

MSG No. 31.132  $P_Bmn2_1$  [ Type IV, orthorhombic ]

Table 1: Wyckoff site: **2a**, site symmetry:  $mm'2'$

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

Table 2: Wyckoff site: **2b**, site symmetry:  $mm'2'$

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

Table 3: Wyckoff site: **4c**, site symmetry:  $m..$

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

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

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

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

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

Table 6: Wyckoff site: **8f**, site symmetry: **1**

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