

LA-UR-24-20324

Approved for public release; distribution is unlimited.

Title: Call for Proposals: Proton Radiography 2024 Run Cycle

Author(s): Sandstrom, Mary M.

Intended for: Will be distributed via email to potential users both within LANL and other Institutions.
Web

Issued: 2024-01-12



Los Alamos National Laboratory, an affirmative action/equal opportunity employer, is operated by Triad National Security, LLC for the National Nuclear Security Administration of U.S. Department of Energy under contract 89233218CNA000001. By approving this article, the publisher recognizes that the U.S. Government retains nonexclusive, royalty-free license to publish or reproduce the published form of this contribution, or to allow others to do so, for U.S. Government purposes. Los Alamos National Laboratory requests that the publisher identify this article as work performed under the auspices of the U.S. Department of Energy. Los Alamos National Laboratory strongly supports academic freedom and a researcher's right to publish; as an institution, however, the Laboratory does not endorse the viewpoint of a publication or guarantee its technical correctness.

Call for Proposals: Proton Radiography 2024 Run Cycle

Deadline: 5:00 pm (MST), Monday March 11, 2024

Program Advisory Committee Review with PI presentations:

Tentatively – week of April 8, 2024, currently planned for in person with hybrid option for unclassified presentations.

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 Calendar Year 2024. Accepted experiments will be scheduled from approximately September 4, 2024 through December 21, 2024. 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.

No previous proposals, even those awarded previous beam time, will be scheduled for 2024. All must reapply for beam time. If your experiment will be ready for the 2024 run cycle, apply to this call. If your experiment will not be ready to execute, please apply to a future call for beam time instead. Please contact the pRad Capability Leader, Mary Sandstrom at msandstrom@lanl.gov, to be assigned a Point of Contact (POC) from the pRad team.

Since the 2024 run cycle has been truncated, pRad will accept proposals for high explosive, pulsed power (PHELIX), and 40mm powder gun drivers, however there may not be enough time to field all three. 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. It is expected that the pRad experiments will have extensive testing at other facilities before coming to pRad. Known technical, operational, and safety risks specifically associated with the proposed experiment must be identified in the proposal.

Proposal Requirements

Proposals must provide a detailed description of the experimental devices, the experimental configurations, and amount of beam time requested as well as estimate of feasibility in 2024 run cycle. Proposers should work with their POC when developing their proposals.

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.

Program Advisory Committee

Proposals that are complete will then be sent to their point-of-contact (POC) for a feasibility review. 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 Valerie Salazar if you have problems, vsalazar@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 Mary Sandstrom (msandstrom@lanl.gov) and Keith Rielage (rielagek@lanl.gov) using the transfer.lanl.gov website (accessible from outside LANL, and useful for large files) or direct email. Please include your proposal ID number in your document.

Classified Proposals

Submit any classified proposals via transfer.lanl.gov to Mary Sandstrom (msandstrom@lanl.gov) and Keith Rielage (rielagek@lanl.gov) on the classified network. For proposals containing sigma 15 or 20 information, please contact James Wernicke (wernicke@lanl.gov) for information on how to proceed.