MSG No. 225.118 $Fm'\bar{3}'m$ [Type III, cubic]

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

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	$[0, \frac{1}{2}, \frac{1}{2}]$	[49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,
		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	$[\frac{1}{2}, 0, \frac{1}{2}]$	[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	$[\frac{1}{2}, \frac{1}{2}, 0]$	[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'-3'm`

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,
		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	$[\frac{1}{2}, 0, 0]$	[49,50,51,52,53,54,55,56,57,58,59,60,61,62,63,64,65,66,67,68,69,70,71,72,
		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	$[0, \frac{1}{2}, 0]$	[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	$[0, 0, \frac{1}{2}]$	[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: `-43m`

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

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

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

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

No.	position	mapping
1	$[x, 0, 0]$	`[1,2,21,22,25,26,39,40]`
2	$[-x, 0, 0]$	`[3,4,13,14,33,34,37,38]`
3	$[0, x, 0]$	`[5,12,18,20,29,31,44,46]`
4	$[0, 0, x]$	`[6,9,15,24,28,35,43,47]`
5	$[0, 0, -x]$	`[7,11,16,23,27,36,42,45]`
6	$[0, -x, 0]$	`[8,10,17,19,30,32,41,48]`
7	$\left[x, \frac{1}{2}, \frac{1}{2}\right]$	`[49,50,69,70,73,74,87,88]`
8	$\left[-x, \frac{1}{2}, \frac{1}{2}\right]$	`[51,52,61,62,81,82,85,86]`
9	$\left[0, x+\frac{1}{2}, \frac{1}{2}\right]$	`[53,60,66,68,77,79,92,94]`
10	$\left[0, \frac{1}{2}, x+\frac{1}{2}\right]$	`[54,57,63,72,76,83,91,95]`
11	$\left[0, \frac{1}{2}, \frac{1}{2}-x\right]$	`[55,59,64,71,75,84,90,93]`
12	$\left[0, \frac{1}{2}-x, \frac{1}{2}\right]$	`[56,58,65,67,78,80,89,96]`
13	$\left[x+\frac{1}{2}, 0, \frac{1}{2}\right]$	`[97,98,117,118,121,122,135,136]`
14	$\left[\frac{1}{2}-x, 0, \frac{1}{2}\right]$	`[99,100,109,110,129,130,133,134]`
15	$\left[\frac{1}{2}, x, \frac{1}{2}\right]$	`[101,108,114,116,125,127,140,142]`

continued ...

Table 5

No.	position	mapping
16	$\left[\frac{1}{2}, 0, x+\frac{1}{2}\right]$	[102,105,111,120,124,131,139,143]
17	$\left[\frac{1}{2}, 0, \frac{1}{2}-x\right]$	[103,107,112,119,123,132,138,141]
18	$\left[\frac{1}{2}, -x, \frac{1}{2}\right]$	[104,106,113,115,126,128,137,144]
19	$\left[x+\frac{1}{2}, \frac{1}{2}, 0\right]$	[145,146,165,166,169,170,183,184]
20	$\left[\frac{1}{2}-x, \frac{1}{2}, 0\right]$	[147,148,157,158,177,178,181,182]
21	$\left[\frac{1}{2}, x+\frac{1}{2}, 0\right]$	[149,156,162,164,173,175,188,190]
22	$\left[\frac{1}{2}, \frac{1}{2}, x\right]$	[150,153,159,168,172,179,187,191]
23	$\left[\frac{1}{2}, \frac{1}{2}, -x\right]$	[151,155,160,167,171,180,186,189]
24	$\left[\frac{1}{2}, \frac{1}{2}-x, 0\right]$	[152,154,161,163,174,176,185,192]

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

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

continued ...

Table 6

No.	position	mapping
32	$\left[\frac{1}{2}-x,\ \frac{1}{2}-x,\ -x\right]$	[176,178,180,181,185,186]

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

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

continued ...

Table 7

No.	position	mapping
40	$\left[\frac{3}{4}, \frac{1}{4}, \frac{1}{2} - x\right]$	[84,90,123,141]
41	$\left[x + \frac{1}{2}, \frac{1}{4}, \frac{3}{4}\right]$	[97,118,146,165]
42	$\left[x + \frac{1}{2}, \frac{3}{4}, \frac{1}{4}\right]$	[98,117,145,166]
43	$\left[\frac{1}{2} - x, \frac{1}{4}, \frac{1}{4}\right]$	[99,109,148,158]
44	$\left[\frac{1}{2} - x, \frac{3}{4}, \frac{3}{4}\right]$	[100,110,147,157]
45	$\left[x + \frac{1}{2}, \frac{3}{4}, \frac{3}{4}\right]$	[121,135,170,184]
46	$\left[x + \frac{1}{2}, \frac{1}{4}, \frac{1}{4}\right]$	[122,136,169,183]
47	$\left[\frac{1}{2} - x, \frac{1}{4}, \frac{3}{4}\right]$	[129,134,178,181]
48	$\left[\frac{1}{2} - x, \frac{3}{4}, \frac{1}{4}\right]$	[130,133,177,182]

