



Contribution ID: 184

Type: Oral

The LANL UCN Program: status and news

Monday 17 October 2016 11:00 (30 minutes)

In this talk, we present an overview of the science program at the Los Alamos spallation-driven solid-deuterium ultra-cold neutron (UCN) source, describe the performance of the source, and give the status of the source upgrade now underway. Experiments in operation or development include the UCNTau neutron lifetime experiment, UCNB/Nab detector development for measurement of neutron beta decay parameters with cold and ultra-cold neutrons, SNS-nEDM storage cell performance tests, and development of the new LANL nEDM experiment. The present source upgrade involves replacing the entire cryogenic part of the UCN source, including the deuterium converter volume and the polyethylene moderator, as well as replacing the entire UCN transport system and installing a new UCN beam port, to be dedicated to the new LANL-nEDM experiment. The status and outlook of the experimental efforts and of the operation of the facility will be presented.

Author: SAUNDERS, Alexander (Los Alamos National Lab)

Presenter: SAUNDERS, Alexander (Los Alamos National Lab)

Session Classification: Mo - 2

Track Classification: Fundamental physics and precision experiments with muons, pions, neutrons, antiprotons, and other particles