

88th Eigenvector

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

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

$$E_{88} = \frac{1}{2} \left(-J - 2t + U + 10W + \sqrt{A_7} \right)$$

$$\begin{aligned} |\Psi_{88}\rangle &= |3, \frac{1}{2}, \frac{1}{2}, \Gamma_{5,3}\rangle \\ &= C_{88,1} (|002u\rangle - |00u2\rangle - |020u\rangle + |0u02\rangle + |20u0\rangle - |2u00\rangle - |u020\rangle + |u200\rangle) \\ &+ C_{88,2} (|0duu\rangle + |0udu\rangle + |d0uu\rangle - |du0u\rangle + |u0ud\rangle - |udu0\rangle - |uu0d\rangle - |uud0\rangle) \\ &+ C_{88,3} (|0wud\rangle - |duu0\rangle + |u0du\rangle - |ud0u\rangle) \end{aligned}$$

$$C_{88-1} = -\frac{1}{2} \sqrt{\frac{3}{2}} t$$

$$C_{88-2} = -\frac{J + 2t + U - 2W - \sqrt{A_7}}{4\sqrt{6}}$$

$$C_{88-3} = \frac{J + 2t + U - 2W - \sqrt{A_7}}{2\sqrt{6}}$$

$$N_{88} = 2\sqrt{2C_{88,1}^2 + 2C_{88,2}^2 + C_{88,3}^2}$$