MSG No. 18.23 $P_C2_12_12$ [Type IV, orthorhombic]

Table 1: Wyckoff site: `2a`, site symmetry: `2'2'2`

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

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

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

Table 3: Wyckoff site: `2c`, site symmetry: `2'2'2`

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

Table 4: Wyckoff site: `2d`, site symmetry: `2'2'2`

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

Table 5: Wyckoff site: `4e`, site symmetry: `2'..`

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

Table 6: Wyckoff site: `4f`, site symmetry: `2'..`

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

Table 7: Wyckoff site: `4g`, site symmetry: `.2'.`

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

Table 8: Wyckoff site: `4h`, site symmetry: `.2'.`

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

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

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

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

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

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

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

Table 12: Wyckoff site: `8l`, site symmetry: `1`

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