

MSG No. 107.228 *I4mm1'* [ Type II, tetragonal ]

Table 1: Wyckoff site: **2a**, site symmetry: **4mm1'**

No.	position	mapping
1	[0, 0, z]	[1,2,3,4,5,6,7,8,17,18,19,20,21,22,23,24]
2	[\frac{1}{2}, \frac{1}{2}, z + \frac{1}{2}]	[9,10,11,12,13,14,15,16,25,26,27,28,29,30,31,32]

Table 2: Wyckoff site: **4b**, site symmetry: **2mm.1'**

No.	position	mapping
1	[0, \frac{1}{2}, z]	[1,4,5,6,17,20,21,22]
2	[\frac{1}{2}, 0, z]	[2,3,7,8,18,19,23,24]
3	[\frac{1}{2}, 0, z + \frac{1}{2}]	[9,12,13,14,25,28,29,30]
4	[0, \frac{1}{2}, z + \frac{1}{2}]	[10,11,15,16,26,27,31,32]

Table 3: Wyckoff site: **8c**, site symmetry: **..m1'**

No.	position	mapping
1	[x, x, z]	[1,8,17,24]
2	[-x, x, z]	[2,5,18,21]
3	[x, -x, z]	[3,6,19,22]
4	[-x, -x, z]	[4,7,20,23]
5	[x + \frac{1}{2}, x + \frac{1}{2}, z + \frac{1}{2}]	[9,16,25,32]
6	[\frac{1}{2} - x, x + \frac{1}{2}, z + \frac{1}{2}]	[10,13,26,29]
7	[x + \frac{1}{2}, \frac{1}{2} - x, z + \frac{1}{2}]	[11,14,27,30]
8	[\frac{1}{2} - x, \frac{1}{2} - x, z + \frac{1}{2}]	[12,15,28,31]

Table 4: Wyckoff site: **8d**, site symmetry: **.m.1'**

No.	position	mapping
1	[x, 0, z]	[1,6,17,22]
2	[0, x, z]	[2,8,18,24]
3	[0, -x, z]	[3,7,19,23]
4	[-x, 0, z]	[4,5,20,21]
5	[x + \frac{1}{2}, \frac{1}{2}, z + \frac{1}{2}]	[9,14,25,30]
6	[\frac{1}{2}, x + \frac{1}{2}, z + \frac{1}{2}]	[10,16,26,32]
7	[\frac{1}{2}, \frac{1}{2} - x, z + \frac{1}{2}]	[11,15,27,31]
8	[\frac{1}{2} - x, \frac{1}{2} - x, z + \frac{1}{2}]	[12,13,28,29]

Table 5: Wyckoff site: 16e, site symmetry: 11'

No.	position	mapping
1	[ $x, y, z$ ]	[1,17]
2	[ $-y, x, z$ ]	[2,18]
3	[ $y, -x, z$ ]	[3,19]
4	[ $-x, -y, z$ ]	[4,20]
5	[ $-x, y, z$ ]	[5,21]
6	[ $x, -y, z$ ]	[6,22]
7	[ $-y, -x, z$ ]	[7,23]
8	[ $y, x, z$ ]	[8,24]
9	[ $x + \frac{1}{2}, y + \frac{1}{2}, z + \frac{1}{2}$ ]	[9,25]
10	[ $\frac{1}{2} - y, x + \frac{1}{2}, z + \frac{1}{2}$ ]	[10,26]
11	[ $y + \frac{1}{2}, \frac{1}{2} - x, z + \frac{1}{2}$ ]	[11,27]
12	[ $\frac{1}{2} - x, \frac{1}{2} - y, z + \frac{1}{2}$ ]	[12,28]
13	[ $\frac{1}{2} - x, y + \frac{1}{2}, z + \frac{1}{2}$ ]	[13,29]
14	[ $x + \frac{1}{2}, \frac{1}{2} - y, z + \frac{1}{2}$ ]	[14,30]
15	[ $\frac{1}{2} - y, \frac{1}{2} - x, z + \frac{1}{2}$ ]	[15,31]
16	[ $y + \frac{1}{2}, x + \frac{1}{2}, z + \frac{1}{2}$ ]	[16,32]