MSG No. 90.100 P_c42_12 [Type IV, tetragonal]

Table 1: Wyckoff site: `4a`, site symmetry: `2.22`

No.	position	mapping
1	$[0,\ 0,\ 0]$	`[1,6,7,8]`
2	$\left[\frac{1}{2},\ \frac{1}{2},\ 0\right]$	`[2,3,4,5]`
3	$\left[0,\ 0,\ \frac{1}{2}\right]$	`[9,14,15,16]`
4	$\left[\frac{1}{2},\ \frac{1}{2},\ \frac{1}{2}\right]$	`[10,11,12,13]`

Table 2: Wyckoff site: `4b`, site symmetry: `2.2'2'`

No.	position	mapping
1	$\left[0,\ 0,\ \frac{1}{4}\right]$	`[1,6,15,16]`
2	$\left[\frac{1}{2},\ \frac{1}{2},\ \frac{1}{4}\right]$	`[2,3,12,13]`
3	$\left[\frac{1}{2},\ \frac{1}{2},\ \frac{3}{4}\right]$	`[4,5,10,11]`
4	$\left[0,\ 0,\ \frac{3}{4}\right]$	`[7,8,9,14]`

Table 3: Wyckoff site: `4c`, site symmetry: `4..`

No.	position	mapping
1	$\left[0,\ \frac{1}{2},\ z\right]$	`[1,2,3,6]`
2	$\left[\frac{1}{2},\ 0,\ -z\right]$	`[4,5,7,8]`
3	$\left[0,\ \frac{1}{2},\ z+\frac{1}{2}\right]$	`[9,10,11,14]`
4	$\left[\frac{1}{2},\ 0,\ \frac{1}{2}-z\right]$	`[12,13,15,16]`

Table 4: Wyckoff site: `8d`, site symmetry: `2..`

No.	position	mapping
1	$[0,\ 0,\ z]$	`[1,6]`
2	$\left[\frac{1}{2},\ \frac{1}{2},\ z\right]$	`[2,3]`
3	$\left[\frac{1}{2},\ \frac{1}{2},\ -z\right]$	`[4,5]`
4	$[0,\ 0,\ -z]$	`[7,8]`
5	$\left[0,\ 0,\ z+\frac{1}{2}\right]$	`[9,14]`
6	$\left[\frac{1}{2},\ \frac{1}{2},\ z+\frac{1}{2}\right]$	`[10,11]`
7	$\left[\frac{1}{2},\ \frac{1}{2},\ \frac{1}{2}-z\right]$	`[12,13]`
8	$\left[0,\ 0,\ \frac{1}{2}-z\right]$	`[15,16]`

Table 5: Wyckoff site: `8e`, site symmetry: `..2`

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

Table 6: Wyckoff site: `8f`, site symmetry: `..2'`

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

Table 7: Wyckoff site: `16g`, site symmetry: `1`

No.	position	mapping
1	$[x,\ y,\ z]$	`[1]`
2	$\left[\frac{1}{2}-y,\ x+\frac{1}{2},\ z\right]$	`[2]`
3	$\left[y+\frac{1}{2},\ \frac{1}{2}-x,\ z\right]$	`[3]`
4	$\left[x+\frac{1}{2},\ \frac{1}{2}-y,\ -z\right]$	`[4]`
5	$\left[\frac{1}{2}-x,\ y+\frac{1}{2},\ -z\right]$	`[5]`
6	$[-x,\ -y,\ z]$	`[6]`
7	$[y,\ x,\ -z]$	`[7]`
8	$[-y,\ -x,\ -z]$	`[8]`
9	$\left[x,\ y,\ z+\frac{1}{2}\right]$	`[9]`
10	$\left[\frac{1}{2}-y,\ x+\frac{1}{2},\ z+\frac{1}{2}\right]$	`[10]`
11	$\left[y+\frac{1}{2},\ \frac{1}{2}-x,\ z+\frac{1}{2}\right]$	`[11]`
12	$\left[x+\frac{1}{2},\ \frac{1}{2}-y,\ \frac{1}{2}-z\right]$	`[12]`
13	$\left[\frac{1}{2}-x,\ y+\frac{1}{2},\ \frac{1}{2}-z\right]$	`[13]`
14	$\left[-x,\ -y,\ z+\frac{1}{2}\right]$	`[14]`
15	$\left[y,\ x,\ \frac{1}{2}-z\right]$	`[15]`
16	$\left[-y,\ -x,\ \frac{1}{2}-z\right]$	`[16]`