# MSG No. 53.326 $Pm'n'a$ [ Type III, orthorhombic ]

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

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

Table 2: Wyckoff site: 2b, site symmetry: 2'/m'..

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

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

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

Table 4: Wyckoff site: 2d, site symmetry: 2'/m'..

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

Table 5: Wyckoff site: 4e, site symmetry: 2'..

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

Table 6: Wyckoff site: `4f`, site symmetry: `2'..`

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

Table 7: Wyckoff site: `4g`, site symmetry: `.2'.`

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

Table 8: Wyckoff site: `4h`, site symmetry: `m'..`

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

Table 9: Wyckoff site: `8i`, 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 | $\left[x+\frac{1}{2},\ y,\ \frac{1}{2}-z\right]$ | `[4]` |
| 5 | $[x,\ -y,\ -z]$ | `[5]` |
| 6 | $\left[\frac{1}{2}-x,\ y,\ \frac{1}{2}-z\right]$ | `[6]` |
| 7 | $[-x,\ y,\ z]$ | `[7]` |
| 8 | $\left[x+\frac{1}{2},\ -y,\ z+\frac{1}{2}\right]$ | `[8]` |