

**Workshop on Fundamental Neutron Physics at the Spallation  
Neutron Source  
(FNPSNS 2001)**

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# Fundamental Neutron Physics is a key element of the Los Alamos Nuclear Physics Program

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- ◆ We are currently constructing two neutron experiments at LANSCE
  - Measurement of the Parity Violating Asymmetry  $A_\gamma$  in  $np \rightarrow d \gamma$
  - UCN A: Measurement of the Neutron Beta-Asymmetry using Ultra-Cold Neutrons
  - Data taking expected to begin in FY03 for both
- ◆ We are developing new experiments
  - An advanced concept of EDM using UCN and superfluid He
  - A new approach to measuring the neutron decay correlations with cold neutrons
  - UCN User facility
- ◆ Many of which you heard about at the FPPNB-2000 workshop last June

# **Los Alamos strongly supports the fundamental neutron physics program at the SNS**

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- ◆ **The physics program being proposed for the SNS has a large overlap with our scientific interests**
  - Now and in the future.
- ◆ **Collaborative efforts at LANSCE will provide an important element of preparing for the SNS**
  - Vitality of the science
  - Training ground for new scientists and students
  - Better definition of ultimate experiments best suited for the SNS
- ◆ **We expect LANSCE to be an integral part of a national program in fundamental neutron physics in the SNS era**
- ◆ **And that Los Alamos scientists would vigorously pursue scientific programs both at LANSCE and the SNS**

# Importance of this Workshop

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- ◆ **The SNS neutron physics program is a unique opportunity for our field**
- ◆ **Los Alamos is committed to contributing not only to the its scientific justification, but the detailed definition of experimental requirements, proposal and organizational structure**
- ◆ **We support an organizational structure with a strong community representation and peer review**
  - **While different in character from traditional IDTs, it should be possible to tailor it to the needs of this program**
  - **The challenge will be to satisfy SNS management while meeting the needs of this community**