165	3.04994	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_SLV	2.181	SLV 43	Si
V_SLV	22.206	SLV 81	Si
PF_SLV	1.467	SLV 3	Si
V_SLV	29.076	SLV 3	Si
PFFP_SLV	41.539	SLV 3	Si
R_SLV	1.77	SLV 14	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
-7.101	-8.718	-9.428	-8.718	L1	L2	2.327	0.45	2.6	2.6	2.6			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,conv	e,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 FRM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	em	em_	emu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 82	0.47	-1408.78	-17935	-0.0000323	0.0003743	0.0035	2.327	17356.47	19713.38	19713.38	13.99	No	Si
SLV 82	0.87	-1567.9	-16886	-0.0000313	0.0003743	0.0035	2.327	16534.96	18798.36	18798.36	11.99	No	Si
SLV 81	0.47	-1408.78	-17935	-0.0000323	0.0003743	0.0035	2.327	17356.47	19713.38	19713.38	13.99	No	Si
SLV 81	0.87	-1567.9	-16886	-0.0000313	0.0003743	0.0035	2.327	16534.96	18798.36	18798.36	11.99	No	Si
SLV 42	0.47	-1259.69	-15697	-0.0000282	0.0003743	0.0035	2.327	15574.08	17716.37	17716.37	14.06	No	Si
SLV 42	0.87	-1427.41	-14915	-0.0000277	0.0003743	0.0035	2.327	14925.57	17013.17	17013.17	11.92	No	Si
SLV 41	0.47	-1259.69	-15697	-0.0000282	0.0003743	0.0035	2.327	15574.08	17716.37	17716.37	14.06	No	Si
SLV 41	0.87	-1427.41	-14915	-0.0000277	0.0003743	0.0035	2.327	14925.57	17013.17	17013.17	11.92	No	Si
SLV 40	0.47	-1259.69	-15697	-0.0000282	0.0003743	0.0035	2.327	15574.08	17716.37	17716.37	14.06	No	Si
SLV 40	0.87	-1427.41	-14915	-0.0000277	0.0003743	0.0035	2.327	14925.57	17013.17	17013.17	11.92	No	Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLU 84	0.47	-1408.78	-17935	-0.0000323	0.0003743	0.0035	2.327	17356.47	19713.38	19713.38	13.99	No	Si
SLU 84	0.87	-1567.9	-16886	-0.0000313	0.0003743	0.0035	2.327	16534.96	18798.36	18798.36	11.99	No	Si
SLU 83	0.47	-1408.78	-17935	-0.0000323	0.0003743	0.0035	2.327	17356.47	19713.38	19713.38	13.99	No	Si
SLU 83	0.87	-1567.9	-16886	-0.0000313	0.0003743	0.0035	2.327	16534.96	18798.36	18798.36	11.99	No	Si
SLU 37	0.47	-1158.05	-14519	-0.000026	0.0003743	0.0035	2.327	14592.22	16655.69	16655.69	14.38	No	Si
SLU 37	0.87	-1295.77	-13717	-0.0000253	0.0003743	0.0035	2.327	13906.51	15898.56	15898.56	12.27	No	Si
SLU 38	0.47	-1158.05	-14519	-0.000026	0.0003743	0.0035	2.327	14592.22	16655.69	16655.69	14.38	No	Si
SLU 38	0.87	-1295.77	-13717	-0.0000253	0.0003743	0.0035	2.327	13906.51	15898.56	15898.56	12.27	No	Si
SLU 39	0.47	-1259.69	-15697	-0.0000282	0.0003743	0.0035	2.327	15574.08	17716.37	17716.37	14.06	No	Si
SLU 39	0.87	-1427.41	-14915	-0.0000277	0.0003743	0.0035	2.327	14925.57	17013.17	17013.17	11.92	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 15	0.47	-2747.4	-10666	-0.0000259	0.0005615	0.0035	2.327		13239.56	13239.56	4.82		Si
SLV 15	0.87	-1509.32	-9247	-0.0000191	0.0005615	0.0035	2.327		11737.03	11737.03	7.78		Si
SLV 6	0.47	1864.11	-8894	-0.0000199	0.0005615	0.0035	2.327		10149.89	10149.89	5.44		Si
SLV 6	0.87	669.8	-9041	-0.0000157	0.0005615	0.0035	2.327		10306.67	10306.67	15.39		Si
SLV 5	0.47	2237.78	-8526	-0.0000208	0.0005615	0.0035	2.327		9756.53	9756.53	4.36		Si
SLV 5	0.87	777.5	-8799	-0.0000157	0.0005615	0.0035	2.327		10048.57	10048.57	12.92		Si
SLV 12	0.47	-3932.47	-13712	-0.0000351	0.0005615	0.0035	2.327		16340.96	16340.96	4.16		Si
SLV 12	0.87	-2583.4	-11743	-0.0000269	0.0005615	0.0035	2.327		14344.05	14344.05	5.55		Si
SLV 8	0.47	-3134.33	-14371	-0.000033	0.0005615	0.0035	2.327		17007.71	17007.71	5.43		Si
SLV 8	0.87	-2471.14	-12608	-0.0000278	0.0005615	0.0035	2.327		15222.2	15222.2	6.16		Si
SLV 9	0.47	1439.64	-7868	-0.0000168	0.0005615	0.0035	2.327		9052.19	9052.19	6.29		Si
SLV 9	0.87	665.24	-7934	-0.000014	0.0005615	0.0035	2.327		9122.94	9122.94	13.71		Si
SLV 11	0.47	-3558.81	-13344	-0.0000331	0.0005615	0.0035	2.327		15966.96	15966.96	4.49		Si
SLV 11	0.87	-2475.7	-11501	-0.0000262	0.0005615	0.0035	2.327		14096.71	14096.71	5.69		Si
SLV 16	0.47	-3107.29	-11021	-0.0000278	0.0005615	0.0035	2.327		13604.46	13604.46	4.38		Si
SLV 16	0.87	-1613.05	-9480	-0.0000199	0.0005615	0.0035	2.327		11983.19	11983.19	7.43		Si
SLV 14	0.47	-1607.76	-9378	-0.0000197	0.0005615	0.0035	2.327		11874.62	11874.62	7.39		Si
SLV 14	0.87	-670.76	-8410	-0.0000147	0.0005615	0.0035	2.327		10855.73	10855.73	16.18		Si
SLV 7	0.47	-2760.67	-14003	-0.000031	0.0005615	0.0035	2.327		16636.02	16636.02	6.03		Si
SLV 7	0.87	-2363.45	-12366	-0.000027	0.0005615	0.0035	2.327		14978.1	14978.1	6.34		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 49	0.47	-872.16	-11997	-10664	-607	2.327	2.327	-10184	8302	8694	28547	31356	5934	37240	No	61.39	Si
SLU 49	0.87	-886.31	-10863	-9656	-605	2.327	2.327	-9222	8174	8559	28547	31356	5934	37106	No	61.33	Si
SLU 43	0.47	-872.16	-11997	-10664	-607	2.327	2.327	-10184	8302	8694	28547	31356	5934	37240	No	61.39	Si
SLU 43	0.87	-886.31	-10863	-9656	-605	2.327	2.327	-9222	8174	8559	28547	31356	5934	37106	No	61.33	Si
SLU 51	0.47	-872.16	-11997	-10664	-607	2.327	2.327	-10184	8302	8694	28547	31356	5934	37240	No	61.39	Si
SLU 51	0.87	-886.31	-10863	-9656	-605	2.327	2.327	-9222	8174	8559	28547	31356	5934	37106	No	61.33	Si
SLU 44	0.47	-872.16	-11997	-10664	-607	2.327	2.327	-10184	8302	8694	28547	31356	5934	37240	No	61.39	Si
SLU 44	0.87	-886.31	-10863	-9656	-605	2.327	2.327	-9222	8174	8559	28547	31356	5934	37106	No	61.33	Si
SLU 47	0.47	-872.16	-11997	-10664	-607	2.327	2.327	-10184	8302	8694	28547	31356	5934	37240	No	61.39	Si
SLU 47	0.87	-886.31	-10863	-9656	-605	2.327	2.327	-9222	8174	8559	28547	31356	5934	37106	No	61.33	Si
SLU 50	0.47	-872.16	-11997	-10664	-607	2.327	2.327	-10184	8302	8694	28547	31356	5934	37240	No	61.39	Si
SLU 50	0.87	-886.31	-10863	-9656	-605	2.327	2.327	-9222	8174	8559	28547	31356	5934	37106	No	61.33	Si
SLU 46	0.47	-872.16	-11997	-10664	-607	2.327	2.327	-10184	8302	8694	28547	31356	5934	37240	No	61.39	Si
SLU 46	0.87	-886.31	-10863	-9656	-605	2.327	2.327	-9222	8174	8559	28547	31356	5934	37106	No	61.33	Si
SLU 45	0.47	-872.16	-11997	-10664	-607	2.327	2.327	-10184	8302	8694	28547	31356	5934	37240	No	61.39	Si
SLU 45	0.87	-886.31	-10863	-9656	-605	2.327	2.327	-9222	8174	8559	28547	31356	5934	37106	No	61.33	Si
SLU 48	0.47	-872.16	-11997	-10664	-607	2.327	2.327	-10184	8302	8694	28547	31356	5934	37240	No	61.39	Si
SLU 48	0.87	-886.31	-10863	-9656	-605	2.327	2.327	-9222	8174	8559	28547	31356	5934	37106	No	61.33	Si
SLU 1	0.47	-723.06	-9759	-8675	-415	2.327	2.327	-8284	8049	8428	28547	31356	5934	36975	No	89	Si
SLU 1	0.87	-745.82	-8892	-7904	-414	2.327	2.327	-7548	7951	8326	28547	31356	5934	36872	No	89.03	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 8	0.47	-3134.33	-14371	-12774	-4737	2.327	2.327	-12199	12856	13463	28547	47034	5934	42009		8.87	Si
SLV 8	0.87	-2471.14	-12608	-11207	-4776	2.327	2.327	-10703	12557	13149	28547	47034	5934	41696		8.73	Si
SLV 1	0.47	1412.6	-11218	-9971	5492	2.327	2.327	-9522	12321	12902	28547	47034	5934	41449		7.55	Si
SLV 1	0.87	-192.85	-11061	-9832	5359	2.327	2.327	-9390	12295	12874	28547	47034	5934	41421		7.73	Si
SLV 6	0.47	1864.11	-8894	-7906	5410	2.327	2.327	-7550	11927	12489	28547	47034	5934	41035		7.58	Si
SLV 6	0.87	669.8	-9041	-8036	5372	2.327	2.327	-7675	11952	12515	28547	47034	5934	41062		7.64	Si
SLV 5	0.47	2237.78	-8526	-7579	6441	2.327	2.327	-7237	11864	12423	28547	47034	5934	40970		6.36	Si
SLV 5	0.87	777.5	-8799	-7821	6402	2.327	2.327	-7469	11910	12472	28547	47034	5934	41019		6.41	Si
SLV 11	0.47	-3558.81	-13344	-11862	-5954	2.327	2.327	-11328	12682	13280	28547	47034	5934	41827		7.02	Si
SLV 11	0.87	-2475.7	-11501	-10223	-5912	2.327	2.327	-9763	12369	12952	28547	47034	5934	41499		7.02	Si
SLV 16	0.47	-3107.29	-11021	-9796	-6036	2.327	2.327	-9355	12288	12867	28547	47034	5934	41413		6.86	Si
SLV 16	0.87	-1613.05	-9480	-8427	-5899	2.327	2.327	-8048	12026	12593	28547	47034	5934	41140		6.97	Si
SLV 12	0.47	-3932.47	-13712	-12189	-6985	2.327	2.327	-11640	12745	13345	28547	47034	5934	41892		6	Si
SLV 12	0.87	-2583.4	-11743	-10438	-6942	2.327	2.327	-9968	12410	12995	28547	47034	5934	41542		5.98	Si
SLV 9	0.47	1439.64	-7868	-6993	4194	2.327	2.327	-6679	11752	12306	28547	47034	5934	40853		9.74	Si
SLV 9	0.87	665.24	-7934	-7052	4236	2.327	2.327	-6735	11764	12318	28547	47034	5934	40865		9.65	Si
SLV 15	0.47	-2747.4	-10666	-9481	-5043	2.327	2.327	-9054	12228	12804	28547	47034	5934	41350		8.2	Si
SLV 15	0.87	-1509.32	-9247	-8220	-4907	2.327	2.327	-7850	11987	12552	28547	47034	5934	41098		8.38	Si
SLV 2	0.47	1052.71	-11572	-10286	4500	2.327	2.327	-9823	12381	12965	28547	47034	5934	41512		9.23	Si
SLV 2	0.87	-296.58	-11294	-10039	4366	2.327	2.327	-9588	12334	12916	28547	47034	5934	41462		9.5	Si

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

quota -0.23 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.24	7755	-8121	132.75	1734.38	13.07	Si
SLV 10	179667	0.24	7990	-8367	132.75	1784.09	13.44	Si



Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.24	8347	-8740	132.75	1859.03	14	Si
SLV 14	179667	0.24	8573	-8977	132.75	1906.5	14.36	Si
SLV 5	179667	0.24	8914	-9335	132.75	1977.67	14.9	Si
SLV 6	179667	0.24	9150	-9581	132.75	2026.54	15.27	Si
SLV 15	179667	0.24	10009	-10481	132.75	2203.61	16.6	Si
SLV 16	179667	0.24	10235	-10718	132.75	2249.92	16.95	Si
SLV 1	179667	0.24	12210	-12786	132.75	2646.83	19.94	Si
SLV 2	179667	0.24	12437	-13023	132.75	2691.6	20.28	Si

Per la verifica della tabella precedente non è 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 mezzera = -0.23 Wa = 0.08 Ta = 0.0251

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-10748	-19335	-145	1.082	1483	0.93	16.91327	3.45007	Si
SLV 3	-10447	-19286	-145	1.105	1452.7	0.929	17.29824	3.45007	Si
SLV 8	-11356	-19941	-125	1.04	1544.4	0.932	16.21133	3.04994	Si
SLV 2	-9642	-16462	-80	1.178	1371.6	0.925	18.5093	3.45007	Si
SLV 7	-11043	-19890	-125	1.062	1512.9	0.931	16.57597	3.04994	Si
SLV 1	-9341	-16412	-80	1.206	1341.4	0.924	18.97387	3.45007	Si
SLV 12	-10766	-17587	-43	1.088	1484.8	0.93	17.01126	3.04994	Si
SLV 11	-10454	-17535	-43	1.113	1453.4	0.929	17.41327	3.04994	Si
SLV 16	-8781	-11486	128	1.258	1285.1	0.921	19.83786	3.45007	Si
SLV 15	-8481	-11436	129	1.29	1254.9	0.92	20.37643	3.45007	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	11.919	SLU 39	Si
V_SLU	61.328	SLU 43	Si
PF_SLV	4.155	SLV 12	Si
V_SLV	5.984	SLV 12	Si
PFFP_SLV	13.065	SLV 9	Si
R_SLV	4.902	SLV 4	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
-1.141	-8.718	-6.101	-8.718	L1	L2	4.96	0.45	2.6	2.6	2.6			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ0	fv0	μ	φ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRCM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,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 1	0.47	216.5	-16044	-0.0000112	0.0003743	0.0035	4.96	36980.45	38746.76	38746.76	178.97	No	Si
SLU 1	0.87	87.24	-14626	-0.0000101	0.0003743	0.0035	4.96	33938.58	35594	35594	408	No	Si
SLU 47	0.47	271.87	-19430	-0.0000136	0.0003743	0.0035	4.96	44067.15	46157.53	46157.53	169.78	No	Si
SLU 47	0.87	109.62	-17591	-0.0000121	0.0003743	0.0035	4.96	40247.61	42159.72	42159.72	384.6	No	Si
SLU 44	0.47	271.87	-19430	-0.0000136	0.0003743	0.0035	4.96	44067.15	46157.53	46157.53	169.78	No	Si
SLU 44	0.87	109.62	-17591	-0.0000121	0.0003743	0.0035	4.96	40247.61	42159.72	42159.72	384.6	No	Si
SLU 51	0.47	271.87	-19430	-0.0000136	0.0003743	0.0035	4.96	44067.15	46157.53	46157.53	169.78	No	Si
SLU 51	0.87	109.62	-17591	-0.0000121	0.0003743	0.0035	4.96	40247.61	42159.72	42159.72	384.6	No	Si
SLU 48	0.47	271.87	-19430	-0.0000136	0.0003743	0.0035	4.96	44067.15	46157.53	46157.53	169.78	No	Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLU 48	0.87	109.62	-17591	-0.0000121	0.0003743	0.0035	4.96	40247.61	42159.72	42159.72	384.6	No	Si
SLU 46	0.47	271.87	-19430	-0.000136	0.0003743	0.0035	4.96	44067.15	46157.53	46157.53	169.78	No	Si
SLU 46	0.87	109.62	-17591	-0.000121	0.0003743	0.0035	4.96	40247.61	42159.72	42159.72	384.6	No	Si
SLU 45	0.47	271.87	-19430	-0.000136	0.0003743	0.0035	4.96	44067.15	46157.53	46157.53	169.78	No	Si
SLU 45	0.87	109.62	-17591	-0.000121	0.0003743	0.0035	4.96	40247.61	42159.72	42159.72	384.6	No	Si
SLU 49	0.47	271.87	-19430	-0.000136	0.0003743	0.0035	4.96	44067.15	46157.53	46157.53	169.78	No	Si
SLU 49	0.87	109.62	-17591	-0.000121	0.0003743	0.0035	4.96	40247.61	42159.72	42159.72	384.6	No	Si
SLU 50	0.47	271.87	-19430	-0.000136	0.0003743	0.0035	4.96	44067.15	46157.53	46157.53	169.78	No	Si
SLU 50	0.87	109.62	-17591	-0.000121	0.0003743	0.0035	4.96	40247.61	42159.72	42159.72	384.6	No	Si
SLU 43	0.47	271.87	-19430	-0.000136	0.0003743	0.0035	4.96	44067.15	46157.53	46157.53	169.78	No	Si
SLU 43	0.87	109.62	-17591	-0.000121	0.0003743	0.0035	4.96	40247.61	42159.72	42159.72	384.6	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 2	0.47	7836.85	-15977	-0.0000173	0.0005615	0.0035	4.96		39248.64	39248.64	5.01		Si
SLV 2	0.87	3805.8	-14578	-0.000013	0.0005615	0.0035	4.96		36038.82	36038.82	9.47		Si
SLV 4	0.47	7972.76	-21804	-0.0000215	0.0005615	0.0035	4.96		52439.25	52439.25	6.58		Si
SLV 4	0.87	4239.89	-20401	-0.0000174	0.0005615	0.0035	4.96		49310.39	49310.39	11.63		Si
SLV 14	0.47	-8644.76	-16073	-0.0000181	0.0005615	0.0035	4.96		45365.6	45365.6	5.25		Si
SLV 14	0.87	-4471.46	-14644	-0.0000136	0.0005615	0.0035	4.96		42095.28	42095.28	9.41		Si
SLV 10	0.47	-3056.56	-9241	-0.0000088	0.0005615	0.0035	4.96		29521.22	29521.22	9.66		Si
SLV 10	0.87	-2088.85	-7826	-0.0000171	0.0005615	0.0035	4.96		26179.75	26179.75	12.53		Si
SLV 16	0.47	-8508.85	-21900	-0.000022	0.0005615	0.0035	4.96		58426.75	58426.75	6.87		Si
SLV 16	0.87	-4037.38	-20467	-0.0000173	0.0005615	0.0035	4.96		55196.76	55196.76	13.67		Si
SLV 13	0.47	-7505.51	-16058	-0.0000171	0.0005615	0.0035	4.96		45330.28	45330.28	6.04		Si
SLV 13	0.87	-4053.55	-14628	-0.0000133	0.0005615	0.0035	4.96		42059.65	42059.65	10.38		Si
SLV 1	0.47	8976.1	-15962	-0.0000183	0.0005615	0.0035	4.96		39213.01	39213.01	4.37		Si
SLV 1	0.87	4223.72	-14562	-0.0000134	0.0005615	0.0035	4.96		36003.21	36003.21	8.52		Si
SLV 5	0.47	3070.77	-9196	-0.0000087	0.0005615	0.0035	4.96		23444.33	23444.33	7.63		Si
SLV 5	0.87	828.24	-7791	-0.0000059	0.0005615	0.0035	4.96		20099.56	20099.56	24.27		Si
SLV 3	0.47	9112.01	-21789	-0.0000225	0.0005615	0.0035	4.96		52404.66	52404.66	5.75		Si
SLV 3	0.87	4657.8	-20386	-0.0000178	0.0005615	0.0035	4.96		49275.75	49275.75	10.58		Si
SLV 15	0.47	-7369.6	-21885	-0.0000211	0.0005615	0.0035	4.96		58391.71	58391.71	7.92		Si
SLV 15	0.87	-3619.46	-20452	-0.000017	0.0005615	0.0035	4.96		55161.92	55161.92	15.24		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	0.47	331.83	-29534	-26252	518	4.96	4.96	-11762	8513	19000	28547	66836	12648	47547	No	91.84	Si
SLU 80	0.87	130.37	-27700	-24622	518	4.96	4.96	-11031	8415	18783	28547	66836	12648	47330	No	91.42	Si
SLU 81	0.47	345.56	-32080	-28516	543	4.96	4.96	-12776	8648	19302	28547	66836	12648	47849	No	88.2	Si
SLU 81	0.87	134.52	-30253	-26891	542	4.96	4.96	-12048	8551	19086	28547	66836	12648	47632	No	87.8	Si
SLU 82	0.47	345.56	-32080	-28516	543	4.96	4.96	-12776	8648	19302	28547	66836	12648	47849	No	88.2	Si
SLU 82	0.87	134.52	-30253	-26891	542	4.96	4.96	-12048	8551	19086	28547	66836	12648	47632	No	87.8	Si
SLU 84	0.47	345.56	-32080	-28516	543	4.96	4.96	-12776	8648	19302	28547	66836	12648	47849	No	88.2	Si
SLU 84	0.87	134.52	-30253	-26891	542	4.96	4.96	-12048	8551	19086	28547	66836	12648	47632	No	87.8	Si
SLU 78	0.47	331.83	-29534	-26252	518	4.96	4.96	-11762	8513	19000	28547	66836	12648	47547	No	91.84	Si
SLU 78	0.87	130.37	-27700	-24622	518	4.96	4.96	-11031	8415	18783	28547	66836	12648	47330	No	91.42	Si
SLU 76	0.47	331.83	-29534	-26252	518	4.96	4.96	-11762	8513	19000	28547	66836	12648	47547	No	91.84	Si
SLU 76	0.87	130.37	-27700	-24622	518	4.96	4.96	-11031	8415	18783	28547	66836	12648	47330	No	91.42	Si
SLU 83	0.47	345.56	-32080	-28516	543	4.96	4.96	-12776	8648	19302	28547	66836	12648	47849	No	88.2	Si
SLU 83	0.87	134.52	-30253	-26891	542	4.96	4.96	-12048	8551	19086	28547	66836	12648	47632	No	87.8	Si
SLU 75	0.47	331.83	-29534	-26252	518	4.96	4.96	-11762	8513	19000	28547	66836	12648	47547	No	91.84	Si
SLU 75	0.87	130.37	-27700	-24622	518	4.96	4.96	-11031	8415	18783	28547	66836	12648	47330	No	91.42	Si
SLU 77	0.47	331.83	-29534	-26252	518	4.96	4.96	-11762	8513	19000	28547	66836	12648	47547	No	91.84	Si
SLU 77	0.87	130.37	-27700	-24622	518	4.96	4.96	-11031	8415	18783	28547	66836	12648	47330	No	91.42	Si
SLU 79	0.47	331.83	-29534	-26252	518	4.96	4.96	-11762	8513	19000	28547	66836	12648	47547	No	91.84	Si
SLU 79	0.87	130.37	-27700	-24622	518	4.96	4.96	-11031	8415	18783	28547	66836	12648	47330	No	91.42	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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	0.47	-8644.76	-16073	-14287	-11688	4.96	4.96	-6401	11697	26107	28547	100254	12648	54654		4.68	Si
SLV 14	0.87	-4471.46	-14644	-13016	-11450	4.96	4.96	-5832	11583	25853	28547	100254	12648	54400		4.75	Si
SLV 13	0.47	-7505.51	-16058	-14273	-9885	4.96	4.96	-6395	11696	26105	28547	100254	12648	54651		5.53	Si
SLV 13	0.87	-4053.55	-14628	-13003	-9647	4.96	4.96	-5826	11582	25851	28547	100254	12648	54397		5.64	Si
SLV 1	0.47	8976.1	-15962	-14188	13167	4.96	4.96	-6357	11688	26088	28547	100254	12648	54634		4.15	Si
SLV 1	0.87	4223.72	-14562	-12944	12892	4.96	4.96	-5799	11577	25839	28547	100254	12648	54385		4.22	Si
SLV 3	0.47	9112.01	-21789	-19368	12409	4.96	4.96	-8677	12152	27124	28547	100254	12648	55670		4.49	Si
SLV 3	0.87	4657.8	-20386	-18121	12172	4.96	4.96	-8119	12040	26874	28547	100254	12648	55421		4.55	Si
SLV 12	0.47	-2603.52	-28666	-25480	-5296	4.96	4.96	-11416	12700	28346	28547	100254	12648	56893		10.74	Si
SLV 12	0.87	-641.9	-27239	-24212	-5156	4.96	4.96	-10848	12586	28092	28547	100254	12648	56639		10.98	Si
SLV 15	0.47	-7369.6	-21885	-19453	-10642	4.96	4.96	-8716	12160	27141	28547	100254	12648	55687		5.23	Si
SLV 15	0.87	-3619.46	-20452	-18179	-10367	4.96	4.96	-8145	12046	26886	28547	100254	12648	55432		5.35	Si
SLV 5	0.47	3070.77	-9196	-8175	6017	4.96	4.96	-3662	11149	24885	28547	100254	12648	53431		8.88	Si
SLV 5	0.87	828.24	-7791	-6925	5878	4.96	4.96	-3103	11037	24635	28547	100254	12648	53182		9.05	Si
SLV 2	0.47	7836.85	-15977	-14202	11364	4.96	4.96	-6363	11689	26090	28547	100254	12648	54637		4.81	Si
SLV 2	0.87	3805.8	-14578	-12958	11088	4.96	4.96	-5806	11578	25842	28547	100254	12648	54388		4.9	Si
SLV 4	0.47	7972.76	-21804	-19382	10606	4.96	4.96	-8684	12153	27126	28547	100254	12648	55673		5.25	Si
SLV 4	0.87	4239.89	-20401	-18135	10368	4.96	4.96	-8125	12042	26877	28547	100254	12648	55423		5.35	Si
SLV 16	0.47	-8508.85	-21900	-19467	-12445	4.96	4.96	-8722	12161	27143	28547	100254	12648	55690		4.47	Si
SLV 16	0.87	-4037.38	-20467	-18193	-12170	4.96	4.96	-8151	12047	26889	28547	100254	12648	55435		4.56	Si

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

quota -0.23 Wa 0.08 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 5	179667	0.24	4747	-10595	282.96	2309.84	8.16	Si



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.24	4749	-10600	282.96	2310.85	8.17	Si
SLV 6	179667	0.24	4754	-10610	282.96	2312.91	8.17	Si
SLV 10	179667	0.24	4756	-10615	282.96	2313.93	8.18	Si
SLV 1	179667	0.24	7876	-17579	282.96	3751.34	13.26	Si
SLV 2	179667	0.24	7882	-17593	282.96	3754.17	13.27	Si
SLV 13	179667	0.24	7883	-17595	282.96	3754.58	13.27	Si
SLV 14	179667	0.24	7889	-17609	282.96	3757.41	13.28	Si
SLV 3	179667	0.24	10560	-23570	282.96	4936.55	17.45	Si
SLV 4	179667	0.24	10566	-23584	282.96	4939.27	17.46	Si

Per la verifica della tabella precedente non è 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 = -0.23 $W_a = 0.08$ $T_a = 0.0251$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 12	-23591	-34012	-691	1.045	3230	0.931	16.31624	3.04994	Si
SLV 11	-23575	-33997	-691	1.046	3228.3	0.931	16.32522	3.04994	Si
SLV 8	-23565	-33957	-688	1.046	3227.3	0.931	16.33253	3.04994	Si
SLV 7	-23549	-33942	-687	1.047	3225.7	0.931	16.34153	3.04994	Si
SLV 16	-17444	-27067	-174	1.328	2611.4	0.919	21.01027	3.45007	Si
SLV 15	-17428	-27053	-174	1.329	2609.9	0.919	21.02469	3.45007	Si
SLV 4	-17357	-26885	-163	1.333	2602.7	0.918	21.09889	3.45007	Si
SLV 3	-17341	-26871	-162	1.334	2601.1	0.918	21.11342	3.45007	Si
SLV 14	-12148	-21060	272	1.701	2084.1	0.905	27.31539	3.45007	Si
SLV 13	-12133	-21045	272	1.702	2082.5	0.905	27.33967	3.45007	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	169.776	SLU 43	Si
V_SLU	87.803	SLU 81	Si
PF_SLV	4.369	SLV 1	Si
V_SLV	4.149	SLV 1	Si
PFFP_SLV	8.163	SLV 5	Si
R_SLV	5.35	SLV 12	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
2.186	-8.719	-0.141	-8.718	L1	L2	2.327	0.45	2.6	2.6	2.6			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	τ_0	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	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,conv	e,fd	yF,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, $\gamma_M = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	em	em_	emu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLU 39	0.47	1028.95	-15094	-0.0000264	0.0003743	0.0035	2.327	15075.63	15567.74	15567.74	15.13	No	Si
SLU 39	0.87	907.03	-14904	-0.0000256	0.0003743	0.0035	2.327	14916.6	15403.39	15403.39	16.98	No	Si
SLU 41	0.47	1028.95	-15094	-0.0000264	0.0003743	0.0035	2.327	15075.63	15567.74	15567.74	15.13	No	Si
SLU 41	0.87	907.03	-14904	-0.0000256	0.0003743	0.0035	2.327	14916.6	15403.39	15403.39	16.98	No	Si
SLU 42	0.47	1028.95	-15094	-0.0000264	0.0003743	0.0035	2.327	15075.63	15567.74	15567.74	15.13	No	Si
SLU 42	0.87	907.03	-14904	-0.0000256	0.0003743	0.0035	2.327	14916.6	15403.39	15403.39	16.98	No	Si
SLU 81	0.47	1133.86	-17218	-0.0000301	0.0003743	0.0035	2.327	16797.56	17420.98	17420.98	15.36	No	Si
SLU 81	0.87	950.15	-16870	-0.0000289	0.0003743	0.0035	2.327	16521.99	17114.85	17114.85	18.01	No	Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLU 37	0.47	938.85	-13946	-0.0000243	0.0003743	0.0035	2.327	14103.73	14578.96	14578.96	15.53	No	Si
SLU 37	0.87	802.65	-13704	-0.0000234	0.0003743	0.0035	2.327	13895.1	14371.65	14371.65	17.91	No	Si
SLU 83	0.47	1133.86	-17218	-0.0000301	0.0003743	0.0035	2.327	16797.56	17420.98	17420.98	15.36	No	Si
SLU 83	0.87	950.15	-16870	-0.0000289	0.0003743	0.0035	2.327	16521.99	17114.85	17114.85	18.01	No	Si
SLU 82	0.47	1133.86	-17218	-0.0000301	0.0003743	0.0035	2.327	16797.56	17420.98	17420.98	15.36	No	Si
SLU 82	0.87	950.15	-16870	-0.0000289	0.0003743	0.0035	2.327	16521.99	17114.85	17114.85	18.01	No	Si
SLU 38	0.47	938.85	-13946	-0.0000243	0.0003743	0.0035	2.327	14103.73	14578.96	14578.96	15.53	No	Si
SLU 38	0.87	802.65	-13704	-0.0000234	0.0003743	0.0035	2.327	13895.1	14371.65	14371.65	17.91	No	Si
SLU 84	0.47	1133.86	-17218	-0.0000301	0.0003743	0.0035	2.327	16797.56	17420.98	17420.98	15.36	No	Si
SLU 84	0.87	950.15	-16870	-0.0000289	0.0003743	0.0035	2.327	16521.99	17114.85	17114.85	18.01	No	Si
SLU 40	0.47	1028.95	-15094	-0.0000264	0.0003743	0.0035	2.327	15075.63	15567.74	15567.74	15.13	No	Si
SLU 40	0.87	907.03	-14904	-0.0000256	0.0003743	0.0035	2.327	14916.6	15403.39	15403.39	16.98	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRMC in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 7	0.47	3812.46	-12099	-0.0000322	0.0005615	0.0035	2.327		13494.68	13494.68	3.54		Si
SLV 7	0.87	2728.12	-10466	-0.0000256	0.0005615	0.0035	2.327		11805.32	11805.32	4.33		Si
SLV 6	0.47	-1624.67	-8529	-0.0000185	0.0005615	0.0035	2.327		10980.31	10980.31	6.76		Si
SLV 6	0.87	-1606.28	-9238	-0.0000195	0.0005615	0.0035	2.327		11727.08	11727.08	7.3		Si
SLV 4	0.47	2676.56	-9901	-0.0000245	0.0005615	0.0035	2.327		11211.76	11211.76	4.19		Si
SLV 4	0.87	1292.91	-8996	-0.0000179	0.0005615	0.0035	2.327		10258.71	10258.71	7.93		Si
SLV 10	0.47	-2487.69	-9174	-0.0000227	0.0005615	0.0035	2.327		11660	11660	4.69		Si
SLV 10	0.87	-1747.66	-10041	-0.0000212	0.0005615	0.0035	2.327		12576.5	12576.5	7.2		Si
SLV 11	0.47	2949.44	-12744	-0.0000299	0.0005615	0.0035	2.327		14156.04	14156.04	4.8		Si
SLV 11	0.87	2586.74	-11269	-0.0000262	0.0005615	0.0035	2.327		12639.68	12639.68	4.89		Si
SLV 3	0.47	3042.19	-10199	-0.0000264	0.0005615	0.0035	2.327		11524.6	11524.6	3.79		Si
SLV 3	0.87	1419.66	-9153	-0.0000187	0.0005615	0.0035	2.327		10424.62	10424.62	7.34		Si
SLV 9	0.47	-2108.07	-9483	-0.0000217	0.0005615	0.0035	2.327		11986.16	11986.16	5.69		Si
SLV 9	0.87	-1616.06	-10204	-0.000021	0.0005615	0.0035	2.327		12749.2	12749.2	7.89		Si
SLV 12	0.47	2569.81	-12435	-0.0000279	0.0005615	0.0035	2.327		13841.11	13841.11	5.39		Si
SLV 12	0.87	2455.14	-11106	-0.0000255	0.0005615	0.0035	2.327		12471.53	12471.53	5.08		Si
SLV 1	0.47	1524.94	-9220	-0.0000192	0.0005615	0.0035	2.327		10495.75	10495.75	6.88		Si
SLV 1	0.87	158.82	-8833	-0.0000134	0.0005615	0.0035	2.327		10085.37	10085.37	63.5		Si
SLV 8	0.47	3432.83	-11790	-0.0000303	0.0005615	0.0035	2.327		13176.43	13176.43	3.84		Si
SLV 8	0.87	2596.52	-10303	-0.0000248	0.0005615	0.0035	2.327		11634.08	11634.08	4.48		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 37	0.47	938.85	-13946	-12397	-1029	2.327	2.327	-11838	8523	8925	28547	31356	5934	37290	No	36.25	Si
SLU 37	0.87	802.65	-13704	-12181	-1031	2.327	2.327	-11633	8496	8896	28547	31356	5934	37290	No	36.18	Si
SLU 82	0.47	1133.86	-17218	-15305	-1207	2.327	2.327	-14616	8893	9312	28547	31356	5934	37290	No	30.9	Si
SLU 82	0.87	950.15	-16870	-14995	-1209	2.327	2.327	-14320	8854	9271	28547	31356	5934	37290	No	30.84	Si
SLU 40	0.47	1028.95	-15094	-13417	-1215	2.327	2.327	-12813	8653	9061	28547	31356	5934	37290	No	30.69	Si
SLU 40	0.87	907.03	-14904	-13248	-1217	2.327	2.327	-12652	8631	9038	28547	31356	5934	37290	No	30.63	Si
SLU 38	0.47	938.85	-13946	-12397	-1029	2.327	2.327	-11838	8523	8925	28547	31356	5934	37290	No	36.25	Si
SLU 38	0.87	802.65	-13704	-12181	-1031	2.327	2.327	-11633	8496	8896	28547	31356	5934	37290	No	36.18	Si
SLU 39	0.47	1028.95	-15094	-13417	-1215	2.327	2.327	-12813	8653	9061	28547	31356	5934	37290	No	30.69	Si
SLU 39	0.87	907.03	-14904	-13248	-1217	2.327	2.327	-12652	8631	9038	28547	31356	5934	37290	No	30.63	Si
SLU 41	0.47	1028.95	-15094	-13417	-1215	2.327	2.327	-12813	8653	9061	28547	31356	5934	37290	No	30.69	Si
SLU 41	0.87	907.03	-14904	-13248	-1217	2.327	2.327	-12652	8631	9038	28547	31356	5934	37290	No	30.63	Si
SLU 83	0.47	1133.86	-17218	-15305	-1207	2.327	2.327	-14616	8893	9312	28547	31356	5934	37290	No	30.9	Si
SLU 83	0.87	950.15	-16870	-14995	-1209	2.327	2.327	-14320	8854	9271	28547	31356	5934	37290	No	30.84	Si
SLU 84	0.47	1133.86	-17218	-15305	-1207	2.327	2.327	-14616	8893	9312	28547	31356	5934	37290	No	30.9	Si
SLU 84	0.87	950.15	-16870	-14995	-1209	2.327	2.327	-14320	8854	9271	28547	31356	5934	37290	No	30.84	Si
SLU 81	0.47	1133.86	-17218	-15305	-1207	2.327	2.327	-14616	8893	9312	28547	31356	5934	37290	No	30.9	Si
SLU 81	0.87	950.15	-16870	-14995	-1209	2.327	2.327	-14320	8854	9271	28547	31356	5934	37290	No	30.84	Si
SLU 42	0.47	1028.95	-15094	-13417	-1215	2.327	2.327	-12813	8653	9061	28547	31356	5934	37290	No	30.69	Si
SLU 42	0.87	907.03	-14904	-13248	-1217	2.327	2.327	-12652	8631	9038	28547	31356	5934	37290	No	30.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	0.47	2676.56	-9901	-8801	4339	2.327	2.327	-8405	12098	12668	28547	47034	5934	41215		9.5	Si
SLV 4	0.87	1292.91	-8996	-7996	4207	2.327	2.327	-7636	11944	12507	28547	47034	5934	41054		9.76	Si
SLV 13	0.47	-1351.79	-11372	-10108	-5361	2.327	2.327	-9653	12347	12929	28547	47034	5934	41476		7.74	Si
SLV 13	0.87	-312.45	-11511	-10232	-5231	2.327	2.327	-9771	12371	12954	28547	47034	5934	41501		7.93	Si
SLV 16	0.47	-200.17	-12053	-10713	-3804	2.327	2.327	-10231	12463	13050	28547	47034	5934	41597		10.94	Si
SLV 16	0.87	821.64	-11674	-10377	-3667	2.327	2.327	-9909	12399	12983	28547	47034	5934	41530		11.33	Si
SLV 3	0.47	3042.19	-10199	-9066	5345	2.327	2.327	-8657	12148	12721	28547	47034	5934	41267		7.72	Si
SLV 3	0.87	1419.66	-9153	-8136	5213	2.327	2.327	-7770	11971	12535	28547	47034	5934	41082		7.88	Si
SLV 9	0.47	-2108.07	-9483	-8429	-5482	2.327	2.327	-8050	12027	12594	28547	47034	5934	41140		7.5	Si
SLV 9	0.87	-1616.06	-10204	-9070	-5456	2.327	2.327	-8662	12149	12722	28547	47034	5934	41268		7.56	Si
SLV 14	0.47	-1717.43	-11074	-9844	-6367	2.327	2.327	-9401	12297	12877	28547	47034	5934	41423		6.51	Si
SLV 14	0.87	-439.2	-11354	-10093	-6237	2.327	2.327	-9638	12344	12926	28547	47034	5934	41473		6.65	Si
SLV 10	0.47	-2487.69	-9174	-8155	-6527	2.327	2.327	-7788	11974	12539	28547	47034	5934	41085		6.3	Si
SLV 10	0.87	-1747.66	-10041	-8925	-6500	2.327	2.327	-8524	12121	12693	28547	47034	5934	41239		6.34	Si
SLV 7	0.47	3812.46	-12099	-10755	5504	2.327	2.327	-10270	12471	13059	28547	47034	5934	41605		7.56	Si
SLV 7	0.87	2728.12	-10466	-9303	5475	2.327	2.327	-8884	12193	12768	28547	47034	5934	41315		7.55	Si
SLV 6	0.47	-1624.67	-8529	-7581	-4084	2.327	2.327	-7240	11865	12424	28547	47034	5934	40971		10.03	Si
SLV 6	0.87	-1606.28	-9238	-8211	-4138	2.327	2.327	-7842	11985	12550	28547	47034	5934	41097		9.93	Si
SLV 8	0.47	3432.83	-11790	-10480	4460	2.327	2.327	-10008	12418	13004	28547	47034	5934	41550		9.32	Si
SLV 8	0.87	2596.52	-10303	-9158	4431	2.327	2.327	-8746	12166	12739	28547	47034	5934	41286		9.32	Si

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



Comb.	fd	Sa	σ_0	N	M	Mc	Coeff.s.	Verifica
SLV 6	179667	0.24	6495	-6801	132.75	1465.1	11.04	Si
SLV 5	179667	0.24	6742	-7060	132.75	1518.39	11.44	Si
SLV 2	179667	0.24	7373	-7721	132.75	1653.36	12.45	Si
SLV 10	179667	0.24	7379	-7727	132.75	1654.49	12.46	Si
SLV 1	179667	0.24	7612	-7971	132.75	1704.05	12.84	Si
SLV 9	179667	0.24	7626	-7986	132.75	1707.12	12.86	Si
SLV 4	179667	0.24	9007	-9432	132.75	1996.97	15.04	Si
SLV 3	179667	0.24	9246	-9681	132.75	2046.46	15.42	Si
SLV 14	179667	0.24	10321	-10807	132.75	2267.31	17.08	Si
SLV 13	179667	0.24	10559	-11057	132.75	2315.83	17.44	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non é 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 mezzera = -0.23 $W_a = 0.08$ $T_a = 0.0251$

Comb.	N top	N base	V orto	α_0	M*	e*	a0*	aLim	Verifica
SLV 15	-10240	-15344	-237	1.115	1431.9	0.928	17.45982	3.45007	Si
SLV 16	-10018	-15217	-236	1.133	1409.5	0.927	17.76526	3.45007	Si
SLV 13	-9879	-12241	-162	1.151	1395.4	0.926	18.05652	3.45007	Si
SLV 14	-9656	-12114	-161	1.17	1373.1	0.925	18.38278	3.45007	Si
SLV 11	-10047	-16952	-174	1.135	1412.4	0.927	17.80248	3.04994	Si
SLV 3	-8472	-9587	194	1.285	1254	0.92	20.29858	3.45007	Si
SLV 12	-9816	-16820	-173	1.155	1389.2	0.926	18.13171	3.04994	Si
SLV 4	-8249	-9460	195	1.31	1231.7	0.919	20.7153	3.45007	Si
SLV 1	-8110	-6484	270	1.319	1217.8	0.918	20.87427	3.45007	Si
SLV 7	-9517	-15224	-44	1.193	1359	0.925	18.74619	3.04994	Si

Per la verifica della tabella precedente non si considerano i rinforzi predisposti ma qualora la sezione di verifica sia in trazione si ipotizza che tale componente sia assorbita dal rinforzo e la verifica viene effettuata conteggiando la forza di aggancio al piano definita.

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLU	15.13	SLU 39	Si
V_SLU	30.634	SLU 39	Si
PF_SLV	3.54	SLV 7	Si
V_SLV	6.295	SLV 10	Si
PFFP_SLV	11.036	SLV 6	Si
R_SLV	5.061	SLV 15	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
2.185	-17.729	2.185	-12.974	L1	L2	4.755	0.45	2.6	2.6	2.6			

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	τ_0	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	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,CNR DT-200						CRM / Fibrenet?				
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	α_t	α	elim,conv	ϵ_{fd}	$\gamma_{F,d}$	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, $\gamma_M = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	ϵ_m _	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 80	-1.53	21766.91	-39069	-0.0000464	0.0004492	0.0035	4.755	79006.11	85457.43	85457.43	3.93	No	Si
SLU 80	0.57	14695.23	-27577	-0.0000317	0.0004492	0.0035	4.755	58648.67	62958.62	62958.62	4.28	No	Si
SLU 83	-1.53	22871.99	-41137	-0.0000489	0.0004492	0.0035	4.755	82415.28	89034.25	89034.25	3.89	No	Si
SLU 83	0.57	15694.67	-29476	-0.0000339	0.0004492	0.0035	4.755	62178.09	66835.9	66835.9	4.26	No	Si
SLU 77	-1.53	21766.91	-39069	-0.0000464	0.0004492	0.0035	4.755	79006.11	85457.43	85457.43	3.93	No	Si
SLU 77	0.57	14695.23	-27577	-0.0000317	0.0004492	0.0035	4.755	58648.67	62958.62	62958.62	4.28	No	Si
SLU 82	-1.53	22871.99	-41137	-0.0000489	0.0004492	0.0035	4.755	82415.28	89034.25	89034.25	3.89	No	Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 82	0.57	15694.67	-29476	-0.0000339	0.0004492	0.0035	4.755	62178.09	66835.9	66835.9	4.26	No	Si
SLU 79	-1.53	21766.91	-39069	-0.0000464	0.0004492	0.0035	4.755	79006.11	85457.43	85457.43	3.93	No	Si
SLU 79	0.57	14695.23	-27577	-0.0000317	0.0004492	0.0035	4.755	58648.67	62958.62	62958.62	4.28	No	Si
SLU 78	-1.53	21766.91	-39069	-0.0000464	0.0004492	0.0035	4.755	79006.11	85457.43	85457.43	3.93	No	Si
SLU 78	0.57	14695.23	-27577	-0.0000317	0.0004492	0.0035	4.755	58648.67	62958.62	62958.62	4.28	No	Si
SLU 76	-1.53	21766.91	-39069	-0.0000464	0.0004492	0.0035	4.755	79006.11	85457.43	85457.43	3.93	No	Si
SLU 76	0.57	14695.23	-27577	-0.0000317	0.0004492	0.0035	4.755	58648.67	62958.62	62958.62	4.28	No	Si
SLU 81	-1.53	22871.99	-41137	-0.0000489	0.0004492	0.0035	4.755	82415.28	89034.25	89034.25	3.89	No	Si
SLU 81	0.57	15694.67	-29476	-0.0000339	0.0004492	0.0035	4.755	62178.09	66835.9	66835.9	4.26	No	Si
SLU 75	-1.53	21766.91	-39069	-0.0000464	0.0004492	0.0035	4.755	79006.11	85457.43	85457.43	3.93	No	Si
SLU 75	0.57	14695.23	-27577	-0.0000317	0.0004492	0.0035	4.755	58648.67	62958.62	62958.62	4.28	No	Si
SLU 84	-1.53	22871.99	-41137	-0.0000489	0.0004492	0.0035	4.755	82415.28	89034.25	89034.25	3.89	No	Si
SLU 84	0.57	15694.67	-29476	-0.0000339	0.0004492	0.0035	4.755	62178.09	66835.9	66835.9	4.26	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM 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	-1.53	15329.54	-17233	-0.0000249	0.0006738	0.0035	4.755		41678.16	41678.16	2.72		Si
SLV 4	0.57	-993.34	-8594	-0.0000066	0.0006738	0.0035	4.755		33269.07	33269.07	33.49		Si
SLV 3	-1.53	16389.89	-17304	-0.000026	0.0006738	0.0035	4.755		41835.47	41835.47	2.55		Si
SLV 3	0.57	-2503.99	-8105	-0.0000076	0.0006738	0.0035	4.755		32168.56	32168.56	12.85		Si
SLV 10	-1.53	-1933.28	-32616	-0.0000238	0.0006738	0.0035	4.755		85421.99	85421.99	44.19		Si
SLV 10	0.57	32559.87	-29956	-0.0000506	0.0006738	0.0035	4.755		69255.96	69255.96	2.13		Si
SLV 7	-1.53	32082.73	-21244	-0.0000535	0.0006738	0.0035	4.755		50510.94	50510.94	1.57		Si
SLV 7	0.57	-12966.36	-6821	-0.0000302	0.0006738	0.0035	3.804		29256.64	29256.64	2.26		Si
SLV 8	-1.53	30981.8	-21170	-0.0000505	0.0006738	0.0035	4.755		50350.11	50350.11	1.63		Si
SLV 8	0.57	-11397.89	-7329	-0.000019	0.0006738	0.0035	3.804		30409.96	30409.96	2.67		Si
SLV 11	-1.53	34820.49	-26482	-0.0000544	0.0006738	0.0035	4.755		61851.66	61851.66	1.78		Si
SLV 11	0.57	-9701.46	-11203	-0.0000158	0.0006738	0.0035	4.755		39141.68	39141.68	4.03		Si
SLV 6	-1.53	-4671.04	-27378	-0.0000225	0.0006738	0.0035	4.755		74387.44	74387.44	15.93		Si
SLV 6	0.57	29294.97	-25574	-0.0000451	0.0006738	0.0035	4.755		59904.09	59904.09	2.04		Si
SLV 5	-1.53	-3570.11	-27452	-0.0000216	0.0006738	0.0035	4.755		74542.82	74542.82	20.88		Si
SLV 5	0.57	27726.5	-25067	-0.0000428	0.0006738	0.0035	4.755		58814.27	58814.27	2.12		Si
SLV 12	-1.53	33719.57	-26408	-0.0000523	0.0006738	0.0035	4.755		61693.33	61693.33	1.83		Si
SLV 12	0.57	-8132.99	-11711	-0.0000148	0.0006738	0.0035	4.755		40279.89	40279.89	4.95		Si
SLV 9	-1.53	-832.35	-32690	-0.0000229	0.0006738	0.0035	4.755		85577.37	85577.37	102.81		Si
SLV 9	0.57	30991.4	-29448	-0.0000484	0.0006738	0.0035	4.755		68183.33	68183.33	2.2		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 80	-1.53	21766.91	-39069	-31255	4212	4.755	4.755	-14607	10281	21999	81562	76897	24250	101148	No	24.02	Si
SLU 80	0.57	14695.23	-27577	-22062	4515	4.755	4.755	-10310	9708	20773	81562	76897	24250	101148	No	22.4	Si
SLU 79	-1.53	21766.91	-39069	-31255	4212	4.755	4.755	-14607	10281	21999	81562	76897	24250	101148	No	24.02	Si
SLU 79	0.57	14695.23	-27577	-22062	4515	4.755	4.755	-10310	9708	20773	81562	76897	24250	101148	No	22.4	Si
SLU 75	-1.53	21766.91	-39069	-31255	4212	4.755	4.755	-14607	10281	21999	81562	76897	24250	101148	No	24.02	Si
SLU 75	0.57	14695.23	-27577	-22062	4515	4.755	4.755	-10310	9708	20773	81562	76897	24250	101148	No	22.4	Si
SLU 77	-1.53	21766.91	-39069	-31255	4212	4.755	4.755	-14607	10281	21999	81562	76897	24250	101148	No	24.02	Si
SLU 77	0.57	14695.23	-27577	-22062	4515	4.755	4.755	-10310	9708	20773	81562	76897	24250	101148	No	22.4	Si
SLU 82	-1.53	22871.99	-41137	-32910	4442	4.755	4.755	-15380	10384	22219	81562	76897	24250	101148	No	22.77	Si
SLU 82	0.57	15694.67	-29476	-23581	4762	4.755	4.755	-11020	9803	20975	81562	76897	24250	101148	No	21.24	Si
SLU 78	-1.53	21766.91	-39069	-31255	4212	4.755	4.755	-14607	10281	21999	81562	76897	24250	101148	No	24.02	Si
SLU 78	0.57	14695.23	-27577	-22062	4515	4.755	4.755	-10310	9708	20773	81562	76897	24250	101148	No	22.4	Si
SLU 76	-1.53	21766.91	-39069	-31255	4212	4.755	4.755	-14607	10281	21999	81562	76897	24250	101148	No	24.02	Si
SLU 76	0.57	14695.23	-27577	-22062	4515	4.755	4.755	-10310	9708	20773	81562	76897	24250	101148	No	22.4	Si
SLU 84	-1.53	22871.99	-41137	-32910	4442	4.755	4.755	-15380	10384	22219	81562	76897	24250	101148	No	22.77	Si
SLU 84	0.57	15694.67	-29476	-23581	4762	4.755	4.755	-11020	9803	20975	81562	76897	24250	101148	No	21.24	Si
SLU 83	-1.53	22871.99	-41137	-32910	4442	4.755	4.755	-15380	10384	22219	81562	76897	24250	101148	No	22.77	Si
SLU 83	0.57	15694.67	-29476	-23581	4762	4.755	4.755	-11020	9803	20975	81562	76897	24250	101148	No	21.24	Si
SLU 81	-1.53	22871.99	-41137	-32910	4442	4.755	4.755	-15380	10384	22219	81562	76897	24250	101148	No	22.77	Si
SLU 81	0.57	15694.67	-29476	-23581	4762	4.755	4.755	-11020	9803	20975	81562	76897	24250	101148	No	21.24	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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 9	-1.53	-832.35	-32690	-26152	-21084	4.755	4.755	-12222	14944	31977	81562	115346	24250	113539		5.38	Si
SLV 9	0.57	30991.4	-29448	-23559	-20370	4.755	3.9753	-11010	14702	26300	81562	115346	24250	107862		5.3	Si
SLV 12	-1.53	33719.57	-26408	-21126	27208	4.755	3.3019	-9873	14475	21507	81562	115346	24250	103069		3.79	Si
SLV 12	0.57	-8132.99	-11711	-9368	26937	4.755	4.755	-4378	13376	28621	81562	115346	24250	110182		4.09	Si
SLV 7	-1.53	32082.73	-21244	-16995	28805	4.755	2.6018	-7942	14088	16495	81562	115346	24250	98056		3.4	Si
SLV 7	0.57	-12966.36	-6821	-5457	28506	3.804	1.4299	0	0	0	81562	92277	19400	81562		2.86	Si
SLV 11	-1.53	34820.49	-26482	-21185	29138	4.755	3.1878	-9901	14480	20772	81562	115346	24250	102334		3.51	Si
SLV 11	0.57	-9701.46	-11203	-8962	28865	4.755	4.5346	-4400	13380	27303	81562	115346	24250	108864		3.77	Si
SLV 5	-1.53	-3570.11	-27452	-21962	-21417	4.755	4.755	-10264	14553	31139	81562	115346	24250	112701		5.26	Si
SLV 5	0.57	27726.5	-25067	-20053	-20729	4.755	3.8142	-9372	14374	24672	81562	115346	24250	106233		5.12	Si
SLV 10	-1.53	-1933.28	-32616	-26093	-23014	4.755	4.755	-12194	14939	31965	81562	115346	24250	113527		4.93	Si
SLV 10	0.57	32559.87	-29956	-23965	-22298	4.755	3.8717	-11200	14740	25681	81562	115346	24250	107243		4.81	Si
SLV 8	-1.53	30981.8	-21170	-16936	26876	4.755	2.742	-7915	14083	17377	81562	115346	24250	98939		3.68	Si
SLV 8	0.57	-11397.89	-7329	-5863	26578	3.804	2.467	0	0	0	81562	92277	19400	81562		3.07	Si
SLV 6	-1.53	-4671.04	-27378	-21903	-23346	4.755	4.755	-10236	14547	31127	81562	115346	24250	112689		4.83	Si
SLV 6	0.57	29294.97	-25574	-20459	-22657	4.755	3.696	-9562	14412	23971	81562	115346	24250	105532		4.66	Si
SLV 15	-1.53	25515.77	-34764	-27811	11912	4.755	4.755	-12998	15100	32309	81562	115346	24250	113871		9.56	Si
SLV 15	0.57	8378.99	-22710	-18168	12016	4.755	4.755	-8491	14198	30380	81562	115346	24250	111942		9.32	Si
SLV 3	-1.53	16389.89	-17304	-13843	10804	4.755	4.291	-6470	13794	26635	81562	115346	24250	108197		10.01	Si
SLV 3	0.57	-2503.99	-8105	-6484	10820	4.755	4.755	-3030	13106	28044	81562	115346	24250	109605		10.13	Si



Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	-11543	0.24	275.84	2520.72	3715.67	3118.2	11.3	Si
SLV 4	-11826	0.24	275.84	2580.59	3783.13	3181.86	11.53	Si
SLV 7	-12099	0.24	275.84	2638.25	3848.07	3243.16	11.76	Si
SLV 8	-12393	0.24	275.84	2700.22	3917.63	3308.92	12	Si
SLV 1	-15665	0.24	275.84	3383.89	4692.14	4038.01	14.64	Si
SLV 2	-15948	0.24	275.84	3442.42	4759	4100.71	14.87	Si
SLV 11	-16702	0.24	275.84	3597.93	4937.19	4267.56	15.47	Si
SLV 12	-16996	0.24	275.84	3658.35	5006.63	4332.49	15.71	Si
SLV 5	-25840	0.24	275.84	5430.86	7083.01	6256.94	22.68	Si
SLV 6	-26133	0.24	275.84	5488.2	7151.77	6319.98	22.91	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = -0.23 Wa = 0.08 Ta = 0.0251

Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 14	-22173	-36556	195	1.078	3051.7	0.93	16.84366	3.45007	Si
SLV 13	-21855	-36627	193	1.09	3019.6	0.93	17.03936	3.45007	Si
SLV 10	-22244	-32616	86	1.079	3058.9	0.93	16.8632	3.04994	Si
SLV 9	-21914	-32690	84	1.092	3025.6	0.93	17.0662	3.04994	Si
SLV 16	-18345	-34693	216	1.24	2666.3	0.922	19.53251	3.45007	Si
SLV 15	-18027	-34764	213	1.256	2634.4	0.922	19.80038	3.45007	Si
SLV 6	-18472	-27378	14	1.242	2679.1	0.923	19.56389	3.04994	Si
SLV 5	-18142	-27452	11	1.259	2645.9	0.922	19.8411	3.04994	Si
SLV 2	-9600	-19096	-47	1.941	1797	0.899	31.39356	3.45007	Si
SLV 1	-9282	-19167	-49	1.983	1766	0.898	32.09204	3.45007	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_SLV	3.893	SLV 81	Si
V_SLV	21.241	SLV 81	Si
PF_SLV	1.574	SLV 7	Si
V_SLV	2.861	SLV 7	Si
PFFP_SLV	11.304	SLV 3	Si
R_SLV	4.882	SLV 14	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 l.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s,sx	a.s,dx
2.185	-12.024	2.186	-8.719	L1	L2	3.305	0.45	2.6	2.6	2.6			

