230 Space Groups

No. 1 C_1^1 $P1$ [triclinic] tag = "C1^1, C1"

* generator : $\{1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$

No. 2 C_i^1 $P-1$ [triclinic] tag = "`Ci^1, Ci`"

* generator : $\{-1|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$

$[\ \{-1|0\}\ ] = \quad \{-1|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{-1|0\}$

No. 3 C_2^1 $P2$ (b-axis setting) [monoclinic] tag = "`C2^1, C2`"

* generator : $\{2_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{010}|0\}$] = $\{2_{010}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{010}|0\}$

No. 4 C_2^2 $P2_1$ (b-axis setting) [monoclinic] tag = "C2^2, C2"

* generator : $\{2_{010}|0\frac{1}{2}0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{010}|0\frac{1}{2}0\}$] = $\{2_{010}|0\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{010}|0\frac{1}{2}0\}$

No. 5 C_2^3 $C2$ (b-axis setting) [monoclinic] tag = "C2^3, C2"

* generator : $\{2_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{010}|0\}$] = $\{2_{010}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad 0\right)$

① $\{1|0\}$ ② $\{2_{010}|0\}$

No. 6 C_s^1 Pm (b-axis setting) [monoclinic] tag = "`Cs^1, Cs`"

* generator : $\{\mathrm{m}_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{\mathrm{m}_{010}|0\}$] = $\{\mathrm{m}_{010}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{\mathrm{m}_{010}|0\}$

No. 7 C_s^2 Pc (b-axis setting) [monoclinic] tag = "`Cs^2, Cs`"

* generator : $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{\mathrm{m}_{010}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

No. 8 C_s^3 Cm (b-axis setting) [monoclinic] tag = "`Cs^3, Cs`"

* generator : $\{\mathrm{m}_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{\mathrm{m}_{010}|0\}$] = $\{\mathrm{m}_{010}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad 0\right)$

① $\{1|0\}$ ② $\{\mathrm{m}_{010}|0\}$

No. 9 C_s^4 Cc (b-axis setting) [monoclinic] tag = "`Cs^4, Cs`"

* generator : $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{\mathrm{m}_{010}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad 0\right)$

① $\{1|0\}$ ② $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

No. 10 C_{2h}^{1} $P2/m$ (b-axis setting) [monoclinic] tag = "`C2h^1, C2h`"

* generator : $\{2_{010}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{010}|0\}$] = $\{2_{010}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{010}|0\}$] = $\{m_{010}|0\}$

* symmetry operation $+\begin{pmatrix} 0 & 0 & 0 \end{pmatrix}$

① $\{1|0\}$ ② $\{2_{010}|0\}$ ③ $\{-1|0\}$ ④ $\{m_{010}|0\}$

No. 11 C_{2h}^2 $P2_1/m$ (b-axis setting) [monoclinic] tag = "`C2h^2, C2h`"

* generator : $\{2_{010}|0\frac{1}{2}0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{010}|0\frac{1}{2}0\}$] = $\{2_{010}|0\frac{1}{2}0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{010}|0\frac{1}{2}0\}$] = $\{\mathrm{m}_{010}|0\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{010}|0\frac{1}{2}0\}$ ③ $\{-1|0\}$ ④ $\{\mathrm{m}_{010}|0\frac{1}{2}0\}$

No. 12 C_{2h}^3 $C2/m$ (b-axis setting) [monoclinic] tag = "`C2h^3, C2h`"

* generator : $\{2_{010}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{010}|0\}$] = $\{2_{010}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{010}|0\}$] = $\{\mathrm{m}_{010}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad 0\right)$

① $\{1|0\}$ ② $\{2_{010}|0\}$ ③ $\{-1|0\}$ ④ $\{\mathrm{m}_{010}|0\}$

No. 13 C_{2h}^4 $P2/c$ (b-axis setting) [monoclinic] tag = "`C2h^4, C2h`"

* generator : $\{2_{010}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{010}|00\frac{1}{2}\}$] = $\{2_{010}|00\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{010}|00\frac{1}{2}\}$] = $\{m_{010}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{010}|00\frac{1}{2}\}$ ③ $\{-1|0\}$ ④ $\{m_{010}|00\frac{1}{2}\}$

No. 14 C_{2h}^5 $P2_1/c$ (b-axis setting) [monoclinic] tag = "`C2h^5, C2h`"

* generator : $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$] = $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$ ③ $\{-1|0\}$ ④ $\{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$

No. 15 C_{2h}^{6} $C2/c$ (b-axis setting) [monoclinic] tag = "`C2h^6, C2h`"

* generator : $\{2_{010}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{010}|00\frac{1}{2}\}$] = $\{2_{010}|00\frac{1}{2}\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{\mathrm{m}_{010}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad 0\right)$

① $\{1|0\}$ ② $\{2_{010}|00\frac{1}{2}\}$ ③ $\{-1|0\}$ ④ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

No. 16 D_2^1 $P222$ [orthorhombic] tag = "`D2^1, D2`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \{1|0\}$

$[\ \{2_{001}|0\}\ ] = \{2_{001}|0\}$

$[\ \{2_{010}|0\}\ ] = \{2_{010}|0\}$

$[\ \{2_{100}|0\}\ ] = \{2_{100}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{010}|0\}$ ④ $\{2_{100}|0\}$

No. 17 D_2^2 $P222_1$ [orthorhombic] tag = "`D2^2, D2`"

* generator : $\{2_{001}|00\frac{1}{2}\}$, $\{2_{010}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$
[$\{2_{010}|00\frac{1}{2}\}$] = $\{2_{010}|00\frac{1}{2}\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{2_{010}|00\frac{1}{2}\}$ ④ $\{2_{100}|0\}$

No. 18 D_2^3 $P2_12_12$ [orthorhombic] tag = "`D2^3, D2`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$

[$\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$ ④ $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$

No. 19 D_2^4 $P2_12_12_1$ [orthorhombic] tag = "`D2^4, D2`"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$

$[\ \{2_{001}|\frac{1}{2}0\frac{1}{2}\}\ ] = \quad \{2_{001}|\frac{1}{2}0\frac{1}{2}\}$

$[\ \{2_{010}|0\frac{1}{2}\frac{1}{2}\}\ ] = \quad \{2_{010}|0\frac{1}{2}\frac{1}{2}\}$

$[\ \{2_{100}|\frac{1}{2}\frac{1}{2}0\}\ ] = \quad \{2_{100}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$ ③ $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$ ④ $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$

No. 20 D_2^5 $C222_1$ [orthorhombic] tag = "`D2^5, D2`"

* generator : $\{2_{001}|00\frac{1}{2}\}$, $\{2_{010}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$

$[\ \{2_{001}|00\frac{1}{2}\}\ ] = \quad \{2_{001}|00\frac{1}{2}\}$

$[\ \{2_{010}|00\frac{1}{2}\}\ ] = \quad \{2_{010}|00\frac{1}{2}\}$

$[\ \{2_{100}|0\}\ ] = \quad \{2_{100}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$, $+\begin{pmatrix}\frac{1}{2} & \frac{1}{2} & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{2_{010}|00\frac{1}{2}\}$ ④ $\{2_{100}|0\}$

No. 21 D_2^6 $C222$ [orthorhombic] tag = "`D2^6, D2`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|0\}\ ] = \quad \{2_{001}|0\}$
$[\ \{2_{010}|0\}\ ] = \quad \{2_{010}|0\}$
$[\ \{2_{100}|0\}\ ] = \quad \{2_{100}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad 0\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{010}|0\}$ ④ $\{2_{100}|0\}$

No. 22 D_2^7 $F222$ [orthorhombic] tag = "`D2^7, D2`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|0\}\ ] = \quad \{2_{001}|0\}$
$[\ \{2_{010}|0\}\ ] = \quad \{2_{010}|0\}$
$[\ \{2_{100}|0\}\ ] = \quad \{2_{100}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(0 \quad \frac{1}{2} \quad \frac{1}{2}\right)$, $+\left(\frac{1}{2} \quad 0 \quad \frac{1}{2}\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad 0\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{010}|0\}$ ④ $\{2_{100}|0\}$

No. 23 D_2^8 $I222$ [orthorhombic] tag = "`D2^8, D2`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|0\}\ ] = \quad \{2_{001}|0\}$
$[\ \{2_{010}|0\}\ ] = \quad \{2_{010}|0\}$
$[\ \{2_{100}|0\}\ ] = \quad \{2_{100}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{010}|0\}$ ④ $\{2_{100}|0\}$

No. 24 D_2^9 $I2_12_12_1$ [orthorhombic] tag = "`D2^9, D2`"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|\frac{1}{2}0\frac{1}{2}\}\ ] = \quad \{2_{001}|\frac{1}{2}0\frac{1}{2}\}$
$[\ \{2_{010}|0\frac{1}{2}\frac{1}{2}\}\ ] = \quad \{2_{010}|0\frac{1}{2}\frac{1}{2}\}$
$[\ \{2_{100}|\frac{1}{2}\frac{1}{2}0\}\ ] = \quad \{2_{100}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$ ③ $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$ ④ $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$

No. 25 C_{2v}^{1} $Pmm2$ [orthorhombic] tag = "C2v^1, C2v"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{\mathrm{m}_{010}|0\}$] = $\{\mathrm{m}_{010}|0\}$
[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|0\}$ ④ $\{\mathrm{m}_{100}|0\}$

No. 26 C_{2v}^2 $Pmc2_1$ [orthorhombic] tag = "`C2v^2, C2v`"

* generator : $\{2_{001}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$
[$\{\mathrm{m}_{010}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|00\frac{1}{2}\}$
[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ④ $\{\mathrm{m}_{100}|0\}$

No. 27 C_{2v}^3 $Pcc2$ [orthorhombic] tag = "`C2v^3, C2v`"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{\mathrm{m}_{010}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ④ $\{\mathrm{m}_{100}|00\frac{1}{2}\}$

No. 28 C_{2v}^4 $Pma2$ [orthorhombic] tag = "`C2v^4, C2v`"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}00\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{\mathrm{m}_{010}|\frac{1}{2}00\}$] = $\{\mathrm{m}_{010}|\frac{1}{2}00\}$

[$\{\mathrm{m}_{100}|\frac{1}{2}00\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}00\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|\frac{1}{2}00\}$ ④ $\{\mathrm{m}_{100}|\frac{1}{2}00\}$

No. 29 C_{2v}^{5} $Pca2_1$ [orthorhombic] tag = "C2v^5, C2v"

* generator : $\{2_{001}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|\frac{1}{2}00\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$
[$\{\mathrm{m}_{010}|\frac{1}{2}00\}$] = $\{\mathrm{m}_{010}|\frac{1}{2}00\}$
[$\{\mathrm{m}_{100}|\frac{1}{2}0\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}0\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{\mathrm{m}_{010}|\frac{1}{2}00\}$ ④ $\{\mathrm{m}_{100}|\frac{1}{2}0\frac{1}{2}\}$

No. 30 C_{2v}^{6} $Pnc2$ [orthorhombic] tag = "C2v^6, C2v"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$

[$\{\mathrm{m}_{100}|0\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|0\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$ ④ $\{\mathrm{m}_{100}|0\frac{1}{2}\frac{1}{2}\}$

No. 31 C_{2v}^{7} $Pmn2_1$ [orthorhombic] tag = "`C2v^7, C2v`"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{\mathrm{m}_{010}|\frac{1}{2}0\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$

[$\{\mathrm{m}_{010}|\frac{1}{2}0\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|\frac{1}{2}0\frac{1}{2}\}$

[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$ ③ $\{\mathrm{m}_{010}|\frac{1}{2}0\frac{1}{2}\}$ ④ $\{\mathrm{m}_{100}|0\}$

No. 32 C_{2v}^{8} $Pba2$ [orthorhombic] tag = "`C2v^8, C2v`"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$
[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$ ④ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$

No. 33 C_{2v}^{9} $Pna2_1$ [orthorhombic] tag = "`C2v^9, C2v`"

* generator : $\{2_{001}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$

[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$ ④ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

No. 34 C_{2v}^{10} $Pnn2$ [orthorhombic] tag = "C2v^10, C2v"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ④ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

No. 35 C_{2v}^{11} $Cmm2$ [orthorhombic] tag = "C2v^11, C2v"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{\mathrm{m}_{010}|0\}$] = $\{\mathrm{m}_{010}|0\}$
[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad 0\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|0\}$ ④ $\{\mathrm{m}_{100}|0\}$

No. 36 C_{2v}^{12} $Cmc2_1$ [orthorhombic] tag = "C2v^12, C2v"

* generator : $\{2_{001}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$
[$\{\mathrm{m}_{010}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|00\frac{1}{2}\}$
[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$, $+\begin{pmatrix}\frac{1}{2} & \frac{1}{2} & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ④ $\{\mathrm{m}_{100}|0\}$

No. 37 C_{2v}^{13} $Ccc2$ [orthorhombic] tag = "`C2v^13, C2v`"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{\mathrm{m}_{010}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad 0\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ④ $\{\mathrm{m}_{100}|00\frac{1}{2}\}$

No. 38 C_{2v}^{14} $Amm2$ [orthorhombic] tag = "`C2v^14, C2v`"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{\mathrm{m}_{010}|0\}$] = $\{\mathrm{m}_{010}|0\}$
[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(0 \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|0\}$ ④ $\{\mathrm{m}_{100}|0\}$

No. 39 C_{2v}^{15} $Aem2$ [orthorhombic] tag = "`C2v^15, C2v`"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|0\frac{1}{2}0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{\mathrm{m}_{010}|0\frac{1}{2}0\}$] = $\{\mathrm{m}_{010}|0\frac{1}{2}0\}$

[$\{\mathrm{m}_{100}|0\frac{1}{2}0\}$] = $\{\mathrm{m}_{100}|0\frac{1}{2}0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(0 \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|0\frac{1}{2}0\}$ ④ $\{\mathrm{m}_{100}|0\frac{1}{2}0\}$

No. 40 C_{2v}^{16} $Ama2$ [orthorhombic] tag = "C2v^16, C2v"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}00\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{\mathrm{m}_{010}|\frac{1}{2}00\}$] = $\{\mathrm{m}_{010}|\frac{1}{2}00\}$

[$\{\mathrm{m}_{100}|\frac{1}{2}00\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}00\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(0 \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|\frac{1}{2}00\}$ ④ $\{\mathrm{m}_{100}|\frac{1}{2}00\}$

No. 41 C_{2v}^{17} $Aea2$ [orthorhombic] tag = "C2v^17, C2v"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$

[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(0 \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$ ④ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$

No. 42 C_{2v}^{18} $Fmm2$ [orthorhombic] tag = "C2v^18, C2v"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{\mathrm{m}_{010}|0\}$] = $\{\mathrm{m}_{010}|0\}$
[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(0 \quad \frac{1}{2} \quad \frac{1}{2}\right)$, $+\left(\frac{1}{2} \quad 0 \quad \frac{1}{2}\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad 0\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|0\}$ ④ $\{\mathrm{m}_{100}|0\}$

No. 43 C_{2v}^{19} $Fdd2$ [orthorhombic] tag = "C2v^19, C2v"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{\mathrm{m}_{010}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$] = $\{\mathrm{m}_{010}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$

[$\{\mathrm{m}_{100}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$] = $\{\mathrm{m}_{100}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$, $+\begin{pmatrix}0 & \frac{1}{2} & \frac{1}{2}\end{pmatrix}$, $+\begin{pmatrix}\frac{1}{2} & 0 & \frac{1}{2}\end{pmatrix}$, $+\begin{pmatrix}\frac{1}{2} & \frac{1}{2} & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$ ④ $\{\mathrm{m}_{100}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$

No. 44 C_{2v}^{20} $Imm2$ [orthorhombic] tag = "`C2v^20, C2v`"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{\mathrm{m}_{010}|0\}$] = $\{\mathrm{m}_{010}|0\}$
[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|0\}$ ④ $\{\mathrm{m}_{100}|0\}$

No. 45 C_{2v}^{21} $Iba2$ [orthorhombic] tag = "`C2v^21, C2v`"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$

[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$, $+\begin{pmatrix}\frac{1}{2} & \frac{1}{2} & \frac{1}{2}\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$ ④ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$

No. 46 C_{2v}^{22} $Ima2$ [orthorhombic] tag = "C2v^22, C2v"

* generator : $\{2_{001}|0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}00\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{\mathrm{m}_{010}|\frac{1}{2}00\}$] = $\{\mathrm{m}_{010}|\frac{1}{2}00\}$
[$\{\mathrm{m}_{100}|\frac{1}{2}00\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}00\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{\mathrm{m}_{010}|\frac{1}{2}00\}$ ④ $\{\mathrm{m}_{100}|\frac{1}{2}00\}$

No. 47 D_{2h}^{1} $Pmmm$ [orthorhombic] tag = "`D2h^1, D2h`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{010}|0\}$] = $\{2_{010}|0\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{010}|0\}$] = $\{m_{010}|0\}$
[$\{m_{100}|0\}$] = $\{m_{100}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{010}|0\}$ ④ $\{2_{100}|0\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|0\}$ ⑦ $\{m_{010}|0\}$ ⑧ $\{m_{100}|0\}$

No. 48 D_{2h}^{2} $Pnnn$ [orthorhombic] tag = "`D2h^2, D2h`"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|\frac{1}{2}\frac{1}{2}0\}\ ] = \quad \{2_{001}|\frac{1}{2}\frac{1}{2}0\}$
$[\ \{2_{010}|\frac{1}{2}0\frac{1}{2}\}\ ] = \quad \{2_{010}|\frac{1}{2}0\frac{1}{2}\}$
$[\ \{2_{100}|0\frac{1}{2}\frac{1}{2}\}\ ] = \quad \{2_{100}|0\frac{1}{2}\frac{1}{2}\}$
$[\ \{-1|0\}\ ] = \quad \{-1|0\}$
$[\ \{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}\ ] = \quad \{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$
$[\ \{\mathrm{m}_{010}|\frac{1}{2}0\frac{1}{2}\}\ ] = \quad \{\mathrm{m}_{010}|\frac{1}{2}0\frac{1}{2}\}$
$[\ \{\mathrm{m}_{100}|0\frac{1}{2}\frac{1}{2}\}\ ] = \quad \{\mathrm{m}_{100}|0\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$ ③ $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$ ④ $\{2_{100}|0\frac{1}{2}\frac{1}{2}\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$ ⑦ $\{\mathrm{m}_{010}|\frac{1}{2}0\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{100}|0\frac{1}{2}\frac{1}{2}\}$

No. 49 D_{2h}^{3} $Pccm$ [orthorhombic] tag = "`D2h^3, D2h`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{010}|00\frac{1}{2}\}$] = $\{2_{010}|00\frac{1}{2}\}$
[$\{2_{100}|00\frac{1}{2}\}$] = $\{2_{100}|00\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{010}|00\frac{1}{2}\}$] = $\{m_{010}|00\frac{1}{2}\}$
[$\{m_{100}|00\frac{1}{2}\}$] = $\{m_{100}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{010}|00\frac{1}{2}\}$ ④ $\{2_{100}|00\frac{1}{2}\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|0\}$ ⑦ $\{m_{010}|00\frac{1}{2}\}$ ⑧ $\{m_{100}|00\frac{1}{2}\}$

No. 50 D_{2h}^4 *Pban* [orthorhombic] tag = "`D2h^4, D2h`"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|\frac{1}{2}00\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{010}|\frac{1}{2}00\}$] = $\{2_{010}|\frac{1}{2}00\}$
[$\{2_{100}|0\frac{1}{2}0\}$] = $\{2_{100}|0\frac{1}{2}0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{\mathrm{m}_{010}|\frac{1}{2}00\}$] = $\{\mathrm{m}_{010}|\frac{1}{2}00\}$
[$\{\mathrm{m}_{100}|0\frac{1}{2}0\}$] = $\{\mathrm{m}_{100}|0\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$ ③ $\{2_{010}|\frac{1}{2}00\}$ ④ $\{2_{100}|0\frac{1}{2}0\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$ ⑦ $\{\mathrm{m}_{010}|\frac{1}{2}00\}$ ⑧ $\{\mathrm{m}_{100}|0\frac{1}{2}0\}$

No. 51 D_{2h}^{5} $Pmma$ [orthorhombic] tag = "`D2h^5, D2h`"

* generator : $\{2_{001}|\frac{1}{2}00\}$, $\{2_{010}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}00\}$] = $\{2_{001}|\frac{1}{2}00\}$
[$\{2_{010}|0\}$] = $\{2_{010}|0\}$
[$\{2_{100}|\frac{1}{2}00\}$] = $\{2_{100}|\frac{1}{2}00\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|\frac{1}{2}00\}$] = $\{m_{001}|\frac{1}{2}00\}$
[$\{m_{010}|0\}$] = $\{m_{010}|0\}$
[$\{m_{100}|\frac{1}{2}00\}$] = $\{m_{100}|\frac{1}{2}00\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}00\}$ ③ $\{2_{010}|0\}$ ④ $\{2_{100}|\frac{1}{2}00\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|\frac{1}{2}00\}$ ⑦ $\{m_{010}|0\}$ ⑧ $\{m_{100}|\frac{1}{2}00\}$

No. 52 D_{2h}^{6} $Pnna$ [orthorhombic] tag = "`D2h^6, D2h`"

* generator : $\{2_{001}|\frac{1}{2}00\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}00\}$] = $\{2_{001}|\frac{1}{2}00\}$
[$\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{2_{100}|0\frac{1}{2}\frac{1}{2}\}$] = $\{2_{100}|0\frac{1}{2}\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}00\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}00\}$
[$\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{\mathrm{m}_{100}|0\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|0\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}00\}$ ③ $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ④ $\{2_{100}|0\frac{1}{2}\frac{1}{2}\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{2}00\}$ ⑦ $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{100}|0\frac{1}{2}\frac{1}{2}\}$

No. 53 D_{2h}^{7} $Pmna$ [orthorhombic] tag = "`D2h^7, D2h`"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$
[$\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$
[$\{\mathrm{m}_{010}|\frac{1}{2}0\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|\frac{1}{2}0\frac{1}{2}\}$
[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$ ③ $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$ ④ $\{2_{100}|0\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$ ⑦ $\{\mathrm{m}_{010}|\frac{1}{2}0\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{100}|0\}$

No. 54 D_{2h}^{8} $Pcca$ [orthorhombic] tag = "`D2h^8, D2h`"

* generator : $\{2_{001}|\frac{1}{2}00\}$, $\{2_{010}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}00\}$] = $\{2_{001}|\frac{1}{2}00\}$
[$\{2_{010}|00\frac{1}{2}\}$] = $\{2_{010}|00\frac{1}{2}\}$
[$\{2_{100}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{100}|\frac{1}{2}0\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|\frac{1}{2}00\}$] = $\{m_{001}|\frac{1}{2}00\}$
[$\{m_{010}|00\frac{1}{2}\}$] = $\{m_{010}|00\frac{1}{2}\}$
[$\{m_{100}|\frac{1}{2}0\frac{1}{2}\}$] = $\{m_{100}|\frac{1}{2}0\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}00\}$ ③ $\{2_{010}|00\frac{1}{2}\}$ ④ $\{2_{100}|\frac{1}{2}0\frac{1}{2}\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|\frac{1}{2}00\}$ ⑦ $\{m_{010}|00\frac{1}{2}\}$ ⑧ $\{m_{100}|\frac{1}{2}0\frac{1}{2}\}$

No. 55 D_{2h}^{9} $Pbam$ [orthorhombic] tag = "`D2h^9, D2h`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{010}|\frac{1}{2}\frac{1}{2}0\}$] = $\{m_{010}|\frac{1}{2}\frac{1}{2}0\}$
[$\{m_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{m_{100}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$ ④ $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|0\}$ ⑦ $\{m_{010}|\frac{1}{2}\frac{1}{2}0\}$ ⑧ $\{m_{100}|\frac{1}{2}\frac{1}{2}0\}$

No. 56 D_{2h}^{10} $Pccn$ [orthorhombic] tag = "D2h^10, D2h"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|\frac{1}{2}\frac{1}{2}0\}\ ] = \quad \{2_{001}|\frac{1}{2}\frac{1}{2}0\}$
$[\ \{2_{010}|0\frac{1}{2}\frac{1}{2}\}\ ] = \quad \{2_{010}|0\frac{1}{2}\frac{1}{2}\}$
$[\ \{2_{100}|\frac{1}{2}0\frac{1}{2}\}\ ] = \quad \{2_{100}|\frac{1}{2}0\frac{1}{2}\}$
$[\ \{-1|0\}\ ] = \quad \{-1|0\}$
$[\ \{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}\ ] = \quad \{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$
$[\ \{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}\ ] = \quad \{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$
$[\ \{\mathrm{m}_{100}|\frac{1}{2}0\frac{1}{2}\}\ ] = \quad \{\mathrm{m}_{100}|\frac{1}{2}0\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$ ③ $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$ ④ $\{2_{100}|\frac{1}{2}0\frac{1}{2}\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$ ⑦ $\{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{100}|\frac{1}{2}0\frac{1}{2}\}$

No. 57 D_{2h}^{11} *Pbcm* [orthorhombic] tag = "`D2h^11, D2h`"

* generator : $\{2_{001}|00\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$
* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$
[$\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$] = $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$
[$\{2_{100}|0\frac{1}{2}0\}$] = $\{2_{100}|0\frac{1}{2}0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{001}|00\frac{1}{2}\}$
[$\{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$
[$\{\mathrm{m}_{100}|0\frac{1}{2}0\}$] = $\{\mathrm{m}_{100}|0\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$ ④ $\{2_{100}|0\frac{1}{2}0\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|00\frac{1}{2}\}$ ⑦ $\{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{100}|0\frac{1}{2}0\}$

No. 58 D_{2h}^{12} $Pnnm$ [orthorhombic] tag = "`D2h^12, D2h`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{m_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{m_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{m_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ④ $\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|0\}$ ⑦ $\{m_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑧ $\{m_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

No. 59 D_{2h}^{13} $Pmmn$ [orthorhombic] tag = "`D2h^13, D2h`"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|0\frac{1}{2}0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{010}|0\frac{1}{2}0\}$] = $\{2_{010}|0\frac{1}{2}0\}$
[$\{2_{100}|\frac{1}{2}00\}$] = $\{2_{100}|\frac{1}{2}00\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{\mathrm{m}_{010}|0\frac{1}{2}0\}$] = $\{\mathrm{m}_{010}|0\frac{1}{2}0\}$
[$\{\mathrm{m}_{100}|\frac{1}{2}00\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}00\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$ ③ $\{2_{010}|0\frac{1}{2}0\}$ ④ $\{2_{100}|\frac{1}{2}00\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$ ⑦ $\{\mathrm{m}_{010}|0\frac{1}{2}0\}$ ⑧ $\{\mathrm{m}_{100}|\frac{1}{2}00\}$

No. 60 D_{2h}^{14} *Pbcn* [orthorhombic] tag = "`D2h^14, D2h`"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{010}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}\ ] = \quad \{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
$[\ \{2_{010}|00\frac{1}{2}\}\ ] = \quad \{2_{010}|00\frac{1}{2}\}$
$[\ \{2_{100}|\frac{1}{2}\frac{1}{2}0\}\ ] = \quad \{2_{100}|\frac{1}{2}\frac{1}{2}0\}$
$[\ \{-1|0\}\ ] = \quad \{-1|0\}$
$[\ \{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}\ ] = \quad \{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
$[\ \{\mathrm{m}_{010}|00\frac{1}{2}\}\ ] = \quad \{\mathrm{m}_{010}|00\frac{1}{2}\}$
$[\ \{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}\ ] = \quad \{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ③ $\{2_{010}|00\frac{1}{2}\}$ ④ $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑦ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$

No. 61 D_{2h}^{15} *Pbca* [orthorhombic] tag = "`D2h^15, D2h`"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|\frac{1}{2}0\frac{1}{2}\}\ ] = \quad \{2_{001}|\frac{1}{2}0\frac{1}{2}\}$
$[\ \{2_{010}|0\frac{1}{2}\frac{1}{2}\}\ ] = \quad \{2_{010}|0\frac{1}{2}\frac{1}{2}\}$
$[\ \{2_{100}|\frac{1}{2}\frac{1}{2}0\}\ ] = \quad \{2_{100}|\frac{1}{2}\frac{1}{2}0\}$
$[\ \{-1|0\}\ ] = \quad \{-1|0\}$
$[\ \{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}\ ] = \quad \{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$
$[\ \{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}\ ] = \quad \{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$
$[\ \{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}\ ] = \quad \{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$ ③ $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$ ④ $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$ ⑦ $\{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$

No. 62 D_{2h}^{16} $Pnma$ [orthorhombic] tag = "`D2h^16, D2h`"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$
[$\{2_{010}|0\frac{1}{2}0\}$] = $\{2_{010}|0\frac{1}{2}0\}$
[$\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$
[$\{\mathrm{m}_{010}|0\frac{1}{2}0\}$] = $\{\mathrm{m}_{010}|0\frac{1}{2}0\}$
[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$ ③ $\{2_{010}|0\frac{1}{2}0\}$ ④ $\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$ ⑦ $\{\mathrm{m}_{010}|0\frac{1}{2}0\}$ ⑧ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

No. 63 D_{2h}^{17} $Cmcm$ [orthorhombic] tag = "`D2h^17, D2h`"

* generator : $\{2_{001}|00\frac{1}{2}\}$, $\{2_{010}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$
[$\{2_{010}|00\frac{1}{2}\}$] = $\{2_{010}|00\frac{1}{2}\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|00\frac{1}{2}\}$] = $\{m_{001}|00\frac{1}{2}\}$
[$\{m_{010}|00\frac{1}{2}\}$] = $\{m_{010}|00\frac{1}{2}\}$
[$\{m_{100}|0\}$] = $\{m_{100}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad 0\right)$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{2_{010}|00\frac{1}{2}\}$ ④ $\{2_{100}|0\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|00\frac{1}{2}\}$ ⑦ $\{m_{010}|00\frac{1}{2}\}$ ⑧ $\{m_{100}|0\}$

No. 64 D_{2h}^{18} $Cmce$ [orthorhombic] tag = "`D2h^18, D2h`"

* generator : $\{2_{001}|0\frac{1}{2}\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\frac{1}{2}\frac{1}{2}\}$] = $\{2_{001}|0\frac{1}{2}\frac{1}{2}\}$
[$\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$] = $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\frac{1}{2}\frac{1}{2}\}$] = $\{m_{001}|0\frac{1}{2}\frac{1}{2}\}$
[$\{m_{010}|0\frac{1}{2}\frac{1}{2}\}$] = $\{m_{010}|0\frac{1}{2}\frac{1}{2}\}$
[$\{m_{100}|0\}$] = $\{m_{100}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad 0\right)$

① $\{1|0\}$ ② $\{2_{001}|0\frac{1}{2}\frac{1}{2}\}$ ③ $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$ ④ $\{2_{100}|0\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|0\frac{1}{2}\frac{1}{2}\}$ ⑦ $\{m_{010}|0\frac{1}{2}\frac{1}{2}\}$ ⑧ $\{m_{100}|0\}$

No. 65 D_{2h}^{19} $Cmmm$ [orthorhombic] tag = "`D2h^19, D2h`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{010}|0\}$] = $\{2_{010}|0\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{010}|0\}$] = $\{m_{010}|0\}$
[$\{m_{100}|0\}$] = $\{m_{100}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad 0\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{010}|0\}$ ④ $\{2_{100}|0\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|0\}$ ⑦ $\{m_{010}|0\}$ ⑧ $\{m_{100}|0\}$

No. 66 D_{2h}^{20} $Cccm$ [orthorhombic] tag = "`D2h^20, D2h`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{010}|00\frac{1}{2}\}$] = $\{2_{010}|00\frac{1}{2}\}$
[$\{2_{100}|00\frac{1}{2}\}$] = $\{2_{100}|00\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{010}|00\frac{1}{2}\}$] = $\{m_{010}|00\frac{1}{2}\}$
[$\{m_{100}|00\frac{1}{2}\}$] = $\{m_{100}|00\frac{1}{2}\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad 0\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{010}|00\frac{1}{2}\}$ ④ $\{2_{100}|00\frac{1}{2}\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|0\}$ ⑦ $\{m_{010}|00\frac{1}{2}\}$ ⑧ $\{m_{100}|00\frac{1}{2}\}$

No. 67 D_{2h}^{21} $Cmme$ [orthorhombic] tag = "`D2h^21, D2h`"

* generator : $\{2_{001}|0\frac{1}{2}0\}$, $\{2_{010}|0\frac{1}{2}0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\frac{1}{2}0\}$] = $\{2_{001}|0\frac{1}{2}0\}$
[$\{2_{010}|0\frac{1}{2}0\}$] = $\{2_{010}|0\frac{1}{2}0\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\frac{1}{2}0\}$] = $\{m_{001}|0\frac{1}{2}0\}$
[$\{m_{010}|0\frac{1}{2}0\}$] = $\{m_{010}|0\frac{1}{2}0\}$
[$\{m_{100}|0\}$] = $\{m_{100}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad 0\right)$

① $\{1|0\}$ ② $\{2_{001}|0\frac{1}{2}0\}$ ③ $\{2_{010}|0\frac{1}{2}0\}$ ④ $\{2_{100}|0\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|0\frac{1}{2}0\}$ ⑦ $\{m_{010}|0\frac{1}{2}0\}$ ⑧ $\{m_{100}|0\}$

No. 68 D_{2h}^{22} $Ccce$ [orthorhombic] tag = "`D2h^22, D2h`"

