MSG No. 230.149 $Ia'\bar{3}'d'$ [Type III, cubic]

Table 1: Wyckoff site: `16a`, site symmetry: `.-3'.`

No.	position	mapping
1	$[0, 0, 0]$	`[1,17,18,25,41,42]`
2	$\left[\frac{1}{4}, \frac{1}{4}, \frac{3}{4}\right]$	`[2,7,15,26,31,39]`
3	$\left[\frac{3}{4}, \frac{1}{4}, \frac{1}{4}\right]$	`[3,4,11,27,28,35]`
4	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[5,6,13,29,30,37]`
5	$\left[0, 0, \frac{1}{2}\right]$	`[8,22,23,32,46,47]`
6	$\left[\frac{1}{2}, 0, 0\right]$	`[9,19,24,33,43,48]`
7	$\left[0, \frac{1}{2}, 0\right]$	`[10,20,21,34,44,45]`
8	$\left[\frac{1}{4}, \frac{1}{4}, \frac{1}{4}\right]$	`[12,14,16,36,38,40]`
9	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[49,65,66,73,89,90]`
10	$\left[\frac{3}{4}, \frac{3}{4}, \frac{1}{4}\right]$	`[50,55,63,74,79,87]`
11	$\left[\frac{1}{4}, \frac{3}{4}, \frac{3}{4}\right]$	`[51,52,59,75,76,83]`
12	$\left[\frac{3}{4}, \frac{1}{4}, \frac{3}{4}\right]$	`[53,54,61,77,78,85]`
13	$\left[\frac{1}{2}, \frac{1}{2}, 0\right]$	`[56,70,71,80,94,95]`
14	$\left[0, \frac{1}{2}, \frac{1}{2}\right]$	`[57,67,72,81,91,96]`
15	$\left[\frac{1}{2}, 0, \frac{1}{2}\right]$	`[58,68,69,82,92,93]`
16	$\left[\frac{3}{4}, \frac{3}{4}, \frac{3}{4}\right]$	`[60,62,64,84,86,88]`

Table 2: Wyckoff site: `16b`, site symmetry: `.32`

No.	position	mapping
1	$\left[\frac{1}{8}, \frac{1}{8}, \frac{1}{8}\right]$	`[1,12,14,16,17,18]`
2	$\left[\frac{3}{8}, \frac{1}{8}, \frac{7}{8}\right]$	`[2,7,9,15,19,24]`
3	$\left[\frac{7}{8}, \frac{3}{8}, \frac{1}{8}\right]$	`[3,4,10,11,20,21]`
4	$\left[\frac{1}{8}, \frac{7}{8}, \frac{3}{8}\right]$	`[5,6,8,13,22,23]`
5	$\left[\frac{7}{8}, \frac{7}{8}, \frac{7}{8}\right]$	`[25,41,42,84,86,88]`
6	$\left[\frac{1}{8}, \frac{3}{8}, \frac{5}{8}\right]$	`[26,31,39,81,91,96]`
7	$\left[\frac{5}{8}, \frac{1}{8}, \frac{3}{8}\right]$	`[27,28,35,82,92,93]`
8	$\left[\frac{3}{8}, \frac{5}{8}, \frac{1}{8}\right]$	`[29,30,37,80,94,95]`
9	$\left[\frac{7}{8}, \frac{1}{8}, \frac{5}{8}\right]$	`[32,46,47,77,78,85]`
10	$\left[\frac{5}{8}, \frac{7}{8}, \frac{1}{8}\right]$	`[33,43,48,74,79,87]`
11	$\left[\frac{1}{8}, \frac{5}{8}, \frac{7}{8}\right]$	`[34,44,45,75,76,83]`
12	$\left[\frac{3}{8}, \frac{3}{8}, \frac{3}{8}\right]$	`[36,38,40,73,89,90]`
13	$\left[\frac{5}{8}, \frac{5}{8}, \frac{5}{8}\right]$	`[49,60,62,64,65,66]`
14	$\left[\frac{7}{8}, \frac{5}{8}, \frac{3}{8}\right]$	`[50,55,57,63,67,72]`
15	$\left[\frac{3}{8}, \frac{7}{8}, \frac{5}{8}\right]$	`[51,52,58,59,68,69]`
16	$\left[\frac{5}{8}, \frac{3}{8}, \frac{7}{8}\right]$	`[53,54,56,61,70,71]`

