70^{th} Eigenvector

$\boldsymbol{N_e = 3 \qquad s = \frac{1}{2} \qquad m_s = \frac{1}{2}}$

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

$$E_{70} = \frac{1}{2}\left(-J - 2t + U + 10W - \sqrt{A_4}\right)$$

$$\begin{aligned}
|\Psi_{70}\rangle &= |3, \frac{1}{2}, \frac{1}{2}, \Gamma_{3,2}\rangle \\
&= C_{70,1}\left(|002u\rangle + |00u2\rangle - |02u0\rangle - |0u20\rangle - |200u\rangle + |2u00\rangle - |u002\rangle + |u200\rangle\right) \\
&+ C_{70,2}\left(|0duu\rangle + |0uud\rangle - |d0uu\rangle - |duu0\rangle - |u0du\rangle + |ud0u\rangle + |uu0d\rangle - |uud0\rangle\right) \\
&+ C_{70,3}\left(|0udu\rangle + |du0u\rangle - |u0ud\rangle - |udu0\rangle\right)
\end{aligned}$$

$$\begin{aligned}
C_{70-1} &= \frac{1}{2}\sqrt{\frac{3}{2}}t \\
C_{70-2} &= \frac{J - 2t + U - 2W + \sqrt{A_4}}{4\sqrt{6}} \\
C_{70-3} &= -\frac{J - 2t + U - 2W + \sqrt{A_4}}{2\sqrt{6}} \\
N_{70} &= 2\sqrt{2C_{70,1}^2 + 2C_{70,2}^2 + C_{70,3}^2}
\end{aligned}$$