MSG No. 98.157 $I4_122$ [Type I, tetragonal]

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

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

Table 2: Wyckoff site: `4b`, site symmetry: `2.22`

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

Table 3: Wyckoff site: `8c`, site symmetry: `2..`

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

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

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

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

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

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

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

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

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