Linear Analysis of Bernoulli Beams

Bence Balogh

Contents

1 Summary

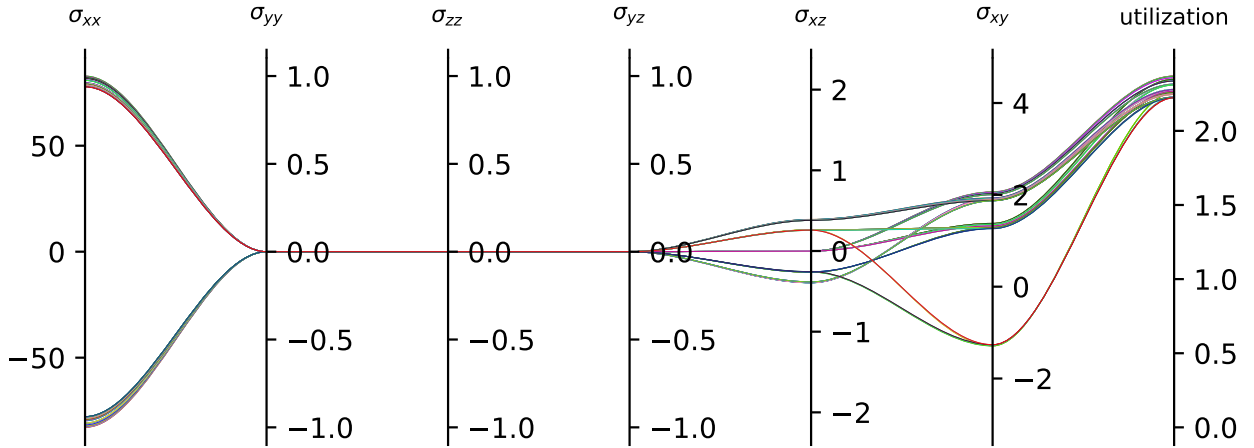Figure 1: Read this for an online version of the geometry.

Figure 2: Stress states of points with highest utilizations. The maximum value is 2.37.

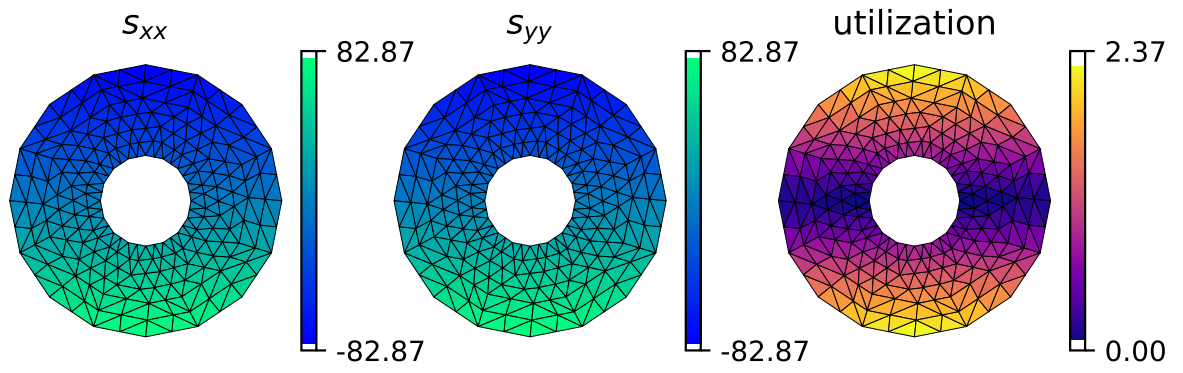The highest utilization 2.37 occurs at element 58, from load case 0 at location $\xi = -1$.

Figure 3: Results of the cross section where the highest utilization occurs.
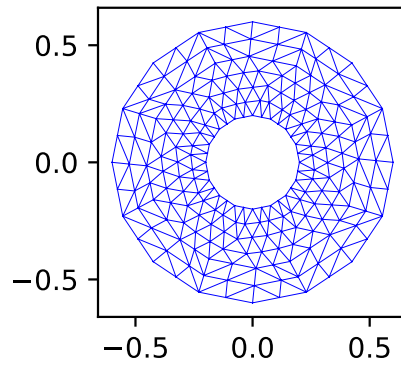
2 Input

Figure 4: Mesh of the cross section.

E	ν	A	I_x	I_y	I_z
2.1e+04	0.25	0.9797	0.191	0.09548	0.09548

Table 1: Section properties.

2.1 Mesh

node	x	y	z
1	0	-7.5	-5
2	0	-7.5	0
3	0	-7.5	5
4	0	0	-5
5	0	0	0
6	0	0	5
7	0	7.5	-5
8	0	7.5	0
9	0	7.5	5
10	25	-7.5	-5
11	25	-7.5	0
12	25	-7.5	5
13	25	0	-5
14	25	0	0
15	25	0	5
16	25	7.5	-5
17	25	7.5	0
18	25	7.5	5
19	50	-7.5	-5
20	50	-7.5	0

3

	node	x	y	z
21	50	-7.5	5
22	50	0	-5
23	50	0	0
24	50	0	5
25	50	7.5	-5
26	50	7.5	0
27	50	7.5	5
28	75	-7.5	-5
29	75	-7.5	0
30	75	-7.5	5
31	75	0	-5
32	75	0	0
33	75	0	5
34	75	7.5	-5
35	75	7.5	0
36	75	7.5	5
37	100	-7.5	-5
38	100	-7.5	0
39	100	-7.5	5
40	100	0	-5
41	100	0	0
42	100	0	5
43	100	7.5	-5
44	100	7.5	0
45	100	7.5	5

	cell	nodes
1		[0, 1]
2		[0, 3]
3		[0, 9]
4		[1, 2]
5		[1, 4]
6		[1, 10]
7		[2, 5]
8		[2, 11]
9		[3, 4]
10		[3, 6]
11		[3, 12]
12		[4, 5]
13		[4, 7]
14		[4, 13]
15		[5, 8]
16		[5, 14]

cell	nodes
17	[6, 7]
18	[6, 15]
19	[7, 8]
20	[7, 16]
21	[8, 17]
22	[9, 10]
23	[9, 12]
24	[9, 18]
25	[10, 11]
26	[10, 13]
27	[10, 19]
28	[11, 14]
29	[11, 20]
30	[12, 13]
31	[12, 15]
32	[12, 21]
33	[13, 14]
34	[13, 16]
35	[13, 22]
36	[14, 17]
37	[14, 23]
38	[15, 16]
39	[15, 24]
40	[16, 17]
41	[16, 25]
42	[17, 26]
43	[18, 19]
44	[18, 21]
45	[18, 27]
46	[19, 20]
47	[19, 22]
48	[19, 28]
49	[20, 23]
50	[20, 29]
51	[21, 22]
52	[21, 24]
53	[21, 30]
54	[22, 23]
55	[22, 25]
56	[22, 31]
57	[23, 26]
58	[23, 32]
59	[24, 25]
60	[24, 33]

cell	nodes
61	[25, 26]
62	[25, 34]
63	[26, 35]
64	[27, 28]
65	[27, 30]
66	[27, 36]
67	[28, 29]
68	[28, 31]
69	[28, 37]
70	[29, 32]
71	[29, 38]
72	[30, 31]
73	[30, 33]
74	[30, 39]
75	[31, 32]
76	[31, 34]
77	[31, 40]
78	[32, 35]
79	[32, 41]
80	[33, 34]
81	[33, 42]
82	[34, 35]
83	[34, 43]
84	[35, 44]
85	[36, 37]
86	[36, 39]
87	[37, 38]
88	[37, 40]
89	[38, 41]
90	[39, 40]
91	[39, 42]
92	[40, 41]
93	[40, 43]
94	[41, 44]
95	[42, 43]
96	[43, 44]

2.2 Nodal Loads

node	case	F_x	F_y	F_z	M_x	M_y	M_z
1	LC1	0	0	0	0	0	0
2	LC1	0	0	0	0	0	0
3	LC1	0	0	0	0	0	0
4	LC1	0	0	0	0	0	0
5	LC1	0	0	0	0	0	0
6	LC1	0	0	0	0	0	0
7	LC1	0	0	0	0	0	0
8	LC1	0	0	0	0	0	0
9	LC1	0	0	0	0	0	0
10	LC1	0	0	0	0	0	0
11	LC1	0	0	0	0	0	0
12	LC1	0	0	0	0	0	0
13	LC1	0	0	0	0	0	0
14	LC1	0	0	0	0	0	0
15	LC1	0	0	0	0	0	0
16	LC1	0	0	0	0	0	0
17	LC1	0	0	0	0	0	0
18	LC1	0	0	0	0	0	0
19	LC1	0	0	0	0	0	0
20	LC1	0	0	0	0	0	0
21	LC1	0	0	0	0	0	0
22	LC1	0	0	0	0	0	0
23	LC1	0	0	0	0	0	0
24	LC1	0	0	0	0	0	0
25	LC1	0	0	0	0	0	0
26	LC1	0	0	0	0	0	0
27	LC1	0	0	0	0	0	0
28	LC1	0	0	0	0	0	0
29	LC1	0	0	0	0	0	0
30	LC1	0	0	0	0	0	0
31	LC1	0	0	0	0	0	0
32	LC1	0	0	0	0	0	0
33	LC1	0	0	0	0	0	0
34	LC1	0	0	0	0	0	0
35	LC1	0	0	0	0	0	0
36	LC1	0	0	0	0	0	0
37	LC1	0	0	0	0	0	0
38	LC1	0	0	0	0	0	0
39	LC1	0	0	0	0	0	0
40	LC1	0	0	0	0	0	0
41	LC1	0	0	2	0	0	0
42	LC1	0	0	0	0	0	0

node	case	F_x	F_y	F_z	M_x	M_y	M_z
43	LC1	0	0	0	0	0	0
44	LC1	0	0	0	0	0	0
45	LC1	0	0	0	0	0	0

node	case	F_x	F_y	F_z	M_x	M_y	M_z
1	LC2	0	0	0	0	0	0
2	LC2	0	0	0	0	0	0
3	LC2	0	0	0	0	0	0
4	LC2	0	0	0	0	0	0
5	LC2	0	0	0	0	0	0
6	LC2	0	0	0	0	0	0
7	LC2	0	0	0	0	0	0
8	LC2	0	0	0	0	0	0
9	LC2	0	0	0	0	0	0
10	LC2	0	0	0	0	0	0
11	LC2	0	0	0	0	0	0
12	LC2	0	0	0	0	0	0
13	LC2	0	0	0	0	0	0
14	LC2	0	0	0	0	0	0
15	LC2	0	0	0	0	0	0
16	LC2	0	0	0	0	0	0
17	LC2	0	0	0	0	0	0
18	LC2	0	0	0	0	0	0
19	LC2	0	0	0	0	0	0
20	LC2	0	0	0	0	0	0
21	LC2	0	0	0	0	0	0
22	LC2	0	0	0	0	0	0
23	LC2	0	0	0	0	0	0
24	LC2	0	0	0	0	0	0
25	LC2	0	0	0	0	0	0
26	LC2	0	0	0	0	0	0
27	LC2	0	0	0	0	0	0
28	LC2	0	0	0	0	0	0
29	LC2	0	0	0	0	0	0
30	LC2	0	0	0	0	0	0
31	LC2	0	0	0	0	0	0
32	LC2	0	0	0	0	0	0
33	LC2	0	0	0	0	0	0
34	LC2	0	0	0	0	0	0
35	LC2	0	0	0	0	0	0
36	LC2	0	0	0	0	0	0
37	LC2	0	0	0	0	0	0
38	LC2	0	0	0	0	0	0

node	case	F_x	F_y	F_z	M_x	M_y	M_z
39	LC2	0	0	0	0	0	0
40	LC2	0	0	0	0	0	0
41	LC2	0	2	0	0	0	0
42	LC2	0	0	0	0	0	0
43	LC2	0	0	0	0	0	0
44	LC2	0	0	0	0	0	0
45	LC2	0	0	0	0	0	0

node	case	F_x	F_y	F_z	M_x	M_y	M_z
1	LC3	0	0	0	0	0	0
2	LC3	0	0	0	0	0	0
3	LC3	0	0	0	0	0	0
4	LC3	0	0	0	0	0	0
5	LC3	0	0	0	0	0	0
6	LC3	0	0	0	0	0	0
7	LC3	0	0	0	0	0	0
8	LC3	0	0	0	0	0	0
9	LC3	0	0	0	0	0	0
10	LC3	0	0	0	0	0	0
11	LC3	0	0	0	0	0	0
12	LC3	0	0	0	0	0	0
13	LC3	0	0	0	0	0	0
14	LC3	0	0	0	0	0	0
15	LC3	0	0	0	0	0	0
16	LC3	0	0	0	0	0	0
17	LC3	0	0	0	0	0	0
18	LC3	0	0	0	0	0	0
19	LC3	0	0	0	0	0	0
20	LC3	0	0	0	0	0	0
21	LC3	0	0	0	0	0	0
22	LC3	0	0	0	0	0	0
23	LC3	0	0	0	0	0	0
24	LC3	0	0	0	0	0	0
25	LC3	0	0	0	0	0	0
26	LC3	0	0	0	0	0	0
27	LC3	0	0	0	0	0	0
28	LC3	0	0	0	0	0	0
29	LC3	0	0	0	0	0	0
30	LC3	0	0	0	0	0	0
31	LC3	0	0	0	0	0	0
32	LC3	0	0	0	0	0	0
33	LC3	0	0	0	0	0	0
34	LC3	0	0	0	0	0	0

node	case	F_x	F_y	F_z	M_x	M_y	M_z
35	LC3	0	0	0	0	0	0
36	LC3	0	0	0	0	0	0
37	LC3	0	0	0	0	0	0
38	LC3	0	0	0	0	0	0
39	LC3	0	0	0	0	0	0
40	LC3	0	0	0	0	0	0
41	LC3	0	-2	0	0	0	0
42	LC3	0	0	0	0	0	0
43	LC3	0	0	0	0	0	0
44	LC3	0	0	0	0	0	0
45	LC3	0	0	0	0	0	0

