

MSG No. 209.48 *F*432 [Type I, cubic]

Table 1: Wyckoff site: 4a, site symmetry: 432

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

Table 2: Wyckoff site: 4b, site symmetry: 432

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

Table 3: Wyckoff site: 8c, site symmetry: 23.

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

Table 4: Wyckoff site: 24d, site symmetry: 2.22

No.	position	mapping
1	[0, $\frac{1}{4}$, $\frac{1}{4}$]	[1,13,32,38]
2	[0, $\frac{3}{4}$, $\frac{1}{4}$]	[2,10,27,33]
3	[0, $\frac{1}{4}$, $\frac{3}{4}$]	[3,9,26,34]
4	[$\frac{1}{4}$, $\frac{1}{4}$, 0]	[4,18,88,93]
5	[$\frac{3}{4}$, $\frac{1}{4}$, 0]	[5,19,87,95]
6	[$\frac{3}{4}$, 0, $\frac{1}{4}$]	[6,20,59,70]
7	[$\frac{1}{4}$, 0, $\frac{1}{4}$]	[7,17,60,72]
8	[0, $\frac{3}{4}$, $\frac{3}{4}$]	[8,14,25,37]
9	[$\frac{1}{4}$, 0, $\frac{3}{4}$]	[11,22,54,68]

continued ...

Table 4

No.	position	mapping
10	$[\frac{3}{4}, 0, \frac{3}{4}]$	[12, 24, 55, 65]
11	$[\frac{1}{4}, \frac{3}{4}, 0]$	[15, 23, 77, 91]
12	$[\frac{3}{4}, \frac{3}{4}, 0]$	[16, 21, 76, 90]
13	$[\frac{1}{4}, \frac{3}{4}, \frac{1}{2}]$	[28, 42, 64, 69]
14	$[\frac{3}{4}, \frac{3}{4}, \frac{1}{2}]$	[29, 43, 63, 71]
15	$[\frac{3}{4}, \frac{1}{2}, \frac{3}{4}]$	[30, 44, 83, 94]
16	$[\frac{1}{4}, \frac{1}{2}, \frac{3}{4}]$	[31, 41, 84, 96]
17	$[\frac{1}{4}, \frac{1}{2}, \frac{1}{4}]$	[35, 46, 78, 92]
18	$[\frac{3}{4}, \frac{1}{2}, \frac{1}{4}]$	[36, 48, 79, 89]
19	$[\frac{1}{4}, \frac{1}{4}, \frac{1}{2}]$	[39, 47, 53, 67]
20	$[\frac{3}{4}, \frac{1}{4}, \frac{1}{2}]$	[40, 45, 52, 66]
21	$[\frac{1}{2}, \frac{1}{4}, \frac{3}{4}]$	[49, 61, 80, 86]
22	$[\frac{1}{2}, \frac{3}{4}, \frac{3}{4}]$	[50, 58, 75, 81]
23	$[\frac{1}{2}, \frac{1}{4}, \frac{1}{4}]$	[51, 57, 74, 82]
24	$[\frac{1}{2}, \frac{3}{4}, \frac{1}{4}]$	[56, 62, 73, 85]

Table 5: Wyckoff site: 24e, site symmetry: 4..

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

Table 6: Wyckoff site: 32f, site symmetry: .3.

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

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

No.	position	mapping
1	[$0, y, y$]	[1, 13]
2	[$0, -y, y$]	[2, 10]
3	[$0, y, -y$]	[3, 9]
4	[$y, y, 0$]	[4, 18]
5	[$-y, y, 0$]	[5, 19]
6	[$-y, 0, y$]	[6, 20]
7	[$y, 0, y$]	[7, 17]

continued ...

Table 7

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

Table 8: Wyckoff site: 48h, site symmetry: . . 2

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

continued ...

Table 8

No.	position	mapping
47	$[y + \frac{1}{2}, \frac{1}{2} - y, \frac{1}{2}]$	[87,95]
48	$[\frac{1}{2} - y, \frac{1}{2} - y, \frac{1}{2}]$	[88,93]

Table 9: Wyckoff site: 48i, site symmetry: 2..

