MSG No. 225.119 $Fm\bar{3}m'$ [Type III, cubic]

Table 1: Wyckoff site: `4a`, site symmetry: `m-3m'`

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,
		25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48]
2	$\left[0, \frac{1}{2}, \frac{1}{2}\right]$	[49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,
		73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96]
3	$\left[\frac{1}{2}, 0, \frac{1}{2}\right]$	[97,98,99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,
		121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144]
4	$\left[\frac{1}{2}, \frac{1}{2}, 0\right]$	[145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,
		169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192]

Table 2: Wyckoff site: `4b`, site symmetry: `m-3m'`

No.	position	mapping
1	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	[1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,
		25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48]
2	$\left[\frac{1}{2}, 0, 0\right]$	[49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,
		73,74,75,76,77,78,79,80,81,82,83,84,85,86,87,88,89,90,91,92,93,94,95,96]
3	$\left[0, \frac{1}{2}, 0\right]$	[97,98,99,100,101,102,103,104,105,106,107,108,109,110,111,112,113,114,115,116,117,118,119,120,
		121,122,123,124,125,126,127,128,129,130,131,132,133,134,135,136,137,138,139,140,141,142,143,144]
4	$\left[0, 0, \frac{1}{2}\right]$	[145,146,147,148,149,150,151,152,153,154,155,156,157,158,159,160,161,162,163,164,165,166,167,168,
		169,170,171,172,173,174,175,176,177,178,179,180,181,182,183,184,185,186,187,188,189,190,191,192]

Table 3: Wyckoff site: `8c`, site symmetry: `-4'3m'`

No.	position	mapping
1	$\left[\frac{1}{4}, \frac{1}{4}, \frac{1}{4}\right]$	[1,5,6,44,46,48,50,58,59,88,89,93,99,103,108,133,138,143,148,152,153,182,183,187]
2	$\left[\frac{1}{4}, \frac{3}{4}, \frac{3}{4}\right]$	[2,10,11,40,41,45,49,53,54,92,94,96,100,104,105,134,135,139,147,151,156,181,186,191]
3	$\left[\frac{3}{4}, \frac{1}{4}, \frac{3}{4}\right]$	[3,7,12,37,42,47,52,56,57,86,87,91,97,101,102,140,142,144,146,154,155,184,185,189]
4	$\left[\frac{3}{4}, \frac{3}{4}, \frac{1}{4}\right]$	[4,8,9,38,39,43,51,55,60,85,90,95,98,106,107,136,137,141,145,149,150,188,190,192]
5	$\left[\frac{3}{4}, \frac{3}{4}, \frac{3}{4}\right]$	[13,17,18,32,34,36,62,70,71,76,77,81,111,115,120,121,126,131,160,164,165,170,171,175]
6	$\left[\frac{3}{4}, \frac{1}{4}, \frac{1}{4}\right]$	[14,22,23,28,29,33,61,65,66,80,82,84,112,116,117,122,123,127,159,163,168,169,174,179]
7	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}\right]$	[15,19,24,25,30,35,64,68,69,74,75,79,109,113,114,128,130,132,158,166,167,172,173,177]
8	$\left[\frac{1}{4}, \frac{1}{4}, \frac{3}{4}\right]$	[16,20,21,26,27,31,63,67,72,73,78,83,110,118,119,124,125,129,157,161,162,176,178,180]

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

No.	position	mapping
1	$\left[0, \frac{1}{4}, \frac{1}{4}\right]$	[1,14,33,46,50,61,82,93]
2	$\left[0, \frac{3}{4}, \frac{3}{4}\right]$	[2,13,34,45,49,62,81,94]
3	$\left[0, \frac{1}{4}, \frac{3}{4}\right]$	[3,16,26,37,52,63,73,86]
4	$\left[0, \frac{3}{4}, \frac{1}{4}\right]$	[4,15,25,38,51,64,74,85]
5	$\left[\frac{1}{4}, 0, \frac{1}{4}\right]$	[5,24,30,44,108,113,128,138]
6	$\left[\frac{1}{4}, \frac{1}{4}, 0\right]$	[6,21,27,48,153,162,180,183]
7	$\left[\frac{3}{4}, \frac{1}{4}, 0\right]$	[7,23,28,47,155,163,179,184]
8	$\left[\frac{3}{4}, 0, \frac{1}{4}\right]$	[8,22,29,43,106,116,127,137]
9	$\left[\frac{3}{4}, \frac{3}{4}, 0\right]$	[9,18,36,39,150,165,171,192]
10	$\left[\frac{1}{4}, 0, \frac{3}{4}\right]$	[10,20,31,41,104,118,125,139]
11	$\left[\frac{1}{4}, \frac{3}{4}, 0\right]$	[11,19,35,40,151,167,172,191]
12	$\left[\frac{3}{4}, 0, \frac{3}{4}\right]$	[12,17,32,42,101,120,126,140]
13	$\left[\frac{1}{4}, \frac{1}{2}, \frac{3}{4}\right]$	[53,72,78,92,156,161,176,186]
14	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{2}\right]$	[54,69,75,96,105,114,132,135]
15	$\left[\frac{3}{4}, \frac{3}{4}, \frac{1}{2}\right]$	[55,71,76,95,107,115,131,136]
16	$\left[\frac{3}{4}, \frac{1}{2}, \frac{3}{4}\right]$	[56,70,77,91,154,164,175,185]
17	$\left[\frac{3}{4}, \frac{1}{4}, \frac{1}{2}\right]$	[57,66,84,87,102,117,123,144]
18	$\left[\frac{1}{4}, \frac{1}{2}, \frac{1}{4}\right]$	[58,68,79,89,152,166,173,187]
19	$\left[\frac{1}{4}, \frac{1}{4}, \frac{1}{2}\right]$	[59,67,83,88,103,119,124,143]
20	$\left[\frac{3}{4}, \frac{1}{2}, \frac{1}{4}\right]$	[60,65,80,90,149,168,174,188]
21	$\left[\frac{1}{2}, \frac{1}{4}, \frac{3}{4}\right]$	[97,110,129,142,146,157,178,189]
22	$\left[\frac{1}{2}, \frac{3}{4}, \frac{1}{4}\right]$	[98,109,130,141,145,158,177,190]
23	$\left[\frac{1}{2}, \frac{1}{4}, \frac{1}{4}\right]$	[99,112,122,133,148,159,169,182]
24	$\left[\frac{1}{2}, \frac{3}{4}, \frac{3}{4}\right]$	[100,111,121,134,147,160,170,181]

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

No.	position	mapping
1	$[x, 0, 0]$	[1,2,15,16,25,26,45,46]
2	$[-x, 0, 0]$	[3,4,13,14,33,34,37,38]
3	$[0, x, 0]$	[5,12,20,22,29,31,42,44]
4	$[0, 0, x]$	[6,9,19,23,28,35,39,48]
5	$[0, 0, -x]$	[7,11,18,21,27,36,40,47]
6	$[0, -x, 0]$	[8,10,17,24,30,32,41,43]
7	$\left[x, \frac{1}{2}, \frac{1}{2}\right]$	[49,50,63,64,73,74,93,94]
8	$\left[-x, \frac{1}{2}, \frac{1}{2}\right]$	[51,52,61,62,81,82,85,86]
9	$\left[0, x+\frac{1}{2}, \frac{1}{2}\right]$	[53,60,68,70,77,79,90,92]
10	$\left[0, \frac{1}{2}, x+\frac{1}{2}\right]$	[54,57,67,71,76,83,87,96]
11	$\left[0, \frac{1}{2}, \frac{1}{2}-x\right]$	[55,59,66,69,75,84,88,95]
12	$\left[0, \frac{1}{2}-x, \frac{1}{2}\right]$	[56,58,65,72,78,80,89,91]
13	$\left[x+\frac{1}{2}, 0, \frac{1}{2}\right]$	[97,98,111,112,121,122,141,142]
14	$\left[\frac{1}{2}-x, 0, \frac{1}{2}\right]$	[99,100,109,110,129,130,133,134]
15	$\left[\frac{1}{2}, x, \frac{1}{2}\right]$	[101,108,116,118,125,127,138,140]

continued ...

