122nd Eigenvector

$N_e \;=\; 4 \qquad s = 1 \qquad m_s = 0$

Irred. Representation : $\Gamma_{3,2}$

$E_{122} \;=\; U + 10W$

$$
\begin{aligned}
|\Psi_{122}\rangle \;=\;& |4,1,0,\Gamma_{3,2}\rangle \\
=\;& C_{122,1}\left(|02du\rangle + |02ud\rangle + |0du2\rangle + |0ud2\rangle - |20du\rangle - |20ud\rangle - |2du0\rangle - |2ud0\rangle \right. \\
& \left. + |d02u\rangle - |d20u\rangle + |du02\rangle - |du20\rangle + |u02d\rangle - |u20d\rangle + |ud02\rangle - |ud20\rangle\right) \\
& +\; C_{122,2}\left(|0d2u\rangle + |0u2d\rangle - |2d0u\rangle - |2u0d\rangle + |d0u2\rangle - |d2u0\rangle + |u0d2\rangle - |u2d0\rangle\right)
\end{aligned}
$$

$$
\begin{aligned}
C_{122-1} \;=\;& -\frac{1}{4\sqrt{3}} \\
C_{122-2} \;=\;& -\frac{1}{2\sqrt{3}} \\
N_{122} \;=\;& \sqrt{16C_{122,1}^2 + 8C_{122,2}^2}
\end{aligned}
$$