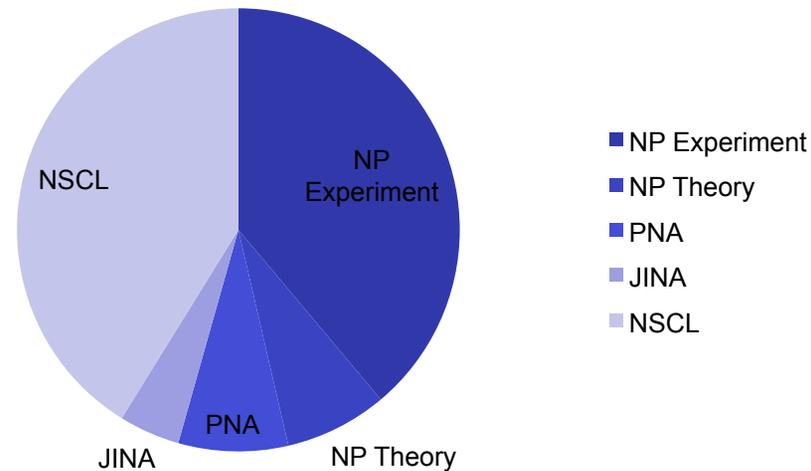
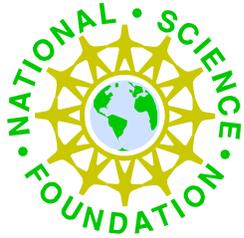


Nuclear Physics at NSF

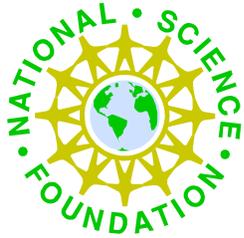
- NP Experiment
 - Structure
 - Heavy Ions
 - Symmetries
 - Hadrons and QCD
- NP Theory
- Particle and Nuclear Astrophysics
 - Astrophysics (Notre Dame, FSU)
 - Neutrinos (Borexino, $\beta\beta$, ϑ_{13})
- Frontier Center (Joint Institute for Nuclear Astrophysics)
- NSCL
- FY2008 total: \$45M





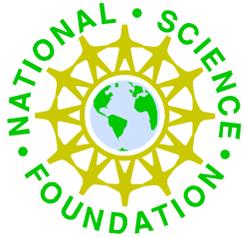
Additional Funding

- Major Research Instrumentation (MRI)
 - small (<\$1M); large (\$1-4M)
 - annual average about \$1.6M
 - awards to university labs & user groups at national labs
- Cyber-Enabled Discovery and Innovation (CDI)
 - 5-year initiative begun FY2008
 - plan: +\$50M/year, totaling \$750M
 - 1 NP-related award in FY08 (U Washington)
- Petscale Applications
- DHS Domestic Nuclear Detection Office
 - multi-year initiative begun FY2007
 - 2 NP-related awards



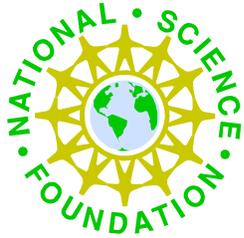
NSF-GPRA Interface

- merit review process
- Committee of Visitors
 - every 3 years
 - January 2009
- highlights
 - intellectual merit
 - broader impacts



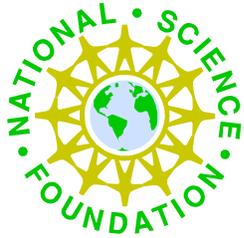
Highlights Overview

- neutron charge distribution
- polarized e vs. 2-photon exchange
- short-range correlations in nuclei
- handedness in nuclei
- archaeometry applications
- Monte Carlo studies of dense matter
- gluon component of proton spin
- pion decay constants
- magic numbers for neutron-rich nuclei
- production of ^{96}Cd
- shape transitions in neutron-rich nuclei
- symmetries and lattice QCD hadron spectra



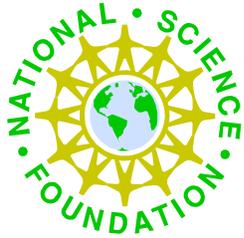
Nuclear Physics FY2008

- NSCL operations: flat (not +\$1M)
 - partially restored by supplemental appropriation
- Nuclear Theory and Experiment: down 5%
 - “class of 2005”
 - Out-year adjustments made to move some impact to FY2009 and FY2010



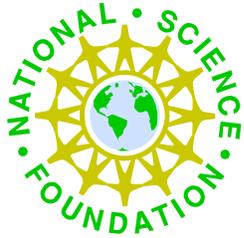
Nuclear Physics FY2009

- NSCL operations: try to restore trajectory toward optimal operations
- Nuclear Theory and Experiment: impact from FY2008, and/or move forward
- Move forward with DOE on partnered funding plan for neutron EDM



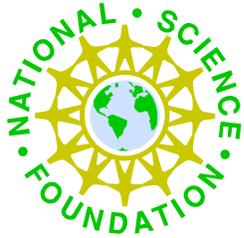
FY2009-10 Appropriations

- today: Continuing Resolution
- FY2008 R&RA: \$4.827B
- FY2009 R&RA request: \$5.594B
- Stimulus Bill: \$3B; need approved op. plan
 - \$2.5B R&RA, including
 - \$0.3B MRI
 - \$0.2B ARI
- FY2009 R&RA conference: \$5.183B (+7%)
- FY2010 (total) request: \$7B (FY08+16%)
 - ... to \$9.7B in FY2014



DUSEL

- NSF review Jan. 28-30
- Solicitation S4
 - proposals to develop project plans for potential candidates for the initial suite of experiments
 - anticipate \$15M: \$5M over 3 years
 - proposals under review
 - expect awards in summer
- R&D: to be negotiated with DOE



People

- **NSF Director: Arden Bement**
- **NSF Deputy Director: Cora Marrett (acting)**
- **MPS Assistant Director: T. Chan**
- **Physics Division Director: Joe Dehmer**
- **Nuclear Physics:**
 - **BDK (expt and theory)**
 - **Allena Opper(and astro, underground lab)**