Table 5

No.	position	mapping
16	$\left[\frac{1}{2}, 0, x+\frac{1}{2}\right]$	[102,105,115,119,124,131,135,144]
17	$\left[\frac{1}{2}, 0, \frac{1}{2}-x\right]$	[103,107,114,117,123,132,136,143]
18	$\left[\frac{1}{2}, -x, \frac{1}{2}\right]$	[104,106,113,120,126,128,137,139]
19	$\left[x+\frac{1}{2}, \frac{1}{2}, 0\right]$	[145,146,159,160,169,170,189,190]
20	$\left[\frac{1}{2}-x, \frac{1}{2}, 0\right]$	[147,148,157,158,177,178,181,182]
21	$\left[\frac{1}{2}, x+\frac{1}{2}, 0\right]$	[149,156,164,166,173,175,186,188]
22	$\left[\frac{1}{2}, \frac{1}{2}, x\right]$	[150,153,163,167,172,179,183,192]
23	$\left[\frac{1}{2}, \frac{1}{2}, -x\right]$	[151,155,162,165,171,180,184,191]
24	$\left[\frac{1}{2}, \frac{1}{2}-x, 0\right]$	[152,154,161,168,174,176,185,187]

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

No.	position	mapping
1	$[x, x, x]$	[1,5,6,44,46,48]
2	$[x, -x, -x]$	[2,10,11,40,41,45]
3	$[-x, x, -x]$	[3,7,12,37,42,47]
4	$[-x, -x, x]$	[4,8,9,38,39,43]
5	$[-x, -x, -x]$	[13,17,18,32,34,36]
6	$[-x, x, x]$	[14,22,23,28,29,33]
7	$[x, -x, x]$	[15,19,24,25,30,35]
8	$[x, x, -x]$	[16,20,21,26,27,31]
9	$\left[x, x+\frac{1}{2}, x+\frac{1}{2}\right]$	[49,53,54,92,94,96]
10	$\left[x, \frac{1}{2}-x, \frac{1}{2}-x\right]$	[50,58,59,88,89,93]
11	$\left[-x, x+\frac{1}{2}, \frac{1}{2}-x\right]$	[51,55,60,85,90,95]
12	$\left[-x, \frac{1}{2}-x, x+\frac{1}{2}\right]$	[52,56,57,86,87,91]
13	$\left[-x, \frac{1}{2}-x, \frac{1}{2}-x\right]$	[61,65,66,80,82,84]
14	$\left[-x, x+\frac{1}{2}, x+\frac{1}{2}\right]$	[62,70,71,76,77,81]
15	$\left[x, \frac{1}{2}-x, x+\frac{1}{2}\right]$	[63,67,72,73,78,83]
16	$\left[x, x+\frac{1}{2}, \frac{1}{2}-x\right]$	[64,68,69,74,75,79]
17	$\left[x+\frac{1}{2}, x, x+\frac{1}{2}\right]$	[97,101,102,140,142,144]
18	$\left[x+\frac{1}{2}, -x, \frac{1}{2}-x\right]$	[98,106,107,136,137,141]
19	$\left[\frac{1}{2}-x, x, \frac{1}{2}-x\right]$	[99,103,108,133,138,143]
20	$\left[\frac{1}{2}-x, -x, x+\frac{1}{2}\right]$	[100,104,105,134,135,139]
21	$\left[\frac{1}{2}-x, -x, \frac{1}{2}-x\right]$	[109,113,114,128,130,132]
22	$\left[\frac{1}{2}-x, x, x+\frac{1}{2}\right]$	[110,118,119,124,125,129]
23	$\left[x+\frac{1}{2}, -x, x+\frac{1}{2}\right]$	[111,115,120,121,126,131]
24	$\left[x+\frac{1}{2}, x, \frac{1}{2}-x\right]$	[112,116,117,122,123,127]
25	$\left[x+\frac{1}{2}, x+\frac{1}{2}, x\right]$	[145,149,150,188,190,192]
26	$\left[x+\frac{1}{2}, \frac{1}{2}-x, -x\right]$	[146,154,155,184,185,189]
27	$\left[\frac{1}{2}-x, x+\frac{1}{2}, -x\right]$	[147,151,156,181,186,191]
28	$\left[\frac{1}{2}-x, \frac{1}{2}-x, x\right]$	[148,152,153,182,183,187]
29	$\left[\frac{1}{2}-x, \frac{1}{2}-x, -x\right]$	[157,161,162,176,178,180]
30	$\left[\frac{1}{2}-x, x+\frac{1}{2}, x\right]$	[158,166,167,172,173,177]
31	$\left[x+\frac{1}{2}, \frac{1}{2}-x, x\right]$	[159,163,168,169,174,179]

continued ...

Table 6

No.	position	mapping
32	$\left[x+\frac{1}{2}, x+\frac{1}{2}, -x\right]$	[160,164,165,170,171,175]

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

No.	position	mapping
1	$\left[x, \frac{1}{4}, \frac{1}{4}\right]$	[1,46,50,93]
2	$\left[x, \frac{3}{4}, \frac{3}{4}\right]$	[2,45,49,94]
3	$\left[-x, \frac{1}{4}, \frac{3}{4}\right]$	[3,37,52,86]
4	$\left[-x, \frac{3}{4}, \frac{1}{4}\right]$	[4,38,51,85]
5	$\left[\frac{1}{4}, x, \frac{1}{4}\right]$	[5,44,108,138]
6	$\left[\frac{1}{4}, \frac{1}{4}, x\right]$	[6,48,153,183]
7	$\left[\frac{3}{4}, \frac{1}{4}, -x\right]$	[7,47,155,184]
8	$\left[\frac{3}{4}, -x, \frac{1}{4}\right]$	[8,43,106,137]
9	$\left[\frac{3}{4}, \frac{3}{4}, x\right]$	[9,39,150,192]
10	$\left[\frac{1}{4}, -x, \frac{3}{4}\right]$	[10,41,104,139]
11	$\left[\frac{1}{4}, \frac{3}{4}, -x\right]$	[11,40,151,191]
12	$\left[\frac{3}{4}, x, \frac{3}{4}\right]$	[12,42,101,140]
13	$\left[-x, \frac{3}{4}, \frac{3}{4}\right]$	[13,34,62,81]
14	$\left[-x, \frac{1}{4}, \frac{1}{4}\right]$	[14,33,61,82]
15	$\left[x, \frac{3}{4}, \frac{1}{4}\right]$	[15,25,64,74]
16	$\left[x, \frac{1}{4}, \frac{3}{4}\right]$	[16,26,63,73]
17	$\left[\frac{3}{4}, -x, \frac{3}{4}\right]$	[17,32,120,126]
18	$\left[\frac{3}{4}, \frac{3}{4}, -x\right]$	[18,36,165,171]
19	$\left[\frac{1}{4}, \frac{3}{4}, x\right]$	[19,35,167,172]
20	$\left[\frac{1}{4}, x, \frac{3}{4}\right]$	[20,31,118,125]
21	$\left[\frac{1}{4}, \frac{1}{4}, -x\right]$	[21,27,162,180]
22	$\left[\frac{3}{4}, x, \frac{1}{4}\right]$	[22,29,116,127]
23	$\left[\frac{3}{4}, \frac{1}{4}, x\right]$	[23,28,163,179]
24	$\left[\frac{1}{4}, -x, \frac{1}{4}\right]$	[24,30,113,128]
25	$\left[\frac{1}{4}, x+\frac{1}{2}, \frac{3}{4}\right]$	[53,92,156,186]
26	$\left[\frac{1}{4}, \frac{3}{4}, x+\frac{1}{2}\right]$	[54,96,105,135]
27	$\left[\frac{3}{4}, \frac{3}{4}, \frac{1}{2}-x\right]$	[55,95,107,136]
28	$\left[\frac{3}{4}, \frac{1}{2}-x, \frac{3}{4}\right]$	[56,91,154,185]
29	$\left[\frac{3}{4}, \frac{1}{4}, x+\frac{1}{2}\right]$	[57,87,102,144]
30	$\left[\frac{1}{4}, \frac{1}{2}-x, \frac{1}{4}\right]$	[58,89,152,187]
31	$\left[\frac{1}{4}, \frac{1}{4}, \frac{1}{2}-x\right]$	[59,88,103,143]
32	$\left[\frac{3}{4}, x+\frac{1}{2}, \frac{1}{4}\right]$	[60,90,149,188]
33	$\left[\frac{3}{4}, \frac{1}{2}-x, \frac{1}{4}\right]$	[65,80,168,174]
34	$\left[\frac{3}{4}, \frac{1}{4}, \frac{1}{2}-x\right]$	[66,84,117,123]
35	$\left[\frac{1}{4}, \frac{1}{4}, x+\frac{1}{2}\right]$	[67,83,119,124]
36	$\left[\frac{1}{4}, x+\frac{1}{2}, \frac{1}{4}\right]$	[68,79,166,173]
37	$\left[\frac{1}{4}, \frac{3}{4}, \frac{1}{2}-x\right]$	[69,75,114,132]
38	$\left[\frac{3}{4}, x+\frac{1}{2}, \frac{3}{4}\right]$	[70,77,164,175]
39	$\left[\frac{3}{4}, \frac{3}{4}, x+\frac{1}{2}\right]$	[71,76,115,131]

