

$$H_B = \left(\begin{array}{ccccccccc} -1.68B & 0 & 0 & 0 & 0 & -0.56B & 0 & 0 & 0 & 0 \\ 0 & -0.56B & 0 & 0 & 0 & 0 & -0.69B & 0 & 0 & 0 \\ 0 & 0 & 0.56B & 0 & 0 & 0 & 0 & -0.69B & 0 & 0 \\ 0 & 0 & 0 & 1.68B & 0 & 0 & 0 & 0 & -0.56B & 0 \\ 0 & 0 & 0 & 0 & -4.20B & 0 & 0 & 0 & 0 & 0 \\ -0.56B & 0 & 0 & 0 & 0 & -2.52B & 0 & 0 & 0 & 0 \\ 0 & -0.69B & 0 & 0 & 0 & 0 & -0.84B & 0 & 0 & 0 \\ 0 & 0 & -0.69B & 0 & 0 & 0 & 0 & 0.84B & 0 & 0 \\ 0 & 0 & 0 & -0.56B & 0 & 0 & 0 & 0 & 2.52B & 0 \\ 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 0 & 4.20B \end{array} \right) \left. \vphantom{\begin{array}{c} J = \frac{3}{2} \\ J = \frac{5}{2} \end{array}} \right\} \begin{array}{l} J = \frac{3}{2} \\ J = \frac{5}{2} \end{array}$$

$$m_J = \begin{array}{cccccccccc} \frac{-3}{2} & \frac{-1}{2} & \frac{1}{2} & \frac{3}{2} & \frac{-5}{2} & \frac{-3}{2} & \frac{-1}{2} & \frac{1}{2} & \frac{3}{2} & \frac{5}{2} \end{array}$$