

## 11<sup>st</sup> Eigenvector

$$N_e = 2 \quad s = 0 \quad m_s = 0$$

Irred. Representation :  $\Gamma_1$

$$E_{11} = \frac{1}{2} \left( -J + 2t + U + W - \sqrt{A_5} \right)$$

$$\begin{aligned} |\Psi_{11}\rangle &= |2, 0, 0, \Gamma_1\rangle \\ &= C_{11,1} (|002\rangle + |020\rangle + |200\rangle) \\ &\quad + C_{11,2} (|0du\rangle - |0ud\rangle + |d0u\rangle + |du0\rangle - |u0d\rangle - |ud0\rangle) \end{aligned}$$

$$C_{11-1} = 2\sqrt{\frac{2}{3}}t$$

$$C_{11-2} = \frac{J - 2t + U - W + \sqrt{A_5}}{2\sqrt{6}}$$

$$N_{11} = \sqrt{3C_{11,1}^2 + 6C_{11,2}^2}$$