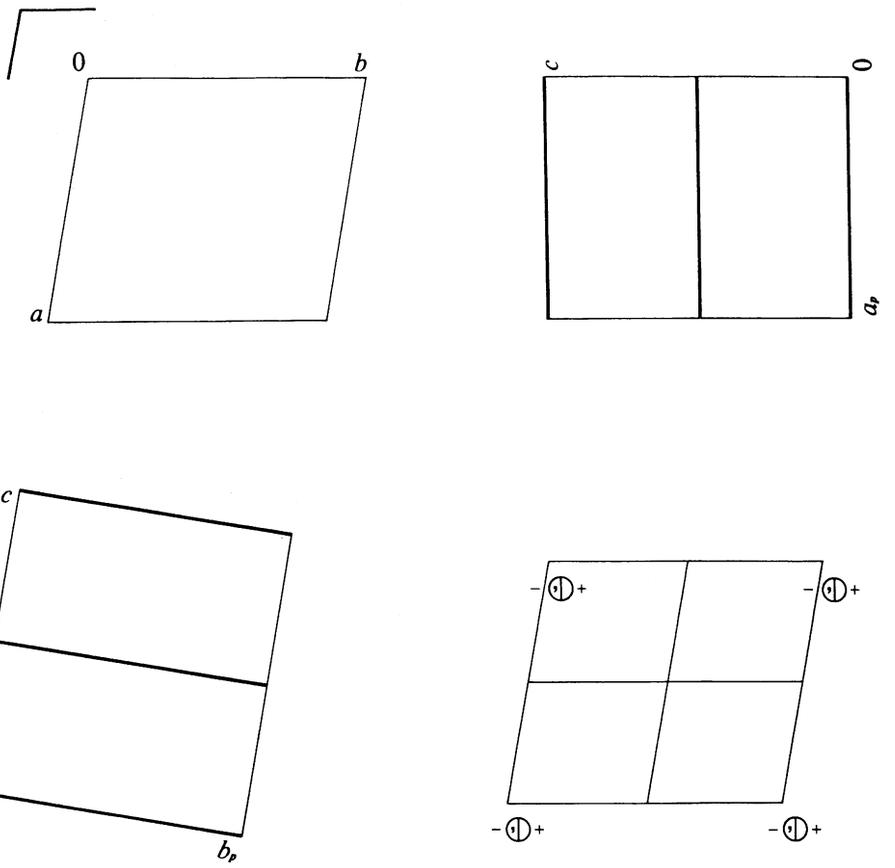
Pm C_s^1 m Monoclinic

No. 6 $P\,1\,1\,m$ Patterson symmetry $P\,1\,1\,2/m$

UNIQUE AXIS c



Origin on mirror plane m

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

Symmetry operations

(1) 1 (2) m $x,y,0$

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

Positions

Multiplicity, Wyckoff letter, Site symmetry			Coordinates		Reflection conditions
					General:
2	c	1	(1) x,y,z	(2) $x,y,\bar{z}$	no conditions
					Special: no extra conditions
1	b	m	$x,y,\frac{1}{2}$		
1	a	m	$x,y,0$		

Symmetry of special projections

Along [001] $p1$
$\mathbf{a}' = \mathbf{a}$ $\mathbf{b}' = \mathbf{b}$
Origin at $0,0,z$

Along [100] $p112$
$\mathbf{a}' = \mathbf{b}_p$ $\mathbf{b}' = \mathbf{c}$
Origin at $x,0,0$

Along [010] $p1m1$
$\mathbf{a}' = \mathbf{c}$ $\mathbf{b}' = \mathbf{a}_p$
Origin at $0,y,0$

Maximal non-isomorphic subgroups

I [2] $P1$ (1) 1

IIa none

IIb [2] $P112a$ ($\mathbf{a}' = 2\mathbf{a}$) ($Pc$, 7); [2] $P112b$ ($\mathbf{b}' = 2\mathbf{b}$) ($Pc$, 7); [2] $C112e$ ($\mathbf{a}' = 2\mathbf{a}, \mathbf{b}' = 2\mathbf{b}$) ($Pc$, 7); [2] $A112m$ ($\mathbf{b}' = 2\mathbf{b}, \mathbf{c}' = 2\mathbf{c}$) ($Cm$, 8); [2] $B112m$ ($\mathbf{a}' = 2\mathbf{a}, \mathbf{c}' = 2\mathbf{c}$) ($Cm$, 8); [2] $F112m$ ($\mathbf{a}' = 2\mathbf{a}, \mathbf{b}' = 2\mathbf{b}, \mathbf{c}' = 2\mathbf{c}$) ($Cm$, 8)

Maximal isomorphic subgroups of lowest index

IIc [2] $P112m$ ($\mathbf{c}' = 2\mathbf{c}$) ($Pm$, 6); [2] $P112m$ ($\mathbf{a}' = 2\mathbf{a}$ or $\mathbf{b}' = 2\mathbf{b}$ or $\mathbf{a}' = \mathbf{a} - \mathbf{b}, \mathbf{b}' = \mathbf{a} + \mathbf{b}$) ($Pm$, 6)

Minimal non-isomorphic supergroups

I [2] $P2/m$ (10); [2] $P2_1/m$ (11); [2] $Pmm2$ (25); [2] $Pmc2_1$ (26); [2] $Pma2$ (28); [2] $Pmn2_1$ (31); [2] $Amm2$ (38); [2] $Ama2$ (40); [3] $P\bar{6}$ (174)

II [2] $A112m$ (Cm, 8); [2] $B112m$ (Cm, 8); [2] $I112m$ (Cm, 8)