3 Results

3.1 Nodal DOF Solution

node	case	U_x	U_y	U_z	φ_x	φ_y	φ_z
41	LC1	1.198e-17	7.783e-15	0.9563	1.511e-13	-0.003519	2.564e-17
41	LC2	-3.778e-18	0.9127	-2.089e-14	5.959e-15	6.225e-17	0.001993
41	LC3	3.778e-18	-0.9127	2.089e-14	-5.959e-15	-6.24e-17	-0.001993

Table 7: DOF solutions of loaded nodes for each load case.

i	case	U_x	U_y	U_z	φ_x	φ_y	φ_z
1	LC1	5.748e-12	2.33e-17	2.093e-13	-1.434e-18	-2.943e-12	1.942e-16
2	LC1	3.747e-26	-3.392e-28	2.481e-13	-8.185e-19	-3.267e-12	-4.065e-27
3	LC1	-5.748e-12	-2.33e-17	2.093e-13	-1.434e-18	-2.943e-12	-1.942e-16
4	LC1	5.759e-12	3.289e-25	2.093e-13	2.918e-24	-2.943e-12	4.197e-24
5	LC1	2.959e-27	-4.218e-28	2.481e-13	2.917e-24	-3.266e-12	-4.745e-27
6	LC1	-5.759e-12	-3.298e-25	2.093e-13	2.918e-24	-2.943e-12	-4.207e-24
7	LC1	5.748e-12	-2.33e-17	2.093e-13	1.434e-18	-2.943e-12	-1.942e-16
8	LC1	-3.489e-26	-3.488e-28	2.481e-13	8.185e-19	-3.267e-12	-4.144e-27
9	LC1	-5.748e-12	2.33e-17	2.093e-13	1.434e-18	-2.943e-12	1.942e-16
10	LC1	0.006984	1.201e-08	0.1869	-2.235e-08	-0.004078	-1.209e-06
11	LC1	4.553e-17	-1.919e-16	0.1869	-1.276e-08	-0.002061	2.237e-18
12	LC1	-0.006984	-1.201e-08	0.1869	-2.235e-08	-0.004078	1.209e-06
13	LC1	0.006998	2.27e-13	0.1869	4.548e-14	-0.004079	1.071e-15
14	LC1	3.596e-18	-1.917e-16	0.1869	4.546e-14	-0.002064	6.586e-18
15	LC1	-0.006998	-2.274e-13	0.1869	4.548e-14	-0.004079	-1.057e-15
16	LC1	0.006984	-1.201e-08	0.1869	2.235e-08	-0.004078	1.209e-06
17	LC1	-4.239e-17	-1.907e-16	0.1869	1.276e-08	-0.002061	2.862e-18
18	LC1	-0.006984	1.201e-08	0.1869	2.235e-08	-0.004078	-1.209e-06
19	LC1	0.01201	3.076e-08	0.4293	2.201e-07	-0.005074	-2.709e-06

i	case	U_x	U_y	U_z	φ_x	φ_y	φ_z
20	LC1	9.359e-17	3.122e-16	0.4293	-1.552e-07	-0.003173	4.732e-17
21	LC1	-0.01201	-3.076e-08	0.4293	2.201e-07	-0.005074	2.709e-06
22	LC1	0.01204	4.61e-13	0.4293	9.242e-14	-0.005076	7.052e-16
23	LC1	7.672e-18	3.188e-16	0.4293	9.226e-14	-0.003179	2.472e-17
24	LC1	-0.01204	-4.604e-13	0.4293	9.24e-14	-0.005076	-6.549e-16
25	LC1	0.01201	-3.075e-08	0.4293	-2.201e-07	-0.005074	2.709e-06
26	LC1	-8.508e-17	3.26e-16	0.4293	1.552e-07	-0.003173	4.78e-17
27	LC1	-0.01201	3.075e-08	0.4293	-2.201e-07	-0.005074	-2.709e-06
28	LC1	0.01502	2.548e-06	0.692	1.41e-05	-0.005669	-4.078e-06
29	LC1	1.262e-16	4.423e-15	0.692	1.031e-06	-0.003727	7.794e-17
30	LC1	-0.01502	-2.548e-06	0.692	1.41e-05	-0.005669	4.078e-06
31	LC1	0.01508	6.392e-13	0.6921	1.272e-13	-0.005703	2.421e-16
32	LC1	1.007e-17	4.421e-15	0.6921	1.27e-13	-0.003747	3.731e-17
33	LC1	-0.01508	-6.303e-13	0.6921	1.272e-13	-0.005703	-1.671e-16
34	LC1	0.01502	-2.548e-06	0.692	-1.41e-05	-0.005669	4.078e-06
35	LC1	-1.159e-16	4.42e-15	0.692	-1.031e-06	-0.003727	7.873e-17
36	LC1	-0.01502	2.548e-06	0.692	-1.41e-05	-0.005669	-4.078e-06
37	LC1	0.01605	8.003e-05	0.9513	0.0003554	-0.004682	-6.93e-06
38	LC1	1.376e-16	7.776e-15	0.9513	0.0001334	-0.003497	4.67e-17
39	LC1	-0.01605	-8.003e-05	0.9513	0.0003554	-0.004682	6.93e-06
40	LC1	0.01612	7.62e-13	0.9562	1.514e-13	-0.004721	-4.73e-16
41	LC1	1.198e-17	7.783e-15	0.9563	1.511e-13	-0.003519	2.564e-17
42	LC1	-0.01612	-7.464e-13	0.9562	1.514e-13	-0.004721	5.237e-16
43	LC1	0.01605	-8.003e-05	0.9513	-0.0003554	-0.004682	6.93e-06
44	LC1	-1.264e-16	7.787e-15	0.9513	-0.0001334	-0.003497	4.938e-17
45	LC1	-0.01605	8.003e-05	0.9513	-0.0003554	-0.004682	-6.93e-06

i	case	U_x	U_y	U_z	φ_x	φ_y	φ_z
1	LC2	3.832e-12	2.062e-13	3.834e-18	-5.972e-19	-3.196e-17	2.927e-12
2	LC2	3.833e-12	2.062e-13	-2.729e-26	1.199e-25	3.522e-25	2.927e-12
3	LC2	3.832e-12	2.062e-13	-3.834e-18	5.972e-19	3.196e-17	2.927e-12
4	LC2	-1.242e-25	2.543e-13	-6.18e-27	4.283e-21	8.664e-26	3.328e-12
5	LC2	-2.058e-27	2.543e-13	-7.459e-27	1.201e-25	9.73e-26	3.328e-12
6	LC2	1.227e-25	2.543e-13	-6.168e-27	-4.283e-21	8.657e-26	3.328e-12
7	LC2	-3.832e-12	2.062e-13	-3.834e-18	-5.972e-19	3.196e-17	2.927e-12
8	LC2	-3.833e-12	2.062e-13	1.237e-26	1.193e-25	-1.575e-25	2.927e-12
9	LC2	-3.832e-12	2.062e-13	3.834e-18	5.972e-19	-3.196e-17	2.927e-12
10	LC2	0.004657	0.1883	2.726e-09	-9.308e-09	1.989e-07	0.004357
11	LC2	0.004658	0.1883	-1.945e-14	1.869e-15	1.38e-16	0.004357
12	LC2	0.004657	0.1883	-2.726e-09	9.308e-09	-1.989e-07	0.004357
13	LC2	-1.51e-16	0.1883	-5.476e-15	6.675e-11	1.17e-16	0.001855
14	LC2	-2.5e-18	0.1883	-5.478e-15	1.866e-15	5.077e-17	0.001855
15	LC2	1.493e-16	0.1883	-5.48e-15	-6.675e-11	1.179e-16	0.001855

i	case	U_x	U_y	U_z	φ_x	φ_y	φ_z
16	LC2	-0.004657	0.1883	-2.726e-09	-9.308e-09	-1.989e-07	0.004357
17	LC2	-0.004658	0.1883	8.482e-15	1.86e-15	-3.608e-17	0.004357
18	LC2	-0.004657	0.1883	2.726e-09	9.308e-09	1.989e-07	0.004357
19	LC2	0.008021	0.4273	1.578e-08	-2.439e-07	4.873e-07	0.004822
20	LC2	0.008024	0.4273	-4.222e-14	3.903e-15	1.667e-16	0.004822
21	LC2	0.008021	0.4273	-1.578e-08	2.439e-07	-4.873e-07	0.004822
22	LC2	-2.391e-16	0.4272	-1.297e-14	4.247e-10	1.09e-16	0.002491
23	LC2	-4.069e-18	0.4272	-1.297e-14	3.904e-15	6.564e-17	0.002491
24	LC2	2.354e-16	0.4272	-1.297e-14	-4.247e-10	1.103e-16	0.002491
25	LC2	-0.008021	0.4273	-1.578e-08	-2.439e-07	-4.873e-07	0.004822
26	LC2	-0.008024	0.4273	1.615e-14	3.904e-15	-3.563e-17	0.004822
27	LC2	-0.008021	0.4273	1.578e-08	2.439e-07	4.873e-07	0.004822
28	LC2	0.01004	0.6756	6.367e-07	-9.294e-06	8.649e-07	0.005073
29	LC2	0.01005	0.6756	-5.883e-14	5.655e-15	1.455e-16	0.005083
30	LC2	0.01004	0.6756	-6.367e-07	9.294e-06	-8.649e-07	0.005073
31	LC2	-2.79e-16	0.6756	-1.691e-14	-2.891e-06	8.958e-17	0.002684
32	LC2	-4.665e-18	0.6756	-1.691e-14	5.621e-15	6.614e-17	0.002691
33	LC2	2.772e-16	0.6756	-1.691e-14	2.891e-06	9.118e-17	0.002684
34	LC2	-0.01004	0.6756	-6.367e-07	-9.294e-06	-8.649e-07	0.005073
35	LC2	-0.01005	0.6756	2.514e-14	5.703e-15	-1.332e-17	0.005083
36	LC2	-0.01004	0.6756	6.367e-07	9.294e-06	8.649e-07	0.005073
37	LC2	0.01074	0.9109	2.176e-05	-0.0002599	1.449e-06	0.003563
38	LC2	0.01075	0.9125	-6.576e-14	6.009e-15	1.183e-16	0.003575
39	LC2	0.01074	0.9109	-2.176e-05	0.0002599	-1.449e-06	0.003563
40	LC2	-2.928e-16	0.9109	-2.089e-14	-0.0001649	7.852e-17	0.001986
41	LC2	-3.778e-18	0.9127	-2.089e-14	5.959e-15	6.225e-17	0.001993
42	LC2	2.924e-16	0.9109	-2.089e-14	0.0001649	8.081e-17	0.001986
43	LC2	-0.01074	0.9109	-2.176e-05	-0.0002599	-1.449e-06	0.003563
44	LC2	-0.01075	0.9125	2.392e-14	6.016e-15	7.356e-18	0.003575
45	LC2	-0.01074	0.9109	2.176e-05	0.0002599	1.449e-06	0.003563

i	case	U_x	U_y	U_z	φ_x	φ_y	φ_z
1	LC3	-3.832e-12	-2.062e-13	-3.834e-18	5.972e-19	3.196e-17	-2.927e-12
2	LC3	-3.833e-12	-2.062e-13	2.729e-26	-1.199e-25	-3.522e-25	-2.927e-12
3	LC3	-3.832e-12	-2.062e-13	3.834e-18	-5.972e-19	-3.196e-17	-2.927e-12
4	LC3	1.243e-25	-2.543e-13	6.18e-27	-4.283e-21	-8.664e-26	-3.328e-12
5	LC3	2.058e-27	-2.543e-13	7.458e-27	-1.201e-25	-9.73e-26	-3.328e-12
6	LC3	-1.227e-25	-2.543e-13	6.167e-27	4.283e-21	-8.656e-26	-3.328e-12
7	LC3	3.832e-12	-2.062e-13	3.834e-18	5.972e-19	-3.196e-17	-2.927e-12
8	LC3	3.833e-12	-2.062e-13	-1.237e-26	-1.195e-25	1.575e-25	-2.927e-12
9	LC3	3.832e-12	-2.062e-13	-3.834e-18	-5.972e-19	3.196e-17	-2.927e-12
10	LC3	-0.004657	-0.1883	-2.726e-09	9.308e-09	-1.989e-07	-0.004357
11	LC3	-0.004658	-0.1883	1.945e-14	-1.869e-15	-1.38e-16	-0.004357

i	case	U_x	U_y	U_z	φ_x	φ_y	φ_z
12	LC3	-0.004657	-0.1883	2.726e-09	-9.308e-09	1.989e-07	-0.004357
13	LC3	1.51e-16	-0.1883	5.476e-15	-6.675e-11	-1.17e-16	-0.001855
14	LC3	2.5e-18	-0.1883	5.478e-15	-1.866e-15	-5.077e-17	-0.001855
15	LC3	-1.493e-16	-0.1883	5.479e-15	6.675e-11	-1.179e-16	-0.001855
16	LC3	0.004657	-0.1883	2.726e-09	9.308e-09	1.989e-07	-0.004357
17	LC3	0.004658	-0.1883	-8.482e-15	-1.863e-15	3.608e-17	-0.004357
18	LC3	0.004657	-0.1883	-2.726e-09	-9.308e-09	-1.989e-07	-0.004357
19	LC3	-0.008021	-0.4273	-1.578e-08	2.439e-07	-4.873e-07	-0.004822
20	LC3	-0.008024	-0.4273	4.222e-14	-3.903e-15	-1.667e-16	-0.004822
21	LC3	-0.008021	-0.4273	1.578e-08	-2.439e-07	4.873e-07	-0.004822
22	LC3	2.391e-16	-0.4272	1.297e-14	-4.247e-10	-1.09e-16	-0.002491
23	LC3	4.069e-18	-0.4272	1.297e-14	-3.904e-15	-6.564e-17	-0.002491
24	LC3	-2.354e-16	-0.4272	1.297e-14	4.247e-10	-1.103e-16	-0.002491
25	LC3	0.008021	-0.4273	1.578e-08	2.439e-07	4.873e-07	-0.004822
26	LC3	0.008024	-0.4273	-1.615e-14	-3.904e-15	3.584e-17	-0.004822
27	LC3	0.008021	-0.4273	-1.578e-08	-2.439e-07	-4.873e-07	-0.004822
28	LC3	-0.01004	-0.6756	-6.367e-07	9.294e-06	-8.649e-07	-0.005073
29	LC3	-0.01005	-0.6756	5.883e-14	-5.655e-15	-1.457e-16	-0.005083
30	LC3	-0.01004	-0.6756	6.367e-07	-9.294e-06	8.649e-07	-0.005073
31	LC3	2.794e-16	-0.6756	1.688e-14	2.891e-06	-8.96e-17	-0.002684
32	LC3	4.543e-18	-0.6756	1.688e-14	-5.631e-15	-6.622e-17	-0.002691
33	LC3	-2.773e-16	-0.6756	1.688e-14	-2.891e-06	-9.108e-17	-0.002684
34	LC3	0.01004	-0.6756	6.367e-07	9.294e-06	8.649e-07	-0.005073
35	LC3	0.01005	-0.6756	-2.52e-14	-5.703e-15	1.3e-17	-0.005083
36	LC3	0.01004	-0.6756	-6.367e-07	-9.294e-06	-8.649e-07	-0.005073
37	LC3	-0.01074	-0.9109	-2.176e-05	0.0002599	-1.449e-06	-0.003563
38	LC3	-0.01075	-0.9125	6.576e-14	-6.009e-15	-1.181e-16	-0.003575
39	LC3	-0.01074	-0.9109	2.176e-05	-0.0002599	1.449e-06	-0.003563
40	LC3	2.937e-16	-0.9109	2.089e-14	0.0001649	-7.906e-17	-0.001986
41	LC3	3.778e-18	-0.9127	2.089e-14	-5.959e-15	-6.24e-17	-0.001993
42	LC3	-2.926e-16	-0.9109	2.089e-14	-0.0001649	-8.114e-17	-0.001986
43	LC3	0.01074	-0.9109	2.176e-05	0.0002599	1.449e-06	-0.003563
44	LC3	0.01075	-0.9125	-2.392e-14	-6.016e-15	-8.068e-18	-0.003575
45	LC3	0.01074	-0.9109	-2.176e-05	-0.0002599	-1.449e-06	-0.003563