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	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,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 FRM in combinazioni non sismiche, $\gamma M = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵm	ϵm_{-}	ϵm_{+}	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLU 43	-1.53	2041.08	-16945	-0.0000202	0.0004492	0.0035	3.305	25390.76	27256.61	27256.61	13.35	No	Si
SLU 43	0.57	5105.46	-7488	-0.0000166	0.0004492	0.0035	3.305	11863.54	13069.46	13069.46	2.56	No	Si
SLU 44	-1.53	2041.08	-16945	-0.0000202	0.0004492	0.0035	3.305	25390.76	27256.61	27256.61	13.35	No	Si
SLU 44	0.57	5105.46	-7488	-0.0000166	0.0004492	0.0035	3.305	11863.54	13069.46	13069.46	2.56	No	Si
SLU 1	-1.53	1653.03	-13541	-0.0000161	0.0004492	0.0035	3.305	20709.37	22262.65	22262.65	13.47	No	Si
SLU 1	0.57	4041.47	-6126	-0.0000132	0.0004492	0.0035	3.305	9782.03	10955.02	10955.02	2.71	No	Si
SLU 45	-1.53	2041.08	-16945	-0.0000202	0.0004492	0.0035	3.305	25390.76	27256.61	27256.61	13.35	No	Si
SLU 45	0.57	5105.46	-7488	-0.0000166	0.0004492	0.0035	3.305	11863.54	13069.46	13069.46	2.56	No	Si
SLU 51	-1.53	2041.08	-16945	-0.0000202	0.0004492	0.0035	3.305	25390.76	27256.61	27256.61	13.35	No	Si
SLU 51	0.57	5105.46	-7488	-0.0000166	0.0004492	0.0035	3.305	11863.54	13069.46	13069.46	2.56	No	Si
SLU 47	-1.53	2041.08	-16945	-0.0000202	0.0004492	0.0035	3.305	25390.76	27256.61	27256.61	13.35	No	Si
SLU 47	0.57	5105.46	-7488	-0.0000166	0.0004492	0.0035	3.305	11863.54	13069.46	13069.46	2.56	No	Si
SLU 49	-1.53	2041.08	-16945	-0.0000202	0.0004492	0.0035	3.305	25390.76	27256.61	27256.61	13.35	No	Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	0.57	5105.46	-7488	-0.0000166	0.0004492	0.0035	3.305	11863.54	13069.46	13069.46	2.56	No	Si
SLU 48	-1.53	2041.08	-16945	-0.0000202	0.0004492	0.0035	3.305	25390.76	27256.61	27256.61	13.35	No	Si
SLU 48	0.57	5105.46	-7488	-0.0000166	0.0004492	0.0035	3.305	11863.54	13069.46	13069.46	2.56	No	Si
SLU 46	-1.53	2041.08	-16945	-0.0000202	0.0004492	0.0035	3.305	25390.76	27256.61	27256.61	13.35	No	Si
SLU 46	0.57	5105.46	-7488	-0.0000166	0.0004492	0.0035	3.305	11863.54	13069.46	13069.46	2.56	No	Si
SLU 50	-1.53	2041.08	-16945	-0.0000202	0.0004492	0.0035	3.305	25390.76	27256.61	27256.61	13.35	No	Si
SLU 50	0.57	5105.46	-7488	-0.0000166	0.0004492	0.0035	3.305	11863.54	13069.46	13069.46	2.56	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM 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	-1.53	-1344.92	-8566	-0.0000106	0.0006738	0.0035	3.305		20132.77	20132.77	14.97		Si
SLV 2	0.57	8592.87	-864	-0.0051712	0.0006738	0.0035	3.305		2573.71	2573.71	0.3		No
SLV 10	-1.53	-5611.28	-12365	-0.0000219	0.0006738	0.0035	3.305		25983.83	25983.83	4.63		Si
SLV 10	0.57	20287.65	1507	-0.0175289	0.0006738	0.0035	3.305		0	0	0		No
SLV 14	-1.53	138.26	-18686	-0.0000184	0.0006738	0.0035	3.305		30346.24	30346.24	219.49		Si
SLV 14	0.57	10275.97	-7162	-0.0000726	0.0006738	0.0035	3.305		12668.8	12668.8	1.23		Si
SLV 6	-1.53	-6056.23	-9329	-0.0000199	0.0006738	0.0035	3.305		21313.42	21313.42	3.52		Si
SLV 6	0.57	19782.72	3396	-0.0189758	0.0006738	0.0035	3.305		0	0	0		No
SLV 13	-1.53	593.74	-18699	-0.0000192	0.0006738	0.0035	3.305		30366.27	30366.27	51.14		Si
SLV 13	0.57	9133.3	-7804	-0.0000349	0.0006738	0.0035	3.305		13679.93	13679.93	1.5		Si
SLV 8	-1.53	8862.93	-17269	-0.0000327	0.0006738	0.0035	3.305		28222.96	28222.96	3.18		Si
SLV 8	0.57	-10442.71	-15038	-0.0000339	0.0006738	0.0035	3.305		30043.98	30043.98	2.88		Si
SLV 1	-1.53	-889.44	-8580	-0.0000099	0.0006738	0.0035	3.305		20153.47	20153.47	22.66		Si
SLV 1	0.57	7450.2	-1506	-0.0031195	0.0006738	0.0035	3.305		3615.03	3615.03	0.49		No
SLV 9	-1.53	-5138.37	-12379	-0.0000211	0.0006738	0.0035	3.305		26005.07	26005.07	5.06		Si
SLV 9	0.57	19101.25	840	-0.0158976	0.0006738	0.0035	3.305		0	0	0		No
SLV 5	-1.53	-5583.32	-9343	-0.0000189	0.0006738	0.0035	3.305		21334.91	21334.91	3.82		Si
SLV 5	0.57	18596.32	2729	-0.0173513	0.0006738	0.0035	3.305		0	0	0		No
SLV 7	-1.53	9335.84	-17283	-0.0000335	0.0006738	0.0035	3.305		28243.76	28243.76	3.03		Si
SLV 7	0.57	-11629.12	-15705	-0.0000372	0.0006738	0.0035	3.305		31050.76	31050.76	2.67		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	-1.53	2773.45	-21434	-17148	-3676	3.305	3.305	-11530	9871	14680	81562	53448	16855	70304	No	19.13	Si
SLU 76	0.57	6112.74	-10893	-8714	-3981	3.305	3.274	-5859	9115	13428	81562	53448	16855	70304	No	17.66	Si
SLU 78	-1.53	2773.45	-21434	-17148	-3676	3.305	3.305	-11530	9871	14680	81562	53448	16855	70304	No	19.13	Si
SLU 78	0.57	6112.74	-10893	-8714	-3981	3.305	3.274	-5859	9115	13428	81562	53448	16855	70304	No	17.66	Si
SLU 81	-1.53	2952.5	-22535	-18028	-3883	3.305	3.305	-12122	9950	14798	81562	53448	16855	70304	No	18.11	Si
SLU 81	0.57	6358.87	-11757	-9405	-4205	3.305	3.305	-6324	9177	13648	81562	53448	16855	70304	No	16.72	Si
SLU 83	-1.53	2952.5	-22535	-18028	-3883	3.305	3.305	-12122	9950	14798	81562	53448	16855	70304	No	18.11	Si
SLU 83	0.57	6358.87	-11757	-9405	-4205	3.305	3.305	-6324	9177	13648	81562	53448	16855	70304	No	16.72	Si
SLU 80	-1.53	2773.45	-21434	-17148	-3676	3.305	3.305	-11530	9871	14680	81562	53448	16855	70304	No	19.13	Si
SLU 80	0.57	6112.74	-10893	-8714	-3981	3.305	3.274	-5859	9115	13428	81562	53448	16855	70304	No	17.66	Si
SLU 84	-1.53	2952.5	-22535	-18028	-3883	3.305	3.305	-12122	9950	14798	81562	53448	16855	70304	No	18.11	Si
SLU 84	0.57	6358.87	-11757	-9405	-4205	3.305	3.305	-6324	9177	13648	81562	53448	16855	70304	No	16.72	Si
SLU 79	-1.53	2773.45	-21434	-17148	-3676	3.305	3.305	-11530	9871	14680	81562	53448	16855	70304	No	19.13	Si
SLU 79	0.57	6112.74	-10893	-8714	-3981	3.305	3.274	-5859	9115	13428	81562	53448	16855	70304	No	17.66	Si
SLU 77	-1.53	2773.45	-21434	-17148	-3676	3.305	3.305	-11530	9871	14680	81562	53448	16855	70304	No	19.13	Si
SLU 77	0.57	6112.74	-10893	-8714	-3981	3.305	3.274	-5859	9115	13428	81562	53448	16855	70304	No	17.66	Si
SLU 82	-1.53	2952.5	-22535	-18028	-3883	3.305	3.305	-12122	9950	14798	81562	53448	16855	70304	No	18.11	Si
SLU 82	0.57	6358.87	-11757	-9405	-4205	3.305	3.305	-6324	9177	13648	81562	53448	16855	70304	No	16.72	Si
SLU 75	-1.53	2773.45	-21434	-17148	-3676	3.305	3.305	-11530	9871	14680	81562	53448	16855	70304	No	19.13	Si
SLU 75	0.57	6112.74	-10893	-8714	-3981	3.305	3.274	-5859	9115	13428	81562	53448	16855	70304	No	17.66	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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	-1.53	9335.84	-17283	-13826	13525	3.305	3.305	-9297	14359	21356	81562	80172	16855	97028		7.17	Si
SLV 7	0.57	-11629.12	-15705	-12564	12967	3.305	2.736	-10248	14550	17914	81562	80172	16855	97028		7.48	Si
SLV 14	-1.53	138.26	-18686	-14949	-8923	3.305	3.305	-10051	14510	21580	81562	80172	16855	97028		10.87	Si
SLV 14	0.57	10275.97	-7162	-5729	-8988	3.305	0.6529	-19636	16250	4774	81562	80172	16855	86336		9.61	Si
SLV 9	-1.53	-5138.37	-12379	-9903	-17260	3.305	3.305	-6659	13832	20571	81562	80172	16855	97028		5.62	Si
SLV 9	0.57	19101.25	840	672	-17123	3.305	0	16393	16250	0	81562	80172	16855	81562		4.76	Si
SLV 13	-1.53	593.74	-18699	-14959	-7668	3.305	3.305	-10058	14512	21583	81562	80172	16855	97028		12.65	Si
SLV 13	0.57	9133.3	-7804	-6243	-7733	3.305	1.4464	-4198	13340	8682	81562	80172	16855	90244		11.67	Si
SLV 11	-1.53	9780.8	-20319	-16255	12760	3.305	3.305	-10930	14686	21842	81562	80172	16855	97028		7.6	Si
SLV 11	0.57	-11124.19	-17594	-14075	12231	3.305	3.0607	-10260	14552	20043	81562	80172	16855	97028		7.93	Si
SLV 12	-1.53	9307.88	-20305	-16244	11458	3.305	3.305	-10922	14684	21839	81562	80172	16855	97028		8.47	Si
SLV 12	0.57	-9937.78	-16927	-13542	10927	3.305	3.1962	-9453	14391	20698	81562	80172	16855	97028		8.88	Si
SLV 6	-1.53	-6056.23	-9329	-7463	-17798	3.305	3.0099	-5520	13604	18426	81562	80172	16855	97028		5.45	Si
SLV 6	0.57	19782.72	3396	2717	-17689	3.305	0	68214	9779	0	81562	80172	16855	81562		4.61	Si
SLV 10	-1.53	-5611.28	-12365	-9892	-18562	3.305	3.305	-6651	13830	20569	81562	80172	16855	97028		5.23	Si
SLV 10	0.57	20287.65	1507	1205	-18426	3.305	0	29575	16250	0	81562	80172	16855	81562		4.43	Si
SLV 5	-1.53	-5583.32	-9343	-7474	-16496	3.305	3.1646	-5260	13552	19299	81562	80172	16855	97028		5.88	Si
SLV 5	0.57	18596.32	2729	2184	-16386	3.305	0	54631	12457	0	81562	80172	16855	81562		4.98	Si
SLV 8	-1.53	8862.93	-17269	-13815	12222	3.305	3.305	-9289	14358	21354	81562	80172	16855	97028		7.94	Si
SLV 8	0.57	-10442.71	-15038	-12030	11664	3.305	2.8742	-9338	14368	18583	81562	80172	16855	97028		8.32	Si

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

quota -0.23 Ta 0.03 Wa 0.08 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 6	-2182	0.24	191.73	486.98	1185.32	836.15	4.36	Si
SLV 5	-2564	0.24	191.73	571.57	1278.34	924.95	4.82	Si
SLV 2	-4339	0.24	191.73	960.66	1707.6	1334.13	6.96	Si
SLV 10	-4496	0.24	191.73	994.86	1745.23	1370.05	7.15	Si



Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 1	-4707	0.24	191.73	1040.82	1795.86	1418.34	7.4	Si
SLV 9	-4878	0.24	191.73	1077.98	1836.86	1457.42	7.6	Si
SLV 4	-8495	0.24	191.73	1851.85	2700.98	2276.42	11.87	Si
SLV 3	-8864	0.24	191.73	1929.48	2788.3	2358.89	12.3	Si
SLV 14	-12052	0.24	191.73	2591.74	3542.74	3067.24	16	Si
SLV 13	-12420	0.24	191.73	2667.21	3629.91	3148.56	16.42	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzera = -0.23 Wa = 0.08 Ta = 0.0251

Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 15	-10786	-21081	664	1.362	1656.3	0.916	21.62641	3.45007	Si
SLV 11	-13015	-20319	148	1.221	1879.8	0.923	19.22631	3.04994	Si
SLV 16	-10344	-21068	663	1.403	1612.2	0.914	22.31401	3.45007	Si
SLV 12	-12557	-20305	147	1.254	1833.7	0.922	19.76902	3.04994	Si
SLV 7	-11407	-17283	-249	1.337	1718.5	0.918	21.17129	3.04994	Si
SLV 8	-10949	-17269	-250	1.377	1672.6	0.916	21.83853	3.04994	Si
SLV 13	-7274	-18699	709	1.775	1307.9	0.901	28.61574	3.45007	Si
SLV 14	-6833	-18686	709	1.847	1264.7	0.899	29.84506	3.45007	Si
SLV 3	-5427	-10962	-658	2.131	1128.4	0.894	34.65258	3.45007	Si
SLV 4	-4985	-10948	-659	2.237	1086.2	0.892	36.4507	3.45007	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	2.56	SLU 43	Si
V_SLU	16.721	SLU 81	Si
PF_SLV	0	SLV 5	No
V_SLV	4.426	SLV 10	Si
PFFP_SLV	4.361	SLV 6	Si
R_SLV	6.268	SLV 15	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
-9.429	-17.728	-9.428	-8.718	L2	L3	9.01	0.3	3.92	3.92	3.92			

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	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e _s CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	at	α	elim,conv	e _s 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 FRM in combinazioni non sismiche, $\gamma_M = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	ϵ_m _	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 21	1.07	-1232.82	-27598	-0.0000146	0.0004492	0.0035	9.01	113941.1	165165.99	165165.99	133.97	No	Si
SLU 21	4.99	8.87	-1275	-0.0000006	0.0004492	0.0035	9.01	5720.92	13785.15	13785.15	1553.48	No	Si
SLU 81	1.07	-1567	-35927	-0.0000191	0.0004492	0.0035	9.01	144246.41	197691.18	197691.18	126.16	No	Si
SLU 81	4.99	10.68	-1616	-0.0000008	0.0004492	0.0035	9.01	7243.31	15288.77	15288.77	1431.14	No	Si
SLU 40	1.07	-1438.57	-31504	-0.0000167	0.0004492	0.0035	9.01	128386.87	180471.54	180471.54	125.45	No	Si
SLU 40	4.99	43.55	-1648	-0.0000008	0.0004492	0.0035	9.01	7386.95	15430.8	15430.8	354.32	No	Si
SLU 83	1.07	-1567	-35927	-0.0000191	0.0004492	0.0035	9.01	144246.41	197691.18	197691.18	126.16	No	Si
SLU 83	4.99	10.68	-1616	-0.0000008	0.0004492	0.0035	9.01	7243.31	15288.77	15288.77	1431.14	No	Si
SLU 82	1.07	-1567	-35927	-0.0000191	0.0004492	0.0035	9.01	144246.41	197691.18	197691.18	126.16	No	Si
SLU 82	4.99	10.68	-1616	-0.0000008	0.0004492	0.0035	9.01	7243.31	15288.77	15288.77	1431.14	No	Si
SLU 42	1.07	-1438.57	-31504	-0.0000167	0.0004492	0.0035	9.01	128386.87	180471.54	180471.54	125.45	No	Si
SLU 42	4.99	43.55	-1648	-0.0000008	0.0004492	0.0035	9.01	7386.95	15430.8	15430.8	354.32	No	Si
SLU 19	1.07	-1232.82	-27598	-0.0000146	0.0004492	0.0035	9.01	113941.1	165165.99	165165.99	133.97	No	Si
SLU 19	4.99	8.87	-1275	-0.0000006	0.0004492	0.0035	9.01	5720.92	13785.15	13785.15	1553.48	No	Si
SLU 84	1.07	-1567	-35927	-0.0000191	0.0004492	0.0035	9.01	144246.41	197691.18	197691.18	126.16	No	Si
SLU 84	4.99	10.68	-1616	-0.0000008	0.0004492	0.0035	9.01	7243.31	15288.77	15288.77	1431.14	No	Si
SLU 41	1.07	-1438.57	-31504	-0.0000167	0.0004492	0.0035	9.01	128386.87	180471.54	180471.54	125.45	No	Si
SLU 41	4.99	43.55	-1648	-0.0000008	0.0004492	0.0035	9.01	7386.95	15430.8	15430.8	354.32	No	Si
SLU 39	1.07	-1438.57	-31504	-0.0000167	0.0004492	0.0035	9.01	128386.87	180471.54	180471.54	125.45	No	Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 39	4.99	43.55	-1648	-0.0000008	0.0004492	0.0035	9.01	7386.95	15430.8	15430.8	354.32	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche, γM = 2

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	1.07	-1725.94	-23785	-0.0000127	0.0006738	0.0035	9.01		150735.52	150735.52	87.34		Si
SLV 8	4.99	-928.61	-484	-0.0000006	0.0006738	0.0035	9.01		51537.07	51537.07	55.5		Si
SLV 12	1.07	-1957.63	-18648	-0.0000102	0.0006738	0.0035	9.01		129265.91	129265.91	66.03		Si
SLV 12	4.99	-1191.49	-416	-0.0000008	0.0006738	0.0035	7.208		51241.63	51241.63	43.01		Si
SLV 5	1.07	285.74	-25357	-0.0000131	0.0006738	0.0035	9.01		117385.56	117385.56	410.81		Si
SLV 5	4.99	1102.97	-818	-0.0000008	0.0006738	0.0035	9.01		11769.75	11769.75	10.67		Si
SLV 3	1.07	-831.41	-30274	-0.0000158	0.0006738	0.0035	9.01		177520.26	177520.26	213.52		Si
SLV 3	4.99	262.53	-702	-0.0000004	0.0006738	0.0035	9.01		11259.24	11259.24	42.89		Si
SLV 6	1.07	412.19	-25443	-0.0000131	0.0006738	0.0035	9.01		117747.42	117747.42	285.66		Si
SLV 6	4.99	828.44	-782	-0.0000007	0.0006738	0.0035	9.01		11610.78	11610.78	14.02		Si
SLV 2	1.07	-68.18	-30854	-0.0000158	0.0006738	0.0035	9.01		179908.29	179908.29	2638.64		Si
SLV 2	4.99	525.22	-757	-0.0000006	0.0006738	0.0035	9.01		11501.44	11501.44	21.9		Si
SLV 1	1.07	-189.97	-30771	-0.0000158	0.0006738	0.0035	9.01		179566.29	179566.29	945.23		Si
SLV 1	4.99	789.64	-792	-0.0000007	0.0006738	0.0035	9.01		11654.55	11654.55	14.76		Si
SLV 11	1.07	-2084.08	-18562	-0.0000102	0.0006738	0.0035	9.01		128901.87	128901.87	61.85		Si
SLV 11	4.99	-916.96	-452	-0.0000006	0.0006738	0.0035	9.01		51398.67	51398.67	56.05		Si
SLV 9	1.07	54.05	-20220	-0.0000103	0.0006738	0.0035	9.01		95806.59	95806.59	1772.55		Si
SLV 9	4.99	840.09	-750	-0.0000007	0.0006738	0.0035	9.01		11470.67	11470.67	13.65		Si
SLV 10	1.07	180.5	-20306	-0.0000104	0.0006738	0.0035	9.01		96174.01	96174.01	532.82		Si
SLV 10	4.99	565.55	-714	-0.0000006	0.0006738	0.0035	9.01		11311.7	11311.7	20		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 51	1.07	-791.68	-23632	-17187	274	9.01	9.01	-6359	9181	24817	129139	97139	45951	143090	No	522.87	Si
SLU 51	4.99	-102.79	-287	-209	274	9.01	9.01	-77	8344	22553	129139	97139	45951	143090	No	521.45	Si
SLU 49	1.07	-791.68	-23632	-17187	274	9.01	9.01	-6359	9181	24817	129139	97139	45951	143090	No	522.87	Si
SLU 49	4.99	-102.79	-287	-209	274	9.01	9.01	-77	8344	22553	129139	97139	45951	143090	No	521.45	Si
SLU 50	1.07	-791.68	-23632	-17187	274	9.01	9.01	-6359	9181	24817	129139	97139	45951	143090	No	522.87	Si
SLU 50	4.99	-102.79	-287	-209	274	9.01	9.01	-77	8344	22553	129139	97139	45951	143090	No	521.45	Si
SLU 64	1.07	-997.42	-27538	-20027	260	9.01	9.01	-7409	9321	25195	129139	97139	45951	143090	No	549.96	Si
SLU 64	4.99	-68.12	-660	-480	261	9.01	9.01	-178	8357	22589	129139	97139	45951	143090	No	548.28	Si
SLU 44	1.07	-791.68	-23632	-17187	274	9.01	9.01	-6359	9181	24817	129139	97139	45951	143090	No	522.87	Si
SLU 44	4.99	-102.79	-287	-209	274	9.01	9.01	-77	8344	22553	129139	97139	45951	143090	No	521.45	Si
SLU 43	1.07	-791.68	-23632	-17187	274	9.01	9.01	-6359	9181	24817	129139	97139	45951	143090	No	522.87	Si
SLU 43	4.99	-102.79	-287	-209	274	9.01	9.01	-77	8344	22553	129139	97139	45951	143090	No	521.45	Si
SLU 45	1.07	-791.68	-23632	-17187	274	9.01	9.01	-6359	9181	24817	129139	97139	45951	143090	No	522.87	Si
SLU 45	4.99	-102.79	-287	-209	274	9.01	9.01	-77	8344	22553	129139	97139	45951	143090	No	521.45	Si
SLU 48	1.07	-791.68	-23632	-17187	274	9.01	9.01	-6359	9181	24817	129139	97139	45951	143090	No	522.87	Si
SLU 48	4.99	-102.79	-287	-209	274	9.01	9.01	-77	8344	22553	129139	97139	45951	143090	No	521.45	Si
SLU 47	1.07	-791.68	-23632	-17187	274	9.01	9.01	-6359	9181	24817	129139	97139	45951	143090	No	522.87	Si
SLU 47	4.99	-102.79	-287	-209	274	9.01	9.01	-77	8344	22553	129139	97139	45951	143090	No	521.45	Si
SLU 46	1.07	-791.68	-23632	-17187	274	9.01	9.01	-6359	9181	24817	129139	97139	45951	143090	No	522.87	Si
SLU 46	4.99	-102.79	-287	-209	274	9.01	9.01	-77	8344	22553	129139	97139	45951	143090	No	521.45	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	1.07	-1957.63	-18648	-13562	13898	9.01	9.01	-5017	13503	36500	129139	145709	45951	165639		11.92	Si
SLV 12	4.99	-1191.49	-416	-303	6135	7.208	4.9237	0	0	0	129139	116567	36761	129139		21.05	Si
SLV 4	1.07	-709.62	-30357	-22078	5814	9.01	9.01	-8168	14134	38203	129139	145709	45951	167342		28.78	Si
SLV 4	4.99	-1.89	-668	-485	3511	9.01	9.01	-180	12536	33885	129139	145709	45951	163024		46.43	Si
SLV 8	1.07	-1725.94	-23785	-17298	14247	9.01	9.01	-6400	13780	37247	129139	145709	45951	166386		11.68	Si
SLV 8	4.99	-928.61	-484	-352	6497	9.01	7.7554	-151	12530	29153	129139	145709	45951	158292		24.36	Si
SLV 13	1.07	-962.27	-13648	-9926	-5429	9.01	9.01	-3672	13234	35773	129139	145709	45951	164912		30.37	Si
SLV 13	4.99	-86.63	-566	-412	-3125	9.01	9.01	-152	12530	33870	129139	145709	45951	163009		52.16	Si
SLV 11	1.07	-2084.08	-18562	-13499	11252	9.01	9.01	-4994	13499	36487	129139	145709	45951	165627		14.72	Si
SLV 11	4.99	-916.96	-452	-329	3489	9.01	7.4291	-147	12529	27925	129139	145709	45951	157064		45.02	Si
SLV 6	1.07	412.19	-25443	-18504	-10867	9.01	9.01	-6846	13869	37488	129139	145709	45951	166628		15.33	Si
SLV 6	4.99	828.44	-782	-568	-3103	9.01	9.01	-210	12542	33901	129139	145709	45951	163040		52.55	Si
SLV 9	1.07	54.05	-20220	-14706	-13862	9.01	9.01	-5440	13588	36729	129139	145709	45951	165868		11.97	Si
SLV 9	4.99	840.09	-750	-545	-6111	9.01	9.01	-202	12540	33897	129139	145709	45951	163036		26.68	Si
SLV 10	1.07	180.5	-20306	-14768	-11215	9.01	9.01	-5464	13593	36741	129139	145709	45951	165880		14.79	Si
SLV 10	4.99	565.55	-714	-519	-3465	9.01	9.01	-192	12538	33891	129139	145709	45951	163031		47.05	Si
SLV 5	1.07	285.74	-25357	-18441	-13514	9.01	9.01	-6823	13865	37476	129139	145709	45951	166615		12.33	Si
SLV 5	4.99	1102.97	-818	-595	-5749	9.01	9.01	-220	12544	33906	129139	145709	45951	163046		28.36	Si
SLV 7	1.07	-1852.39	-23699	-17235	11600	9.01	9.01	-6376	13775	37235	129139	145709	45951	166374		14.34	Si
SLV 7	4.99	-654.07	-520	-378	3851	9.01	9.01	-140	12528	33863	129139	145709	45951	163002		42.33	Si

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

quota 3.03 Ta 0.09 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-9537	0.47	1543.16	0	2763.32	1381.66	0.9	No
SLV 15	-9605	0.47	1543.16	0	2774.82	1387.41	0.9	No
SLV 14	-9869	0.47	1543.16	0	2819.14	1409.57	0.91	No
SLV 13	-9938	0.47	1543.16	0	2830.64	1415.32	0.92	No
SLV 12	-10756	0.47	1543.16	1578.42	2967.91	2273.17	1.47	Si
SLV 11	-10827	0.47	1543.16	1588.63	2979.83	2284.23	1.48	Si
SLV 10	-11865	0.47	1543.16	1737.08	3153.21	2445.15	1.58	Si
SLV 9	-11936	0.47	1543.16	1747.24	3165.05	2456.14	1.59	Si
SLV 8	-12135	0.47	1543.16	1775.71	3198.25	2486.98	1.61	Si
SLV 7	-12206	0.47	1543.16	1785.85	3210.08	2497.97	1.62	Si



Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.03 Wa = 0.05 Ta = 0.0855

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-792	-30771	-653	4.911	1955.7	0.966	73.89335	16.97787	Si
SLV 2	-757	-30854	-654	4.927	1954.7	0.967	74.04503	16.97787	Si
SLV 3	-702	-30274	-634	4.955	1953.4	0.969	74.31406	16.97787	Si
SLV 4	-668	-30357	-634	4.972	1952.5	0.97	74.46495	16.97787	Si
SLV 13	-566	-13648	631	5.022	1950.3	0.974	74.90999	16.97787	Si
SLV 14	-532	-13731	631	5.039	1949.6	0.976	75.06017	16.97787	Si
SLV 15	-477	-13151	651	5.064	1948.6	0.978	75.26661	16.97787	Si
SLV 16	-442	-13234	651	5.082	1948	0.979	75.41544	16.97787	Si
SLV 5	-818	-25357	-226	4.94	1956.4	0.965	74.3998	11.37117	Si
SLV 6	-782	-25443	-227	4.957	1955.4	0.966	74.55885	11.37117	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	125.452	SLU 39	Si
V_SLU	521.447	SLU 43	Si
PF_SLV	10.671	SLV 5	Si
V_SLV	11.679	SLV 8	Si
PFFP_SLV	0.895	SLV 16	No
R_SLV	4.352	SLV 1	Si

Maschio 16

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
-3.67	-17.728	-3.67	-8.718	L2	L3	9.01	0.21	3.92	3.92	3.92			

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 FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,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 FRM in combinazioni non sismiche, γM = 3

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	1.07	3696.9	-43417	-0.0000325	0.0004492	0.0035	9.01	158862.29	183665.69	183665.69	49.68	No	Si
SLU 46	4.99	359.38	-1475	-0.0000012	0.0004492	0.0035	9.01	6602.19	14604.79	14604.79	40.64	No	Si
SLU 51	1.07	3696.9	-43417	-0.0000325	0.0004492	0.0035	9.01	158862.29	183665.69	183665.69	49.68	No	Si
SLU 51	4.99	359.38	-1475	-0.0000012	0.0004492	0.0035	9.01	6602.19	14604.79	14604.79	40.64	No	Si
SLU 44	1.07	3696.9	-43417	-0.0000325	0.0004492	0.0035	9.01	158862.29	183665.69	183665.69	49.68	No	Si
SLU 44	4.99	359.38	-1475	-0.0000012	0.0004492	0.0035	9.01	6602.19	14604.79	14604.79	40.64	No	Si
SLU 45	1.07	3696.9	-43417	-0.0000325	0.0004492	0.0035	9.01	158862.29	183665.69	183665.69	49.68	No	Si
SLU 45	4.99	359.38	-1475	-0.0000012	0.0004492	0.0035	9.01	6602.19	14604.79	14604.79	40.64	No	Si
SLU 71	1.07	3738.71	-49577	-0.0000371	0.0004492	0.0035	9.01	175450.01	203710.5	203710.5	54.49	No	Si
SLU 71	4.99	347.52	-2036	-0.0000016	0.0004492	0.0035	9.01	9092.3	17047.86	17047.86	49.06	No	Si
SLU 49	1.07	3696.9	-43417	-0.0000325	0.0004492	0.0035	9.01	158862.29	183665.69	183665.69	49.68	No	Si
SLU 49	4.99	359.38	-1475	-0.0000012	0.0004492	0.0035	9.01	6602.19	14604.79	14604.79	40.64	No	Si
SLU 50	1.07	3696.9	-43417	-0.0000325	0.0004492	0.0035	9.01	158862.29	183665.69	183665.69	49.68	No	Si
SLU 50	4.99	359.38	-1475	-0.0000012	0.0004492	0.0035	9.01	6602.19	14604.79	14604.79	40.64	No	Si
SLU 43	1.07	3696.9	-43417	-0.0000325	0.0004492	0.0035	9.01	158862.29	183665.69	183665.69	49.68	No	Si
SLU 43	4.99	359.38	-1475	-0.0000012	0.0004492	0.0035	9.01	6602.19	14604.79	14604.79	40.64	No	Si
SLU 48	1.07	3696.9	-43417	-0.0000325	0.0004492	0.0035	9.01	158862.29	183665.69	183665.69	49.68	No	Si
SLU 48	4.99	359.38	-1475	-0.0000012	0.0004492	0.0035	9.01	6602.19	14604.79	14604.79	40.64	No	Si
SLU 47	1.07	3696.9	-43417	-0.0000325	0.0004492	0.0035	9.01	158862.29	183665.69	183665.69	49.68	No	Si
SLU 47	4.99	359.38	-1475	-0.0000012	0.0004492	0.0035	9.01	6602.19	14604.79	14604.79	40.64	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM 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	1.07	-39167.94	-38996	-0.0000459	0.0006738	0.0035	9.01		209770.62	209770.62	5.36		Si
SLV 10	4.99	1431.15	-1685	-0.0000018	0.0006738	0.0035	9.01		15539.5	15539.5	10.86		Si
SLV 4	1.07	15752.51	-39746	-0.0000353	0.0006738	0.0035	9.01		173590.61	173590.61	11.02		Si
SLV 4	4.99	-109	-1770	-0.0000013	0.0006738	0.0035	9.01		56987.73	56987.73	522.83		Si
SLV 9	1.07	-39271.1	-39002	-0.000046	0.0006738	0.0035	9.01		209795.61	209795.61	5.34		Si
SLV 9	4.99	1444.76	-1683	-0.0000018	0.0006738	0.0035	9.01		15528.85	15528.85	10.75		Si
SLV 12	1.07	44764.87	-39553	-0.000049	0.0006738	0.0035	9.01		172835.67	172835.67	3.86		Si
SLV 12	4.99	-930.44	-1760	-0.0000016	0.0006738	0.0035	9.01		56941.72	56941.72	61.2		Si
SLV 11	1.07	44661.72	-39560	-0.000049	0.0006738	0.0035	9.01		172861.58	172861.58	3.87		Si
SLV 11	4.99	-916.83	-1757	-0.0000016	0.0006738	0.0035	9.01		56931.21	56931.21	62.1		Si
SLV 8	1.07	44933.81	-39732	-0.0000492	0.0006738	0.0035	9.01		173536.86	173536.86	3.86		Si
SLV 8	4.99	-932.92	-1777	-0.0000016	0.0006738	0.0035	9.01		57015.07	57015.07	61.11		Si
SLV 5	1.07	-39102.16	-39181	-0.000046	0.0006738	0.0035	9.01		210474.32	210474.32	5.38		Si
SLV 5	4.99	1442.28	-1700	-0.0000018	0.0006738	0.0035	9.01		15603.22	15603.22	10.82		Si
SLV 7	1.07	44830.65	-39739	-0.0000492	0.0006738	0.0035	9.01		173562.35	173562.35	3.87		Si
SLV 7	4.99	-919.31	-1774	-0.0000016	0.0006738	0.0035	9.01		57004.56	57004.56	62.01		Si
SLV 3	1.07	15653.16	-39752	-0.0000353	0.0006738	0.0035	9.01		173615.16	173615.16	11.09		Si
SLV 3	4.99	-95.89	-1768	-0.0000013	0.0006738	0.0035	9.01		56977.61	56977.61	594.18		Si
SLV 6	1.07	-38999.01	-39175	-0.000046	0.0006738	0.0035	9.01		210449.32	210449.32	5.4		Si
SLV 6	4.99	1428.67	-1702	-0.0000018	0.0006738	0.0035	9.01		15613.88	15613.88	10.93		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 45	1.07	3696.9	-43417	-28272	-448	9.01	9.01	-14942	10326	19537	129139	67997	45951	113948	No	254.46	Si
SLU 45	4.99	359.38	-1475	-960	-439	9.01	9.01	-508	8401	15896	129139	67997	45951	113948	No	259.59	Si
SLU 50	1.07	3696.9	-43417	-28272	-448	9.01	9.01	-14942	10326	19537	129139	67997	45951	113948	No	254.46	Si
SLU 50	4.99	359.38	-1475	-960	-439	9.01	9.01	-508	8401	15896	129139	67997	45951	113948	No	259.59	Si
SLU 51	1.07	3696.9	-43417	-28272	-448	9.01	9.01	-14942	10326	19537	129139	67997	45951	113948	No	254.46	Si
SLU 51	4.99	359.38	-1475	-960	-439	9.01	9.01	-508	8401	15896	129139	67997	45951	113948	No	259.59	Si
SLU 44	1.07	3696.9	-43417	-28272	-448	9.01	9.01	-14942	10326	19537	129139	67997	45951	113948	No	254.46	Si
SLU 44	4.99	359.38	-1475	-960	-439	9.01	9.01	-508	8401	15896	129139	67997	45951	113948	No	259.59	Si
SLU 47	1.07	3696.9	-43417	-28272	-448	9.01	9.01	-14942	10326	19537	129139	67997	45951	113948	No	254.46	Si
SLU 47	4.99	359.38	-1475	-960	-439	9.01	9.01	-508	8401	15896	129139	67997	45951	113948	No	259.59	Si
SLU 70	1.07	3738.71	-49577	-32283	-394	9.01	9.01	-17062	10608	20072	129139	67997	45951	113948	No	289.15	Si
SLU 70	4.99	347.52	-2036	-1326	-385	9.01	9.01	-701	8427	15944	129139	67997	45951	113948	No	296.21	Si
SLU 46	1.07	3696.9	-43417	-28272	-448	9.01	9.01	-14942	10326	19537	129139	67997	45951	113948	No	254.46	Si
SLU 46	4.99	359.38	-1475	-960	-439	9.01	9.01	-508	8401	15896	129139	67997	45951	113948	No	259.59	Si
SLU 43	1.07	3696.9	-43417	-28272	-448	9.01	9.01	-14942	10326	19537	129139	67997	45951	113948	No	254.46	Si
SLU 43	4.99	359.38	-1475	-960	-439	9.01	9.01	-508	8401	15896	129139	67997	45951	113948	No	259.59	Si
SLU 48	1.07	3696.9	-43417	-28272	-448	9.01	9.01	-14942	10326	19537	129139	67997	45951	113948	No	254.46	Si
SLU 48	4.99	359.38	-1475	-960	-439	9.01	9.01	-508	8401	15896	129139	67997	45951	113948	No	259.59	Si
SLU 49	1.07	3696.9	-43417	-28272	-448	9.01	9.01	-14942	10326	19537	129139	67997	45951	113948	No	254.46	Si
SLU 49	4.99	359.38	-1475	-960	-439	9.01	9.01	-508	8401	15896	129139	67997	45951	113948	No	259.59	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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 12	1.07	44764.87	-39553	-25755	20763	9.01	9.01	-13612	15222	28802	129139	101996	45951	147947		7.13	Si
SLV 12	4.99	-930.44	-1760	-1146	13455	9.01	9.01	-606	12621	23880	129139	101996	45951	147947		11	Si
SLV 7	1.07	44830.65	-39739	-25876	20638	9.01	9.01	-13676	15235	28827	129139	101996	45951	147947		7.17	Si
SLV 7	4.99	-919.31	-1774	-1155	13367	9.01	9.01	-611	12622	23882	129139	101996	45951	147947		11.07	Si
SLV 9	1.07	-39271.1	-39002	-25397	-21216	9.01	9.01	-13423	15185	28731	129139	101996	45951	147947		6.97	Si
SLV 9	4.99	1444.76	-1683	-1096	-13930	9.01	9.01	-579	12616	23870	129139	101996	45951	147947		10.62	Si
SLV 8	1.07	44933.81	-39732	-25872	20655	9.01	9.01	-13674	15235	28826	129139	101996	45951	147947		7.16	Si
SLV 8	4.99	-932.92	-1777	-1157	13384	9.01	9.01	-611	12622	23883	129139	101996	45951	147947		11.05	Si
SLV 10	1.07	-39167.94	-38996	-25393	-21198	9.01	9.01	-13420	15184	28730	129139	101996	45951	147947		6.98	Si
SLV 10	4.99	1431.15	-1685	-1098	-13913	9.01	9.01	-580	12616	23871	129139	101996	45951	147947		10.63	Si
SLV 6	1.07	-38999.01	-39175	-25509	-21305	9.01	9.01	-13482	15196	28753	129139	101996	45951	147947		6.94	Si
SLV 6	4.99	1428.67	-1702	-1109	-13984	9.01	9.01	-586	12617	23873	129139	101996	45951	147947		10.58	Si
SLV 1	1.07	-9526.68	-39585	-25776	-6762	9.01	9.01	-13623	15225	28807	129139	101996	45951	147947		21.88	Si
SLV 1	4.99	612.58	-1746	-1137	-4505	9.01	9.01	-601	12620	23879	129139	101996	45951	147947		32.84	Si
SLV 5	1.07	-39102.16	-39181	-25513	-21323	9.01	9.01	-13484	15197	28754	129139	101996	45951	147947		6.94	Si
SLV 5	4.99	1442.28	-1700	-1107	-14001	9.01	9.01	-585	12617	23873	129139	101996	45951	147947		10.57	Si
SLV 11	1.07	44661.72	-39560	-25760	20745	9.01	9.01	-13614	15223	28803	129139	101996	45951	147947		7.13	Si
SLV 11	4.99	-916.83	-1757	-1144	13439	9.01	9.01	-605	12621	23880	129139	101996	45951	147947		11.01	Si
SLV 2	1.07	-9427.33	-39579	-25772	-6745	9.01	9.01	-13621	15224	28806	129139	101996	45951	147947		21.93	Si
SLV 2	4.99	599.48	-1748	-1138	-4489	9.01	9.01	-602	12620	23879	129139	101996	45951	147947		32.96	Si

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

quota 3.03 Ta 0.12 Wa 0.04 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 10	-18948	0.47	1106.88	1880.86	3126.74	2503.8	2.26	Si
SLV 9	-18965	0.47	1106.88	1882.39	3128.7	2505.54	2.26	Si
SLV 6	-19006	0.47	1106.88	1886.26	3133.63	2509.94	2.27	Si
SLV 5	-19022	0.47	1106.88	1887.79	3135.59	2511.69	2.27	Si
SLV 14	-19305	0.47	1106.88	1914.2	3169.34	2541.77	2.3	Si
SLV 13	-19321	0.47	1106.88	1915.68	3171.23	2543.45	2.3	Si
SLV 2	-19498	0.47	1106.88	1932.16	3192.32	2562.24	2.31	Si
SLV 1	-19514	0.47	1106.88	1933.63	3194.21	2563.92	2.32	Si
SLV 16	-19669	0.47	1106.88	1948.08	3212.73	2580.4	2.33	Si
SLV 15	-19684	0.47	1106.88	1949.55	3214.61	2582.08	2.33	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.03 Wa = 0.04 Ta = 0.1222

Comb.	N top	N base	V orto	α0	M*	e*	α0*	aLim	Verifica
SLV 4	-1770	-39746	-359	5.998	1423.5	0.923	94.38816	19.26035	Si
SLV 3	-1768	-39752	-359	5.999	1423.3	0.924	94.40876	19.26035	Si
SLV 2	-1748	-39579	-369	6.012	1422.2	0.924	94.56406	19.26035	Si



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 1	-1746	-39585	-369	6.014	1422	0.924	94.5847	19.26035	Si
SLV 16	-1714	-39149	369	6.037	1420.2	0.925	94.86373	19.26035	Si
SLV 15	-1712	-39156	369	6.038	1420.1	0.925	94.88415	19.26035	Si
SLV 14	-1692	-38982	359	6.054	1418.9	0.925	95.07983	19.26035	Si
SLV 13	-1689	-38988	359	6.056	1418.8	0.925	95.10029	19.26035	Si
SLV 8	-1777	-39732	-92	6.025	1423.8	0.923	94.83027	17.34016	Si
SLV 7	-1774	-39739	-92	6.027	1423.7	0.923	94.85176	17.34016	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	40.639	SLU 43	Si
V_SLU	254.462	SLU 43	Si
PF_SLV	3.861	SLV 12	Si
V_SLV	6.938	SLV 5	Si
PFFP_SLV	2.262	SLV 10	Si
R_SLV	4.901	SLV 4	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
-8.545	-17.728	-9.429	-17.728	L2	L3	0.884	0.3	3.92	3.92	3.92			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,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	elim,conv	ε,fd	yF,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 FRM in combinazioni non sismiche, $\gamma_m = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 40	2.07	284.67	-1788	-0.0000211	0.0003743	0.0035	0.8845	738.51	799.9	799.9	2.81	No	Si
SLU 40	3.97	-666.64	-3844	-0.0000493	0.0003743	0.0035	0.8845	1458.11	1669.45	1669.45	2.5	No	Si
SLU 83	2.07	277.62	-2136	-0.0000228	0.0003743	0.0035	0.8845	869.76	936.79	936.79	3.37	No	Si
SLU 83	3.97	-682.55	-4065	-0.0000512	0.0003743	0.0035	0.8845	1527.26	1747.29	1747.29	2.56	No	Si
SLU 42	2.07	284.67	-1788	-0.0000211	0.0003743	0.0035	0.8845	738.51	799.9	799.9	2.81	No	Si
SLU 42	3.97	-666.64	-3844	-0.0000493	0.0003743	0.0035	0.8845	1458.11	1669.45	1669.45	2.5	No	Si
SLU 81	2.07	277.62	-2136	-0.0000228	0.0003743	0.0035	0.8845	869.76	936.79	936.79	3.37	No	Si
SLU 81	3.97	-682.55	-4065	-0.0000512	0.0003743	0.0035	0.8845	1527.26	1747.29	1747.29	2.56	No	Si
SLU 41	2.07	284.67	-1788	-0.0000211	0.0003743	0.0035	0.8845	738.51	799.9	799.9	2.81	No	Si
SLU 41	3.97	-666.64	-3844	-0.0000493	0.0003743	0.0035	0.8845	1458.11	1669.45	1669.45	2.5	No	Si
SLU 39	2.07	284.67	-1788	-0.0000211	0.0003743	0.0035	0.8845	738.51	799.9	799.9	2.81	No	Si
SLU 39	3.97	-666.64	-3844	-0.0000493	0.0003743	0.0035	0.8845	1458.11	1669.45	1669.45	2.5	No	Si
SLU 84	2.07	277.62	-2136	-0.0000228	0.0003743	0.0035	0.8845	869.76	936.79	936.79	3.37	No	Si
SLU 84	3.97	-682.55	-4065	-0.0000512	0.0003743	0.0035	0.8845	1527.26	1747.29	1747.29	2.56	No	Si
SLU 37	2.07	236.32	-1674	-0.0000185	0.0003743	0.0035	0.8845	694.54	753.96	753.96	3.19	No	Si
SLU 37	3.97	-563.58	-3317	-0.0000416	0.0003743	0.0035	0.8845	1286.71	1481	1481	2.63	No	Si
SLU 38	2.07	236.32	-1674	-0.0000185	0.0003743	0.0035	0.8845	694.54	753.96	753.96	3.19	No	Si
SLU 38	3.97	-563.58	-3317	-0.0000416	0.0003743	0.0035	0.8845	1286.71	1481	1481	2.63	No	Si
SLU 82	2.07	277.62	-2136	-0.0000228	0.0003743	0.0035	0.8845	869.76	936.79	936.79	3.37	No	Si
SLU 82	3.97	-682.55	-4065	-0.0000512	0.0003743	0.0035	0.8845	1527.26	1747.29	1747.29	2.56	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche, $\gamma_m = 2$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 3	2.07	744.24	-5	-0.0201718	0.0005615	0.0035	0.7076		52.64	52.64	0.07		No
SLV 3	3.97	-876.44	-3056	-0.0000674	0.0005615	0.0035	0.7076		1417.29	1417.29	1.62		Si
SLV 8	2.07	956.99	580	0.0545695	0.0005615	0.0035	0.7076		0	0	0		No
SLV 8	3.97	-1064.63	-3716	-0.0000828	0.0005615	0.0035	0.7076		1671.32	1671.32	1.57		Si
SLV 11	2.07	447.67	-629	-0.0037549	0.0005615	0.0035	0.7076		323.06	323.06	0.72		No



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 11	3.97	-598.19	-2913	-0.0000414	0.0005615	0.0035	0.8845		1360.64	1360.64	2.27		Si
SLV 7	2.07	775.43	100	-0.0223146	0.0005615	0.0035	0.7076		0	0	0		No
SLV 7	3.97	-896.29	-3405	-0.0000651	0.0005615	0.0035	0.7076		1552.48	1552.48	1.73		Si
SLV 4	2.07	919.11	458	0.0073248	0.0005615	0.0035	0.7076		0	0	0		No
SLV 4	3.97	-1038.58	-3356	-0.000088	0.0005615	0.0035	0.7076		1533.57	1533.57	1.48		Si
SLV 12	2.07	629.23	-148	-0.0150028	0.0005615	0.0035	0.7076		114.9	114.9	0.18		No
SLV 12	3.97	-766.53	-3224	-0.0000535	0.0005615	0.0035	0.8845		1483.1	1483.1	1.93		Si
SLV 10	2.07	-561.96	-2901	-0.0000392	0.0005615	0.0035	0.8845		1355.77	1355.77	2.41		Si
SLV 10	3.97	292.71	-571	-0.0006352	0.0005615	0.0035	0.7076		298.29	298.29	1.02		Si
SLV 13	2.07	-705.64	-3259	-0.0000488	0.0005615	0.0035	0.8845		1496.48	1496.48	2.12		Si
SLV 13	3.97	435	-620	-0.0034276	0.0005615	0.0035	0.7076		319.51	319.51	0.73		No
SLV 9	2.07	-743.52	-3382	-0.0000515	0.0005615	0.0035	0.8845		1543.53	1543.53	2.08		Si
SLV 9	3.97	461.05	-260	-0.0087692	0.0005615	0.0035	0.7076		163.66	163.66	0.35		No
SLV 2	2.07	561.75	-368	-0.0102793	0.0005615	0.0035	0.7076		210.51	210.51	0.37		No
SLV 2	3.97	-720.81	-2560	-0.0000541	0.0005615	0.0035	0.7076		1219.39	1219.39	1.69		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 84	2.07	277.62	-2136	-1798	1244	0.8845	0.8845	-6777	7848	2082	45199	7946	2255	10201	No	8.2	Si
SLU 84	3.97	-682.55	-4065	-3423	1245	0.8845	0.823	-12901	8665	2139	45199	7946	2255	10201	No	8.19	Si
SLU 42	2.07	284.67	-1788	-1506	1204	0.8845	0.8492	-5675	7701	1962	45199	7946	2255	10201	No	8.47	Si
SLU 42	3.97	-666.64	-3844	-3237	1205	0.8845	0.8065	-12200	8571	2074	45199	7946	2255	10201	No	8.46	Si
SLU 83	2.07	277.62	-2136	-1798	1244	0.8845	0.8845	-6777	7848	2082	45199	7946	2255	10201	No	8.2	Si
SLU 83	3.97	-682.55	-4065	-3423	1245	0.8845	0.823	-12901	8665	2139	45199	7946	2255	10201	No	8.19	Si
SLU 39	2.07	284.67	-1788	-1506	1204	0.8845	0.8492	-5675	7701	1962	45199	7946	2255	10201	No	8.47	Si
SLU 39	3.97	-666.64	-3844	-3237	1205	0.8845	0.8065	-12200	8571	2074	45199	7946	2255	10201	No	8.46	Si
SLU 78	2.07	229.27	-2021	-1702	1068	0.8845	0.8845	-6415	7800	2070	45199	7946	2255	10201	No	9.55	Si
SLU 78	3.97	-579.49	-3538	-2979	1069	0.8845	0.8353	-11228	8441	2115	45199	7946	2255	10201	No	9.54	Si
SLU 77	2.07	229.27	-2021	-1702	1068	0.8845	0.8845	-6415	7800	2070	45199	7946	2255	10201	No	9.55	Si
SLU 77	3.97	-579.49	-3538	-2979	1069	0.8845	0.8353	-11228	8441	2115	45199	7946	2255	10201	No	9.54	Si
SLU 81	2.07	277.62	-2136	-1798	1244	0.8845	0.8845	-6777	7848	2082	45199	7946	2255	10201	No	8.2	Si
SLU 81	3.97	-682.55	-4065	-3423	1245	0.8845	0.823	-12901	8665	2139	45199	7946	2255	10201	No	8.19	Si
SLU 82	2.07	277.62	-2136	-1798	1244	0.8845	0.8845	-6777	7848	2082	45199	7946	2255	10201	No	8.2	Si
SLU 82	3.97	-682.55	-4065	-3423	1245	0.8845	0.823	-12901	8665	2139	45199	7946	2255	10201	No	8.19	Si
SLU 40	2.07	284.67	-1788	-1506	1204	0.8845	0.8492	-5675	7701	1962	45199	7946	2255	10201	No	8.47	Si
SLU 40	3.97	-666.64	-3844	-3237	1205	0.8845	0.8065	-12200	8571	2074	45199	7946	2255	10201	No	8.46	Si
SLU 41	2.07	284.67	-1788	-1506	1204	0.8845	0.8492	-5675	7701	1962	45199	7946	2255	10201	No	8.47	Si
SLU 41	3.97	-666.64	-3844	-3237	1205	0.8845	0.8065	-12200	8571	2074	45199	7946	2255	10201	No	8.46	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 13	2.07	-705.64	-3259	-2744	-1240	0.8845	0.6771	-13591	13135	2668	45199	11918	2255	14174		11.43	Si
SLV 13	3.97	435	-620	-522	-810	0.7076	0	0	0	0	45199	9535	1804	11339		14.01	Si
SLV 9	2.07	-743.52	-3382	-2848	-1082	0.8845	0.6671	-14328	13282	2658	45199	11918	2255	14174		13.09	Si
SLV 9	3.97	461.05	-260	-219	-1222	0.7076	0	0	0	0	45199	9535	1804	11339		9.28	Si
SLV 7	2.07	775.43	100	84	1861	0.7076	0	0	0	0	45199	9535	1804	11339		6.09	Si
SLV 7	3.97	-896.29	-3405	-2867	2002	0.7076	0.537	0	0	0	45199	9535	1804	11339		5.66	Si
SLV 12	2.07	629.23	-148	-124	1442	0.7076	0	0	0	0	45199	9535	1804	11339		7.86	Si
SLV 12	3.97	-766.53	-3224	-2715	1894	0.8845	0.6135	-14858	13388	2464	45199	11918	2255	14174		7.48	Si
SLV 1	2.07	386.88	-831	-700	1385	0.7076	0	0	0	0	45199	9535	1804	11339		8.19	Si
SLV 1	3.97	-558.67	-2260	-1903	779	0.8845	0.5852	-10895	12596	2211	45199	11918	2255	14174		18.2	Si
SLV 8	2.07	956.99	580	489	2230	0.7076	0	0	0	0	45199	9535	1804	11339		5.09	Si
SLV 8	3.97	-1064.63	-3716	-3129	2371	0.7076	0.4672	0	0	0	45199	9535	1804	11339		4.78	Si
SLV 11	2.07	447.67	-629	-529	1074	0.7076	0	0	0	0	45199	9535	1804	11339		10.56	Si
SLV 11	3.97	-598.19	-2913	-2453	1526	0.8845	0.7107	-11567	12730	2714	45199	11918	2255	14174		9.29	Si
SLV 2	2.07	561.75	-368	-310	1740	0.7076	0	0	0	0	45199	9535	1804	11339		6.52	Si
SLV 2	3.97	-720.81	-2560	-2156	1134	0.7076	0.482	0	0	0	45199	9535	1804	11339		10	Si
SLV 4	2.07	919.11	458	385	2387	0.7076	0	0	0	0	45199	9535	1804	11339		4.75	Si
SLV 4	3.97	-1038.58	-3356	-2826	1958	0.7076	0.3982	0	0	0	45199	9535	1804	11339		5.79	Si
SLV 3	2.07	744.24	-5	-5	2032	0.7076	0	0	0	0	45199	9535	1804	11339		5.58	Si
SLV 3	3.97	-876.44	-3056	-2574	1603	0.7076	0.4664	0	0	0	45199	9535	1804	11339		7.07	Si

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

quota 3.03 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.47	5422	-1439	147.79	208.14	1.41	Si
SLV 10	179667	0.47	5484	-1455	147.79	210.44	1.42	Si
SLV 13	179667	0.47	5591	-1484	147.79	214.4	1.45	Si
SLV 14	179667	0.47	5651	-1500	147.79	216.61	1.47	Si
SLV 5	179667	0.47	5858	-1554	147.79	224.21	1.52	Si
SLV 6	179667	0.47	5920	-1571	147.79	226.5	1.53	Si
SLV 15	179667	0.47	6172	-1638	147.79	235.71	1.59	Si
SLV 16	179667	0.47	6232	-1654	147.79	237.91	1.61	Si
SLV 1	179667	0.47	7044	-1869	147.79	267.44	1.81	Si
SLV 2	179667	0.47	7104	-1885	147.79	269.61	1.82	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 é 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 = 3.03 Wa = 0.05 Ta = 0.0855

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 4	-1040	-1727	21	2.561	263.9	0.889	41.85431	16.97787	Si



