

# NUCLEI/UNEDF Leadership-class computing

- ◆ SciDAC collaborations between applied mathematicians, computer scientists, and nuclear physicists lead to efficient utilization of leadership-class computing resources for nuclear physics problems
- ◆ Significant accomplishments in NUCLEI/UNEDF, achieved through leadership-class computing
  - *Ab-initio* calculations of C-12
  - Understanding the long lifetime of C-14
  - *Ab-initio* calculations of Ca-54
  - Improved energy-density functionals
  - Quantifying the limits of nuclear existence
- ◆ Over 35% of computing resources consistently used at leadership-class scale (utilization @ OLCF)

