160^{th} Eigenvector

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

Irred. Representation : $\Gamma_{5,3}$

$$E_{160} = \frac{A_{11}}{6}$$

$$\begin{aligned}
|\Psi_{160}\rangle &= |4,1,1,\Gamma_{5,3}\rangle \\
&= C_{160,1}\left(|02uu\rangle - |0u2u\rangle + |20uu\rangle - |2u0u\rangle + |u0u2\rangle + |u2u0\rangle - |uu02\rangle - |uu20\rangle\right) \\
&+ C_{160,2}\left(|0uu2\rangle - |2uu0\rangle - |u02u\rangle + |u20u\rangle\right) \\
&+ C_{160,3}\left(|duuu\rangle - |uduu\rangle - |uudu\rangle + |uuud\rangle\right)
\end{aligned}$$

$$\begin{aligned}
C_{160-1} &= \frac{1}{3}t\left(J+U-2W+2\cos\left(\theta_3\right)\sqrt{A_2}\right) \\
C_{160-2} &= -4t^2 \\
C_{160-3} &= \frac{1}{8}\left(J^2+4(U+10W)J+4\left(U^2-8t^2\right)\right) \\
&\quad+\left(\frac{1}{72}\left(60W-A_{11}\right)\left(6(J+2(U+5W))-A_{11}\right)\right) \\
N_{160} &= 2\sqrt{2C_{160,1}^2+C_{160,2}^2+C_{160,3}^2}
\end{aligned}$$