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 3	-1007	-1876	21	2.603	260.9	0.889	42.54714	16.97787	Si
SLV 2	-935	-1988	10	2.706	254.4	0.889	44.25101	16.97787	Si
SLV 1	-903	-2136	10	2.753	251.5	0.889	45.01658	16.97787	Si
SLV 16	-891	-1621	-12	2.77	250.4	0.889	45.28981	16.97787	Si
SLV 15	-859	-1769	-12	2.82	247.5	0.889	46.08999	16.97787	Si
SLV 14	-787	-1881	-22	2.929	241.2	0.89	47.84943	16.97787	Si
SLV 13	-755	-2030	-22	2.984	238.4	0.89	48.7328	16.97787	Si
SLV 8	-1110	-1383	22	2.474	270.4	0.89	40.41377	11.37117	Si
SLV 7	-1076	-1538	22	2.514	267.3	0.889	41.08856	11.37117	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	2.504	SLU 39	Si
V_SLU	8.192	SLU 81	Si
PF_SLV	0	SLV 4	No
V_SLV	4.751	SLV 4	Si
PFFP_SLV	1.408	SLV 9	Si
R_SLV	2.465	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
-6.558	-17.728	-7.545	-17.728	L2	L3	0.986	0.3	3.92	3.92	3.92			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	$\tau 0$	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	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,conv	ϵ_s,fd	$\gamma F,d$	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, $\gamma M = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵm	ϵm_{-}	ϵm_{+}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 34	2.07	240.68	-5132	-0.0000344	0.0003743	0.0035	0.9863	2099.72	2212.49	2212.49	9.19	No	Si
SLU 34	4.07	-269.73	-3661	-0.0000273	0.0003743	0.0035	0.9863	1585.92	1872.95	1872.95	6.94	No	Si
SLU 42	2.07	307.25	-5829	-0.0000404	0.0003743	0.0035	0.9863	2318.38	2485.31	2485.31	8.09	No	Si
SLU 42	4.07	-350.43	-4317	-0.0000334	0.0003743	0.0035	0.9863	1823.98	2135.63	2135.63	6.09	No	Si
SLU 39	2.07	307.25	-5829	-0.0000404	0.0003743	0.0035	0.9863	2318.38	2485.31	2485.31	8.09	No	Si
SLU 39	4.07	-350.43	-4317	-0.0000334	0.0003743	0.0035	0.9863	1823.98	2135.63	2135.63	6.09	No	Si
SLU 81	2.07	285.5	-6368	-0.0000427	0.0003743	0.0035	0.9863	2476.6	2695.61	2695.61	9.44	No	Si
SLU 81	4.07	-317.64	-4485	-0.0000333	0.0003743	0.0035	0.9863	1882.54	2202.65	2202.65	6.93	No	Si
SLU 82	2.07	285.5	-6368	-0.0000427	0.0003743	0.0035	0.9863	2476.6	2695.61	2695.61	9.44	No	Si
SLU 82	4.07	-317.64	-4485	-0.0000333	0.0003743	0.0035	0.9863	1882.54	2202.65	2202.65	6.93	No	Si
SLU 33	2.07	240.68	-5132	-0.0000344	0.0003743	0.0035	0.9863	2099.72	2212.49	2212.49	9.19	No	Si
SLU 33	4.07	-269.73	-3661	-0.0000273	0.0003743	0.0035	0.9863	1585.92	1872.95	1872.95	6.94	No	Si
SLU 41	2.07	307.25	-5829	-0.0000404	0.0003743	0.0035	0.9863	2318.38	2485.31	2485.31	8.09	No	Si
SLU 41	4.07	-350.43	-4317	-0.0000334	0.0003743	0.0035	0.9863	1823.98	2135.63	2135.63	6.09	No	Si
SLU 40	2.07	307.25	-5829	-0.0000404	0.0003743	0.0035	0.9863	2318.38	2485.31	2485.31	8.09	No	Si
SLU 40	4.07	-350.43	-4317	-0.0000334	0.0003743	0.0035	0.9863	1823.98	2135.63	2135.63	6.09	No	Si
SLU 84	2.07	285.5	-6368	-0.0000427	0.0003743	0.0035	0.9863	2476.6	2695.61	2695.61	9.44	No	Si
SLU 84	4.07	-317.64	-4485	-0.0000333	0.0003743	0.0035	0.9863	1882.54	2202.65	2202.65	6.93	No	Si
SLU 83	2.07	285.5	-6368	-0.0000427	0.0003743	0.0035	0.9863	2476.6	2695.61	2695.61	9.44	No	Si
SLU 83	4.07	-317.64	-4485	-0.0000333	0.0003743	0.0035	0.9863	1882.54	2202.65	2202.65	6.93	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, $\gamma M = 2$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵm	ϵm_{-}	ϵm_{+}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 12	2.07	761	-2281	-0.0000483	0.0005615	0.0035	0.9863		1141.36	1141.36	1.5		Si
SLV 12	4.07	-488.26	-1628	-0.000028	0.0005615	0.0035	0.789		1010.17	1010.17	2.07		Si
SLV 7	2.07	1004.01	-2582	-0.0000862	0.0005615	0.0035	0.9863		1277.21	1277.21	1.27		Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 7	4.07	-722.18	-2042	-0.0000494	0.0005615	0.0035	0.789		1199.97	1199.97	1.66		Si
SLV 8	2.07	1274.04	-2594	-0.0016813	0.0005615	0.0035	0.789		1282.59	1282.59	1.01		Si
SLV 8	4.07	-971.3	-2269	-0.0001168	0.0005615	0.0035	0.789		1302.3	1302.3	1.34		Si
SLV 14	2.07	-889.53	-3176	-0.0000505	0.0005615	0.0035	0.789		1706.64	1706.64	1.92		Si
SLV 14	4.07	773.49	-1147	-0.0058409	0.0005615	0.0035	0.789		615.99	615.99	0.8		No
SLV 3	2.07	1043.76	-3625	-0.0000603	0.0005615	0.0035	0.9863		1738.56	1738.56	1.67		Si
SLV 3	4.07	-916.82	-2940	-0.0000551	0.0005615	0.0035	0.789		1601.96	1601.96	1.75		Si
SLV 15	2.07	-666.37	-2583	-0.0000368	0.0005615	0.0035	0.9863		1443.75	1443.75	2.17		Si
SLV 15	4.07	693.3	-803	-0.0078781	0.0005615	0.0035	0.789		452.37	452.37	0.65		No
SLV 4	2.07	1303.84	-3637	-0.0000947	0.0005615	0.0035	0.9863		1743.56	1743.56	1.34		Si
SLV 4	4.07	-1156.76	-3159	-0.0000861	0.0005615	0.0035	0.789		1698.94	1698.94	1.47		Si
SLV 13	2.07	-1149.6	-3165	-0.0000842	0.0005615	0.0035	0.789		1701.55	1701.55	1.48		Si
SLV 13	4.07	1013.43	-928	-0.0149329	0.0005615	0.0035	0.789		512.13	512.13	0.51		No
SLV 16	2.07	-406.3	-2595	-0.0000256	0.0005615	0.0035	0.9863		1448.88	1448.88	3.57		Si
SLV 16	4.07	453.36	-1022	-0.0000705	0.0005615	0.0035	0.9863		556.94	556.94	1.23		Si
SLV 9	2.07	-1119.8	-4208	-0.0000634	0.0005615	0.0035	0.789		2153.38	2153.38	1.92		Si
SLV 9	4.07	827.97	-1817	-0.0001772	0.0005615	0.0035	0.9863		928.94	928.94	1.12		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	I'	αN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	2.07	285.5	-6368	-5363	231	0.9863	0.9863	-18124	9361	2770	45199	8860	2515	11375	No	49.18	Si
SLU 83	4.07	-317.64	-4485	-3777	-336	0.9863	0.9863	-12765	8646	2558	45199	8860	2515	11375	No	33.82	Si
SLU 74	2.07	218.93	-5671	-4776	164	0.9863	0.9863	-16140	9096	2692	45199	8860	2515	11375	No	69.44	Si
SLU 74	4.07	-236.95	-3829	-3224	-334	0.9863	0.9863	-10896	8397	2485	45199	8860	2515	11375	No	34.01	Si
SLU 81	2.07	285.5	-6368	-5363	231	0.9863	0.9863	-18124	9361	2770	45199	8860	2515	11375	No	49.18	Si
SLU 81	4.07	-317.64	-4485	-3777	-336	0.9863	0.9863	-12765	8646	2558	45199	8860	2515	11375	No	33.82	Si
SLU 78	2.07	218.93	-5671	-4776	164	0.9863	0.9863	-16140	9096	2692	45199	8860	2515	11375	No	69.44	Si
SLU 78	4.07	-236.95	-3829	-3224	-334	0.9863	0.9863	-10896	8397	2485	45199	8860	2515	11375	No	34.01	Si
SLU 84	2.07	285.5	-6368	-5363	231	0.9863	0.9863	-18124	9361	2770	45199	8860	2515	11375	No	49.18	Si
SLU 84	4.07	-317.64	-4485	-3777	-336	0.9863	0.9863	-12765	8646	2558	45199	8860	2515	11375	No	33.82	Si
SLU 77	2.07	218.93	-5671	-4776	164	0.9863	0.9863	-16140	9096	2692	45199	8860	2515	11375	No	69.44	Si
SLU 77	4.07	-236.95	-3829	-3224	-334	0.9863	0.9863	-10896	8397	2485	45199	8860	2515	11375	No	34.01	Si
SLU 73	2.07	218.93	-5671	-4776	164	0.9863	0.9863	-16140	9096	2692	45199	8860	2515	11375	No	69.44	Si
SLU 73	4.07	-236.95	-3829	-3224	-334	0.9863	0.9863	-10896	8397	2485	45199	8860	2515	11375	No	34.01	Si
SLU 75	2.07	218.93	-5671	-4776	164	0.9863	0.9863	-16140	9096	2692	45199	8860	2515	11375	No	69.44	Si
SLU 75	4.07	-236.95	-3829	-3224	-334	0.9863	0.9863	-10896	8397	2485	45199	8860	2515	11375	No	34.01	Si
SLU 82	2.07	285.5	-6368	-5363	231	0.9863	0.9863	-18124	9361	2770	45199	8860	2515	11375	No	49.18	Si
SLU 82	4.07	-317.64	-4485	-3777	-336	0.9863	0.9863	-12765	8646	2558	45199	8860	2515	11375	No	33.82	Si
SLU 80	2.07	218.93	-5671	-4776	164	0.9863	0.9863	-16140	9096	2692	45199	8860	2515	11375	No	69.44	Si
SLU 80	4.07	-236.95	-3829	-3224	-334	0.9863	0.9863	-10896	8397	2485	45199	8860	2515	11375	No	34.01	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	I'	αN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	2.07	1004.01	-2582	-2174	1099	0.9863	0.3128	-7348	11886	1116	45199	13290	2515	15805		14.38	Si
SLV 7	4.07	-722.18	-2042	-1719	109	0.789	0.4183	0	0	0	45199	10632	2012	12644		116.06	Si
SLV 13	2.07	-1149.6	-3165	-2665	-1505	0.789	0.3897	0	0	0	45199	10632	2012	12644		8.4	Si
SLV 13	4.07	1013.43	-928	-781	-995	0.789	0	0	0	0	45199	10632	2012	12644		12.71	Si
SLV 3	2.07	1043.76	-3625	-3053	1263	0.9863	0.6157	-10318	12480	2305	45199	13290	2515	15805		12.52	Si
SLV 3	4.07	-916.82	-2940	-2475	299	0.789	0.5438	0	0	0	45199	10632	2012	12644		42.3	Si
SLV 2	2.07	820.6	-4218	-3552	1037	0.9863	0.8959	-12006	12818	3445	45199	13290	2515	15805		15.25	Si
SLV 2	4.07	-836.62	-3284	-2765	314	0.9863	0.7152	-12968	13010	2791	45199	13290	2515	15805		50.26	Si
SLV 8	2.07	1274.04	-2594	-2184	1420	0.789	0.0059	0	0	0	45199	10632	2012	12644		8.91	Si
SLV 8	4.07	-971.3	-2269	-1911	307	0.789	0.1954	0	0	0	45199	10632	2012	12644		41.12	Si
SLV 14	2.07	-889.53	-3176	-2675	-1196	0.789	0.6393	0	0	0	45199	10632	2012	12644		10.57	Si
SLV 14	4.07	773.49	-1147	-966	-803	0.789	0	0	0	0	45199	10632	2012	12644		15.74	Si
SLV 9	2.07	-1119.8	-4208	-3543	-1353	0.789	0.6811	0	0	0	45199	10632	2012	12644		9.34	Si
SLV 9	4.07	827.97	-1817	-1530	-812	0.9863	0.1125	-45466	16250	548	45199	13290	2515	15805		19.46	Si
SLV 10	2.07	-849.78	-4220	-3554	-1033	0.9863	0.8753	-13621	13141	3451	45199	13290	2515	15805		15.31	Si
SLV 10	4.07	578.85	-2045	-1722	-614	0.9863	0.6302	-5819	11581	2189	45199	13290	2515	15805		25.76	Si
SLV 4	2.07	1303.84	-3637	-3063	1571	0.9863	0.4039	-10350	12487	1513	45199	13290	2515	15805		10.06	Si
SLV 4	4.07	-1156.76	-3159	-2660	490	0.789	0.3809	0	0	0	45199	10632	2012	12644		25.8	Si
SLV 15	2.07	-666.37	-2583	-2175	-970	0.9863	0.7056	-10325	12482	2642	45199	13290	2515	15805		16.29	Si
SLV 15	4.07	693.3	-803	-676	-819	0.789	0	0	0	0	45199	10632	2012	12644		15.44	Si

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

quota 3.03 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	α0	N	M	Mc	Coeff.s.	Verifica
SLV 11	179667	0.47	5408	-1600	164.8	231.51	1.4	Si
SLV 12	179667	0.47	5448	-1612	164.8	233.18	1.41	Si
SLV 7	179667	0.47	6376	-1887	164.8	271.17	1.65	Si
SLV 8	179667	0.47	6416	-1899	164.8	272.81	1.66	Si
SLV 15	179667	0.47	6612	-1956	164.8	280.75	1.7	Si
SLV 16	179667	0.47	6651	-1968	164.8	282.33	1.71	Si
SLV 13	179667	0.47	8612	-2548	164.8	360.66	2.19	Si
SLV 14	179667	0.47	8651	-2560	164.8	362.19	2.2	Si
SLV 3	179667	0.47	9839	-2911	164.8	408.56	2.48	Si
SLV 4	179667	0.47	9878	-2923	164.8	410.06	2.49	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 é 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 mezzera = 3.03 Wa = 0.05 Ta = 0.0855



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 2	-1258	-3012	-111	2.414	303.4	0.89	39.43601	16.97787	Si
SLV 1	-1251	-3392	-111	2.421	302.8	0.89	39.5461	16.97787	Si
SLV 4	-1185	-1798	70	2.51	296.7	0.889	41.01733	16.97787	Si
SLV 3	-1179	-2177	70	2.517	296.1	0.889	41.13483	16.97787	Si
SLV 14	-1090	-4969	-71	2.62	288	0.889	42.83574	16.97787	Si
SLV 13	-1084	-5349	-71	2.628	287.4	0.889	42.96309	16.97787	Si
SLV 16	-1018	-3754	111	2.691	281.4	0.889	44.00098	16.97787	Si
SLV 15	-1011	-4134	111	2.699	280.8	0.889	44.13525	16.97787	Si
SLV 6	-1283	-5107	-309	2.303	305.8	0.89	37.60985	11.37117	Si
SLV 5	-1277	-5501	-309	2.309	305.2	0.89	37.71778	11.37117	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	6.094	SLU 39	Si
V_SLU	33.823	SLU 81	Si
PF_SLV	0.505	SLV 13	No
V_SLV	8.402	SLV 13	Si
PFFP_SLV	1.405	SLV 11	Si
R_SLV	2.323	SLV 2	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
-3.283	-17.728	-5.158	-17.728	L2	L3	1.876	0.3	3.92	3.92	3.92			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / $\epsilon_{\text{CNR DT-200}}$							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	elim,conv	ϵ_{fd}	$\gamma_{\text{F,d}}$	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 FRM in combinazioni non sismiche, $\gamma_M = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 43	3.07	285.64	-2947	-0.0000102	0.0003743	0.0035	1.8756	2621.64	2845.75	2845.75	9.96	No	Si
SLU 43	4.07	841.74	-3357	-0.0000161	0.0003743	0.0035	1.8756	2963.97	3197.61	3197.61	3.8	No	Si
SLU 47	3.07	285.64	-2947	-0.0000102	0.0003743	0.0035	1.8756	2621.64	2845.75	2845.75	9.96	No	Si
SLU 47	4.07	841.74	-3357	-0.0000161	0.0003743	0.0035	1.8756	2963.97	3197.61	3197.61	3.8	No	Si
SLU 51	3.07	285.64	-2947	-0.0000102	0.0003743	0.0035	1.8756	2621.64	2845.75	2845.75	9.96	No	Si
SLU 51	4.07	841.74	-3357	-0.0000161	0.0003743	0.0035	1.8756	2963.97	3197.61	3197.61	3.8	No	Si
SLU 48	3.07	285.64	-2947	-0.0000102	0.0003743	0.0035	1.8756	2621.64	2845.75	2845.75	9.96	No	Si
SLU 48	4.07	841.74	-3357	-0.0000161	0.0003743	0.0035	1.8756	2963.97	3197.61	3197.61	3.8	No	Si
SLU 50	3.07	285.64	-2947	-0.0000102	0.0003743	0.0035	1.8756	2621.64	2845.75	2845.75	9.96	No	Si
SLU 50	4.07	841.74	-3357	-0.0000161	0.0003743	0.0035	1.8756	2963.97	3197.61	3197.61	3.8	No	Si
SLU 8	3.07	229.43	-2557	-0.0000087	0.0003743	0.0035	1.8756	2290.84	2506.1	2506.1	10.92	No	Si
SLU 8	4.07	701.57	-2909	-0.0000137	0.0003743	0.0035	1.8756	2589.4	2812.78	2812.78	4.01	No	Si
SLU 44	3.07	285.64	-2947	-0.0000102	0.0003743	0.0035	1.8756	2621.64	2845.75	2845.75	9.96	No	Si
SLU 44	4.07	841.74	-3357	-0.0000161	0.0003743	0.0035	1.8756	2963.97	3197.61	3197.61	3.8	No	Si
SLU 49	3.07	285.64	-2947	-0.0000102	0.0003743	0.0035	1.8756	2621.64	2845.75	2845.75	9.96	No	Si
SLU 49	4.07	841.74	-3357	-0.0000161	0.0003743	0.0035	1.8756	2963.97	3197.61	3197.61	3.8	No	Si
SLU 46	3.07	285.64	-2947	-0.0000102	0.0003743	0.0035	1.8756	2621.64	2845.75	2845.75	9.96	No	Si
SLU 46	4.07	841.74	-3357	-0.0000161	0.0003743	0.0035	1.8756	2963.97	3197.61	3197.61	3.8	No	Si
SLU 45	3.07	285.64	-2947	-0.0000102	0.0003743	0.0035	1.8756	2621.64	2845.75	2845.75	9.96	No	Si
SLU 45	4.07	841.74	-3357	-0.0000161	0.0003743	0.0035	1.8756	2963.97	3197.61	3197.61	3.8	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche, $\gamma_M = 2$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	3.07	904.44	-1945	-0.0000135	0.0005615	0.0035	1.8756		1981.47	1981.47	2.19		Si
SLV 4	4.07	-976.83	-2204	-0.0000147	0.0005615	0.0035	1.8756		2899.92	2899.92	2.97		Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 15	3.07	-394.13	-3885	-0.0000136	0.0005615	0.0035	1.8756		4379.72	4379.72	11.11		Si
SLV 15	4.07	2401.67	-4987	-0.0000366	0.0005615	0.0035	1.8756		4652.67	4652.67	1.94		Si
SLV 11	3.07	-2.32	-1904	-0.000005	0.0005615	0.0035	1.8756		2632.08	2632.08	1132.4		Si
SLV 11	4.07	990.34	-3267	-0.000017	0.0005615	0.0035	1.8756		3160.75	3160.75	3.19		Si
SLV 10	3.07	174.2	-5629	-0.0000165	0.0005615	0.0035	1.8756		5197.84	5197.84	29.84		Si
SLV 10	4.07	1650.94	-5404	-0.0000285	0.0005615	0.0035	1.8756		5008.31	5008.31	3.03		Si
SLV 8	3.07	504.71	-1150	-0.0000076	0.0005615	0.0035	1.8756		1260.36	1260.36	2.5		Si
SLV 8	4.07	-326.02	-2186	-0.0000085	0.0005615	0.0035	1.8756		2884.5	2884.5	8.85		Si
SLV 16	3.07	-235.02	-3652	-0.0000116	0.0005615	0.0035	1.8756		4178.16	4178.16	17.78		Si
SLV 16	4.07	1991.51	-4655	-0.0000304	0.0005615	0.0035	1.8756		4368.15	4368.15	2.19		Si
SLV 14	3.07	-231.62	-4842	-0.0000148	0.0005615	0.0035	1.8756		5197.09	5197.09	22.44		Si
SLV 14	4.07	2317.45	-5399	-0.0000355	0.0005615	0.0035	1.8756		5004.42	5004.42	2.16		Si
SLV 13	3.07	-390.73	-5075	-0.0000168	0.0005615	0.0035	1.8756		5396.7	5396.7	13.81		Si
SLV 13	4.07	2727.6	-5732	-0.0000417	0.0005615	0.0035	1.8756		5285.37	5285.37	1.94		Si
SLV 3	3.07	745.33	-2177	-0.000012	0.0005615	0.0035	1.8756		2191.99	2191.99	2.94		Si
SLV 3	4.07	-566.68	-2536	-0.0000115	0.0005615	0.0035	1.8756		3196.65	3196.65	5.64		Si
SLV 9	3.07	9	-5870	-0.0000157	0.0005615	0.0035	1.8756		5400.9	5400.9	599.84		Si
SLV 9	4.07	2076.79	-5749	-0.0000333	0.0005615	0.0035	1.8756		5299.88	5299.88	2.55		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 73	3.07	381.63	-6283	-5291	-1328	1.8756	1.8756	-9403	8198	4613	45199	16849	4783	21632	No	16.29	Si
SLU 73	4.07	1450.08	-7064	-5949	-2741	1.8756	1.8756	-10572	8354	4701	45199	16849	4783	21632	No	7.89	Si
SLU 76	3.07	381.63	-6283	-5291	-1328	1.8756	1.8756	-9403	8198	4613	45199	16849	4783	21632	No	16.29	Si
SLU 76	4.07	1450.08	-7064	-5949	-2741	1.8756	1.8756	-10572	8354	4701	45199	16849	4783	21632	No	7.89	Si
SLU 84	3.07	407	-7241	-6098	-1446	1.8756	1.8756	-10837	8389	4721	45199	16849	4783	21632	No	14.96	Si
SLU 84	4.07	1622.92	-8123	-6840	-2989	1.8756	1.8756	-12156	8565	4820	45199	16849	4783	21632	No	7.24	Si
SLU 74	3.07	381.63	-6283	-5291	-1328	1.8756	1.8756	-9403	8198	4613	45199	16849	4783	21632	No	16.29	Si
SLU 74	4.07	1450.08	-7064	-5949	-2741	1.8756	1.8756	-10572	8354	4701	45199	16849	4783	21632	No	7.89	Si
SLU 75	3.07	381.63	-6283	-5291	-1328	1.8756	1.8756	-9403	8198	4613	45199	16849	4783	21632	No	16.29	Si
SLU 75	4.07	1450.08	-7064	-5949	-2741	1.8756	1.8756	-10572	8354	4701	45199	16849	4783	21632	No	7.89	Si
SLU 83	3.07	407	-7241	-6098	-1446	1.8756	1.8756	-10837	8389	4721	45199	16849	4783	21632	No	14.96	Si
SLU 83	4.07	1622.92	-8123	-6840	-2989	1.8756	1.8756	-12156	8565	4820	45199	16849	4783	21632	No	7.24	Si
SLU 82	3.07	407	-7241	-6098	-1446	1.8756	1.8756	-10837	8389	4721	45199	16849	4783	21632	No	14.96	Si
SLU 82	4.07	1622.92	-8123	-6840	-2989	1.8756	1.8756	-12156	8565	4820	45199	16849	4783	21632	No	7.24	Si
SLU 79	3.07	381.63	-6283	-5291	-1328	1.8756	1.8756	-9403	8198	4613	45199	16849	4783	21632	No	16.29	Si
SLU 79	4.07	1450.08	-7064	-5949	-2741	1.8756	1.8756	-10572	8354	4701	45199	16849	4783	21632	No	7.89	Si
SLU 81	3.07	407	-7241	-6098	-1446	1.8756	1.8756	-10837	8389	4721	45199	16849	4783	21632	No	14.96	Si
SLU 81	4.07	1622.92	-8123	-6840	-2989	1.8756	1.8756	-12156	8565	4820	45199	16849	4783	21632	No	7.24	Si
SLU 78	3.07	381.63	-6283	-5291	-1328	1.8756	1.8756	-9403	8198	4613	45199	16849	4783	21632	No	16.29	Si
SLU 78	4.07	1450.08	-7064	-5949	-2741	1.8756	1.8756	-10572	8354	4701	45199	16849	4783	21632	No	7.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	3.07	-231.62	-4842	-4078	-3210	1.8756	1.8756	-7247	11866	6677	45199	25274	4783	30057		9.36	Si
SLV 14	4.07	2317.45	-5399	-4547	-3334	1.8756	1.5258	-8081	12033	5508	45199	25274	4783	30057		9.02	Si
SLV 16	3.07	-235.02	-3652	-3076	-3219	1.8756	1.8756	-5466	11510	6476	45199	25274	4783	30057		9.34	Si
SLV 16	4.07	1991.51	-4655	-3920	-3129	1.8756	1.5299	-6966	11810	5420	45199	25274	4783	30057		9.6	Si
SLV 11	3.07	-2.32	-1904	-1603	-2047	1.8756	1.8756	-2849	10986	6182	45199	25274	4783	30057		14.69	Si
SLV 11	4.07	990.34	-3267	-2751	-2215	1.8756	1.8756	-4889	11395	6412	45199	25274	4783	30057		13.57	Si
SLV 2	3.07	907.84	-3135	-2640	-2212	1.8756	1.8756	-4691	11355	6389	45199	25274	4783	30057		13.59	Si
SLV 2	4.07	-650.9	-2948	-2483	147	1.8756	1.8756	-4412	11299	6358	45199	25274	4783	30057		204.16	Si
SLV 5	3.07	350.84	-5358	-4512	-389	1.8756	1.8756	-8018	12020	6764	45199	25274	4783	30057		77.25	Si
SLV 5	4.07	1186.29	-5014	-4222	-1853	1.8756	1.8756	-7504	11917	6706	45199	25274	4783	30057		16.22	Si
SLV 4	3.07	904.44	-1945	-1638	2203	1.8756	1.4183	-2911	10999	4680	45199	25274	4783	30057		13.65	Si
SLV 4	4.07	-976.83	-2204	-1856	352	1.8756	1.4836	-4175	11252	5008	45199	25274	4783	30057		85.46	Si
SLV 13	3.07	-390.73	-5075	-4274	-3911	1.8756	1.8756	-7595	11936	6716	45199	25274	4783	30057		7.69	Si
SLV 13	4.07	2727.6	-5732	-4827	-3867	1.8756	1.3859	-8579	12132	5044	45199	25274	4783	30057		7.77	Si
SLV 15	3.07	-394.13	-3885	-3272	-3920	1.8756	1.8756	-5814	11580	6516	45199	25274	4783	30057		7.67	Si
SLV 15	4.07	2401.67	-4987	-4200	-3662	1.8756	1.3688	-7464	11910	4891	45199	25274	4783	30057		8.21	Si
SLV 9	3.07	9	-5870	-4943	-2016	1.8756	1.8756	-8785	12174	6850	45199	25274	4783	30057		14.91	Si
SLV 9	4.07	2076.79	-5749	-4842	-2897	1.8756	1.7298	-8605	12138	6299	45199	25274	4783	30057		10.38	Si
SLV 10	3.07	174.2	-5629	-4740	-1288	1.8756	1.8756	-8424	12101	6809	45199	25274	4783	30057		23.34	Si
SLV 10	4.07	1650.94	-5404	-4551	-2344	1.8756	1.8756	-8088	12034	6771	45199	25274	4783	30057		12.82	Si

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

quota 3.03 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.47	0	-465	313.39	0	0	No, e>t/2
SLV 4	179667	0.47	0	-1728	313.39	0	0	No, e>t/2
SLV 8	179667	0.47	0	-397	313.39	0	0	No, e>t/2
SLV 11	179667	0.47	0	-585	313.39	0	0	No, e>t/2
SLV 12	179667	0.47	0	-518	313.39	0	0	No, e>t/2
SLV 3	179667	0.47	0	-1793	313.39	0	0	No, e>t/2
SLV 16	179667	0.47	3784	-2129	313.39	311.44	0.99	No, M>Mu
SLV 15	179667	0.47	3900	-2194	313.39	320.73	1.02	Si
SLV 2	179667	0.47	5309	-2987	313.39	432.5	1.38	Si
SLV 1	179667	0.47	5425	-3052	313.39	441.59	1.41	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 é 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 = 3.03 Wa = 0.05 Ta = 0.0855



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 13	-2353	844	-4	2.483	573.4	0.89	40.57045	16.97787	Si, Trazione
SLV 14	-2303	237	-4	2.512	568.8	0.889	41.03846	16.97787	Si, Trazione
SLV 15	-2265	2849	12	2.532	565.3	0.889	41.38121	16.97787	Si, Trazione
SLV 16	-2216	2242	12	2.562	560.7	0.889	41.86697	16.97787	Si, Trazione
SLV 1	-1971	-4631	-26	2.714	538.3	0.889	44.3743	16.97787	Si
SLV 2	-1921	-5238	-26	2.748	533.9	0.889	44.92654	16.97787	Si
SLV 3	-1883	-2626	-10	2.779	530.4	0.889	45.43159	16.97787	Si
SLV 4	-1834	-3233	-10	2.814	526	0.889	46.00702	16.97787	Si
SLV 9	-2323	-3399	-31	2.494	570.6	0.889	40.75698	11.37117	Si
SLV 10	-2271	-4030	-31	2.524	565.8	0.889	41.24824	11.37117	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	3.799	SLU 43	Si
V_SLU	7.238	SLU 81	Si
PF_SLV	1.937	SLV 15	Si
V_SLV	7.668	SLV 15	Si
PFFP_SLV	0	SLV 3	No
R_SLV	2.39	SLV 13	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
-2.153	-17.728	-2.783	-17.728	L2	L3	0.63	0.3	3.92	3.92	3.92			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,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	α _t	α	elim,conv	ε _{f,d}	γ _{F,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 FRM in combinazioni non sismiche, $\gamma_M = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 49	3.07	289.73	-1795	-0.0000399	0.0003743	0.0035	0.6298	512.44	549.36	549.36	1.9	No	Si
SLU 49	4.07	-394	-1656	-0.0000762	0.0003743	0.0035	0.5038	476.71	562.1	562.1	1.43	No	Si
SLU 70	3.07	346.33	-2368	-0.0000484	0.0003743	0.0035	0.6298	653.89	692.32	692.32	2	No	Si
SLU 70	4.07	-476.84	-2211	-0.0000795	0.0003743	0.0035	0.5038	616.19	710.61	710.61	1.49	No	Si
SLU 43	3.07	289.73	-1795	-0.0000399	0.0003743	0.0035	0.6298	512.44	549.36	549.36	1.9	No	Si
SLU 43	4.07	-394	-1656	-0.0000762	0.0003743	0.0035	0.5038	476.71	562.1	562.1	1.43	No	Si
SLU 51	3.07	289.73	-1795	-0.0000399	0.0003743	0.0035	0.6298	512.44	549.36	549.36	1.9	No	Si
SLU 51	4.07	-394	-1656	-0.0000762	0.0003743	0.0035	0.5038	476.71	562.1	562.1	1.43	No	Si
SLU 50	3.07	289.73	-1795	-0.0000399	0.0003743	0.0035	0.6298	512.44	549.36	549.36	1.9	No	Si
SLU 50	4.07	-394	-1656	-0.0000762	0.0003743	0.0035	0.5038	476.71	562.1	562.1	1.43	No	Si
SLU 48	3.07	289.73	-1795	-0.0000399	0.0003743	0.0035	0.6298	512.44	549.36	549.36	1.9	No	Si
SLU 48	4.07	-394	-1656	-0.0000762	0.0003743	0.0035	0.5038	476.71	562.1	562.1	1.43	No	Si
SLU 47	3.07	289.73	-1795	-0.0000399	0.0003743	0.0035	0.6298	512.44	549.36	549.36	1.9	No	Si
SLU 47	4.07	-394	-1656	-0.0000762	0.0003743	0.0035	0.5038	476.71	562.1	562.1	1.43	No	Si
SLU 44	3.07	289.73	-1795	-0.0000399	0.0003743	0.0035	0.6298	512.44	549.36	549.36	1.9	No	Si
SLU 44	4.07	-394	-1656	-0.0000762	0.0003743	0.0035	0.5038	476.71	562.1	562.1	1.43	No	Si
SLU 46	3.07	289.73	-1795	-0.0000399	0.0003743	0.0035	0.6298	512.44	549.36	549.36	1.9	No	Si
SLU 46	4.07	-394	-1656	-0.0000762	0.0003743	0.0035	0.5038	476.71	562.1	562.1	1.43	No	Si
SLU 45	3.07	289.73	-1795	-0.0000399	0.0003743	0.0035	0.6298	512.44	549.36	549.36	1.9	No	Si
SLU 45	4.07	-394	-1656	-0.0000762	0.0003743	0.0035	0.5038	476.71	562.1	562.1	1.43	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche, $\gamma_M = 2$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	3.07	527.02	-2599	-0.0000803	0.0005615	0.0035	0.6298		785.25	785.25	1.49		Si
SLV 4	4.07	-769.84	-2826	-0.000254	0.0005615	0.0035	0.5038		896.38	896.38	1.16		Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 6	3.07	468.16	-3323	-0.0000654	0.0005615	0.0035	0.6298		973.16	973.16	2.08		Si
SLV 6	4.07	-766.75	-3299	-0.0001455	0.0005615	0.0035	0.5038		1021.38	1021.38	1.33		Si
SLV 2	3.07	575.24	-3178	-0.0000824	0.0005615	0.0035	0.6298		940.3	940.3	1.63		Si
SLV 2	4.07	-891.69	-3386	-0.0002569	0.0005615	0.0035	0.5038		1044.34	1044.34	1.17		Si
SLV 10	3.07	327.09	-2866	-0.0000483	0.0005615	0.0035	0.6298		857.62	857.62	2.62		Si
SLV 10	4.07	-536.04	-2659	-0.0000813	0.0005615	0.0035	0.5038		850.96	850.96	1.59		Si
SLV 1	3.07	510.2	-2977	-0.0000714	0.0005615	0.0035	0.6298		887.46	887.46	1.74		Si
SLV 1	4.07	-784.53	-3096	-0.0001879	0.0005615	0.0035	0.5038		967.86	967.86	1.23		Si
SLV 7	3.07	239.9	-1186	-0.0000353	0.0005615	0.0035	0.6298		384.13	384.13	1.6		Si
SLV 7	4.07	-249.31	-1131	-0.0000401	0.0005615	0.0035	0.5038		418.31	418.31	1.68		Si
SLV 15	3.07	-8.24	-873	-0.0000075	0.0005615	0.0035	0.6298		341.91	341.91	41.49		Si
SLV 15	4.07	106.34	-404	-0.000026	0.0005615	0.0035	0.6298		149.23	149.23	1.4		Si
SLV 3	3.07	461.98	-2398	-0.0000673	0.0005615	0.0035	0.6298		730.19	730.19	1.58		Si
SLV 3	4.07	-662.68	-2536	-0.0001731	0.0005615	0.0035	0.5038		816.99	816.99	1.23		Si
SLV 8	3.07	307.43	-1394	-0.00005	0.0005615	0.0035	0.6298		445.29	445.29	1.45		Si
SLV 8	4.07	-360.58	-1432	-0.0000777	0.0005615	0.0035	0.5038		505.43	505.43	1.4		Si
SLV 5	3.07	400.63	-3115	-0.0000569	0.0005615	0.0035	0.6298		924.12	924.12	2.31		Si
SLV 5	4.07	-655.48	-2998	-0.0001103	0.0005615	0.0035	0.5038		941.79	941.79	1.44		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 76	3.07	449.68	-3524	-2967	1156	0.6298	0.5618	-15705	9038	1523	45199	5658	1606	7264	No	6.29	Si
SLU 76	4.07	-631.14	-3318	-2794	1235	0.5038	0.374	0	0	0	45199	4526	1285	5811	No	4.7	Si
SLU 75	3.07	449.68	-3524	-2967	1156	0.6298	0.5618	-15705	9038	1523	45199	5658	1606	7264	No	6.29	Si
SLU 75	4.07	-631.14	-3318	-2794	1235	0.5038	0.374	0	0	0	45199	4526	1285	5811	No	4.7	Si
SLU 84	3.07	493.97	-4019	-3384	1261	0.6298	0.576	-17912	9333	1613	45199	5658	1606	7264	No	5.76	Si
SLU 84	4.07	-697.27	-3792	-3194	1352	0.5038	0.3931	0	0	0	45199	4526	1285	5811	No	4.3	Si
SLU 78	3.07	449.68	-3524	-2967	1156	0.6298	0.5618	-15705	9038	1523	45199	5658	1606	7264	No	6.29	Si
SLU 78	4.07	-631.14	-3318	-2794	1235	0.5038	0.374	0	0	0	45199	4526	1285	5811	No	4.7	Si
SLU 73	3.07	449.68	-3524	-2967	1156	0.6298	0.5618	-15705	9038	1523	45199	5658	1606	7264	No	6.29	Si
SLU 73	4.07	-631.14	-3318	-2794	1235	0.5038	0.374	0	0	0	45199	4526	1285	5811	No	4.7	Si
SLU 74	3.07	449.68	-3524	-2967	1156	0.6298	0.5618	-15705	9038	1523	45199	5658	1606	7264	No	6.29	Si
SLU 74	4.07	-631.14	-3318	-2794	1235	0.5038	0.374	0	0	0	45199	4526	1285	5811	No	4.7	Si
SLU 82	3.07	493.97	-4019	-3384	1261	0.6298	0.576	-17912	9333	1613	45199	5658	1606	7264	No	5.76	Si
SLU 82	4.07	-697.27	-3792	-3194	1352	0.5038	0.3931	0	0	0	45199	4526	1285	5811	No	4.3	Si
SLU 81	3.07	493.97	-4019	-3384	1261	0.6298	0.576	-17912	9333	1613	45199	5658	1606	7264	No	5.76	Si
SLU 81	4.07	-697.27	-3792	-3194	1352	0.5038	0.3931	0	0	0	45199	4526	1285	5811	No	4.3	Si
SLU 83	3.07	493.97	-4019	-3384	1261	0.6298	0.576	-17912	9333	1613	45199	5658	1606	7264	No	5.76	Si
SLU 83	4.07	-697.27	-3792	-3194	1352	0.5038	0.3931	0	0	0	45199	4526	1285	5811	No	4.3	Si
SLU 79	3.07	449.68	-3524	-2967	1156	0.6298	0.5618	-15705	9038	1523	45199	5658	1606	7264	No	6.29	Si
SLU 79	4.07	-631.14	-3318	-2794	1235	0.5038	0.374	0	0	0	45199	4526	1285	5811	No	4.7	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 7	3.07	239.9	-1186	-999	632	0.6298	0.3378	-5285	11474	1163	45199	8487	1606	10093		15.96	Si
SLV 7	4.07	-249.31	-1131	-952	377	0.5038	0.2835	0	0	0	45199	6789	1285	8074		21.42	Si
SLV 10	3.07	327.09	-2866	-2413	848	0.6298	0.6023	-12772	12971	2344	45199	8487	1606	10093		11.9	Si
SLV 10	4.07	-536.04	-2659	-2239	1195	0.5038	0.3399	0	0	0	45199	6789	1285	8074		6.76	Si
SLV 8	3.07	307.43	-1394	-1174	837	0.6298	0.2833	-6215	11660	991	45199	8487	1606	10093		12.06	Si
SLV 8	4.07	-360.58	-1432	-1206	607	0.5038	0.1893	0	0	0	45199	6789	1285	8074		13.29	Si
SLV 1	3.07	510.2	-2977	-2507	1441	0.6298	0.4306	-13269	13070	1688	45199	8487	1606	10093		7	Si
SLV 1	4.07	-784.53	-3096	-2607	1573	0.5038	0.1846	0	0	0	45199	6789	1285	8074		5.13	Si
SLV 2	3.07	575.24	-3178	-2676	1638	0.6298	0.4017	-14164	13250	1597	45199	8487	1606	10093		6.16	Si
SLV 2	4.07	-891.69	-3386	-2852	1795	0.5038	0.1547	0	0	0	45199	6789	1285	8074		4.5	Si
SLV 4	3.07	527.02	-2599	-2189	1503	0.6298	0.3365	-11585	12734	1285	45199	8487	1606	10093		6.72	Si
SLV 4	4.07	-769.84	-2826	-2380	1485	0.5038	0.1275	0	0	0	45199	6789	1285	8074		5.44	Si
SLV 3	3.07	461.98	-2398	-2020	1306	0.6298	0.3669	-10690	12555	1382	45199	8487	1606	10093		7.73	Si
SLV 3	4.07	-662.68	-2536	-2136	1263	0.5038	0.1609	0	0	0	45199	6789	1285	8074		6.39	Si
SLV 6	3.07	468.16	-3323	-2798	1287	0.6298	0.5221	-14811	13379	2095	45199	8487	1606	10093		7.84	Si
SLV 6	4.07	-766.75	-3299	-2778	1641	0.5038	0.2474	0	0	0	45199	6789	1285	8074		4.92	Si
SLV 5	3.07	400.63	-3115	-2623	1083	0.6298	0.5588	-13882	13193	2212	45199	8487	1606	10093		9.32	Si
SLV 5	4.07	-655.48	-2998	-2525	1411	0.5038	0.2888	0	0	0	45199	6789	1285	8074		5.72	Si
SLV 9	3.07	259.57	-2657	-2238	644	0.6298	0.6298	-11842	12785	2416	45199	8487	1606	10093		15.68	Si
SLV 9	4.07	-424.78	-2358	-1986	965	0.5038	0.4043	0	0	0	45199	6789	1285	8074		8.37	Si

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

quota 3.03 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.47	0	-670	105.23	0	0	No, e>t/2
SLV 12	179667	0.47	0	-590	105.23	0	0	No, e>t/2
SLV 11	179667	0.47	0	-524	105.23	0	0	No, e>t/2
SLV 8	179667	0.47	3897	-736	105.23	107.62	1.02	Si
SLV 15	179667	0.47	4522	-854	105.23	124.38	1.18	Si
SLV 16	179667	0.47	4862	-919	105.23	133.41	1.27	Si
SLV 13	179667	0.47	6789	-1283	105.23	183.85	1.75	Si
SLV 3	179667	0.47	7095	-1341	105.23	191.74	1.82	Si
SLV 14	179667	0.47	7129	-1347	105.23	192.6	1.83	Si
SLV 4	179667	0.47	7435	-1405	105.23	200.45	1.9	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 é 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 = 3.03 Wa = 0.05 Ta = 0.0855



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 2	-948	1572	69	2.202	207.4	0.892	35.8886	16.97787	Si, Trazione
SLV 1	-910	1078	69	2.254	203.8	0.891	36.75713	16.97787	Si, Trazione
SLV 4	-876	1908	89	2.291	200.5	0.891	37.38431	16.97787	Si, Trazione
SLV 3	-838	1414	89	2.348	197	0.89	38.32731	16.97787	Si, Trazione
SLV 14	-657	-2812	-89	2.663	180.3	0.889	43.54287	16.97787	Si
SLV 13	-619	-3307	-89	2.74	176.9	0.889	44.79315	16.97787	Si
SLV 16	-584	-2477	-69	2.832	173.8	0.889	46.27368	16.97787	Si
SLV 15	-547	-2971	-69	2.918	170.5	0.89	47.6615	16.97787	Si
SLV 6	-932	-345	-10	2.262	205.8	0.892	36.86288	11.37117	Si
SLV 5	-892	-858	-10	2.317	202.1	0.891	37.799	11.37117	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	1.427	SLU 43	Si
V_SLU	4.298	SLU 81	Si
PF_SLV	1.164	SLV 4	Si
V_SLV	4.497	SLV 2	Si
PFFP_SLV	0	SLV 7	No
R_SLV	2.114	SLV 2	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
0.227	-17.728	-0.753	-17.728	L2	L3	0.98	0.3	3.92	3.92	3.92			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRMC

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,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	α _t	α	elim,conv	ε _{f,d}	γ _{F,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 FRMC in combinazioni non sismiche, $\gamma_m = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 35	2.07	-263.9	-5039	-0.0000349	0.0003743	0.0035	0.98	2053.36	2394.96	2394.96	9.08	No	Si
SLU 35	4.07	286.84	-3638	-0.000028	0.0003743	0.0035	0.98	1565.97	1640.17	1640.17	5.72	No	Si
SLU 33	2.07	-263.9	-5039	-0.0000349	0.0003743	0.0035	0.98	2053.36	2394.96	2394.96	9.08	No	Si
SLU 33	4.07	286.84	-3638	-0.000028	0.0003743	0.0035	0.98	1565.97	1640.17	1640.17	5.72	No	Si
SLU 39	2.07	-330.1	-5740	-0.000041	0.0003743	0.0035	0.98	2273.2	2650.2	2650.2	8.03	No	Si
SLU 39	4.07	368	-4301	-0.0000342	0.0003743	0.0035	0.98	1804.69	1883.11	1883.11	5.12	No	Si
SLU 36	2.07	-263.9	-5039	-0.0000349	0.0003743	0.0035	0.98	2053.36	2394.96	2394.96	9.08	No	Si
SLU 36	4.07	286.84	-3638	-0.000028	0.0003743	0.0035	0.98	1565.97	1640.17	1640.17	5.72	No	Si
SLU 34	2.07	-263.9	-5039	-0.0000349	0.0003743	0.0035	0.98	2053.36	2394.96	2394.96	9.08	No	Si
SLU 34	4.07	286.84	-3638	-0.000028	0.0003743	0.0035	0.98	1565.97	1640.17	1640.17	5.72	No	Si
SLU 38	2.07	-263.9	-5039	-0.0000349	0.0003743	0.0035	0.98	2053.36	2394.96	2394.96	9.08	No	Si
SLU 38	4.07	286.84	-3638	-0.000028	0.0003743	0.0035	0.98	1565.97	1640.17	1640.17	5.72	No	Si
SLU 41	2.07	-330.1	-5740	-0.000041	0.0003743	0.0035	0.98	2273.2	2650.2	2650.2	8.03	No	Si
SLU 41	4.07	368	-4301	-0.0000342	0.0003743	0.0035	0.98	1804.69	1883.11	1883.11	5.12	No	Si
SLU 40	2.07	-330.1	-5740	-0.000041	0.0003743	0.0035	0.98	2273.2	2650.2	2650.2	8.03	No	Si
SLU 40	4.07	368	-4301	-0.0000342	0.0003743	0.0035	0.98	1804.69	1883.11	1883.11	5.12	No	Si
SLU 42	2.07	-330.1	-5740	-0.000041	0.0003743	0.0035	0.98	2273.2	2650.2	2650.2	8.03	No	Si
SLU 42	4.07	368	-4301	-0.0000342	0.0003743	0.0035	0.98	1804.69	1883.11	1883.11	5.12	No	Si
SLU 37	2.07	-263.9	-5039	-0.0000349	0.0003743	0.0035	0.98	2053.36	2394.96	2394.96	9.08	No	Si
SLU 37	4.07	286.84	-3638	-0.000028	0.0003743	0.0035	0.98	1565.97	1640.17	1640.17	5.72	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRMC in combinazioni sismiche, $\gamma_m = 2$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 11	2.07	-1361.76	-2579	-0.0006024	0.0005615	0.0035	0.784		1432.69	1432.69	1.05		Si
SLV 11	4.07	1057.5	-2311	-0.0002799	0.0005615	0.0035	0.98		1146.65	1146.65	1.08		Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 5	2.07	897.08	-4010	-0.000051	0.0005615	0.0035	0.98		1889.65	1889.65	2.11		Si
SLV 5	4.07	-640.4	-1897	-0.0000418	0.0005615	0.0035	0.784		1126.8	1126.8	1.76		Si
SLV 12	2.07	-1097.71	-2595	-0.0001323	0.0005615	0.0035	0.784		1439.47	1439.47	1.31		Si
SLV 12	4.07	814.49	-2118	-0.000069	0.0005615	0.0035	0.98		1059.22	1059.22	1.3		Si
SLV 16	2.07	-1108.8	-3412	-0.000071	0.0005615	0.0035	0.784		1798.86	1798.86	1.62		Si
SLV 16	4.07	965.86	-2819	-0.0000655	0.0005615	0.0035	0.98		1373.64	1373.64	1.42		Si
SLV 6	2.07	1161.13	-4025	-0.0000686	0.0005615	0.0035	0.98		1895.98	1895.98	1.63		Si
SLV 6	4.07	-883.42	-1704	-0.0003235	0.0005615	0.0035	0.784		1038.89	1038.89	1.18		Si
SLV 4	2.07	642.46	-2715	-0.0000359	0.0005615	0.0035	0.98		1327.37	1327.37	2.07		Si
SLV 4	4.07	-663.07	-968	-0.000466	0.0005615	0.0035	0.784		696.78	696.78	1.05		Si
SLV 1	2.07	908.18	-3192	-0.0000527	0.0005615	0.0035	0.98		1537.87	1537.87	1.69		Si
SLV 1	4.07	-791.78	-1196	-0.0005456	0.0005615	0.0035	0.784		803.55	803.55	1.01		Si
SLV 2	2.07	1162.49	-3207	-0.0000877	0.0005615	0.0035	0.98		1544.33	1544.33	1.33		Si
SLV 2	4.07	-1025.84	-1010	-0.0013464	0.0005615	0.0035	0.784		716.76	716.76	0.7		No
SLV 7	2.07	-836.38	-2370	-0.0000587	0.0005615	0.0035	0.784		1339.04	1339.04	1.6		Si
SLV 7	4.07	568.82	-1756	-0.0000354	0.0005615	0.0035	0.98		894.01	894.01	1.57		Si
SLV 15	2.07	-1363.12	-3398	-0.0001353	0.0005615	0.0035	0.784		1792.46	1792.46	1.31		Si
SLV 15	4.07	1199.92	-3005	-0.0001184	0.0005615	0.0035	0.98		1455.91	1455.91	1.21		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 72	2.07	-94.34	-3912	-3295	-53	0.98	0.98	-11206	8439	2481	45199	8804	2499	11303	No	212.63	Si
SLU 72	4.07	68.62	-2245	-1891	341	0.98	0.98	-6431	7802	2294	45199	8804	2499	11303	No	33.18	Si
SLU 64	2.07	-94.34	-3912	-3295	-53	0.98	0.98	-11206	8439	2481	45199	8804	2499	11303	No	212.63	Si
SLU 64	4.07	68.62	-2245	-1891	341	0.98	0.98	-6431	7802	2294	45199	8804	2499	11303	No	33.18	Si
SLU 66	2.07	-94.34	-3912	-3295	-53	0.98	0.98	-11206	8439	2481	45199	8804	2499	11303	No	212.63	Si
SLU 66	4.07	68.62	-2245	-1891	341	0.98	0.98	-6431	7802	2294	45199	8804	2499	11303	No	33.18	Si
SLU 69	2.07	-94.34	-3912	-3295	-53	0.98	0.98	-11206	8439	2481	45199	8804	2499	11303	No	212.63	Si
SLU 69	4.07	68.62	-2245	-1891	341	0.98	0.98	-6431	7802	2294	45199	8804	2499	11303	No	33.18	Si
SLU 68	2.07	-94.34	-3912	-3295	-53	0.98	0.98	-11206	8439	2481	45199	8804	2499	11303	No	212.63	Si
SLU 68	4.07	68.62	-2245	-1891	341	0.98	0.98	-6431	7802	2294	45199	8804	2499	11303	No	33.18	Si
SLU 73	2.07	-248.8	-5548	-4672	-212	0.98	0.98	-15892	9063	2665	45199	8804	2499	11303	No	53.32	Si
SLU 73	4.07	258	-3792	-3194	340	0.98	0.98	-10863	8393	2467	45199	8804	2499	11303	No	33.2	Si
SLU 70	2.07	-94.34	-3912	-3295	-53	0.98	0.98	-11206	8439	2481	45199	8804	2499	11303	No	212.63	Si
SLU 70	4.07	68.62	-2245	-1891	341	0.98	0.98	-6431	7802	2294	45199	8804	2499	11303	No	33.18	Si
SLU 67	2.07	-94.34	-3912	-3295	-53	0.98	0.98	-11206	8439	2481	45199	8804	2499	11303	No	212.63	Si
SLU 67	4.07	68.62	-2245	-1891	341	0.98	0.98	-6431	7802	2294	45199	8804	2499	11303	No	33.18	Si
SLU 71	2.07	-94.34	-3912	-3295	-53	0.98	0.98	-11206	8439	2481	45199	8804	2499	11303	No	212.63	Si
SLU 71	4.07	68.62	-2245	-1891	341	0.98	0.98	-6431	7802	2294	45199	8804	2499	11303	No	33.18	Si
SLU 65	2.07	-94.34	-3912	-3295	-53	0.98	0.98	-11206	8439	2481	45199	8804	2499	11303	No	212.63	Si
SLU 65	4.07	68.62	-2245	-1891	341	0.98	0.98	-6431	7802	2294	45199	8804	2499	11303	No	33.18	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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 1	2.07	908.18	-3192	-2688	1199	0.98	0.6164	-9142	12245	2264	45199	13206	2499	15705		13.09	Si
SLV 1	4.07	-791.78	-1196	-1007	866	0.784	0	0	0	0	45199	10564	1999	12564		14.5	Si
SLV 5	2.07	897.08	-4010	-3377	1053	0.98	0.7988	-11485	12714	3047	45199	13206	2499	15705		14.91	Si
SLV 5	4.07	-640.4	-1897	-1598	773	0.784	0.4574	0	0	0	45199	10564	1999	12564		16.26	Si
SLV 12	2.07	-1097.71	-2595	-2185	-1191	0.784	0.2007	0	0	0	45199	10564	1999	12564		10.55	Si
SLV 12	4.07	814.49	-2118	-1783	-254	0.98	0.3162	-6066	11630	1103	45199	13206	2499	15705		61.89	Si
SLV 6	2.07	1161.13	-4025	-3390	1365	0.98	0.6046	-11529	12722	2307	45199	13206	2499	15705		11.51	Si
SLV 6	4.07	-883.42	-1704	-1435	975	0.784	0	0	0	0	45199	10564	1999	12564		12.89	Si
SLV 11	2.07	-1361.76	-2579	-2172	-1503	0.784	0	0	0	0	45199	10564	1999	12564		8.36	Si
SLV 11	4.07	1057.5	-2311	-1946	-456	0.98	0.0972	-66885	16250	474	45199	13206	2499	15705		34.46	Si
SLV 16	2.07	-1108.8	-3412	-2874	-1337	0.784	0.4952	0	0	0	45199	10564	1999	12564		9.39	Si
SLV 16	4.07	965.86	-2819	-2374	-347	0.98	0.4421	-8074	12032	1596	45199	13206	2499	15705		45.22	Si
SLV 15	2.07	-1363.12	-3398	-2861	-1638	0.784	0.2664	0	0	0	45199	10564	1999	12564		7.67	Si
SLV 15	4.07	1199.92	-3005	-2530	-542	0.98	0.272	-31532	16250	1326	45199	13206	2499	15705		28.98	Si
SLV 7	2.07	-836.38	-2370	-1996	-821	0.784	0.4112	0	0	0	45199	10564	1999	12564		15.31	Si
SLV 7	4.07	568.82	-1756	-1478	-113	0.98	0.498	-5028	11422	1706	45199	13206	2499	15705		138.88	Si
SLV 13	2.07	-843.08	-3890	-3275	-1075	0.98	0.8197	-13404	13098	3221	45199	13206	2499	15705		14.6	Si
SLV 13	4.07	837.16	-3047	-2566	-276	0.98	0.6459	-8729	12162	2357	45199	13206	2499	15705		56.88	Si
SLV 2	2.07	1162.49	-3207	-2700	1500	0.98	0.3824	-9185	12254	1406	45199	13206	2499	15705		10.47	Si
SLV 2	4.07	-1025.84	-1010	-851	1061	0.784	0	0	0	0	45199	10564	1999	12564		11.84	Si

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

quota 3.03 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 7	179667	0.47	5658	-1663	163.75	240.28	1.47	Si
SLV 8	179667	0.47	5710	-1679	163.75	242.41	1.48	Si
SLV 11	179667	0.47	6342	-1864	163.75	268.05	1.64	Si
SLV 12	179667	0.47	6394	-1880	163.75	270.16	1.65	Si
SLV 3	179667	0.47	6931	-2038	163.75	291.79	1.78	Si
SLV 4	179667	0.47	6981	-2053	163.75	293.8	1.79	Si
SLV 1	179667	0.47	8705	-2559	163.75	362.01	2.21	Si
SLV 2	179667	0.47	8755	-2574	163.75	363.97	2.22	Si
SLV 15	179667	0.47	9210	-2708	163.75	381.66	2.33	Si
SLV 16	179667	0.47	9260	-2722	163.75	383.61	2.34	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non é 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 = 3.03 Wa = 0.05 Ta = 0.0855



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 13	-1205	-2650	-107	2.463	297.3	0.889	40.24892	16.97787	Si
SLV 14	-1204	-3048	-107	2.464	297.2	0.889	40.26614	16.97787	Si
SLV 15	-1142	-1489	70	2.55	291.5	0.889	41.68395	16.97787	Si
SLV 16	-1141	-1887	70	2.551	291.4	0.889	41.70212	16.97787	Si
SLV 1	-1089	-5005	-71	2.613	286.6	0.889	42.71563	16.97787	Si
SLV 2	-1088	-5403	-71	2.614	286.6	0.889	42.73472	16.97787	Si
SLV 3	-1026	-3844	107	2.674	281	0.889	43.71184	16.97787	Si
SLV 4	-1025	-4242	107	2.675	280.9	0.889	43.73176	16.97787	Si
SLV 9	-1237	-4821	-302	2.343	300.3	0.89	38.27637	11.37117	Si
SLV 10	-1236	-5234	-302	2.344	300.3	0.89	38.29315	11.37117	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_SLV	5.117	SLV 39	Si
V_SLV	33.183	SLV 64	Si
PF_SLV	0.699	SLV 2	No
V_SLV	7.672	SLV 15	Si
PFFP_SLV	1.467	SLV 7	Si
R_SLV	2.371	SLV 13	Si

Maschio 22

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	X fin.	Y fin.	Quota i.	Quota.s	l	Sp.	h netta	h ini.	h fin.	a	a.s.,sx	a.s.,dx
2.185	-17.729	1.227	-17.729	L2	L3	0.958	0.3	3.92	3.92	3.92			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / ϵ_c 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	elim,conv	ϵ_c ,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 FRM in combinazioni non sismiche, $\gamma_M = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 84	2.07	-377.63	-1923	-0.0000228	0.0003743	0.0035	0.9578	860.46	1100.74	1100.74	2.91	No	Si
SLU 84	3.97	841.09	-4406	-0.000053	0.0003743	0.0035	0.9578	1792.27	1871.59	1871.59	2.23	No	Si
SLU 42	2.07	-371.42	-1635	-0.0000217	0.0003743	0.0035	0.9578	739.3	975.11	975.11	2.63	No	Si
SLU 42	3.97	811.56	-4158	-0.0000506	0.0003743	0.0035	0.9578	1708.02	1780.57	1780.57	2.19	No	Si
SLU 82	2.07	-377.63	-1923	-0.0000228	0.0003743	0.0035	0.9578	860.46	1100.74	1100.74	2.91	No	Si
SLU 82	3.97	841.09	-4406	-0.000053	0.0003743	0.0035	0.9578	1792.27	1871.59	1871.59	2.23	No	Si
SLU 38	2.07	-317.54	-1508	-0.0000187	0.0003743	0.0035	0.9578	685.05	919.39	919.39	2.9	No	Si
SLU 38	3.97	692.29	-3593	-0.000043	0.0003743	0.0035	0.9578	1509.36	1577.6	1577.6	2.28	No	Si
SLU 37	2.07	-317.54	-1508	-0.0000187	0.0003743	0.0035	0.9578	685.05	919.39	919.39	2.9	No	Si
SLU 37	3.97	692.29	-3593	-0.000043	0.0003743	0.0035	0.9578	1509.36	1577.6	1577.6	2.28	No	Si
SLU 83	2.07	-377.63	-1923	-0.0000228	0.0003743	0.0035	0.9578	860.46	1100.74	1100.74	2.91	No	Si
SLU 83	3.97	841.09	-4406	-0.000053	0.0003743	0.0035	0.9578	1792.27	1871.59	1871.59	2.23	No	Si
SLU 81	2.07	-377.63	-1923	-0.0000228	0.0003743	0.0035	0.9578	860.46	1100.74	1100.74	2.91	No	Si
SLU 81	3.97	841.09	-4406	-0.000053	0.0003743	0.0035	0.9578	1792.27	1871.59	1871.59	2.23	No	Si
SLU 40	2.07	-371.42	-1635	-0.0000217	0.0003743	0.0035	0.9578	739.3	975.11	975.11	2.63	No	Si
SLU 40	3.97	811.56	-4158	-0.0000506	0.0003743	0.0035	0.9578	1708.02	1780.57	1780.57	2.19	No	Si
SLU 39	2.07	-371.42	-1635	-0.0000217	0.0003743	0.0035	0.9578	739.3	975.11	975.11	2.63	No	Si
SLU 39	3.97	811.56	-4158	-0.0000506	0.0003743	0.0035	0.9578	1708.02	1780.57	1780.57	2.19	No	Si
SLU 41	2.07	-371.42	-1635	-0.0000217	0.0003743	0.0035	0.9578	739.3	975.11	975.11	2.63	No	Si
SLU 41	3.97	811.56	-4158	-0.0000506	0.0003743	0.0035	0.9578	1708.02	1780.57	1780.57	2.19	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche, $\gamma_M = 2$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	2.07	-510.29	-272	-0.0007618	0.0005615	0.0035	0.7662		360.75	360.75	0.71	No	No
SLV 14	3.97	695.95	-2391	-0.0000429	0.0005615	0.0035	0.9578		1152.7	1152.7	1.66		Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 12	2.07	-947.02	-274	-0.0022644	0.0005615	0.0035	0.7662		361.58	361.58	0.38		No
SLV 12	3.97	1066.88	-3885	-0.0000652	0.0005615	0.0035	0.9578		1790.46	1790.46	1.68		Si
SLV 8	2.07	-561.8	-1097	-0.0002105	0.0005615	0.0035	0.7662		741.18	741.18	1.32		Si
SLV 8	3.97	722.64	-3371	-0.0000429	0.0005615	0.0035	0.9578		1575.58	1575.58	2.18		Si
SLV 11	2.07	-1148.66	159	-0.0003064	0.0005615	0.0035	0.7662		0	0	0		No
SLV 11	3.97	1247.65	-4201	-0.00008	0.0005615	0.0035	0.9578		1916.56	1916.56	1.54		Si
SLV 2	2.07	773.77	-3016	-0.0000458	0.0005615	0.0035	0.9578		1424.1	1424.1	1.84		Si
SLV 2	3.97	-451.51	-676	-0.0003078	0.0005615	0.0035	0.7662		548.35	548.35	1.21		Si
SLV 6	2.07	807.23	-2584	-0.0000527	0.0005615	0.0035	0.9578		1237.3	1237.3	1.53		Si
SLV 6	3.97	-471	-140	-0.0008395	0.0005615	0.0035	0.7662		298.8	298.8	0.63		No
SLV 7	2.07	-763.44	-665	-0.0010131	0.0005615	0.0035	0.7662		542.89	542.89	0.71		No
SLV 7	3.97	903.41	-3687	-0.0000535	0.0005615	0.0035	0.9578		1708.87	1708.87	1.89		Si
SLV 15	2.07	-1115.21	591	0.121932	0.0005615	0.0035	0.7662		0	0	0		No
SLV 15	3.97	1228.16	-3664	-0.000089	0.0005615	0.0035	0.9578		1699.31	1699.31	1.38		Si
SLV 16	2.07	-921	174	0.0185891	0.0005615	0.0035	0.7662		0	0	0		No
SLV 16	3.97	1054.04	-3360	-0.0000699	0.0005615	0.0035	0.9578		1570.94	1570.94	1.49		Si
SLV 13	2.07	-704.5	144	0.0198312	0.0005615	0.0035	0.7662		0	0	0		No
SLV 13	3.97	870.06	-2695	-0.0000589	0.0005615	0.0035	0.9578		1285.38	1285.38	1.48		Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni non sismiche secondo metodo CNR DT215, γM = 3