Table 3: Wyckoff site: 24c, site symmetry: 2.22

No.	position	mapping
1	$\left[\frac{1}{8}, 0, \frac{1}{4}\right]$	[1,8,13,14]
2	$\left[\frac{3}{8}, 0, \frac{3}{4}\right]$	[2,9,51,58]
3	$\left[\frac{7}{8}, \frac{1}{2}, \frac{1}{4}\right]$	[3,10,50,57]
4	$\left[0, \frac{1}{4}, \frac{1}{8}\right]$	[4,16,18,21]
5	$\left[0, \frac{3}{4}, \frac{3}{8}\right]$	[5,23,63,67]
6	$\left[\frac{1}{4}, \frac{7}{8}, \frac{1}{2}\right]$	[6,22,59,68]
7	$\left[\frac{1}{4}, \frac{1}{8}, 0\right]$	[7,12,17,24]
8	$\left[\frac{3}{4}, \frac{3}{8}, 0\right]$	[11,20,54,70]
9	$\left[\frac{1}{2}, \frac{1}{4}, \frac{7}{8}\right]$	[15,19,53,71]
10	$\left[\frac{7}{8}, 0, \frac{3}{4}\right]$	[25,32,85,86]
11	$\left[\frac{1}{8}, \frac{1}{2}, \frac{3}{4}\right]$	[26,34,75,81]
12	$\left[\frac{5}{8}, 0, \frac{1}{4}\right]$	[27,33,74,82]
13	$\left[\frac{1}{2}, \frac{1}{4}, \frac{3}{8}\right]$	[28,40,90,93]
14	$\left[\frac{1}{2}, \frac{3}{4}, \frac{1}{8}\right]$	[29,43,87,95]
15	$\left[\frac{1}{4}, \frac{5}{8}, 0\right]$	[30,44,83,94]
16	$\left[\frac{1}{4}, \frac{3}{8}, \frac{1}{2}\right]$	[31,36,89,96]
17	$\left[\frac{3}{4}, \frac{1}{8}, \frac{1}{2}\right]$	[35,46,78,92]
18	$\left[\frac{3}{8}, \frac{1}{2}, \frac{1}{4}\right]$	[37,38,73,80]
19	$\left[0, \frac{1}{4}, \frac{5}{8}\right]$	[39,47,77,91]
20	$\left[\frac{3}{4}, \frac{7}{8}, 0\right]$	[41,48,79,84]
21	$\left[0, \frac{3}{4}, \frac{7}{8}\right]$	[42,45,76,88]
22	$\left[\frac{5}{8}, \frac{1}{2}, \frac{3}{4}\right]$	[49,56,61,62]
23	$\left[\frac{1}{2}, \frac{3}{4}, \frac{5}{8}\right]$	[52,64,66,69]
24	$\left[\frac{3}{4}, \frac{5}{8}, \frac{1}{2}\right]$	[55,60,65,72]

Table 4: Wyckoff site: 24d, site symmetry: -4'..

No.	position	mapping
1	$\left[\frac{3}{8}, 0, \frac{1}{4}\right]$	[1,8,27,74]
2	$\left[\frac{5}{8}, 0, \frac{3}{4}\right]$	[2,25,32,51]
3	$\left[\frac{1}{8}, \frac{1}{2}, \frac{1}{4}\right]$	[3,50,73,80]
4	$\left[0, \frac{1}{4}, \frac{7}{8}\right]$	[4,16,47,91]
5	$\left[0, \frac{3}{4}, \frac{5}{8}\right]$	[5,42,45,63]
6	$\left[\frac{1}{4}, \frac{1}{8}, \frac{1}{2}\right]$	[6,59,89,96]
7	$\left[\frac{1}{4}, \frac{7}{8}, 0\right]$	[7,12,44,94]
8	$\left[\frac{1}{8}, 0, \frac{3}{4}\right]$	[9,58,85,86]
9	$\left[\frac{5}{8}, \frac{1}{2}, \frac{1}{4}\right]$	[10,37,38,57]
10	$\left[\frac{3}{4}, \frac{5}{8}, 0\right]$	[11,41,48,54]
11	$\left[\frac{7}{8}, 0, \frac{1}{4}\right]$	[13,14,33,82]
12	$\left[\frac{1}{2}, \frac{1}{4}, \frac{1}{8}\right]$	[15,53,90,93]
13	$\left[\frac{1}{4}, \frac{3}{8}, 0\right]$	[17,24,30,83]
14	$\left[0, \frac{1}{4}, \frac{3}{8}\right]$	[18,21,39,77]
15	$\left[\frac{1}{2}, \frac{1}{4}, \frac{5}{8}\right]$	[19,28,40,71]

continued ...

