

# MSG No. 202.24 $Fm'3'$ [ Type III, cubic ]

Table 1: Wyckoff site: **4a**, site symmetry:  $m'-3'$ .

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:  $m'-3'$ .

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	$[\frac{1}{4}, \frac{1}{4}, \frac{1}{4}]$	$[1, 5, 6, 26, 34, 35, 51, 55, 60, 76, 80, 81]$
2	$[\frac{1}{4}, \frac{3}{4}, \frac{3}{4}]$	$[2, 10, 11, 25, 29, 30, 52, 56, 57, 75, 79, 84]$
3	$[\frac{3}{4}, \frac{1}{4}, \frac{3}{4}]$	$[3, 7, 12, 28, 32, 33, 49, 53, 54, 74, 82, 83]$
4	$[\frac{3}{4}, \frac{3}{4}, \frac{1}{4}]$	$[4, 8, 9, 27, 31, 36, 50, 58, 59, 73, 77, 78]$
5	$[\frac{3}{4}, \frac{3}{4}, \frac{3}{4}]$	$[13, 17, 18, 38, 46, 47, 63, 67, 72, 88, 92, 93]$
6	$[\frac{3}{4}, \frac{1}{4}, \frac{1}{4}]$	$[14, 22, 23, 37, 41, 42, 64, 68, 69, 87, 91, 96]$
7	$[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}]$	$[15, 19, 24, 40, 44, 45, 61, 65, 66, 86, 94, 95]$
8	$[\frac{1}{4}, \frac{1}{4}, \frac{3}{4}]$	$[16, 20, 21, 39, 43, 48, 62, 70, 71, 85, 89, 90]$

Table 4: Wyckoff site: **24d**, site symmetry: **2/m'..**

No.	position	mapping
1	$[0, \frac{1}{4}, \frac{1}{4}]$	$[1, 14, 26, 37]$
2	$[0, \frac{3}{4}, \frac{3}{4}]$	$[2, 13, 25, 38]$
3	$[0, \frac{1}{4}, \frac{3}{4}]$	$[3, 16, 28, 39]$
4	$[0, \frac{3}{4}, \frac{1}{4}]$	$[4, 15, 27, 40]$
5	$[\frac{1}{4}, 0, \frac{1}{4}]$	$[5, 24, 60, 65]$
6	$[\frac{1}{4}, \frac{1}{4}, 0]$	$[6, 21, 81, 90]$
7	$[\frac{3}{4}, \frac{1}{4}, 0]$	$[7, 23, 83, 91]$
8	$[\frac{3}{4}, 0, \frac{1}{4}]$	$[8, 22, 58, 68]$
9	$[\frac{3}{4}, \frac{3}{4}, 0]$	$[9, 18, 78, 93]$

*continued ...*

Table 4

No.	position	mapping
10	$[\frac{1}{4}, 0, \frac{3}{4}]$	[10, 20, 56, 70]
11	$[\frac{1}{4}, \frac{3}{4}, 0]$	[11, 19, 79, 95]
12	$[\frac{3}{4}, 0, \frac{3}{4}]$	[12, 17, 53, 72]
13	$[\frac{1}{4}, \frac{1}{2}, \frac{3}{4}]$	[29, 48, 84, 89]
14	$[\frac{1}{4}, \frac{3}{4}, \frac{1}{2}]$	[30, 45, 57, 66]
15	$[\frac{3}{4}, \frac{3}{4}, \frac{1}{2}]$	[31, 47, 59, 67]
16	$[\frac{3}{4}, \frac{1}{2}, \frac{3}{4}]$	[32, 46, 82, 92]
17	$[\frac{3}{4}, \frac{1}{4}, \frac{1}{2}]$	[33, 42, 54, 69]
18	$[\frac{1}{4}, \frac{1}{2}, \frac{1}{4}]$	[34, 44, 80, 94]
19	$[\frac{1}{4}, \frac{1}{4}, \frac{1}{2}]$	[35, 43, 55, 71]
20	$[\frac{3}{4}, \frac{1}{2}, \frac{1}{4}]$	[36, 41, 77, 96]
21	$[\frac{1}{2}, \frac{1}{4}, \frac{3}{4}]$	[49, 62, 74, 85]
22	$[\frac{1}{2}, \frac{3}{4}, \frac{1}{4}]$	[50, 61, 73, 86]
23	$[\frac{1}{2}, \frac{1}{4}, \frac{1}{4}]$	[51, 64, 76, 87]
24	$[\frac{1}{2}, \frac{3}{4}, \frac{3}{4}]$	[52, 63, 75, 88]

Table 5: Wyckoff site: 24e, site symmetry: 2m'm'..