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 40	2.07	-371.42	-1635	-1377	-1519	0.9578	0.7552	-6101	7758	1758	45199	8604	2442	11046	No	7.27	Si
SLU 40	3.97	811.56	-4158	-3501	-1525	0.9578	0.851	-12185	8569	2188	45199	8604	2442	11046	No	7.25	Si
SLU 42	2.07	-371.42	-1635	-1377	-1519	0.9578	0.7552	-6101	7758	1758	45199	8604	2442	11046	No	7.27	Si
SLU 42	3.97	811.56	-4158	-3501	-1525	0.9578	0.851	-12185	8569	2188	45199	8604	2442	11046	No	7.25	Si
SLU 77	2.07	-323.76	-1796	-1513	-1402	0.9578	0.8959	-5265	7646	2055	45199	8604	2442	11046	No	7.88	Si
SLU 77	3.97	721.82	-3842	-3235	-1408	0.9578	0.873	-11260	8446	2212	45199	8604	2442	11046	No	7.84	Si
SLU 83	2.07	-377.63	-1923	-1620	-1603	0.9578	0.8476	-6398	7797	1983	45199	8604	2442	11046	No	6.89	Si
SLU 83	3.97	841.09	-4406	-3711	-1610	0.9578	0.864	-12914	8666	2246	45199	8604	2442	11046	No	6.86	Si
SLU 84	2.07	-377.63	-1923	-1620	-1603	0.9578	0.8476	-6398	7797	1983	45199	8604	2442	11046	No	6.89	Si
SLU 84	3.97	841.09	-4406	-3711	-1610	0.9578	0.864	-12914	8666	2246	45199	8604	2442	11046	No	6.86	Si
SLU 39	2.07	-371.42	-1635	-1377	-1519	0.9578	0.7552	-6101	7758	1758	45199	8604	2442	11046	No	7.27	Si
SLU 39	3.97	811.56	-4158	-3501	-1525	0.9578	0.851	-12185	8569	2188	45199	8604	2442	11046	No	7.25	Si
SLU 81	2.07	-377.63	-1923	-1620	-1603	0.9578	0.8476	-6398	7797	1983	45199	8604	2442	11046	No	6.89	Si
SLU 81	3.97	841.09	-4406	-3711	-1610	0.9578	0.864	-12914	8666	2246	45199	8604	2442	11046	No	6.86	Si
SLU 41	2.07	-371.42	-1635	-1377	-1519	0.9578	0.7552	-6101	7758	1758	45199	8604	2442	11046	No	7.27	Si
SLU 41	3.97	811.56	-4158	-3501	-1525	0.9578	0.851	-12185	8569	2188	45199	8604	2442	11046	No	7.25	Si
SLU 75	2.07	-323.76	-1796	-1513	-1402	0.9578	0.8959	-5265	7646	2055	45199	8604	2442	11046	No	7.88	Si
SLU 75	3.97	721.82	-3842	-3235	-1408	0.9578	0.873	-11260	8446	2212	45199	8604	2442	11046	No	7.84	Si
SLU 82	2.07	-377.63	-1923	-1620	-1603	0.9578	0.8476	-6398	7797	1983	45199	8604	2442	11046	No	6.89	Si
SLU 82	3.97	841.09	-4406	-3711	-1610	0.9578	0.864	-12914	8666	2246	45199	8604	2442	11046	No	6.86	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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 6	2.07	807.23	-2584	-2176	952	0.9578	0.4995	-7573	11931	1788	45199	12906	2442	15348		16.13	Si
SLV 6	3.97	-471	-140	-118	1094	0.7662	0	0	0	0	45199	10325	1954	12278		11.23	Si
SLV 2	2.07	773.77	-3016	-2540	1221	0.9578	0.667	-8840	12185	2438	45199	12906	2442	15348		12.57	Si
SLV 2	3.97	-451.51	-676	-570	762	0.7662	0	0	0	0	45199	10325	1954	12278		16.12	Si
SLV 13	2.07	-704.5	144	122	-2147	0.7662	0	0	0	0	45199	10325	1954	12278		5.72	Si
SLV 13	3.97	870.06	-2695	-2269	-1509	0.9578	0.468	-7897	11996	1684	45199	12906	2442	15348		10.17	Si
SLV 15	2.07	-1115.21	591	497	-2808	0.7662	0	0	0	0	45199	10325	1954	12278		4.37	Si
SLV 15	3.97	1228.16	-3664	-3085	-2356	0.9578	0.4311	-10739	12564	1625	45199	12906	2442	15348		6.51	Si
SLV 7	2.07	-763.44	-665	-560	-1641	0.7662	0	0	0	0	45199	10325	1954	12278		7.48	Si
SLV 7	3.97	903.41	-3687	-3105	-2120	0.9578	0.7015	-10805	12578	2647	45199	12906	2442	15348		7.24	Si
SLV 14	2.07	-510.29	-272	-229	-1772	0.7662	0	0	0	0	45199	10325	1954	12278		6.93	Si
SLV 14	3.97	695.95	-2391	-2013	-1134	0.9578	0.5632	-7006	11818	1997	45199	12906	2442	15348		13.54	Si
SLV 16	2.07	-921	174	147	-2433	0.7662	0	0	0	0	45199	10325	1954	12278		5.05	Si
SLV 16	3.97	1054.04	-3360	-2829	-1981	0.9578	0.4955	-9847	12386	1841	45199	12906	2442	15348		7.75	Si
SLV 12	2.07	-947.02	-274	-231	-2149	0.7662	0	0	0	0	45199	10325	1954	12278		5.71	Si
SLV 12	3.97	1066.88	-3885	-3272	-2299	0.9578	0.6128	-11387	12694	2334	45199	12906	2442	15348		6.68	Si
SLV 11	2.07	-1148.66	159	134	-2538	0.7662	0	0	0	0	45199	10325	1954	12278		4.84	Si
SLV 11	3.97	1247.65	-4201	-3538	-2688	0.9578	0.5456	-12312	12879	2108	45199	12906	2442	15348		5.71	Si
SLV 8	2.07	-561.8	-1097	-924	-1251	0.7662	0	0	0	0	45199	10325	1954	12278		9.82	Si
SLV 8	3.97	722.64	-3371	-2839	-1730	0.9578	0.7935	-9880	12393	2950	45199	12906	2442	15348		8.87	Si

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

quota 3.03 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 9	179667	0.47	0	-1042	160.03	0	0	No, e>t/2
SLV 6	179667	0.47	0	-917	160.03	0	0	No, e>t/2
SLV 5	179667	0.47	0	-954	160.03	0	0	No, e>t/2
SLV 10	179667	0.47	0	-1005	160.03	0	0	No, e>t/2
SLV 2	179667	0.47	4866	-1398	160.03	203.04	1.27	Si
SLV 1	179667	0.47	4992	-1434	160.03	208.13	1.3	Si
SLV 14	179667	0.47	5887	-1691	160.03	243.93	1.52	Si
SLV 13	179667	0.47	6013	-1728	160.03	248.94	1.56	Si
SLV 4	179667	0.47	6606	-1898	160.03	272.42	1.7	Si
SLV 3	179667	0.47	6733	-1934	160.03	277.38	1.73	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non é 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 = 3.03 Wa = 0.05 Ta = 0.0855



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 15	-1160	-1452	25	2.52	288.9	0.889	41.18388	16.97787	Si
SLV 16	-1125	-1554	25	2.56	285.7	0.889	41.84806	16.97787	Si
SLV 13	-1020	-1381	10	2.697	276.2	0.889	44.09381	16.97787	Si
SLV 3	-993	-1882	-12	2.732	273.7	0.889	44.67375	16.97787	Si
SLV 14	-986	-1483	11	2.743	273	0.889	44.84471	16.97787	Si
SLV 4	-958	-1985	-12	2.78	270.6	0.889	45.44434	16.97787	Si
SLV 1	-854	-1812	-26	2.925	261.3	0.89	47.79262	16.97787	Si
SLV 2	-819	-1914	-26	2.98	258.3	0.89	48.66305	16.97787	Si
SLV 11	-1264	-1683	28	2.405	298.7	0.89	39.26105	11.37117	Si
SLV 12	-1228	-1789	28	2.442	295.3	0.89	39.89277	11.37117	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_SLV	2.194	SLV 39	Si
V_SLV	6.863	SLV 81	Si
PF_SLV	0	SLV 11	No
V_SLV	4.373	SLV 15	Si
PFFP_SLV	0	SLV 5	No
R_SLV	2.426	SLV 15	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
0.286	-13.248	-7.629	-13.248	L2	L3	7.915	0.3	3.92	3.92	3.92			

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	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRMC

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / $\epsilon_{\text{CNR DT-200}}$							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	αt	α	elim,conv	ϵ_{fd}	$\gamma_{\text{F,d}}$	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 FRMC in combinazioni non sismiche, $\gamma_M = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	1.07	3300.84	-49078	-0.0000307	0.0004492	0.0035	7.915	161371.2	179892.18	179892.18	54.5	No	Si
SLU 47	3.17	2646.86	-36745	-0.0000229	0.0004492	0.0035	7.915	127002.39	139775.77	139775.77	52.81	No	Si
SLU 45	1.07	3300.84	-49078	-0.0000307	0.0004492	0.0035	7.915	161371.2	179892.18	179892.18	54.5	No	Si
SLU 45	3.17	2646.86	-36745	-0.0000229	0.0004492	0.0035	7.915	127002.39	139775.77	139775.77	52.81	No	Si
SLU 43	1.07	3300.84	-49078	-0.0000307	0.0004492	0.0035	7.915	161371.2	179892.18	179892.18	54.5	No	Si
SLU 43	3.17	2646.86	-36745	-0.0000229	0.0004492	0.0035	7.915	127002.39	139775.77	139775.77	52.81	No	Si
SLU 71	1.07	3684.27	-55706	-0.0000349	0.0004492	0.0035	7.915	178129.29	198872.53	198872.53	53.98	No	Si
SLU 71	3.17	2805.64	-43747	-0.0000272	0.0004492	0.0035	7.915	147023.63	163128.45	163128.45	58.14	No	Si
SLU 46	1.07	3300.84	-49078	-0.0000307	0.0004492	0.0035	7.915	161371.2	179892.18	179892.18	54.5	No	Si
SLU 46	3.17	2646.86	-36745	-0.0000229	0.0004492	0.0035	7.915	127002.39	139775.77	139775.77	52.81	No	Si
SLU 49	1.07	3300.84	-49078	-0.0000307	0.0004492	0.0035	7.915	161371.2	179892.18	179892.18	54.5	No	Si
SLU 49	3.17	2646.86	-36745	-0.0000229	0.0004492	0.0035	7.915	127002.39	139775.77	139775.77	52.81	No	Si
SLU 50	1.07	3300.84	-49078	-0.0000307	0.0004492	0.0035	7.915	161371.2	179892.18	179892.18	54.5	No	Si
SLU 50	3.17	2646.86	-36745	-0.0000229	0.0004492	0.0035	7.915	127002.39	139775.77	139775.77	52.81	No	Si
SLU 48	1.07	3300.84	-49078	-0.0000307	0.0004492	0.0035	7.915	161371.2	179892.18	179892.18	54.5	No	Si
SLU 48	3.17	2646.86	-36745	-0.0000229	0.0004492	0.0035	7.915	127002.39	139775.77	139775.77	52.81	No	Si
SLU 51	1.07	3300.84	-49078	-0.0000307	0.0004492	0.0035	7.915	161371.2	179892.18	179892.18	54.5	No	Si
SLU 51	3.17	2646.86	-36745	-0.0000229	0.0004492	0.0035	7.915	127002.39	139775.77	139775.77	52.81	No	Si
SLU 44	1.07	3300.84	-49078	-0.0000307	0.0004492	0.0035	7.915	161371.2	179892.18	179892.18	54.5	No	Si
SLU 44	3.17	2646.86	-36745	-0.0000229	0.0004492	0.0035	7.915	127002.39	139775.77	139775.77	52.81	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRMC in combinazioni sismiche, $\gamma_M = 2$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	1.07	24798.45	-45246	-0.0000378	0.0006738	0.0035	7.915		171986.73	171986.73	6.94		Si
SLV 1	3.17	-7106.16	-36315	-0.0000244	0.0006738	0.0035	7.915		171554.7	171554.7	24.14		Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 14	1.07	-19664.5	-44479	-0.000035	0.0006738	0.0035	7.915		199927.67	199927.67	10.17		Si
SLV 14	3.17	11410.97	-35623	-0.000026	0.0006738	0.0035	7.915		138519.48	138519.48	12.14		Si
SLV 7	1.07	10171.29	-45034	-0.000031	0.0006738	0.0035	7.915		171252.53	171252.53	16.84		Si
SLV 7	3.17	-371.58	-35955	-0.0000212	0.0006738	0.0035	7.915		170296.75	170296.75	458.31		Si
SLV 16	1.07	-19034.74	-44504	-0.0000348	0.0006738	0.0035	7.915		200011.8	200011.8	10.51		Si
SLV 16	3.17	11415.64	-35568	-0.0000259	0.0006738	0.0035	7.915		138325.9	138325.9	12.12		Si
SLV 13	1.07	-20828.3	-44482	-0.0000356	0.0006738	0.0035	7.915		199937.19	199937.19	9.6		Si
SLV 13	3.17	12070.5	-35629	-0.0000263	0.0006738	0.0035	7.915		138541.56	138541.56	11.48		Si
SLV 4	1.07	26592.01	-45269	-0.0000387	0.0006738	0.0035	7.915		172064.07	172064.07	6.47		Si
SLV 4	3.17	-7761.02	-36253	-0.0000247	0.0006738	0.0035	7.915		171339.59	171339.59	22.08		Si
SLV 2	1.07	25962.25	-45243	-0.0000384	0.0006738	0.0035	7.915		171976.86	171976.86	6.62		Si
SLV 2	3.17	-7765.7	-36309	-0.0000247	0.0006738	0.0035	7.915		171532.68	171532.68	22.09		Si
SLV 8	1.07	11379.63	-45031	-0.0000316	0.0006738	0.0035	7.915		171242.28	171242.28	15.05		Si
SLV 8	3.17	-1056.36	-35949	-0.0000215	0.0006738	0.0035	7.915		170273.89	170273.89	161.19		Si
SLV 15	1.07	-20198.54	-44507	-0.0000353	0.0006738	0.0035	7.915		200021.32	200021.32	9.9		Si
SLV 15	3.17	12075.18	-35574	-0.0000262	0.0006738	0.0035	7.915		138347.98	138347.98	11.46		Si
SLV 3	1.07	25428.2	-45272	-0.0000381	0.0006738	0.0035	7.915		172073.94	172073.94	6.77		Si
SLV 3	3.17	-7101.49	-36260	-0.0000244	0.0006738	0.0035	7.915		171361.61	171361.61	24.13		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 83	1.07	4344.62	-73112	-53173	656	7.915	7.915	-22393	10833	25724	129139	85334	40367	125700	No	191.72	Si
SLU 83	3.17	2962.9	-62890	-45738	656	7.915	7.915	-19262	10833	25724	129139	85334	40367	125700	No	191.73	Si
SLU 82	1.07	4344.62	-73112	-53173	656	7.915	7.915	-22393	10833	25724	129139	85334	40367	125700	No	191.72	Si
SLU 82	3.17	2962.9	-62890	-45738	656	7.915	7.915	-19262	10833	25724	129139	85334	40367	125700	No	191.73	Si
SLU 42	1.07	3684.01	-63535	-46207	612	7.915	7.915	-19460	10833	25724	129139	85334	40367	125700	No	205.41	Si
SLU 42	3.17	2393.96	-56257	-40914	612	7.915	7.915	-17231	10631	25243	129139	85334	40367	125700	No	205.42	Si
SLU 75	1.07	4146.51	-67891	-49375	584	7.915	7.915	-20794	10833	25724	129139	85334	40367	125700	No	215.15	Si
SLU 75	3.17	2915.72	-57147	-41562	584	7.915	7.915	-17503	10667	25329	129139	85334	40367	125700	No	215.17	Si
SLU 77	1.07	4146.51	-67891	-49375	584	7.915	7.915	-20794	10833	25724	129139	85334	40367	125700	No	215.15	Si
SLU 77	3.17	2915.72	-57147	-41562	584	7.915	7.915	-17503	10667	25329	129139	85334	40367	125700	No	215.17	Si
SLU 40	1.07	3684.01	-63535	-46207	612	7.915	7.915	-19460	10833	25724	129139	85334	40367	125700	No	205.41	Si
SLU 40	3.17	2393.96	-56257	-40914	612	7.915	7.915	-17231	10631	25243	129139	85334	40367	125700	No	205.42	Si
SLU 81	1.07	4344.62	-73112	-53173	656	7.915	7.915	-22393	10833	25724	129139	85334	40367	125700	No	191.72	Si
SLU 81	3.17	2962.9	-62890	-45738	656	7.915	7.915	-19262	10833	25724	129139	85334	40367	125700	No	191.73	Si
SLU 84	1.07	4344.62	-73112	-53173	656	7.915	7.915	-22393	10833	25724	129139	85334	40367	125700	No	191.72	Si
SLU 84	3.17	2962.9	-62890	-45738	656	7.915	7.915	-19262	10833	25724	129139	85334	40367	125700	No	191.73	Si
SLU 39	1.07	3684.01	-63535	-46207	612	7.915	7.915	-19460	10833	25724	129139	85334	40367	125700	No	205.41	Si
SLU 39	3.17	2393.96	-56257	-40914	612	7.915	7.915	-17231	10631	25243	129139	85334	40367	125700	No	205.42	Si
SLU 41	1.07	3684.01	-63535	-46207	612	7.915	7.915	-19460	10833	25724	129139	85334	40367	125700	No	205.41	Si
SLU 41	3.17	2393.96	-56257	-40914	612	7.915	7.915	-17231	10631	25243	129139	85334	40367	125700	No	205.42	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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 14	1.07	-19664.5	-44479	-32348	-15773	7.915	7.915	-13623	15225	36151	129139	128000	40367	165290		10.48	Si
SLV 14	3.17	11410.97	-35623	-25907	-13254	7.915	7.915	-10911	14682	34863	129139	128000	40367	164002		12.37	Si
SLV 15	1.07	-20198.54	-44507	-32369	-16331	7.915	7.915	-13632	15226	36155	129139	128000	40367	165294		10.12	Si
SLV 15	3.17	12075.18	-35574	-25872	-13861	7.915	7.915	-10896	14679	34856	129139	128000	40367	163995		11.83	Si
SLV 9	1.07	-5615.92	-44720	-32524	-5541	7.915	7.915	-13697	15239	36186	129139	128000	40367	165325		29.84	Si
SLV 9	3.17	5365.84	-35934	-26134	-4711	7.915	7.915	-11006	14701	34908	129139	128000	40367	164047		34.82	Si
SLV 16	1.07	-19034.74	-44504	-32367	-15463	7.915	7.915	-13631	15226	36155	129139	128000	40367	165294		10.69	Si
SLV 16	3.17	11415.64	-35568	-25867	-12993	7.915	7.915	-10894	14679	34855	129139	128000	40367	163994		12.62	Si
SLV 2	1.07	25962.25	-45243	-32904	17022	7.915	7.915	-13857	15271	36262	129139	128000	40367	165401		9.72	Si
SLV 2	3.17	-7765.7	-36309	-26406	14552	7.915	7.915	-11121	14724	34963	129139	128000	40367	164102		11.28	Si
SLV 4	1.07	26592.01	-45269	-32923	17332	7.915	7.915	-13865	15273	36266	129139	128000	40367	165405		9.54	Si
SLV 4	3.17	-7761.02	-36253	-26366	14813	7.915	7.915	-11104	14721	34954	129139	128000	40367	164094		11.08	Si
SLV 1	1.07	24798.45	-45246	-32906	16154	7.915	7.915	-13858	15272	36263	129139	128000	40367	165402		10.24	Si
SLV 1	3.17	-7106.16	-36315	-26411	13684	7.915	7.915	-11123	14725	34963	129139	128000	40367	164103		11.99	Si
SLV 8	1.07	11379.63	-45031	-32750	6232	7.915	7.915	-13792	15258	36231	129139	128000	40367	165370		26.54	Si
SLV 8	3.17	-1056.36	-35949	-26145	5401	7.915	7.915	-11011	14702	34910	129139	128000	40367	164049		30.37	Si
SLV 3	1.07	25428.2	-45272	-32925	16464	7.915	7.915	-13866	15273	36266	129139	128000	40367	165405		10.05	Si
SLV 3	3.17	-7101.49	-36260	-26371	13944	7.915	7.915	-11106	14721	34955	129139	128000	40367	164095		11.77	Si
SLV 13	1.07	-20828.3	-44482	-32351	-16641	7.915	7.915	-13624	15225	36151	129139	128000	40367	165291		9.93	Si
SLV 13	3.17	12070.5	-35629	-25912	-14122	7.915	7.915	-10913	14683	34864	129139	128000	40367	164003		11.61	Si

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

quota 3.03 Ta 0.09 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 16	-35662	0.47	1355.62	4910.99	6896.1	5903.54	4.35	Si
SLV 15	-35669	0.47	1355.62	4911.78	6897.11	5904.44	4.36	Si
SLV 14	-35730	0.47	1355.62	4919.43	6906.91	5913.17	4.36	Si
SLV 13	-35736	0.47	1355.62	4920.22	6907.92	5914.07	4.36	Si
SLV 12	-35803	0.47	1355.62	4928.64	6918.71	5923.67	4.37	Si
SLV 11	-35810	0.47	1355.62	4929.46	6919.76	5924.61	4.37	Si
SLV 8	-35991	0.47	1355.62	4952.2	6948.91	5950.56	4.39	Si
SLV 7	-35998	0.47	1355.62	4953.02	6949.96	5951.49	4.39	Si
SLV 10	-36027	0.47	1355.62	4956.75	6954.74	5955.74	4.39	Si
SLV 9	-36034	0.47	1355.62	4957.57	6955.79	5956.68	4.39	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzeria = 3.03 Wa = 0.05 Ta = 0.0855

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-17628	-45246	-433	1.744	3159.8	0.902	28.10646	16.97787	Si
SLV 2	-17627	-45243	-433	1.744	3159.7	0.902	28.1071	16.97787	Si
SLV 15	-17564	-44507	433	1.748	3153.5	0.901	28.17804	16.97787	Si
SLV 16	-17563	-44504	433	1.748	3153.5	0.901	28.17869	16.97787	Si
SLV 3	-17632	-45272	295	1.749	3160.2	0.902	28.18773	16.97787	Si



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 4	-17631	-45269	295	1.749	3160.1	0.902	28.18838	16.97787	Si
SLV 13	-17560	-44482	-295	1.753	3153.1	0.901	28.26838	16.97787	Si
SLV 14	-17559	-44479	-295	1.753	3153.1	0.901	28.26903	16.97787	Si
SLV 5	-17599	-44949	-1234	1.715	3157	0.902	27.6413	11.37117	Si
SLV 6	-17599	-44946	-1234	1.715	3156.9	0.902	27.64196	11.37117	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	52.808	SLU 43	Si
V_SLU	191.717	SLU 81	Si
PF_SLV	6.471	SLV 4	Si
V_SLV	9.543	SLV 4	Si
PFFP_SLV	4.355	SLV 16	Si
R_SLV	1.655	SLV 1	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
-7.101	-8.718	-9.428	-8.718	L2	L3	2.327	0.3	3.92	3.92	3.92			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	$\tau 0$	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	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,conv	e,f,d	y,F,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, $\gamma M = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	em	em_	emu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLU 82	2.07	-838.47	-8097	-0.0000223	0.0003743	0.0035	2.327	8347.74	10146.34	10146.34	12.1	No	Si
SLU 82	3.97	-1259.16	-7377	-0.0000231	0.0003743	0.0035	2.327	7692.56	9446.41	9446.41	7.5	No	Si
SLU 39	2.07	-685.53	-7123	-0.0000192	0.0003743	0.0035	2.327	7457.31	9189.44	9189.44	13.4	No	Si
SLU 39	3.97	-1302.5	-7001	-0.0000224	0.0003743	0.0035	2.327	7343.48	9066.43	9066.43	6.96	No	Si
SLU 40	2.07	-685.53	-7123	-0.0000192	0.0003743	0.0035	2.327	7457.31	9189.44	9189.44	13.4	No	Si
SLU 40	3.97	-1302.5	-7001	-0.0000224	0.0003743	0.0035	2.327	7343.48	9066.43	9066.43	6.96	No	Si
SLU 83	2.07	-838.47	-8097	-0.0000223	0.0003743	0.0035	2.327	8347.74	10146.34	10146.34	12.1	No	Si
SLU 83	3.97	-1259.16	-7377	-0.0000231	0.0003743	0.0035	2.327	7692.56	9446.41	9446.41	7.5	No	Si
SLU 84	2.07	-838.47	-8097	-0.0000223	0.0003743	0.0035	2.327	8347.74	10146.34	10146.34	12.1	No	Si
SLU 84	3.97	-1259.16	-7377	-0.0000223	0.0003743	0.0035	2.327	7692.56	9446.41	9446.41	7.5	No	Si
SLU 32	2.07	-641.03	-6461	-0.0000175	0.0003743	0.0035	2.327	6833.59	8525.67	8525.67	13.3	No	Si
SLU 32	3.97	-1048.57	-6010	-0.0000188	0.0003743	0.0035	2.327	6401.51	8078.17	8078.17	7.7	No	Si
SLU 81	2.07	-838.47	-8097	-0.0000223	0.0003743	0.0035	2.327	8347.74	10146.34	10146.34	12.1	No	Si
SLU 81	3.97	-1259.16	-7377	-0.0000231	0.0003743	0.0035	2.327	7692.56	9446.41	9446.41	7.5	No	Si
SLU 42	2.07	-685.53	-7123	-0.0000192	0.0003743	0.0035	2.327	7457.31	9189.44	9189.44	13.4	No	Si
SLU 42	3.97	-1302.5	-7001	-0.0000224	0.0003743	0.0035	2.327	7343.48	9066.43	9066.43	6.96	No	Si
SLU 38	2.07	-641.03	-6461	-0.0000175	0.0003743	0.0035	2.327	6833.59	8525.67	8525.67	13.3	No	Si
SLU 38	3.97	-1048.57	-6010	-0.0000188	0.0003743	0.0035	2.327	6401.51	8078.17	8078.17	7.7	No	Si
SLU 41	2.07	-685.53	-7123	-0.0000192	0.0003743	0.0035	2.327	7457.31	9189.44	9189.44	13.4	No	Si
SLU 41	3.97	-1302.5	-7001	-0.0000224	0.0003743	0.0035	2.327	7343.48	9066.43	9066.43	6.96	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, $\gamma M = 2$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	em	em_	emu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 10	2.07	1172.39	-3223	-0.0000133	0.0005615	0.0035	2.327		3926	3926	3.35		Si
SLV 10	3.97	-628.54	-3888	-0.0000117	0.0005615	0.0035	2.327		5918.53	5918.53	9.42		Si
SLV 9	2.07	1608.94	-2771	-0.0000157	0.0005615	0.0035	2.327		3426.23	3426.23	2.13		Si
SLV 9	3.97	-1008.97	-4143	-0.0000144	0.0005615	0.0035	2.327		6197.5	6197.5	6.14		Si
SLV 5	2.07	2282.29	-2628	-0.0000297	0.0005615	0.0035	2.327		3267.72	3267.72	1.43		Si
SLV 5	3.97	-1800.28	-4783	-0.0000201	0.0005615	0.0035	2.327		6888.17	6888.17	3.83		Si
SLV 1	2.07	1460.27	-3782	-0.0000161	0.0005615	0.0035	2.327		4543.09	4543.09	3.11		Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 1	3.97	-2163.99	-4971	-0.0000226	0.0005615	0.0035	2.327		7089.23	7089.23	3.28		Si
SLV 11	2.07	-2961.19	-6520	-0.0000307	0.0005615	0.0035	2.327		8721.32	8721.32	2.95		Si
SLV 11	3.97	569.51	-2560	-0.000085	0.0005615	0.0035	2.327		3190.75	3190.75	5.6		Si
SLV 16	2.07	-2575.72	-5818	-0.0000268	0.0005615	0.0035	2.327		7980.49	7980.49	3.1		Si
SLV 16	3.97	1313.65	-2117	-0.0000128	0.0005615	0.0035	2.327		2692.99	2692.99	2.05		Si
SLV 8	2.07	-2724.39	-6829	-0.0000298	0.0005615	0.0035	2.327		9049.74	9049.74	3.32		Si
SLV 8	3.97	158.63	-2945	-0.0000071	0.0005615	0.0035	2.327		3618.13	3618.13	22.81		Si
SLV 15	2.07	-2155.26	-5382	-0.0000234	0.0005615	0.0035	2.327		7523.65	7523.65	3.49		Si
SLV 15	3.97	947.24	-2363	-0.0000102	0.0005615	0.0035	2.327		2969.09	2969.09	3.13		Si
SLV 12	2.07	-3397.74	-6972	-0.0000345	0.0005615	0.0035	2.327		9201.32	9201.32	2.71		Si
SLV 12	3.97	949.94	-2305	-0.0000101	0.0005615	0.0035	2.327		2903.8	2903.8	3.06		Si
SLV 6	2.07	1845.74	-3081	-0.000018	0.0005615	0.0035	2.327		3768.45	3768.45	2.04		Si
SLV 6	3.97	-1419.85	-4528	-0.0000175	0.0005615	0.0035	2.327		6613.9	6613.9	4.66		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 82	2.07	-838.47	-8097	-6819	1768	2.327	2.327	-9768	8247	5757	45199	20904	5934	26838	No	15.18	Si
SLU 82	3.97	-1259.16	-7377	-6213	1769	2.327	2.327	-8899	8131	5676	45199	20904	5934	26838	No	15.17	Si
SLU 39	2.07	-685.53	-7123	-5999	1796	2.327	2.327	-8593	8090	5648	45199	20904	5934	26838	No	14.94	Si
SLU 39	3.97	-1302.5	-7001	-5896	1797	2.327	2.327	-8446	8071	5634	45199	20904	5934	26838	No	14.94	Si
SLU 42	2.07	-685.53	-7123	-5999	1796	2.327	2.327	-8593	8090	5648	45199	20904	5934	26838	No	14.94	Si
SLU 42	3.97	-1302.5	-7001	-5896	1797	2.327	2.327	-8446	8071	5634	45199	20904	5934	26838	No	14.94	Si
SLU 41	2.07	-685.53	-7123	-5999	1796	2.327	2.327	-8593	8090	5648	45199	20904	5934	26838	No	14.94	Si
SLU 41	3.97	-1302.5	-7001	-5896	1797	2.327	2.327	-8446	8071	5634	45199	20904	5934	26838	No	14.94	Si
SLU 40	2.07	-685.53	-7123	-5999	1796	2.327	2.327	-8593	8090	5648	45199	20904	5934	26838	No	14.94	Si
SLU 40	3.97	-1302.5	-7001	-5896	1797	2.327	2.327	-8446	8071	5634	45199	20904	5934	26838	No	14.94	Si
SLU 38	2.07	-641.03	-6461	-5441	1485	2.327	2.327	-7793	7984	5573	45199	20904	5934	26838	No	18.07	Si
SLU 38	3.97	-1048.57	-6010	-5061	1486	2.327	2.327	-7250	7911	5523	45199	20904	5934	26838	No	18.06	Si
SLU 81	2.07	-838.47	-8097	-6819	1768	2.327	2.327	-9768	8247	5757	45199	20904	5934	26838	No	15.18	Si
SLU 81	3.97	-1259.16	-7377	-6213	1769	2.327	2.327	-8899	8131	5676	45199	20904	5934	26838	No	15.17	Si
SLU 37	2.07	-641.03	-6461	-5441	1485	2.327	2.327	-7793	7984	5573	45199	20904	5934	26838	No	18.07	Si
SLU 37	3.97	-1048.57	-6010	-5061	1486	2.327	2.327	-7250	7911	5523	45199	20904	5934	26838	No	18.06	Si
SLU 84	2.07	-838.47	-8097	-6819	1768	2.327	2.327	-9768	8247	5757	45199	20904	5934	26838	No	15.18	Si
SLU 84	3.97	-1259.16	-7377	-6213	1769	2.327	2.327	-8899	8131	5676	45199	20904	5934	26838	No	15.17	Si
SLU 83	2.07	-838.47	-8097	-6819	1768	2.327	2.327	-9768	8247	5757	45199	20904	5934	26838	No	15.18	Si
SLU 83	3.97	-1259.16	-7377	-6213	1769	2.327	2.327	-8899	8131	5676	45199	20904	5934	26838	No	15.17	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	2.07	2282.29	-2628	-2213	5036	2.327	0.8856	-3171	11051	2936	45199	31356	5934	37290		7.4	Si
SLV 5	3.97	-1800.28	-4783	-4028	4873	2.327	2.327	-5770	11571	8077	45199	31356	5934	37290		7.65	Si
SLV 11	2.07	-2961.19	-6520	-2809	-2809	2.327	2.1279	-8629	12143	7751	45199	31356	5934	37290		13.28	Si
SLV 11	3.97	569.51	-2560	-2156	-2645	2.327	2.327	-3088	11034	7703	45199	31356	5934	37290		14.1	Si
SLV 12	2.07	-3397.74	-6972	-5871	-3672	2.327	2.0284	-9691	12355	7518	45199	31356	5934	37290		10.16	Si
SLV 12	3.97	949.94	-2305	-1941	-3508	2.327	2.254	-2780	10973	7420	45199	31356	5934	37290		10.63	Si
SLV 10	2.07	1172.39	-3223	-2714	2603	2.327	2.327	-3888	11194	7815	45199	31356	5934	37290		14.33	Si
SLV 10	3.97	-628.54	-3888	-3274	3074	2.327	2.327	-4690	11355	7927	45199	31356	5934	37290		12.13	Si
SLV 6	2.07	1845.74	-3081	-2594	4173	2.327	1.693	-3716	11160	5668	45199	31356	5934	37290		8.94	Si
SLV 6	3.97	-1419.85	-4528	-3813	4010	2.327	2.327	-5462	11509	8034	45199	31356	5934	37290		9.3	Si
SLV 3	2.07	89.23	-4907	-4132	2774	2.327	2.327	-5919	11601	8098	45199	31356	5934	37290		13.44	Si
SLV 3	3.97	-1690.44	-4496	-3786	1671	2.327	2.327	-5423	11501	8029	45199	31356	5934	37290		22.32	Si
SLV 16	2.07	-2575.72	-5818	-4899	-3292	2.327	2.1623	-7576	11932	7740	45199	31356	5934	37290		11.33	Si
SLV 16	3.97	1313.65	-2117	-1783	-2281	2.327	1.6288	-2554	10927	5340	45199	31356	5934	37290		16.35	Si
SLV 2	2.07	1039.81	-4218	-3552	3826	2.327	2.327	-5088	11434	7982	45199	31356	5934	37290		9.75	Si
SLV 2	3.97	-1797.58	-4725	-3979	2815	2.327	2.327	-5699	11557	8068	45199	31356	5934	37290		13.25	Si
SLV 1	2.07	1460.27	-3782	-3185	4657	2.327	2.327	-4563	11329	7909	45199	31356	5934	37290		8.01	Si
SLV 1	3.97	-2163.99	-4971	-4186	3646	2.327	2.1844	-6404	11698	7666	45199	31356	5934	37290		10.23	Si
SLV 9	2.07	1608.94	-2771	-2334	3465	2.327	1.7486	-3343	11085	5815	45199	31356	5934	37290		10.76	Si
SLV 9	3.97	-1008.97	-4143	-3489	3937	2.327	2.327	-4998	11416	7970	45199	31356	5934	37290		9.47	Si

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

quota 3.03 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 13	179667	0.47	4798	-3349	388.81	486.62	1.25	Si
SLV 14	179667	0.47	4828	-3370	388.81	489.56	1.26	Si
SLV 15	179667	0.47	4966	-3467	388.81	503.14	1.29	Si
SLV 16	179667	0.47	4996	-3488	388.81	506.07	1.3	Si
SLV 9	179667	0.47	5231	-3651	388.81	528.95	1.36	Si
SLV 10	179667	0.47	5262	-3673	388.81	531.99	1.37	Si
SLV 5	179667	0.47	5770	-4028	388.81	581.42	1.5	Si
SLV 11	179667	0.47	5792	-4044	388.81	583.54	1.5	Si
SLV 6	179667	0.47	5802	-4050	388.81	584.43	1.5	Si
SLV 12	179667	0.47	5824	-4065	388.81	586.55	1.51	Si

Per la verifica della tabella precedente non è 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 mezzera = 3.03 Wa = 0.05 Ta = 0.0855

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 1	-2603	-5639	-158	2.606	682.3	0.889	42.59909	16.97787	Si
SLV 2	-2574	-5920	-158	2.621	679.6	0.889	42.84411	16.97787	Si
SLV 3	-2538	-6493	-36	2.664	676.3	0.889	43.54898	16.97787	Si



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 4	-2508	-6774	-37	2.679	673.6	0.889	43.80215	16.97787	Si
SLV 13	-2313	-4251	38	2.787	656	0.889	45.56184	16.97787	Si
SLV 15	-2247	-5104	159	2.799	650.1	0.889	45.75972	16.97787	Si
SLV 14	-2283	-4532	38	2.804	653.3	0.889	45.83793	16.97787	Si
SLV 16	-2218	-5385	159	2.817	647.5	0.889	46.0399	16.97787	Si
SLV 5	-2579	-4152	-231	2.604	680	0.889	42.56827	11.37117	Si
SLV 6	-2548	-4444	-231	2.619	677.2	0.889	42.82351	11.37117	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	6.961	SLU 39	Si
V_SLU	14.936	SLU 39	Si
PF_SLV	1.432	SLV 5	Si
V_SLV	7.404	SLV 5	Si
PFFP_SLV	1.252	SLV 13	Si
R_SLV	2.509	SLV 1	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
-1.141	-8.718	-6.101	-8.718	L2	L3	4.96	0.3	3.92	3.92	3.92			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	t0	fv0	μ	ϕ	fv,lim	E	G	FC
600000			431200	11200	25000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRMC

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,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	elim,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 FRMC in combinazioni non sismiche, $\gamma_{\text{M}} = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_{m}	ϵ_{m_-}	ϵ_{m_+}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 46	2.07	-32.19	-7018	-0.0000071	0.0003743	0.0035	4.96	16598.13	23926.53	23926.53	743.36	No	Si
SLU 46	3.97	285.33	-7434	-0.0000078	0.0003743	0.0035	4.96	17530.66	18897.87	18897.87	66.23	No	Si
SLU 45	2.07	-32.19	-7018	-0.0000071	0.0003743	0.0035	4.96	16598.13	23926.53	23926.53	743.36	No	Si
SLU 45	3.97	285.33	-7434	-0.0000078	0.0003743	0.0035	4.96	17530.66	18897.87	18897.87	66.23	No	Si
SLU 43	2.07	-32.19	-7018	-0.0000071	0.0003743	0.0035	4.96	16598.13	23926.53	23926.53	743.36	No	Si
SLU 43	3.97	285.33	-7434	-0.0000078	0.0003743	0.0035	4.96	17530.66	18897.87	18897.87	66.23	No	Si
SLU 48	2.07	-32.19	-7018	-0.0000071	0.0003743	0.0035	4.96	16598.13	23926.53	23926.53	743.36	No	Si
SLU 48	3.97	285.33	-7434	-0.0000078	0.0003743	0.0035	4.96	17530.66	18897.87	18897.87	66.23	No	Si
SLU 49	2.07	-32.19	-7018	-0.0000071	0.0003743	0.0035	4.96	16598.13	23926.53	23926.53	743.36	No	Si
SLU 49	3.97	285.33	-7434	-0.0000078	0.0003743	0.0035	4.96	17530.66	18897.87	18897.87	66.23	No	Si
SLU 44	2.07	-32.19	-7018	-0.0000071	0.0003743	0.0035	4.96	16598.13	23926.53	23926.53	743.36	No	Si
SLU 44	3.97	285.33	-7434	-0.0000078	0.0003743	0.0035	4.96	17530.66	18897.87	18897.87	66.23	No	Si
SLU 1	2.07	-26.32	-5885	-0.0000059	0.0003743	0.0035	4.96	14027.76	21335.6	21335.6	810.56	No	Si
SLU 1	3.97	226.65	-6388	-0.0000067	0.0003743	0.0035	4.96	15174.17	16480.35	16480.35	72.71	No	Si
SLU 47	2.07	-32.19	-7018	-0.0000071	0.0003743	0.0035	4.96	16598.13	23926.53	23926.53	743.36	No	Si
SLU 47	3.97	285.33	-7434	-0.0000078	0.0003743	0.0035	4.96	17530.66	18897.87	18897.87	66.23	No	Si
SLU 50	2.07	-32.19	-7018	-0.0000071	0.0003743	0.0035	4.96	16598.13	23926.53	23926.53	743.36	No	Si
SLU 50	3.97	285.33	-7434	-0.0000078	0.0003743	0.0035	4.96	17530.66	18897.87	18897.87	66.23	No	Si
SLU 51	2.07	-32.19	-7018	-0.0000071	0.0003743	0.0035	4.96	16598.13	23926.53	23926.53	743.36	No	Si
SLU 51	3.97	285.33	-7434	-0.0000078	0.0003743	0.0035	4.96	17530.66	18897.87	18897.87	66.23	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRMC in combinazioni sismiche, $\gamma_{\text{M}} = 2$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_{m}	ϵ_{m_-}	ϵ_{m_+}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 2	2.07	6610.18	-5805	-0.0000143	0.0005615	0.0035	4.96		15256.97	15256.97	2.31		Si
SLV 2	3.97	-2891.95	-7392	-0.0000109	0.0005615	0.0035	4.96		24995.61	24995.61	8.64		Si
SLV 15	2.07	-6674.8	-9254	-0.0000173	0.0005615	0.0035	4.96		29327.38	29327.38	4.39		Si
SLV 15	3.97	3379.38	-9791	-0.0000139	0.0005615	0.0035	4.96		24596.53	24596.53	7.28		Si
SLV 10	2.07	-3618.38	-1989	-0.0000098	0.0005615	0.0035	3.968		12190.04	12190.04	3.37		Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 10	3.97	2117.64	-4460	-0.000007	0.0005615	0.0035	4.96		12039.95	12039.95	5.69		Si
SLV 3	2.07	8573.91	-9137	-0.000196	0.0005615	0.0035	4.96		23076.18	23076.18	2.69		Si
SLV 3	3.97	-4314.87	-9859	-0.000151	0.0005615	0.0035	4.96		30719.94	30719.94	7.12		Si
SLV 5	2.07	2742.38	-1948	-0.0000059	0.0005615	0.0035	4.96		5988.6	5988.6	2.18		Si
SLV 5	3.97	-1685.13	-4471	-0.000065	0.0005615	0.0035	4.96		18119.15	18119.15	10.75		Si
SLV 1	2.07	8330.49	-5800	-0.000184	0.0005615	0.0035	4.96		15244.88	15244.88	1.83		Si
SLV 1	3.97	-4331.35	-7383	-0.000126	0.0005615	0.0035	4.96		24975.56	24975.56	5.77		Si
SLV 16	2.07	-8395.11	-9259	-0.000195	0.0005615	0.0035	4.96		29339.06	29339.06	3.49		Si
SLV 16	3.97	4818.78	-9800	-0.000156	0.0005615	0.0035	4.96		24616.31	24616.31	5.11		Si
SLV 13	2.07	-6918.21	-5917	-0.000149	0.0005615	0.0035	4.96		21539.16	21539.16	3.11		Si
SLV 13	3.97	3362.91	-7316	-0.000113	0.0005615	0.0035	4.96		18821.01	18821.01	5.6		Si
SLV 4	2.07	6853.6	-9142	-0.000174	0.0005615	0.0035	4.96		23088.02	23088.02	3.37		Si
SLV 4	3.97	-2875.47	-9868	-0.000133	0.0005615	0.0035	4.96		30739.7	30739.7	10.69		Si
SLV 14	2.07	-8638.52	-5922	-0.000192	0.0005615	0.0035	3.968		21551.06	21551.06	2.49		Si
SLV 14	3.97	4802.31	-7324	-0.000131	0.0005615	0.0035	4.96		18841.31	18841.31	3.92		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 38	2.07	-47.27	-11642	-9803	7	4.96	4.96	-6588	7823	11640	45199	44557	12648	56839	No	8186.8	Si
SLU 38	3.97	286.39	-14101	-11874	7	4.96	4.96	-7980	8008	11917	45199	44557	12648	57115	No	8270.17	Si
SLU 82	2.07	-59.58	-14451	-12169	7	4.96	4.96	-8178	8035	11956	45199	44557	12648	57155	No	7750.05	Si
SLU 82	3.97	359.04	-17363	-14622	7	4.96	4.96	-9827	8255	12283	45199	44557	12648	57205	No	7805.56	Si
SLU 37	2.07	-47.27	-11642	-9803	7	4.96	4.96	-6588	7823	11640	45199	44557	12648	56839	No	8186.8	Si
SLU 37	3.97	286.39	-14101	-11874	7	4.96	4.96	-7980	8008	11917	45199	44557	12648	57115	No	8270.17	Si
SLU 40	2.07	-53.71	-13318	-11215	10	4.96	4.96	-7537	7949	11829	45199	44557	12648	57027	No	5777.22	Si
SLU 40	3.97	300.36	-16318	-13741	10	4.96	4.96	-9235	8176	12166	45199	44557	12648	57205	No	5818	Si
SLU 42	2.07	-53.71	-13318	-11215	10	4.96	4.96	-7537	7949	11829	45199	44557	12648	57027	No	5777.22	Si
SLU 42	3.97	300.36	-16318	-13741	10	4.96	4.96	-9235	8176	12166	45199	44557	12648	57205	No	5818	Si
SLU 81	2.07	-59.58	-14451	-12169	7	4.96	4.96	-8178	8035	11956	45199	44557	12648	57155	No	7750.05	Si
SLU 81	3.97	359.04	-17363	-14622	7	4.96	4.96	-9827	8255	12283	45199	44557	12648	57205	No	7805.56	Si
SLU 39	2.07	-53.71	-13318	-11215	10	4.96	4.96	-7537	7949	11829	45199	44557	12648	57027	No	5777.22	Si
SLU 39	3.97	300.36	-16318	-13741	10	4.96	4.96	-9235	8176	12166	45199	44557	12648	57205	No	5818	Si
SLU 41	2.07	-53.71	-13318	-11215	10	4.96	4.96	-7537	7949	11829	45199	44557	12648	57027	No	5777.22	Si
SLU 41	3.97	300.36	-16318	-13741	10	4.96	4.96	-9235	8176	12166	45199	44557	12648	57205	No	5818	Si
SLU 83	2.07	-59.58	-14451	-12169	7	4.96	4.96	-8178	8035	11956	45199	44557	12648	57155	No	7750.05	Si
SLU 83	3.97	359.04	-17363	-14622	7	4.96	4.96	-9827	8255	12283	45199	44557	12648	57205	No	7805.56	Si
SLU 84	2.07	-59.58	-14451	-12169	7	4.96	4.96	-8178	8035	11956	45199	44557	12648	57155	No	7750.05	Si
SLU 84	3.97	359.04	-17363	-14622	7	4.96	4.96	-9827	8255	12283	45199	44557	12648	57205	No	7805.56	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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 4	2.07	6853.6	-9142	-7699	6028	4.96	4.96	-5174	11451	17040	45199	66836	12648	62238		10.33	Si
SLV 4	3.97	-2875.47	-9868	-8310	4367	4.96	4.96	-5584	11534	17162	45199	66836	12648	62361		14.28	Si
SLV 3	2.07	8573.91	-9137	-7694	7691	4.96	4.6249	-5171	11451	15888	45199	66836	12648	61086		7.94	Si
SLV 3	3.97	-4314.87	-9859	-8302	6030	4.96	4.96	-5580	11533	17160	45199	66836	12648	62359		10.34	Si
SLV 13	2.07	-6918.21	-5917	-4983	-6029	4.96	3.9326	-4230	11263	13288	45199	66836	12648	58486		9.7	Si
SLV 13	3.97	3362.91	-7316	-6161	-4369	4.96	4.96	-4140	11245	16732	45199	66836	12648	61931		14.18	Si
SLV 16	2.07	-8395.11	-9259	-7797	-7625	4.96	4.7199	-5519	11520	16313	45199	66836	12648	61512		8.07	Si
SLV 16	3.97	4818.78	-9800	-8253	-5950	4.96	4.96	-5546	11526	17150	45199	66836	12648	62349		10.48	Si
SLV 14	2.07	-8638.52	-5922	-4987	-7692	3.968	3.0642	0	0	0	45199	53469	10118	45199		5.88	Si
SLV 14	3.97	4802.31	-7324	-6168	-6031	4.96	4.96	-4145	11246	16734	45199	66836	12648	61932		10.27	Si
SLV 15	2.07	-6674.8	-9254	-7793	-5963	4.96	4.96	-5237	11464	17059	45199	66836	12648	62257		10.44	Si
SLV 15	3.97	3379.38	-9791	-8245	-4287	4.96	4.96	-5541	11525	17149	45199	66836	12648	62348		14.54	Si
SLV 10	2.07	-3618.38	-1989	-1675	-3023	3.968	1.982	0	0	0	45199	53469	10118	45199		14.95	Si
SLV 10	3.97	2117.64	-4460	-3756	-2548	4.96	4.96	-2524	10921	16251	45199	66836	12648	61450		24.12	Si
SLV 5	2.07	2742.38	-1948	-1641	2800	4.96	3.2176	-1103	10637	10268	45199	66836	12648	55466		19.81	Si
SLV 5	3.97	-1685.13	-4471	-3765	2274	4.96	4.96	-2530	10923	16253	45199	66836	12648	61452		27.02	Si
SLV 1	2.07	8330.49	-5800	-4884	7624	4.96	3.1313	-3283	11073	10402	45199	66836	12648	55601		7.29	Si
SLV 1	3.97	-4331.35	-7383	-6218	5948	4.96	4.96	-4179	11252	16744	45199	66836	12648	61942		10.41	Si
SLV 2	2.07	6610.18	-5805	-4889	5961	4.96	4.0241	-3285	11074	13369	45199	66836	12648	58567		9.82	Si
SLV 2	3.97	-2891.95	-7392	-6225	4285	4.96	4.96	-4183	11253	16745	45199	66836	12648	61944		14.45	Si

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

quota 3.03 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	σ0	N	M	Mc	Coeff.s.	Verifica
SLV 10	179667	0.47	0	-3627	828.75	0	0	No, e>t/2
SLV 5	179667	0.47	0	-3617	828.75	0	0	No, e>t/2
SLV 6	179667	0.47	0	-3625	828.75	0	0	No, e>t/2
SLV 9	179667	0.47	0	-3620	828.75	0	0	No, e>t/2
SLV 1	179667	0.47	4681	-6965	828.75	1012.79	1.22	Si
SLV 2	179667	0.47	4686	-6973	828.75	1013.83	1.22	Si
SLV 13	179667	0.47	4687	-6974	828.75	1013.97	1.22	Si
SLV 14	179667	0.47	4692	-6981	828.75	1015	1.22	Si
SLV 3	179667	0.47	6611	-9838	828.75	1411.78	1.7	Si
SLV 4	179667	0.47	6616	-9845	828.75	1412.79	1.7	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 é 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 = 3.03 Wa = 0.05 Ta = 0.0855

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 3	-5604	-10032	98	2.615	1459.3	0.889	42.74263	16.97787	Si



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 4	-5604	-10026	98	2.615	1459.3	0.889	42.74517	16.97787	Si
SLV 15	-5585	-10040	100	2.619	1457.6	0.889	42.81539	16.97787	Si
SLV 16	-5585	-10034	100	2.619	1457.5	0.889	42.81794	16.97787	Si
SLV 1	-5220	-5229	-87	2.71	1424.4	0.889	44.31104	16.97787	Si
SLV 2	-5220	-5223	-87	2.71	1424.3	0.889	44.31375	16.97787	Si
SLV 13	-5201	-5237	-85	2.715	1422.6	0.889	44.39303	16.97787	Si
SLV 14	-5200	-5231	-85	2.715	1422.6	0.889	44.39574	16.97787	Si
SLV 7	-6046	-15639	315	2.495	1500	0.889	40.76602	11.37117	Si
SLV 8	-6045	-15633	315	2.495	1499.9	0.889	40.76845	11.37117	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	66.232	SLU 43	Si
V_SLU	5777.225	SLU 39	Si
PF_SLV	1.83	SLV 1	Si
V_SLV	5.876	SLV 14	Si
PFFP_SLV	0	SLV 5	No
R_SLV	2.518	SLV 3	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
2.186	-8.719	-0.141	-8.718	L2	L3	2.327	0.3	3.92	3.92	3.92			

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fk	fvk0	fmedio	$\tau 0$	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	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e_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	elim,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, $\gamma M = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 41	2.07	75.25	-7452	-0.0000165	0.0003743	0.0035	2.327	7761.69	8264.67	8264.67	109.83	No	Si
SLU 41	3.97	1299.34	-7243	-0.000023	0.0003743	0.0035	2.327	7567.99	8058.57	8058.57	6.2	No	Si
SLU 42	2.07	75.25	-7452	-0.0000165	0.0003743	0.0035	2.327	7761.69	8264.67	8264.67	109.83	No	Si
SLU 42	3.97	1299.34	-7243	-0.000023	0.0003743	0.0035	2.327	7567.99	8058.57	8058.57	6.2	No	Si
SLU 37	2.07	61.6	-6772	-0.000015	0.0003743	0.0035	2.327	7128.5	7589.77	7589.77	123.21	No	Si
SLU 37	3.97	1045.21	-6236	-0.0000193	0.0003743	0.0035	2.327	6619.43	7048.13	7048.13	6.74	No	Si
SLU 81	2.07	111.01	-8490	-0.0000191	0.0003743	0.0035	2.327	8698	9144.8	9144.8	82.38	No	Si
SLU 81	3.97	1255.38	-7660	-0.0000237	0.0003743	0.0035	2.327	7952.08	8449.66	8449.66	6.73	No	Si
SLU 38	2.07	61.6	-6772	-0.000015	0.0003743	0.0035	2.327	7128.5	7589.77	7589.77	123.21	No	Si
SLU 38	3.97	1045.21	-6236	-0.0000193	0.0003743	0.0035	2.327	6619.43	7048.13	7048.13	6.74	No	Si
SLU 82	2.07	111.01	-8490	-0.0000191	0.0003743	0.0035	2.327	8698	9144.8	9144.8	82.38	No	Si
SLU 82	3.97	1255.38	-7660	-0.0000237	0.0003743	0.0035	2.327	7952.08	8449.66	8449.66	6.73	No	Si
SLU 83	2.07	111.01	-8490	-0.0000191	0.0003743	0.0035	2.327	8698	9144.8	9144.8	82.38	No	Si
SLU 83	3.97	1255.38	-7660	-0.0000237	0.0003743	0.0035	2.327	7952.08	8449.66	8449.66	6.73	No	Si
SLU 40	2.07	75.25	-7452	-0.0000165	0.0003743	0.0035	2.327	7761.69	8264.67	8264.67	109.83	No	Si
SLU 40	3.97	1299.34	-7243	-0.000023	0.0003743	0.0035	2.327	7567.99	8058.57	8058.57	6.2	No	Si
SLU 84	2.07	111.01	-8490	-0.0000191	0.0003743	0.0035	2.327	8698	9144.8	9144.8	82.38	No	Si
SLU 84	3.97	1255.38	-7660	-0.0000237	0.0003743	0.0035	2.327	7952.08	8449.66	8449.66	6.73	No	Si
SLU 39	2.07	75.25	-7452	-0.0000165	0.0003743	0.0035	2.327	7761.69	8264.67	8264.67	109.83	No	Si
SLU 39	3.97	1299.34	-7243	-0.000023	0.0003743	0.0035	2.327	7567.99	8058.57	8058.57	6.2	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, $\gamma M = 2$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 8	2.07	2534.65	-5953	-0.0000268	0.0005615	0.0035	2.327		6888.74	6888.74	2.72		Si
SLV 8	3.97	-579.79	-2359	-0.0000082	0.0005615	0.0035	2.327		4235.92	4235.92	7.31		Si
SLV 6	2.07	-2090.67	-3913	-0.0000206	0.0005615	0.0035	2.327		5945.83	5945.83	2.84		Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 6	3.97	976.51	-4672	-0.0000153	0.0005615	0.0035	2.327		5512.56	5512.56	5.65		Si
SLV 16	2.07	-723.15	-4995	-0.0000146	0.0005615	0.0035	2.327		7114.98	7114.98	9.84		Si
SLV 16	3.97	1735.84	-4670	-0.0000195	0.0005615	0.0035	2.327		5509.96	5509.96	3.17		Si
SLV 7	2.07	2988.31	-6329	-0.0000305	0.0005615	0.0035	2.327		7286.39	7286.39	2.44		Si
SLV 7	3.97	-952.91	-2088	-0.0000097	0.0005615	0.0035	2.327		3934.44	3934.44	4.13		Si
SLV 10	2.07	-2850.96	-3797	-0.0000306	0.0005615	0.0035	1.8616		5819.17	5819.17	2.04		Si
SLV 10	3.97	1797.03	-5367	-0.0000214	0.0005615	0.0035	2.327		6264.14	6264.14	3.49		Si
SLV 13	2.07	-1673.81	-4744	-0.0000193	0.0005615	0.0035	2.327		6846.36	6846.36	4.09		Si
SLV 13	3.97	1843.36	-5103	-0.000021	0.0005615	0.0035	2.327		5978.27	5978.27	3.24		Si
SLV 3	2.07	2248.1	-5743	-0.0000247	0.0005615	0.0035	2.327		6664.37	6664.37	2.96		Si
SLV 3	3.97	-1358.61	-2091	-0.0000134	0.0005615	0.0035	1.8616		3938.44	3938.44	2.9		Si
SLV 9	2.07	-2397.3	-4172	-0.0000235	0.0005615	0.0035	2.327		6229.04	6229.04	2.6		Si
SLV 9	3.97	1423.91	-5096	-0.0000187	0.0005615	0.0035	2.327		5971.36	5971.36	4.19		Si
SLV 14	2.07	-2110.75	-4383	-0.0000213	0.0005615	0.0035	2.327		6457.7	6457.7	3.06		Si
SLV 14	3.97	2202.73	-5364	-0.0000236	0.0005615	0.0035	2.327		6260.26	6260.26	2.84		Si
SLV 11	2.07	2228.02	-6213	-0.0000256	0.0005615	0.0035	2.327		7163.56	7163.56	3.22		Si
SLV 11	3.97	-132.39	-2783	-0.0000066	0.0005615	0.0035	2.327		4705.65	4705.65	35.54		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	I'	αN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 42	2.07	75.25	-7452	-6276	-2074	2.327	2.327	-8990	8143	5685	45199	20904	5934	26838	No	12.94	Si
SLU 42	3.97	1299.34	-7243	-6099	-2080	2.327	2.327	-8737	8109	5661	45199	20904	5934	26838	No	12.9	Si
SLU 82	2.07	111.01	-8490	-7149	-2098	2.327	2.327	-10241	8310	5801	45199	20904	5934	26838	No	12.79	Si
SLU 82	3.97	1255.38	-7660	-6451	-2105	2.327	2.327	-9240	8177	5708	45199	20904	5934	26838	No	12.75	Si
SLU 84	2.07	111.01	-8490	-7149	-2098	2.327	2.327	-10241	8310	5801	45199	20904	5934	26838	No	12.79	Si
SLU 84	3.97	1255.38	-7660	-6451	-2105	2.327	2.327	-9240	8177	5708	45199	20904	5934	26838	No	12.75	Si
SLU 78	2.07	97.37	-7809	-6576	-1773	2.327	2.327	-9420	8201	5725	45199	20904	5934	26838	No	15.14	Si
SLU 78	3.97	1001.24	-6654	-5604	-1779	2.327	2.327	-8027	8015	5595	45199	20904	5934	26838	No	15.09	Si
SLU 83	2.07	111.01	-8490	-7149	-2098	2.327	2.327	-10241	8310	5801	45199	20904	5934	26838	No	12.79	Si
SLU 83	3.97	1255.38	-7660	-6451	-2105	2.327	2.327	-9240	8177	5708	45199	20904	5934	26838	No	12.75	Si
SLU 41	2.07	75.25	-7452	-6276	-2074	2.327	2.327	-8990	8143	5685	45199	20904	5934	26838	No	12.94	Si
SLU 41	3.97	1299.34	-7243	-6099	-2080	2.327	2.327	-8737	8109	5661	45199	20904	5934	26838	No	12.9	Si
SLU 39	2.07	75.25	-7452	-6276	-2074	2.327	2.327	-8990	8143	5685	45199	20904	5934	26838	No	12.94	Si
SLU 39	3.97	1299.34	-7243	-6099	-2080	2.327	2.327	-8737	8109	5661	45199	20904	5934	26838	No	12.9	Si
SLU 40	2.07	75.25	-7452	-6276	-2074	2.327	2.327	-8990	8143	5685	45199	20904	5934	26838	No	12.94	Si
SLU 40	3.97	1299.34	-7243	-6099	-2080	2.327	2.327	-8737	8109	5661	45199	20904	5934	26838	No	12.9	Si
SLU 77	2.07	97.37	-7809	-6576	-1773	2.327	2.327	-9420	8201	5725	45199	20904	5934	26838	No	15.14	Si
SLU 77	3.97	1001.24	-6654	-5604	-1779	2.327	2.327	-8027	8015	5595	45199	20904	5934	26838	No	15.09	Si
SLU 81	2.07	111.01	-8490	-7149	-2098	2.327	2.327	-10241	8310	5801	45199	20904	5934	26838	No	12.79	Si
SLU 81	3.97	1255.38	-7660	-6451	-2105	2.327	2.327	-9240	8177	5708	45199	20904	5934	26838	No	12.75	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	I'	αN	fvd	Vt	Vt,f	Vt,c	Vt,c.int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 5	2.07	-1637.01	-4288	-3611	-2510	2.327	2.327	-5172	11451	7994	45199	31356	5934	37290		14.86	Si
SLV 5	3.97	603.38	-4401	-3706	-3014	2.327	2.327	-5309	11478	8013	45199	31356	5934	37290		12.37	Si
SLV 3	2.07	2248.1	-5743	-4836	3079	2.327	2.3161	-6927	11802	8200	45199	31356	5934	37290		12.11	Si
SLV 3	3.97	-1358.61	-2091	-1761	2062	1.8616	1.5414	0	0	0	45199	25085	4747	29832		14.47	Si
SLV 9	2.07	-2397.3	-4172	-3513	-4148	2.327	1.7666	-6644	11746	6225	45199	31356	5934	37290		8.99	Si
SLV 9	3.97	1423.91	-5096	-4292	-4012	2.327	2.327	-6147	11646	8130	45199	31356	5934	37290		9.3	Si
SLV 13	2.07	-1673.81	-4744	-3995	-4085	2.327	2.327	-5723	11561	8071	45199	31356	5934	37290		9.13	Si
SLV 13	3.97	1843.36	-5103	-4297	-3076	2.327	2.327	-6155	11648	8131	45199	31356	5934	37290		12.12	Si
SLV 16	2.07	-723.15	-4995	-4206	-3181	2.327	2.327	-6025	11622	8113	45199	31356	5934	37290		11.72	Si
SLV 16	3.97	1735.84	-4670	-3932	-2063	2.327	2.327	-5633	11543	8058	45199	31356	5934	37290		18.07	Si
SLV 15	2.07	-286.21	-5356	-4510	-2380	2.327	2.327	-6461	11709	8174	45199	31356	5934	37290		15.67	Si
SLV 15	3.97	1376.47	-4409	-3712	-1263	2.327	2.327	-5318	11480	8014	45199	31356	5934	37290		29.52	Si
SLV 10	2.07	-2850.96	-3797	-3197	-4978	1.8616	1.2378	0	0	0	45199	25085	4747	29832		5.99	Si
SLV 10	3.97	1797.03	-5367	-4520	-4843	2.327	2.327	-6475	11712	8176	45199	31356	5934	37290		7.7	Si
SLV 14	2.07	-2110.75	-4383	-3691	-4885	2.327	2.0456	-6029	11623	7133	45199	31356	5934	37290		7.63	Si
SLV 14	3.97	2202.73	-5364	-4517	-3876	2.327	2.2585	-6470	11711	7935	45199	31356	5934	37290		9.62	Si
SLV 6	2.07	-2090.67	-3913	-3295	-3340	2.327	1.8875	-5833	11583	6559	45199	31356	5934	37290		11.16	Si
SLV 6	3.97	976.51	-4672	-3934	-3845	2.327	2.327	-5636	11544	8059	45199	31356	5934	37290		9.7	Si
SLV 7	2.07	2988.31	-6329	-5329	3172	2.327	2.0739	-7634	11943	7431	45199	31356	5934	37290		11.76	Si
SLV 7	3.97	-952.91	-2088	-1758	3028	2.327	2.1211	-2764	10969	6980	45199	31356	5934	37290		12.31	Si

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

quota 3.03 Wa 0.05 denominatore 8 γM = 2

Comb.	fd	Sa	α0	N	M	Mc	Coeff.s.	Verifica
SLV 3	179667	0.47	4920	-3435	388.81	498.62	1.28	Si
SLV 4	179667	0.47	4944	-3451	388.81	500.95	1.29	Si
SLV 7	179667	0.47	5127	-3579	388.81	518.8	1.33	Si
SLV 8	179667	0.47	5151	-3596	388.81	521.22	1.34	Si
SLV 1	179667	0.47	5321	-3714	388.81	537.74	1.38	Si
SLV 2	179667	0.47	5344	-3731	388.81	540.06	1.39	Si
SLV 11	179667	0.47	5704	-3982	388.81	575	1.48	Si
SLV 12	179667	0.47	5729	-3999	388.81	577.39	1.49	Si
SLV 5	179667	0.47	6461	-4511	388.81	647.96	1.67	Si
SLV 6	179667	0.47	6486	-4528	388.81	650.33	1.67	Si

Per la verifica della tabella precedente non é stato considerato il rinforzo predisposto.

