

$\bar{3}$

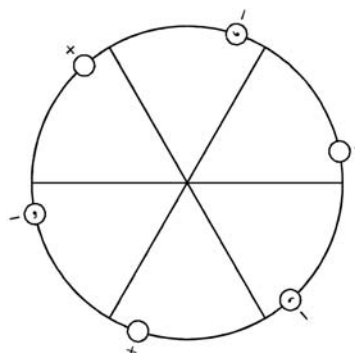
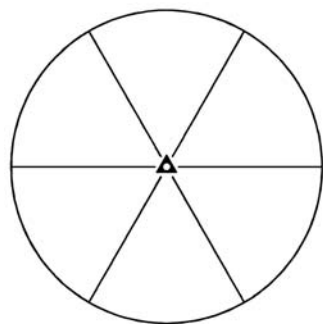
$\bar{3}$

Trigonal

No. 45

$\bar{3}$

Patterson symmetry  $\bar{3}$



**Origin** at centre ( $\bar{3}$ )

**Asymmetric unit**  $0 \leq x; 0 \leq y; 0 \leq z \leq \frac{1}{2}$

**Symmetry operations**

- |                     |                              |                              |
|---------------------|------------------------------|------------------------------|
| (1) 1               | (2) $3^+ 0,0,z$              | (3) $3^- 0,0,z$              |
| (4) $\bar{1} 0,0,0$ | (5) $\bar{3}^+ 0,0,z; 0,0,0$ | (6) $\bar{3}^- 0,0,z; 0,0,0$ |

**Generators selected** (1);  $t(0,0,1)$ ; (2); (4)

**Positions**

|   |                  | Coordinates                                      |  |  | Reflection conditions        |
|---|------------------|--|--|--|------------------------------|
| Multiplicity,<br>Wyckoff letter,<br>Site symmetry |                  |  |  |  | General:                     |
| 6   | $d$ 1            | (1) $x, y, z$<br>(4) $\bar{x}, \bar{y}, \bar{z}$ | (2) $\bar{y}, x - y, z$<br>(5) $y, \bar{x} + y, \bar{z}$ | (3) $\bar{x} + y, \bar{x}, z$<br>(6) $x - y, x, \bar{z}$ | no conditions                |
| 2   | $c$ 3..          | 0, 0, $z$  | 0, 0, $\bar{z}$  |  | Special: no extra conditions |
| 1   | $b$ $\bar{3}$ .. | 0, 0, $\frac{1}{2}$                              |  |  |                              |
| 1   | $a$ $\bar{3}$ .. | 0, 0, 0  |  |  |                              |

**Symmetry of special projections**

|                     |   |  |
|---------------------|---|--|
| Along [001] 6       | Along [100] $\mu\bar{3} 2 1 1$                    | Along [210] $\mu\bar{3} 2 1 1$                               |
| Origin at 0, 0, $z$ | $\mathbf{a}' = \mathbf{c}$<br>Origin at $x, 0, 0$ | $\mathbf{a}' = \mathbf{c}$<br>Origin at $x, \frac{1}{2}x, 0$ |

**Maximal non-isotypic non-enantiomorphic subgroups**

**I** [2]  $\mu\bar{3}$  (42) 1; 2; 3  
[3]  $\mu\bar{1}$  (2) 1; 4

**IIa** none

**IIb** none

**Maximal isotypic subgroups and enantiomorphic subgroups of lowest index**

**IIc** [2]  $\mu\bar{3}$  ( $\mathbf{c}' = 2\mathbf{c}$ ) (45)

**Minimal non-isotypic non-enantiomorphic supergroups**

**I** [2]  $\mu\bar{3} 1 m$  (51); [2]  $\mu\bar{3} 1 c$  (52); [2]  $\mu\bar{6}/m$  (60); [2]  $\mu\bar{6}_3/m$  (61)

**II** none