

186th Eigenvector

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

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

$$E_{186} = \frac{1}{2} (-J + 2t + 3U + 34W - \sqrt{A_4})$$

$$\begin{aligned} |\Psi_{186}\rangle &= |5, \frac{1}{2}, -\frac{1}{2}, \Gamma_{5,2}\rangle \\ &= C_{186,1} (|022d\rangle - |02d2\rangle - |202d\rangle + |20d2\rangle - |2d02\rangle + |2d20\rangle + |d202\rangle - |d220\rangle) \\ &+ C_{186,2} (|2ddu\rangle + |2dud\rangle - |d2du\rangle - |d2ud\rangle - |du2d\rangle + |dud2\rangle - |ud2d\rangle + |udd2\rangle) \\ &+ C_{186,3} (|2udd\rangle - |dd2u\rangle + |ddu2\rangle - |u2dd\rangle) \end{aligned}$$

$$\begin{aligned} C_{186-1} &= \frac{1}{2} \sqrt{\frac{3}{2}} t \\ C_{186-2} &= -\frac{J - 2t + U - 2W + \sqrt{A_4}}{4\sqrt{6}} \\ C_{186-3} &= \frac{J - 2t + U - 2W + \sqrt{A_4}}{2\sqrt{6}} \\ N_{186} &= 2\sqrt{2C_{186,1}^2 + 2C_{186,2}^2 + C_{186,3}^2} \end{aligned}$$