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

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

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

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

No.	position	mapping
1	[ $x, \frac{1}{4}, \frac{1}{4}$ ]	[1,26]
2	[ $x, \frac{3}{4}, \frac{3}{4}$ ]	[2,25]
3	[ $-x, \frac{1}{4}, \frac{3}{4}$ ]	[3,28]
4	[ $-x, \frac{3}{4}, \frac{1}{4}$ ]	[4,27]
5	[ $\frac{1}{4}, x, \frac{1}{4}$ ]	[5,60]
6	[ $\frac{1}{4}, \frac{1}{4}, x$ ]	[6,81]
7	[ $\frac{3}{4}, \frac{1}{4}, -x$ ]	[7,83]

*continued ...*

Table 7

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

Table 8: Wyckoff site: 48h, site symmetry:  $\text{m}'\dots$ 

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

continued ...

Table 8

No.	position	mapping
47	$[y + \frac{1}{2}, \frac{1}{2} - z, 0]$	[83,91]
48	$[\frac{1}{2} - z, \frac{1}{2}, -y]$	[84,89]

Table 9: Wyckoff site: 96i, site symmetry: 1

No.	position	mapping
1	$[x, y, z]$	[1]
2	$[x, -y, -z]$	[2]
3	$[-x, y, -z]$	[3]
4	$[-x, -y, z]$	[4]
5	$[z, x, y]$	[5]
6	$[y, z, x]$	[6]
7	$[-y, z, -x]$	[7]
8	$[-z, -x, y]$	[8]
9	$[-y, -z, x]$	[9]
10	$[z, -x, -y]$	[10]
11	$[y, -z, -x]$	[11]
12	$[-z, x, -y]$	[12]
13	$[-x, -y, -z]$	[13]
14	$[-x, y, z]$	[14]
15	$[x, -y, z]$	[15]
16	$[x, y, -z]$	[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	$[x, \frac{1}{2} - y, \frac{1}{2} - z]$	[26]
27	$[-x, y + \frac{1}{2}, \frac{1}{2} - z]$	[27]
28	$[-x, \frac{1}{2} - y, z + \frac{1}{2}]$	[28]
29	$[z, x + \frac{1}{2}, y + \frac{1}{2}]$	[29]
30	$[y, z + \frac{1}{2}, x + \frac{1}{2}]$	[30]
31	$[-y, z + \frac{1}{2}, \frac{1}{2} - x]$	[31]
32	$[-z, \frac{1}{2} - x, y + \frac{1}{2}]$	[32]
33	$[-y, \frac{1}{2} - z, x + \frac{1}{2}]$	[33]
34	$[z, \frac{1}{2} - x, \frac{1}{2} - y]$	[34]
35	$[y, \frac{1}{2} - z, \frac{1}{2} - x]$	[35]
36	$[-z, x + \frac{1}{2}, \frac{1}{2} - y]$	[36]
37	$[-x, \frac{1}{2} - y, \frac{1}{2} - z]$	[37]
38	$[-x, y + \frac{1}{2}, z + \frac{1}{2}]$	[38]

continued ...

