Linear Analysis of Bernoulli Beams

Bence Balogh

Contents

1 Summary

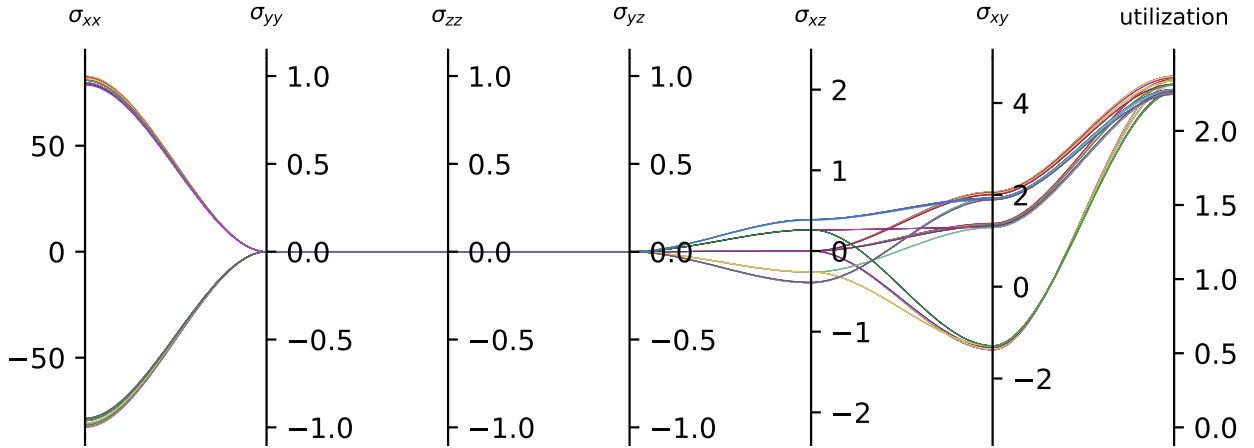Figure 1: Read this for an online version of the geometry.

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

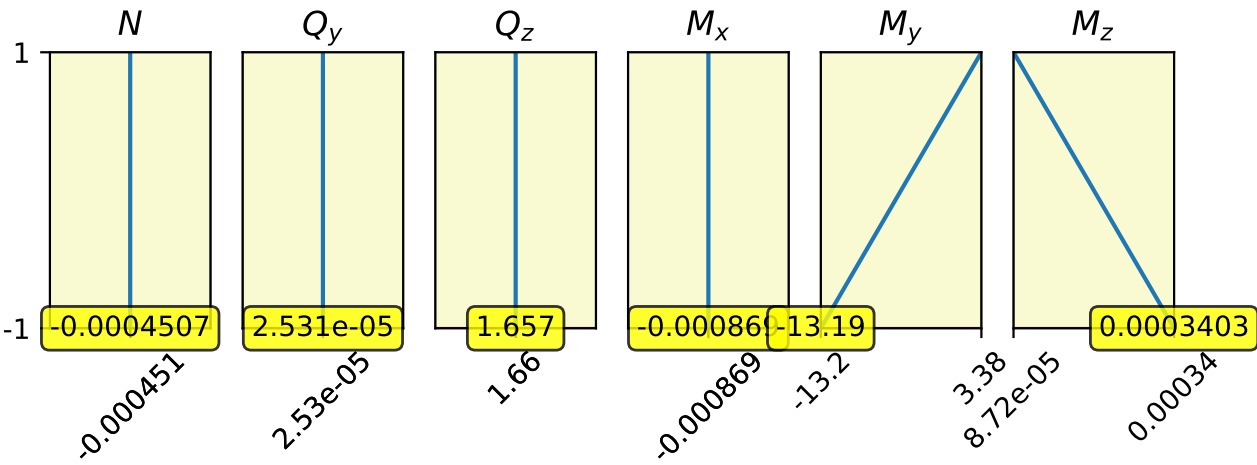The highest utilization 2.37 occurs at element 58, from load case 0 at location $\xi = -1$.

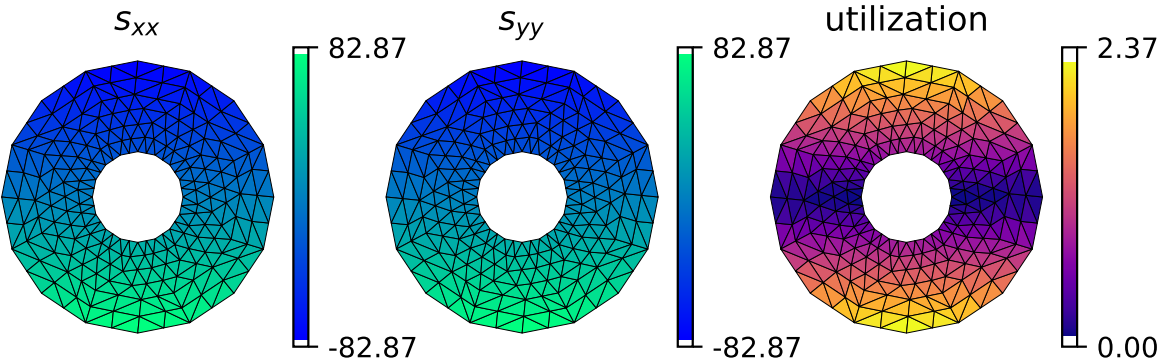Figure 3: Internal forces for element 58 and load case 0.

Figure 4: Results of the cross section where the highest utilization occurs.

2 Input
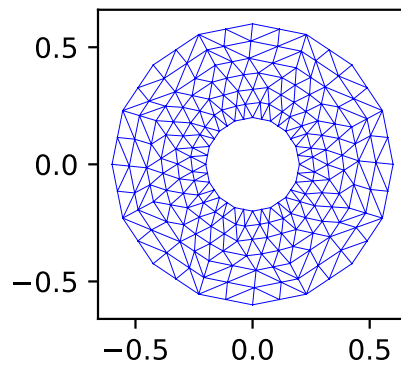
Figure 5: Mesh of the cross section.

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

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	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	0	0	0	0	0
42	LC2	0	0	0	0	0	0
43	LC2	0	0	0	0	0	0
44	LC2	0	2	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	-2	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
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	4.895e-18	3.062e-15	0.9563	1.54e-13	-0.003519	1.423e-17
44	LC2	-0.01075	0.913	3.947e-14	6.537e-15	-4.39e-17	0.003581
38	LC3	-0.01075	-0.913	5.862e-14	-6.577e-15	-8.896e-17	-0.003581

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	1.429e-26	-8.689e-28	2.481e-13	-8.185e-19	-3.267e-12	-1.206e-26
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	3.328e-25	2.093e-13	2.958e-24	-2.943e-12	4.247e-24
5	LC1	2.913e-28	-1.121e-27	2.481e-13	2.957e-24	-3.266e-12	-1.416e-26
6	LC1	-5.759e-12	-3.351e-25	2.093e-13	2.958e-24	-2.943e-12	-4.275e-24
7	LC1	5.748e-12	-2.33e-17	2.093e-13	1.434e-18	-2.943e-12	-1.942e-16
8	LC1	-1.694e-26	-8.767e-28	2.481e-13	8.185e-19	-3.267e-12	-1.213e-26
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	1.736e-17	-7.506e-16	0.1869	-1.276e-08	-0.002061	-1.489e-17
12	LC1	-0.006984	-1.201e-08	0.1869	-2.235e-08	-0.004078	1.209e-06
13	LC1	0.006998	2.296e-13	0.1869	4.611e-14	-0.004079	1.077e-15
14	LC1	3.54e-19	-7.504e-16	0.1869	4.609e-14	-0.002064	-1.786e-18
15	LC1	-0.006998	-2.311e-13	0.1869	4.611e-14	-0.004079	-1.08e-15
16	LC1	0.006984	-1.201e-08	0.1869	2.235e-08	-0.004078	1.209e-06
17	LC1	-2.059e-17	-7.491e-16	0.1869	1.276e-08	-0.002061	-1.438e-17
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
20	LC1	4.294e-17	-1.412e-15	0.4293	-1.552e-07	-0.003173	1.896e-17

