MSG No. 49.270 $Pc'cm'$ [Type III, orthorhombic]

Table 1: Wyckoff site: `2a`, site symmetry: `..2'/m'`

No.	position	mapping
1	$[0, 0, 0]$	`[1,3,6,8]`
2	$\left[0, 0, \frac{1}{2}\right]$	`[2,4,5,7]`

Table 2: Wyckoff site: `2b`, site symmetry: `..2'/m'`

No.	position	mapping
1	$\left[\frac{1}{2}, \frac{1}{2}, 0\right]$	`[1,3,6,8]`
2	$\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$	`[2,4,5,7]`

Table 3: Wyckoff site: `2c`, site symmetry: `..2'/m'`

No.	position	mapping
1	$\left[0, \frac{1}{2}, 0\right]$	`[1,3,6,8]`
2	$\left[0, \frac{1}{2}, \frac{1}{2}\right]$	`[2,4,5,7]`

Table 4: Wyckoff site: `2d`, site symmetry: `..2'/m'`

No.	position	mapping
1	$\left[\frac{1}{2}, 0, 0\right]$	`[1,3,6,8]`
2	$\left[\frac{1}{2}, 0, \frac{1}{2}\right]$	`[2,4,5,7]`

Table 5: Wyckoff site: `2e`, site symmetry: `2'22'`

No.	position	mapping
1	$\left[0, 0, \frac{1}{4}\right]$	`[1,2,5,6]`
2	$\left[0, 0, \frac{3}{4}\right]$	`[3,4,7,8]`

Table 6: Wyckoff site: `2f`, site symmetry: `2'22'`

No.	position	mapping
1	$\left[\frac{1}{2}, 0, \frac{1}{4}\right]$	`[1,2,5,6]`
2	$\left[\frac{1}{2}, 0, \frac{3}{4}\right]$	`[3,4,7,8]`

Table 7: Wyckoff site: `2g`, site symmetry: `2'22'`

No.	position	mapping
1	$\left[0,\ \frac{1}{2},\ \frac{1}{4}\right]$	`[1,2,5,6]`
2	$\left[0,\ \frac{1}{2},\ \frac{3}{4}\right]$	`[3,4,7,8]`

Table 8: Wyckoff site: `2h`, site symmetry: `2'22'`

No.	position	mapping
1	$\left[\frac{1}{2},\ \frac{1}{2},\ \frac{1}{4}\right]$	`[1,2,5,6]`
2	$\left[\frac{1}{2},\ \frac{1}{2},\ \frac{3}{4}\right]$	`[3,4,7,8]`

Table 9: Wyckoff site: `4i`, site symmetry: `2'..`

No.	position	mapping
1	$\left[x,\ 0,\ \frac{1}{4}\right]$	`[1,5]`
2	$\left[-x,\ 0,\ \frac{1}{4}\right]$	`[2,6]`
3	$\left[-x,\ 0,\ \frac{3}{4}\right]$	`[3,7]`
4	$\left[x,\ 0,\ \frac{3}{4}\right]$	`[4,8]`

Table 10: Wyckoff site: `4j`, site symmetry: `2'..`

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

Table 11: Wyckoff site: `4k`, site symmetry: `.2.`

No.	position	mapping
1	$\left[0,\ y,\ \frac{1}{4}\right]$	`[1,2]`
2	$\left[0,\ -y,\ \frac{3}{4}\right]$	`[3,4]`
3	$\left[0,\ -y,\ \frac{1}{4}\right]$	`[5,6]`
4	$\left[0,\ y,\ \frac{3}{4}\right]$	`[7,8]`

Table 12: Wyckoff site: `4l`, site symmetry: `.2.`

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

Table 13: Wyckoff site: `4m`, site symmetry: `..2'`

No.	position	mapping
1	$[0,\, 0,\, z]$	`[1,6]`
2	$\left[0,\, 0,\, \frac{1}{2}-z\right]$	`[2,5]`
3	$[0,\, 0,\, -z]$	`[3,8]`
4	$\left[0,\, 0,\, z+\frac{1}{2}\right]$	`[4,7]`

Table 14: Wyckoff site: `4n`, site symmetry: `..2'`

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

Table 15: Wyckoff site: `4o`, site symmetry: `..2'`

No.	position	mapping
1	$\left[0,\, \frac{1}{2},\, z\right]$	`[1,6]`
2	$\left[0,\, \frac{1}{2},\, \frac{1}{2}-z\right]$	`[2,5]`
3	$\left[0,\, \frac{1}{2},\, -z\right]$	`[3,8]`
4	$\left[0,\, \frac{1}{2},\, z+\frac{1}{2}\right]$	`[4,7]`

Table 16: Wyckoff site: `4p`, site symmetry: `..2'`

No.	position	mapping
1	$\left[\frac{1}{2},\, 0,\, z\right]$	`[1,6]`
2	$\left[\frac{1}{2},\, 0,\, \frac{1}{2}-z\right]$	`[2,5]`
3	$\left[\frac{1}{2},\, 0,\, -z\right]$	`[3,8]`
4	$\left[\frac{1}{2},\, 0,\, z+\frac{1}{2}\right]$	`[4,7]`

Table 17: Wyckoff site: `4q`, site symmetry: `..m'`

No.	position	mapping
1	$[x,\ y,\ 0]$	`[1,8]`
2	$\left[-x,\ y,\ \frac{1}{2}\right]$	`[2,7]`
3	$[-x,\ -y,\ 0]$	`[3,6]`
4	$\left[x,\ -y,\ \frac{1}{2}\right]$	`[4,5]`

Table 18: Wyckoff site: `8r`, site symmetry: `1`

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