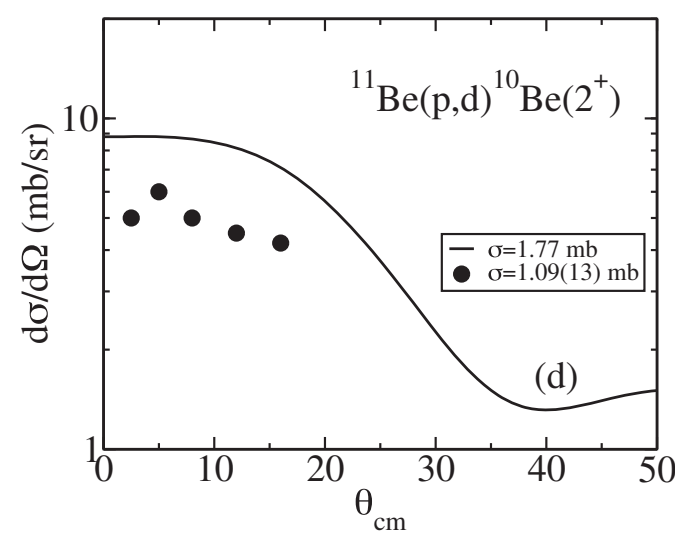
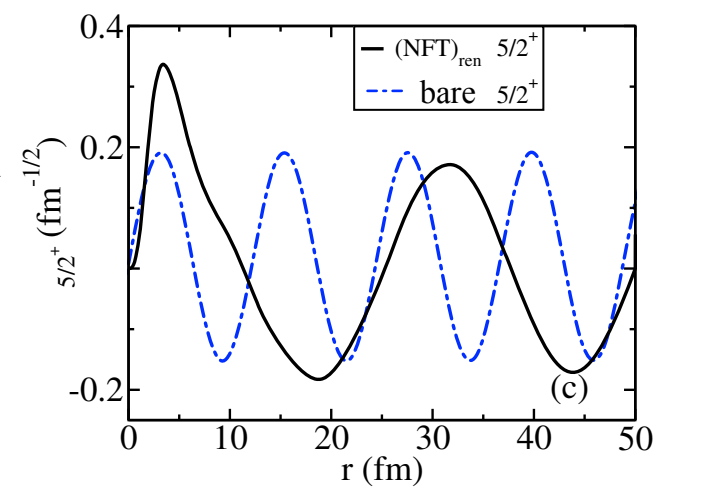
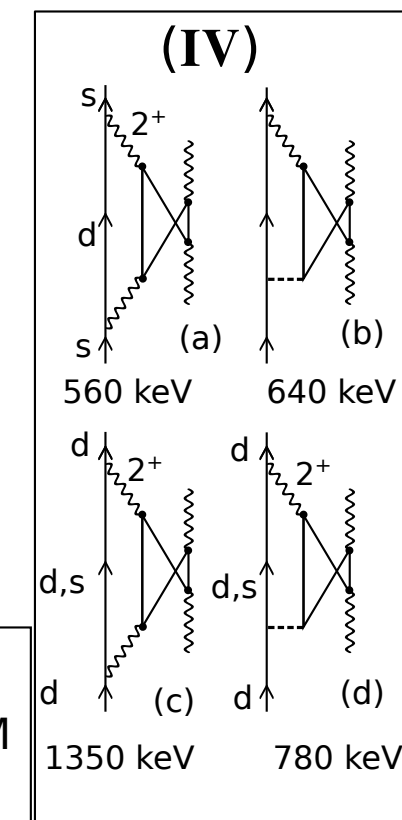
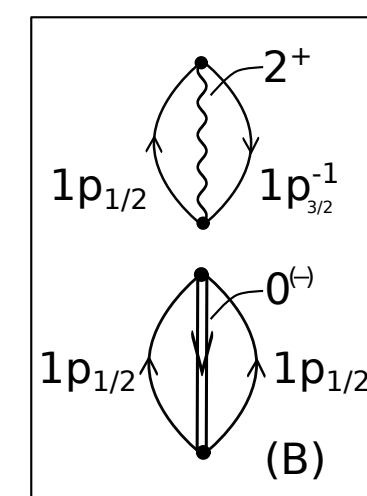
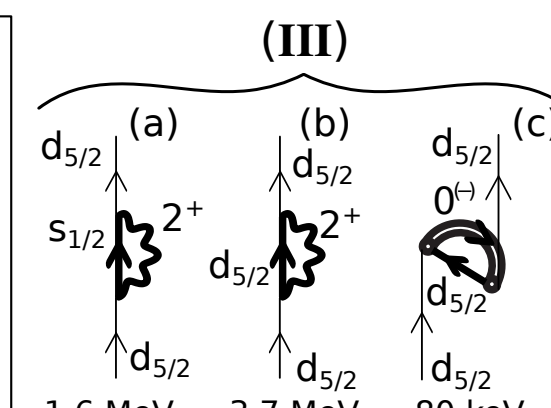
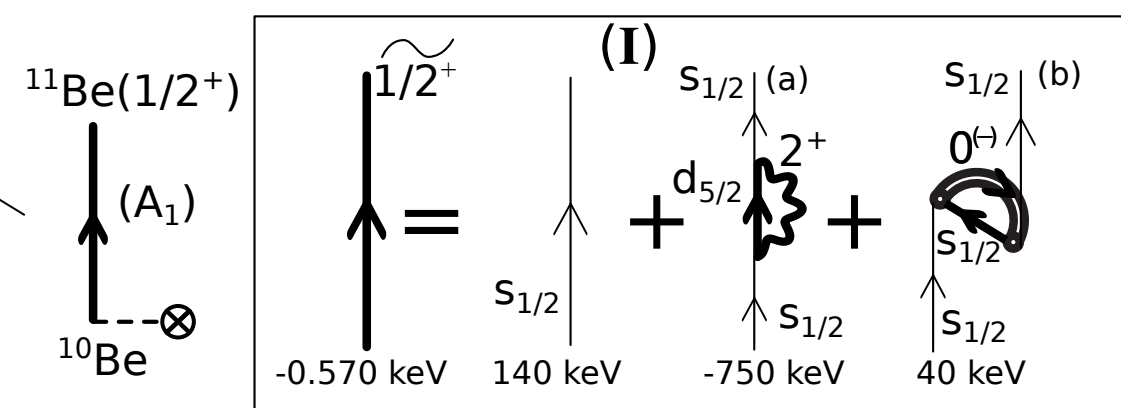
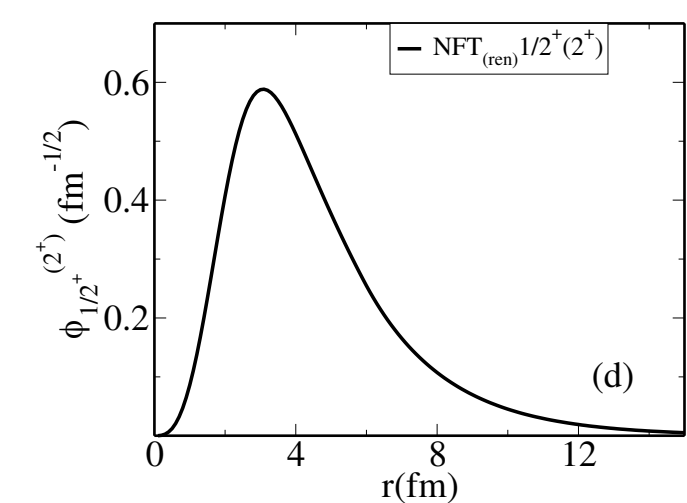
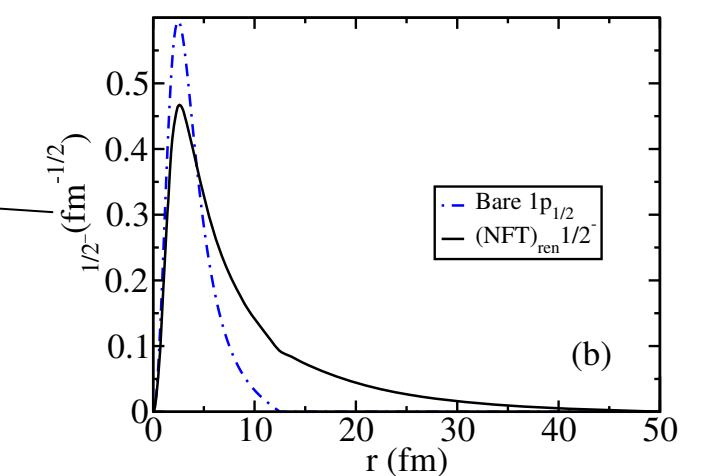
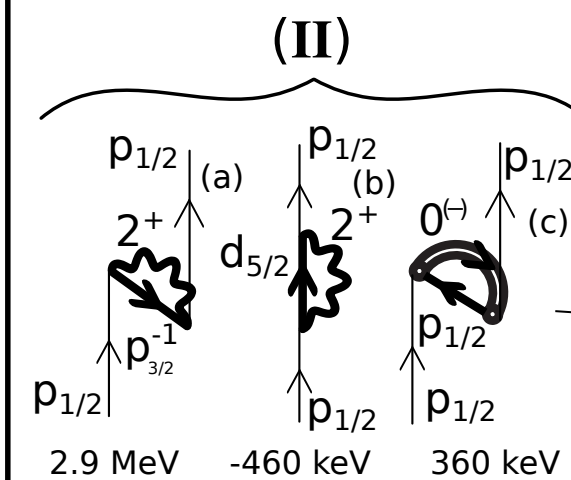


$$\begin{aligned}
 |1/2^-\rangle &= \sqrt{0.81} |1p_{1/2}\rangle + \sqrt{0.15} |(1p_{1/2}, 