Table 9

No.	position	mapping
39	$[x, \frac{1}{2} - y, z + \frac{1}{2}]$	[39]
40	$[x, y + \frac{1}{2}, \frac{1}{2} - z]$	[40]
41	$[-z, \frac{1}{2} - x, \frac{1}{2} - y]$	[41]
42	$[-y, \frac{1}{2} - z, \frac{1}{2} - x]$	[42]
43	$[y, \frac{1}{2} - z, x + \frac{1}{2}]$	[43]
44	$[z, x + \frac{1}{2}, \frac{1}{2} - y]$	[44]
45	$[y, z + \frac{1}{2}, \frac{1}{2} - x]$	[45]
46	$[-z, x + \frac{1}{2}, y + \frac{1}{2}]$	[46]
47	$[-y, z + \frac{1}{2}, x + \frac{1}{2}]$	[47]
48	$[z, \frac{1}{2} - x, y + \frac{1}{2}]$	[48]
49	$[x + \frac{1}{2}, y, z + \frac{1}{2}]$	[49]
50	$[x + \frac{1}{2}, -y, \frac{1}{2} - z]$	[50]
51	$[\frac{1}{2} - x, y, \frac{1}{2} - z]$	[51]
52	$[\frac{1}{2} - x, -y, z + \frac{1}{2}]$	[52]
53	$[z + \frac{1}{2}, x, y + \frac{1}{2}]$	[53]
54	$[y + \frac{1}{2}, z, x + \frac{1}{2}]$	[54]
55	$[\frac{1}{2} - y, z, \frac{1}{2} - x]$	[55]
56	$[\frac{1}{2} - z, -x, y + \frac{1}{2}]$	[56]
57	$[\frac{1}{2} - y, -z, x + \frac{1}{2}]$	[57]
58	$[z + \frac{1}{2}, -x, \frac{1}{2} - y]$	[58]
59	$[y + \frac{1}{2}, -z, \frac{1}{2} - x]$	[59]
60	$[\frac{1}{2} - z, x, \frac{1}{2} - y]$	[60]
61	$[\frac{1}{2} - x, -y, \frac{1}{2} - z]$	[61]
62	$[\frac{1}{2} - x, y, z + \frac{1}{2}]$	[62]
63	$[x + \frac{1}{2}, -y, z + \frac{1}{2}]$	[63]
64	$[x + \frac{1}{2}, y, \frac{1}{2} - z]$	[64]
65	$[\frac{1}{2} - z, -x, \frac{1}{2} - y]$	[65]
66	$[\frac{1}{2} - y, -z, \frac{1}{2} - x]$	[66]
67	$[y + \frac{1}{2}, -z, x + \frac{1}{2}]$	[67]
68	$[z + \frac{1}{2}, x, \frac{1}{2} - y]$	[68]
69	$[y + \frac{1}{2}, z, \frac{1}{2} - x]$	[69]
70	$[\frac{1}{2} - z, x, y + \frac{1}{2}]$	[70]
71	$[\frac{1}{2} - y, z, x + \frac{1}{2}]$	[71]
72	$[z + \frac{1}{2}, -x, y + \frac{1}{2}]$	[72]
73	$[x + \frac{1}{2}, y + \frac{1}{2}, z]$	[73]
74	$[x + \frac{1}{2}, \frac{1}{2} - y, -z]$	[74]
75	$[\frac{1}{2} - x, y + \frac{1}{2}, -z]$	[75]
76	$[\frac{1}{2} - x, \frac{1}{2} - y, z]$	[76]
77	$[z + \frac{1}{2}, x + \frac{1}{2}, y]$	[77]
78	$[y + \frac{1}{2}, z + \frac{1}{2}, x]$	[78]
79	$[\frac{1}{2} - y, z + \frac{1}{2}, -x]$	[79]
80	$[\frac{1}{2} - z, \frac{1}{2} - x, y]$	[80]
81	$[\frac{1}{2} - y, \frac{1}{2} - z, x]$	[81]
82	$[z + \frac{1}{2}, \frac{1}{2} - x, -y]$	[82]
83	$[y + \frac{1}{2}, \frac{1}{2} - z, -x]$	[83]
84	$[\frac{1}{2} - z, x + \frac{1}{2}, -y]$	[84]
85	$[\frac{1}{2} - x, \frac{1}{2} - y, -z]$	[85]

*continued ...*

Table 9

No.	position	mapping
86	$[\frac{1}{2} - x, y + \frac{1}{2}, z]$	[86]
87	$[x + \frac{1}{2}, \frac{1}{2} - y, z]$	[87]
88	$[x + \frac{1}{2}, y + \frac{1}{2}, -z]$	[88]
89	$[\frac{1}{2} - z, \frac{1}{2} - x, -y]$	[89]
90	$[\frac{1}{2} - y, \frac{1}{2} - z, -x]$	[90]
91	$[y + \frac{1}{2}, \frac{1}{2} - z, x]$	[91]
92	$[z + \frac{1}{2}, x + \frac{1}{2}, -y]$	[92]
93	$[y + \frac{1}{2}, z + \frac{1}{2}, -x]$	[93]
94	$[\frac{1}{2} - z, x + \frac{1}{2}, y]$	[94]
95	$[\frac{1}{2} - y, z + \frac{1}{2}, x]$	[95]
96	$[z + \frac{1}{2}, \frac{1}{2} - x, y]$	[96]