i	case	U_x	U_y	U_z	φ_x	φ_y	φ_z
21	LC1	-0.01201	-3.076e-08	0.4293	2.201e-07	-0.005074	2.709e-06
22	LC1	0.01204	4.663e-13	0.4293	9.381e-14	-0.005076	7.025e-16
23	LC1	2.126e-18	-1.406e-15	0.4293	9.365e-14	-0.003179	1.064e-17
24	LC1	-0.01204	-4.691e-13	0.4293	9.38e-14	-0.005076	-6.812e-16
25	LC1	0.01201	-3.075e-08	0.4293	-2.201e-07	-0.005074	2.709e-06
26	LC1	-4.523e-17	-1.399e-15	0.4293	1.552e-07	-0.003173	1.889e-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	6.475e-17	1.034e-15	0.692	1.031e-06	-0.003727	4.705e-17
30	LC1	-0.01502	-2.548e-06	0.692	1.41e-05	-0.005669	4.078e-06
31	LC1	0.01508	6.466e-13	0.6921	1.293e-13	-0.005703	2.332e-16
32	LC1	4.052e-18	1.032e-15	0.6921	1.292e-13	-0.003747	2.13e-17
33	LC1	-0.01508	-6.446e-13	0.6921	1.293e-13	-0.005703	-1.902e-16
34	LC1	0.01502	-2.548e-06	0.692	-1.41e-05	-0.005669	4.078e-06
35	LC1	-6.437e-17	1.03e-15	0.692	-1.031e-06	-0.003727	4.742e-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	7.093e-17	3.054e-15	0.9513	0.0001334	-0.003497	2.761e-17
39	LC1	-0.01605	-8.003e-05	0.9513	0.0003554	-0.004682	6.93e-06
40	LC1	0.01612	7.714e-13	0.9562	1.542e-13	-0.004721	-4.925e-16
41	LC1	4.895e-18	3.062e-15	0.9563	1.54e-13	-0.003519	1.423e-17
42	LC1	-0.01612	-7.652e-13	0.9562	1.542e-13	-0.004721	5.218e-16
43	LC1	0.01605	-8.003e-05	0.9513	-0.0003554	-0.004682	6.93e-06
44	LC1	-7.092e-17	3.064e-15	0.9513	-0.0001334	-0.003497	2.94e-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	3.505e-18	-6.258e-19	-2.923e-17	2.927e-12
2	LC2	3.833e-12	2.062e-13	-2.538e-26	1.244e-25	3.269e-25	2.927e-12
3	LC2	3.832e-12	2.062e-13	-3.505e-18	6.258e-19	2.923e-17	2.927e-12
4	LC2	4.421e-16	2.543e-13	5.848e-19	2.829e-20	-4.876e-18	3.328e-12
5	LC2	6.136e-16	2.543e-13	-4.781e-27	1.249e-25	6.185e-26	3.328e-12
6	LC2	4.421e-16	2.543e-13	-5.848e-19	-2.829e-20	4.876e-18	3.328e-12
7	LC2	-3.832e-12	2.062e-13	-4.09e-18	-7.534e-19	3.41e-17	2.926e-12
8	LC2	-3.833e-12	2.062e-13	1.581e-26	1.246e-25	-2.03e-25	2.926e-12
9	LC2	-3.832e-12	2.062e-13	4.09e-18	7.534e-19	-3.41e-17	2.926e-12
10	LC2	0.004656	0.1883	2.532e-09	-9.753e-09	1.819e-07	0.004357
11	LC2	0.004657	0.1883	-1.797e-14	1.939e-15	1.188e-16	0.004357
12	LC2	0.004656	0.1883	-2.532e-09	9.753e-09	-1.819e-07	0.004357
13	LC2	5.373e-07	0.1883	4.529e-10	4.41e-10	3.034e-08	0.001855
14	LC2	7.457e-07	0.1883	-3.429e-15	1.944e-15	2.59e-17	0.001855
15	LC2	5.373e-07	0.1883	-4.529e-10	-4.41e-10	-3.034e-08	0.001855
16	LC2	-0.004657	0.1883	-2.985e-09	-1.174e-08	-2.122e-07	0.004357

i	case	U_x	U_y	U_z	φ_x	φ_y	φ_z
17	LC2	-0.004658	0.1883	1.11e-14	1.943e-15	-6.705e-17	0.004357
18	LC2	-0.004657	0.1883	2.985e-09	1.174e-08	2.122e-07	0.004357
19	LC2	0.008021	0.4272	1.459e-08	-2.443e-07	4.432e-07	0.004822
20	LC2	0.008023	0.4273	-3.833e-14	4.088e-15	1.376e-16	0.004821
21	LC2	0.008021	0.4272	-1.459e-08	2.443e-07	-4.432e-07	0.004822
22	LC2	1.105e-06	0.4272	4.07e-09	1.872e-08	7.85e-08	0.002491
23	LC2	1.643e-06	0.4272	-7.646e-15	4.099e-15	2.743e-17	0.002491
24	LC2	1.105e-06	0.4272	-4.07e-09	-1.872e-08	-7.85e-08	0.002491
25	LC2	-0.008022	0.4272	-1.866e-08	-3.139e-07	-5.217e-07	0.004822
26	LC2	-0.008025	0.4273	2.296e-14	4.1e-15	-8.337e-17	0.004822
27	LC2	-0.008022	0.4272	1.866e-08	3.139e-07	5.217e-07	0.004822
28	LC2	0.01004	0.6756	5.785e-07	-8.92e-06	7.804e-07	0.005072
29	LC2	0.01005	0.6756	-5.25e-14	5.98e-15	1.159e-16	0.005081
30	LC2	0.01004	0.6756	-5.785e-07	8.92e-06	-7.804e-07	0.005072
31	LC2	1.767e-06	0.6756	1.506e-07	-2.12e-06	1.523e-07	0.002684
32	LC2	3.023e-06	0.6756	-8.128e-15	5.957e-15	2.348e-17	0.00269
33	LC2	1.767e-06	0.6756	-1.506e-07	2.12e-06	-1.523e-07	0.002684
34	LC2	-0.01004	0.6756	-7.292e-07	-1.188e-05	-9.327e-07	0.005074
35	LC2	-0.01005	0.6756	3.604e-14	5.911e-15	-6.883e-17	0.005088
36	LC2	-0.01004	0.6756	7.292e-07	1.188e-05	9.327e-07	0.005074
37	LC2	0.01074	0.9108	1.865e-05	-0.0002334	1.308e-06	0.003562
38	LC2	0.01075	0.9123	-5.874e-14	6.548e-15	9.07e-17	0.003573
39	LC2	0.01074	0.9108	-1.865e-05	0.0002334	-1.308e-06	0.003562
40	LC2	2.181e-06	0.9109	5.792e-06	-0.0001292	2.545e-07	0.001985
41	LC2	3.815e-06	0.9125	-9.622e-15	6.504e-15	2.316e-17	0.001991
42	LC2	2.181e-06	0.9109	-5.792e-06	0.0001292	-2.545e-07	0.001985
43	LC2	-0.01074	0.9109	-2.445e-05	-0.0003495	-1.563e-06	0.003565
44	LC2	-0.01075	0.913	3.947e-14	6.537e-15	-4.39e-17	0.003581
45	LC2	-0.01074	0.9109	2.445e-05	0.0003495	1.563e-06	0.003565

i	case	U_x	U_y	U_z	φ_x	φ_y	φ_z
1	LC3	-3.832e-12	-2.062e-13	-4.09e-18	7.534e-19	3.41e-17	-2.926e-12
2	LC3	-3.833e-12	-2.062e-13	2.538e-26	-1.244e-25	-3.268e-25	-2.926e-12
3	LC3	-3.832e-12	-2.062e-13	4.09e-18	-7.534e-19	-3.41e-17	-2.926e-12
4	LC3	4.421e-16	-2.543e-13	5.848e-19	-2.829e-20	-4.876e-18	-3.328e-12
5	LC3	6.136e-16	-2.543e-13	4.771e-27	-1.246e-25	-6.172e-26	-3.328e-12
6	LC3	4.421e-16	-2.543e-13	-5.848e-19	2.829e-20	4.876e-18	-3.328e-12
7	LC3	3.832e-12	-2.062e-13	3.505e-18	6.258e-19	-2.923e-17	-2.927e-12
8	LC3	3.833e-12	-2.062e-13	-1.582e-26	-1.241e-25	2.031e-25	-2.927e-12
9	LC3	3.832e-12	-2.062e-13	-3.505e-18	-6.258e-19	2.923e-17	-2.927e-12
10	LC3	-0.004657	-0.1883	-2.985e-09	1.174e-08	-2.122e-07	-0.004357
11	LC3	-0.004658	-0.1883	1.796e-14	-1.939e-15	-1.183e-16	-0.004357
12	LC3	-0.004657	-0.1883	2.985e-09	-1.174e-08	2.122e-07	-0.004357

