MSG No. 47.250 $Pmmm1'$ [Type II, orthorhombic]

Table 1: Wyckoff site: `1a`, site symmetry: `mmm1'`

No.	position	mapping
1	[0, 0, 0]	`[1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16]`

Table 2: Wyckoff site: `1b`, site symmetry: `mmm1'`

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

Table 3: Wyckoff site: `1c`, site symmetry: `mmm1'`

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

Table 4: Wyckoff site: `1d`, site symmetry: `mmm1'`

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

Table 5: Wyckoff site: `1e`, site symmetry: `mmm1'`

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

Table 6: Wyckoff site: `1f`, site symmetry: `mmm1'`

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

Table 7: Wyckoff site: 1g, site symmetry: mmm1'

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

Table 8: Wyckoff site: 1h, site symmetry: mmm1'

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

Table 9: Wyckoff site: 2i, site symmetry: 2mm1'

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

Table 10: Wyckoff site: 2j, site symmetry: 2mm1'

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

Table 11: Wyckoff site: 2k, site symmetry: 2mm1'

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

Table 12: Wyckoff site: 2l, site symmetry: 2mm1'

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

Table 13: Wyckoff site: 2m, site symmetry: m2m1'

No.	position	mapping
1	$[0,\ y,\ 0]$	[1,3,6,8,9,11,14,16]
2	$[0,\ -y,\ 0]$	[2,4,5,7,10,12,13,15]

Table 14: Wyckoff site: 2n, site symmetry: m2m1'

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

Table 15: Wyckoff site: 2o, site symmetry: m2m1'

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

Table 16: Wyckoff site: 2p, site symmetry: m2m1'

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

Table 17: Wyckoff site: 2q, site symmetry: mm21'

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

Table 18: Wyckoff site: 2r, site symmetry: mm21'

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

Table 19: Wyckoff site: 2s, site symmetry: mm21'

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

Table 20: Wyckoff site: 2t, site symmetry: mm21'

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

Table 21: Wyckoff site: 4u, site symmetry: m..1'

No.	position	mapping
1	$[0, y, z]$	[1,6,9,14]
2	$[0, -y, -z]$	[2,5,10,13]
3	$[0, y, -z]$	[3,8,11,16]
4	$[0, -y, z]$	[4,7,12,15]

Table 22: Wyckoff site: 4v, site symmetry: m..1'

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

Table 23: Wyckoff site: 4w, site symmetry: .m.1'

No.	position	mapping
1	$[x, 0, z]$	[1,7,9,15]
2	$[x, 0, -z]$	[2,8,10,16]
3	$[-x, 0, -z]$	[3,5,11,13]
4	$[-x, 0, z]$	[4,6,12,14]

Table 24: Wyckoff site: 4x, site symmetry: .m.1'

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

Table 25: Wyckoff site: 4y, site symmetry: ..m1'

No.	position	mapping
1	$[x, y, 0]$	[1,8,9,16]
2	$[x, -y, 0]$	[2,7,10,15]
3	$[-x, y, 0]$	[3,6,11,14]
4	$[-x, -y, 0]$	[4,5,12,13]

Table 26: Wyckoff site: 4z, site symmetry: ..m1'

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

Table 27: Wyckoff site: 8A, site symmetry: 11'

No.	position	mapping
1	$[x, y, z]$	[1,9]
2	$[x, -y, -z]$	[2,10]
3	$[-x, y, -z]$	[3,11]
4	$[-x, -y, z]$	[4,12]
5	$[-x, -y, -z]$	[5,13]
6	$[-x, y, z]$	[6,14]
7	$[x, -y, z]$	[7,15]
8	$[x, y, -z]$	[8,16]