* generator : $\{2_{001}|\frac{1}{2}00\}$, $\{2_{010}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}00\}$] = $\{2_{001}|\frac{1}{2}00\}$
[$\{2_{010}|00\frac{1}{2}\}$] = $\{2_{010}|00\frac{1}{2}\}$
[$\{2_{100}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{100}|\frac{1}{2}0\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}00\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}00\}$
[$\{\mathrm{m}_{010}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{010}|00\frac{1}{2}\}$
[$\{\mathrm{m}_{100}|\frac{1}{2}0\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}0\frac{1}{2}\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad 0\right)$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}00\}$ ③ $\{2_{010}|00\frac{1}{2}\}$ ④ $\{2_{100}|\frac{1}{2}0\frac{1}{2}\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{2}00\}$ ⑦ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{100}|\frac{1}{2}0\frac{1}{2}\}$

No. 69 D_{2h}^{23} $Fmmm$ [orthorhombic] tag = "`D2h^23, D2h`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{010}|0\}$] = $\{2_{010}|0\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{010}|0\}$] = $\{m_{010}|0\}$
[$\{m_{100}|0\}$] = $\{m_{100}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(0 \quad \frac{1}{2} \quad \frac{1}{2}\right)$, $+\left(\frac{1}{2} \quad 0 \quad \frac{1}{2}\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad 0\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{010}|0\}$ ④ $\{2_{100}|0\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|0\}$ ⑦ $\{m_{010}|0\}$ ⑧ $\{m_{100}|0\}$

No. 70 D_{2h}^{24} $Fddd$ [orthorhombic] tag = "`D2h^24, D2h`"

* generator : $\{2_{001}|\frac{3}{4}\frac{3}{4}0\}$, $\{2_{010}|\frac{3}{4}0\frac{3}{4}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|\frac{3}{4}\frac{3}{4}0\}\ ] = \quad \{2_{001}|\frac{3}{4}\frac{3}{4}0\}$
$[\ \{2_{010}|\frac{3}{4}0\frac{3}{4}\}\ ] = \quad \{2_{010}|\frac{3}{4}0\frac{3}{4}\}$
$[\ \{2_{100}|0\frac{3}{4}\frac{3}{4}\}\ ] = \quad \{2_{100}|0\frac{3}{4}\frac{3}{4}\}$
$[\ \{-1|0\}\ ] = \quad \{-1|0\}$
$[\ \{\mathrm{m}_{001}|\frac{1}{4}\frac{1}{4}0\}\ ] = \quad \{\mathrm{m}_{001}|\frac{1}{4}\frac{1}{4}0\}$
$[\ \{\mathrm{m}_{010}|\frac{1}{4}0\frac{1}{4}\}\ ] = \quad \{\mathrm{m}_{010}|\frac{1}{4}0\frac{1}{4}\}$
$[\ \{\mathrm{m}_{100}|0\frac{1}{4}\frac{1}{4}\}\ ] = \quad \{\mathrm{m}_{100}|0\frac{1}{4}\frac{1}{4}\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(0\quad \frac{1}{2}\quad \frac{1}{2}\right)$, $+\left(\frac{1}{2}\quad 0\quad \frac{1}{2}\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad 0\right)$

① $\{1|0\}$ ② $\{2_{001}|\frac{3}{4}\frac{3}{4}0\}$ ③ $\{2_{010}|\frac{3}{4}0\frac{3}{4}\}$ ④ $\{2_{100}|0\frac{3}{4}\frac{3}{4}\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{4}\frac{1}{4}0\}$ ⑦ $\{\mathrm{m}_{010}|\frac{1}{4}0\frac{1}{4}\}$ ⑧ $\{\mathrm{m}_{100}|0\frac{1}{4}\frac{1}{4}\}$

No. 71 D_{2h}^{25} $Immm$ [orthorhombic] tag = "`D2h^25, D2h`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{010}|0\}$] = $\{2_{010}|0\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{010}|0\}$] = $\{m_{010}|0\}$
[$\{m_{100}|0\}$] = $\{m_{100}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{010}|0\}$ ④ $\{2_{100}|0\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|0\}$ ⑦ $\{m_{010}|0\}$ ⑧ $\{m_{100}|0\}$

No. 72 D_{2h}^{26} $Ibam$ [orthorhombic] tag = "`D2h^26, D2h`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{010}|\frac{1}{2}\frac{1}{2}0\}$] = $\{m_{010}|\frac{1}{2}\frac{1}{2}0\}$
[$\{m_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{m_{100}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$, $+\begin{pmatrix}\frac{1}{2} & \frac{1}{2} & \frac{1}{2}\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$ ④ $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|0\}$ ⑦ $\{m_{010}|\frac{1}{2}\frac{1}{2}0\}$ ⑧ $\{m_{100}|\frac{1}{2}\frac{1}{2}0\}$

No. 73 D_{2h}^{27} *Ibca* [orthorhombic] tag = "`D2h^27, D2h`"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|\frac{1}{2}0\frac{1}{2}\}\ ] = \quad \{2_{001}|\frac{1}{2}0\frac{1}{2}\}$
$[\ \{2_{010}|0\frac{1}{2}\frac{1}{2}\}\ ] = \quad \{2_{010}|0\frac{1}{2}\frac{1}{2}\}$
$[\ \{2_{100}|\frac{1}{2}\frac{1}{2}0\}\ ] = \quad \{2_{100}|\frac{1}{2}\frac{1}{2}0\}$
$[\ \{-1|0\}\ ] = \quad \{-1|0\}$
$[\ \{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}\ ] = \quad \{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$
$[\ \{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}\ ] = \quad \{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$
$[\ \{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}\ ] = \quad \{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $\quad +\left(0 \quad 0 \quad 0\right), \quad +\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$ ③ $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$ ④ $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$ ⑦ $\{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$

No. 74 D_{2h}^{28} $Imma$ [orthorhombic] tag = "D2h^28, D2h"

* generator : $\{2_{001}|0\frac{1}{2}0\}$, $\{2_{010}|0\frac{1}{2}0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\frac{1}{2}0\}$] = $\{2_{001}|0\frac{1}{2}0\}$
[$\{2_{010}|0\frac{1}{2}0\}$] = $\{2_{010}|0\frac{1}{2}0\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\frac{1}{2}0\}$] = $\{m_{001}|0\frac{1}{2}0\}$
[$\{m_{010}|0\frac{1}{2}0\}$] = $\{m_{010}|0\frac{1}{2}0\}$
[$\{m_{100}|0\}$] = $\{m_{100}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\frac{1}{2}0\}$ ③ $\{2_{010}|0\frac{1}{2}0\}$ ④ $\{2_{100}|0\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|0\frac{1}{2}0\}$ ⑦ $\{m_{010}|0\frac{1}{2}0\}$ ⑧ $\{m_{100}|0\}$

No. 75 C_4^1 $P4$ [tetragonal] tag = "`C4^1, C4`"

* generator : $\{2_{001}|0\}$, $\{4^+_{001}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{4^+_{001}|0\}$] = $\{4^+_{001}|0\}$

[$\{4^-_{001}|0\}$] = $\{4^-_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^+_{001}|0\}$ ④ $\{4^-_{001}|0\}$

No. 76 C_4^2 $P4_1$ [tetragonal] tag = "C4^2, C4"

* generator : $\{2_{001}|00\frac{1}{2}\}$, $\{4^+_{001}|00\frac{1}{4}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$

[$\{4^+_{001}|00\frac{1}{4}\}$] = $\{4^+_{001}|00\frac{1}{4}\}$

[$\{4^-_{001}|00\frac{3}{4}\}$] = $\{4^-_{001}|00\frac{3}{4}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{4^+_{001}|00\frac{1}{4}\}$ ④ $\{4^-_{001}|00\frac{3}{4}\}$

No. 77 C_4^3 $P4_2$ [tetragonal] tag = "C4^3, C4"

* generator : $\{2_{001}|0\}$, $\{4^+_{001}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{4^+_{001}|00\frac{1}{2}\}$] = $\{4^+_{001}|00\frac{1}{2}\}$

[$\{4^-_{001}|00\frac{1}{2}\}$] = $\{4^-_{001}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^+_{001}|00\frac{1}{2}\}$ ④ $\{4^-_{001}|00\frac{1}{2}\}$

No. 78 C_4^4 $P4_3$ [tetragonal] tag = "C4^4, C4"

* generator : $\{2_{001}|00\frac{1}{2}\}$, $\{4^+_{001}|00\frac{3}{4}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$

[$\{4^+_{001}|00\frac{3}{4}\}$] = $\{4^+_{001}|00\frac{3}{4}\}$

[$\{4^-_{001}|00\frac{1}{4}\}$] = $\{4^-_{001}|00\frac{1}{4}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{4^+_{001}|00\frac{3}{4}\}$ ④ $\{4^-_{001}|00\frac{1}{4}\}$

No. 79 C_4^5 $I4$ [tetragonal] tag = "C4^5, C4"

* generator : $\{2_{001}|0\}$, $\{4^+_{001}|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|0\}\ ] = \quad \{2_{001}|0\}$
$[\ \{4^+_{001}|0\}\ ] = \quad \{4^+_{001}|0\}$
$[\ \{4^-_{001}|0\}\ ] = \quad \{4^-_{001}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^+_{001}|0\}$ ④ $\{4^-_{001}|0\}$

No. 80 C_4^6 $I4_1$ [tetragonal] tag = "`C4^6, C4`"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}\ ] = \quad \{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
$[\ \{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}\ ] = \quad \{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}$
$[\ \{4^-_{001}|\frac{1}{2}0\frac{3}{4}\}\ ] = \quad \{4^-_{001}|\frac{1}{2}0\frac{3}{4}\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ③ $\{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}$ ④ $\{4^-_{001}|\frac{1}{2}0\frac{3}{4}\}$

No. 81 S_4^1 $P-4$ [tetragonal] tag = "`S4^1, S4`"

* generator : $\{2_{001}|0\}$, $\{-4^+_{001}|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$

$[\ \{2_{001}|0\}\ ] = \quad \{2_{001}|0\}$

$[\ \{-4^+_{001}|0\}\ ] = \quad \{-4^+_{001}|0\}$

$[\ \{-4^-_{001}|0\}\ ] = \quad \{-4^-_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{-4^+_{001}|0\}$ ④ $\{-4^-_{001}|0\}$

No. 82 S_4^2 $I-4$ [tetragonal] tag = "S4^2, S4"

* generator : $\{2_{001}|0\}$, $\{-4^+_{001}|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|0\}\ ] = \quad \{2_{001}|0\}$
$[\ \{-4^+_{001}|0\}\ ] = \quad \{-4^+_{001}|0\}$
$[\ \{-4^-_{001}|0\}\ ] = \quad \{-4^-_{001}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{-4^+_{001}|0\}$ ④ $\{-4^-_{001}|0\}$

No. 83 C_{4h}^{1} $P4/m$ [tetragonal] tag = "C4h^1, C4h"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\}$
[$\{4^{-}_{001}|0\}$] = $\{4^{-}_{001}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$
[$\{-4^{-}_{001}|0\}$] = $\{-4^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^{+}_{001}|0\}$ ④ $\{4^{-}_{001}|0\}$ ⑤ $\{-1|0\}$
⑥ $\{m_{001}|0\}$ ⑦ $\{-4^{+}_{001}|0\}$ ⑧ $\{-4^{-}_{001}|0\}$

No. 84 C_{4h}^{2} $P4_2/m$ [tetragonal] tag = "`C4h^2, C4h`"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{4^{+}_{001}|00\frac{1}{2}\}$] = $\{4^{+}_{001}|00\frac{1}{2}\}$
[$\{4^{-}_{001}|00\frac{1}{2}\}$] = $\{4^{-}_{001}|00\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|0\}$] = $\{\mathrm{m}_{001}|0\}$
[$\{-4^{+}_{001}|00\frac{1}{2}\}$] = $\{-4^{+}_{001}|00\frac{1}{2}\}$
[$\{-4^{-}_{001}|00\frac{1}{2}\}$] = $\{-4^{-}_{001}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^{+}_{001}|00\frac{1}{2}\}$ ④ $\{4^{-}_{001}|00\frac{1}{2}\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|0\}$ ⑦ $\{-4^{+}_{001}|00\frac{1}{2}\}$ ⑧ $\{-4^{-}_{001}|00\frac{1}{2}\}$

No. 85 C_{4h}^3 $P4/n$ [tetragonal] tag = "`C4h^3, C4h`"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{4^+_{001}|\frac{1}{2}00\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{4^+_{001}|\frac{1}{2}00\}$] = $\{4^+_{001}|\frac{1}{2}00\}$
[$\{4^-_{001}|0\frac{1}{2}0\}$] = $\{4^-_{001}|0\frac{1}{2}0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{-4^+_{001}|\frac{1}{2}00\}$] = $\{-4^+_{001}|\frac{1}{2}00\}$
[$\{-4^-_{001}|0\frac{1}{2}0\}$] = $\{-4^-_{001}|0\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$ ③ $\{4^+_{001}|\frac{1}{2}00\}$ ④ $\{4^-_{001}|0\frac{1}{2}0\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$ ⑦ $\{-4^+_{001}|\frac{1}{2}00\}$ ⑧ $\{-4^-_{001}|0\frac{1}{2}0\}$

No. 86 C_{4h}^{4} $P4_2/n$ [tetragonal] tag = "`C4h^4, C4h`"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{4^{+}_{001}|0\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{4^{+}_{001}|0\frac{1}{2}\frac{1}{2}\}$] = $\{4^{+}_{001}|0\frac{1}{2}\frac{1}{2}\}$
[$\{4^{-}_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{4^{-}_{001}|\frac{1}{2}0\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{-4^{+}_{001}|0\frac{1}{2}\frac{1}{2}\}$] = $\{-4^{+}_{001}|0\frac{1}{2}\frac{1}{2}\}$
[$\{-4^{-}_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{-4^{-}_{001}|\frac{1}{2}0\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$ ③ $\{4^{+}_{001}|0\frac{1}{2}\frac{1}{2}\}$ ④ $\{4^{-}_{001}|\frac{1}{2}0\frac{1}{2}\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$ ⑦ $\{-4^{+}_{001}|0\frac{1}{2}\frac{1}{2}\}$ ⑧ $\{-4^{-}_{001}|\frac{1}{2}0\frac{1}{2}\}$

No. 87 C_{4h}^{5} $I4/m$ [tetragonal] tag = "`C4h^5, C4h`"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\}$
[$\{4^{-}_{001}|0\}$] = $\{4^{-}_{001}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|0\}$] = $\{\mathrm{m}_{001}|0\}$
[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$
[$\{-4^{-}_{001}|0\}$] = $\{-4^{-}_{001}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^{+}_{001}|0\}$ ④ $\{4^{-}_{001}|0\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|0\}$ ⑦ $\{-4^{+}_{001}|0\}$ ⑧ $\{-4^{-}_{001}|0\}$

No. 88 C_{4h}^{6} $I4_1/a$ [tetragonal] tag = "`C4h^6, C4h`"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{4^{+}_{001}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|\frac{1}{2}0\frac{1}{2}\}\ ] = \quad \{2_{001}|\frac{1}{2}0\frac{1}{2}\}$
$[\ \{4^{+}_{001}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}\ ] = \quad \{4^{+}_{001}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$
$[\ \{4^{-}_{001}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}\ ] = \quad \{4^{-}_{001}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$
$[\ \{-1|0\}\ ] = \quad \{-1|0\}$
$[\ \{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}\ ] = \quad \{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$
$[\ \{-4^{+}_{001}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}\ ] = \quad \{-4^{+}_{001}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$
$[\ \{-4^{-}_{001}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}\ ] = \quad \{-4^{-}_{001}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$ ③ $\{4^{+}_{001}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$ ④ $\{4^{-}_{001}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$ ⑤ $\{-1|0\}$
⑥ $\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$ ⑦ $\{-4^{+}_{001}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$ ⑧ $\{-4^{-}_{001}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$

No. 89 D_4^1 $P422$ [tetragonal] tag = "`D4^1, D4`"

* generator : $\{2_{001}|0\}$, $\{4^+_{001}|0\}$, $\{2_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$
[$\{2_{110}|0\}$] = $\{2_{110}|0\}$, $\{2_{1-10}|0\}$
[$\{4^+_{001}|0\}$] = $\{4^+_{001}|0\}$, $\{4^-_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{100}|0\}$ ④ $\{2_{010}|0\}$ ⑤ $\{2_{110}|0\}$
⑥ $\{2_{1-10}|0\}$ ⑦ $\{4^+_{001}|0\}$ ⑧ $\{4^-_{001}|0\}$

No. 90 D_4^2 $P42_12$ [tetragonal] tag = "D4^2, D4"

* generator : $\{2_{001}|0\}$, $\{4^+_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{110}|0\}$] = $\{2_{110}|0\}$, $\{2_{1-10}|0\}$
[$\{4^+_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{4^+_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{4^-_{001}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$ ④ $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$ ⑤ $\{2_{110}|0\}$
⑥ $\{2_{1-10}|0\}$ ⑦ $\{4^+_{001}|\frac{1}{2}\frac{1}{2}0\}$ ⑧ $\{4^-_{001}|\frac{1}{2}\frac{1}{2}0\}$

No. 91 D_4^3 $P4_122$ [tetragonal] tag = "`D4^3, D4`"

* generator : $\{2_{001}|00\frac{1}{2}\}$, $\{4^+_{001}|00\frac{1}{4}\}$, $\{2_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$
[$\{2_{100}|00\frac{1}{2}\}$] = $\{2_{100}|00\frac{1}{2}\}$, $\{2_{010}|0\}$
[$\{2_{110}|00\frac{3}{4}\}$] = $\{2_{110}|00\frac{3}{4}\}$, $\{2_{1-10}|00\frac{1}{4}\}$
[$\{4^+_{001}|00\frac{1}{4}\}$] = $\{4^+_{001}|00\frac{1}{4}\}$, $\{4^-_{001}|00\frac{3}{4}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{2_{100}|00\frac{1}{2}\}$ ④ $\{2_{010}|0\}$ ⑤ $\{2_{110}|00\frac{3}{4}\}$
⑥ $\{2_{1-10}|00\frac{1}{4}\}$ ⑦ $\{4^+_{001}|00\frac{1}{4}\}$ ⑧ $\{4^-_{001}|00\frac{3}{4}\}$

No. 92 D_4^4 $P4_12_12$ [tetragonal] tag = "D4^4, D4"

* generator : $\{2_{001}|00\frac{1}{2}\}$, $\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{4}\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{4}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$

[$\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{3}{4}\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{3}{4}\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{4}\}$

[$\{2_{110}|0\}$] = $\{2_{110}|0\}$, $\{2_{1-10}|00\frac{1}{2}\}$

[$\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{4}\}$] = $\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{4}\}$, $\{4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{3}{4}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{3}{4}\}$ ④ $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{4}\}$ ⑤ $\{2_{110}|0\}$

⑥ $\{2_{1-10}|00\frac{1}{2}\}$ ⑦ $\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{4}\}$ ⑧ $\{4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{3}{4}\}$

No. 93 D_4^5 $P4_222$ [tetragonal] tag = "`D4^5, D4`"

* generator : $\{2_{001}|0\}$, $\{4^+_{001}|00\frac{1}{2}\}$, $\{2_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$

[$\{2_{110}|00\frac{1}{2}\}$] = $\{2_{110}|00\frac{1}{2}\}$, $\{2_{1-10}|00\frac{1}{2}\}$

[$\{4^+_{001}|00\frac{1}{2}\}$] = $\{4^+_{001}|00\frac{1}{2}\}$, $\{4^-_{001}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{100}|0\}$ ④ $\{2_{010}|0\}$ ⑤ $\{2_{110}|00\frac{1}{2}\}$
⑥ $\{2_{1-10}|00\frac{1}{2}\}$ ⑦ $\{4^+_{001}|00\frac{1}{2}\}$ ⑧ $\{4^-_{001}|00\frac{1}{2}\}$

No. 94 D_4^6 $P4_22_12$ [tetragonal] tag = "D4^6, D4"

* generator : $\{2_{001}|0\}$, $\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{2_{110}|0\}$] = $\{2_{110}|0\}$, $\{2_{1-10}|0\}$

[$\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ④ $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑤ $\{2_{110}|0\}$

⑥ $\{2_{1-10}|0\}$ ⑦ $\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑧ $\{4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

No. 95 D_4^7 $P4_322$ [tetragonal] tag = "`D4^7, D4`"

* generator : $\{2_{001}|00\frac{1}{2}\}$, $\{4^+_{001}|00\frac{3}{4}\}$, $\{2_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$

[$\{2_{100}|00\frac{1}{2}\}$] = $\{2_{100}|00\frac{1}{2}\}$, $\{2_{010}|0\}$

[$\{2_{110}|00\frac{1}{4}\}$] = $\{2_{110}|00\frac{1}{4}\}$, $\{2_{1-10}|00\frac{3}{4}\}$

[$\{4^+_{001}|00\frac{3}{4}\}$] = $\{4^+_{001}|00\frac{3}{4}\}$, $\{4^-_{001}|00\frac{1}{4}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{2_{100}|00\frac{1}{2}\}$ ④ $\{2_{010}|0\}$ ⑤ $\{2_{110}|00\frac{1}{4}\}$
⑥ $\{2_{1-10}|00\frac{3}{4}\}$ ⑦ $\{4^+_{001}|00\frac{3}{4}\}$ ⑧ $\{4^-_{001}|00\frac{1}{4}\}$

No. 96 D_4^8 $P4_32_12$ [tetragonal] tag = "D4^8, D4"

* generator : $\{2_{001}|00\frac{1}{2}\}$, $\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{3}{4}\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{3}{4}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$
[$\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{4}\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{4}\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{3}{4}\}$
[$\{2_{110}|0\}$] = $\{2_{110}|0\}$, $\{2_{1-10}|00\frac{1}{2}\}$
[$\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{3}{4}\}$] = $\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{3}{4}\}$, $\{4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{4}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{4}\}$ ④ $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{3}{4}\}$ ⑤ $\{2_{110}|0\}$
⑥ $\{2_{1-10}|00\frac{1}{2}\}$ ⑦ $\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{3}{4}\}$ ⑧ $\{4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{4}\}$

No. 97 D_4^9 $I422$ [tetragonal] tag = "D4^9, D4"

* generator : $\{2_{001}|0\}$, $\{4^+_{001}|0\}$, $\{2_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$

[$\{2_{110}|0\}$] = $\{2_{110}|0\}$, $\{2_{1-10}|0\}$

[$\{4^+_{001}|0\}$] = $\{4^+_{001}|0\}$, $\{4^-_{001}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{100}|0\}$ ④ $\{2_{010}|0\}$ ⑤ $\{2_{110}|0\}$
⑥ $\{2_{1-10}|0\}$ ⑦ $\{4^+_{001}|0\}$ ⑧ $\{4^-_{001}|0\}$

No. 98 D_4^{10} $I4_122$ [tetragonal] tag = "D4^10, D4"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}$, $\{2_{010}|\frac{1}{2}0\frac{3}{4}\}$
* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{2_{100}|0\frac{1}{2}\frac{1}{4}\}$] = $\{2_{100}|0\frac{1}{2}\frac{1}{4}\}$, $\{2_{010}|\frac{1}{2}0\frac{3}{4}\}$
[$\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{1-10}|0\}$
[$\{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}$] = $\{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}$, $\{4^-_{001}|\frac{1}{2}0\frac{3}{4}\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ③ $\{2_{100}|0\frac{1}{2}\frac{1}{4}\}$ ④ $\{2_{010}|\frac{1}{2}0\frac{3}{4}\}$ ⑤ $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑥ $\{2_{1-10}|0\}$ ⑦ $\{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}$ ⑧ $\{4^-_{001}|\frac{1}{2}0\frac{3}{4}\}$

No. 99 C_{4v}^{1} $P4mm$ [tetragonal] tag = "`C4v^1, C4v`"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|0\}$, $\{\mathrm{m}_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\}$, $\{4^{-}_{001}|0\}$
[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$, $\{\mathrm{m}_{010}|0\}$
[$\{\mathrm{m}_{110}|0\}$] = $\{\mathrm{m}_{110}|0\}$, $\{\mathrm{m}_{1-10}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^{+}_{001}|0\}$ ④ $\{4^{-}_{001}|0\}$ ⑤ $\{\mathrm{m}_{100}|0\}$
⑥ $\{\mathrm{m}_{010}|0\}$ ⑦ $\{\mathrm{m}_{110}|0\}$ ⑧ $\{\mathrm{m}_{1-10}|0\}$

No. 100 C_{4v}^{2} $P4bm$ [tetragonal] tag = "`C4v^2, C4v`"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\}$, $\{4^{-}_{001}|0\}$

[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$

[$\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}0\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^{+}_{001}|0\}$ ④ $\{4^{-}_{001}|0\}$ ⑤ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$

⑥ $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$ ⑦ $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}0\}$ ⑧ $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}0\}$

No. 101 C_{4v}^{3} $P4_{2}cm$ [tetragonal] tag = "C4v^3, C4v"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{4^{+}_{001}|00\frac{1}{2}\}$] = $\{4^{+}_{001}|00\frac{1}{2}\}$, $\{4^{-}_{001}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{110}|0\}$] = $\{\mathrm{m}_{110}|0\}$, $\{\mathrm{m}_{1-10}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^{+}_{001}|00\frac{1}{2}\}$ ④ $\{4^{-}_{001}|00\frac{1}{2}\}$ ⑤ $\{\mathrm{m}_{100}|00\frac{1}{2}\}$

⑥ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ⑦ $\{\mathrm{m}_{110}|0\}$ ⑧ $\{\mathrm{m}_{1-10}|0\}$

No. 102 C_{4v}^{4} $P4_2nm$ [tetragonal] tag = "C4v^4, C4v"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{4^{+}_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{4^{+}_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^{-}_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{\mathrm{m}_{110}|0\}$] = $\{\mathrm{m}_{110}|0\}$, $\{\mathrm{m}_{1-10}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^{+}_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ④ $\{4^{-}_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑤ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑥ $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑦ $\{\mathrm{m}_{110}|0\}$ ⑧ $\{\mathrm{m}_{1-10}|0\}$

No. 103 C_{4v}^{5} $P4cc$ [tetragonal] tag = "C4v^5, C4v"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|0\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\}$, $\{4^{-}_{001}|0\}$

[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{110}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|00\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^{+}_{001}|0\}$ ④ $\{4^{-}_{001}|0\}$ ⑤ $\{\mathrm{m}_{100}|00\frac{1}{2}\}$

⑥ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ⑦ $\{\mathrm{m}_{110}|00\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$

No. 104 C_{4v}^{6} $P4nc$ [tetragonal] tag = "C4v^6, C4v"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\}$, $\{4^{-}_{001}|0\}$

[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^{+}_{001}|0\}$ ④ $\{4^{-}_{001}|0\}$ ⑤ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

⑥ $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑦ $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

No. 105 C_{4v}^{7} $P4_2mc$ [tetragonal] tag = "C4v^7, C4v"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{4^{+}_{001}|00\frac{1}{2}\}$] = $\{4^{+}_{001}|00\frac{1}{2}\}$, $\{4^{-}_{001}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$, $\{\mathrm{m}_{010}|0\}$

[$\{\mathrm{m}_{110}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|00\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^{+}_{001}|00\frac{1}{2}\}$ ④ $\{4^{-}_{001}|00\frac{1}{2}\}$ ⑤ $\{\mathrm{m}_{100}|0\}$
⑥ $\{\mathrm{m}_{010}|0\}$ ⑦ $\{\mathrm{m}_{110}|00\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$

No. 106 C_{4v}^{8} $P4_2bc$ [tetragonal] tag = "C4v^8, C4v"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{4^{+}_{001}|00\frac{1}{2}\}$] = $\{4^{+}_{001}|00\frac{1}{2}\}$, $\{4^{-}_{001}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$

[$\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^{+}_{001}|00\frac{1}{2}\}$ ④ $\{4^{-}_{001}|00\frac{1}{2}\}$ ⑤ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$

⑥ $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$ ⑦ $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

No. 107 C_{4v}^{9} $I4mm$ [tetragonal] tag = "`C4v^9, C4v`"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|0\}$, $\{\mathrm{m}_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\}$, $\{4^{-}_{001}|0\}$
[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$, $\{\mathrm{m}_{010}|0\}$
[$\{\mathrm{m}_{110}|0\}$] = $\{\mathrm{m}_{110}|0\}$, $\{\mathrm{m}_{1-10}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^{+}_{001}|0\}$ ④ $\{4^{-}_{001}|0\}$ ⑤ $\{\mathrm{m}_{100}|0\}$
⑥ $\{\mathrm{m}_{010}|0\}$ ⑦ $\{\mathrm{m}_{110}|0\}$ ⑧ $\{\mathrm{m}_{1-10}|0\}$

No. 108 C_{4v}^{10} $I4cm$ [tetragonal] tag = "C4v^10, C4v"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|0\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\}$, $\{4^{-}_{001}|0\}$

[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{110}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|00\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$, $+\begin{pmatrix}\frac{1}{2} & \frac{1}{2} & \frac{1}{2}\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{4^{+}_{001}|0\}$ ④ $\{4^{-}_{001}|0\}$ ⑤ $\{\mathrm{m}_{100}|00\frac{1}{2}\}$
⑥ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ⑦ $\{\mathrm{m}_{110}|00\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$

No. 109 C_{4v}^{11} $I4_1md$ [tetragonal] tag = "C4v^11, C4v"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}$, $\{\mathrm{m}_{010}|0\}$
* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}$] = $\{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}$, $\{4^-_{001}|\frac{1}{2}0\frac{3}{4}\}$
[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{010}|0\}$
[$\{\mathrm{m}_{110}|0\frac{1}{2}\frac{1}{4}\}$] = $\{\mathrm{m}_{110}|0\frac{1}{2}\frac{1}{4}\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}0\frac{3}{4}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$, $+\begin{pmatrix}\frac{1}{2} & \frac{1}{2} & \frac{1}{2}\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ③ $\{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}$ ④ $\{4^-_{001}|\frac{1}{2}0\frac{3}{4}\}$ ⑤ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑥ $\{\mathrm{m}_{010}|0\}$ ⑦ $\{\mathrm{m}_{110}|0\frac{1}{2}\frac{1}{4}\}$ ⑧ $\{\mathrm{m}_{1-10}|\frac{1}{2}0\frac{3}{4}\}$

No. 110 C_{4v}^{12} $I4_1cd$ [tetragonal] tag = "C4v^12, C4v"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$
* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}\ ] = \quad \{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
$[\ \{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}\ ] = \quad \{4^+_{001}|0\frac{1}{2}\frac{1}{4}\},\ \{4^-_{001}|\frac{1}{2}0\frac{3}{4}\}$
$[\ \{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}\ ] = \quad \{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\},\ \{\mathrm{m}_{010}|00\frac{1}{2}\}$
$[\ \{\mathrm{m}_{110}|0\frac{1}{2}\frac{3}{4}\}\ ] = \quad \{\mathrm{m}_{110}|0\frac{1}{2}\frac{3}{4}\},\ \{\mathrm{m}_{1-10}|\frac{1}{2}0\frac{1}{4}\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ③ $\{4^+_{001}|0\frac{1}{2}\frac{1}{4}\}$ ④ $\{4^-_{001}|\frac{1}{2}0\frac{3}{4}\}$ ⑤ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$
⑥ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ⑦ $\{\mathrm{m}_{110}|0\frac{1}{2}\frac{3}{4}\}$ ⑧ $\{\mathrm{m}_{1-10}|\frac{1}{2}0\frac{1}{4}\}$

No. 111 D_{2d}^{1} $P-42m$ [tetragonal] tag = "D2d^1, D2d"

* generator : $\{2_{001}|0\}$, $\{-4^{+}_{001}|0\}$, $\{2_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$
[$\{\mathrm{m}_{110}|0\}$] = $\{\mathrm{m}_{110}|0\}$, $\{\mathrm{m}_{1-10}|0\}$
[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{100}|0\}$ ④ $\{2_{010}|0\}$ ⑤ $\{\mathrm{m}_{110}|0\}$
⑥ $\{\mathrm{m}_{1-10}|0\}$ ⑦ $\{-4^{+}_{001}|0\}$ ⑧ $\{-4^{-}_{001}|0\}$

No. 112 D_{2d}^{2} $P-42c$ [tetragonal] tag = "`D2d^2, D2d`"

* generator : $\{2_{001}|0\}$, $\{-4^{+}_{001}|0\}$, $\{2_{010}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{100}|00\frac{1}{2}\}$] = $\{2_{100}|00\frac{1}{2}\}$, $\{2_{010}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{110}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|00\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$

[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{100}|00\frac{1}{2}\}$ ④ $\{2_{010}|00\frac{1}{2}\}$ ⑤ $\{\mathrm{m}_{110}|00\frac{1}{2}\}$
⑥ $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$ ⑦ $\{-4^{+}_{001}|0\}$ ⑧ $\{-4^{-}_{001}|0\}$

No. 113 D_{2d}^{3} $P-42_1m$ [tetragonal] tag = "D2d^3, D2d"

* generator : $\{2_{001}|0\}$, $\{-4^{+}_{001}|0\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$

[$\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}0\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}0\}$

[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$ ④ $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$ ⑤ $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}0\}$

⑥ $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}0\}$ ⑦ $\{-4^{+}_{001}|0\}$ ⑧ $\{-4^{-}_{001}|0\}$

No. 114 D_{2d}^{4} $P-42_1c$ [tetragonal] tag = "`D2d^4, D2d`"

* generator : $\{2_{001}|0\}$, $\{-4^{+}_{001}|0\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ④ $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑤ $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑥ $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑦ $\{-4^{+}_{001}|0\}$ ⑧ $\{-4^{-}_{001}|0\}$

No. 115 D_{2d}^{5} $P-4m2$ [tetragonal] tag = "D2d^5, D2d-1"