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i	case	U_x	U_y	U_z	φ_x	φ_y	φ_z
13	LC3	5.373e-07	-0.1883	4.529e-10	-4.41e-10	3.034e-08	-0.001855
14	LC3	7.457e-07	-0.1883	3.421e-15	-1.944e-15	-2.585e-17	-0.001855
15	LC3	5.373e-07	-0.1883	-4.529e-10	4.41e-10	-3.034e-08	-0.001855
16	LC3	0.004656	-0.1883	2.532e-09	9.753e-09	1.819e-07	-0.004357
17	LC3	0.004657	-0.1883	-1.111e-14	-1.934e-15	6.705e-17	-0.004357
18	LC3	0.004656	-0.1883	-2.532e-09	-9.753e-09	-1.819e-07	-0.004357
19	LC3	-0.008022	-0.4272	-1.866e-08	3.139e-07	-5.217e-07	-0.004822
20	LC3	-0.008025	-0.4273	3.833e-14	-4.094e-15	-1.373e-16	-0.004822
21	LC3	-0.008022	-0.4272	1.866e-08	-3.139e-07	5.217e-07	-0.004822
22	LC3	1.105e-06	-0.4272	4.07e-09	-1.872e-08	7.85e-08	-0.002491
23	LC3	1.643e-06	-0.4272	7.675e-15	-4.097e-15	-2.727e-17	-0.002491
24	LC3	1.105e-06	-0.4272	-4.07e-09	1.872e-08	-7.85e-08	-0.002491
25	LC3	0.008021	-0.4272	1.459e-08	2.443e-07	4.432e-07	-0.004822
26	LC3	0.008023	-0.4273	-2.291e-14	-4.102e-15	8.358e-17	-0.004821
27	LC3	0.008021	-0.4272	-1.459e-08	-2.443e-07	-4.432e-07	-0.004822
28	LC3	-0.01004	-0.6756	-7.292e-07	1.188e-05	-9.327e-07	-0.005074
29	LC3	-0.01005	-0.6756	5.261e-14	-5.977e-15	-1.145e-16	-0.005088
30	LC3	-0.01004	-0.6756	7.292e-07	-1.188e-05	9.327e-07	-0.005074
31	LC3	1.767e-06	-0.6756	1.506e-07	2.12e-06	1.523e-07	-0.002684
32	LC3	3.023e-06	-0.6756	8.251e-15	-5.945e-15	-2.293e-17	-0.00269
33	LC3	1.767e-06	-0.6756	-1.506e-07	-2.12e-06	-1.523e-07	-0.002684
34	LC3	0.01004	-0.6756	5.785e-07	8.92e-06	7.804e-07	-0.005072
35	LC3	0.01005	-0.6756	-3.599e-14	-5.961e-15	6.942e-17	-0.005081
36	LC3	0.01004	-0.6756	-5.785e-07	-8.92e-06	-7.804e-07	-0.005072
37	LC3	-0.01074	-0.9109	-2.445e-05	0.0003495	-1.563e-06	-0.003565
38	LC3	-0.01075	-0.913	5.862e-14	-6.577e-15	-8.896e-17	-0.003581
39	LC3	-0.01074	-0.9109	2.445e-05	-0.0003495	1.563e-06	-0.003565
40	LC3	2.181e-06	-0.9109	5.792e-06	0.0001292	2.545e-07	-0.001985
41	LC3	3.815e-06	-0.9125	9.549e-15	-6.516e-15	-2.234e-17	-0.001991
42	LC3	2.181e-06	-0.9109	-5.792e-06	-0.0001292	-2.545e-07	-0.001985
43	LC3	0.01074	-0.9108	1.865e-05	0.0002334	1.308e-06	-0.003562
44	LC3	0.01075	-0.9123	-3.95e-14	-6.566e-15	4.461e-17	-0.003573
45	LC3	0.01074	-0.9108	-1.865e-05	-0.0002334	-1.308e-06	-0.003562

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
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

node	case	F_x	F_y	F_z	M_x	M_y	M_z
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	-3.505e-06	6.258e-07	2.923e-05	-2.927
2	LC2	-3.833	-0.2062	0	0	0	-2.927
3	LC2	-3.832	-0.2062	3.505e-06	-6.258e-07	-2.923e-05	-2.927

		node	case	F_x	F_y	F_z	M_x	M_y	M_z
4	LC2	-0.0004421	-0.2543	-5.848e-07	-2.829e-08	4.876e-06	-3.328
5	LC2	-0.0006136	-0.2543	0	0	0	-3.328
6	LC2	-0.0004421	-0.2543	5.848e-07	2.829e-08	-4.876e-06	-3.328
7	LC2	3.832	-0.2062	4.09e-06	7.534e-07	-3.41e-05	-2.926
8	LC2	3.833	-0.2062	0	0	0	-2.926
9	LC2	3.832	-0.2062	-4.09e-06	-7.534e-07	3.41e-05	-2.926
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	4.09e-06	-7.534e-07	-3.41e-05	2.926
2	LC3	3.833	0.2062	0	0	0	2.926
3	LC3	3.832	0.2062	-4.09e-06	7.534e-07	3.41e-05	2.926
4	LC3	-0.0004421	0.2543	-5.848e-07	2.829e-08	4.876e-06	3.328
5	LC3	-0.0006136	0.2543	0	0	0	3.328
6	LC3	-0.0004421	0.2543	5.848e-07	-2.829e-08	-4.876e-06	3.328
7	LC3	-3.832	0.2062	-3.505e-06	-6.258e-07	2.923e-05	2.927
8	LC3	-3.833	0.2062	0	0	0	2.927
9	LC3	-3.832	0.2062	3.505e-06	6.258e-07	-2.923e-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
13	2	LC1	0	0	0	0	0	0

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
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
28	1	LC1	3.294e-05	-1.995e-05	-0.0005126	-0.0003258	0.005444	-0.0002185

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
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
42	3	LC1	-4.137	-0.1971	7.545e-05	-1.555e-05	0.001063	2.384

			cell index case	N	Q_y	Q_z	M_x	M_y	M_z
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
57	2	LC1	8.436e-05	0.0001607	0.001127	0.0004516	-0.004952	0.0005438

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
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
72	1	LC1	-0.006226	0	1.645	0	-13.12	0

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
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
86	3	LC1	-0.2195	0.2015	0.002252	-0.008387	0.0103	-0.8506

			cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
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	-3.505e-06	0.2062	-6.258e-07	-8.081	-0.0001169			
3	2	LC2	3.832	-3.505e-06	0.2062	-6.258e-07	-2.927	-2.923e-05			
3	3	LC2	3.832	-3.505e-06	0.2062	-6.258e-07	2.228	5.841e-05			
4	1	LC2	0	0	0	0	0	0			
4	2	LC2	0	0	0	0	0	0			

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
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	3.505e-06	0.2062	6.258e-07	-8.081	0.0001169
8	2	LC2	3.832	3.505e-06	0.2062	6.258e-07	-2.927	2.923e-05
8	3	LC2	3.832	3.505e-06	0.2062	6.258e-07	2.228	-5.841e-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	0.0004421	-5.848e-07	0.2543	2.829e-08	-9.686	-1.95e-05
11	2	LC2	0.0004421	-5.848e-07	0.2543	2.829e-08	-3.328	-4.876e-06
11	3	LC2	0.0004421	-5.848e-07	0.2543	2.829e-08	3.03	9.744e-06
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	0.0006136	0	0.2543	0	-9.686	0
14	2	LC2	0.0006136	0	0.2543	0	-3.328	0
14	3	LC2	0.0006136	0	0.2543	0	3.03	0
15	1	LC2	0	0	0	0	-1.27e-08	0
15	2	LC2	0	0	0	0	0	0
15	3	LC2	0	0	0	0	0	0
16	1	LC2	0.0004421	5.848e-07	0.2543	-2.829e-08	-9.686	1.95e-05
16	2	LC2	0.0004421	5.848e-07	0.2543	-2.829e-08	-3.328	4.876e-06
16	3	LC2	0.0004421	5.848e-07	0.2543	-2.829e-08	3.03	-9.744e-06
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	4.09e-06	0.2062	-7.534e-07	-8.081	0.0001364
18	2	LC2	-3.832	4.09e-06	0.2062	-7.534e-07	-2.926	3.41e-05
18	3	LC2	-3.832	4.09e-06	0.2062	-7.534e-07	2.228	-6.815e-05
19	1	LC2	0	0	0	0	0	0

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
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	-2.926	0
20	3	LC2	-3.833	0	0.2062	0	2.228	0
21	1	LC2	-3.832	-4.09e-06	0.2062	7.534e-07	-8.081	-0.0001364
21	2	LC2	-3.832	-4.09e-06	0.2062	7.534e-07	-2.926	-3.41e-05
21	3	LC2	-3.832	-4.09e-06	0.2062	7.534e-07	2.228	6.815e-05
22	1	LC2	-1.042e-05	3.057e-07	0.0001174	2.188e-05	-0.0008074	6.204e-06
22	2	LC2	-1.042e-05	3.057e-07	0.0001174	2.188e-05	-0.0002205	4.675e-06
22	3	LC2	-1.042e-05	3.057e-07	0.0001174	2.188e-05	0.0003664	3.147e-06
23	1	LC2	0.01495	1.873e-06	1.063	-3.241e-05	-12.63	2.38e-05
23	2	LC2	0.01495	1.873e-06	1.063	-3.241e-05	-4.655	9.749e-06
23	3	LC2	0.01495	1.873e-06	1.063	-3.241e-05	3.317	-4.299e-06
24	1	LC2	2.769	-1.205e-05	0.1912	-1.505e-05	-7.208	-0.000431
24	2	LC2	2.769	-1.205e-05	0.1912	-1.505e-05	-2.428	-0.0001297
24	3	LC2	2.769	-1.205e-05	0.1912	-1.505e-05	2.353	0.0001716
25	1	LC2	-1.042e-05	-3.057e-07	-0.0001174	-2.188e-05	0.0009533	1.618e-06
25	2	LC2	-1.042e-05	-3.057e-07	-0.0001174	-2.188e-05	0.0003664	3.147e-06
25	3	LC2	-1.042e-05	-3.057e-07	-0.0001174	-2.188e-05	-0.0002205	4.675e-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	-2.428	0
27	3	LC2	2.77	0	0.1912	0	2.353	0
28	1	LC2	0.01495	-1.873e-06	1.063	3.241e-05	-12.63	-2.38e-05
28	2	LC2	0.01495	-1.873e-06	1.063	3.241e-05	-4.655	-9.749e-06
28	3	LC2	0.01495	-1.873e-06	1.063	3.241e-05	3.317	4.299e-06
29	1	LC2	2.769	1.205e-05	0.1912	1.505e-05	-7.208	0.000431
29	2	LC2	2.769	1.205e-05	0.1912	1.505e-05	-2.428	0.0001297
29	3	LC2	2.769	1.205e-05	0.1912	1.505e-05	2.353	-0.0001716
30	1	LC2	-1.864e-06	-4.135e-06	2.551e-05	3.012e-05	-0.0001792	-3.119e-05
30	2	LC2	-1.864e-06	-4.135e-06	2.551e-05	3.012e-05	-5.161e-05	-1.051e-05
30	3	LC2	-1.864e-06	-4.135e-06	2.551e-05	3.012e-05	7.595e-05	1.016e-05
31	1	LC2	-0.01495	2.221e-06	1.063	-5.188e-05	-11.29	2.173e-05
31	2	LC2	-0.01495	2.221e-06	1.063	-5.188e-05	-3.317	5.071e-06
31	3	LC2	-0.01495	2.221e-06	1.063	-5.188e-05	4.655	-1.158e-05
32	1	LC2	0.0004675	-2.101e-06	0.2842	1.173e-06	-10.71	-7.491e-05
32	2	LC2	0.0004675	-2.101e-06	0.2842	1.173e-06	-3.604	-2.24e-05
32	3	LC2	0.0004675	-2.101e-06	0.2842	1.173e-06	3.502	3.012e-05
33	1	LC2	-1.864e-06	4.135e-06	-2.551e-05	-3.012e-05	0.0002035	3.084e-05
33	2	LC2	-1.864e-06	4.135e-06	-2.551e-05	-3.012e-05	7.595e-05	1.016e-05
33	3	LC2	-1.864e-06	4.135e-06	-2.551e-05	-3.012e-05	-5.161e-05	-1.051e-05

