

$p2_1/b11$

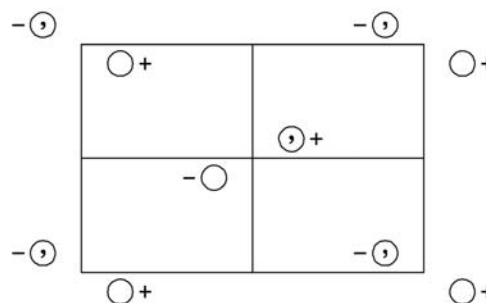
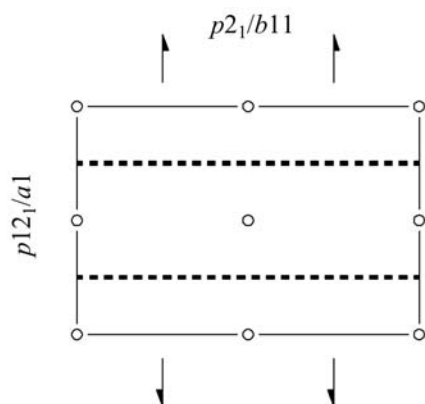
$2/m$

Monoclinic/Rectangular

No. 17

$p2_1/b11$

Patterson symmetry $p2/m11$



Origin at $\bar{1}$

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

Symmetry operations

- | | | | |
|--------------------|---|--|--|
| (1) 1
(1 0,0,0) | (2) $2(\frac{1}{2}, 0, 0)$ $x, \frac{1}{4}, 0$
$(2_x \frac{1}{2}, \frac{1}{2}, 0)$ | (3) $\bar{1}$ 0,0,0
$(\bar{1} 0,0,0)$ | (4) b $\frac{1}{4}, y, z$
$(m_x \frac{1}{2}, \frac{1}{2}, 0)$ |
|--------------------|---|--|--|

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

Positions

Multiplicity, Wyckoff letter, Site symmetry	Coordinates				Reflection conditions
4 c 1	(1) x, y, z	(2) $x + \frac{1}{2}, \bar{y} + \frac{1}{2}, \bar{z}$	(3) $\bar{x}, \bar{y}, \bar{z}$	(4) $\bar{x} + \frac{1}{2}, y + \frac{1}{2}, z$	General: $h0: h = 2n$ $0k: k = 2n$ Special: as above, plus $hk: h + k = 2n$
2 b $\bar{1}$	$0, \frac{1}{2}, 0$	$\frac{1}{2}, 0, 0$			$hk: h + k = 2n$
2 a $\bar{1}$	$0, 0, 0$	$\frac{1}{2}, \frac{1}{2}, 0$			$hk: h + k = 2n$

Symmetry of special projections

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

Along [100] $\cancel{p211}$
 $\mathbf{a}' = \frac{1}{2}\mathbf{b}$
 Origin at $x, 0, 0$

Along [010] $\cancel{p2mg}$
 $\mathbf{a}' = \mathbf{a}$
 Origin at $0, y, 0$

Maximal non-isotypic subgroups

I [2] $pb11$ (12) 1; 4
 [2] $p2_111$ (9) 1; 2
 [2] $p\bar{1}$ (2) 1; 3

IIa none

IIb none

Maximal isotypic subgroups of lowest index

IIc [3] $p2_1/b11$ ($\mathbf{a}' = 3\mathbf{a}$) (17)

Minimal non-isotypic supergroups

I [2] $pman$ (42); [2] $pbaa$ (43); [2] $pbam$ (44); [2] $pbma$ (45)

II [2] $c2/m11$ (18); [2] $p2_1/m11$ ($\mathbf{b}' = \frac{1}{2}\mathbf{b}$) (15); [2] $p2/b11$ ($\mathbf{a}' = \frac{1}{2}\mathbf{a}$) (16)