

MPG No. 15.9.137 $4'/m'm'm$ ($4'/m'mm'$ setting) [Type III, tetragonal]

Table 1: Wyckoff site: 1 \circ , site symmetry: $4'/m'mm'$

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

Table 2: Wyckoff site: 2a, site symmetry: $4'mm'$

No.	position	mapping
1	[0, 0, z]	[1, 4, 5, 8, 10, 11, 14, 15]
2	[0, 0, -z]	[2, 3, 6, 7, 9, 12, 13, 16]

Table 3: Wyckoff site: 4b, site symmetry: $m'.m2$

No.	position	mapping
1	[x, x, 0]	[1, 5, 12, 16]
2	[-x, -x, 0]	[4, 8, 9, 13]
3	[-x, x, 0]	[3, 7, 10, 14]
4	[x, -x, 0]	[2, 6, 11, 15]

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

No.	position	mapping
1	[x, 0, 0]	[1, 2, 15, 16]
2	[-x, 0, 0]	[3, 4, 13, 14]
3	[0, x, 0]	[5, 7, 10, 12]
4	[0, -x, 0]	[6, 8, 9, 11]

Table 5: Wyckoff site: 8d, site symmetry: $m'..$

No.	position	mapping
1	[x, y, 0]	[1, 16]
2	[-x, -y, 0]	[4, 13]
3	[-y, x, 0]	[7, 10]
4	[y, -x, 0]	[6, 11]
5	[-x, y, 0]	[3, 14]
6	[x, -y, 0]	[2, 15]
7	[y, x, 0]	[5, 12]

continued ...

Table 5

No.	position	mapping
8	$[-y, -x, 0]$	[8,9]

Table 6: Wyckoff site: 8e, site symmetry: . .m

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

Table 7: Wyckoff site: 8f, site symmetry: .m.

No.	position	mapping
1	$[x, 0, z]$	[1,15]
2	$[-x, 0, z]$	[4,14]
3	$[0, x, z]$	[5,10]
4	$[0, -x, z]$	[8,11]
5	$[-x, 0, -z]$	[3,13]
6	$[x, 0, -z]$	[2,16]
7	$[0, x, -z]$	[7,12]
8	$[0, -x, -z]$	[6,9]

Table 8: Wyckoff site: 16g, site symmetry: 1

No.	position	mapping
1	$[x, y, z]$	[1]
2	$[-x, -y, z]$	[4]
3	$[-y, x, z]$	[10]
4	$[y, -x, z]$	[11]
5	$[-x, y, -z]$	[3]
6	$[x, -y, -z]$	[2]
7	$[y, x, -z]$	[12]
8	$[-y, -x, -z]$	[9]
9	$[-x, -y, -z]$	[13]
10	$[x, y, -z]$	[16]

continued ...

Table 8

No.	position	mapping
11	$[y, -x, -z]$	[6]
12	$[-y, x, -z]$	[7]
13	$[x, -y, z]$	[15]
14	$[-x, y, z]$	[14]
15	$[-y, -x, z]$	[8]
16	$[y, x, z]$	[5]