3.2 Reaction Forces

node	case	F_x	F_y	F_z	M_x	M_y	M_z
1	LC1	-5.748	-2.33e-05	-0.2093	1.434e-06	2.943	-0.0001942
2	LC1	0	0	-0.2481	8.185e-07	3.267	0
3	LC1	5.748	2.33e-05	-0.2093	1.434e-06	2.943	0.0001942
4	LC1	-5.759	0	-0.2093	0	2.943	0
5	LC1	0	0	-0.2481	0	3.266	0

		node	case	F_x	F_y	F_z	M_x	M_y	M_z
6	LC1	5.759	0	-0.2093	0	2.943	0
7	LC1	-5.748	2.33e-05	-0.2093	-1.434e-06	2.943	0.0001942
8	LC1	0	0	-0.2481	-8.185e-07	3.267	0
9	LC1	5.748	-2.33e-05	-0.2093	-1.434e-06	2.943	-0.0001942
10	LC1	0	0	0	0	0	0
11	LC1	0	0	0	0	0	0
12	LC1	0	0	0	0	0	0
13	LC1	0	0	0	0	0	0
14	LC1	0	0	0	0	0	0
15	LC1	0	0	0	0	0	0
16	LC1	0	0	0	0	0	0
17	LC1	0	0	0	0	0	0
18	LC1	0	0	0	0	0	0
19	LC1	0	0	0	0	0	0
20	LC1	0	0	0	0	0	0
21	LC1	0	0	0	0	0	0
22	LC1	0	0	0	0	0	0
23	LC1	0	0	0	0	0	0
24	LC1	0	0	0	0	0	0
25	LC1	0	0	0	0	0	0
26	LC1	0	0	0	0	0	0
27	LC1	0	0	0	0	0	0
28	LC1	0	0	0	0	0	0
29	LC1	0	0	0	0	0	0
30	LC1	0	0	0	0	0	0
31	LC1	0	0	0	0	0	0
32	LC1	0	0	0	0	0	0
33	LC1	0	0	0	0	0	0
34	LC1	0	0	0	0	0	0
35	LC1	0	0	0	0	0	0
36	LC1	0	0	0	0	0	0
37	LC1	0	0	0	0	0	0
38	LC1	0	0	0	0	0	0
39	LC1	0	0	0	0	0	0
40	LC1	0	0	0	0	0	0
41	LC1	0	0	0	0	0	0
42	LC1	0	0	0	0	0	0
43	LC1	0	0	0	0	0	0
44	LC1	0	0	0	0	0	0
45	LC1	0	0	0	0	0	0

		node	case	F_x	F_y	F_z	M_x	M_y	M_z
1	LC2	-3.832	-0.2062	-3.834e-06	5.972e-07	3.196e-05	-2.927

node	case	F_x	F_y	F_z	M_x	M_y	M_z
2	LC2	-3.833	-0.2062	0	0	0	-2.927
3	LC2	-3.832	-0.2062	3.834e-06	-5.972e-07	-3.196e-05	-2.927
4	LC2	0	-0.2543	0	0	0	-3.328
5	LC2	0	-0.2543	0	0	0	-3.328
6	LC2	0	-0.2543	0	0	0	-3.328
7	LC2	3.832	-0.2062	3.834e-06	5.972e-07	-3.196e-05	-2.927
8	LC2	3.833	-0.2062	0	0	0	-2.927
9	LC2	3.832	-0.2062	-3.834e-06	-5.972e-07	3.196e-05	-2.927
10	LC2	0	0	0	0	0	0
11	LC2	0	0	0	0	0	0
12	LC2	0	0	0	0	0	0
13	LC2	0	0	0	0	0	0
14	LC2	0	0	0	0	0	0
15	LC2	0	0	0	0	0	0
16	LC2	0	0	0	0	0	0
17	LC2	0	0	0	0	0	0
18	LC2	0	0	0	0	0	0
19	LC2	0	0	0	0	0	0
20	LC2	0	0	0	0	0	0
21	LC2	0	0	0	0	0	0
22	LC2	0	0	0	0	0	0
23	LC2	0	0	0	0	0	0
24	LC2	0	0	0	0	0	0
25	LC2	0	0	0	0	0	0
26	LC2	0	0	0	0	0	0
27	LC2	0	0	0	0	0	0
28	LC2	0	0	0	0	0	0
29	LC2	0	0	0	0	0	0
30	LC2	0	0	0	0	0	0
31	LC2	0	0	0	0	0	0
32	LC2	0	0	0	0	0	0
33	LC2	0	0	0	0	0	0
34	LC2	0	0	0	0	0	0
35	LC2	0	0	0	0	0	0
36	LC2	0	0	0	0	0	0
37	LC2	0	0	0	0	0	0
38	LC2	0	0	0	0	0	0
39	LC2	0	0	0	0	0	0
40	LC2	0	0	0	0	0	0
41	LC2	0	0	0	0	0	0
42	LC2	0	0	0	0	0	0
43	LC2	0	0	0	0	0	0
44	LC2	0	0	0	0	0	0
45	LC2	0	0	0	0	0	0

	node	case	F_x	F_y	F_z	M_x	M_y	M_z
1	LC3	3.832	0.2062	3.834e-06	-5.972e-07	-3.196e-05	2.927
2	LC3	3.833	0.2062	0	0	0	2.927
3	LC3	3.832	0.2062	-3.834e-06	5.972e-07	3.196e-05	2.927
4	LC3	0	0.2543	0	0	0	3.328
5	LC3	0	0.2543	0	0	0	3.328
6	LC3	0	0.2543	0	0	0	3.328
7	LC3	-3.832	0.2062	-3.834e-06	-5.972e-07	3.196e-05	2.927
8	LC3	-3.833	0.2062	0	0	0	2.927
9	LC3	-3.832	0.2062	3.834e-06	5.972e-07	-3.196e-05	2.927
10	LC3	0	0	0	0	0	0
11	LC3	0	0	0	0	0	0
12	LC3	0	0	0	0	0	0
13	LC3	0	0	0	0	0	0
14	LC3	0	0	0	0	0	0
15	LC3	0	0	0	0	0	0
16	LC3	0	0	0	0	0	0
17	LC3	0	0	0	0	0	0
18	LC3	0	0	0	0	0	0
19	LC3	0	0	0	0	0	0
20	LC3	0	0	0	0	0	0
21	LC3	0	0	0	0	0	0
22	LC3	0	0	0	0	0	0
23	LC3	0	0	0	0	0	0
24	LC3	0	0	0	0	0	0
25	LC3	0	0	0	0	0	0
26	LC3	0	0	0	0	0	0
27	LC3	0	0	0	0	0	0
28	LC3	0	0	0	0	0	0
29	LC3	0	0	0	0	0	0
30	LC3	0	0	0	0	0	0
31	LC3	0	0	0	0	0	0
32	LC3	0	0	0	0	0	0
33	LC3	0	0	0	0	0	0
34	LC3	0	0	0	0	0	0
35	LC3	0	0	0	0	0	0
36	LC3	0	0	0	0	0	0
37	LC3	0	0	0	0	0	0
38	LC3	0	0	0	0	0	0
39	LC3	0	0	0	0	0	0
40	LC3	0	0	0	0	0	0
41	LC3	0	0	0	0	0	0
42	LC3	0	0	0	0	0	0
43	LC3	0	0	0	0	0	0

node	case	F_x	F_y	F_z	M_x	M_y	M_z
44	LC3	0	0	0	0	0	0
45	LC3	0	0	0	0	0	0

3.3 Internal Forces

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
1	1	LC1	0	0	0	0	-1.399e-08	0
1	2	LC1	0	0	0	0	0	0
1	3	LC1	0	0	0	0	0	0
2	1	LC1	0	0	0	0	0	0
2	2	LC1	0	0	0	0	0	0
2	3	LC1	0	0	0	0	0	0
3	1	LC1	5.748	-0.2093	2.33e-05	-1.434e-06	-0.0007767	-8.176
3	2	LC1	5.748	-0.2093	2.33e-05	-1.434e-06	-0.0001942	-2.943
3	3	LC1	5.748	-0.2093	2.33e-05	-1.434e-06	0.0003882	2.289
4	1	LC1	0	0	0	0	-1.424e-08	0
4	2	LC1	0	0	0	0	0	0
4	3	LC1	0	0	0	0	0	0
5	1	LC1	0	0	0	0	0	0
5	2	LC1	0	0	0	0	0	0
5	3	LC1	0	0	0	0	0	0
6	1	LC1	0	-0.2481	0	-8.185e-07	0	-9.47
6	2	LC1	0	-0.2481	0	-8.185e-07	0	-3.267
6	3	LC1	0	-0.2481	0	-8.185e-07	0	2.936
7	1	LC1	0	0	0	0	0	0
7	2	LC1	0	0	0	0	0	0
7	3	LC1	0	0	0	0	0	0
8	1	LC1	-5.748	-0.2093	-2.33e-05	-1.434e-06	0.0007767	-8.176
8	2	LC1	-5.748	-0.2093	-2.33e-05	-1.434e-06	0.0001942	-2.943
8	3	LC1	-5.748	-0.2093	-2.33e-05	-1.434e-06	-0.0003882	2.289
9	1	LC1	0	0	0	0	-1.397e-08	0
9	2	LC1	0	0	0	0	0	0
9	3	LC1	0	0	0	0	0	0
10	1	LC1	0	0	0	0	0	0
10	2	LC1	0	0	0	0	0	0
10	3	LC1	0	0	0	0	0	0
11	1	LC1	5.759	-0.2093	0	0	0	-8.175
11	2	LC1	5.759	-0.2093	0	0	0	-2.943
11	3	LC1	5.759	-0.2093	0	0	0	2.289
12	1	LC1	0	0	0	0	-1.423e-08	0
12	2	LC1	0	0	0	0	0	0
12	3	LC1	0	0	0	0	0	0
13	1	LC1	0	0	0	0	0	0

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
13	2	LC1	0	0	0	0	0	0
13	3	LC1	0	0	0	0	0	0
14	1	LC1	0	-0.2481	0	0	0	-9.468
14	2	LC1	0	-0.2481	0	0	0	-3.266
14	3	LC1	0	-0.2481	0	0	0	2.935
15	1	LC1	0	0	0	0	0	0
15	2	LC1	0	0	0	0	0	0
15	3	LC1	0	0	0	0	0	0
16	1	LC1	-5.759	-0.2093	0	0	0	-8.175
16	2	LC1	-5.759	-0.2093	0	0	0	-2.943
16	3	LC1	-5.759	-0.2093	0	0	0	2.289
17	1	LC1	0	0	0	0	-1.399e-08	0
17	2	LC1	0	0	0	0	0	0
17	3	LC1	0	0	0	0	0	0
18	1	LC1	5.748	-0.2093	-2.33e-05	1.434e-06	0.0007767	-8.176
18	2	LC1	5.748	-0.2093	-2.33e-05	1.434e-06	0.0001942	-2.943
18	3	LC1	5.748	-0.2093	-2.33e-05	1.434e-06	-0.0003882	2.289
19	1	LC1	0	0	0	0	-1.424e-08	0
19	2	LC1	0	0	0	0	0	0
19	3	LC1	0	0	0	0	0	0
20	1	LC1	0	-0.2481	0	8.185e-07	0	-9.47
20	2	LC1	0	-0.2481	0	8.185e-07	0	-3.267
20	3	LC1	0	-0.2481	0	8.185e-07	0	2.936
21	1	LC1	-5.748	-0.2093	2.33e-05	1.434e-06	-0.0007767	-8.176
21	2	LC1	-5.748	-0.2093	2.33e-05	1.434e-06	-0.0001942	-2.943
21	3	LC1	-5.748	-0.2093	2.33e-05	1.434e-06	0.0003882	2.289
22	1	LC1	0.01219	1.92e-05	1.61	0.000388	-12.88	0.0001479
22	2	LC1	0.01219	1.92e-05	1.61	0.000388	-4.833	5.186e-05
22	3	LC1	0.01219	1.92e-05	1.61	0.000388	3.216	-4.417e-05
23	1	LC1	-3.294e-05	-1.995e-05	0.0005126	-0.0003258	-0.005444	-0.0002185
23	2	LC1	-3.294e-05	-1.995e-05	0.0005126	-0.0003258	-0.001599	-6.885e-05
23	3	LC1	-3.294e-05	-1.995e-05	0.0005126	-0.0003258	0.002246	8.079e-05
24	1	LC1	4.137	-0.1971	7.545e-05	1.555e-05	-0.002709	-7.472
24	2	LC1	4.137	-0.1971	7.545e-05	1.555e-05	-0.0008228	-2.544
24	3	LC1	4.137	-0.1971	7.545e-05	1.555e-05	0.001063	2.384
25	1	LC1	-0.01219	1.92e-05	1.61	0.000388	-11.27	0.0001402
25	2	LC1	-0.01219	1.92e-05	1.61	0.000388	-3.216	4.417e-05
25	3	LC1	-0.01219	1.92e-05	1.61	0.000388	4.833	-5.186e-05
26	1	LC1	0	-2.225e-05	0	-0.0004619	0	-0.0002469
26	2	LC1	0	-2.225e-05	0	-0.0004619	0	-8.001e-05
26	3	LC1	0	-2.225e-05	0	-0.0004619	0	8.683e-05
27	1	LC1	0	-0.2725	0	-9.138e-06	0	-10.31
27	2	LC1	0	-0.2725	0	-9.138e-06	0	-3.496
27	3	LC1	0	-0.2725	0	-9.138e-06	0	3.317

