

Subperiodic Groups isomorphic to Factor Groups of Reducible Space Groups¹

Supplementary Tables

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Table 1 Partial translational subgroups associated with reducible space groups. "o" and "i" denote that T_{G1} is either *orthogonal* or *inclined* with respect to the plane containing the translations of T_{G2} .

Triclinic System

<i>P</i>	$T(\mathbf{a}, \mathbf{b})$	$T(\mathbf{c})$	i	$T(\mathbf{a}, \mathbf{b}) T(\mathbf{c})$	$\rho_{\mathbf{a}, \mathbf{b}}$	$\rho_{\mathbf{c}}$
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Monoclinic System

Unique Axis **b**

<i>P</i>	$T(\mathbf{a}, \mathbf{c})$	$T(\mathbf{b})$	o	$T(\mathbf{a}, \mathbf{c}) T(\mathbf{b})$	$\rho_{\mathbf{a}, \mathbf{c}}$	$\rho_{\mathbf{b}}$
	$T(\mathbf{a}, \mathbf{b})$	$T(\mathbf{c})$	i	$T(\mathbf{a}, \mathbf{b}) T(\mathbf{c})$	$\rho_{\mathbf{a}, \mathbf{b}}$	$\rho_{\mathbf{c}}$
	$T(\mathbf{b}, \mathbf{c})$	$T(\mathbf{a})$	i	$T(\mathbf{b}, \mathbf{c}) T(\mathbf{a})$	$\rho_{\mathbf{b}, \mathbf{c}}$	$\rho_{\mathbf{a}}$
<i>C</i>	$T(\mathbf{a}, \mathbf{c})$	$T(\mathbf{b})$	o	$T(\mathbf{a}, \mathbf{c}) T(\mathbf{b})[\mathbf{0} + \frac{1}{2}(\mathbf{a} + \mathbf{b})]$	$\rho_{\mathbf{a}/2, \mathbf{c}}$	$\rho_{\mathbf{b}/2}$
	$T(\frac{1}{2}(\mathbf{a}-\mathbf{b}), \frac{1}{2}(\mathbf{a} + \mathbf{b}))$	$T(\mathbf{c})$	i	$T(\frac{1}{2}(\mathbf{a}-\mathbf{b}), \frac{1}{2}(\mathbf{a} + \mathbf{b})) T(\mathbf{c})$	$C_{\mathbf{a}, \mathbf{b}}$	$\rho_{\mathbf{c}}$
	$T(\mathbf{b}, \mathbf{c})$	$T(\mathbf{a})$	i	$T(\mathbf{b}, \mathbf{c}) T(\mathbf{a})[\mathbf{0} + \frac{1}{2}(\mathbf{a} + \mathbf{b})]$	$\rho_{\mathbf{b}/2, \mathbf{c}}$	$\rho_{\mathbf{a}/2}$
<i>A</i>	$T(\mathbf{a}, \mathbf{c})$	$T(\mathbf{b})$	o	$T(\mathbf{a}, \mathbf{c}) T(\mathbf{b})[\mathbf{0} + \frac{1}{2}(\mathbf{b} + \mathbf{c})]$	$\rho_{\mathbf{a}, \mathbf{c}/2}$	$\rho_{\mathbf{b}/2}$
	$T(\frac{1}{2}(\mathbf{b}-\mathbf{c}), \frac{1}{2}(\mathbf{b} + \mathbf{c}))$	$T(\mathbf{a})$	i	$T(\frac{1}{2}(\mathbf{b}-\mathbf{c}), \frac{1}{2}(\mathbf{b} + \mathbf{c})) T(\mathbf{a})$	$C_{\mathbf{b}, \mathbf{c}}$	$\rho_{\mathbf{a}}$

	T(a,b)	T(c)	i	T(a,b) T(c)[0 + 1/2 (b + c)]	$\rho_{a,b/2}$	$\rho_{c/2}$
/	T(a,c)	T(b)	o	T(a,c) T(b)[0 + 1/2 (a + b + c)]	$C_{a,c}$	$\rho_{b/2}$
	T(a,b)	T(c)	i	T(a,b) T(c)[0 + 1/2 (a + b + c)]	$C_{a,b}$	$\rho_{c/2}$
	T(b,c)	T(a)	i	T(b,c) T(a)[0 + 1/2 (a + b + c)]	$C_{b,c}$	$\rho_{a/2}$
Unique Axis c						
P	T(a,b)	T(c)	o	T(a,b) T(c)	$\rho_{a,b}$	ρ_c
	T(b,c)	T(a)	i	T(b,c) T(a)	$\rho_{b,c}$	ρ_a
	T(a,c)	T(b)	i	T(a,c) T(b)	$\rho_{a,c}$	ρ_b
A	T(a,b)	T(c)	o	T(a,c) T(b)[0 + 1/2 (b + c)]	$\rho_{a,b/2}$	$\rho_{c/2}$
	T(1/2 (b-c), 1/2 (b + c))	T(a)	i	T(1/2 (b-c), 1/2 (b + c)) T(a)	$C_{b,c}$	ρ_a
	T(a,c)	T(b)	i	T(a,c) T(b)[0 + 1/2 (b + c)]	$\rho_{a,c/2}$	$\rho_{b/2}$
B	T(a,b)	T(c)	o	T(a,b) T(c)[0 + 1/2 (a + c)]	$\rho_{a/2,b}$	$\rho_{c/2}$
	T(1/2 (a-c), 1/2 (a + c))	T(b)	i	T(1/2 (a-c), 1/2 (a + c)) T(b)	$C_{a,c}$	ρ_b

	T(b,c)	T(a)	i	T(b,c) T(a)[0 + 1/2 (a + c)]	$\rho_{b,c/2}$	$\rho_{a/2}$
/	T(a,b)	T(c)	o	T(a,b) T(c)[0 + 1/2 (a + b + c)]	$\rho_{a,b}$	$\rho_{c/2}$
	T(b,c)	T(a)	i	T(b,c) T(a)[0 + 1/2 (a + b + c)]	$\rho_{b,c}$	$\rho_{a/2}$
	T(a,c)	T(b)	i	T(a,c) T(b)[0 + 1/2 (a + b + c)]	$\rho_{a,c}$	$\rho_{b/2}$

Orthorhombic System

<i>P</i>	T(a,b)	T(c)		T(a,b) T(c)	$\rho_{a,b}$	ρ_c
	T(b,c)	T(a)		T(b,c) T(a)	$\rho_{b,c}$	ρ_a
	T(a,c)	T(b)		T(a,c) T(b)	$\rho_{a,c}$	ρ_b
<i>C</i>	T(1/2 (a-b), 1/2 (a + b))	T(c)		T(1/2 (a-b), 1/2 (a + b)) T(c)	$\rho_{a,b}$	ρ_c
	T(b,c)	T(a)		T(b,c) T(a)[0 + 1/2 (a + b)]	$\rho_{b/2,c}$	$\rho_{a/2}$
	T(a,c)	T(b)		T(a,c) T(b)[0 + 1/2 (a + b)]	$\rho_{a/2,c}$	$\rho_{b/2}$
<i>F</i>	T(1/2 (a-b), 1/2 (a + b))	T(c)		T(1/2 (a-b), 1/2 (a + b)) T(c)[0 + 1/2 (a + c)]	$\rho_{a/2,b/2}$	$\rho_{c/2}$
	T(1/2 (b-c), 1/2 (b + c))	T(a)		T(1/2 (b-c), 1/2 (b + c)) T(a)[0 + 1/2 (a + b)]	$\rho_{b/2,c/2}$	$\rho_{a/2}$
	T(1/2 (a-c), 1/2 (a + c))	T(b)		T(1/2 (a-c), 1/2 (a + c)) T(b)[0 + 1/2 (b + c)]	$\rho_{a/2,c/2}$	$\rho_{b/2}$

<i>I</i>	T(a,b)	T(c)	T(a,b) T(c)[0 + ½ (a + b + c)]	C_{a,b}	$\rho_{c/2}$
	T(b,c)	T(a)	T(b,c) T(a)[0 + ½ (a + b + c)]	C_{b,c}	$\rho_{a/2}$
	T(a,c)	T(b)	T(a,c) T(b)[0 + ½ (a + b + c)]	C_{a,c}	$\rho_{b/2}$

<i>A</i>	T(½ (b-c), ½ (b + c))	T(a)	T(½ (b-c), ½ (b + c)) T(a)	C_{b,c}	ρ_a
	T(a,b)	T(c)	T(a,b) T(c)[0 + ½ (b + c)]	$\rho_{a,b/2}$	$\rho_{c/2}$
	T(a,c)	T(b)	T(a,c) T(b)[0 + ½ (b + c)]	$\rho_{a,c/2}$	$\rho_{b/2}$

Tetragonal System

<i>P</i>	T(a,b)	T(c)	T(a,b) T(c)	$\rho_{a,b}$	ρ_c
<i>I</i>	T(a,b)	T(c)	T(a,b) T(c)[0 + ½ (a + b + c)]	C_{a,b}	$\rho_{c/2}$

Hexagonal System

P **T(a,b)** **T(c)** **T(a,b) T(c)** $\rho_{a,b}$ ρ_c

R(obverse setting)

