

196th Eigenvector

$$N_e = 5 \quad s = \frac{1}{2} \quad m_s = \frac{1}{2}$$

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

$$E_{196} = \frac{1}{2} (-J + 2t + 3U + 34W - \sqrt{A_7})$$

$$\begin{aligned} |\Psi_{196}\rangle &= |5, \frac{1}{2}, \frac{1}{2}, \Gamma_{3,2}\rangle \\ &= C_{196,1} (|022u\rangle - |0u22\rangle + |20u2\rangle - |220u\rangle - |22u0\rangle + |2u02\rangle - |u022\rangle + |u220\rangle) \\ &+ C_{196,2} (|2duu\rangle + |2uud\rangle - |d2uu\rangle - |duu2\rangle - |u2du\rangle + |ud2u\rangle + |uu2d\rangle - |uud2\rangle) \\ &+ C_{196,3} (|2udu\rangle + |du2u\rangle - |u2ud\rangle - |udu2\rangle) \end{aligned}$$

$$C_{196-1} = \frac{1}{2} \sqrt{\frac{3}{2}} t$$

$$C_{196-2} = -\frac{J + 2t + U - 2W + \sqrt{A_7}}{4\sqrt{6}}$$

$$C_{196-3} = \frac{J + 2t + U - 2W + \sqrt{A_7}}{2\sqrt{6}}$$

$$N_{196} = 2\sqrt{2C_{196,1}^2 + 2C_{196,2}^2 + C_{196,3}^2}$$