No.	position	mapping
1	$[x, \frac{1}{4}, \frac{1}{4}]$	[1,32]
2	$[x, \frac{3}{4}, \frac{1}{4}]$	[2,27]
3	$[x, \frac{1}{4}, \frac{3}{4}]$	[3,26]
4	$[\frac{1}{4}, \frac{1}{4}, -x]$	[4,88]
5	$[\frac{3}{4}, \frac{1}{4}, x]$	[5,87]
6	$[\frac{3}{4}, x, \frac{1}{4}]$	[6,59]
7	$[\frac{1}{4}, -x, \frac{1}{4}]$	[7,60]
8	$[x, \frac{3}{4}, \frac{3}{4}]$	[8,25]
9	$[-x, \frac{1}{4}, \frac{3}{4}]$	[9,34]
10	$[-x, \frac{3}{4}, \frac{1}{4}]$	[10,33]
11	$[\frac{1}{4}, x, \frac{3}{4}]$	[11,54]
12	$[\frac{3}{4}, -x, \frac{3}{4}]$	[12,55]
13	$[-x, \frac{1}{4}, \frac{1}{4}]$	[13,38]
14	$[-x, \frac{3}{4}, \frac{3}{4}]$	[14,37]
15	$[\frac{1}{4}, \frac{3}{4}, x]$	[15,77]
16	$[\frac{3}{4}, \frac{3}{4}, -x]$	[16,76]
17	$[\frac{1}{4}, x, \frac{1}{4}]$	[17,72]
18	$[\frac{1}{4}, \frac{1}{4}, x]$	[18,93]
19	$[\frac{3}{4}, \frac{1}{4}, -x]$	[19,95]
20	$[\frac{3}{4}, -x, \frac{1}{4}]$	[20,70]
21	$[\frac{3}{4}, \frac{3}{4}, x]$	[21,90]
22	$[\frac{1}{4}, -x, \frac{3}{4}]$	[22,68]
23	$[\frac{1}{4}, \frac{3}{4}, -x]$	[23,91]
24	$[\frac{3}{4}, x, \frac{3}{4}]$	[24,65]
25	$[\frac{1}{4}, \frac{3}{4}, \frac{1}{2} - x]$	[28,64]
26	$[\frac{3}{4}, \frac{3}{4}, x + \frac{1}{2}]$	[29,63]
27	$[\frac{3}{4}, x + \frac{1}{2}, \frac{3}{4}]$	[30,83]
28	$[\frac{1}{4}, \frac{1}{2} - x, \frac{3}{4}]$	[31,84]
29	$[\frac{1}{4}, x + \frac{1}{2}, \frac{1}{4}]$	[35,78]
30	$[\frac{3}{4}, \frac{1}{2} - x, \frac{1}{4}]$	[36,79]
31	$[\frac{1}{4}, \frac{1}{4}, x + \frac{1}{2}]$	[39,53]
32	$[\frac{3}{4}, \frac{1}{4}, \frac{1}{2} - x]$	[40,52]
33	$[\frac{1}{4}, x + \frac{1}{2}, \frac{3}{4}]$	[41,96]
34	$[\frac{1}{4}, \frac{3}{4}, x + \frac{1}{2}]$	[42,69]
35	$[\frac{3}{4}, \frac{3}{4}, \frac{1}{2} - x]$	[43,71]
36	$[\frac{3}{4}, \frac{1}{2} - x, \frac{3}{4}]$	[44,94]
37	$[\frac{3}{4}, \frac{1}{4}, x + \frac{1}{2}]$	[45,66]
38	$[\frac{1}{4}, \frac{1}{2} - x, \frac{1}{4}]$	[46,92]

continued ...

