

MSG No. 228.138 $Fd' \bar{3}'c'$ [Type III, cubic]

Table 1: Wyckoff site: 16a, site symmetry: 23.

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

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

No.	position	mapping
1	$[\frac{1}{4}, \frac{1}{4}, \frac{1}{4}]$	[1, 12, 14, 16, 17, 18]
2	$[\frac{1}{2}, \frac{1}{4}, \frac{1}{2}]$	[2, 7, 15, 105, 115, 120]
3	$[\frac{1}{2}, \frac{1}{2}, \frac{1}{4}]$	[3, 4, 11, 154, 164, 165]
4	$[\frac{1}{4}, \frac{1}{2}, \frac{1}{2}]$	[5, 6, 13, 56, 70, 71]
5	$[\frac{1}{4}, 0, 0]$	[8, 22, 23, 53, 54, 61]
6	$[0, \frac{1}{4}, 0]$	[9, 19, 24, 98, 103, 111]
7	$[0, 0, \frac{1}{4}]$	[10, 20, 21, 147, 148, 155]
8	$[\frac{3}{4}, \frac{3}{4}, \frac{3}{4}]$	[25, 36, 38, 40, 41, 42]
9	$[0, \frac{3}{4}, 0]$	[26, 31, 39, 129, 139, 144]
10	$[0, 0, \frac{3}{4}]$	[27, 28, 35, 178, 188, 189]
11	$[\frac{3}{4}, 0, 0]$	[29, 30, 37, 80, 94, 95]
12	$[\frac{3}{4}, \frac{1}{2}, \frac{1}{2}]$	[32, 46, 47, 77, 78, 85]
13	$[\frac{1}{2}, \frac{3}{4}, \frac{1}{2}]$	[33, 43, 48, 122, 127, 135]
14	$[\frac{1}{2}, \frac{1}{2}, \frac{3}{4}]$	[34, 44, 45, 171, 172, 179]
15	$[\frac{1}{4}, \frac{3}{4}, \frac{3}{4}]$	[49, 60, 62, 64, 65, 66]
16	$[\frac{1}{2}, \frac{3}{4}, 0]$	[50, 55, 63, 153, 163, 168]
17	$[\frac{1}{2}, 0, \frac{3}{4}]$	[51, 52, 59, 106, 116, 117]
18	$[0, \frac{3}{4}, \frac{1}{2}]$	[57, 67, 72, 146, 151, 159]
19	$[0, \frac{1}{2}, \frac{3}{4}]$	[58, 68, 69, 99, 100, 107]
20	$[\frac{3}{4}, \frac{1}{4}, \frac{1}{2}]$	[73, 84, 86, 88, 89, 90]
21	$[0, \frac{1}{4}, \frac{1}{2}]$	[74, 79, 87, 177, 187, 192]

continued ...

Table 2

No.	position	mapping
22	$[0, \frac{1}{2}, \frac{1}{4}]$	[75, 76, 83, 130, 140, 141]
23	$[\frac{1}{2}, \frac{1}{4}, 0]$	[81, 91, 96, 170, 175, 183]
24	$[\frac{1}{2}, 0, \frac{1}{4}]$	[82, 92, 93, 123, 124, 131]
25	$[\frac{3}{4}, \frac{1}{4}, \frac{3}{4}]$	[97, 108, 110, 112, 113, 114]
26	$[\frac{3}{4}, \frac{1}{2}, 0]$	[101, 102, 109, 152, 166, 167]
27	$[\frac{3}{4}, 0, \frac{1}{2}]$	[104, 118, 119, 149, 150, 157]
28	$[\frac{1}{4}, \frac{3}{4}, \frac{1}{4}]$	[121, 132, 134, 136, 137, 138]
29	$[\frac{1}{4}, 0, \frac{1}{2}]$	[125, 126, 133, 176, 190, 191]
30	$[\frac{1}{4}, \frac{1}{2}, 0]$	[128, 142, 143, 173, 174, 181]
31	$[\frac{3}{4}, \frac{3}{4}, \frac{1}{4}]$	[145, 156, 158, 160, 161, 162]
32	$[\frac{1}{4}, \frac{1}{4}, \frac{3}{4}]$	[169, 180, 182, 184, 185, 186]

Table 3: Wyckoff site: 32c, site symmetry: .-3'.

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

continued ...

Table 3

No.	position	mapping
30	$[\frac{3}{4}, \frac{1}{2}, \frac{1}{4}]$	[153, 163, 168, 177, 187, 192]
31	$[\frac{3}{4}, \frac{3}{4}, 0]$	[154, 164, 165, 178, 188, 189]
32	$[0, 0, \frac{1}{2}]$	[156, 158, 160, 180, 182, 184]

