MSG No. 135.486 $P4'_2/mb'c$ [Type III, tetragonal]

Table 1: Wyckoff site: `4a`, site symmetry: `2/m..`

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

Table 2: Wyckoff site: `4b`, site symmetry: `-4'..`

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

Table 3: Wyckoff site: `4c`, site symmetry: `2/m..`

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

Table 4: Wyckoff site: `4d`, site symmetry: `2.22`

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

Table 5: Wyckoff site: `8e`, site symmetry: `2..`

No.	position	mapping
1	$[0,\ 0,\ z]$	`[1,2]`
2	$\left[\frac{1}{2},\ \frac{1}{2},\ \frac{1}{2}-z\right]$	`[3,4]`

continued ...

Table 5

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

Table 6: Wyckoff site: `8f`, site symmetry: `2..`

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

Table 7: Wyckoff site: `8g`, site symmetry: `..2`

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

Table 8: Wyckoff site: `8h`, site symmetry: `m..`

No.	position	mapping
1	$[x,\ y,\ 0]$	`[1,6]`
2	$[-x,\ -y,\ 0]$	`[2,5]`
3	$[y+\frac{1}{2},\ x+\frac{1}{2},\ \frac{1}{2}]$	`[3,8]`
4	$[\frac{1}{2}-y,\ \frac{1}{2}-x,\ \frac{1}{2}]$	`[4,7]`
5	$[-y,\ x,\ \frac{1}{2}]$	`[9,14]`

continued ...

Table 8

No.	position	mapping
6	$\left[y,\, -x,\, \frac{1}{2}\right]$	`[10,13]`
7	$\left[x+\frac{1}{2},\, \frac{1}{2}-y,\, 0\right]$	`[11,16]`
8	$\left[\frac{1}{2}-x,\, y+\frac{1}{2},\, 0\right]$	`[12,15]`

Table 9: Wyckoff site: `16i`, site symmetry: `1`

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