

9th Eigenvector

$$N_e = 2 \quad s = 1 \quad m_s = -1$$

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

$$E_9 = \frac{J}{2} + t + W$$

$$\begin{aligned} |\Psi_9\rangle &= |2, 1, -1, \Gamma_{3,1}\rangle \\ &= C_{9,1}(|0dd\rangle) \\ &\quad + C_{9,2}(|d0d\rangle - |dd0\rangle) \end{aligned}$$

$$C_{9-1} = -\sqrt{\frac{2}{3}}$$

$$C_{9-2} = -\frac{1}{\sqrt{6}}$$

$$N_9 = \sqrt{C_{9,1}^2 + 2C_{9,2}^2}$$