

Orthorhombic

$mm2$

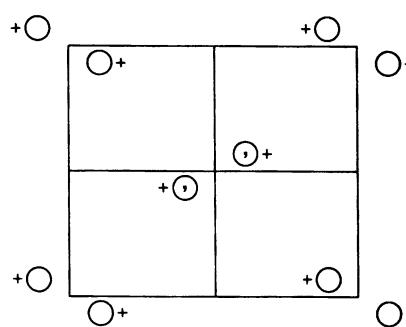
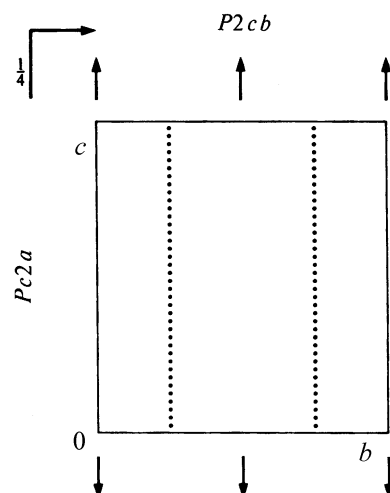
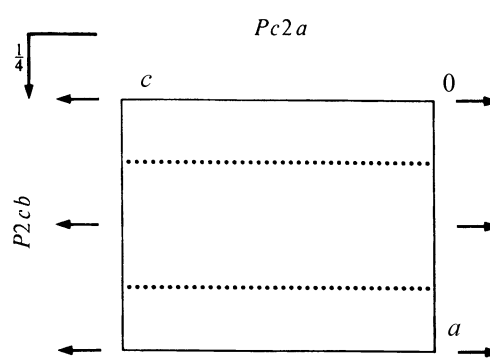
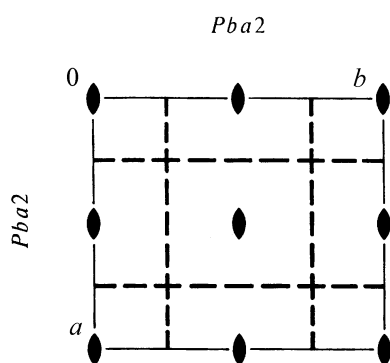
C_{2v}^8

$Pba2$

Patterson symmetry $Pmmm$

$Pba2$

No. 32



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) a $x, \frac{1}{4}, z$ (4) b $\frac{1}{4}, y, z$

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

General:

$0kl: k = 2n$
 $h0l: h = 2n$
 $h00: h = 2n$
 $0k0: k = 2n$

Special: as above, plus

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

$hkl: h + k = 2n$

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

$hkl: h + k = 2n$

Symmetry of special projections

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

Along $[100]$ $p1m1$
 $\mathbf{a}' = \frac{1}{2}\mathbf{b}$ $\mathbf{b}' = \mathbf{c}$
Origin at $x,0,0$

Along $[010]$ $p11m$
 $\mathbf{a}' = \mathbf{c}$ $\mathbf{b}' = \frac{1}{2}\mathbf{a}$
Origin at $0,y,0$