continued ...

Table 7

No.	position	mapping
40	$\left[\frac{1}{4},\ \frac{1}{2}-x,\ \frac{3}{4}\right]$	[72,78,161,176]
41	$\left[x+\frac{1}{2},\ \frac{1}{4},\ \frac{3}{4}\right]$	[97,142,146,189]
42	$\left[x+\frac{1}{2},\ \frac{3}{4},\ \frac{1}{4}\right]$	[98,141,145,190]
43	$\left[\frac{1}{2}-x,\ \frac{1}{4},\ \frac{1}{4}\right]$	[99,133,148,182]
44	$\left[\frac{1}{2}-x,\ \frac{3}{4},\ \frac{3}{4}\right]$	[100,134,147,181]
45	$\left[\frac{1}{2}-x,\ \frac{3}{4},\ \frac{1}{4}\right]$	[109,130,158,177]
46	$\left[\frac{1}{2}-x,\ \frac{1}{4},\ \frac{3}{4}\right]$	[110,129,157,178]
47	$\left[x+\frac{1}{2},\ \frac{3}{4},\ \frac{3}{4}\right]$	[111,121,160,170]
48	$\left[x+\frac{1}{2},\ \frac{1}{4},\ \frac{1}{4}\right]$	[112,122,159,169]

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

No.	position	mapping
1	$[0,\ y,\ y]$	[1,14,33,46]
2	$[0,\ -y,\ -y]$	[2,13,34,45]
3	$[0,\ y,\ -y]$	[3,16,26,37]
4	$[0,\ -y,\ y]$	[4,15,25,38]
5	$[y,\ 0,\ y]$	[5,24,30,44]
6	$[y,\ y,\ 0]$	[6,21,27,48]
7	$[-y,\ y,\ 0]$	[7,23,28,47]
8	$[-y,\ 0,\ y]$	[8,22,29,43]
9	$[-y,\ -y,\ 0]$	[9,18,36,39]
10	$[y,\ 0,\ -y]$	[10,20,31,41]
11	$[y,\ -y,\ 0]$	[11,19,35,40]
12	$[-y,\ 0,\ -y]$	[12,17,32,42]
13	$\left[0,\ y+\frac{1}{2},\ y+\frac{1}{2}\right]$	[49,62,81,94]
14	$\left[0,\ \frac{1}{2}-y,\ \frac{1}{2}-y\right]$	[50,61,82,93]
15	$\left[0,\ y+\frac{1}{2},\ \frac{1}{2}-y\right]$	[51,64,74,85]
16	$\left[0,\ \frac{1}{2}-y,\ y+\frac{1}{2}\right]$	[52,63,73,86]
17	$\left[y,\ \frac{1}{2},\ y+\frac{1}{2}\right]$	[53,72,78,92]
18	$\left[y,\ y+\frac{1}{2},\ \frac{1}{2}\right]$	[54,69,75,96]
19	$\left[-y,\ y+\frac{1}{2},\ \frac{1}{2}\right]$	[55,71,76,95]
20	$\left[-y,\ \frac{1}{2},\ y+\frac{1}{2}\right]$	[56,70,77,91]
21	$\left[-y,\ \frac{1}{2}-y,\ \frac{1}{2}\right]$	[57,66,84,87]
22	$\left[y,\ \frac{1}{2},\ \frac{1}{2}-y\right]$	[58,68,79,89]
23	$\left[y,\ \frac{1}{2}-y,\ \frac{1}{2}\right]$	[59,67,83,88]
24	$\left[-y,\ \frac{1}{2},\ \frac{1}{2}-y\right]$	[60,65,80,90]
25	$\left[\frac{1}{2},\ y,\ y+\frac{1}{2}\right]$	[97,110,129,142]
26	$\left[\frac{1}{2},\ -y,\ \frac{1}{2}-y\right]$	[98,109,130,141]
27	$\left[\frac{1}{2},\ y,\ \frac{1}{2}-y\right]$	[99,112,122,133]
28	$\left[\frac{1}{2},\ -y,\ y+\frac{1}{2}\right]$	[100,111,121,134]
29	$\left[y+\frac{1}{2},\ 0,\ y+\frac{1}{2}\right]$	[101,120,126,140]
30	$\left[y+\frac{1}{2},\ y,\ \frac{1}{2}\right]$	[102,117,123,144]
31	$\left[\frac{1}{2}-y,\ y,\ \frac{1}{2}\right]$	[103,119,124,143]

continued ...

Table 8

No.	position	mapping
32	$\left[\frac{1}{2}-y,\ 0,\ y+\frac{1}{2}\right]$	[104,118,125,139]
33	$\left[\frac{1}{2}-y,\ -y,\ \frac{1}{2}\right]$	[105,114,132,135]
34	$\left[y+\frac{1}{2},\ 0,\ \frac{1}{2}-y\right]$	[106,116,127,137]
35	$\left[y+\frac{1}{2},\ -y,\ \frac{1}{2}\right]$	[107,115,131,136]
36	$\left[\frac{1}{2}-y,\ 0,\ \frac{1}{2}-y\right]$	[108,113,128,138]
37	$\left[\frac{1}{2},\ y+\frac{1}{2},\ y\right]$	[145,158,177,190]
38	$\left[\frac{1}{2},\ \frac{1}{2}-y,\ -y\right]$	[146,157,178,189]
39	$\left[\frac{1}{2},\ y+\frac{1}{2},\ -y\right]$	[147,160,170,181]
40	$\left[\frac{1}{2},\ \frac{1}{2}-y,\ y\right]$	[148,159,169,182]
41	$\left[y+\frac{1}{2},\ \frac{1}{2},\ y\right]$	[149,168,174,188]
42	$\left[y+\frac{1}{2},\ y+\frac{1}{2},\ 0\right]$	[150,165,171,192]
43	$\left[\frac{1}{2}-y,\ y+\frac{1}{2},\ 0\right]$	[151,167,172,191]
44	$\left[\frac{1}{2}-y,\ \frac{1}{2},\ y\right]$	[152,166,173,187]
45	$\left[\frac{1}{2}-y,\ \frac{1}{2}-y,\ 0\right]$	[153,162,180,183]
46	$\left[y+\frac{1}{2},\ \frac{1}{2},\ -y\right]$	[154,164,175,185]
47	$\left[y+\frac{1}{2},\ \frac{1}{2}-y,\ 0\right]$	[155,163,179,184]
48	$\left[\frac{1}{2}-y,\ \frac{1}{2},\ -y\right]$	[156,161,176,186]

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

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

continued ...