Hexagonal axes

T(a,b) **T(c)** **T(a,b) T(c)**[$0 + (2a + b + c)/3 + (a + 2b + 2c)/3$] $\rho_{(2a+b)/3, (-a+b)/3}$ $\rho_{c/3}$

Rhombohedral axes

T(a-b,b-c) **T(a + b + c)** **T(a-b,b-c) T(a + b + c)**[$0 + a + b$] $\rho_{(2a-b-c)/3, (-a+2b-c)/3}$ $\rho_{(a+b+c)}$

Table 2 Layer and rod groups isomorphic to factor groups of reducible space groups

G	T_{G2}	T_{G1}	G/T_{G1}	G/T_{G2}
<u>Triclinic System</u>				
1) P1	T(a,b)	T(c)	p1	a,b,c
2) P	T(a,b)	T(c)	p	a,b,c
<u>Monoclinic System</u>				
3) P2 (P121) UAb	T(a,c) T(a,b) T(b,c)	T(b) T(c) T(a)	p112 p211 p211	a,,b b,,c b,c,a
P2 (P112) UAc	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	p112 p211 p211	a,b,c c,,a c,a,b
4) P2 ₁ (P12 ₁ 1) UAb	T(a,c) T(a,b) T(b,c)	T(b) T(c) T(a)	p112 p2 ₁ 11 p2 ₁ 11	a,,b b,,c b,c,a
P2 ₁ (P112 ₁) UAc	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	p112 p2 ₁ 11 p2 ₁ 11	a,b,c c,,a c,a,b
5) C2 (C121) UAb CH1	T(a,c) T(½(ab), ½(a+b)) T(b,c)	T(b) T(c) T(a)	p112 c211 p211	a/2,,b b,,c b/2,c,a

C2 (A121) UAb CH2	T(a,c) T($\frac{1}{2}(b-c), \frac{1}{2}(b+c)$) T(a,b)	T(b) T(a) T(c)	p112 c211 p211	a,,b b,c,a b/2,,c	p112 p211 p211	a,,b/2 b,c,a b,,c/2
C2 (I121) UAb CH3	T(a,c) T(a,b) T(b,c)	T(b) T(c) T(a)	p112 c211 c211	$\frac{1}{2}(a-c), \frac{1}{2}(a+c), b$ b,,c b,c,a	p112 p211 p211	a,,b/2 b,,c/2 b,c,a/2
C2 (A112) UAc CH1	T(a,b) T($\frac{1}{2}(b-c), \frac{1}{2}(b+c)$) T(a,c)	T(c) T(a) T(b)	p112 c211 p211	a,b/2,c c,,a c/2,a,b	p112 p211 p211	a,b,c/2 c,,a c,a,b/2
C2 (B112) UAc CH2	T(a,b) T($\frac{1}{2}(a-c), \frac{1}{2}(a+c)$) T(b,c)	T(c) T(b) T(a)	p112 c211 p211	a/2,b,c c,a,b c/2,,a	p112 p211 p211	a,b,c/2 c,a,b c,,a/2
C2 (I112) UAc CH3	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	p112 c211 c211	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$ c,,a c,a,b	p112 p211 p211	a,b,c/2 c,,a/2 c,a,b/2
6) Pm (P1m1) UAb	T(a,c) T(a,b) T(b,c)	T(b) T(c) T(a)	p11m pm11 pm11	a,,b b,,c b,c,a	p11m pm11 pm11	a,,b b,,c b,c,a
Pm (P11m) UAc	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	p11m pm11 pm11	a,b,c c,,a c,a,b	p11m pm11 pm11	a,b,c c,,a c,a,b
7) Pc (P1c1) UAb CH1	T(a,c) T(a,b) T(b,c)	T(b) T(c) T(a)	p11a (CH1) p11n (CH2) p11b (CH3) pm11 pb11	c,a,b a,-a-c,b -a-c,c,b b,,c b,c,a	p11m pc11 pm11	c,a,b b,,c b,c,a

Pc (P1n1) UAb CH2	T(a,c)	T(b)	p11a (CH1)	-a-c,c,b	ρ 11m	c,a,b
	T(a,b)	T(c)	p11n (CH2)	c,a,b		
	T(b,c)	T(a)	p11b (CH3)	a,-a-c,b		
Pc (P1a1) UAb CH3	T(a,b)	T(c)	pb11	b,,c	ρ c11	b,,c
	T(b,c)	T(a)	pb11	b,c,a	ρ c11	b,c,a
	T(a,c)	T(b)	p11a (CH1)	a,-a-c,b	ρ 11m	c,a,b
Pc (P11a) UAc CH1	T(a,b)	T(c)	p11n (CH2)	-a-c,c,b		
	T(b,c)	T(a)	p11b (CH3)	c,a,b		
	T(a,c)	T(b)	pm11	b,,c	ρ m11	b,,c
Pc (P11n) UAc CH2	T(a,b)	T(c)	pm11	b,c,a	ρ c11	b,c,a
	T(b,c)	T(a)	p11a (CH1)	a,b,c	ρ 11m	a,b,c
	T(a,c)	T(b)	p11n (CH2)	b,-a-b,c		
Pc (P11b) UAc CH3	T(a,b)	T(c)	p11b (CH3)	-a-b,a,c		
	T(b,c)	T(a)	pm11	c,,a	ρ c11	c,,a
	T(a,c)	T(b)	pb11	c,a,b	ρ m11	c,a,b
8) Cm (C1m1) UAb CH1	T(a,b)	T(c)	p11a (CH1)	-a-b,a,c	ρ 11m	a,b,c
	T(b,c)	T(a)	p11n (CH2)	a,b,c		
	T(a,c)	T(b)	p11b (CH3)	b,-a-b,c		
Cm (A1m1) UAb CH2	T(a,b)	T(c)	pb11	c,,a	ρ c11	c,,a
	T(b,c)	T(a)	pb11	c,a,b	ρ c11	c,a,b
	T(a,c)	T(b)	pm11	c,a,b	ρ m11	c,,a
Cm (I1m1)	T(a,b)	T(c)	pm11	c,a,b	ρ c11	c,a,b
	T(b,c)	T(a)	p11m	a/2,,b	ρ 11m	a,,b/2
	T(a,c)	T(b)	cm11	b,,c	ρ m11	b,,c
Cm (A1m1) UAb CH2	T(a,b)	T(c)	pm11	b/2,c,a	ρ m11	b,c,a/2
	T(b,c)	T(a)	p11m	c/2,a,b	ρ 11m	c,a,b/2
	T(a,c)	T(b)	cm11	b,c,a	ρ m11	b,c,a
Cm (I1m1)	T(a,b)	T(c)	pm11	b/2,,c	ρ m11	b,,c/2
	T(b,c)	T(a)	p11m	$\frac{1}{2}(a-c), \frac{1}{2}(a+c),b$	ρ 11m	a,,b/2
	T(a,c)	T(b)	cm11			

UAb CH3	T(a,b) T(b,c)	T(c) T(a)	cm11 cm11	b,,c b,c,a	$\rho m11$ $\rho m11$	b,,c/2 b,c,a/2
Cm (A11m) UAc CH1	T(a,b) T(½(b-c), ½(b+c)) T(a,c)	T(c) T(a) T(b)	p11m cm11 pm11	a,b/2,c c,,a c/2,a,b	$\rho 11m$ $\rho m11$	a,b,c/2 c,,a
Cm (B11m) UAc CH2	T(a,b) T(½(a-c), ½(a+c)) T(b,c)	T(c) T(b) T(a)	p11m cm11 pm11	a/2,b,c c,a,b c/2,,a	$\rho 11m$ $\rho m11$ $\rho m11$	a,b,c/2 c,a,b c,,a/2
Cm (I11m) UAc CH3	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	p11m cm11 cm11	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$ c,,a c,a,b	$\rho 11m$ $\rho m11$ $\rho m11$	a,b,c/2 c,,a/2 c,a,b/2
9) Cc (C1c1) UAb CH1	T(a,c) T(½(a-b), ½(a+b)) T(b,c)	T(b) T(c) T(a)	p11a (CH1) p11n (CH2) p11b (CH3) cm11 pb11	c,a/2,b a/2,-a/2-c,b -a/2-c,c,b b,,c b/2,c,a	$\rho 11m$ $\rho c11$ $\rho m11$	c,a,b/2 b,,c b,c,a/2
Cc (A1n1) UAb CH2	T(a,c) T(½(b-c), ½(b+c)) T(a,b)	T(b) T(a) T(c)	p11a (CH1) p11n (CH2) p11b (CH3) cm11 pb11	-a-c/2,c/2,b c/2,a,b a,-a-c/2,b b,c,a b/2,,c	$\rho 11m$ $\rho c11$ $\rho m11$	c,a,b/2 b,c,a b,,c/2
Cc (I1a1) UAb CH3	T(a,c) T(a,b) T(b,c)	T(b) T(c) T(a)	p11a (CH1) p11n (CH2) p11b (CH3) cm11 cm11	-a, ½(a+c),b $\frac{1}{2}(a-c), \frac{1}{2}(a+c), b$ $\frac{1}{2}(a-c), -a, b$ b,,c b,c,a	$\rho 11m$ $\rho m11$ $\rho c11$	a,,b/2 b,,c/2 b,c,a/2
Cc (A11a) UAc CH1	T(a,b) T(½(b-c), ½(b+c)) T(a,c)	T(c) T(a) T(b)	p11a (CH1) p11n (CH2) p11b (CH3) cm11 pm11	a,b/2,c b/2,-a-b/2,c -a-b/2,a,c c,,a c/2,a,b	$\rho 11m$ $\rho c11$ $\rho m11$	a,b,c/2 c,,a c,a,b/2
Cc (B11n) UAc CH2	T(a,b)	T(c)	p11a (CH1) p11n (CH2)	-a/2-b,a/2,c a/2,b,c	$\rho 11m$	a,b,c/2