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

No.	position	mapping
1	$[0, y, y]$	[1,22,33,38]
2	$[0, -y, -y]$	[2,21,34,37]
3	$[0, y, -y]$	[3,13,26,40]
4	$[0, -y, y]$	[4,14,25,39]
5	$[y, 0, y]$	[5,20,30,48]
6	$[y, y, 0]$	[6,24,27,45]
7	$[-y, y, 0]$	[7,23,28,47]
8	$[-y, 0, y]$	[8,19,29,46]
9	$[-y, -y, 0]$	[9,15,36,42]
10	$[y, 0, -y]$	[10,17,31,44]
11	$[y, -y, 0]$	[11,16,35,43]
12	$[-y, 0, -y]$	[12,18,32,41]
13	$\left[0, y + \frac{1}{2}, y + \frac{1}{2}\right]$	[49,70,81,86]
14	$\left[0, \frac{1}{2} - y, \frac{1}{2} - y\right]$	[50,69,82,85]
15	$\left[0, y + \frac{1}{2}, \frac{1}{2} - y\right]$	[51,61,74,88]
16	$\left[0, \frac{1}{2} - y, y + \frac{1}{2}\right]$	[52,62,73,87]
17	$\left[y, \frac{1}{2}, y + \frac{1}{2}\right]$	[53,68,78,96]
18	$\left[y, y + \frac{1}{2}, \frac{1}{2}\right]$	[54,72,75,93]
19	$\left[-y, y + \frac{1}{2}, \frac{1}{2}\right]$	[55,71,76,95]
20	$\left[-y, \frac{1}{2}, y + \frac{1}{2}\right]$	[56,67,77,94]
21	$\left[-y, \frac{1}{2} - y, \frac{1}{2}\right]$	[57,63,84,90]
22	$\left[y, \frac{1}{2}, \frac{1}{2} - y\right]$	[58,65,79,92]
23	$\left[y, \frac{1}{2} - y, \frac{1}{2}\right]$	[59,64,83,91]
24	$\left[-y, \frac{1}{2}, \frac{1}{2} - y\right]$	[60,66,80,89]
25	$\left[\frac{1}{2}, y, y + \frac{1}{2}\right]$	[97,118,129,134]
26	$\left[\frac{1}{2}, -y, \frac{1}{2} - y\right]$	[98,117,130,133]
27	$\left[\frac{1}{2}, y, \frac{1}{2} - y\right]$	[99,109,122,136]
28	$\left[\frac{1}{2}, -y, y + \frac{1}{2}\right]$	[100,110,121,135]
29	$\left[y + \frac{1}{2}, 0, y + \frac{1}{2}\right]$	[101,116,126,144]
30	$\left[y + \frac{1}{2}, y, \frac{1}{2}\right]$	[102,120,123,141]
31	$\left[\frac{1}{2} - y, y, \frac{1}{2}\right]$	[103,119,124,143]

continued ...

Table 8

No.	position	mapping
32	$\left[\frac{1}{2}-y,\ 0,\ y+\frac{1}{2}\right]$	[104,115,125,142]
33	$\left[\frac{1}{2}-y,\ -y,\ \frac{1}{2}\right]$	[105,111,132,138]
34	$\left[y+\frac{1}{2},\ 0,\ \frac{1}{2}-y\right]$	[106,113,127,140]
35	$\left[y+\frac{1}{2},\ -y,\ \frac{1}{2}\right]$	[107,112,131,139]
36	$\left[\frac{1}{2}-y,\ 0,\ \frac{1}{2}-y\right]$	[108,114,128,137]
37	$\left[\frac{1}{2},\ y+\frac{1}{2},\ y\right]$	[145,166,177,182]
38	$\left[\frac{1}{2},\ \frac{1}{2}-y,\ -y\right]$	[146,165,178,181]
39	$\left[\frac{1}{2},\ y+\frac{1}{2},\ -y\right]$	[147,157,170,184]
40	$\left[\frac{1}{2},\ \frac{1}{2}-y,\ y\right]$	[148,158,169,183]
41	$\left[y+\frac{1}{2},\ \frac{1}{2},\ y\right]$	[149,164,174,192]
42	$\left[y+\frac{1}{2},\ y+\frac{1}{2},\ 0\right]$	[150,168,171,189]
43	$\left[\frac{1}{2}-y,\ y+\frac{1}{2},\ 0\right]$	[151,167,172,191]
44	$\left[\frac{1}{2}-y,\ \frac{1}{2},\ y\right]$	[152,163,173,190]
45	$\left[\frac{1}{2}-y,\ \frac{1}{2}-y,\ 0\right]$	[153,159,180,186]
46	$\left[y+\frac{1}{2},\ \frac{1}{2},\ -y\right]$	[154,161,175,188]
47	$\left[y+\frac{1}{2},\ \frac{1}{2}-y,\ 0\right]$	[155,160,179,187]
48	$\left[\frac{1}{2}-y,\ \frac{1}{2},\ -y\right]$	[156,162,176,185]

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

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

continued ...