Table 4: Wyckoff site: 48d, site symmetry: $-4^3\ldots$

No.	position	mapping
1	$[\frac{7}{8}, \frac{1}{8}, \frac{1}{8}]$	[1, 8, 123, 170]
2	$[\frac{1}{8}, \frac{3}{8}, \frac{3}{8}]$	[2, 3, 32, 73]
3	$[\frac{3}{8}, \frac{3}{8}, \frac{5}{8}]$	[4, 16, 91, 143]
4	$[\frac{3}{8}, \frac{3}{8}, \frac{1}{8}]$	[5, 15, 45, 186]
5	$[\frac{3}{8}, \frac{1}{8}, \frac{3}{8}]$	[6, 11, 48, 137]
6	$[\frac{3}{8}, \frac{5}{8}, \frac{3}{8}]$	[7, 12, 92, 190]
7	$[\frac{3}{8}, \frac{1}{8}, \frac{1}{8}]$	[9, 10, 37, 86]
8	$[\frac{5}{8}, \frac{3}{8}, \frac{3}{8}]$	[13, 14, 130, 177]
9	$[\frac{1}{8}, \frac{7}{8}, \frac{1}{8}]$	[17, 24, 83, 174]
10	$[\frac{1}{8}, \frac{1}{8}, \frac{7}{8}]$	[18, 21, 87, 125]
11	$[\frac{1}{8}, \frac{1}{8}, \frac{3}{8}]$	[19, 23, 28, 184]
12	$[\frac{1}{8}, \frac{3}{8}, \frac{1}{8}]$	[20, 22, 31, 132]
13	$[\frac{1}{8}, \frac{7}{8}, \frac{7}{8}]$	[25, 50, 51, 80]
14	$[\frac{3}{8}, \frac{5}{8}, \frac{1}{8}]$	[26, 75, 145, 152]
15	$[\frac{3}{8}, \frac{1}{8}, \frac{5}{8}]$	[27, 74, 97, 104]
16	$[\frac{5}{8}, \frac{1}{8}, \frac{3}{8}]$	[29, 114, 117, 183]
17	$[\frac{5}{8}, \frac{3}{8}, \frac{1}{8}]$	[30, 131, 161, 168]
18	$[\frac{1}{8}, \frac{7}{8}, \frac{3}{8}]$	[33, 82, 157, 158]
19	$[\frac{1}{8}, \frac{3}{8}, \frac{7}{8}]$	[34, 81, 109, 110]
20	$[\frac{1}{8}, \frac{3}{8}, \frac{5}{8}]$	[35, 65, 72, 126]
21	$[\frac{5}{8}, \frac{3}{8}, \frac{5}{8}]$	[36, 116, 118, 127]
22	$[\frac{3}{8}, \frac{5}{8}, \frac{5}{8}]$	[38, 57, 58, 85]
23	$[\frac{1}{8}, \frac{5}{8}, \frac{3}{8}]$	[39, 66, 69, 173]
24	$[\frac{5}{8}, \frac{5}{8}, \frac{3}{8}]$	[40, 163, 167, 172]
25	$[\frac{7}{8}, \frac{1}{8}, \frac{7}{8}]$	[41, 102, 107, 144]
26	$[\frac{7}{8}, \frac{7}{8}, \frac{1}{8}]$	[42, 149, 159, 189]
27	$[\frac{3}{8}, \frac{7}{8}, \frac{1}{8}]$	[43, 52, 64, 191]
28	$[\frac{3}{8}, \frac{1}{8}, \frac{7}{8}]$	[44, 55, 60, 142]
29	$[\frac{7}{8}, \frac{1}{8}, \frac{3}{8}]$	[46, 140, 151, 156]
30	$[\frac{7}{8}, \frac{3}{8}, \frac{1}{8}]$	[47, 100, 112, 187]
31	$[\frac{7}{8}, \frac{5}{8}, \frac{5}{8}]$	[49, 56, 122, 171]
32	$[\frac{3}{8}, \frac{7}{8}, \frac{5}{8}]$	[53, 63, 93, 138]
33	$[\frac{3}{8}, \frac{5}{8}, \frac{7}{8}]$	[54, 59, 96, 185]
34	$[\frac{5}{8}, \frac{7}{8}, \frac{7}{8}]$	[61, 62, 129, 178]
35	$[\frac{1}{8}, \frac{5}{8}, \frac{7}{8}]$	[67, 71, 76, 136]
36	$[\frac{1}{8}, \frac{7}{8}, \frac{5}{8}]$	[68, 70, 79, 180]
37	$[\frac{5}{8}, \frac{5}{8}, \frac{7}{8}]$	[77, 135, 162, 165]

continued ...

Table 4

No.	position	mapping
38	$[\frac{5}{8}, \frac{7}{8}, \frac{5}{8}]$	[78,113,120,179]
39	$[\frac{5}{8}, \frac{7}{8}, \frac{1}{8}]$	[84,164,166,175]
40	$[\frac{5}{8}, \frac{1}{8}, \frac{7}{8}]$	[88,115,119,124]
41	$[\frac{7}{8}, \frac{5}{8}, \frac{3}{8}]$	[89,150,155,192]
42	$[\frac{7}{8}, \frac{3}{8}, \frac{5}{8}]$	[90,101,111,141]
43	$[\frac{7}{8}, \frac{5}{8}, \frac{7}{8}]$	[94,103,108,188]
44	$[\frac{7}{8}, \frac{7}{8}, \frac{5}{8}]$	[95,139,148,160]
45	$[\frac{5}{8}, \frac{3}{8}, \frac{7}{8}]$	[98,99,128,169]
46	$[\frac{7}{8}, \frac{1}{8}, \frac{5}{8}]$	[105,106,133,182]
47	$[\frac{5}{8}, \frac{7}{8}, \frac{3}{8}]$	[121,146,147,176]
48	$[\frac{7}{8}, \frac{5}{8}, \frac{1}{8}]$	[134,153,154,181]

Table 5: Wyckoff site: 64e, site symmetry: .3.

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

continued ...

Table 5

No.	position	mapping
30	$[x + \frac{1}{4}, \frac{1}{2} - x, x + \frac{3}{4}]$	[81,91,96]
31	$[x + \frac{1}{4}, x + \frac{3}{4}, \frac{1}{2} - x]$	[82,92,93]
32	$[x + \frac{1}{2}, x, x]$	[84,86,88]
33	$[x + \frac{1}{2}, x, x + \frac{1}{2}]$	[97,113,114]
34	$[x + \frac{3}{4}, \frac{1}{2} - x, x + \frac{3}{4}]$	[98,103,111]
35	$[x + \frac{3}{4}, x + \frac{1}{4}, -x]$	[99,100,107]
36	$[-x, x + \frac{1}{4}, x + \frac{3}{4}]$	[101,102,109]
37	$[x + \frac{1}{2}, \frac{1}{4} - x, \frac{3}{4} - x]$	[104,118,119]
38	$[\frac{3}{4} - x, x, \frac{3}{4} - x]$	[105,115,120]
39	$[\frac{3}{4} - x, \frac{1}{4} - x, x + \frac{1}{2}]$	[106,116,117]
40	$[-x, \frac{1}{2} - x, -x]$	[108,110,112]
41	$[\frac{1}{2} - x, -x, \frac{1}{2} - x]$	[121,137,138]
42	$[\frac{3}{4} - x, x + \frac{1}{2}, \frac{3}{4} - x]$	[122,127,135]
43	$[\frac{3}{4} - x, \frac{1}{4} - x, x]$	[123,124,131]
44	$[x, \frac{1}{4} - x, \frac{3}{4} - x]$	[125,126,133]
45	$[\frac{1}{2} - x, x + \frac{1}{4}, x + \frac{3}{4}]$	[128,142,143]
46	$[x + \frac{3}{4}, -x, x + \frac{3}{4}]$	[129,139,144]
47	$[x + \frac{3}{4}, x + \frac{1}{4}, \frac{1}{2} - x]$	[130,140,141]
48	$[x, x + \frac{1}{2}, x]$	[132,134,136]
49	$[x + \frac{1}{2}, x + \frac{1}{2}, x]$	[145,161,162]
50	$[x + \frac{3}{4}, -x, x + \frac{1}{4}]$	[146,151,159]
51	$[x + \frac{3}{4}, x + \frac{3}{4}, \frac{1}{2} - x]$	[147,148,155]
52	$[-x, x + \frac{3}{4}, x + \frac{1}{4}]$	[149,150,157]
53	$[x + \frac{1}{2}, \frac{3}{4} - x, \frac{1}{4} - x]$	[152,166,167]
54	$[\frac{3}{4} - x, x + \frac{1}{2}, \frac{1}{4} - x]$	[153,163,168]
55	$[\frac{3}{4} - x, \frac{3}{4} - x, x]$	[154,164,165]
56	$[-x, -x, \frac{1}{2} - x]$	[156,158,160]
57	$[\frac{1}{2} - x, \frac{1}{2} - x, -x]$	[169,185,186]
58	$[\frac{3}{4} - x, x, \frac{1}{4} - x]$	[170,175,183]
59	$[\frac{3}{4} - x, \frac{3}{4} - x, x + \frac{1}{2}]$	[171,172,179]
60	$[x, \frac{3}{4} - x, \frac{1}{4} - x]$	[173,174,181]
61	$[\frac{1}{2} - x, x + \frac{3}{4}, x + \frac{1}{4}]$	[176,190,191]
62	$[x + \frac{3}{4}, \frac{1}{2} - x, x + \frac{1}{4}]$	[177,187,192]
63	$[x + \frac{3}{4}, x + \frac{3}{4}, -x]$	[178,188,189]
64	$[x, x, x + \frac{1}{2}]$	[180,182,184]

