SG No. 41 C_{2v}^{17} $Aea2$ [orthorhombic]

* generator : $\{2_{001}|0\}$, $\{m_{010}|\frac{1}{2}\frac{1}{2}0\}$
* symmetry operation $+[0, 0, 0]$, $+\left[0, \frac{1}{2}, \frac{1}{2}\right]$

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	$\{2_{001}\|0\}$	$\begin{bmatrix} -1 & 0 & 0 & 0 \\ 0 & -1 & 0 & 0 \\ 0 & 0 & 1 & 0 \end{bmatrix}$	1
3	$\{m_{010}\|\frac{1}{2}\frac{1}{2}0\}$	$\begin{bmatrix} 1 & 0 & 0 & \frac{1}{2} \\ 0 & -1 & 0 & \frac{1}{2} \\ 0 & 0 & 1 & 0 \end{bmatrix}$	-1
4	$\{m_{100}\|\frac{1}{2}\frac{1}{2}0\}$	$\begin{bmatrix} -1 & 0 & 0 & \frac{1}{2} \\ 0 & 1 & 0 & \frac{1}{2} \\ 0 & 0 & 1 & 0 \end{bmatrix}$	-1