	$T(\frac{1}{2}(a-c), \frac{1}{2}(a+c))$ $T(b,c)$	$T(b)$ $T(a)$	p11b (CH3) cm11 pb11	$b,-a/2-b,c$ c,a,b $c/2,,a$	$c/4$	$pc11$ $pm11$	c,a,b $c,,a/2$
Cc (I11b) UAc CH3	$T(a,b)$ $T(b,c)$ $T(a,c)$	$T(c)$ $T(a)$ $T(b)$	p11a (CH1) p11n (CH2) p11b (CH3) cm11 cm11	$-a,-\frac{1}{2}(a+b),c$ $\frac{1}{2}(a-b), \frac{1}{2}(a+b),c$ $\frac{1}{2}(a-b),b,c$ $c,,a$ c,a,b	$c/4$	$p11m$ $pm11$ $pc11$	$a,b,c/2$ $c,,a/2$ $c,a,b/2$
10) P2/m (P12/m1) UAb	$T(a,c)$ $T(a,b)$ $T(b,c)$	$T(b)$ $T(c)$ $T(a)$	p112/m p2/m11 p2/m11	$a,,b$ $b,,c$ b,c,a		$p112/m$ $p2/m11$ $p2/m11$	$a,,b$ $b,,c$ b,c,a
P2/m (P112/m) UAc	$T(a,b)$ $T(b,c)$ $T(a,c)$	$T(c)$ $T(a)$ $T(b)$	p112/m p2/m11 p2/m11	a,b,c $c,,a$ c,a,b		$p112/m$ $p2/m11$ $p2/m11$	a,b,c $c,,a$ c,a,b
11) P2 ₁ /m (P12 ₁ /m1) UAb	$T(a,c)$ $T(a,b)$ $T(b,c)$	$T(b)$ $T(c)$ $T(a)$	p112/m p2 ₁ /m11 p2 ₁ /m11	c,a,b $b,,c$ b,c,a		$p112_1/m$ $p2/m11$ $p2/m11$	c,a,b $b,,c$ b,c,a
P2 ₁ /m (P112 ₁ /m) UAc	$T(a,b)$ $T(b,c)$ $T(a,c)$	$T(c)$ $T(a)$ $T(b)$	p112/m p2 ₁ /m11 p2 ₁ /m11	a,b,c $c,,a$ c,a,b		$p112_1/m$ $p2/m11$ $p2/m11$	a,b,c $c,,a$ c,a,b
12) C2/m (C12/m1) UAb CH1	$T(a,c)$ $T(\frac{1}{2}(a-b), \frac{1}{2}(a+b))$ $T(b,c)$	$T(b)$ $T(c)$ $T(a)$	p112/m c2/m11 p2/m11	$a/2,,b$ $b,,c$ $b/2,c,a$		$p112/m$ $p2/m11$ $p2/m11$	$a,,b/2$ $b,,c$ $b,c,a/2$
C2/m (A12/m1) UAb CH2	$T(a,c)$ $T(\frac{1}{2}(b-c), \frac{1}{2}(b+c))$ $T(a,b)$	$T(b)$ $T(a)$ $T(c)$	p112/m c2/m11 p2/m11	$c/2,a,b$ b,c,a $b/2,,c$		$p112/m$ $p2/m11$ $p2/m11$	$c,a,b/2$ b,c,a $b,,c/2$
C2/m (I12/m1) UAb CH3	$T(a,c)$ $T(a,b)$ $T(b,c)$	$T(b)$ $T(c)$ $T(a)$	p112/m c2/m11 c2/m11	$\frac{1}{2}(a-c), \frac{1}{2}(a+c),b$ $b,,c$ b,c,a		$p112/m$ $p2/m11$ $p2/m11$	$a,,b/2$ $b,,c/2$ $b,c,a/2$
C2/m (A112/m) UAc CH1	$T(a,b)$ $T(\frac{1}{2}(b-c), \frac{1}{2}(b+c))$	$T(c)$ $T(a)$	p112/m c2/m11	$a,b/2,c$ $c,,a$		$p112/m$ $p2/m11$	$a,b,c/2$ $c,,a$

	T(a,c)	T(b)	p2/m11	c/2,a,b	<i>p</i> 2/m11	c,a,b/2
C2/m (B112/m) UAc CH2	T(a,b) T(½(a-c), ½(a+c)) T(b,c)	T(c) T(b) T(a)	p112/m c2/m11 p2/m11	a/2,b,c c,a,b c/2,,a	<i>p</i> 112/m <i>p</i> 2/m11 <i>p</i> 2/m11	a,b,c/2 c,a,b c,,a/2
C2/m (I112/m) UAc CH3	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	p112/m c2/m11 c2/m11	½(a-b), ½(a+b),c c,,a c,a,b	<i>p</i> 112/m <i>p</i> 2/m11 <i>p</i> 2/m11	a,b,c/2 c,,a/2 c,a,b/2
13) Pc (P12/c1) UAb CH1	T(a,c) T(a,b) T(b,c)	T(b) T(c) T(a)	p112/a (CH1) p112/n (CH2) p112/b (CH3) p2/m11 p2/b11	c,a,b a,-a-c,b -a-c,c,b b,,c b,c,a	<i>p</i> 112/m <i>p</i> 2/c11 <i>p</i> 2/m11	c,a,b b,,c b,c,a
P2/c (P12/n1) UAb CH2	T(a,c) T(a,b) T(b,c)	T(b) T(c) T(a)	p112/a (CH1) p112/n (CH2) p112/b (CH3) p2/b11 p2/b11	-a-c,c,b c,a,b a,-a-c,b b,,c b,c,a	<i>p</i> 112/m <i>p</i> 2/c11 <i>p</i> 2/c11	c,a,b b,,c b,c,a
P2/c (P12/a1) UAb CH3	T(a,c) T(a,b) T(b,c)	T(b) T(c) T(a)	p112/a (CH1) p112/n (CH2) p112/b (CH3) p2/b11 p2/m11	a,,b c,-a-c,b -a-c,a,b b,,c b,c,a	<i>p</i> 112/m <i>p</i> 2/m11 <i>p</i> 2/c11	c,a,b b,,c b,c,a
P2/c (P112/a) UAc CH1	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	p112/a (CH1) p112/n (CH2) p112/b (CH3) p2/m11 p2/b11	a,b,c b,-a-b,c -a-b,a,c c,,a c,a,b	<i>p</i> 112/m <i>p</i> 2/c11 <i>p</i> 2/m11	a,b,c c,,a c,a,b
P2/c (P112/n) UAc CH2	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	p112/a (CH1) p112/n (CH2) p112/b (CH3) p2/b11 p2/b11	-a-b,a,c a,b,c b,-a-b,c c,,a c,a,b	<i>p</i> 112/m <i>p</i> 2/c11 <i>p</i> 2/c11	a,b,c c,,a c,a,b

