

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

6. SCANNING TABLES

Monoclinic

 No. 13  $P2/c$ 

$$\mathcal{G} = P12/c1 \quad \text{UNIQUE AXIS } b$$

 $C_{2h}^4$ 

CELL CHOICE 1

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

| Orientation orbit<br>( <i>hkl</i> )             | Conventional basis<br>of the scanning group<br><b>a'</b> <b>b'</b> <b>d</b>  | Scanning<br>group<br>$\mathcal{H}$ | Linear<br>orbit<br><b>sd</b>  | Sectional<br>layer group<br>$\mathcal{L}(\mathbf{sd})$ |                   |
|---|--|------------------------------------|---|--|-------------------|
| UNIQUE AXIS <i>b</i><br>(010)                   | <b>c</b> <b>a</b> <b>b</b>   | $P112/a$                           | $0\mathbf{d}, \frac{1}{2}\mathbf{d}$  | $p112/a$   | L07               |
| UNIQUE AXIS <i>c</i><br>(001)                   | <b>a</b> <b>b</b> <b>c</b>   |                                    | $[\mathbf{sd}, -\mathbf{sd}]$   | $p112 (\mathbf{a}/4)$                                  | L03               |
| UNIQUE AXIS <i>b</i><br>( <i>n</i> 0 <i>m</i> ) | <b>b</b> $n\mathbf{c} - m\mathbf{a}$ $p\mathbf{c} + q\mathbf{a}$   |                                    |   |  |                   |
| UNIQUE AXIS <i>c</i><br>( <i>mn</i> 0)          | <b>c</b> $n\mathbf{a} - m\mathbf{b}$ $p\mathbf{a} + q\mathbf{b}$<br><i>n</i> odd <i>m</i> even<br><i>q</i> odd<br><i>m</i> odd<br><i>q</i> odd | $P2/b11$                           | $0\mathbf{d}, \frac{1}{2}\mathbf{d}$<br>$[\mathbf{sd}, -\mathbf{sd}]$   | $p2/b11$<br>$pb11$                                     | L16<br>L12        |
|   |  | $P2/n11$                           | $[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$<br>$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$<br>$[\pm\mathbf{sd}, (\pm s + \frac{1}{2})\mathbf{d}]$ | $p\bar{1}$<br>$p211 (\mathbf{b}'/4)$<br>$p1$           | L02<br>L08<br>L01 |
|   | <i>m</i> odd<br><i>p</i> odd <i>q</i> even   | $P2/c11$                           | $[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$<br>$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$<br>$[\pm\mathbf{sd}, (\pm s + \frac{1}{2})\mathbf{d}]$ | $p\bar{1}$<br>$p211$<br>$p1$                           | L02<br>L08<br>L01 |

 No. 13  $P2/c$ 

$$\mathcal{G} = P12/n1 \quad \text{UNIQUE AXIS } b$$

 $C_{2h}^4$ 

CELL CHOICE 2

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

| Orientation orbit<br>( <i>hkl</i> )             | Conventional basis<br>of the scanning group<br><b>a'</b> <b>b'</b> <b>d</b>   | Scanning<br>group<br>$\mathcal{H}$ | Linear<br>orbit<br><b>sd</b>  | Sectional<br>layer group<br>$\mathcal{L}(\mathbf{sd})$ |                   |
|---|---|------------------------------------|---|--|-------------------|
| UNIQUE AXIS <i>b</i><br>(010)                   | <b>c</b> <b>a</b> <b>b</b>  | $P112/n$                           | $0\mathbf{d}, \frac{1}{2}\mathbf{d}$  | $p112/n$   | L07               |
| UNIQUE AXIS <i>c</i><br>(001)                   | <b>a</b> <b>b</b> <b>c</b>  |                                    | $[\mathbf{sd}, -\mathbf{sd}]$   | $p112 [(\mathbf{a} + \mathbf{b})/4]$                   | L03               |
| UNIQUE AXIS <i>b</i><br>( <i>n</i> 0 <i>m</i> ) | <b>b</b> $n\mathbf{c} - m\mathbf{a}$ $p\mathbf{c} + q\mathbf{a}$  |                                    |   |  |                   |
| UNIQUE AXIS <i>c</i><br>( <i>mn</i> 0)          | <b>c</b> $n\mathbf{a} - m\mathbf{b}$ $p\mathbf{a} + q\mathbf{b}$<br><i>n</i> odd <i>m</i> even<br><i>p</i> even <i>q</i> odd<br>or<br><i>n</i> even <i>m</i> odd<br><i>p</i> odd <i>q</i> even<br><i>p</i> odd <i>q</i> odd | $P2/n11$                           | $[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$<br>$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$<br>$[\pm\mathbf{sd}, (\pm s + \frac{1}{2})\mathbf{d}]$ | $p\bar{1}$<br>$p211 (\mathbf{b}'/4)$<br>$p1$           | L02<br>L08<br>L01 |
|   |   | $P2/c11$                           | $[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$<br>$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$<br>$[\pm\mathbf{sd}, (\pm s + \frac{1}{2})\mathbf{d}]$ | $p\bar{1}$<br>$p211$<br>$p1$                           | L02<br>L08<br>L01 |
|   | <i>n</i> odd <i>m</i> odd   | $P2/b11$                           | $0\mathbf{d}, \frac{1}{2}\mathbf{d}$<br>$[\mathbf{sd}, -\mathbf{sd}]$   | $p2/b11$<br>$pb11$                                     | L16<br>L12        |

