

Generators selected (1); $t(1,0,0)$; $t(0,1,0)$; $t(0,0,1)$; (2); (4)

Positions

Multiplicity, Wyckoff letter, Site symmetry	Coordinates			Reflection conditions
				General:
6 <i>b</i> 1	(1) x, y, z (4) $z + \frac{1}{2}, y + \frac{1}{2}, x + \frac{1}{2}$	(2) z, x, y (5) $y + \frac{1}{2}, x + \frac{1}{2}, z + \frac{1}{2}$	(3) y, z, x (6) $x + \frac{1}{2}, z + \frac{1}{2}, y + \frac{1}{2}$	$hhl : l = 2n$ $hhh : h = 2n$
2 <i>a</i> 3.	x, x, x	$x + \frac{1}{2}, x + \frac{1}{2}, x + \frac{1}{2}$		Special: as above, plus $hkl : h + k + l = 2n$

Symmetry of special projections

Along $[111] p31m$ $\mathbf{a}' = \frac{1}{3}(2\mathbf{a} - \mathbf{b} - \mathbf{c})$ $\mathbf{b}' = \frac{1}{3}(-\mathbf{a} + 2\mathbf{b} - \mathbf{c})$ Origin at x, x, x	Along $[1\bar{1}0] p1$ $\mathbf{a}' = \frac{1}{2}(\mathbf{a} + \mathbf{b} - 2\mathbf{c})$ $\mathbf{b}' = \frac{1}{2}\mathbf{c}$ Origin at $x, \bar{x}, 0$	Along $[2\bar{1}\bar{1}] p1g1$ $\mathbf{a}' = \frac{1}{2}(\mathbf{b} - \mathbf{c})$ $\mathbf{b}' = \frac{1}{3}(\mathbf{a} + \mathbf{b} + \mathbf{c})$ Origin at $2x, \bar{x}, \bar{x}$
---	---	--

Maximal non-isomorphic subgroups

I	$[2] R31 (R3, 146)$	1; 2; 3
	{	$[3] R1c (Cc, 9)$ 1; 4
		$[3] R1c (Cc, 9)$ 1; 5
		$[3] R1c (Cc, 9)$ 1; 6

IIa none

IIIb $[3] P3c1 (\mathbf{a}' = \mathbf{a} - \mathbf{b}, \mathbf{b}' = \mathbf{b} - \mathbf{c}, \mathbf{c}' = \mathbf{a} + \mathbf{b} + \mathbf{c}) (158)$

Maximal isomorphic subgroups of lowest index

IIc $[4] R3c (\mathbf{a}' = -\mathbf{a} + \mathbf{b} + \mathbf{c}, \mathbf{b}' = \mathbf{a} - \mathbf{b} + \mathbf{c}, \mathbf{c}' = \mathbf{a} + \mathbf{b} - \mathbf{c}) (161)$; $[5] R3c (\mathbf{a}' = \mathbf{a} + 2\mathbf{b} + 2\mathbf{c}, \mathbf{b}' = 2\mathbf{a} + \mathbf{b} + 2\mathbf{c}, \mathbf{c}' = 2\mathbf{a} + 2\mathbf{b} + \mathbf{c}) (161)$

Minimal non-isomorphic supergroups

I	$[2] R\bar{3}c (167)$; $[4] P\bar{4}3n (218)$; $[4] F\bar{4}3c (219)$; $[4] I\bar{4}3d (220)$
II	$[2] R3m (\mathbf{a}' = \frac{1}{2}(-\mathbf{a} + \mathbf{b} + \mathbf{c}), \mathbf{b}' = \frac{1}{2}(\mathbf{a} - \mathbf{b} + \mathbf{c}), \mathbf{c}' = \frac{1}{2}(\mathbf{a} + \mathbf{b} - \mathbf{c})) (160)$; $[3] P31c (\mathbf{a}' = \frac{1}{3}(2\mathbf{a} - \mathbf{b} - \mathbf{c}), \mathbf{b}' = \frac{1}{3}(-\mathbf{a} + 2\mathbf{b} - \mathbf{c}), \mathbf{c}' = \frac{1}{3}(\mathbf{a} + \mathbf{b} + \mathbf{c})) (159)$