Table 9

No.	position	mapping
24	$\left[-y,\, 0,\, \frac{1}{2}-y\right]$	[60,65,80,90]
25	$\left[0,\, y,\, y+\frac{1}{2}\right]$	[97,110,129,142]
26	$\left[0,\, -y,\, \frac{1}{2}-y\right]$	[98,109,130,141]
27	$\left[0,\, y,\, \frac{1}{2}-y\right]$	[99,112,122,133]
28	$\left[0,\, -y,\, y+\frac{1}{2}\right]$	[100,111,121,134]
29	$\left[y+\frac{1}{2},\, \frac{1}{2},\, y+\frac{1}{2}\right]$	[101,120,126,140]
30	$\left[y+\frac{1}{2},\, y,\, 0\right]$	[102,117,123,144]
31	$\left[\frac{1}{2}-y,\, y,\, 0\right]$	[103,119,124,143]
32	$\left[\frac{1}{2}-y,\, \frac{1}{2},\, y+\frac{1}{2}\right]$	[104,118,125,139]
33	$\left[\frac{1}{2}-y,\, -y,\, 0\right]$	[105,114,132,135]
34	$\left[y+\frac{1}{2},\, \frac{1}{2},\, \frac{1}{2}-y\right]$	[106,116,127,137]
35	$\left[y+\frac{1}{2},\, -y,\, 0\right]$	[107,115,131,136]
36	$\left[\frac{1}{2}-y,\, \frac{1}{2},\, \frac{1}{2}-y\right]$	[108,113,128,138]
37	$\left[0,\, y+\frac{1}{2},\, y\right]$	[145,158,177,190]
38	$\left[0,\, \frac{1}{2}-y,\, -y\right]$	[146,157,178,189]
39	$\left[0,\, y+\frac{1}{2},\, -y\right]$	[147,160,170,181]
40	$\left[0,\, \frac{1}{2}-y,\, y\right]$	[148,159,169,182]
41	$\left[y+\frac{1}{2},\, 0,\, y\right]$	[149,168,174,188]
42	$\left[y+\frac{1}{2},\, y+\frac{1}{2},\, \frac{1}{2}\right]$	[150,165,171,192]
43	$\left[\frac{1}{2}-y,\, y+\frac{1}{2},\, \frac{1}{2}\right]$	[151,167,172,191]
44	$\left[\frac{1}{2}-y,\, 0,\, y\right]$	[152,166,173,187]
45	$\left[\frac{1}{2}-y,\, \frac{1}{2}-y,\, \frac{1}{2}\right]$	[153,162,180,183]
46	$\left[y+\frac{1}{2},\, 0,\, -y\right]$	[154,164,175,185]
47	$\left[y+\frac{1}{2},\, \frac{1}{2}-y,\, \frac{1}{2}\right]$	[155,163,179,184]
48	$\left[\frac{1}{2}-y,\, 0,\, -y\right]$	[156,161,176,186]

Table 10: Wyckoff site: 96j, site symmetry: m..

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	$[0,\, -z,\, y]$	[25,38]
14	$[0,\, z,\, -y]$	[26,37]
15	$[z,\, y,\, 0]$	[27,48]

continued ...

Table 10

No.	position	mapping
16	$[-z,\ y,\ 0]$	[28,47]
17	$[-y,\ 0,\ z]$	[29,43]
18	$[y,\ 0,\ z]$	[30,44]
19	$[y,\ 0,\ -z]$	[31,41]
20	$[-y,\ 0,\ -z]$	[32,42]
21	$[0,\ z,\ y]$	[33,46]
22	$[0,\ -z,\ -y]$	[34,45]
23	$[z,\ -y,\ 0]$	[35,40]
24	$[-z,\ -y,\ 0]$	[36,39]
25	$\left[0,\ y+\frac{1}{2},\ z+\frac{1}{2}\right]$	[49,62]
26	$\left[0,\ \frac{1}{2}-y,\ \frac{1}{2}-z\right]$	[50,61]
27	$\left[0,\ y+\frac{1}{2},\ \frac{1}{2}-z\right]$	[51,64]
28	$\left[0,\ \frac{1}{2}-y,\ z+\frac{1}{2}\right]$	[52,63]
29	$\left[z,\ \frac{1}{2},\ y+\frac{1}{2}\right]$	[53,72]
30	$\left[y,\ z+\frac{1}{2},\ \frac{1}{2}\right]$	[54,69]
31	$\left[-y,\ z+\frac{1}{2},\ \frac{1}{2}\right]$	[55,71]
32	$\left[-z,\ \frac{1}{2},\ y+\frac{1}{2}\right]$	[56,70]
33	$\left[-y,\ \frac{1}{2}-z,\ \frac{1}{2}\right]$	[57,66]
34	$\left[z,\ \frac{1}{2},\ \frac{1}{2}-y\right]$	[58,68]
35	$\left[y,\ \frac{1}{2}-z,\ \frac{1}{2}\right]$	[59,67]
36	$\left[-z,\ \frac{1}{2},\ \frac{1}{2}-y\right]$	[60,65]
37	$\left[0,\ \frac{1}{2}-z,\ y+\frac{1}{2}\right]$	[73,86]
38	$\left[0,\ z+\frac{1}{2},\ \frac{1}{2}-y\right]$	[74,85]
39	$\left[z,\ y+\frac{1}{2},\ \frac{1}{2}\right]$	[75,96]
40	$\left[-z,\ y+\frac{1}{2},\ \frac{1}{2}\right]$	[76,95]
41	$\left[-y,\ \frac{1}{2},\ z+\frac{1}{2}\right]$	[77,91]
42	$\left[y,\ \frac{1}{2},\ z+\frac{1}{2}\right]$	[78,92]
43	$\left[y,\ \frac{1}{2},\ \frac{1}{2}-z\right]$	[79,89]
44	$\left[-y,\ \frac{1}{2},\ \frac{1}{2}-z\right]$	[80,90]
45	$\left[0,\ z+\frac{1}{2},\ y+\frac{1}{2}\right]$	[81,94]
46	$\left[0,\ \frac{1}{2}-z,\ \frac{1}{2}-y\right]$	[82,93]
47	$\left[z,\ \frac{1}{2}-y,\ \frac{1}{2}\right]$	[83,88]
48	$\left[-z,\ \frac{1}{2}-y,\ \frac{1}{2}\right]$	[84,87]
49	$\left[\frac{1}{2},\ y,\ z+\frac{1}{2}\right]$	[97,110]
50	$\left[\frac{1}{2},\ -y,\ \frac{1}{2}-z\right]$	[98,109]
51	$\left[\frac{1}{2},\ y,\ \frac{1}{2}-z\right]$	[99,112]
52	$\left[\frac{1}{2},\ -y,\ z+\frac{1}{2}\right]$	[100,111]
53	$\left[z+\frac{1}{2},\ 0,\ y+\frac{1}{2}\right]$	[101,120]
54	$\left[y+\frac{1}{2},\ z,\ \frac{1}{2}\right]$	[102,117]
55	$\left[\frac{1}{2}-y,\ z,\ \frac{1}{2}\right]$	[103,119]
56	$\left[\frac{1}{2}-z,\ 0,\ y+\frac{1}{2}\right]$	[104,118]
57	$\left[\frac{1}{2}-y,\ -z,\ \frac{1}{2}\right]$	[105,114]
58	$\left[z+\frac{1}{2},\ 0,\ \frac{1}{2}-y\right]$	[106,116]
59	$\left[y+\frac{1}{2},\ -z,\ \frac{1}{2}\right]$	[107,115]
60	$\left[\frac{1}{2}-z,\ 0,\ \frac{1}{2}-y\right]$	[108,113]
61	$\left[\frac{1}{2},\ -z,\ y+\frac{1}{2}\right]$	[121,134]
62	$\left[\frac{1}{2},\ z,\ \frac{1}{2}-y\right]$	[122,133]

continued ...