* generator : $\{2_{001}|0\}$, $\{-4^{+}_{001}|0\}$, $\{\mathrm{m}_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{110}|0\}$] = $\{2_{110}|0\}$, $\{2_{1-10}|0\}$
[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$, $\{\mathrm{m}_{010}|0\}$
[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{110}|0\}$ ④ $\{2_{1-10}|0\}$ ⑤ $\{\mathrm{m}_{100}|0\}$
⑥ $\{\mathrm{m}_{010}|0\}$ ⑦ $\{-4^{+}_{001}|0\}$ ⑧ $\{-4^{-}_{001}|0\}$

No. 116 D_{2d}^{6} $P-4c2$ [tetragonal] tag = "`D2d^6, D2d-1`"

* generator : $\{2_{001}|0\}$, $\{-4^{+}_{001}|0\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{110}|00\frac{1}{2}\}$] = $\{2_{110}|00\frac{1}{2}\}$, $\{2_{1-10}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{110}|00\frac{1}{2}\}$ ④ $\{2_{1-10}|00\frac{1}{2}\}$ ⑤ $\{\mathrm{m}_{100}|00\frac{1}{2}\}$

⑥ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ⑦ $\{-4^{+}_{001}|0\}$ ⑧ $\{-4^{-}_{001}|0\}$

No. 117 D_{2d}^{7} $P-4b2$ [tetragonal] tag = "`D2d^7, D2d-1`"

* generator : $\{2_{001}|0\}$, $\{-4^{+}_{001}|0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{110}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{110}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{1-10}|\frac{1}{2}\frac{1}{2}0\}$

[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$

[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{110}|\frac{1}{2}\frac{1}{2}0\}$ ④ $\{2_{1-10}|\frac{1}{2}\frac{1}{2}0\}$ ⑤ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$
⑥ $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$ ⑦ $\{-4^{+}_{001}|0\}$ ⑧ $\{-4^{-}_{001}|0\}$

No. 118 D_{2d}^{8} $P-4n2$ [tetragonal] tag = "`D2d^8, D2d-1`"

* generator : $\{2_{001}|0\}$, $\{-4^{+}_{001}|0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ④ $\{2_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑤ $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑥ $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑦ $\{-4^{+}_{001}|0\}$ ⑧ $\{-4^{-}_{001}|0\}$

No. 119 D_{2d}^{9} $I-4m2$ [tetragonal] tag = "`D2d^9, D2d-1`"

* generator : $\{2_{001}|0\}$, $\{-4^{+}_{001}|0\}$, $\{\mathrm{m}_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{110}|0\}$] = $\{2_{110}|0\}$, $\{2_{1-10}|0\}$
[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$, $\{\mathrm{m}_{010}|0\}$
[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{110}|0\}$ ④ $\{2_{1-10}|0\}$ ⑤ $\{\mathrm{m}_{100}|0\}$
⑥ $\{\mathrm{m}_{010}|0\}$ ⑦ $\{-4^{+}_{001}|0\}$ ⑧ $\{-4^{-}_{001}|0\}$

No. 120 D_{2d}^{10} $I-4c2$ [tetragonal] tag = "D2d^10, D2d-1"

* generator : $\{2_{001}|0\}$, $\{-4^{+}_{001}|0\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{110}|00\frac{1}{2}\}$] = $\{2_{110}|00\frac{1}{2}\}$, $\{2_{1-10}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$

[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{110}|00\frac{1}{2}\}$ ④ $\{2_{1-10}|00\frac{1}{2}\}$ ⑤ $\{\mathrm{m}_{100}|00\frac{1}{2}\}$
⑥ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ⑦ $\{-4^{+}_{001}|0\}$ ⑧ $\{-4^{-}_{001}|0\}$

No. 121 D_{2d}^{11} $I-42m$ [tetragonal] tag = "D2d^11, D2d"

* generator : $\{2_{001}|0\}$, $\{-4^{+}_{001}|0\}$, $\{2_{010}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$

[$\{\mathrm{m}_{110}|0\}$] = $\{\mathrm{m}_{110}|0\}$, $\{\mathrm{m}_{1-10}|0\}$

[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{100}|0\}$ ④ $\{2_{010}|0\}$ ⑤ $\{\mathrm{m}_{110}|0\}$
⑥ $\{\mathrm{m}_{1-10}|0\}$ ⑦ $\{-4^{+}_{001}|0\}$ ⑧ $\{-4^{-}_{001}|0\}$

No. 122 D_{2d}^{12} $I-42d$ [tetragonal] tag = "D2d^12, D2d"

* generator : $\{2_{001}|0\}$, $\{-4^{+}_{001}|0\}$, $\{2_{010}|\frac{1}{2}0\frac{3}{4}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{100}|\frac{1}{2}0\frac{3}{4}\}$] = $\{2_{100}|\frac{1}{2}0\frac{3}{4}\}$, $\{2_{010}|\frac{1}{2}0\frac{3}{4}\}$

[$\{\mathrm{m}_{110}|\frac{1}{2}0\frac{3}{4}\}$] = $\{\mathrm{m}_{110}|\frac{1}{2}0\frac{3}{4}\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}0\frac{3}{4}\}$

[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$, $+\begin{pmatrix}\frac{1}{2} & \frac{1}{2} & \frac{1}{2}\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{100}|\frac{1}{2}0\frac{3}{4}\}$ ④ $\{2_{010}|\frac{1}{2}0\frac{3}{4}\}$ ⑤ $\{\mathrm{m}_{110}|\frac{1}{2}0\frac{3}{4}\}$

⑥ $\{\mathrm{m}_{1-10}|\frac{1}{2}0\frac{3}{4}\}$ ⑦ $\{-4^{+}_{001}|0\}$ ⑧ $\{-4^{-}_{001}|0\}$

No. 123 D_{4h}^{1} $P4/mmm$ [tetragonal] tag = "D4h^1, D4h"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|0\}$, $\{2_{010}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$
[$\{2_{110}|0\}$] = $\{2_{110}|0\}$, $\{2_{1-10}|0\}$
[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\}$, $\{4^{-}_{001}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{100}|0\}$] = $\{m_{100}|0\}$, $\{m_{010}|0\}$
[$\{m_{110}|0\}$] = $\{m_{110}|0\}$, $\{m_{1-10}|0\}$
[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix} 0 & 0 & 0 \end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{100}|0\}$ ④ $\{2_{010}|0\}$ ⑤ $\{2_{110}|0\}$
⑥ $\{2_{1-10}|0\}$ ⑦ $\{4^{+}_{001}|0\}$ ⑧ $\{4^{-}_{001}|0\}$ ⑨ $\{-1|0\}$ ⑩ $\{m_{001}|0\}$
⑪ $\{m_{100}|0\}$ ⑫ $\{m_{010}|0\}$ ⑬ $\{m_{110}|0\}$ ⑭ $\{m_{1-10}|0\}$ ⑮ $\{-4^{+}_{001}|0\}$
⑯ $\{-4^{-}_{001}|0\}$

No. 124 D_{4h}^{2} $P4/mcc$ [tetragonal] tag = "`D4h^2, D4h`"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|0\}$, $\{2_{010}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{100}|00\frac{1}{2}\}$] = $\{2_{100}|00\frac{1}{2}\}$, $\{2_{010}|00\frac{1}{2}\}$
[$\{2_{110}|00\frac{1}{2}\}$] = $\{2_{110}|00\frac{1}{2}\}$, $\{2_{1-10}|00\frac{1}{2}\}$
[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\}$, $\{4^{-}_{001}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|0\}$] = $\{\mathrm{m}_{001}|0\}$
[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$
[$\{\mathrm{m}_{110}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|00\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$
[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|00\frac{1}{2}\}$	④	$\{2_{010}\|00\frac{1}{2}\}$	⑤	$\{2_{110}\|00\frac{1}{2}\}$
⑥	$\{2_{1-10}\|00\frac{1}{2}\}$	⑦	$\{4^{+}_{001}\|0\}$	⑧	$\{4^{-}_{001}\|0\}$	⑨	$\{-1\|0\}$	⑩	$\{\mathrm{m}_{001}\|0\}$
⑪	$\{\mathrm{m}_{100}\|00\frac{1}{2}\}$	⑫	$\{\mathrm{m}_{010}\|00\frac{1}{2}\}$	⑬	$\{\mathrm{m}_{110}\|00\frac{1}{2}\}$	⑭	$\{\mathrm{m}_{1-10}\|00\frac{1}{2}\}$	⑮	$\{-4^{+}_{001}\|0\}$
⑯	$\{-4^{-}_{001}\|0\}$								

No. 125 D_{4h}^{3} $P4/nbm$ [tetragonal] tag = "`D4h^3, D4h`"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{4^{+}_{001}|\frac{1}{2}00\}$, $\{2_{010}|\frac{1}{2}00\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{100}|0\frac{1}{2}0\}$] = $\{2_{100}|0\frac{1}{2}0\}$, $\{2_{010}|\frac{1}{2}00\}$
[$\{2_{110}|0\}$] = $\{2_{110}|0\}$, $\{2_{1-10}|\frac{1}{2}\frac{1}{2}0\}$
[$\{4^{+}_{001}|\frac{1}{2}00\}$] = $\{4^{+}_{001}|\frac{1}{2}00\}$, $\{4^{-}_{001}|0\frac{1}{2}0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{\mathrm{m}_{100}|0\frac{1}{2}0\}$] = $\{\mathrm{m}_{100}|0\frac{1}{2}0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}00\}$
[$\{\mathrm{m}_{110}|0\}$] = $\{\mathrm{m}_{110}|0\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}0\}$
[$\{-4^{+}_{001}|\frac{1}{2}00\}$] = $\{-4^{+}_{001}|\frac{1}{2}00\}$, $\{-4^{-}_{001}|0\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}\frac{1}{2}0\}$	③	$\{2_{100}\|0\frac{1}{2}0\}$	④	$\{2_{010}\|\frac{1}{2}00\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{1-10}\|\frac{1}{2}\frac{1}{2}0\}$	⑦	$\{4^{+}_{001}\|\frac{1}{2}00\}$	⑧	$\{4^{-}_{001}\|0\frac{1}{2}0\}$	⑨	$\{-1\|0\}$	⑩	$\{\mathrm{m}_{001}\|\frac{1}{2}\frac{1}{2}0\}$
⑪	$\{\mathrm{m}_{100}\|0\frac{1}{2}0\}$	⑫	$\{\mathrm{m}_{010}\|\frac{1}{2}00\}$	⑬	$\{\mathrm{m}_{110}\|0\}$	⑭	$\{\mathrm{m}_{1-10}\|\frac{1}{2}\frac{1}{2}0\}$	⑮	$\{-4^{+}_{001}\|\frac{1}{2}00\}$
⑯	$\{-4^{-}_{001}\|0\frac{1}{2}0\}$								

No. 126 D_{4h}^{4} $P4/nnc$ [tetragonal] tag = "`D4h^4, D4h`"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{4^{+}_{001}|\frac{1}{2}00\}$, $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{100}|0\frac{1}{2}\frac{1}{2}\}$] = $\{2_{100}|0\frac{1}{2}\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$
[$\{2_{110}|00\frac{1}{2}\}$] = $\{2_{110}|00\frac{1}{2}\}$, $\{2_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{4^{+}_{001}|\frac{1}{2}00\}$] = $\{4^{+}_{001}|\frac{1}{2}00\}$, $\{4^{-}_{001}|0\frac{1}{2}0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{\mathrm{m}_{100}|0\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|0\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{010}|\frac{1}{2}0\frac{1}{2}\}$
[$\{\mathrm{m}_{110}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|00\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{-4^{+}_{001}|\frac{1}{2}00\}$] = $\{-4^{+}_{001}|\frac{1}{2}00\}$, $\{-4^{-}_{001}|0\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}\frac{1}{2}0\}$	③	$\{2_{100}\|0\frac{1}{2}\frac{1}{2}\}$	④	$\{2_{010}\|\frac{1}{2}0\frac{1}{2}\}$	⑤	$\{2_{110}\|00\frac{1}{2}\}$
⑥	$\{2_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑦	$\{4^{+}_{001}\|\frac{1}{2}00\}$	⑧	$\{4^{-}_{001}\|0\frac{1}{2}0\}$	⑨	$\{-1\|0\}$	⑩	$\{\mathrm{m}_{001}\|\frac{1}{2}\frac{1}{2}0\}$
⑪	$\{\mathrm{m}_{100}\|0\frac{1}{2}\frac{1}{2}\}$	⑫	$\{\mathrm{m}_{010}\|\frac{1}{2}0\frac{1}{2}\}$	⑬	$\{\mathrm{m}_{110}\|00\frac{1}{2}\}$	⑭	$\{\mathrm{m}_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑮	$\{-4^{+}_{001}\|\frac{1}{2}00\}$
⑯	$\{-4^{-}_{001}\|0\frac{1}{2}0\}$								

No. 127 D_{4h}^{5} $P4/mbm$ [tetragonal] tag = "`D4h^5, D4h`"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|0\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{110}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{110}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{1-10}|\frac{1}{2}\frac{1}{2}0\}$
[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\}$, $\{4^{-}_{001}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{m_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{m_{010}|\frac{1}{2}\frac{1}{2}0\}$
[$\{m_{110}|\frac{1}{2}\frac{1}{2}0\}$] = $\{m_{110}|\frac{1}{2}\frac{1}{2}0\}$, $\{m_{1-10}|\frac{1}{2}\frac{1}{2}0\}$
[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|\frac{1}{2}\frac{1}{2}0\}$	④	$\{2_{010}\|\frac{1}{2}\frac{1}{2}0\}$	⑤	$\{2_{110}\|\frac{1}{2}\frac{1}{2}0\}$
⑥	$\{2_{1-10}\|\frac{1}{2}\frac{1}{2}0\}$	⑦	$\{4^{+}_{001}\|0\}$	⑧	$\{4^{-}_{001}\|0\}$	⑨	$\{-1\|0\}$	⑩	$\{m_{001}\|0\}$
⑪	$\{m_{100}\|\frac{1}{2}\frac{1}{2}0\}$	⑫	$\{m_{010}\|\frac{1}{2}\frac{1}{2}0\}$	⑬	$\{m_{110}\|\frac{1}{2}\frac{1}{2}0\}$	⑭	$\{m_{1-10}\|\frac{1}{2}\frac{1}{2}0\}$	⑮	$\{-4^{+}_{001}\|0\}$
⑯	$\{-4^{-}_{001}\|0\}$								

No. 128 D_{4h}^{6} $P4/mnc$ [tetragonal] tag = "`D4h^6, D4h`"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|0\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\}$, $\{4^{-}_{001}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|0\}$] = $\{\mathrm{m}_{001}|0\}$
[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	④	$\{2_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑤	$\{2_{110}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑥	$\{2_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑦	$\{4^{+}_{001}\|0\}$	⑧	$\{4^{-}_{001}\|0\}$	⑨	$\{-1\|0\}$	⑩	$\{\mathrm{m}_{001}\|0\}$
⑪	$\{\mathrm{m}_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑫	$\{\mathrm{m}_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑬	$\{\mathrm{m}_{110}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑭	$\{\mathrm{m}_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑮	$\{-4^{+}_{001}\|0\}$
⑯	$\{-4^{-}_{001}\|0\}$								

No. 129 D_{4h}^{7} $P4/nmm$ [tetragonal] tag = "`D4h^7, D4h`"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{4^{+}_{001}|\frac{1}{2}00\}$, $\{2_{010}|0\frac{1}{2}0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{100}|\frac{1}{2}00\}$] = $\{2_{100}|\frac{1}{2}00\}$, $\{2_{010}|0\frac{1}{2}0\}$
[$\{2_{110}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{110}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{1-10}|0\}$
[$\{4^{+}_{001}|\frac{1}{2}00\}$] = $\{4^{+}_{001}|\frac{1}{2}00\}$, $\{4^{-}_{001}|0\frac{1}{2}0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{\mathrm{m}_{100}|\frac{1}{2}00\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}00\}$, $\{\mathrm{m}_{010}|0\frac{1}{2}0\}$
[$\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}0\}$, $\{\mathrm{m}_{1-10}|0\}$
[$\{-4^{+}_{001}|\frac{1}{2}00\}$] = $\{-4^{+}_{001}|\frac{1}{2}00\}$, $\{-4^{-}_{001}|0\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}\frac{1}{2}0\}$	③	$\{2_{100}\|\frac{1}{2}00\}$	④	$\{2_{010}\|0\frac{1}{2}0\}$	⑤	$\{2_{110}\|\frac{1}{2}\frac{1}{2}0\}$
⑥	$\{2_{1-10}\|0\}$	⑦	$\{4^{+}_{001}\|\frac{1}{2}00\}$	⑧	$\{4^{-}_{001}\|0\frac{1}{2}0\}$	⑨	$\{-1\|0\}$	⑩	$\{\mathrm{m}_{001}\|\frac{1}{2}\frac{1}{2}0\}$
⑪	$\{\mathrm{m}_{100}\|\frac{1}{2}00\}$	⑫	$\{\mathrm{m}_{010}\|0\frac{1}{2}0\}$	⑬	$\{\mathrm{m}_{110}\|\frac{1}{2}\frac{1}{2}0\}$	⑭	$\{\mathrm{m}_{1-10}\|0\}$	⑮	$\{-4^{+}_{001}\|\frac{1}{2}00\}$
⑯	$\{-4^{-}_{001}\|0\frac{1}{2}0\}$								

No. 130 D_{4h}^{8} $P4/ncc$ [tetragonal] tag = "D4h^8, D4h"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{4^{+}_{001}|\frac{1}{2}00\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{100}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{100}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$
[$\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{1-10}|00\frac{1}{2}\}$
[$\{4^{+}_{001}|\frac{1}{2}00\}$] = $\{4^{+}_{001}|\frac{1}{2}00\}$, $\{4^{-}_{001}|0\frac{1}{2}0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{\mathrm{m}_{100}|\frac{1}{2}0\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}0\frac{1}{2}\}$, $\{\mathrm{m}_{010}|0\frac{1}{2}\frac{1}{2}\}$
[$\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$
[$\{-4^{+}_{001}|\frac{1}{2}00\}$] = $\{-4^{+}_{001}|\frac{1}{2}00\}$, $\{-4^{-}_{001}|0\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}\frac{1}{2}0\}$	③	$\{2_{100}\|\frac{1}{2}0\frac{1}{2}\}$	④	$\{2_{010}\|0\frac{1}{2}\frac{1}{2}\}$	⑤	$\{2_{110}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑥	$\{2_{1-10}\|00\frac{1}{2}\}$	⑦	$\{4^{+}_{001}\|\frac{1}{2}00\}$	⑧	$\{4^{-}_{001}\|0\frac{1}{2}0\}$	⑨	$\{-1\|0\}$	⑩	$\{\mathrm{m}_{001}\|\frac{1}{2}\frac{1}{2}0\}$
⑪	$\{\mathrm{m}_{100}\|\frac{1}{2}0\frac{1}{2}\}$	⑫	$\{\mathrm{m}_{010}\|0\frac{1}{2}\frac{1}{2}\}$	⑬	$\{\mathrm{m}_{110}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑭	$\{\mathrm{m}_{1-10}\|00\frac{1}{2}\}$	⑮	$\{-4^{+}_{001}\|\frac{1}{2}00\}$
⑯	$\{-4^{-}_{001}\|0\frac{1}{2}0\}$								

No. 131 D_{4h}^{9} $P4_2/mmc$ [tetragonal] tag = "D4h^9, D4h"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|00\frac{1}{2}\}$, $\{2_{010}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$
[$\{2_{110}|00\frac{1}{2}\}$] = $\{2_{110}|00\frac{1}{2}\}$, $\{2_{1-10}|00\frac{1}{2}\}$
[$\{4^{+}_{001}|00\frac{1}{2}\}$] = $\{4^{+}_{001}|00\frac{1}{2}\}$, $\{4^{-}_{001}|00\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{100}|0\}$] = $\{m_{100}|0\}$, $\{m_{010}|0\}$
[$\{m_{110}|00\frac{1}{2}\}$] = $\{m_{110}|00\frac{1}{2}\}$, $\{m_{1-10}|00\frac{1}{2}\}$
[$\{-4^{+}_{001}|00\frac{1}{2}\}$] = $\{-4^{+}_{001}|00\frac{1}{2}\}$, $\{-4^{-}_{001}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|00\frac{1}{2}\}$
⑥	$\{2_{1-10}\|00\frac{1}{2}\}$	⑦	$\{4^{+}_{001}\|00\frac{1}{2}\}$	⑧	$\{4^{-}_{001}\|00\frac{1}{2}\}$	⑨	$\{-1\|0\}$	⑩	$\{m_{001}\|0\}$
⑪	$\{m_{100}\|0\}$	⑫	$\{m_{010}\|0\}$	⑬	$\{m_{110}\|00\frac{1}{2}\}$	⑭	$\{m_{1-10}\|00\frac{1}{2}\}$	⑮	$\{-4^{+}_{001}\|00\frac{1}{2}\}$
⑯	$\{-4^{-}_{001}\|00\frac{1}{2}\}$								

No. 132 D_{4h}^{10} $P4_2/mcm$ [tetragonal] tag = "D4h^10, D4h"

* generator : $\{2_{001}|0\}$, $\{4^+_{001}|00\frac{1}{2}\}$, $\{2_{010}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{100}|00\frac{1}{2}\}$] = $\{2_{100}|00\frac{1}{2}\}$, $\{2_{010}|00\frac{1}{2}\}$
[$\{2_{110}|0\}$] = $\{2_{110}|0\}$, $\{2_{1-10}|0\}$
[$\{4^+_{001}|00\frac{1}{2}\}$] = $\{4^+_{001}|00\frac{1}{2}\}$, $\{4^-_{001}|00\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{100}|00\frac{1}{2}\}$] = $\{m_{100}|00\frac{1}{2}\}$, $\{m_{010}|00\frac{1}{2}\}$
[$\{m_{110}|0\}$] = $\{m_{110}|0\}$, $\{m_{1-10}|0\}$
[$\{-4^+_{001}|00\frac{1}{2}\}$] = $\{-4^+_{001}|00\frac{1}{2}\}$, $\{-4^-_{001}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|00\frac{1}{2}\}$	④	$\{2_{010}\|00\frac{1}{2}\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{1-10}\|0\}$	⑦	$\{4^+_{001}\|00\frac{1}{2}\}$	⑧	$\{4^-_{001}\|00\frac{1}{2}\}$	⑨	$\{-1\|0\}$	⑩	$\{m_{001}\|0\}$
⑪	$\{m_{100}\|00\frac{1}{2}\}$	⑫	$\{m_{010}\|00\frac{1}{2}\}$	⑬	$\{m_{110}\|0\}$	⑭	$\{m_{1-10}\|0\}$	⑮	$\{-4^+_{001}\|00\frac{1}{2}\}$
⑯	$\{-4^-_{001}\|00\frac{1}{2}\}$								

No. 133 D_{4h}^{11} $P4_2/nbc$ [tetragonal] tag = "`D4h^11, D4h`"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}00\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{100}|0\frac{1}{2}0\}$] = $\{2_{100}|0\frac{1}{2}0\}$, $\{2_{010}|\frac{1}{2}00\}$
[$\{2_{110}|00\frac{1}{2}\}$] = $\{2_{110}|00\frac{1}{2}\}$, $\{2_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{4^-_{001}|0\frac{1}{2}\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{\mathrm{m}_{100}|0\frac{1}{2}0\}$] = $\{\mathrm{m}_{100}|0\frac{1}{2}0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}00\}$
[$\{\mathrm{m}_{110}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|00\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{-4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{-4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{-4^-_{001}|0\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}\frac{1}{2}0\}$	③	$\{2_{100}\|0\frac{1}{2}0\}$	④	$\{2_{010}\|\frac{1}{2}00\}$	⑤	$\{2_{110}\|00\frac{1}{2}\}$
⑥	$\{2_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑦	$\{4^+_{001}\|\frac{1}{2}0\frac{1}{2}\}$	⑧	$\{4^-_{001}\|0\frac{1}{2}\frac{1}{2}\}$	⑨	$\{-1\|0\}$	⑩	$\{\mathrm{m}_{001}\|\frac{1}{2}\frac{1}{2}0\}$
⑪	$\{\mathrm{m}_{100}\|0\frac{1}{2}0\}$	⑫	$\{\mathrm{m}_{010}\|\frac{1}{2}00\}$	⑬	$\{\mathrm{m}_{110}\|00\frac{1}{2}\}$	⑭	$\{\mathrm{m}_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑮	$\{-4^+_{001}\|\frac{1}{2}0\frac{1}{2}\}$
⑯	$\{-4^-_{001}\|0\frac{1}{2}\frac{1}{2}\}$								

No. 134 D_{4h}^{12} $P4_2/nnm$ [tetragonal] tag = "D4h^12, D4h"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{100}|0\frac{1}{2}\frac{1}{2}\}$] = $\{2_{100}|0\frac{1}{2}\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$
[$\{2_{110}|0\}$] = $\{2_{110}|0\}$, $\{2_{1-10}|\frac{1}{2}\frac{1}{2}0\}$
[$\{4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{4^-_{001}|0\frac{1}{2}\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{m_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{m_{100}|0\frac{1}{2}\frac{1}{2}\}$] = $\{m_{100}|0\frac{1}{2}\frac{1}{2}\}$, $\{m_{010}|\frac{1}{2}0\frac{1}{2}\}$
[$\{m_{110}|0\}$] = $\{m_{110}|0\}$, $\{m_{1-10}|\frac{1}{2}\frac{1}{2}0\}$
[$\{-4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{-4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{-4^-_{001}|0\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}\frac{1}{2}0\}$	③	$\{2_{100}\|0\frac{1}{2}\frac{1}{2}\}$	④	$\{2_{010}\|\frac{1}{2}0\frac{1}{2}\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{1-10}\|\frac{1}{2}\frac{1}{2}0\}$	⑦	$\{4^+_{001}\|\frac{1}{2}0\frac{1}{2}\}$	⑧	$\{4^-_{001}\|0\frac{1}{2}\frac{1}{2}\}$	⑨	$\{-1\|0\}$	⑩	$\{m_{001}\|\frac{1}{2}\frac{1}{2}0\}$
⑪	$\{m_{100}\|0\frac{1}{2}\frac{1}{2}\}$	⑫	$\{m_{010}\|\frac{1}{2}0\frac{1}{2}\}$	⑬	$\{m_{110}\|0\}$	⑭	$\{m_{1-10}\|\frac{1}{2}\frac{1}{2}0\}$	⑮	$\{-4^+_{001}\|\frac{1}{2}0\frac{1}{2}\}$
⑯	$\{-4^-_{001}\|0\frac{1}{2}\frac{1}{2}\}$								

No. 135 D_{4h}^{13} $P4_2/mbc$ [tetragonal] tag = "`D4h^13, D4h`"

* generator : $\{2_{001}|0\}$, $\{4^+_{001}|00\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{4^+_{001}|00\frac{1}{2}\}$] = $\{4^+_{001}|00\frac{1}{2}\}$, $\{4^-_{001}|00\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|0\}$] = $\{\mathrm{m}_{001}|0\}$
[$\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}\frac{1}{2}0\}$
[$\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{-4^+_{001}|00\frac{1}{2}\}$] = $\{-4^+_{001}|00\frac{1}{2}\}$, $\{-4^-_{001}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|\frac{1}{2}\frac{1}{2}0\}$	④	$\{2_{010}\|\frac{1}{2}\frac{1}{2}0\}$	⑤	$\{2_{110}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑥	$\{2_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑦	$\{4^+_{001}\|00\frac{1}{2}\}$	⑧	$\{4^-_{001}\|00\frac{1}{2}\}$	⑨	$\{-1\|0\}$	⑩	$\{\mathrm{m}_{001}\|0\}$
⑪	$\{\mathrm{m}_{100}\|\frac{1}{2}\frac{1}{2}0\}$	⑫	$\{\mathrm{m}_{010}\|\frac{1}{2}\frac{1}{2}0\}$	⑬	$\{\mathrm{m}_{110}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑭	$\{\mathrm{m}_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑮	$\{-4^+_{001}\|00\frac{1}{2}\}$
⑯	$\{-4^-_{001}\|00\frac{1}{2}\}$								

No. 136 D_{4h}^{14} $P4_2/mnm$ [tetragonal] tag = "`D4h^14, D4h`"

* generator : $\{2_{001}|0\}$, $\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$
* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{2_{110}|0\}$] = $\{2_{110}|0\}$, $\{2_{1-10}|0\}$
[$\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{m_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{m_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
[$\{m_{110}|0\}$] = $\{m_{110}|0\}$, $\{m_{1-10}|0\}$
[$\{-4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{-4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	④	$\{2_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{1-10}\|0\}$	⑦	$\{4^+_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑧	$\{4^-_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑨	$\{-1\|0\}$	⑩	$\{m_{001}\|0\}$
⑪	$\{m_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑫	$\{m_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑬	$\{m_{110}\|0\}$	⑭	$\{m_{1-10}\|0\}$	⑮	$\{-4^+_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑯	$\{-4^-_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$								

No. 137 D_{4h}^{15} $P4_2/nmc$ [tetragonal] tag = "D4h^15, D4h"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{100}|\frac{1}{2}00\}$] = $\{2_{100}|\frac{1}{2}00\}$, $\{2_{010}|0\frac{1}{2}0\}$
[$\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{1-10}|00\frac{1}{2}\}$
[$\{4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{4^-_{001}|0\frac{1}{2}\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{\mathrm{m}_{100}|\frac{1}{2}00\}$] = $\{\mathrm{m}_{100}|\frac{1}{2}00\}$, $\{\mathrm{m}_{010}|0\frac{1}{2}0\}$
[$\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$
[$\{-4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{-4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{-4^-_{001}|0\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$ ③ $\{2_{100}|\frac{1}{2}00\}$ ④ $\{2_{010}|0\frac{1}{2}0\}$ ⑤ $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑥ $\{2_{1-10}|00\frac{1}{2}\}$ ⑦ $\{4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$ ⑧ $\{4^-_{001}|0\frac{1}{2}\frac{1}{2}\}$ ⑨ $\{-1|0\}$ ⑩ $\{\mathrm{m}_{001}|\frac{1}{2}\frac{1}{2}0\}$
⑪ $\{\mathrm{m}_{100}|\frac{1}{2}00\}$ ⑫ $\{\mathrm{m}_{010}|0\frac{1}{2}0\}$ ⑬ $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$ ⑭ $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$ ⑮ $\{-4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$
⑯ $\{-4^-_{001}|0\frac{1}{2}\frac{1}{2}\}$

No. 138 D_{4h}^{16} $P4_2/ncm$ [tetragonal] tag = "D4h^16, D4h"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{2_{100}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{100}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$
[$\{2_{110}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{110}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{1-10}|0\}$
[$\{4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{4^-_{001}|0\frac{1}{2}\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{m_{001}|\frac{1}{2}\frac{1}{2}0\}$
[$\{m_{100}|\frac{1}{2}0\frac{1}{2}\}$] = $\{m_{100}|\frac{1}{2}0\frac{1}{2}\}$, $\{m_{010}|0\frac{1}{2}\frac{1}{2}\}$
[$\{m_{110}|\frac{1}{2}\frac{1}{2}0\}$] = $\{m_{110}|\frac{1}{2}\frac{1}{2}0\}$, $\{m_{1-10}|0\}$
[$\{-4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{-4^+_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{-4^-_{001}|0\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}\frac{1}{2}0\}$	③	$\{2_{100}\|\frac{1}{2}0\frac{1}{2}\}$	④	$\{2_{010}\|0\frac{1}{2}\frac{1}{2}\}$	⑤	$\{2_{110}\|\frac{1}{2}\frac{1}{2}0\}$
⑥	$\{2_{1-10}\|0\}$	⑦	$\{4^+_{001}\|\frac{1}{2}0\frac{1}{2}\}$	⑧	$\{4^-_{001}\|0\frac{1}{2}\frac{1}{2}\}$	⑨	$\{-1\|0\}$	⑩	$\{m_{001}\|\frac{1}{2}\frac{1}{2}0\}$
⑪	$\{m_{100}\|\frac{1}{2}0\frac{1}{2}\}$	⑫	$\{m_{010}\|0\frac{1}{2}\frac{1}{2}\}$	⑬	$\{m_{110}\|\frac{1}{2}\frac{1}{2}0\}$	⑭	$\{m_{1-10}\|0\}$	⑮	$\{-4^+_{001}\|\frac{1}{2}0\frac{1}{2}\}$
⑯	$\{-4^-_{001}\|0\frac{1}{2}\frac{1}{2}\}$								

No. 139 D_{4h}^{17} $I4/mmm$ [tetragonal] tag = "D4h^17, D4h"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|0\}$, $\{2_{010}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$
[$\{2_{110}|0\}$] = $\{2_{110}|0\}$, $\{2_{1-10}|0\}$
[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\}$, $\{4^{-}_{001}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{100}|0\}$] = $\{m_{100}|0\}$, $\{m_{010}|0\}$
[$\{m_{110}|0\}$] = $\{m_{110}|0\}$, $\{m_{1-10}|0\}$
[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{1-10}\|0\}$	⑦	$\{4^{+}_{001}\|0\}$	⑧	$\{4^{-}_{001}\|0\}$	⑨	$\{-1\|0\}$	⑩	$\{m_{001}\|0\}$
⑪	$\{m_{100}\|0\}$	⑫	$\{m_{010}\|0\}$	⑬	$\{m_{110}\|0\}$	⑭	$\{m_{1-10}\|0\}$	⑮	$\{-4^{+}_{001}\|0\}$
⑯	$\{-4^{-}_{001}\|0\}$								

No. 140 D_{4h}^{18} $I4/mcm$ [tetragonal] tag = "`D4h^18, D4h`"