Table 9

No.	position	mapping
24	$\left[-y,\, 0,\, \frac{1}{2}-y\right]$	[60,66,80,89]
25	$\left[0,\, y,\, y+\frac{1}{2}\right]$	[97,118,129,134]
26	$\left[0,\, -y,\, \frac{1}{2}-y\right]$	[98,117,130,133]
27	$\left[0,\, y,\, \frac{1}{2}-y\right]$	[99,109,122,136]
28	$\left[0,\, -y,\, y+\frac{1}{2}\right]$	[100,110,121,135]
29	$\left[y+\frac{1}{2},\, \frac{1}{2},\, y+\frac{1}{2}\right]$	[101,116,126,144]
30	$\left[y+\frac{1}{2},\, y,\, 0\right]$	[102,120,123,141]
31	$\left[\frac{1}{2}-y,\, y,\, 0\right]$	[103,119,124,143]
32	$\left[\frac{1}{2}-y,\, \frac{1}{2},\, y+\frac{1}{2}\right]$	[104,115,125,142]
33	$\left[\frac{1}{2}-y,\, -y,\, 0\right]$	[105,111,132,138]
34	$\left[y+\frac{1}{2},\, \frac{1}{2},\, \frac{1}{2}-y\right]$	[106,113,127,140]
35	$\left[y+\frac{1}{2},\, -y,\, 0\right]$	[107,112,131,139]
36	$\left[\frac{1}{2}-y,\, \frac{1}{2},\, \frac{1}{2}-y\right]$	[108,114,128,137]
37	$\left[0,\, y+\frac{1}{2},\, y\right]$	[145,166,177,182]
38	$\left[0,\, \frac{1}{2}-y,\, -y\right]$	[146,165,178,181]
39	$\left[0,\, y+\frac{1}{2},\, -y\right]$	[147,157,170,184]
40	$\left[0,\, \frac{1}{2}-y,\, y\right]$	[148,158,169,183]
41	$\left[y+\frac{1}{2},\, 0,\, y\right]$	[149,164,174,192]
42	$\left[y+\frac{1}{2},\, y+\frac{1}{2},\, \frac{1}{2}\right]$	[150,168,171,189]
43	$\left[\frac{1}{2}-y,\, y+\frac{1}{2},\, \frac{1}{2}\right]$	[151,167,172,191]
44	$\left[\frac{1}{2}-y,\, 0,\, y\right]$	[152,163,173,190]
45	$\left[\frac{1}{2}-y,\, \frac{1}{2}-y,\, \frac{1}{2}\right]$	[153,159,180,186]
46	$\left[y+\frac{1}{2},\, 0,\, -y\right]$	[154,161,175,188]
47	$\left[y+\frac{1}{2},\, \frac{1}{2}-y,\, \frac{1}{2}\right]$	[155,160,179,187]
48	$\left[\frac{1}{2}-y,\, 0,\, -y\right]$	[156,162,176,185]

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

No.	position	mapping
1	$[0,\, y,\, z]$	[1,38]
2	$[0,\, -y,\, -z]$	[2,37]
3	$[0,\, y,\, -z]$	[3,40]
4	$[0,\, -y,\, z]$	[4,39]
5	$[z,\, 0,\, y]$	[5,48]
6	$[y,\, z,\, 0]$	[6,45]
7	$[-y,\, z,\, 0]$	[7,47]
8	$[-z,\, 0,\, y]$	[8,46]
9	$[-y,\, -z,\, 0]$	[9,42]
10	$[z,\, 0,\, -y]$	[10,44]
11	$[y,\, -z,\, 0]$	[11,43]
12	$[-z,\, 0,\, -y]$	[12,41]
13	$[0,\, z,\, -y]$	[13,26]
14	$[0,\, -z,\, y]$	[14,25]
15	$[-z,\, -y,\, 0]$	[15,36]

continued ...

