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## An overview of the proton storage ring upgrade at LANSCE

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The Los Alamos Neutron Science Center (LANSCE) is one of the oldest operating high-average-power accelerators in the United States, having recently celebrated its 50th anniversary of operation. LANSCE is comprised of an 800-MeV linac capable of concurrently accelerating both H<sup>+</sup> and H<sup>-</sup> ions, and can presently provide beam to six separate user stations.

The Proton Storage Ring (PSR) at LANSCE acts as a pulse-stacker, providing intense bunches of protons to the Lujan neutron scattering center target. Critical subsystems have become increasingly difficult to maintain due to spare parts availability; more generally, the PSR contributes significantly to our annual maintenance duration due to beam spill and component activation. The proposed LAMP project would extend the operating lifetime and improve the operational characteristics of the PSR via increasing the physical aperture by 50%; modernizing and improving the performance of the RF buncher system, extraction kickers and impedance inserts; and updating the injection line and stripper foil system for reduced injection losses and improved maintainability. This paper provides an overview of the PSR portion of LAMP.

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