

Laue class $C_{2h} - 2/m$

6. SCANNING TABLES

Monoclinic

 No. 9 Cc
 C_s^4

CELL CHOICE 1

 $\mathcal{G} = C1c1$ UNIQUE AXIS b
 $\mathcal{G} = A11a$ UNIQUE AXIS c

Orientation orbit (hkl)	Conventional basis of the scanning group \mathbf{a}' \mathbf{b}' \mathbf{d}	Scanning group \mathcal{H}	Linear orbit $s\mathbf{d}$	Sectional layer group $\mathcal{L}(s\mathbf{d})$	
UNIQUE AXIS b (010)	\mathbf{c} \mathbf{a} \mathbf{b}	$A11a$	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$p11a$	L05
UNIQUE AXIS c (001)	\mathbf{a} \mathbf{b} \mathbf{c}		$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$ $[\pm s\mathbf{d}, (\pm s + \frac{1}{2})\mathbf{d}]$	$p11n$ $p1$	L05 L01
UNIQUE AXIS b ($n0m$) UNIQUE AXIS c ($mn0$)	\mathbf{b} $n\mathbf{c} - m\mathbf{a}$ $p\mathbf{c} + q\mathbf{a}$ \mathbf{c} $n\mathbf{a} - m\mathbf{b}$ $p\mathbf{a} + q\mathbf{b}$ n odd m even p even q odd n even m odd p odd q even n even m odd p odd q odd n odd m odd p even q odd n odd m odd p odd q even n odd m even p odd q odd	$Bb11$ $Cc11$ $Cn11$ $Bn11$ $Ic11$ $Ib11$	$[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$	$pb11$ $\widehat{p}1$ $\widehat{p}1$ $pb11 (\mathbf{a}'/4)$ $pb11 (\mathbf{a}'/4)$ $pb11$	L12 L01 L01 L12 L12 L12

No. 9 Cc

C_s^4

CELL CHOICE $\tilde{1}$

$$\mathcal{G} = A1a1 \text{ UNIQUE AXIS } b$$

$$\mathcal{G} = B11b \text{ UNIQUE AXIS } c$$

Orientation orbit (hkl)	Conventional basis of the scanning group $\mathbf{a}' \quad \mathbf{b}' \quad \mathbf{d}$	Scanning group \mathcal{H}	Linear orbit $s\mathbf{d}$	Sectional layer group $\mathcal{L}(s\mathbf{d})$	
UNIQUE AXIS b (010)	$\mathbf{c} \quad \mathbf{a} \quad \mathbf{b}$	$B11b$	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$p11b$	L05
UNIQUE AXIS c (001)	$\mathbf{a} \quad \mathbf{b} \quad \mathbf{c}$		$[\frac{1}{2}\mathbf{d}, \frac{3}{4}\mathbf{d}]$ $[\pm s\mathbf{d}, (\pm s + \frac{1}{2})\mathbf{d}]$	$p11n$ $p1$	L05 L01
UNIQUE AXIS b ($n0m$)	$\mathbf{b} \quad n\mathbf{c} - m\mathbf{a} \quad p\mathbf{c} + q\mathbf{a}$				
UNIQUE AXIS c ($mn0$)	$\mathbf{c} \quad n\mathbf{a} - m\mathbf{b} \quad p\mathbf{a} + q\mathbf{b}$ $n \text{ odd} \quad m \text{ even}$ $p \text{ even} \quad q \text{ odd}$ $n \text{ even} \quad m \text{ odd}$ $p \text{ odd} \quad q \text{ even}$ $n \text{ even} \quad m \text{ odd}$ $p \text{ odd} \quad q \text{ odd}$ $n \text{ odd} \quad m \text{ odd}$ $p \text{ even} \quad q \text{ odd}$ $n \text{ odd} \quad m \text{ odd}$ $p \text{ odd} \quad q \text{ even}$ $n \text{ odd} \quad m \text{ even}$ $p \text{ odd} \quad q \text{ odd}$	$Cc11$	$[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$	$\hat{p}1$	L01
		$Bb11$	$[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$	$pb11$	L12
		$Ib11$	$[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$	$pb11$	L12
		$Ic11$	$[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$	$pb11 (\mathbf{a}'/4)$	L12
		$Bn11$	$[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$	$pb11 (\mathbf{a}'/4)$	L12
		$Cn11$	$[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$	$\hat{p}1$	L01

