SG No. 88 C_{4h}^6 $I4_1/a$ [tetragonal]

* generator : $\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$, $\{4^+_{001}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$, $\{-1|0\}$
* symmetry operation $+[0, 0, 0]$, $+\left[\frac{1}{2}, \frac{1}{2}, \frac{1}{2}\right]$

Table 1: Symmetry operations for 3d polar vector.

No.	tag	matrix (polar)	det
1	$\{1|0\}$	$\begin{bmatrix} 1 & 0 & 0 & 0 \\ 0 & 1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}$	1
2	$\{2_{001}|\frac{1}{2}0\frac{1}{2}\}$	$\begin{bmatrix} -1 & 0 & 0 & \frac{1}{2} \\ 0 & -1 & 0 & 0 \\ 0 & 0 & 1 & \frac{1}{2} \end{bmatrix}$	1
3	$\{4^+_{001}|\frac{3}{4}\frac{1}{4}\frac{1}{4}\}$	$\begin{bmatrix} 0 & -1 & 0 & \frac{3}{4} \\ 1 & 0 & 0 & \frac{1}{4} \\ 0 & 0 & 1 & \frac{1}{4} \end{bmatrix}$	1
4	$\{4^-_{001}|\frac{3}{4}\frac{3}{4}\frac{3}{4}\}$	$\begin{bmatrix} 0 & 1 & 0 & \frac{3}{4} \\ -1 & 0 & 0 & \frac{3}{4} \\ 0 & 0 & 1 & \frac{3}{4} \end{bmatrix}$	1
5	$\{-1|0\}$	$\begin{bmatrix} -1 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 \\ 0 & 0 & -1 & 0 \end{bmatrix}$	-1
6	$\{m_{001}|\frac{1}{2}0\frac{1}{2}\}$	$\begin{bmatrix} 1 & 0 & 0 & \frac{1}{2} \\ 0 & 1 & 0 & 0 \\ 0 & 0 & -1 & \frac{1}{2} \end{bmatrix}$	-1
7	$\{-4^+_{001}|\frac{1}{4}\frac{3}{4}\frac{3}{4}\}$	$\begin{bmatrix} 0 & 1 & 0 & \frac{1}{4} \\ -1 & 0 & 0 & \frac{3}{4} \\ 0 & 0 & -1 & \frac{3}{4} \end{bmatrix}$	-1
8	$\{-4^-_{001}|\frac{1}{4}\frac{1}{4}\frac{1}{4}\}$	$\begin{bmatrix} 0 & -1 & 0 & \frac{1}{4} \\ 1 & 0 & 0 & \frac{1}{4} \\ 0 & 0 & -1 & \frac{1}{4} \end{bmatrix}$	-1