

Second Circular

A workshop on "Theoretical Problems in Fundamental Neutron Physics" will be held at the University of South Carolina, Columbia, South Carolina, October 14 and 15, 2005. As outlined in the first announcement, the purpose of the workshop is to identify and elucidate current theoretical issues associated with fundamental symmetry violation experiments involving low energy neutrons. The workshop will focus on theoretical issues related to neutron beta decay, hadronic parity violation, the neutron electric dipole moment, and neutron-antineutron oscillations. Some invited experimental talks will give overviews of the current status and the expected improvements in future experiments.

Since the advent of intense cold neutron facilities nearly 30 years ago, a wide variety of fundamental neutron physics measurements have shed much light on important issues in nuclear physics, particle physics, astrophysics and cosmology. Currently a new generation of such experiments is being planned and new sources of cold neutrons, including the Spallation Neutron Source (SNS), are under construction. The extraction of fundamental information from these experiments requires careful and often delicate theoretical interpretations. Given the prospect of new and more accurate measurements, it is appropriate to review the status of the theory associated with these experimental improvements with an eye towards the clarification of unresolved issues as well as the identification of the breadth of physics that can be addressed at SNS.

Schedule

The Workshop will take place in the Russell House Theater at the University of South Carolina. The Russell House is located on the university campus and is at a short walking distance from Holiday Inn. Maps are available at the workshop website (<http://www.physics.sc.edu/TPFNP/>).

List of speakers:

J. Byrne
*J. Carlson **
*V. Cirigliano **
*B. Desplanques **
D. Dubbers
*J. Engel **
P. Herczeg
B. Holstein
S. Gardner
P. Geltenbort
C. Gould
Yu. Kamyshev
*S. Lamoreaux **
C. Lee
W. Marciano

R. Mohapatra
F. Myhrer
V. Nesvizhevsky
*R. Peccei **
M. Pospelov
M. Ramsey-Musolf
*M. Savage **
W. M. Snow
I. Towner

() To be confirmed.*

Registration:

The participants in the workshop are requested to register by e-mail: papp@physics.sc.edu. The registration fee of \$100 covers the reception, coffee breaks, lunch and the banquet and can be paid at the registration desk October 13 (Holiday Inn) or October 14 (Russell House Theater).

Financial support for participants:

Financial support is available for a limited number of students. Interested students should contact the local organizing committee directly.

Meals and breaks

Lunch tickets will be provided to all participants at the registration desk. Coffee and light refreshments will be provided from 8:30 in the morning and during the breaks. The reception will be held in the lobby of Holiday Inn Thursday, October 13, and the banquet will take place Friday, October 14 (details to be provided at the registration).

Accommodation

Blocks of rooms have been reserved at the rate of \$93.50/night (including tax) at the **HOLIDAY INN COLISEUM** 630 ASSEMBLY STREET, COLUMBIA, SC 29201. Participants are requested to make their reservations directly with the hotel calling Timothy A. Fields at (803) 799-7800. Please mention "**TPFNP workshop**" in order to obtain the above rate.

We look forward to welcoming you at the University of South Carolina.

The workshop is organized by the University of South Carolina with support from Oak Ridge National Laboratory, Oak Ridge Associated Universities, Joint Institute for Neutron Science, University of South Carolina, South Carolina's EPSCoR/IDeA Program, and the Sub-Z0 Working Group.