



Contribution ID: 2584 Contribution code: TUPM014

Type: **Poster Presentation**

## **Future Los Alamos Neutron Science Center (LANSCE) Directions and Enabling R&D Studies**

*Tuesday, 9 May 2023 16:30 (2 hours)*

The Los Alamos Neutron Science Center (LANSCE) is a MW-class H-/H+ 800-MeV proton linear accelerator and storage ring that serves five distinct user facilities in support of LANL's national security mission and DOE's Office of Science medical isotope program. We will describe future directions of LANSCE over the next two decades, which includes revitalization and modernization of existing subsystems and upgrades with significantly increased operational capabilities. We will also be describing ongoing and future R&D activities will enable these enhancements. Some of this R&D is truly cross-cutting, leading to foundational technologies that broadly support multiple LANSCE directions, such as high-gradient normal-conducting RF, artificial intelligence/machine learning, and high-brightness, robust cathodes. Other R&D is more specific to particular applications, and include such topics as narrow bandwidth inverse-Compton scattering, short-range wakefield studies, and novel X-ray free-electron laser architectures.

### **Funding Agency**

### **Footnotes**

### **I have read and accept the Privacy Policy Statement**

Yes

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**Session Classification:** Tuesday Poster Session

**Track Classification:** MC4: Hadron Accelerators: MC4.A08: Linear Accelerators