85$^{\text{th}}$ **Eigenvector**

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

Irred. Representation : $\Gamma_{5,2}$

$$E_{85} \;=\; \frac{1}{2}\left(-J - 2t + U + 10W + \sqrt{A_7}\right)$$

$$
\begin{aligned}
|\Psi_{85}\rangle \;=\;& \left|3, \frac{1}{2}, \frac{1}{2}, \Gamma_{5,2}\right\rangle \\
=\;& C_{85,1}\left(|020u\rangle - |02u0\rangle - |0u02\rangle + |0u20\rangle - |200u\rangle + |20u0\rangle + |u002\rangle - |u020\rangle\right) \\
+\;& C_{85,2}\left(|0duu\rangle - |d0uu\rangle - |uu0d\rangle + |uud0\rangle\right) \\
+\;& C_{85,3}\left(|0udu\rangle + |0uud\rangle - |du0u\rangle + |duu0\rangle - |u0du\rangle - |u0ud\rangle - |ud0u\rangle + |udu0\rangle\right)
\end{aligned}
$$

$$
\begin{aligned}
C_{85-1} \;=\;& \frac{1}{2}\sqrt{\frac{3}{2}}\,t \\
C_{85-2} \;=\;& \frac{J + 2t + U - 2W - \sqrt{A_7}}{2\sqrt{6}} \\
C_{85-3} \;=\;& -\frac{J + 2t + U - 2W - \sqrt{A_7}}{4\sqrt{6}} \\
N_{85} \;=\;& 2\sqrt{2C_{85,1}^2 + C_{85,2}^2 + 2C_{85,3}^2}
\end{aligned}
$$