183$^{\text{rd}}$ **Eigenvector**

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

Irred. Representation : $\Gamma_{5,1}$

$$E_{183} = \frac{1}{2}\left(-J + 2t + 3U + 34W - \sqrt{A_4}\right)$$

$$
\begin{aligned}
|\Psi_{183}\rangle &= |5, \tfrac{1}{2}, -\tfrac{1}{2}, \Gamma_{5,1}\rangle \\
&= C_{183,1}\left(|022d\rangle - |0d22\rangle - |20d2\rangle - |220d\rangle + |22d0\rangle + |2d02\rangle + |d022\rangle - |d220\rangle\right) \\
&+ C_{183,2}\left(|2ddu\rangle + |2udd\rangle + |d2ud\rangle + |dd2u\rangle + |ddu2\rangle + |du2d\rangle + |u2dd\rangle + |udd2\rangle\right) \\
&+ C_{183,3}\left(|2dud\rangle + |d2du\rangle + |dud2\rangle + |ud2d\rangle\right)
\end{aligned}
$$

$$
\begin{aligned}
C_{183-1} &= \frac{1}{2}\sqrt{\frac{3}{2}}\,t \\
C_{183-2} &= \frac{J - 2t + U - 2W + \sqrt{A_4}}{4\sqrt{6}} \\
C_{183-3} &= -\frac{J - 2t + U - 2W + \sqrt{A_4}}{2\sqrt{6}} \\
N_{183} &= 2\sqrt{2C_{183,1}^2 + 2C_{183,2}^2 + C_{183,3}^2}
\end{aligned}
$$