MSG No. 59.407 $Pm'mn$ [Type III, orthorhombic]

Table 1: Wyckoff site: 2a, site symmetry: m'm2'

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

Table 2: Wyckoff site: 2b, site symmetry: m'm2'

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

Table 3: Wyckoff site: 4c, site symmetry: -1'

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

Table 4: Wyckoff site: 4d, site symmetry: -1'

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

Table 5: Wyckoff site: 4e, site symmetry: m'..

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

Table 6: Wyckoff site: `4f`, site symmetry: `.m.`

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

Table 7: Wyckoff site: `8g`, site symmetry: `1`

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