MSG No. 51.294 $Pm'm'a$ [Type III, orthorhombic]

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

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

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

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

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

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

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

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

Table 5: Wyckoff site: 2e, site symmetry: m'm'2

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

Table 6: Wyckoff site: 2f, site symmetry: m'm'2

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

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

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

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

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

Table 9: Wyckoff site: 4i, site symmetry: .m'.

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

Table 10: Wyckoff site: 4j, site symmetry: .m'.

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

Table 11: Wyckoff site: 4k, site symmetry: m'..

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

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

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