## $190^{\text{th}}$ Eigenvector

$\boldsymbol{N_e \;\; = \;\; 5 \qquad s = \frac{1}{2} \qquad m_s = -\frac{1}{2}}$

**Irred. Representation :** $\boldsymbol{\Gamma_{5,3}}$

$$E_{190} \;\; = \;\; \frac{1}{2}\left(-J + 2t + 3U + 34W + \sqrt{A_4}\right)$$

$$\begin{aligned}
|\Psi_{190}\rangle &= |5, \frac{1}{2}, -\frac{1}{2}, \Gamma_{5,3}\rangle \\
&= C_{190,1}\left(|02d2\rangle - |0d22\rangle - |202d\rangle + |220d\rangle - |22d0\rangle + |2d20\rangle + |d022\rangle - |d202\rangle\right) \\
&+ C_{190,2}\left(|2ddu\rangle + |d2ud\rangle - |du2d\rangle - |udd2\rangle\right) \\
&+ C_{190,3}\left(|2dud\rangle + |2udd\rangle + |d2du\rangle - |dd2u\rangle - |ddu2\rangle - |dud2\rangle + |u2dd\rangle - |ud2d\rangle\right)
\end{aligned}$$

$$\begin{aligned}
C_{190-1} &= -\frac{1}{2}\sqrt{\frac{3}{2}}t \\
C_{190-2} &= -\frac{J - 2t + U - 2W - \sqrt{A_4}}{2\sqrt{6}} \\
C_{190-3} &= \frac{J - 2t + U - 2W - \sqrt{A_4}}{4\sqrt{6}} \\
N_{190} &= 2\sqrt{2C_{190,1}^2 + C_{190,2}^2 + 2C_{190,3}^2}
\end{aligned}$$