No. 9 Cc

C_s^4

CELL CHOICE 2

$$\mathcal{G} = A1n1 \text{ UNIQUE AXIS } b$$

$$\mathcal{G} = B11n \text{ UNIQUE AXIS } c$$

Orientation orbit (hkl)	Conventional basis of the scanning group $\mathbf{a}' \quad \mathbf{b}' \quad \mathbf{d}$	Scanning group \mathcal{H}	Linear orbit $s\mathbf{d}$	Sectional layer group $\mathcal{L}(s\mathbf{d})$	
UNIQUE AXIS b (010)	$\mathbf{c} \quad \mathbf{a} \quad \mathbf{b}$	$B11n$	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$p11n$	L05
UNIQUE AXIS c (001)	$\mathbf{a} \quad \mathbf{b} \quad \mathbf{c}$		$[\frac{1}{2}\mathbf{d}, \frac{3}{4}\mathbf{d}]$ $[\pm s\mathbf{d}, (\pm s + \frac{1}{2})\mathbf{d}]$	$p11b$ $p1$	L05 L01
UNIQUE AXIS b ($n0m$) UNIQUE AXIS c ($mn0$)	$\mathbf{b} \quad n\mathbf{c} - m\mathbf{a} \quad p\mathbf{c} + q\mathbf{a}$ $\mathbf{c} \quad n\mathbf{a} - m\mathbf{b} \quad p\mathbf{a} + q\mathbf{b}$ n odd m even p even q odd n even m odd p odd q even n even m odd p odd q odd n odd m odd p even q odd n odd m odd p odd q even n odd m even p odd q odd	$Cn11$ $Bn11$ $ Ic11$ $ Ib11$ $ Bb11$ $ Cc11$	$[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$	$\widehat{p}1$ $pb11 (\mathbf{a}'/4)$ $pb11 (\mathbf{a}'/4)$ $pb11$ $pb11$ $\widehat{p}1$	L01 L12 L12 L12 L12 L01

No. 9 Cc

C_s^4

CELL CHOICE $\tilde{2}$

$$\mathcal{G} = C1n1 \quad \text{UNIQUE AXIS } b$$

$$\mathcal{G} = A11n \quad \text{UNIQUE AXIS } c$$

Orientation orbit (hkl)	Conventional basis of the scanning group $\mathbf{a}' \quad \mathbf{b}' \quad \mathbf{d}$	Scanning group \mathcal{H}	Linear orbit $s\mathbf{d}$	Sectional layer group $\mathcal{L}(s\mathbf{d})$	
UNIQUE AXIS b (010)	$\mathbf{c} \quad \mathbf{a} \quad \mathbf{b}$	$A11n$	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$p11n$	L05
UNIQUE AXIS c (001)	$\mathbf{a} \quad \mathbf{b} \quad \mathbf{c}$		$[\frac{1}{2}\mathbf{d}, \frac{3}{4}\mathbf{d}]$ $[\pm s\mathbf{d}, (\pm s + \frac{1}{2})\mathbf{d}]$	$p11a$ $p1$	L05 L01
UNIQUE AXIS b ($n0m$)	$\mathbf{b} \quad n\mathbf{c} - m\mathbf{a} \quad p\mathbf{c} + q\mathbf{a}$				
UNIQUE AXIS c ($mn0$)	$\mathbf{c} \quad n\mathbf{a} - m\mathbf{b} \quad p\mathbf{a} + q\mathbf{b}$ n odd m even p even q odd n even m odd p odd q even n even m odd p odd q odd n odd m odd p even q odd n odd m odd p odd q even n odd m even p odd q odd	$Bn11$ $Cn11$ $Cc11$ $Bb11$ $Ib11$ $Ic11$	$[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$	$pb11 (\mathbf{a}'/4)$ $\widehat{p}1$ $\widehat{p}1$ $pb11$ $pb11$ $pb11 (\mathbf{a}'/4)$	L12 L01 L01 L12 L12 L12