Table 6: Wyckoff site: 96f, site symmetry: 2..

No.	position	mapping
1	$[x, \frac{1}{8}, \frac{1}{8}]$	[1,8]
2	$[x + \frac{1}{4}, \frac{3}{8}, \frac{3}{8}]$	[2,3]
3	$[\frac{3}{8}, \frac{3}{8}, \frac{1}{2} - x]$	[4,16]
4	$[\frac{3}{8}, \frac{3}{8}, x + \frac{1}{4}]$	[5,15]
5	$[\frac{3}{8}, x + \frac{1}{4}, \frac{3}{8}]$	[6,11]

continued ...

Table 6

No.	position	mapping
6	$[\frac{3}{8}, \frac{1}{2} - x, \frac{3}{8}]$	[7,12]
7	$[\frac{1}{4} - x, \frac{1}{8}, \frac{1}{8}]$	[9,10]
8	$[\frac{1}{2} - x, \frac{3}{8}, \frac{3}{8}]$	[13,14]
9	$[\frac{1}{8}, x, \frac{1}{8}]$	[17,24]
10	$[\frac{1}{8}, \frac{1}{8}, x]$	[18,21]
11	$[\frac{1}{8}, \frac{1}{8}, \frac{1}{4} - x]$	[19,23]
12	$[\frac{1}{8}, \frac{1}{4} - x, \frac{1}{8}]$	[20,22]
13	$[-x, \frac{7}{8}, \frac{7}{8}]$	[25,80]
14	$[\frac{1}{4} - x, \frac{5}{8}, \frac{1}{8}]$	[26,75]
15	$[\frac{1}{4} - x, \frac{1}{8}, \frac{5}{8}]$	[27,74]
16	$[\frac{1}{8}, \frac{1}{8}, x + \frac{1}{2}]$	[28,184]
17	$[\frac{5}{8}, \frac{1}{8}, \frac{1}{4} - x]$	[29,183]
18	$[\frac{5}{8}, \frac{1}{4} - x, \frac{1}{8}]$	[30,131]
19	$[\frac{1}{8}, x + \frac{1}{2}, \frac{1}{8}]$	[31,132]
20	$[-x, \frac{3}{8}, \frac{3}{8}]$	[32,73]
21	$[x + \frac{1}{4}, \frac{7}{8}, \frac{3}{8}]$	[33,82]
22	$[x + \frac{1}{4}, \frac{3}{8}, \frac{7}{8}]$	[34,81]
23	$[\frac{1}{8}, \frac{1}{4} - x, \frac{5}{8}]$	[35,126]
24	$[\frac{5}{8}, x + \frac{1}{2}, \frac{5}{8}]$	[36,127]
25	$[x + \frac{1}{2}, \frac{1}{8}, \frac{1}{8}]$	[37,86]
26	$[x + \frac{1}{2}, \frac{5}{8}, \frac{5}{8}]$	[38,85]
27	$[\frac{1}{8}, \frac{5}{8}, \frac{1}{4} - x]$	[39,173]
28	$[\frac{5}{8}, \frac{5}{8}, x + \frac{1}{2}]$	[40,172]
29	$[\frac{7}{8}, -x, \frac{7}{8}]$	[41,144]
30	$[\frac{7}{8}, \frac{7}{8}, -x]$	[42,189]
31	$[\frac{3}{8}, \frac{7}{8}, x + \frac{1}{4}]$	[43,191]
32	$[\frac{3}{8}, x + \frac{1}{4}, \frac{7}{8}]$	[44,142]
33	$[\frac{3}{8}, \frac{3}{8}, -x]$	[45,186]
34	$[\frac{7}{8}, x + \frac{1}{4}, \frac{3}{8}]$	[46,140]
35	$[\frac{7}{8}, \frac{3}{8}, x + \frac{1}{4}]$	[47,187]
36	$[\frac{3}{8}, -x, \frac{3}{8}]$	[48,137]
37	$[x, \frac{5}{8}, \frac{5}{8}]$	[49,56]
38	$[x + \frac{1}{4}, \frac{7}{8}, \frac{7}{8}]$	[50,51]
39	$[\frac{3}{8}, \frac{7}{8}, -x]$	[52,64]
40	$[\frac{3}{8}, \frac{7}{8}, x + \frac{3}{4}]$	[53,63]
41	$[\frac{3}{8}, x + \frac{3}{4}, \frac{7}{8}]$	[54,59]
42	$[\frac{3}{8}, -x, \frac{7}{8}]$	[55,60]
43	$[\frac{1}{4} - x, \frac{5}{8}, \frac{5}{8}]$	[57,58]
44	$[\frac{1}{2} - x, \frac{7}{8}, \frac{7}{8}]$	[61,62]
45	$[\frac{1}{8}, x + \frac{1}{2}, \frac{5}{8}]$	[65,72]
46	$[\frac{1}{8}, \frac{5}{8}, x + \frac{1}{2}]$	[66,69]
47	$[\frac{1}{8}, \frac{5}{8}, \frac{3}{4} - x]$	[67,71]
48	$[\frac{1}{8}, \frac{3}{4} - x, \frac{5}{8}]$	[68,70]
49	$[\frac{1}{8}, \frac{5}{8}, x]$	[76,136]
50	$[\frac{5}{8}, \frac{5}{8}, \frac{3}{4} - x]$	[77,135]
51	$[\frac{5}{8}, \frac{3}{4} - x, \frac{5}{8}]$	[78,179]
52	$[\frac{1}{8}, x, \frac{5}{8}]$	[79,180]

continued ...