P2/c (P112/b) UAc CH3	T(a,b)	T(c)	p112/a (CH1) b,-a-b,c p112/n (CH2) -a-b,a,c p112/b (CH3) a,b,c	<i>p</i> 112/m	a,b,c
	T(b,c)	T(a)	p2/b11 c,,a	<i>p</i> 2/m11	c,,a
	T(a,c)	T(b)	p2/m11 c,a,b	<i>p</i> 2/c11	c,a,b
14) P2 ₁ /c (P12 ₁ /c1) UAb CH1	T(a,c)	T(b)	p112/a (CH1) c,a,b p112/n (CH2) a,-a-c,b p112/b (CH3) -a-c,c,b	<i>p</i> 112 ₁ /m	c,a,b
	T(a,b)	T(c)	p2 ₁ /m11 b,,c	<i>p</i> 2/c11	b,,c
	T(b,c)	T(a)	p2 ₁ /b11 b,c,a	<i>p</i> 2/m11	b,c,a
P2 ₁ /c (P12 ₁ /n1) UAb CH2	T(a,c)	T(b)	p112/a (CH1) -a-c,c,b p112/n (CH2) c,a,b p112/b (CH3) a,-a-c,b	<i>p</i> 112 ₁ /m	c,a,b
	T(a,b)	T(c)	p2 ₁ /b11 b,,c	<i>p</i> 2/c11	b,,c
	T(b,c)	T(a)	p2 ₁ /b11 b,c,a	<i>p</i> 2/c11	b,c,a
P2 ₁ /c (P12 ₁ /a1) UAb CH3	T(a,c)	T(b)	p112/a (CH1) a,,b p112/n (CH2) c,-a-c,b p112/b (CH3) -a-c,a,b	<i>p</i> 112 ₁ /m	c,a,b
	T(a,b)	T(c)	p2 ₁ /b11 b,,c	<i>p</i> 2/m11	b,,c
	T(b,c)	T(a)	p2 ₁ /m11 b,c,a	<i>p</i> 2/c11	b,c,a
P2 ₁ /c (P112 ₁ /a) UAc CH1	T(a,b)	T(c)	p112/a (CH1) a,b,c p112/n (CH2) b,-a-b,c p112/b (CH3) -a-b,a,c	<i>p</i> 112 ₁ /m	a,b,c
	T(b,c)	T(a)	p2 ₁ /m11 c,,a	<i>p</i> 2/c11	c,,a
	T(a,c)	T(b)	p2 ₁ /b11 c,a,b	<i>p</i> 2/m11	c,a,b
P2 ₁ /c (P112 ₁ /n) UAc CH2	T(a,b)	T(c)	p112/a (CH1) -a-b,a,c p112/n (CH2) a,b,c p112/b (CH3) b,-a-b,c	<i>p</i> 112 ₁ /m	a,b,c
	T(b,c)	T(a)	p2 ₁ /b11 c,,a	<i>p</i> 2/c11	c,,a
	T(a,c)	T(b)	p2 ₁ /b11 c,a,b	<i>p</i> 2/c11	c,a,b
P2 ₁ /c (P112 ₁ /b) UAc CH3	T(a,b)	T(c)	p112/a (CH1) b,a,c p112/n (CH2) a,-a-b,c p112/b (CH3) -a-b,b,c	<i>p</i> 112 ₁ /m	a,b,c

	T(b,c) T(a,c)	T(a) T(b)	p2 ₁ /b11 p2 ₁ /m11	c,,a c,a,b	p2/m11 p2/c11	c,,a c,a,b
15) C2/c (C12/c1) UAb CH1	T(a,c)	T(b)	p112/a (CH1) p112/n (CH2) p112/b (CH3) c2/m11 p2/b11	c,a/2,b a/2,-a/2-c,b -a/2-c,c,b b,,c b/2,c,a	p112/m p2/c11 p2/m11	c,a,b/2 b,,c b,c,a/2
C2/c (A12/n1) UAb CH2	T(a,c)	T(b)	p112/a (CH1) p112/n (CH2) p112/b (CH3) c2/m11 p2/b11	-a-c/2,c/2,b c/2,a,b a,-a-c/2,b b,c,a b/2,,c	p112/m p2/c11 p2/c11	c,a,b/2 b,c,a b,,c/2
C2/c (I12/a1) UAb CH3	T(a,c)	T(b)	p112/a (CH1) p112/n (CH2) p112/b (CH3) c2/m11 c2/m11	-a, 1/2(a+c),b 1/2(a-c), 1/2(a+c),b 1/2(a-c),-a,b b,,c b,c,a	p112/m p2/m11 p2/m11	c,a,b/2 b,,c/2 b,c,a/2
C2/c (A112/a) UAc CH1	T(a,b)	T(c)	p112/a (CH1) p112/n (CH2) p112/b (CH3) c2/m11 p2/b11	a,b/2,c b/2,-a-b/2,c -a-b/2,a,c c,,a c/2,a,b	p112/m p2/c11 p2/m11	a,b,c/2 c,,a c,a,b/2
C2/c (B112/n) UAc CH2	T(a,b)	T(c)	p112/a (CH1) p112/n (CH2) p112/b (CH3) c2/m11 p2/b11	b/2,-a/2-b,c -a/2-b,a/2.c a/2,b,c c,a,b c/2,,a	p112/m p2/c11 p2/m11	a,b,c/2 c,a,b c,,a/2
C2/c (I112/b)	T(a,b)	T(c)	p112/a (CH1)	b,-1/2(a+b),c	p112/m	a,b,c/2

G

T_{G2}

T_{G1}

G/T_{G1}

G/T_{G2}

Orthorhombic System

16) P222	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	p222 p222 p222	a,b,c b,c,a c,a,b		----- p222 p222 p222	a,b,c b,c,a c,a,b
17) P222 ₁	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	p222 p2 ₁ 22 p2 ₁ 22	a,b,c c,,a c,a,b		p222 ₁ p222 p222	a,b,c b,c,a c,a,b
18) P2 ₁ 2 ₁ 2	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	p2 ₁ 2 ₁ 2 p2 ₁ 22 p2 ₁ 22	a,b,c b,c,a a,,b		p222 p222 ₁ p222 ₁	a,b,c b,c,a c,a,b
19) P2 ₁ 2 ₁ 2 ₁	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	p2 ₁ 2 ₁ 2 p2 ₁ 2 ₁ 2 p2 ₁ 2 ₁ 2	a,b,c b,c,a c,a,b	a/4 b/4 c/4	p222 ₁ p222 ₁ p222 ₁	a,b,c b,c,a c,a,b
20) C222 ₁	T(½(a-b), ½(a+b)) T(b,c) T(a,c)	T(c) T(a) T(b)	c222 p2 ₁ 22 p2 ₁ 22	a,b,c c,/2,a c,a/2,b		p222 ₁ p222 p222	a,b,c b,c,a/2 c,a,b/2
21) C222	T(½(a-b), ½(a+b)) T(b,c) T(a,c)	T(c) T(a) T(b)	c222 p222 p222	a,b,c b/2,c,a c,a/2,b		p222 p222 p222	a,b,c b,c,a/2 c,a,b/2
22) F222	T(½(a-b), ½(a+b)) T(½(b-c), ½(b+c)) T(½(a-c), ½(a+c))	T(c) T(a) T(b)	p222 p222 p222	a/2,b/2,c b/2,c/2,a c/2,a/2,b		p222 p222 p222	a,b,c/2 b,c,a/2 c,a,b/2
23) I222	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	c222 c222	a,b,c b,c,a c,a,b		p222 p222	a,b,c/2 b,c,a/2 c,a,b/2
24) I2 ₁ 2 ₁ 2 ₁	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	c222 c222 c222	a,b,c b,c,a c,a,b	a/4 b/4 c/4	p222 ₁ p222 ₁ p222 ₁	a,b,c/2 b,c,a/2 c,a,b/2
25) Pmm2	T(a,b)	T(c)	pmm2	a,b,c		pmm2	a,b,c

	T(b,c)	T(a)	pm2m	b,c,a		ρ 2mm	c,,a	
	T(a,c)	T(b)	pm2m	a,,b		ρ 2mm	c,a,b	
26) Pmc2 ₁	T(a,b)	T(c)	pmm2	a,b,c		ρ mc2 ₁	a,b,c	
	T(b,c)	T(a)	pb2 ₁ m	b,c,a		ρ 2mm	c,,a	
	T(a,c)	T(b)	pm2 ₁ b	a,,b		ρ 2mm	c,a,b	
27) Pcc2	T(a,b)	T(c)	pmm2	a,b,c		ρ cc2	a,b,c	
	T(b,c)	T(a)	pb2b	b,c,a		ρ 2mm	c,,a	
	T(a,c)	T(b)	pb2b	a,,b		ρ 2mm	c,a,b	
28) Pma2	T(a,b)	T(c)	pma2	a,b,c		ρ m2	a,b,c	
	T(b,c)	T(a)	pm2m	b,c,a		ρ 2cm	c,,a	
	T(a,c)	T(b)	pm2a	a,,b		ρ 2mm	c,a,b	
29) Pca2 ₁	T(a,b)	T(c)	pma2	a,b,c		ρ mc2 ₁	b,,c	
	T(b,c)	T(a)	pm2 ₁ b	b,c,a		ρ 2cm	c,,a	
	T(a,c)	T(b)	pb2 ₁ a	a,,b		ρ 2mm	c,a,b	
30) Pnc2	T(a,b)	T(c)	pma2	b,,c		ρ cc2	a,b,c	
	T(b,c)	T(a)	pb2n	b,c,a		ρ 2mm	c,,a	
	T(a,c)	T(b)	pb2b	a,,b		ρ 2cm	c,a,b	
31) Pmc2 ₁	T(a,b)	T(c)	pma2	a,b,c	a/4	ρ mc2 ₁	a,b,c	a/4
	T(b,c)	T(a)	pb2 ₁ m	b,c,a		ρ 2cm	c,,a	
	T(a,c)	T(b)	pm2 ₁ n	a,,b		ρ 2mm	c,a,b	
32) Pba2	T(a,b)	T(c)	pba2	a,b,c		ρ m2	a,b,c	
	T(b,c)	T(a)	pm2a	b,c,a		ρ 2cm	c,,a	
	T(a,c)	T(b)	pm2a	a,,b		ρ 2cm	c,a,b	
33) Pna2 ₁	T(a,b)	T(c)	pba2	a,b,c		ρ mc2 ₁	b,,c	
	T(b,c)	T(a)	pm2 ₁ n	b,c,a	b/4	ρ 2cm	c,,a	
	T(a,c)	T(b)	pb2 ₁ a	a,,b		ρ 2cm	c,a,b	
34) Pnn2	T(a,b)	T(c)	pba2	a,b,c		ρ cc2	a,b,c	