Table 4

No.	position	mapping
16	$\left[\frac{3}{4}, \frac{1}{8}, 0\right]$	[20,70,79,84]
17	$\left[\frac{1}{4}, \frac{5}{8}, \frac{1}{2}\right]$	[22,31,36,68]
18	$\left[0, \frac{3}{4}, \frac{1}{8}\right]$	[23,67,76,88]
19	$\left[\frac{7}{8}, \frac{1}{2}, \frac{3}{4}\right]$	[26,49,56,75]
20	$\left[\frac{1}{2}, \frac{3}{4}, \frac{7}{8}\right]$	[29,66,69,87]
21	$\left[\frac{3}{8}, \frac{1}{2}, \frac{3}{4}\right]$	[34,61,62,81]
22	$\left[\frac{3}{4}, \frac{7}{8}, \frac{1}{2}\right]$	[35,65,72,78]
23	$\left[\frac{1}{2}, \frac{3}{4}, \frac{3}{8}\right]$	[43,52,64,95]
24	$\left[\frac{3}{4}, \frac{3}{8}, \frac{1}{2}\right]$	[46,55,60,92]

Table 5: Wyckoff site: 32e, site symmetry: .3.

No.	position	mapping
1	$[x, x, x]$	[1,17,18]
2	$\left[x+\frac{1}{4}, \frac{1}{4}-x, x+\frac{3}{4}\right]$	[2,7,15]
3	$\left[x+\frac{3}{4}, x+\frac{1}{4}, \frac{1}{4}-x\right]$	[3,4,11]
4	$\left[\frac{1}{4}-x, x+\frac{3}{4}, x+\frac{1}{4}\right]$	[5,6,13]
5	$\left[x, -x, \frac{1}{2}-x\right]$	[8,22,23]
6	$\left[\frac{1}{2}-x, x, -x\right]$	[9,19,24]
7	$\left[-x, \frac{1}{2}-x, x\right]$	[10,20,21]
8	$\left[\frac{1}{4}-x, \frac{1}{4}-x, \frac{1}{4}-x\right]$	[12,14,16]
9	$[-x, -x, -x]$	[25,41,42]
10	$\left[\frac{1}{4}-x, x+\frac{1}{4}, \frac{3}{4}-x\right]$	[26,31,39]
11	$\left[\frac{3}{4}-x, \frac{1}{4}-x, x+\frac{1}{4}\right]$	[27,28,35]
12	$\left[x+\frac{1}{4}, \frac{3}{4}-x, \frac{1}{4}-x\right]$	[29,30,37]
13	$\left[-x, x, x+\frac{1}{2}\right]$	[32,46,47]
14	$\left[x+\frac{1}{2}, -x, x\right]$	[33,43,48]
15	$\left[x, x+\frac{1}{2}, -x\right]$	[34,44,45]
16	$\left[x+\frac{1}{4}, x+\frac{1}{4}, x+\frac{1}{4}\right]$	[36,38,40]
17	$\left[x+\frac{1}{2}, x+\frac{1}{2}, x+\frac{1}{2}\right]$	[49,65,66]
18	$\left[x+\frac{3}{4}, \frac{3}{4}-x, x+\frac{1}{4}\right]$	[50,55,63]
19	$\left[x+\frac{1}{4}, x+\frac{3}{4}, \frac{3}{4}-x\right]$	[51,52,59]
20	$\left[\frac{3}{4}-x, x+\frac{1}{4}, x+\frac{3}{4}\right]$	[53,54,61]
21	$\left[x+\frac{1}{2}, \frac{1}{2}-x, -x\right]$	[56,70,71]
22	$\left[-x, x+\frac{1}{2}, \frac{1}{2}-x\right]$	[57,67,72]
23	$\left[\frac{1}{2}-x, -x, x+\frac{1}{2}\right]$	[58,68,69]
24	$\left[\frac{3}{4}-x, \frac{3}{4}-x, \frac{3}{4}-x\right]$	[60,62,64]
25	$\left[\frac{1}{2}-x, \frac{1}{2}-x, \frac{1}{2}-x\right]$	[73,89,90]
26	$\left[\frac{3}{4}-x, x+\frac{3}{4}, \frac{1}{4}-x\right]$	[74,79,87]
27	$\left[\frac{1}{4}-x, \frac{3}{4}-x, x+\frac{3}{4}\right]$	[75,76,83]
28	$\left[x+\frac{3}{4}, \frac{1}{4}-x, \frac{3}{4}-x\right]$	[77,78,85]
29	$\left[\frac{1}{2}-x, x+\frac{1}{2}, x\right]$	[80,94,95]
30	$\left[x, \frac{1}{2}-x, x+\frac{1}{2}\right]$	[81,91,96]
31	$\left[x+\frac{1}{2}, x, \frac{1}{2}-x\right]$	[82,92,93]

continued ...

