

Names: _____

PHYS 7501, FS 2017

Group Activity 10

Due: In class, September 29th

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. Which nucleus would generally have higher kinetic-energy fission fragments, ^{252}Cf or ^{235}U ? What's the ratio of TKE ? Keep in mind the shell effects on the fragment mass distributions.