# MSG No. 31.134 $P_Imn2_1$ [ Type IV, orthorhombic ]

Table 1: Wyckoff site: `2a`, site symmetry: `mm'2'`

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

Table 2: Wyckoff site: `2b`, site symmetry: `mm'2'`

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

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

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

Table 4: Wyckoff site: `4d`, site symmetry: `m..`

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

Table 5: Wyckoff site: `8e`, site symmetry: `1`

| No. | position | mapping |
|---|---|---|
| 1 | $[x,\ y,\ z]$ | `[1]` |
| 2 | $\left[\frac{1}{2}-x,\ -y,\ z+\frac{1}{2}\right]$ | `[2]` |
| 3 | $[-x,\ y,\ z]$ | `[3]` |
| 4 | $\left[x+\frac{1}{2},\ -y,\ z+\frac{1}{2}\right]$ | `[4]` |
| 5 | $\left[x+\frac{1}{2},\ y+\frac{1}{2},\ z+\frac{1}{2}\right]$ | `[5]` |
| 6 | $\left[-x,\ \frac{1}{2}-y,\ z\right]$ | `[6]` |

*continued ...*

Table 5

| No. | position | mapping |
|---|---|---|
| 7 | $\left[\frac{1}{2}-x,\, y+\frac{1}{2},\, z+\frac{1}{2}\right]$ | [7] |
| 8 | $\left[x,\, \frac{1}{2}-y,\, z\right]$ | [8] |