

MSG No. 53.324 $Pmn'a$ [Type III, orthorhombic]

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Table 9: Wyckoff site: 8i, site symmetry: 1

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