PG No. 24 D_6 622 [hexagonal]

* generator : $3^+_{001},\ 2_{001},\ 2_{110}$
* conjugacy class

$[1]$: 1
$[2_{001}]$: 2_{001}
$[2_{100}]$: $2_{100},\ 2_{010},\ 2_{110}$
$[2_{120}]$: $2_{120},\ 2_{210},\ 2_{1-10}$
$[3^+_{001}]$: $3^+_{001},\ 3^-_{001}$
$[6^+_{001}]$: $6^+_{001},\ 6^-_{001}$

* 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	3^+_{001}	$\begin{bmatrix} 0 & -1 & 0 \\ 1 & -1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$	1
3	3^-_{001}	$\begin{bmatrix} -1 & 1 & 0 \\ -1 & 0 & 0 \\ 0 & 0 & 1 \end{bmatrix}$	1
4	2_{001}	$\begin{bmatrix} -1 & 0 & 0 \\ 0 & -1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$	1
5	6^-_{001}	$\begin{bmatrix} 0 & 1 & 0 \\ -1 & 1 & 0 \\ 0 & 0 & 1 \end{bmatrix}$	1
6	6^+_{001}	$\begin{bmatrix} 1 & -1 & 0 \\ 1 & 0 & 0 \\ 0 & 0 & 1 \end{bmatrix}$	1
7	2_{110}	$\begin{bmatrix} 0 & 1 & 0 \\ 1 & 0 & 0 \\ 0 & 0 & -1 \end{bmatrix}$	1
8	2_{100}	$\begin{bmatrix} 1 & -1 & 0 \\ 0 & -1 & 0 \\ 0 & 0 & -1 \end{bmatrix}$	1
9	2_{010}	$\begin{bmatrix} -1 & 0 & 0 \\ -1 & 1 & 0 \\ 0 & 0 & -1 \end{bmatrix}$	1
10	2_{1-10}	$\begin{bmatrix} 0 & -1 & 0 \\ -1 & 0 & 0 \\ 0 & 0 & -1 \end{bmatrix}$	1
11	2_{120}	$\begin{bmatrix} -1 & 1 & 0 \\ 0 & 1 & 0 \\ 0 & 0 & -1 \end{bmatrix}$	1

continued ...

Table 1

No.	tag	matrix (polar)	det
12	2_{210}	$\begin{bmatrix} 1 & 0 & 0 \\ 1 & -1 & 0 \\ 0 & 0 & -1 \end{bmatrix}$	1