

MSG No. 102.190 $P4'_2nm'$ [Type III, tetragonal]

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

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

Table 2: Wyckoff site: 4b, site symmetry: 2..

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

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

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

Table 4: Wyckoff site: 8d, site symmetry: 1

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