

## 51<sup>st</sup> Eigenvector

$$N_e = 4 \quad s = 1 \quad m_s = 0$$

Irred. Representation :  $\Gamma_{3,1}$

$$E_{51} = -t + U + 5W$$

$$\begin{aligned} |\Psi_{51}\rangle &= |4, 1, 0, \Gamma_{3,1}\rangle \\ &= C_{51,1} (|2du\rangle + |2ud\rangle) \\ &\quad + C_{51,2} (|d2u\rangle - |du2\rangle + |u2d\rangle - |ud2\rangle) \end{aligned}$$

$$C_{51-1} = \frac{1}{\sqrt{3}}$$

$$C_{51-2} = \frac{1}{2\sqrt{3}}$$

$$N_{51} = \sqrt{2C_{51,1}^2 + 4C_{51,2}^2}$$