MSG No. 23.51 $I2'2'2$ [Type III, orthorhombic]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Table 11: Wyckoff site: `8k`, site symmetry: `1`

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