Table 9

No.	position	mapping
39	$[\frac{1}{4}, \frac{1}{4}, \frac{1}{2} - x]$	[47,67]
40	$[\frac{3}{4}, x + \frac{1}{2}, \frac{1}{4}]$	[48,89]
41	$[x + \frac{1}{2}, \frac{1}{4}, \frac{3}{4}]$	[49,80]
42	$[x + \frac{1}{2}, \frac{3}{4}, \frac{3}{4}]$	[50,75]
43	$[x + \frac{1}{2}, \frac{1}{4}, \frac{1}{4}]$	[51,74]
44	$[x + \frac{1}{2}, \frac{3}{4}, \frac{1}{4}]$	[56,73]
45	$[\frac{1}{2} - x, \frac{1}{4}, \frac{1}{4}]$	[57,82]
46	$[\frac{1}{2} - x, \frac{3}{4}, \frac{3}{4}]$	[58,81]
47	$[\frac{1}{2} - x, \frac{1}{4}, \frac{3}{4}]$	[61,86]
48	$[\frac{1}{2} - x, \frac{3}{4}, \frac{1}{4}]$	[62,85]

Table 10: Wyckoff site: 96j, site symmetry: 1

No.	position	mapping
1	$[x, y, z]$	[1]
2	$[x, -z, y]$	[2]
3	$[x, z, -y]$	[3]
4	$[z, y, -x]$	[4]
5	$[-z, y, x]$	[5]
6	$[-y, x, z]$	[6]
7	$[y, -x, z]$	[7]
8	$[x, -y, -z]$	[8]
9	$[-x, y, -z]$	[9]
10	$[-x, -y, z]$	[10]
11	$[y, x, -z]$	[11]
12	$[-y, -x, -z]$	[12]
13	$[-x, z, y]$	[13]
14	$[-x, -z, -y]$	[14]
15	$[z, -y, x]$	[15]
16	$[-z, -y, -x]$	[16]
17	$[z, x, y]$	[17]
18	$[y, z, x]$	[18]
19	$[-y, z, -x]$	[19]
20	$[-z, -x, y]$	[20]
21	$[-y, -z, x]$	[21]
22	$[z, -x, -y]$	[22]
23	$[y, -z, -x]$	[23]
24	$[-z, x, -y]$	[24]
25	$[x, y + \frac{1}{2}, z + \frac{1}{2}]$	[25]
26	$[x, \frac{1}{2} - z, y + \frac{1}{2}]$	[26]
27	$[x, z + \frac{1}{2}, \frac{1}{2} - y]$	[27]
28	$[z, y + \frac{1}{2}, \frac{1}{2} - x]$	[28]
29	$[-z, y + \frac{1}{2}, x + \frac{1}{2}]$	[29]
30	$[-y, x + \frac{1}{2}, z + \frac{1}{2}]$	[30]

continued ...

