

$Pca2_1$

$C_{2v}^5$

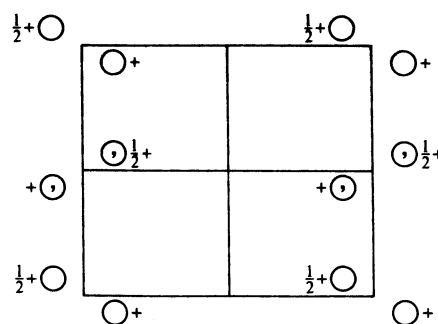
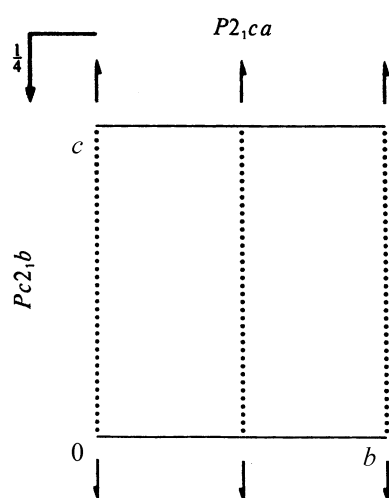
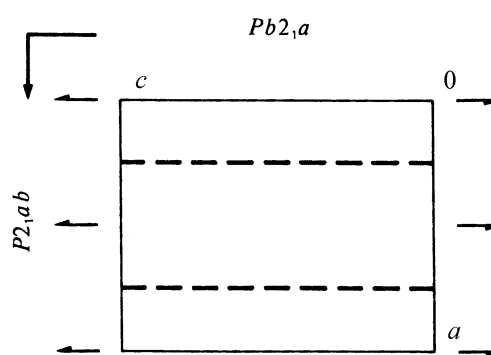
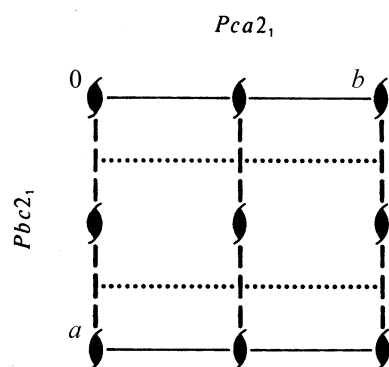
$mm2$

Orthorhombic

No. 29

$Pca2_1$

Patterson symmetry  $Pmmm$



Origin on  $1a2_1$

Asymmetric unit  $0 \leq x \leq \frac{1}{4}$ ;  $0 \leq y \leq 1$ ;  $0 \leq z \leq 1$

Symmetry operations

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

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

General:

$Ok\bar{l}: l = 2n$   
 $h0l: h = 2n$   
 $h00: h = 2n$   
 $00l: l = 2n$

Symmetry of special projections

Along  $[001]$   $p2mg$   
 $\mathbf{a}' = \mathbf{a}$   $\mathbf{b}' = \mathbf{b}$   
Origin at  $0,0,z$

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

Along  $[010]$   $p11g$   
 $\mathbf{a}' = \mathbf{c}$   $\mathbf{b}' = \frac{1}{2}\mathbf{a}$   
Origin at  $0,y,0$