* generator : $\{2_{001}|0\}$, $\{4^{+}_{001}|0\}$, $\{2_{010}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{100}|00\frac{1}{2}\}$] = $\{2_{100}|00\frac{1}{2}\}$, $\{2_{010}|00\frac{1}{2}\}$
[$\{2_{110}|00\frac{1}{2}\}$] = $\{2_{110}|00\frac{1}{2}\}$, $\{2_{1-10}|00\frac{1}{2}\}$
[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\}$, $\{4^{-}_{001}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{100}|00\frac{1}{2}\}$] = $\{m_{100}|00\frac{1}{2}\}$, $\{m_{010}|00\frac{1}{2}\}$
[$\{m_{110}|00\frac{1}{2}\}$] = $\{m_{110}|00\frac{1}{2}\}$, $\{m_{1-10}|00\frac{1}{2}\}$
[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\}$, $\{-4^{-}_{001}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|00\frac{1}{2}\}$	④	$\{2_{010}\|00\frac{1}{2}\}$	⑤	$\{2_{110}\|00\frac{1}{2}\}$
⑥	$\{2_{1-10}\|00\frac{1}{2}\}$	⑦	$\{4^{+}_{001}\|0\}$	⑧	$\{4^{-}_{001}\|0\}$	⑨	$\{-1\|0\}$	⑩	$\{m_{001}\|0\}$
⑪	$\{m_{100}\|00\frac{1}{2}\}$	⑫	$\{m_{010}\|00\frac{1}{2}\}$	⑬	$\{m_{110}\|00\frac{1}{2}\}$	⑭	$\{m_{1-10}\|00\frac{1}{2}\}$	⑮	$\{-4^{+}_{001}\|0\}$
⑯	$\{-4^{-}_{001}\|0\}$								

No. 141 D_{4h}^{19} $I4_1/amd$ [tetragonal] tag = "D4h^19, D4h"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$, $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$
[$\{2_{110}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$] = $\{2_{110}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$, $\{2_{1-10}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$
[$\{4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$] = $\{4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$, $\{4^-_{001}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$
[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$, $\{\mathrm{m}_{010}|\frac{1}{2}0\frac{1}{2}\}$
[$\{\mathrm{m}_{110}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$] = $\{\mathrm{m}_{110}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$, $\{\mathrm{m}_{1-10}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$
[$\{-4^+_{001}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$] = $\{-4^+_{001}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$, $\{-4^-_{001}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$ ③ $\{2_{100}|0\}$ ④ $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$ ⑤ $\{2_{110}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$
⑥ $\{2_{1-10}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$ ⑦ $\{4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$ ⑧ $\{4^-_{001}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$ ⑨ $\{-1|0\}$ ⑩ $\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$
⑪ $\{\mathrm{m}_{100}|0\}$ ⑫ $\{\mathrm{m}_{010}|\frac{1}{2}0\frac{1}{2}\}$ ⑬ $\{\mathrm{m}_{110}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$ ⑭ $\{\mathrm{m}_{1-10}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$ ⑮ $\{-4^+_{001}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$
⑯ $\{-4^-_{001}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$

No. 142 D_{4h}^{20} $I4_1/acd$ [tetragonal] tag = "`D4h^20, D4h`"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$, $\{2_{010}|\frac{1}{2}00\}$, $\{-1|0\}$
* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$
[$\{2_{100}|00\frac{1}{2}\}$] = $\{2_{100}|00\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}00\}$
[$\{2_{110}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$] = $\{2_{110}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$, $\{2_{1-10}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$
[$\{4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$] = $\{4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$, $\{4^-_{001}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$
[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|\frac{1}{2}00\}$
[$\{\mathrm{m}_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$] = $\{\mathrm{m}_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$, $\{\mathrm{m}_{1-10}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$
[$\{-4^+_{001}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$] = $\{-4^+_{001}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$, $\{-4^-_{001}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$ ③ $\{2_{100}|00\frac{1}{2}\}$ ④ $\{2_{010}|\frac{1}{2}00\}$ ⑤ $\{2_{110}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$
⑥ $\{2_{1-10}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$ ⑦ $\{4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$ ⑧ $\{4^-_{001}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$ ⑨ $\{-1|0\}$ ⑩ $\{\mathrm{m}_{001}|\frac{1}{2}0\frac{1}{2}\}$
⑪ $\{\mathrm{m}_{100}|00\frac{1}{2}\}$ ⑫ $\{\mathrm{m}_{010}|\frac{1}{2}00\}$ ⑬ $\{\mathrm{m}_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$ ⑭ $\{\mathrm{m}_{1-10}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$ ⑮ $\{-4^+_{001}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$
⑯ $\{-4^-_{001}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$

No. 143 C_3^1 $P3$ [trigonal] tag = "C3^1, C3"

* generator : $\{3^+_{001}|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$

$[\ \{3^+_{001}|0\}\ ] = \quad \{3^+_{001}|0\}$

$[\ \{3^-_{001}|0\}\ ] = \quad \{3^-_{001}|0\}$

* symmetry operation $+\begin{pmatrix} 0 & 0 & 0 \end{pmatrix}$

① $\{1|0\}$ ② $\{3^+_{001}|0\}$ ③ $\{3^-_{001}|0\}$

No. 144 C_3^2 $P3_1$ [trigonal] tag = "C3^2, C3"

* generator : $\{3^+_{001}|00\frac{1}{3}\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$

$[\ \{3^+_{001}|00\frac{1}{3}\}\ ] = \quad \{3^+_{001}|00\frac{1}{3}\}$

$[\ \{3^-_{001}|00\frac{2}{3}\}\ ] = \quad \{3^-_{001}|00\frac{2}{3}\}$

* symmetry operation $+\begin{pmatrix} 0 & 0 & 0 \end{pmatrix}$

① $\{1|0\}$ ② $\{3^+_{001}|00\frac{1}{3}\}$ ③ $\{3^-_{001}|00\frac{2}{3}\}$

No. 145 C_3^3 $P3_2$ [trigonal] tag = "C3^3, C3"

* generator : $\{3^+_{001}|00\frac{2}{3}\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$

$[\ \{3^+_{001}|00\frac{2}{3}\}\ ] = \quad \{3^+_{001}|00\frac{2}{3}\}$

$[\ \{3^-_{001}|00\frac{1}{3}\}\ ] = \quad \{3^-_{001}|00\frac{1}{3}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{3^+_{001}|00\frac{2}{3}\}$ ③ $\{3^-_{001}|00\frac{1}{3}\}$

No. 146 C_3^4 $R3$ [trigonal] tag = "C3^4, C3"

* generator : $\{3^+_{001}|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$

$[\ \{3^+_{001}|0\}\ ] = \quad \{3^+_{001}|0\}$

$[\ \{3^-_{001}|0\}\ ] = \quad \{3^-_{001}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{2}{3} \quad \frac{1}{3} \quad \frac{1}{3}\right)$, $+\left(\frac{1}{3} \quad \frac{2}{3} \quad \frac{2}{3}\right)$

① $\{1|0\}$ ② $\{3^+_{001}|0\}$ ③ $\{3^-_{001}|0\}$

No. 147 C_{3i}^{1} $P-3$ [trigonal] tag = "C3i^1, C3i"

* generator : $\{3^{+}_{001}|0\},\ \{-1|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{3^{+}_{001}|0\}\ ] = \quad \{3^{+}_{001}|0\}$
$[\ \{3^{-}_{001}|0\}\ ] = \quad \{3^{-}_{001}|0\}$
$[\ \{-1|0\}\ ] = \quad \{-1|0\}$
$[\ \{-3^{+}_{001}|0\}\ ] = \quad \{-3^{+}_{001}|0\}$
$[\ \{-3^{-}_{001}|0\}\ ] = \quad \{-3^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{3^{+}_{001}|0\}$ ③ $\{3^{-}_{001}|0\}$ ④ $\{-1|0\}$ ⑤ $\{-3^{+}_{001}|0\}$
⑥ $\{-3^{-}_{001}|0\}$

No. 148 C_{3i}^{2} $R-3$ [trigonal] tag = "`C3i^2, C3i`"

* generator : $\{3^{+}_{001}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \{1|0\}$
$[\ \{3^{+}_{001}|0\}\ ] = \{3^{+}_{001}|0\}$
$[\ \{3^{-}_{001}|0\}\ ] = \{3^{-}_{001}|0\}$
$[\ \{-1|0\}\ ] = \{-1|0\}$
$[\ \{-3^{+}_{001}|0\}\ ] = \{-3^{+}_{001}|0\}$
$[\ \{-3^{-}_{001}|0\}\ ] = \{-3^{-}_{001}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{2}{3}\quad \frac{1}{3}\quad \frac{1}{3}\right)$, $+\left(\frac{1}{3}\quad \frac{2}{3}\quad \frac{2}{3}\right)$

① $\{1|0\}$ ② $\{3^{+}_{001}|0\}$ ③ $\{3^{-}_{001}|0\}$ ④ $\{-1|0\}$ ⑤ $\{-3^{+}_{001}|0\}$
⑥ $\{-3^{-}_{001}|0\}$

No. 149 D_3^1 $P312$ [trigonal] tag = "D3^1, D3"

* generator : $\{3^+_{001}|0\}$, $\{2_{1-10}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{120}|0\}$] = $\{2_{120}|0\}$, $\{2_{210}|0\}$, $\{2_{1-10}|0\}$

[$\{3^+_{001}|0\}$] = $\{3^+_{001}|0\}$, $\{3^-_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{120}|0\}$ ③ $\{2_{210}|0\}$ ④ $\{2_{1-10}|0\}$ ⑤ $\{3^+_{001}|0\}$
⑥ $\{3^-_{001}|0\}$

No. 150 D_3^2 $P321$ [trigonal] tag = "D3^2, D3-1"

* generator : $\{3^+_{001}|0\}$, $\{2_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$, $\{2_{110}|0\}$

[$\{3^+_{001}|0\}$] = $\{3^+_{001}|0\}$, $\{3^-_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{100}|0\}$ ③ $\{2_{010}|0\}$ ④ $\{2_{110}|0\}$ ⑤ $\{3^+_{001}|0\}$
⑥ $\{3^-_{001}|0\}$

No. 151 D_3^3 $P3_112$ [trigonal] tag = "D3^3, D3"

* generator : $\{3^+_{001}|00\frac{1}{3}\}$, $\{2_{1-10}|00\frac{2}{3}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{120}|00\frac{1}{3}\}$] = $\{2_{120}|00\frac{1}{3}\}$, $\{2_{210}|0\}$, $\{2_{1-10}|00\frac{2}{3}\}$

[$\{3^+_{001}|00\frac{1}{3}\}$] = $\{3^+_{001}|00\frac{1}{3}\}$, $\{3^-_{001}|00\frac{2}{3}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{120}|00\frac{1}{3}\}$ ③ $\{2_{210}|0\}$ ④ $\{2_{1-10}|00\frac{2}{3}\}$ ⑤ $\{3^+_{001}|00\frac{1}{3}\}$
⑥ $\{3^-_{001}|00\frac{2}{3}\}$

No. 152 D_3^4 $P3_121$ [trigonal] tag = "D3^4, D3-1"

* generator : $\{3^+_{001}|00\frac{1}{3}\},\ \{2_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{100}|00\frac{2}{3}\}$] = $\{2_{100}|00\frac{2}{3}\},\ \{2_{010}|00\frac{1}{3}\},\ \{2_{110}|0\}$

[$\{3^+_{001}|00\frac{1}{3}\}$] = $\{3^+_{001}|00\frac{1}{3}\},\ \{3^-_{001}|00\frac{2}{3}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{100}|00\frac{2}{3}\}$ ③ $\{2_{010}|00\frac{1}{3}\}$ ④ $\{2_{110}|0\}$ ⑤ $\{3^+_{001}|00\frac{1}{3}\}$
⑥ $\{3^-_{001}|00\frac{2}{3}\}$

No. 153 D_3^5 $P3_212$ [trigonal] tag = "D3^5, D3"

* generator : $\{3^+_{001}|00\frac{2}{3}\}$, $\{2_{1-10}|00\frac{1}{3}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{120}|00\frac{2}{3}\}$] = $\{2_{120}|00\frac{2}{3}\}$, $\{2_{210}|0\}$, $\{2_{1-10}|00\frac{1}{3}\}$

[$\{3^+_{001}|00\frac{2}{3}\}$] = $\{3^+_{001}|00\frac{2}{3}\}$, $\{3^-_{001}|00\frac{1}{3}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{120}|00\frac{2}{3}\}$ ③ $\{2_{210}|0\}$ ④ $\{2_{1-10}|00\frac{1}{3}\}$ ⑤ $\{3^+_{001}|00\frac{2}{3}\}$
⑥ $\{3^-_{001}|00\frac{1}{3}\}$

No. 154 D_3^6 $P3_221$ [trigonal] tag = "D3^6, D3-1"

* generator : $\{3^+_{001}|00\frac{2}{3}\},\ \{2_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{100}|00\frac{1}{3}\}$] = $\{2_{100}|00\frac{1}{3}\},\ \{2_{010}|00\frac{2}{3}\},\ \{2_{110}|0\}$

[$\{3^+_{001}|00\frac{2}{3}\}$] = $\{3^+_{001}|00\frac{2}{3}\},\ \{3^-_{001}|00\frac{1}{3}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{100}|00\frac{1}{3}\}$ ③ $\{2_{010}|00\frac{2}{3}\}$ ④ $\{2_{110}|0\}$ ⑤ $\{3^+_{001}|00\frac{2}{3}\}$
⑥ $\{3^-_{001}|00\frac{1}{3}\}$

No. 155 D_3^7 $R32$ [trigonal] tag = "D3^7, D3-1"

* generator : $\{3^+_{001}|0\},\ \{2_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{100}|0\}$] = $\{2_{100}|0\},\ \{2_{010}|0\},\ \{2_{110}|0\}$

[$\{3^+_{001}|0\}$] = $\{3^+_{001}|0\},\ \{3^-_{001}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right),\quad +\left(\frac{2}{3}\quad \frac{1}{3}\quad \frac{1}{3}\right),\quad +\left(\frac{1}{3}\quad \frac{2}{3}\quad \frac{2}{3}\right)$

① $\{1|0\}$ ② $\{2_{100}|0\}$ ③ $\{2_{010}|0\}$ ④ $\{2_{110}|0\}$ ⑤ $\{3^+_{001}|0\}$
⑥ $\{3^-_{001}|0\}$

No. 156 C_{3v}^{1} $P3m1$ [trigonal] tag = "C3v^1, C3v"

* generator : $\{3^{+}_{001}|0\}$, $\{\mathrm{m}_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$

[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$, $\{\mathrm{m}_{010}|0\}$, $\{\mathrm{m}_{110}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{3^{+}_{001}|0\}$ ③ $\{3^{-}_{001}|0\}$ ④ $\{\mathrm{m}_{100}|0\}$ ⑤ $\{\mathrm{m}_{010}|0\}$
⑥ $\{\mathrm{m}_{110}|0\}$

No. 157 C_{3v}^{2} $P31m$ [trigonal] tag = "`C3v^2, C3v-1`"

* generator : $\{3^{+}_{001}|0\}$, $\{\mathrm{m}_{1-10}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$

[$\{\mathrm{m}_{120}|0\}$] = $\{\mathrm{m}_{120}|0\}$, $\{\mathrm{m}_{210}|0\}$, $\{\mathrm{m}_{1-10}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{3^{+}_{001}|0\}$ ③ $\{3^{-}_{001}|0\}$ ④ $\{\mathrm{m}_{120}|0\}$ ⑤ $\{\mathrm{m}_{210}|0\}$
⑥ $\{\mathrm{m}_{1-10}|0\}$

No. 158 C_{3v}^{3} $P3c1$ [trigonal] tag = "C3v^3, C3v"

* generator : $\{3^{+}_{001}|0\}$, $\{\mathrm{m}_{110}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$

[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$, $\{\mathrm{m}_{110}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{3^{+}_{001}|0\}$ ③ $\{3^{-}_{001}|0\}$ ④ $\{\mathrm{m}_{100}|00\frac{1}{2}\}$ ⑤ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$
⑥ $\{\mathrm{m}_{110}|00\frac{1}{2}\}$

No. 159 C_{3v}^{4} $P31c$ [trigonal] tag = "`C3v^4, C3v-1`"

* generator : $\{3^{+}_{001}|0\}$, $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$

[$\{\mathrm{m}_{120}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{120}|00\frac{1}{2}\}$, $\{\mathrm{m}_{210}|00\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{3^{+}_{001}|0\}$ ③ $\{3^{-}_{001}|0\}$ ④ $\{\mathrm{m}_{120}|00\frac{1}{2}\}$ ⑤ $\{\mathrm{m}_{210}|00\frac{1}{2}\}$
⑥ $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$

No. 160 C_{3v}^{5} $R3m$ [trigonal] tag = "C3v^5, C3v"

* generator : $\{3^{+}_{001}|0\}$, $\{\mathrm{m}_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$

[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$, $\{\mathrm{m}_{010}|0\}$, $\{\mathrm{m}_{110}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{2}{3}\quad \frac{1}{3}\quad \frac{1}{3}\right)$, $+\left(\frac{1}{3}\quad \frac{2}{3}\quad \frac{2}{3}\right)$

① $\{1|0\}$ ② $\{3^{+}_{001}|0\}$ ③ $\{3^{-}_{001}|0\}$ ④ $\{\mathrm{m}_{100}|0\}$ ⑤ $\{\mathrm{m}_{010}|0\}$
⑥ $\{\mathrm{m}_{110}|0\}$

No. 161 C_{3v}^{6} $R3c$ [trigonal] tag = "`C3v^6, C3v`"

* generator : $\{3^{+}_{001}|0\}$, $\{\mathrm{m}_{110}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$

[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$, $\{\mathrm{m}_{110}|00\frac{1}{2}\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{2}{3} \quad \frac{1}{3} \quad \frac{1}{3}\right)$, $+\left(\frac{1}{3} \quad \frac{2}{3} \quad \frac{2}{3}\right)$

① $\{1|0\}$ ② $\{3^{+}_{001}|0\}$ ③ $\{3^{-}_{001}|0\}$ ④ $\{\mathrm{m}_{100}|00\frac{1}{2}\}$ ⑤ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$
⑥ $\{\mathrm{m}_{110}|00\frac{1}{2}\}$

No. 162 D_{3d}^{1} $P-31m$ [trigonal] tag = "`D3d^1, D3d`"

* generator : $\{3^{+}_{001}|0\}$, $\{2_{1-10}|0\}$, $\{-1|0\}$
* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{120}|0\}$] = $\{2_{120}|0\}$, $\{2_{210}|0\}$, $\{2_{1-10}|0\}$
[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{120}|0\}$] = $\{\mathrm{m}_{120}|0\}$, $\{\mathrm{m}_{210}|0\}$, $\{\mathrm{m}_{1-10}|0\}$
[$\{-3^{+}_{001}|0\}$] = $\{-3^{+}_{001}|0\}$, $\{-3^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{120}|0\}$ ③ $\{2_{210}|0\}$ ④ $\{2_{1-10}|0\}$ ⑤ $\{3^{+}_{001}|0\}$
⑥ $\{3^{-}_{001}|0\}$ ⑦ $\{-1|0\}$ ⑧ $\{\mathrm{m}_{120}|0\}$ ⑨ $\{\mathrm{m}_{210}|0\}$ ⑩ $\{\mathrm{m}_{1-10}|0\}$
⑪ $\{-3^{+}_{001}|0\}$ ⑫ $\{-3^{-}_{001}|0\}$

No. 163 D_{3d}^{2} $P-31c$ [trigonal] tag = "D3d^2, D3d"

* generator : $\{3^{+}_{001}|0\},\ \{2_{1-10}|00\tfrac{1}{2}\},\ \{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{120}|00\tfrac{1}{2}\}$] = $\{2_{120}|00\tfrac{1}{2}\},\ \{2_{210}|00\tfrac{1}{2}\},\ \{2_{1-10}|00\tfrac{1}{2}\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\},\ \{3^{-}_{001}|0\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{\mathrm{m}_{120}|00\tfrac{1}{2}\}$] = $\{\mathrm{m}_{120}|00\tfrac{1}{2}\},\ \{\mathrm{m}_{210}|00\tfrac{1}{2}\},\ \{\mathrm{m}_{1-10}|00\tfrac{1}{2}\}$

[$\{-3^{+}_{001}|0\}$] = $\{-3^{+}_{001}|0\},\ \{-3^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{120}\|00\tfrac{1}{2}\}$	③	$\{2_{210}\|00\tfrac{1}{2}\}$	④	$\{2_{1-10}\|00\tfrac{1}{2}\}$	⑤	$\{3^{+}_{001}\|0\}$
⑥	$\{3^{-}_{001}\|0\}$	⑦	$\{-1\|0\}$	⑧	$\{\mathrm{m}_{120}\|00\tfrac{1}{2}\}$	⑨	$\{\mathrm{m}_{210}\|00\tfrac{1}{2}\}$	⑩	$\{\mathrm{m}_{1-10}\|00\tfrac{1}{2}\}$
⑪	$\{-3^{+}_{001}\|0\}$	⑫	$\{-3^{-}_{001}\|0\}$						

No. 164 D_{3d}^{3} $P-3m1$ [trigonal] tag = "`D3d^3, D3d-1`"

* generator : $\{3^{+}_{001}|0\},\ \{2_{110}|0\},\ \{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{100}|0\}$] = $\{2_{100}|0\},\ \{2_{010}|0\},\ \{2_{110}|0\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\},\ \{3^{-}_{001}|0\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\},\ \{\mathrm{m}_{010}|0\},\ \{\mathrm{m}_{110}|0\}$

[$\{-3^{+}_{001}|0\}$] = $\{-3^{+}_{001}|0\},\ \{-3^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{100}\|0\}$	③	$\{2_{010}\|0\}$	④	$\{2_{110}\|0\}$	⑤	$\{3^{+}_{001}\|0\}$
⑥	$\{3^{-}_{001}\|0\}$	⑦	$\{-1\|0\}$	⑧	$\{\mathrm{m}_{100}\|0\}$	⑨	$\{\mathrm{m}_{010}\|0\}$	⑩	$\{\mathrm{m}_{110}\|0\}$
⑪	$\{-3^{+}_{001}\|0\}$	⑫	$\{-3^{-}_{001}\|0\}$						

No. 165 D_{3d}^{4} $P-3c1$ [trigonal] tag = "D3d^4, D3d-1"

* generator : $\{3^{+}_{001}|0\},\ \{2_{110}|00\frac{1}{2}\},\ \{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{100}|00\frac{1}{2}\}$] = $\{2_{100}|00\frac{1}{2}\},\ \{2_{010}|00\frac{1}{2}\},\ \{2_{110}|00\frac{1}{2}\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\},\ \{3^{-}_{001}|0\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\},\ \{\mathrm{m}_{010}|00\frac{1}{2}\},\ \{\mathrm{m}_{110}|00\frac{1}{2}\}$

[$\{-3^{+}_{001}|0\}$] = $\{-3^{+}_{001}|0\},\ \{-3^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{100}\|00\frac{1}{2}\}$	③	$\{2_{010}\|00\frac{1}{2}\}$	④	$\{2_{110}\|00\frac{1}{2}\}$	⑤	$\{3^{+}_{001}\|0\}$
⑥	$\{3^{-}_{001}\|0\}$	⑦	$\{-1\|0\}$	⑧	$\{\mathrm{m}_{100}\|00\frac{1}{2}\}$	⑨	$\{\mathrm{m}_{010}\|00\frac{1}{2}\}$	⑩	$\{\mathrm{m}_{110}\|00\frac{1}{2}\}$
⑪	$\{-3^{+}_{001}\|0\}$	⑫	$\{-3^{-}_{001}\|0\}$						

No. 166 D_{3d}^{5} $R-3m$ [trigonal] tag = "D3d^5, D3d-1"

* generator : $\{3^{+}_{001}|0\}$, $\{2_{110}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$, $\{2_{110}|0\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{m_{100}|0\}$] = $\{m_{100}|0\}$, $\{m_{010}|0\}$, $\{m_{110}|0\}$

[$\{-3^{+}_{001}|0\}$] = $\{-3^{+}_{001}|0\}$, $\{-3^{-}_{001}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{2}{3}\quad \frac{1}{3}\quad \frac{1}{3}\right)$, $+\left(\frac{1}{3}\quad \frac{2}{3}\quad \frac{2}{3}\right)$

① $\{1|0\}$ ② $\{2_{100}|0\}$ ③ $\{2_{010}|0\}$ ④ $\{2_{110}|0\}$ ⑤ $\{3^{+}_{001}|0\}$

⑥ $\{3^{-}_{001}|0\}$ ⑦ $\{-1|0\}$ ⑧ $\{m_{100}|0\}$ ⑨ $\{m_{010}|0\}$ ⑩ $\{m_{110}|0\}$

⑪ $\{-3^{+}_{001}|0\}$ ⑫ $\{-3^{-}_{001}|0\}$

No. 167 D_{3d}^{6} $R-3c$ [trigonal] tag = "D3d^6, D3d-1"

* generator : $\{3^{+}_{001}|0\},\ \{2_{110}|00\frac{1}{2}\},\ \{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{100}|00\frac{1}{2}\}$] = $\{2_{100}|00\frac{1}{2}\},\ \{2_{010}|00\frac{1}{2}\},\ \{2_{110}|00\frac{1}{2}\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\},\ \{3^{-}_{001}|0\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\},\ \{\mathrm{m}_{010}|00\frac{1}{2}\},\ \{\mathrm{m}_{110}|00\frac{1}{2}\}$

[$\{-3^{+}_{001}|0\}$] = $\{-3^{+}_{001}|0\},\ \{-3^{-}_{001}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right),\ +\left(\frac{2}{3}\quad \frac{1}{3}\quad \frac{1}{3}\right),\ +\left(\frac{1}{3}\quad \frac{2}{3}\quad \frac{2}{3}\right)$

① $\{1|0\}$ ② $\{2_{100}|00\frac{1}{2}\}$ ③ $\{2_{010}|00\frac{1}{2}\}$ ④ $\{2_{110}|00\frac{1}{2}\}$ ⑤ $\{3^{+}_{001}|0\}$

⑥ $\{3^{-}_{001}|0\}$ ⑦ $\{-1|0\}$ ⑧ $\{\mathrm{m}_{100}|00\frac{1}{2}\}$ ⑨ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ⑩ $\{\mathrm{m}_{110}|00\frac{1}{2}\}$

⑪ $\{-3^{+}_{001}|0\}$ ⑫ $\{-3^{-}_{001}|0\}$

No. 168 C_6^1 $P6$ [hexagonal] tag = "C6^1, C6"

* generator : $\{3^+_{001}|0\}$, $\{2_{001}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{3^+_{001}|0\}$] = $\{3^+_{001}|0\}$
[$\{3^-_{001}|0\}$] = $\{3^-_{001}|0\}$
[$\{6^+_{001}|0\}$] = $\{6^+_{001}|0\}$
[$\{6^-_{001}|0\}$] = $\{6^-_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{3^+_{001}|0\}$ ④ $\{3^-_{001}|0\}$ ⑤ $\{6^+_{001}|0\}$
⑥ $\{6^-_{001}|0\}$

No. 169 C_6^2 $P6_1$ [hexagonal] tag = "C6^2, C6"

* generator : $\{3^+_{001}|00\frac{1}{3}\}$, $\{2_{001}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$
[$\{3^+_{001}|00\frac{1}{3}\}$] = $\{3^+_{001}|00\frac{1}{3}\}$
[$\{3^-_{001}|00\frac{2}{3}\}$] = $\{3^-_{001}|00\frac{2}{3}\}$
[$\{6^+_{001}|00\frac{1}{6}\}$] = $\{6^+_{001}|00\frac{1}{6}\}$
[$\{6^-_{001}|00\frac{5}{6}\}$] = $\{6^-_{001}|00\frac{5}{6}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{3^+_{001}|00\frac{1}{3}\}$ ④ $\{3^-_{001}|00\frac{2}{3}\}$ ⑤ $\{6^+_{001}|00\frac{1}{6}\}$
⑥ $\{6^-_{001}|00\frac{5}{6}\}$

No. 170 C_6^3 $P6_5$ [hexagonal] tag = "C6^3, C6"

* generator : $\{3^+_{001}|00\frac{2}{3}\}$, $\{2_{001}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$
[$\{3^+_{001}|00\frac{2}{3}\}$] = $\{3^+_{001}|00\frac{2}{3}\}$
[$\{3^-_{001}|00\frac{1}{3}\}$] = $\{3^-_{001}|00\frac{1}{3}\}$
[$\{6^+_{001}|00\frac{5}{6}\}$] = $\{6^+_{001}|00\frac{5}{6}\}$
[$\{6^-_{001}|00\frac{1}{6}\}$] = $\{6^-_{001}|00\frac{1}{6}\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{3^+_{001}|00\frac{2}{3}\}$ ④ $\{3^-_{001}|00\frac{1}{3}\}$ ⑤ $\{6^+_{001}|00\frac{5}{6}\}$
⑥ $\{6^-_{001}|00\frac{1}{6}\}$

No. 171 C_6^4 $P6_2$ [hexagonal] tag = "C6^4, C6"

* generator : $\{3^+_{001}|00\frac{2}{3}\}$, $\{2_{001}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{3^+_{001}|00\frac{2}{3}\}$] = $\{3^+_{001}|00\frac{2}{3}\}$
[$\{3^-_{001}|00\frac{1}{3}\}$] = $\{3^-_{001}|00\frac{1}{3}\}$
[$\{6^+_{001}|00\frac{1}{3}\}$] = $\{6^+_{001}|00\frac{1}{3}\}$
[$\{6^-_{001}|00\frac{2}{3}\}$] = $\{6^-_{001}|00\frac{2}{3}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{3^+_{001}|00\frac{2}{3}\}$ ④ $\{3^-_{001}|00\frac{1}{3}\}$ ⑤ $\{6^+_{001}|00\frac{1}{3}\}$
⑥ $\{6^-_{001}|00\frac{2}{3}\}$

No. 172 C_6^5 $P6_4$ [hexagonal] tag = "C6^5, C6"

* generator : $\{3^+_{001}|00\frac{1}{3}\}$, $\{2_{001}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{3^+_{001}|00\frac{1}{3}\}$] = $\{3^+_{001}|00\frac{1}{3}\}$
[$\{3^-_{001}|00\frac{2}{3}\}$] = $\{3^-_{001}|00\frac{2}{3}\}$
[$\{6^+_{001}|00\frac{2}{3}\}$] = $\{6^+_{001}|00\frac{2}{3}\}$
[$\{6^-_{001}|00\frac{1}{3}\}$] = $\{6^-_{001}|00\frac{1}{3}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{3^+_{001}|00\frac{1}{3}\}$ ④ $\{3^-_{001}|00\frac{2}{3}\}$ ⑤ $\{6^+_{001}|00\frac{2}{3}\}$
⑥ $\{6^-_{001}|00\frac{1}{3}\}$

No. 173 C_6^6 $P6_3$ [hexagonal] tag = "C6^6, C6"

* generator : $\{3^+_{001}|0\}$, $\{2_{001}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$
[$\{3^+_{001}|0\}$] = $\{3^+_{001}|0\}$
[$\{3^-_{001}|0\}$] = $\{3^-_{001}|0\}$
[$\{6^+_{001}|00\frac{1}{2}\}$] = $\{6^+_{001}|00\frac{1}{2}\}$
[$\{6^-_{001}|00\frac{1}{2}\}$] = $\{6^-_{001}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{3^+_{001}|0\}$ ④ $\{3^-_{001}|0\}$ ⑤ $\{6^+_{001}|00\frac{1}{2}\}$
⑥ $\{6^-_{001}|00\frac{1}{2}\}$

No. 174 C_{3h}^{1} $P-6$ [hexagonal] tag = "`C3h^1, C3h`"

* generator : $\{3^{+}_{001}|0\}$, $\{\mathrm{m}_{001}|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$
$[\ \{3^{+}_{001}|0\}\ ] = \quad \{3^{+}_{001}|0\}$
$[\ \{3^{-}_{001}|0\}\ ] = \quad \{3^{-}_{001}|0\}$
$[\ \{\mathrm{m}_{001}|0\}\ ] = \quad \{\mathrm{m}_{001}|0\}$
$[\ \{-6^{+}_{001}|0\}\ ] = \quad \{-6^{+}_{001}|0\}$
$[\ \{-6^{-}_{001}|0\}\ ] = \quad \{-6^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix} 0 & 0 & 0 \end{pmatrix}$

① $\{1|0\}$ ② $\{3^{+}_{001}|0\}$ ③ $\{3^{-}_{001}|0\}$ ④ $\{\mathrm{m}_{001}|0\}$ ⑤ $\{-6^{+}_{001}|0\}$
⑥ $\{-6^{-}_{001}|0\}$

No. 175 C_{6h}^{1} $P6/m$ [hexagonal] tag = "`C6h^1, C6h`"

* generator : $\{3^{+}_{001}|0\}$, $\{2_{001}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$
[$\{3^{-}_{001}|0\}$] = $\{3^{-}_{001}|0\}$
[$\{6^{+}_{001}|0\}$] = $\{6^{+}_{001}|0\}$
[$\{6^{-}_{001}|0\}$] = $\{6^{-}_{001}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{\mathrm{m}_{001}|0\}$] = $\{\mathrm{m}_{001}|0\}$
[$\{-3^{+}_{001}|0\}$] = $\{-3^{+}_{001}|0\}$
[$\{-3^{-}_{001}|0\}$] = $\{-3^{-}_{001}|0\}$
[$\{-6^{+}_{001}|0\}$] = $\{-6^{+}_{001}|0\}$
[$\{-6^{-}_{001}|0\}$] = $\{-6^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix} 0 & 0 & 0 \end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{3^{+}_{001}|0\}$ ④ $\{3^{-}_{001}|0\}$ ⑤ $\{6^{+}_{001}|0\}$
⑥ $\{6^{-}_{001}|0\}$ ⑦ $\{-1|0\}$ ⑧ $\{\mathrm{m}_{001}|0\}$ ⑨ $\{-3^{+}_{001}|0\}$ ⑩ $\{-3^{-}_{001}|0\}$
⑪ $\{-6^{+}_{001}|0\}$ ⑫ $\{-6^{-}_{001}|0\}$

