



TEL: 225-578-2261
FAX: 225-578-5855
<http://www.phys.lsu.edu>

202 NICHOLSON HALL
Louisiana State University
Baton Rouge, Louisiana 70803-4001

WEEKLY CALENDAR

April 20, 2009

DEPARTMENTAL COLLOQUIUM

"Designing and Building Atomic Nuclei: New Frontiers in Nuclear Physics"

3:40 PM, April 23, 2009
109 Nicholson Hall

Brad Sherrill
Michigan State University
Host: Jeffery Blackmon

• *Refreshments served at 3:15 PM in 201 Nicholson Hall* •

The Facility for Rare Isotope Beams, FRIB, is a new project the US Department of Energy has initiated to answer long-standing questions in nuclear physics and nuclear astrophysics. In addition, the facility may provide a wide range of new isotopes of interest to the medical community, and isotopes for other applications such as probing nanomaterials. The heart of the project is a high-power superconducting linear accelerator that will be used to produce specific isotopes of interest. A number of key isotopes are currently not available yet are important for progress in understanding atomic nuclei and astronomical processes. For example, the current generation of 10m-class telescopes are able to measure detailed elemental abundances in some of the oldest stars, but data on neutron-rich isotopes is needed to connect those observations to astrophysical models. A description of the project and samples of the scientific program will be presented.

Congratulations To:

Dr. Kenneth Schafer for being elected as a Fellow Member of the Optical Society (OSA). Dr. Schafer "is being honored specifically for many contributions to the advancement of the field of laser matter interactions through innovative, creative, and extensive theoretical studies of the highest quality."

Publications:

"First direct measurement of the $^{17}\text{F}(p,\gamma)^{18}\text{Ne}$ cross section," K. A. Chipps, D. W. Bardayan, J. C. Blackmon, K. Y. Chae, U. Greife, R. Hatarik, R. L. Kozub, C. Matei, B. H. Moazen, C. D. Nesaraja, S. D. Pain, W. A. Peters, S. T. Pittman, J. F. Shriner, Jr., and M. S. Smith, Phys. Rev. Lett. 102, 152502 (2009).
<http://link.aps.org/abstract/PRL/v102/e152502>