Table 10

No.	position	mapping
16	$[z, -y, 0]$	[16,35]
17	$[y, 0, -z]$	[17,31]
18	$[-y, 0, -z]$	[18,32]
19	$[-y, 0, z]$	[19,29]
20	$[y, 0, z]$	[20,30]
21	$[0, -z, -y]$	[21,34]
22	$[0, z, y]$	[22,33]
23	$[-z, y, 0]$	[23,28]
24	$[z, y, 0]$	[24,27]
25	$\left[0, y+\frac{1}{2}, z+\frac{1}{2}\right]$	[49,86]
26	$\left[0, \frac{1}{2}-y, \frac{1}{2}-z\right]$	[50,85]
27	$\left[0, y+\frac{1}{2}, \frac{1}{2}-z\right]$	[51,88]
28	$\left[0, \frac{1}{2}-y, z+\frac{1}{2}\right]$	[52,87]
29	$\left[z, \frac{1}{2}, y+\frac{1}{2}\right]$	[53,96]
30	$\left[y, z+\frac{1}{2}, \frac{1}{2}\right]$	[54,93]
31	$\left[-y, z+\frac{1}{2}, \frac{1}{2}\right]$	[55,95]
32	$\left[-z, \frac{1}{2}, y+\frac{1}{2}\right]$	[56,94]
33	$\left[-y, \frac{1}{2}-z, \frac{1}{2}\right]$	[57,90]
34	$\left[z, \frac{1}{2}, \frac{1}{2}-y\right]$	[58,92]
35	$\left[y, \frac{1}{2}-z, \frac{1}{2}\right]$	[59,91]
36	$\left[-z, \frac{1}{2}, \frac{1}{2}-y\right]$	[60,89]
37	$\left[0, z+\frac{1}{2}, \frac{1}{2}-y\right]$	[61,74]
38	$\left[0, \frac{1}{2}-z, y+\frac{1}{2}\right]$	[62,73]
39	$\left[-z, \frac{1}{2}-y, \frac{1}{2}\right]$	[63,84]
40	$\left[z, \frac{1}{2}-y, \frac{1}{2}\right]$	[64,83]
41	$\left[y, \frac{1}{2}, \frac{1}{2}-z\right]$	[65,79]
42	$\left[-y, \frac{1}{2}, \frac{1}{2}-z\right]$	[66,80]
43	$\left[-y, \frac{1}{2}, z+\frac{1}{2}\right]$	[67,77]
44	$\left[y, \frac{1}{2}, z+\frac{1}{2}\right]$	[68,78]
45	$\left[0, \frac{1}{2}-z, \frac{1}{2}-y\right]$	[69,82]
46	$\left[0, z+\frac{1}{2}, y+\frac{1}{2}\right]$	[70,81]
47	$\left[-z, y+\frac{1}{2}, \frac{1}{2}\right]$	[71,76]
48	$\left[z, y+\frac{1}{2}, \frac{1}{2}\right]$	[72,75]
49	$\left[\frac{1}{2}, y, z+\frac{1}{2}\right]$	[97,134]
50	$\left[\frac{1}{2}, -y, \frac{1}{2}-z\right]$	[98,133]
51	$\left[\frac{1}{2}, y, \frac{1}{2}-z\right]$	[99,136]
52	$\left[\frac{1}{2}, -y, z+\frac{1}{2}\right]$	[100,135]
53	$\left[z+\frac{1}{2}, 0, y+\frac{1}{2}\right]$	[101,144]
54	$\left[y+\frac{1}{2}, z, \frac{1}{2}\right]$	[102,141]
55	$\left[\frac{1}{2}-y, z, \frac{1}{2}\right]$	[103,143]
56	$\left[\frac{1}{2}-z, 0, y+\frac{1}{2}\right]$	[104,142]
57	$\left[\frac{1}{2}-y, -z, \frac{1}{2}\right]$	[105,138]
58	$\left[z+\frac{1}{2}, 0, \frac{1}{2}-y\right]$	[106,140]
59	$\left[y+\frac{1}{2}, -z, \frac{1}{2}\right]$	[107,139]
60	$\left[\frac{1}{2}-z, 0, \frac{1}{2}-y\right]$	[108,137]
61	$\left[\frac{1}{2}, z, \frac{1}{2}-y\right]$	[109,122]
62	$\left[\frac{1}{2}, -z, y+\frac{1}{2}\right]$	[110,121]

continued ...

Table 10

No.	position	mapping
63	$\left[\frac{1}{2}-z,\ -y,\ \frac{1}{2}\right]$	[111,132]
64	$\left[z+\frac{1}{2},\ -y,\ \frac{1}{2}\right]$	[112,131]
65	$\left[y+\frac{1}{2},\ 0,\ \frac{1}{2}-z\right]$	[113,127]
66	$\left[\frac{1}{2}-y,\ 0,\ \frac{1}{2}-z\right]$	[114,128]
67	$\left[\frac{1}{2}-y,\ 0,\ z+\frac{1}{2}\right]$	[115,125]
68	$\left[y+\frac{1}{2},\ 0,\ z+\frac{1}{2}\right]$	[116,126]
69	$\left[\frac{1}{2},\ -z,\ \frac{1}{2}-y\right]$	[117,130]
70	$\left[\frac{1}{2},\ z,\ y+\frac{1}{2}\right]$	[118,129]
71	$\left[\frac{1}{2}-z,\ y,\ \frac{1}{2}\right]$	[119,124]
72	$\left[z+\frac{1}{2},\ y,\ \frac{1}{2}\right]$	[120,123]
73	$\left[\frac{1}{2},\ y+\frac{1}{2},\ z\right]$	[145,182]
74	$\left[\frac{1}{2},\ \frac{1}{2}-y,\ -z\right]$	[146,181]
75	$\left[\frac{1}{2},\ y+\frac{1}{2},\ -z\right]$	[147,184]
76	$\left[\frac{1}{2},\ \frac{1}{2}-y,\ z\right]$	[148,183]
77	$\left[z+\frac{1}{2},\ \frac{1}{2},\ y\right]$	[149,192]
78	$\left[y+\frac{1}{2},\ z+\frac{1}{2},\ 0\right]$	[150,189]
79	$\left[\frac{1}{2}-y,\ z+\frac{1}{2},\ 0\right]$	[151,191]
80	$\left[\frac{1}{2}-z,\ \frac{1}{2},\ y\right]$	[152,190]
81	$\left[\frac{1}{2}-y,\ \frac{1}{2}-z,\ 0\right]$	[153,186]
82	$\left[z+\frac{1}{2},\ \frac{1}{2},\ -y\right]$	[154,188]
83	$\left[y+\frac{1}{2},\ \frac{1}{2}-z,\ 0\right]$	[155,187]
84	$\left[\frac{1}{2}-z,\ \frac{1}{2},\ -y\right]$	[156,185]
85	$\left[\frac{1}{2},\ z+\frac{1}{2},\ -y\right]$	[157,170]
86	$\left[\frac{1}{2},\ \frac{1}{2}-z,\ y\right]$	[158,169]
87	$\left[\frac{1}{2}-z,\ \frac{1}{2}-y,\ 0\right]$	[159,180]
88	$\left[z+\frac{1}{2},\ \frac{1}{2}-y,\ 0\right]$	[160,179]
89	$\left[y+\frac{1}{2},\ \frac{1}{2},\ -z\right]$	[161,175]
90	$\left[\frac{1}{2}-y,\ \frac{1}{2},\ -z\right]$	[162,176]
91	$\left[\frac{1}{2}-y,\ \frac{1}{2},\ z\right]$	[163,173]
92	$\left[y+\frac{1}{2},\ \frac{1}{2},\ z\right]$	[164,174]
93	$\left[\frac{1}{2},\ \frac{1}{2}-z,\ -y\right]$	[165,178]
94	$\left[\frac{1}{2},\ z+\frac{1}{2},\ y\right]$	[166,177]
95	$\left[\frac{1}{2}-z,\ y+\frac{1}{2},\ 0\right]$	[167,172]
96	$\left[z+\frac{1}{2},\ y+\frac{1}{2},\ 0\right]$	[168,171]