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
28	1	LC1	3.294e-05	-1.995e-05	-0.0005126	-0.0003258	0.005444	-0.0002185
28	2	LC1	3.294e-05	-1.995e-05	-0.0005126	-0.0003258	0.001599	-6.885e-05
28	3	LC1	3.294e-05	-1.995e-05	-0.0005126	-0.0003258	-0.002246	8.079e-05
29	1	LC1	-4.137	-0.1971	-7.545e-05	1.555e-05	0.002709	-7.472
29	2	LC1	-4.137	-0.1971	-7.545e-05	1.555e-05	0.0008228	-2.544
29	3	LC1	-4.137	-0.1971	-7.545e-05	1.555e-05	-0.001063	2.384
30	1	LC1	0.01217	0	1.609	0	-12.88	0
30	2	LC1	0.01217	0	1.609	0	-4.831	0
30	3	LC1	0.01217	0	1.609	0	3.214	0
31	1	LC1	-3.294e-05	1.995e-05	-0.0005126	0.0003258	0.00609	0.0002304
31	2	LC1	-3.294e-05	1.995e-05	-0.0005126	0.0003258	0.002246	8.079e-05
31	3	LC1	-3.294e-05	1.995e-05	-0.0005126	0.0003258	-0.001599	-6.885e-05
32	1	LC1	4.151	-0.197	0	0	0	-7.469
32	2	LC1	4.151	-0.197	0	0	0	-2.543
32	3	LC1	4.151	-0.197	0	0	0	2.383
33	1	LC1	-0.01217	0	1.609	0	-11.26	0
33	2	LC1	-0.01217	0	1.609	0	-3.214	0
33	3	LC1	-0.01217	0	1.609	0	4.831	0
34	1	LC1	0	2.225e-05	0	0.0004619	0	0.0002537
34	2	LC1	0	2.225e-05	0	0.0004619	0	8.683e-05
34	3	LC1	0	2.225e-05	0	0.0004619	0	-8.001e-05
35	1	LC1	0	-0.2724	0	0	0	-10.3
35	2	LC1	0	-0.2724	0	0	0	-3.494
35	3	LC1	0	-0.2724	0	0	0	3.315
36	1	LC1	3.294e-05	1.995e-05	0.0005126	0.0003258	-0.00609	0.0002304
36	2	LC1	3.294e-05	1.995e-05	0.0005126	0.0003258	-0.002246	8.079e-05
36	3	LC1	3.294e-05	1.995e-05	0.0005126	0.0003258	0.001599	-6.885e-05
37	1	LC1	-4.151	-0.197	0	0	0	-7.469
37	2	LC1	-4.151	-0.197	0	0	0	-2.543
37	3	LC1	-4.151	-0.197	0	0	0	2.383
38	1	LC1	0.01219	-1.92e-05	1.61	-0.000388	-12.88	-0.0001479
38	2	LC1	0.01219	-1.92e-05	1.61	-0.000388	-4.833	-5.186e-05
38	3	LC1	0.01219	-1.92e-05	1.61	-0.000388	3.216	4.417e-05
39	1	LC1	4.137	-0.1971	-7.545e-05	-1.555e-05	0.002709	-7.472
39	2	LC1	4.137	-0.1971	-7.545e-05	-1.555e-05	0.0008228	-2.544
39	3	LC1	4.137	-0.1971	-7.545e-05	-1.555e-05	-0.001063	2.384
40	1	LC1	-0.01219	-1.92e-05	1.61	-0.000388	-11.27	-0.0001402
40	2	LC1	-0.01219	-1.92e-05	1.61	-0.000388	-3.216	-4.417e-05
40	3	LC1	-0.01219	-1.92e-05	1.61	-0.000388	4.833	5.186e-05
41	1	LC1	0	-0.2725	0	9.138e-06	0	-10.31
41	2	LC1	0	-0.2725	0	9.138e-06	0	-3.496
41	3	LC1	0	-0.2725	0	9.138e-06	0	3.317
42	1	LC1	-4.137	-0.1971	7.545e-05	-1.555e-05	-0.002709	-7.472
42	2	LC1	-4.137	-0.1971	7.545e-05	-1.555e-05	-0.0008228	-2.544

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
42	3	LC1	-4.137	-0.1971	7.545e-05	-1.555e-05	0.001063	2.384
43	1	LC1	-0.0004507	-2.531e-05	1.657	0.000869	-13.19	-0.0003403
43	2	LC1	-0.0004507	-2.531e-05	1.657	0.000869	-4.904	-0.0002138
43	3	LC1	-0.0004507	-2.531e-05	1.657	0.000869	3.38	-8.721e-05
44	1	LC1	-8.436e-05	-0.0001607	0.001127	-0.0004516	-0.01196	-0.001867
44	2	LC1	-8.436e-05	-0.0001607	0.001127	-0.0004516	-0.003504	-0.0006615
44	3	LC1	-8.436e-05	-0.0001607	0.001127	-0.0004516	0.004952	0.0005438
45	1	LC1	2.479	-0.1977	0.0001345	0.0008908	-0.004934	-7.463
45	2	LC1	2.479	-0.1977	0.0001345	0.0008908	-0.001571	-2.519
45	3	LC1	2.479	-0.1977	0.0001345	0.0008908	0.001791	2.424
46	1	LC1	0.0004507	-2.531e-05	1.657	0.000869	-11.66	-3.933e-05
46	2	LC1	0.0004507	-2.531e-05	1.657	0.000869	-3.38	8.721e-05
46	3	LC1	0.0004507	-2.531e-05	1.657	0.000869	4.904	0.0002138
47	1	LC1	0	-8.031e-05	0	-0.001111	0	-0.000862
47	2	LC1	0	-8.031e-05	0	-0.001111	0	-0.0002597
47	3	LC1	0	-8.031e-05	0	-0.001111	0	0.0003427
48	1	LC1	0	-0.2717	0	7.613e-05	0	-10.23
48	2	LC1	0	-0.2717	0	7.613e-05	0	-3.441
48	3	LC1	0	-0.2717	0	7.613e-05	0	3.352
49	1	LC1	8.436e-05	-0.0001607	-0.001127	-0.0004516	0.01196	-0.001867
49	2	LC1	8.436e-05	-0.0001607	-0.001127	-0.0004516	0.003504	-0.0006615
49	3	LC1	8.436e-05	-0.0001607	-0.001127	-0.0004516	-0.004952	0.0005438
50	1	LC1	-2.479	-0.1977	-0.0001345	0.0008908	0.004934	-7.463
50	2	LC1	-2.479	-0.1977	-0.0001345	0.0008908	0.001571	-2.519
50	3	LC1	-2.479	-0.1977	-0.0001345	0.0008908	-0.001791	2.424
51	1	LC1	-0.0004407	0	1.654	0	-13.17	0
51	2	LC1	-0.0004407	0	1.654	0	-4.897	0
51	3	LC1	-0.0004407	0	1.654	0	3.375	0
52	1	LC1	-8.436e-05	0.0001607	-0.001127	0.0004516	0.01341	0.001749
52	2	LC1	-8.436e-05	0.0001607	-0.001127	0.0004516	0.004952	0.0005438
52	3	LC1	-8.436e-05	0.0001607	-0.001127	0.0004516	-0.003504	-0.0006615
53	1	LC1	2.499	-0.1972	0	0	0	-7.444
53	2	LC1	2.499	-0.1972	0	0	0	-2.515
53	3	LC1	2.499	-0.1972	0	0	0	2.414
54	1	LC1	0.0004407	0	1.654	0	-11.65	0
54	2	LC1	0.0004407	0	1.654	0	-3.375	0
54	3	LC1	0.0004407	0	1.654	0	4.897	0
55	1	LC1	0	8.031e-05	0	0.001111	0	0.000945
55	2	LC1	0	8.031e-05	0	0.001111	0	0.0003427
55	3	LC1	0	8.031e-05	0	0.001111	0	-0.0002597
56	1	LC1	0	-0.2713	0	0	0	-10.22
56	2	LC1	0	-0.2713	0	0	0	-3.437
56	3	LC1	0	-0.2713	0	0	0	3.346
57	1	LC1	8.436e-05	0.0001607	0.001127	0.0004516	-0.01341	0.001749

			cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
57	2	LC1	8.436e-05	0.0001607	0.001127	0.0004516	-0.004952	0.0005438
57	3	LC1	8.436e-05	0.0001607	0.001127	0.0004516	0.003504	-0.0006615
58	1	LC1	-2.499	-0.1972	0	0	0	-7.444
58	2	LC1	-2.499	-0.1972	0	0	0	-2.515
58	3	LC1	-2.499	-0.1972	0	0	0	2.414
59	1	LC1	-0.0004507	2.531e-05	1.657	-0.000869	-13.19	0.0003403
59	2	LC1	-0.0004507	2.531e-05	1.657	-0.000869	-4.904	0.0002138
59	3	LC1	-0.0004507	2.531e-05	1.657	-0.000869	3.38	8.721e-05
60	1	LC1	2.479	-0.1977	-0.0001345	-0.0008908	0.004934	-7.463
60	2	LC1	2.479	-0.1977	-0.0001345	-0.0008908	0.001571	-2.519
60	3	LC1	2.479	-0.1977	-0.0001345	-0.0008908	-0.001791	2.424
61	1	LC1	0.0004507	2.531e-05	1.657	-0.000869	-11.66	3.933e-05
61	2	LC1	0.0004507	2.531e-05	1.657	-0.000869	-3.38	-8.721e-05
61	3	LC1	0.0004507	2.531e-05	1.657	-0.000869	4.904	-0.0002138
62	1	LC1	0	-0.2717	0	-7.613e-05	0	-10.23
62	2	LC1	0	-0.2717	0	-7.613e-05	0	-3.441
62	3	LC1	0	-0.2717	0	-7.613e-05	0	3.352
63	1	LC1	-2.479	-0.1977	0.0001345	-0.0008908	-0.004934	-7.463
63	2	LC1	-2.479	-0.1977	0.0001345	-0.0008908	-0.001571	-2.519
63	3	LC1	-2.479	-0.1977	0.0001345	-0.0008908	0.001791	2.424
64	1	LC1	-0.003672	-0.006793	1.63	0.001308	-13	-0.05619
64	2	LC1	-0.003672	-0.006793	1.63	0.001308	-4.853	-0.02222
64	3	LC1	-0.003672	-0.006793	1.63	0.001308	3.295	0.01174
65	1	LC1	-0.006989	0.001329	0.00216	-0.007159	-0.02321	0.01118
65	2	LC1	-0.006989	0.001329	0.00216	-0.007159	-0.00701	0.001213
65	3	LC1	-0.006989	0.001329	0.00216	-0.007159	0.009191	-0.008754
66	1	LC1	0.8476	-0.2001	0.0003312	0.0219	-0.01219	-7.424
66	2	LC1	0.8476	-0.2001	0.0003312	0.0219	-0.003911	-2.422
66	3	LC1	0.8476	-0.2001	0.0003312	0.0219	0.004369	2.58
67	1	LC1	0.003672	-0.006793	1.63	0.001308	-11.44	-0.0457
67	2	LC1	0.003672	-0.006793	1.63	0.001308	-3.295	-0.01174
67	3	LC1	0.003672	-0.006793	1.63	0.001308	4.853	0.02222
68	1	LC1	0	0.004089	0	-0.00427	0	0.04573
68	2	LC1	0	0.004089	0	-0.00427	0	0.01506
68	3	LC1	0	0.004089	0	-0.00427	0	-0.01561
69	1	LC1	0	-0.2603	0	0.008495	0	-9.741
69	2	LC1	0	-0.2603	0	0.008495	0	-3.235
69	3	LC1	0	-0.2603	0	0.008495	0	3.272
70	1	LC1	0.006989	0.001329	-0.00216	-0.007159	0.02321	0.01118
70	2	LC1	0.006989	0.001329	-0.00216	-0.007159	0.00701	0.001213
70	3	LC1	0.006989	0.001329	-0.00216	-0.007159	-0.009191	-0.008754
71	1	LC1	-0.8476	-0.2001	-0.0003312	0.0219	0.01219	-7.424
71	2	LC1	-0.8476	-0.2001	-0.0003312	0.0219	0.003911	-2.422
71	3	LC1	-0.8476	-0.2001	-0.0003312	0.0219	-0.004369	2.58