	T(b,c) T(a,c)	T(a) T(b)	pb2n pb2n	b,c,a a,,b	<i>p</i> 2cm <i>p</i> 2cm	c,,a c,a,b
35) Cmm2	T(½ (a-b), ½ (a + b)) T(b,c) T(a,c)	T(c) T(a) T(b)	cmm2 pm2m pm2m	a,b,c b/2,c,a a/2,,b	<i>p</i> mm2 <i>p</i> 2mm <i>p</i> 2mm	a,b,c b,c,a/2 c,a,b/2
36) Cmc2 ₁	T(½ (a-b), ½ (a + b)) T(b,c) T(a,c)	T(c) T(a) T(b)	cmm2 pb2 ₁ m pm2 ₁ b	a,b,c b/2,c,a a/2,,b	<i>p</i> mc2 ₁ <i>p</i> 2mm <i>p</i> 2mm	a,b,c c,,a/2 c,a,b/2
37) Ccc2	T(½ (a-b), ½ (a + b)) T(b,c) T(a,c)	T(c) T(a) T(b)	cmm2 pb2b pb2b	a,b,c b/2,c,a a/2,,b	<i>p</i> cc2 <i>p</i> 2mm <i>p</i> 2mm	a,b,c c,,a/2 c,a,b/2
38) Amm2	T(½ (b-c), ½ (b + c)) T(a,b) T(a,c)	T(a) T(c) T(b)	cm2m pmm2 pm2m	b,c,a a,b/2,c a,/2,b	<i>p</i> 2mm <i>p</i> mm2 <i>p</i> 2mm	c,,a a,b,c/2 c,a,b/2
39) Abm2	T(½ (b-c), ½ (b + c)) T(a,b) T(a,c)	T(a) T(c) T(b)	cm2a pmm2 pm2m	b,c,a a,b/2,c a,/2,b	<i>p</i> 2mm <i>p</i> mm2 <i>p</i> 2cm	c,,a a,b,c/2 c,a,b/2
40) Ama2	T(½ (b-c), ½ (b + c)) T(a,b) T(a,c)	T(a) T(c) T(b)	cm2m pma2 pm2a	b,c,a a,b/2,c a,/2,b	<i>p</i> 2cm <i>p</i> mm2 <i>p</i> 2mm	c,,a a,b,c/2 c,a,b/2
41) Aba2	T(½ (b-c), ½ (b + c)) T(a,b) T(a,c)	T(a) T(c) T(b)	cm2a pma2 pm2a	b,c,a a,b/2,c a,/2,b	<i>p</i> 2cm <i>p</i> mm2 <i>p</i> 2mm	c,,a a,b,c/2 c,a,b/2
42) Fmm2	T(½ (a-b), ½ (a + b)) T(½ (b-c), ½ (b + c)) T(½ (a-c), ½ (a + c))	T(c) T(a) T(b)	pmm2 pm2m pm2m	a/2,b/2,c b/2,c/2,a a/2,/2,b	<i>p</i> mm2 <i>p</i> 2mm <i>p</i> 2mm	a,b,c/2 c,,a/2 c,a,b/2
43) Fdd2	T(½ (a-b), ½ (a + b)) T(½ (b-c), ½ (b + c)) T(½ (a-c), ½ (a + c))	T(c) T(a) T(b)	pba2 pb2n pb2n	a/2,b/2,c b/2,c/2,a a/2,/2,b	<i>p</i> cc2 <i>p</i> 2cm <i>p</i> 2cm	a,b,c/2 c,,a/2 c,a,b/2

44) Imm2	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	cmm2 cm2m cm2m	a,b,c b,c,a a,,b		pmm2 p2mm p2mm	a,b,c/2 c,,a/2 c,a,b/2
45) Iba2	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	cmm2 cm2a cm2a	a,b,c b,c,a a,,b		pmm2 p2cm p2cm	a,b,c/2 c,,a/2 c,a,b/2
46) Ima2	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	cmm2 cm2m cm2a	a,b,c b,c,a a,,b	a/4 + b/4	pmm2 p2mm p2mm	a,b,c/2 c,,a/2 c,a,b/2
47) Pmmm	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	pmmm pmmm pmmm	a,b,c b,c,a c,a,b		pmmm pmmm pmmm	a,b,c b,c,a c,a,b
48) Pnnn	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	pban pban pban	a,b,c b,c,a a,,b		pccm pccm pccm	a,b,c b,c,a c,a,b
49) Pccm	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	pmmm pmaa pmaa	a,b,c c,,a c,a,b		pccm pmmm pmmm	a,b,c b,c,a c,a,b
50) Pban (OC1)	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	pban pmaa pmaa	a,b,c b,c,a a,,b	a/4 + b/4 b/4 a/4	pmmm pccm pccm	a,b,c b,c,a c,a,b
Pban (OC2)	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	pban pmaa pmaa	a,b,c b,c,a a,,b		pmmm pccm pccm	a,b,c b,c,a c,a,b
51) Pmma	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	pmma pmmm pmam	a,b,c b,c,a a,,b		pmmm pmcm pmmm	a,b,c b,c,a c,a,b
52) Pnna	T(a,b)	T(c)	pbaa	a,b,c		pccm	a,b,c

	T(b,c)	T(a)	pman	c,,a		<i>ρ</i> ccm	b,c,a
	T(a,c)	T(b)	pban	c,a,b		<i>ρ</i> mcm	c,a,b
53) Pmna	T(a,b)	T(c)	pmaa	a,b,c		<i>ρ</i> mcm	a,b,c
	T(b,c)	T(a)	pmam	c,,a		<i>ρ</i> ccm	b,c,a
	T(a,c)	T(b)	pman	a,,b		<i>ρ</i> mmm	c,a,b
54) Pcca	T(a,b)	T(c)	pmma	a,b,c		<i>ρ</i> ccm	a,b,c
	T(b,c)	T(a)	pmaa	c,,a		<i>ρ</i> mcm	b,c,a
	T(a,c)	T(b)	pbaa	c,a,b		<i>ρ</i> mmm	c,a,b
55) Pbam	T(a,b)	T(c)	pbam	a,b,c		<i>ρ</i> mmm	a,b,c
	T(b,c)	T(a)	pmaa	b,c,a		<i>ρ</i> mcm	c,,a
	T(a,c)	T(b)	pmaa	a,,b		<i>ρ</i> mcm	c,a,b
56) Pccn	T(a,b)	T(c)	pmmn	a,b,c		<i>ρ</i> ccm	a,b,c
	T(b,c)	T(a)	pbaa	c,,a		<i>ρ</i> mcm	b,c,a
	T(a,c)	T(b)	pbaa	c,a,b		<i>ρ</i> mcm	a,,b
57) Pbcm	T(a,b)	T(c)	pmam	b,,c		<i>ρ</i> mcm	a,b,c
	T(b,c)	T(a)	pbma	b,c,a		<i>ρ</i> mmm	b,c,a
	T(a,c)	T(b)	pmma	c,a,b		<i>ρ</i> mcm	c,a,b
58) Pnnm	T(a,b)	T(c)	pbam	a,b,c		<i>ρ</i> ccm	a,b,c
	T(b,c)	T(a)	pman	c,,a		<i>ρ</i> mcm	c,,a
	T(a,c)	T(b)	pman	c,a,b		<i>ρ</i> mcm	c,a,b
59) Pmmn (OC1)	T(a,b)	T(c)	pmmn	a,b,c	a/4 + b/4	<i>ρ</i> mmm	a,b,c
	T(b,c)	T(a)	pmam	b,c,a	b/4	<i>ρ</i> mcm	b,c,a
	T(a,c)	T(b)	pmam	a,,b	a/4	<i>ρ</i> mcm	a,,b
Pmmn (OC2)	T(a,b)	T(c)	pmmn	a,b,c		<i>ρ</i> mmm	a,b,c
	T(b,c)	T(a)	pmam	b,c,a		<i>ρ</i> mcm	b,c,a
	T(a,c)	T(b)	pmam	a,,b		<i>ρ</i> mcm	a,,b
60) Pbcn	T(a,b)	T(c)	pman	b,,c		<i>ρ</i> mcm	a,b,c
	T(b,c)	T(a)	pbaa	b,c,a		<i>ρ</i> mcm	b,c,a
	T(a,c)	T(b)	pbma	c,a,b		<i>ρ</i> ccm	c,a,b

