

3rd Eigenvector

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

Irred. Representation : $\Gamma_{4,1}$

$$E_3 = -t$$

$$\begin{aligned} |\Psi_3\rangle &= |1, \frac{1}{2}, -\frac{1}{2}, \Gamma_{4,1}\rangle \\ &= \frac{1}{2}(|000d\rangle + |00d0\rangle - |0d00\rangle - |d000\rangle) \end{aligned}$$