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
72	1	LC1	-0.006226	0	1.645	0	-13.12	0
72	2	LC1	-0.006226	0	1.645	0	-4.897	0
72	3	LC1	-0.006226	0	1.645	0	3.329	0
73	1	LC1	-0.006989	-0.001329	-0.00216	0.007159	0.02539	-0.01872
73	2	LC1	-0.006989	-0.001329	-0.00216	0.007159	0.009191	-0.008754
73	3	LC1	-0.006989	-0.001329	-0.00216	0.007159	-0.00701	0.001213
74	1	LC1	0.8577	-0.2061	0	0	0	-7.648
74	2	LC1	0.8577	-0.2061	0	0	0	-2.497
74	3	LC1	0.8577	-0.2061	0	0	0	2.654
75	1	LC1	0.006226	0	1.645	0	-11.55	0
75	2	LC1	0.006226	0	1.645	0	-3.329	0
75	3	LC1	0.006226	0	1.645	0	4.897	0
76	1	LC1	0	-0.004089	0	0.00427	0	-0.04628
76	2	LC1	0	-0.004089	0	0.00427	0	-0.01561
76	3	LC1	0	-0.004089	0	0.00427	0	0.01506
77	1	LC1	0	-0.2671	0	0	0	-9.996
77	2	LC1	0	-0.2671	0	0	0	-3.32
77	3	LC1	0	-0.2671	0	0	0	3.357
78	1	LC1	0.006989	-0.001329	0.00216	0.007159	-0.02539	-0.01872
78	2	LC1	0.006989	-0.001329	0.00216	0.007159	-0.009191	-0.008754
78	3	LC1	0.006989	-0.001329	0.00216	0.007159	0.00701	0.001213
79	1	LC1	-0.8577	-0.2061	0	0	0	-7.648
79	2	LC1	-0.8577	-0.2061	0	0	0	-2.497
79	3	LC1	-0.8577	-0.2061	0	0	0	2.654
80	1	LC1	-0.003672	0.006793	1.63	-0.001308	-13	0.05619
80	2	LC1	-0.003672	0.006793	1.63	-0.001308	-4.853	0.02222
80	3	LC1	-0.003672	0.006793	1.63	-0.001308	3.295	-0.01174
81	1	LC1	0.8476	-0.2001	-0.0003312	-0.0219	0.01219	-7.424
81	2	LC1	0.8476	-0.2001	-0.0003312	-0.0219	0.003911	-2.422
81	3	LC1	0.8476	-0.2001	-0.0003312	-0.0219	-0.004369	2.58
82	1	LC1	0.003672	0.006793	1.63	-0.001308	-11.44	0.0457
82	2	LC1	0.003672	0.006793	1.63	-0.001308	-3.295	0.01174
82	3	LC1	0.003672	0.006793	1.63	-0.001308	4.853	-0.02222
83	1	LC1	0	-0.2603	0	-0.008495	0	-9.741
83	2	LC1	0	-0.2603	0	-0.008495	0	-3.235
83	3	LC1	0	-0.2603	0	-0.008495	0	3.272
84	1	LC1	-0.8476	-0.2001	0.0003312	-0.0219	-0.01219	-7.424
84	2	LC1	-0.8476	-0.2001	0.0003312	-0.0219	-0.003911	-2.422
84	3	LC1	-0.8476	-0.2001	0.0003312	-0.0219	0.004369	2.58
85	1	LC1	-0.001414	-0.2199	0.8454	0.002223	-6.815	-1.738
85	2	LC1	-0.001414	-0.2199	0.8454	0.002223	-2.589	-0.6387
85	3	LC1	-0.001414	-0.2199	0.8454	0.002223	1.638	0.4606
86	1	LC1	-0.2195	0.2015	0.002252	-0.008387	-0.02348	2.172
86	2	LC1	-0.2195	0.2015	0.002252	-0.008387	-0.006592	0.6606

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
86	3	LC1	-0.2195	0.2015	0.002252	-0.008387	0.0103	-0.8506
87	1	LC1	0.001414	-0.2199	0.8454	0.002223	-5.865	-1.56
87	2	LC1	0.001414	-0.2199	0.8454	0.002223	-1.638	-0.4606
87	3	LC1	0.001414	-0.2199	0.8454	0.002223	2.589	0.6387
88	1	LC1	0	0.2574	0	-0.004716	0	2.86
88	2	LC1	0	0.2574	0	-0.004716	0	0.9297
88	3	LC1	0	0.2574	0	-0.004716	0	-1.001
89	1	LC1	0.2195	0.2015	-0.002252	-0.008387	0.02348	2.172
89	2	LC1	0.2195	0.2015	-0.002252	-0.008387	0.006592	0.6606
89	3	LC1	0.2195	0.2015	-0.002252	-0.008387	-0.0103	-0.8506
90	1	LC1	0.609	0	0.8622	0	-6.949	0
90	2	LC1	0.609	0	0.8622	0	-2.638	0
90	3	LC1	0.609	0	0.8622	0	1.674	0
91	1	LC1	-0.2195	-0.2015	-0.002252	0.008387	0.02719	-2.362
91	2	LC1	-0.2195	-0.2015	-0.002252	0.008387	0.0103	-0.8506
91	3	LC1	-0.2195	-0.2015	-0.002252	0.008387	-0.006592	0.6606
92	1	LC1	-0.609	0	0.8622	0	-5.985	0
92	2	LC1	-0.609	0	0.8622	0	-1.674	0
92	3	LC1	-0.609	0	0.8622	0	2.638	0
93	1	LC1	0	-0.2574	0	0.004716	0	-2.932
93	2	LC1	0	-0.2574	0	0.004716	0	-1.001
93	3	LC1	0	-0.2574	0	0.004716	0	0.9297
94	1	LC1	0.2195	-0.2015	0.002252	0.008387	-0.02719	-2.362
94	2	LC1	0.2195	-0.2015	0.002252	0.008387	-0.0103	-0.8506
94	3	LC1	0.2195	-0.2015	0.002252	0.008387	0.006592	0.6606
95	1	LC1	-0.001414	0.2199	0.8454	-0.002223	-6.815	1.738
95	2	LC1	-0.001414	0.2199	0.8454	-0.002223	-2.589	0.6387
95	3	LC1	-0.001414	0.2199	0.8454	-0.002223	1.638	-0.4606
96	1	LC1	0.001414	0.2199	0.8454	-0.002223	-5.865	1.56
96	2	LC1	0.001414	0.2199	0.8454	-0.002223	-1.638	0.4606
96	3	LC1	0.001414	0.2199	0.8454	-0.002223	2.589	-0.6387

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
1	1	LC2	0	0	0	0	0	0
1	2	LC2	0	0	0	0	0	0
1	3	LC2	0	0	0	0	0	0
2	1	LC2	0	0	0	0	-1.248e-08	0
2	2	LC2	0	0	0	0	0	0
2	3	LC2	0	0	0	0	0	0
3	1	LC2	3.832	-3.834e-06	0.2062	-5.972e-07	-8.081	-0.0001278
3	2	LC2	3.832	-3.834e-06	0.2062	-5.972e-07	-2.927	-3.196e-05
3	3	LC2	3.832	-3.834e-06	0.2062	-5.972e-07	2.228	6.388e-05
4	1	LC2	0	0	0	0	0	0
4	2	LC2	0	0	0	0	0	0
4	3	LC2	0	0	0	0	0	0
5	1	LC2	0	0	0	0	-1.248e-08	0
5	2	LC2	0	0	0	0	0	0
5	3	LC2	0	0	0	0	0	0
6	1	LC2	3.833	0	0.2062	0	-8.081	0
6	2	LC2	3.833	0	0.2062	0	-2.927	0
6	3	LC2	3.833	0	0.2062	0	2.228	0
7	1	LC2	0	0	0	0	-1.248e-08	0
7	2	LC2	0	0	0	0	0	0
7	3	LC2	0	0	0	0	0	0
8	1	LC2	3.832	3.834e-06	0.2062	5.972e-07	-8.081	0.0001278
8	2	LC2	3.832	3.834e-06	0.2062	5.972e-07	-2.927	3.196e-05
8	3	LC2	3.832	3.834e-06	0.2062	5.972e-07	2.228	-6.388e-05
9	1	LC2	0	0	0	0	0	0
9	2	LC2	0	0	0	0	0	0
9	3	LC2	0	0	0	0	0	0
10	1	LC2	0	0	0	0	-1.27e-08	0
10	2	LC2	0	0	0	0	0	0
10	3	LC2	0	0	0	0	0	0
11	1	LC2	0	0	0.2543	0	-9.686	0
11	2	LC2	0	0	0.2543	0	-3.328	0
11	3	LC2	0	0	0.2543	0	3.03	0
12	1	LC2	0	0	0	0	0	0
12	2	LC2	0	0	0	0	0	0
12	3	LC2	0	0	0	0	0	0
13	1	LC2	0	0	0	0	-1.27e-08	0
13	2	LC2	0	0	0	0	0	0
13	3	LC2	0	0	0	0	0	0
14	1	LC2	0	0	0.2543	0	-9.686	0
14	2	LC2	0	0	0.2543	0	-3.328	0
14	3	LC2	0	0	0.2543	0	3.03	0
15	1	LC2	0	0	0	0	-1.27e-08	0

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
15	2	LC2	0	0	0	0	0	0
15	3	LC2	0	0	0	0	0	0
16	1	LC2	0	0	0.2543	0	-9.686	0
16	2	LC2	0	0	0.2543	0	-3.328	0
16	3	LC2	0	0	0.2543	0	3.03	0
17	1	LC2	0	0	0	0	0	0
17	2	LC2	0	0	0	0	0	0
17	3	LC2	0	0	0	0	0	0
18	1	LC2	-3.832	3.834e-06	0.2062	-5.972e-07	-8.081	0.0001278
18	2	LC2	-3.832	3.834e-06	0.2062	-5.972e-07	-2.927	3.196e-05
18	3	LC2	-3.832	3.834e-06	0.2062	-5.972e-07	2.228	-6.388e-05
19	1	LC2	0	0	0	0	0	0
19	2	LC2	0	0	0	0	0	0
19	3	LC2	0	0	0	0	0	0
20	1	LC2	-3.833	0	0.2062	0	-8.081	0
20	2	LC2	-3.833	0	0.2062	0	-2.927	0
20	3	LC2	-3.833	0	0.2062	0	2.228	0
21	1	LC2	-3.832	-3.834e-06	0.2062	5.972e-07	-8.081	-0.0001278
21	2	LC2	-3.832	-3.834e-06	0.2062	5.972e-07	-2.927	-3.196e-05
21	3	LC2	-3.832	-3.834e-06	0.2062	5.972e-07	2.228	6.388e-05
22	1	LC2	-1.122e-05	5.553e-07	0.0001314	2.953e-05	-0.0009055	7.897e-06
22	2	LC2	-1.122e-05	5.553e-07	0.0001314	2.953e-05	-0.0002487	5.121e-06
22	3	LC2	-1.122e-05	5.553e-07	0.0001314	2.953e-05	0.0004082	2.344e-06
23	1	LC2	0.01495	1.821e-06	1.063	-4.255e-05	-12.63	2.299e-05
23	2	LC2	0.01495	1.821e-06	1.063	-4.255e-05	-4.655	9.335e-06
23	3	LC2	0.01495	1.821e-06	1.063	-4.255e-05	3.317	-4.322e-06
24	1	LC2	2.769	-1.323e-05	0.1912	-1.505e-05	-7.208	-0.000473
24	2	LC2	2.769	-1.323e-05	0.1912	-1.505e-05	-2.427	-0.0001422
24	3	LC2	2.769	-1.323e-05	0.1912	-1.505e-05	2.353	0.0001885
25	1	LC2	-1.122e-05	-5.553e-07	-0.0001314	-2.953e-05	0.001065	-4.321e-07
25	2	LC2	-1.122e-05	-5.553e-07	-0.0001314	-2.953e-05	0.0004082	2.344e-06
25	3	LC2	-1.122e-05	-5.553e-07	-0.0001314	-2.953e-05	-0.0002487	5.121e-06
26	1	LC2	0.01494	0	1.063	0	-12.63	0
26	2	LC2	0.01494	0	1.063	0	-4.655	0
26	3	LC2	0.01494	0	1.063	0	3.317	0
27	1	LC2	2.77	0	0.1912	0	-7.208	0
27	2	LC2	2.77	0	0.1912	0	-2.427	0
27	3	LC2	2.77	0	0.1912	0	2.353	0
28	1	LC2	0.01495	-1.821e-06	1.063	4.255e-05	-12.63	-2.299e-05
28	2	LC2	0.01495	-1.821e-06	1.063	4.255e-05	-4.655	-9.335e-06
28	3	LC2	0.01495	-1.821e-06	1.063	4.255e-05	3.317	4.322e-06
29	1	LC2	2.769	1.323e-05	0.1912	1.505e-05	-7.208	0.000473
29	2	LC2	2.769	1.323e-05	0.1912	1.505e-05	-2.427	0.0001422
29	3	LC2	2.769	1.323e-05	0.1912	1.505e-05	2.353	-0.0001885