Table 10

No.	position	mapping
31	$[y, \frac{1}{2} - x, z + \frac{1}{2}]$	[31]
32	$[x, \frac{1}{2} - y, \frac{1}{2} - z]$	[32]
33	$[-x, y + \frac{1}{2}, \frac{1}{2} - z]$	[33]
34	$[-x, \frac{1}{2} - y, z + \frac{1}{2}]$	[34]
35	$[y, x + \frac{1}{2}, \frac{1}{2} - z]$	[35]
36	$[-y, \frac{1}{2} - x, \frac{1}{2} - z]$	[36]
37	$[-x, z + \frac{1}{2}, y + \frac{1}{2}]$	[37]
38	$[-x, \frac{1}{2} - z, \frac{1}{2} - y]$	[38]
39	$[z, \frac{1}{2} - y, x + \frac{1}{2}]$	[39]
40	$[-z, \frac{1}{2} - y, \frac{1}{2} - x]$	[40]
41	$[z, x + \frac{1}{2}, y + \frac{1}{2}]$	[41]
42	$[y, z + \frac{1}{2}, x + \frac{1}{2}]$	[42]
43	$[-y, z + \frac{1}{2}, \frac{1}{2} - x]$	[43]
44	$[-z, \frac{1}{2} - x, y + \frac{1}{2}]$	[44]
45	$[-y, \frac{1}{2} - z, x + \frac{1}{2}]$	[45]
46	$[z, \frac{1}{2} - x, \frac{1}{2} - y]$	[46]
47	$[y, \frac{1}{2} - z, \frac{1}{2} - x]$	[47]
48	$[-z, x + \frac{1}{2}, \frac{1}{2} - y]$	[48]
49	$[x + \frac{1}{2}, y, z + \frac{1}{2}]$	[49]
50	$[x + \frac{1}{2}, -z, y + \frac{1}{2}]$	[50]
51	$[x + \frac{1}{2}, z, \frac{1}{2} - y]$	[51]
52	$[z + \frac{1}{2}, y, \frac{1}{2} - x]$	[52]
53	$[\frac{1}{2} - z, y, x + \frac{1}{2}]$	[53]
54	$[\frac{1}{2} - y, x, z + \frac{1}{2}]$	[54]
55	$[y + \frac{1}{2}, -x, z + \frac{1}{2}]$	[55]
56	$[x + \frac{1}{2}, -y, \frac{1}{2} - z]$	[56]
57	$[\frac{1}{2} - x, y, \frac{1}{2} - z]$	[57]
58	$[\frac{1}{2} - x, -y, z + \frac{1}{2}]$	[58]
59	$[y + \frac{1}{2}, x, \frac{1}{2} - z]$	[59]
60	$[\frac{1}{2} - y, -x, \frac{1}{2} - z]$	[60]
61	$[\frac{1}{2} - x, z, y + \frac{1}{2}]$	[61]
62	$[\frac{1}{2} - x, -z, \frac{1}{2} - y]$	[62]
63	$[z + \frac{1}{2}, -y, x + \frac{1}{2}]$	[63]
64	$[\frac{1}{2} - z, -y, \frac{1}{2} - x]$	[64]
65	$[z + \frac{1}{2}, x, y + \frac{1}{2}]$	[65]
66	$[y + \frac{1}{2}, z, x + \frac{1}{2}]$	[66]
67	$[\frac{1}{2} - y, z, \frac{1}{2} - x]$	[67]
68	$[\frac{1}{2} - z, -x, y + \frac{1}{2}]$	[68]
69	$[\frac{1}{2} - y, -z, x + \frac{1}{2}]$	[69]
70	$[z + \frac{1}{2}, -x, \frac{1}{2} - y]$	[70]
71	$[y + \frac{1}{2}, -z, \frac{1}{2} - x]$	[71]
72	$[\frac{1}{2} - z, x, \frac{1}{2} - y]$	[72]
73	$[x + \frac{1}{2}, y + \frac{1}{2}, z]$	[73]
74	$[x + \frac{1}{2}, \frac{1}{2} - z, y]$	[74]
75	$[x + \frac{1}{2}, z + \frac{1}{2}, -y]$	[75]
76	$[z + \frac{1}{2}, y + \frac{1}{2}, -x]$	[76]
77	$[\frac{1}{2} - z, y + \frac{1}{2}, x]$	[77]

continued ...

Table 10

No.	position	mapping
78	$[\frac{1}{2} - y, x + \frac{1}{2}, z]$	[78]
79	$[y + \frac{1}{2}, \frac{1}{2} - x, z]$	[79]
80	$[x + \frac{1}{2}, \frac{1}{2} - y, -z]$	[80]
81	$[\frac{1}{2} - x, y + \frac{1}{2}, -z]$	[81]
82	$[\frac{1}{2} - x, \frac{1}{2} - y, z]$	[82]
83	$[y + \frac{1}{2}, x + \frac{1}{2}, -z]$	[83]
84	$[\frac{1}{2} - y, \frac{1}{2} - x, -z]$	[84]
85	$[\frac{1}{2} - x, z + \frac{1}{2}, y]$	[85]
86	$[\frac{1}{2} - x, \frac{1}{2} - z, -y]$	[86]
87	$[z + \frac{1}{2}, \frac{1}{2} - y, x]$	[87]
88	$[\frac{1}{2} - z, \frac{1}{2} - y, -x]$	[88]
89	$[z + \frac{1}{2}, x + \frac{1}{2}, y]$	[89]
90	$[y + \frac{1}{2}, z + \frac{1}{2}, x]$	[90]
91	$[\frac{1}{2} - y, z + \frac{1}{2}, -x]$	[91]
92	$[\frac{1}{2} - z, \frac{1}{2} - x, y]$	[92]
93	$[\frac{1}{2} - y, \frac{1}{2} - z, x]$	[93]
94	$[z + \frac{1}{2}, \frac{1}{2} - x, -y]$	[94]
95	$[y + \frac{1}{2}, \frac{1}{2} - z, -x]$	[95]
96	$[\frac{1}{2} - z, x + \frac{1}{2}, -y]$	[96]