No. 9 Cc

C_s^4

$$\mathcal{G} = I1a1 \text{ UNIQUE AXIS } b$$

CELL CHOICE 3

$$\mathcal{G} = I11b \text{ UNIQUE AXIS } c$$

Orientation orbit (hkl)	Conventional basis of the scanning group $\mathbf{a}' \quad \mathbf{b}' \quad \mathbf{d}$	Scanning group \mathcal{H}	Linear orbit $s\mathbf{d}$	Sectional layer group $\mathcal{L}(s\mathbf{d})$	
UNIQUE AXIS b (010)	$\mathbf{c} \quad \mathbf{a} \quad \mathbf{b}$	$I11b$	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	$p11b$	L05
UNIQUE AXIS c (001)	$\mathbf{a} \quad \mathbf{b} \quad \mathbf{c}$		$[\frac{1}{2}\mathbf{d}, \frac{3}{4}\mathbf{d}]$ $[\pm s\mathbf{d}, (\pm s + \frac{1}{2})\mathbf{d}]$	$p11a$ $p1$	L05 L01
UNIQUE AXIS b ($n0m$)	$\mathbf{b} \quad n\mathbf{c} - m\mathbf{a} \quad p\mathbf{c} + q\mathbf{a}$				
UNIQUE AXIS c ($mn0$)	$\mathbf{c} \quad n\mathbf{a} - m\mathbf{b} \quad p\mathbf{a} + q\mathbf{b}$ n odd m even p even q odd n even m odd p odd q even n even m odd p odd q odd n odd m odd p even q odd n odd m odd p odd q even n odd m even p odd q odd	$Ic11$ $Ib11$ $Bb11$ $Cc11$ $Cn11$ $Bn11$	$[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$	$pb11 (\mathbf{a}'/4)$ $pb11$ $pb11$ $\widehat{p}1$ $\widehat{p}1$ $pb11 (\mathbf{a}'/4)$	L12 L12 L12 L01 L01 L12

No. 9 Cc

C_s^4

CELL CHOICE $\tilde{3}$

$$\mathcal{G} = I1c1 \quad \text{UNIQUE AXIS } b$$

$$\mathcal{G} = I11a \quad \text{UNIQUE AXIS } c$$

Orientation orbit (<i>hkl</i>)	Conventional basis of the scanning group a' b' d	Scanning group \mathcal{H}	Linear orbit sd	Sectional layer group $\mathcal{L}(\mathbf{sd})$	
UNIQUE AXIS <i>b</i> (010)	c a b	<i>I11a</i>	$[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$	<i>p11a</i>	L05
UNIQUE AXIS <i>c</i> (001)	a b c		$[\frac{1}{2}\mathbf{d}, \frac{3}{4}\mathbf{d}]$ $[\pm s\mathbf{d}, (\pm s + \frac{1}{2})\mathbf{d}]$	<i>p11b</i> <i>p1</i>	L05 L01
UNIQUE AXIS <i>b</i> (<i>n0m</i>)	b <i>nc - ma</i> <i>pc + qa</i>				
UNIQUE AXIS <i>c</i> (<i>mn0</i>)	c <i>na - mb</i> <i>pa + qb</i> <i>n</i> odd <i>m</i> even <i>p</i> even <i>q</i> odd <i>n</i> even <i>m</i> odd <i>p</i> odd <i>q</i> even <i>n</i> even <i>m</i> odd <i>p</i> odd <i>q</i> odd <i>n</i> odd <i>m</i> odd <i>p</i> even <i>q</i> odd <i>n</i> odd <i>m</i> odd <i>p</i> odd <i>q</i> even <i>n</i> odd <i>m</i> even <i>p</i> odd <i>q</i> odd	<i>Ib11</i> <i>Ic11</i> <i>Bn11</i> <i>Cn11</i> <i>Cc11</i> <i>Bb11</i>	$[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$ $[s\mathbf{d}, (s + \frac{1}{2})\mathbf{d}]$	<i>pb11</i> <i>pb11</i> (a' /4) <i>pb11</i> (a' /4) $\widehat{p}1$ $\widehat{p}1$ <i>pb11</i>	L12 L12 L12 L01 L01 L12

Geometric class $C_{2h} - 112/m$

No. 10 $P2/m$

C_{2h}^1

$$\mathcal{G} = P12/m1 \quad \text{UNIQUE AXIS } b$$

$$\mathcal{G} = P112/m \quad \text{UNIQUE AXIS } c$$

Orientation orbit (<i>hkl</i>)	Conventional basis of the scanning group a' b' d	Scanning group \mathcal{H}	Linear orbit sd	Sectional layer group $\mathcal{L}(\mathbf{sd})$	
UNIQUE AXIS <i>b</i> (010)	c a b	<i>P112/m</i>	$0\mathbf{d}, \frac{1}{2}\mathbf{d}$	<i>p112/m</i>	L06
UNIQUE AXIS <i>c</i> (001)	a b c		$[s\mathbf{d}, -s\mathbf{d}]$	<i>p112</i>	L03
UNIQUE AXIS <i>b</i> (<i>n0m</i>)	b <i>nc - ma</i> <i>pc + qa</i>	<i>P2/m11</i>	$0\mathbf{d}, \frac{1}{2}\mathbf{d}$	<i>p2/m11</i>	L14
UNIQUE AXIS <i>c</i> (<i>mn0</i>)	c <i>na - mb</i> <i>pa + qb</i>		$[s\mathbf{d}, -s\mathbf{d}]$	<i>pm11</i>	L11