MSG No. 199.12 $I2_13$ [Type I, cubic]

Table 1: Wyckoff site: `8a`, site symmetry: `.3.`

No.	position	mapping
1	$[x,\ x,\ x]$	`[1,5,6]`
2	$\left[x,\ -x,\ \frac{1}{2}-x\right]$	`[2,10,11]`
3	$\left[\frac{1}{2}-x,\ x,\ -x\right]$	`[3,7,12]`
4	$\left[-x,\ \frac{1}{2}-x,\ x\right]$	`[4,8,9]`
5	$\left[x+\frac{1}{2},\ x+\frac{1}{2},\ x+\frac{1}{2}\right]$	`[13,17,18]`
6	$\left[x+\frac{1}{2},\ \frac{1}{2}-x,\ -x\right]$	`[14,22,23]`
7	$\left[-x,\ x+\frac{1}{2},\ \frac{1}{2}-x\right]$	`[15,19,24]`
8	$\left[\frac{1}{2}-x,\ -x,\ x+\frac{1}{2}\right]$	`[16,20,21]`

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

No.	position	mapping
1	$\left[x,\ 0,\ \frac{1}{4}\right]$	`[1,2]`
2	$\left[\frac{1}{2}-x,\ 0,\ \frac{3}{4}\right]$	`[3,16]`
3	$\left[-x,\ \frac{1}{2},\ \frac{1}{4}\right]$	`[4,15]`
4	$\left[\frac{1}{4},\ x,\ 0\right]$	`[5,12]`
5	$\left[0,\ \frac{1}{4},\ x\right]$	`[6,9]`
6	$\left[\frac{1}{2},\ \frac{1}{4},\ -x\right]$	`[7,23]`
7	$\left[\frac{3}{4},\ \frac{1}{2}-x,\ 0\right]$	`[8,22]`
8	$\left[\frac{1}{4},\ -x,\ \frac{1}{2}\right]$	`[10,20]`
9	$\left[0,\ \frac{3}{4},\ \frac{1}{2}-x\right]$	`[11,19]`
10	$\left[x+\frac{1}{2},\ \frac{1}{2},\ \frac{3}{4}\right]$	`[13,14]`
11	$\left[\frac{3}{4},\ x+\frac{1}{2},\ \frac{1}{2}\right]$	`[17,24]`
12	$\left[\frac{1}{2},\ \frac{3}{4},\ x+\frac{1}{2}\right]$	`[18,21]`

Table 3: Wyckoff site: `24c`, site symmetry: `1`

No.	position	mapping
1	$[x,\ y,\ z]$	`[1]`
2	$\left[x,\ -y,\ \frac{1}{2}-z\right]$	`[2]`
3	$\left[\frac{1}{2}-x,\ y,\ -z\right]$	`[3]`
4	$\left[-x,\ \frac{1}{2}-y,\ z\right]$	`[4]`
5	$[z,\ x,\ y]$	`[5]`
6	$[y,\ z,\ x]$	`[6]`
7	$\left[\frac{1}{2}-y,\ z,\ -x\right]$	`[7]`
8	$\left[-z,\ \frac{1}{2}-x,\ y\right]$	`[8]`
9	$\left[-y,\ \frac{1}{2}-z,\ x\right]$	`[9]`
10	$\left[z,\ -x,\ \frac{1}{2}-y\right]$	`[10]`
11	$\left[y,\ -z,\ \frac{1}{2}-x\right]$	`[11]`

continued ...

Table 3

No.	position	mapping
12	$\left[\frac{1}{2}-z,\, x,\, -y\right]$	[12]
13	$\left[x+\frac{1}{2},\, y+\frac{1}{2},\, z+\frac{1}{2}\right]$	[13]
14	$\left[x+\frac{1}{2},\, \frac{1}{2}-y,\, -z\right]$	[14]
15	$\left[-x,\, y+\frac{1}{2},\, \frac{1}{2}-z\right]$	[15]
16	$\left[\frac{1}{2}-x,\, -y,\, z+\frac{1}{2}\right]$	[16]
17	$\left[z+\frac{1}{2},\, x+\frac{1}{2},\, y+\frac{1}{2}\right]$	[17]
18	$\left[y+\frac{1}{2},\, z+\frac{1}{2},\, x+\frac{1}{2}\right]$	[18]
19	$\left[-y,\, z+\frac{1}{2},\, \frac{1}{2}-x\right]$	[19]
20	$\left[\frac{1}{2}-z,\, -x,\, y+\frac{1}{2}\right]$	[20]
21	$\left[\frac{1}{2}-y,\, -z,\, x+\frac{1}{2}\right]$	[21]
22	$\left[z+\frac{1}{2},\, \frac{1}{2}-x,\, -y\right]$	[22]
23	$\left[y+\frac{1}{2},\, \frac{1}{2}-z,\, -x\right]$	[23]
24	$\left[-z,\, x+\frac{1}{2},\, \frac{1}{2}-y\right]$	[24]