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
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	0.0007386	0	0.2842	0	-10.71	0
35	2	LC2	0.0007386	0	0.2842	0	-3.604	0
35	3	LC2	0.0007386	0	0.2842	0	3.502	0
36	1	LC2	-0.01495	-2.221e-06	1.063	5.188e-05	-11.29	-2.173e-05
36	2	LC2	-0.01495	-2.221e-06	1.063	5.188e-05	-3.317	-5.071e-06
36	3	LC2	-0.01495	-2.221e-06	1.063	5.188e-05	4.655	1.158e-05
37	1	LC2	0.0004675	2.101e-06	0.2842	-1.173e-06	-10.71	7.491e-05
37	2	LC2	0.0004675	2.101e-06	0.2842	-1.173e-06	-3.604	2.24e-05
37	3	LC2	0.0004675	2.101e-06	0.2842	-1.173e-06	3.502	-3.012e-05
38	1	LC2	1.228e-05	9.353e-07	-0.0001429	4.071e-05	0.0009866	1.172e-05
38	2	LC2	1.228e-05	9.353e-07	-0.0001429	4.071e-05	0.0002721	7.047e-06
38	3	LC2	1.228e-05	9.353e-07	-0.0001429	4.071e-05	-0.0004423	2.37e-06
39	1	LC2	-2.769	1.415e-05	0.1912	-1.939e-05	-7.208	0.0005059
39	2	LC2	-2.769	1.415e-05	0.1912	-1.939e-05	-2.427	0.0001521
39	3	LC2	-2.769	1.415e-05	0.1912	-1.939e-05	2.353	-0.0002017
40	1	LC2	1.228e-05	-9.353e-07	0.0001429	-4.071e-05	-0.001157	-2.307e-06
40	2	LC2	1.228e-05	-9.353e-07	0.0001429	-4.071e-05	-0.0004423	2.37e-06
40	3	LC2	1.228e-05	-9.353e-07	0.0001429	-4.071e-05	0.0002721	7.047e-06
41	1	LC2	-2.771	0	0.1912	0	-7.208	0
41	2	LC2	-2.771	0	0.1912	0	-2.427	0
41	3	LC2	-2.771	0	0.1912	0	2.353	0
42	1	LC2	-2.769	-1.415e-05	0.1912	1.939e-05	-7.208	-0.0005059
42	2	LC2	-2.769	-1.415e-05	0.1912	1.939e-05	-2.427	-0.0001521
42	3	LC2	-2.769	-1.415e-05	0.1912	1.939e-05	2.353	0.0002017
43	1	LC2	-6.002e-05	7.785e-05	0.0002822	-9.097e-05	-0.001939	0.0006819
43	2	LC2	-6.002e-05	7.785e-05	0.0002822	-9.097e-05	-0.0005278	0.0002926
43	3	LC2	-6.002e-05	7.785e-05	0.0002822	-9.097e-05	0.0008833	-9.665e-05
44	1	LC2	-0.0007093	4.765e-05	1.107	-7.8e-05	-13.07	0.0006064
44	2	LC2	-0.0007093	4.765e-05	1.107	-7.8e-05	-4.773	0.000249
44	3	LC2	-0.0007093	4.765e-05	1.107	-7.8e-05	3.527	-0.0001084
45	1	LC2	1.662	-2.442e-05	0.192	-0.0005567	-7.22	-0.0008888
45	2	LC2	1.662	-2.442e-05	0.192	-0.0005567	-2.42	-0.0002782
45	3	LC2	1.662	-2.442e-05	0.192	-0.0005567	2.38	0.0003323
46	1	LC2	-6.002e-05	-7.785e-05	-0.0002822	9.097e-05	0.002294	-0.0004859
46	2	LC2	-6.002e-05	-7.785e-05	-0.0002822	9.097e-05	0.0008833	-9.665e-05
46	3	LC2	-6.002e-05	-7.785e-05	-0.0002822	9.097e-05	-0.0005278	0.0002926
47	1	LC2	-0.000803	0	1.107	0	-13.07	0
47	2	LC2	-0.000803	0	1.107	0	-4.772	0
47	3	LC2	-0.000803	0	1.107	0	3.527	0
48	1	LC2	1.664	0	0.1919	0	-7.216	0
48	2	LC2	1.664	0	0.1919	0	-2.419	0

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cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
48	3	LC2	1.664	0	0.1919	0	2.378	0
49	1	LC2	-0.0007093	-4.765e-05	1.107	7.8e-05	-13.07	-0.0006064
49	2	LC2	-0.0007093	-4.765e-05	1.107	7.8e-05	-4.773	-0.000249
49	3	LC2	-0.0007093	-4.765e-05	1.107	7.8e-05	3.527	0.0001084
50	1	LC2	1.662	2.442e-05	0.192	0.0005567	-7.22	0.0008888
50	2	LC2	1.662	2.442e-05	0.192	0.0005567	-2.42	0.0002782
50	3	LC2	1.662	2.442e-05	0.192	0.0005567	2.38	-0.0003323
51	1	LC2	-1.675e-05	-4.215e-05	6.576e-05	9.512e-05	-0.0004617	-0.0003236
51	2	LC2	-1.675e-05	-4.215e-05	6.576e-05	9.512e-05	-0.0001329	-0.0001129
51	3	LC2	-1.675e-05	-4.215e-05	6.576e-05	9.512e-05	0.0001959	9.787e-05
52	1	LC2	0.0006493	6.183e-05	1.106	-0.0001284	-11.82	0.0006066
52	2	LC2	0.0006493	6.183e-05	1.106	-0.0001284	-3.526	0.0001429
52	3	LC2	0.0006493	6.183e-05	1.106	-0.0001284	4.773	-0.0003208
53	1	LC2	0.0005445	-4.669e-06	0.2828	-0.0001372	-10.62	-0.0001691
53	2	LC2	0.0005445	-4.669e-06	0.2828	-0.0001372	-3.551	-5.244e-05
53	3	LC2	0.0005445	-4.669e-06	0.2828	-0.0001372	3.52	6.428e-05
54	1	LC2	-1.675e-05	4.215e-05	-6.576e-05	-9.512e-05	0.0005247	0.0003086
54	2	LC2	-1.675e-05	4.215e-05	-6.576e-05	-9.512e-05	0.0001959	9.787e-05
54	3	LC2	-1.675e-05	4.215e-05	-6.576e-05	-9.512e-05	-0.0001329	-0.0001129
55	1	LC2	0.0007545	0	1.106	0	-11.82	0
55	2	LC2	0.0007545	0	1.106	0	-3.525	0
55	3	LC2	0.0007545	0	1.106	0	4.771	0
56	1	LC2	0.001136	0	0.2828	0	-10.62	0
56	2	LC2	0.001136	0	0.2828	0	-3.55	0
56	3	LC2	0.001136	0	0.2828	0	3.519	0
57	1	LC2	0.0006493	-6.183e-05	1.106	0.0001284	-11.82	-0.0006066
57	2	LC2	0.0006493	-6.183e-05	1.106	0.0001284	-3.526	-0.0001429
57	3	LC2	0.0006493	-6.183e-05	1.106	0.0001284	4.773	0.0003208
58	1	LC2	0.0005445	4.669e-06	0.2828	0.0001372	-10.62	0.0001691
58	2	LC2	0.0005445	4.669e-06	0.2828	0.0001372	-3.551	5.244e-05
58	3	LC2	0.0005445	4.669e-06	0.2828	0.0001372	3.52	-6.428e-05
59	1	LC2	7.677e-05	0.0001105	-0.000348	-0.0001372	0.002401	0.0009548
59	2	LC2	7.677e-05	0.0001105	-0.000348	-0.0001372	0.0006608	0.0004022
59	3	LC2	7.677e-05	0.0001105	-0.000348	-0.0001372	-0.001079	-0.0001504
60	1	LC2	-1.662	2.909e-05	0.192	-0.0007423	-7.219	0.001058
60	2	LC2	-1.662	2.909e-05	0.192	-0.0007423	-2.42	0.0003307
60	3	LC2	-1.662	2.909e-05	0.192	-0.0007423	2.379	-0.0003966
61	1	LC2	7.677e-05	-0.0001105	0.000348	0.0001372	-0.002819	-0.000703
61	2	LC2	7.677e-05	-0.0001105	0.000348	0.0001372	-0.001079	-0.0001504
61	3	LC2	7.677e-05	-0.0001105	0.000348	0.0001372	0.0006608	0.0004022
62	1	LC2	-1.665	0	0.1918	0	-7.212	0
62	2	LC2	-1.665	0	0.1918	0	-2.418	0
62	3	LC2	-1.665	0	0.1918	0	2.376	0
63	1	LC2	-1.662	-2.909e-05	0.192	0.0007423	-7.219	-0.001058

