

$P\bar{6}_1$	No. 169	C_6^2	C_6^3	No. 170	$P\bar{6}_5$
Axes	Coordinates		Wyckoff Positions	Axes	Coordinates
I Maximal translationengleiche subgroups					
[2] $P\bar{3}_1$ (144)			$2 \times 3a$	[2] $P\bar{3}_2$ (145)	
[3] $P112_1$ (4)			$3 \times 2a$	[3] $P112_1$ (4)	
II Maximal klassengleiche subgroups					
Enlarged unit cell, isomorphic					
[5] $P6_5$ (170)	a, b, 5c $x, y, \frac{1}{5}z; \pm(0, 0, \frac{1}{5}); \pm(0, 0, \frac{2}{5})$	$5 \times 6a$	[5] $P6_1$ (169)	a, b, 5c $x, y, \frac{1}{5}z; \pm(0, 0, \frac{1}{5}); \pm(0, 0, \frac{2}{5})$	
[p] $P6_5$ (170)	a, b, pc $x, y, \frac{1}{p}z; +(0, 0, \frac{u}{p})$ $p = \text{prime} = 6n-1; u = 1, \dots, p-1$	$p \times 6a$	[p] $P6_1$ (169)	a, b, pc $x, y, \frac{1}{p}z; +(0, 0, \frac{u}{p})$ $p = \text{prime} = 6n-1; u = 1, \dots, p-1$	
[7] $P6_1$	a, b, 7c $x, y, \frac{1}{7}z; \pm(0, 0, \frac{1}{7});$ $\pm(0, 0, \frac{2}{7}); \pm(0, 0, \frac{3}{7})$	$7 \times 6a$	[7] $P6_5$	a, b, 7c $x, y, \frac{1}{7}z; \pm(0, 0, \frac{1}{7});$ $\pm(0, 0, \frac{2}{7}); \pm(0, 0, \frac{3}{7})$	
[p] $P6_1$	a, b, pc $x, y, \frac{1}{p}z; +(0, 0, \frac{u}{p})$ $p = \text{prime} = 6n+1; u = 1, \dots, p-1$	$p \times 6a$	[p] $P6_5$	a, b, pc $x, y, \frac{1}{p}z; +(0, 0, \frac{u}{p})$ $p = \text{prime} = 6n+1; u = 1, \dots, p-1$	
[3] $P6_1$	2a+b, -a+b, c $\frac{1}{3}(x+y), \frac{1}{3}(-x+2y), z; \pm(\frac{1}{3}, \frac{2}{3}, 0)$	$3 \times 6a$	[3] $P6_5$	2a+b, -a+b, c $\frac{1}{3}(x+y), \frac{1}{3}(-x+2y), z; \pm(\frac{1}{3}, \frac{2}{3}, 0)$	
[7] $P6_1$	3a+b, -a+2b, c $\frac{1}{7}(2x+y), \frac{1}{7}(-x+3y), z;$ $\pm(\frac{1}{7}, \frac{3}{7}, 0); \pm(\frac{3}{7}, \frac{2}{7}, 0); \pm(\frac{5}{7}, \frac{1}{7}, 0)$	$7 \times 6a$	[7] $P6_5$	3a+b, -a+2b, c $\frac{1}{7}(2x+y), \frac{1}{7}(-x+3y), z;$ $\pm(\frac{1}{7}, \frac{3}{7}, 0); \pm(\frac{3}{7}, \frac{2}{7}, 0); \pm(\frac{5}{7}, \frac{1}{7}, 0)$	
[7] $P6_1$	3a+2b, -2a+b, c $\frac{1}{7}(x+2y), \frac{1}{7}(-2x+3y), z;$ $\pm(\frac{2}{7}, \frac{3}{7}, 0); \pm(\frac{3}{7}, \frac{1}{7}, 0); \pm(\frac{1}{7}, \frac{5}{7}, 0)$	$7 \times 6a$	[7] $P6_5$	3a+2b, -2a+b, c $\frac{1}{7}(x+2y), \frac{1}{7}(-2x+3y), z;$ $\pm(\frac{2}{7}, \frac{3}{7}, 0); \pm(\frac{3}{7}, \frac{1}{7}, 0); \pm(\frac{1}{7}, \frac{5}{7}, 0)$	
[p] $P6_1$	qa+r, c $\frac{1}{p}((q-r)x+ry), \frac{1}{p}(-rx+qy), z;$ $-ra+(q-r)b, c +(\frac{ur}{p}, \frac{uq}{p}, 0)$ $p = \text{prime} = q^2 - qr + r^2 = 6n+1;$ $q, r = 1, 2, \dots; q > r; u = 1, \dots, p-1$	$p \times 6a$	[p] $P6_5$	qa+r, c $\frac{1}{p}((q-r)x+ry), \frac{1}{p}(-rx+qy), z;$ $-ra+(q-r)b, c +(\frac{ur}{p}, \frac{uq}{p}, 0)$ $p = \text{prime} = q^2 - qr + r^2 = 6n+1;$ $q, r = 1, 2, \dots; q > r; u = 1, \dots, p-1$	
[4] $P6_1$	2a, 2b, c $\frac{1}{2}x, \frac{1}{2}y, z; +(\frac{1}{2}, 0, 0);$ $+(0, \frac{1}{2}, 0); +(\frac{1}{2}, \frac{1}{2}, 0)$	$4 \times 6a$	[4] $P6_5$	2a, 2b, c $\frac{1}{2}x, \frac{1}{2}y, z; +(\frac{1}{2}, 0, 0);$ $+(0, \frac{1}{2}, 0); +(\frac{1}{2}, \frac{1}{2}, 0)$	
[p ²] $P6_1$	pa, pb, c $\frac{1}{p}x, \frac{1}{p}y, z; +(\frac{u}{p}, \frac{v}{p}, 0)$ $p = \text{prime} = 3n-1; u, v = 1, \dots, p-1$	$p^2 \times 6a$	[p ²] $P6_5$	pa, pb, c $\frac{1}{p}x, \frac{1}{p}y, z; +(\frac{u}{p}, \frac{v}{p}, 0)$ $p = \text{prime} = 3n-1; u, v = 1, \dots, p-1$	