

47th Eigenvector

$$N_e = 4 \quad s = 0 \quad m_s = 0$$

Irred. Representation : Γ_1

$$E_{47} = \frac{1}{2} \left(-J - 2t + 3U + 9W + \sqrt{A_3} \right)$$

$$\begin{aligned} |\Psi_{47}\rangle &= |4, 0, 0, \Gamma_1\rangle \\ &= C_{47,1} (|022\rangle + |202\rangle + |220\rangle) \\ &\quad + C_{47,2} (|2du\rangle - |2ud\rangle + |d2u\rangle + |du2\rangle - |u2d\rangle - |ud2\rangle) \end{aligned}$$

$$C_{47-1} = 2\sqrt{\frac{2}{3}}t$$

$$C_{47-2} = \frac{J + 2t + U - W - \sqrt{A_3}}{2\sqrt{6}}$$

$$N_{47} = \sqrt{3C_{47,1}^2 + 6C_{47,2}^2}$$