

## 15<sup>th</sup> Eigenvector

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

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

$$E_{15} = \frac{1}{2} \left( -J - t + U + W + \sqrt{A_1} \right)$$

$$\begin{aligned} |\Psi_{15}\rangle &= |2, 0, 0, \Gamma_{3,1}\rangle \\ &= C_{15,1} (|002\rangle - |020\rangle) \\ &\quad + C_{15,2} (|d0u\rangle - |du0\rangle - |u0d\rangle + |ud0\rangle) \end{aligned}$$

$$C_{15-1} = t$$

$$C_{15-2} = \frac{1}{4} \left( J + t + U - W - \sqrt{A_1} \right)$$

$$N_{15} = \sqrt{2C_{15,1}^2 + 4C_{15,2}^2}$$