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
63	2	LC2	-1.662	-2.909e-05	0.192	0.0007423	-2.42	-0.0003307
63	3	LC2	-1.662	-2.909e-05	0.192	0.0007423	2.379	0.0003966
64	1	LC2	-0.00238	-0.0001247	0.0006351	0.002931	-0.00445	0.002642
64	2	LC2	-0.00238	-0.0001247	0.0006351	0.002931	-0.001275	0.003265
64	3	LC2	-0.00238	-0.0001247	0.0006351	0.002931	0.001901	0.003889
65	1	LC2	-0.004151	0.002337	1.086	-0.0001343	-12.86	0.02811
65	2	LC2	-0.004151	0.002337	1.086	-0.0001343	-4.712	0.01058
65	3	LC2	-0.004151	0.002337	1.086	-0.0001343	3.435	-0.006945
66	1	LC2	0.5748	-6.804e-05	0.196	-0.0144	-7.23	-0.002509
66	2	LC2	0.5748	-6.804e-05	0.196	-0.0144	-2.329	-0.0008081
66	3	LC2	0.5748	-6.804e-05	0.196	-0.0144	2.571	0.0008928
67	1	LC2	-0.00238	0.0001247	-0.0006351	-0.002931	0.005076	0.004512
67	2	LC2	-0.00238	0.0001247	-0.0006351	-0.002931	0.001901	0.003889
67	3	LC2	-0.00238	0.0001247	-0.0006351	-0.002931	-0.001275	0.003265
68	1	LC2	-0.005757	0	1.089	0	-12.89	0
68	2	LC2	-0.005757	0	1.089	0	-4.724	0
68	3	LC2	-0.005757	0	1.089	0	3.445	0
69	1	LC2	0.576	0	0.1979	0	-7.299	0
69	2	LC2	0.576	0	0.1979	0	-2.352	0
69	3	LC2	0.576	0	0.1979	0	2.594	0
70	1	LC2	-0.004151	-0.002337	1.086	0.0001343	-12.86	-0.02811
70	2	LC2	-0.004151	-0.002337	1.086	0.0001343	-4.712	-0.01058
70	3	LC2	-0.004151	-0.002337	1.086	0.0001343	3.435	0.006945
71	1	LC2	0.5748	6.804e-05	0.196	0.0144	-7.23	0.002509
71	2	LC2	0.5748	6.804e-05	0.196	0.0144	-2.329	0.0008081
71	3	LC2	0.5748	6.804e-05	0.196	0.0144	2.571	-0.0008928
72	1	LC2	-0.0006198	-0.003284	0.0001685	0.001803	-0.001203	-0.02378
72	2	LC2	-0.0006198	-0.003284	0.0001685	0.001803	-0.0003603	-0.00736
72	3	LC2	-0.0006198	-0.003284	0.0001685	0.001803	0.0004824	0.009061
73	1	LC2	0.003022	0.002945	1.086	-0.0002321	-11.58	0.03052
73	2	LC2	0.003022	0.002945	1.086	-0.0002321	-3.435	0.008433
73	3	LC2	0.003022	0.002945	1.086	-0.0002321	4.713	-0.01365
74	1	LC2	0.0003409	-1.652e-05	0.2724	-0.008155	-10.16	-0.0006112
74	2	LC2	0.0003409	-1.652e-05	0.2724	-0.008155	-3.349	-0.0001983
74	3	LC2	0.0003409	-1.652e-05	0.2724	-0.008155	3.461	0.0002147
75	1	LC2	-0.0006198	0.003284	-0.0001685	-0.001803	0.001325	0.02548
75	2	LC2	-0.0006198	0.003284	-0.0001685	-0.001803	0.0004824	0.009061
75	3	LC2	-0.0006198	0.003284	-0.0001685	-0.001803	-0.0003603	-0.00736
76	1	LC2	0.0089	0	1.09	0	-11.62	0
76	2	LC2	0.0089	0	1.09	0	-3.447	0
76	3	LC2	0.0089	0	1.09	0	4.729	0
77	1	LC2	0.0006515	0	0.2747	0	-10.24	0
77	2	LC2	0.0006515	0	0.2747	0	-3.377	0
77	3	LC2	0.0006515	0	0.2747	0	3.489	0

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
78	1	LC2	0.003022	-0.002945	1.086	0.0002321	-11.58	-0.03052
78	2	LC2	0.003022	-0.002945	1.086	0.0002321	-3.435	-0.008433
78	3	LC2	0.003022	-0.002945	1.086	0.0002321	4.713	0.01365
79	1	LC2	0.0003409	1.652e-05	0.2724	0.008155	-10.16	0.0006112
79	2	LC2	0.0003409	1.652e-05	0.2724	0.008155	-3.349	0.0001983
79	3	LC2	0.0003409	1.652e-05	0.2724	0.008155	3.461	-0.0002147
80	1	LC2	0.003	0.001002	-0.0008037	0.004433	0.005653	0.01228
80	2	LC2	0.003	0.001002	-0.0008037	0.004433	0.001635	0.007269
80	3	LC2	0.003	0.001002	-0.0008037	0.004433	-0.002383	0.002261
81	1	LC2	-0.5752	8.455e-05	0.196	-0.02166	-7.229	0.00312
81	2	LC2	-0.5752	8.455e-05	0.196	-0.02166	-2.329	0.001006
81	3	LC2	-0.5752	8.455e-05	0.196	-0.02166	2.571	-0.001107
82	1	LC2	0.003	-0.001002	0.0008037	-0.004433	-0.006401	-0.002746
82	2	LC2	0.003	-0.001002	0.0008037	-0.004433	-0.002383	0.002261
82	3	LC2	0.003	-0.001002	0.0008037	-0.004433	0.001635	0.007269
83	1	LC2	-0.5766	0	0.1986	0	-7.328	0
83	2	LC2	-0.5766	0	0.1986	0	-2.362	0
83	3	LC2	-0.5766	0	0.1986	0	2.604	0
84	1	LC2	-0.5752	-8.455e-05	0.196	0.02166	-7.229	-0.00312
84	2	LC2	-0.5752	-8.455e-05	0.196	0.02166	-2.329	-0.001006
84	3	LC2	-0.5752	-8.455e-05	0.196	0.02166	2.571	0.001107
85	1	LC2	-0.07675	-0.1696	0.0006571	0.003312	-0.004403	-1.178
85	2	LC2	-0.07675	-0.1696	0.0006571	0.003312	-0.001118	-0.3303
85	3	LC2	-0.07675	-0.1696	0.0006571	0.003312	0.002167	0.5175
86	1	LC2	0.02646	0.07682	0.5742	-0.0002253	-6.881	0.8921
86	2	LC2	0.02646	0.07682	0.5742	-0.0002253	-2.575	0.3159
86	3	LC2	0.02646	0.07682	0.5742	-0.0002253	1.731	-0.2602
87	1	LC2	-0.07675	0.1696	-0.0006571	-0.003312	0.005453	1.365
87	2	LC2	-0.07675	0.1696	-0.0006571	-0.003312	0.002167	0.5175
87	3	LC2	-0.07675	0.1696	-0.0006571	-0.003312	-0.001118	-0.3303
88	1	LC2	0.537	0	0.5773	0	-6.918	0
88	2	LC2	0.537	0	0.5773	0	-2.588	0
88	3	LC2	0.537	0	0.5773	0	1.742	0
89	1	LC2	0.02646	-0.07682	0.5742	0.0002253	-6.881	-0.8921
89	2	LC2	0.02646	-0.07682	0.5742	0.0002253	-2.575	-0.3159
89	3	LC2	0.02646	-0.07682	0.5742	0.0002253	1.731	0.2602
90	1	LC2	-0.02383	-0.2555	0.000192	0.001846	-0.001338	-1.865
90	2	LC2	-0.02383	-0.2555	0.000192	0.001846	-0.000378	-0.587
90	3	LC2	-0.02383	-0.2555	0.000192	0.001846	0.0005821	0.6907
91	1	LC2	0.0433	0.1007	0.5743	-0.0003886	-6.039	1.074
91	2	LC2	0.0433	0.1007	0.5743	-0.0003886	-1.731	0.3186
91	3	LC2	0.0433	0.1007	0.5743	-0.0003886	2.576	-0.4364
92	1	LC2	-0.02383	0.2555	-0.000192	-0.001846	0.001542	1.968
92	2	LC2	-0.02383	0.2555	-0.000192	-0.001846	0.0005821	0.6907

