THE LANSCE ACCELERATOR: A POWERFUL TOOL FOR SCIENCE AND APPLICATIONS

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Abstract

The Los Alamos Neutron Science Center (LANSCE) accelerator was built over 30 years ago. It consists of a 800-MeV proton linac, a proton storage ring, and facilities for isotope production, proton radiography, ultra-cold neutrons, weapons neutron research and for various sciences such as materials, biological and nanotechnology using neutron scattering. For national security, it plays a vital role in stockpile stewardship by providing important data on dynamic events during weapons detonation using proton radiography. The aging components of LANSCE will be refurbished and modernized in the next few years and the LANSCE will continue serving as a prominent facility for both science and national security in the years ahead. After SNS comes on line, it will play a complementary role and will also serve as a staging facility for some experiments to be carried out at SNS. Interesting science being conducted at LANSCE and the plans for the refurbishment and future enhancement of the facility will be presented.

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