Table 6

No.	position	mapping
53	$[\frac{1}{8}, \frac{3}{4} - x, \frac{1}{8}]$	[83,174]
54	$[\frac{5}{8}, x, \frac{1}{8}]$	[84,175]
55	$[\frac{1}{8}, \frac{1}{8}, \frac{3}{4} - x]$	[87,125]
56	$[\frac{5}{8}, \frac{1}{8}, x]$	[88,124]
57	$[\frac{7}{8}, \frac{1}{2} - x, \frac{3}{8}]$	[89,192]
58	$[\frac{7}{8}, \frac{3}{8}, \frac{1}{2} - x]$	[90,141]
59	$[\frac{3}{8}, \frac{3}{8}, x + \frac{3}{4}]$	[91,143]
60	$[\frac{3}{8}, x + \frac{3}{4}, \frac{3}{8}]$	[92,190]
61	$[\frac{3}{8}, \frac{7}{8}, \frac{1}{2} - x]$	[93,138]
62	$[\frac{7}{8}, x + \frac{3}{4}, \frac{7}{8}]$	[94,188]
63	$[\frac{7}{8}, \frac{7}{8}, x + \frac{3}{4}]$	[95,139]
64	$[\frac{3}{8}, \frac{1}{2} - x, \frac{7}{8}]$	[96,185]
65	$[x + \frac{1}{2}, \frac{1}{8}, \frac{5}{8}]$	[97,104]
66	$[x + \frac{3}{4}, \frac{3}{8}, \frac{7}{8}]$	[98,99]
67	$[\frac{7}{8}, \frac{3}{8}, -x]$	[100,112]
68	$[\frac{7}{8}, \frac{3}{8}, x + \frac{3}{4}]$	[101,111]
69	$[\frac{7}{8}, x + \frac{1}{4}, \frac{7}{8}]$	[102,107]
70	$[\frac{7}{8}, \frac{1}{2} - x, \frac{7}{8}]$	[103,108]
71	$[\frac{3}{4} - x, \frac{1}{8}, \frac{5}{8}]$	[105,106]
72	$[-x, \frac{3}{8}, \frac{7}{8}]$	[109,110]
73	$[\frac{5}{8}, x, \frac{5}{8}]$	[113,120]
74	$[\frac{5}{8}, \frac{1}{8}, x + \frac{1}{2}]$	[114,117]
75	$[\frac{5}{8}, \frac{1}{8}, \frac{3}{4} - x]$	[115,119]
76	$[\frac{5}{8}, \frac{1}{4} - x, \frac{5}{8}]$	[116,118]
77	$[\frac{1}{2} - x, \frac{7}{8}, \frac{3}{8}]$	[121,176]
78	$[\frac{3}{4} - x, \frac{5}{8}, \frac{5}{8}]$	[122,171]
79	$[\frac{3}{4} - x, \frac{1}{8}, \frac{1}{8}]$	[123,170]
80	$[\frac{1}{2} - x, \frac{3}{8}, \frac{7}{8}]$	[128,169]
81	$[x + \frac{3}{4}, \frac{7}{8}, \frac{7}{8}]$	[129,178]
82	$[x + \frac{3}{4}, \frac{3}{8}, \frac{3}{8}]$	[130,177]
83	$[x, \frac{1}{8}, \frac{5}{8}]$	[133,182]
84	$[x, \frac{5}{8}, \frac{1}{8}]$	[134,181]
85	$[x + \frac{1}{2}, \frac{5}{8}, \frac{1}{8}]$	[145,152]
86	$[x + \frac{3}{4}, \frac{7}{8}, \frac{3}{8}]$	[146,147]
87	$[\frac{7}{8}, \frac{7}{8}, \frac{1}{2} - x]$	[148,160]
88	$[\frac{7}{8}, \frac{7}{8}, x + \frac{1}{4}]$	[149,159]
89	$[\frac{7}{8}, x + \frac{3}{4}, \frac{3}{8}]$	[150,155]
90	$[\frac{7}{8}, -x, \frac{3}{8}]$	[151,156]
91	$[\frac{3}{4} - x, \frac{5}{8}, \frac{1}{8}]$	[153,154]
92	$[-x, \frac{7}{8}, \frac{3}{8}]$	[157,158]
93	$[\frac{5}{8}, x + \frac{1}{2}, \frac{1}{8}]$	[161,168]
94	$[\frac{5}{8}, \frac{5}{8}, x]$	[162,165]
95	$[\frac{5}{8}, \frac{5}{8}, \frac{1}{4} - x]$	[163,167]
96	$[\frac{5}{8}, \frac{3}{4} - x, \frac{1}{8}]$	[164,166]

