173^{rd} Eigenvector

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

Irred. Representation : $\boldsymbol{\Gamma_{3,2}}$

$$E_{173} \;=\; \frac{1}{2}\left(-J + 2t + 3U + 34W + \sqrt{A_7}\right)$$

$$\begin{aligned}
|\Psi_{173}\rangle \;&=\; |5, \frac{1}{2}, -\frac{1}{2}, \Gamma_{3,2}\rangle \\
&=\; C_{173,1}\left(|022d\rangle - |0d22\rangle + |20d2\rangle - |220d\rangle - |22d0\rangle + |2d02\rangle - |d022\rangle + |d220\rangle\right) \\
&+\; C_{173,2}\left(|2ddu\rangle + |2udd\rangle - |d2ud\rangle + |dd2u\rangle - |ddu2\rangle + |du2d\rangle - |u2dd\rangle - |udd2\rangle\right) \\
&+\; C_{173,3}\left(|2dud\rangle - |d2du\rangle - |dud2\rangle + |ud2d\rangle\right)
\end{aligned}$$

$$\begin{aligned}
C_{173-1} \;&=\; -\frac{1}{2}\sqrt{\frac{3}{2}}t \\
C_{173-2} \;&=\; -\frac{J + 2t + U - 2W - \sqrt{A_7}}{4\sqrt{6}} \\
C_{173-3} \;&=\; \frac{J + 2t + U - 2W - \sqrt{A_7}}{2\sqrt{6}} \\
N_{173} \;&=\; 2\sqrt{2C_{173,1}^2 + 2C_{173,2}^2 + C_{173,3}^2}
\end{aligned}$$