

$Amm2$

$C_{2v}^{14}$

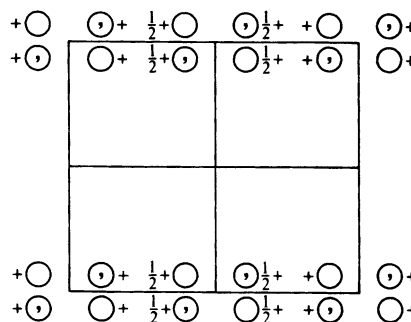
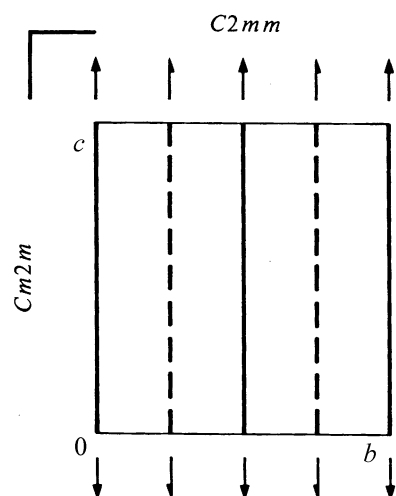
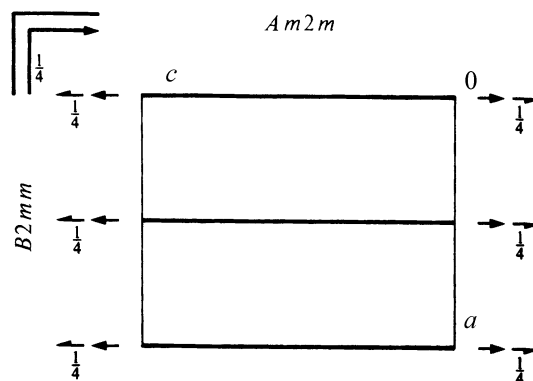
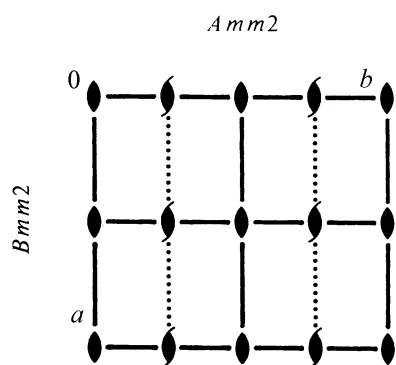
$mm2$

Orthorhombic

No. 38

$Amm2$

Patterson symmetry  $Ammm$  ( $Cmmm$ )



Origin on  $mm2$

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

Symmetry operations

For  $(0,0,0)+$  set

- (1) 1                      (2)  $2 \quad 0,0,z$                       (3)  $m \quad x,0,z$                       (4)  $m \quad 0,y,z$

For  $(0, \frac{1}{2}, \frac{1}{2})+$  set

- (1)  $t(0, \frac{1}{2}, \frac{1}{2})$                       (2)  $2(0,0, \frac{1}{2}) \quad 0, \frac{1}{4}, z$                       (3)  $c \quad x, \frac{1}{4}, z$                       (4)  $n(0, \frac{1}{2}, \frac{1}{2}) \quad 0,y,z$

**Generators selected** (1);  $t(1,0,0)$ ;  $t(0,1,0)$ ;  $t(0,0,1)$ ;  $t(0, \frac{1}{2}, \frac{1}{2})$ ; (2); (3)

**Positions**

Multiplicity,  
Wyckoff letter,  
Site symmetry

Coordinates

$(0,0,0)+ (0, \frac{1}{2}, \frac{1}{2})+$

Reflection conditions

General:

8 *f* 1 (1)  $x, y, z$  (2)  $\bar{x}, \bar{y}, z$  (3)  $x, \bar{y}, z$  (4)  $\bar{x}, y, z$

$hkl: k + l = 2n$

$0kl: k + l = 2n$

$h0l: l = 2n$

$hk0: k = 2n$

$0k0: k = 2n$

$00l: l = 2n$

Special: no extra conditions

4 *e*  $m \dots$   $\frac{1}{2}, y, z$   $\frac{1}{2}, \bar{y}, z$

4 *d*  $m \dots$   $0, y, z$   $0, \bar{y}, z$

4 *c*  $.m \dots$   $x, 0, z$   $\bar{x}, 0, z$

2 *b*  $mm2$   $\frac{1}{2}, 0, z$

2 *a*  $mm2$   $0, 0, z$

**Symmetry of special projections**

Along [001]  $p2mm$

$\mathbf{a}' = \mathbf{a}$   $\mathbf{b}' = \frac{1}{2}\mathbf{b}$

Origin at  $0, 0, z$

Along [100]  $c1m1$

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

Origin at  $x, 0, 0$

Along [010]  $p11m$

$\mathbf{a}' = \frac{1}{2}\mathbf{c}$   $\mathbf{b}' = \mathbf{a}$

Origin at  $0, y, 0$