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

No.	position	mapping
1	$[x,\ x,\ z]$	[1,20]
2	$[x,\ -x,\ -z]$	[2,17]
3	$[-x,\ x,\ -z]$	[3,18]
4	$[-x,\ -x,\ z]$	[4,19]
5	$[z,\ x,\ x]$	[5,24]
6	$[x,\ z,\ x]$	[6,22]

continued ...

Table 11

No.	position	mapping
7	$[-x,\ z,\ -x]$	[7,13]
8	$[-z,\ -x,\ x]$	[8,15]
9	$[-x,\ -z,\ x]$	[9,14]
10	$[z,\ -x,\ -x]$	[10,16]
11	$[x,\ -z,\ -x]$	[11,21]
12	$[-z,\ x,\ -x]$	[12,23]
13	$[x,\ -z,\ x]$	[25,43]
14	$[x,\ z,\ -x]$	[26,45]
15	$[z,\ x,\ -x]$	[27,44]
16	$[-z,\ x,\ x]$	[28,46]
17	$[-x,\ x,\ z]$	[29,38]
18	$[x,\ -x,\ z]$	[30,39]
19	$[x,\ x,\ -z]$	[31,40]
20	$[-x,\ -x,\ -z]$	[32,37]
21	$[-x,\ z,\ x]$	[33,47]
22	$[-x,\ -z,\ -x]$	[34,42]
23	$[z,\ -x,\ x]$	[35,48]
24	$[-z,\ -x,\ -x]$	[36,41]
25	$\left[x,\ x+\frac{1}{2},\ z+\frac{1}{2}\right]$	[49,68]
26	$\left[x,\ \frac{1}{2}-x,\ \frac{1}{2}-z\right]$	[50,65]
27	$\left[-x,\ x+\frac{1}{2},\ \frac{1}{2}-z\right]$	[51,66]
28	$\left[-x,\ \frac{1}{2}-x,\ z+\frac{1}{2}\right]$	[52,67]
29	$\left[z,\ x+\frac{1}{2},\ x+\frac{1}{2}\right]$	[53,72]
30	$\left[x,\ z+\frac{1}{2},\ x+\frac{1}{2}\right]$	[54,70]
31	$\left[-x,\ z+\frac{1}{2},\ \frac{1}{2}-x\right]$	[55,61]
32	$\left[-z,\ \frac{1}{2}-x,\ x+\frac{1}{2}\right]$	[56,63]
33	$\left[-x,\ \frac{1}{2}-z,\ x+\frac{1}{2}\right]$	[57,62]
34	$\left[z,\ \frac{1}{2}-x,\ \frac{1}{2}-x\right]$	[58,64]
35	$\left[x,\ \frac{1}{2}-z,\ \frac{1}{2}-x\right]$	[59,69]
36	$\left[-z,\ x+\frac{1}{2},\ \frac{1}{2}-x\right]$	[60,71]
37	$\left[x,\ \frac{1}{2}-z,\ x+\frac{1}{2}\right]$	[73,91]
38	$\left[x,\ z+\frac{1}{2},\ \frac{1}{2}-x\right]$	[74,93]
39	$\left[z,\ x+\frac{1}{2},\ \frac{1}{2}-x\right]$	[75,92]
40	$\left[-z,\ x+\frac{1}{2},\ x+\frac{1}{2}\right]$	[76,94]
41	$\left[-x,\ x+\frac{1}{2},\ z+\frac{1}{2}\right]$	[77,86]
42	$\left[x,\ \frac{1}{2}-x,\ z+\frac{1}{2}\right]$	[78,87]
43	$\left[x,\ x+\frac{1}{2},\ \frac{1}{2}-z\right]$	[79,88]
44	$\left[-x,\ \frac{1}{2}-x,\ \frac{1}{2}-z\right]$	[80,85]
45	$\left[-x,\ z+\frac{1}{2},\ x+\frac{1}{2}\right]$	[81,95]
46	$\left[-x,\ \frac{1}{2}-z,\ \frac{1}{2}-x\right]$	[82,90]
47	$\left[z,\ \frac{1}{2}-x,\ x+\frac{1}{2}\right]$	[83,96]
48	$\left[-z,\ \frac{1}{2}-x,\ \frac{1}{2}-x\right]$	[84,89]
49	$\left[x+\frac{1}{2},\ x,\ z+\frac{1}{2}\right]$	[97,116]
50	$\left[x+\frac{1}{2},\ -x,\ \frac{1}{2}-z\right]$	[98,113]
51	$\left[\frac{1}{2}-x,\ x,\ \frac{1}{2}-z\right]$	[99,114]
52	$\left[\frac{1}{2}-x,\ -x,\ z+\frac{1}{2}\right]$	[100,115]
53	$\left[z+\frac{1}{2},\ x,\ x+\frac{1}{2}\right]$	[101,120]