1p_{3/2})_{2^+}^{-1} \otimes 2^+\rangle_0 + 1p_{1/2}\rangle + \sqrt{0.02} |(d_{5/2} \otimes 3^-)_{1/2^-}\rangle \\
 &\quad + \sqrt{0.04} |(1p_{1/2}^2(0) \otimes 0^{(-)})_{0^+} p_{1/2}\rangle \quad (1) \\
 |1/2^+\rangle &= \sqrt{0.83} |2s_{1/2}\rangle + \sqrt{0.17} |(d_{5/2} \otimes 2^+)_{1/2^+}\rangle + \sqrt{0.01} |(s_{1/2}^2(0) \otimes 0^{(-)})_{0^+} s_{1/2}\rangle \quad (2) \\
 |0^{(-)}\rangle &= |^8\text{Be}(gs, 0^+)\rangle \quad \text{monopole pair removal mode of the closed shell system } ^{10}\text{Be}_6 \quad (3) \\
 |5/2^-\rangle &= \sqrt{0.34} |d_{5/2}\rangle + \sqrt{0.32} |(s_{1/2} \otimes 2^+)_{5/2^+}\rangle + \sqrt{0.34} |(d_{5/2} \otimes 2^+)_{5/2^+}\rangle \\
 &\quad + \sqrt{0.003} |(d_{5/2}(0)^2 \otimes 0^{(-)})_{0^+} d_{5/2}\rangle \quad (4)
 \end{aligned}$$



$$\langle r^2 \rangle^{1/2} = \begin{cases} 2.44 \pm 0.06 \text{ fm} & (\text{exp}) \\ 2.48 \text{ fm} & (\text{NFT})_{\text{ren}} \end{cases}$$