Le motivazioni per cui la sezione di verifica nonostante abbia un rinforzo non venga condotta come sezione rinforzata possono essere:

- Il rinforzo predisposto non é 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 mezzera = 3.03 Wa = 0.05 Ta = 0.0855



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 14	-2706	-6215	-157	2.555	691.7	0.889	41.76609	16.97787	Si
SLV 13	-2674	-6422	-157	2.57	688.8	0.889	42.0187	16.97787	Si
SLV 16	-2603	-6514	-38	2.629	682.3	0.889	42.98468	16.97787	Si
SLV 15	-2572	-6722	-38	2.645	679.4	0.889	43.249	16.97787	Si
SLV 2	-2391	-4808	40	2.742	663	0.889	44.83593	16.97787	Si
SLV 1	-2360	-5016	40	2.76	660.2	0.889	45.12257	16.97787	Si
SLV 4	-2289	-5108	158	2.776	653.8	0.889	45.37413	16.97787	Si
SLV 3	-2257	-5316	158	2.794	651	0.889	45.66897	16.97787	Si
SLV 10	-2715	-5369	-226	2.537	692.5	0.889	41.46982	11.37117	Si
SLV 9	-2683	-5585	-226	2.553	689.6	0.889	41.72987	11.37117	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	6.202	SLU 39	Si
V_SLU	12.751	SLU 81	Si
PF_SLV	2.041	SLV 10	Si
V_SLV	5.992	SLV 10	Si
PFFP_SLV	1.282	SLV 3	Si
R_SLV	2.46	SLV 14	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
2.185	-13.249	1.086	-13.249	L2	L3	1.099	0.3	3.92	3.92	3.92			

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	$\tau 0$	fv0	μ	ϕ	fv,lim	E	G	FC
600000			517500	13500	30000	0.58	0.77	32500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,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	elim,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 FRM in combinazioni non sismiche, $\gamma_m = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLU 47	1.07	1522.38	-7936	-0.0000718	0.0004492	0.0035	1.099	3501.66	3931.71	3931.71	2.58	No	Si
SLU 47	3.17	-554.65	-958	-0.0001113	0.0004492	0.0035	0.8792	0	1025.97	1025.97	1.85	No	Si
SLU 49	1.07	1522.38	-7936	-0.0000718	0.0004492	0.0035	1.099	3501.66	3931.71	3931.71	2.58	No	Si
SLU 49	3.17	-554.65	-958	-0.0001113	0.0004492	0.0035	0.8792	0	1025.97	1025.97	1.85	No	Si
SLU 45	1.07	1522.38	-7936	-0.0000718	0.0004492	0.0035	1.099	3501.66	3931.71	3931.71	2.58	No	Si
SLU 45	3.17	-554.65	-958	-0.0001113	0.0004492	0.0035	0.8792	0	1025.97	1025.97	1.85	No	Si
SLU 48	1.07	1522.38	-7936	-0.0000718	0.0004492	0.0035	1.099	3501.66	3931.71	3931.71	2.58	No	Si
SLU 48	3.17	-554.65	-958	-0.0001113	0.0004492	0.0035	0.8792	0	1025.97	1025.97	1.85	No	Si
SLU 51	1.07	1522.38	-7936	-0.0000718	0.0004492	0.0035	1.099	3501.66	3931.71	3931.71	2.58	No	Si
SLU 51	3.17	-554.65	-958	-0.0001113	0.0004492	0.0035	0.8792	0	1025.97	1025.97	1.85	No	Si
SLU 44	1.07	1522.38	-7936	-0.0000718	0.0004492	0.0035	1.099	3501.66	3931.71	3931.71	2.58	No	Si
SLU 44	3.17	-554.65	-958	-0.0001113	0.0004492	0.0035	0.8792	0	1025.97	1025.97	1.85	No	Si
SLU 50	1.07	1522.38	-7936	-0.0000718	0.0004492	0.0035	1.099	3501.66	3931.71	3931.71	2.58	No	Si
SLU 50	3.17	-554.65	-958	-0.0001113	0.0004492	0.0035	0.8792	0	1025.97	1025.97	1.85	No	Si
SLU 46	1.07	1522.38	-7936	-0.0000718	0.0004492	0.0035	1.099	3501.66	3931.71	3931.71	2.58	No	Si
SLU 46	3.17	-554.65	-958	-0.0001113	0.0004492	0.0035	0.8792	0	1025.97	1025.97	1.85	No	Si
SLU 43	1.07	1522.38	-7936	-0.0000718	0.0004492	0.0035	1.099	3501.66	3931.71	3931.71	2.58	No	Si
SLU 43	3.17	-554.65	-958	-0.0001113	0.0004492	0.0035	0.8792	0	1025.97	1025.97	1.85	No	Si
SLU 1	1.07	1133	-6184	-0.0000538	0.0004492	0.0035	1.099	2876.37	3232.77	3232.77	2.85	No	Si
SLU 1	3.17	-389.81	-964	-0.0000204	0.0004492	0.0035	0.8792	517.06	1028.99	1028.99	2.64	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche, $\gamma_m = 2$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 4	1.07	2774.27	-7039	-0.0001506	0.0006738	0.0035	1.099		3716.41	3716.41	1.34		Si
SLV 4	3.17	-1119.61	1161	-0.0006364	0.0006738	0.0035	0.8792		0	0	0		No



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 1	1.07	2555.22	-7775	-0.0001145	0.0006738	0.0035	1.099		4057.27	4057.27	1.59		Si
SLV 1	3.17	-1060.85	628	-0.0005962	0.0006738	0.0035	0.8792		179.36	179.36	0.17		No
SLV 7	1.07	1811.86	-5134	-0.0000834	0.0006738	0.0035	1.099		2808.83	2808.83	1.55		Si
SLV 7	3.17	-520.44	-200	-0.0002371	0.0006738	0.0035	0.8792		624.49	624.49	1.2		Si
SLV 12	1.07	855.91	-4730	-0.0000399	0.0006738	0.0035	1.099		2610.37	2610.37	3.05		Si
SLV 12	3.17	-66.01	-1681	-0.0000085	0.0006738	0.0035	1.099		1405.08	1405.08	21.29		Si
SLV 3	1.07	2744.04	-6870	-0.0001524	0.0006738	0.0035	1.099		3637.39	3637.39	1.33		Si
SLV 3	3.17	-1079.11	1086	-0.0006085	0.0006738	0.0035	0.8792		0	0	0		No
SLV 8	1.07	1843.24	-5309	-0.0000838	0.0006738	0.0035	1.099		2893.51	2893.51	1.57		Si
SLV 8	3.17	-562.48	-122	-0.000266	0.0006738	0.0035	0.8792		582.74	582.74	1.04		Si
SLV 6	1.07	1213.85	-8327	-0.0000645	0.0006738	0.0035	1.099		4287.55	4287.55	3.53		Si
SLV 6	3.17	-501.59	-1648	-0.0000207	0.0006738	0.0035	0.8792		1388.21	1388.21	2.77		Si
SLV 11	1.07	824.52	-4554	-0.0000384	0.0006738	0.0035	1.099		2524.37	2524.37	3.06		Si
SLV 11	3.17	-23.97	-1759	-0.0000079	0.0006738	0.0035	1.099		1445.6	1445.6	60.3		Si
SLV 2	1.07	2585.45	-7944	-0.0001154	0.0006738	0.0035	1.099		4132.83	4132.83	1.6		Si
SLV 2	3.17	-1101.34	703	-0.0006255	0.0006738	0.0035	0.8792		194.51	194.51	0.18		No
SLV 5	1.07	1182.46	-8152	-0.000063	0.0006738	0.0035	1.099		4216.86	4216.86	3.57		Si
SLV 5	3.17	-459.55	-1726	-0.0000187	0.0006738	0.0035	1.099		1428.73	1428.73	3.11		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 45	1.07	1522.38	-7936	-5772	2417	1.099	1.073	-17506	10668	3434	129139	11848	5605	17453	No	7.22	Si
SLU 45	3.17	-554.65	-958	-697	2372	0.8792	0	0	0	0	129139	9479	4484	13962	No	5.89	Si
SLU 47	1.07	1522.38	-7936	-5772	2417	1.099	1.073	-17506	10668	3434	129139	11848	5605	17453	No	7.22	Si
SLU 47	3.17	-554.65	-958	-697	2372	0.8792	0	0	0	0	129139	9479	4484	13962	No	5.89	Si
SLU 1	1.07	1133	-6184	-4497	1783	1.099	1.0988	-13641	10152	3347	129139	11848	5605	17453	No	9.79	Si
SLU 1	3.17	-389.81	-964	-701	1746	0.8792	0.4354	0	0	0	129139	9479	4484	13962	No	7.99	Si
SLU 48	1.07	1522.38	-7936	-5772	2417	1.099	1.073	-17506	10668	3434	129139	11848	5605	17453	No	7.22	Si
SLU 48	3.17	-554.65	-958	-697	2372	0.8792	0	0	0	0	129139	9479	4484	13962	No	5.89	Si
SLU 46	1.07	1522.38	-7936	-5772	2417	1.099	1.073	-17506	10668	3434	129139	11848	5605	17453	No	7.22	Si
SLU 46	3.17	-554.65	-958	-697	2372	0.8792	0	0	0	0	129139	9479	4484	13962	No	5.89	Si
SLU 43	1.07	1522.38	-7936	-5772	2417	1.099	1.073	-17506	10668	3434	129139	11848	5605	17453	No	7.22	Si
SLU 43	3.17	-554.65	-958	-697	2372	0.8792	0	0	0	0	129139	9479	4484	13962	No	5.89	Si
SLU 50	1.07	1522.38	-7936	-5772	2417	1.099	1.073	-17506	10668	3434	129139	11848	5605	17453	No	7.22	Si
SLU 50	3.17	-554.65	-958	-697	2372	0.8792	0	0	0	0	129139	9479	4484	13962	No	5.89	Si
SLU 51	1.07	1522.38	-7936	-5772	2417	1.099	1.073	-17506	10668	3434	129139	11848	5605	17453	No	7.22	Si
SLU 51	3.17	-554.65	-958	-697	2372	0.8792	0	0	0	0	129139	9479	4484	13962	No	5.89	Si
SLU 44	1.07	1522.38	-7936	-5772	2417	1.099	1.073	-17506	10668	3434	129139	11848	5605	17453	No	7.22	Si
SLU 44	3.17	-554.65	-958	-697	2372	0.8792	0	0	0	0	129139	9479	4484	13962	No	5.89	Si
SLU 49	1.07	1522.38	-7936	-5772	2417	1.099	1.073	-17506	10668	3434	129139	11848	5605	17453	No	7.22	Si
SLU 49	3.17	-554.65	-958	-697	2372	0.8792	0	0	0	0	129139	9479	4484	13962	No	5.89	Si

Verifica a taglio nel piano delle sezioni rinforzate con rete a fibra in combinazioni sismiche secondo metodo CNR DT215, γM = 2

Comb.	Quota	M	N	Nmur	V	df	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 11	1.07	824.52	-4554	-3312	708	1.099	1.099	-10047	14509	4784	129139	17772	5605	23377		33.01	Si
SLV 11	3.17	-23.97	-1759	-1279	1002	1.099	1.099	-3880	13276	4377	129139	17772	5605	23377		23.33	Si
SLV 7	1.07	1811.86	-5134	-3734	2138	1.099	0.5897	-11325	14765	2612	129139	17772	5605	23377		10.93	Si
SLV 7	3.17	-520.44	-200	-146	2018	0.8792	0	0	0	0	129139	14218	4484	18702		9.27	Si
SLV 12	1.07	855.91	-4730	-3440	809	1.099	1.099	-10433	14587	4809	129139	17772	5605	23377		28.88	Si
SLV 12	3.17	-66.01	-1681	-1222	1103	1.099	1.099	-3708	13242	4366	129139	17772	5605	23377		21.19	Si
SLV 1	1.07	2555.22	-7775	-5655	3896	1.099	0.6626	-17152	15930	3166	129139	17772	5605	23377		6	Si
SLV 1	3.17	-1060.85	628	457	3127	0.8792	0	0	0	0	129139	14218	4484	18702		5.98	Si
SLV 2	1.07	2585.45	-7944	-5777	3993	1.099	0.6721	-17524	16005	3227	129139	17772	5605	23377		5.85	Si
SLV 2	3.17	-1101.34	703	511	3224	0.8792	0	0	0	0	129139	14218	4484	18702		5.8	Si
SLV 6	1.07	1213.85	-8327	-6056	2374	1.099	1.099	-18370	16174	5332	129139	17772	5605	23377		9.85	Si
SLV 6	3.17	-501.59	-1648	-1199	1999	0.8792	0.7355	0	0	0	129139	14218	4484	18702		9.35	Si
SLV 4	1.07	2774.27	-7039	-5119	3953	1.099	0.466	-15527	15605	2182	129139	17772	5605	23377		5.91	Si
SLV 4	3.17	-1119.61	1161	844	3260	0.8792	0	0	0	0	129139	14218	4484	18702		5.74	Si
SLV 3	1.07	2744.04	-6870	-4996	3856	1.099	0.4502	-15154	15531	2097	129139	17772	5605	23377		6.06	Si
SLV 3	3.17	-1079.11	1086	790	3163	0.8792	0	0	0	0	129139	14218	4484	18702		5.91	Si
SLV 8	1.07	1843.24	-5309	-3861	2240	1.099	0.6069	-11712	14842	2702	129139	17772	5605	23377		10.44	Si
SLV 8	3.17	-562.48	-122	-89	2119	0.8792	0	0	0	0	129139	14218	4484	18702		8.83	Si
SLV 5	1.07	1182.46	-8152	-5929	2273	1.099	1.099	-17983	16097	5307	129139	17772	5605	23377		10.29	Si
SLV 5	3.17	-459.55	-1726	-1256	1898	1.099	0.8499	-4933	13487	3438	129139	17772	5605	23377		12.31	Si

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

quota 3.03 Ta 0.09 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 3	1076	0.47	188.22	0	0	0	0	No
SLV 1	614	0.47	188.22	0	0	0	0	No
SLV 4	1151	0.47	188.22	0	0	0	0	No
SLV 2	689	0.47	188.22	0	0	0	0	No
SLV 8	-125	0.47	188.22	0	135.48	67.74	0.36	No
SLV 7	-203	0.47	188.22	0	148.65	74.33	0.39	No
SLV 6	-1665	0.47	188.22	242.88	391.92	317.4	1.69	Si
SLV 12	-1683	0.47	188.22	245.39	394.85	320.12	1.7	Si
SLV 5	-1743	0.47	188.22	253.93	404.85	329.39	1.75	Si
SLV 11	-1761	0.47	188.22	256.43	407.78	332.11	1.76	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzera = 3.03 Wa = 0.05 Ta = 0.0855

Comb.	N top	N base	V orto	α0	M*	e*	a0*	aLim	Verifica
SLV 13	-2071	-5843	-5	1.959	401.9	0.897	31.75479	16.97787	Si
SLV 14	-2068	-6012	-5	1.961	401.6	0.897	31.78636	16.97787	Si
SLV 15	-2037	-4938	11	1.978	398.6	0.896	32.07088	16.97787	Si
SLV 16	-2034	-5106	11	1.98	398.3	0.896	32.10067	16.97787	Si
SLV 1	-1770	-7775	-11	2.154	373	0.893	35.05151	16.97787	Si



Comb.	N top	N base	V orto	$\alpha 0$	M*	e*	a0*	aLim	Verifica
SLV 2	-1767	-7944	-10	2.156	372.7	0.893	35.08955	16.97787	Si
SLV 3	-1736	-6870	5	2.181	369.7	0.893	35.49894	16.97787	Si
SLV 4	-1733	-7039	6	2.183	369.4	0.893	35.53519	16.97787	Si
SLV 9	-2005	-7573	-26	1.993	395.6	0.896	32.32281	11.37117	Si
SLV 10	-2002	-7748	-26	1.995	395.3	0.896	32.3568	11.37117	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	1.85	SLU 43	Si
V_SLU	5.887	SLU 43	Si
PF_SLV	0	SLV 3	No
V_SLV	5.736	SLV 4	Si
PFFP_SLV	0	SLV 1	No
R_SLV	1.87	SLV 13	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
2.185	-17.729	2.186	-8.719	L2	L3	9.01	0.3	3.92	3.92	3.92			

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	t0	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	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,conv	e,fd	yF,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, $\gamma M = 3$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	em	em_	emu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLU 76	1.07	-6993.29	-32850	-0.0000194	0.0004492	0.0035	9.01	133270.59	185712.72	185712.72	26.56	No	Si
SLU 76	4.99	-165.04	-1359	-0.0000007	0.0004492	0.0035	9.01	6098.22	55369.34	55369.34	335.5	No	Si
SLU 79	1.07	-6993.29	-32850	-0.0000194	0.0004492	0.0035	9.01	133270.59	185712.72	185712.72	26.56	No	Si
SLU 79	4.99	-165.04	-1359	-0.0000007	0.0004492	0.0035	9.01	6098.22	55369.34	55369.34	335.5	No	Si
SLU 81	1.07	-7465.92	-35374	-0.0000209	0.0004492	0.0035	9.01	142292.5	195537.99	195537.99	26.19	No	Si
SLU 81	4.99	-145.82	-1647	-0.0000009	0.0004492	0.0035	9.01	7384.44	56624.32	56624.32	388.31	No	Si
SLU 75	1.07	-6993.29	-32850	-0.0000194	0.0004492	0.0035	9.01	133270.59	185712.72	185712.72	26.56	No	Si
SLU 75	4.99	-165.04	-1359	-0.0000007	0.0004492	0.0035	9.01	6098.22	55369.34	55369.34	335.5	No	Si
SLU 80	1.07	-6993.29	-32850	-0.0000194	0.0004492	0.0035	9.01	133270.59	185712.72	185712.72	26.56	No	Si
SLU 80	4.99	-165.04	-1359	-0.0000007	0.0004492	0.0035	9.01	6098.22	55369.34	55369.34	335.5	No	Si
SLU 77	1.07	-6993.29	-32850	-0.0000194	0.0004492	0.0035	9.01	133270.59	185712.72	185712.72	26.56	No	Si
SLU 77	4.99	-165.04	-1359	-0.0000007	0.0004492	0.0035	9.01	6098.22	55369.34	55369.34	335.5	No	Si
SLU 83	1.07	-7465.92	-35374	-0.0000209	0.0004492	0.0035	9.01	142292.5	195537.99	195537.99	26.19	No	Si
SLU 83	4.99	-145.82	-1647	-0.0000009	0.0004492	0.0035	9.01	7384.44	56624.32	56624.32	388.31	No	Si
SLU 78	1.07	-6993.29	-32850	-0.0000194	0.0004492	0.0035	9.01	133270.59	185712.72	185712.72	26.56	No	Si
SLU 78	4.99	-165.04	-1359	-0.0000007	0.0004492	0.0035	9.01	6098.22	55369.34	55369.34	335.5	No	Si
SLU 84	1.07	-7465.92	-35374	-0.0000209	0.0004492	0.0035	9.01	142292.5	195537.99	195537.99	26.19	No	Si
SLU 84	4.99	-145.82	-1647	-0.0000009	0.0004492	0.0035	9.01	7384.44	56624.32	56624.32	388.31	No	Si
SLU 82	1.07	-7465.92	-35374	-0.0000209	0.0004492	0.0035	9.01	142292.5	195537.99	195537.99	26.19	No	Si
SLU 82	4.99	-145.82	-1647	-0.0000009	0.0004492	0.0035	9.01	7384.44	56624.32	56624.32	388.31	No	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCM in combinazioni sismiche, $\gamma M = 2$

Verifica condotta secondo CNR-DT 215

Comb.	Quota	M	N	em	em_	emu	df	M0d	M1d	MRd	c.s.	Incremento > 50%	Verifica
SLV 12	1.07	6472.01	-24259	-0.0000146	0.0006738	0.0035	9.01		112784.08	112784.08	17.43		Si
SLV 12	4.99	-218.72	-598	-0.0000004	0.0006738	0.0035	9.01		52035.03	52035.03	237.91		Si
SLV 8	1.07	7077.76	-18598	-0.0000119	0.0006738	0.0035	9.01		88905.63	88905.63	12.56		Si
SLV 8	4.99	-452.54	-525	-0.0000004	0.0006738	0.0035	9.01		51716.3	51716.3	114.28		Si
SLV 7	1.07	7981.98	-18835	-0.0000123	0.0006738	0.0035	9.01		89910.95	89910.95	11.26		Si
SLV 7	4.99	-698.49	-496	-0.0000005	0.0006738	0.0035	9.01		51592.6	51592.6	73.86		Si
SLV 1	1.07	-6820.2	-12238	-0.0000085	0.0006738	0.0035	9.01		102143.99	102143.99	14.98		Si



Comb.	Quota	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	c.s.	incremento > 50%	Verifica
SLV 1	4.99	-570.68	-530	-0.0000005	0.0006738	0.0035	9.01		51738.24	51738.24	90.66		Si
SLV 5	1.07	-15852.2	-18854	-0.000015	0.0006738	0.0035	9.01		130132.49	130132.49	8.21		Si
SLV 5	4.99	-89.15	-678	-0.0000004	0.0006738	0.0035	9.01		52385.25	52385.25	587.63		Si
SLV 11	1.07	7376.24	-24495	-0.000015	0.0006738	0.0035	9.01		113774.16	113774.16	15.42		Si
SLV 11	4.99	-464.67	-569	-0.0000004	0.0006738	0.0035	9.01		51911.33	51911.33	111.72		Si
SLV 2	1.07	-7691.09	-12011	-0.0000087	0.0006738	0.0035	9.01		101174.7	101174.7	13.15		Si
SLV 2	4.99	-333.8	-557	-0.0000004	0.0006738	0.0035	9.01		51857.38	51857.38	155.35		Si
SLV 6	1.07	-16756.42	-18617	-0.0000152	0.0006738	0.0035	9.01		129136.43	129136.43	7.71		Si
SLV 6	4.99	156.8	-706	-0.0000004	0.0006738	0.0035	9.01		11276.91	11276.91	71.92		Si
SLV 10	1.07	-17362.17	-24278	-0.0000184	0.0006738	0.0035	9.01		152790.17	152790.17	8.8		Si
SLV 10	4.99	390.62	-779	-0.0000005	0.0006738	0.0035	9.01		11599.56	11599.56	29.7		Si
SLV 9	1.07	-16457.94	-24514	-0.0000182	0.0006738	0.0035	9.01		153774.74	153774.74	9.34		Si
SLV 9	4.99	144.68	-751	-0.0000004	0.0006738	0.0035	9.01		11474.34	11474.34	79.31		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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLU 50	1.07	-5180.06	-23023	-16744	160	9.01	9.01	-6195	9159	24758	129139	97139	45951	143090	No	896.24	Si
SLU 50	4.99	-234.02	-310	-226	164	9.01	9.01	-84	8344	22555	129139	97139	45951	143090	No	873.14	Si
SLU 48	1.07	-5180.06	-23023	-16744	160	9.01	9.01	-6195	9159	24758	129139	97139	45951	143090	No	896.24	Si
SLU 48	4.99	-234.02	-310	-226	164	9.01	9.01	-84	8344	22555	129139	97139	45951	143090	No	873.14	Si
SLU 45	1.07	-5180.06	-23023	-16744	160	9.01	9.01	-6195	9159	24758	129139	97139	45951	143090	No	896.24	Si
SLU 45	4.99	-234.02	-310	-226	164	9.01	9.01	-84	8344	22555	129139	97139	45951	143090	No	873.14	Si
SLU 51	1.07	-5180.06	-23023	-16744	160	9.01	9.01	-6195	9159	24758	129139	97139	45951	143090	No	896.24	Si
SLU 51	4.99	-234.02	-310	-226	164	9.01	9.01	-84	8344	22555	129139	97139	45951	143090	No	873.14	Si
SLU 49	1.07	-5180.06	-23023	-16744	160	9.01	9.01	-6195	9159	24758	129139	97139	45951	143090	No	896.24	Si
SLU 49	4.99	-234.02	-310	-226	164	9.01	9.01	-84	8344	22555	129139	97139	45951	143090	No	873.14	Si
SLU 43	1.07	-5180.06	-23023	-16744	160	9.01	9.01	-6195	9159	24758	129139	97139	45951	143090	No	896.24	Si
SLU 43	4.99	-234.02	-310	-226	164	9.01	9.01	-84	8344	22555	129139	97139	45951	143090	No	873.14	Si
SLU 46	1.07	-5180.06	-23023	-16744	160	9.01	9.01	-6195	9159	24758	129139	97139	45951	143090	No	896.24	Si
SLU 46	4.99	-234.02	-310	-226	164	9.01	9.01	-84	8344	22555	129139	97139	45951	143090	No	873.14	Si
SLU 65	1.07	-5890.48	-26961	-19608	118	9.01	9.01	-7254	9301	25139	129139	97139	45951	143090	No	1210.75	Si
SLU 65	4.99	-209.86	-687	-500	123	9.01	9.01	-185	8358	22592	129139	97139	45951	143090	No	1165.1	Si
SLU 47	1.07	-5180.06	-23023	-16744	160	9.01	9.01	-6195	9159	24758	129139	97139	45951	143090	No	896.24	Si
SLU 47	4.99	-234.02	-310	-226	164	9.01	9.01	-84	8344	22555	129139	97139	45951	143090	No	873.14	Si
SLU 44	1.07	-5180.06	-23023	-16744	160	9.01	9.01	-6195	9159	24758	129139	97139	45951	143090	No	896.24	Si
SLU 44	4.99	-234.02	-310	-226	164	9.01	9.01	-84	8344	22555	129139	97139	45951	143090	No	873.14	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	I'	σN	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	res. > 50%	c.s.	Verifica
SLV 2	1.07	-7691.09	-12011	-8735	-5523	9.01	9.01	-3232	13146	35535	129139	145709	45951	164674		29.82	Si
SLV 2	4.99	-333.8	-557	-405	-3167	9.01	9.01	-150	12530	33869	129139	145709	45951	163008		51.47	Si
SLV 15	1.07	-1689.09	-31102	-22619	5674	9.01	9.01	-8368	14174	38311	129139	145709	45951	167451		29.51	Si
SLV 15	4.99	25.93	-719	-523	3325	9.01	9.01	-193	12539	33892	129139	145709	45951	163031		49.03	Si
SLV 7	1.07	7981.98	-18835	-13698	13486	9.01	9.01	-5068	13514	36527	129139	145709	45951	165666		12.28	Si
SLV 7	4.99	-698.49	-496	-361	6108	9.01	9.01	-134	12527	33860	129139	145709	45951	162999		26.69	Si
SLV 5	1.07	-15852.2	-18854	-13712	-11053	9.01	9.01	-5073	13515	36530	129139	145709	45951	165669		14.99	Si
SLV 5	4.99	-89.15	-678	-493	-3592	9.01	9.01	-182	12536	33886	129139	145709	45951	163025		45.39	Si
SLV 6	1.07	-16756.42	-18617	-13540	-13716	9.01	9.01	-5009	13502	36495	129139	145709	45951	165635		12.08	Si
SLV 6	4.99	156.8	-706	-514	-6255	9.01	9.01	-190	12538	33890	129139	145709	45951	163029		26.06	Si
SLV 12	1.07	6472.01	-24259	-17643	11204	9.01	9.01	-6527	13805	37316	129139	145709	45951	166455		14.86	Si
SLV 12	4.99	-218.72	-598	-435	3750	9.01	9.01	-161	12532	33874	129139	145709	45951	163014		43.47	Si
SLV 8	1.07	7077.76	-18598	-13526	10823	9.01	9.01	-5004	13501	36493	129139	145709	45951	165632		15.3	Si
SLV 8	4.99	-452.54	-525	-382	3445	9.01	9.01	-141	12528	33864	129139	145709	45951	163003		47.32	Si
SLV 11	1.07	7376.24	-24495	-17815	13867	9.01	9.01	-6591	13818	37350	129139	145709	45951	166490		12.01	Si
SLV 11	4.99	-464.67	-569	-414	6413	9.01	9.01	-153	12531	33870	129139	145709	45951	163010		25.42	Si
SLV 9	1.07	-16457.94	-24514	-17829	-10672	9.01	9.01	-6596	13819	37353	129139	145709	45951	166492		15.6	Si
SLV 9	4.99	144.68	-751	-546	-3286	9.01	9.01	-202	12540	33897	129139	145709	45951	163036		49.61	Si
SLV 10	1.07	-17362.17	-24278	-17657	-13335	9.01	9.01	-6532	13806	37319	129139	145709	45951	166458		12.48	Si
SLV 10	4.99	390.62	-779	-567	-5950	9.01	9.01	-210	12542	33901	129139	145709	45951	163040		27.4	Si

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

quota 3.03 Ta 0.09 Wa 0.05 denominatore 8

Comb.	N	Sa	M	M0d	M1d	MRd	Coeff.s.	Verifica
SLV 2	-9427	0.47	1543.16	0	2744.88	1372.44	0.89	No
SLV 1	-9430	0.47	1543.16	0	2745.37	1372.68	0.89	No
SLV 4	-9594	0.47	1543.16	0	2772.89	1386.45	0.9	No
SLV 3	-9597	0.47	1543.16	0	2773.38	1386.69	0.9	No
SLV 6	-11033	0.47	1543.16	1618.12	3014.3	2316.21	1.5	Si
SLV 5	-11036	0.47	1543.16	1618.55	3014.8	2316.67	1.5	Si
SLV 8	-11589	0.47	1543.16	1697.71	3107.35	2402.53	1.56	Si
SLV 7	-11592	0.47	1543.16	1698.14	3107.85	2403	1.56	Si
SLV 10	-12577	0.47	1543.16	1838.62	3271.7	2555.16	1.66	Si
SLV 9	-12580	0.47	1543.16	1839.04	3272.2	2555.62	1.66	Si

Verifica dei meccanismi locali di collasso con analisi cinematica lineare

forza di aggancio al piano = 5617 quota mezzera = 3.03 Wa = 0.05 Ta = 0.0855

Comb.	N top	N base	V orto	α0	M*	e*	α0*	aLim	Verifica
SLV 14	-800	-30880	704	4.902	1955.9	0.966	73.78113	16.97787	Si
SLV 13	-773	-31107	705	4.914	1955.2	0.966	73.90056	16.97787	Si
SLV 16	-746	-30874	708	4.927	1954.5	0.967	74.01446	16.97787	Si
SLV 15	-719	-31102	708	4.94	1953.8	0.968	74.13349	16.97787	Si
SLV 2	-557	-12011	-705	5.019	1950.1	0.975	74.84141	16.97787	Si
SLV 1	-530	-12238	-704	5.032	1949.6	0.976	74.95948	16.97787	Si
SLV 4	-503	-12005	-701	5.046	1949.1	0.977	75.08172	16.97787	Si
SLV 3	-475	-12233	-701	5.06	1948.6	0.978	75.1992	16.97787	Si
SLV 10	-779	-24278	207	4.96	1955.3	0.966	74.59932	11.37117	Si
SLV 9	-751	-24514	207	4.973	1954.6	0.967	74.7244	11.37117	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	26.191	SLU 81	Si
V_SLU	873.143	SLU 43	Si
PF_SLV	7.707	SLV 6	Si
V_SLV	12.006	SLV 11	Si
PFFP_SLV	0.889	SLV 2	No
R_SLV	4.346	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]

f_b: resistenza normalizzata a compressione in direzione orizzontale dei blocchi. [daN/m²]

f_{hk}: resistenza caratteristica a compressione della muratura utilizzata in direzione orizzontale. [daN/m²]

f_{vk0}: resistenza caratteristica a taglio in assenza di carichi verticali. [daN/m²]

f_{hmedia}: 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]

f_{v0}: 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 ammortamento o ingranamento secondo Circolare 7 21-01-19 §C8.7.1.3.1.1.

f_{vk,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]

t_{fv}: spessore di calcolo equivalente verticale di uno strato di rinforzo.

t_{fo}: spessore di calcolo equivalente orizzontale di uno strato di rinforzo.

E: modulo di elasticità longitudinale. [daN/m²]

ε_u: 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.

elim,conv / ε,CNR DT-200: dati relativi ai parametri per il calcolo della deformazione di progetto.

α_t: coefficiente che tiene conto della ridotta capacità estensionale delle fibre sollecitate a taglio secondo CNR-DT 215 §4.1.1.

α: coefficiente amplificativo tensione di distacco secondo CNR-DT 215 §3.1 ovvero secondo CNR-DT 200 R1/2013 §5.3.3.

elim,conv: deformazione limite convenzionale del rinforzo FRCC.

ε_{f,d}: deformazione di progetto del rinforzo FRCC ovvero CRM.

γ_{f,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 FRCC ovvero CRM.

spessore intonaco: spessore intonaco. [m]

tipo blocco fibrenet: tipo blocco muratura per verifica a taglio tipo Fibrenet.

Comb.: combinazione.



Sez.: sezione di verifica.

M: momento flettente nel piano. [daN*m]

N: sforzo normale. [daN]

em: deformazione della muratura.

em_u: deformazione elastica della muratura.

emu: 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
-7.545	-17.728	-1.53	0.47	2	-8.545	-17.728	-1.53	0.47	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb _u	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	3200000000	128000000	1.2

Materiale per FRMC

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim_conv / e_CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	α_t	α	elim_conv	ϵ_{fd}	$\gamma_{F,d}$	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 FRMC in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em _u	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 42	ini.	833.36	-1784	-0.0000853	0.0001872	0.0035	2		10722.86	10722.86	No	12.87	Si
SLU 42	fin.	-622.27	-1786	-0.000063	0.0001872	0.0035	2		10737.13	10737.13	No	17.25	Si
SLU 41	ini.	833.36	-1784	-0.0000853	0.0001872	0.0035	2		10722.86	10722.86	No	12.87	Si
SLU 41	fin.	-622.27	-1786	-0.000063	0.0001872	0.0035	2		10737.13	10737.13	No	17.25	Si
SLU 84	ini.	851.39	-2049	-0.0000872	0.0001872	0.0035	2		10722.86	10722.86	No	12.59	Si
SLU 84	fin.	-656.26	-2153	-0.0000666	0.0001872	0.0035	2		10737.13	10737.13	No	16.36	Si
SLU 83	ini.	851.39	-2049	-0.0000872	0.0001872	0.0035	2		10722.86	10722.86	No	12.59	Si
SLU 83	fin.	-656.26	-2153	-0.0000666	0.0001872	0.0035	2		10737.13	10737.13	No	16.36	Si
SLU 39	ini.	833.36	-1784	-0.0000853	0.0001872	0.0035	2		10722.86	10722.86	No	12.87	Si
SLU 39	fin.	-622.27	-1786	-0.000063	0.0001872	0.0035	2		10737.13	10737.13	No	17.25	Si
SLU 82	ini.	851.39	-2049	-0.0000872	0.0001872	0.0035	2		10722.86	10722.86	No	12.59	Si
SLU 82	fin.	-656.26	-2153	-0.0000666	0.0001872	0.0035	2		10737.13	10737.13	No	16.36	Si
SLU 40	ini.	833.36	-1784	-0.0000853	0.0001872	0.0035	2		10722.86	10722.86	No	12.87	Si
SLU 40	fin.	-622.27	-1786	-0.000063	0.0001872	0.0035	2		10737.13	10737.13	No	17.25	Si
SLU 81	ini.	851.39	-2049	-0.0000872	0.0001872	0.0035	2		10722.86	10722.86	No	12.59	Si
SLU 81	fin.	-656.26	-2153	-0.0000666	0.0001872	0.0035	2		10737.13	10737.13	No	16.36	Si
SLU 77	ini.	732.01	-1916	-0.0000746	0.0001872	0.0035	2		10722.86	10722.86	No	14.65	Si
SLU 77	fin.	-580.16	-2073	-0.0000587	0.0001872	0.0035	2		10737.13	10737.13	No	18.51	Si
SLU 78	ini.	732.01	-1916	-0.0000746	0.0001872	0.0035	2		10722.86	10722.86	No	14.65	Si
SLU 78	fin.	-580.16	-2073	-0.0000587	0.0001872	0.0035	2		10737.13	10737.13	No	18.51	Si



Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	833.36	-2896	2	0	1613	7930	13475	5100	9542	No	3.29	Si
SLU 39	fin.	-622.27	-1423	2	0	1613	7930	13475	5100	9543	No	6.71	Si
SLU 83	ini.	851.39	-2982	2	0	1653	7930	13475	5100	9583	No	3.21	Si
SLU 83	fin.	-656.26	-1487	2	0	1669	7930	13475	5100	9599	No	6.46	Si
SLU 84	ini.	851.39	-2982	2	0	1653	7930	13475	5100	9583	No	3.21	Si
SLU 84	fin.	-656.26	-1487	2	0	1669	7930	13475	5100	9599	No	6.46	Si
SLU 40	ini.	833.36	-2896	2	0	1613	7930	13475	5100	9542	No	3.29	Si
SLU 40	fin.	-622.27	-1423	2	0	1613	7930	13475	5100	9543	No	6.71	Si
SLU 81	ini.	851.39	-2982	2	0	1653	7930	13475	5100	9583	No	3.21	Si
SLU 81	fin.	-656.26	-1487	2	0	1669	7930	13475	5100	9599	No	6.46	Si
SLU 41	ini.	833.36	-2896	2	0	1613	7930	13475	5100	9542	No	3.29	Si
SLU 41	fin.	-622.27	-1423	2	0	1613	7930	13475	5100	9543	No	6.71	Si
SLU 82	ini.	851.39	-2982	2	0	1653	7930	13475	5100	9583	No	3.21	Si
SLU 82	fin.	-656.26	-1487	2	0	1669	7930	13475	5100	9599	No	6.46	Si
SLU 78	ini.	732.01	-2590	2	0	1633	7930	13475	5100	9563	No	3.69	Si
SLU 78	fin.	-580.16	-1299	2	0	1657	7930	13475	5100	9587	No	7.38	Si
SLU 42	ini.	833.36	-2896	2	0	1613	7930	13475	5100	9542	No	3.29	Si
SLU 42	fin.	-622.27	-1423	2	0	1613	7930	13475	5100	9543	No	6.71	Si
SLU 77	ini.	732.01	-2590	2	0	1633	7930	13475	5100	9563	No	3.69	Si
SLU 77	fin.	-580.16	-1299	2	0	1657	7930	13475	5100	9587	No	7.38	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRMC in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-1622.82	-724	-0.0001687	0.0002807	0.0035	2		15648.46	15648.46		9.64	Si
SLV 13	fin.	792.7	-2251	-0.0000803	0.0002807	0.0035	2		15635.95	15635.95		19.72	Si
SLV 5	ini.	-1881.77	-3321	-0.0001974	0.0002807	0.0035	2		15648.46	15648.46		8.32	Si
SLV 5	fin.	608.13	-3532	-0.0000612	0.0002807	0.0035	2		15635.95	15635.95		25.71	Si
SLV 3	ini.	2038.17	-1876	-0.0002152	0.0002807	0.0035	2		15635.95	15635.95		7.67	Si
SLV 3	fin.	-1341.63	-944	-0.0001381	0.0002807	0.0035	2		15648.46	15648.46		11.66	Si
SLV 8	ini.	3325.31	117	-0.0003703	0.0002807	0.0035	2		15635.95	15635.95		4.7	Si
SLV 8	fin.	-1718.65	624	-0.0001792	0.0002807	0.0035	2		15648.46	15648.46		9.11	Si
SLV 10	ini.	-2167.06	-2623	-0.0002297	0.0002807	0.0035	2		15648.46	15648.46		7.22	Si
SLV 10	fin.	926.08	-3319	-0.0000941	0.0002807	0.0035	2		15635.95	15635.95		16.88	Si
SLV 11	ini.	2283.16	720	-0.0002433	0.0002807	0.0035	2		15635.95	15635.95		6.85	Si
SLV 11	fin.	-1152.48	328	-0.0001179	0.0002807	0.0035	2		15648.46	15648.46		13.58	Si
SLV 9	ini.	-2545.49	-2670	-0.0002738	0.0002807	0.0035	2		15648.46	15648.46		6.15	Si
SLV 9	fin.	1050.19	-3574	-0.0001072	0.0002807	0.0035	2		15635.95	15635.95		14.89	Si
SLV 7	ini.	2946.88	69	-0.0003227	0.0002807	0.0035	2		15635.95	15635.95		5.31	Si
SLV 7	fin.	-1594.54	369	-0.0001656	0.0002807	0.0035	2		15648.46	15648.46		9.81	Si
SLV 12	ini.	2661.59	768	-0.0002879	0.0002807	0.0035	2		15635.95	15635.95		5.87	Si
SLV 12	fin.	-1276.59	583	-0.0001311	0.0002807	0.0035	2		15648.46	15648.46		12.26	Si
SLV 4	ini.	2402.64	-1830	-0.0002572	0.0002807	0.0035	2		15635.95	15635.95		6.51	Si
SLV 4	fin.	-1461.16	-698	-0.000151	0.0002807	0.0035	2		15648.46	15648.46		10.71	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	2283.16	-3036	2	0	1812	7930	20213	5100	9742		3.21	Si
SLV 11	fin.	-1152.48	-3732	2	0	1892	7930	20213	5100	9822		2.63	Si
SLV 12	ini.	2661.59	-3724	2	0	1802	7930	20213	5100	9732		2.61	Si
SLV 12	fin.	-1276.59	-4446	2	0	1840	7930	20213	5100	9770		2.2	Si
SLV 2	ini.	954.05	-4211	2	0	2446	7930	20213	5100	10375		2.46	Si
SLV 2	fin.	-800.36	-2576	2	0	2289	7930	20213	5100	10219		3.97	Si
SLV 10	ini.	-2167.06	2216	2	0	2411	7930	20213	5100	10340		4.67	Si
SLV 10	fin.	926.08	3936	2	0	2517	7930	20213	5100	10447		2.65	Si
SLV 9	ini.	-2545.49	2905	2	0	2418	7930	20213	5100	10348		3.56	Si
SLV 9	fin.	1050.19	4650	2	0	2555	7930	20213	5100	10485		2.25	Si
SLV 7	ini.	2946.88	-5048	2	0	1943	7930	20213	5100	9873		1.96	Si
SLV 7	fin.	-1594.54	-5390	2	0	1884	7930	20213	5100	9813		1.82	Si
SLV 3	ini.	2038.17	-5330	2	0	2290	7930	20213	5100	10220		1.92	Si
SLV 3	fin.	-1341.63	-4403	2	0	2131	7930	20213	5100	10061		2.29	Si
SLV 8	ini.	3325.31	-5737	2	0	1934	7930	20213	5100	9863		1.72	Si
SLV 8	fin.	-1718.65	-6104	2	0	1832	7930	20213	5100	9762		1.6	Si
SLV 13	ini.	-1622.82	3161	2	0	2092	7930	20213	5100	10021		3.17	Si
SLV 13	fin.	792.7	3637	2	0	2352	7930	20213	5100	10281		2.83	Si
SLV 4	ini.	2402.64	-5993	2	0	2283	7930	20213	5100	10212		1.7	Si
SLV 4	fin.	-1461.16	-5090	2	0	2087	7930	20213	5100	10017		1.97	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.702	SLV 8	Si
V_SLV	1.599	SLV 8	Si
PF_SLU	12.595	SLU 81	Si
V_SLU	3.214	SLU 81	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
1.227	-17.729	-1.53	0.47	2	0.227	-17.728	-1.53	0.47	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	α _t	α	elim,conv	e,f,d	γ _{f,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 FRM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 39	ini.	-338.21	-757	-0.0000339	0.0001872	0.0035	2		10737.13	10737.13	No	31.75	Si
SLU 39	fin.	827.63	-932	-0.0000846	0.0001872	0.0035	2		10722.86	10722.86	No	12.96	Si
SLU 42	ini.	-338.21	-757	-0.0000339	0.0001872	0.0035	2		10737.13	10737.13	No	31.75	Si
SLU 42	fin.	827.63	-932	-0.0000846	0.0001872	0.0035	2		10722.86	10722.86	No	12.96	Si
SLU 40	ini.	-338.21	-757	-0.0000339	0.0001872	0.0035	2		10737.13	10737.13	No	31.75	Si
SLU 40	fin.	827.63	-932	-0.0000846	0.0001872	0.0035	2		10722.86	10722.86	No	12.96	Si
SLU 84	ini.	-333.67	-948	-0.0000334	0.0001872	0.0035	2		10737.13	10737.13	No	32.18	Si
SLU 84	fin.	832.68	-1050	-0.0000852	0.0001872	0.0035	2		10722.86	10722.86	No	12.88	Si
SLU 78	ini.	-279.93	-932	-0.000028	0.0001872	0.0035	2		10737.13	10737.13	No	38.36	Si
SLU 78	fin.	707.33	-969	-0.000072	0.0001872	0.0035	2		10722.86	10722.86	No	15.16	Si
SLU 41	ini.	-338.21	-757	-0.0000339	0.0001872	0.0035	2		10737.13	10737.13	No	31.75	Si
SLU 41	fin.	827.63	-932	-0.0000846	0.0001872	0.0035	2		10722.86	10722.86	No	12.96	Si
SLU 81	ini.	-333.67	-948	-0.0000334	0.0001872	0.0035	2		10737.13	10737.13	No	32.18	Si
SLU 81	fin.	832.68	-1050	-0.0000852	0.0001872	0.0035	2		10722.86	10722.86	No	12.88	Si
SLU 77	ini.	-279.93	-932	-0.000028	0.0001872	0.0035	2		10737.13	10737.13	No	38.36	Si
SLU 77	fin.	707.33	-969	-0.000072	0.0001872	0.0035	2		10722.86	10722.86	No	15.16	Si
SLU 83	ini.	-333.67	-948	-0.0000334	0.0001872	0.0035	2		10737.13	10737.13	No	32.18	Si
SLU 83	fin.	832.68	-1050	-0.0000852	0.0001872	0.0035	2		10722.86	10722.86	No	12.88	Si
SLU 82	ini.	-333.67	-948	-0.0000334	0.0001872	0.0035	2		10737.13	10737.13	No	32.18	Si
SLU 82	fin.	832.68	-1050	-0.0000852	0.0001872	0.0035	2		10722.86	10722.86	No	12.88	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRM 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.	-338.21	1581	2	0	1443	7930	13475	5100	9373	No	5.93	Si
SLU 42	fin.	827.63	2671	2	0	1473	7930	13475	5100	9403	No	3.52	Si
SLU 40	ini.	-338.21	1581	2	0	1443	7930	13475	5100	9373	No	5.93	Si
SLU 40	fin.	827.63	2671	2	0	1473	7930	13475	5100	9403	No	3.52	Si
SLU 39	ini.	-338.21	1581	2	0	1443	7930	13475	5100	9373	No	5.93	Si
SLU 39	fin.	827.63	2671	2	0	1473	7930	13475	5100	9403	No	3.52	Si
SLU 84	ini.	-333.67	1680	2	0	1476	7930	13475	5100	9406	No	5.6	Si
SLU 84	fin.	832.68	2718	2	0	1494	7930	13475	5100	9423	No	3.47	Si
SLU 81	ini.	-333.67	1680	2	0	1476	7930	13475	5100	9406	No	5.6	Si
SLU 81	fin.	832.68	2718	2	0	1494	7930	13475	5100	9423	No	3.47	Si
SLU 78	ini.	-279.93	1487	2	0	1473	7930	13475	5100	9403	No	6.32	Si
SLU 78	fin.	707.33	2339	2	0	1480	7930	13475	5100	9409	No	4.02	Si
SLU 83	ini.	-333.67	1680	2	0	1476	7930	13475	5100	9406	No	5.6	Si
SLU 83	fin.	832.68	2718	2	0	1494	7930	13475	5100	9423	No	3.47	Si
SLU 82	ini.	-333.67	1680	2	0	1476	7930	13475	5100	9406	No	5.6	Si
SLU 82	fin.	832.68	2718	2	0	1494	7930	13475	5100	9423	No	3.47	Si
SLU 77	ini.	-279.93	1487	2	0	1473	7930	13475	5100	9403	No	6.32	Si
SLU 77	fin.	707.33	2339	2	0	1480	7930	13475	5100	9409	No	4.02	Si
SLU 41	ini.	-338.21	1581	2	0	1443	7930	13475	5100	9373	No	5.93	Si
SLU 41	fin.	827.63	2671	2	0	1473	7930	13475	5100	9403	No	3.52	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1047.93	93	-0.0001069	0.0002807	0.0035	2		15648.46	15648.46		14.93	Si
SLV 16	fin.	1977.78	-1006	-0.0002083	0.0002807	0.0035	2		15635.95	15635.95		7.91	Si
SLV 15	ini.	-1159.98	370	-0.0001187	0.0002807	0.0035	2		15648.46	15648.46		13.49	Si
SLV 15	fin.	2349.35	-951	-0.000251	0.0002807	0.0035	2		15635.95	15635.95		6.66	Si
SLV 5	ini.	1003.05	-2564	-0.0001022	0.0002807	0.0035	2		15635.95	15635.95		15.59	Si
SLV 5	fin.	-1698.61	-2100	-0.000177	0.0002807	0.0035	2		15648.46	15648.46		9.21	Si
SLV 2	ini.	886.32	-1754	-0.00009	0.0002807	0.0035	2		15635.95	15635.95		17.64	Si
SLV 2	fin.	-1624.6	-302	-0.0001688	0.0002807	0.0035	2		15648.46	15648.46		9.63	Si



Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-1276.72	1180	-0.0001311	0.0002807	0.0035	2		15648.46	15648.46		12.26	Si
SLV 12	fin.	2423.36	848	-0.0002596	0.0002807	0.0035	2		15635.95	15635.95		6.45	Si
SLV 6	ini.	-1119.4	-2852	-0.0001145	0.0002807	0.0035	2		15635.95	15635.95		13.97	Si
SLV 6	fin.	-2084.4	-2158	-0.0002202	0.0002807	0.0035	2		15648.46	15648.46		7.51	Si
SLV 7	ini.	-992.37	1258	-0.000101	0.0002807	0.0035	2		15648.46	15648.46		15.77	Si
SLV 7	fin.	2067.38	1435	-0.0002185	0.0002807	0.0035	2		15635.95	15635.95		7.56	Si
SLV 11	ini.	-1393.06	1468	-0.0001436	0.0002807	0.0035	2		15648.46	15648.46		11.23	Si
SLV 11	fin.	2809.15	905	-0.0003058	0.0002807	0.0035	2		15635.95	15635.95		5.57	Si
SLV 8	ini.	-876.03	970	-0.0000888	0.0002807	0.0035	2		15648.46	15648.46		17.86	Si
SLV 8	fin.	1681.58	1377	-0.0001753	0.0002807	0.0035	2		15635.95	15635.95		9.3	Si
SLV 10	ini.	718.71	-2642	-0.0000726	0.0002807	0.0035	2		15635.95	15635.95		21.76	Si
SLV 10	fin.	-1342.62	-2687	-0.0001382	0.0002807	0.0035	2		15648.46	15648.46		11.66	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	-1159.98	5212	2	0	1884	7930	20213	5100	9813		1.88	Si
SLV 15	fin.	2349.35	5720	2	0	2132	7930	20213	5100	10062		1.76	Si
SLV 2	ini.	886.32	-3485	2	0	2270	7930	20213	5100	10200		2.93	Si
SLV 2	fin.	-1624.6	-3233	2	0	2014	7930	20213	5100	9944		3.08	Si
SLV 8	ini.	-876.03	3092	2	0	1759	7930	20213	5100	9689		3.13	Si
SLV 8	fin.	1681.58	2086	2	0	1669	7930	20213	5100	9599		4.6	Si
SLV 6	ini.	1119.4	-3873	2	0	2446	7930	20213	5100	10376		2.68	Si
SLV 6	fin.	-2084.4	-2388	2	0	2337	7930	20213	5100	10266		4.3	Si
SLV 11	ini.	-1393.06	5600	2	0	1649	7930	20213	5100	9578		1.71	Si
SLV 11	fin.	2809.15	4874	2	0	1773	7930	20213	5100	9703		1.99	Si
SLV 16	ini.	-1047.93	4500	2	0	1939	7930	20213	5100	9868		2.19	Si
SLV 16	fin.	1977.78	5036	2	0	2142	7930	20213	5100	10072		2	Si
SLV 13	ini.	-561.36	3122	2	0	2101	7930	20213	5100	10031		3.21	Si
SLV 13	fin.	1219.56	4378	2	0	2313	7930	20213	5100	10242		2.34	Si
SLV 7	ini.	-992.37	3831	2	0	1696	7930	20213	5100	9626		2.51	Si
SLV 7	fin.	2067.38	2796	2	0	1656	7930	20213	5100	9586		3.43	Si
SLV 14	ini.	-449.3	2410	2	0	2151	7930	20213	5100	10080		4.18	Si
SLV 14	fin.	847.99	3694	2	0	2322	7930	20213	5100	10251		2.78	Si
SLV 12	ini.	-1276.72	4861	2	0	1713	7930	20213	5100	9643		1.98	Si
SLV 12	fin.	2423.36	4164	2	0	1785	7930	20213	5100	9715		2.33	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.566	SLV 11	Si
V_SLV	1.71	SLV 11	Si
PF_SLU	12.878	SLU 81	Si
V_SLU	3.466	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
1.227	-17.729	0.87	1.07	0.2	0.227	-17.728	0.87	1.07	0.2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRMC

Materiale	Fu Verticale	Fu Orizzontale	t _{fv}	t _{fo}	E	ε _u	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / ε _c CNR DT-200						CRM / Fibrenet?				
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	α _t	α	elim,conv	ε _{f,d}	γ _{f,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 FRMC in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	ε _m	ε _{m_}	ε _{mu}	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-111.34	-307	-0.001909	0.0001872	0.0035	0.2		152.15	152.15	No	1.37	Si
SLU 75	fin.	-78.58	-71	-0.0011294	0.0001872	0.0035	0.2		152.15	152.15	No	1.94	Si
SLU 82	ini.	-123.4	-353	-0.0023189	0.0001872	0.0035	0.2		152.15	152.15	No	1.23	Si
SLU 82	fin.	-82.49	-58	-0.0012074	0.0001872	0.0035	0.2		152.15	152.15	No	1.84	Si
SLU 42	ini.	-113.69	-340	-0.0019819	0.0001872	0.0035	0.2		152.15	152.15	No	1.34	Si
SLU 42	fin.	-70.56	-29	-0.0009777	0.0001872	0.0035	0.2		152.15	152.15	No	2.16	Si
SLU 40	ini.	-113.69	-340	-0.0019819	0.0001872	0.0035	0.2		152.15	152.15	No	1.34	Si



Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 40	fin.	-70.56	-29	-0.0009777	0.0001872	0.0035	0.2		152.15	152.15	No	2.16	Si
SLU 41	ini.	-113.69	-340	-0.0019819	0.0001872	0.0035	0.2		152.15	152.15	No	1.34	Si
SLU 41	fin.	-70.56	-29	-0.0009777	0.0001872	0.0035	0.2		152.15	152.15	No	2.16	Si
SLU 84	ini.	-123.4	-353	-0.0023189	0.0001872	0.0035	0.2		152.15	152.15	No	1.23	Si
SLU 84	fin.	-82.49	-58	-0.0012074	0.0001872	0.0035	0.2		152.15	152.15	No	1.84	Si
SLU 83	ini.	-123.4	-353	-0.0023189	0.0001872	0.0035	0.2		152.15	152.15	No	1.23	Si
SLU 83	fin.	-82.49	-58	-0.0012074	0.0001872	0.0035	0.2		152.15	152.15	No	1.84	Si
SLU 39	ini.	-113.69	-340	-0.0019819	0.0001872	0.0035	0.2		152.15	152.15	No	1.34	Si
SLU 39	fin.	-70.56	-29	-0.0009777	0.0001872	0.0035	0.2		152.15	152.15	No	2.16	Si
SLU 81	ini.	-123.4	-353	-0.0023189	0.0001872	0.0035	0.2		152.15	152.15	No	1.23	Si
SLU 81	fin.	-82.49	-58	-0.0012074	0.0001872	0.0035	0.2		152.15	152.15	No	1.84	Si
SLU 77	ini.	-111.34	-307	-0.001909	0.0001872	0.0035	0.2		152.15	152.15	No	1.37	Si
SLU 77	fin.	-78.58	-71	-0.0011294	0.0001872	0.0035	0.2		152.15	152.15	No	1.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	-111.34	673	0.2	0	120	1586	1348	510	1706	No	2.54	Si
SLU 75	fin.	-78.58	-523	0.2	0	96	1586	1348	510	1682	No	3.21	Si
SLU 79	ini.	-111.34	673	0.2	0	120	1586	1348	510	1706	No	2.54	Si
SLU 79	fin.	-78.58	-523	0.2	0	96	1586	1348	510	1682	No	3.21	Si
SLU 77	ini.	-111.34	673	0.2	0	120	1586	1348	510	1706	No	2.54	Si
SLU 77	fin.	-78.58	-523	0.2	0	96	1586	1348	510	1682	No	3.21	Si
SLU 80	ini.	-111.34	673	0.2	0	120	1586	1348	510	1706	No	2.54	Si
SLU 80	fin.	-78.58	-523	0.2	0	96	1586	1348	510	1682	No	3.21	Si
SLU 76	ini.	-111.34	673	0.2	0	120	1586	1348	510	1706	No	2.54	Si
SLU 76	fin.	-78.58	-523	0.2	0	96	1586	1348	510	1682	No	3.21	Si
SLU 81	ini.	-123.4	739	0.2	0	124	1586	1348	510	1710	No	2.31	Si
SLU 81	fin.	-82.49	-552	0.2	0	94	1586	1348	510	1680	No	3.04	Si
SLU 83	ini.	-123.4	739	0.2	0	124	1586	1348	510	1710	No	2.31	Si
SLU 83	fin.	-82.49	-552	0.2	0	94	1586	1348	510	1680	No	3.04	Si
SLU 82	ini.	-123.4	739	0.2	0	124	1586	1348	510	1710	No	2.31	Si
SLU 82	fin.	-82.49	-552	0.2	0	94	1586	1348	510	1680	No	3.04	Si
SLU 78	ini.	-111.34	673	0.2	0	120	1586	1348	510	1706	No	2.54	Si
SLU 78	fin.	-78.58	-523	0.2	0	96	1586	1348	510	1682	No	3.21	Si
SLU 84	ini.	-123.4	739	0.2	0	124	1586	1348	510	1710	No	2.31	Si
SLU 84	fin.	-82.49	-552	0.2	0	94	1586	1348	510	1680	No	3.04	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRMC in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-155.93	-787	-0.0035296	0.0002807	0.0035	0.2		156.73	156.73		1.01	Si
SLV 11	fin.	45.88	618	-0.000539	0.0002807	0.0035	0.2		155.45	155.45		3.39	Si
SLV 6	ini.	20.3	448	-0.0002133	0.0002807	0.0035	0.2		155.45	155.45		7.66	Si
SLV 6	fin.	-154.3	-763	-0.0034536	0.0002807	0.0035	0.2		156.73	156.73		1.02	Si
SLV 16	ini.	-131.52	-603	-0.002416	0.0002807	0.0035	0.2		156.73	156.73		1.19	Si
SLV 16	fin.	13.18	399	-0.0001351	0.0002807	0.0035	0.2		155.45	155.45		11.79	Si
SLV 2	ini.	8.46	351	-0.0000855	0.0002807	0.0035	0.2		155.45	155.45		18.36	Si
SLV 2	fin.	-135.9	-640	-0.0025909	0.0002807	0.0035	0.2		156.73	156.73		1.15	Si
SLV 7	ini.	-125.92	-586	-0.0022114	0.0002807	0.0035	0.2		156.73	156.73		1.24	Si
SLV 7	fin.	15.06	402	-0.0001554	0.0002807	0.0035	0.2		155.45	155.45		10.32	Si
SLV 15	ini.	-144.09	-690	-0.0029578	0.0002807	0.0035	0.2		156.73	156.73		1.09	Si
SLV 15	fin.	27.48	496	-0.0002969	0.0002807	0.0035	0.2		155.45	155.45		5.66	Si
SLV 5	ini.	7.25	358	-0.0000729	0.0002807	0.0035	0.2		155.45	155.45		21.45	Si
SLV 5	fin.	-139.46	-662	-0.0027437	0.0002807	0.0035	0.2		156.73	156.73		1.12	Si
SLV 1	ini.	-4.11	264	-0.0000406	0.0002807	0.0035	0.2		156.73	156.73		38.14	Si
SLV 1	fin.	-121.6	-543	-0.0020672	0.0002807	0.0035	0.2		156.73	156.73		1.29	Si
SLV 10	ini.	-9.71	247	-0.0000976	0.0002807	0.0035	0.2		156.73	156.73		16.14	Si
SLV 10	fin.	-123.49	-547	-0.0021286	0.0002807	0.0035	0.2		156.73	156.73		1.27	Si
SLV 12	ini.	-142.88	-697	-0.0029	0.0002807	0.0035	0.2		156.73	156.73		1.1	Si
SLV 12	fin.	31.03	518	-0.0003405	0.0002807	0.0035	0.2		155.45	155.45		5.01	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	7.25	59	0.2	0	71	1586	2021	510	1657		28.26	Si
SLV 5	fin.	-139.46	-767	0.2	0	198	1586	2021	510	1784		2.33	Si
SLV 2	ini.	8.46	50	0.2	0	72	1586	2021	510	1658		33.28	Si
SLV 2	fin.	-135.9	-747	0.2	0	196	1586	2021	510	1782		2.39	Si
SLV 10	ini.	-9.71	144	0.2	0	93	1586	2021	510	1679		11.65	Si
SLV 10	fin.	-123.49	-693	0.2	0	188	1586	2021	510	1774		2.56	Si
SLV 6	ini.	20.3	-3	0.2	0	44	1586	2021	510	1630		600.46	Si
SLV 6	fin.	-154.3	-839	0.2	0	207	1586	2021	510	1792		2.14	Si
SLV 11	ini.	-155.93	842	0.2	0	208	1586	2021	510	1794		2.13	Si
SLV 11	fin.	45.88	122	0.2	0	0	1586	2021	510	1586		12.96	Si
SLV 1	ini.	-4.11	109	0.2	0	90	1586	2021	510	1676		15.39	Si
SLV 1	fin.	-121.6	-678	0.2	0	188	1586	2021	510	1774		2.62	Si
SLV 15	ini.	-144.09	789	0.2	0	200	1586	2021	510	1786		2.26	Si
SLV 15	fin.	27.48	31	0.2	0	19	1586	2021	510	1605		52.12	Si
SLV 12	ini.	-142.88	780	0.2	0	201	1586	2021	510	1787		2.29	Si
SLV 12	fin.	31.03	51	0.2	0	0	1586	2021	510	1586		31.16	Si
SLV 16	ini.	-131.52	730	0.2	0	193	1586	2021	510	1779		2.44	Si
SLV 16	fin.	13.18	-38	0.2	0	60	1586	2021	510	1646		43.24	Si
SLV 7	ini.	-125.92	695	0.2	0	192	1586	2021	510	1778		2.56	Si
SLV 7	fin.	15.06	-23	0.2	0	59	1586	2021	510	1645		70.44	Si



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	1.005	SLV 11	Si
V_SLV	2.132	SLV 11	Si
PF_SLU	1.233	SLU 81	Si
V_SLU	2.315	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
-6.101	-8.718	-1.53	0.47	2	-7.101	-8.718	-1.53	0.47	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fhk	fvk0	fhmmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,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	elim,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 FRM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	272.42	-2095	-0.0000272	0.0001872	0.0035	2		10722.86	10722.86	No	39.36	Si
SLU 81	fin.	701.48	-2111	-0.0000714	0.0001872	0.0035	2		10722.86	10722.86	No	15.29	Si
SLU 83	ini.	272.42	-2095	-0.0000272	0.0001872	0.0035	2		10722.86	10722.86	No	39.36	Si
SLU 83	fin.	701.48	-2111	-0.0000714	0.0001872	0.0035	2		10722.86	10722.86	No	15.29	Si
SLU 75	ini.	206.54	-1961	-0.0000206	0.0001872	0.0035	2		10722.86	10722.86	No	51.92	Si
SLU 75	fin.	689.84	-2020	-0.0000701	0.0001872	0.0035	2		10722.86	10722.86	No	15.54	Si
SLU 84	ini.	272.42	-2095	-0.0000272	0.0001872	0.0035	2		10722.86	10722.86	No	39.36	Si
SLU 84	fin.	701.48	-2111	-0.0000714	0.0001872	0.0035	2		10722.86	10722.86	No	15.29	Si
SLU 80	ini.	206.54	-1961	-0.0000206	0.0001872	0.0035	2		10722.86	10722.86	No	51.92	Si
SLU 80	fin.	689.84	-2020	-0.0000701	0.0001872	0.0035	2		10722.86	10722.86	No	15.54	Si
SLU 79	ini.	206.54	-1961	-0.0000206	0.0001872	0.0035	2		10722.86	10722.86	No	51.92	Si
SLU 79	fin.	689.84	-2020	-0.0000701	0.0001872	0.0035	2		10722.86	10722.86	No	15.54	Si
SLU 76	ini.	206.54	-1961	-0.0000206	0.0001872	0.0035	2		10722.86	10722.86	No	51.92	Si
SLU 76	fin.	689.84	-2020	-0.0000701	0.0001872	0.0035	2		10722.86	10722.86	No	15.54	Si
SLU 77	ini.	206.54	-1961	-0.0000206	0.0001872	0.0035	2		10722.86	10722.86	No	51.92	Si
SLU 77	fin.	689.84	-2020	-0.0000701	0.0001872	0.0035	2		10722.86	10722.86	No	15.54	Si
SLU 78	ini.	206.54	-1961	-0.0000206	0.0001872	0.0035	2		10722.86	10722.86	No	51.92	Si
SLU 78	fin.	689.84	-2020	-0.0000701	0.0001872	0.0035	2		10722.86	10722.86	No	15.54	Si
SLU 82	ini.	272.42	-2095	-0.0000272	0.0001872	0.0035	2		10722.86	10722.86	No	39.36	Si
SLU 82	fin.	701.48	-2111	-0.0000714	0.0001872	0.0035	2		10722.86	10722.86	No	15.29	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRM 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.	206.54	-35	2	0	1640	7930	13475	5100	9570	No	272.9	Si
SLU 73	fin.	689.84	1703	2	0	1649	7930	13475	5100	9579	No	5.63	Si
SLU 82	ini.	272.42	-231	2	0	1661	7930	13475	5100	9590	No	41.56	Si
SLU 82	fin.	701.48	1726	2	0	1663	7930	13475	5100	9593	No	5.56	Si
SLU 81	ini.	272.42	-231	2	0	1661	7930	13475	5100	9590	No	41.56	Si
SLU 81	fin.	701.48	1726	2	0	1663	7930	13475	5100	9593	No	5.56	Si
SLU 84	ini.	272.42	-231	2	0	1661	7930	13475	5100	9590	No	41.56	Si
SLU 84	fin.	701.48	1726	2	0	1663	7930	13475	5100	9593	No	5.56	Si
SLU 75	ini.	206.54	-35	2	0	1640	7930	13475	5100	9570	No	272.9	Si
SLU 75	fin.	689.84	1703	2	0	1649	7930	13475	5100	9579	No	5.63	Si
SLU 78	ini.	206.54	-35	2	0	1640	7930	13475	5100	9570	No	272.9	Si
SLU 78	fin.	689.84	1703	2	0	1649	7930	13475	5100	9579	No	5.63	Si
SLU 80	ini.	206.54	-35	2	0	1640	7930	13475	5100	9570	No	272.9	Si
SLU 80	fin.	689.84	1703	2	0	1649	7930	13475	5100	9579	No	5.63	Si
SLU 74	ini.	206.54	-35	2	0	1640	7930	13475	5100	9570	No	272.9	Si
SLU 74	fin.	689.84	1703	2	0	1649	7930	13475	5100	9579	No	5.63	Si
SLU 83	ini.	272.42	-231	2	0	1661	7930	13475	5100	9590	No	41.56	Si
SLU 83	fin.	701.48	1726	2	0	1663	7930	13475	5100	9593	No	5.56	Si
SLU 77	ini.	206.54	-35	2	0	1640	7930	13475	5100	9570	No	272.9	Si
SLU 77	fin.	689.84	1703	2	0	1649	7930	13475	5100	9579	No	5.63	Si



Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-1897.28	-1552	-0.0001991	0.0002807	0.0035	2		15648.46	15648.46		8.25	Si
SLV 16	fin.	1917.14	-3456	-0.0002015	0.0002807	0.0035	2		15635.95	15635.95		8.16	Si
SLV 15	ini.	-1565.84	-1476	-0.0001624	0.0002807	0.0035	2		15648.46	15648.46		9.99	Si
SLV 15	fin.	1724.15	-3037	-0.00018	0.0002807	0.0035	2		15635.95	15635.95		9.07	Si
SLV 2	ini.	1694.65	-1142	-0.0001767	0.0002807	0.0035	2		15635.95	15635.95		9.23	Si
SLV 2	fin.	-703.08	203	-0.0000709	0.0002807	0.0035	2		15648.46	15648.46		22.26	Si
SLV 11	ini.	-1965.94	-5567	-0.0002068	0.0002807	0.0035	2		15648.46	15648.46		7.96	Si
SLV 11	fin.	598.22	-6009	-0.0000602	0.0002807	0.0035	2		15635.95	15635.95		26.14	Si
SLV 6	ini.	2094.75	2948	-0.0002216	0.0002807	0.0035	2		15635.95	15635.95		7.46	Si
SLV 6	fin.	422.85	3174	-0.0000423	0.0002807	0.0035	2		15635.95	15635.95		36.98	Si
SLV 12	ini.	-2310.07	-5645	-0.0002462	0.0002807	0.0035	2		15648.46	15648.46		6.77	Si
SLV 12	fin.	798.58	-6444	-0.0000809	0.0002807	0.0035	2		15635.95	15635.95		19.58	Si
SLV 14	ini.	-800.39	1241	-0.000081	0.0002807	0.0035	2		15648.46	15648.46		19.55	Si
SLV 14	fin.	2052.41	-647	-0.0002168	0.0002807	0.0035	2		15635.95	15635.95		7.62	Si
SLV 1	ini.	2026.09	-1067	-0.0002138	0.0002807	0.0035	2		15635.95	15635.95		7.72	Si
SLV 1	fin.	-896.07	622	-0.0000909	0.0002807	0.0035	2		15648.46	15648.46		17.46	Si
SLV 5	ini.	2438.88	3026	-0.0002615	0.0002807	0.0035	2		15635.95	15635.95		6.41	Si
SLV 5	fin.	222.49	3610	-0.0000221	0.0002807	0.0035	2		15635.95	15635.95		70.28	Si
SLV 13	ini.	-468.94	1316	-0.000047	0.0002807	0.0035	2		15648.46	15648.46		33.37	Si
SLV 13	fin.	1859.43	-228	-0.000195	0.0002807	0.0035	2		15635.95	15635.95		8.41	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRM 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.	597.76	-3349	2	0	2608	7930	20213	5100	10538		3.15	Si
SLV 4	fin.	-838.36	-1481	2	0	2408	7930	20213	5100	10338		6.98	Si
SLV 11	ini.	-1965.94	2228	2	0	2835	7930	20213	5100	10765		4.83	Si
SLV 11	fin.	598.22	4312	2	0	2893	7930	20213	5100	10823		2.51	Si
SLV 2	ini.	1694.65	-4014	2	0	2166	7930	20213	5100	10096		2.52	Si
SLV 2	fin.	-703.08	-2883	2	0	1917	7930	20213	5100	9847		3.42	Si
SLV 3	ini.	929.2	-4203	2	0	2597	7930	20213	5100	10527		2.5	Si
SLV 3	fin.	-1031.34	-2352	2	0	2341	7930	20213	5100	10271		4.37	Si
SLV 16	ini.	-1897.28	5378	2	0	2236	7930	20213	5100	10166		1.89	Si
SLV 16	fin.	1917.14	6282	2	0	2538	7930	20213	5100	10468		1.67	Si
SLV 15	ini.	-1565.84	4524	2	0	2224	7930	20213	5100	10153		2.24	Si
SLV 15	fin.	1724.15	5411	2	0	2475	7930	20213	5100	10404		1.92	Si
SLV 13	ini.	-468.94	3860	2	0	1683	7930	20213	5100	9613		2.49	Si
SLV 13	fin.	1859.43	4009	2	0	2000	7930	20213	5100	9930		2.48	Si
SLV 12	ini.	-2310.07	3115	2	0	2845	7930	20213	5100	10775		3.46	Si
SLV 12	fin.	798.58	5217	2	0	2950	7930	20213	5100	10879		2.09	Si
SLV 14	ini.	-800.39	4713	2	0	1700	7930	20213	5100	9630		2.04	Si
SLV 14	fin.	2052.41	4880	2	0	2078	7930	20213	5100	10007		2.05	Si
SLV 1	ini.	2026.09	-4868	2	0	2153	7930	20213	5100	10082		2.07	Si
SLV 1	fin.	-896.07	-3754	2	0	1832	7930	20213	5100	9762		2.6	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	6.411	SLV 5	Si
V_SLV	1.666	SLV 16	Si
PF_SLU	15.286	SLU 81	Si
V_SLU	5.556	SLU 81	Si

Trave di accoppiamento 9

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-0.141	-8.718	-1.53	0.47	2	-1.141	-8.718	-1.53	0.47	2	1	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fmk	fvk0	fmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,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	elim,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 FRMC in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	777.14	-1273	-0.0000793	0.0001872	0.0035	2		10722.86	10722.86	No	13.8	Si
SLU 84	fin.	343.47	-1460	-0.0000344	0.0001872	0.0035	2		10722.86	10722.86	No	31.22	Si
SLU 77	ini.	743.45	-1241	-0.0000758	0.0001872	0.0035	2		10722.86	10722.86	No	14.42	Si
SLU 77	fin.	277.42	-1354	-0.0000277	0.0001872	0.0035	2		10722.86	10722.86	No	38.65	Si
SLU 79	ini.	743.45	-1241	-0.0000758	0.0001872	0.0035	2		10722.86	10722.86	No	14.42	Si
SLU 79	fin.	277.42	-1354	-0.0000277	0.0001872	0.0035	2		10722.86	10722.86	No	38.65	Si
SLU 75	ini.	743.45	-1241	-0.0000758	0.0001872	0.0035	2		10722.86	10722.86	No	14.42	Si
SLU 75	fin.	277.42	-1354	-0.0000277	0.0001872	0.0035	2		10722.86	10722.86	No	38.65	Si
SLU 76	ini.	743.45	-1241	-0.0000758	0.0001872	0.0035	2		10722.86	10722.86	No	14.42	Si
SLU 76	fin.	277.42	-1354	-0.0000277	0.0001872	0.0035	2		10722.86	10722.86	No	38.65	Si
SLU 81	ini.	777.14	-1273	-0.0000793	0.0001872	0.0035	2		10722.86	10722.86	No	13.8	Si
SLU 81	fin.	343.47	-1460	-0.0000344	0.0001872	0.0035	2		10722.86	10722.86	No	31.22	Si
SLU 80	ini.	743.45	-1241	-0.0000758	0.0001872	0.0035	2		10722.86	10722.86	No	14.42	Si
SLU 80	fin.	277.42	-1354	-0.0000277	0.0001872	0.0035	2		10722.86	10722.86	No	38.65	Si
SLU 78	ini.	743.45	-1241	-0.0000758	0.0001872	0.0035	2		10722.86	10722.86	No	14.42	Si
SLU 78	fin.	277.42	-1354	-0.0000277	0.0001872	0.0035	2		10722.86	10722.86	No	38.65	Si
SLU 82	ini.	777.14	-1273	-0.0000793	0.0001872	0.0035	2		10722.86	10722.86	No	13.8	Si
SLU 82	fin.	343.47	-1460	-0.0000344	0.0001872	0.0035	2		10722.86	10722.86	No	31.22	Si
SLU 83	ini.	777.14	-1273	-0.0000793	0.0001872	0.0035	2		10722.86	10722.86	No	13.8	Si
SLU 83	fin.	343.47	-1460	-0.0000344	0.0001872	0.0035	2		10722.86	10722.86	No	31.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 78	ini.	743.45	-3009	2	0	1525	7930	13475	5100	9455	No	3.14	Si
SLU 78	fin.	277.42	524	2	0	1544	7930	13475	5100	9474	No	18.07	Si
SLU 84	ini.	777.14	-3103	2	0	1531	7930	13475	5100	9460	No	3.05	Si
SLU 84	fin.	343.47	750	2	0	1561	7930	13475	5100	9491	No	12.66	Si
SLU 82	ini.	777.14	-3103	2	0	1531	7930	13475	5100	9460	No	3.05	Si
SLU 82	fin.	343.47	750	2	0	1561	7930	13475	5100	9491	No	12.66	Si
SLU 75	ini.	743.45	-3009	2	0	1525	7930	13475	5100	9455	No	3.14	Si
SLU 75	fin.	277.42	524	2	0	1544	7930	13475	5100	9474	No	18.07	Si
SLU 81	ini.	777.14	-3103	2	0	1531	7930	13475	5100	9460	No	3.05	Si
SLU 81	fin.	343.47	750	2	0	1561	7930	13475	5100	9491	No	12.66	Si
SLU 79	ini.	743.45	-3009	2	0	1525	7930	13475	5100	9455	No	3.14	Si
SLU 79	fin.	277.42	524	2	0	1544	7930	13475	5100	9474	No	18.07	Si
SLU 76	ini.	743.45	-3009	2	0	1525	7930	13475	5100	9455	No	3.14	Si
SLU 76	fin.	277.42	524	2	0	1544	7930	13475	5100	9474	No	18.07	Si
SLU 80	ini.	743.45	-3009	2	0	1525	7930	13475	5100	9455	No	3.14	Si
SLU 80	fin.	277.42	524	2	0	1544	7930	13475	5100	9474	No	18.07	Si
SLU 83	ini.	777.14	-3103	2	0	1531	7930	13475	5100	9460	No	3.05	Si
SLU 83	fin.	343.47	750	2	0	1561	7930	13475	5100	9491	No	12.66	Si
SLU 77	ini.	743.45	-3009	2	0	1525	7930	13475	5100	9455	No	3.14	Si
SLU 77	fin.	277.42	524	2	0	1544	7930	13475	5100	9474	No	18.07	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRMC in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	447.75	3711	-0.0000449	0.0002807	0.0035	2		15635.95	15635.95		34.92	Si
SLV 10	fin.	2147.93	3323	-0.0002277	0.0002807	0.0035	2		15635.95	15635.95		7.28	Si
SLV 9	ini.	514.05	3149	-0.0000516	0.0002807	0.0035	2		15635.95	15635.95		30.42	Si
SLV 9	fin.	1834.56	3283	-0.0001923	0.0002807	0.0035	2		15635.95	15635.95		8.52	Si
SLV 1	ini.	1355.51	-1293	-0.0001397	0.0002807	0.0035	2		15635.95	15635.95		11.54	Si
SLV 1	fin.	-750.87	1707	-0.0000759	0.0002807	0.0035	2		15648.46	15648.46		20.84	Si
SLV 14	ini.	-204.35	1850	-0.0002023	0.0002807	0.0035	2		15648.46	15648.46		76.58	Si
SLV 14	fin.	1899.96	-739	-0.0001996	0.0002807	0.0035	2		15635.95	15635.95		8.23	Si
SLV 13	ini.	-140.49	1309	-0.0000139	0.0002807	0.0035	2		15648.46	15648.46		111.38	Si
SLV 13	fin.	1598.14	-778	-0.0001661	0.0002807	0.0035	2		15635.95	15635.95		9.78	Si
SLV 3	ini.	1244.32	-3660	-0.0001278	0.0002807	0.0035	2		15635.95	15635.95		12.57	Si
SLV 3	fin.	-1663.17	-1029	-0.0001731	0.0002807	0.0035	2		15648.46	15648.46		9.41	Si
SLV 4	ini.	1180.46	-3119	-0.000121	0.0002807	0.0035	2		15635.95	15635.95		13.25	Si
SLV 4	fin.	-1361.35	-991	-0.0001402	0.0002807	0.0035	2		15648.46	15648.46		11.49	Si
SLV 6	ini.	896.55	2930	-0.0000911	0.0002807	0.0035	2		15635.95	15635.95		17.44	Si
SLV 6	fin.	1443.23	4068	-0.0001492	0.0002807	0.0035	2		15635.95	15635.95		10.83	Si
SLV 7	ini.	592.22	-5521	-0.0000596	0.0002807	0.0035	2		15635.95	15635.95		26.4	Si
SLV 7	fin.	-1911.14	-5091	-0.0002007	0.0002807	0.0035	2		15648.46	15648.46		8.19	Si
SLV 8	ini.	525.92	-4959	-0.0000528	0.0002807	0.0035	2		15635.95	15635.95		29.73	Si
SLV 8	fin.	-1597.78	-5051	-0.0001659	0.0002807	0.0035	2		15648.46	15648.46		9.79	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	1355.51	-5848	2	0	2192	7930	20213	5100	10122		1.73	Si
SLV 1	fin.	-750.87	-4978	2	0	1593	7930	20213	5100	9523		1.91	Si
SLV 8	ini.	525.92	-4807	2	0	2753	7930	20213	5100	10682		2.22	Si
SLV 8	fin.	-1597.78	-955	2	0	2765	7930	20213	5100	10695		11.19	Si
SLV 15	ini.	-251.68	652	2	0	2151	7930	20213	5100	10081		15.46	Si
SLV 15	fin.	685.84	4279	2	0	2546	7930	20213	5100	10476		2.45	Si
SLV 4	ini.	1180.46	-6144	2	0	2487	7930	20213	5100	10417		1.7	Si
SLV 4	fin.	-1361.35	-4174	2	0	2139	7930	20213	5100	10069		2.41	Si
SLV 7	ini.	592.22	-5714	2	0	2829	7930	20213	5100	10759		1.88	Si
SLV 7	fin.	-1911.14	-1839	2	0	2771	7930	20213	5100	10700		5.82	Si



Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 2	ini.	1291.65	-4975	2	0	2097	7930	20213	5100	10026		2.02	Si
SLV 2	fin.	-449.05	-4127	2	0	1584	7930	20213	5100	9513		2.3	Si
SLV 13	ini.	-140.49	1822	2	0	1685	7930	20213	5100	9614		5.28	Si
SLV 13	fin.	1598.14	4325	2	0	2101	7930	20213	5100	10031		2.32	Si
SLV 14	ini.	-204.35	2695	2	0	1559	7930	20213	5100	9488		3.52	Si
SLV 14	fin.	1899.96	5177	2	0	2094	7930	20213	5100	10024		1.94	Si
SLV 16	ini.	-315.54	1525	2	0	2054	7930	20213	5100	9984		6.55	Si
SLV 16	fin.	987.66	5130	2	0	2541	7930	20213	5100	10470		2.04	Si
SLV 3	ini.	1244.32	-7017	2	0	2568	7930	20213	5100	10498		1.5	Si
SLV 3	fin.	-1663.17	-5025	2	0	2146	7930	20213	5100	10076		2.01	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	7.28	SLV 10	Si
V_SLV	1.496	SLV 3	Si
PF_SLU	13.798	SLU 81	Si
V_SLU	3.048	SLU 81	Si

Trave di accoppiamento 11

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
2.185	-12.974	0.57	1.07	0.5	2.185	-12.024	0.57	1.07	0.5	0.95	0.45	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,conv	e,fd	yF,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 FRM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-677.43	-1178	-0.0017986	0.0002246	0.0035	0.5		725.96	725.96	No	1.07	Si
SLU 78	fin.	416.51	884	-0.0008991	0.0002246	0.0035	0.5		722.25	722.25	No	1.73	Si
SLU 79	ini.	-677.43	-1178	-0.0017986	0.0002246	0.0035	0.5		725.96	725.96	No	1.07	Si
SLU 79	fin.	416.51	884	-0.0008991	0.0002246	0.0035	0.5		722.25	722.25	No	1.73	Si
SLU 82	ini.	-704.08	-1232	-0.0019233	0.0002246	0.0035	0.5		725.96	725.96	No	1.03	Si
SLU 82	fin.	423.68	901	-0.0009193	0.0002246	0.0035	0.5		722.25	722.25	No	1.7	Si
SLU 76	ini.	-677.43	-1178	-0.0017986	0.0002246	0.0035	0.5		725.96	725.96	No	1.07	Si
SLU 76	fin.	416.51	884	-0.0008991	0.0002246	0.0035	0.5		722.25	722.25	No	1.73	Si
SLU 81	ini.	-704.08	-1232	-0.0019233	0.0002246	0.0035	0.5		725.96	725.96	No	1.03	Si
SLU 81	fin.	423.68	901	-0.0009193	0.0002246	0.0035	0.5		722.25	722.25	No	1.7	Si
SLU 80	ini.	-677.43	-1178	-0.0017986	0.0002246	0.0035	0.5		725.96	725.96	No	1.07	Si
SLU 80	fin.	416.51	884	-0.0008991	0.0002246	0.0035	0.5		722.25	722.25	No	1.73	Si
SLU 83	ini.	-704.08	-1232	-0.0019233	0.0002246	0.0035	0.5		725.96	725.96	No	1.03	Si
SLU 83	fin.	423.68	901	-0.0009193	0.0002246	0.0035	0.5		722.25	722.25	No	1.7	Si
SLU 84	ini.	-704.08	-1232	-0.0019233	0.0002246	0.0035	0.5		725.96	725.96	No	1.03	Si
SLU 84	fin.	423.68	901	-0.0009193	0.0002246	0.0035	0.5		722.25	722.25	No	1.7	Si
SLU 75	ini.	-677.43	-1178	-0.0017986	0.0002246	0.0035	0.5		725.96	725.96	No	1.07	Si
SLU 75	fin.	416.51	884	-0.0008991	0.0002246	0.0035	0.5		722.25	722.25	No	1.73	Si
SLU 77	ini.	-677.43	-1178	-0.0017986	0.0002246	0.0035	0.5		725.96	725.96	No	1.07	Si
SLU 77	fin.	416.51	884	-0.0008991	0.0002246	0.0035	0.5		722.25	722.25	No	1.73	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRM 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.	-677.43	2445	0.5	0	336	3965	4043	1275	4301	No	1.76	Si
SLU 77	fin.	416.51	930	0.5	0	0	3965	4043	1275	3965	No	4.26	Si
SLU 75	ini.	-677.43	2445	0.5	0	336	3965	4043	1275	4301	No	1.76	Si
SLU 75	fin.	416.51	930	0.5	0	0	3965	4043	1275	3965	No	4.26	Si
SLU 80	ini.	-677.43	2445	0.5	0	336	3965	4043	1275	4301	No	1.76	Si
SLU 80	fin.	416.51	930	0.5	0	0	3965	4043	1275	3965	No	4.26	Si
SLU 79	ini.	-677.43	2445	0.5	0	336	3965	4043	1275	4301	No	1.76	Si
SLU 79	fin.	416.51	930	0.5	0	0	3965	4043	1275	3965	No	4.26	Si
SLU 81	ini.	-704.08	2547	0.5	0	341	3965	4043	1275	4306	No	1.69	Si



Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 81	fin.	423.68	935	0.5	0	0	3965	4043	1275	3965	No	4.24	Si
SLU 84	ini.	-704.08	2547	0.5	0	341	3965	4043	1275	4306	No	1.69	Si
SLU 84	fin.	423.68	935	0.5	0	0	3965	4043	1275	3965	No	4.24	Si
SLU 76	ini.	-677.43	2445	0.5	0	336	3965	4043	1275	4301	No	1.76	Si
SLU 76	fin.	416.51	930	0.5	0	0	3965	4043	1275	3965	No	4.26	Si
SLU 78	ini.	-677.43	2445	0.5	0	336	3965	4043	1275	4301	No	1.76	Si
SLU 78	fin.	416.51	930	0.5	0	0	3965	4043	1275	3965	No	4.26	Si
SLU 82	ini.	-704.08	2547	0.5	0	341	3965	4043	1275	4306	No	1.69	Si
SLU 82	fin.	423.68	935	0.5	0	0	3965	4043	1275	3965	No	4.24	Si
SLU 83	ini.	-704.08	2547	0.5	0	341	3965	4043	1275	4306	No	1.69	Si
SLU 83	fin.	423.68	935	0.5	0	0	3965	4043	1275	3965	No	4.24	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCC in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	704.89	1452	-0.0017854	0.0003369	0.0035	0.5		858.55	858.55		1.22	Si
SLV 12	fin.	-939.83	-1723	-0.0031932	0.0003369	0.0035	0.5		861.84	861.84		0.92	No
SLV 14	ini.	-1044.34	-1954	-0.0039444	0.0003369	0.0035	0.5		861.84	861.84		0.83	No
SLV 14	fin.	793.38	1478	-0.0022196	0.0003369	0.0035	0.5		858.55	858.55		1.08	Si
SLV 13	ini.	-945.53	-1762	-0.0032369	0.0003369	0.0035	0.5		861.84	861.84		0.91	No
SLV 13	fin.	693.03	1298	-0.001735	0.0003369	0.0035	0.5		858.55	858.55		1.24	Si
SLV 10	ini.	-1847.58	-3477	-0.0084704	0.0003369	0.0035	0.5		861.84	861.84		0.47	No
SLV 10	fin.	1685.93	3212	-0.0076509	0.0003369	0.0035	0.5		858.55	858.55		0.51	No
SLV 7	ini.	886.36	1828	-0.0028109	0.0003369	0.0035	0.5		858.55	858.55		0.97	No
SLV 7	fin.	-1068.35	-1907	-0.0041032	0.0003369	0.0035	0.5		861.84	861.84		0.81	No
SLV 8	ini.	783.76	1629	-0.0021669	0.0003369	0.0035	0.5		858.55	858.55		1.1	Si
SLV 8	fin.	-964.16	-1720	-0.0033781	0.0003369	0.0035	0.5		861.84	861.84		0.89	No
SLV 5	ini.	-1666.11	-3101	-0.0075163	0.0003369	0.0035	0.5		861.84	861.84		0.52	No
SLV 5	fin.	1557.41	3028	-0.0069612	0.0003369	0.0035	0.5		858.55	858.55		0.55	No
SLV 11	ini.	807.48	1652	-0.0022995	0.0003369	0.0035	0.5		858.55	858.55		1.06	Si
SLV 11	fin.	-1044.02	-1910	-0.0039422	0.0003369	0.0035	0.5		861.84	861.84		0.83	No
SLV 9	ini.	-1744.98	-3277	-0.0079335	0.0003369	0.0035	0.5		861.84	861.84		0.49	No
SLV 9	fin.	1581.74	3025	-0.0070929	0.0003369	0.0035	0.5		858.55	858.55		0.54	No
SLV 6	ini.	-1768.71	-3301	-0.0080582	0.0003369	0.0035	0.5		861.84	861.84		0.49	No
SLV 6	fin.	1661.6	3215	-0.0075214	0.0003369	0.0035	0.5		858.55	858.55		0.52	No

Verifica a taglio nel piano delle sezioni rinforzate con FRCC 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.	-1666.11	5325	0.5	0	606	3965	6064	1275	4571		0.86	No
SLV 5	fin.	1557.41	4613	0.5	0	0	3965	6064	1275	3965		0.86	No
SLV 9	ini.	-1744.98	5610	0.5	0	618	3965	6064	1275	4583		0.82	No
SLV 9	fin.	1581.74	4609	0.5	0	0	3965	6064	1275	3965		0.86	No
SLV 10	ini.	-1847.58	5923	0.5	0	631	3965	6064	1275	4596		0.78	No
SLV 10	fin.	1685.93	4936	0.5	0	0	3965	6064	1275	3965		0.8	No
SLV 12	ini.	704.89	-1873	0.5	0	0	3965	6064	1275	3965		2.12	Si
SLV 12	fin.	-939.83	-3206	0.5	0	501	3965	6064	1275	4466		1.39	Si
SLV 7	ini.	886.36	-2470	0.5	0	0	3965	6064	1275	3965		1.61	Si
SLV 7	fin.	-1068.35	-3529	0.5	0	516	3965	6064	1275	4481		1.27	Si
SLV 8	ini.	783.76	-2157	0.5	0	0	3965	6064	1275	3965		1.84	Si
SLV 8	fin.	-964.16	-3202	0.5	0	501	3965	6064	1275	4466		1.39	Si
SLV 6	ini.	-1768.71	5638	0.5	0	619	3965	6064	1275	4584		0.81	No
SLV 6	fin.	1661.6	4940	0.5	0	0	3965	6064	1275	3965		0.8	No
SLV 13	ini.	-945.53	3220	0.5	0	504	3965	6064	1275	4469		1.39	Si
SLV 13	fin.	693.03	1761	0.5	0	0	3965	6064	1275	3965		2.25	Si
SLV 11	ini.	807.48	-2185	0.5	0	0	3965	6064	1275	3965		1.81	Si
SLV 11	fin.	-1044.02	-3533	0.5	0	517	3965	6064	1275	4481		1.27	Si
SLV 14	ini.	-1044.34	3521	0.5	0	520	3965	6064	1275	4485		1.27	Si
SLV 14	fin.	793.38	2075	0.5	0	0	3965	6064	1275	3965		1.91	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	0.466	SLV 10	No
V_SLV	0.776	SLV 10	No
PF_SLU	1.031	SLU 81	Si
V_SLU	1.69	SLU 81	Si

Trave di accoppiamento 12

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-7.629	-13.248	3.17	4.99	1.82	-8.429	-13.248	3.17	4.99	1.82	0.8	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb_	fhk	fvk0	fkhmedio	t0	fv0	μ	φ	fvk_lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCC

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio



Rinforzo a matrice inorganica

									elim,conv / e,CNR DT-200						CRM / Fibrenet?				
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	α_t	α	elim,conv	e,fd	yF,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 FRMC in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 48	ini.	-1853.28	-2444	-0.0002415	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.67	Si
SLU 48	fin.	831.73	-114	-0.0001029	0.0002246	0.0035	1.82		12345.32	12345.32	No	14.84	Si
SLU 45	ini.	-1853.28	-2444	-0.0002415	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.67	Si
SLU 45	fin.	831.73	-114	-0.0001029	0.0002246	0.0035	1.82		12345.32	12345.32	No	14.84	Si
SLU 51	ini.	-1853.28	-2444	-0.0002415	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.67	Si
SLU 51	fin.	831.73	-114	-0.0001029	0.0002246	0.0035	1.82		12345.32	12345.32	No	14.84	Si
SLU 47	ini.	-1853.28	-2444	-0.0002415	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.67	Si
SLU 47	fin.	831.73	-114	-0.0001029	0.0002246	0.0035	1.82		12345.32	12345.32	No	14.84	Si
SLU 43	ini.	-1853.28	-2444	-0.0002415	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.67	Si
SLU 43	fin.	831.73	-114	-0.0001029	0.0002246	0.0035	1.82		12345.32	12345.32	No	14.84	Si
SLU 46	ini.	-1853.28	-2444	-0.0002415	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.67	Si
SLU 46	fin.	831.73	-114	-0.0001029	0.0002246	0.0035	1.82		12345.32	12345.32	No	14.84	Si
SLU 49	ini.	-1853.28	-2444	-0.0002415	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.67	Si
SLU 49	fin.	831.73	-114	-0.0001029	0.0002246	0.0035	1.82		12345.32	12345.32	No	14.84	Si
SLU 44	ini.	-1853.28	-2444	-0.0002415	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.67	Si
SLU 44	fin.	831.73	-114	-0.0001029	0.0002246	0.0035	1.82		12345.32	12345.32	No	14.84	Si
SLU 50	ini.	-1853.28	-2444	-0.0002415	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.67	Si
SLU 50	fin.	831.73	-114	-0.0001029	0.0002246	0.0035	1.82		12345.32	12345.32	No	14.84	Si
SLU 70	ini.	-1738.61	-2489	-0.0002251	0.0002246	0.0035	1.82		12356.5	12356.5	No	7.11	Si
SLU 70	fin.	854.79	-167	-0.0001059	0.0002246	0.0035	1.82		12345.32	12345.32	No	14.44	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	-1425.78	7531	1.82	0	1156	6344	9811	4641	7500	No	1	No
SLU 76	fin.	924.17	3214	1.82	0	826	6344	9811	4641	7169	No	2.23	Si
SLU 83	ini.	-1291.71	7637	1.82	0	1154	6344	9811	4641	7498	No	0.98	No
SLU 83	fin.	953.9	2698	1.82	0	828	6344	9811	4641	7171	No	2.66	Si
SLU 77	ini.	-1425.78	7531	1.82	0	1156	6344	9811	4641	7500	No	1	No
SLU 77	fin.	924.17	3214	1.82	0	826	6344	9811	4641	7169	No	2.23	Si
SLU 79	ini.	-1425.78	7531	1.82	0	1156	6344	9811	4641	7500	No	1	No
SLU 79	fin.	924.17	3214	1.82	0	826	6344	9811	4641	7169	No	2.23	Si
SLU 80	ini.	-1425.78	7531	1.82	0	1156	6344	9811	4641	7500	No	1	No
SLU 80	fin.	924.17	3214	1.82	0	826	6344	9811	4641	7169	No	2.23	Si
SLU 75	ini.	-1425.78	7531	1.82	0	1156	6344	9811	4641	7500	No	1	No
SLU 75	fin.	924.17	3214	1.82	0	826	6344	9811	4641	7169	No	2.23	Si
SLU 78	ini.	-1425.78	7531	1.82	0	1156	6344	9811	4641	7500	No	1	No
SLU 78	fin.	924.17	3214	1.82	0	826	6344	9811	4641	7169	No	2.23	Si
SLU 82	ini.	-1291.71	7637	1.82	0	1154	6344	9811	4641	7498	No	0.98	No
SLU 82	fin.	953.9	2698	1.82	0	828	6344	9811	4641	7171	No	2.66	Si
SLU 81	ini.	-1291.71	7637	1.82	0	1154	6344	9811	4641	7498	No	0.98	No
SLU 81	fin.	953.9	2698	1.82	0	828	6344	9811	4641	7171	No	2.66	Si
SLU 84	ini.	-1291.71	7637	1.82	0	1154	6344	9811	4641	7498	No	0.98	No
SLU 84	fin.	953.9	2698	1.82	0	828	6344	9811	4641	7171	No	2.66	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRMC 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.	-1527.59	-2280	-0.0001917	0.0003369	0.0035	1.82		11688.48	11688.48		7.65	Si
SLV 12	fin.	737.18	-262	-0.0000901	0.0003369	0.0035	1.82		11676.26	11676.26		15.84	Si
SLV 10	ini.	-1731.22	-2436	-0.0002189	0.0003369	0.0035	1.82		11688.48	11688.48		6.75	Si
SLV 10	fin.	825.53	-143	-0.0001012	0.0003369	0.0035	1.82		11676.26	11676.26		14.14	Si
SLV 5	ini.	-1018.84	-1508	-0.0001256	0.0003369	0.0035	1.82		11688.48	11688.48		11.47	Si
SLV 5	fin.	607.39	14	-0.0000739	0.0003369	0.0035	1.82		11676.26	11676.26		19.22	Si
SLV 14	ini.	-2590.97	-3579	-0.0003393	0.0003369	0.0035	1.82		11688.48	11688.48		4.51	Si
SLV 14	fin.	1086.06	-369	-0.0001343	0.0003369	0.0035	1.82		11676.26	11676.26		10.75	Si
SLV 6	ini.	-934.54	-1410	-0.0001148	0.0003369	0.0035	1.82		11688.48	11688.48		12.51	Si
SLV 6	fin.	576.21	15	-0.00007	0.0003369	0.0035	1.82		11676.26	11676.26		20.26	Si
SLV 15	ini.	-2611.08	-3627	-0.0003423	0.0003369	0.0035	1.82		11688.48	11688.48		4.48	Si
SLV 15	fin.	1089.58	-407	-0.0001347	0.0003369	0.0035	1.82		11676.26	11676.26		10.72	Si
SLV 16	ini.	-2529.88	-3533	-0.0003304	0.0003369	0.0035	1.82		11688.48	11688.48		4.62	Si
SLV 16	fin.	1059.55	-405	-0.0001309	0.0003369	0.0035	1.82		11676.26	11676.26		11.02	Si
SLV 11	ini.	-1611.89	-2378	-0.0002029	0.0003369	0.0035	1.82		11688.48	11688.48		7.25	Si
SLV 11	fin.	768.35	-264	-0.000094	0.0003369	0.0035	1.82		11676.26	11676.26		15.2	Si
SLV 9	ini.	-1815.53	-2534	-0.0002303	0.0003369	0.0035	1.82		11688.48	11688.48		6.44	Si
SLV 9	fin.	856.71	-144	-0.0001051	0.0003369	0.0035	1.82		11676.26	11676.26		13.63	Si
SLV 13	ini.	-2672.17	-3674	-0.0003512	0.0003369	0.0035	1.82		11688.48	11688.48		4.37	Si
SLV 13	fin.	1116.09	-371	-0.0001381	0.0003369	0.0035	1.82		11676.26	11676.26		10.46	Si



Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	-2590.97	8765	1.82	0	1722	6344	14716	4641	8065		0.92	No
SLV 14	fin.	1086.06	6307	1.82	0	1253	6344	14716	4641	7596		1.2	Si
SLV 5	ini.	-1018.84	5052	1.82	0	1437	6344	14716	4641	7780		1.54	Si
SLV 5	fin.	607.39	2589	1.82	0	1184	6344	14716	4641	7528		2.91	Si
SLV 10	ini.	-1731.22	6707	1.82	0	1571	6344	14716	4641	7914		1.18	Si
SLV 10	fin.	825.53	4244	1.82	0	1213	6344	14716	4641	7557		1.78	Si
SLV 12	ini.	-1527.59	6208	1.82	0	1549	6344	14716	4641	7893		1.27	Si
SLV 12	fin.	737.18	3761	1.82	0	1234	6344	14716	4641	7578		2.01	Si
SLV 9	ini.	-1815.53	6961	1.82	0	1584	6344	14716	4641	7928		1.14	Si
SLV 9	fin.	856.71	4498	1.82	0	1213	6344	14716	4641	7557		1.68	Si
SLV 15	ini.	-2611.08	8860	1.82	0	1728	6344	14716	4641	8071		0.91	No
SLV 15	fin.	1089.58	6407	1.82	0	1259	6344	14716	4641	7603		1.19	Si
SLV 6	ini.	-934.54	4798	1.82	0	1422	6344	14716	4641	7766		1.62	Si
SLV 6	fin.	576.21	2335	1.82	0	1184	6344	14716	4641	7528		3.22	Si
SLV 13	ini.	-2672.17	9010	1.82	0	1734	6344	14716	4641	8077		0.9	No
SLV 13	fin.	1116.09	6551	1.82	0	1253	6344	14716	4641	7597		1.16	Si
SLV 11	ini.	-1611.89	6462	1.82	0	1563	6344	14716	4641	7906		1.22	Si
SLV 11	fin.	768.35	4015	1.82	0	1234	6344	14716	4641	7578		1.89	Si
SLV 16	ini.	-2529.88	8616	1.82	0	1716	6344	14716	4641	8060		0.94	No
SLV 16	fin.	1059.55	6162	1.82	0	1259	6344	14716	4641	7603		1.23	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	4.374	SLV 13	Si
V SLV	0.896	SLV 13	No
PF SLU	6.667	SLU 43	Si
V SLU	0.982	SLU 81	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
-7.545	-17.728	1.07	2.07	1	-8.545	-17.728	1.07	2.07	1	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRMC

Materiale	Fu Verticale	Fu Orizzontale	t _{fv}	t _{fo}	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / ε _c CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	α _t	α	elim,conv	ε _{f,d}	γ _{f,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 FRMC in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	ε _m	ε _{m_}	ε _{mu}	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 83	ini.	217.88	-874	-0.0000892	0.0001872	0.0035	1		3643.26	3643.26	No	16.72	Si
SLU 83	fin.	-441.86	26	-0.0001886	0.0001872	0.0035	1		3649.64	3649.64	No	8.26	Si
SLU 42	ini.	235.89	-806	-0.0000969	0.0001872	0.0035	1		3643.26	3643.26	No	15.44	Si
SLU 42	fin.	-432.55	86	-0.0001843	0.0001872	0.0035	1		3649.64	3649.64	No	8.44	Si
SLU 82	ini.	217.88	-874	-0.0000892	0.0001872	0.0035	1		3643.26	3643.26	No	16.72	Si
SLU 82	fin.	-441.86	26	-0.0001886	0.0001872	0.0035	1		3649.64	3649.64	No	8.26	Si
SLU 40	ini.	235.89	-806	-0.0000969	0.0001872	0.0035	1		3643.26	3643.26	No	15.44	Si
SLU 40	fin.	-432.55	86	-0.0001843	0.0001872	0.0035	1		3649.64	3649.64	No	8.44	Si
SLU 77	ini.	168.4	-786	-0.0000684	0.0001872	0.0035	1		3643.26	3643.26	No	21.63	Si
SLU 77	fin.	-375.42	-32	-0.000158	0.0001872	0.0035	1		3649.64	3649.64	No	9.72	Si
SLU 84	ini.	217.88	-874	-0.0000892	0.0001872	0.0035	1		3643.26	3643.26	No	16.72	Si
SLU 84	fin.	-441.86	26	-0.0001886	0.0001872	0.0035	1		3649.64	3649.64	No	8.26	Si
SLU 78	ini.	168.4	-786	-0.0000684	0.0001872	0.0035	1		3643.26	3643.26	No	21.63	Si
SLU 78	fin.	-375.42	-32	-0.000158	0.0001872	0.0035	1		3649.64	3649.64	No	9.72	Si
SLU 39	ini.	235.89	-806	-0.0000969	0.0001872	0.0035	1		3643.26	3643.26	No	15.44	Si
SLU 39	fin.	-432.55	86	-0.0001843	0.0001872	0.0035	1		3649.64	3649.64	No	8.44	Si
SLU 81	ini.	217.88	-874	-0.0000892	0.0001872	0.0035	1		3643.26	3643.26	No	16.72	Si
SLU 81	fin.	-441.86	26	-0.0001886	0.0001872	0.0035	1		3649.64	3649.64	No	8.26	Si
SLU 41	ini.	235.89	-806	-0.0000969	0.0001872	0.0035	1		3643.26	3643.26	No	15.44	Si
SLU 41	fin.	-432.55	86	-0.0001843	0.0001872	0.0035	1		3649.64	3649.64	No	8.44	Si



Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	168.4	-285	1	0	561	7930	4492	2550	7042	No	24.75	Si
SLU 77	fin.	-375.42	-1618	1	0	441	7930	4492	2550	7042	No	4.35	Si
SLU 40	ini.	235.89	-535	1	0	563	7930	4492	2550	7042	No	13.16	Si
SLU 40	fin.	-432.55	-1719	1	0	419	7930	4492	2550	7042	No	4.1	Si
SLU 81	ini.	217.88	-443	1	0	573	7930	4492	2550	7042	No	15.89	Si
SLU 81	fin.	-441.86	-1827	1	0	430	7930	4492	2550	7042	No	3.85	Si
SLU 42	ini.	235.89	-535	1	0	563	7930	4492	2550	7042	No	13.16	Si
SLU 42	fin.	-432.55	-1719	1	0	419	7930	4492	2550	7042	No	4.1	Si
SLU 84	ini.	217.88	-443	1	0	573	7930	4492	2550	7042	No	15.89	Si
SLU 84	fin.	-441.86	-1827	1	0	430	7930	4492	2550	7042	No	3.85	Si
SLU 75	ini.	168.4	-285	1	0	561	7930	4492	2550	7042	No	24.75	Si
SLU 75	fin.	-375.42	-1618	1	0	441	7930	4492	2550	7042	No	4.35	Si
SLU 39	ini.	235.89	-535	1	0	563	7930	4492	2550	7042	No	13.16	Si
SLU 39	fin.	-432.55	-1719	1	0	419	7930	4492	2550	7042	No	4.1	Si
SLU 83	ini.	217.88	-443	1	0	573	7930	4492	2550	7042	No	15.89	Si
SLU 83	fin.	-441.86	-1827	1	0	430	7930	4492	2550	7042	No	3.85	Si
SLU 82	ini.	217.88	-443	1	0	573	7930	4492	2550	7042	No	15.89	Si
SLU 82	fin.	-441.86	-1827	1	0	430	7930	4492	2550	7042	No	3.85	Si
SLU 41	ini.	235.89	-535	1	0	563	7930	4492	2550	7042	No	13.16	Si
SLU 41	fin.	-432.55	-1719	1	0	419	7930	4492	2550	7042	No	4.1	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRMC in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-709.07	195	-0.0003081	0.0002807	0.0035	1		3671.29	3671.29		5.18	Si
SLV 10	fin.	441.02	-865	-0.0001842	0.0002807	0.0035	1		3664.83	3664.83		8.31	Si
SLV 7	ini.	829.61	-1148	-0.000369	0.0002807	0.0035	1		3664.83	3664.83		4.42	Si
SLV 7	fin.	-831.74	667	-0.0003694	0.0002807	0.0035	1		3671.29	3671.29		4.41	Si
SLV 3	ini.	819.06	-1063	-0.0003636	0.0002807	0.0035	1		3664.83	3664.83		4.47	Si
SLV 3	fin.	-907.81	830	-0.0004088	0.0002807	0.0035	1		3671.29	3671.29		4.04	Si
SLV 2	ini.	605.79	-859	-0.0002593	0.0002807	0.0035	1		3664.83	3664.83		6.05	Si
SLV 2	fin.	-749.39	652	-0.0003279	0.0002807	0.0035	1		3671.29	3671.29		4.9	Si
SLV 4	ini.	1009.24	-1225	-0.000464	0.0002807	0.0035	1		3664.83	3664.83		3.63	Si
SLV 4	fin.	-1066.73	1020	-0.0004947	0.0002807	0.0035	1		3671.29	3671.29		3.44	Si
SLV 14	ini.	-698.52	110	-0.000303	0.0002807	0.0035	1		3671.29	3671.29		5.26	Si
SLV 14	fin.	517.09	-1028	-0.0002183	0.0002807	0.0035	1		3664.83	3664.83		7.09	Si
SLV 9	ini.	-906.52	364	-0.0004081	0.0002807	0.0035	1		3671.29	3671.29		4.05	Si
SLV 9	fin.	606.02	-1062	-0.0002594	0.0002807	0.0035	1		3664.83	3664.83		6.05	Si
SLV 8	ini.	1027.07	-1316	-0.0004737	0.0002807	0.0035	1		3664.83	3664.83		3.57	Si
SLV 8	fin.	-996.74	864	-0.0004563	0.0002807	0.0035	1		3671.29	3671.29		3.68	Si
SLV 13	ini.	-888.7	273	-0.0003988	0.0002807	0.0035	1		3671.29	3671.29		4.13	Si
SLV 13	fin.	676.01	-1218	-0.0002927	0.0002807	0.0035	1		3664.83	3664.83		5.42	Si
SLV 12	ini.	635.78	-1025	-0.0002734	0.0002807	0.0035	1		3664.83	3664.83		5.76	Si
SLV 12	fin.	-616.8	360	-0.000264	0.0002807	0.0035	1		3671.29	3671.29		5.95	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	415.61	-1164	1	0	769	7930	6738	2550	8699		7.47	Si
SLV 1	fin.	-590.47	-2017	1	0	561	7930	6737	2550	8491		4.21	Si
SLV 2	ini.	605.79	-1667	1	0	794	7930	6738	2550	8724		5.23	Si
SLV 2	fin.	-749.39	-2523	1	0	519	7930	6737	2550	8449		3.35	Si
SLV 13	ini.	-888.7	2637	1	0	600	7930	6738	2550	8530		3.23	Si
SLV 13	fin.	676.01	1673	1	0	846	7930	6737	2550	8776		5.25	Si
SLV 12	ini.	635.78	-1342	1	0	819	7930	6738	2550	8748		6.52	Si
SLV 12	fin.	-616.8	-2372	1	0	583	7930	6737	2550	8512		3.59	Si
SLV 14	ini.	-698.52	2134	1	0	632	7930	6738	2550	8561		4.01	Si
SLV 14	fin.	517.09	1167	1	0	819	7930	6737	2550	8749		7.5	Si
SLV 7	ini.	829.61	-1959	1	0	836	7930	6738	2550	8766		4.47	Si
SLV 7	fin.	-831.74	-2953	1	0	516	7930	6737	2550	8445		2.86	Si
SLV 3	ini.	819.06	-2149	1	0	824	7930	6738	2550	8754		4.07	Si
SLV 3	fin.	-907.81	-3050	1	0	477	7930	6737	2550	8406		2.76	Si
SLV 8	ini.	1027.07	-2482	1	0	860	7930	6738	2550	8790		3.54	Si
SLV 8	fin.	-996.74	-3479	1	0	468	7930	6737	2550	8398		2.41	Si
SLV 9	ini.	-906.52	2466	1	0	582	7930	6738	2550	8511		3.45	Si
SLV 9	fin.	606.02	1596	1	0	824	7930	6737	2550	8754		5.49	Si
SLV 4	ini.	1009.24	-2653	1	0	847	7930	6738	2550	8777		3.31	Si
SLV 4	fin.	-1066.73	-3556	1	0	426	7930	6737	2550	8356		2.35	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.442	SLV 4	Si
V_SLV	2.35	SLV 4	Si
PF_SLU	8.26	SLU 81	Si
V_SLU	3.854	SLU 81	Si

Trave di accoppiamento 14

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)



Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-7.545	-17.728	3.97	4.99	1.02	-8.545	-17.728	3.97	4.99	1.02	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	t _{fv}	t _{fo}	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,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	α _t	α	elim,conv	ε _{f,d}	γ _{f,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 FRM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	ε _m	ε _{m_}	ε _{mu}	df	M _{0d}	M _{1d}	M _{Rd}	incremento > 50%	c.s.	Verifica
SLU 77	ini.	363.64	998	-0.0001468	0.0001872	0.0035	1.02		3779.19	3779.19	No	10.39	Si
SLU 77	fin.	-140.94	291	-0.0000546	0.0001872	0.0035	1.02		3785.72	3785.72	No	26.86	Si
SLU 75	ini.	363.64	998	-0.0001468	0.0001872	0.0035	1.02		3779.19	3779.19	No	10.39	Si
SLU 75	fin.	-140.94	291	-0.0000546	0.0001872	0.0035	1.02		3785.72	3785.72	No	26.86	Si
SLU 83	ini.	417.89	1091	-0.0001704	0.0001872	0.0035	1.02		3779.19	3779.19	No	9.04	Si
SLU 83	fin.	-177.08	281	-0.0000691	0.0001872	0.0035	1.02		3785.72	3785.72	No	21.38	Si
SLU 81	ini.	417.89	1091	-0.0001704	0.0001872	0.0035	1.02		3779.19	3779.19	No	9.04	Si
SLU 81	fin.	-177.08	281	-0.0000691	0.0001872	0.0035	1.02		3785.72	3785.72	No	21.38	Si
SLU 41	ini.	397.77	971	-0.0001616	0.0001872	0.0035	1.02		3779.19	3779.19	No	9.5	Si
SLU 41	fin.	-188.14	199	-0.0000735	0.0001872	0.0035	1.02		3785.72	3785.72	No	20.12	Si
SLU 42	ini.	397.77	971	-0.0001616	0.0001872	0.0035	1.02		3779.19	3779.19	No	9.5	Si
SLU 42	fin.	-188.14	199	-0.0000735	0.0001872	0.0035	1.02		3785.72	3785.72	No	20.12	Si
SLU 84	ini.	417.89	1091	-0.0001704	0.0001872	0.0035	1.02		3779.19	3779.19	No	9.04	Si
SLU 84	fin.	-177.08	281	-0.0000691	0.0001872	0.0035	1.02		3785.72	3785.72	No	21.38	Si
SLU 40	ini.	397.77	971	-0.0001616	0.0001872	0.0035	1.02		3779.19	3779.19	No	9.5	Si
SLU 40	fin.	-188.14	199	-0.0000735	0.0001872	0.0035	1.02		3785.72	3785.72	No	20.12	Si
SLU 82	ini.	417.89	1091	-0.0001704	0.0001872	0.0035	1.02		3779.19	3779.19	No	9.04	Si
SLU 82	fin.	-177.08	281	-0.0000691	0.0001872	0.0035	1.02		3785.72	3785.72	No	21.38	Si
SLU 39	ini.	397.77	971	-0.0001616	0.0001872	0.0035	1.02		3779.19	3779.19	No	9.5	Si
SLU 39	fin.	-188.14	199	-0.0000735	0.0001872	0.0035	1.02		3785.72	3785.72	No	20.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	f _{vd}	V _t	V _{t,f}	V _{t,c}	V _{t,c int.}	V _{t,R}	incremento > 50%	c.s.	Verifica
SLU 83	ini.	417.89	312	1.02	0	140	7930	4582	2601	7183	No	22.99	Si
SLU 83	fin.	-177.08	-2565	1.02	0	389	7930	4582	2601	7183	No	2.8	Si
SLU 39	ini.	397.77	241	1.02	0	197	7930	4582	2601	7183	No	29.82	Si
SLU 39	fin.	-188.14	-2418	1.02	0	405	7930	4582	2601	7183	No	2.97	Si
SLU 77	ini.	363.64	304	1.02	0	186	7930	4582	2601	7183	No	23.65	Si
SLU 77	fin.	-140.94	-2243	1.02	0	387	7930	4582	2601	7183	No	3.2	Si
SLU 41	ini.	397.77	241	1.02	0	197	7930	4582	2601	7183	No	29.82	Si
SLU 41	fin.	-188.14	-2418	1.02	0	405	7930	4582	2601	7183	No	2.97	Si
SLU 42	ini.	397.77	241	1.02	0	197	7930	4582	2601	7183	No	29.82	Si
SLU 42	fin.	-188.14	-2418	1.02	0	405	7930	4582	2601	7183	No	2.97	Si
SLU 81	ini.	417.89	312	1.02	0	140	7930	4582	2601	7183	No	22.99	Si
SLU 81	fin.	-177.08	-2565	1.02	0	389	7930	4582	2601	7183	No	2.8	Si
SLU 84	ini.	417.89	312	1.02	0	140	7930	4582	2601	7183	No	22.99	Si
SLU 84	fin.	-177.08	-2565	1.02	0	389	7930	4582	2601	7183	No	2.8	Si
SLU 75	ini.	363.64	304	1.02	0	186	7930	4582	2601	7183	No	23.65	Si
SLU 75	fin.	-140.94	-2243	1.02	0	387	7930	4582	2601	7183	No	3.2	Si
SLU 82	ini.	417.89	312	1.02	0	140	7930	4582	2601	7183	No	22.99	Si
SLU 82	fin.	-177.08	-2565	1.02	0	389	7930	4582	2601	7183	No	2.8	Si
SLU 40	ini.	397.77	241	1.02	0	197	7930	4582	2601	7183	No	29.82	Si
SLU 40	fin.	-188.14	-2418	1.02	0	405	7930	4582	2601	7183	No	2.97	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	ε _m	ε _{m_}	ε _{mu}	df	M _{0d}	M _{1d}	M _{Rd}	incremento > 50%	c.s.	Verifica
SLV 8	ini.	773.28	704	-0.0003258	0.0002807	0.0035	1.02		3812.65	3812.65		4.93	Si
SLV 8	fin.	-825.62	-1197	-0.0003503	0.0002807	0.0035	1.02		3819.23	3819.23		4.63	Si
SLV 9	ini.	-366.99	567	-0.0001454	0.0002807	0.0035	1.02		3819.23	3819.23		10.41	Si
SLV 9	fin.	711.78	1674	-0.0002968	0.0002807	0.0035	1.02		3812.65	3812.65		5.36	Si
SLV 13	ini.	-201.54	836	-0.0000782	0.0002807	0.0035	1.02		3819.23	3819.23		18.95	Si
SLV 13	fin.	579.14	1474	-0.0002366	0.0002807	0.0035	1.02		3812.65	3812.65		6.58	Si
SLV 5	ini.	-235.77	432	-0.0000919	0.0002807	0.0035	1.02		3819.23	3819.23		16.2	Si
SLV 5	fin.	480	1213	-0.0001934	0.0002807	0.0035	1.02		3812.65	3812.65		7.94	Si