Table 10

No.	position	mapping
63	$\left[z+\frac{1}{2},\, y,\, \frac{1}{2}\right]$	[123,144]
64	$\left[\frac{1}{2}-z,\, y,\, \frac{1}{2}\right]$	[124,143]
65	$\left[\frac{1}{2}-y,\, 0,\, z+\frac{1}{2}\right]$	[125,139]
66	$\left[y+\frac{1}{2},\, 0,\, z+\frac{1}{2}\right]$	[126,140]
67	$\left[y+\frac{1}{2},\, 0,\, \frac{1}{2}-z\right]$	[127,137]
68	$\left[\frac{1}{2}-y,\, 0,\, \frac{1}{2}-z\right]$	[128,138]
69	$\left[\frac{1}{2},\, z,\, y+\frac{1}{2}\right]$	[129,142]
70	$\left[\frac{1}{2},\, -z,\, \frac{1}{2}-y\right]$	[130,141]
71	$\left[z+\frac{1}{2},\, -y,\, \frac{1}{2}\right]$	[131,136]
72	$\left[\frac{1}{2}-z,\, -y,\, \frac{1}{2}\right]$	[132,135]
73	$\left[\frac{1}{2},\, y+\frac{1}{2},\, z\right]$	[145,158]
74	$\left[\frac{1}{2},\, \frac{1}{2}-y,\, -z\right]$	[146,157]
75	$\left[\frac{1}{2},\, y+\frac{1}{2},\, -z\right]$	[147,160]
76	$\left[\frac{1}{2},\, \frac{1}{2}-y,\, z\right]$	[148,159]
77	$\left[z+\frac{1}{2},\, \frac{1}{2},\, y\right]$	[149,168]
78	$\left[y+\frac{1}{2},\, z+\frac{1}{2},\, 0\right]$	[150,165]
79	$\left[\frac{1}{2}-y,\, z+\frac{1}{2},\, 0\right]$	[151,167]
80	$\left[\frac{1}{2}-z,\, \frac{1}{2},\, y\right]$	[152,166]
81	$\left[\frac{1}{2}-y,\, \frac{1}{2}-z,\, 0\right]$	[153,162]
82	$\left[z+\frac{1}{2},\, \frac{1}{2},\, -y\right]$	[154,164]
83	$\left[y+\frac{1}{2},\, \frac{1}{2}-z,\, 0\right]$	[155,163]
84	$\left[\frac{1}{2}-z,\, \frac{1}{2},\, -y\right]$	[156,161]
85	$\left[\frac{1}{2},\, \frac{1}{2}-z,\, y\right]$	[169,182]
86	$\left[\frac{1}{2},\, z+\frac{1}{2},\, -y\right]$	[170,181]
87	$\left[z+\frac{1}{2},\, y+\frac{1}{2},\, 0\right]$	[171,192]
88	$\left[\frac{1}{2}-z,\, y+\frac{1}{2},\, 0\right]$	[172,191]
89	$\left[\frac{1}{2}-y,\, \frac{1}{2},\, z\right]$	[173,187]
90	$\left[y+\frac{1}{2},\, \frac{1}{2},\, z\right]$	[174,188]
91	$\left[y+\frac{1}{2},\, \frac{1}{2},\, -z\right]$	[175,185]
92	$\left[\frac{1}{2}-y,\, \frac{1}{2},\, -z\right]$	[176,186]
93	$\left[\frac{1}{2},\, z+\frac{1}{2},\, y\right]$	[177,190]
94	$\left[\frac{1}{2},\, \frac{1}{2}-z,\, -y\right]$	[178,189]
95	$\left[z+\frac{1}{2},\, \frac{1}{2}-y,\, 0\right]$	[179,184]
96	$\left[\frac{1}{2}-z,\, \frac{1}{2}-y,\, 0\right]$	[180,183]

Table 11: Wyckoff site: 96k, site symmetry: ..m'

No.	position	mapping
1	$[x,\, x,\, z]$	[1,44]
2	$[x,\, -x,\, -z]$	[2,41]
3	$[-x,\, x,\, -z]$	[3,42]
4	$[-x,\, -x,\, z]$	[4,43]
5	$[z,\, x,\, x]$	[5,48]
6	$[x,\, z,\, x]$	[6,46]

continued ...

Table 11

No.	position	mapping
7	$[-x,\, z,\, -x]$	[7,37]
8	$[-z,\, -x,\, x]$	[8,39]
9	$[-x,\, -z,\, x]$	[9,38]
10	$[z,\, -x,\, -x]$	[10,40]
11	$[x,\, -z,\, -x]$	[11,45]
12	$[-z,\, x,\, -x]$	[12,47]
13	$[-x,\, -x,\, -z]$	[13,32]
14	$[-x,\, x,\, z]$	[14,29]
15	$[x,\, -x,\, z]$	[15,30]
16	$[x,\, x,\, -z]$	[16,31]
17	$[-z,\, -x,\, -x]$	[17,36]
18	$[-x,\, -z,\, -x]$	[18,34]
19	$[x,\, -z,\, x]$	[19,25]
20	$[z,\, x,\, -x]$	[20,27]
21	$[x,\, z,\, -x]$	[21,26]
22	$[-z,\, x,\, x]$	[22,28]
23	$[-x,\, z,\, x]$	[23,33]
24	$[z,\, -x,\, x]$	[24,35]
25	$\left[x,\, x+\frac{1}{2},\, z+\frac{1}{2}\right]$	[49,92]
26	$\left[x,\, \frac{1}{2}-x,\, \frac{1}{2}-z\right]$	[50,89]
27	$\left[-x,\, x+\frac{1}{2},\, \frac{1}{2}-z\right]$	[51,90]
28	$\left[-x,\, \frac{1}{2}-x,\, z+\frac{1}{2}\right]$	[52,91]
29	$\left[z,\, x+\frac{1}{2},\, x+\frac{1}{2}\right]$	[53,96]
30	$\left[x,\, z+\frac{1}{2},\, x+\frac{1}{2}\right]$	[54,94]
31	$\left[-x,\, z+\frac{1}{2},\, \frac{1}{2}-x\right]$	[55,85]
32	$\left[-z,\, \frac{1}{2}-x,\, x+\frac{1}{2}\right]$	[56,87]
33	$\left[-x,\, \frac{1}{2}-z,\, x+\frac{1}{2}\right]$	[57,86]
34	$\left[z,\, \frac{1}{2}-x,\, \frac{1}{2}-x\right]$	[58,88]
35	$\left[x,\, \frac{1}{2}-z,\, \frac{1}{2}-x\right]$	[59,93]
36	$\left[-z,\, x+\frac{1}{2},\, \frac{1}{2}-x\right]$	[60,95]
37	$\left[-x,\, \frac{1}{2}-x,\, \frac{1}{2}-z\right]$	[61,80]
38	$\left[-x,\, x+\frac{1}{2},\, z+\frac{1}{2}\right]$	[62,77]
39	$\left[x,\, \frac{1}{2}-x,\, z+\frac{1}{2}\right]$	[63,78]
40	$\left[x,\, x+\frac{1}{2},\, \frac{1}{2}-z\right]$	[64,79]
41	$\left[-z,\, \frac{1}{2}-x,\, \frac{1}{2}-x\right]$	[65,84]
42	$\left[-x,\, \frac{1}{2}-z,\, \frac{1}{2}-x\right]$	[66,82]
43	$\left[x,\, \frac{1}{2}-z,\, x+\frac{1}{2}\right]$	[67,73]
44	$\left[z,\, x+\frac{1}{2},\, \frac{1}{2}-x\right]$	[68,75]
45	$\left[x,\, z+\frac{1}{2},\, \frac{1}{2}-x\right]$	[69,74]
46	$\left[-z,\, x+\frac{1}{2},\, x+\frac{1}{2}\right]$	[70,76]
47	$\left[-x,\, z+\frac{1}{2},\, x+\frac{1}{2}\right]$	[71,81]
48	$\left[z,\, \frac{1}{2}-x,\, x+\frac{1}{2}\right]$	[72,83]
49	$\left[x+\frac{1}{2},\, x,\, z+\frac{1}{2}\right]$	[97,140]
50	$\left[x+\frac{1}{2},\, -x,\, \frac{1}{2}-z\right]$	[98,137]
51	$\left[\frac{1}{2}-x,\, x,\, \frac{1}{2}-z\right]$	[99,138]
52	$\left[\frac{1}{2}-x,\, -x,\, z+\frac{1}{2}\right]$	[100,139]
53	$\left[z+\frac{1}{2},\, x,\, x+\frac{1}{2}\right]$	[101,144]

