

PG No. 6  $D_2$  222 [ orthorhombic ]

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

\* conjugacy class

- [1] : 1
- [2<sub>001</sub>] : 2<sub>001</sub>
- [2<sub>010</sub>] : 2<sub>010</sub>
- [2<sub>100</sub>] : 2<sub>100</sub>

\* symmetry operation

Table 1: Symmetry operations for 3d polar vector.

No.	tag	matrix (polar)	det
1	1	$\begin{bmatrix} 1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$	1
2	2 <sub>001</sub>	$\begin{bmatrix} -1 & 0 & 0 \\ 0 & -1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$	1
3	2 <sub>010</sub>	$\begin{bmatrix} -1 & 0 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & -1 \end{bmatrix}$	1
4	2 <sub>100</sub>	$\begin{bmatrix} 1 & 0 & 0 \\ 0 & -1 & 0 \\ 0 & 0 & -1 \end{bmatrix}$	1