Names: _____

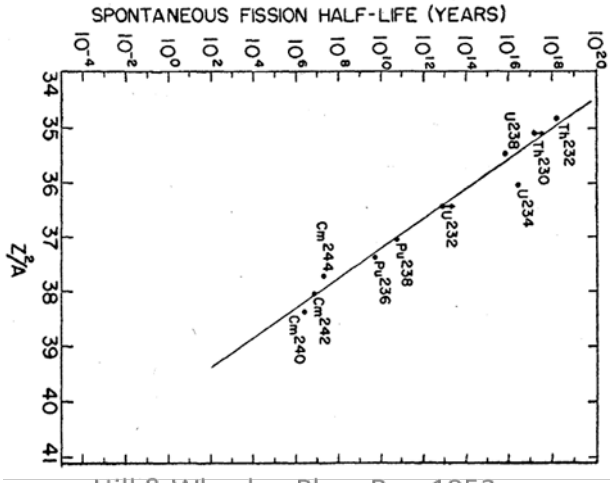
_____

Group Activity 10 **Due:** In class, September 23rd

1. Why is the fissionability parameter x twice as sensitive to the liquid drop model parameter describing the surface term of binding energy a_s as compared to the Coulomb term a_c?

2. For a fixed Z, how should the spontaneous fission half-life to change for increasing A? Why?

3. Using the empirical trend between the spontaneous fission half-life and fissility, what is the estimated spontaneous fission half-life for ^{254}No? Compare to the experimental value of $3 \times 10^4 s$ (Bao, Zhang, Royer, & Li, Nuc. Phys. A 2013).



Hill & Wheeler, Phys. Rev. 1953