Comb.	Sez.	M	N	εm	εm_	εmu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	668.83	755	-0.000277	0.0002807	0.0035	1.02		3812.65	3812.65		5.7	Si
SLV 7	fin.	-663.01	-878	-0.0002739	0.0002807	0.0035	1.02		3819.23	3819.23		5.76	Si
SLV 12	ini.	642.06	838	-0.0002648	0.0002807	0.0035	1.02		3812.65	3812.65		5.94	Si
SLV 12	fin.	-593.84	-736	-0.0002427	0.0002807	0.0035	1.02		3819.23	3819.23		6.43	Si
SLV 4	ini.	607.83	435	-0.0002494	0.0002807	0.0035	1.02		3812.65	3812.65		6.27	Si
SLV 4	fin.	-692.97	-996	-0.0002876	0.0002807	0.0035	1.02		3819.23	3819.23		5.51	Si
SLV 10	ini.	-262.54	516	-0.0001027	0.0002807	0.0035	1.02		3819.23	3819.23		14.55	Si
SLV 10	fin.	549.18	1356	-0.0002234	0.0002807	0.0035	1.02		3812.65	3812.65		6.94	Si
SLV 11	ini.	537.61	890	-0.0002184	0.0002807	0.0035	1.02		3812.65	3812.65		7.09	Si
SLV 11	fin.	-431.23	-417	-0.0001723	0.0002807	0.0035	1.02		3819.23	3819.23		8.86	Si
SLV 3	ini.	507.23	484	-0.0002051	0.0002807	0.0035	1.02		3812.65	3812.65		7.52	Si
SLV 3	fin.	-536.36	-689	-0.0002174	0.0002807	0.0035	1.02		3819.23	3819.23		7.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	336.45	-257	1.02	0	600	7930	6872	2601	8530		33.16	Si
SLV 2	fin.	-350.07	-1751	1.02	0	730	7930	6872	2601	8659		4.95	Si
SLV 8	ini.	773.28	-1845	1.02	0	521	7930	6872	2601	8450		4.58	Si
SLV 8	fin.	-825.62	-3340	1.02	0	857	7930	6872	2601	8786		2.63	Si
SLV 11	ini.	537.61	-973	1.02	0	475	7930	6872	2601	8405		8.64	Si
SLV 11	fin.	-431.23	-2474	1.02	0	738	7930	6872	2601	8667		3.5	Si
SLV 3	ini.	507.23	-850	1.02	0	570	7930	6872	2601	8499		10	Si
SLV 3	fin.	-536.36	-2342	1.02	0	781	7930	6872	2601	8711		3.72	Si
SLV 12	ini.	642.06	-1377	1.02	0	488	7930	6872	2601	8418		6.11	Si
SLV 12	fin.	-593.84	-2877	1.02	0	789	7930	6872	2601	8718		3.03	Si
SLV 5	ini.	-235.77	1829	1.02	0	581	7930	6872	2601	8510		4.65	Si
SLV 5	fin.	480	328	1.02	0	383	7930	6872	2601	8313		25.33	Si
SLV 10	ini.	-262.54	1894	1.02	0	563	7930	6872	2601	8493		4.48	Si
SLV 10	fin.	549.18	388	1.02	0	335	7930	6872	2601	8265		21.31	Si
SLV 4	ini.	607.83	-1238	1.02	0	580	7930	6872	2601	8510		6.87	Si
SLV 4	fin.	-692.97	-2730	1.02	0	828	7930	6872	2601	8757		3.21	Si
SLV 9	ini.	-366.99	2297	1.02	0	552	7930	6872	2601	8481		3.69	Si
SLV 9	fin.	711.78	791	1.02	0	186	7930	6872	2601	8116		10.26	Si
SLV 7	ini.	668.83	-1441	1.02	0	509	7930	6872	2601	8438		5.86	Si
SLV 7	fin.	-663.01	-2937	1.02	0	810	7930	6872	2601	8740		2.98	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.626	SLV 8	Si
V_SLV	2.63	SLV 8	Si
PF_SLU	9.044	SLU 81	Si
V_SLU	2.801	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
-5.158	-17.728	4.07	4.99	0.92	-6.558	-17.728	4.07	4.99	0.92	1.4	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

f _b	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRMC

Materiale	Fu Verticale	Fu Orizzontale	t _{fv}	t _{fo}	E	ε _u	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / ε _c CNR DT-200						CRM / Fibrenet?				
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	α _t	α	elim,conv	ε _f ,d	γ _f ,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 FRMC 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.	-343.91	-2214	-0.0001721	0.0001872	0.0035	0.92		3096.31	3096.31	No	9	Si
SLU 77	fin.	204.58	845	-0.0000994	0.0001872	0.0035	0.92		3090.48	3090.48	No	15.11	Si
SLU 76	ini.	-343.91	-2214	-0.0001721	0.0001872	0.0035	0.92		3096.31	3096.31	No	9	Si
SLU 76	fin.	204.58	845	-0.0000994	0.0001872	0.0035	0.92		3090.48	3090.48	No	15.11	Si
SLU 81	ini.	-366.1	-2419	-0.0001842	0.0001872	0.0035	0.92		3096.31	3096.31	No	8.46	Si
SLU 81	fin.	207.13	895	-0.0001007	0.0001872	0.0035	0.92		3090.48	3090.48	No	14.92	Si
SLU 79	ini.	-343.91	-2214	-0.0001721	0.0001872	0.0035	0.92		3096.31	3096.31	No	9	Si



Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 79	fin.	204.58	845	-0.0000994	0.0001872	0.0035	0.92		3090.48	3090.48	No	15.11	Si
SLU 82	ini.	-366.1	-2419	-0.0001842	0.0001872	0.0035	0.92		3096.31	3096.31	No	8.46	Si
SLU 82	fin.	207.13	895	-0.0001007	0.0001872	0.0035	0.92		3090.48	3090.48	No	14.92	Si
SLU 78	ini.	-343.91	-2214	-0.0001721	0.0001872	0.0035	0.92		3096.31	3096.31	No	9	Si
SLU 78	fin.	204.58	845	-0.0000994	0.0001872	0.0035	0.92		3090.48	3090.48	No	15.11	Si
SLU 75	ini.	-343.91	-2214	-0.0001721	0.0001872	0.0035	0.92		3096.31	3096.31	No	9	Si
SLU 75	fin.	204.58	845	-0.0000994	0.0001872	0.0035	0.92		3090.48	3090.48	No	15.11	Si
SLU 80	ini.	-343.91	-2214	-0.0001721	0.0001872	0.0035	0.92		3096.31	3096.31	No	9	Si
SLU 80	fin.	204.58	845	-0.0000994	0.0001872	0.0035	0.92		3090.48	3090.48	No	15.11	Si
SLU 84	ini.	-366.1	-2419	-0.0001842	0.0001872	0.0035	0.92		3096.31	3096.31	No	8.46	Si
SLU 84	fin.	207.13	895	-0.0001007	0.0001872	0.0035	0.92		3090.48	3090.48	No	14.92	Si
SLU 83	ini.	-366.1	-2419	-0.0001842	0.0001872	0.0035	0.92		3096.31	3096.31	No	8.46	Si
SLU 83	fin.	207.13	895	-0.0001007	0.0001872	0.0035	0.92		3090.48	3090.48	No	14.92	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	-313.51	3907	0.92	0	459	7295	4132	2346	6478	No	1.66	Si
SLU 39	fin.	166.16	-929	0.92	0	145	7295	4132	2346	6478	No	6.98	Si
SLU 83	ini.	-366.1	4245	0.92	0	478	7295	4132	2346	6478	No	1.53	Si
SLU 83	fin.	207.13	-884	0.92	0	113	7295	4132	2346	6478	No	7.33	Si
SLU 84	ini.	-366.1	4245	0.92	0	478	7295	4132	2346	6478	No	1.53	Si
SLU 84	fin.	207.13	-884	0.92	0	113	7295	4132	2346	6478	No	7.33	Si
SLU 77	ini.	-343.91	3777	0.92	0	464	7295	4132	2346	6478	No	1.72	Si
SLU 77	fin.	204.58	-691	0.92	0	127	7295	4132	2346	6478	No	9.37	Si
SLU 41	ini.	-313.51	3907	0.92	0	459	7295	4132	2346	6478	No	1.66	Si
SLU 41	fin.	166.16	-929	0.92	0	145	7295	4132	2346	6478	No	6.98	Si
SLU 42	ini.	-313.51	3907	0.92	0	459	7295	4132	2346	6478	No	1.66	Si
SLU 42	fin.	166.16	-929	0.92	0	145	7295	4132	2346	6478	No	6.98	Si
SLU 81	ini.	-366.1	4245	0.92	0	478	7295	4132	2346	6478	No	1.53	Si
SLU 81	fin.	207.13	-884	0.92	0	113	7295	4132	2346	6478	No	7.33	Si
SLU 75	ini.	-343.91	3777	0.92	0	464	7295	4132	2346	6478	No	1.72	Si
SLU 75	fin.	204.58	-691	0.92	0	127	7295	4132	2346	6478	No	9.37	Si
SLU 40	ini.	-313.51	3907	0.92	0	459	7295	4132	2346	6478	No	1.66	Si
SLU 40	fin.	166.16	-929	0.92	0	145	7295	4132	2346	6478	No	6.98	Si
SLU 82	ini.	-366.1	4245	0.92	0	478	7295	4132	2346	6478	No	1.53	Si
SLU 82	fin.	207.13	-884	0.92	0	113	7295	4132	2346	6478	No	7.33	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRMC in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 4	ini.	401.25	952	-0.0001989	0.0002807	0.0035	0.92		3096.63	3096.63		7.72	Si
SLV 4	fin.	-275.81	-129	-0.0001337	0.0002807	0.0035	0.92		3102.56	3102.56		11.25	Si
SLV 8	ini.	269.75	533	-0.0001309	0.0002807	0.0035	0.92		3096.63	3096.63		11.48	Si
SLV 8	fin.	-119.33	353	-0.0000565	0.0002807	0.0035	0.92		3102.56	3102.56		26	Si
SLV 13	ini.	-867.09	-3783	-0.0004713	0.0002807	0.0035	0.92		3102.56	3102.56		3.58	Si
SLV 13	fin.	580.46	1281	-0.0002974	0.0002807	0.0035	0.92		3096.63	3096.63		5.33	Si
SLV 16	ini.	-555.69	-2566	-0.0002827	0.0002807	0.0035	0.92		3102.56	3102.56		5.58	Si
SLV 16	fin.	411.44	1144	-0.0002043	0.0002807	0.0035	0.92		3096.63	3096.63		7.53	Si
SLV 5	ini.	-448.51	-2308	-0.0002237	0.0002807	0.0035	0.92		3102.56	3102.56		6.92	Si
SLV 5	fin.	217.8	417	-0.0001048	0.0002807	0.0035	0.92		3096.63	3096.63		14.22	Si
SLV 15	ini.	-695.01	-3096	-0.0003639	0.0002807	0.0035	0.92		3102.56	3102.56		4.46	Si
SLV 15	fin.	510.03	1315	-0.0002578	0.0002807	0.0035	0.92		3096.63	3096.63		6.07	Si
SLV 10	ini.	-590.94	-2813	-0.0003028	0.0002807	0.0035	0.92		3102.56	3102.56		5.25	Si
SLV 10	fin.	321.61	621	-0.0001573	0.0002807	0.0035	0.92		3096.63	3096.63		9.63	Si
SLV 9	ini.	-735.59	-3363	-0.0003885	0.0002807	0.0035	0.92		3102.56	3102.56		4.22	Si
SLV 9	fin.	423.98	799	-0.000211	0.0002807	0.0035	0.92		3096.63	3096.63		7.3	Si
SLV 14	ini.	-727.77	-3253	-0.0003837	0.0002807	0.0035	0.92		3102.56	3102.56		4.26	Si
SLV 14	fin.	481.87	1110	-0.0002423	0.0002807	0.0035	0.92		3096.63	3096.63		6.43	Si
SLV 6	ini.	-303.85	-1757	-0.0001479	0.0002807	0.0035	0.92		3102.56	3102.56		10.21	Si
SLV 6	fin.	115.44	239	-0.0000548	0.0002807	0.0035	0.92		3096.63	3096.63		26.83	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	-735.59	3509	0.92	0	699	7295	6199	2346	7994		2.28	Si
SLV 9	fin.	423.98	989	0.92	0	286	7295	6199	2346	7582		7.66	Si
SLV 13	ini.	-867.09	3941	0.92	0	728	7295	6199	2346	8023		2.04	Si
SLV 13	fin.	580.46	1424	0.92	0	187	7295	6199	2346	7482		5.26	Si
SLV 11	ini.	-161.99	2184	0.92	0	515	7295	6199	2346	7810		3.58	Si
SLV 11	fin.	189.21	-337	0.92	0	266	7295	6199	2346	7562		22.47	Si
SLV 10	ini.	-590.94	3094	0.92	0	659	7295	6199	2346	7955		2.57	Si
SLV 10	fin.	321.61	574	0.92	0	315	7295	6199	2346	7610		13.26	Si
SLV 16	ini.	-555.69	3143	0.92	0	641	7295	6199	2346	7936		2.52	Si
SLV 16	fin.	411.44	626	0.92	0	220	7295	6199	2346	7515		12.01	Si
SLV 4	ini.	401.25	563	0.92	0	259	7295	6199	2346	7554		13.42	Si
SLV 4	fin.	-275.81	-1963	0.92	0	415	7295	6199	2346	7711		3.93	Si
SLV 6	ini.	-303.85	2319	0.92	0	576	7295	6199	2346	7871		3.39	Si
SLV 6	fin.	115.44	-203	0.92	0	370	7295	6199	2346	7665		37.82	Si
SLV 14	ini.	-727.77	3541	0.92	0	691	7295	6199	2346	7986		2.26	Si
SLV 14	fin.	481.87	1023	0.92	0	227	7295	6199	2346	7522		7.35	Si
SLV 15	ini.	-695.01	3543	0.92	0	680	7295	6199	2346	7975		2.25	Si
SLV 15	fin.	510.03	1026	0.92	0	178	7295	6199	2346	7473		7.29	Si
SLV 5	ini.	-448.51	2735	0.92	0	621	7295	6199	2346	7916		2.89	Si
SLV 5	fin.	217.8	213	0.92	0	345	7295	6199	2346	7641		35.91	Si



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.578	SLV 13	Si
V_SLV	2.036	SLV 13	Si
PF_SLU	8.458	SLU 81	Si
V_SLU	1.526	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
-2.783	-17.728	1.07	3.07	2	-3.283	-17.728	1.07	3.07	2	0.5	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fhk	fvk0	fhmmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,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	elim,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 FRM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 73	ini.	750.73	-1015	-0.0000765	0.0001872	0.0035	2		14206.68	14206.68	No	18.92	Si
SLU 73	fin.	-514.8	-641	-0.0000519	0.0001872	0.0035	2		14219.44	14219.44	No	27.62	Si
SLU 74	ini.	750.73	-1015	-0.0000765	0.0001872	0.0035	2		14206.68	14206.68	No	18.92	Si
SLU 74	fin.	-514.8	-641	-0.0000519	0.0001872	0.0035	2		14219.44	14219.44	No	27.62	Si
SLU 75	ini.	750.73	-1015	-0.0000765	0.0001872	0.0035	2		14206.68	14206.68	No	18.92	Si
SLU 75	fin.	-514.8	-641	-0.0000519	0.0001872	0.0035	2		14219.44	14219.44	No	27.62	Si
SLU 78	ini.	750.73	-1015	-0.0000765	0.0001872	0.0035	2		14206.68	14206.68	No	18.92	Si
SLU 78	fin.	-514.8	-641	-0.0000519	0.0001872	0.0035	2		14219.44	14219.44	No	27.62	Si
SLU 76	ini.	750.73	-1015	-0.0000765	0.0001872	0.0035	2		14206.68	14206.68	No	18.92	Si
SLU 76	fin.	-514.8	-641	-0.0000519	0.0001872	0.0035	2		14219.44	14219.44	No	27.62	Si
SLU 79	ini.	750.73	-1015	-0.0000765	0.0001872	0.0035	2		14206.68	14206.68	No	18.92	Si
SLU 79	fin.	-514.8	-641	-0.0000519	0.0001872	0.0035	2		14219.44	14219.44	No	27.62	Si
SLU 82	ini.	805	-1146	-0.0000823	0.0001872	0.0035	2		14206.68	14206.68	No	17.65	Si
SLU 82	fin.	-549.76	-758	-0.0000555	0.0001872	0.0035	2		14219.44	14219.44	No	25.86	Si
SLU 84	ini.	805	-1146	-0.0000823	0.0001872	0.0035	2		14206.68	14206.68	No	17.65	Si
SLU 84	fin.	-549.76	-758	-0.0000555	0.0001872	0.0035	2		14219.44	14219.44	No	25.86	Si
SLU 83	ini.	805	-1146	-0.0000823	0.0001872	0.0035	2		14206.68	14206.68	No	17.65	Si
SLU 83	fin.	-549.76	-758	-0.0000555	0.0001872	0.0035	2		14219.44	14219.44	No	25.86	Si
SLU 81	ini.	805	-1146	-0.0000823	0.0001872	0.0035	2		14206.68	14206.68	No	17.65	Si
SLU 81	fin.	-549.76	-758	-0.0000555	0.0001872	0.0035	2		14219.44	14219.44	No	25.86	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRM 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.	805	-3834	2	0	1059	3965	8983	5100	5024	No	1.31	Si
SLU 81	fin.	-549.76	-3630	2	0	999	3965	8983	5100	4964	No	1.37	Si
SLU 78	ini.	750.73	-3547	2	0	1039	3965	8983	5100	5004	No	1.41	Si
SLU 78	fin.	-514.8	-3450	2	0	980	3965	8983	5100	4945	No	1.43	Si
SLU 83	ini.	805	-3834	2	0	1059	3965	8983	5100	5024	No	1.31	Si
SLU 83	fin.	-549.76	-3630	2	0	999	3965	8983	5100	4964	No	1.37	Si
SLU 73	ini.	750.73	-3547	2	0	1039	3965	8983	5100	5004	No	1.41	Si
SLU 73	fin.	-514.8	-3450	2	0	980	3965	8983	5100	4945	No	1.43	Si
SLU 75	ini.	750.73	-3547	2	0	1039	3965	8983	5100	5004	No	1.41	Si
SLU 75	fin.	-514.8	-3450	2	0	980	3965	8983	5100	4945	No	1.43	Si
SLU 84	ini.	805	-3834	2	0	1059	3965	8983	5100	5024	No	1.31	Si
SLU 84	fin.	-549.76	-3630	2	0	999	3965	8983	5100	4964	No	1.37	Si
SLU 82	ini.	805	-3834	2	0	1059	3965	8983	5100	5024	No	1.31	Si
SLU 82	fin.	-549.76	-3630	2	0	999	3965	8983	5100	4964	No	1.37	Si
SLU 74	ini.	750.73	-3547	2	0	1039	3965	8983	5100	5004	No	1.41	Si
SLU 74	fin.	-514.8	-3450	2	0	980	3965	8983	5100	4945	No	1.43	Si
SLU 79	ini.	750.73	-3547	2	0	1039	3965	8983	5100	5004	No	1.41	Si
SLU 79	fin.	-514.8	-3450	2	0	980	3965	8983	5100	4945	No	1.43	Si
SLU 76	ini.	750.73	-3547	2	0	1039	3965	8983	5100	5004	No	1.41	Si
SLU 76	fin.	-514.8	-3450	2	0	980	3965	8983	5100	4945	No	1.43	Si



Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCC in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 1	ini.	1078.36	-646	-0.0001102	0.0002807	0.0035	2		13920.08	13920.08		12.91	Si
SLV 1	fin.	-885.37	-5	-0.0000898	0.0002807	0.0035	2		13933.43	13933.43		15.74	Si
SLV 2	ini.	1233.11	-641	-0.0001266	0.0002807	0.0035	2		13920.08	13920.08		11.29	Si
SLV 2	fin.	-1036.61	108	-0.0001057	0.0002807	0.0035	2		13933.43	13933.43		13.44	Si
SLV 3	ini.	1001.59	-481	-0.0001021	0.0002807	0.0035	2		13920.08	13920.08		13.9	Si
SLV 3	fin.	-905.7	146	-0.0000919	0.0002807	0.0035	2		13933.43	13933.43		15.38	Si
SLV 10	ini.	522.13	-884	-0.0000524	0.0002807	0.0035	2		13920.08	13920.08		26.66	Si
SLV 10	fin.	-202.12	-667	-0.0000201	0.0002807	0.0035	2		13933.43	13933.43		68.94	Si
SLV 13	ini.	-157.8	-724	-0.0000157	0.0002807	0.0035	2		13933.43	13933.43		88.3	Si
SLV 13	fin.	366.44	-929	-0.0000366	0.0002807	0.0035	2		13920.08	13920.08		37.99	Si
SLV 6	ini.	892.98	-861	-0.0000907	0.0002807	0.0035	2		13920.08	13920.08		15.59	Si
SLV 6	fin.	-577.66	-390	-0.0000581	0.0002807	0.0035	2		13933.43	13933.43		24.12	Si
SLV 7	ini.	476.41	-316	-0.0000478	0.0002807	0.0035	2		13920.08	13920.08		29.22	Si
SLV 7	fin.	-488.37	-2	-0.000049	0.0002807	0.0035	2		13933.43	13933.43		28.53	Si
SLV 4	ini.	1156.34	-476	-0.0001184	0.0002807	0.0035	2		13920.08	13920.08		12.04	Si
SLV 4	fin.	-1056.94	260	-0.0001078	0.0002807	0.0035	2		13933.43	13933.43		13.18	Si
SLV 8	ini.	637.08	-310	-0.0000642	0.0002807	0.0035	2		13920.08	13920.08		21.85	Si
SLV 8	fin.	-645.4	116	-0.000065	0.0002807	0.0035	2		13933.43	13933.43		21.59	Si
SLV 5	ini.	732.3	-866	-0.000074	0.0002807	0.0035	2		13920.08	13920.08		19.01	Si
SLV 5	fin.	-420.63	-508	-0.0000421	0.0002807	0.0035	2		13933.43	13933.43		33.12	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCC 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.	476.41	-2375	2	0	1361	3965	13475	5100	5326		2.24	Si
SLV 7	fin.	-488.37	-3142	2	0	1305	3965	13475	5100	5269		1.68	Si
SLV 2	ini.	1233.11	-6006	2	0	1417	3965	13475	5100	5382		0.9	No
SLV 2	fin.	-1036.61	-6497	2	0	1284	3965	13475	5100	5249		0.81	No
SLV 3	ini.	1001.59	-4964	2	0	1390	3965	13475	5100	5354		1.08	Si
SLV 3	fin.	-905.7	-5693	2	0	1277	3965	13475	5100	5242		0.92	No
SLV 8	ini.	637.08	-3137	2	0	1360	3965	13475	5100	5325		1.7	Si
SLV 8	fin.	-645.4	-4030	2	0	1283	3965	13475	5100	5248		1.3	Si
SLV 1	ini.	1078.36	-5272	2	0	1418	3965	13475	5100	5383		1.02	Si
SLV 1	fin.	-885.37	-5642	2	0	1305	3965	13475	5100	5270		0.93	No
SLV 12	ini.	266.24	-1237	2	0	1364	3965	13475	5100	5329		4.31	Si
SLV 12	fin.	-269.86	-1805	2	0	1333	3965	13475	5100	5298		2.93	Si
SLV 6	ini.	892.98	-4162	2	0	1453	3965	13475	5100	5418		1.3	Si
SLV 6	fin.	-577.66	-3858	2	0	1374	3965	13475	5100	5339		1.38	Si
SLV 10	ini.	522.13	-2263	2	0	1457	3965	13475	5100	5422		2.4	Si
SLV 10	fin.	-202.12	-1633	2	0	1421	3965	13475	5100	5386		3.3	Si
SLV 4	ini.	1156.34	-5698	2	0	1389	3965	13475	5100	5353		0.94	No
SLV 4	fin.	-1056.94	-6548	2	0	1256	3965	13475	5100	5221		0.8	No
SLV 5	ini.	732.3	-3401	2	0	1454	3965	13475	5100	5419		1.59	Si
SLV 5	fin.	-420.63	-2970	2	0	1394	3965	13475	5100	5359		1.8	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	11.289	SLV 2	Si
V_SLV	0.797	SLV 4	No
PF_SLU	17.648	SLU 81	Si
V_SLU	1.31	SLU 81	Si

Trave di accoppiamento 17

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-2.783	-17.728	3.87	4.99	1.12	-3.283	-17.728	3.87	4.99	1.12	0.5	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fmk	fvk0	fmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCC

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,CNR DT-200							CRM / Fibrenet?			
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	at	α	elim,conv	e,fd	yF,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 FRCC in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 82	ini.	-135.72	-1745	-0.0000435	0.0001872	0.0035	1.12		4549.31	4549.31	No	33.52	Si
SLU 82	fin.	-1103.89	-2753	-0.0004166	0.0001872	0.0035	1.12		4549.31	4549.31	No	4.12	Si
SLU 79	ini.	-121.53	-1583	-0.0000389	0.0001872	0.0035	1.12		4549.31	4549.31	No	37.43	Si
SLU 79	fin.	-1014.44	-2495	-0.0003768	0.0001872	0.0035	1.12		4549.31	4549.31	No	4.48	Si
SLU 75	ini.	-121.53	-1583	-0.0000389	0.0001872	0.0035	1.12		4549.31	4549.31	No	37.43	Si
SLU 75	fin.	-1014.44	-2495	-0.0003768	0.0001872	0.0035	1.12		4549.31	4549.31	No	4.48	Si
SLU 73	ini.	-121.53	-1583	-0.0000389	0.0001872	0.0035	1.12		4549.31	4549.31	No	37.43	Si
SLU 73	fin.	-1014.44	-2495	-0.0003768	0.0001872	0.0035	1.12		4549.31	4549.31	No	4.48	Si
SLU 83	ini.	-135.72	-1745	-0.0000435	0.0001872	0.0035	1.12		4549.31	4549.31	No	33.52	Si
SLU 83	fin.	-1103.89	-2753	-0.0004166	0.0001872	0.0035	1.12		4549.31	4549.31	No	4.12	Si
SLU 78	ini.	-121.53	-1583	-0.0000389	0.0001872	0.0035	1.12		4549.31	4549.31	No	37.43	Si
SLU 78	fin.	-1014.44	-2495	-0.0003768	0.0001872	0.0035	1.12		4549.31	4549.31	No	4.48	Si
SLU 74	ini.	-121.53	-1583	-0.0000389	0.0001872	0.0035	1.12		4549.31	4549.31	No	37.43	Si
SLU 74	fin.	-1014.44	-2495	-0.0003768	0.0001872	0.0035	1.12		4549.31	4549.31	No	4.48	Si
SLU 84	ini.	-135.72	-1745	-0.0000435	0.0001872	0.0035	1.12		4549.31	4549.31	No	33.52	Si
SLU 84	fin.	-1103.89	-2753	-0.0004166	0.0001872	0.0035	1.12		4549.31	4549.31	No	4.12	Si
SLU 81	ini.	-135.72	-1745	-0.0000435	0.0001872	0.0035	1.12		4549.31	4549.31	No	33.52	Si
SLU 81	fin.	-1103.89	-2753	-0.0004166	0.0001872	0.0035	1.12		4549.31	4549.31	No	4.12	Si
SLU 76	ini.	-121.53	-1583	-0.0000389	0.0001872	0.0035	1.12		4549.31	4549.31	No	37.43	Si
SLU 76	fin.	-1014.44	-2495	-0.0003768	0.0001872	0.0035	1.12		4549.31	4549.31	No	4.48	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCC 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.	-121.53	-1961	1.12	0	721	3965	5031	2856	4685	No	2.39	Si
SLU 76	fin.	-1014.44	-3186	1.12	0	826	3965	5031	2856	4791	No	1.5	Si
SLU 74	ini.	-121.53	-1961	1.12	0	721	3965	5031	2856	4685	No	2.39	Si
SLU 74	fin.	-1014.44	-3186	1.12	0	826	3965	5031	2856	4791	No	1.5	Si
SLU 78	ini.	-121.53	-1961	1.12	0	721	3965	5031	2856	4685	No	2.39	Si
SLU 78	fin.	-1014.44	-3186	1.12	0	826	3965	5031	2856	4791	No	1.5	Si
SLU 81	ini.	-135.72	-2087	1.12	0	740	3965	5031	2856	4705	No	2.25	Si
SLU 81	fin.	-1103.89	-3480	1.12	0	853	3965	5031	2856	4818	No	1.38	Si
SLU 83	ini.	-135.72	-2087	1.12	0	740	3965	5031	2856	4705	No	2.25	Si
SLU 83	fin.	-1103.89	-3480	1.12	0	853	3965	5031	2856	4818	No	1.38	Si
SLU 79	ini.	-121.53	-1961	1.12	0	721	3965	5031	2856	4685	No	2.39	Si
SLU 79	fin.	-1014.44	-3186	1.12	0	826	3965	5031	2856	4791	No	1.5	Si
SLU 75	ini.	-121.53	-1961	1.12	0	721	3965	5031	2856	4685	No	2.39	Si
SLU 75	fin.	-1014.44	-3186	1.12	0	826	3965	5031	2856	4791	No	1.5	Si
SLU 84	ini.	-135.72	-2087	1.12	0	740	3965	5031	2856	4705	No	2.25	Si
SLU 84	fin.	-1103.89	-3480	1.12	0	853	3965	5031	2856	4818	No	1.38	Si
SLU 73	ini.	-121.53	-1961	1.12	0	721	3965	5031	2856	4685	No	2.39	Si
SLU 73	fin.	-1014.44	-3186	1.12	0	826	3965	5031	2856	4791	No	1.5	Si
SLU 82	ini.	-135.72	-2087	1.12	0	740	3965	5031	2856	4705	No	2.25	Si
SLU 82	fin.	-1103.89	-3480	1.12	0	853	3965	5031	2856	4818	No	1.38	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCC in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	-249.56	-2235	-0.0000805	0.0002807	0.0035	1.12		4615.87	4615.87		18.5	Si
SLV 5	fin.	-856.9	-2697	-0.0002961	0.0002807	0.0035	1.12		4615.87	4615.87		5.39	Si
SLV 1	ini.	-165.31	-2252	-0.0000529	0.0002807	0.0035	1.12		4615.87	4615.87		27.92	Si
SLV 1	fin.	-970.91	-2810	-0.0003408	0.0002807	0.0035	1.12		4615.87	4615.87		4.75	Si
SLV 3	ini.	-64.12	-1608	-0.0000203	0.0002807	0.0035	1.12		4615.87	4615.87		71.99	Si
SLV 3	fin.	-875.78	-2232	-0.0003034	0.0002807	0.0035	1.12		4615.87	4615.87		5.27	Si
SLV 9	ini.	-220.81	-1582	-0.000071	0.0002807	0.0035	1.12		4615.87	4615.87		20.9	Si
SLV 9	fin.	-665.65	-2028	-0.0002245	0.0002807	0.0035	1.12		4615.87	4615.87		6.93	Si
SLV 7	ini.	87.76	-87	-0.0000279	0.0002807	0.0035	1.12		4608.77	4608.77		52.52	Si
SLV 7	fin.	-539.78	-770	-0.0001794	0.0002807	0.0035	1.12		4615.87	4615.87		8.55	Si
SLV 10	ini.	-235.46	-1897	-0.0000758	0.0002807	0.0035	1.12		4615.87	4615.87		19.6	Si
SLV 10	fin.	-767.57	-2346	-0.0002622	0.0002807	0.0035	1.12		4615.87	4615.87		6.01	Si
SLV 8	ini.	73.1	-402	-0.0000232	0.0002807	0.0035	1.12		4608.77	4608.77		63.05	Si
SLV 8	fin.	-641.71	-1088	-0.0002158	0.0002807	0.0035	1.12		4615.87	4615.87		7.19	Si
SLV 2	ini.	-179.42	-2556	-0.0000575	0.0002807	0.0035	1.12		4615.87	4615.87		25.73	Si
SLV 2	fin.	-1069.08	-3116	-0.0003806	0.0002807	0.0035	1.12		4615.87	4615.87		4.32	Si
SLV 4	ini.	-78.23	-1911	-0.0000248	0.0002807	0.0035	1.12		4615.87	4615.87		59	Si
SLV 4	fin.	-973.95	-2538	-0.000342	0.0002807	0.0035	1.12		4615.87	4615.87		4.74	Si
SLV 6	ini.	-264.21	-2551	-0.0000853	0.0002807	0.0035	1.12		4615.87	4615.87		17.47	Si
SLV 6	fin.	-958.83	-3015	-0.000336	0.0002807	0.0035	1.12		4615.87	4615.87		4.81	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCC in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 12	ini.	101.85	-1432	1.12	0	683	3965	7546	2856	4648		3.25	Si
SLV 12	fin.	-450.46	-2111	1.12	0	803	3965	7546	2856	4768		2.26	Si
SLV 11	ini.	116.51	-1254	1.12	0	618	3965	7546	2856	4583		3.65	Si
SLV 11	fin.	-348.53	-1933	1.12	0	749	3965	7546	2856	4713		2.44	Si
SLV 3	ini.	-64.12	-1736	1.12	0	982	3965	7546	2856	4946		2.85	Si
SLV 3	fin.	-875.78	-2459	1.12	0	1063	3965	7546	2856	5028		2.04	Si
SLV 8	ini.	73.1	-1702	1.12	0	801	3965	7546	2856	4765		2.8	Si
SLV 8	fin.	-641.71	-2393	1.12	0	908	3965	7546	2856	4873		2.04	Si
SLV 5	ini.	-249.56	-1220	1.12	0	1064	3965	7546	2856	5028		4.12	Si
SLV 5	fin.	-856.9	-1960	1.12	0	1120	3965	7546	2856	5085		2.59	Si



Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 6	ini.	-264.21	-1398	1.12	0	1103	3965	7546	2856	5067		3.62	Si
SLV 6	fin.	-958.83	-2138	1.12	0	1158	3965	7546	2856	5122		2.4	Si
SLV 1	ini.	-165.31	-1645	1.12	0	1066	3965	7546	2856	5031		3.06	Si
SLV 1	fin.	-970.91	-2383	1.12	0	1134	3965	7546	2856	5098		2.14	Si
SLV 4	ini.	-78.23	-1907	1.12	0	1022	3965	7546	2856	4987		2.61	Si
SLV 4	fin.	-973.95	-2631	1.12	0	1101	3965	7546	2856	5066		1.93	Si
SLV 2	ini.	-179.42	-1816	1.12	0	1103	3965	7546	2856	5068		2.79	Si
SLV 2	fin.	-1069.08	-2554	1.12	0	1169	3965	7546	2856	5134		2.01	Si
SLV 7	ini.	87.76	-1524	1.12	0	746	3965	7546	2856	4711		3.09	Si
SLV 7	fin.	-539.78	-2216	1.12	0	860	3965	7546	2856	4825		2.18	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.318	SLV 2	Si
V_SLV	1.926	SLV 4	Si
PF_SLU	4.121	SLU 81	Si
V_SLU	1.385	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
-0.753	-17.728	4.07	4.99	0.92	-2.153	-17.728	4.07	4.99	0.92	1.4	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fthk	fvk0	fthmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,conv	e,fd	yF,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 FRM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	240.37	1108	-0.0001176	0.0001872	0.0035	0.92		3090.48	3090.48	No	12.86	Si
SLU 81	fin.	-223.56	-1738	-0.0001088	0.0001872	0.0035	0.92		3096.31	3096.31	No	13.85	Si
SLU 78	ini.	235.94	1048	-0.0001154	0.0001872	0.0035	0.92		3090.48	3090.48	No	13.1	Si
SLU 78	fin.	-213.49	-1596	-0.0001037	0.0001872	0.0035	0.92		3096.31	3096.31	No	14.5	Si
SLU 83	ini.	240.37	1108	-0.0001176	0.0001872	0.0035	0.92		3090.48	3090.48	No	12.86	Si
SLU 83	fin.	-223.56	-1738	-0.0001088	0.0001872	0.0035	0.92		3096.31	3096.31	No	13.85	Si
SLU 80	ini.	235.94	1048	-0.0001154	0.0001872	0.0035	0.92		3090.48	3090.48	No	13.1	Si
SLU 80	fin.	-213.49	-1596	-0.0001037	0.0001872	0.0035	0.92		3096.31	3096.31	No	14.5	Si
SLU 82	ini.	240.37	1108	-0.0001176	0.0001872	0.0035	0.92		3090.48	3090.48	No	12.86	Si
SLU 82	fin.	-223.56	-1738	-0.0001088	0.0001872	0.0035	0.92		3096.31	3096.31	No	13.85	Si
SLU 75	ini.	235.94	1048	-0.0001154	0.0001872	0.0035	0.92		3090.48	3090.48	No	13.1	Si
SLU 75	fin.	-213.49	-1596	-0.0001037	0.0001872	0.0035	0.92		3096.31	3096.31	No	14.5	Si
SLU 76	ini.	235.94	1048	-0.0001154	0.0001872	0.0035	0.92		3090.48	3090.48	No	13.1	Si
SLU 76	fin.	-213.49	-1596	-0.0001037	0.0001872	0.0035	0.92		3096.31	3096.31	No	14.5	Si
SLU 79	ini.	235.94	1048	-0.0001154	0.0001872	0.0035	0.92		3090.48	3090.48	No	13.1	Si
SLU 79	fin.	-213.49	-1596	-0.0001037	0.0001872	0.0035	0.92		3096.31	3096.31	No	14.5	Si
SLU 77	ini.	235.94	1048	-0.0001154	0.0001872	0.0035	0.92		3090.48	3090.48	No	13.1	Si
SLU 77	fin.	-213.49	-1596	-0.0001037	0.0001872	0.0035	0.92		3096.31	3096.31	No	14.5	Si
SLU 84	ini.	240.37	1108	-0.0001176	0.0001872	0.0035	0.92		3090.48	3090.48	No	12.86	Si
SLU 84	fin.	-223.56	-1738	-0.0001088	0.0001872	0.0035	0.92		3096.31	3096.31	No	13.85	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	240.37	1094	0.92	0	0	7295	4132	2346	6478	No	5.92	Si
SLU 83	fin.	-223.56	-3701	0.92	0	429	7295	4132	2346	6478	No	1.75	Si
SLU 82	ini.	240.37	1094	0.92	0	0	7295	4132	2346	6478	No	5.92	Si
SLU 82	fin.	-223.56	-3701	0.92	0	429	7295	4132	2346	6478	No	1.75	Si
SLU 77	ini.	235.94	876	0.92	0	54	7295	4132	2346	6478	No	7.4	Si
SLU 77	fin.	-213.49	-3295	0.92	0	418	7295	4132	2346	6478	No	1.97	Si
SLU 41	ini.	194.55	1125	0.92	0	97	7295	4132	2346	6478	No	5.76	Si
SLU 41	fin.	-186.78	-3403	0.92	0	413	7295	4132	2346	6478	No	1.9	Si
SLU 39	ini.	194.55	1125	0.92	0	97	7295	4132	2346	6478	No	5.76	Si



Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 39	fin.	-186.78	-3403	0.92	0	413	7295	4132	2346	6478	No	1.9	Si
SLU 75	ini.	235.94	876	0.92	0	54	7295	4132	2346	6478	No	7.4	Si
SLU 75	fin.	-213.49	-3295	0.92	0	418	7295	4132	2346	6478	No	1.97	Si
SLU 81	ini.	240.37	1094	0.92	0	0	7295	4132	2346	6478	No	5.92	Si
SLU 81	fin.	-223.56	-3701	0.92	0	429	7295	4132	2346	6478	No	1.75	Si
SLU 84	ini.	240.37	1094	0.92	0	0	7295	4132	2346	6478	No	5.92	Si
SLU 84	fin.	-223.56	-3701	0.92	0	429	7295	4132	2346	6478	No	1.75	Si
SLU 40	ini.	194.55	1125	0.92	0	97	7295	4132	2346	6478	No	5.76	Si
SLU 40	fin.	-186.78	-3403	0.92	0	413	7295	4132	2346	6478	No	1.9	Si
SLU 42	ini.	194.55	1125	0.92	0	97	7295	4132	2346	6478	No	5.76	Si
SLU 42	fin.	-186.78	-3403	0.92	0	413	7295	4132	2346	6478	No	1.9	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCC in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	411.25	1038	-0.0002042	0.0002807	0.0035	0.92		3096.63	3096.63		7.53	Si
SLV 5	fin.	-499.45	-2441	-0.0002514	0.0002807	0.0035	0.92		3102.56	3102.56		6.21	Si
SLV 16	ini.	-183.91	17	-0.0000879	0.0002807	0.0035	0.92		3102.56	3102.56		16.87	Si
SLV 16	fin.	271.38	590	-0.0001317	0.0002807	0.0035	0.92		3096.63	3096.63		11.41	Si
SLV 6	ini.	515.06	1253	-0.0002605	0.0002807	0.0035	0.92		3096.63	3096.63		6.01	Si
SLV 6	fin.	-612.17	-2886	-0.000315	0.0002807	0.0035	0.92		3102.56	3102.56		5.07	Si
SLV 11	ini.	-167.61	179	-0.0000799	0.0002807	0.0035	0.92		3102.56	3102.56		18.51	Si
SLV 11	fin.	312.7	827	-0.0001528	0.0002807	0.0035	0.92		3096.63	3096.63		9.9	Si
SLV 1	ini.	531.36	1415	-0.0002696	0.0002807	0.0035	0.92		3096.63	3096.63		5.83	Si
SLV 1	fin.	-570.84	-2648	-0.0002913	0.0002807	0.0035	0.92		3102.56	3102.56		5.44	Si
SLV 4	ini.	521.14	1497	-0.0002639	0.0002807	0.0035	0.92		3096.63	3096.63		5.94	Si
SLV 4	fin.	-505.69	-2361	-0.0002549	0.0002807	0.0035	0.92		3102.56	3102.56		6.14	Si
SLV 3	ini.	421.15	1290	-0.0002095	0.0002807	0.0035	0.92		3096.63	3096.63		7.35	Si
SLV 3	fin.	-397.13	-1933	-0.0001963	0.0002807	0.0035	0.92		3102.56	3102.56		7.81	Si
SLV 15	ini.	-283.89	-190	-0.0001378	0.0002807	0.0035	0.92		3102.56	3102.56		10.93	Si
SLV 15	fin.	379.94	1017	-0.0001877	0.0002807	0.0035	0.92		3096.63	3096.63		8.15	Si
SLV 10	ini.	303.54	809	-0.0001481	0.0002807	0.0035	0.92		3096.63	3096.63		10.2	Si
SLV 10	fin.	-379.05	-2000	-0.0001868	0.0002807	0.0035	0.92		3102.56	3102.56		8.19	Si
SLV 2	ini.	631.34	1622	-0.0003268	0.0002807	0.0035	0.92		3096.63	3096.63		4.9	Si
SLV 2	fin.	-679.4	-3076	-0.0003545	0.0002807	0.0035	0.92		3102.56	3102.56		4.57	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCC 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.	-283.89	2039	0.92	0	423	7295	6199	2346	7718		3.78	Si
SLV 15	fin.	379.94	-491	0.92	0	246	7295	6199	2346	7542		15.35	Si
SLV 1	ini.	531.36	-915	0.92	0	148	7295	6199	2346	7443		8.13	Si
SLV 1	fin.	-570.84	-3113	0.92	0	647	7295	6199	2346	7942		2.55	Si
SLV 3	ini.	421.15	-416	0.92	0	184	7295	6199	2346	7480		17.96	Si
SLV 3	fin.	-397.13	-2678	0.92	0	591	7295	6199	2346	7886		2.94	Si
SLV 5	ini.	411.25	-631	0.92	0	242	7295	6199	2346	7537		11.95	Si
SLV 5	fin.	-499.45	-2847	0.92	0	631	7295	6199	2346	7926		2.78	Si
SLV 10	ini.	303.54	-280	0.92	0	285	7295	6199	2346	7580		27.03	Si
SLV 10	fin.	-379.05	-2538	0.92	0	596	7295	6199	2346	7891		3.11	Si
SLV 9	ini.	199.74	106	0.92	0	319	7295	6199	2346	7615		71.82	Si
SLV 9	fin.	-266.33	-2191	0.92	0	559	7295	6199	2346	7854		3.58	Si
SLV 4	ini.	521.14	-789	0.92	0	118	7295	6199	2346	7413		9.4	Si
SLV 4	fin.	-505.69	-3012	0.92	0	625	7295	6199	2346	7920		2.63	Si
SLV 11	ini.	-167.61	1769	0.92	0	377	7295	6199	2346	7673		4.34	Si
SLV 11	fin.	312.7	-744	0.92	0	281	7295	6199	2346	7577		10.19	Si
SLV 6	ini.	515.06	-1017	0.92	0	194	7295	6199	2346	7489		7.36	Si
SLV 6	fin.	-612.17	-3194	0.92	0	665	7295	6199	2346	7960		2.49	Si
SLV 2	ini.	631.34	-1288	0.92	0	41	7295	6199	2346	7336		5.7	Si
SLV 2	fin.	-679.4	-3446	0.92	0	678	7295	6199	2346	7974		2.31	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.567	SLV 2	Si
V_SLV	2.314	SLV 2	Si
PF_SLU	12.857	SLU 81	Si
V_SLU	1.751	SLU 81	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
1.227	-17.729	1.07	2.07	1	0.227	-17.728	1.07	2.07	1	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb_	fhk	fvk0	fvmedio	t0	fv0	μ	φ	fvk_lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCC

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio



Rinforzo a matrice inorganica

									elim,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	elim,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 FRMC in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 78	ini.	-398.64	6	-0.0001686	0.0001872	0.0035	1		3649.64	3649.64	No	9.16	Si
SLU 78	fin.	218.37	-847	-0.0000894	0.0001872	0.0035	1		3643.26	3643.26	No	16.68	Si
SLU 40	ini.	-453.95	124	-0.0001943	0.0001872	0.0035	1		3649.64	3649.64	No	8.04	Si
SLU 40	fin.	278.79	-856	-0.0001154	0.0001872	0.0035	1		3643.26	3643.26	No	13.07	Si
SLU 41	ini.	-453.95	124	-0.0001943	0.0001872	0.0035	1		3649.64	3649.64	No	8.04	Si
SLU 41	fin.	278.79	-856	-0.0001154	0.0001872	0.0035	1		3643.26	3643.26	No	13.07	Si
SLU 82	ini.	-466.47	67	-0.0002002	0.0001872	0.0035	1		3649.64	3649.64	No	7.82	Si
SLU 82	fin.	269.55	-936	-0.0001114	0.0001872	0.0035	1		3643.26	3643.26	No	13.52	Si
SLU 39	ini.	-453.95	124	-0.0001943	0.0001872	0.0035	1		3649.64	3649.64	No	8.04	Si
SLU 39	fin.	278.79	-856	-0.0001154	0.0001872	0.0035	1		3643.26	3643.26	No	13.07	Si
SLU 81	ini.	-466.47	67	-0.0002002	0.0001872	0.0035	1		3649.64	3649.64	No	7.82	Si
SLU 81	fin.	269.55	-936	-0.0001114	0.0001872	0.0035	1		3643.26	3643.26	No	13.52	Si
SLU 83	ini.	-466.47	67	-0.0002002	0.0001872	0.0035	1		3649.64	3649.64	No	7.82	Si
SLU 83	fin.	269.55	-936	-0.0001114	0.0001872	0.0035	1		3643.26	3643.26	No	13.52	Si
SLU 42	ini.	-453.95	124	-0.0001943	0.0001872	0.0035	1		3649.64	3649.64	No	8.04	Si
SLU 42	fin.	278.79	-856	-0.0001154	0.0001872	0.0035	1		3643.26	3643.26	No	13.07	Si
SLU 84	ini.	-466.47	67	-0.0002002	0.0001872	0.0035	1		3649.64	3649.64	No	7.82	Si
SLU 84	fin.	269.55	-936	-0.0001114	0.0001872	0.0035	1		3643.26	3643.26	No	13.52	Si
SLU 77	ini.	-398.64	6	-0.0001686	0.0001872	0.0035	1		3649.64	3649.64	No	9.16	Si
SLU 77	fin.	218.37	-847	-0.0000894	0.0001872	0.0035	1		3643.26	3643.26	No	16.68	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	-398.64	1784	1	0	434	7930	4492	2550	7042	No	3.95	Si
SLU 75	fin.	218.37	377	1	0	569	7930	4492	2550	7042	No	18.7	Si
SLU 82	ini.	-466.47	2001	1	0	422	7930	4492	2550	7042	No	3.52	Si
SLU 82	fin.	269.55	540	1	0	581	7930	4492	2550	7042	No	13.05	Si
SLU 42	ini.	-453.95	1865	1	0	411	7930	4492	2550	7042	No	3.78	Si
SLU 42	fin.	278.79	617	1	0	570	7930	4492	2550	7042	No	11.41	Si
SLU 83	ini.	-466.47	2001	1	0	422	7930	4492	2550	7042	No	3.52	Si
SLU 83	fin.	269.55	540	1	0	581	7930	4492	2550	7042	No	13.05	Si
SLU 40	ini.	-453.95	1865	1	0	411	7930	4492	2550	7042	No	3.78	Si
SLU 40	fin.	278.79	617	1	0	570	7930	4492	2550	7042	No	11.41	Si
SLU 41	ini.	-453.95	1865	1	0	411	7930	4492	2550	7042	No	3.78	Si
SLU 41	fin.	278.79	617	1	0	570	7930	4492	2550	7042	No	11.41	Si
SLU 39	ini.	-453.95	1865	1	0	411	7930	4492	2550	7042	No	3.78	Si
SLU 39	fin.	278.79	617	1	0	570	7930	4492	2550	7042	No	11.41	Si
SLU 77	ini.	-398.64	1784	1	0	434	7930	4492	2550	7042	No	3.95	Si
SLU 77	fin.	218.37	377	1	0	569	7930	4492	2550	7042	No	18.7	Si
SLU 84	ini.	-466.47	2001	1	0	422	7930	4492	2550	7042	No	3.52	Si
SLU 84	fin.	269.55	540	1	0	581	7930	4492	2550	7042	No	13.05	Si
SLU 81	ini.	-466.47	2001	1	0	422	7930	4492	2550	7042	No	3.52	Si
SLU 81	fin.	269.55	540	1	0	581	7930	4492	2550	7042	No	13.05	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRMC in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	ϵ_m	$\epsilon_{m_}$	ϵ_{mu}	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-950.77	889	-0.0004315	0.0002807	0.0035	1		3671.29	3671.29		3.86	Si
SLV 16	fin.	888.46	-1101	-0.0003994	0.0002807	0.0035	1		3664.83	3664.83		4.12	Si
SLV 7	ini.	-616.55	242	-0.0002639	0.0002807	0.0035	1		3671.29	3671.29		5.95	Si
SLV 7	fin.	665.72	-1108	-0.0002877	0.0002807	0.0035	1		3664.83	3664.83		5.51	Si
SLV 1	ini.	528.72	-1042	-0.0002236	0.0002807	0.0035	1		3664.83	3664.83		6.93	Si
SLV 1	fin.	-696.51	60	-0.000302	0.0002807	0.0035	1		3671.29	3671.29		5.27	Si
SLV 13	ini.	-799.3	794	-0.0003529	0.0002807	0.0035	1		3671.29	3671.29		4.59	Si
SLV 13	fin.	670.29	-862	-0.0002899	0.0002807	0.0035	1		3664.83	3664.83		5.47	Si
SLV 2	ini.	689.9	-1241	-0.0002994	0.0002807	0.0035	1		3664.83	3664.83		5.31	Si
SLV 2	fin.	-884.6	209	-0.0003966	0.0002807	0.0035	1		3671.29	3671.29		4.15	Si
SLV 12	ini.	-847.62	587	-0.0003775	0.0002807	0.0035	1		3671.29	3671.29		4.33	Si
SLV 12	fin.	880.46	-1230	-0.0003952	0.0002807	0.0035	1		3664.83	3664.83		4.16	Si
SLV 6	ini.	592.91	-946	-0.0002533	0.0002807	0.0035	1		3664.83	3664.83		6.18	Si
SLV 6	fin.	-883.8	343	-0.0003962	0.0002807	0.0035	1		3671.29	3671.29		4.15	Si
SLV 5	ini.	425.57	-739	-0.0001773	0.0002807	0.0035	1		3664.83	3664.83		8.61	Si
SLV 5	fin.	-688.51	188	-0.0002982	0.0002807	0.0035	1		3671.29	3671.29		5.33	Si
SLV 15	ini.	-1111.94	1088	-0.00052	0.0002807	0.0035	1		3671.29	3671.29		3.3	Si
SLV 15	fin.	1076.56	-1251	-0.0005011	0.0002807	0.0035	1		3664.83	3664.83		3.4	Si
SLV 11	ini.	-1014.96	793	-0.0004662	0.0002807	0.0035	1		3671.29	3671.29		3.62	Si
SLV 11	fin.	1075.75	-1385	-0.0005007	0.0002807	0.0035	1		3664.83	3664.83		3.41	Si



Verifica a taglio nel piano delle sezioni rinforzate con FRCC 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.	-1111.94	3794	1	0	407	7930	6738	2550	8336		2.2	Si
SLV 15	fin.	1076.56	2788	1	0	851	7930	6738	2550	8780		3.15	Si
SLV 12	ini.	-847.62	3072	1	0	534	7930	6738	2550	8464		2.75	Si
SLV 12	fin.	880.46	2035	1	0	848	7930	6738	2550	8778		4.31	Si
SLV 11	ini.	-1014.96	3601	1	0	486	7930	6738	2550	8415		2.34	Si
SLV 11	fin.	1075.75	2554	1	0	869	7930	6738	2550	8799		3.45	Si
SLV 7	ini.	-616.55	2416	1	0	606	7930	6738	2550	8536		3.53	Si
SLV 7	fin.	665.72	1367	1	0	831	7930	6738	2550	8760		6.41	Si
SLV 14	ini.	-638.13	2272	1	0	532	7930	6738	2550	8462		3.72	Si
SLV 14	fin.	482.2	1310	1	0	772	7930	6738	2550	8701		6.64	Si
SLV 1	ini.	528.72	-1170	1	0	821	7930	6738	2550	8751		7.48	Si
SLV 1	fin.	-696.51	-2145	1	0	641	7930	6738	2550	8571		4	Si
SLV 16	ini.	-950.77	3284	1	0	461	7930	6738	2550	8391		2.55	Si
SLV 16	fin.	888.46	2288	1	0	830	7930	6738	2550	8759		3.83	Si
SLV 13	ini.	-799.3	2781	1	0	486	7930	6738	2550	8415		3.03	Si
SLV 13	fin.	670.29	1810	1	0	794	7930	6738	2550	8724		4.82	Si
SLV 6	ini.	592.91	-1487	1	0	807	7930	6738	2550	8737		5.87	Si
SLV 6	fin.	-883.8	-2410	1	0	586	7930	6738	2550	8516		3.53	Si
SLV 2	ini.	689.9	-1679	1	0	849	7930	6738	2550	8779		5.23	Si
SLV 2	fin.	-884.6	-2644	1	0	613	7930	6738	2550	8542		3.23	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF SLV	3.302	SLV 15	Si
V SLV	2.197	SLV 15	Si
PF SLU	7.824	SLU 81	Si
V SLU	3.52	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
1.227	-17.729	3.97	4.99	1.02	0.227	-17.728	3.97	4.99	1.02	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRCC

Materiale	Fu Verticale	Fu Orizzontale	t _{fv}	t _{fo}	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / ε _c CNR DT-200						CRM / Fibrenet?				
materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	α _t	α	elim,conv	ε _{f,d}	γ _{f,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 FRCC in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	ε _m	ε _m _	ε _{mu}	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 75	ini.	-176.62	17	-0.0000689	0.0001872	0.0035	1.02		3785.72	3785.72	No	21.43	Si
SLU 75	fin.	445.34	987	-0.0001827	0.0001872	0.0035	1.02		3779.19	3779.19	No	8.49	Si
SLU 81	ini.	-212.98	-23	-0.0000835	0.0001872	0.0035	1.02		3785.72	3785.72	No	17.77	Si
SLU 81	fin.	504.56	1069	-0.0002096	0.0001872	0.0035	1.02		3779.19	3779.19	No	7.49	Si
SLU 77	ini.	-176.62	17	-0.0000689	0.0001872	0.0035	1.02		3785.72	3785.72	No	21.43	Si
SLU 77	fin.	445.34	987	-0.0001827	0.0001872	0.0035	1.02		3779.19	3779.19	No	8.49	Si
SLU 40	ini.	-216.78	-79	-0.0000851	0.0001872	0.0035	1.02		3785.72	3785.72	No	17.46	Si
SLU 40	fin.	472.46	939	-0.0001949	0.0001872	0.0035	1.02		3779.19	3779.19	No	8	Si
SLU 42	ini.	-216.78	-79	-0.0000851	0.0001872	0.0035	1.02		3785.72	3785.72	No	17.46	Si
SLU 42	fin.	472.46	939	-0.0001949	0.0001872	0.0035	1.02		3779.19	3779.19	No	8	Si
SLU 84	ini.	-212.98	-23	-0.0000835	0.0001872	0.0035	1.02		3785.72	3785.72	No	17.77	Si
SLU 84	fin.	504.56	1069	-0.0002096	0.0001872	0.0035	1.02		3779.19	3779.19	No	7.49	Si
SLU 41	ini.	-216.78	-79	-0.0000851	0.0001872	0.0035	1.02		3785.72	3785.72	No	17.46	Si
SLU 41	fin.	472.46	939	-0.0001949	0.0001872	0.0035	1.02		3779.19	3779.19	No	8	Si
SLU 83	ini.	-212.98	-23	-0.0000835	0.0001872	0.0035	1.02		3785.72	3785.72	No	17.77	Si
SLU 83	fin.	504.56	1069	-0.0002096	0.0001872	0.0035	1.02		3779.19	3779.19	No	7.49	Si
SLU 82	ini.	-212.98	-23	-0.0000835	0.0001872	0.0035	1.02		3785.72	3785.72	No	17.77	Si
SLU 82	fin.	504.56	1069	-0.0002096	0.0001872	0.0035	1.02		3779.19	3779.19	No	7.49	Si
SLU 39	ini.	-216.78	-79	-0.0000851	0.0001872	0.0035	1.02		3785.72	3785.72	No	17.46	Si
SLU 39	fin.	472.46	939	-0.0001949	0.0001872	0.0035	1.02		3779.19	3779.19	No	8	Si