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cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
92	3	LC2	-0.02383	0.2555	-0.000192	-0.001846	-0.000378	-0.587
93	1	LC2	1.323	0	0.5783	0	-6.081	0
93	2	LC2	1.323	0	0.5783	0	-1.744	0
93	3	LC2	1.323	0	0.5783	0	2.594	0
94	1	LC2	0.0433	-0.1007	0.5743	0.0003886	-6.039	-1.074
94	2	LC2	0.0433	-0.1007	0.5743	0.0003886	-1.731	-0.3186
94	3	LC2	0.0433	-0.1007	0.5743	0.0003886	2.576	0.4364
95	1	LC2	0.1006	-0.2393	-0.0008491	0.005061	0.005742	-1.655
95	2	LC2	0.1006	-0.2393	-0.0008491	0.005061	0.001496	-0.4581
95	3	LC2	0.1006	-0.2393	-0.0008491	0.005061	-0.002749	0.7384
96	1	LC2	0.1006	0.2393	0.0008491	-0.005061	-0.006995	1.935
96	2	LC2	0.1006	0.2393	0.0008491	-0.005061	-0.002749	0.7384
96	3	LC2	0.1006	0.2393	0.0008491	-0.005061	0.001496	-0.4581

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	4.09e-06	-0.2062	7.534e-07	8.081	0.0001364
3	2	LC3	-3.832	4.09e-06	-0.2062	7.534e-07	2.926	3.41e-05
3	3	LC3	-3.832	4.09e-06	-0.2062	7.534e-07	-2.228	-6.815e-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	2.926	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	-4.09e-06	-0.2062	-7.534e-07	8.081	-0.0001364
8	2	LC3	-3.832	-4.09e-06	-0.2062	-7.534e-07	2.926	-3.41e-05
8	3	LC3	-3.832	-4.09e-06	-0.2062	-7.534e-07	-2.228	6.815e-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

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
10	2	LC3	0	0	0	0	0	0
10	3	LC3	0	0	0	0	0	0
11	1	LC3	0.0004421	-5.848e-07	-0.2543	-2.829e-08	9.686	-1.95e-05
11	2	LC3	0.0004421	-5.848e-07	-0.2543	-2.829e-08	3.328	-4.876e-06
11	3	LC3	0.0004421	-5.848e-07	-0.2543	-2.829e-08	-3.03	9.744e-06
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	0.0006136	0	-0.2543	0	9.686	0
14	2	LC3	0.0006136	0	-0.2543	0	3.328	0
14	3	LC3	0.0006136	0	-0.2543	0	-3.03	0
15	1	LC3	0	0	0	0	1.27e-08	0
15	2	LC3	0	0	0	0	0	0
15	3	LC3	0	0	0	0	0	0
16	1	LC3	0.0004421	5.848e-07	-0.2543	2.829e-08	9.686	1.95e-05
16	2	LC3	0.0004421	5.848e-07	-0.2543	2.829e-08	3.328	4.876e-06
16	3	LC3	0.0004421	5.848e-07	-0.2543	2.829e-08	-3.03	-9.744e-06
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	-3.505e-06	-0.2062	6.258e-07	8.081	-0.0001169
18	2	LC3	3.832	-3.505e-06	-0.2062	6.258e-07	2.927	-2.923e-05
18	3	LC3	3.832	-3.505e-06	-0.2062	6.258e-07	-2.228	5.841e-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	3.505e-06	-0.2062	-6.258e-07	8.081	0.0001169
21	2	LC3	3.832	3.505e-06	-0.2062	-6.258e-07	2.927	2.923e-05
21	3	LC3	3.832	3.505e-06	-0.2062	-6.258e-07	-2.228	-5.841e-05
22	1	LC3	1.228e-05	-9.353e-07	-0.0001429	-4.071e-05	0.0009866	-1.172e-05
22	2	LC3	1.228e-05	-9.353e-07	-0.0001429	-4.071e-05	0.0002721	-7.047e-06
22	3	LC3	1.228e-05	-9.353e-07	-0.0001429	-4.071e-05	-0.0004423	-2.37e-06
23	1	LC3	-0.01495	-2.221e-06	-1.063	5.188e-05	12.63	-2.824e-05
23	2	LC3	-0.01495	-2.221e-06	-1.063	5.188e-05	4.655	-1.158e-05
23	3	LC3	-0.01495	-2.221e-06	-1.063	5.188e-05	-3.317	5.071e-06
24	1	LC3	-2.769	1.415e-05	-0.1912	1.939e-05	7.208	0.0005059
24	2	LC3	-2.769	1.415e-05	-0.1912	1.939e-05	2.427	0.0001521
24	3	LC3	-2.769	1.415e-05	-0.1912	1.939e-05	-2.353	-0.0002017

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
25	1	LC3	1.228e-05	9.353e-07	0.0001429	4.071e-05	-0.001157	2.307e-06
25	2	LC3	1.228e-05	9.353e-07	0.0001429	4.071e-05	-0.0004423	-2.37e-06
25	3	LC3	1.228e-05	9.353e-07	0.0001429	4.071e-05	0.0002721	-7.047e-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	-2.771	0	-0.1912	0	7.208	0
27	2	LC3	-2.771	0	-0.1912	0	2.427	0
27	3	LC3	-2.771	0	-0.1912	0	-2.353	0
28	1	LC3	-0.01495	2.221e-06	-1.063	-5.188e-05	12.63	2.824e-05
28	2	LC3	-0.01495	2.221e-06	-1.063	-5.188e-05	4.655	1.158e-05
28	3	LC3	-0.01495	2.221e-06	-1.063	-5.188e-05	-3.317	-5.071e-06
29	1	LC3	-2.769	-1.415e-05	-0.1912	-1.939e-05	7.208	-0.0005059
29	2	LC3	-2.769	-1.415e-05	-0.1912	-1.939e-05	2.427	-0.0001521
29	3	LC3	-2.769	-1.415e-05	-0.1912	-1.939e-05	-2.353	0.0002017
30	1	LC3	-1.864e-06	4.135e-06	2.551e-05	-3.012e-05	-0.0001792	3.119e-05
30	2	LC3	-1.864e-06	4.135e-06	2.551e-05	-3.012e-05	-5.161e-05	1.051e-05
30	3	LC3	-1.864e-06	4.135e-06	2.551e-05	-3.012e-05	7.595e-05	-1.016e-05
31	1	LC3	0.01495	-1.873e-06	-1.063	3.241e-05	11.29	-1.835e-05
31	2	LC3	0.01495	-1.873e-06	-1.063	3.241e-05	3.317	-4.299e-06
31	3	LC3	0.01495	-1.873e-06	-1.063	3.241e-05	-4.655	9.749e-06
32	1	LC3	0.0004675	-2.101e-06	-0.2842	-1.173e-06	10.71	-7.491e-05
32	2	LC3	0.0004675	-2.101e-06	-0.2842	-1.173e-06	3.604	-2.24e-05
32	3	LC3	0.0004675	-2.101e-06	-0.2842	-1.173e-06	-3.502	3.012e-05
33	1	LC3	-1.864e-06	-4.135e-06	-2.551e-05	3.012e-05	0.0002035	-3.084e-05
33	2	LC3	-1.864e-06	-4.135e-06	-2.551e-05	3.012e-05	7.595e-05	-1.016e-05
33	3	LC3	-1.864e-06	-4.135e-06	-2.551e-05	3.012e-05	-5.161e-05	1.051e-05
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	0.0007386	0	-0.2842	0	10.71	0
35	2	LC3	0.0007386	0	-0.2842	0	3.604	0
35	3	LC3	0.0007386	0	-0.2842	0	-3.502	0
36	1	LC3	0.01495	1.873e-06	-1.063	-3.241e-05	11.29	1.835e-05
36	2	LC3	0.01495	1.873e-06	-1.063	-3.241e-05	3.317	4.299e-06
36	3	LC3	0.01495	1.873e-06	-1.063	-3.241e-05	-4.655	-9.749e-06
37	1	LC3	0.0004675	2.101e-06	-0.2842	1.173e-06	10.71	7.491e-05
37	2	LC3	0.0004675	2.101e-06	-0.2842	1.173e-06	3.604	2.24e-05
37	3	LC3	0.0004675	2.101e-06	-0.2842	1.173e-06	-3.502	-3.012e-05
38	1	LC3	-1.042e-05	-3.057e-07	0.0001174	-2.188e-05	-0.0008074	-6.204e-06
38	2	LC3	-1.042e-05	-3.057e-07	0.0001174	-2.188e-05	-0.0002205	-4.675e-06
38	3	LC3	-1.042e-05	-3.057e-07	0.0001174	-2.188e-05	0.0003664	-3.147e-06
39	1	LC3	2.769	-1.205e-05	-0.1912	1.505e-05	7.208	-0.000431
39	2	LC3	2.769	-1.205e-05	-0.1912	1.505e-05	2.428	-0.0001297