Table 7: Wyckoff site: 96g, site symmetry: . . 2

No.	position	mapping
1	$[\frac{1}{4}, y, -y]$	[1,62]
2	$[\frac{1}{2}, y + \frac{1}{2}, y + \frac{1}{4}]$	[2,153]
3	$[\frac{1}{2}, \frac{1}{4} - y, \frac{1}{2} - y]$	[3,106]
4	$[\frac{1}{4} - y, y + \frac{1}{4}, \frac{1}{4}]$	[4,21]
5	$[y + \frac{1}{2}, y + \frac{1}{4}, \frac{1}{2}]$	[5,119]
6	$[\frac{1}{2} - y, \frac{1}{2}, \frac{1}{4} - y]$	[6,166]
7	$[y + \frac{1}{4}, \frac{1}{4}, \frac{1}{4} - y]$	[7,24]
8	$[\frac{1}{4}, \frac{1}{4} - y, y + \frac{1}{4}]$	[8,13]
9	$[0, y, y + \frac{1}{4}]$	[9,146]
10	$[0, \frac{1}{4} - y, -y]$	[10,99]
11	$[y + \frac{1}{4}, \frac{1}{2}, y + \frac{1}{2}]$	[11,68]
12	$[\frac{1}{2} - y, \frac{1}{4}, y + \frac{1}{2}]$	[12,113]
13	$[\frac{1}{4}, y + \frac{1}{2}, \frac{1}{2} - y]$	[14,49]
14	$[\frac{1}{4} - y, \frac{1}{2} - y, \frac{1}{2}]$	[15,67]
15	$[y + \frac{1}{2}, \frac{1}{2} - y, \frac{1}{4}]$	[16,162]
16	$[-y, \frac{1}{4}, y]$	[17,108]
17	$[y, -y, \frac{1}{4}]$	[18,160]
18	$[\frac{1}{4} - y, -y, 0]$	[19,63]
19	$[y + \frac{1}{4}, 0, y]$	[20,59]
20	$[-y, 0, \frac{1}{4} - y]$	[22,150]
21	$[y, y + \frac{1}{4}, 0]$	[23,101]
22	$[\frac{3}{4}, -y, y]$	[25,86]
23	$[0, \frac{1}{2} - y, \frac{1}{4} - y]$	[26,177]
24	$[0, y + \frac{1}{4}, y + \frac{1}{2}]$	[27,130]
25	$[y + \frac{1}{4}, \frac{1}{4} - y, \frac{3}{4}]$	[28,45]
26	$[\frac{1}{2} - y, \frac{1}{4} - y, 0]$	[29,143]
27	$[y + \frac{1}{2}, 0, y + \frac{1}{4}]$	[30,190]
28	$[\frac{1}{4} - y, \frac{3}{4}, y + \frac{1}{4}]$	[31,48]
29	$[\frac{3}{4}, y + \frac{1}{4}, \frac{1}{4} - y]$	[32,37]
30	$[\frac{1}{2}, -y, \frac{1}{4} - y]$	[33,170]
31	$[\frac{1}{2}, y + \frac{1}{4}, y]$	[34,123]
32	$[\frac{1}{4} - y, 0, \frac{1}{2} - y]$	[35,92]
33	$[y + \frac{1}{2}, \frac{3}{4}, \frac{1}{2} - y]$	[36,137]
34	$[\frac{3}{4}, \frac{1}{2} - y, y + \frac{1}{2}]$	[38,73]
35	$[y + \frac{1}{4}, y + \frac{1}{2}, 0]$	[39,91]
36	$[\frac{1}{2} - y, y + \frac{1}{2}, \frac{3}{4}]$	[40,186]
37	$[y, \frac{3}{4}, -y]$	[41,132]
38	$[-y, y, \frac{3}{4}]$	[42,184]
39	$[y + \frac{1}{4}, y, \frac{1}{2}]$	[43,87]
40	$[\frac{1}{4} - y, \frac{1}{2}, -y]$	[44,83]
41	$[y, \frac{1}{2}, y + \frac{1}{4}]$	[46,174]
42	$[-y, \frac{1}{4} - y, \frac{1}{2}]$	[47,125]
43	$[\frac{1}{2}, y, y + \frac{3}{4}]$	[50,105]
44	$[\frac{1}{2}, \frac{3}{4} - y, -y]$	[51,154]
45	$[\frac{1}{4} - y, y + \frac{3}{4}, \frac{3}{4}]$	[52,69]
46	$[y + \frac{1}{2}, y + \frac{3}{4}, 0]$	[53,167]

continued ...

Table 7

No.	position	mapping
47	$[\frac{1}{2} - y, 0, \frac{3}{4} - y]$	[54, 118]
48	$[y + \frac{1}{4}, \frac{3}{4}, \frac{3}{4} - y]$	[55, 72]
49	$[\frac{1}{4}, \frac{3}{4} - y, y + \frac{3}{4}]$	[56, 61]
50	$[0, y + \frac{1}{2}, y + \frac{3}{4}]$	[57, 98]
51	$[0, \frac{3}{4} - y, \frac{1}{2} - y]$	[58, 147]
52	$[\frac{1}{2} - y, \frac{3}{4}, y]$	[60, 161]
53	$[y + \frac{1}{2}, -y, \frac{3}{4}]$	[64, 114]
54	$[-y, \frac{3}{4}, y + \frac{1}{2}]$	[65, 156]
55	$[y, \frac{1}{2} - y, \frac{3}{4}]$	[66, 112]
56	$[-y, \frac{1}{2}, \frac{3}{4} - y]$	[70, 102]
57	$[y, y + \frac{3}{4}, \frac{1}{2}]$	[71, 149]
58	$[0, -y, \frac{3}{4} - y]$	[74, 129]
59	$[0, y + \frac{3}{4}, y]$	[75, 178]
60	$[y + \frac{1}{4}, \frac{3}{4} - y, \frac{1}{4}]$	[76, 93]
61	$[\frac{1}{2} - y, \frac{3}{4} - y, \frac{1}{2}]$	[77, 191]
62	$[y + \frac{1}{2}, \frac{1}{2}, y + \frac{3}{4}]$	[78, 142]
63	$[\frac{1}{4} - y, \frac{1}{4}, y + \frac{3}{4}]$	[79, 96]
64	$[\frac{3}{4}, y + \frac{3}{4}, \frac{3}{4} - y]$	[80, 85]
65	$[\frac{1}{2}, \frac{1}{2} - y, \frac{3}{4} - y]$	[81, 122]
66	$[\frac{1}{2}, y + \frac{3}{4}, y + \frac{1}{2}]$	[82, 171]
67	$[y + \frac{1}{2}, \frac{1}{4}, -y]$	[84, 185]
68	$[\frac{1}{2} - y, y, \frac{1}{4}]$	[88, 138]
69	$[y, \frac{1}{4}, \frac{1}{2} - y]$	[89, 180]
70	$[-y, y + \frac{1}{2}, \frac{1}{4}]$	[90, 136]
71	$[y, 0, y + \frac{3}{4}]$	[94, 126]
72	$[-y, \frac{3}{4} - y, 0]$	[95, 173]
73	$[\frac{3}{4} - y, \frac{1}{2} - y]$	[97, 158]
74	$[\frac{3}{4} - y, y + \frac{1}{4}, \frac{3}{4}]$	[100, 117]
75	$[y + \frac{3}{4}, \frac{1}{4}, \frac{3}{4} - y]$	[103, 120]
76	$[\frac{3}{4}, \frac{1}{4} - y, y + \frac{3}{4}]$	[104, 109]
77	$[y + \frac{3}{4}, \frac{1}{2}, y]$	[107, 164]
78	$[\frac{3}{4}, y + \frac{1}{2}, -y]$	[110, 145]
79	$[\frac{3}{4} - y, \frac{1}{2} - y, 0]$	[111, 163]
80	$[\frac{3}{4} - y, -y, \frac{1}{2}]$	[115, 159]
81	$[y + \frac{3}{4}, 0, y + \frac{1}{2}]$	[116, 155]
82	$[\frac{1}{4}, -y, y + \frac{1}{2}]$	[121, 182]
83	$[y + \frac{3}{4}, \frac{1}{4} - y, \frac{1}{4}]$	[124, 141]
84	$[\frac{3}{4} - y, \frac{3}{4}, y + \frac{3}{4}]$	[127, 144]
85	$[\frac{1}{4}, y + \frac{1}{4}, \frac{3}{4} - y]$	[128, 133]
86	$[\frac{3}{4} - y, 0, -y]$	[131, 188]
87	$[\frac{1}{4}, \frac{1}{2} - y, y]$	[134, 169]
88	$[y + \frac{3}{4}, y + \frac{1}{2}, \frac{1}{2}]$	[135, 187]
89	$[y + \frac{3}{4}, y, 0]$	[139, 183]
90	$[\frac{3}{4} - y, \frac{1}{2}, \frac{1}{2} - y]$	[140, 179]
91	$[\frac{3}{4} - y, y + \frac{3}{4}, \frac{1}{4}]$	[148, 165]
92	$[y + \frac{3}{4}, \frac{3}{4}, \frac{1}{4} - y]$	[151, 168]
93	$[\frac{3}{4}, \frac{3}{4} - y, y + \frac{1}{4}]$	[152, 157]

continued ...