continued ...

Table 11

No.	position	mapping
54	$\left[x+\frac{1}{2},\, z,\, x+\frac{1}{2}\right]$	[102,142]
55	$\left[\frac{1}{2}-x,\, z,\, \frac{1}{2}-x\right]$	[103,133]
56	$\left[\frac{1}{2}-z,\, -x,\, x+\frac{1}{2}\right]$	[104,135]
57	$\left[\frac{1}{2}-x,\, -z,\, x+\frac{1}{2}\right]$	[105,134]
58	$\left[z+\frac{1}{2},\, -x,\, \frac{1}{2}-x\right]$	[106,136]
59	$\left[x+\frac{1}{2},\, -z,\, \frac{1}{2}-x\right]$	[107,141]
60	$\left[\frac{1}{2}-z,\, x,\, \frac{1}{2}-x\right]$	[108,143]
61	$\left[\frac{1}{2}-x,\, -x,\, \frac{1}{2}-z\right]$	[109,128]
62	$\left[\frac{1}{2}-x,\, x,\, z+\frac{1}{2}\right]$	[110,125]
63	$\left[x+\frac{1}{2},\, -x,\, z+\frac{1}{2}\right]$	[111,126]
64	$\left[x+\frac{1}{2},\, x,\, \frac{1}{2}-z\right]$	[112,127]
65	$\left[\frac{1}{2}-z,\, -x,\, \frac{1}{2}-x\right]$	[113,132]
66	$\left[\frac{1}{2}-x,\, -z,\, \frac{1}{2}-x\right]$	[114,130]
67	$\left[x+\frac{1}{2},\, -z,\, x+\frac{1}{2}\right]$	[115,121]
68	$\left[z+\frac{1}{2},\, x,\, \frac{1}{2}-x\right]$	[116,123]
69	$\left[x+\frac{1}{2},\, z,\, \frac{1}{2}-x\right]$	[117,122]
70	$\left[\frac{1}{2}-z,\, x,\, x+\frac{1}{2}\right]$	[118,124]
71	$\left[\frac{1}{2}-x,\, z,\, x+\frac{1}{2}\right]$	[119,129]
72	$\left[z+\frac{1}{2},\, -x,\, x+\frac{1}{2}\right]$	[120,131]
73	$\left[x+\frac{1}{2},\, x+\frac{1}{2},\, z\right]$	[145,188]
74	$\left[x+\frac{1}{2},\, \frac{1}{2}-x,\, -z\right]$	[146,185]
75	$\left[\frac{1}{2}-x,\, x+\frac{1}{2},\, -z\right]$	[147,186]
76	$\left[\frac{1}{2}-x,\, \frac{1}{2}-x,\, z\right]$	[148,187]
77	$\left[z+\frac{1}{2},\, x+\frac{1}{2},\, x\right]$	[149,192]
78	$\left[x+\frac{1}{2},\, z+\frac{1}{2},\, x\right]$	[150,190]
79	$\left[\frac{1}{2}-x,\, z+\frac{1}{2},\, -x\right]$	[151,181]
80	$\left[\frac{1}{2}-z,\, \frac{1}{2}-x,\, x\right]$	[152,183]
81	$\left[\frac{1}{2}-x,\, \frac{1}{2}-z,\, x\right]$	[153,182]
82	$\left[z+\frac{1}{2},\, \frac{1}{2}-x,\, -x\right]$	[154,184]
83	$\left[x+\frac{1}{2},\, \frac{1}{2}-z,\, -x\right]$	[155,189]
84	$\left[\frac{1}{2}-z,\, x+\frac{1}{2},\, -x\right]$	[156,191]
85	$\left[\frac{1}{2}-x,\, \frac{1}{2}-x,\, -z\right]$	[157,176]
86	$\left[\frac{1}{2}-x,\, x+\frac{1}{2},\, z\right]$	[158,173]
87	$\left[x+\frac{1}{2},\, \frac{1}{2}-x,\, z\right]$	[159,174]
88	$\left[x+\frac{1}{2},\, x+\frac{1}{2},\, -z\right]$	[160,175]
89	$\left[\frac{1}{2}-z,\, \frac{1}{2}-x,\, -x\right]$	[161,180]
90	$\left[\frac{1}{2}-x,\, \frac{1}{2}-z,\, -x\right]$	[162,178]
91	$\left[x+\frac{1}{2},\, \frac{1}{2}-z,\, x\right]$	[163,169]
92	$\left[z+\frac{1}{2},\, x+\frac{1}{2},\, -x\right]$	[164,171]
93	$\left[x+\frac{1}{2},\, z+\frac{1}{2},\, -x\right]$	[165,170]
94	$\left[\frac{1}{2}-z,\, x+\frac{1}{2},\, x\right]$	[166,172]
95	$\left[\frac{1}{2}-x,\, z+\frac{1}{2},\, x\right]$	[167,177]
96	$\left[z+\frac{1}{2},\, \frac{1}{2}-x,\, x\right]$	[168,179]

Table 12: Wyckoff site: 1921, 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	$[x,\ -z,\ y]$	[25]
26	$[x,\ z,\ -y]$	[26]
27	$[z,\ y,\ -x]$	[27]
28	$[-z,\ y,\ x]$	[28]
29	$[-y,\ x,\ z]$	[29]
30	$[y,\ -x,\ z]$	[30]
31	$[y,\ x,\ -z]$	[31]
32	$[-y,\ -x,\ -z]$	[32]
33	$[-x,\ z,\ y]$	[33]
34	$[-x,\ -z,\ -y]$	[34]
35	$[z,\ -y,\ x]$	[35]
36	$[-z,\ -y,\ -x]$	[36]
37	$[-x,\ z,\ -y]$	[37]
38	$[-x,\ -z,\ y]$	[38]
39	$[-z,\ -y,\ x]$	[39]
40	$[z,\ -y,\ -x]$	[40]
41	$[y,\ -x,\ -z]$	[41]
42	$[-y,\ x,\ -z]$	[42]
43	$[-y,\ -x,\ z]$	[43]
44	$[y,\ x,\ z]$	[44]
45	$[x,\ -z,\ -y]$	[45]
46	$[x,\ z,\ y]$	[46]

continued ...