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
30	1	LC2	0	-3.455e-06	0	3.214e-05	0	-2.594e-05
30	2	LC2	0	-3.455e-06	0	3.214e-05	0	-8.664e-06
30	3	LC2	0	-3.455e-06	0	3.214e-05	0	8.61e-06
31	1	LC2	-0.01495	1.821e-06	1.063	-4.255e-05	-11.29	1.798e-05
31	2	LC2	-0.01495	1.821e-06	1.063	-4.255e-05	-3.317	4.322e-06
31	3	LC2	-0.01495	1.821e-06	1.063	-4.255e-05	4.655	-9.335e-06
32	1	LC2	0	0	0.2842	2.297e-08	-10.71	0
32	2	LC2	0	0	0.2842	2.297e-08	-3.604	0
32	3	LC2	0	0	0.2842	2.297e-08	3.502	0
33	1	LC2	0	3.455e-06	0	-3.214e-05	0	2.588e-05
33	2	LC2	0	3.455e-06	0	-3.214e-05	0	8.61e-06
33	3	LC2	0	3.455e-06	0	-3.214e-05	0	-8.664e-06
34	1	LC2	-0.01494	0	1.063	0	-11.29	0
34	2	LC2	-0.01494	0	1.063	0	-3.317	0
34	3	LC2	-0.01494	0	1.063	0	4.655	0
35	1	LC2	0	0	0.2842	0	-10.71	0
35	2	LC2	0	0	0.2842	0	-3.604	0
35	3	LC2	0	0	0.2842	0	3.502	0
36	1	LC2	-0.01495	-1.821e-06	1.063	4.255e-05	-11.29	-1.798e-05
36	2	LC2	-0.01495	-1.821e-06	1.063	4.255e-05	-3.317	-4.322e-06
36	3	LC2	-0.01495	-1.821e-06	1.063	4.255e-05	4.655	9.335e-06
37	1	LC2	0	0	0.2842	-2.297e-08	-10.71	0
37	2	LC2	0	0	0.2842	-2.297e-08	-3.604	0
37	3	LC2	0	0	0.2842	-2.297e-08	3.502	0
38	1	LC2	1.122e-05	5.553e-07	-0.0001314	2.953e-05	0.0009055	7.897e-06
38	2	LC2	1.122e-05	5.553e-07	-0.0001314	2.953e-05	0.0002487	5.121e-06
38	3	LC2	1.122e-05	5.553e-07	-0.0001314	2.953e-05	-0.0004082	2.344e-06
39	1	LC2	-2.769	1.323e-05	0.1912	-1.505e-05	-7.208	0.000473
39	2	LC2	-2.769	1.323e-05	0.1912	-1.505e-05	-2.427	0.0001422
39	3	LC2	-2.769	1.323e-05	0.1912	-1.505e-05	2.353	-0.0001885
40	1	LC2	1.122e-05	-5.553e-07	0.0001314	-2.953e-05	-0.001065	-4.321e-07
40	2	LC2	1.122e-05	-5.553e-07	0.0001314	-2.953e-05	-0.0004082	2.344e-06
40	3	LC2	1.122e-05	-5.553e-07	0.0001314	-2.953e-05	0.0002487	5.121e-06
41	1	LC2	-2.77	0	0.1912	0	-7.208	0
41	2	LC2	-2.77	0	0.1912	0	-2.427	0
41	3	LC2	-2.77	0	0.1912	0	2.353	0
42	1	LC2	-2.769	-1.323e-05	0.1912	1.505e-05	-7.208	-0.000473
42	2	LC2	-2.769	-1.323e-05	0.1912	1.505e-05	-2.427	-0.0001422
42	3	LC2	-2.769	-1.323e-05	0.1912	1.505e-05	2.353	0.0001885
43	1	LC2	-6.493e-05	8.423e-05	0.000318	-8.792e-05	-0.00219	0.0007296
43	2	LC2	-6.493e-05	8.423e-05	0.000318	-8.792e-05	-0.0005997	0.0003084
43	3	LC2	-6.493e-05	8.423e-05	0.000318	-8.792e-05	0.0009905	-0.0001128
44	1	LC2	-0.0006913	5.118e-05	1.107	-0.0001042	-13.07	0.0006411
44	2	LC2	-0.0006913	5.118e-05	1.107	-0.0001042	-4.773	0.0002572

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
44	3	LC2	-0.0006913	5.118e-05	1.107	-0.0001042	3.526	-0.0001266
45	1	LC2	1.662	-2.698e-05	0.192	-0.0005807	-7.22	-0.0009816
45	2	LC2	1.662	-2.698e-05	0.192	-0.0005807	-2.42	-0.000307
45	3	LC2	1.662	-2.698e-05	0.192	-0.0005807	2.38	0.0003676
46	1	LC2	-6.493e-05	-8.423e-05	-0.000318	8.792e-05	0.002581	-0.0005339
46	2	LC2	-6.493e-05	-8.423e-05	-0.000318	8.792e-05	0.0009905	-0.0001128
46	3	LC2	-6.493e-05	-8.423e-05	-0.000318	8.792e-05	-0.0005997	0.0003084
47	1	LC2	-0.0007819	0	1.106	0	-13.07	0
47	2	LC2	-0.0007819	0	1.106	0	-4.772	0
47	3	LC2	-0.0007819	0	1.106	0	3.526	0
48	1	LC2	1.665	0	0.1918	0	-7.215	0
48	2	LC2	1.665	0	0.1918	0	-2.419	0
48	3	LC2	1.665	0	0.1918	0	2.377	0
49	1	LC2	-0.0006913	-5.118e-05	1.107	0.0001042	-13.07	-0.0006411
49	2	LC2	-0.0006913	-5.118e-05	1.107	0.0001042	-4.773	-0.0002572
49	3	LC2	-0.0006913	-5.118e-05	1.107	0.0001042	3.526	0.0001266
50	1	LC2	1.662	2.698e-05	0.192	0.0005807	-7.22	0.0009816
50	2	LC2	1.662	2.698e-05	0.192	0.0005807	-2.42	0.000307
50	3	LC2	1.662	2.698e-05	0.192	0.0005807	2.38	-0.0003676
51	1	LC2	0	-2.699e-05	0	6.803e-05	0	-0.0002026
51	2	LC2	0	-2.699e-05	0	6.803e-05	0	-6.765e-05
51	3	LC2	0	-2.699e-05	0	6.803e-05	0	6.731e-05
52	1	LC2	0.0006913	5.118e-05	1.107	-0.0001042	-11.83	0.0005104
52	2	LC2	0.0006913	5.118e-05	1.107	-0.0001042	-3.526	0.0001266
52	3	LC2	0.0006913	5.118e-05	1.107	-0.0001042	4.773	-0.0002572
53	1	LC2	0	0	0.2828	-0.0001855	-10.62	0
53	2	LC2	0	0	0.2828	-0.0001855	-3.551	0
53	3	LC2	0	0	0.2828	-0.0001855	3.52	0
54	1	LC2	0	2.699e-05	0	-6.803e-05	0	0.0002023
54	2	LC2	0	2.699e-05	0	-6.803e-05	0	6.731e-05
54	3	LC2	0	2.699e-05	0	-6.803e-05	0	-6.765e-05
55	1	LC2	0.0007819	0	1.106	0	-11.82	0
55	2	LC2	0.0007819	0	1.106	0	-3.526	0
55	3	LC2	0.0007819	0	1.106	0	4.772	0
56	1	LC2	0	0	0.2827	0	-10.62	0
56	2	LC2	0	0	0.2827	0	-3.55	0
56	3	LC2	0	0	0.2827	0	3.518	0
57	1	LC2	0.0006913	-5.118e-05	1.107	0.0001042	-11.83	-0.0005104
57	2	LC2	0.0006913	-5.118e-05	1.107	0.0001042	-3.526	-0.0001266
57	3	LC2	0.0006913	-5.118e-05	1.107	0.0001042	4.773	0.0002572
58	1	LC2	0	0	0.2828	0.0001855	-10.62	0
58	2	LC2	0	0	0.2828	0.0001855	-3.551	0
58	3	LC2	0	0	0.2828	0.0001855	3.52	0
59	1	LC2	6.493e-05	8.423e-05	-0.000318	-8.792e-05	0.00219	0.0007296

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
59	2	LC2	6.493e-05	8.423e-05	-0.000318	-8.792e-05	0.0005997	0.0003084
59	3	LC2	6.493e-05	8.423e-05	-0.000318	-8.792e-05	-0.0009905	-0.0001128
60	1	LC2	-1.662	2.698e-05	0.192	-0.0005807	-7.22	0.0009816
60	2	LC2	-1.662	2.698e-05	0.192	-0.0005807	-2.42	0.000307
60	3	LC2	-1.662	2.698e-05	0.192	-0.0005807	2.38	-0.0003676
61	1	LC2	6.493e-05	-8.423e-05	0.000318	8.792e-05	-0.002581	-0.0005339
61	2	LC2	6.493e-05	-8.423e-05	0.000318	8.792e-05	-0.0009905	-0.0001128
61	3	LC2	6.493e-05	-8.423e-05	0.000318	8.792e-05	0.0005997	0.0003084
62	1	LC2	-1.665	0	0.1918	0	-7.215	0
62	2	LC2	-1.665	0	0.1918	0	-2.419	0
62	3	LC2	-1.665	0	0.1918	0	2.377	0
63	1	LC2	-1.662	-2.698e-05	0.192	0.0005807	-7.22	-0.0009816
63	2	LC2	-1.662	-2.698e-05	0.192	0.0005807	-2.42	-0.000307
63	3	LC2	-1.662	-2.698e-05	0.192	0.0005807	2.38	0.0003676
64	1	LC2	-0.00262	0.0001682	0.0007263	0.003297	-0.005101	0.004988
64	2	LC2	-0.00262	0.0001682	0.0007263	0.003297	-0.001469	0.004148
64	3	LC2	-0.00262	0.0001682	0.0007263	0.003297	0.002163	0.003307
65	1	LC2	-0.003868	0.00257	1.086	-0.000185	-12.86	0.03062
65	2	LC2	-0.003868	0.00257	1.086	-0.000185	-4.712	0.01135
65	3	LC2	-0.003868	0.00257	1.086	-0.000185	3.435	-0.007925
66	1	LC2	0.575	-7.706e-05	0.196	-0.01608	-7.23	-0.002843
66	2	LC2	0.575	-7.706e-05	0.196	-0.01608	-2.329	-0.0009164
66	3	LC2	0.575	-7.706e-05	0.196	-0.01608	2.571	0.00101
67	1	LC2	-0.00262	-0.0001682	-0.0007263	-0.003297	0.005794	0.002466
67	2	LC2	-0.00262	-0.0001682	-0.0007263	-0.003297	0.002163	0.003307
67	3	LC2	-0.00262	-0.0001682	-0.0007263	-0.003297	-0.001469	0.004148
68	1	LC2	-0.006616	0	1.09	0	-12.9	0
68	2	LC2	-0.006616	0	1.09	0	-4.726	0
68	3	LC2	-0.006616	0	1.09	0	3.447	0
69	1	LC2	0.5763	0	0.1981	0	-7.308	0
69	2	LC2	0.5763	0	0.1981	0	-2.355	0
69	3	LC2	0.5763	0	0.1981	0	2.597	0
70	1	LC2	-0.003868	-0.00257	1.086	0.000185	-12.86	-0.03062
70	2	LC2	-0.003868	-0.00257	1.086	0.000185	-4.712	-0.01135
70	3	LC2	-0.003868	-0.00257	1.086	0.000185	3.435	0.007925
71	1	LC2	0.575	7.706e-05	0.196	0.01608	-7.23	0.002843
71	2	LC2	0.575	7.706e-05	0.196	0.01608	-2.329	0.0009164
71	3	LC2	0.575	7.706e-05	0.196	0.01608	2.571	-0.00101
72	1	LC2	0	-0.00272	0	0.002244	0	-0.01924
72	2	LC2	0	-0.00272	0	0.002244	0	-0.005642
72	3	LC2	0	-0.00272	0	0.002244	0	0.00796
73	1	LC2	0.003868	0.00257	1.086	-0.000185	-11.58	0.0272
73	2	LC2	0.003868	0.00257	1.086	-0.000185	-3.435	0.007925
73	3	LC2	0.003868	0.00257	1.086	-0.000185	4.712	-0.01135

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
74	1	LC2	0	0	0.2724	-0.01039	-10.16	0
74	2	LC2	0	0	0.2724	-0.01039	-3.349	0
74	3	LC2	0	0	0.2724	-0.01039	3.461	0
75	1	LC2	0	0.00272	0	-0.002244	0	0.02156
75	2	LC2	0	0.00272	0	-0.002244	0	0.00796
75	3	LC2	0	0.00272	0	-0.002244	0	-0.005642
76	1	LC2	0.006616	0	1.09	0	-11.62	0
76	2	LC2	0.006616	0	1.09	0	-3.447	0
76	3	LC2	0.006616	0	1.09	0	4.726	0
77	1	LC2	0	0	0.2749	0	-10.25	0
77	2	LC2	0	0	0.2749	0	-3.381	0
77	3	LC2	0	0	0.2749	0	3.493	0
78	1	LC2	0.003868	-0.00257	1.086	0.000185	-11.58	-0.0272
78	2	LC2	0.003868	-0.00257	1.086	0.000185	-3.435	-0.007925
78	3	LC2	0.003868	-0.00257	1.086	0.000185	4.712	0.01135
79	1	LC2	0	0	0.2724	0.01039	-10.16	0
79	2	LC2	0	0	0.2724	0.01039	-3.349	0
79	3	LC2	0	0	0.2724	0.01039	3.461	0
80	1	LC2	0.00262	0.0001682	-0.0007263	0.003297	0.005101	0.004988
80	2	LC2	0.00262	0.0001682	-0.0007263	0.003297	0.001469	0.004148
80	3	LC2	0.00262	0.0001682	-0.0007263	0.003297	-0.002163	0.003307
81	1	LC2	-0.575	7.706e-05	0.196	-0.01608	-7.23	0.002843
81	2	LC2	-0.575	7.706e-05	0.196	-0.01608	-2.329	0.0009164
81	3	LC2	-0.575	7.706e-05	0.196	-0.01608	2.571	-0.00101
82	1	LC2	0.00262	-0.0001682	0.0007263	-0.003297	-0.005794	0.002466
82	2	LC2	0.00262	-0.0001682	0.0007263	-0.003297	-0.002163	0.003307
82	3	LC2	0.00262	-0.0001682	0.0007263	-0.003297	0.001469	0.004148
83	1	LC2	-0.5763	0	0.1981	0	-7.308	0
83	2	LC2	-0.5763	0	0.1981	0	-2.355	0
83	3	LC2	-0.5763	0	0.1981	0	2.597	0
84	1	LC2	-0.575	-7.706e-05	0.196	0.01608	-7.23	-0.002843
84	2	LC2	-0.575	-7.706e-05	0.196	0.01608	-2.329	-0.0009164
84	3	LC2	-0.575	-7.706e-05	0.196	0.01608	2.571	0.00101
85	1	LC2	-0.08952	-0.1927	0.0007603	0.003735	-0.005121	-1.341
85	2	LC2	-0.08952	-0.1927	0.0007603	0.003735	-0.00132	-0.3775
85	3	LC2	-0.08952	-0.1927	0.0007603	0.003735	0.002482	0.5859
86	1	LC2	0.003357	0.0896	0.5742	-0.0003098	-6.882	1.033
86	2	LC2	0.003357	0.0896	0.5742	-0.0003098	-2.575	0.3614
86	3	LC2	0.003357	0.0896	0.5742	-0.0003098	1.732	-0.3106
87	1	LC2	-0.08952	0.1927	-0.0007603	-0.003735	0.006283	1.549
87	2	LC2	-0.08952	0.1927	-0.0007603	-0.003735	0.002482	0.5859
87	3	LC2	-0.08952	0.1927	-0.0007603	-0.003735	-0.00132	-0.3775
88	1	LC2	0.5834	0	0.5778	0	-6.924	0
88	2	LC2	0.5834	0	0.5778	0	-2.59	0