Table 7

No.	position	mapping
94	$[y + \frac{3}{4}, \frac{3}{4} - y, \frac{3}{4}]$	[172, 189]
95	$[\frac{3}{4} - y, \frac{1}{4}, y + \frac{1}{4}]$	[175, 192]
96	$[\frac{1}{4}, y + \frac{3}{4}, \frac{1}{4} - y]$	[176, 181]

Table 8: Wyckoff site: 192h, site symmetry: 1

No.	position	mapping
1	$[x, y, z]$	[1]
2	$[x + \frac{1}{4}, \frac{1}{2} - z, y + \frac{1}{4}]$	[2]
3	$[x + \frac{1}{4}, z + \frac{1}{4}, \frac{1}{2} - y]$	[3]
4	$[z + \frac{1}{4}, y + \frac{1}{4}, \frac{1}{2} - x]$	[4]
5	$[\frac{1}{2} - z, y + \frac{1}{4}, x + \frac{1}{4}]$	[5]
6	$[\frac{1}{2} - y, x + \frac{1}{4}, z + \frac{1}{4}]$	[6]
7	$[y + \frac{1}{4}, \frac{1}{2} - x, z + \frac{1}{4}]$	[7]
8	$[x, \frac{1}{4} - y, \frac{1}{4} - z]$	[8]
9	$[\frac{1}{4} - x, y, \frac{1}{4} - z]$	[9]
10	$[\frac{1}{4} - x, \frac{1}{4} - y, z]$	[10]
11	$[y + \frac{1}{4}, x + \frac{1}{4}, \frac{1}{2} - z]$	[11]
12	$[\frac{1}{2} - y, \frac{1}{2} - x, \frac{1}{2} - z]$	[12]
13	$[\frac{1}{2} - x, z + \frac{1}{4}, y + \frac{1}{4}]$	[13]
14	$[\frac{1}{2} - x, \frac{1}{2} - z, \frac{1}{2} - y]$	[14]
15	$[z + \frac{1}{4}, \frac{1}{2} - y, x + \frac{1}{4}]$	[15]
16	$[\frac{1}{2} - z, \frac{1}{2} - y, \frac{1}{2} - x]$	[16]
17	$[z, x, y]$	[17]
18	$[y, z, x]$	[18]
19	$[\frac{1}{4} - y, z, \frac{1}{4} - x]$	[19]
20	$[\frac{1}{4} - z, \frac{1}{4} - x, y]$	[20]
21	$[\frac{1}{4} - y, \frac{1}{4} - z, x]$	[21]
22	$[z, \frac{1}{4} - x, \frac{1}{4} - y]$	[22]
23	$[y, \frac{1}{4} - z, \frac{1}{4} - x]$	[23]
24	$[\frac{1}{4} - z, x, \frac{1}{4} - y]$	[24]
25	$[-x, -y, -z]$	[25]
26	$[\frac{1}{4} - x, z + \frac{1}{2}, \frac{1}{4} - y]$	[26]
27	$[\frac{1}{4} - x, \frac{1}{4} - z, y + \frac{1}{2}]$	[27]
28	$[\frac{1}{4} - z, \frac{1}{4} - y, x + \frac{1}{2}]$	[28]
29	$[z + \frac{1}{2}, \frac{1}{4} - y, \frac{1}{4} - x]$	[29]
30	$[y + \frac{1}{2}, \frac{1}{4} - x, \frac{1}{4} - z]$	[30]
31	$[\frac{1}{4} - y, x + \frac{1}{2}, \frac{1}{4} - z]$	[31]
32	$[-x, y + \frac{1}{4}, z + \frac{1}{4}]$	[32]
33	$[x + \frac{1}{4}, -y, z + \frac{1}{4}]$	[33]
34	$[x + \frac{1}{4}, y + \frac{1}{4}, -z]$	[34]
35	$[\frac{1}{4} - y, \frac{1}{4} - x, z + \frac{1}{2}]$	[35]
36	$[y + \frac{1}{2}, x + \frac{1}{2}, z + \frac{1}{2}]$	[36]
37	$[x + \frac{1}{2}, \frac{1}{4} - z, \frac{1}{4} - y]$	[37]

continued ...