61) Pbca	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	pbma pbma	pbma b,c,a c,a,b	a,b,c	<i>ρmcm</i> <i>ρmcm</i>	<i>ρmcm</i> <i>ρmcm</i>	a,b,c b,c,a c,a,b
62) Pnma	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	pbma pmmm pbam	a,b,c b,c,a a,,b		<i>ρmcm</i> <i>ρmcm</i> <i>ρmcm</i>	<i>ρmcm</i> <i>ρmcm</i> <i>ρmcm</i>	b,,c b,c,a c,a,b
63) Cmcm	T(½ (a-b), ½ (a + b)) T(b,c) T(a,c)	T(c) T(a) T(b)	cmmm pmam pmma	a,b,c c,/2,a c,a/2,b		<i>ρmcm</i> <i>ρmmm</i> <i>ρmmm</i>	<i>ρmcm</i> <i>ρmmm</i> <i>ρmmm</i>	a,b,c b,c,a/2 c,a,b/2
64) Cmca	T(½ (a-b), ½ (a + b)) T(b,c) T(a,c)	T(c) T(a) T(b)	cmma pmam pmma	a,b,c c,/2,a c,a/2,b		<i>ρmcm</i> <i>ρmmm</i> <i>ρmmm</i>	<i>ρmcm</i> <i>ρmmm</i> <i>ρmmm</i>	a,b,c b,c,a/2 c,a,b/2
65) Cmmm	T(½ (a-b), ½ (a + b)) T(b,c) T(a,c)	T(c) T(a) T(b)	cmmm pmmm pmmm	a,b,c b/2,c,a c,a/2,b		<i>ρmmm</i> <i>ρmmm</i> <i>ρmmm</i>	<i>ρmmm</i> <i>ρmmm</i> <i>ρmmm</i>	a,b,c b,c,a/2 c,a,b/2
66) Cmcm	T(½ (a-b), ½ (a + b)) T(b,c) T(a,c)	T(c) T(a) T(b)	cmmm pmaa pmaa	a,b,c c,/2,a c,a/2,b		<i>ρccm</i> <i>ρmmm</i> <i>ρmmm</i>	<i>ρccm</i> <i>ρmmm</i> <i>ρmmm</i>	a,b,c b,c,a/2 c,a,b/2
67) Cmma	T(½ (a-b), ½ (a + b)) T(b,c) T(a,c)	T(c) T(a) T(b)	cmma pmmm pmmm	a,b,c b/2,c,a a/2,,b		<i>ρmmm</i> <i>ρmmm</i> <i>ρmmm</i>	<i>ρmmm</i> <i>ρmmm</i> <i>ρmmm</i>	a,b,c b,c,a/2 c,a,b/2
68) Ccca (OC1)	T(½ (a-b), ½ (a + b)) T(b,c) T(a,c)	T(c) T(a) T(b)	cmma pmaa pmaa	a,b,c c,/2,a c/4 c,a/2,b c/4	a,b,c	a/4 <i>ρmmm</i> <i>ρmmm</i>	<i>ρccm</i> <i>ρmmm</i> <i>ρmmm</i>	a,b,c b,c,a/2 c,a,b/2
Ccca (OC2)	T(½ (a-b), ½ (a + b)) T(b,c) T(a,c)	T(c) T(a) T(b)	cmma pmaa pmaa	a,b,c c,/2,a c,a/2,b		<i>ρccm</i> <i>ρmmm</i> <i>ρmmm</i>	<i>ρccm</i> <i>ρmmm</i> <i>ρmmm</i>	a,b,c b,c,a/2 c,a,b/2

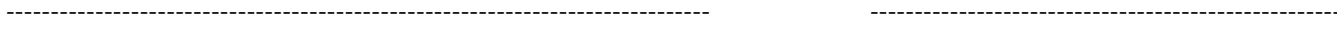
69) Fmmm	$T(\frac{1}{2}(a-b), \frac{1}{2}(a+b))T(c)$ $T(\frac{1}{2}(b-c), \frac{1}{2}(b+c))T(a)$ $T(\frac{1}{2}(a-c), \frac{1}{2}(a+c))T(b)$	pmmm pmmm pmmm	$a/2, b/2, c$ $b/2, c/2, a$ $c/2, a/2, b$	ρ m ρ m ρ m	$a, b, c/2$ $b, c, a/2$ $c, a, b/2$		
70) Fddd (OC1)	$T(\frac{1}{2}(a-b), \frac{1}{2}(a+b))$ $T(\frac{1}{2}(b-c), \frac{1}{2}(b+c))T(a)$ $T(\frac{1}{2}(a-c), \frac{1}{2}(a+c))T(b)$	T(c) pban pban	pban $b/2, c/2, a$ $a/2, /2, b$	$a/2, b/2, c$ $b/8 + c/8$ $a/8 + c/8$	$a/8 + b/8$ ρ ccm ρ ccm ρ ccm	ρ ccm $c/8$ $b, c, a/2$ $c, a, b/2$ $b/8$	
Fddd (OC2)	$T(\frac{1}{2}(a-b), \frac{1}{2}(a+b))T(c)$ $T(\frac{1}{2}(b-c), \frac{1}{2}(b+c))T(a)$ $T(\frac{1}{2}(a-c), \frac{1}{2}(a+c))T(b)$	pban pban pban	$a/2, b/2, c$ $b/2, c/2, a$ $a/2, /2, b$	ρ ccm ρ ccm ρ ccm	$a, b, c/2$ $b, c, a/2$ $c, a, b/2$		
71) Immm	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	cmmm cmmm cmmm	a,b,c b,c,a c,a,b	ρ m ρ m ρ m	a,b,c/2 b,c,a/2 c,a,b/2	
72) Ibam	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	cmmm cmma cmma	a,b,c c,,a c,a,b	ρ m ρ m ρ m	a,b,c/2 b,c,a/2 c,a,b/2	
73) Ibca	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	cmma cmma cmma	a,b,c b,c,a c,a,b	ρ m ρ m ρ m	a,b,c/2 b,c,a/2 c,a,b/2	
74) Imma	T(a,b) T(b,c) T(a,c)	T(c) T(a) T(b)	cmma cmmm cmmm	a,b,c b,c,a c,a,b	$b/4 + c/4$	ρ m ρ m ρ m	a,b,c/2 b,c,a/2 c,a,b/2

Tetragonal System $T_{G1} = T(c)$ $T_{G2} = T(a,b)$

G

G/T_{G1}

G/T_{G2}



75) P4	p4	a,b,c		<i>p</i> 4	a,b,c	
76) P4 ₁	p4	a,b,c		<i>p</i> 4 ₁	a,b,c	
77) P4 ₂	p4	a,b,c		<i>p</i> 4 ₂	a,b,c	
78) P4 ₃	p4	a,b,c		<i>p</i> 4 ₃	a,b,c	
79) I4	p4	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$		<i>p</i> 4	a,b,c/2	
80) I4 ₁	p4	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	a/4 + b/4	<i>p</i> 4 ₂	a,b,c/2	
81) P	p	a,b,c		<i>p</i>	a,b,c	
82) I	p	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$		<i>p</i>	a,b,c/2	
83) P4/m	p4/m	a,b,c		<i>p</i> 4/m	a,b,c	
84) P4 ₂ /m	p4/m	a,b,c		<i>p</i> 4 ₂ /m	a,b,c	
85) P4/n (OC1)	p4/n (OC1)	a,b,c	a/2	<i>p</i> 4/m	a,b,c	
	p4/n (OC2)	a,b,c	/4 + b/4			
P4/n (OC2)	p4/n (OC1)	a,b,c	a/4 + b/4	<i>p</i> 4/m	a,b,c	
	p4/n (OC2)	a,b,c				
86) P4 ₂ /n (OC1)	p4/n (OC1)	a,b,c	a/2	<i>p</i> 4 ₂ /m	a,b,c	c/4
	p4/n (OC2)	a,b,c	/4 + b/4			
P4 ₂ /n (OC2)	p4/n (OC1)	a,b,c	/4 + b/4	<i>p</i> 4 ₂ /m	a,b,c	
	p4/n (OC2)	a,b,c	a/2			
87) I4/m	p4/m	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$		<i>p</i> 4/m	a,b,c/2	
88) I4 ₁ /a (OC1)	p4/n (OC1)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	a/4 + b/4	<i>p</i> 4 ₂ /m	a,b,c/2	c/8
	p4/n (OC2)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	a/4			
I4 ₁ /a (OC2)	p4/n (OC1)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	a/4	<i>p</i> 4 ₂ /m	a,b,c/2	

	p4/n (OC2)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$			
89) P422	p422	a,b,c		<i>p422</i>	a,b,c
90) P4 ₂ 12	p4 ₂ 12	a,b,c	a/2	<i>p422</i>	a,b,c
91) P4 ₁ 22	p422	a,b,c		<i>p4₁22</i>	b,,c
92) P4 ₁ 212	p4 ₂ 12	a,b,c	a/2	<i>p4₁22</i>	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$
93) P4 ₂ 22	p422	a,b,c		<i>p4₂22</i>	a,b,c
94) P4 ₂ 212	p4 ₂ 12	a,b,c	a/2	<i>p4₂22</i>	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$
95) P4 ₃ 22	p422	a,b,c		<i>p4₃22</i>	b,,c
96) P4 ₃ 212	p4 ₂ 12	a,b,c	a/2	<i>p4₃22</i>	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$
97) I422	p422	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$		<i>p422</i>	a,b,c/2
98) I4 ₁ 22	p422	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	a/4 + b/4	<i>p4₂22</i>	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c/2}$
99) P4mm	p4mm	a,b,c		<i>p4mm</i>	a,b,c
100) P4bm	p4bm	a,b,c		<i>p4mm</i>	a,b,c
101) P4 ₂ cm	p4mm	a,b,c		<i>p4₂cm (S1)</i>	a,b,c
				<i>p4₂mc (S2)</i>	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$
102) P4 ₂ nm	p4bm	a,b,c	a/2	<i>p4₂cm (S1)</i>	a,b,c
				<i>p4₂mc (S2)</i>	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$
103) P4cc	p4mm	a,b,c		<i>p4cc</i>	a,b,c
104) P4nc	p4bm	a,b,c		<i>p4cc</i>	a,b,c
105) P4 ₂ mc	p4mm	a,b,c		<i>p4₂cm (S1)</i>	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$