Table 12

No.	position	mapping
47	$[-z,\, y,\, -x]$	[47]
48	$[z,\, y,\, x]$	[48]
49	$\left[x,\, y+\frac{1}{2},\, z+\frac{1}{2}\right]$	[49]
50	$\left[x,\, \frac{1}{2}-y,\, \frac{1}{2}-z\right]$	[50]
51	$\left[-x,\, y+\frac{1}{2},\, \frac{1}{2}-z\right]$	[51]
52	$\left[-x,\, \frac{1}{2}-y,\, z+\frac{1}{2}\right]$	[52]
53	$\left[z,\, x+\frac{1}{2},\, y+\frac{1}{2}\right]$	[53]
54	$\left[y,\, z+\frac{1}{2},\, x+\frac{1}{2}\right]$	[54]
55	$\left[-y,\, z+\frac{1}{2},\, \frac{1}{2}-x\right]$	[55]
56	$\left[-z,\, \frac{1}{2}-x,\, y+\frac{1}{2}\right]$	[56]
57	$\left[-y,\, \frac{1}{2}-z,\, x+\frac{1}{2}\right]$	[57]
58	$\left[z,\, \frac{1}{2}-x,\, \frac{1}{2}-y\right]$	[58]
59	$\left[y,\, \frac{1}{2}-z,\, \frac{1}{2}-x\right]$	[59]
60	$\left[-z,\, x+\frac{1}{2},\, \frac{1}{2}-y\right]$	[60]
61	$\left[-x,\, \frac{1}{2}-y,\, \frac{1}{2}-z\right]$	[61]
62	$\left[-x,\, y+\frac{1}{2},\, z+\frac{1}{2}\right]$	[62]
63	$\left[x,\, \frac{1}{2}-y,\, z+\frac{1}{2}\right]$	[63]
64	$\left[x,\, y+\frac{1}{2},\, \frac{1}{2}-z\right]$	[64]
65	$\left[-z,\, \frac{1}{2}-x,\, \frac{1}{2}-y\right]$	[65]
66	$\left[-y,\, \frac{1}{2}-z,\, \frac{1}{2}-x\right]$	[66]
67	$\left[y,\, \frac{1}{2}-z,\, x+\frac{1}{2}\right]$	[67]
68	$\left[z,\, x+\frac{1}{2},\, \frac{1}{2}-y\right]$	[68]
69	$\left[y,\, z+\frac{1}{2},\, \frac{1}{2}-x\right]$	[69]
70	$\left[-z,\, x+\frac{1}{2},\, y+\frac{1}{2}\right]$	[70]
71	$\left[-y,\, z+\frac{1}{2},\, x+\frac{1}{2}\right]$	[71]
72	$\left[z,\, \frac{1}{2}-x,\, y+\frac{1}{2}\right]$	[72]
73	$\left[x,\, \frac{1}{2}-z,\, y+\frac{1}{2}\right]$	[73]
74	$\left[x,\, z+\frac{1}{2},\, \frac{1}{2}-y\right]$	[74]
75	$\left[z,\, y+\frac{1}{2},\, \frac{1}{2}-x\right]$	[75]
76	$\left[-z,\, y+\frac{1}{2},\, x+\frac{1}{2}\right]$	[76]
77	$\left[-y,\, x+\frac{1}{2},\, z+\frac{1}{2}\right]$	[77]
78	$\left[y,\, \frac{1}{2}-x,\, z+\frac{1}{2}\right]$	[78]
79	$\left[y,\, x+\frac{1}{2},\, \frac{1}{2}-z\right]$	[79]
80	$\left[-y,\, \frac{1}{2}-x,\, \frac{1}{2}-z\right]$	[80]
81	$\left[-x,\, z+\frac{1}{2},\, y+\frac{1}{2}\right]$	[81]
82	$\left[-x,\, \frac{1}{2}-z,\, \frac{1}{2}-y\right]$	[82]
83	$\left[z,\, \frac{1}{2}-y,\, x+\frac{1}{2}\right]$	[83]
84	$\left[-z,\, \frac{1}{2}-y,\, \frac{1}{2}-x\right]$	[84]
85	$\left[-x,\, z+\frac{1}{2},\, \frac{1}{2}-y\right]$	[85]
86	$\left[-x,\, \frac{1}{2}-z,\, y+\frac{1}{2}\right]$	[86]
87	$\left[-z,\, \frac{1}{2}-y,\, x+\frac{1}{2}\right]$	[87]
88	$\left[z,\, \frac{1}{2}-y,\, \frac{1}{2}-x\right]$	[88]
89	$\left[y,\, \frac{1}{2}-x,\, \frac{1}{2}-z\right]$	[89]
90	$\left[-y,\, x+\frac{1}{2},\, \frac{1}{2}-z\right]$	[90]
91	$\left[-y,\, \frac{1}{2}-x,\, z+\frac{1}{2}\right]$	[91]
92	$\left[y,\, x+\frac{1}{2},\, z+\frac{1}{2}\right]$	[92]
93	$\left[x,\, \frac{1}{2}-z,\, \frac{1}{2}-y\right]$	[93]

continued ...

Table 12

No.	position	mapping
94	$\left[x,\, z+\frac{1}{2},\, y+\frac{1}{2}\right]$	[94]
95	$\left[-z,\, y+\frac{1}{2},\, \frac{1}{2}-x\right]$	[95]
96	$\left[z,\, y+\frac{1}{2},\, x+\frac{1}{2}\right]$	[96]
97	$\left[x+\frac{1}{2},\, y,\, z+\frac{1}{2}\right]$	[97]
98	$\left[x+\frac{1}{2},\, -y,\, \frac{1}{2}-z\right]$	[98]
99	$\left[\frac{1}{2}-x,\, y,\, \frac{1}{2}-z\right]$	[99]
100	$\left[\frac{1}{2}-x,\, -y,\, z+\frac{1}{2}\right]$	[100]
101	$\left[z+\frac{1}{2},\, x,\, y+\frac{1}{2}\right]$	[101]
102	$\left[y+\frac{1}{2},\, z,\, x+\frac{1}{2}\right]$	[102]
103	$\left[\frac{1}{2}-y,\, z,\, \frac{1}{2}-x\right]$	[103]
104	$\left[\frac{1}{2}-z,\, -x,\, y+\frac{1}{2}\right]$	[104]
105	$\left[\frac{1}{2}-y,\, -z,\, x+\frac{1}{2}\right]$	[105]
106	$\left[z+\frac{1}{2},\, -x,\, \frac{1}{2}-y\right]$	[106]
107	$\left[y+\frac{1}{2},\, -z,\, \frac{1}{2}-x\right]$	[107]
108	$\left[\frac{1}{2}-z,\, x,\, \frac{1}{2}-y\right]$	[108]
109	$\left[\frac{1}{2}-x,\, -y,\, \frac{1}{2}-z\right]$	[109]
110	$\left[\frac{1}{2}-x,\, y,\, z+\frac{1}{2}\right]$	[110]
111	$\left[x+\frac{1}{2},\, -y,\, z+\frac{1}{2}\right]$	[111]
112	$\left[x+\frac{1}{2},\, y,\, \frac{1}{2}-z\right]$	[112]
113	$\left[\frac{1}{2}-z,\, -x,\, \frac{1}{2}-y\right]$	[113]
114	$\left[\frac{1}{2}-y,\, -z,\, \frac{1}{2}-x\right]$	[114]
115	$\left[y+\frac{1}{2},\, -z,\, x+\frac{1}{2}\right]$	[115]
116	$\left[z+\frac{1}{2},\, x,\, \frac{1}{2}-y\right]$	[116]
117	$\left[y+\frac{1}{2},\, z,\, \frac{1}{2}-x\right]$	[117]
118	$\left[\frac{1}{2}-z,\, x,\, y+\frac{1}{2}\right]$	[118]
119	$\left[\frac{1}{2}-y,\, z,\, x+\frac{1}{2}\right]$	[119]
120	$\left[z+\frac{1}{2},\, -x,\, y+\frac{1}{2}\right]$	[120]
121	$\left[x+\frac{1}{2},\, -z,\, y+\frac{1}{2}\right]$	[121]
122	$\left[x+\frac{1}{2},\, z,\, \frac{1}{2}-y\right]$	[122]
123	$\left[z+\frac{1}{2},\, y,\, \frac{1}{2}-x\right]$	[123]
124	$\left[\frac{1}{2}-z,\, y,\, x+\frac{1}{2}\right]$	[124]
125	$\left[\frac{1}{2}-y,\, x,\, z+\frac{1}{2}\right]$	[125]
126	$\left[y+\frac{1}{2},\, -x,\, z+\frac{1}{2}\right]$	[126]
127	$\left[y+\frac{1}{2},\, x,\, \frac{1}{2}-z\right]$	[127]
128	$\left[\frac{1}{2}-y,\, -x,\, \frac{1}{2}-z\right]$	[128]
129	$\left[\frac{1}{2}-x,\, z,\, y+\frac{1}{2}\right]$	[129]
130	$\left[\frac{1}{2}-x,\, -z,\, \frac{1}{2}-y\right]$	[130]
131	$\left[z+\frac{1}{2},\, -y,\, x+\frac{1}{2}\right]$	[131]
132	$\left[\frac{1}{2}-z,\, -y,\, \frac{1}{2}-x\right]$	[132]
133	$\left[\frac{1}{2}-x,\, z,\, \frac{1}{2}-y\right]$	[133]
134	$\left[\frac{1}{2}-x,\, -z,\, y+\frac{1}{2}\right]$	[134]
135	$\left[\frac{1}{2}-z,\, -y,\, x+\frac{1}{2}\right]$	[135]
136	$\left[z+\frac{1}{2},\, -y,\, \frac{1}{2}-x\right]$	[136]
137	$\left[y+\frac{1}{2},\, -x,\, \frac{1}{2}-z\right]$	[137]
138	$\left[\frac{1}{2}-y,\, x,\, \frac{1}{2}-z\right]$	[138]
139	$\left[\frac{1}{2}-y,\, -x,\, z+\frac{1}{2}\right]$	[139]
140	$\left[y+\frac{1}{2},\, x,\, z+\frac{1}{2}\right]$	[140]