Table 8

No.	position	mapping
38	$[x + \frac{1}{2}, z + \frac{1}{2}, y + \frac{1}{2}]$	[38]
39	$[\frac{1}{4} - z, y + \frac{1}{2}, \frac{1}{4} - x]$	[39]
40	$[z + \frac{1}{2}, y + \frac{1}{2}, x + \frac{1}{2}]$	[40]
41	$[-z, -x, -y]$	[41]
42	$[-y, -z, -x]$	[42]
43	$[y + \frac{1}{4}, -z, x + \frac{1}{4}]$	[43]
44	$[z + \frac{1}{4}, x + \frac{1}{4}, -y]$	[44]
45	$[y + \frac{1}{4}, z + \frac{1}{4}, -x]$	[45]
46	$[-z, x + \frac{1}{4}, y + \frac{1}{4}]$	[46]
47	$[-y, z + \frac{1}{4}, x + \frac{1}{4}]$	[47]
48	$[z + \frac{1}{4}, -x, y + \frac{1}{4}]$	[48]
49	$[x, y + \frac{1}{2}, z + \frac{1}{2}]$	[49]
50	$[x + \frac{1}{4}, -z, y + \frac{3}{4}]$	[50]
51	$[x + \frac{1}{4}, z + \frac{3}{4}, -y]$	[51]
52	$[z + \frac{1}{4}, y + \frac{3}{4}, -x]$	[52]
53	$[\frac{1}{2} - z, y + \frac{3}{4}, x + \frac{3}{4}]$	[53]
54	$[\frac{1}{2} - y, x + \frac{3}{4}, z + \frac{3}{4}]$	[54]
55	$[y + \frac{1}{4}, -x, z + \frac{3}{4}]$	[55]
56	$[x, \frac{3}{4} - y, \frac{3}{4} - z]$	[56]
57	$[\frac{1}{4} - x, y + \frac{1}{2}, \frac{3}{4} - z]$	[57]
58	$[\frac{1}{4} - x, \frac{3}{4} - y, z + \frac{1}{2}]$	[58]
59	$[y + \frac{1}{4}, x + \frac{3}{4}, -z]$	[59]
60	$[\frac{1}{2} - y, -x, -z]$	[60]
61	$[\frac{1}{2} - x, z + \frac{3}{4}, y + \frac{3}{4}]$	[61]
62	$[\frac{1}{2} - x, -z, -y]$	[62]
63	$[z + \frac{1}{4}, -y, x + \frac{3}{4}]$	[63]
64	$[\frac{1}{2} - z, -y, -x]$	[64]
65	$[z, x + \frac{1}{2}, y + \frac{1}{2}]$	[65]
66	$[y, z + \frac{1}{2}, x + \frac{1}{2}]$	[66]
67	$[\frac{1}{4} - y, z + \frac{1}{2}, \frac{3}{4} - x]$	[67]
68	$[\frac{1}{4} - z, \frac{3}{4} - x, y + \frac{1}{2}]$	[68]
69	$[\frac{1}{4} - y, \frac{3}{4} - z, x + \frac{1}{2}]$	[69]
70	$[z, \frac{3}{4} - x, \frac{3}{4} - y]$	[70]
71	$[y, \frac{3}{4} - z, \frac{3}{4} - x]$	[71]
72	$[\frac{1}{4} - z, x + \frac{1}{2}, \frac{3}{4} - y]$	[72]
73	$[-x, \frac{1}{2} - y, \frac{1}{2} - z]$	[73]
74	$[\frac{1}{4} - x, z, \frac{3}{4} - y]$	[74]
75	$[\frac{1}{4} - x, \frac{3}{4} - z, y]$	[75]
76	$[\frac{1}{4} - z, \frac{3}{4} - y, x]$	[76]
77	$[z + \frac{1}{2}, \frac{3}{4} - y, \frac{3}{4} - x]$	[77]
78	$[y + \frac{1}{2}, \frac{3}{4} - x, \frac{3}{4} - z]$	[78]
79	$[\frac{1}{4} - y, x, \frac{3}{4} - z]$	[79]
80	$[-x, y + \frac{3}{4}, z + \frac{3}{4}]$	[80]
81	$[x + \frac{1}{4}, \frac{1}{2} - y, z + \frac{3}{4}]$	[81]
82	$[x + \frac{1}{4}, y + \frac{3}{4}, \frac{1}{2} - z]$	[82]
83	$[\frac{1}{4} - y, \frac{3}{4} - x, z]$	[83]
84	$[y + \frac{1}{2}, x, z]$	[84]

continued ...

Table 8

No.	position	mapping
85	$[x + \frac{1}{2}, \frac{3}{4} - z, \frac{3}{4} - y]$	[85]
86	$[x + \frac{1}{2}, z, y]$	[86]
87	$[\frac{1}{4} - z, y, \frac{3}{4} - x]$	[87]
88	$[z + \frac{1}{2}, y, x]$	[88]
89	$[-z, \frac{1}{2} - x, \frac{1}{2} - y]$	[89]
90	$[-y, \frac{1}{2} - z, \frac{1}{2} - x]$	[90]
91	$[y + \frac{1}{4}, \frac{1}{2} - z, x + \frac{3}{4}]$	[91]
92	$[z + \frac{1}{4}, x + \frac{3}{4}, \frac{1}{2} - y]$	[92]
93	$[y + \frac{1}{4}, z + \frac{3}{4}, \frac{1}{2} - x]$	[93]
94	$[-z, x + \frac{3}{4}, y + \frac{3}{4}]$	[94]
95	$[-y, z + \frac{3}{4}, x + \frac{3}{4}]$	[95]
96	$[z + \frac{1}{4}, \frac{1}{2} - x, y + \frac{3}{4}]$	[96]
97	$[x + \frac{1}{2}, y, z + \frac{1}{2}]$	[97]
98	$[x + \frac{3}{4}, \frac{1}{2} - z, y + \frac{3}{4}]$	[98]
99	$[x + \frac{3}{4}, z + \frac{1}{4}, -y]$	[99]
100	$[z + \frac{3}{4}, y + \frac{1}{4}, -x]$	[100]
101	$[-z, y + \frac{1}{4}, x + \frac{3}{4}]$	[101]
102	$[-y, x + \frac{1}{4}, z + \frac{3}{4}]$	[102]
103	$[y + \frac{3}{4}, \frac{1}{2} - x, z + \frac{3}{4}]$	[103]
104	$[x + \frac{1}{2}, \frac{1}{4} - y, \frac{3}{4} - z]$	[104]
105	$[\frac{3}{4} - x, y, \frac{3}{4} - z]$	[105]
106	$[\frac{3}{4} - x, \frac{1}{4} - y, z + \frac{1}{2}]$	[106]
107	$[y + \frac{3}{4}, x + \frac{1}{4}, -z]$	[107]
108	$[-y, \frac{1}{2} - x, -z]$	[108]
109	$[-x, z + \frac{1}{4}, y + \frac{3}{4}]$	[109]
110	$[-x, \frac{1}{2} - z, -y]$	[110]
111	$[z + \frac{3}{4}, \frac{1}{2} - y, x + \frac{3}{4}]$	[111]
112	$[-z, \frac{1}{2} - y, -x]$	[112]
113	$[z + \frac{1}{2}, x, y + \frac{1}{2}]$	[113]
114	$[y + \frac{1}{2}, z, x + \frac{1}{2}]$	[114]
115	$[\frac{3}{4} - y, z, \frac{3}{4} - x]$	[115]
116	$[\frac{3}{4} - z, \frac{1}{4} - x, y + \frac{1}{2}]$	[116]
117	$[\frac{3}{4} - y, \frac{1}{4} - z, x + \frac{1}{2}]$	[117]
118	$[z + \frac{1}{2}, \frac{1}{4} - x, \frac{3}{4} - y]$	[118]
119	$[y + \frac{1}{2}, \frac{1}{4} - z, \frac{3}{4} - x]$	[119]
120	$[\frac{3}{4} - z, x, \frac{3}{4} - y]$	[120]
121	$[\frac{1}{2} - x, -y, \frac{1}{2} - z]$	[121]
122	$[\frac{3}{4} - x, z + \frac{1}{2}, \frac{3}{4} - y]$	[122]
123	$[\frac{3}{4} - x, \frac{1}{4} - z, y]$	[123]
124	$[\frac{3}{4} - z, \frac{1}{4} - y, x]$	[124]
125	$[z, \frac{1}{4} - y, \frac{3}{4} - x]$	[125]
126	$[y, \frac{1}{4} - x, \frac{3}{4} - z]$	[126]
127	$[\frac{3}{4} - y, x + \frac{1}{2}, \frac{3}{4} - z]$	[127]
128	$[\frac{1}{2} - x, y + \frac{1}{4}, z + \frac{3}{4}]$	[128]
129	$[x + \frac{3}{4}, -y, z + \frac{3}{4}]$	[129]
130	$[x + \frac{3}{4}, y + \frac{1}{4}, \frac{1}{2} - z]$	[130]
131	$[\frac{3}{4} - y, \frac{1}{4} - x, z]$	[131]

continued ...

