

## 27<sup>th</sup> Eigenvector

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

Irred. Representation :  $\Gamma_{4,3}$

$$E_{27} = \frac{1}{2} \left( -J + U + 2W + \sqrt{A_1} \right)$$

$$\begin{aligned} |\Psi_{27}\rangle &= |2, 0, 0, \Gamma_{4,3}\rangle \\ &= C_{27,1} (|0002\rangle - |0020\rangle + |0200\rangle - |2000\rangle) \\ &\quad + C_{27,2} (|0d0u\rangle - |0u0d\rangle - |d0u0\rangle + |u0d0\rangle) \end{aligned}$$

$$C_{27-1} = -t$$

$$C_{27-2} = \frac{1}{4} \left( -J - U + 2W + \sqrt{A_1} \right)$$

$$N_{27} = 2\sqrt{C_{27,1}^2 + C_{27,2}^2}$$