continued ...

Table 12

No.	position	mapping
141	$\left[x+\frac{1}{2},\,-z,\,\frac{1}{2}-y\right]$	[141]
142	$\left[x+\frac{1}{2},\,z,\,y+\frac{1}{2}\right]$	[142]
143	$\left[\frac{1}{2}-z,\,y,\,\frac{1}{2}-x\right]$	[143]
144	$\left[z+\frac{1}{2},\,y,\,x+\frac{1}{2}\right]$	[144]
145	$\left[x+\frac{1}{2},\,y+\frac{1}{2},\,z\right]$	[145]
146	$\left[x+\frac{1}{2},\,\frac{1}{2}-y,\,-z\right]$	[146]
147	$\left[\frac{1}{2}-x,\,y+\frac{1}{2},\,-z\right]$	[147]
148	$\left[\frac{1}{2}-x,\,\frac{1}{2}-y,\,z\right]$	[148]
149	$\left[z+\frac{1}{2},\,x+\frac{1}{2},\,y\right]$	[149]
150	$\left[y+\frac{1}{2},\,z+\frac{1}{2},\,x\right]$	[150]
151	$\left[\frac{1}{2}-y,\,z+\frac{1}{2},\,-x\right]$	[151]
152	$\left[\frac{1}{2}-z,\,\frac{1}{2}-x,\,y\right]$	[152]
153	$\left[\frac{1}{2}-y,\,\frac{1}{2}-z,\,x\right]$	[153]
154	$\left[z+\frac{1}{2},\,\frac{1}{2}-x,\,-y\right]$	[154]
155	$\left[y+\frac{1}{2},\,\frac{1}{2}-z,\,-x\right]$	[155]
156	$\left[\frac{1}{2}-z,\,x+\frac{1}{2},\,-y\right]$	[156]
157	$\left[\frac{1}{2}-x,\,\frac{1}{2}-y,\,-z\right]$	[157]
158	$\left[\frac{1}{2}-x,\,y+\frac{1}{2},\,z\right]$	[158]
159	$\left[x+\frac{1}{2},\,\frac{1}{2}-y,\,z\right]$	[159]
160	$\left[x+\frac{1}{2},\,y+\frac{1}{2},\,-z\right]$	[160]
161	$\left[\frac{1}{2}-z,\,\frac{1}{2}-x,\,-y\right]$	[161]
162	$\left[\frac{1}{2}-y,\,\frac{1}{2}-z,\,-x\right]$	[162]
163	$\left[y+\frac{1}{2},\,\frac{1}{2}-z,\,x\right]$	[163]
164	$\left[z+\frac{1}{2},\,x+\frac{1}{2},\,-y\right]$	[164]
165	$\left[y+\frac{1}{2},\,z+\frac{1}{2},\,-x\right]$	[165]
166	$\left[\frac{1}{2}-z,\,x+\frac{1}{2},\,y\right]$	[166]
167	$\left[\frac{1}{2}-y,\,z+\frac{1}{2},\,x\right]$	[167]
168	$\left[z+\frac{1}{2},\,\frac{1}{2}-x,\,y\right]$	[168]
169	$\left[x+\frac{1}{2},\,\frac{1}{2}-z,\,y\right]$	[169]
170	$\left[x+\frac{1}{2},\,z+\frac{1}{2},\,-y\right]$	[170]
171	$\left[z+\frac{1}{2},\,y+\frac{1}{2},\,-x\right]$	[171]
172	$\left[\frac{1}{2}-z,\,y+\frac{1}{2},\,x\right]$	[172]
173	$\left[\frac{1}{2}-y,\,x+\frac{1}{2},\,z\right]$	[173]
174	$\left[y+\frac{1}{2},\,\frac{1}{2}-x,\,z\right]$	[174]
175	$\left[y+\frac{1}{2},\,x+\frac{1}{2},\,-z\right]$	[175]
176	$\left[\frac{1}{2}-y,\,\frac{1}{2}-x,\,-z\right]$	[176]
177	$\left[\frac{1}{2}-x,\,z+\frac{1}{2},\,y\right]$	[177]
178	$\left[\frac{1}{2}-x,\,\frac{1}{2}-z,\,-y\right]$	[178]
179	$\left[z+\frac{1}{2},\,\frac{1}{2}-y,\,x\right]$	[179]
180	$\left[\frac{1}{2}-z,\,\frac{1}{2}-y,\,-x\right]$	[180]
181	$\left[\frac{1}{2}-x,\,z+\frac{1}{2},\,-y\right]$	[181]
182	$\left[\frac{1}{2}-x,\,\frac{1}{2}-z,\,y\right]$	[182]
183	$\left[\frac{1}{2}-z,\,\frac{1}{2}-y,\,x\right]$	[183]
184	$\left[z+\frac{1}{2},\,\frac{1}{2}-y,\,-x\right]$	[184]
185	$\left[y+\frac{1}{2},\,\frac{1}{2}-x,\,-z\right]$	[185]
186	$\left[\frac{1}{2}-y,\,x+\frac{1}{2},\,-z\right]$	[186]
187	$\left[\frac{1}{2}-y,\,\frac{1}{2}-x,\,z\right]$	[187]

continued ...

Table 12

No.	position	mapping
188	$\left[y+\frac{1}{2},\, x+\frac{1}{2},\, z\right]$	[188]
189	$\left[x+\frac{1}{2},\, \frac{1}{2}-z,\, -y\right]$	[189]
190	$\left[x+\frac{1}{2},\, z+\frac{1}{2},\, y\right]$	[190]
191	$\left[\frac{1}{2}-z,\, y+\frac{1}{2},\, -x\right]$	[191]
192	$\left[z+\frac{1}{2},\, y+\frac{1}{2},\, x\right]$	[192]