

$\rho 222_1$

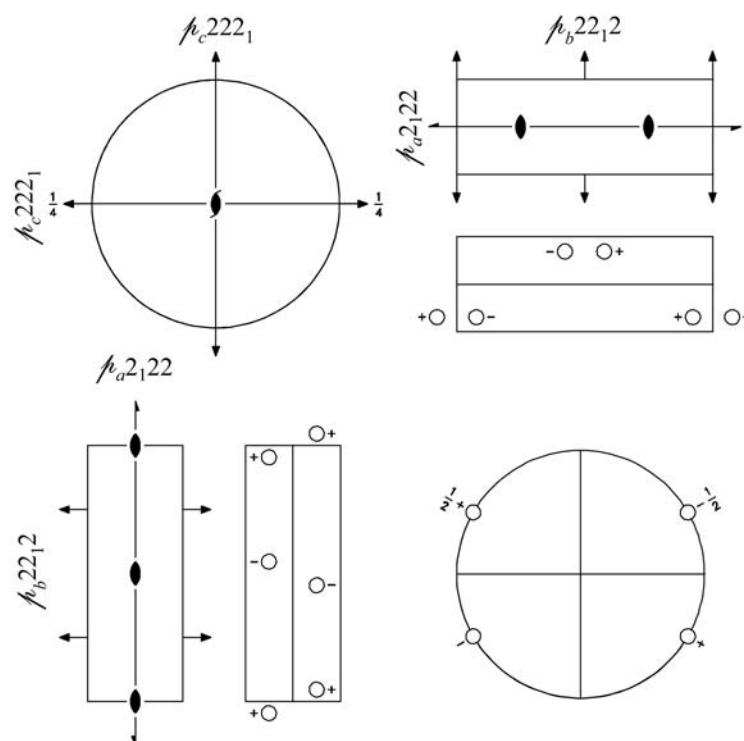
222

Orthorhombic

No. 14

$\rho 222_1$

Patterson symmetry ρmmm



Origin at 212_1

Asymmetric unit $0 \leq x; 0 \leq y; 0 \leq z \leq 1$

Symmetry operations

- | | | | |
|-------------|--|--|---------------------------|
| (1) 1 | (2) $2(\frac{1}{2} \ 0, 0, z)$ | (3) $2 \ 0, y, \frac{1}{4}$ | (4) $2 \ x, 0, 0$ |
| (1 0, 0, 0) | (2 _z 0, 0, $\frac{1}{2}$) | (2 _y 0, 0, $\frac{1}{2}$) | (2 _x 0, 0, 0) |

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

Positions

Multiplicity, Wyckoff letter, Site symmetry	Coordinates				Reflection conditions
4 c 1	(1) x, y, z	(2) $\bar{x}, \bar{y}, z + \frac{1}{2}$	(3) $\bar{x}, y, \bar{z} + \frac{1}{2}$	(4) x, \bar{y}, \bar{z}	General: $l : l = 2n$ Special: no extra conditions
2 b .2.	$0, y, \frac{1}{4}$	$0, \bar{y}, \frac{3}{4}$			
2 a 2..	$x, 0, 0$	$\bar{x}, 0, \frac{1}{2}$			

Symmetry of special projections

Along [001] $2mm$	Along [100] $\rho 2mg$	Along [010] $\rho 2mg$
Origin at $0, 0, z$	$\mathbf{a}' = \mathbf{c}$ Origin at $x, 0, 0$	$\mathbf{a}' = \mathbf{c}$ Origin at $0, y, \frac{1}{4}$

Maximal non-isotypic non-enantiomorphic subgroups

I	$[2] \rho 112_1 (9)$	1; 2
	$[2] \rho 121 (\rho 211, 3)$	1; 3
	$[2] \rho 211 (3)$	1; 4

IIa none

IIb none

Maximal isotypic subgroups and enantiomorphic subgroups of lowest index

IIc $[3] \rho 222_1 (\mathbf{c}' = 3\mathbf{c}) (14)$

Minimal non-isotypic non-enantiomorphic supergroups

I	$[2] \rho mcm (22)$; $[2] \rho 4_2 22 (31)$; $[2] \rho 4_3 22 (33)$; $[3] \rho 6_1 22 (63)$; $[3] \rho 6_3 22 (65)$; $[3] \rho 6_5 22 (67)$
II	$[2] \rho 222 (\mathbf{c}' = \frac{1}{2}\mathbf{c}) (13)$