

MSG No. 59.406  $Pm\bar{m}n1'$  [ Type II, orthorhombic ]

Table 1: Wyckoff site: 2a, site symmetry:  $mm21'$

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

Table 2: Wyckoff site: 2b, site symmetry:  $mm21'$

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

Table 3: Wyckoff site: 4c, site symmetry:  $-11'$

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

Table 4: Wyckoff site: 4d, site symmetry:  $-11'$

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

Table 5: Wyckoff site: 4e, site symmetry:  $m..1'$

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

Table 6: Wyckoff site:  $4f$ , site symmetry:  $.m.1'$ 

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

Table 7: Wyckoff site:  $8g$ , site symmetry:  $11'$ 

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