No. 176 C_{6h}^{2} $P6_3/m$ [hexagonal] tag = "C6h^2, C6h"

* generator : $\{3^{+}_{001}|0\}$, $\{2_{001}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$
[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$
[$\{3^{-}_{001}|0\}$] = $\{3^{-}_{001}|0\}$
[$\{6^{+}_{001}|00\frac{1}{2}\}$] = $\{6^{+}_{001}|00\frac{1}{2}\}$
[$\{6^{-}_{001}|00\frac{1}{2}\}$] = $\{6^{-}_{001}|00\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|00\frac{1}{2}\}$] = $\{m_{001}|00\frac{1}{2}\}$
[$\{-3^{+}_{001}|0\}$] = $\{-3^{+}_{001}|0\}$
[$\{-3^{-}_{001}|0\}$] = $\{-3^{-}_{001}|0\}$
[$\{-6^{+}_{001}|00\frac{1}{2}\}$] = $\{-6^{+}_{001}|00\frac{1}{2}\}$
[$\{-6^{-}_{001}|00\frac{1}{2}\}$] = $\{-6^{-}_{001}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|00\frac{1}{2}\}$	③	$\{3^{+}_{001}\|0\}$	④	$\{3^{-}_{001}\|0\}$	⑤	$\{6^{+}_{001}\|00\frac{1}{2}\}$
⑥	$\{6^{-}_{001}\|00\frac{1}{2}\}$	⑦	$\{-1\|0\}$	⑧	$\{m_{001}\|00\frac{1}{2}\}$	⑨	$\{-3^{+}_{001}\|0\}$	⑩	$\{-3^{-}_{001}\|0\}$
⑪	$\{-6^{+}_{001}\|00\frac{1}{2}\}$	⑫	$\{-6^{-}_{001}\|00\frac{1}{2}\}$						

No. 177 D_6^1 $P622$ [hexagonal] tag = "D6^1, D6"

* generator : $\{3^+_{001}|0\},\ \{2_{001}|0\},\ \{2_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{100}|0\}$] = $\{2_{100}|0\},\ \{2_{010}|0\},\ \{2_{110}|0\}$

[$\{2_{120}|0\}$] = $\{2_{120}|0\},\ \{2_{210}|0\},\ \{2_{1-10}|0\}$

[$\{3^+_{001}|0\}$] = $\{3^+_{001}|0\},\ \{3^-_{001}|0\}$

[$\{6^+_{001}|0\}$] = $\{6^+_{001}|0\},\ \{6^-_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{120}\|0\}$	⑦	$\{2_{210}\|0\}$	⑧	$\{2_{1-10}\|0\}$	⑨	$\{3^+_{001}\|0\}$	⑩	$\{3^-_{001}\|0\}$
⑪	$\{6^+_{001}\|0\}$	⑫	$\{6^-_{001}\|0\}$						

No. 178 D_6^2 $P6_122$ [hexagonal] tag = "D6^2, D6"

* generator : $\{3^+_{001}|00\frac{1}{3}\},\ \{2_{001}|00\frac{1}{2}\},\ \{2_{110}|00\frac{1}{3}\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$

$[\ \{2_{001}|00\frac{1}{2}\}\ ] = \quad \{2_{001}|00\frac{1}{2}\}$

$[\ \{2_{100}|0\}\ ] = \quad \{2_{100}|0\},\ \{2_{010}|00\frac{2}{3}\},\ \{2_{110}|00\frac{1}{3}\}$

$[\ \{2_{120}|00\frac{1}{2}\}\ ] = \quad \{2_{120}|00\frac{1}{2}\},\ \{2_{210}|00\frac{1}{6}\},\ \{2_{1-10}|00\frac{5}{6}\}$

$[\ \{3^+_{001}|00\frac{1}{3}\}\ ] = \quad \{3^+_{001}|00\frac{1}{3}\},\ \{3^-_{001}|00\frac{2}{3}\}$

$[\ \{6^+_{001}|00\frac{1}{6}\}\ ] = \quad \{6^+_{001}|00\frac{1}{6}\},\ \{6^-_{001}|00\frac{5}{6}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|00\frac{1}{2}\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|00\frac{2}{3}\}$	⑤	$\{2_{110}\|00\frac{1}{3}\}$
⑥	$\{2_{120}\|00\frac{1}{2}\}$	⑦	$\{2_{210}\|00\frac{1}{6}\}$	⑧	$\{2_{1-10}\|00\frac{5}{6}\}$	⑨	$\{3^+_{001}\|00\frac{1}{3}\}$	⑩	$\{3^-_{001}\|00\frac{2}{3}\}$
⑪	$\{6^+_{001}\|00\frac{1}{6}\}$	⑫	$\{6^-_{001}\|00\frac{5}{6}\}$						

No. 179 D_6^3 $P6_522$ [hexagonal] tag = "D6^3, D6"

* generator : $\{3^+_{001}|00\frac{2}{3}\},\ \{2_{001}|00\frac{1}{2}\},\ \{2_{110}|00\frac{2}{3}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$

[$\{2_{100}|0\}$] = $\{2_{100}|0\},\ \{2_{010}|00\frac{1}{3}\},\ \{2_{110}|00\frac{2}{3}\}$

[$\{2_{120}|00\frac{1}{2}\}$] = $\{2_{120}|00\frac{1}{2}\},\ \{2_{210}|00\frac{5}{6}\},\ \{2_{1-10}|00\frac{1}{6}\}$

[$\{3^+_{001}|00\frac{2}{3}\}$] = $\{3^+_{001}|00\frac{2}{3}\},\ \{3^-_{001}|00\frac{1}{3}\}$

[$\{6^+_{001}|00\frac{5}{6}\}$] = $\{6^+_{001}|00\frac{5}{6}\},\ \{6^-_{001}|00\frac{1}{6}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|00\frac{1}{2}\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|00\frac{1}{3}\}$	⑤	$\{2_{110}\|00\frac{2}{3}\}$
⑥	$\{2_{120}\|00\frac{1}{2}\}$	⑦	$\{2_{210}\|00\frac{5}{6}\}$	⑧	$\{2_{1-10}\|00\frac{1}{6}\}$	⑨	$\{3^+_{001}\|00\frac{2}{3}\}$	⑩	$\{3^-_{001}\|00\frac{1}{3}\}$
⑪	$\{6^+_{001}\|00\frac{5}{6}\}$	⑫	$\{6^-_{001}\|00\frac{1}{6}\}$						

No. 180 D_6^4 $P6_222$ [hexagonal] tag = "D6^4, D6"

* generator : $\{3^+_{001}|00\frac{2}{3}\}$, $\{2_{001}|0\}$, $\{2_{110}|00\frac{2}{3}\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$

$[\ \{2_{001}|0\}\ ] = \quad \{2_{001}|0\}$

$[\ \{2_{100}|0\}\ ] = \quad \{2_{100}|0\},\ \{2_{010}|00\frac{1}{3}\},\ \{2_{110}|00\frac{2}{3}\}$

$[\ \{2_{120}|0\}\ ] = \quad \{2_{120}|0\},\ \{2_{210}|00\frac{1}{3}\},\ \{2_{1-10}|00\frac{2}{3}\}$

$[\ \{3^+_{001}|00\frac{2}{3}\}\ ] = \quad \{3^+_{001}|00\frac{2}{3}\},\ \{3^-_{001}|00\frac{1}{3}\}$

$[\ \{6^+_{001}|00\frac{1}{3}\}\ ] = \quad \{6^+_{001}|00\frac{1}{3}\},\ \{6^-_{001}|00\frac{2}{3}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|00\frac{1}{3}\}$	⑤	$\{2_{110}\|00\frac{2}{3}\}$
⑥	$\{2_{120}\|0\}$	⑦	$\{2_{210}\|00\frac{1}{3}\}$	⑧	$\{2_{1-10}\|00\frac{2}{3}\}$	⑨	$\{3^+_{001}\|00\frac{2}{3}\}$	⑩	$\{3^-_{001}\|00\frac{1}{3}\}$
⑪	$\{6^+_{001}\|00\frac{1}{3}\}$	⑫	$\{6^-_{001}\|00\frac{2}{3}\}$						

No. 181 D_6^5 $P6_422$ [hexagonal] tag = "D6^5, D6"

* generator : $\{3^+_{001}|00\frac{1}{3}\},\ \{2_{001}|0\},\ \{2_{110}|00\frac{1}{3}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{100}|0\}$] = $\{2_{100}|0\},\ \{2_{010}|00\frac{2}{3}\},\ \{2_{110}|00\frac{1}{3}\}$

[$\{2_{120}|0\}$] = $\{2_{120}|0\},\ \{2_{210}|00\frac{2}{3}\},\ \{2_{1-10}|00\frac{1}{3}\}$

[$\{3^+_{001}|00\frac{1}{3}\}$] = $\{3^+_{001}|00\frac{1}{3}\},\ \{3^-_{001}|00\frac{2}{3}\}$

[$\{6^+_{001}|00\frac{2}{3}\}$] = $\{6^+_{001}|00\frac{2}{3}\},\ \{6^-_{001}|00\frac{1}{3}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|00\frac{2}{3}\}$	⑤	$\{2_{110}\|00\frac{1}{3}\}$
⑥	$\{2_{120}\|0\}$	⑦	$\{2_{210}\|00\frac{2}{3}\}$	⑧	$\{2_{1-10}\|00\frac{1}{3}\}$	⑨	$\{3^+_{001}\|00\frac{1}{3}\}$	⑩	$\{3^-_{001}\|00\frac{2}{3}\}$
⑪	$\{6^+_{001}\|00\frac{2}{3}\}$	⑫	$\{6^-_{001}\|00\frac{1}{3}\}$						

No. 182 D_6^6 $P6_322$ [hexagonal] tag = "D6^6, D6"

* generator : $\{3^+_{001}|0\}$, $\{2_{001}|00\frac{1}{2}\}$, $\{2_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$

[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$, $\{2_{110}|0\}$

[$\{2_{120}|00\frac{1}{2}\}$] = $\{2_{120}|00\frac{1}{2}\}$, $\{2_{210}|00\frac{1}{2}\}$, $\{2_{1-10}|00\frac{1}{2}\}$

[$\{3^+_{001}|0\}$] = $\{3^+_{001}|0\}$, $\{3^-_{001}|0\}$

[$\{6^+_{001}|00\frac{1}{2}\}$] = $\{6^+_{001}|00\frac{1}{2}\}$, $\{6^-_{001}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|00\frac{1}{2}\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{120}\|00\frac{1}{2}\}$	⑦	$\{2_{210}\|00\frac{1}{2}\}$	⑧	$\{2_{1-10}\|00\frac{1}{2}\}$	⑨	$\{3^+_{001}\|0\}$	⑩	$\{3^-_{001}\|0\}$
⑪	$\{6^+_{001}\|00\frac{1}{2}\}$	⑫	$\{6^-_{001}\|00\frac{1}{2}\}$						

No. 183 C_{6v}^{1} $P6mm$ [hexagonal] tag = "C6v^1, C6v"

* generator : $\{3^{+}_{001}|0\}$, $\{2_{001}|0\}$, $\{m_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$

[$\{6^{+}_{001}|0\}$] = $\{6^{+}_{001}|0\}$, $\{6^{-}_{001}|0\}$

[$\{m_{100}|0\}$] = $\{m_{100}|0\}$, $\{m_{010}|0\}$, $\{m_{110}|0\}$

[$\{m_{120}|0\}$] = $\{m_{120}|0\}$, $\{m_{210}|0\}$, $\{m_{1-10}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{3^{+}_{001}|0\}$ ④ $\{3^{-}_{001}|0\}$ ⑤ $\{6^{+}_{001}|0\}$

⑥ $\{6^{-}_{001}|0\}$ ⑦ $\{m_{100}|0\}$ ⑧ $\{m_{010}|0\}$ ⑨ $\{m_{110}|0\}$ ⑩ $\{m_{120}|0\}$

⑪ $\{m_{210}|0\}$ ⑫ $\{m_{1-10}|0\}$

No. 184 C_{6v}^{2} $P6cc$ [hexagonal] tag = "C6v^2, C6v"

* generator : $\{3^{+}_{001}|0\}$, $\{2_{001}|0\}$, $\{\mathrm{m}_{110}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$

[$\{6^{+}_{001}|0\}$] = $\{6^{+}_{001}|0\}$, $\{6^{-}_{001}|0\}$

[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$, $\{\mathrm{m}_{110}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{120}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{120}|00\frac{1}{2}\}$, $\{\mathrm{m}_{210}|00\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{3^{+}_{001}\|0\}$	④	$\{3^{-}_{001}\|0\}$	⑤	$\{6^{+}_{001}\|0\}$
⑥	$\{6^{-}_{001}\|0\}$	⑦	$\{\mathrm{m}_{100}\|00\frac{1}{2}\}$	⑧	$\{\mathrm{m}_{010}\|00\frac{1}{2}\}$	⑨	$\{\mathrm{m}_{110}\|00\frac{1}{2}\}$	⑩	$\{\mathrm{m}_{120}\|00\frac{1}{2}\}$
⑪	$\{\mathrm{m}_{210}\|00\frac{1}{2}\}$	⑫	$\{\mathrm{m}_{1-10}\|00\frac{1}{2}\}$						

No. 185 C_{6v}^{3} $P6_{3}cm$ [hexagonal] tag = "C6v^3, C6v"

* generator : $\{3^{+}_{001}|0\}$, $\{2_{001}|00\frac{1}{2}\}$, $\{\mathrm{m}_{110}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$

[$\{6^{+}_{001}|00\frac{1}{2}\}$] = $\{6^{+}_{001}|00\frac{1}{2}\}$, $\{6^{-}_{001}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$, $\{\mathrm{m}_{110}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{120}|0\}$] = $\{\mathrm{m}_{120}|0\}$, $\{\mathrm{m}_{210}|0\}$, $\{\mathrm{m}_{1-10}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{3^{+}_{001}|0\}$ ④ $\{3^{-}_{001}|0\}$ ⑤ $\{6^{+}_{001}|00\frac{1}{2}\}$

⑥ $\{6^{-}_{001}|00\frac{1}{2}\}$ ⑦ $\{\mathrm{m}_{100}|00\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ⑨ $\{\mathrm{m}_{110}|00\frac{1}{2}\}$ ⑩ $\{\mathrm{m}_{120}|0\}$

⑪ $\{\mathrm{m}_{210}|0\}$ ⑫ $\{\mathrm{m}_{1-10}|0\}$

No. 186 C_{6v}^4 $P6_3mc$ [hexagonal] tag = "C6v^4, C6v"

* generator : $\{3^+_{001}|0\}$, $\{2_{001}|00\frac{1}{2}\}$, $\{\mathrm{m}_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$

[$\{3^+_{001}|0\}$] = $\{3^+_{001}|0\}$, $\{3^-_{001}|0\}$

[$\{6^+_{001}|00\frac{1}{2}\}$] = $\{6^+_{001}|00\frac{1}{2}\}$, $\{6^-_{001}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$, $\{\mathrm{m}_{010}|0\}$, $\{\mathrm{m}_{110}|0\}$

[$\{\mathrm{m}_{120}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{120}|00\frac{1}{2}\}$, $\{\mathrm{m}_{210}|00\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{001}|00\frac{1}{2}\}$ ③ $\{3^+_{001}|0\}$ ④ $\{3^-_{001}|0\}$ ⑤ $\{6^+_{001}|00\frac{1}{2}\}$
⑥ $\{6^-_{001}|00\frac{1}{2}\}$ ⑦ $\{\mathrm{m}_{100}|0\}$ ⑧ $\{\mathrm{m}_{010}|0\}$ ⑨ $\{\mathrm{m}_{110}|0\}$ ⑩ $\{\mathrm{m}_{120}|00\frac{1}{2}\}$
⑪ $\{\mathrm{m}_{210}|00\frac{1}{2}\}$ ⑫ $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$

No. 187 D_{3h}^{1} $P-6m2$ [hexagonal] tag = "D3h^1, D3h"

* generator : $\{3^{+}_{001}|0\}$, $\{\mathrm{m}_{001}|0\}$, $\{\mathrm{m}_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{120}|0\}$] = $\{2_{120}|0\}$, $\{2_{210}|0\}$, $\{2_{1-10}|0\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$

[$\{\mathrm{m}_{100}|0\}$] = $\{\mathrm{m}_{100}|0\}$, $\{\mathrm{m}_{010}|0\}$, $\{\mathrm{m}_{110}|0\}$

[$\{\mathrm{m}_{001}|0\}$] = $\{\mathrm{m}_{001}|0\}$

[$\{-6^{+}_{001}|0\}$] = $\{-6^{+}_{001}|0\}$, $\{-6^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{120}|0\}$ ③ $\{2_{210}|0\}$ ④ $\{2_{1-10}|0\}$ ⑤ $\{3^{+}_{001}|0\}$

⑥ $\{3^{-}_{001}|0\}$ ⑦ $\{\mathrm{m}_{100}|0\}$ ⑧ $\{\mathrm{m}_{010}|0\}$ ⑨ $\{\mathrm{m}_{110}|0\}$ ⑩ $\{\mathrm{m}_{001}|0\}$

⑪ $\{-6^{+}_{001}|0\}$ ⑫ $\{-6^{-}_{001}|0\}$

No. 188 D_{3h}^{2} $P-6c2$ [hexagonal] tag = "`D3h^2, D3h`"

* generator : $\{3^{+}_{001}|0\}$, $\{\mathrm{m}_{001}|00\frac{1}{2}\}$, $\{\mathrm{m}_{110}|00\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{120}|0\}$] = $\{2_{120}|0\}$, $\{2_{210}|0\}$, $\{2_{1-10}|0\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$

[$\{\mathrm{m}_{100}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{100}|00\frac{1}{2}\}$, $\{\mathrm{m}_{010}|00\frac{1}{2}\}$, $\{\mathrm{m}_{110}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{001}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{001}|00\frac{1}{2}\}$

[$\{-6^{+}_{001}|00\frac{1}{2}\}$] = $\{-6^{+}_{001}|00\frac{1}{2}\}$, $\{-6^{-}_{001}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{120}|0\}$ ③ $\{2_{210}|0\}$ ④ $\{2_{1-10}|0\}$ ⑤ $\{3^{+}_{001}|0\}$

⑥ $\{3^{-}_{001}|0\}$ ⑦ $\{\mathrm{m}_{100}|00\frac{1}{2}\}$ ⑧ $\{\mathrm{m}_{010}|00\frac{1}{2}\}$ ⑨ $\{\mathrm{m}_{110}|00\frac{1}{2}\}$ ⑩ $\{\mathrm{m}_{001}|00\frac{1}{2}\}$

⑪ $\{-6^{+}_{001}|00\frac{1}{2}\}$ ⑫ $\{-6^{-}_{001}|00\frac{1}{2}\}$

No. 189 D_{3h}^{3} $P-62m$ [hexagonal] tag = "D3h^3, D3h-1"

* generator : $\{3^{+}_{001}|0\}$, $\{\mathrm{m}_{001}|0\}$, $\{2_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$, $\{2_{110}|0\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$

[$\{\mathrm{m}_{001}|0\}$] = $\{\mathrm{m}_{001}|0\}$

[$\{\mathrm{m}_{120}|0\}$] = $\{\mathrm{m}_{120}|0\}$, $\{\mathrm{m}_{210}|0\}$, $\{\mathrm{m}_{1-10}|0\}$

[$\{-6^{+}_{001}|0\}$] = $\{-6^{+}_{001}|0\}$, $\{-6^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

① $\{1|0\}$ ② $\{2_{100}|0\}$ ③ $\{2_{010}|0\}$ ④ $\{2_{110}|0\}$ ⑤ $\{3^{+}_{001}|0\}$

⑥ $\{3^{-}_{001}|0\}$ ⑦ $\{\mathrm{m}_{001}|0\}$ ⑧ $\{\mathrm{m}_{120}|0\}$ ⑨ $\{\mathrm{m}_{210}|0\}$ ⑩ $\{\mathrm{m}_{1-10}|0\}$

⑪ $\{-6^{+}_{001}|0\}$ ⑫ $\{-6^{-}_{001}|0\}$

No. 190 D_{3h}^{4} $P-62c$ [hexagonal] tag = "D3h^4, D3h-1"

* generator : $\{3^{+}_{001}|0\}$, $\{\mathrm{m}_{001}|00\frac{1}{2}\}$, $\{2_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$, $\{2_{110}|0\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$

[$\{\mathrm{m}_{001}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{001}|00\frac{1}{2}\}$

[$\{\mathrm{m}_{120}|00\frac{1}{2}\}$] = $\{\mathrm{m}_{120}|00\frac{1}{2}\}$, $\{\mathrm{m}_{210}|00\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|00\frac{1}{2}\}$

[$\{-6^{+}_{001}|00\frac{1}{2}\}$] = $\{-6^{+}_{001}|00\frac{1}{2}\}$, $\{-6^{-}_{001}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{100}\|0\}$	③	$\{2_{010}\|0\}$	④	$\{2_{110}\|0\}$	⑤	$\{3^{+}_{001}\|0\}$
⑥	$\{3^{-}_{001}\|0\}$	⑦	$\{\mathrm{m}_{001}\|00\frac{1}{2}\}$	⑧	$\{\mathrm{m}_{120}\|00\frac{1}{2}\}$	⑨	$\{\mathrm{m}_{210}\|00\frac{1}{2}\}$	⑩	$\{\mathrm{m}_{1-10}\|00\frac{1}{2}\}$
⑪	$\{-6^{+}_{001}\|00\frac{1}{2}\}$	⑫	$\{-6^{-}_{001}\|00\frac{1}{2}\}$						

No. 191 D_{6h}^{1} $P6/mmm$ [hexagonal] tag = "D6h^1, D6h"

* generator : $\{3^{+}_{001}|0\}$, $\{2_{001}|0\}$, $\{2_{110}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|0\}$] = $\{2_{001}|0\}$
[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$, $\{2_{110}|0\}$
[$\{2_{120}|0\}$] = $\{2_{120}|0\}$, $\{2_{210}|0\}$, $\{2_{1-10}|0\}$
[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$
[$\{6^{+}_{001}|0\}$] = $\{6^{+}_{001}|0\}$, $\{6^{-}_{001}|0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{100}|0\}$] = $\{m_{100}|0\}$, $\{m_{010}|0\}$, $\{m_{110}|0\}$
[$\{m_{001}|0\}$] = $\{m_{001}|0\}$
[$\{m_{120}|0\}$] = $\{m_{120}|0\}$, $\{m_{210}|0\}$, $\{m_{1-10}|0\}$
[$\{-3^{+}_{001}|0\}$] = $\{-3^{+}_{001}|0\}$, $\{-3^{-}_{001}|0\}$
[$\{-6^{+}_{001}|0\}$] = $\{-6^{+}_{001}|0\}$, $\{-6^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix} 0 & 0 & 0 \end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{120}\|0\}$	⑦	$\{2_{210}\|0\}$	⑧	$\{2_{1-10}\|0\}$	⑨	$\{3^{+}_{001}\|0\}$	⑩	$\{3^{-}_{001}\|0\}$
⑪	$\{6^{+}_{001}\|0\}$	⑫	$\{6^{-}_{001}\|0\}$	⑬	$\{-1\|0\}$	⑭	$\{m_{100}\|0\}$	⑮	$\{m_{010}\|0\}$
⑯	$\{m_{110}\|0\}$	⑰	$\{m_{001}\|0\}$	⑱	$\{m_{120}\|0\}$	⑲	$\{m_{210}\|0\}$	⑳	$\{m_{1-10}\|0\}$
㉑	$\{-3^{+}_{001}\|0\}$	㉒	$\{-3^{-}_{001}\|0\}$	㉓	$\{-6^{+}_{001}\|0\}$	㉔	$\{-6^{-}_{001}\|0\}$		

No. 192 D_{6h}^{2} $P6/mcc$ [hexagonal] tag = "`D6h^2, D6h`"

* generator : $\{3^{+}_{001}|0\},\ \{2_{001}|0\},\ \{2_{110}|00\tfrac{1}{2}\},\ \{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$

[$\{2_{100}|00\tfrac{1}{2}\}$] = $\{2_{100}|00\tfrac{1}{2}\},\ \{2_{010}|00\tfrac{1}{2}\},\ \{2_{110}|00\tfrac{1}{2}\}$

[$\{2_{120}|00\tfrac{1}{2}\}$] = $\{2_{120}|00\tfrac{1}{2}\},\ \{2_{210}|00\tfrac{1}{2}\},\ \{2_{1-10}|00\tfrac{1}{2}\}$

[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\},\ \{3^{-}_{001}|0\}$

[$\{6^{+}_{001}|0\}$] = $\{6^{+}_{001}|0\},\ \{6^{-}_{001}|0\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{m_{100}|00\tfrac{1}{2}\}$] = $\{m_{100}|00\tfrac{1}{2}\},\ \{m_{010}|00\tfrac{1}{2}\},\ \{m_{110}|00\tfrac{1}{2}\}$

[$\{m_{001}|0\}$] = $\{m_{001}|0\}$

[$\{m_{120}|00\tfrac{1}{2}\}$] = $\{m_{120}|00\tfrac{1}{2}\},\ \{m_{210}|00\tfrac{1}{2}\},\ \{m_{1-10}|00\tfrac{1}{2}\}$

[$\{-3^{+}_{001}|0\}$] = $\{-3^{+}_{001}|0\},\ \{-3^{-}_{001}|0\}$

[$\{-6^{+}_{001}|0\}$] = $\{-6^{+}_{001}|0\},\ \{-6^{-}_{001}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|00\tfrac{1}{2}\}$	④	$\{2_{010}\|00\tfrac{1}{2}\}$	⑤	$\{2_{110}\|00\tfrac{1}{2}\}$
⑥	$\{2_{120}\|00\tfrac{1}{2}\}$	⑦	$\{2_{210}\|00\tfrac{1}{2}\}$	⑧	$\{2_{1-10}\|00\tfrac{1}{2}\}$	⑨	$\{3^{+}_{001}\|0\}$	⑩	$\{3^{-}_{001}\|0\}$
⑪	$\{6^{+}_{001}\|0\}$	⑫	$\{6^{-}_{001}\|0\}$	⑬	$\{-1\|0\}$	⑭	$\{m_{100}\|00\tfrac{1}{2}\}$	⑮	$\{m_{010}\|00\tfrac{1}{2}\}$
⑯	$\{m_{110}\|00\tfrac{1}{2}\}$	⑰	$\{m_{001}\|0\}$	⑱	$\{m_{120}\|00\tfrac{1}{2}\}$	⑲	$\{m_{210}\|00\tfrac{1}{2}\}$	⑳	$\{m_{1-10}\|00\tfrac{1}{2}\}$
㉑	$\{-3^{+}_{001}\|0\}$	㉒	$\{-3^{-}_{001}\|0\}$	㉓	$\{-6^{+}_{001}\|0\}$	㉔	$\{-6^{-}_{001}\|0\}$		

No. 193 D_{6h}^{3} $P6_3/mcm$ [hexagonal] tag = "D6h^3, D6h"

* generator : $\{3^{+}_{001}|0\}$, $\{2_{001}|00\frac{1}{2}\}$, $\{2_{110}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$
[$\{2_{100}|00\frac{1}{2}\}$] = $\{2_{100}|00\frac{1}{2}\}$, $\{2_{010}|00\frac{1}{2}\}$, $\{2_{110}|00\frac{1}{2}\}$
[$\{2_{120}|0\}$] = $\{2_{120}|0\}$, $\{2_{210}|0\}$, $\{2_{1-10}|0\}$
[$\{3^{+}_{001}|0\}$] = $\{3^{+}_{001}|0\}$, $\{3^{-}_{001}|0\}$
[$\{6^{+}_{001}|00\frac{1}{2}\}$] = $\{6^{+}_{001}|00\frac{1}{2}\}$, $\{6^{-}_{001}|00\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{100}|00\frac{1}{2}\}$] = $\{m_{100}|00\frac{1}{2}\}$, $\{m_{010}|00\frac{1}{2}\}$, $\{m_{110}|00\frac{1}{2}\}$
[$\{m_{001}|00\frac{1}{2}\}$] = $\{m_{001}|00\frac{1}{2}\}$
[$\{m_{120}|0\}$] = $\{m_{120}|0\}$, $\{m_{210}|0\}$, $\{m_{1-10}|0\}$
[$\{-3^{+}_{001}|0\}$] = $\{-3^{+}_{001}|0\}$, $\{-3^{-}_{001}|0\}$
[$\{-6^{+}_{001}|00\frac{1}{2}\}$] = $\{-6^{+}_{001}|00\frac{1}{2}\}$, $\{-6^{-}_{001}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix} 0 & 0 & 0 \end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|00\frac{1}{2}\}$	③	$\{2_{100}\|00\frac{1}{2}\}$	④	$\{2_{010}\|00\frac{1}{2}\}$	⑤	$\{2_{110}\|00\frac{1}{2}\}$
⑥	$\{2_{120}\|0\}$	⑦	$\{2_{210}\|0\}$	⑧	$\{2_{1-10}\|0\}$	⑨	$\{3^{+}_{001}\|0\}$	⑩	$\{3^{-}_{001}\|0\}$
⑪	$\{6^{+}_{001}\|00\frac{1}{2}\}$	⑫	$\{6^{-}_{001}\|00\frac{1}{2}\}$	⑬	$\{-1\|0\}$	⑭	$\{m_{100}\|00\frac{1}{2}\}$	⑮	$\{m_{010}\|00\frac{1}{2}\}$
⑯	$\{m_{110}\|00\frac{1}{2}\}$	⑰	$\{m_{001}\|00\frac{1}{2}\}$	⑱	$\{m_{120}\|0\}$	⑲	$\{m_{210}\|0\}$	⑳	$\{m_{1-10}\|0\}$
㉑	$\{-3^{+}_{001}\|0\}$	㉒	$\{-3^{-}_{001}\|0\}$	㉓	$\{-6^{+}_{001}\|00\frac{1}{2}\}$	㉔	$\{-6^{-}_{001}\|00\frac{1}{2}\}$		

No. 194 D_{6h}^4 $P6_3/mmc$ [hexagonal] tag = "D6h^4, D6h"

* generator : $\{3^+_{001}|0\}$, $\{2_{001}|00\frac{1}{2}\}$, $\{2_{110}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|00\frac{1}{2}\}$] = $\{2_{001}|00\frac{1}{2}\}$

[$\{2_{100}|0\}$] = $\{2_{100}|0\}$, $\{2_{010}|0\}$, $\{2_{110}|0\}$

[$\{2_{120}|00\frac{1}{2}\}$] = $\{2_{120}|00\frac{1}{2}\}$, $\{2_{210}|00\frac{1}{2}\}$, $\{2_{1-10}|00\frac{1}{2}\}$

[$\{3^+_{001}|0\}$] = $\{3^+_{001}|0\}$, $\{3^-_{001}|0\}$

[$\{6^+_{001}|00\frac{1}{2}\}$] = $\{6^+_{001}|00\frac{1}{2}\}$, $\{6^-_{001}|00\frac{1}{2}\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{m_{100}|0\}$] = $\{m_{100}|0\}$, $\{m_{010}|0\}$, $\{m_{110}|0\}$

[$\{m_{001}|00\frac{1}{2}\}$] = $\{m_{001}|00\frac{1}{2}\}$

[$\{m_{120}|00\frac{1}{2}\}$] = $\{m_{120}|00\frac{1}{2}\}$, $\{m_{210}|00\frac{1}{2}\}$, $\{m_{1-10}|00\frac{1}{2}\}$

[$\{-3^+_{001}|0\}$] = $\{-3^+_{001}|0\}$, $\{-3^-_{001}|0\}$

[$\{-6^+_{001}|00\frac{1}{2}\}$] = $\{-6^+_{001}|00\frac{1}{2}\}$, $\{-6^-_{001}|00\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|00\frac{1}{2}\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{120}\|00\frac{1}{2}\}$	⑦	$\{2_{210}\|00\frac{1}{2}\}$	⑧	$\{2_{1-10}\|00\frac{1}{2}\}$	⑨	$\{3^+_{001}\|0\}$	⑩	$\{3^-_{001}\|0\}$
⑪	$\{6^+_{001}\|00\frac{1}{2}\}$	⑫	$\{6^-_{001}\|00\frac{1}{2}\}$	⑬	$\{-1\|0\}$	⑭	$\{m_{100}\|0\}$	⑮	$\{m_{010}\|0\}$
⑯	$\{m_{110}\|0\}$	⑰	$\{m_{001}\|00\frac{1}{2}\}$	⑱	$\{m_{120}\|00\frac{1}{2}\}$	⑲	$\{m_{210}\|00\frac{1}{2}\}$	⑳	$\{m_{1-10}\|00\frac{1}{2}\}$
㉑	$\{-3^+_{001}\|0\}$	㉒	$\{-3^-_{001}\|0\}$	㉓	$\{-6^+_{001}\|00\frac{1}{2}\}$	㉔	$\{-6^-_{001}\|00\frac{1}{2}\}$		

No. 195 T^1 $P23$ [cubic] tag = "`T^1, T`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$, $\{3^{+}_{111}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$, $\{2_{100}|0\}$, $\{2_{010}|0\}$

[$\{3^{+}_{111}|0\}$] = $\{3^{+}_{111}|0\}$, $\{3^{+}_{1-1-1}|0\}$, $\{3^{+}_{-11-1}|0\}$, $\{3^{+}_{-1-11}|0\}$

