

MSG No. 58.394 *Pnnm1'* [ Type II, orthorhombic ]

Table 1: Wyckoff site: **2a**, site symmetry:  $\dots 2/m1'$

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

Table 2: Wyckoff site: **2b**, site symmetry:  $\dots 2/m1'$

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

Table 3: Wyckoff site: **2c**, site symmetry:  $\dots 2/m1'$

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

Table 4: Wyckoff site: **2d**, site symmetry:  $\dots 2/m1'$

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

Table 5: Wyckoff site: **4e**, site symmetry:  $\dots 21'$

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

Table 6: Wyckoff site: 4f, site symmetry: . . 21'

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

Table 7: Wyckoff site: 4g, site symmetry: . . m1'

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

Table 8: Wyckoff site: 8h, site symmetry: 11'

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