Table 5

No.	position	mapping
32	$\left[x+\frac{3}{4}, x+\frac{3}{4}, x+\frac{3}{4}\right]$	[84,86,88]

Table 6: Wyckoff site: 48f, site symmetry: 2..

No.	position	mapping
1	$\left[x, 0, \frac{1}{4}\right]$	[1,8]
2	$\left[x+\frac{1}{4}, 0, \frac{3}{4}\right]$	[2,51]
3	$\left[x+\frac{3}{4}, \frac{1}{2}, \frac{1}{4}\right]$	[3,50]
4	$\left[0, \frac{1}{4}, \frac{1}{4}-x\right]$	[4,16]
5	$\left[0, \frac{3}{4}, x+\frac{1}{4}\right]$	[5,63]
6	$\left[\frac{1}{4}, x+\frac{3}{4}, \frac{1}{2}\right]$	[6,59]
7	$\left[\frac{1}{4}, \frac{1}{4}-x, 0\right]$	[7,12]
8	$\left[\frac{1}{2}-x, 0, \frac{3}{4}\right]$	[9,58]
9	$\left[-x, \frac{1}{2}, \frac{1}{4}\right]$	[10,57]
10	$\left[\frac{3}{4}, x+\frac{1}{4}, 0\right]$	[11,54]
11	$\left[\frac{1}{4}-x, 0, \frac{1}{4}\right]$	[13,14]
12	$\left[\frac{1}{2}, \frac{1}{4}, x+\frac{3}{4}\right]$	[15,53]
13	$\left[\frac{1}{4}, x, 0\right]$	[17,24]
14	$\left[0, \frac{1}{4}, x\right]$	[18,21]
15	$\left[\frac{1}{2}, \frac{1}{4}, -x\right]$	[19,71]
16	$\left[\frac{3}{4}, \frac{1}{2}-x, 0\right]$	[20,70]
17	$\left[\frac{1}{4}, -x, \frac{1}{2}\right]$	[22,68]
18	$\left[0, \frac{3}{4}, \frac{1}{2}-x\right]$	[23,67]
19	$\left[-x, 0, \frac{3}{4}\right]$	[25,32]
20	$\left[\frac{1}{4}-x, \frac{1}{2}, \frac{3}{4}\right]$	[26,75]
21	$\left[\frac{3}{4}-x, 0, \frac{1}{4}\right]$	[27,74]
22	$\left[\frac{1}{2}, \frac{1}{4}, x+\frac{1}{4}\right]$	[28,40]
23	$\left[\frac{1}{2}, \frac{3}{4}, \frac{1}{4}-x\right]$	[29,87]
24	$\left[\frac{1}{4}, \frac{3}{4}-x, 0\right]$	[30,83]
25	$\left[\frac{1}{4}, x+\frac{1}{4}, \frac{1}{2}\right]$	[31,36]
26	$\left[x+\frac{1}{2}, 0, \frac{1}{4}\right]$	[33,82]
27	$\left[x, \frac{1}{2}, \frac{3}{4}\right]$	[34,81]
28	$\left[\frac{3}{4}, \frac{1}{4}-x, \frac{1}{2}\right]$	[35,78]
29	$\left[x+\frac{1}{4}, \frac{1}{2}, \frac{1}{4}\right]$	[37,38]
30	$\left[0, \frac{1}{4}, \frac{3}{4}-x\right]$	[39,77]
31	$\left[\frac{3}{4}, -x, 0\right]$	[41,48]
32	$\left[0, \frac{3}{4}, -x\right]$	[42,45]
33	$\left[\frac{1}{2}, \frac{3}{4}, x\right]$	[43,95]
34	$\left[\frac{1}{4}, x+\frac{1}{2}, 0\right]$	[44,94]
35	$\left[\frac{3}{4}, x, \frac{1}{2}\right]$	[46,92]
36	$\left[0, \frac{1}{4}, x+\frac{1}{2}\right]$	[47,91]
37	$\left[x+\frac{1}{2}, \frac{1}{2}, \frac{3}{4}\right]$	[49,56]
38	$\left[\frac{1}{2}, \frac{3}{4}, \frac{3}{4}-x\right]$	[52,64]
39	$\left[\frac{3}{4}, \frac{3}{4}-x, \frac{1}{2}\right]$	[55,60]

continued ...