[$\{3^{-}_{111}|0\}$] = $\{3^{-}_{111}|0\}$, $\{3^{-}_{1-1-1}|0\}$, $\{3^{-}_{-11-1}|0\}$, $\{3^{-}_{-1-11}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{3^{+}_{111}\|0\}$
⑥	$\{3^{+}_{1-1-1}\|0\}$	⑦	$\{3^{+}_{-11-1}\|0\}$	⑧	$\{3^{+}_{-1-11}\|0\}$	⑨	$\{3^{-}_{111}\|0\}$	⑩	$\{3^{-}_{1-1-1}\|0\}$
⑪	$\{3^{-}_{-11-1}\|0\}$	⑫	$\{3^{-}_{-1-11}\|0\}$						

No. 196 T^2 $F23$ [cubic] tag = "`T^2, T`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$, $\{3^{+}_{111}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$, $\{2_{100}|0\}$, $\{2_{010}|0\}$

[$\{3^{+}_{111}|0\}$] = $\{3^{+}_{111}|0\}$, $\{3^{+}_{1-1-1}|0\}$, $\{3^{+}_{-11-1}|0\}$, $\{3^{+}_{-1-11}|0\}$

[$\{3^{-}_{111}|0\}$] = $\{3^{-}_{111}|0\}$, $\{3^{-}_{1-1-1}|0\}$, $\{3^{-}_{-11-1}|0\}$, $\{3^{-}_{-1-11}|0\}$

* symmetry operation $+\left(0\ \ 0\ \ 0\right)$, $+\left(0\ \ \frac{1}{2}\ \ \frac{1}{2}\right)$, $+\left(\frac{1}{2}\ \ 0\ \ \frac{1}{2}\right)$, $+\left(\frac{1}{2}\ \ \frac{1}{2}\ \ 0\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{100}|0\}$ ④ $\{2_{010}|0\}$ ⑤ $\{3^{+}_{111}|0\}$

⑥ $\{3^{+}_{1-1-1}|0\}$ ⑦ $\{3^{+}_{-11-1}|0\}$ ⑧ $\{3^{+}_{-1-11}|0\}$ ⑨ $\{3^{-}_{111}|0\}$ ⑩ $\{3^{-}_{1-1-1}|0\}$

⑪ $\{3^{-}_{-11-1}|0\}$ ⑫ $\{3^{-}_{-1-11}|0\}$

No. 197 T^3 $I23$ [cubic] tag = "`T^3, T`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$, $\{3^{+}_{111}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$, $\{2_{100}|0\}$, $\{2_{010}|0\}$

[$\{3^{+}_{111}|0\}$] = $\{3^{+}_{111}|0\}$, $\{3^{+}_{1-1-1}|0\}$, $\{3^{+}_{-11-1}|0\}$, $\{3^{+}_{-1-11}|0\}$

[$\{3^{-}_{111}|0\}$] = $\{3^{-}_{111}|0\}$, $\{3^{-}_{1-1-1}|0\}$, $\{3^{-}_{-11-1}|0\}$, $\{3^{-}_{-1-11}|0\}$

* symmetry operation $+\left(0 \quad 0 \quad 0\right)$, $+\left(\frac{1}{2} \quad \frac{1}{2} \quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|0\}$ ③ $\{2_{100}|0\}$ ④ $\{2_{010}|0\}$ ⑤ $\{3^{+}_{111}|0\}$

⑥ $\{3^{+}_{1-1-1}|0\}$ ⑦ $\{3^{+}_{-11-1}|0\}$ ⑧ $\{3^{+}_{-1-11}|0\}$ ⑨ $\{3^{-}_{111}|0\}$ ⑩ $\{3^{-}_{1-1-1}|0\}$

⑪ $\{3^{-}_{-11-1}|0\}$ ⑫ $\{3^{-}_{-1-11}|0\}$

No. 198 T^4 $P2_13$ [cubic] tag = "T^4, T"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^+_{111}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^+_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^+_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$

[$\{3^-_{111}|0\}$] = $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{-11-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^-_{-1-11}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}0\frac{1}{2}\}$	③	$\{2_{100}\|\frac{1}{2}\frac{1}{2}0\}$	④	$\{2_{010}\|0\frac{1}{2}\frac{1}{2}\}$	⑤	$\{3^+_{111}\|0\}$
⑥	$\{3^+_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑦	$\{3^+_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑧	$\{3^+_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$	⑨	$\{3^-_{111}\|0\}$	⑩	$\{3^-_{1-1-1}\|0\frac{1}{2}\frac{1}{2}\}$
⑪	$\{3^-_{-11-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑫	$\{3^-_{-1-11}\|\frac{1}{2}\frac{1}{2}0\}$						

No. 199 T^5 $I2_13$ [cubic] tag = "`T^5, T`"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^+_{111}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^+_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^+_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$

[$\{3^-_{111}|0\}$] = $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{-11-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^-_{-1-11}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

① $\{1|0\}$ ② $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$ ③ $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$ ④ $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$ ⑤ $\{3^+_{111}|0\}$

⑥ $\{3^+_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$ ⑦ $\{3^+_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$ ⑧ $\{3^+_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$ ⑨ $\{3^-_{111}|0\}$ ⑩ $\{3^-_{1-1-1}|0\frac{1}{2}\frac{1}{2}\}$

⑪ $\{3^-_{-11-1}|\frac{1}{2}0\frac{1}{2}\}$ ⑫ $\{3^-_{-1-11}|\frac{1}{2}\frac{1}{2}0\}$

No. 200 T_h^1 $Pm-3$ [cubic] tag = "`Th^1, Th`"

* generator : $\{2_{001}|0\},\ \{2_{010}|0\},\ \{3^+_{111}|0\},\ \{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\},\ \{2_{100}|0\},\ \{2_{010}|0\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\},\ \{3^+_{1-1-1}|0\},\ \{3^+_{-11-1}|0\},\ \{3^+_{-1-11}|0\}$

[$\{3^-_{111}|0\}$] = $\{3^-_{111}|0\},\ \{3^-_{1-1-1}|0\},\ \{3^-_{-11-1}|0\},\ \{3^-_{-1-11}|0\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{\mathrm{m}_{001}|0\}$] = $\{\mathrm{m}_{001}|0\},\ \{\mathrm{m}_{100}|0\},\ \{\mathrm{m}_{010}|0\}$

[$\{-3^+_{111}|0\}$] = $\{-3^+_{111}|0\},\ \{-3^+_{1-1-1}|0\},\ \{-3^+_{-11-1}|0\},\ \{-3^+_{-1-11}|0\}$

[$\{-3^-_{111}|0\}$] = $\{-3^-_{111}|0\},\ \{-3^-_{1-1-1}|0\},\ \{-3^-_{-11-1}|0\},\ \{-3^-_{-1-11}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{3^+_{111}\|0\}$
⑥	$\{3^+_{1-1-1}\|0\}$	⑦	$\{3^+_{-11-1}\|0\}$	⑧	$\{3^+_{-1-11}\|0\}$	⑨	$\{3^-_{111}\|0\}$	⑩	$\{3^-_{1-1-1}\|0\}$
⑪	$\{3^-_{-11-1}\|0\}$	⑫	$\{3^-_{-1-11}\|0\}$	⑬	$\{-1\|0\}$	⑭	$\{\mathrm{m}_{001}\|0\}$	⑮	$\{\mathrm{m}_{100}\|0\}$
⑯	$\{\mathrm{m}_{010}\|0\}$	⑰	$\{-3^+_{111}\|0\}$	⑱	$\{-3^+_{1-1-1}\|0\}$	⑲	$\{-3^+_{-11-1}\|0\}$	⑳	$\{-3^+_{-1-11}\|0\}$
㉑	$\{-3^-_{111}\|0\}$	㉒	$\{-3^-_{1-1-1}\|0\}$	㉓	$\{-3^-_{-11-1}\|0\}$	㉔	$\{-3^-_{-1-11}\|0\}$		

No. 201 T_h^2 $Pn-3$ [cubic] tag = "`Th^2, Th`"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^+_{111}|0\}$, $\{-1|0\}$
* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{100}|0\frac{1}{2}\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$
[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^+_{-11-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^+_{-1-11}|\frac{1}{2}0\frac{1}{2}\}$
[$\{3^-_{111}|0\}$] = $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^-_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^-_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{m_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{m_{100}|0\frac{1}{2}\frac{1}{2}\}$, $\{m_{010}|\frac{1}{2}0\frac{1}{2}\}$
[$\{-3^+_{111}|0\}$] = $\{-3^+_{111}|0\}$, $\{-3^+_{1-1-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{-3^+_{-11-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{-3^+_{-1-11}|\frac{1}{2}0\frac{1}{2}\}$
[$\{-3^-_{111}|0\}$] = $\{-3^-_{111}|0\}$, $\{-3^-_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{-3^-_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{-3^-_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}\frac{1}{2}0\}$	③	$\{2_{100}\|0\frac{1}{2}\frac{1}{2}\}$	④	$\{2_{010}\|\frac{1}{2}0\frac{1}{2}\}$	⑤	$\{3^+_{111}\|0\}$
⑥	$\{3^+_{1-1-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑦	$\{3^+_{-11-1}\|0\frac{1}{2}\frac{1}{2}\}$	⑧	$\{3^+_{-1-11}\|\frac{1}{2}0\frac{1}{2}\}$	⑨	$\{3^-_{111}\|0\}$	⑩	$\{3^-_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$
⑪	$\{3^-_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑫	$\{3^-_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$	⑬	$\{-1\|0\}$	⑭	$\{m_{001}\|\frac{1}{2}\frac{1}{2}0\}$	⑮	$\{m_{100}\|0\frac{1}{2}\frac{1}{2}\}$
⑯	$\{m_{010}\|\frac{1}{2}0\frac{1}{2}\}$	⑰	$\{-3^+_{111}\|0\}$	⑱	$\{-3^+_{1-1-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑲	$\{-3^+_{-11-1}\|0\frac{1}{2}\frac{1}{2}\}$	⑳	$\{-3^+_{-1-11}\|\frac{1}{2}0\frac{1}{2}\}$
㉑	$\{-3^-_{111}\|0\}$	㉒	$\{-3^-_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$	㉓	$\{-3^-_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	㉔	$\{-3^-_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$		

No. 202 T_h^3 $Fm-3$ [cubic] tag = "`Th^3, Th`"

* generator : $\{2_{001}|0\},\ \{2_{010}|0\},\ \{3^+_{111}|0\},\ \{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\},\ \{2_{100}|0\},\ \{2_{010}|0\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\},\ \{3^+_{1-1-1}|0\},\ \{3^+_{-11-1}|0\},\ \{3^+_{-1-11}|0\}$

[$\{3^-_{111}|0\}$] = $\{3^-_{111}|0\},\ \{3^-_{1-1-1}|0\},\ \{3^-_{-11-1}|0\},\ \{3^-_{-1-11}|0\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{\mathrm{m}_{001}|0\}$] = $\{\mathrm{m}_{001}|0\},\ \{\mathrm{m}_{100}|0\},\ \{\mathrm{m}_{010}|0\}$

[$\{-3^+_{111}|0\}$] = $\{-3^+_{111}|0\},\ \{-3^+_{1-1-1}|0\},\ \{-3^+_{-11-1}|0\},\ \{-3^+_{-1-11}|0\}$

[$\{-3^-_{111}|0\}$] = $\{-3^-_{111}|0\},\ \{-3^-_{1-1-1}|0\},\ \{-3^-_{-11-1}|0\},\ \{-3^-_{-1-11}|0\}$

* symmetry operation $+\left(0\ \ 0\ \ 0\right),\ +\left(0\ \ \frac{1}{2}\ \ \frac{1}{2}\right),\ +\left(\frac{1}{2}\ \ 0\ \ \frac{1}{2}\right),\ +\left(\frac{1}{2}\ \ \frac{1}{2}\ \ 0\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{3^+_{111}\|0\}$
⑥	$\{3^+_{1-1-1}\|0\}$	⑦	$\{3^+_{-11-1}\|0\}$	⑧	$\{3^+_{-1-11}\|0\}$	⑨	$\{3^-_{111}\|0\}$	⑩	$\{3^-_{1-1-1}\|0\}$
⑪	$\{3^-_{-11-1}\|0\}$	⑫	$\{3^-_{-1-11}\|0\}$	⑬	$\{-1\|0\}$	⑭	$\{\mathrm{m}_{001}\|0\}$	⑮	$\{\mathrm{m}_{100}\|0\}$
⑯	$\{\mathrm{m}_{010}\|0\}$	⑰	$\{-3^+_{111}\|0\}$	⑱	$\{-3^+_{1-1-1}\|0\}$	⑲	$\{-3^+_{-11-1}\|0\}$	⑳	$\{-3^+_{-1-11}\|0\}$
㉑	$\{-3^-_{111}\|0\}$	㉒	$\{-3^-_{1-1-1}\|0\}$	㉓	$\{-3^-_{-11-1}\|0\}$	㉔	$\{-3^-_{-1-11}\|0\}$		

No. 203 T_h^4 $Fd-3$ [cubic] tag = "`Th^4, Th`"

* generator : $\{2_{001}|\frac{3}{4}\frac{3}{4}0\}$, $\{2_{010}|\frac{3}{4}0\frac{3}{4}\}$, $\{3^+_{111}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|\frac{3}{4}\frac{3}{4}0\}$] = $\{2_{001}|\frac{3}{4}\frac{3}{4}0\}$, $\{2_{100}|0\frac{3}{4}\frac{3}{4}\}$, $\{2_{010}|\frac{3}{4}0\frac{3}{4}\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|\frac{3}{4}\frac{3}{4}0\}$, $\{3^+_{-11-1}|0\frac{3}{4}\frac{3}{4}\}$, $\{3^+_{-1-11}|\frac{3}{4}0\frac{3}{4}\}$

[$\{3^-_{111}|0\}$] = $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|\frac{3}{4}0\frac{3}{4}\}$, $\{3^-_{-11-1}|\frac{3}{4}\frac{3}{4}0\}$, $\{3^-_{-1-11}|0\frac{3}{4}\frac{3}{4}\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{m_{001}|\frac{1}{4}\frac{1}{4}0\}$] = $\{m_{001}|\frac{1}{4}\frac{1}{4}0\}$, $\{m_{100}|0\frac{1}{4}\frac{1}{4}\}$, $\{m_{010}|\frac{1}{4}0\frac{1}{4}\}$

[$\{-3^+_{111}|0\}$] = $\{-3^+_{111}|0\}$, $\{-3^+_{1-1-1}|\frac{1}{4}\frac{1}{4}0\}$, $\{-3^+_{-11-1}|0\frac{1}{4}\frac{1}{4}\}$, $\{-3^+_{-1-11}|\frac{1}{4}0\frac{1}{4}\}$

[$\{-3^-_{111}|0\}$] = $\{-3^-_{111}|0\}$, $\{-3^-_{1-1-1}|\frac{1}{4}0\frac{1}{4}\}$, $\{-3^-_{-11-1}|\frac{1}{4}\frac{1}{4}0\}$, $\{-3^-_{-1-11}|0\frac{1}{4}\frac{1}{4}\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(0\quad \frac{1}{2}\quad \frac{1}{2}\right)$, $+\left(\frac{1}{2}\quad 0\quad \frac{1}{2}\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad 0\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{3}{4}\frac{3}{4}0\}$	③	$\{2_{100}\|0\frac{3}{4}\frac{3}{4}\}$	④	$\{2_{010}\|\frac{3}{4}0\frac{3}{4}\}$	⑤	$\{3^+_{111}\|0\}$
⑥	$\{3^+_{1-1-1}\|\frac{3}{4}\frac{3}{4}0\}$	⑦	$\{3^+_{-11-1}\|0\frac{3}{4}\frac{3}{4}\}$	⑧	$\{3^+_{-1-11}\|\frac{3}{4}0\frac{3}{4}\}$	⑨	$\{3^-_{111}\|0\}$	⑩	$\{3^-_{1-1-1}\|\frac{3}{4}0\frac{3}{4}\}$
⑪	$\{3^-_{-11-1}\|\frac{3}{4}\frac{3}{4}0\}$	⑫	$\{3^-_{-1-11}\|0\frac{3}{4}\frac{3}{4}\}$	⑬	$\{-1\|0\}$	⑭	$\{m_{001}\|\frac{1}{4}\frac{1}{4}0\}$	⑮	$\{m_{100}\|0\frac{1}{4}\frac{1}{4}\}$
⑯	$\{m_{010}\|\frac{1}{4}0\frac{1}{4}\}$	⑰	$\{-3^+_{111}\|0\}$	⑱	$\{-3^+_{1-1-1}\|\frac{1}{4}\frac{1}{4}0\}$	⑲	$\{-3^+_{-11-1}\|0\frac{1}{4}\frac{1}{4}\}$	⑳	$\{-3^+_{-1-11}\|\frac{1}{4}0\frac{1}{4}\}$
㉑	$\{-3^-_{111}\|0\}$	㉒	$\{-3^-_{1-1-1}\|\frac{1}{4}0\frac{1}{4}\}$	㉓	$\{-3^-_{-11-1}\|\frac{1}{4}\frac{1}{4}0\}$	㉔	$\{-3^-_{-1-11}\|0\frac{1}{4}\frac{1}{4}\}$		

No. 204 T_h^5 $Im-3$ [cubic] tag = "`Th^5, Th`"

* generator : $\{2_{001}|0\},\ \{2_{010}|0\},\ \{3^+_{111}|0\},\ \{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\},\ \{2_{100}|0\},\ \{2_{010}|0\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\},\ \{3^+_{1-1-1}|0\},\ \{3^+_{-11-1}|0\},\ \{3^+_{-1-11}|0\}$

[$\{3^-_{111}|0\}$] = $\{3^-_{111}|0\},\ \{3^-_{1-1-1}|0\},\ \{3^-_{-11-1}|0\},\ \{3^-_{-1-11}|0\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{\mathrm{m}_{001}|0\}$] = $\{\mathrm{m}_{001}|0\},\ \{\mathrm{m}_{100}|0\},\ \{\mathrm{m}_{010}|0\}$

[$\{-3^+_{111}|0\}$] = $\{-3^+_{111}|0\},\ \{-3^+_{1-1-1}|0\},\ \{-3^+_{-11-1}|0\},\ \{-3^+_{-1-11}|0\}$

[$\{-3^-_{111}|0\}$] = $\{-3^-_{111}|0\},\ \{-3^-_{1-1-1}|0\},\ \{-3^-_{-11-1}|0\},\ \{-3^-_{-1-11}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right),\quad +\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{3^+_{111}\|0\}$
⑥	$\{3^+_{1-1-1}\|0\}$	⑦	$\{3^+_{-11-1}\|0\}$	⑧	$\{3^+_{-1-11}\|0\}$	⑨	$\{3^-_{111}\|0\}$	⑩	$\{3^-_{1-1-1}\|0\}$
⑪	$\{3^-_{-11-1}\|0\}$	⑫	$\{3^-_{-1-11}\|0\}$	⑬	$\{-1\|0\}$	⑭	$\{\mathrm{m}_{001}\|0\}$	⑮	$\{\mathrm{m}_{100}\|0\}$
⑯	$\{\mathrm{m}_{010}\|0\}$	⑰	$\{-3^+_{111}\|0\}$	⑱	$\{-3^+_{1-1-1}\|0\}$	⑲	$\{-3^+_{-11-1}\|0\}$	⑳	$\{-3^+_{-1-11}\|0\}$
㉑	$\{-3^-_{111}\|0\}$	㉒	$\{-3^-_{1-1-1}\|0\}$	㉓	$\{-3^-_{-11-1}\|0\}$	㉔	$\{-3^-_{-1-11}\|0\}$		

No. 205 T_h^6 $Pa-3$ [cubic] tag = "`Th^6, Th`"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^+_{111}|0\}$, $\{-1|0\}$
* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$
[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^+_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^+_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$
[$\{3^-_{111}|0\}$] = $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{-11-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^-_{-1-11}|\frac{1}{2}\frac{1}{2}0\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{m_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{m_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{m_{010}|0\frac{1}{2}\frac{1}{2}\}$
[$\{-3^+_{111}|0\}$] = $\{-3^+_{111}|0\}$, $\{-3^+_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{-3^+_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{-3^+_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$
[$\{-3^-_{111}|0\}$] = $\{-3^-_{111}|0\}$, $\{-3^-_{1-1-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{-3^-_{-11-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{-3^-_{-1-11}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}0\frac{1}{2}\}$	③	$\{2_{100}\|\frac{1}{2}\frac{1}{2}0\}$	④	$\{2_{010}\|0\frac{1}{2}\frac{1}{2}\}$	⑤	$\{3^+_{111}\|0\}$
⑥	$\{3^+_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑦	$\{3^+_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑧	$\{3^+_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$	⑨	$\{3^-_{111}\|0\}$	⑩	$\{3^-_{1-1-1}\|0\frac{1}{2}\frac{1}{2}\}$
⑪	$\{3^-_{-11-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑫	$\{3^-_{-1-11}\|\frac{1}{2}\frac{1}{2}0\}$	⑬	$\{-1\|0\}$	⑭	$\{m_{001}\|\frac{1}{2}0\frac{1}{2}\}$	⑮	$\{m_{100}\|\frac{1}{2}\frac{1}{2}0\}$
⑯	$\{m_{010}\|0\frac{1}{2}\frac{1}{2}\}$	⑰	$\{-3^+_{111}\|0\}$	⑱	$\{-3^+_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑲	$\{-3^+_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑳	$\{-3^+_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$
㉑	$\{-3^-_{111}\|0\}$	㉒	$\{-3^-_{1-1-1}\|0\frac{1}{2}\frac{1}{2}\}$	㉓	$\{-3^-_{-11-1}\|\frac{1}{2}0\frac{1}{2}\}$	㉔	$\{-3^-_{-1-11}\|\frac{1}{2}\frac{1}{2}0\}$		

No. 206 T_h^7 $Ia-3$ [cubic] tag = "`Th^7, Th`"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^+_{111}|0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^+_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^+_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$

[$\{3^-_{111}|0\}$] = $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{-11-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^-_{-1-11}|\frac{1}{2}\frac{1}{2}0\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{m_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{m_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{m_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{m_{010}|0\frac{1}{2}\frac{1}{2}\}$

[$\{-3^+_{111}|0\}$] = $\{-3^+_{111}|0\}$, $\{-3^+_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{-3^+_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{-3^+_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$

[$\{-3^-_{111}|0\}$] = $\{-3^-_{111}|0\}$, $\{-3^-_{1-1-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{-3^-_{-11-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{-3^-_{-1-11}|\frac{1}{2}\frac{1}{2}0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad\frac{1}{2}\quad\frac{1}{2}\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}0\frac{1}{2}\}$	③	$\{2_{100}\|\frac{1}{2}\frac{1}{2}0\}$	④	$\{2_{010}\|0\frac{1}{2}\frac{1}{2}\}$	⑤	$\{3^+_{111}\|0\}$
⑥	$\{3^+_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑦	$\{3^+_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑧	$\{3^+_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$	⑨	$\{3^-_{111}\|0\}$	⑩	$\{3^-_{1-1-1}\|0\frac{1}{2}\frac{1}{2}\}$
⑪	$\{3^-_{-11-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑫	$\{3^-_{-1-11}\|\frac{1}{2}\frac{1}{2}0\}$	⑬	$\{-1\|0\}$	⑭	$\{m_{001}\|\frac{1}{2}0\frac{1}{2}\}$	⑮	$\{m_{100}\|\frac{1}{2}\frac{1}{2}0\}$
⑯	$\{m_{010}\|0\frac{1}{2}\frac{1}{2}\}$	⑰	$\{-3^+_{111}\|0\}$	⑱	$\{-3^+_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑲	$\{-3^+_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑳	$\{-3^+_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$
㉑	$\{-3^-_{111}\|0\}$	㉒	$\{-3^-_{1-1-1}\|0\frac{1}{2}\frac{1}{2}\}$	㉓	$\{-3^-_{-11-1}\|\frac{1}{2}0\frac{1}{2}\}$	㉔	$\{-3^-_{-1-11}\|\frac{1}{2}\frac{1}{2}0\}$		

No. 207 O^1 $P432$ [cubic] tag = "O^1, O"

* generator : $\{2_{001}|0\},\ \{2_{010}|0\},\ \{3^+_{111}|0\},\ \{2_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\},\ \{2_{100}|0\},\ \{2_{010}|0\}$

[$\{2_{110}|0\}$] = $\{2_{110}|0\},\ \{2_{101}|0\},\ \{2_{011}|0\},\ \{2_{1-10}|0\},\ \{2_{-101}|0\},\ \{2_{01-1}|0\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\},\ \{3^+_{1-1-1}|0\},\ \{3^+_{-11-1}|0\},\ \{3^+_{-1-11}|0\},\ \{3^-_{111}|0\},\ \{3^-_{1-1-1}|0\},\ \{3^-_{-11-1}|0\},\ \{3^-_{-1-11}|0\}$

[$\{4^+_{001}|0\}$] = $\{4^+_{001}|0\},\ \{4^+_{100}|0\},\ \{4^+_{010}|0\},\ \{4^-_{001}|0\},\ \{4^-_{100}|0\},\ \{4^-_{010}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{101}\|0\}$	⑦	$\{2_{011}\|0\}$	⑧	$\{2_{1-10}\|0\}$	⑨	$\{2_{-101}\|0\}$	⑩	$\{2_{01-1}\|0\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|0\}$	⑬	$\{3^+_{-11-1}\|0\}$	⑭	$\{3^+_{-1-11}\|0\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|0\}$	⑰	$\{3^-_{-11-1}\|0\}$	⑱	$\{3^-_{-1-11}\|0\}$	⑲	$\{4^+_{001}\|0\}$	⑳	$\{4^+_{100}\|0\}$
㉑	$\{4^+_{010}\|0\}$	㉒	$\{4^-_{001}\|0\}$	㉓	$\{4^-_{100}\|0\}$	㉔	$\{4^-_{010}\|0\}$		

No. 208 O^2 $P4_232$ [cubic] tag = "O^2, O"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$, $\{3^+_{111}|0\}$, $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$, $\{2_{100}|0\}$, $\{2_{010}|0\}$

[$\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{011}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{-101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{01-1}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|0\}$, $\{3^+_{-11-1}|0\}$, $\{3^+_{-1-11}|0\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\}$, $\{3^-_{-11-1}|0\}$, $\{3^-_{-1-11}|0\}$

[$\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^+_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^+_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^-_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^-_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑥	$\{2_{101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑦	$\{2_{011}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑧	$\{2_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑨	$\{2_{-101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑩	$\{2_{01-1}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|0\}$	⑬	$\{3^+_{-11-1}\|0\}$	⑭	$\{3^+_{-1-11}\|0\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|0\}$	⑰	$\{3^-_{-11-1}\|0\}$	⑱	$\{3^-_{-1-11}\|0\}$	⑲	$\{4^+_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑳	$\{4^+_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
㉑	$\{4^+_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉒	$\{4^-_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉓	$\{4^-_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉔	$\{4^-_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$		

No. 209 O^3 $F432$ [cubic] tag = "O^3, O"

* generator : $\{2_{001}|0\},\ \{2_{010}|0\},\ \{3^{+}_{111}|0\},\ \{2_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\},\ \{2_{100}|0\},\ \{2_{010}|0\}$

[$\{2_{110}|0\}$] = $\{2_{110}|0\},\ \{2_{101}|0\},\ \{2_{011}|0\},\ \{2_{1-10}|0\},\ \{2_{-101}|0\},\ \{2_{01-1}|0\}$

[$\{3^{+}_{111}|0\}$] = $\{3^{+}_{111}|0\},\ \{3^{+}_{1-1-1}|0\},\ \{3^{+}_{-11-1}|0\},\ \{3^{+}_{-1-11}|0\},\ \{3^{-}_{111}|0\},\ \{3^{-}_{1-1-1}|0\},\ \{3^{-}_{-11-1}|0\},\ \{3^{-}_{-1-11}|0\}$

[$\{4^{+}_{001}|0\}$] = $\{4^{+}_{001}|0\},\ \{4^{+}_{100}|0\},\ \{4^{+}_{010}|0\},\ \{4^{-}_{001}|0\},\ \{4^{-}_{100}|0\},\ \{4^{-}_{010}|0\}$

* symmetry operation $+\left(0\ \ 0\ \ 0\right),\ +\left(0\ \ \frac{1}{2}\ \ \frac{1}{2}\right),\ +\left(\frac{1}{2}\ \ 0\ \ \frac{1}{2}\right),\ +\left(\frac{1}{2}\ \ \frac{1}{2}\ \ 0\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{101}\|0\}$	⑦	$\{2_{011}\|0\}$	⑧	$\{2_{1-10}\|0\}$	⑨	$\{2_{-101}\|0\}$	⑩	$\{2_{01-1}\|0\}$
⑪	$\{3^{+}_{111}\|0\}$	⑫	$\{3^{+}_{1-1-1}\|0\}$	⑬	$\{3^{+}_{-11-1}\|0\}$	⑭	$\{3^{+}_{-1-11}\|0\}$	⑮	$\{3^{-}_{111}\|0\}$
⑯	$\{3^{-}_{1-1-1}\|0\}$	⑰	$\{3^{-}_{-11-1}\|0\}$	⑱	$\{3^{-}_{-1-11}\|0\}$	⑲	$\{4^{+}_{001}\|0\}$	⑳	$\{4^{+}_{100}\|0\}$
㉑	$\{4^{+}_{010}\|0\}$	㉒	$\{4^{-}_{001}\|0\}$	㉓	$\{4^{-}_{100}\|0\}$	㉔	$\{4^{-}_{010}\|0\}$		

No. 210 O^4 $F4_132$ [cubic] tag = "O^4, O"

* generator : $\{2_{001}|0\frac{1}{2}\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^+_{111}|0\}$, $\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\frac{1}{2}\frac{1}{2}\}$] = $\{2_{001}|0\frac{1}{2}\frac{1}{2}\}$, $\{2_{100}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}\frac{1}{2}0\}$

[$\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$] = $\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$, $\{2_{101}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$, $\{2_{011}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$, $\{2_{1-10}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$, $\{2_{-101}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$, $\{2_{01-1}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^+_{-11-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^+_{-1-11}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^-_{-11-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{-1-11}|\frac{1}{2}0\frac{1}{2}\}$

[$\{4^+_{001}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$] = $\{4^+_{001}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$, $\{4^+_{100}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$, $\{4^+_{010}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$, $\{4^-_{001}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$, $\{4^-_{100}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$, $\{4^-_{010}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(0\quad \frac{1}{2}\quad \frac{1}{2}\right)$, $+\left(\frac{1}{2}\quad 0\quad \frac{1}{2}\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad 0\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|0\frac{1}{2}\frac{1}{2}\}$	③	$\{2_{100}\|\frac{1}{2}0\frac{1}{2}\}$	④	$\{2_{010}\|\frac{1}{2}\frac{1}{2}0\}$	⑤	$\{2_{110}\|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$
⑥	$\{2_{101}\|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$	⑦	$\{2_{011}\|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$	⑧	$\{2_{1-10}\|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$	⑨	$\{2_{-101}\|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$	⑩	$\{2_{01-1}\|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|0\frac{1}{2}\frac{1}{2}\}$	⑬	$\{3^+_{-11-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑭	$\{3^+_{-1-11}\|\frac{1}{2}\frac{1}{2}0\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑰	$\{3^-_{-11-1}\|0\frac{1}{2}\frac{1}{2}\}$	⑱	$\{3^-_{-1-11}\|\frac{1}{2}0\frac{1}{2}\}$	⑲	$\{4^+_{001}\|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$	⑳	$\{4^+_{100}\|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$
㉑	$\{4^+_{010}\|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$	㉒	$\{4^-_{001}\|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$	㉓	$\{4^-_{100}\|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$	㉔	$\{4^-_{010}\|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$		

No. 211 O^5 $I432$ [cubic] tag = "O^5, O"

* generator : $\{2_{001}|0\},\ \{2_{010}|0\},\ \{3^+_{111}|0\},\ \{2_{110}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\},\ \{2_{100}|0\},\ \{2_{010}|0\}$

[$\{2_{110}|0\}$] = $\{2_{110}|0\},\ \{2_{101}|0\},\ \{2_{011}|0\},\ \{2_{1-10}|0\},\ \{2_{-101}|0\},\ \{2_{01-1}|0\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\},\ \{3^+_{1-1-1}|0\},\ \{3^+_{-11-1}|0\},\ \{3^+_{-1-11}|0\},\ \{3^-_{111}|0\},\ \{3^-_{1-1-1}|0\},\ \{3^-_{-11-1}|0\},\ \{3^-_{-1-11}|0\}$

[$\{4^+_{001}|0\}$] = $\{4^+_{001}|0\},\ \{4^+_{100}|0\},\ \{4^+_{010}|0\},\ \{4^-_{001}|0\},\ \{4^-_{100}|0\},\ \{4^-_{010}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right),\quad +\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{101}\|0\}$	⑦	$\{2_{011}\|0\}$	⑧	$\{2_{1-10}\|0\}$	⑨	$\{2_{-101}\|0\}$	⑩	$\{2_{01-1}\|0\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|0\}$	⑬	$\{3^+_{-11-1}\|0\}$	⑭	$\{3^+_{-1-11}\|0\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|0\}$	⑰	$\{3^-_{-11-1}\|0\}$	⑱	$\{3^-_{-1-11}\|0\}$	⑲	$\{4^+_{001}\|0\}$	⑳	$\{4^+_{100}\|0\}$
㉑	$\{4^+_{010}\|0\}$	㉒	$\{4^-_{001}\|0\}$	㉓	$\{4^-_{100}\|0\}$	㉔	$\{4^-_{010}\|0\}$		