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
88	3	LC2	0.5834	0	0.5778	0	1.744	0
89	1	LC2	0.003357	-0.0896	0.5742	0.0003098	-6.882	-1.033
89	2	LC2	0.003357	-0.0896	0.5742	0.0003098	-2.575	-0.3614
89	3	LC2	0.003357	-0.0896	0.5742	0.0003098	1.732	0.3106
90	1	LC2	0	-0.2791	0	0.002353	0	-2.027
90	2	LC2	0	-0.2791	0	0.002353	0	-0.6316
90	3	LC2	0	-0.2791	0	0.002353	0	0.7638
91	1	LC2	-0.003357	0.0896	0.5742	-0.0003098	-6.038	0.9826
91	2	LC2	-0.003357	0.0896	0.5742	-0.0003098	-1.732	0.3106
91	3	LC2	-0.003357	0.0896	0.5742	-0.0003098	2.575	-0.3614
92	1	LC2	0	0.2791	0	-0.002353	0	2.159
92	2	LC2	0	0.2791	0	-0.002353	0	0.7638
92	3	LC2	0	0.2791	0	-0.002353	0	-0.6316
93	1	LC2	-0.5834	0	0.5778	0	-6.078	0
93	2	LC2	-0.5834	0	0.5778	0	-1.744	0
93	3	LC2	-0.5834	0	0.5778	0	2.59	0
94	1	LC2	-0.003357	-0.0896	0.5742	0.0003098	-6.038	-0.9826
94	2	LC2	-0.003357	-0.0896	0.5742	0.0003098	-1.732	-0.3106
94	3	LC2	-0.003357	-0.0896	0.5742	0.0003098	2.575	0.3614
95	1	LC2	0.08952	-0.1927	-0.0007603	0.003735	0.005121	-1.341
95	2	LC2	0.08952	-0.1927	-0.0007603	0.003735	0.00132	-0.3775
95	3	LC2	0.08952	-0.1927	-0.0007603	0.003735	-0.002482	0.5859
96	1	LC2	0.08952	0.1927	0.0007603	-0.003735	-0.006283	1.549
96	2	LC2	0.08952	0.1927	0.0007603	-0.003735	-0.002482	0.5859
96	3	LC2	0.08952	0.1927	0.0007603	-0.003735	0.00132	-0.3775

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
1	1	LC3	0	0	0	0	0	0
1	2	LC3	0	0	0	0	0	0
1	3	LC3	0	0	0	0	0	0
2	1	LC3	0	0	0	0	1.248e-08	0
2	2	LC3	0	0	0	0	0	0
2	3	LC3	0	0	0	0	0	0
3	1	LC3	-3.832	3.834e-06	-0.2062	5.972e-07	8.081	0.0001278
3	2	LC3	-3.832	3.834e-06	-0.2062	5.972e-07	2.927	3.196e-05
3	3	LC3	-3.832	3.834e-06	-0.2062	5.972e-07	-2.228	-6.388e-05
4	1	LC3	0	0	0	0	0	0
4	2	LC3	0	0	0	0	0	0
4	3	LC3	0	0	0	0	0	0
5	1	LC3	0	0	0	0	1.248e-08	0
5	2	LC3	0	0	0	0	0	0
5	3	LC3	0	0	0	0	0	0
6	1	LC3	-3.833	0	-0.2062	0	8.081	0
6	2	LC3	-3.833	0	-0.2062	0	2.927	0
6	3	LC3	-3.833	0	-0.2062	0	-2.228	0
7	1	LC3	0	0	0	0	1.248e-08	0
7	2	LC3	0	0	0	0	0	0
7	3	LC3	0	0	0	0	0	0
8	1	LC3	-3.832	-3.834e-06	-0.2062	-5.972e-07	8.081	-0.0001278
8	2	LC3	-3.832	-3.834e-06	-0.2062	-5.972e-07	2.927	-3.196e-05
8	3	LC3	-3.832	-3.834e-06	-0.2062	-5.972e-07	-2.228	6.388e-05
9	1	LC3	0	0	0	0	0	0
9	2	LC3	0	0	0	0	0	0
9	3	LC3	0	0	0	0	0	0
10	1	LC3	0	0	0	0	1.27e-08	0
10	2	LC3	0	0	0	0	0	0
10	3	LC3	0	0	0	0	0	0
11	1	LC3	0	0	-0.2543	0	9.686	0
11	2	LC3	0	0	-0.2543	0	3.328	0
11	3	LC3	0	0	-0.2543	0	-3.03	0
12	1	LC3	0	0	0	0	0	0
12	2	LC3	0	0	0	0	0	0
12	3	LC3	0	0	0	0	0	0
13	1	LC3	0	0	0	0	1.27e-08	0
13	2	LC3	0	0	0	0	0	0
13	3	LC3	0	0	0	0	0	0
14	1	LC3	0	0	-0.2543	0	9.686	0
14	2	LC3	0	0	-0.2543	0	3.328	0
14	3	LC3	0	0	-0.2543	0	-3.03	0
15	1	LC3	0	0	0	0	1.27e-08	0

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
15	2	LC3	0	0	0	0	0	0
15	3	LC3	0	0	0	0	0	0
16	1	LC3	0	0	-0.2543	0	9.686	0
16	2	LC3	0	0	-0.2543	0	3.328	0
16	3	LC3	0	0	-0.2543	0	-3.03	0
17	1	LC3	0	0	0	0	0	0
17	2	LC3	0	0	0	0	0	0
17	3	LC3	0	0	0	0	0	0
18	1	LC3	3.832	-3.834e-06	-0.2062	5.972e-07	8.081	-0.0001278
18	2	LC3	3.832	-3.834e-06	-0.2062	5.972e-07	2.927	-3.196e-05
18	3	LC3	3.832	-3.834e-06	-0.2062	5.972e-07	-2.228	6.388e-05
19	1	LC3	0	0	0	0	0	0
19	2	LC3	0	0	0	0	0	0
19	3	LC3	0	0	0	0	0	0
20	1	LC3	3.833	0	-0.2062	0	8.081	0
20	2	LC3	3.833	0	-0.2062	0	2.927	0
20	3	LC3	3.833	0	-0.2062	0	-2.228	0
21	1	LC3	3.832	3.834e-06	-0.2062	-5.972e-07	8.081	0.0001278
21	2	LC3	3.832	3.834e-06	-0.2062	-5.972e-07	2.927	3.196e-05
21	3	LC3	3.832	3.834e-06	-0.2062	-5.972e-07	-2.228	-6.388e-05
22	1	LC3	1.122e-05	-5.553e-07	-0.0001314	-2.953e-05	0.0009055	-7.897e-06
22	2	LC3	1.122e-05	-5.553e-07	-0.0001314	-2.953e-05	0.0002487	-5.121e-06
22	3	LC3	1.122e-05	-5.553e-07	-0.0001314	-2.953e-05	-0.0004082	-2.344e-06
23	1	LC3	-0.01495	-1.821e-06	-1.063	4.255e-05	12.63	-2.299e-05
23	2	LC3	-0.01495	-1.821e-06	-1.063	4.255e-05	4.655	-9.335e-06
23	3	LC3	-0.01495	-1.821e-06	-1.063	4.255e-05	-3.317	4.322e-06
24	1	LC3	-2.769	1.323e-05	-0.1912	1.505e-05	7.208	0.000473
24	2	LC3	-2.769	1.323e-05	-0.1912	1.505e-05	2.427	0.0001422
24	3	LC3	-2.769	1.323e-05	-0.1912	1.505e-05	-2.353	-0.0001885
25	1	LC3	1.122e-05	5.553e-07	0.0001314	2.953e-05	-0.001065	4.321e-07
25	2	LC3	1.122e-05	5.553e-07	0.0001314	2.953e-05	-0.0004082	-2.344e-06
25	3	LC3	1.122e-05	5.553e-07	0.0001314	2.953e-05	0.0002487	-5.121e-06
26	1	LC3	-0.01494	0	-1.063	0	12.63	0
26	2	LC3	-0.01494	0	-1.063	0	4.655	0
26	3	LC3	-0.01494	0	-1.063	0	-3.317	0
27	1	LC3	-2.77	0	-0.1912	0	7.208	0
27	2	LC3	-2.77	0	-0.1912	0	2.427	0
27	3	LC3	-2.77	0	-0.1912	0	-2.353	0
28	1	LC3	-0.01495	1.821e-06	-1.063	-4.255e-05	12.63	2.299e-05
28	2	LC3	-0.01495	1.821e-06	-1.063	-4.255e-05	4.655	9.335e-06
28	3	LC3	-0.01495	1.821e-06	-1.063	-4.255e-05	-3.317	-4.322e-06
29	1	LC3	-2.769	-1.323e-05	-0.1912	-1.505e-05	7.208	-0.000473
29	2	LC3	-2.769	-1.323e-05	-0.1912	-1.505e-05	2.427	-0.0001422
29	3	LC3	-2.769	-1.323e-05	-0.1912	-1.505e-05	-2.353	0.0001885

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
30	1	LC3	0	3.455e-06	0	-3.214e-05	0	2.594e-05
30	2	LC3	0	3.455e-06	0	-3.214e-05	0	8.664e-06
30	3	LC3	0	3.455e-06	0	-3.214e-05	0	-8.61e-06
31	1	LC3	0.01495	-1.821e-06	-1.063	4.255e-05	11.29	-1.798e-05
31	2	LC3	0.01495	-1.821e-06	-1.063	4.255e-05	3.317	-4.322e-06
31	3	LC3	0.01495	-1.821e-06	-1.063	4.255e-05	-4.655	9.335e-06
32	1	LC3	0	0	-0.2842	-2.297e-08	10.71	0
32	2	LC3	0	0	-0.2842	-2.297e-08	3.604	0
32	3	LC3	0	0	-0.2842	-2.297e-08	-3.502	0
33	1	LC3	0	-3.455e-06	0	3.214e-05	0	-2.588e-05
33	2	LC3	0	-3.455e-06	0	3.214e-05	0	-8.61e-06
33	3	LC3	0	-3.455e-06	0	3.214e-05	0	8.664e-06
34	1	LC3	0.01494	0	-1.063	0	11.29	0
34	2	LC3	0.01494	0	-1.063	0	3.317	0
34	3	LC3	0.01494	0	-1.063	0	-4.655	0
35	1	LC3	0	0	-0.2842	0	10.71	0
35	2	LC3	0	0	-0.2842	0	3.604	0
35	3	LC3	0	0	-0.2842	0	-3.502	0
36	1	LC3	0.01495	1.821e-06	-1.063	-4.255e-05	11.29	1.798e-05
36	2	LC3	0.01495	1.821e-06	-1.063	-4.255e-05	3.317	4.322e-06
36	3	LC3	0.01495	1.821e-06	-1.063	-4.255e-05	-4.655	-9.335e-06
37	1	LC3	0	0	-0.2842	2.297e-08	10.71	0
37	2	LC3	0	0	-0.2842	2.297e-08	3.604	0
37	3	LC3	0	0	-0.2842	2.297e-08	-3.502	0
38	1	LC3	-1.122e-05	-5.553e-07	0.0001314	-2.953e-05	-0.0009055	-7.897e-06
38	2	LC3	-1.122e-05	-5.553e-07	0.0001314	-2.953e-05	-0.0002487	-5.121e-06
38	3	LC3	-1.122e-05	-5.553e-07	0.0001314	-2.953e-05	0.0004082	-2.344e-06
39	1	LC3	2.769	-1.323e-05	-0.1912	1.505e-05	7.208	-0.000473
39	2	LC3	2.769	-1.323e-05	-0.1912	1.505e-05	2.427	-0.0001422
39	3	LC3	2.769	-1.323e-05	-0.1912	1.505e-05	-2.353	0.0001885
40	1	LC3	-1.122e-05	5.553e-07	-0.0001314	2.953e-05	0.001065	4.321e-07
40	2	LC3	-1.122e-05	5.553e-07	-0.0001314	2.953e-05	0.0004082	-2.344e-06
40	3	LC3	-1.122e-05	5.553e-07	-0.0001314	2.953e-05	-0.0002487	-5.121e-06
41	1	LC3	2.77	0	-0.1912	0	7.208	0
41	2	LC3	2.77	0	-0.1912	0	2.427	0
41	3	LC3	2.77	0	-0.1912	0	-2.353	0
42	1	LC3	2.769	1.323e-05	-0.1912	-1.505e-05	7.208	0.000473
42	2	LC3	2.769	1.323e-05	-0.1912	-1.505e-05	2.427	0.0001422
42	3	LC3	2.769	1.323e-05	-0.1912	-1.505e-05	-2.353	-0.0001885
43	1	LC3	6.493e-05	-8.423e-05	-0.000318	8.792e-05	0.00219	-0.0007296
43	2	LC3	6.493e-05	-8.423e-05	-0.000318	8.792e-05	0.0005997	-0.0003084
43	3	LC3	6.493e-05	-8.423e-05	-0.000318	8.792e-05	-0.0009905	0.0001128
44	1	LC3	0.0006913	-5.118e-05	-1.107	0.0001042	13.07	-0.0006411
44	2	LC3	0.0006913	-5.118e-05	-1.107	0.0001042	4.773	-0.0002572