Table 6

No.	position	mapping
40	$\left[\frac{3}{4}-x,\ \frac{1}{2},\ \frac{3}{4}\right]$	[61,62]
41	$\left[\frac{3}{4},\ x+\frac{1}{2},\ \frac{1}{2}\right]$	[65,72]
42	$\left[\frac{1}{2},\ \frac{3}{4},\ x+\frac{1}{2}\right]$	[66,69]
43	$\left[\frac{1}{2}-x,\ \frac{1}{2},\ \frac{1}{4}\right]$	[73,80]
44	$\left[0,\ \frac{3}{4},\ x+\frac{3}{4}\right]$	[76,88]
45	$\left[\frac{3}{4},\ x+\frac{3}{4},\ 0\right]$	[79,84]
46	$\left[x+\frac{3}{4},\ 0,\ \frac{3}{4}\right]$	[85,86]
47	$\left[\frac{1}{4},\ \frac{1}{2}-x,\ \frac{1}{2}\right]$	[89,96]
48	$\left[\frac{1}{2},\ \frac{1}{4},\ \frac{1}{2}-x\right]$	[90,93]

Table 7: Wyckoff site: 48g, site symmetry: ..2

No.	position	mapping
1	$\left[\frac{1}{8},\ y,\ \frac{1}{4}-y\right]$	[1,14]
2	$\left[\frac{3}{8},\ y,\ y+\frac{3}{4}\right]$	[2,9]
3	$\left[\frac{7}{8},\ \frac{1}{2}-y,\ \frac{1}{4}-y\right]$	[3,10]
4	$\left[-y,\ y+\frac{1}{4},\ \frac{1}{8}\right]$	[4,21]
5	$\left[y,\ y+\frac{3}{4},\ \frac{3}{8}\right]$	[5,23]
6	$\left[\frac{1}{4}-y,\ \frac{7}{8},\ \frac{1}{2}-y\right]$	[6,22]
7	$\left[y+\frac{1}{4},\ \frac{1}{8},\ -y\right]$	[7,24]
8	$\left[\frac{1}{8},\ -y,\ y+\frac{1}{4}\right]$	[8,13]
9	$\left[y+\frac{3}{4},\ \frac{3}{8},\ y\right]$	[11,20]
10	$\left[\frac{1}{4}-y,\ \frac{1}{8},\ y\right]$	[12,17]
11	$\left[\frac{1}{2}-y,\ \frac{1}{4}-y,\ \frac{7}{8}\right]$	[15,19]
12	$\left[y,\ \frac{1}{4}-y,\ \frac{1}{8}\right]$	[16,18]
13	$\left[\frac{7}{8},\ -y,\ y+\frac{3}{4}\right]$	[25,86]
14	$\left[\frac{1}{8},\ \frac{1}{2}-y,\ \frac{3}{4}-y\right]$	[26,81]
15	$\left[\frac{5}{8},\ y,\ y+\frac{1}{4}\right]$	[27,82]
16	$\left[y+\frac{1}{2},\ \frac{1}{4}-y,\ \frac{3}{8}\right]$	[28,93]
17	$\left[\frac{1}{2}-y,\ \frac{3}{4}-y,\ \frac{1}{8}\right]$	[29,95]
18	$\left[y+\frac{1}{4},\ \frac{5}{8},\ y\right]$	[30,94]
19	$\left[\frac{1}{4}-y,\ \frac{3}{8},\ y+\frac{1}{2}\right]$	[31,96]
20	$\left[\frac{7}{8},\ y,\ \frac{3}{4}-y\right]$	[32,85]
21	$\left[\frac{5}{8},\ -y,\ \frac{1}{4}-y\right]$	[33,74]
22	$\left[\frac{1}{8},\ y+\frac{1}{2},\ y+\frac{3}{4}\right]$	[34,75]
23	$\left[\frac{3}{4}-y,\ \frac{1}{8},\ \frac{1}{2}-y\right]$	[35,92]
24	$\left[y+\frac{1}{4},\ \frac{3}{8},\ \frac{1}{2}-y\right]$	[36,89]
25	$\left[\frac{3}{8},\ y+\frac{1}{2},\ \frac{1}{4}-y\right]$	[37,80]
26	$\left[\frac{3}{8},\ \frac{1}{2}-y,\ y+\frac{1}{4}\right]$	[38,73]
27	$\left[y,\ y+\frac{1}{4},\ \frac{5}{8}\right]$	[39,91]
28	$\left[\frac{1}{2}-y,\ y+\frac{1}{4},\ \frac{3}{8}\right]$	[40,90]
29	$\left[y+\frac{3}{4},\ \frac{7}{8},\ -y\right]$	[41,84]
30	$\left[-y,\ y+\frac{3}{4},\ \frac{7}{8}\right]$	[42,88]
31	$\left[y+\frac{1}{2},\ y+\frac{3}{4},\ \frac{1}{8}\right]$	[43,87]

continued ...

