

Act 3

Polonium has an effective barrier width of ~ 10 fermi, leading to a tunneling probability of $\sim 10^{-15}$. Now consider Uranium, which has a similar barrier height, but an effective width of about ~ 20 fermi.

Estimate the tunneling probability in Uranium:

- a. 10^{-30}
- b. 10^{-14}
- c. 10^{-7}