

Call for Proposals: Proton Radiography FY21 at LANSCE

Deadline: 5:00 pm (MST) Friday, January 31, 2020

Program Advisory Committee Review with PI presentations: tentatively February 19 & 20, 2020

The Los Alamos Neutron Science Center (LANSCE) is issuing a Call for Proposals for experiments for the pRad Facility <https://lansce.lanl.gov/facilities/pRad/index.php> during Fiscal Year 2021. Accepted experiments will be scheduled from approximately **October 1, 2020 through December 23, 2020 and June 15, 2021 through September 30, 2021**. The proton radiography facility uses 800 MeV protons, provided by the LANSCE accelerator facility at Los Alamos National Laboratory (LANL), to diagnose dynamic and static experiments in support of national and international weapons science and stockpile stewardship programs and other research that benefits from the unique capabilities of proton radiography.

In FY21 run cycle, the pRad facility will have high explosive, pulsed power (PHELIX), and 40mm powder gun drivers available for experiments. We anticipate that three imaging systems will be available for dynamic experiments, 1X, 3X, and 7X. The x7 magnifier will not be available for powder gun experiments. If your experiment would benefit from a pre-shot sample characterization using neutron diffraction, address the requirement in your proposal. If feasible, we will use the available instruments (SMARTS and HIPPO) at the Lujan Center to perform the sample characterization. See <https://lansce.lanl.gov/facilities/lujan/index.php> for instrument details.

pRad Facility Scope and Costs

pRad beam production operations are covered by NNSA programmatic sponsors.

Approximately 10% of the beam time at pRad is available for compelling scientific proposals from institutions without programmatic sponsors, and proprietary work or SPP (Strategic Partnership Project) agreements. For all experiments, costs for personnel not on the pRad team and unique experimental costs, including fabrication and assembly of the experimental package, must be borne by the user.

Proposal Requirements

Proposals must provide a detailed description of the experimental devices, the experimental configurations, beam time requested as well as estimate of feasibility in FY21 run cycle. Proposers should work with the pRad team when developing their proposals. For technical questions regarding details involved in fielding pRad experiments or in other types of experiments that could be fielded, please contact Levi Neukirch (lneukirch@lanl.gov) and Kathy Prestridge (kpp@lanl.gov). Known technical, operational, and safety risks specific associated with the proposed experiment must be identified in the proposal. Proposers should specify how the pRad measurements will inform theory, modeling, or validation work. All proposals that cover work that is continuing or are an extension of work being done during FY20 should attach

either a progress report, a final shot report, or a published paper based on the results of that work.

Submitted proposals will be ranked on:

1. Quality of the science being proposed (What is the problem, and why are experiments needed?)
2. Impact to programs (How will the data be used?)
3. Appropriateness of the use of the pRad diagnostic for the experiments (Why can't this be done somewhere else?)
4. Readiness of the experiments, feasibility with stated resources, and requested time (Has other work been done informing the pRad experiments?)

Program Advisory Committee

All proposed experiments will be reviewed by the Program Advisory Committee (PAC). The PAC is an advisory committee to the LANSCE User Facility Director and judges the proposals based upon the criteria stated above.

Proposal Submission

Step 1: Log into the LANSCE Experiment Management System

Log in to <https://lems.lanl.gov/login>. Create an account (contact the pRad User Office if you have problems, prad-uo@lanl.gov). Answer the questions in the system and make a note of your proposal number.

Step 2: Submit Full Proposal to LANSCE

Unclassified and OUO/Export Controlled Proposals

Submit your proposal to nroelofs@lanl.gov and kpp@lanl.gov using the **transfer.lanl.gov** website (accessible from outside LANL, and useful for large files) or email. Please include your proposal ID number in your document.

Classified Proposals

Submit your classified proposal to Liz Melton on the secure network (ejm@lanl.gov) via email or transfer. If this transmission method is not available to you, contact Liz for alternatives. If this transmission method is not available to you, contact Liz for alternatives (ejm@lanl.gov or 505-667-1785). Classified proposals should be appropriately marked and include your LEMS proposal number. For proposals containing sigma 15 or 20 information, please contact Tamsen Schurman (tamsen@lanl.gov) for information on how to proceed.