Table 7

No.	position	mapping
32	$\left[\frac{1}{4}-y,\ \frac{5}{8},\ -y\right]$	[44,83]
33	$\left[y,\ \frac{3}{4}-y,\ \frac{7}{8}\right]$	[45,76]
34	$\left[y+\frac{3}{4},\ \frac{1}{8},\ y+\frac{1}{2}\right]$	[46,78]
35	$\left[-y,\ \frac{1}{4}-y,\ \frac{5}{8}\right]$	[47,77]
36	$\left[\frac{3}{4}-y,\ \frac{7}{8},\ y\right]$	[48,79]
37	$\left[\frac{5}{8},\ y+\frac{1}{2},\ \frac{3}{4}-y\right]$	[49,62]
38	$\left[\frac{7}{8},\ y+\frac{1}{2},\ y+\frac{1}{4}\right]$	[50,57]
39	$\left[\frac{3}{8},\ -y,\ \frac{3}{4}-y\right]$	[51,58]
40	$\left[\frac{1}{2}-y,\ y+\frac{3}{4},\ \frac{5}{8}\right]$	[52,69]
41	$\left[y+\frac{1}{2},\ y+\frac{1}{4},\ \frac{7}{8}\right]$	[53,71]
42	$\left[\frac{3}{4}-y,\ \frac{3}{8},\ -y\right]$	[54,70]
43	$\left[y+\frac{3}{4},\ \frac{5}{8},\ \frac{1}{2}-y\right]$	[55,72]
44	$\left[\frac{5}{8},\ \frac{1}{2}-y,\ y+\frac{3}{4}\right]$	[56,61]
45	$\left[y+\frac{1}{4},\ \frac{7}{8},\ y+\frac{1}{2}\right]$	[59,68]
46	$\left[\frac{3}{4}-y,\ \frac{5}{8},\ y+\frac{1}{2}\right]$	[60,65]
47	$\left[-y,\ \frac{3}{4}-y,\ \frac{3}{8}\right]$	[63,67]
48	$\left[y+\frac{1}{2},\ \frac{3}{4}-y,\ \frac{5}{8}\right]$	[64,66]

Table 8: Wyckoff site: 96h, site symmetry: 1

No.	position	mapping
1	$[x,\ y,\ z]$	[1]
2	$\left[x+\frac{1}{4},\ \frac{1}{4}-z,\ y+\frac{3}{4}\right]$	[2]
3	$\left[x+\frac{3}{4},\ z+\frac{1}{4},\ \frac{1}{4}-y\right]$	[3]
4	$\left[z+\frac{3}{4},\ y+\frac{1}{4},\ \frac{1}{4}-x\right]$	[4]
5	$\left[\frac{1}{4}-z,\ y+\frac{3}{4},\ x+\frac{1}{4}\right]$	[5]
6	$\left[\frac{1}{4}-y,\ x+\frac{3}{4},\ z+\frac{1}{4}\right]$	[6]
7	$\left[y+\frac{1}{4},\ \frac{1}{4}-x,\ z+\frac{3}{4}\right]$	[7]
8	$\left[x,\ -y,\ \frac{1}{2}-z\right]$	[8]
9	$\left[\frac{1}{2}-x,\ y,\ -z\right]$	[9]
10	$\left[-x,\ \frac{1}{2}-y,\ z\right]$	[10]
11	$\left[y+\frac{3}{4},\ x+\frac{1}{4},\ \frac{1}{4}-z\right]$	[11]
12	$\left[\frac{1}{4}-y,\ \frac{1}{4}-x,\ \frac{1}{4}-z\right]$	[12]
13	$\left[\frac{1}{4}-x,\ z+\frac{3}{4},\ y+\frac{1}{4}\right]$	[13]
14	$\left[\frac{1}{4}-x,\ \frac{1}{4}-z,\ \frac{1}{4}-y\right]$	[14]
15	$\left[z+\frac{1}{4},\ \frac{1}{4}-y,\ x+\frac{3}{4}\right]$	[15]
16	$\left[\frac{1}{4}-z,\ \frac{1}{4}-y,\ \frac{1}{4}-x\right]$	[16]
17	$[z,\ x,\ y]$	[17]
18	$[y,\ z,\ x]$	[18]
19	$\left[\frac{1}{2}-y,\ z,\ -x\right]$	[19]
20	$\left[-z,\ \frac{1}{2}-x,\ y\right]$	[20]
21	$\left[-y,\ \frac{1}{2}-z,\ x\right]$	[21]
22	$\left[z,\ -x,\ \frac{1}{2}-y\right]$	[22]
23	$\left[y,\ -z,\ \frac{1}{2}-x\right]$	[23]

continued ...