No. 212 O^6 $P4_332$ [cubic] tag = "O^6, O"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^+_{111}|0\}$, $\{2_{110}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$

[$\{2_{110}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$] = $\{2_{110}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$, $\{2_{101}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$, $\{2_{011}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$, $\{2_{1-10}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$, $\{2_{-101}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$, $\{2_{01-1}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^+_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^+_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{-11-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^-_{-1-11}|\frac{1}{2}\frac{1}{2}0\}$

[$\{4^+_{001}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$] = $\{4^+_{001}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$, $\{4^+_{100}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$, $\{4^+_{010}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$, $\{4^-_{001}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$, $\{4^-_{100}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$, $\{4^-_{010}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}0\frac{1}{2}\}$	③	$\{2_{100}\|\frac{1}{2}\frac{1}{2}0\}$	④	$\{2_{010}\|0\frac{1}{2}\frac{1}{2}\}$	⑤	$\{2_{110}\|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$
⑥	$\{2_{101}\|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$	⑦	$\{2_{011}\|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$	⑧	$\{2_{1-10}\|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$	⑨	$\{2_{-101}\|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$	⑩	$\{2_{01-1}\|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑬	$\{3^+_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑭	$\{3^+_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|0\frac{1}{2}\frac{1}{2}\}$	⑰	$\{3^-_{-11-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑱	$\{3^-_{-1-11}\|\frac{1}{2}\frac{1}{2}0\}$	⑲	$\{4^+_{001}\|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$	⑳	$\{4^+_{100}\|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$
㉑	$\{4^+_{010}\|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$	㉒	$\{4^-_{001}\|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$	㉓	$\{4^-_{100}\|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$	㉔	$\{4^-_{010}\|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$		

No. 213 O^7 $P4_132$ [cubic] tag = "O^7, O"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^+_{111}|0\}$, $\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$

[$\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$] = $\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$, $\{2_{101}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$, $\{2_{011}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$, $\{2_{1-10}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$, $\{2_{-101}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$, $\{2_{01-1}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^+_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^+_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{-11-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^-_{-1-11}|\frac{1}{2}\frac{1}{2}0\}$

[$\{4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$] = $\{4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$, $\{4^+_{100}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$, $\{4^+_{010}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$, $\{4^-_{001}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$, $\{4^-_{100}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$, $\{4^-_{010}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}0\frac{1}{2}\}$	③	$\{2_{100}\|\frac{1}{2}\frac{1}{2}0\}$	④	$\{2_{010}\|0\frac{1}{2}\frac{1}{2}\}$	⑤	$\{2_{110}\|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$
⑥	$\{2_{101}\|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$	⑦	$\{2_{011}\|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$	⑧	$\{2_{1-10}\|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$	⑨	$\{2_{-101}\|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$	⑩	$\{2_{01-1}\|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑬	$\{3^+_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑭	$\{3^+_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|0\frac{1}{2}\frac{1}{2}\}$	⑰	$\{3^-_{-11-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑱	$\{3^-_{-1-11}\|\frac{1}{2}\frac{1}{2}0\}$	⑲	$\{4^+_{001}\|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$	⑳	$\{4^+_{100}\|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$
㉑	$\{4^+_{010}\|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$	㉒	$\{4^-_{001}\|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$	㉓	$\{4^-_{100}\|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$	㉔	$\{4^-_{010}\|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$		

No. 214 O^8 $I4_132$ [cubic] tag = "O^8, O"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^+_{111}|0\}$, $\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$

[$\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$] = $\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$, $\{2_{101}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$, $\{2_{011}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$, $\{2_{1-10}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$, $\{2_{-101}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$, $\{2_{01-1}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^+_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^+_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{-11-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^-_{-1-11}|\frac{1}{2}\frac{1}{2}0\}$

[$\{4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$] = $\{4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$, $\{4^+_{100}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$, $\{4^+_{010}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$, $\{4^-_{001}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$, $\{4^-_{100}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$, $\{4^-_{010}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}0\frac{1}{2}\}$	③	$\{2_{100}\|\frac{1}{2}\frac{1}{2}0\}$	④	$\{2_{010}\|0\frac{1}{2}\frac{1}{2}\}$	⑤	$\{2_{110}\|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$
⑥	$\{2_{101}\|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$	⑦	$\{2_{011}\|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$	⑧	$\{2_{1-10}\|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$	⑨	$\{2_{-101}\|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$	⑩	$\{2_{01-1}\|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑬	$\{3^+_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑭	$\{3^+_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|0\frac{1}{2}\frac{1}{2}\}$	⑰	$\{3^-_{-11-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑱	$\{3^-_{-1-11}\|\frac{1}{2}\frac{1}{2}0\}$	⑲	$\{4^+_{001}\|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$	⑳	$\{4^+_{100}\|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$
㉑	$\{4^+_{010}\|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$	㉒	$\{4^-_{001}\|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$	㉓	$\{4^-_{100}\|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$	㉔	$\{4^-_{010}\|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$		

No. 215 T_d^1 $P-43m$ [cubic] tag = "`Td^1, Td`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$, $\{3^+_{111}|0\}$, $\{\mathrm{m}_{1-10}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$, $\{2_{100}|0\}$, $\{2_{010}|0\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|0\}$, $\{3^+_{-11-1}|0\}$, $\{3^+_{-1-11}|0\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\}$, $\{3^-_{-11-1}|0\}$, $\{3^-_{-1-11}|0\}$

[$\{\mathrm{m}_{110}|0\}$] = $\{\mathrm{m}_{110}|0\}$, $\{\mathrm{m}_{101}|0\}$, $\{\mathrm{m}_{011}|0\}$, $\{\mathrm{m}_{1-10}|0\}$, $\{\mathrm{m}_{-101}|0\}$, $\{\mathrm{m}_{01-1}|0\}$

[$\{-4^+_{001}|0\}$] = $\{-4^+_{001}|0\}$, $\{-4^+_{100}|0\}$, $\{-4^+_{010}|0\}$, $\{-4^-_{001}|0\}$, $\{-4^-_{100}|0\}$, $\{-4^-_{010}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{3^+_{111}\|0\}$
⑥	$\{3^+_{1-1-1}\|0\}$	⑦	$\{3^+_{-11-1}\|0\}$	⑧	$\{3^+_{-1-11}\|0\}$	⑨	$\{3^-_{111}\|0\}$	⑩	$\{3^-_{1-1-1}\|0\}$
⑪	$\{3^-_{-11-1}\|0\}$	⑫	$\{3^-_{-1-11}\|0\}$	⑬	$\{\mathrm{m}_{110}\|0\}$	⑭	$\{\mathrm{m}_{101}\|0\}$	⑮	$\{\mathrm{m}_{011}\|0\}$
⑯	$\{\mathrm{m}_{1-10}\|0\}$	⑰	$\{\mathrm{m}_{-101}\|0\}$	⑱	$\{\mathrm{m}_{01-1}\|0\}$	⑲	$\{-4^+_{001}\|0\}$	⑳	$\{-4^+_{100}\|0\}$
㉑	$\{-4^+_{010}\|0\}$	㉒	$\{-4^-_{001}\|0\}$	㉓	$\{-4^-_{100}\|0\}$	㉔	$\{-4^-_{010}\|0\}$		

No. 216 T_d^2 $F-43m$ [cubic] tag = "`Td^2, Td`"

* generator : $\{2_{001}|0\},\ \{2_{010}|0\},\ \{3^{+}_{111}|0\},\ \{\mathrm{m}_{1-10}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\},\ \{2_{100}|0\},\ \{2_{010}|0\}$

[$\{3^{+}_{111}|0\}$] = $\{3^{+}_{111}|0\},\ \{3^{+}_{1-1-1}|0\},\ \{3^{+}_{-11-1}|0\},\ \{3^{+}_{-1-11}|0\},\ \{3^{-}_{111}|0\},\ \{3^{-}_{1-1-1}|0\},\ \{3^{-}_{-11-1}|0\},\ \{3^{-}_{-1-11}|0\}$

[$\{\mathrm{m}_{110}|0\}$] = $\{\mathrm{m}_{110}|0\},\ \{\mathrm{m}_{101}|0\},\ \{\mathrm{m}_{011}|0\},\ \{\mathrm{m}_{1-10}|0\},\ \{\mathrm{m}_{-101}|0\},\ \{\mathrm{m}_{01-1}|0\}$

[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\},\ \{-4^{+}_{100}|0\},\ \{-4^{+}_{010}|0\},\ \{-4^{-}_{001}|0\},\ \{-4^{-}_{100}|0\},\ \{-4^{-}_{010}|0\}$

* symmetry operation $+\left(0\ \ 0\ \ 0\right),\ +\left(0\ \ \frac{1}{2}\ \ \frac{1}{2}\right),\ +\left(\frac{1}{2}\ \ 0\ \ \frac{1}{2}\right),\ +\left(\frac{1}{2}\ \ \frac{1}{2}\ \ 0\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{3^{+}_{111}\|0\}$
⑥	$\{3^{+}_{1-1-1}\|0\}$	⑦	$\{3^{+}_{-11-1}\|0\}$	⑧	$\{3^{+}_{-1-11}\|0\}$	⑨	$\{3^{-}_{111}\|0\}$	⑩	$\{3^{-}_{1-1-1}\|0\}$
⑪	$\{3^{-}_{-11-1}\|0\}$	⑫	$\{3^{-}_{-1-11}\|0\}$	⑬	$\{\mathrm{m}_{110}\|0\}$	⑭	$\{\mathrm{m}_{101}\|0\}$	⑮	$\{\mathrm{m}_{011}\|0\}$
⑯	$\{\mathrm{m}_{1-10}\|0\}$	⑰	$\{\mathrm{m}_{-101}\|0\}$	⑱	$\{\mathrm{m}_{01-1}\|0\}$	⑲	$\{-4^{+}_{001}\|0\}$	⑳	$\{-4^{+}_{100}\|0\}$
㉑	$\{-4^{+}_{010}\|0\}$	㉒	$\{-4^{-}_{001}\|0\}$	㉓	$\{-4^{-}_{100}\|0\}$	㉔	$\{-4^{-}_{010}\|0\}$		

No. 217 T_d^3 $I-43m$ [cubic] tag = "`Td^3, Td`"

* generator : $\{2_{001}|0\},\ \{2_{010}|0\},\ \{3^{+}_{111}|0\},\ \{\mathrm{m}_{1-10}|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\},\ \{2_{100}|0\},\ \{2_{010}|0\}$

[$\{3^{+}_{111}|0\}$] = $\{3^{+}_{111}|0\},\ \{3^{+}_{1-1-1}|0\},\ \{3^{+}_{-11-1}|0\},\ \{3^{+}_{-1-11}|0\},\ \{3^{-}_{111}|0\},\ \{3^{-}_{1-1-1}|0\},\ \{3^{-}_{-11-1}|0\},\ \{3^{-}_{-1-11}|0\}$

[$\{\mathrm{m}_{110}|0\}$] = $\{\mathrm{m}_{110}|0\},\ \{\mathrm{m}_{101}|0\},\ \{\mathrm{m}_{011}|0\},\ \{\mathrm{m}_{1-10}|0\},\ \{\mathrm{m}_{-101}|0\},\ \{\mathrm{m}_{01-1}|0\}$

[$\{-4^{+}_{001}|0\}$] = $\{-4^{+}_{001}|0\},\ \{-4^{+}_{100}|0\},\ \{-4^{+}_{010}|0\},\ \{-4^{-}_{001}|0\},\ \{-4^{-}_{100}|0\},\ \{-4^{-}_{010}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right),\quad +\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{3^{+}_{111}\|0\}$
⑥	$\{3^{+}_{1-1-1}\|0\}$	⑦	$\{3^{+}_{-11-1}\|0\}$	⑧	$\{3^{+}_{-1-11}\|0\}$	⑨	$\{3^{-}_{111}\|0\}$	⑩	$\{3^{-}_{1-1-1}\|0\}$
⑪	$\{3^{-}_{-11-1}\|0\}$	⑫	$\{3^{-}_{-1-11}\|0\}$	⑬	$\{\mathrm{m}_{110}\|0\}$	⑭	$\{\mathrm{m}_{101}\|0\}$	⑮	$\{\mathrm{m}_{011}\|0\}$
⑯	$\{\mathrm{m}_{1-10}\|0\}$	⑰	$\{\mathrm{m}_{-101}\|0\}$	⑱	$\{\mathrm{m}_{01-1}\|0\}$	⑲	$\{-4^{+}_{001}\|0\}$	⑳	$\{-4^{+}_{100}\|0\}$
㉑	$\{-4^{+}_{010}\|0\}$	㉒	$\{-4^{-}_{001}\|0\}$	㉓	$\{-4^{-}_{100}\|0\}$	㉔	$\{-4^{-}_{010}\|0\}$		

No. 218 T_d^4 $P-43n$ [cubic] tag = "`Td^4, Td`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$, $\{3^+_{111}|0\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$, $\{2_{100}|0\}$, $\{2_{010}|0\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|0\}$, $\{3^+_{-11-1}|0\}$, $\{3^+_{-1-11}|0\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\}$, $\{3^-_{-11-1}|0\}$, $\{3^-_{-1-11}|0\}$

[$\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{011}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{-101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{01-1}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{-4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{-4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^+_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^+_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^-_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^-_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{3^+_{111}\|0\}$
⑥	$\{3^+_{1-1-1}\|0\}$	⑦	$\{3^+_{-11-1}\|0\}$	⑧	$\{3^+_{-1-11}\|0\}$	⑨	$\{3^-_{111}\|0\}$	⑩	$\{3^-_{1-1-1}\|0\}$
⑪	$\{3^-_{-11-1}\|0\}$	⑫	$\{3^-_{-1-11}\|0\}$	⑬	$\{\mathrm{m}_{110}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑭	$\{\mathrm{m}_{101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑮	$\{\mathrm{m}_{011}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑯	$\{\mathrm{m}_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑰	$\{\mathrm{m}_{-101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑱	$\{\mathrm{m}_{01-1}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑲	$\{-4^+_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑳	$\{-4^+_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
㉑	$\{-4^+_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉒	$\{-4^-_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉓	$\{-4^-_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉔	$\{-4^-_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$		

No. 219 T_d^5 $F-43c$ [cubic] tag = "`Td^5, Td`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$, $\{3^+_{111}|0\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$, $\{2_{100}|0\}$, $\{2_{010}|0\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|0\}$, $\{3^+_{-11-1}|0\}$, $\{3^+_{-1-11}|0\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\}$, $\{3^-_{-11-1}|0\}$, $\{3^-_{-1-11}|0\}$

[$\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{\mathrm{m}_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{011}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{-101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{01-1}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{-4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{-4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^+_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^+_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^-_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^-_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(0\quad \frac{1}{2}\quad \frac{1}{2}\right)$, $+\left(\frac{1}{2}\quad 0\quad \frac{1}{2}\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad 0\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{3^+_{111}\|0\}$
⑥	$\{3^+_{1-1-1}\|0\}$	⑦	$\{3^+_{-11-1}\|0\}$	⑧	$\{3^+_{-1-11}\|0\}$	⑨	$\{3^-_{111}\|0\}$	⑩	$\{3^-_{1-1-1}\|0\}$
⑪	$\{3^-_{-11-1}\|0\}$	⑫	$\{3^-_{-1-11}\|0\}$	⑬	$\{\mathrm{m}_{110}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑭	$\{\mathrm{m}_{101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑮	$\{\mathrm{m}_{011}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑯	$\{\mathrm{m}_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑰	$\{\mathrm{m}_{-101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑱	$\{\mathrm{m}_{01-1}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑲	$\{-4^+_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑳	$\{-4^+_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
㉑	$\{-4^+_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉒	$\{-4^-_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉓	$\{-4^-_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉔	$\{-4^-_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$		

No. 220 T_d^6 $I-43d$ [cubic] tag = "`Td^6, Td`"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^+_{111}|0\}$, $\{\mathrm{m}_{1-10}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^+_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^+_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{-11-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^-_{-1-11}|\frac{1}{2}\frac{1}{2}0\}$

[$\{\mathrm{m}_{110}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$] = $\{\mathrm{m}_{110}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$, $\{\mathrm{m}_{101}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$, $\{\mathrm{m}_{011}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$, $\{\mathrm{m}_{1-10}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$, $\{\mathrm{m}_{-101}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$, $\{\mathrm{m}_{01-1}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$

[$\{-4^+_{001}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$] = $\{-4^+_{001}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$, $\{-4^+_{100}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$, $\{-4^+_{010}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$, $\{-4^-_{001}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$, $\{-4^-_{100}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$, $\{-4^-_{010}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad\frac{1}{2}\quad\frac{1}{2}\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}0\frac{1}{2}\}$	③	$\{2_{100}\|\frac{1}{2}\frac{1}{2}0\}$	④	$\{2_{010}\|0\frac{1}{2}\frac{1}{2}\}$	⑤	$\{3^+_{111}\|0\}$
⑥	$\{3^+_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑦	$\{3^+_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑧	$\{3^+_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$	⑨	$\{3^-_{111}\|0\}$	⑩	$\{3^-_{1-1-1}\|0\frac{1}{2}\frac{1}{2}\}$
⑪	$\{3^-_{-11-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑫	$\{3^-_{-1-11}\|\frac{1}{2}\frac{1}{2}0\}$	⑬	$\{\mathrm{m}_{110}\|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$	⑭	$\{\mathrm{m}_{101}\|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$	⑮	$\{\mathrm{m}_{011}\|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$
⑯	$\{\mathrm{m}_{1-10}\|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$	⑰	$\{\mathrm{m}_{-101}\|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$	⑱	$\{\mathrm{m}_{01-1}\|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$	⑲	$\{-4^+_{001}\|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$	⑳	$\{-4^+_{100}\|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$
㉑	$\{-4^+_{010}\|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$	㉒	$\{-4^-_{001}\|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$	㉓	$\{-4^-_{100}\|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$	㉔	$\{-4^-_{010}\|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$		

No. 221 O_h^1 $Pm-3m$ [cubic] tag = "`Oh^1, Oh`"

* generator : $\{2_{001}|0\},\ \{2_{010}|0\},\ \{3^+_{111}|0\},\ \{2_{110}|0\},\ \{-1|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$

$[\ \{2_{001}|0\}\ ] = \quad \{2_{001}|0\},\ \{2_{100}|0\},\ \{2_{010}|0\}$

$[\ \{2_{110}|0\}\ ] = \quad \{2_{110}|0\},\ \{2_{101}|0\},\ \{2_{011}|0\},\ \{2_{1-10}|0\},\ \{2_{-101}|0\},\ \{2_{01-1}|0\}$

$[\ \{3^+_{111}|0\}\ ] = \quad \{3^+_{111}|0\},\ \{3^+_{1-1-1}|0\},\ \{3^+_{-11-1}|0\},\ \{3^+_{-1-11}|0\},\ \{3^-_{111}|0\},\ \{3^-_{1-1-1}|0\},\ \{3^-_{-11-1}|0\},\ \{3^-_{-1-11}|0\}$

$[\ \{4^+_{001}|0\}\ ] = \quad \{4^+_{001}|0\},\ \{4^+_{100}|0\},\ \{4^+_{010}|0\},\ \{4^-_{001}|0\},\ \{4^-_{100}|0\},\ \{4^-_{010}|0\}$

$[\ \{-1|0\}\ ] = \quad \{-1|0\}$

$[\ \{\mathrm{m}_{001}|0\}\ ] = \quad \{\mathrm{m}_{001}|0\},\ \{\mathrm{m}_{100}|0\},\ \{\mathrm{m}_{010}|0\}$

$[\ \{\mathrm{m}_{110}|0\}\ ] = \quad \{\mathrm{m}_{110}|0\},\ \{\mathrm{m}_{101}|0\},\ \{\mathrm{m}_{011}|0\},\ \{\mathrm{m}_{1-10}|0\},\ \{\mathrm{m}_{-101}|0\},\ \{\mathrm{m}_{01-1}|0\}$

$[\ \{-3^+_{111}|0\}\ ] = \quad \{-3^+_{111}|0\},\ \{-3^+_{1-1-1}|0\},\ \{-3^+_{-11-1}|0\},\ \{-3^+_{-1-11}|0\},\ \{-3^-_{111}|0\},\ \{-3^-_{1-1-1}|0\},\ \{-3^-_{-11-1}|0\},\ \{-3^-_{-1-11}|0\}$

$[\ \{-4^+_{001}|0\}\ ] = \quad \{-4^+_{001}|0\},\ \{-4^+_{100}|0\},\ \{-4^+_{010}|0\},\ \{-4^-_{001}|0\},\ \{-4^-_{100}|0\},\ \{-4^-_{010}|0\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{101}\|0\}$	⑦	$\{2_{011}\|0\}$	⑧	$\{2_{1-10}\|0\}$	⑨	$\{2_{-101}\|0\}$	⑩	$\{2_{01-1}\|0\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|0\}$	⑬	$\{3^+_{-11-1}\|0\}$	⑭	$\{3^+_{-1-11}\|0\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|0\}$	⑰	$\{3^-_{-11-1}\|0\}$	⑱	$\{3^-_{-1-11}\|0\}$	⑲	$\{4^+_{001}\|0\}$	⑳	$\{4^+_{100}\|0\}$
㉑	$\{4^+_{010}\|0\}$	㉒	$\{4^-_{001}\|0\}$	㉓	$\{4^-_{100}\|0\}$	㉔	$\{4^-_{010}\|0\}$	㉕	$\{-1\|0\}$
㉖	$\{\mathrm{m}_{001}\|0\}$	㉗	$\{\mathrm{m}_{100}\|0\}$	㉘	$\{\mathrm{m}_{010}\|0\}$	㉙	$\{\mathrm{m}_{110}\|0\}$	㉚	$\{\mathrm{m}_{101}\|0\}$
㉛	$\{\mathrm{m}_{011}\|0\}$	㉜	$\{\mathrm{m}_{1-10}\|0\}$	㉝	$\{\mathrm{m}_{-101}\|0\}$	㉞	$\{\mathrm{m}_{01-1}\|0\}$	㉟	$\{-3^+_{111}\|0\}$
㊱	$\{-3^+_{1-1-1}\|0\}$	㊲	$\{-3^+_{-11-1}\|0\}$	㊳	$\{-3^+_{-1-11}\|0\}$	㊴	$\{-3^-_{111}\|0\}$	㊵	$\{-3^-_{1-1-1}\|0\}$
㊶	$\{-3^-_{-11-1}\|0\}$	㊷	$\{-3^-_{-1-11}\|0\}$	㊸	$\{-4^+_{001}\|0\}$	㊹	$\{-4^+_{100}\|0\}$	㊺	$\{-4^+_{010}\|0\}$
㊻	$\{-4^-_{001}\|0\}$	㊼	$\{-4^-_{100}\|0\}$	㊽	$\{-4^-_{010}\|0\}$				

No. 222 O_h^2 $Pn-3n$ [cubic] tag = "Oh^2, Oh"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^+_{111}|0\}$, $\{2_{110}|00\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{100}|0\frac{1}{2}\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$

[$\{2_{110}|00\frac{1}{2}\}$] = $\{2_{110}|00\frac{1}{2}\}$, $\{2_{101}|0\frac{1}{2}0\}$, $\{2_{011}|\frac{1}{2}00\}$, $\{2_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{-101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{01-1}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^+_{-11-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^+_{-1-11}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^-_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^-_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$

[$\{4^+_{001}|\frac{1}{2}00\}$] = $\{4^+_{001}|\frac{1}{2}00\}$, $\{4^+_{100}|0\frac{1}{2}0\}$, $\{4^+_{010}|00\frac{1}{2}\}$, $\{4^-_{001}|0\frac{1}{2}0\}$, $\{4^-_{100}|00\frac{1}{2}\}$, $\{4^-_{010}|\frac{1}{2}00\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{m_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{m_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{m_{100}|0\frac{1}{2}\frac{1}{2}\}$, $\{m_{010}|\frac{1}{2}0\frac{1}{2}\}$

[$\{m_{110}|00\frac{1}{2}\}$] = $\{m_{110}|00\frac{1}{2}\}$, $\{m_{101}|0\frac{1}{2}0\}$, $\{m_{011}|\frac{1}{2}00\}$, $\{m_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{m_{-101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{m_{01-1}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{-3^+_{111}|0\}$] = $\{-3^+_{111}|0\}$, $\{-3^+_{1-1-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{-3^+_{-11-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{-3^+_{-1-11}|\frac{1}{2}0\frac{1}{2}\}$, $\{-3^-_{111}|0\}$, $\{-3^-_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{-3^-_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{-3^-_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$

[$\{-4^+_{001}|\frac{1}{2}00\}$] = $\{-4^+_{001}|\frac{1}{2}00\}$, $\{-4^+_{100}|0\frac{1}{2}0\}$, $\{-4^+_{010}|00\frac{1}{2}\}$, $\{-4^-_{001}|0\frac{1}{2}0\}$, $\{-4^-_{100}|00\frac{1}{2}\}$, $\{-4^-_{010}|\frac{1}{2}00\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}\frac{1}{2}0\}$	③	$\{2_{100}\|0\frac{1}{2}\frac{1}{2}\}$	④	$\{2_{010}\|\frac{1}{2}0\frac{1}{2}\}$	⑤	$\{2_{110}\|00\frac{1}{2}\}$
⑥	$\{2_{101}\|0\frac{1}{2}0\}$	⑦	$\{2_{011}\|\frac{1}{2}00\}$	⑧	$\{2_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑨	$\{2_{-101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑩	$\{2_{01-1}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑬	$\{3^+_{-11-1}\|0\frac{1}{2}\frac{1}{2}\}$	⑭	$\{3^+_{-1-11}\|\frac{1}{2}0\frac{1}{2}\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑰	$\{3^-_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑱	$\{3^-_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$	⑲	$\{4^+_{001}\|\frac{1}{2}00\}$	⑳	$\{4^+_{100}\|0\frac{1}{2}0\}$
㉑	$\{4^+_{010}\|00\frac{1}{2}\}$	㉒	$\{4^-_{001}\|0\frac{1}{2}0\}$	㉓	$\{4^-_{100}\|00\frac{1}{2}\}$	㉔	$\{4^-_{010}\|\frac{1}{2}00\}$	㉕	$\{-1\|0\}$
㉖	$\{m_{001}\|\frac{1}{2}\frac{1}{2}0\}$	㉗	$\{m_{100}\|0\frac{1}{2}\frac{1}{2}\}$	㉘	$\{m_{010}\|\frac{1}{2}0\frac{1}{2}\}$	㉙	$\{m_{110}\|00\frac{1}{2}\}$	㉚	$\{m_{101}\|0\frac{1}{2}0\}$
㉛	$\{m_{011}\|\frac{1}{2}00\}$	㉜	$\{m_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉝	$\{m_{-101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉞	$\{m_{01-1}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉟	$\{-3^+_{111}\|0\}$
㊱	$\{-3^+_{1-1-1}\|\frac{1}{2}\frac{1}{2}0\}$	㊲	$\{-3^+_{-11-1}\|0\frac{1}{2}\frac{1}{2}\}$	㊳	$\{-3^+_{-1-11}\|\frac{1}{2}0\frac{1}{2}\}$	㊴	$\{-3^-_{111}\|0\}$	㊵	$\{-3^-_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$
㊶	$\{-3^-_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	㊷	$\{-3^-_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$	㊸	$\{-4^+_{001}\|\frac{1}{2}00\}$	㊹	$\{-4^+_{100}\|0\frac{1}{2}0\}$	㊺	$\{-4^+_{010}\|00\frac{1}{2}\}$
㊻	$\{-4^-_{001}\|0\frac{1}{2}0\}$	㊼	$\{-4^-_{100}\|00\frac{1}{2}\}$	㊽	$\{-4^-_{010}\|\frac{1}{2}00\}$				

No. 223 O_h^3 $Pm-3n$ [cubic] tag = "`Oh^3, Oh`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$, $\{3^+_{111}|0\}$, $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$, $\{2_{100}|0\}$, $\{2_{010}|0\}$

[$\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{011}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{-101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{01-1}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|0\}$, $\{3^+_{-11-1}|0\}$, $\{3^+_{-1-11}|0\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\}$, $\{3^-_{-11-1}|0\}$, $\{3^-_{-1-11}|0\}$

[$\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^+_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^+_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^-_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^-_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{m_{001}|0\}$] = $\{m_{001}|0\}$, $\{m_{100}|0\}$, $\{m_{010}|0\}$

[$\{m_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{m_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{m_{101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{m_{011}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{m_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{m_{-101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{m_{01-1}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{-3^+_{111}|0\}$] = $\{-3^+_{111}|0\}$, $\{-3^+_{1-1-1}|0\}$, $\{-3^+_{-11-1}|0\}$, $\{-3^+_{-1-11}|0\}$, $\{-3^-_{111}|0\}$, $\{-3^-_{1-1-1}|0\}$, $\{-3^-_{-11-1}|0\}$, $\{-3^-_{-1-11}|0\}$

[$\{-4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{-4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^+_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^+_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^-_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^-_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑥	$\{2_{101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑦	$\{2_{011}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑧	$\{2_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑨	$\{2_{-101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑩	$\{2_{01-1}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|0\}$	⑬	$\{3^+_{-11-1}\|0\}$	⑭	$\{3^+_{-1-11}\|0\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|0\}$	⑰	$\{3^-_{-11-1}\|0\}$	⑱	$\{3^-_{-1-11}\|0\}$	⑲	$\{4^+_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑳	$\{4^+_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
㉑	$\{4^+_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉒	$\{4^-_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉓	$\{4^-_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉔	$\{4^-_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉕	$\{-1\|0\}$
㉖	$\{m_{001}\|0\}$	㉗	$\{m_{100}\|0\}$	㉘	$\{m_{010}\|0\}$	㉙	$\{m_{110}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉚	$\{m_{101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
㉛	$\{m_{011}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉜	$\{m_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉝	$\{m_{-101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉞	$\{m_{01-1}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉟	$\{-3^+_{111}\|0\}$
㊱	$\{-3^+_{1-1-1}\|0\}$	㊲	$\{-3^+_{-11-1}\|0\}$	㊳	$\{-3^+_{-1-11}\|0\}$	㊴	$\{-3^-_{111}\|0\}$	㊵	$\{-3^-_{1-1-1}\|0\}$
㊶	$\{-3^-_{-11-1}\|0\}$	㊷	$\{-3^-_{-1-11}\|0\}$	㊸	$\{-4^+_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㊹	$\{-4^+_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㊺	$\{-4^+_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
㊻	$\{-4^-_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㊼	$\{-4^-_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㊽	$\{-4^-_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$				

No. 224 O_h^4 $Pn-3m$ [cubic] tag = "`Oh^4, Oh`"

* generator : $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^+_{111}|0\}$, $\{2_{110}|\frac{1}{2}\frac{1}{2}0\}$, $\{-1|0\}$
* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$
[$\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{100}|0\frac{1}{2}\frac{1}{2}\}$, $\{2_{010}|\frac{1}{2}0\frac{1}{2}\}$
[$\{2_{110}|\frac{1}{2}\frac{1}{2}0\}$] = $\{2_{110}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{101}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{011}|0\frac{1}{2}\frac{1}{2}\}$, $\{2_{1-10}|0\}$, $\{2_{-101}|0\}$, $\{2_{01-1}|0\}$
[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^+_{-11-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^+_{-1-11}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^-_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^-_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$
[$\{4^+_{001}|0\frac{1}{2}\frac{1}{2}\}$] = $\{4^+_{001}|0\frac{1}{2}\frac{1}{2}\}$, $\{4^+_{100}|\frac{1}{2}0\frac{1}{2}\}$, $\{4^+_{010}|\frac{1}{2}\frac{1}{2}0\}$, $\{4^-_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{4^-_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{4^-_{010}|0\frac{1}{2}\frac{1}{2}\}$
[$\{-1|0\}$] = $\{-1|0\}$
[$\{m_{001}|\frac{1}{2}\frac{1}{2}0\}$] = $\{m_{001}|\frac{1}{2}\frac{1}{2}0\}$, $\{m_{100}|0\frac{1}{2}\frac{1}{2}\}$, $\{m_{010}|\frac{1}{2}0\frac{1}{2}\}$
[$\{m_{110}|\frac{1}{2}\frac{1}{2}0\}$] = $\{m_{110}|\frac{1}{2}\frac{1}{2}0\}$, $\{m_{101}|\frac{1}{2}0\frac{1}{2}\}$, $\{m_{011}|0\frac{1}{2}\frac{1}{2}\}$, $\{m_{1-10}|0\}$, $\{m_{-101}|0\}$, $\{m_{01-1}|0\}$
[$\{-3^+_{111}|0\}$] = $\{-3^+_{111}|0\}$, $\{-3^+_{1-1-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{-3^+_{-11-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{-3^+_{-1-11}|\frac{1}{2}0\frac{1}{2}\}$, $\{-3^-_{111}|0\}$, $\{-3^-_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{-3^-_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{-3^-_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$
[$\{-4^+_{001}|0\frac{1}{2}\frac{1}{2}\}$] = $\{-4^+_{001}|0\frac{1}{2}\frac{1}{2}\}$, $\{-4^+_{100}|\frac{1}{2}0\frac{1}{2}\}$, $\{-4^+_{010}|\frac{1}{2}\frac{1}{2}0\}$, $\{-4^-_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{-4^-_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{-4^-_{010}|0\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\begin{pmatrix}0 & 0 & 0\end{pmatrix}$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}\frac{1}{2}0\}$	③	$\{2_{100}\|0\frac{1}{2}\frac{1}{2}\}$	④	$\{2_{010}\|\frac{1}{2}0\frac{1}{2}\}$	⑤	$\{2_{110}\|\frac{1}{2}\frac{1}{2}0\}$
⑥	$\{2_{101}\|\frac{1}{2}0\frac{1}{2}\}$	⑦	$\{2_{011}\|0\frac{1}{2}\frac{1}{2}\}$	⑧	$\{2_{1-10}\|0\}$	⑨	$\{2_{-101}\|0\}$	⑩	$\{2_{01-1}\|0\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑬	$\{3^+_{-11-1}\|0\frac{1}{2}\frac{1}{2}\}$	⑭	$\{3^+_{-1-11}\|\frac{1}{2}0\frac{1}{2}\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑰	$\{3^-_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑱	$\{3^-_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$	⑲	$\{4^+_{001}\|0\frac{1}{2}\frac{1}{2}\}$	⑳	$\{4^+_{100}\|\frac{1}{2}0\frac{1}{2}\}$
㉑	$\{4^+_{010}\|\frac{1}{2}\frac{1}{2}0\}$	㉒	$\{4^-_{001}\|\frac{1}{2}0\frac{1}{2}\}$	㉓	$\{4^-_{100}\|\frac{1}{2}\frac{1}{2}0\}$	㉔	$\{4^-_{010}\|0\frac{1}{2}\frac{1}{2}\}$	㉕	$\{-1\|0\}$
㉖	$\{m_{001}\|\frac{1}{2}\frac{1}{2}0\}$	㉗	$\{m_{100}\|0\frac{1}{2}\frac{1}{2}\}$	㉘	$\{m_{010}\|\frac{1}{2}0\frac{1}{2}\}$	㉙	$\{m_{110}\|\frac{1}{2}\frac{1}{2}0\}$	㉚	$\{m_{101}\|\frac{1}{2}0\frac{1}{2}\}$
㉛	$\{m_{011}\|0\frac{1}{2}\frac{1}{2}\}$	㉜	$\{m_{1-10}\|0\}$	㉝	$\{m_{-101}\|0\}$	㉞	$\{m_{01-1}\|0\}$	㉟	$\{-3^+_{111}\|0\}$
㊱	$\{-3^+_{1-1-1}\|\frac{1}{2}\frac{1}{2}0\}$	㊲	$\{-3^+_{-11-1}\|0\frac{1}{2}\frac{1}{2}\}$	㊳	$\{-3^+_{-1-11}\|\frac{1}{2}0\frac{1}{2}\}$	㊴	$\{-3^-_{111}\|0\}$	㊵	$\{-3^-_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$
㊶	$\{-3^-_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	㊷	$\{-3^-_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$	㊸	$\{-4^+_{001}\|0\frac{1}{2}\frac{1}{2}\}$	㊹	$\{-4^+_{100}\|\frac{1}{2}0\frac{1}{2}\}$	㊺	$\{-4^+_{010}\|\frac{1}{2}\frac{1}{2}0\}$
㊻	$\{-4^-_{001}\|\frac{1}{2}0\frac{1}{2}\}$	㊼	$\{-4^-_{100}\|\frac{1}{2}\frac{1}{2}0\}$	㊽	$\{-4^-_{010}\|0\frac{1}{2}\frac{1}{2}\}$				