				$p4_2mc$ (S2)	a,b,c
106) P4 _{2bc}	p4bm	a,b,c		$p4_2cm$ (S1)	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$
				$p4_2mc$ (S2)	a,b,c
107) I4mm	p4mm	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$		$p4mm$	a,b,c/2
108) I4cm	p4mm	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$		$p4mm$	a,b,c/2
109) I4 _{1md}	p4bm	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$	$a/4 + b/4$	$p4_2cm$ (S1)	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c/2$
				$p4_2mc$ (S2)	a,b,c/2
110) I4 _{1cd}	p4bm	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$	$a/4 + b/4$	$p4_2cm$ (S1)	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c/2$
				$p4_2mc$ (S2)	a,b,c/2
111) P2m	p2m	a,b,c		$p2m$ (S1)	a,b,c
				$pm2$ (S2)	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$
112) P2c	p2m	a,b,c		$p2c$ (S1)	a,b,c
				$pc2$ (S2)	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$
113) P2 _{1m}	p2 _{1m}	a,b,c		$p2m$ (S1)	a,b,c
				$pm2$ (S2)	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$
114) P2 _{1c}	p2 _{1m}	a,b,c		$p2c$ (S1)	a,b,c
				$pc2$ (S2)	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$
115) Pm2	pm2	a,b,c		$p2m$ (S1)	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$
				$pm2$ (S2)	a,b,c
116) Pc2	pm2	a,b,c		$p2c$ (S1)	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$
				$pc2$ (S2)	a,b,c
117) Pb2	pb2	a,b,c		$p2m$ (S1)	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$
118) Pn2	pb2	a,b,c		$p2c$ (S1)	$\frac{1}{2}(a-b), \frac{1}{2}(a+b), c$
				$pc2$ (S2)	a,b,c

119) Im2	p2m	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$		<i>p</i> 2m (S1) <i>pm</i> 2 (S2)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}/2$ a,b,c/2	
120) Ic2	p2m	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$		<i>p</i> 2m (S1) <i>pm</i> 2 (S2)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}/2$ a,b,c/2	
121) I2m	pm2	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$		<i>p</i> 2m (S1) <i>pm</i> 2 (S2)	a,b,c/2 $\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}/2$	
122) I2d	pb2	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$		<i>p</i> 2c	a,b,c/2	
123) P4/mmm	p4/mmm	a,b,c			<i>p</i> 4/mmm	a,b,c
124) P4/mcc	p4/mmm	a,b,c			<i>p</i> 4/mcc	a,b,c
125) P4/nbm (OC1)	p4/nbm (OC1) p4/nbm (OC2)	a,b,c a,b,c	a/4 + b/4		<i>p</i> 4/mmm	a,b,c
P4/nbm (OC2)	p4/nbm (OC1) p4/nbm (OC2)	a,b,c a,b,c	a/4 + b/4		<i>p</i> 4/mmm	a,b,c
126) P4/nnc (OC1)	p4/nbm (OC1) p4/nbm (OC2)	a,b,c a,b,c	a/4 + b/4		<i>p</i> 4/mcc	a,b,c c/4
P4/nnc (OC2)	p4/nbm (OC1) p4/nbm (OC2)	a,b,c a,b,c	a/4 + b/4		<i>p</i> 4/mcc	a,b,c
127) P4/mbm	p4/mbm	a,b,c			<i>p</i> 4/mmm	a,b,c
128) P4/mnc	p4/mbm	a,b,c			<i>p</i> 4/mcc	a,b,c
129) P4/nmm (OC1)	p4/nmm (OC1) p4/nmm (OC2)	a,b,c a,b,c	a/2 a/4 - b/4		<i>p</i> 4/mmm	a,b,c
P4/nmm (OC2)	p4/nmm (OC1) p4/nmm (OC2)	a,b,c a,b,c	a/4 + b/4		<i>p</i> 4/mmm	a,b,c
130) P4/ncc (OC1)	p4/nmm (OC1) p4/nmm (OC2)	a,b,c a,b,c	a/2 a/4 - b/4		<i>p</i> 4/mcc	a,b,c

	P4/ncc (OC2)	p4/nmm (OC1) p4/nmm (OC2)	a,b,c a,b,c	a/4 + b/4	<i>p4/mcc</i>	a,b,c	
131)	P4 ₂ /mmc	p4/mmm	a,b,c		<i>p4₂/mmc (S1)</i> <i>p4₂/mcm (S2)</i>	a,b,c $\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	
132)	P4 ₂ /mcm	p4/mmm	a,b,c		<i>p4₂/mmc (S1)</i> <i>p4₂/mcm (S2)</i>	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$ a,b,c	
133)	P4 ₂ /nbc (OC1)	p4/nbm (OC1) p4/nbm (OC2)	a,b,c a,b,c	a/2 a/4-b/4	<i>p4₂/mmc (S1)</i> <i>p4₂/mcm (S2)</i>	a,b,c $\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	c/4 c/4
	P4 ₂ /nbc (OC2)	p4/nbm (OC1) p4/nbm (OC2)	a,b,c a,b,c	a/4 + b/4	<i>p4₂/mmc (S1)</i> <i>p4₂/mcm (S2)</i>	a,b,c $\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	
134)	P4 ₂ /nnm (OC1)	p4/nbm (OC1) p4/nbm (OC2)	a,b,c a,b,c	a/2 a/4-b/4	<i>p4₂/mmc (S1)</i> <i>p4₂/mcm (S2)</i>	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$ a,b,c	c/4 c/4
	P4 ₂ /nnm (OC2)	p4/nbm (OC1) p4/nbm (OC2)	a,b,c a,b,c	a/4 + b/4	<i>p4₂/mmc (S1)</i> <i>p4₂/mcm (S2)</i>	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$ a,b,c	
135)	P4 ₂ /mbc	p4/mbm	a,b,c		<i>p4₂/mmc (S1)</i> <i>p4₂/mcm (S2)</i>	a,b,c $\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	
136)	P4 ₂ /mnm	p4/mbm	a,b,c	a/2	<i>p4₂/mmc (S1)</i> <i>p4₂/mcm (S2)</i>	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$ a,b,c	
137)	P4 ₂ /nmc (OC1)	p4/nmm (OC1) p4/nmm (OC2)	a,b,c a,b,c	a/2 a/4-b/4	<i>p4₂/mmc (S1)</i> <i>p4₂/mcm (S2)</i>	a,b,c $\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	c/4 c/4
	P4 ₂ /nmc (OC2)	p4/nmm (OC1) p4/nmm (OC2)	a,b,c a,b,c	a/4 + b/4	<i>p4₂/mmc (S1)</i> <i>p4₂/mcm (S2)</i>	a,b,c $\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	
138)	P4 ₂ /ncm (OC1)	p4/nmm (OC1) p4/nmm (OC2)	a,b,c a,b,c	a/2 a/4-b/4	<i>p4₂/mmc (S1)</i> <i>p4₂/mcm (S2)</i>	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$ a,b,c	c/4 c/4
	P4 ₂ /ncm (OC2)	p4/nmm (OC1)	a,b,c	a/4 + b/4	<i>p4₂/mmc (S1)</i>	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	

	p4/nmm (OC2)	a,b,c		<i>p4₂/mcm</i> (S2)	a,b,c	
139) I4/mmm	p4/mmm	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$		<i>p4/mmm</i>	a,b,c/2	
140) I4/mcm	p4/mmm	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$		<i>p4/mmm</i>	a,b,c/2	
141) I4 ₁ /amd (OC1)	p4/nbm (OC1)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	a/4 + b/4	<i>p4₂/mmc</i> (S1)	a,b,c/2	c/8
	p4/nbm (OC2)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	a/4	<i>p4₂/mcm</i> (S2)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c/2}$	c/8
I4 ₁ /amd (OC2)	p4/nbm (OC1)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	a/4	<i>p4₂/mmc</i> (S1)	a,b,c/2	
	p4/nbm (OC2)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$		<i>p4₂/mcm</i> (S2)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c/2}$	
142) I4 ₁ /acd (OC1)	p4/nbm (OC1)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	a/4 + b/4	<i>p4₂/mmc</i> (S1)	a,b,c/2	c/8
	p4/nbm (OC2)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	a/4	<i>p4₂/mcm</i> (S2)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c/2}$	c/8
I4 ₁ /acd (OC2)	p4/nbm (OC1)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$	a/4	<i>p4₂/mmc</i> (S1)	a,b,c/2	c/8
	p4/nbm (OC2)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c}$		<i>p4₂/mcm</i> (S2)	$\frac{1}{2}(\mathbf{a-b}), \frac{1}{2}(\mathbf{a+b}), \mathbf{c/2}$	c/8