Table 8

No.	position	mapping
24	$\left[\frac{1}{2}-z,\, x,\, -y\right]$	[24]
25	$[-x,\, -y,\, -z]$	[25]
26	$\left[\frac{1}{4}-x,\, z+\frac{1}{4},\, \frac{3}{4}-y\right]$	[26]
27	$\left[\frac{3}{4}-x,\, \frac{1}{4}-z,\, y+\frac{1}{4}\right]$	[27]
28	$\left[\frac{3}{4}-z,\, \frac{1}{4}-y,\, x+\frac{1}{4}\right]$	[28]
29	$\left[z+\frac{1}{4},\, \frac{3}{4}-y,\, \frac{1}{4}-x\right]$	[29]
30	$\left[y+\frac{1}{4},\, \frac{3}{4}-x,\, \frac{1}{4}-z\right]$	[30]
31	$\left[\frac{1}{4}-y,\, x+\frac{1}{4},\, \frac{3}{4}-z\right]$	[31]
32	$\left[-x,\, y,\, z+\frac{1}{2}\right]$	[32]
33	$\left[x+\frac{1}{2},\, -y,\, z\right]$	[33]
34	$\left[x,\, y+\frac{1}{2},\, -z\right]$	[34]
35	$\left[\frac{3}{4}-y,\, \frac{1}{4}-x,\, z+\frac{1}{4}\right]$	[35]
36	$\left[y+\frac{1}{4},\, x+\frac{1}{4},\, z+\frac{1}{4}\right]$	[36]
37	$\left[x+\frac{1}{4},\, \frac{3}{4}-z,\, \frac{1}{4}-y\right]$	[37]
38	$\left[x+\frac{1}{4},\, z+\frac{1}{4},\, y+\frac{1}{4}\right]$	[38]
39	$\left[\frac{1}{4}-z,\, y+\frac{1}{4},\, \frac{3}{4}-x\right]$	[39]
40	$\left[z+\frac{1}{4},\, y+\frac{1}{4},\, x+\frac{1}{4}\right]$	[40]
41	$[-z,\, -x,\, -y]$	[41]
42	$[-y,\, -z,\, -x]$	[42]
43	$\left[y+\frac{1}{2},\, -z,\, x\right]$	[43]
44	$\left[z,\, x+\frac{1}{2},\, -y\right]$	[44]
45	$\left[y,\, z+\frac{1}{2},\, -x\right]$	[45]
46	$\left[-z,\, x,\, y+\frac{1}{2}\right]$	[46]
47	$\left[-y,\, z,\, x+\frac{1}{2}\right]$	[47]
48	$\left[z+\frac{1}{2},\, -x,\, y\right]$	[48]
49	$\left[x+\frac{1}{2},\, y+\frac{1}{2},\, z+\frac{1}{2}\right]$	[49]
50	$\left[x+\frac{3}{4},\, \frac{3}{4}-z,\, y+\frac{1}{4}\right]$	[50]
51	$\left[x+\frac{1}{4},\, z+\frac{3}{4},\, \frac{3}{4}-y\right]$	[51]
52	$\left[z+\frac{1}{4},\, y+\frac{3}{4},\, \frac{3}{4}-x\right]$	[52]
53	$\left[\frac{3}{4}-z,\, y+\frac{1}{4},\, x+\frac{3}{4}\right]$	[53]
54	$\left[\frac{3}{4}-y,\, x+\frac{1}{4},\, z+\frac{3}{4}\right]$	[54]
55	$\left[y+\frac{3}{4},\, \frac{3}{4}-x,\, z+\frac{1}{4}\right]$	[55]
56	$\left[x+\frac{1}{2},\, \frac{1}{2}-y,\, -z\right]$	[56]
57	$\left[-x,\, y+\frac{1}{2},\, \frac{1}{2}-z\right]$	[57]
58	$\left[\frac{1}{2}-x,\, -y,\, z+\frac{1}{2}\right]$	[58]
59	$\left[y+\frac{1}{4},\, x+\frac{3}{4},\, \frac{3}{4}-z\right]$	[59]
60	$\left[\frac{3}{4}-y,\, \frac{3}{4}-x,\, \frac{3}{4}-z\right]$	[60]
61	$\left[\frac{3}{4}-x,\, z+\frac{1}{4},\, y+\frac{3}{4}\right]$	[61]
62	$\left[\frac{3}{4}-x,\, \frac{3}{4}-z,\, \frac{3}{4}-y\right]$	[62]
63	$\left[z+\frac{3}{4},\, \frac{3}{4}-y,\, x+\frac{1}{4}\right]$	[63]
64	$\left[\frac{3}{4}-z,\, \frac{3}{4}-y,\, \frac{3}{4}-x\right]$	[64]
65	$\left[z+\frac{1}{2},\, x+\frac{1}{2},\, y+\frac{1}{2}\right]$	[65]
66	$\left[y+\frac{1}{2},\, z+\frac{1}{2},\, x+\frac{1}{2}\right]$	[66]
67	$\left[-y,\, z+\frac{1}{2},\, \frac{1}{2}-x\right]$	[67]
68	$\left[\frac{1}{2}-z,\, -x,\, y+\frac{1}{2}\right]$	[68]
69	$\left[\frac{1}{2}-y,\, -z,\, x+\frac{1}{2}\right]$	[69]
70	$\left[z+\frac{1}{2},\, \frac{1}{2}-x,\, -y\right]$	[70]