continued ...

Table 11

No.	position	mapping
54	$\left[x+\frac{1}{2},\, z,\, x+\frac{1}{2}\right]$	[102,118]
55	$\left[\frac{1}{2}-x,\, z,\, \frac{1}{2}-x\right]$	[103,109]
56	$\left[\frac{1}{2}-z,\, -x,\, x+\frac{1}{2}\right]$	[104,111]
57	$\left[\frac{1}{2}-x,\, -z,\, x+\frac{1}{2}\right]$	[105,110]
58	$\left[z+\frac{1}{2},\, -x,\, \frac{1}{2}-x\right]$	[106,112]
59	$\left[x+\frac{1}{2},\, -z,\, \frac{1}{2}-x\right]$	[107,117]
60	$\left[\frac{1}{2}-z,\, x,\, \frac{1}{2}-x\right]$	[108,119]
61	$\left[x+\frac{1}{2},\, -z,\, x+\frac{1}{2}\right]$	[121,139]
62	$\left[x+\frac{1}{2},\, z,\, \frac{1}{2}-x\right]$	[122,141]
63	$\left[z+\frac{1}{2},\, x,\, \frac{1}{2}-x\right]$	[123,140]
64	$\left[\frac{1}{2}-z,\, x,\, x+\frac{1}{2}\right]$	[124,142]
65	$\left[\frac{1}{2}-x,\, x,\, z+\frac{1}{2}\right]$	[125,134]
66	$\left[x+\frac{1}{2},\, -x,\, z+\frac{1}{2}\right]$	[126,135]
67	$\left[x+\frac{1}{2},\, x,\, \frac{1}{2}-z\right]$	[127,136]
68	$\left[\frac{1}{2}-x,\, -x,\, \frac{1}{2}-z\right]$	[128,133]
69	$\left[\frac{1}{2}-x,\, z,\, x+\frac{1}{2}\right]$	[129,143]
70	$\left[\frac{1}{2}-x,\, -z,\, \frac{1}{2}-x\right]$	[130,138]
71	$\left[z+\frac{1}{2},\, -x,\, x+\frac{1}{2}\right]$	[131,144]
72	$\left[\frac{1}{2}-z,\, -x,\, \frac{1}{2}-x\right]$	[132,137]
73	$\left[x+\frac{1}{2},\, x+\frac{1}{2},\, z\right]$	[145,164]
74	$\left[x+\frac{1}{2},\, \frac{1}{2}-x,\, -z\right]$	[146,161]
75	$\left[\frac{1}{2}-x,\, x+\frac{1}{2},\, -z\right]$	[147,162]
76	$\left[\frac{1}{2}-x,\, \frac{1}{2}-x,\, z\right]$	[148,163]
77	$\left[z+\frac{1}{2},\, x+\frac{1}{2},\, x\right]$	[149,168]
78	$\left[x+\frac{1}{2},\, z+\frac{1}{2},\, x\right]$	[150,166]
79	$\left[\frac{1}{2}-x,\, z+\frac{1}{2},\, -x\right]$	[151,157]
80	$\left[\frac{1}{2}-z,\, \frac{1}{2}-x,\, x\right]$	[152,159]
81	$\left[\frac{1}{2}-x,\, \frac{1}{2}-z,\, x\right]$	[153,158]
82	$\left[z+\frac{1}{2},\, \frac{1}{2}-x,\, -x\right]$	[154,160]
83	$\left[x+\frac{1}{2},\, \frac{1}{2}-z,\, -x\right]$	[155,165]
84	$\left[\frac{1}{2}-z,\, x+\frac{1}{2},\, -x\right]$	[156,167]
85	$\left[x+\frac{1}{2},\, \frac{1}{2}-z,\, x\right]$	[169,187]
86	$\left[x+\frac{1}{2},\, z+\frac{1}{2},\, -x\right]$	[170,189]
87	$\left[z+\frac{1}{2},\, x+\frac{1}{2},\, -x\right]$	[171,188]
88	$\left[\frac{1}{2}-z,\, x+\frac{1}{2},\, x\right]$	[172,190]
89	$\left[\frac{1}{2}-x,\, x+\frac{1}{2},\, z\right]$	[173,182]
90	$\left[x+\frac{1}{2},\, \frac{1}{2}-x,\, z\right]$	[174,183]
91	$\left[x+\frac{1}{2},\, x+\frac{1}{2},\, -z\right]$	[175,184]
92	$\left[\frac{1}{2}-x,\, \frac{1}{2}-x,\, -z\right]$	[176,181]
93	$\left[\frac{1}{2}-x,\, z+\frac{1}{2},\, x\right]$	[177,191]
94	$\left[\frac{1}{2}-x,\, \frac{1}{2}-z,\, -x\right]$	[178,186]
95	$\left[z+\frac{1}{2},\, \frac{1}{2}-x,\, x\right]$	[179,192]
96	$\left[\frac{1}{2}-z,\, \frac{1}{2}-x,\, -x\right]$	[180,185]