No. 225 O_h^5 $Fm-3m$ [cubic] tag = "`Oh^5, Oh`"

* generator : $\{2_{001}|0\},\ \{2_{010}|0\},\ \{3^+_{111}|0\},\ \{2_{110}|0\},\ \{-1|0\}$

* conjugacy class (point-group part)

$[\ \{1|0\}\ ] = \quad \{1|0\}$

$[\ \{2_{001}|0\}\ ] = \quad \{2_{001}|0\},\ \{2_{100}|0\},\ \{2_{010}|0\}$

$[\ \{2_{110}|0\}\ ] = \quad \{2_{110}|0\},\ \{2_{101}|0\},\ \{2_{011}|0\},\ \{2_{1-10}|0\},\ \{2_{-101}|0\},\ \{2_{01-1}|0\}$

$[\ \{3^+_{111}|0\}\ ] = \quad \{3^+_{111}|0\},\ \{3^+_{1-1-1}|0\},\ \{3^+_{-11-1}|0\},\ \{3^+_{-1-11}|0\},\ \{3^-_{111}|0\},\ \{3^-_{1-1-1}|0\},\ \{3^-_{-11-1}|0\},\ \{3^-_{-1-11}|0\}$

$[\ \{4^+_{001}|0\}\ ] = \quad \{4^+_{001}|0\},\ \{4^+_{100}|0\},\ \{4^+_{010}|0\},\ \{4^-_{001}|0\},\ \{4^-_{100}|0\},\ \{4^-_{010}|0\}$

$[\ \{-1|0\}\ ] = \quad \{-1|0\}$

$[\ \{\mathrm{m}_{001}|0\}\ ] = \quad \{\mathrm{m}_{001}|0\},\ \{\mathrm{m}_{100}|0\},\ \{\mathrm{m}_{010}|0\}$

$[\ \{\mathrm{m}_{110}|0\}\ ] = \quad \{\mathrm{m}_{110}|0\},\ \{\mathrm{m}_{101}|0\},\ \{\mathrm{m}_{011}|0\},\ \{\mathrm{m}_{1-10}|0\},\ \{\mathrm{m}_{-101}|0\},\ \{\mathrm{m}_{01-1}|0\}$

$[\ \{-3^+_{111}|0\}\ ] = \quad \{-3^+_{111}|0\},\ \{-3^+_{1-1-1}|0\},\ \{-3^+_{-11-1}|0\},\ \{-3^+_{-1-11}|0\},\ \{-3^-_{111}|0\},\ \{-3^-_{1-1-1}|0\},\ \{-3^-_{-11-1}|0\},\ \{-3^-_{-1-11}|0\}$

$[\ \{-4^+_{001}|0\}\ ] = \quad \{-4^+_{001}|0\},\ \{-4^+_{100}|0\},\ \{-4^+_{010}|0\},\ \{-4^-_{001}|0\},\ \{-4^-_{100}|0\},\ \{-4^-_{010}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right),\ +\left(0\quad \frac{1}{2}\quad \frac{1}{2}\right),\ +\left(\frac{1}{2}\quad 0\quad \frac{1}{2}\right),\ +\left(\frac{1}{2}\quad \frac{1}{2}\quad 0\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{101}\|0\}$	⑦	$\{2_{011}\|0\}$	⑧	$\{2_{1-10}\|0\}$	⑨	$\{2_{-101}\|0\}$	⑩	$\{2_{01-1}\|0\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|0\}$	⑬	$\{3^+_{-11-1}\|0\}$	⑭	$\{3^+_{-1-11}\|0\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|0\}$	⑰	$\{3^-_{-11-1}\|0\}$	⑱	$\{3^-_{-1-11}\|0\}$	⑲	$\{4^+_{001}\|0\}$	⑳	$\{4^+_{100}\|0\}$
㉑	$\{4^+_{010}\|0\}$	㉒	$\{4^-_{001}\|0\}$	㉓	$\{4^-_{100}\|0\}$	㉔	$\{4^-_{010}\|0\}$	㉕	$\{-1\|0\}$
㉖	$\{\mathrm{m}_{001}\|0\}$	㉗	$\{\mathrm{m}_{100}\|0\}$	㉘	$\{\mathrm{m}_{010}\|0\}$	㉙	$\{\mathrm{m}_{110}\|0\}$	㉚	$\{\mathrm{m}_{101}\|0\}$
㉛	$\{\mathrm{m}_{011}\|0\}$	㉜	$\{\mathrm{m}_{1-10}\|0\}$	㉝	$\{\mathrm{m}_{-101}\|0\}$	㉞	$\{\mathrm{m}_{01-1}\|0\}$	㉟	$\{-3^+_{111}\|0\}$
㊱	$\{-3^+_{1-1-1}\|0\}$	㊲	$\{-3^+_{-11-1}\|0\}$	㊳	$\{-3^+_{-1-11}\|0\}$	㊴	$\{-3^-_{111}\|0\}$	㊵	$\{-3^-_{1-1-1}\|0\}$
㊶	$\{-3^-_{-11-1}\|0\}$	㊷	$\{-3^-_{-1-11}\|0\}$	㊸	$\{-4^+_{001}\|0\}$	㊹	$\{-4^+_{100}\|0\}$	㊺	$\{-4^+_{010}\|0\}$
㊻	$\{-4^-_{001}\|0\}$	㊼	$\{-4^-_{100}\|0\}$	㊽	$\{-4^-_{010}\|0\}$				

No. 226 O_h^6 $Fm-3c$ [cubic] tag = "`Oh^6, Oh`"

* generator : $\{2_{001}|0\}$, $\{2_{010}|0\}$, $\{3^+_{111}|0\}$, $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\}$, $\{2_{100}|0\}$, $\{2_{010}|0\}$

[$\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{2_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{011}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{-101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{01-1}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|0\}$, $\{3^+_{-11-1}|0\}$, $\{3^+_{-1-11}|0\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\}$, $\{3^-_{-11-1}|0\}$, $\{3^-_{-1-11}|0\}$

[$\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^+_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^+_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^-_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{4^-_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{m_{001}|0\}$] = $\{m_{001}|0\}$, $\{m_{100}|0\}$, $\{m_{010}|0\}$

[$\{m_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{m_{110}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{m_{101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{m_{011}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{m_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{m_{-101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{m_{01-1}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{-3^+_{111}|0\}$] = $\{-3^+_{111}|0\}$, $\{-3^+_{1-1-1}|0\}$, $\{-3^+_{-11-1}|0\}$, $\{-3^+_{-1-11}|0\}$, $\{-3^-_{111}|0\}$, $\{-3^-_{1-1-1}|0\}$, $\{-3^-_{-11-1}|0\}$, $\{-3^-_{-1-11}|0\}$

[$\{-4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$] = $\{-4^+_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^+_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^+_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^-_{001}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^-_{100}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{-4^-_{010}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(0\quad \frac{1}{2}\quad \frac{1}{2}\right)$, $+\left(\frac{1}{2}\quad 0\quad \frac{1}{2}\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad 0\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑥	$\{2_{101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑦	$\{2_{011}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑧	$\{2_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑨	$\{2_{-101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑩	$\{2_{01-1}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|0\}$	⑬	$\{3^+_{-11-1}\|0\}$	⑭	$\{3^+_{-1-11}\|0\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|0\}$	⑰	$\{3^-_{-11-1}\|0\}$	⑱	$\{3^-_{-1-11}\|0\}$	⑲	$\{4^+_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑳	$\{4^+_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
㉑	$\{4^+_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉒	$\{4^-_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉓	$\{4^-_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉔	$\{4^-_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉕	$\{-1\|0\}$
㉖	$\{m_{001}\|0\}$	㉗	$\{m_{100}\|0\}$	㉘	$\{m_{010}\|0\}$	㉙	$\{m_{110}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉚	$\{m_{101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
㉛	$\{m_{011}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉜	$\{m_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉝	$\{m_{-101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉞	$\{m_{01-1}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉟	$\{-3^+_{111}\|0\}$
㊱	$\{-3^+_{1-1-1}\|0\}$	㊲	$\{-3^+_{-11-1}\|0\}$	㊳	$\{-3^+_{-1-11}\|0\}$	㊴	$\{-3^-_{111}\|0\}$	㊵	$\{-3^-_{1-1-1}\|0\}$
㊶	$\{-3^-_{-11-1}\|0\}$	㊷	$\{-3^-_{-1-11}\|0\}$	㊸	$\{-4^+_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㊹	$\{-4^+_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㊺	$\{-4^+_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
㊻	$\{-4^-_{001}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㊼	$\{-4^-_{100}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㊽	$\{-4^-_{010}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$				

No. 227 O_h^7 $Fd-3m$ [cubic] tag = "`Oh^7, Oh`"

* generator : $\{2_{001}|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$, $\{2_{010}|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$, $\{3^+_{111}|0\}$, $\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$] = $\{2_{001}|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$, $\{2_{100}|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$, $\{2_{010}|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$

[$\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$] = $\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$, $\{2_{101}|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$, $\{2_{011}|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$, $\{2_{1-10}|0\}$, $\{2_{-101}|0\}$, $\{2_{01-1}|0\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$, $\{3^+_{-11-1}|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$, $\{3^+_{-1-11}|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$, $\{3^-_{-11-1}|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$, $\{3^-_{-1-11}|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$

[$\{4^+_{001}|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$] = $\{4^+_{001}|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$, $\{4^+_{100}|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$, $\{4^+_{010}|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$, $\{4^-_{001}|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$, $\{4^-_{100}|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$, $\{4^-_{010}|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{m_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$] = $\{m_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$, $\{m_{100}|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$, $\{m_{010}|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$

[$\{m_{110}|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$] = $\{m_{110}|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$, $\{m_{101}|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$, $\{m_{011}|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$, $\{m_{1-10}|0\}$, $\{m_{-101}|0\}$, $\{m_{01-1}|0\}$

[$\{-3^+_{111}|0\}$] = $\{-3^+_{111}|0\}$, $\{-3^+_{1-1-1}|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$, $\{-3^+_{-11-1}|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$, $\{-3^+_{-1-11}|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$, $\{-3^-_{111}|0\}$, $\{-3^-_{1-1-1}|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$, $\{-3^-_{-11-1}|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$, $\{-3^-_{-1-11}|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$

[$\{-4^+_{001}|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$] = $\{-4^+_{001}|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$, $\{-4^+_{100}|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$, $\{-4^+_{010}|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$, $\{-4^-_{001}|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$, $\{-4^-_{100}|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$, $\{-4^-_{010}|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$

* symmetry operation $+\left(0\ \ 0\ \ 0\right)$, $+\left(0\ \ \frac{1}{2}\ \ \frac{1}{2}\right)$, $+\left(\frac{1}{2}\ \ 0\ \ \frac{1}{2}\right)$, $+\left(\frac{1}{2}\ \ \frac{1}{2}\ \ 0\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$	③	$\{2_{100}\|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$	④	$\{2_{010}\|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$	⑤	$\{2_{110}\|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$
⑥	$\{2_{101}\|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$	⑦	$\{2_{011}\|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$	⑧	$\{2_{1-10}\|0\}$	⑨	$\{2_{-101}\|0\}$	⑩	$\{2_{01-1}\|0\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$	⑬	$\{3^+_{-11-1}\|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$	⑭	$\{3^+_{-1-11}\|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$	⑰	$\{3^-_{-11-1}\|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$	⑱	$\{3^-_{-1-11}\|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$	⑲	$\{4^+_{001}\|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$	⑳	$\{4^+_{100}\|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$
㉑	$\{4^+_{010}\|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$	㉒	$\{4^-_{001}\|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$	㉓	$\{4^-_{100}\|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$	㉔	$\{4^-_{010}\|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$	㉕	$\{-1\|0\}$
㉖	$\{m_{001}\|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$	㉗	$\{m_{100}\|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$	㉘	$\{m_{010}\|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$	㉙	$\{m_{110}\|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$	㉚	$\{m_{101}\|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$
㉛	$\{m_{011}\|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$	㉜	$\{m_{1-10}\|0\}$	㉝	$\{m_{-101}\|0\}$	㉞	$\{m_{01-1}\|0\}$	㉟	$\{-3^+_{111}\|0\}$
㊱	$\{-3^+_{1-1-1}\|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$	㊲	$\{-3^+_{-11-1}\|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$	㊳	$\{-3^+_{-1-11}\|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$	㊴	$\{-3^-_{111}\|0\}$	㊵	$\{-3^-_{1-1-1}\|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$
㊶	$\{-3^-_{-11-1}\|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$	㊷	$\{-3^-_{-1-11}\|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$	㊸	$\{-4^+_{001}\|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$	㊹	$\{-4^+_{100}\|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$	㊺	$\{-4^+_{010}\|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$
㊻	$\{-4^-_{001}\|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$	㊼	$\{-4^-_{100}\|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$	㊽	$\{-4^-_{010}\|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$				

No. 228 O_h^8 $Fd-3c$ [cubic] tag = "`Oh^8, Oh`"

* generator : $\{2_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$, $\{2_{010}|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$, $\{3^{+}_{111}|0\}$, $\{2_{110}|\frac{3}{4}\frac{1}{4}0\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$, $\{2_{100}|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$, $\{2_{010}|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$

[$\{2_{110}|\frac{3}{4}\frac{1}{4}0\}$] = $\{2_{110}|\frac{3}{4}\frac{1}{4}0\}$, $\{2_{101}|\frac{1}{4}0\frac{3}{4}\}$, $\{2_{011}|0\frac{3}{4}\frac{1}{4}\}$, $\{2_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{-101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{2_{01-1}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{3^{+}_{111}|0\}$] = $\{3^{+}_{111}|0\}$, $\{3^{+}_{1-1-1}|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$, $\{3^{+}_{-11-1}|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$, $\{3^{+}_{-1-11}|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$, $\{3^{-}_{111}|0\}$, $\{3^{-}_{1-1-1}|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$, $\{3^{-}_{-11-1}|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$, $\{3^{-}_{-1-11}|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$

[$\{4^{+}_{001}|0\frac{3}{4}\frac{1}{4}\}$] = $\{4^{+}_{001}|0\frac{3}{4}\frac{1}{4}\}$, $\{4^{+}_{100}|\frac{1}{4}0\frac{3}{4}\}$, $\{4^{+}_{010}|\frac{3}{4}\frac{1}{4}0\}$, $\{4^{-}_{001}|\frac{1}{4}0\frac{3}{4}\}$, $\{4^{-}_{100}|\frac{3}{4}\frac{1}{4}0\}$, $\{4^{-}_{010}|0\frac{3}{4}\frac{1}{4}\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{\mathrm{m}_{001}|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$] = $\{\mathrm{m}_{001}|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$, $\{\mathrm{m}_{100}|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$, $\{\mathrm{m}_{010}|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$

[$\{\mathrm{m}_{110}|\frac{1}{4}\frac{3}{4}0\}$] = $\{\mathrm{m}_{110}|\frac{1}{4}\frac{3}{4}0\}$, $\{\mathrm{m}_{101}|\frac{3}{4}0\frac{1}{4}\}$, $\{\mathrm{m}_{011}|0\frac{1}{4}\frac{3}{4}\}$, $\{\mathrm{m}_{1-10}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{-101}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$, $\{\mathrm{m}_{01-1}|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$

[$\{-3^{+}_{111}|0\}$] = $\{-3^{+}_{111}|0\}$, $\{-3^{+}_{1-1-1}|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$, $\{-3^{+}_{-11-1}|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$, $\{-3^{+}_{-1-11}|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$, $\{-3^{-}_{111}|0\}$, $\{-3^{-}_{1-1-1}|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$, $\{-3^{-}_{-11-1}|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$, $\{-3^{-}_{-1-11}|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$

[$\{-4^{+}_{001}|0\frac{1}{4}\frac{3}{4}\}$] = $\{-4^{+}_{001}|0\frac{1}{4}\frac{3}{4}\}$, $\{-4^{+}_{100}|\frac{3}{4}0\frac{1}{4}\}$, $\{-4^{+}_{010}|\frac{1}{4}\frac{3}{4}0\}$, $\{-4^{-}_{001}|\frac{3}{4}0\frac{1}{4}\}$, $\{-4^{-}_{100}|\frac{1}{4}\frac{3}{4}0\}$, $\{-4^{-}_{010}|0\frac{1}{4}\frac{3}{4}\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(0\quad \frac{1}{2}\quad \frac{1}{2}\right)$, $+\left(\frac{1}{2}\quad 0\quad \frac{1}{2}\right)$, $+\left(\frac{1}{2}\quad \frac{1}{2}\quad 0\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$	③	$\{2_{100}\|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$	④	$\{2_{010}\|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$	⑤	$\{2_{110}\|\frac{3}{4}\frac{1}{4}0\}$
⑥	$\{2_{101}\|\frac{1}{4}0\frac{3}{4}\}$	⑦	$\{2_{011}\|0\frac{3}{4}\frac{1}{4}\}$	⑧	$\{2_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑨	$\{2_{-101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	⑩	$\{2_{01-1}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$
⑪	$\{3^{+}_{111}\|0\}$	⑫	$\{3^{+}_{1-1-1}\|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$	⑬	$\{3^{+}_{-11-1}\|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$	⑭	$\{3^{+}_{-1-11}\|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$	⑮	$\{3^{-}_{111}\|0\}$
⑯	$\{3^{-}_{1-1-1}\|\frac{3}{4}\frac{1}{2}\frac{1}{4}\}$	⑰	$\{3^{-}_{-11-1}\|\frac{1}{4}\frac{3}{4}\frac{1}{2}\}$	⑱	$\{3^{-}_{-1-11}\|\frac{1}{2}\frac{1}{4}\frac{3}{4}\}$	⑲	$\{4^{+}_{001}\|0\frac{3}{4}\frac{1}{4}\}$	⑳	$\{4^{+}_{100}\|\frac{1}{4}0\frac{3}{4}\}$
㉑	$\{4^{+}_{010}\|\frac{3}{4}\frac{1}{4}0\}$	㉒	$\{4^{-}_{001}\|\frac{1}{4}0\frac{3}{4}\}$	㉓	$\{4^{-}_{100}\|\frac{3}{4}\frac{1}{4}0\}$	㉔	$\{4^{-}_{010}\|0\frac{3}{4}\frac{1}{4}\}$	㉕	$\{-1\|0\}$
㉖	$\{\mathrm{m}_{001}\|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$	㉗	$\{\mathrm{m}_{100}\|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$	㉘	$\{\mathrm{m}_{010}\|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$	㉙	$\{\mathrm{m}_{110}\|\frac{1}{4}\frac{3}{4}0\}$	㉚	$\{\mathrm{m}_{101}\|\frac{3}{4}0\frac{1}{4}\}$
㉛	$\{\mathrm{m}_{011}\|0\frac{1}{4}\frac{3}{4}\}$	㉜	$\{\mathrm{m}_{1-10}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉝	$\{\mathrm{m}_{-101}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉞	$\{\mathrm{m}_{01-1}\|\frac{1}{2}\frac{1}{2}\frac{1}{2}\}$	㉟	$\{-3^{+}_{111}\|0\}$
㊱	$\{-3^{+}_{1-1-1}\|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$	㊲	$\{-3^{+}_{-11-1}\|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$	㊳	$\{-3^{+}_{-1-11}\|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$	㊴	$\{-3^{-}_{111}\|0\}$	㊵	$\{-3^{-}_{1-1-1}\|\frac{1}{4}\frac{1}{2}\frac{3}{4}\}$
㊶	$\{-3^{-}_{-11-1}\|\frac{3}{4}\frac{1}{4}\frac{1}{2}\}$	㊷	$\{-3^{-}_{-1-11}\|\frac{1}{2}\frac{3}{4}\frac{1}{4}\}$	㊸	$\{-4^{+}_{001}\|0\frac{1}{4}\frac{3}{4}\}$	㊹	$\{-4^{+}_{100}\|\frac{3}{4}0\frac{1}{4}\}$	㊺	$\{-4^{+}_{010}\|\frac{1}{4}\frac{3}{4}0\}$
㊻	$\{-4^{-}_{001}\|\frac{3}{4}0\frac{1}{4}\}$	㊼	$\{-4^{-}_{100}\|\frac{1}{4}\frac{3}{4}0\}$	㊽	$\{-4^{-}_{010}\|0\frac{1}{4}\frac{3}{4}\}$				

No. 229 O_h^9 $Im-3m$ [cubic] tag = "`Oh^9, Oh`"

* generator : $\{2_{001}|0\},\ \{2_{010}|0\},\ \{3^+_{111}|0\},\ \{2_{110}|0\},\ \{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|0\}$] = $\{2_{001}|0\},\ \{2_{100}|0\},\ \{2_{010}|0\}$

[$\{2_{110}|0\}$] = $\{2_{110}|0\},\ \{2_{101}|0\},\ \{2_{011}|0\},\ \{2_{1-10}|0\},\ \{2_{-101}|0\},\ \{2_{01-1}|0\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\},\ \{3^+_{1-1-1}|0\},\ \{3^+_{-11-1}|0\},\ \{3^+_{-1-11}|0\},\ \{3^-_{111}|0\},\ \{3^-_{1-1-1}|0\},\ \{3^-_{-11-1}|0\},\ \{3^-_{-1-11}|0\}$

[$\{4^+_{001}|0\}$] = $\{4^+_{001}|0\},\ \{4^+_{100}|0\},\ \{4^+_{010}|0\},\ \{4^-_{001}|0\},\ \{4^-_{100}|0\},\ \{4^-_{010}|0\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{\mathrm{m}_{001}|0\}$] = $\{\mathrm{m}_{001}|0\},\ \{\mathrm{m}_{100}|0\},\ \{\mathrm{m}_{010}|0\}$

[$\{\mathrm{m}_{110}|0\}$] = $\{\mathrm{m}_{110}|0\},\ \{\mathrm{m}_{101}|0\},\ \{\mathrm{m}_{011}|0\},\ \{\mathrm{m}_{1-10}|0\},\ \{\mathrm{m}_{-101}|0\},\ \{\mathrm{m}_{01-1}|0\}$

[$\{-3^+_{111}|0\}$] = $\{-3^+_{111}|0\},\ \{-3^+_{1-1-1}|0\},\ \{-3^+_{-11-1}|0\},\ \{-3^+_{-1-11}|0\},\ \{-3^-_{111}|0\},\ \{-3^-_{1-1-1}|0\},\ \{-3^-_{-11-1}|0\},\ \{-3^-_{-1-11}|0\}$

[$\{-4^+_{001}|0\}$] = $\{-4^+_{001}|0\},\ \{-4^+_{100}|0\},\ \{-4^+_{010}|0\},\ \{-4^-_{001}|0\},\ \{-4^-_{100}|0\},\ \{-4^-_{010}|0\}$

* symmetry operation $+\left(0\quad 0\quad 0\right),\quad +\left(\frac{1}{2}\quad \frac{1}{2}\quad \frac{1}{2}\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|0\}$	③	$\{2_{100}\|0\}$	④	$\{2_{010}\|0\}$	⑤	$\{2_{110}\|0\}$
⑥	$\{2_{101}\|0\}$	⑦	$\{2_{011}\|0\}$	⑧	$\{2_{1-10}\|0\}$	⑨	$\{2_{-101}\|0\}$	⑩	$\{2_{01-1}\|0\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|0\}$	⑬	$\{3^+_{-11-1}\|0\}$	⑭	$\{3^+_{-1-11}\|0\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|0\}$	⑰	$\{3^-_{-11-1}\|0\}$	⑱	$\{3^-_{-1-11}\|0\}$	⑲	$\{4^+_{001}\|0\}$	⑳	$\{4^+_{100}\|0\}$
㉑	$\{4^+_{010}\|0\}$	㉒	$\{4^-_{001}\|0\}$	㉓	$\{4^-_{100}\|0\}$	㉔	$\{4^-_{010}\|0\}$	㉕	$\{-1\|0\}$
㉖	$\{\mathrm{m}_{001}\|0\}$	㉗	$\{\mathrm{m}_{100}\|0\}$	㉘	$\{\mathrm{m}_{010}\|0\}$	㉙	$\{\mathrm{m}_{110}\|0\}$	㉚	$\{\mathrm{m}_{101}\|0\}$
㉛	$\{\mathrm{m}_{011}\|0\}$	㉜	$\{\mathrm{m}_{1-10}\|0\}$	㉝	$\{\mathrm{m}_{-101}\|0\}$	㉞	$\{\mathrm{m}_{01-1}\|0\}$	㉟	$\{-3^+_{111}\|0\}$
㊱	$\{-3^+_{1-1-1}\|0\}$	㊲	$\{-3^+_{-11-1}\|0\}$	㊳	$\{-3^+_{-1-11}\|0\}$	㊴	$\{-3^-_{111}\|0\}$	㊵	$\{-3^-_{1-1-1}\|0\}$
㊶	$\{-3^-_{-11-1}\|0\}$	㊷	$\{-3^-_{-1-11}\|0\}$	㊸	$\{-4^+_{001}\|0\}$	㊹	$\{-4^+_{100}\|0\}$	㊺	$\{-4^+_{010}\|0\}$
㊻	$\{-4^-_{001}\|0\}$	㊼	$\{-4^-_{100}\|0\}$	㊽	$\{-4^-_{010}\|0\}$				

No. 230 O_h^{10} $Ia-3d$ [cubic] tag = "Oh^10, Oh"

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^+_{111}|0\}$, $\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$, $\{-1|0\}$

* conjugacy class (point-group part)

[$\{1|0\}$] = $\{1|0\}$

[$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{2_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{2_{010}|0\frac{1}{2}\frac{1}{2}\}$

[$\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$] = $\{2_{110}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$, $\{2_{101}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$, $\{2_{011}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$, $\{2_{1-10}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$, $\{2_{-101}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$, $\{2_{01-1}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$

[$\{3^+_{111}|0\}$] = $\{3^+_{111}|0\}$, $\{3^+_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^+_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{3^+_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{111}|0\}$, $\{3^-_{1-1-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{3^-_{-11-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{3^-_{-1-11}|\frac{1}{2}\frac{1}{2}0\}$

[$\{4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$] = $\{4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$, $\{4^+_{100}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$, $\{4^+_{010}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$, $\{4^-_{001}|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$, $\{4^-_{100}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$, $\{4^-_{010}|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$

[$\{-1|0\}$] = $\{-1|0\}$

[$\{m_{001}|\frac{1}{2}0\frac{1}{2}\}$] = $\{m_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{m_{100}|\frac{1}{2}\frac{1}{2}0\}$, $\{m_{010}|0\frac{1}{2}\frac{1}{2}\}$

[$\{m_{110}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$] = $\{m_{110}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$, $\{m_{101}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$, $\{m_{011}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$, $\{m_{1-10}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$, $\{m_{-101}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$, $\{m_{01-1}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$

[$\{-3^+_{111}|0\}$] = $\{-3^+_{111}|0\}$, $\{-3^+_{1-1-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{-3^+_{-11-1}|\frac{1}{2}\frac{1}{2}0\}$, $\{-3^+_{-1-11}|0\frac{1}{2}\frac{1}{2}\}$, $\{-3^-_{111}|0\}$, $\{-3^-_{1-1-1}|0\frac{1}{2}\frac{1}{2}\}$, $\{-3^-_{-11-1}|\frac{1}{2}0\frac{1}{2}\}$, $\{-3^-_{-1-11}|\frac{1}{2}\frac{1}{2}0\}$

[$\{-4^+_{001}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$] = $\{-4^+_{001}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$, $\{-4^+_{100}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$, $\{-4^+_{010}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$, $\{-4^-_{001}|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$, $\{-4^-_{100}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$, $\{-4^-_{010}|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$

* symmetry operation $+\left(0\quad 0\quad 0\right)$, $+\left(\frac{1}{2}\quad\frac{1}{2}\quad\frac{1}{2}\right)$

①	$\{1\|0\}$	②	$\{2_{001}\|\frac{1}{2}0\frac{1}{2}\}$	③	$\{2_{100}\|\frac{1}{2}\frac{1}{2}0\}$	④	$\{2_{010}\|0\frac{1}{2}\frac{1}{2}\}$	⑤	$\{2_{110}\|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$
⑥	$\{2_{101}\|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$	⑦	$\{2_{011}\|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$	⑧	$\{2_{1-10}\|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$	⑨	$\{2_{-101}\|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$	⑩	$\{2_{01-1}\|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$
⑪	$\{3^+_{111}\|0\}$	⑫	$\{3^+_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑬	$\{3^+_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	⑭	$\{3^+_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$	⑮	$\{3^-_{111}\|0\}$
⑯	$\{3^-_{1-1-1}\|0\frac{1}{2}\frac{1}{2}\}$	⑰	$\{3^-_{-11-1}\|\frac{1}{2}0\frac{1}{2}\}$	⑱	$\{3^-_{-1-11}\|\frac{1}{2}\frac{1}{2}0\}$	⑲	$\{4^+_{001}\|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$	⑳	$\{4^+_{100}\|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$
㉑	$\{4^+_{010}\|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$	㉒	$\{4^-_{001}\|\frac{1}{4}\frac{1}{4}\frac{3}{4}\}$	㉓	$\{4^-_{100}\|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$	㉔	$\{4^-_{010}\|\frac{1}{4}\frac{3}{4}\frac{1}{4}\}$	㉕	$\{-1\|0\}$
㉖	$\{m_{001}\|\frac{1}{2}0\frac{1}{2}\}$	㉗	$\{m_{100}\|\frac{1}{2}\frac{1}{2}0\}$	㉘	$\{m_{010}\|0\frac{1}{2}\frac{1}{2}\}$	㉙	$\{m_{110}\|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$	㉚	$\{m_{101}\|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$
㉛	$\{m_{011}\|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$	㉜	$\{m_{1-10}\|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$	㉝	$\{m_{-101}\|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$	㉞	$\{m_{01-1}\|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$	㉟	$\{-3^+_{111}\|0\}$
㊱	$\{-3^+_{1-1-1}\|\frac{1}{2}0\frac{1}{2}\}$	㊲	$\{-3^+_{-11-1}\|\frac{1}{2}\frac{1}{2}0\}$	㊳	$\{-3^+_{-1-11}\|0\frac{1}{2}\frac{1}{2}\}$	㊴	$\{-3^-_{111}\|0\}$	㊵	$\{-3^-_{1-1-1}\|0\frac{1}{2}\frac{1}{2}\}$
㊶	$\{-3^-_{-11-1}\|\frac{1}{2}0\frac{1}{2}\}$	㊷	$\{-3^-_{-1-11}\|\frac{1}{2}\frac{1}{2}0\}$	㊸	$\{-4^+_{001}\|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$	㊹	$\{-4^+_{100}\|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$	㊺	$\{-4^+_{010}\|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$
㊻	$\{-4^-_{001}\|\frac{3}{4}\frac{3}{4}\frac{1}{4}\}$	㊼	$\{-4^-_{100}\|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$	㊽	$\{-4^-_{010}\|\frac{3}{4}\frac{1}{4}\frac{3}{4}\}$				