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**OPERATIONAL STATUS OF THE LOS ALAMOS NEUTRON SCIENCE CENTER  
(LANSCE)\***

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**Abstract**

The Los Alamos Neutron Science Center (LANSCE) accelerator and beam delivery complex generates the proton beams that serve three neutron production sources; the thermal and cold source for the Manuel Lujan Jr. Neutron Scattering Center, the Weapons Neutron Research (WNR) high-energy neutron source, and a pulsed Ultra-Cold Neutron Source. These three sources are the foundation of strong and productive multi-disciplinary research programs that serve a diverse and robust user community. The facility also provides multiplexed beams for the production of medical radioisotopes and proton radiography of dynamic events. The recent operating history of these sources will be reviewed and plans for performance improvement will be discussed, together with the underlying drivers for the on-going Linac Risk Mitigation project. The project is funded and underway and will enable future decades of reliable, high-performance operation. It is replacing a substantial fraction of the radio-frequency power systems (gridded tubes and klystrons) with modern systems, completely refurbishing the original accelerator control and timing systems, replacing obsolete diagnostic devices, and modernizing other ancillary systems. Details of the proposed MaRIE project that builds upon the LANSCE facility are presented in a separate contribution.

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