MSG No. 199.13 $I2_131'$ [Type II, cubic]

Table 1: Wyckoff site: `8a`, site symmetry: `.3.1'`

No.	position	mapping
1	$[x,\, x,\, x]$	`[1,5,6,25,29,30]`
2	$\left[x,\, -x,\, \frac{1}{2}-x\right]$	`[2,10,11,26,34,35]`
3	$\left[\frac{1}{2}-x,\, x,\, -x\right]$	`[3,7,12,27,31,36]`
4	$\left[-x,\, \frac{1}{2}-x,\, x\right]$	`[4,8,9,28,32,33]`
5	$\left[x+\frac{1}{2},\, x+\frac{1}{2},\, x+\frac{1}{2}\right]$	`[13,17,18,37,41,42]`
6	$\left[x+\frac{1}{2},\, \frac{1}{2}-x,\, -x\right]$	`[14,22,23,38,46,47]`
7	$\left[-x,\, x+\frac{1}{2},\, \frac{1}{2}-x\right]$	`[15,19,24,39,43,48]`
8	$\left[\frac{1}{2}-x,\, -x,\, x+\frac{1}{2}\right]$	`[16,20,21,40,44,45]`

Table 2: Wyckoff site: `12b`, site symmetry: `2..1'`

No.	position	mapping
1	$\left[x,\, 0,\, \frac{1}{4}\right]$	`[1,2,25,26]`
2	$\left[\frac{1}{2}-x,\, 0,\, \frac{3}{4}\right]$	`[3,16,27,40]`
3	$\left[-x,\, \frac{1}{2},\, \frac{1}{4}\right]$	`[4,15,28,39]`
4	$\left[\frac{1}{4},\, x,\, 0\right]$	`[5,12,29,36]`
5	$\left[0,\, \frac{1}{4},\, x\right]$	`[6,9,30,33]`
6	$\left[\frac{1}{2},\, \frac{1}{4},\, -x\right]$	`[7,23,31,47]`
7	$\left[\frac{3}{4},\, \frac{1}{2}-x,\, 0\right]$	`[8,22,32,46]`
8	$\left[\frac{1}{4},\, -x,\, \frac{1}{2}\right]$	`[10,20,34,44]`
9	$\left[0,\, \frac{3}{4},\, \frac{1}{2}-x\right]$	`[11,19,35,43]`
10	$\left[x+\frac{1}{2},\, \frac{1}{2},\, \frac{3}{4}\right]$	`[13,14,37,38]`
11	$\left[\frac{3}{4},\, x+\frac{1}{2},\, \frac{1}{2}\right]$	`[17,24,41,48]`
12	$\left[\frac{1}{2},\, \frac{3}{4},\, x+\frac{1}{2}\right]$	`[18,21,42,45]`

Table 3: Wyckoff site: `24c`, site symmetry: `11'`

No.	position	mapping
1	$[x,\, y,\, z]$	`[1,25]`
2	$\left[x,\, -y,\, \frac{1}{2}-z\right]$	`[2,26]`
3	$\left[\frac{1}{2}-x,\, y,\, -z\right]$	`[3,27]`
4	$\left[-x,\, \frac{1}{2}-y,\, z\right]$	`[4,28]`
5	$[z,\, x,\, y]$	`[5,29]`
6	$[y,\, z,\, x]$	`[6,30]`
7	$\left[\frac{1}{2}-y,\, z,\, -x\right]$	`[7,31]`
8	$\left[-z,\, \frac{1}{2}-x,\, y\right]$	`[8,32]`
9	$\left[-y,\, \frac{1}{2}-z,\, x\right]$	`[9,33]`
10	$\left[z,\, -x,\, \frac{1}{2}-y\right]$	`[10,34]`
11	$\left[y,\, -z,\, \frac{1}{2}-x\right]$	`[11,35]`

continued ...

Table 3

No.	position	mapping
12	$\left[\frac{1}{2}-z,\, x,\, -y\right]$	[12,36]
13	$\left[x+\frac{1}{2},\, y+\frac{1}{2},\, z+\frac{1}{2}\right]$	[13,37]
14	$\left[x+\frac{1}{2},\, \frac{1}{2}-y,\, -z\right]$	[14,38]
15	$\left[-x,\, y+\frac{1}{2},\, \frac{1}{2}-z\right]$	[15,39]
16	$\left[\frac{1}{2}-x,\, -y,\, z+\frac{1}{2}\right]$	[16,40]
17	$\left[z+\frac{1}{2},\, x+\frac{1}{2},\, y+\frac{1}{2}\right]$	[17,41]
18	$\left[y+\frac{1}{2},\, z+\frac{1}{2},\, x+\frac{1}{2}\right]$	[18,42]
19	$\left[-y,\, z+\frac{1}{2},\, \frac{1}{2}-x\right]$	[19,43]
20	$\left[\frac{1}{2}-z,\, -x,\, y+\frac{1}{2}\right]$	[20,44]
21	$\left[\frac{1}{2}-y,\, -z,\, x+\frac{1}{2}\right]$	[21,45]
22	$\left[z+\frac{1}{2},\, \frac{1}{2}-x,\, -y\right]$	[22,46]
23	$\left[y+\frac{1}{2},\, \frac{1}{2}-z,\, -x\right]$	[23,47]
24	$\left[-z,\, x+\frac{1}{2},\, \frac{1}{2}-y\right]$	[24,48]