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	$[-x, z, -y]$	[13]
14	$[-x, -z, y]$	[14]
15	$[-z, -y, x]$	[15]
16	$[z, -y, -x]$	[16]
17	$[y, -x, -z]$	[17]
18	$[-y, x, -z]$	[18]
19	$[-y, -x, z]$	[19]
20	$[y, x, z]$	[20]
21	$[x, -z, -y]$	[21]
22	$[x, z, y]$	[22]
23	$[-z, y, -x]$	[23]
24	$[z, y, x]$	[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	$[-x, -y, -z]$	[37]
38	$[-x, y, z]$	[38]
39	$[x, -y, z]$	[39]
40	$[x, y, -z]$	[40]
41	$[-z, -x, -y]$	[41]
42	$[-y, -z, -x]$	[42]
43	$[y, -z, x]$	[43]
44	$[z, x, -y]$	[44]
45	$[y, z, -x]$	[45]
46	$[-z, x, y]$	[46]

continued ...

Table 12

No.	position	mapping
47	$[-y,\, z,\, x]$	[47]
48	$[z,\, -x,\, y]$	[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	$\left[-x,\, z+\frac{1}{2},\, \frac{1}{2}-y\right]$	[61]
62	$\left[-x,\, \frac{1}{2}-z,\, y+\frac{1}{2}\right]$	[62]
63	$\left[-z,\, \frac{1}{2}-y,\, x+\frac{1}{2}\right]$	[63]
64	$\left[z,\, \frac{1}{2}-y,\, \frac{1}{2}-x\right]$	[64]
65	$\left[y,\, \frac{1}{2}-x,\, \frac{1}{2}-z\right]$	[65]
66	$\left[-y,\, x+\frac{1}{2},\, \frac{1}{2}-z\right]$	[66]
67	$\left[-y,\, \frac{1}{2}-x,\, z+\frac{1}{2}\right]$	[67]
68	$\left[y,\, x+\frac{1}{2},\, z+\frac{1}{2}\right]$	[68]
69	$\left[x,\, \frac{1}{2}-z,\, \frac{1}{2}-y\right]$	[69]
70	$\left[x,\, z+\frac{1}{2},\, y+\frac{1}{2}\right]$	[70]
71	$\left[-z,\, y+\frac{1}{2},\, \frac{1}{2}-x\right]$	[71]
72	$\left[z,\, y+\frac{1}{2},\, x+\frac{1}{2}\right]$	[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	$\left[-x,\, \frac{1}{2}-y,\, \frac{1}{2}-z\right]$	[85]
86	$\left[-x,\, y+\frac{1}{2},\, z+\frac{1}{2}\right]$	[86]
87	$\left[x,\, \frac{1}{2}-y,\, z+\frac{1}{2}\right]$	[87]
88	$\left[x,\, y+\frac{1}{2},\, \frac{1}{2}-z\right]$	[88]
89	$\left[-z,\, \frac{1}{2}-x,\, \frac{1}{2}-y\right]$	[89]
90	$\left[-y,\, \frac{1}{2}-z,\, \frac{1}{2}-x\right]$	[90]
91	$\left[y,\, \frac{1}{2}-z,\, x+\frac{1}{2}\right]$	[91]
92	$\left[z,\, x+\frac{1}{2},\, \frac{1}{2}-y\right]$	[92]
93	$\left[y,\, z+\frac{1}{2},\, \frac{1}{2}-x\right]$	[93]

continued ...

