

Orthorhombic

$mm2$

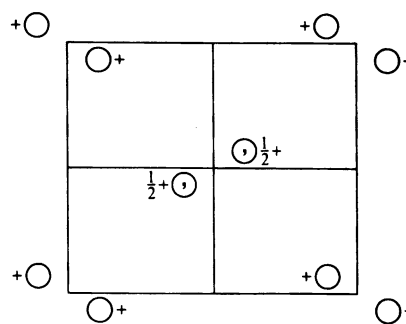
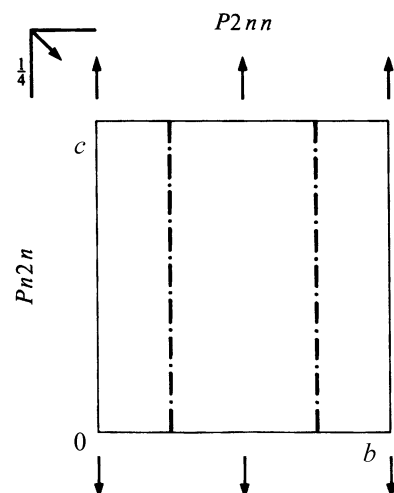
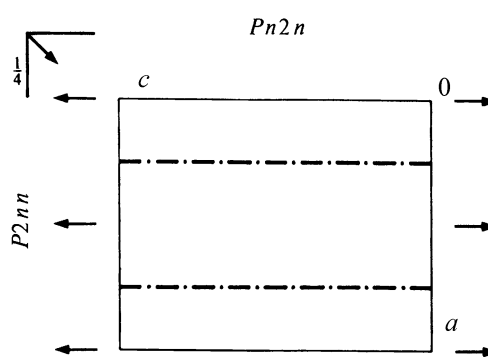
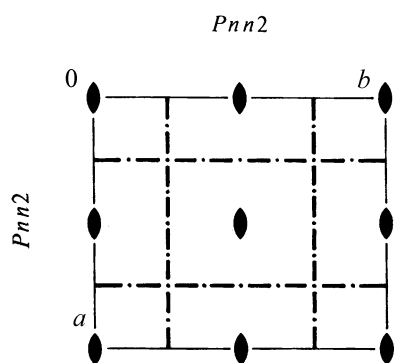
$C_{2v}^{10}$

$Pnn2$

Patterson symmetry  $Pmmm$

$Pnn2$

No. 34



Origin on 112

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

Symmetry operations

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

Generators selected (1);  $t(1,0,0)$ ;  $t(0,1,0)$ ;  $t(0,0,1)$ ; (2); (3)

Positions

Multiplicity,  
Wyckoff letter,  
Site symmetry

Coordinates

Reflection conditions

- 4  $c$  1      (1)  $x,y,z$       (2)  $\bar{x},\bar{y},z$       (3)  $x+\frac{1}{2},\bar{y}+\frac{1}{2},z+\frac{1}{2}$       (4)  $\bar{x}+\frac{1}{2},y+\frac{1}{2},z+\frac{1}{2}$

General:

- $0kl: k+l=2n$   
 $h0l: h+l=2n$   
 $h00: h=2n$   
 $0k0: k=2n$   
 $00l: l=2n$

Special: as above, plus

- 2  $b$  .. 2       $0,\frac{1}{2},z$        $\frac{1}{2},0,z+\frac{1}{2}$

$hkl: h+k+l=2n$

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

$hkl: h+k+l=2n$

Symmetry of special projections

Along  $[001]$   $p2gg$   
 $\mathbf{a}' = \mathbf{a}$      $\mathbf{b}' = \mathbf{b}$   
Origin at  $0,0,z$

Along  $[100]$   $c1m1$   
 $\mathbf{a}' = \mathbf{b}$      $\mathbf{b}' = \mathbf{c}$   
Origin at  $x,0,0$

Along  $[010]$   $c11m$   
 $\mathbf{a}' = \mathbf{c}$      $\mathbf{b}' = \mathbf{a}$   
Origin at  $0,y,0$