Table 8

No.	position	mapping
132	$[y, x + \frac{1}{2}, z]$	[132]
133	$[x, \frac{1}{4} - z, \frac{3}{4} - y]$	[133]
134	$[x, z + \frac{1}{2}, y]$	[134]
135	$[\frac{3}{4} - z, y + \frac{1}{2}, \frac{3}{4} - x]$	[135]
136	$[z, y + \frac{1}{2}, x]$	[136]
137	$[\frac{1}{2} - z, -x, \frac{1}{2} - y]$	[137]
138	$[\frac{1}{2} - y, -z, \frac{1}{2} - x]$	[138]
139	$[y + \frac{3}{4}, -z, x + \frac{3}{4}]$	[139]
140	$[z + \frac{3}{4}, x + \frac{1}{4}, \frac{1}{2} - y]$	[140]
141	$[y + \frac{3}{4}, z + \frac{1}{4}, \frac{1}{2} - x]$	[141]
142	$[\frac{1}{2} - z, x + \frac{1}{4}, y + \frac{3}{4}]$	[142]
143	$[\frac{1}{2} - y, z + \frac{1}{4}, x + \frac{3}{4}]$	[143]
144	$[z + \frac{3}{4}, -x, y + \frac{3}{4}]$	[144]
145	$[x + \frac{1}{2}, y + \frac{1}{2}, z]$	[145]
146	$[x + \frac{3}{4}, -z, y + \frac{1}{4}]$	[146]
147	$[x + \frac{3}{4}, z + \frac{3}{4}, \frac{1}{2} - y]$	[147]
148	$[z + \frac{3}{4}, y + \frac{3}{4}, \frac{1}{2} - x]$	[148]
149	$[-z, y + \frac{3}{4}, x + \frac{1}{4}]$	[149]
150	$[-y, x + \frac{3}{4}, z + \frac{1}{4}]$	[150]
151	$[y + \frac{3}{4}, -x, z + \frac{1}{4}]$	[151]
152	$[x + \frac{1}{2}, \frac{3}{4} - y, \frac{1}{4} - z]$	[152]
153	$[\frac{3}{4} - x, y + \frac{1}{2}, \frac{1}{4} - z]$	[153]
154	$[\frac{3}{4} - x, \frac{3}{4} - y, z]$	[154]
155	$[y + \frac{3}{4}, x + \frac{3}{4}, \frac{1}{2} - z]$	[155]
156	$[-y, -x, \frac{1}{2} - z]$	[156]
157	$[-x, z + \frac{3}{4}, y + \frac{1}{4}]$	[157]
158	$[-x, -z, \frac{1}{2} - y]$	[158]
159	$[z + \frac{3}{4}, -y, x + \frac{1}{4}]$	[159]
160	$[-z, -y, \frac{1}{2} - x]$	[160]
161	$[z + \frac{1}{2}, x + \frac{1}{2}, y]$	[161]
162	$[y + \frac{1}{2}, z + \frac{1}{2}, x]$	[162]
163	$[\frac{3}{4} - y, z + \frac{1}{2}, \frac{1}{4} - x]$	[163]
164	$[\frac{3}{4} - z, \frac{3}{4} - x, y]$	[164]
165	$[\frac{3}{4} - y, \frac{3}{4} - z, x]$	[165]
166	$[z + \frac{1}{2}, \frac{3}{4} - x, \frac{1}{4} - y]$	[166]
167	$[y + \frac{1}{2}, \frac{3}{4} - z, \frac{1}{4} - x]$	[167]
168	$[\frac{3}{4} - z, x + \frac{1}{2}, \frac{1}{4} - y]$	[168]
169	$[\frac{1}{2} - x, \frac{1}{2} - y, -z]$	[169]
170	$[\frac{3}{4} - x, z, \frac{1}{4} - y]$	[170]
171	$[\frac{3}{4} - x, \frac{3}{4} - z, y + \frac{1}{2}]$	[171]
172	$[\frac{3}{4} - z, \frac{3}{4} - y, x + \frac{1}{2}]$	[172]
173	$[z, \frac{3}{4} - y, \frac{1}{4} - x]$	[173]
174	$[y, \frac{3}{4} - x, \frac{1}{4} - z]$	[174]
175	$[\frac{3}{4} - y, x, \frac{1}{4} - z]$	[175]
176	$[\frac{1}{2} - x, y + \frac{3}{4}, z + \frac{1}{4}]$	[176]
177	$[x + \frac{3}{4}, \frac{1}{2} - y, z + \frac{1}{4}]$	[177]
178	$[x + \frac{3}{4}, y + \frac{3}{4}, -z]$	[178]

continued ...

Table 8

No.	position	mapping
179	$[\frac{3}{4} - y, \frac{3}{4} - x, z + \frac{1}{2}]$	[179]
180	$[y, x, z + \frac{1}{2}]$	[180]
181	$[x, \frac{3}{4} - z, \frac{1}{4} - y]$	[181]
182	$[x, z, y + \frac{1}{2}]$	[182]
183	$[\frac{3}{4} - z, y, \frac{1}{4} - x]$	[183]
184	$[z, y, x + \frac{1}{2}]$	[184]
185	$[\frac{1}{2} - z, \frac{1}{2} - x, -y]$	[185]
186	$[\frac{1}{2} - y, \frac{1}{2} - z, -x]$	[186]
187	$[y + \frac{3}{4}, \frac{1}{2} - z, x + \frac{1}{4}]$	[187]
188	$[z + \frac{3}{4}, x + \frac{3}{4}, -y]$	[188]
189	$[y + \frac{3}{4}, z + \frac{3}{4}, -x]$	[189]
190	$[\frac{1}{2} - z, x + \frac{3}{4}, y + \frac{1}{4}]$	[190]
191	$[\frac{1}{2} - y, z + \frac{3}{4}, x + \frac{1}{4}]$	[191]
192	$[z + \frac{3}{4}, \frac{1}{2} - x, y + \frac{1}{4}]$	[192]