T.Barnes DOE/NP

NERSC-NP Workshop on:

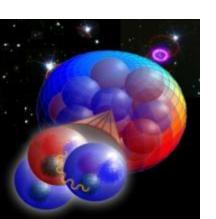
Large Scale Computing and Storage Requirements for Nuclear Physics

*ca.* next 4 years; "meet and greet and request"

26-27 May 2011

# **NP Program Office Research Directions**

Reinterpreted somewhat for NERSC purposes



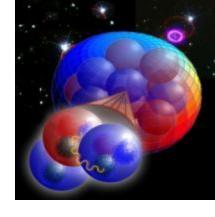
- 1. NP Research Areas
- 2. Current NP NERSC User Community
- 3. Presentations

## 1. <u>Research Areas</u> (*NP field*; specific comp. at NERSC; facility)

The crucial reference: **NSAC Report** (Dec. 2007; next one probably in *ca.* 1 year)

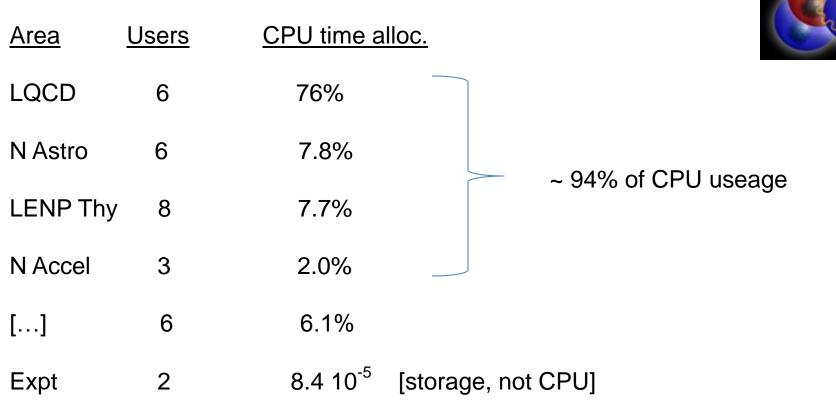
### The Frontiers of Nuclear Science: A Long Range Plan

- p. *i.*: The Science
- Quantum Chromodynamics: From the Structure of Hadrons to the Phases of Nuclear Matter
- QCD and the Structure of Hadrons (Hadron Str. & Spec. MENP; LQCD; TJNAF)
- The Phases of Nuclear Matter (*Heavy Ion Collisions*; T>0 LQCD; RHIC and LHC)
- The Emerging QCD Frontier: The Electron-Ion Collider (further future)
- Nuclei: From Structure to Exploding Stars (LENP; N Astro; future FRIB)
- In Search of the New Standard Model (*Fund. Ints. and Symms. (recent) ~ LENP*; BNL, ORNL(SNS), ...)



## 2. Current NP NERSC User Community

#### 31 Pls

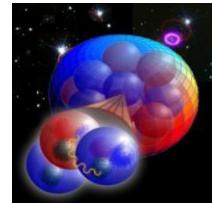


NERSC request was to hear from **all** areas of NP. (Possible future users?) So, we have included presentations beyond what this list alone would suggest...

#### 3. Presentations

#### Area <u>Representatives:</u>

- LQCD Robert Edwards (TJNAF), Chip Watson (TJNAF); Martin Savage (UW)
- LENP Thy Joe Carlson (LANL), Esmond Ng (LBNL), Jon Engel (UNC)
- N Astro Dan Kasen (UCB), Tomasz Plewa (FSU)
- Expt: Heavy lons Jeff Porter (LBNL)
- Expt: MENP Richard Jones (UConn)
- Nuclear Data Alejandro Sonzogni (BNL)
- N Accel. David Bruhweiler (Tech-X)



Next: Kathy Yelick (NERSC Director)