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
44	3	LC3	0.0006913	-5.118e-05	-1.107	0.0001042	-3.526	0.0001266
45	1	LC3	-1.662	2.698e-05	-0.192	0.0005807	7.22	0.0009816
45	2	LC3	-1.662	2.698e-05	-0.192	0.0005807	2.42	0.000307
45	3	LC3	-1.662	2.698e-05	-0.192	0.0005807	-2.38	-0.0003676
46	1	LC3	6.493e-05	8.423e-05	0.000318	-8.792e-05	-0.002581	0.0005339
46	2	LC3	6.493e-05	8.423e-05	0.000318	-8.792e-05	-0.0009905	0.0001128
46	3	LC3	6.493e-05	8.423e-05	0.000318	-8.792e-05	0.0005997	-0.0003084
47	1	LC3	0.0007819	0	-1.106	0	13.07	0
47	2	LC3	0.0007819	0	-1.106	0	4.772	0
47	3	LC3	0.0007819	0	-1.106	0	-3.526	0
48	1	LC3	-1.665	0	-0.1918	0	7.215	0
48	2	LC3	-1.665	0	-0.1918	0	2.419	0
48	3	LC3	-1.665	0	-0.1918	0	-2.377	0
49	1	LC3	0.0006913	5.118e-05	-1.107	-0.0001042	13.07	0.0006411
49	2	LC3	0.0006913	5.118e-05	-1.107	-0.0001042	4.773	0.0002572
49	3	LC3	0.0006913	5.118e-05	-1.107	-0.0001042	-3.526	-0.0001266
50	1	LC3	-1.662	-2.698e-05	-0.192	-0.0005807	7.22	-0.0009816
50	2	LC3	-1.662	-2.698e-05	-0.192	-0.0005807	2.42	-0.000307
50	3	LC3	-1.662	-2.698e-05	-0.192	-0.0005807	-2.38	0.0003676
51	1	LC3	0	2.699e-05	0	-6.803e-05	0	0.0002026
51	2	LC3	0	2.699e-05	0	-6.803e-05	0	6.765e-05
51	3	LC3	0	2.699e-05	0	-6.803e-05	0	-6.731e-05
52	1	LC3	-0.0006913	-5.118e-05	-1.107	0.0001042	11.83	-0.0005104
52	2	LC3	-0.0006913	-5.118e-05	-1.107	0.0001042	3.526	-0.0001266
52	3	LC3	-0.0006913	-5.118e-05	-1.107	0.0001042	-4.773	0.0002572
53	1	LC3	0	0	-0.2828	0.0001855	10.62	0
53	2	LC3	0	0	-0.2828	0.0001855	3.551	0
53	3	LC3	0	0	-0.2828	0.0001855	-3.52	0
54	1	LC3	0	-2.699e-05	0	6.803e-05	0	-0.0002023
54	2	LC3	0	-2.699e-05	0	6.803e-05	0	-6.731e-05
54	3	LC3	0	-2.699e-05	0	6.803e-05	0	6.765e-05
55	1	LC3	-0.0007819	0	-1.106	0	11.82	0
55	2	LC3	-0.0007819	0	-1.106	0	3.526	0
55	3	LC3	-0.0007819	0	-1.106	0	-4.772	0
56	1	LC3	0	0	-0.2827	0	10.62	0
56	2	LC3	0	0	-0.2827	0	3.55	0
56	3	LC3	0	0	-0.2827	0	-3.518	0
57	1	LC3	-0.0006913	5.118e-05	-1.107	-0.0001042	11.83	0.0005104
57	2	LC3	-0.0006913	5.118e-05	-1.107	-0.0001042	3.526	0.0001266
57	3	LC3	-0.0006913	5.118e-05	-1.107	-0.0001042	-4.773	-0.0002572
58	1	LC3	0	0	-0.2828	-0.0001855	10.62	0
58	2	LC3	0	0	-0.2828	-0.0001855	3.551	0
58	3	LC3	0	0	-0.2828	-0.0001855	-3.52	0
59	1	LC3	-6.493e-05	-8.423e-05	0.000318	8.792e-05	-0.00219	-0.0007296

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
59	2	LC3	-6.493e-05	-8.423e-05	0.000318	8.792e-05	-0.0005997	-0.0003084
59	3	LC3	-6.493e-05	-8.423e-05	0.000318	8.792e-05	0.0009905	0.0001128
60	1	LC3	1.662	-2.698e-05	-0.192	0.0005807	7.22	-0.0009816
60	2	LC3	1.662	-2.698e-05	-0.192	0.0005807	2.42	-0.000307
60	3	LC3	1.662	-2.698e-05	-0.192	0.0005807	-2.38	0.0003676
61	1	LC3	-6.493e-05	8.423e-05	-0.000318	-8.792e-05	0.002581	0.0005339
61	2	LC3	-6.493e-05	8.423e-05	-0.000318	-8.792e-05	0.0009905	0.0001128
61	3	LC3	-6.493e-05	8.423e-05	-0.000318	-8.792e-05	-0.0005997	-0.0003084
62	1	LC3	1.665	0	-0.1918	0	7.215	0
62	2	LC3	1.665	0	-0.1918	0	2.419	0
62	3	LC3	1.665	0	-0.1918	0	-2.377	0
63	1	LC3	1.662	2.698e-05	-0.192	-0.0005807	7.22	0.0009816
63	2	LC3	1.662	2.698e-05	-0.192	-0.0005807	2.42	0.000307
63	3	LC3	1.662	2.698e-05	-0.192	-0.0005807	-2.38	-0.0003676
64	1	LC3	0.00262	-0.0001682	-0.0007263	-0.003297	0.005101	-0.004988
64	2	LC3	0.00262	-0.0001682	-0.0007263	-0.003297	0.001469	-0.004148
64	3	LC3	0.00262	-0.0001682	-0.0007263	-0.003297	-0.002163	-0.003307
65	1	LC3	0.003868	-0.00257	-1.086	0.000185	12.86	-0.03062
65	2	LC3	0.003868	-0.00257	-1.086	0.000185	4.712	-0.01135
65	3	LC3	0.003868	-0.00257	-1.086	0.000185	-3.435	0.007925
66	1	LC3	-0.575	7.706e-05	-0.196	0.01608	7.23	0.002843
66	2	LC3	-0.575	7.706e-05	-0.196	0.01608	2.329	0.0009164
66	3	LC3	-0.575	7.706e-05	-0.196	0.01608	-2.571	-0.00101
67	1	LC3	0.00262	0.0001682	0.0007263	0.003297	-0.005794	-0.002466
67	2	LC3	0.00262	0.0001682	0.0007263	0.003297	-0.002163	-0.003307
67	3	LC3	0.00262	0.0001682	0.0007263	0.003297	0.001469	-0.004148
68	1	LC3	0.006616	0	-1.09	0	12.9	0
68	2	LC3	0.006616	0	-1.09	0	4.726	0
68	3	LC3	0.006616	0	-1.09	0	-3.447	0
69	1	LC3	-0.5763	0	-0.1981	0	7.308	0
69	2	LC3	-0.5763	0	-0.1981	0	2.355	0
69	3	LC3	-0.5763	0	-0.1981	0	-2.597	0
70	1	LC3	0.003868	0.00257	-1.086	-0.000185	12.86	0.03062
70	2	LC3	0.003868	0.00257	-1.086	-0.000185	4.712	0.01135
70	3	LC3	0.003868	0.00257	-1.086	-0.000185	-3.435	-0.007925
71	1	LC3	-0.575	-7.706e-05	-0.196	-0.01608	7.23	-0.002843
71	2	LC3	-0.575	-7.706e-05	-0.196	-0.01608	2.329	-0.0009164
71	3	LC3	-0.575	-7.706e-05	-0.196	-0.01608	-2.571	0.00101
72	1	LC3	0	0.00272	0	-0.002244	0	0.01924
72	2	LC3	0	0.00272	0	-0.002244	0	0.005642
72	3	LC3	0	0.00272	0	-0.002244	0	-0.00796
73	1	LC3	-0.003868	-0.00257	-1.086	0.000185	11.58	-0.0272
73	2	LC3	-0.003868	-0.00257	-1.086	0.000185	3.435	-0.007925
73	3	LC3	-0.003868	-0.00257	-1.086	0.000185	-4.712	0.01135

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
74	1	LC3	0	0	-0.2724	0.01039	10.16	0
74	2	LC3	0	0	-0.2724	0.01039	3.349	0
74	3	LC3	0	0	-0.2724	0.01039	-3.461	0
75	1	LC3	0	-0.00272	0	0.002244	0	-0.02156
75	2	LC3	0	-0.00272	0	0.002244	0	-0.00796
75	3	LC3	0	-0.00272	0	0.002244	0	0.005642
76	1	LC3	-0.006616	0	-1.09	0	11.62	0
76	2	LC3	-0.006616	0	-1.09	0	3.447	0
76	3	LC3	-0.006616	0	-1.09	0	-4.726	0
77	1	LC3	0	0	-0.2749	0	10.25	0
77	2	LC3	0	0	-0.2749	0	3.381	0
77	3	LC3	0	0	-0.2749	0	-3.493	0
78	1	LC3	-0.003868	0.00257	-1.086	-0.000185	11.58	0.0272
78	2	LC3	-0.003868	0.00257	-1.086	-0.000185	3.435	0.007925
78	3	LC3	-0.003868	0.00257	-1.086	-0.000185	-4.712	-0.01135
79	1	LC3	0	0	-0.2724	-0.01039	10.16	0
79	2	LC3	0	0	-0.2724	-0.01039	3.349	0
79	3	LC3	0	0	-0.2724	-0.01039	-3.461	0
80	1	LC3	-0.00262	-0.0001682	0.0007263	-0.003297	-0.005101	-0.004988
80	2	LC3	-0.00262	-0.0001682	0.0007263	-0.003297	-0.001469	-0.004148
80	3	LC3	-0.00262	-0.0001682	0.0007263	-0.003297	0.002163	-0.003307
81	1	LC3	0.575	-7.706e-05	-0.196	0.01608	7.23	-0.002843
81	2	LC3	0.575	-7.706e-05	-0.196	0.01608	2.329	-0.0009164
81	3	LC3	0.575	-7.706e-05	-0.196	0.01608	-2.571	0.00101
82	1	LC3	-0.00262	0.0001682	-0.0007263	0.003297	0.005794	-0.002466
82	2	LC3	-0.00262	0.0001682	-0.0007263	0.003297	0.002163	-0.003307
82	3	LC3	-0.00262	0.0001682	-0.0007263	0.003297	-0.001469	-0.004148
83	1	LC3	0.5763	0	-0.1981	0	7.308	0
83	2	LC3	0.5763	0	-0.1981	0	2.355	0
83	3	LC3	0.5763	0	-0.1981	0	-2.597	0
84	1	LC3	0.575	7.706e-05	-0.196	-0.01608	7.23	0.002843
84	2	LC3	0.575	7.706e-05	-0.196	-0.01608	2.329	0.0009164
84	3	LC3	0.575	7.706e-05	-0.196	-0.01608	-2.571	-0.00101
85	1	LC3	0.08952	0.1927	-0.0007603	-0.003735	0.005121	1.341
85	2	LC3	0.08952	0.1927	-0.0007603	-0.003735	0.00132	0.3775
85	3	LC3	0.08952	0.1927	-0.0007603	-0.003735	-0.002482	-0.5859
86	1	LC3	-0.003357	-0.0896	-0.5742	0.0003098	6.882	-1.033
86	2	LC3	-0.003357	-0.0896	-0.5742	0.0003098	2.575	-0.3614
86	3	LC3	-0.003357	-0.0896	-0.5742	0.0003098	-1.732	0.3106
87	1	LC3	0.08952	-0.1927	0.0007603	0.003735	-0.006283	-1.549
87	2	LC3	0.08952	-0.1927	0.0007603	0.003735	-0.002482	-0.5859
87	3	LC3	0.08952	-0.1927	0.0007603	0.003735	0.00132	0.3775
88	1	LC3	-0.5834	0	-0.5778	0	6.924	0
88	2	LC3	-0.5834	0	-0.5778	0	2.59	0

			cell index case	N	Q_y	Q_z	M_x	M_y	M_z
88	3	LC3	-0.5834	0	-0.5778	0	-1.744	0
89	1	LC3	-0.003357	0.0896	-0.5742	-0.0003098	6.882	1.033
89	2	LC3	-0.003357	0.0896	-0.5742	-0.0003098	2.575	0.3614
89	3	LC3	-0.003357	0.0896	-0.5742	-0.0003098	-1.732	-0.3106
90	1	LC3	0	0.2791	0	-0.002353	0	2.027
90	2	LC3	0	0.2791	0	-0.002353	0	0.6316
90	3	LC3	0	0.2791	0	-0.002353	0	-0.7638
91	1	LC3	0.003357	-0.0896	-0.5742	0.0003098	6.038	-0.9826
91	2	LC3	0.003357	-0.0896	-0.5742	0.0003098	1.732	-0.3106
91	3	LC3	0.003357	-0.0896	-0.5742	0.0003098	-2.575	0.3614
92	1	LC3	0	-0.2791	0	0.002353	0	-2.159
92	2	LC3	0	-0.2791	0	0.002353	0	-0.7638
92	3	LC3	0	-0.2791	0	0.002353	0	0.6316
93	1	LC3	0.5834	0	-0.5778	0	6.078	0
93	2	LC3	0.5834	0	-0.5778	0	1.744	0
93	3	LC3	0.5834	0	-0.5778	0	-2.59	0
94	1	LC3	0.003357	0.0896	-0.5742	-0.0003098	6.038	0.9826
94	2	LC3	0.003357	0.0896	-0.5742	-0.0003098	1.732	0.3106
94	3	LC3	0.003357	0.0896	-0.5742	-0.0003098	-2.575	-0.3614
95	1	LC3	-0.08952	0.1927	0.0007603	-0.003735	-0.005121	1.341
95	2	LC3	-0.08952	0.1927	0.0007603	-0.003735	-0.00132	0.3775
95	3	LC3	-0.08952	0.1927	0.0007603	-0.003735	0.002482	-0.5859
96	1	LC3	-0.08952	-0.1927	-0.0007603	0.003735	0.006283	-1.549
96	2	LC3	-0.08952	-0.1927	-0.0007603	0.003735	0.002482	-0.5859
96	3	LC3	-0.08952	-0.1927	-0.0007603	0.003735	-0.00132	0.3775

3.4 Modes of Vibration

Estimation of the smallest natural circular frequency using Rayleigh's formula : 8.092.

mode	λ	$m_{eff,y}$	$m_{eff,z}$
1	7.601	1 (1)	1 (1)
2	7.612	1 (1)	1 (1)
3	11.85	1 (1)	1 (1)
4	23.59	1 (1)	1 (1)
5	23.63	1 (1)	1 (1)
6	35.8	1 (1)	1 (1)
7	41.24	1 (1)	1 (1)
8	41.87	1 (1)	1 (1)
9	55.96	1 (1)	1 (1)
10	56.22	1 (1)	1 (1)