MPG No. 15.2.54 $4/mmm1'$ [Type II, tetragonal]

Table 1: Wyckoff site: `1o`, site symmetry: `4/mmm1'`

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

Table 2: Wyckoff site: `2a`, site symmetry: `4mm`

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

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

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

Table 4: Wyckoff site: `4c`, site symmetry: `m2m.`

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

Table 5: Wyckoff site: `8d`, site symmetry: `m..`

No.	position	mapping
1	[x, y, 0]	`[1,12,17,28]`
2	[$-x$, $-y$, 0]	`[4,9,20,25]`
3	[$-y$, x, 0]	`[6,15,22,31]`
4	[y, $-x$, 0]	`[7,14,23,30]`
5	[$-x$, y, 0]	`[3,10,19,26]`
6	[x, $-y$, 0]	`[2,11,18,27]`

continued ...

Table 5

No.	position	mapping
7	$[y, x, 0]$	`[8,13,24,29]`
8	$[-y, -x, 0]$	`[5,16,21,32]`

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

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

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

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

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

No.	position	mapping
1	$[x, y, z]$	`[1,17]`
2	$[-x, -y, z]$	`[4,20]`
3	$[-y, x, z]$	`[6,22]`
4	$[y, -x, z]$	`[7,23]`
5	$[-x, y, -z]$	`[3,19]`
6	$[x, -y, -z]$	`[2,18]`
7	$[y, x, -z]$	`[8,24]`
8	$[-y, -x, -z]$	`[5,21]`
9	$[-x, -y, -z]$	`[9,25]`

continued ...

Table 8

No.	position	mapping
10	$[x, y, -z]$	`[12,28]`
11	$[y, -x, -z]$	`[14,30]`
12	$[-y, x, -z]$	`[15,31]`
13	$[x, -y, z]$	`[11,27]`
14	$[-x, y, z]$	`[10,26]`
15	$[-y, -x, z]$	`[16,32]`
16	$[y, x, z]$	`[13,29]`