Hexagonal System $T_{G1} = T(\mathbf{c})$ $T_{G2} = T(\mathbf{a,b})$

Rhombohedral (obverse setting): Hexagonal Axes: $T_{G1} = T(\mathbf{c})$ $T_{G2} = T(\mathbf{a,b})$
Rhombohedral Axes: $T_{G1} = T(\mathbf{a+b+c})$ $T_{G2} = T(\mathbf{a-b,b-c})$

G	G/T_{G1}	G/T_{G2}
	-----	-----
143) P3	p3 a,b,c	<i>p3</i> a,b,c
144) P3 ₁	p3 a,b,c	<i>p3₁</i> a,b,c
145) P3 ₂	p3 a,b,c	<i>p3₂</i> a,b,c
146) R3 (H)	p3 $(2\mathbf{a+b})/3, (-\mathbf{a+b})/3, \mathbf{c}$	<i>p3</i> a,b,c/3
R3 (R)	p3 $(2\mathbf{a-b-c})/3, (-\mathbf{a+2b-c})/3, \mathbf{a+b+c}$	<i>p3</i> a-b,b-c,(a+b+c)/3

147) P	p	a,b,c	p	a,b,c
148) R (H)	p	$(2a+b)/3, (-a+b)/3, c$	p	a,b,c/3
R (R)	p	$(2a-b-c)/3, (-a+2b-c)/3, a+b+c$	p	a-b,b-c,(a+b+c)/3
149) P312	p312	a,b,c	p_{312} (S1) p_{321} (S2)	a,b,c $2a+b, -a+b, c$
150) P321	p321	a,b,c	p_{312} (S1) p_{321} (S2)	$2a+b, -a+b, c$ a,b,c
151) P3 ₁ 12	p312	a,b,c	p_{3112} (S1) p_{3121} (S2)	a,b,c $2a+b, -a+b, c$
152) P3 ₁ 21	p321	a,b,c	p_{3112} (S1) p_{3121} (S2)	$2a+b, -a+b, c$ a,b,c
153) P3 ₂ 12	p312	a,b,c	p_{3212} (S1) p_{3221} (S2)	a,b,c $a-b, a+2b, c$
154) P3 ₂ 21	p321	a,b,c	p_{3212} (S1) p_{3221} (S2)	$a+b, -a+b, c$ a,b,c
155) R32 (H)	p312	$(2a+b)/3, (-a+b)/3, c$	p_{312} (S1) p_{321} (S2)	$2a+b, -a+b, c/3$ a,b,c/3
R32 (R)	p312	$(2a-b-c)/3, (-a+2b-c)/3, a+b+c$	p_{312} (S1) p_{321} (S2)	$2a-b-c, -a+2b-c, (a+b+c)/3$ a-b,b-c,(a+b+c)/3
156) P3m1	p3m1	a,b,c	p_{3m1} (S1) p_{31m} (S2)	a,b,c $2a+b, -a+b, c$
157) P31m	p31m	a,b,c	p_{3m1} (S1) p_{31m} (S2)	$2a+b, -a+b, c$ a,b,c
158) P3c1	p3m1	a,b,c	p_{3c1} (S1) p_{31c} (S2)	a,b,c $2a+b, -a+b, c$

159) P31c	p31m	a,b,c	ρ_{31c} (S1) $2a+b, -a+b, c$ ρ_{31c} (S2) a,b,c
160) R3m (H)	p31m	$(2a+b)/3, (-a+b)/3, c$	ρ_{31m} (S1) a,b,c/3 ρ_{31m} (S2) $2a+b, -a+b, c/3$
R3m (R)	p31m	$(2a-b-c)/3, (-a+2b-c)/3, a+b+c$	ρ_{31m} (S1) a-b,b-c,(a+b+c)/3 ρ_{31m} (S2) $2a-b-c, -a+2b-c, (a+b+c)/3$
161) R3c (H)	p31m	$(2a+b)/3, (-a+b)/3, c$	ρ_{31c} (S1) a,b,c/3 ρ_{31c} (S2) $2a+b, -a+b, c/3$
R3c (R)	p31m	$(2a-b-c)/3, (-a+2b-c)/3, a+b+c$	ρ_{31c} (S1) a-b,b-c,(a+b+c)/3 ρ_{31c} (S2) $2a-b-c, -a+2b-c, (a+b+c)/3$
162) P1m	p1m	a,b,c	ρ_{1m} (S1) a,b,c ρ_{1m} (S2) $2a+b, -a+b, c$
163) P1c	p1m	a,b,c	ρ_{1c} (S1) a,b,c ρ_{1c} (S2) $2a+b, -a+b, c$
164) Pm1	pm1	a,b,c	ρ_{1m} (S1) $2a+b, -a+b, c$ ρ_{1m} (S2) a,b,c
165) Pc1	pm1	a,b,c	ρ_{1c} (S1) $2a+b, -a+b, c$ ρ_{1c} (S2) a,b,c
166) Rm (H)	p1m	$(2a+b)/3, (-a+b)/3, c$	ρ_{1m} (S1) $2a+b, -a+b, c/3$ ρ_{1m} (S2) a,b,c/3
Rm (R)	p1m	$(2a-b-c)/3, (-a+2b-c)/3, a+b+c$	ρ_{1m} (S1) $2a-b-c, -a+2b-c, (a+b+c)/3$ ρ_{1m} (S2) a-b,b-c,(a+b+c)/3
167) Rc (H)	p1m	$(2a+b)/3, (-a+b)/3, c$	ρ_{1c} (S1) $2a+b, -a+b, c/3$ ρ_{1c} (S2) a,b,c/3
Rc (R)	p1m	$(2a-b-c)/3, (-a+2b-c)/3, a+b+c$	ρ_{1c} (S1) $2a-b-c, -a+2b-c, (a+b+c)/3$

			$\rho c1$ (S2)	$a-b, b-c, (a+b+c)/3$
168) P6	p6	a,b,c	$\rho 6$	a,b,c
169) P6 ₁	p6	a,b,c	$\rho 6_1$	a,b,c
170) P6 ₅	p6	a,b,c	$\rho 6_5$	a,b,c
171) P6 ₂	p6	a,b,c	$\rho 6_2$	a,b,c
172) P6 ₄	p6	a,b,c	$\rho 6_4$	a,b,c
173) P6 ₃	p6	a,b,c	$\rho 6_3$	a,b,c
174) P	p	a,b,c	ρ	a,b,c
175) P6/m	p6/m	a,b,c	$\rho 6/m$	a,b,c
176) P6 ₃ /m	p6/m	a,b,c	$\rho 6_3/m$	a,b,c
177) P622	p622	a,b,c	$\rho 622$	a,b,c
178) P6 ₁ 22	p622	a,b,c	$\rho 6_122$	a,b,c
179) P6 ₅ 22	p622	a,b,c	$\rho 6_522$	a,b,c
180) P6 ₂ 22	p622	a,b,c	$\rho 6_222$	a,b,c
181) P6 ₄ 22	p622	a,b,c	$\rho 6_422$	a,b,c
182) P6 ₃ 22	p622	a,b,c	$\rho 6_322$	a,b,c
183) P6mm	p6mm	a,b,c	$\rho 6mm$	a,b,c
184) P6cc	p6mm	a,b,c	$\rho 6cc$	a,b,c
185) P6 ₃ cm	p6mm	a,b,c	$\rho 6_3mc$ (S1) $\rho 6_3cm$ (S2)	2a + b, -a + b, c a,b,c

186) P6 ₃ mc	p6mm	a,b,c	<i>p6₃mc</i> (S1) a,b,c <i>p6₃cm</i> (S2) 2a+b,-a+b,c
187) Pm2	pm2	a,b,c	<i>pm2</i> (S1) a,b,c <i>p2m</i> (S2) 2a+b,-a+b,c
188) Pc2	pm2	a,b,c	<i>pc2</i> (S1) a,b,c <i>p2c</i> (S2) 2a+b,-a+b,c
189) P2m	p2m	a,b,c	<i>pm2</i> (S1) 2a+b,-a+b,c <i>p2m</i> (S2) a,b,c
190) P2c	p2m	a,b,c	<i>pc2</i> (S1) 2a+b,-a+b,c <i>p2c</i> (S2) a,b,c
191) P6/mmm	p6/mmm	a,b,c	<i>p6/mmm</i> a,b,c
192) P6/mcc	p6/mmm	a,b,c	<i>p6/mcc</i> a,b,c
193) P6 ₃ /mcm	p6/mmm	a,b,c	<i>p6₃/mmc</i> (S1) 2a+b,-a+b,c <i>p6₃/mcm</i> (S2) a,b,c
194) P6 ₃ /mmc	p6/mmm	a,b,c	<i>p6₃/mmc</i> (S1) a,b,c <i>p6₃/mcm</i> (S2) 2a+b,-a+b,c