

## 187<sup>th</sup> Eigenvector

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

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

$$E_{187} = \frac{1}{2} (-J + 2t + 3U + 34W + \sqrt{A_4})$$

$$\begin{aligned} |\Psi_{187}\rangle &= |5, \frac{1}{2}, -\frac{1}{2}, \Gamma_{5,2}\rangle \\ &= C_{187,1} (|022d\rangle - |02d2\rangle - |202d\rangle + |20d2\rangle - |2d02\rangle + |2d20\rangle + |d202\rangle - |d220\rangle) \\ &+ C_{187,2} (|2ddu\rangle + |2dud\rangle - |d2du\rangle - |d2ud\rangle - |du2d\rangle + |dud2\rangle - |ud2d\rangle + |udd2\rangle) \\ &+ C_{187,3} (|2udd\rangle - |dd2u\rangle + |ddu2\rangle - |u2dd\rangle) \end{aligned}$$

$$C_{187-1} = \frac{1}{2} \sqrt{\frac{3}{2}} t$$

$$C_{187-2} = -\frac{J - 2t + U - 2W - \sqrt{A_4}}{4\sqrt{6}}$$

$$C_{187-3} = \frac{J - 2t + U - 2W - \sqrt{A_4}}{2\sqrt{6}}$$

$$N_{187} = 2\sqrt{2C_{187,1}^2 + 2C_{187,2}^2 + C_{187,3}^2}$$