

$\mu 6_3$

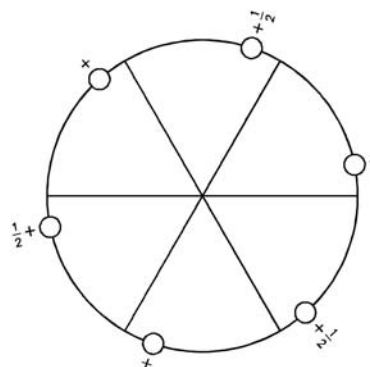
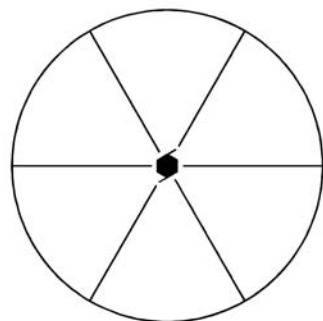
6

Hexagonal

No. 56

$\mu 6_3$

Patterson symmetry  $\mu 6/m$



**Origin** on 3 on  $6_3$

**Asymmetric unit**  $0 \leq x; 0 \leq y; 0 \leq z \leq 1; y \leq x$

**Symmetry operations**

- |                                                             |                                                                    |                                                               |
|-------------------------------------------------------------|--------------------------------------------------------------------|---------------------------------------------------------------|
| (1) 1<br>(1 0,0,0)                                          | (2) $3^+$ 0,0,z<br>( $3_z$  0,0,0)                                 | (3) $3^-$ 0,0,z<br>( $3_z^{-1}$  0,0,0)                       |
| (4) $2(\frac{1}{2})$ 0,0,z<br>( $2_z$  0,0, $\frac{1}{2}$ ) | (5) $6^-(\frac{1}{2})$ 0,0,z<br>( $6_z^{-1}$  0,0, $\frac{1}{2}$ ) | (6) $6^+(\frac{1}{2})$ 0,0,z<br>( $6_z$  0,0, $\frac{1}{2}$ ) |

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

**Positions**

Multiplicity,  
Wyckoff letter,  
Site symmetry

Coordinates

Reflection conditions

6 *b* 1 (1)  $x, y, z$  (2)  $\bar{y}, x - y, z$  (3)  $\bar{x} + y, \bar{x}, z$   
(4)  $\bar{x}, \bar{y}, z + \frac{1}{2}$  (5)  $y, \bar{x} + y, z + \frac{1}{2}$  (6)  $x - y, x, z + \frac{1}{2}$

General:

$$l : l = 2n$$

Special: no extra conditions

2 *a* 3.. 0,0,z 0,0,z +  $\frac{1}{2}$

**Symmetry of special projections**

Along [001] 6

Along [100]  $\mu 11g$

Along [210]  $\mu 11g$

$\mathbf{a}' = \mathbf{c}$

$\mathbf{a}' = \mathbf{c}$

Origin at 0,0,z

Origin at  $x, 0, 0$

Origin at  $x, \frac{1}{2}x, 0$

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

**I** [2]  $\mu 3$  (42) 1; 2; 3  
[3]  $\mu 112_1$  (9) 1; 4

**IIa** none

**IIb** [3]  $\mu 6_3$  ( $\mathbf{c}' = 3\mathbf{c}$ ) (58); [3]  $\mu 6_1$  ( $\mathbf{c}' = 3\mathbf{c}$ ) (54)

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

**IIc** [3]  $\mu 6_3$  ( $\mathbf{c}' = 3\mathbf{c}$ ) (56)

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

**I** [2]  $\mu 6_3/m$  (61); [2]  $\mu 6_3 22$  (65); [2]  $\mu 6_3 mc$  (70)

**II** [2]  $\mu 6$  ( $\mathbf{c}' = \frac{1}{2}\mathbf{c}$ ) (53)