

MSG No. 51.292 *Pmm'a* [ Type III, orthorhombic ]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Table 12: Wyckoff site: 81, site symmetry: 1

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