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
39	3	LC3	2.769	-1.205e-05	-0.1912	1.505e-05	-2.353	0.0001716
40	1	LC3	-1.042e-05	3.057e-07	-0.0001174	2.188e-05	0.0009533	-1.618e-06
40	2	LC3	-1.042e-05	3.057e-07	-0.0001174	2.188e-05	0.0003664	-3.147e-06
40	3	LC3	-1.042e-05	3.057e-07	-0.0001174	2.188e-05	-0.0002205	-4.675e-06
41	1	LC3	2.77	0	-0.1912	0	7.208	0
41	2	LC3	2.77	0	-0.1912	0	2.428	0
41	3	LC3	2.77	0	-0.1912	0	-2.353	0
42	1	LC3	2.769	1.205e-05	-0.1912	-1.505e-05	7.208	0.000431
42	2	LC3	2.769	1.205e-05	-0.1912	-1.505e-05	2.428	0.0001297
42	3	LC3	2.769	1.205e-05	-0.1912	-1.505e-05	-2.353	-0.0001716
43	1	LC3	7.677e-05	-0.0001105	-0.000348	0.0001372	0.002401	-0.0009548
43	2	LC3	7.677e-05	-0.0001105	-0.000348	0.0001372	0.0006608	-0.0004022
43	3	LC3	7.677e-05	-0.0001105	-0.000348	0.0001372	-0.001079	0.0001504
44	1	LC3	0.0006493	-6.183e-05	-1.106	0.0001284	13.07	-0.0007845
44	2	LC3	0.0006493	-6.183e-05	-1.106	0.0001284	4.773	-0.0003208
44	3	LC3	0.0006493	-6.183e-05	-1.106	0.0001284	-3.526	0.0001429
45	1	LC3	-1.662	2.909e-05	-0.192	0.0007423	7.219	0.001058
45	2	LC3	-1.662	2.909e-05	-0.192	0.0007423	2.42	0.0003307
45	3	LC3	-1.662	2.909e-05	-0.192	0.0007423	-2.379	-0.0003966
46	1	LC3	7.677e-05	0.0001105	0.000348	-0.0001372	-0.002819	0.000703
46	2	LC3	7.677e-05	0.0001105	0.000348	-0.0001372	-0.001079	0.0001504
46	3	LC3	7.677e-05	0.0001105	0.000348	-0.0001372	0.0006608	-0.0004022
47	1	LC3	0.0007545	0	-1.106	0	13.07	0
47	2	LC3	0.0007545	0	-1.106	0	4.771	0
47	3	LC3	0.0007545	0	-1.106	0	-3.525	0
48	1	LC3	-1.665	0	-0.1918	0	7.212	0
48	2	LC3	-1.665	0	-0.1918	0	2.418	0
48	3	LC3	-1.665	0	-0.1918	0	-2.376	0
49	1	LC3	0.0006493	6.183e-05	-1.106	-0.0001284	13.07	0.0007845
49	2	LC3	0.0006493	6.183e-05	-1.106	-0.0001284	4.773	0.0003208
49	3	LC3	0.0006493	6.183e-05	-1.106	-0.0001284	-3.526	-0.0001429
50	1	LC3	-1.662	-2.909e-05	-0.192	-0.0007423	7.219	-0.001058
50	2	LC3	-1.662	-2.909e-05	-0.192	-0.0007423	2.42	-0.0003307
50	3	LC3	-1.662	-2.909e-05	-0.192	-0.0007423	-2.379	0.0003966
51	1	LC3	-1.675e-05	4.215e-05	6.576e-05	-9.512e-05	-0.0004617	0.0003236
51	2	LC3	-1.675e-05	4.215e-05	6.576e-05	-9.512e-05	-0.0001329	0.0001129
51	3	LC3	-1.675e-05	4.215e-05	6.576e-05	-9.512e-05	0.0001959	-9.787e-05
52	1	LC3	-0.0007093	-4.765e-05	-1.107	7.8e-05	11.83	-0.0004657
52	2	LC3	-0.0007093	-4.765e-05	-1.107	7.8e-05	3.527	-0.0001084
52	3	LC3	-0.0007093	-4.765e-05	-1.107	7.8e-05	-4.773	0.000249
53	1	LC3	0.0005445	-4.669e-06	-0.2828	0.0001372	10.62	-0.0001691
53	2	LC3	0.0005445	-4.669e-06	-0.2828	0.0001372	3.551	-5.244e-05
53	3	LC3	0.0005445	-4.669e-06	-0.2828	0.0001372	-3.52	6.428e-05
54	1	LC3	-1.675e-05	-4.215e-05	-6.576e-05	9.512e-05	0.0005247	-0.0003086

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
54	2	LC3	-1.675e-05	-4.215e-05	-6.576e-05	9.512e-05	0.0001959	-9.787e-05
54	3	LC3	-1.675e-05	-4.215e-05	-6.576e-05	9.512e-05	-0.0001329	0.0001129
55	1	LC3	-0.000803	0	-1.107	0	11.83	0
55	2	LC3	-0.000803	0	-1.107	0	3.527	0
55	3	LC3	-0.000803	0	-1.107	0	-4.772	0
56	1	LC3	0.001136	0	-0.2828	0	10.62	0
56	2	LC3	0.001136	0	-0.2828	0	3.55	0
56	3	LC3	0.001136	0	-0.2828	0	-3.519	0
57	1	LC3	-0.0007093	4.765e-05	-1.107	-7.8e-05	11.83	0.0004657
57	2	LC3	-0.0007093	4.765e-05	-1.107	-7.8e-05	3.527	0.0001084
57	3	LC3	-0.0007093	4.765e-05	-1.107	-7.8e-05	-4.773	-0.000249
58	1	LC3	0.0005445	4.669e-06	-0.2828	-0.0001372	10.62	0.0001691
58	2	LC3	0.0005445	4.669e-06	-0.2828	-0.0001372	3.551	5.244e-05
58	3	LC3	0.0005445	4.669e-06	-0.2828	-0.0001372	-3.52	-6.428e-05
59	1	LC3	-6.002e-05	-7.785e-05	0.0002822	9.097e-05	-0.001939	-0.0006819
59	2	LC3	-6.002e-05	-7.785e-05	0.0002822	9.097e-05	-0.0005278	-0.0002926
59	3	LC3	-6.002e-05	-7.785e-05	0.0002822	9.097e-05	0.0008833	9.665e-05
60	1	LC3	1.662	-2.442e-05	-0.192	0.0005567	7.22	-0.0008888
60	2	LC3	1.662	-2.442e-05	-0.192	0.0005567	2.42	-0.0002782
60	3	LC3	1.662	-2.442e-05	-0.192	0.0005567	-2.38	0.0003323
61	1	LC3	-6.002e-05	7.785e-05	-0.0002822	-9.097e-05	0.002294	0.0004859
61	2	LC3	-6.002e-05	7.785e-05	-0.0002822	-9.097e-05	0.0008833	9.665e-05
61	3	LC3	-6.002e-05	7.785e-05	-0.0002822	-9.097e-05	-0.0005278	-0.0002926
62	1	LC3	1.664	0	-0.1919	0	7.216	0
62	2	LC3	1.664	0	-0.1919	0	2.419	0
62	3	LC3	1.664	0	-0.1919	0	-2.378	0
63	1	LC3	1.662	2.442e-05	-0.192	-0.0005567	7.22	0.0008888
63	2	LC3	1.662	2.442e-05	-0.192	-0.0005567	2.42	0.0002782
63	3	LC3	1.662	2.442e-05	-0.192	-0.0005567	-2.38	-0.0003323
64	1	LC3	0.003	-0.001002	-0.0008037	-0.004433	0.005653	-0.01228
64	2	LC3	0.003	-0.001002	-0.0008037	-0.004433	0.001635	-0.007269
64	3	LC3	0.003	-0.001002	-0.0008037	-0.004433	-0.002383	-0.002261
65	1	LC3	0.003022	-0.002945	-1.086	0.0002321	12.86	-0.03574
65	2	LC3	0.003022	-0.002945	-1.086	0.0002321	4.713	-0.01365
65	3	LC3	0.003022	-0.002945	-1.086	0.0002321	-3.435	0.008433
66	1	LC3	-0.5752	8.455e-05	-0.196	0.02166	7.229	0.00312
66	2	LC3	-0.5752	8.455e-05	-0.196	0.02166	2.329	0.001006
66	3	LC3	-0.5752	8.455e-05	-0.196	0.02166	-2.571	-0.001107
67	1	LC3	0.003	0.001002	0.0008037	0.004433	-0.006401	0.002746
67	2	LC3	0.003	0.001002	0.0008037	0.004433	-0.002383	-0.002261
67	3	LC3	0.003	0.001002	0.0008037	0.004433	0.001635	-0.007269
68	1	LC3	0.0089	0	-1.09	0	12.9	0
68	2	LC3	0.0089	0	-1.09	0	4.729	0
68	3	LC3	0.0089	0	-1.09	0	-3.447	0