continued ...

Table 8

No.	position	mapping
71	$\left[y+\frac{1}{2},\ \frac{1}{2}-z,\ -x\right]$	[71]
72	$\left[-z,\ x+\frac{1}{2},\ \frac{1}{2}-y\right]$	[72]
73	$\left[\frac{1}{2}-x,\ \frac{1}{2}-y,\ \frac{1}{2}-z\right]$	[73]
74	$\left[\frac{3}{4}-x,\ z+\frac{3}{4},\ \frac{1}{4}-y\right]$	[74]
75	$\left[\frac{1}{4}-x,\ \frac{3}{4}-z,\ y+\frac{3}{4}\right]$	[75]
76	$\left[\frac{1}{4}-z,\ \frac{3}{4}-y,\ x+\frac{3}{4}\right]$	[76]
77	$\left[z+\frac{3}{4},\ \frac{1}{4}-y,\ \frac{3}{4}-x\right]$	[77]
78	$\left[y+\frac{3}{4},\ \frac{1}{4}-x,\ \frac{3}{4}-z\right]$	[78]
79	$\left[\frac{3}{4}-y,\ x+\frac{3}{4},\ \frac{1}{4}-z\right]$	[79]
80	$\left[\frac{1}{2}-x,\ y+\frac{1}{2},\ z\right]$	[80]
81	$\left[x,\ \frac{1}{2}-y,\ z+\frac{1}{2}\right]$	[81]
82	$\left[x+\frac{1}{2},\ y,\ \frac{1}{2}-z\right]$	[82]
83	$\left[\frac{1}{4}-y,\ \frac{3}{4}-x,\ z+\frac{3}{4}\right]$	[83]
84	$\left[y+\frac{3}{4},\ x+\frac{3}{4},\ z+\frac{3}{4}\right]$	[84]
85	$\left[x+\frac{3}{4},\ \frac{1}{4}-z,\ \frac{3}{4}-y\right]$	[85]
86	$\left[x+\frac{3}{4},\ z+\frac{3}{4},\ y+\frac{3}{4}\right]$	[86]
87	$\left[\frac{3}{4}-z,\ y+\frac{3}{4},\ \frac{1}{4}-x\right]$	[87]
88	$\left[z+\frac{3}{4},\ y+\frac{3}{4},\ x+\frac{3}{4}\right]$	[88]
89	$\left[\frac{1}{2}-z,\ \frac{1}{2}-x,\ \frac{1}{2}-y\right]$	[89]
90	$\left[\frac{1}{2}-y,\ \frac{1}{2}-z,\ \frac{1}{2}-x\right]$	[90]
91	$\left[y,\ \frac{1}{2}-z,\ x+\frac{1}{2}\right]$	[91]
92	$\left[z+\frac{1}{2},\ x,\ \frac{1}{2}-y\right]$	[92]
93	$\left[y+\frac{1}{2},\ z,\ \frac{1}{2}-x\right]$	[93]
94	$\left[\frac{1}{2}-z,\ x+\frac{1}{2},\ y\right]$	[94]
95	$\left[\frac{1}{2}-y,\ z+\frac{1}{2},\ x\right]$	[95]
96	$\left[z,\ \frac{1}{2}-x,\ y+\frac{1}{2}\right]$	[96]