No. 13  $P2/c$

$C_{2h}^4$

$$\mathcal{G} = P12/a1 \text{ UNIQUE AXIS } b$$

CELL CHOICE 3

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

| Orientation orbit<br>( <i>hkl</i> ) | Conventional basis<br>of the scanning group<br><b>a'</b> <b>b'</b> <b>d</b> | Scanning<br>group<br>$\mathcal{H}$ | Linear<br>orbit<br><b>sd</b>  | Sectional<br>layer group<br>$\mathcal{L}(\mathbf{sd})$ |                  |        |     |
|-------------------------------------|---|------------------------------------|---|--|------------------|--------|-----|
| UNIQUE AXIS <i>b</i><br>(010)       | <b>c</b> <b>a</b> <b>b</b>  | $P112/b$                           | $0\mathbf{d}, \frac{1}{2}\mathbf{d}$  | $p112/b$   | L07              |        |     |
| UNIQUE AXIS <i>c</i><br>(001)       | <b>a</b> <b>b</b> <b>c</b>  |                                    | $[\mathbf{sd}, -\mathbf{sd}]$   | $p112 (\mathbf{b}/4)$                                  | L03              |        |     |
| UNIQUE AXIS <i>b</i><br>( $n0m$ )   | <b>b</b> $nc - ma$ $pc + qa$  | $P2/c11$                           | $[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$<br>$[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$<br>$[\pm\mathbf{sd}, (\pm s + \frac{1}{2})\mathbf{d}]$ | $p\bar{1}$   | L02              |        |     |
| UNIQUE AXIS <i>c</i><br>( $mn0$ )   | <b>c</b> $na - mb$ $pa + qb$  |                                    |   |  | $n$ odd          | $p211$ | L08 |
|                                     |   |                                    |   |  | $p$ even $q$ odd | $p1$   | L01 |
|                                     | $n$ even $m$ odd  | $P2/b11$                           | $0\mathbf{d}, \frac{1}{2}\mathbf{d}$  | $p2/b11$   | L16              |        |     |
|                                     | $p$ odd   |                                    | $[\mathbf{sd}, -\mathbf{sd}]$   | $pb11$   | L12              |        |     |
|                                     | $n$ odd   | $P2/n11$                           | $[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$  | $p\bar{1}$   | L02              |        |     |
|                                     | $p$ odd   |                                    | $[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$  | $p211 (\mathbf{b}'/4)$                                 | L08              |        |     |
|                                     |   |                                    | $[\pm\mathbf{sd}, (\pm s + \frac{1}{2})\mathbf{d}]$   | $p1$   | L01              |        |     |

No. 14  $P2_1/c$

$C_{2h}^5$

$$\mathcal{G} = P12_1/c1 \text{ UNIQUE AXIS } b$$

CELL CHOICE 1

$$\mathcal{G} = P112_1/a \text{ UNIQUE AXIS } c$$

| Orientation orbit<br>( <i>hkl</i> ) | Conventional basis<br>of the scanning group<br><b>a'</b> <b>b'</b> <b>d</b> | Scanning<br>group<br>$\mathcal{H}$ | Linear<br>orbit<br><b>sd</b>                        | Sectional<br>layer group<br>$\mathcal{L}(\mathbf{sd})$ |         |
|-------------------------------------|---|------------------------------------|---|--|---------|
| UNIQUE AXIS <i>b</i><br>(010)       | <b>c</b> <b>a</b> <b>b</b>  | $P112_1/a$                         | $[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$              | $p\bar{1}$   | L02     |
| UNIQUE AXIS <i>c</i><br>(001)       | <b>a</b> <b>b</b> <b>c</b>  |                                    | $[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$    | $p11a$   | L05     |
|                                     |   |                                    | $[\pm\mathbf{sd}, (\pm s + \frac{1}{2})\mathbf{d}]$ | $p1$   | L01     |
| UNIQUE AXIS <i>b</i><br>( $n0m$ )   | <b>b</b> $nc - ma$ $pc + qa$  | $P2_1/b11$                         | $0\mathbf{d}, \frac{1}{2}\mathbf{d}$                | $p2_1/b11$   | L17     |
| UNIQUE AXIS <i>c</i><br>( $mn0$ )   | <b>c</b> $na - mb$ $pa + qb$  |                                    |   |  | $n$ odd |
|                                     |   | $P2_1/n11$                         | $[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$              | $p\bar{1}$   | L02     |
|                                     |   |                                    | $[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$    | $p2_111 (\mathbf{b}'/4)$                               | L09     |
|                                     |   |                                    | $[\pm\mathbf{sd}, (\pm s + \frac{1}{2})\mathbf{d}]$ | $p1$   | L01     |
|                                     | $m$ odd   | $P2_1/c11$                         | $[0\mathbf{d}, \frac{1}{2}\mathbf{d}]$              | $p\bar{1}$   | L02     |
|                                     | $p$ odd $q$ even  |                                    | $[\frac{1}{4}\mathbf{d}, \frac{3}{4}\mathbf{d}]$    | $p2_111$   | L09     |
|                                     |   |                                    | $[\pm\mathbf{sd}, (\pm s + \frac{1}{2})\mathbf{d}]$ | $p1$   | L01     |