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
69	1	LC3	-0.5766	0	-0.1986	0	7.328	0
69	2	LC3	-0.5766	0	-0.1986	0	2.362	0
69	3	LC3	-0.5766	0	-0.1986	0	-2.604	0
70	1	LC3	0.003022	0.002945	-1.086	-0.0002321	12.86	0.03574
70	2	LC3	0.003022	0.002945	-1.086	-0.0002321	4.713	0.01365
70	3	LC3	0.003022	0.002945	-1.086	-0.0002321	-3.435	-0.008433
71	1	LC3	-0.5752	-8.455e-05	-0.196	-0.02166	7.229	-0.00312
71	2	LC3	-0.5752	-8.455e-05	-0.196	-0.02166	2.329	-0.001006
71	3	LC3	-0.5752	-8.455e-05	-0.196	-0.02166	-2.571	0.001107
72	1	LC3	-0.0006198	0.003284	0.0001685	-0.001803	-0.001203	0.02378
72	2	LC3	-0.0006198	0.003284	0.0001685	-0.001803	-0.0003603	0.00736
72	3	LC3	-0.0006198	0.003284	0.0001685	-0.001803	0.0004824	-0.009061
73	1	LC3	-0.004151	-0.002337	-1.086	0.0001343	11.58	-0.02447
73	2	LC3	-0.004151	-0.002337	-1.086	0.0001343	3.435	-0.006945
73	3	LC3	-0.004151	-0.002337	-1.086	0.0001343	-4.712	0.01058
74	1	LC3	0.0003409	-1.652e-05	-0.2724	0.008155	10.16	-0.0006112
74	2	LC3	0.0003409	-1.652e-05	-0.2724	0.008155	3.349	-0.0001983
74	3	LC3	0.0003409	-1.652e-05	-0.2724	0.008155	-3.461	0.0002147
75	1	LC3	-0.0006198	-0.003284	-0.0001685	0.001803	0.001325	-0.02548
75	2	LC3	-0.0006198	-0.003284	-0.0001685	0.001803	0.0004824	-0.009061
75	3	LC3	-0.0006198	-0.003284	-0.0001685	0.001803	-0.0003603	0.00736
76	1	LC3	-0.005757	0	-1.089	0	11.61	0
76	2	LC3	-0.005757	0	-1.089	0	3.445	0
76	3	LC3	-0.005757	0	-1.089	0	-4.724	0
77	1	LC3	0.0006515	0	-0.2747	0	10.24	0
77	2	LC3	0.0006515	0	-0.2747	0	3.377	0
77	3	LC3	0.0006515	0	-0.2747	0	-3.489	0
78	1	LC3	-0.004151	0.002337	-1.086	-0.0001343	11.58	0.02447
78	2	LC3	-0.004151	0.002337	-1.086	-0.0001343	3.435	0.006945
78	3	LC3	-0.004151	0.002337	-1.086	-0.0001343	-4.712	-0.01058
79	1	LC3	0.0003409	1.652e-05	-0.2724	-0.008155	10.16	0.0006112
79	2	LC3	0.0003409	1.652e-05	-0.2724	-0.008155	3.349	0.0001983
79	3	LC3	0.0003409	1.652e-05	-0.2724	-0.008155	-3.461	-0.0002147
80	1	LC3	-0.00238	0.0001247	0.0006351	-0.002931	-0.00445	-0.002642
80	2	LC3	-0.00238	0.0001247	0.0006351	-0.002931	-0.001275	-0.003265
80	3	LC3	-0.00238	0.0001247	0.0006351	-0.002931	0.001901	-0.003889
81	1	LC3	0.5748	-6.804e-05	-0.196	0.0144	7.23	-0.002509
81	2	LC3	0.5748	-6.804e-05	-0.196	0.0144	2.329	-0.0008081
81	3	LC3	0.5748	-6.804e-05	-0.196	0.0144	-2.571	0.0008928
82	1	LC3	-0.00238	-0.0001247	-0.0006351	0.002931	0.005076	-0.004512
82	2	LC3	-0.00238	-0.0001247	-0.0006351	0.002931	0.001901	-0.003889
82	3	LC3	-0.00238	-0.0001247	-0.0006351	0.002931	-0.001275	-0.003265
83	1	LC3	0.576	0	-0.1979	0	7.299	0
83	2	LC3	0.576	0	-0.1979	0	2.352	0

cell	index	case	N	Q_y	Q_z	M_x	M_y	M_z
83	3	LC3	0.576	0	-0.1979	0	-2.594	0
84	1	LC3	0.5748	6.804e-05	-0.196	-0.0144	7.23	0.002509
84	2	LC3	0.5748	6.804e-05	-0.196	-0.0144	2.329	0.0008081
84	3	LC3	0.5748	6.804e-05	-0.196	-0.0144	-2.571	-0.0008928
85	1	LC3	0.1006	0.2393	-0.0008491	-0.005061	0.005742	1.655
85	2	LC3	0.1006	0.2393	-0.0008491	-0.005061	0.001496	0.4581
85	3	LC3	0.1006	0.2393	-0.0008491	-0.005061	-0.002749	-0.7384
86	1	LC3	0.0433	-0.1007	-0.5743	0.0003886	6.883	-1.191
86	2	LC3	0.0433	-0.1007	-0.5743	0.0003886	2.576	-0.4364
86	3	LC3	0.0433	-0.1007	-0.5743	0.0003886	-1.731	0.3186
87	1	LC3	0.1006	-0.2393	0.0008491	0.005061	-0.006995	-1.935
87	2	LC3	0.1006	-0.2393	0.0008491	0.005061	-0.002749	-0.7384
87	3	LC3	0.1006	-0.2393	0.0008491	0.005061	0.001496	0.4581
88	1	LC3	1.323	0	-0.5783	0	6.931	0
88	2	LC3	1.323	0	-0.5783	0	2.594	0
88	3	LC3	1.323	0	-0.5783	0	-1.744	0
89	1	LC3	0.0433	0.1007	-0.5743	-0.0003886	6.883	1.191
89	2	LC3	0.0433	0.1007	-0.5743	-0.0003886	2.576	0.4364
89	3	LC3	0.0433	0.1007	-0.5743	-0.0003886	-1.731	-0.3186
90	1	LC3	-0.02383	0.2555	0.000192	-0.001846	-0.001338	1.865
90	2	LC3	-0.02383	0.2555	0.000192	-0.001846	-0.000378	0.587
90	3	LC3	-0.02383	0.2555	0.000192	-0.001846	0.0005821	-0.6907
91	1	LC3	0.02646	-0.07682	-0.5742	0.0002253	6.038	-0.8364
91	2	LC3	0.02646	-0.07682	-0.5742	0.0002253	1.731	-0.2602
91	3	LC3	0.02646	-0.07682	-0.5742	0.0002253	-2.575	0.3159
92	1	LC3	-0.02383	-0.2555	-0.000192	0.001846	0.001542	-1.968
92	2	LC3	-0.02383	-0.2555	-0.000192	0.001846	0.0005821	-0.6907
92	3	LC3	-0.02383	-0.2555	-0.000192	0.001846	-0.000378	0.587
93	1	LC3	0.537	0	-0.5773	0	6.072	0
93	2	LC3	0.537	0	-0.5773	0	1.742	0
93	3	LC3	0.537	0	-0.5773	0	-2.588	0
94	1	LC3	0.02646	0.07682	-0.5742	-0.0002253	6.038	0.8364
94	2	LC3	0.02646	0.07682	-0.5742	-0.0002253	1.731	0.2602
94	3	LC3	0.02646	0.07682	-0.5742	-0.0002253	-2.575	-0.3159
95	1	LC3	-0.07675	0.1696	0.0006571	-0.003312	-0.004403	1.178
95	2	LC3	-0.07675	0.1696	0.0006571	-0.003312	-0.001118	0.3303
95	3	LC3	-0.07675	0.1696	0.0006571	-0.003312	0.002167	-0.5175
96	1	LC3	-0.07675	-0.1696	-0.0006571	0.003312	0.005453	-1.365
96	2	LC3	-0.07675	-0.1696	-0.0006571	0.003312	0.002167	-0.5175
96	3	LC3	-0.07675	-0.1696	-0.0006571	0.003312	-0.001118	0.3303

3.4 Modes of Vibration

	mode λ	$m_{eff,y}$	$m_{eff,z}$
1	0.01038	274.3 (0.6849)	113.6 (0.3003)
2	0.01039	120.4 (0.3007)	258.6 (0.684)
3	0.01572	0.002934 (7.327e-06)	0.006344 (1.678e-05)
4	0.02907	0.0001106 (2.761e-07)	5.092 (0.01347)
5	0.02911	5.037 (0.01258)	0.0001241 (3.283e-07)
6	0.04265	1.07e-06 (2.672e-09)	2.318e-06 (6.132e-09)
7	0.04365	7.606e-07 (1.899e-09)	0.6916 (0.001829)
8	0.04425	0.6233 (0.001556)	7.626e-07 (2.017e-09)
9	0.05219	1.653e-08 (4.128e-11)	0.1241 (0.0003283)
10	0.0524	0.1155 (0.0002884)	1.286e-07 (3.401e-10)
11	0.06068	8.668e-09 (2.164e-11)	1.926e-08 (5.095e-11)
12	0.06991	2.149e-09 (5.365e-12)	4.829e-09 (1.277e-11)
13	0.1243	4.691e-10 (1.171e-12)	0.0001711 (4.526e-07)
14	0.142	2.338e-11 (5.839e-14)	2.242e-11 (5.928e-14)
15	0.1437	5.561e-05 (1.389e-07)	8.831e-09 (2.336e-11)
16	0.1437	1.74e-05 (4.346e-08)	2.189e-08 (5.79e-11)
17	0.1475	9.215e-12 (2.301e-14)	0.000115 (3.043e-07)
18	0.1545	3.723e-11 (9.297e-14)	3.521e-11 (9.311e-14)
19	0.1595	1.285e-08 (3.208e-11)	2.833e-12 (7.492e-15)
20	0.1627	8.775e-12 (2.191e-14)	3.129e-11 (8.277e-14)