Verifica a taglio nel piano delle sezioni rinforzate con FRMC in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLU 83	ini.	-212.98	2894	1.02	0	448	7930	4582	2601	7183	No	2.48	Si
SLU 83	fin.	504.56	62	1.02	0	152	7930	4582	2601	7183	No	115.02	Si
SLU 42	ini.	-216.78	2722	1.02	0	458	7930	4582	2601	7183	No	2.64	Si
SLU 42	fin.	472.46	91	1.02	0	210	7930	4582	2601	7183	No	78.87	Si
SLU 39	ini.	-216.78	2722	1.02	0	458	7930	4582	2601	7183	No	2.64	Si
SLU 39	fin.	472.46	91	1.02	0	210	7930	4582	2601	7183	No	78.87	Si
SLU 77	ini.	-176.62	2537	1.02	0	440	7930	4582	2601	7183	No	2.83	Si
SLU 77	fin.	445.34	42	1.02	0	191	7930	4582	2601	7183	No	172.87	Si
SLU 84	ini.	-212.98	2894	1.02	0	448	7930	4582	2601	7183	No	2.48	Si
SLU 84	fin.	504.56	62	1.02	0	152	7930	4582	2601	7183	No	115.02	Si
SLU 81	ini.	-212.98	2894	1.02	0	448	7930	4582	2601	7183	No	2.48	Si
SLU 81	fin.	504.56	62	1.02	0	152	7930	4582	2601	7183	No	115.02	Si
SLU 82	ini.	-212.98	2894	1.02	0	448	7930	4582	2601	7183	No	2.48	Si
SLU 82	fin.	504.56	62	1.02	0	152	7930	4582	2601	7183	No	115.02	Si
SLU 40	ini.	-216.78	2722	1.02	0	458	7930	4582	2601	7183	No	2.64	Si
SLU 40	fin.	472.46	91	1.02	0	210	7930	4582	2601	7183	No	78.87	Si
SLU 75	ini.	-176.62	2537	1.02	0	440	7930	4582	2601	7183	No	2.83	Si
SLU 75	fin.	445.34	42	1.02	0	191	7930	4582	2601	7183	No	172.87	Si
SLU 41	ini.	-216.78	2722	1.02	0	458	7930	4582	2601	7183	No	2.64	Si
SLU 41	fin.	472.46	91	1.02	0	210	7930	4582	2601	7183	No	78.87	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRMC in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 12	ini.	-707.75	-1331	-0.0002944	0.0002807	0.0035	1.02		3819.23	3819.23		5.4	Si
SLV 12	fin.	737.1	487	-0.0003087	0.0002807	0.0035	1.02		3812.65	3812.65		5.17	Si
SLV 7	ini.	-618.98	-1143	-0.000254	0.0002807	0.0035	1.02		3819.23	3819.23		6.17	Si
SLV 7	fin.	697.74	591	-0.0002903	0.0002807	0.0035	1.02		3812.65	3812.65		5.46	Si
SLV 16	ini.	-594.16	-1065	-0.0002429	0.0002807	0.0035	1.02		3819.23	3819.23		6.43	Si
SLV 16	fin.	586.89	325	-0.0002401	0.0002807	0.0035	1.02		3812.65	3812.65		6.5	Si
SLV 8	ini.	-459.85	-779	-0.0001844	0.0002807	0.0035	1.02		3819.23	3819.23		8.31	Si
SLV 8	fin.	592.18	686	-0.0002424	0.0002807	0.0035	1.02		3812.65	3812.65		6.44	Si
SLV 6	ini.	699.41	1840	-0.0002911	0.0002807	0.0035	1.02		3812.65	3812.65		5.45	Si
SLV 6	fin.	-325.62	894	-0.0001283	0.0002807	0.0035	1.02		3819.23	3819.23		11.73	Si
SLV 2	ini.	579.96	1560	-0.000237	0.0002807	0.0035	1.02		3812.65	3812.65		6.57	Si
SLV 2	fin.	-171.52	1052	-0.0000664	0.0002807	0.0035	1.02		3819.23	3819.23		22.27	Si
SLV 10	ini.	451.51	1288	-0.0001812	0.0002807	0.0035	1.02		3812.65	3812.65		8.44	Si
SLV 10	fin.	-180.7	694	-0.00007	0.0002807	0.0035	1.02		3819.23	3819.23		21.14	Si
SLV 5	ini.	540.28	1475	-0.0002195	0.0002807	0.0035	1.02		3812.65	3812.65		7.06	Si
SLV 5	fin.	-220.06	798	-0.0000856	0.0002807	0.0035	1.02		3819.23	3819.23		17.36	Si
SLV 11	ini.	-866.88	-1695	-0.0003705	0.0002807	0.0035	1.02		3819.23	3819.23		4.41	Si
SLV 11	fin.	842.66	391	-0.0003593	0.0002807	0.0035	1.02		3812.65	3812.65		4.52	Si
SLV 15	ini.	-747.42	-1415	-0.000313	0.0002807	0.0035	1.02		3819.23	3819.23		5.11	Si
SLV 15	fin.	688.56	233	-0.0002861	0.0002807	0.0035	1.02		3812.65	3812.65		5.54	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC in combinazioni sismiche CNR DT215

Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 11	ini.	-866.88	3566	1.02	0	925	7930	6872	2601	8854		2.48	Si
SLV 11	fin.	842.66	2114	1.02	0	589	7930	6872	2601	8519		4.03	Si
SLV 15	ini.	-747.42	3019	1.02	0	887	7930	6872	2601	8817		2.92	Si
SLV 15	fin.	688.56	1568	1.02	0	621	7930	6872	2601	8551		5.45	Si
SLV 12	ini.	-707.75	3164	1.02	0	876	7930	6872	2601	8805		2.78	Si
SLV 12	fin.	737.1	1712	1.02	0	569	7930	6872	2601	8499		4.96	Si
SLV 6	ini.	699.41	-665	1.02	0	0	7930	6872	2601	7930		11.93	Si
SLV 6	fin.	-325.62	-2121	1.02	0	474	7930	6872	2601	8404		3.96	Si
SLV 8	ini.	-459.85	2637	1.02	0	795	7930	6872	2601	8725		3.31	Si
SLV 8	fin.	592.18	1183	1.02	0	525	7930	6872	2601	8454		7.15	Si
SLV 14	ini.	-246.38	1641	1.02	0	714	7930	6872	2601	8644		5.27	Si
SLV 14	fin.	311.56	190	1.02	0	590	7930	6872	2601	8520		44.88	Si
SLV 16	ini.	-594.16	2632	1.02	0	838	7930	6872	2601	8767		3.33	Si
SLV 16	fin.	586.89	1181	1.02	0	603	7930	6872	2601	8532		7.22	Si
SLV 7	ini.	-618.98	3038	1.02	0	849	7930	6872	2601	8779		2.89	Si
SLV 7	fin.	697.74	1585	1.02	0	546	7930	6872	2601	8476		5.35	Si
SLV 13	ini.	-399.64	2028	1.02	0	772	7930	6872	2601	8702		4.29	Si
SLV 13	fin.	413.22	577	1.02	0	609	7930	6872	2601	8538		14.8	Si
SLV 5	ini.	540.28	-263	1.02	0	288	7930	6872	2601	8218		31.28	Si
SLV 5	fin.	-220.06	-1719	1.02	0	498	7930	6872	2601	8428		4.9	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.406	SLV 11	Si
V_SLV	2.483	SLV 11	Si
PF_SLU	7.49	SLU 81	Si
V_SLU	2.482	SLU 81	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
-6.101	-8.718	1.07	2.07	1	-7.101	-8.718	1.07	2.07	1	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	f _{hk}	f _{vk0}	f _{hmedio}	τ ₀	f _{v0}	μ	φ	f _{vk,lim}	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

materiale	lato applicazione	esposizione	ancoraggio verticale iniziale	ancoraggio verticale finale	ancoraggio orizzontale iniziale	ancoraggio orizzontale finale	strati	verifica taglio	elim,conv / e,CNR DT-200						CRM / Fibrenet?				
									α _t	α	elim,conv	e,f,d	yF,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 FRM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	ε _m	ε _{m_}	ε _{mu}	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 44	ini.	-208.59	-234	-0.0000851	0.0001872	0.0035	1		3649.64	3649.64	No	17.5	Si
SLU 44	fin.	135.13	-672	-0.0000545	0.0001872	0.0035	1		3643.26	3643.26	No	26.96	Si
SLU 51	ini.	-208.59	-234	-0.0000851	0.0001872	0.0035	1		3649.64	3649.64	No	17.5	Si
SLU 51	fin.	135.13	-672	-0.0000545	0.0001872	0.0035	1		3643.26	3643.26	No	26.96	Si
SLU 50	ini.	-208.59	-234	-0.0000851	0.0001872	0.0035	1		3649.64	3649.64	No	17.5	Si
SLU 50	fin.	135.13	-672	-0.0000545	0.0001872	0.0035	1		3643.26	3643.26	No	26.96	Si
SLU 47	ini.	-208.59	-234	-0.0000851	0.0001872	0.0035	1		3649.64	3649.64	No	17.5	Si
SLU 47	fin.	135.13	-672	-0.0000545	0.0001872	0.0035	1		3643.26	3643.26	No	26.96	Si
SLU 45	ini.	-208.59	-234	-0.0000851	0.0001872	0.0035	1		3649.64	3649.64	No	17.5	Si
SLU 45	fin.	135.13	-672	-0.0000545	0.0001872	0.0035	1		3643.26	3643.26	No	26.96	Si
SLU 49	ini.	-208.59	-234	-0.0000851	0.0001872	0.0035	1		3649.64	3649.64	No	17.5	Si
SLU 49	fin.	135.13	-672	-0.0000545	0.0001872	0.0035	1		3643.26	3643.26	No	26.96	Si
SLU 46	ini.	-208.59	-234	-0.0000851	0.0001872	0.0035	1		3649.64	3649.64	No	17.5	Si
SLU 46	fin.	135.13	-672	-0.0000545	0.0001872	0.0035	1		3643.26	3643.26	No	26.96	Si
SLU 48	ini.	-208.59	-234	-0.0000851	0.0001872	0.0035	1		3649.64	3649.64	No	17.5	Si
SLU 48	fin.	135.13	-672	-0.0000545	0.0001872	0.0035	1		3643.26	3643.26	No	26.96	Si
SLU 43	ini.	-208.59	-234	-0.0000851	0.0001872	0.0035	1		3649.64	3649.64	No	17.5	Si
SLU 43	fin.	135.13	-672	-0.0000545	0.0001872	0.0035	1		3643.26	3643.26	No	26.96	Si
SLU 68	ini.	-196.7	-324	-0.0000801	0.0001872	0.0035	1		3649.64	3649.64	No	18.55	Si
SLU 68	fin.	109.8	-711	-0.0000441	0.0001872	0.0035	1		3643.26	3643.26	No	33.18	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRM in combinazioni non sismiche CNR DT215

Comb.	Sez.	M	V	df	f _{vd}	V _t	V _{t,f}	V _{t,c}	V _{t,c int.}	V _{t,R}	incremento > 50%	c.s.	Verifica
SLU 71	ini.	-196.7	1060	1	0	491	7930	4492	2550	7042	No	6.64	Si
SLU 71	fin.	109.8	-203	1	0	550	7930	4492	2550	7042	No	34.71	Si
SLU 66	ini.	-196.7	1060	1	0	491	7930	4492	2550	7042	No	6.64	Si
SLU 66	fin.	109.8	-203	1	0	550	7930	4492	2550	7042	No	34.71	Si
SLU 64	ini.	-196.7	1060	1	0	491	7930	4492	2550	7042	No	6.64	Si
SLU 64	fin.	109.8	-203	1	0	550	7930	4492	2550	7042	No	34.71	Si
SLU 67	ini.	-196.7	1060	1	0	491	7930	4492	2550	7042	No	6.64	Si
SLU 67	fin.	109.8	-203	1	0	550	7930	4492	2550	7042	No	34.71	Si
SLU 50	ini.	-208.59	1034	1	0	476	7930	4492	2550	7042	No	6.81	Si
SLU 50	fin.	135.13	-55	1	0	544	7930	4492	2550	7042	No	128.39	Si
SLU 70	ini.	-196.7	1060	1	0	491	7930	4492	2550	7042	No	6.64	Si
SLU 70	fin.	109.8	-203	1	0	550	7930	4492	2550	7042	No	34.71	Si
SLU 65	ini.	-196.7	1060	1	0	491	7930	4492	2550	7042	No	6.64	Si
SLU 65	fin.	109.8	-203	1	0	550	7930	4492	2550	7042	No	34.71	Si
SLU 69	ini.	-196.7	1060	1	0	491	7930	4492	2550	7042	No	6.64	Si
SLU 69	fin.	109.8	-203	1	0	550	7930	4492	2550	7042	No	34.71	Si
SLU 72	ini.	-196.7	1060	1	0	491	7930	4492	2550	7042	No	6.64	Si
SLU 72	fin.	109.8	-203	1	0	550	7930	4492	2550	7042	No	34.71	Si
SLU 68	ini.	-196.7	1060	1	0	491	7930	4492	2550	7042	No	6.64	Si
SLU 68	fin.	109.8	-203	1	0	550	7930	4492	2550	7042	No	34.71	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	ε _m	ε _{m_}	ε _{mu}	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 14	ini.	-675.23	386	-0.0002917	0.0002807	0.0035	1		3671.29	3671.29		5.44	Si
SLV 14	fin.	591.91	-1242	-0.0002528	0.0002807	0.0035	1		3664.83	3664.83		6.19	Si
SLV 8	ini.	-574.12	125	-0.0002441	0.0002807	0.0035	1		3671.29	3671.29		6.39	Si
SLV 8	fin.	426.3	-1073	-0.0001777	0.0002807	0.0035	1		3664.83	3664.83		8.6	Si
SLV 16	ini.	-991.91	694	-0.0004537	0.0002807	0.0035	1		3671.29	3671.29		3.7	Si
SLV 16	fin.	859.85	-1635	-0.0003845	0.0002807	0.0035	1		3664.83	3664.83		4.26	Si
SLV 12	ini.	-938.92	555	-0.0004252	0.0002807	0.0035	1		3671.29	3671.29		3.91	Si
SLV 12	fin.	771.97	-1546	-0.0003398	0.0002807	0.0035	1		3664.83	3664.83		4.75	Si



Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 5	ini.	652.01	-1106	-0.0002812	0.0002807	0.0035	1		3664.83	3664.83		5.62	Si
SLV 5	fin.	-619.22	448	-0.0002651	0.0002807	0.0035	1		3671.29	3671.29		5.93	Si
SLV 11	ini.	-768.39	351	-0.0003374	0.0002807	0.0035	1		3671.29	3671.29		4.78	Si
SLV 11	fin.	619.57	-1335	-0.0002658	0.0002807	0.0035	1		3664.83	3664.83		5.92	Si
SLV 1	ini.	705	-1245	-0.0003067	0.0002807	0.0035	1		3664.83	3664.83		5.2	Si
SLV 1	fin.	-707.09	537	-0.0003072	0.0002807	0.0035	1		3671.29	3671.29		5.19	Si
SLV 13	ini.	-510.98	189	-0.0002152	0.0002807	0.0035	1		3671.29	3671.29		7.18	Si
SLV 13	fin.	445.13	-1039	-0.000186	0.0002807	0.0035	1		3664.83	3664.83		8.23	Si
SLV 2	ini.	540.76	-1048	-0.0002291	0.0002807	0.0035	1		3664.83	3664.83		6.78	Si
SLV 2	fin.	-560.32	334	-0.0002377	0.0002807	0.0035	1		3671.29	3671.29		6.55	Si
SLV 15	ini.	-827.66	497	-0.0003673	0.0002807	0.0035	1		3671.29	3671.29		4.44	Si
SLV 15	fin.	713.07	-1432	-0.0003106	0.0002807	0.0035	1		3664.83	3664.83		5.14	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	705	-1803	1	0	850	7930	6738	2550	8780		4.87	Si
SLV 1	fin.	-707.09	-2759	1	0	545	7930	6738	2550	8475		3.07	Si
SLV 2	ini.	540.76	-1310	1	0	822	7930	6738	2550	8752		6.68	Si
SLV 2	fin.	-560.32	-2268	1	0	588	7930	6738	2550	8517		3.76	Si
SLV 15	ini.	-827.66	2886	1	0	554	7930	6738	2550	8483		2.94	Si
SLV 15	fin.	713.07	1902	1	0	876	7930	6738	2550	8806		4.63	Si
SLV 16	ini.	-991.91	3379	1	0	509	7930	6738	2550	8439		2.5	Si
SLV 16	fin.	859.85	2392	1	0	903	7930	6738	2550	8833		3.69	Si
SLV 13	ini.	-510.98	2056	1	0	617	7930	6738	2550	8546		4.16	Si
SLV 13	fin.	445.13	947	1	0	821	7930	6738	2550	8750		9.24	Si
SLV 14	ini.	-675.23	2549	1	0	577	7930	6738	2550	8507		3.34	Si
SLV 14	fin.	591.91	1437	1	0	850	7930	6738	2550	8779		6.11	Si
SLV 12	ini.	-938.92	3005	1	0	541	7930	6738	2550	8471		2.82	Si
SLV 12	fin.	771.97	2219	1	0	891	7930	6738	2550	8821		3.98	Si
SLV 6	ini.	481.48	-918	1	0	800	7930	6738	2550	8730		9.51	Si
SLV 6	fin.	-466.82	-2076	1	0	607	7930	6738	2550	8537		4.11	Si
SLV 5	ini.	652.01	-1429	1	0	830	7930	6738	2550	8760		6.13	Si
SLV 5	fin.	-619.22	-2585	1	0	564	7930	6738	2550	8494		3.29	Si
SLV 11	ini.	-768.39	2494	1	0	584	7930	6738	2550	8514		3.41	Si
SLV 11	fin.	619.57	1710	1	0	863	7930	6738	2550	8792		5.14	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.701	SLV 16	Si
V_SLV	2.498	SLV 16	Si
PF_SLU	17.497	SLU 43	Si
V_SLU	6.644	SLU 64	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
-6.101	-8.718	3.97	4.99	1.02	-7.101	-8.718	3.97	4.99	1.02	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fhk	fvk0	fmedio	t0	f0	μ	φ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRMC

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,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	elim,conv	ε,fd	yF,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 FRMC in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 81	ini.	-292.52	-833	-0.0001163	0.0001872	0.0035	1.02		3785.72	3785.72	No	12.94	Si
SLU 81	fin.	130.24	-62	-0.0000505	0.0001872	0.0035	1.02		3779.19	3779.19	No	29.02	Si
SLU 78	ini.	-282.42	-766	-0.0001121	0.0001872	0.0035	1.02		3785.72	3785.72	No	13.4	Si
SLU 78	fin.	144.14	-10	-0.000056	0.0001872	0.0035	1.02		3779.19	3779.19	No	26.22	Si
SLU 80	ini.	-282.42	-766	-0.0001121	0.0001872	0.0035	1.02		3785.72	3785.72	No	13.4	Si
SLU 80	fin.	144.14	-10	-0.000056	0.0001872	0.0035	1.02		3779.19	3779.19	No	26.22	Si
SLU 84	ini.	-292.52	-833	-0.0001163	0.0001872	0.0035	1.02		3785.72	3785.72	No	12.94	Si



Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	fin.	130.24	-62	-0.0000505	0.0001872	0.0035	1.02		3779.19	3779.19	No	29.02	Si
SLU 75	ini.	-282.42	-766	-0.0001121	0.0001872	0.0035	1.02		3785.72	3785.72	No	13.4	Si
SLU 75	fin.	144.14	-10	-0.000056	0.0001872	0.0035	1.02		3779.19	3779.19	No	26.22	Si
SLU 77	ini.	-282.42	-766	-0.0001121	0.0001872	0.0035	1.02		3785.72	3785.72	No	13.4	Si
SLU 77	fin.	144.14	-10	-0.000056	0.0001872	0.0035	1.02		3779.19	3779.19	No	26.22	Si
SLU 76	ini.	-282.42	-766	-0.0001121	0.0001872	0.0035	1.02		3785.72	3785.72	No	13.4	Si
SLU 76	fin.	144.14	-10	-0.000056	0.0001872	0.0035	1.02		3779.19	3779.19	No	26.22	Si
SLU 82	ini.	-292.52	-833	-0.0001163	0.0001872	0.0035	1.02		3785.72	3785.72	No	12.94	Si
SLU 82	fin.	130.24	-62	-0.0000505	0.0001872	0.0035	1.02		3779.19	3779.19	No	29.02	Si
SLU 83	ini.	-292.52	-833	-0.0001163	0.0001872	0.0035	1.02		3785.72	3785.72	No	12.94	Si
SLU 83	fin.	130.24	-62	-0.0000505	0.0001872	0.0035	1.02		3779.19	3779.19	No	29.02	Si
SLU 79	ini.	-282.42	-766	-0.0001121	0.0001872	0.0035	1.02		3785.72	3785.72	No	13.4	Si
SLU 79	fin.	144.14	-10	-0.000056	0.0001872	0.0035	1.02		3779.19	3779.19	No	26.22	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	-282.42	2183	1.02	0	567	7930	4581	2601	7182	No	3.29	Si
SLU 73	fin.	144.14	-442	1.02	0	445	7930	4581	2601	7182	No	16.26	Si
SLU 81	ini.	-292.52	2371	1.02	0	576	7930	4581	2601	7182	No	3.03	Si
SLU 81	fin.	130.24	-587	1.02	0	455	7930	4581	2601	7182	No	12.23	Si
SLU 75	ini.	-282.42	2183	1.02	0	567	7930	4581	2601	7182	No	3.29	Si
SLU 75	fin.	144.14	-442	1.02	0	445	7930	4581	2601	7182	No	16.26	Si
SLU 83	ini.	-292.52	2371	1.02	0	576	7930	4581	2601	7182	No	3.03	Si
SLU 83	fin.	130.24	-587	1.02	0	455	7930	4581	2601	7182	No	12.23	Si
SLU 82	ini.	-292.52	2371	1.02	0	576	7930	4581	2601	7182	No	3.03	Si
SLU 82	fin.	130.24	-587	1.02	0	455	7930	4581	2601	7182	No	12.23	Si
SLU 74	ini.	-282.42	2183	1.02	0	567	7930	4581	2601	7182	No	3.29	Si
SLU 74	fin.	144.14	-442	1.02	0	445	7930	4581	2601	7182	No	16.26	Si
SLU 76	ini.	-282.42	2183	1.02	0	567	7930	4581	2601	7182	No	3.29	Si
SLU 76	fin.	144.14	-442	1.02	0	445	7930	4581	2601	7182	No	16.26	Si
SLU 84	ini.	-292.52	2371	1.02	0	576	7930	4581	2601	7182	No	3.03	Si
SLU 84	fin.	130.24	-587	1.02	0	455	7930	4581	2601	7182	No	12.23	Si
SLU 78	ini.	-282.42	2183	1.02	0	567	7930	4581	2601	7182	No	3.29	Si
SLU 78	fin.	144.14	-442	1.02	0	445	7930	4581	2601	7182	No	16.26	Si
SLU 79	ini.	-282.42	2183	1.02	0	567	7930	4581	2601	7182	No	3.29	Si
SLU 79	fin.	144.14	-442	1.02	0	445	7930	4581	2601	7182	No	16.26	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRMC in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 16	ini.	-798.82	-1603	-0.0003374	0.0002807	0.0035	1.02		3819.23	3819.23		4.78	Si
SLV 16	fin.	823.29	821	-0.0003498	0.0002807	0.0035	1.02		3812.65	3812.65		4.63	Si
SLV 11	ini.	-688.12	-1330	-0.0002854	0.0002807	0.0035	1.02		3819.23	3819.23		5.55	Si
SLV 11	fin.	758.77	833	-0.0003189	0.0002807	0.0035	1.02		3812.65	3812.65		5.02	Si
SLV 5	ini.	426.39	599	-0.0001705	0.0002807	0.0035	1.02		3812.65	3812.65		8.94	Si
SLV 5	fin.	-673.9	-900	-0.0002789	0.0002807	0.0035	1.02		3819.23	3819.23		5.67	Si
SLV 6	ini.	282.82	339	-0.0001111	0.0002807	0.0035	1.02		3812.65	3812.65		13.48	Si
SLV 6	fin.	-498.42	-704	-0.000201	0.0002807	0.0035	1.02		3819.23	3819.23		7.66	Si
SLV 1	ini.	393.52	612	-0.0001567	0.0002807	0.0035	1.02		3812.65	3812.65		9.69	Si
SLV 1	fin.	-562.94	-692	-0.0002291	0.0002807	0.0035	1.02		3819.23	3819.23		6.78	Si
SLV 12	ini.	-831.69	-1589	-0.0003533	0.0002807	0.0035	1.02		3819.23	3819.23		4.59	Si
SLV 12	fin.	934.25	1028	-0.0004048	0.0002807	0.0035	1.02		3812.65	3812.65		4.08	Si
SLV 8	ini.	-594.43	-1133	-0.000243	0.0002807	0.0035	1.02		3819.23	3819.23		6.43	Si
SLV 8	fin.	674.66	763	-0.0002797	0.0002807	0.0035	1.02		3812.65	3812.65		5.65	Si
SLV 15	ini.	-660.55	-1352	-0.0002728	0.0002807	0.0035	1.02		3819.23	3819.23		5.78	Si
SLV 15	fin.	654.28	632	-0.0002704	0.0002807	0.0035	1.02		3812.65	3812.65		5.83	Si
SLV 7	ini.	-450.85	-873	-0.0001806	0.0002807	0.0035	1.02		3819.23	3819.23		8.47	Si
SLV 7	fin.	499.18	568	-0.0002016	0.0002807	0.0035	1.02		3812.65	3812.65		7.64	Si
SLV 14	ini.	-535.65	-1161	-0.0002171	0.0002807	0.0035	1.02		3819.23	3819.23		7.13	Si
SLV 14	fin.	471.37	380	-0.0001897	0.0002807	0.0035	1.02		3812.65	3812.65		8.09	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRMC 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.	426.39	-1041	1.02	0	545	7930	6872	2601	8474		8.14	Si
SLV 5	fin.	-673.9	-2598	1.02	0	813	7930	6872	2601	8743		3.37	Si
SLV 11	ini.	-688.12	3325	1.02	0	875	7930	6872	2601	8805		2.65	Si
SLV 11	fin.	758.77	1769	1.02	0	490	7930	6872	2601	8419		4.76	Si
SLV 12	ini.	-831.69	3877	1.02	0	911	7930	6872	2601	8840		2.28	Si
SLV 12	fin.	934.25	2320	1.02	0	438	7930	6872	2601	8368		3.61	Si
SLV 15	ini.	-660.55	3052	1.02	0	879	7930	6872	2601	8808		2.89	Si
SLV 15	fin.	654.28	1495	1.02	0	537	7930	6872	2601	8467		5.66	Si
SLV 8	ini.	-594.43	3055	1.02	0	848	7930	6872	2601	8777		2.87	Si
SLV 8	fin.	674.66	1499	1.02	0	507	7930	6872	2601	8436		5.63	Si
SLV 7	ini.	-450.85	2504	1.02	0	809	7930	6872	2601	8739		3.49	Si
SLV 7	fin.	499.18	948	1.02	0	552	7930	6872	2601	8481		8.95	Si
SLV 14	ini.	-535.65	2520	1.02	0	852	7930	6872	2601	8781		3.49	Si
SLV 14	fin.	471.37	962	1.02	0	592	7930	6872	2601	8521		8.85	Si
SLV 6	ini.	282.82	-490	1.02	0	600	7930	6872	2601	8530		17.4	Si
SLV 6	fin.	-498.42	-2046	1.02	0	784	7930	6872	2601	8713		4.26	Si
SLV 1	ini.	393.52	-748	1.02	0	542	7930	6872	2601	8471		11.32	Si
SLV 1	fin.	-562.94	-2304	1.02	0	782	7930	6872	2601	8711		3.78	Si
SLV 16	ini.	-798.82	3583	1.02	0	913	7930	6872	2601	8842		2.47	Si
SLV 16	fin.	823.29	2026	1.02	0	493	7930	6872	2601	8422		4.16	Si



Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.081	SLV 12	Si
V_SLV	2.28	SLV 12	Si
PF_SLU	12.942	SLU 81	Si
V_SLU	3.029	SLU 81	Si

Trave di accoppiamento 23

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
-0.141	-8.718	1.07	2.07	1	-1.141	-8.718	1.07	2.07	1	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fhk	fvk0	fhmmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,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 FRM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 48	ini.	131.35	-711	-0.000053	0.0001872	0.0035	1		3643.26	3643.26	No	27.74	Si
SLU 48	fin.	-138.56	-318	-0.0000559	0.0001872	0.0035	1		3649.64	3649.64	No	26.34	Si
SLU 70	ini.	102.97	-758	-0.0000414	0.0001872	0.0035	1		3643.26	3643.26	No	35.38	Si
SLU 70	fin.	-123.27	-419	-0.0000496	0.0001872	0.0035	1		3649.64	3649.64	No	29.61	Si
SLU 44	ini.	131.35	-711	-0.000053	0.0001872	0.0035	1		3643.26	3643.26	No	27.74	Si
SLU 44	fin.	-138.56	-318	-0.0000559	0.0001872	0.0035	1		3649.64	3649.64	No	26.34	Si
SLU 49	ini.	131.35	-711	-0.000053	0.0001872	0.0035	1		3643.26	3643.26	No	27.74	Si
SLU 49	fin.	-138.56	-318	-0.0000559	0.0001872	0.0035	1		3649.64	3649.64	No	26.34	Si
SLU 43	ini.	131.35	-711	-0.000053	0.0001872	0.0035	1		3643.26	3643.26	No	27.74	Si
SLU 43	fin.	-138.56	-318	-0.0000559	0.0001872	0.0035	1		3649.64	3649.64	No	26.34	Si
SLU 47	ini.	131.35	-711	-0.000053	0.0001872	0.0035	1		3643.26	3643.26	No	27.74	Si
SLU 47	fin.	-138.56	-318	-0.0000559	0.0001872	0.0035	1		3649.64	3649.64	No	26.34	Si
SLU 45	ini.	131.35	-711	-0.000053	0.0001872	0.0035	1		3643.26	3643.26	No	27.74	Si
SLU 45	fin.	-138.56	-318	-0.0000559	0.0001872	0.0035	1		3649.64	3649.64	No	26.34	Si
SLU 46	ini.	131.35	-711	-0.000053	0.0001872	0.0035	1		3643.26	3643.26	No	27.74	Si
SLU 46	fin.	-138.56	-318	-0.0000559	0.0001872	0.0035	1		3649.64	3649.64	No	26.34	Si
SLU 51	ini.	131.35	-711	-0.000053	0.0001872	0.0035	1		3643.26	3643.26	No	27.74	Si
SLU 51	fin.	-138.56	-318	-0.0000559	0.0001872	0.0035	1		3649.64	3649.64	No	26.34	Si
SLU 50	ini.	131.35	-711	-0.000053	0.0001872	0.0035	1		3643.26	3643.26	No	27.74	Si
SLU 50	fin.	-138.56	-318	-0.0000559	0.0001872	0.0035	1		3649.64	3649.64	No	26.34	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRM 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 69	ini.	102.97	210	1	0	556	7930	4492	2550	7042	No	33.59	Si
SLU 69	fin.	-123.27	-1067	1	0	506	7930	4492	2550	7042	No	6.6	Si
SLU 65	ini.	102.97	210	1	0	556	7930	4492	2550	7042	No	33.59	Si
SLU 65	fin.	-123.27	-1067	1	0	506	7930	4492	2550	7042	No	6.6	Si
SLU 71	ini.	102.97	210	1	0	556	7930	4492	2550	7042	No	33.59	Si
SLU 71	fin.	-123.27	-1067	1	0	506	7930	4492	2550	7042	No	6.6	Si
SLU 50	ini.	131.35	52	1	0	550	7930	4492	2550	7042	No	135.82	Si
SLU 50	fin.	-138.56	-1047	1	0	490	7930	4492	2550	7042	No	6.73	Si
SLU 64	ini.	102.97	210	1	0	556	7930	4492	2550	7042	No	33.59	Si
SLU 64	fin.	-123.27	-1067	1	0	506	7930	4492	2550	7042	No	6.6	Si
SLU 68	ini.	102.97	210	1	0	556	7930	4492	2550	7042	No	33.59	Si
SLU 68	fin.	-123.27	-1067	1	0	506	7930	4492	2550	7042	No	6.6	Si
SLU 67	ini.	102.97	210	1	0	556	7930	4492	2550	7042	No	33.59	Si
SLU 67	fin.	-123.27	-1067	1	0	506	7930	4492	2550	7042	No	6.6	Si
SLU 72	ini.	102.97	210	1	0	556	7930	4492	2550	7042	No	33.59	Si
SLU 72	fin.	-123.27	-1067	1	0	506	7930	4492	2550	7042	No	6.6	Si
SLU 70	ini.	102.97	210	1	0	556	7930	4492	2550	7042	No	33.59	Si
SLU 70	fin.	-123.27	-1067	1	0	506	7930	4492	2550	7042	No	6.6	Si
SLU 66	ini.	102.97	210	1	0	556	7930	4492	2550	7042	No	33.59	Si
SLU 66	fin.	-123.27	-1067	1	0	506	7930	4492	2550	7042	No	6.6	Si



Verifica a pressoflessione nel piano delle sezioni rinforzate con FRM in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 13	ini.	-634.55	213	-0.0002724	0.0002807	0.0035	1		3671.29	3671.29		5.79	Si
SLV 13	fin.	552.63	-1220	-0.0002346	0.0002807	0.0035	1		3664.83	3664.83		6.63	Si
SLV 8	ini.	617.66	-1205	-0.0002649	0.0002807	0.0035	1		3664.83	3664.83		5.93	Si
SLV 8	fin.	-640.47	400	-0.0002752	0.0002807	0.0035	1		3671.29	3671.29		5.73	Si
SLV 4	ini.	773.05	-1390	-0.0003403	0.0002807	0.0035	1		3664.83	3664.83		4.74	Si
SLV 4	fin.	-724.51	519	-0.0003157	0.0002807	0.0035	1		3671.29	3671.29		5.07	Si
SLV 1	ini.	668.92	-1278	-0.0002892	0.0002807	0.0035	1		3664.83	3664.83		5.48	Si
SLV 1	fin.	-596.63	357	-0.0002545	0.0002807	0.0035	1		3671.29	3671.29		6.15	Si
SLV 14	ini.	-790.84	393	-0.0003486	0.0002807	0.0035	1		3671.29	3671.29		4.64	Si
SLV 14	fin.	699.89	-1432	-0.0003042	0.0002807	0.0035	1		3664.83	3664.83		5.24	Si
SLV 3	ini.	929.33	-1570	-0.000421	0.0002807	0.0035	1		3664.83	3664.83		3.94	Si
SLV 3	fin.	-871.78	731	-0.00039	0.0002807	0.0035	1		3671.29	3671.29		4.21	Si
SLV 7	ini.	779.93	-1392	-0.0003438	0.0002807	0.0035	1		3664.83	3664.83		4.7	Si
SLV 7	fin.	-793.37	620	-0.0003499	0.0002807	0.0035	1		3671.29	3671.29		4.63	Si
SLV 2	ini.	512.63	-1098	-0.0002163	0.0002807	0.0035	1		3664.83	3664.83		7.15	Si
SLV 2	fin.	-449.36	145	-0.0001875	0.0002807	0.0035	1		3671.29	3671.29		8.17	Si
SLV 10	ini.	-641.44	215	-0.0002756	0.0002807	0.0035	1		3671.29	3671.29		5.72	Si
SLV 10	fin.	621.48	-1320	-0.0002667	0.0002807	0.0035	1		3664.83	3664.83		5.9	Si
SLV 16	ini.	-530.42	101	-0.000224	0.0002807	0.0035	1		3671.29	3671.29		6.92	Si
SLV 16	fin.	424.74	-1058	-0.000177	0.0002807	0.0035	1		3664.83	3664.83		8.63	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRM 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.	929.33	-2439	1	0	895	7930	6738	2550	8824		3.62	Si
SLV 3	fin.	-871.78	-3368	1	0	501	7930	6738	2550	8430		2.5	Si
SLV 14	ini.	-790.84	2820	1	0	576	7930	6738	2550	8505		3.02	Si
SLV 14	fin.	699.89	1785	1	0	876	7930	6738	2550	8806		4.93	Si
SLV 13	ini.	-634.55	2334	1	0	612	7930	6738	2550	8541		3.66	Si
SLV 13	fin.	552.63	1311	1	0	847	7930	6738	2550	8776		6.69	Si
SLV 1	ini.	668.92	-1537	1	0	855	7930	6738	2550	8784		5.72	Si
SLV 1	fin.	-596.63	-2608	1	0	583	7930	6738	2550	8513		3.26	Si
SLV 7	ini.	779.93	-2145	1	0	870	7930	6738	2550	8800		4.1	Si
SLV 7	fin.	-793.37	-2893	1	0	527	7930	6738	2550	8456		2.92	Si
SLV 8	ini.	617.66	-1640	1	0	844	7930	6738	2550	8774		5.35	Si
SLV 8	fin.	-640.47	-2401	1	0	574	7930	6738	2550	8504		3.54	Si
SLV 10	ini.	-641.44	2527	1	0	612	7930	6738	2550	8541		3.38	Si
SLV 10	fin.	621.48	1310	1	0	861	7930	6738	2550	8790		6.71	Si
SLV 4	ini.	773.05	-1952	1	0	870	7930	6738	2550	8800		4.51	Si
SLV 4	fin.	-724.51	-2894	1	0	549	7930	6738	2550	8479		2.93	Si
SLV 2	ini.	512.63	-1051	1	0	829	7930	6738	2550	8759		8.34	Si
SLV 2	fin.	-449.36	-2134	1	0	625	7930	6738	2550	8555		4.01	Si
SLV 9	ini.	-479.17	2022	1	0	647	7930	6738	2550	8577		4.24	Si
SLV 9	fin.	468.58	818	1	0	829	7930	6738	2550	8759		10.71	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	3.944	SLV 3	Si
V_SLV	2.503	SLV 3	Si
PF_SLU	26.34	SLU 43	Si
V_SLU	6.603	SLU 64	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
-0.141	-8.718	3.97	4.99	1.02	-1.141	-8.718	3.97	4.99	1.02	1	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 intonaco armato solo su un lato_Corti

fb	fmk	fvk0	fmedio	τ0	fv0	μ	φ	fvk,lim	E	G	FC
120000			215600	11200	25000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,conv	e,fd	yF,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 FRCC in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 84	ini.	106.98	-357	-0.0000413	0.0001872	0.0035	1.02		3779.19	3779.19	No	35.33	Si
SLU 84	fin.	-225.71	-862	-0.0000887	0.0001872	0.0035	1.02		3785.72	3785.72	No	16.77	Si
SLU 83	ini.	106.98	-357	-0.0000413	0.0001872	0.0035	1.02		3779.19	3779.19	No	35.33	Si
SLU 83	fin.	-225.71	-862	-0.0000887	0.0001872	0.0035	1.02		3785.72	3785.72	No	16.77	Si
SLU 81	ini.	106.98	-357	-0.0000413	0.0001872	0.0035	1.02		3779.19	3779.19	No	35.33	Si
SLU 81	fin.	-225.71	-862	-0.0000887	0.0001872	0.0035	1.02		3785.72	3785.72	No	16.77	Si
SLU 78	ini.	103.74	-257	-0.0000401	0.0001872	0.0035	1.02		3779.19	3779.19	No	36.43	Si
SLU 78	fin.	-217.8	-793	-0.0000855	0.0001872	0.0035	1.02		3785.72	3785.72	No	17.38	Si
SLU 76	ini.	103.74	-257	-0.0000401	0.0001872	0.0035	1.02		3779.19	3779.19	No	36.43	Si
SLU 76	fin.	-217.8	-793	-0.0000855	0.0001872	0.0035	1.02		3785.72	3785.72	No	17.38	Si
SLU 75	ini.	103.74	-257	-0.0000401	0.0001872	0.0035	1.02		3779.19	3779.19	No	36.43	Si
SLU 75	fin.	-217.8	-793	-0.0000855	0.0001872	0.0035	1.02		3785.72	3785.72	No	17.38	Si
SLU 80	ini.	103.74	-257	-0.0000401	0.0001872	0.0035	1.02		3779.19	3779.19	No	36.43	Si
SLU 80	fin.	-217.8	-793	-0.0000855	0.0001872	0.0035	1.02		3785.72	3785.72	No	17.38	Si
SLU 77	ini.	103.74	-257	-0.0000401	0.0001872	0.0035	1.02		3779.19	3779.19	No	36.43	Si
SLU 77	fin.	-217.8	-793	-0.0000855	0.0001872	0.0035	1.02		3785.72	3785.72	No	17.38	Si
SLU 79	ini.	103.74	-257	-0.0000401	0.0001872	0.0035	1.02		3779.19	3779.19	No	36.43	Si
SLU 79	fin.	-217.8	-793	-0.0000855	0.0001872	0.0035	1.02		3785.72	3785.72	No	17.38	Si
SLU 82	ini.	106.98	-357	-0.0000413	0.0001872	0.0035	1.02		3779.19	3779.19	No	35.33	Si
SLU 82	fin.	-225.71	-862	-0.0000887	0.0001872	0.0035	1.02		3785.72	3785.72	No	16.77	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCC 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.	103.74	1347	1.02	0	488	7930	4582	2601	7182	No	5.33	Si
SLU 80	fin.	-217.8	-1965	1.02	0	570	7930	4582	2601	7182	No	3.66	Si
SLU 75	ini.	103.74	1347	1.02	0	488	7930	4582	2601	7182	No	5.33	Si
SLU 75	fin.	-217.8	-1965	1.02	0	570	7930	4582	2601	7182	No	3.66	Si
SLU 79	ini.	103.74	1347	1.02	0	488	7930	4582	2601	7182	No	5.33	Si
SLU 79	fin.	-217.8	-1965	1.02	0	570	7930	4582	2601	7182	No	3.66	Si
SLU 81	ini.	106.98	1655	1.02	0	505	7930	4582	2601	7182	No	4.34	Si
SLU 81	fin.	-225.71	-2166	1.02	0	580	7930	4582	2601	7182	No	3.32	Si
SLU 78	ini.	103.74	1347	1.02	0	488	7930	4582	2601	7182	No	5.33	Si
SLU 78	fin.	-217.8	-1965	1.02	0	570	7930	4582	2601	7182	No	3.66	Si
SLU 76	ini.	103.74	1347	1.02	0	488	7930	4582	2601	7182	No	5.33	Si
SLU 76	fin.	-217.8	-1965	1.02	0	570	7930	4582	2601	7182	No	3.66	Si
SLU 82	ini.	106.98	1655	1.02	0	505	7930	4582	2601	7182	No	4.34	Si
SLU 82	fin.	-225.71	-2166	1.02	0	580	7930	4582	2601	7182	No	3.32	Si
SLU 77	ini.	103.74	1347	1.02	0	488	7930	4582	2601	7182	No	5.33	Si
SLU 77	fin.	-217.8	-1965	1.02	0	570	7930	4582	2601	7182	No	3.66	Si
SLU 83	ini.	106.98	1655	1.02	0	505	7930	4582	2601	7182	No	4.34	Si
SLU 83	fin.	-225.71	-2166	1.02	0	580	7930	4582	2601	7182	No	3.32	Si
SLU 84	ini.	106.98	1655	1.02	0	505	7930	4582	2601	7182	No	4.34	Si
SLU 84	fin.	-225.71	-2166	1.02	0	580	7930	4582	2601	7182	No	3.32	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCC in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 3	ini.	466.48	1447	-0.0001876	0.0002807	0.0035	1.02		3812.65	3812.65		8.17	Si
SLV 3	fin.	-719.72	-1755	-0.0003	0.0002807	0.0035	1.02		3819.23	3819.23		5.31	Si
SLV 1	ini.	277.36	625	-0.0001088	0.0002807	0.0035	1.02		3812.65	3812.65		13.75	Si
SLV 1	fin.	-481	-1283	-0.0001935	0.0002807	0.0035	1.02		3819.23	3819.23		7.94	Si
SLV 11	ini.	358.62	1222	-0.0001422	0.0002807	0.0035	1.02		3812.65	3812.65		10.63	Si
SLV 11	fin.	-503.01	-1174	-0.000203	0.0002807	0.0035	1.02		3819.23	3819.23		7.59	Si
SLV 12	ini.	270.76	856	-0.0001062	0.0002807	0.0035	1.02		3812.65	3812.65		14.08	Si
SLV 12	fin.	-375.39	-899	-0.0001489	0.0002807	0.0035	1.02		3819.23	3819.23		10.17	Si
SLV 4	ini.	381.85	1095	-0.0001518	0.0002807	0.0035	1.02		3812.65	3812.65		9.98	Si
SLV 4	fin.	-596.8	-1490	-0.0002441	0.0002807	0.0035	1.02		3819.23	3819.23		6.4	Si
SLV 14	ini.	-315.12	-1561	-0.000124	0.0002807	0.0035	1.02		3819.23	3819.23		12.12	Si
SLV 14	fin.	407.39	728	-0.0001625	0.0002807	0.0035	1.02		3812.65	3812.65		9.36	Si
SLV 2	ini.	192.73	272	-0.0000749	0.0002807	0.0035	1.02		3812.65	3812.65		19.78	Si
SLV 2	fin.	-358.08	-1019	-0.0001417	0.0002807	0.0035	1.02		3819.23	3819.23		10.67	Si
SLV 10	ini.	-359.63	-1885	-0.0001424	0.0002807	0.0035	1.02		3819.23	3819.23		10.62	Si
SLV 10	fin.	420.33	672	-0.000168	0.0002807	0.0035	1.02		3812.65	3812.65		9.07	Si
SLV 8	ini.	423.12	1406	-0.0001692	0.0002807	0.0035	1.02		3812.65	3812.65		9.01	Si
SLV 8	fin.	-605.03	-1423	-0.0002477	0.0002807	0.0035	1.02		3819.23	3819.23		6.31	Si
SLV 7	ini.	510.98	1772	-0.0002068	0.0002807	0.0035	1.02		3812.65	3812.65		7.46	Si
SLV 7	fin.	-732.65	-1698	-0.000306	0.0002807	0.0035	1.02		3819.23	3819.23		5.21	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCC 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.	466.48	-1650	1.02	0	300	7930	6872	2601	8230		4.99	Si
SLV 3	fin.	-719.72	-3486	1.02	0	933	7930	6872	2601	8862		2.54	Si
SLV 9	ini.	-271.77	2606	1.02	0	901	7930	6872	2601	8831		3.39	Si
SLV 9	fin.	292.71	743	1.02	0	588	7930	6872	2601	8518		11.47	Si
SLV 8	ini.	423.12	-1386	1.02	0	316	7930	6872	2601	8246		5.95	Si
SLV 8	fin.	-605.03	-3207	1.02	0	888	7930	6872	2601	8818		2.75	Si
SLV 1	ini.	277.36	-551	1.02	0	539	7930	6872	2601	8468		15.38	Si
SLV 1	fin.	-481	-2399	1.02	0	869	7930	6872	2601	8799		3.67	Si
SLV 14	ini.	-315.12	2870	1.02	0	907	7930	6872	2601	8837		3.08	Si
SLV 14	fin.	407.39	1022	1.02	0	515	7930	6872	2601	8444		8.27	Si



Comb.	Sez.	M	V	df	fvd	Vt	Vt,f	Vt,c	Vt,c int.	Vt,R	incremento > 50%	c.s.	Verifica
SLV 10	ini.	-359.63	3148	1.02	0	950	7930	6872	2601	8879		2.82	Si
SLV 10	fin.	420.33	1285	1.02	0	528	7930	6872	2601	8458		6.58	Si
SLV 12	ini.	270.76	-517	1.02	0	484	7930	6872	2601	8413		16.29	Si
SLV 12	fin.	-375.39	-2337	1.02	0	813	7930	6872	2601	8743		3.74	Si
SLV 7	ini.	510.98	-1928	1.02	0	104	7930	6872	2601	8034		4.17	Si
SLV 7	fin.	-732.65	-3749	1.02	0	925	7930	6872	2601	8855		2.36	Si
SLV 4	ini.	381.85	-1128	1.02	0	419	7930	6872	2601	8349		7.4	Si
SLV 4	fin.	-596.8	-2963	1.02	0	897	7930	6872	2601	8827		2.98	Si
SLV 11	ini.	358.62	-1059	1.02	0	381	7930	6872	2601	8310		7.85	Si
SLV 11	fin.	-503.01	-2880	1.02	0	853	7930	6872	2601	8783		3.05	Si

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	5.213	SLV 7	Si
V_SLV	2.362	SLV 7	Si
PF_SLU	16.773	SLU 81	Si
V_SLU	3.316	SLU 81	Si

Trave di accoppiamento 25

Verifiche condotte secondo D.M. 17-01-18 (N.T.C.)

Dati geometrici

X ini.	Y ini.	Z ini.inf.	Z ini.sup.	H ini.	X fin.	Y fin.	Z fin.inf.	Z fin.sup.	H fin.	Luce	Spessore	R. Trazione
1.086	-13.249	3.17	4.99	1.82	0.286	-13.248	3.17	4.99	1.82	0.8	0.3	30000

Caratteristiche del materiale

(Circolare 7 21-01-19 C8.5.I) Muratura in mattoni pieni e malta di calce LC2 Intonaco armato_Corti

fb	fhk	fvk0	fhmmedio	t0	fv0	μ	φ	fvk,lim	E	G	FC
120000			258750	13500	30000	0.577	0.767	6500	320000000	128000000	1.2

Materiale per FRM

Materiale	Fu Verticale	Fu Orizzontale	tfv	tfo	E	eu	Tipo fibra
GeoSteel G1200	47200	47200	0.01656	0.01656	19000000000	0.015	Acciaio

Rinforzo a matrice inorganica

									elim,conv / e,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	elim,conv	e,fd	yF,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 FRM in combinazioni non sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLU 49	ini.	689.96	392	-0.0000848	0.0002246	0.0035	1.82		12345.32	12345.32	No	17.89	Si
SLU 49	fin.	-1779.61	-1844	-0.0002309	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.94	Si
SLU 70	ini.	727.49	323	-0.0000896	0.0002246	0.0035	1.82		12345.32	12345.32	No	16.97	Si
SLU 70	fin.	-1663.39	-1896	-0.0002144	0.0002246	0.0035	1.82		12356.5	12356.5	No	7.43	Si
SLU 48	ini.	689.96	392	-0.0000848	0.0002246	0.0035	1.82		12345.32	12345.32	No	17.89	Si
SLU 48	fin.	-1779.61	-1844	-0.0002309	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.94	Si
SLU 47	ini.	689.96	392	-0.0000848	0.0002246	0.0035	1.82		12345.32	12345.32	No	17.89	Si
SLU 47	fin.	-1779.61	-1844	-0.0002309	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.94	Si
SLU 46	ini.	689.96	392	-0.0000848	0.0002246	0.0035	1.82		12345.32	12345.32	No	17.89	Si
SLU 46	fin.	-1779.61	-1844	-0.0002309	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.94	Si
SLU 44	ini.	689.96	392	-0.0000848	0.0002246	0.0035	1.82		12345.32	12345.32	No	17.89	Si
SLU 44	fin.	-1779.61	-1844	-0.0002309	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.94	Si
SLU 43	ini.	689.96	392	-0.0000848	0.0002246	0.0035	1.82		12345.32	12345.32	No	17.89	Si
SLU 43	fin.	-1779.61	-1844	-0.0002309	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.94	Si
SLU 45	ini.	689.96	392	-0.0000848	0.0002246	0.0035	1.82		12345.32	12345.32	No	17.89	Si
SLU 45	fin.	-1779.61	-1844	-0.0002309	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.94	Si
SLU 51	ini.	689.96	392	-0.0000848	0.0002246	0.0035	1.82		12345.32	12345.32	No	17.89	Si
SLU 51	fin.	-1779.61	-1844	-0.0002309	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.94	Si
SLU 50	ini.	689.96	392	-0.0000848	0.0002246	0.0035	1.82		12345.32	12345.32	No	17.89	Si
SLU 50	fin.	-1779.61	-1844	-0.0002309	0.0002246	0.0035	1.82		12356.5	12356.5	No	6.94	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRM 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.	828.01	-2462	1.82	0	743	6344	9811	4641	7087	No	2.88	Si
SLU 79	fin.	-1356.63	-6850	1.82	0	1084	6344	9811	4641	7427	No	1.08	Si
SLU 80	ini.	828.01	-2462	1.82	0	743	6344	9811	4641	7087	No	2.88	Si
SLU 80	fin.	-1356.63	-6850	1.82	0	1084	6344	9811	4641	7427	No	1.08	Si
SLU 84	ini.	871.09	-1894	1.82	0	749	6344	9811	4641	7093	No	3.74	Si
SLU 84	fin.	-1225.15	-6915	1.82	0	1083	6344	9811	4641	7427	No	1.07	Si
SLU 81	ini.	871.09	-1894	1.82	0	749	6344	9811	4641	7093	No	3.74	Si
SLU 81	fin.	-1225.15	-6915	1.82	0	1083	6344	9811	4641	7427	No	1.07	Si
SLU 75	ini.	828.01	-2462	1.82	0	743	6344	9811	4641	7087	No	2.88	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.	-1356.63	-6850	1.82	0	1084	6344	9811	4641	7427	No	1.08	Si
SLU 76	ini.	828.01	-2462	1.82	0	743	6344	9811	4641	7087	No	2.88	Si
SLU 76	fin.	-1356.63	-6850	1.82	0	1084	6344	9811	4641	7427	No	1.08	Si
SLU 77	ini.	828.01	-2462	1.82	0	743	6344	9811	4641	7087	No	2.88	Si
SLU 77	fin.	-1356.63	-6850	1.82	0	1084	6344	9811	4641	7427	No	1.08	Si
SLU 83	ini.	871.09	-1894	1.82	0	749	6344	9811	4641	7093	No	3.74	Si
SLU 83	fin.	-1225.15	-6915	1.82	0	1083	6344	9811	4641	7427	No	1.07	Si
SLU 78	ini.	828.01	-2462	1.82	0	743	6344	9811	4641	7087	No	2.88	Si
SLU 78	fin.	-1356.63	-6850	1.82	0	1084	6344	9811	4641	7427	No	1.08	Si
SLU 82	ini.	871.09	-1894	1.82	0	749	6344	9811	4641	7093	No	3.74	Si
SLU 82	fin.	-1225.15	-6915	1.82	0	1083	6344	9811	4641	7427	No	1.07	Si

Verifica a pressoflessione nel piano delle sezioni rinforzate con FRCC in combinazioni sismiche

Verifica condotta secondo CNR-DT 215

Comb.	Sez.	M	N	em	em_	emu	df	M0d	M1d	MRd	incremento > 50%	c.s.	Verifica
SLV 7	ini.	978.68	619	-0.0001206	0.0003369	0.0035	1.82		11676.26	11676.26		11.93	Si
SLV 7	fin.	-1466.96	-1377	-0.0001836	0.0003369	0.0035	1.82		11688.48	11688.48		7.97	Si
SLV 4	ini.	1094.41	346	-0.0001353	0.0003369	0.0035	1.82		11676.26	11676.26		10.67	Si
SLV 4	fin.	-2701.21	-2931	-0.0003555	0.0003369	0.0035	1.82		11688.48	11688.48		4.33	Si
SLV 2	ini.	928.96	122	-0.0001142	0.0003369	0.0035	1.82		11676.26	11676.26		12.57	Si
SLV 2	fin.	-2789.58	-3226	-0.0003686	0.0003369	0.0035	1.82		11688.48	11688.48		4.19	Si
SLV 6	ini.	437.47	-135	-0.0000529	0.0003369	0.0035	1.82		11676.26	11676.26		26.69	Si
SLV 6	fin.	-1857.07	-2464	-0.0002359	0.0003369	0.0035	1.82		11688.48	11688.48		6.29	Si
SLV 1	ini.	919.06	129	-0.000113	0.0003369	0.0035	1.82		11676.26	11676.26		12.7	Si
SLV 1	fin.	-2697.56	-3126	-0.000355	0.0003369	0.0035	1.82		11688.48	11688.48		4.33	Si
SLV 9	ini.	171.19	-123	-0.0000205	0.0003369	0.0035	1.82		11676.26	11676.26		68.21	Si
SLV 9	fin.	-872.35	-1410	-0.000107	0.0003369	0.0035	1.82		11688.48	11688.48		13.4	Si
SLV 5	ini.	427.18	-127	-0.0000517	0.0003369	0.0035	1.82		11676.26	11676.26		27.33	Si
SLV 5	fin.	-1761.53	-2360	-0.0002229	0.0003369	0.0035	1.82		11688.48	11688.48		6.64	Si
SLV 8	ini.	988.97	611	-0.0001219	0.0003369	0.0035	1.82		11676.26	11676.26		11.81	Si
SLV 8	fin.	-1562.5	-1481	-0.0001963	0.0003369	0.0035	1.82		11688.48	11688.48		7.48	Si
SLV 3	ini.	1084.51	353	-0.0001341	0.0003369	0.0035	1.82		11676.26	11676.26		10.77	Si
SLV 3	fin.	-2609.19	-2831	-0.000342	0.0003369	0.0035	1.82		11688.48	11688.48		4.48	Si
SLV 10	ini.	181.48	-131	-0.0000218	0.0003369	0.0035	1.82		11676.26	11676.26		64.34	Si
SLV 10	fin.	-967.89	-1514	-0.0001191	0.0003369	0.0035	1.82		11688.48	11688.48		12.08	Si

Verifica a taglio nel piano delle sezioni rinforzate con FRCC 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.	978.68	-3695	1.82	0	1068	6344	14716	4641	7411		2.01	Si
SLV 7	fin.	-1466.96	-6158	1.82	0	1417	6344	14716	4641	7761		1.26	Si
SLV 8	ini.	988.97	-3937	1.82	0	1069	6344	14716	4641	7413		1.88	Si
SLV 8	fin.	-1562.5	-6400	1.82	0	1433	6344	14716	4641	7776		1.22	Si
SLV 10	ini.	181.48	-1647	1.82	0	1211	6344	14716	4641	7554		4.59	Si
SLV 10	fin.	-967.89	-4174	1.82	0	1438	6344	14716	4641	7781		1.86	Si
SLV 2	ini.	928.96	-6310	1.82	0	1164	6344	14716	4641	7508		1.19	Si
SLV 2	fin.	-2789.58	-8811	1.82	0	1677	6344	14716	4641	8020		0.91	No
SLV 1	ini.	919.06	-6078	1.82	0	1163	6344	14716	4641	7507		1.24	Si
SLV 1	fin.	-2697.56	-8578	1.82	0	1664	6344	14716	4641	8007		0.93	No
SLV 6	ini.	437.47	-3775	1.82	0	1211	6344	14716	4641	7555		2	Si
SLV 6	fin.	-1857.07	-6300	1.82	0	1575	6344	14716	4641	7918		1.26	Si
SLV 4	ini.	1094.41	-6359	1.82	0	1122	6344	14716	4641	7466		1.17	Si
SLV 4	fin.	-2701.21	-8841	1.82	0	1638	6344	14716	4641	7982		0.9	No
SLV 5	ini.	427.18	-3533	1.82	0	1210	6344	14716	4641	7554		2.14	Si
SLV 5	fin.	-1761.53	-6058	1.82	0	1560	6344	14716	4641	7904		1.3	Si
SLV 12	ini.	732.98	-1808	1.82	0	1069	6344	14716	4641	7412		4.1	Si
SLV 12	fin.	-673.33	-4274	1.82	0	1281	6344	14716	4641	7624		1.78	Si
SLV 3	ini.	1084.51	-6126	1.82	0	1120	6344	14716	4641	7464		1.22	Si
SLV 3	fin.	-2609.19	-8608	1.82	0	1625	6344	14716	4641	7968		0.93	No

Tabella dei coefficienti di sicurezza minimi

Stato limite	Coeff.s.	Comb.	Verifica
PF_SLV	4.19	SLV 2	Si
V_SLV	0.903	SLV 4	No
PF_SLU	6.943	SLU 43	Si
V_SLU	1.074	SLU 81	Si