Table 12

No.	position	mapping
94	$\left[-z,\, x+\frac{1}{2},\, y+\frac{1}{2}\right]$	[94]
95	$\left[-y,\, z+\frac{1}{2},\, x+\frac{1}{2}\right]$	[95]
96	$\left[z,\, \frac{1}{2}-x,\, y+\frac{1}{2}\right]$	[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	$\left[\frac{1}{2}-x,\, z,\, \frac{1}{2}-y\right]$	[109]
110	$\left[\frac{1}{2}-x,\, -z,\, y+\frac{1}{2}\right]$	[110]
111	$\left[\frac{1}{2}-z,\, -y,\, x+\frac{1}{2}\right]$	[111]
112	$\left[z+\frac{1}{2},\, -y,\, \frac{1}{2}-x\right]$	[112]
113	$\left[y+\frac{1}{2},\, -x,\, \frac{1}{2}-z\right]$	[113]
114	$\left[\frac{1}{2}-y,\, x,\, \frac{1}{2}-z\right]$	[114]
115	$\left[\frac{1}{2}-y,\, -x,\, z+\frac{1}{2}\right]$	[115]
116	$\left[y+\frac{1}{2},\, x,\, z+\frac{1}{2}\right]$	[116]
117	$\left[x+\frac{1}{2},\, -z,\, \frac{1}{2}-y\right]$	[117]
118	$\left[x+\frac{1}{2},\, z,\, y+\frac{1}{2}\right]$	[118]
119	$\left[\frac{1}{2}-z,\, y,\, \frac{1}{2}-x\right]$	[119]
120	$\left[z+\frac{1}{2},\, y,\, x+\frac{1}{2}\right]$	[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	$\left[\frac{1}{2}-x,\, -y,\, \frac{1}{2}-z\right]$	[133]
134	$\left[\frac{1}{2}-x,\, y,\, z+\frac{1}{2}\right]$	[134]
135	$\left[x+\frac{1}{2},\, -y,\, z+\frac{1}{2}\right]$	[135]
136	$\left[x+\frac{1}{2},\, y,\, \frac{1}{2}-z\right]$	[136]
137	$\left[\frac{1}{2}-z,\, -x,\, \frac{1}{2}-y\right]$	[137]
138	$\left[\frac{1}{2}-y,\, -z,\, \frac{1}{2}-x\right]$	[138]
139	$\left[y+\frac{1}{2},\, -z,\, x+\frac{1}{2}\right]$	[139]
140	$\left[z+\frac{1}{2},\, x,\, \frac{1}{2}-y\right]$	[140]

continued ...

Table 12

No.	position	mapping
141	$\left[y+\frac{1}{2},\, z,\, \frac{1}{2}-x\right]$	[141]
142	$\left[\frac{1}{2}-z,\, x,\, y+\frac{1}{2}\right]$	[142]
143	$\left[\frac{1}{2}-y,\, z,\, x+\frac{1}{2}\right]$	[143]
144	$\left[z+\frac{1}{2},\, -x,\, y+\frac{1}{2}\right]$	[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	$\left[\frac{1}{2}-x,\, z+\frac{1}{2},\, -y\right]$	[157]
158	$\left[\frac{1}{2}-x,\, \frac{1}{2}-z,\, y\right]$	[158]
159	$\left[\frac{1}{2}-z,\, \frac{1}{2}-y,\, x\right]$	[159]
160	$\left[z+\frac{1}{2},\, \frac{1}{2}-y,\, -x\right]$	[160]
161	$\left[y+\frac{1}{2},\, \frac{1}{2}-x,\, -z\right]$	[161]
162	$\left[\frac{1}{2}-y,\, x+\frac{1}{2},\, -z\right]$	[162]
163	$\left[\frac{1}{2}-y,\, \frac{1}{2}-x,\, z\right]$	[163]
164	$\left[y+\frac{1}{2},\, x+\frac{1}{2},\, z\right]$	[164]
165	$\left[x+\frac{1}{2},\, \frac{1}{2}-z,\, -y\right]$	[165]
166	$\left[x+\frac{1}{2},\, z+\frac{1}{2},\, y\right]$	[166]
167	$\left[\frac{1}{2}-z,\, y+\frac{1}{2},\, -x\right]$	[167]
168	$\left[z+\frac{1}{2},\, y+\frac{1}{2},\, x\right]$	[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	$\left[\frac{1}{2}-x,\, \frac{1}{2}-y,\, -z\right]$	[181]
182	$\left[\frac{1}{2}-x,\, y+\frac{1}{2},\, z\right]$	[182]
183	$\left[x+\frac{1}{2},\, \frac{1}{2}-y,\, z\right]$	[183]
184	$\left[x+\frac{1}{2},\, y+\frac{1}{2},\, -z\right]$	[184]
185	$\left[\frac{1}{2}-z,\, \frac{1}{2}-x,\, -y\right]$	[185]
186	$\left[\frac{1}{2}-y,\, \frac{1}{2}-z,\, -x\right]$	[186]
187	$\left[y+\frac{1}{2},\, \frac{1}{2}-z,\, x\right]$	[187]

continued ...

Table 12

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