

# Call for Proposals: Nuclear Science at LANSCE 2020 Run-Cycle

## Proposal Submission

WNR and Lujan Center call for nuclear science proposals is now open.

Deadline: Monday, March 2<sup>nd</sup>, 2020, 5:00 pm (MDT).

**The Los Alamos Neutron Science Center (LANSCE) is issuing a Call for Proposals for Nuclear Science at the Weapons Neutron Research (WNR) Facility and Lujan Center for the upcoming run cycle June – December 2020.**

The Weapons Neutron Research (WNR) facility and Lujan Center provide neutron and proton beams, as well as detector arrays for basic, applied, radiation effects, and defense-related research. Neutron beams with energies ranging from about 0.1 MeV to more than 600 MeV are produced in Target 4 (an unmoderated tungsten spallation source) using the 800 MeV proton beam from the LANSCE Linac. In the Target-2 area (Blue Room) samples can be exposed to the direct proton beam with energies up to 800 MeV. At Target 1 cold to epithermal neutrons (1 meV - 500 KeV) are produced. Information about the Nuclear Science instruments is available at <https://lansce.lanl.gov/facilities/wnr/index.php>.

## Timeline

The deadline for proposal submission is Monday, March 2, 2020 at 5:00pm (MDT).

All non-proprietary proposals will be reviewed by the Nuclear Program Advisory Committee (NPAC) for scientific merit. The NPAC will meet the week of March 30, 2020. The proposers are not expected to give a presentation, but should appoint a point of contact who is available should questions arise during the review process.

Beam time allocation for proprietary full cost recovery experiments on any beamline is determined on a first come, first served basis and will not be reviewed by the NPAC.

## Instruments/Flight Paths Available in the Current Call for Proposals:

### Target 1 (Thermal and Cold Neutron Source: 1 meV-500 keV):

Flight Path	Description	Instrument Scientist	Email	Telephone
<a href="#">Flight Path 5</a>	General purpose	Alex Long	<a href="mailto:alexlong@lanl.gov">alexlong@lanl.gov</a>	505-667-3600
Flight Path 6	General purpose	Alex Long	<a href="mailto:alexlong@lanl.gov">alexlong@lanl.gov</a>	505-667-3600

Flight Path	Description	Instrument Scientist	Email	Telephone
<a href="#">Flight Path 12</a>	General purpose	Jack Winkelbauer	<a href="mailto:winkelba@lanl.gov">winkelba@lanl.gov</a>	505-606-0023
<a href="#">Flight Path 13</a>	Device for Indirect Capture Experiments on Radionuclides (DICER). Neutron total cross sections of radioactive nuclides	Paul Koehler	<a href="mailto:koehler@lanl.gov">koehler@lanl.gov</a>	505-606-0743
<a href="#">Flight Path 14:</a>	Detector for Advanced Neutron Capture Experiments (DANCE). Neutron capture cross sections on small samples of stable, rare, or radioactive nuclides and measurements of gamma-ray emission spectra:	John Ullmann	<a href="mailto:ullmann@lanl.gov">ullmann@lanl.gov</a>	505- 667-2517

#### Target 4 (High-Energy Neutron Source: 1-600 MeV):

Flight Path	Description	Instrument Scientist	Email	Telephone
<a href="#">Flight Path 90L</a>	Fission, Time-Projection Chamber (TPC)	Christopher Prokop	<a href="mailto:cprokop@lanl.gov">cprokop@lanl.gov</a>	505-667-6810
<a href="#">Flight Path 15L</a>	20 m and 90 m stations, neutron outputs, Chi-Nu	Keegan Kelly	<a href="mailto:kkelly@lanl.gov">kkelly@lanl.gov</a>	505-665-5118
<a href="#">Flight Path 15R</a>	General purpose, detector testing, LENZ(n,z)	Hye Young Lee	<a href="mailto:hylee@lanl.gov">hylee@lanl.gov</a>	505-665-7252
<a href="#">Flight Path 30L</a>	ICE House, single event effects, semiconductor testing and other measurements	Steve Wender	<a href="mailto:wender@lanl.gov">wender@lanl.gov</a>	505-667-1344
<a href="#">Flight Path 30R</a>	ICE II, single event effects, semiconductor testing and other measurements	Steve Wender	<a href="mailto:wender@lanl.gov">wender@lanl.gov</a>	505-667-1344
Flight Path 60R	High Energy Neutron Radiography	Nik Fotiadis	<a href="mailto:fotia@lanl.gov">fotia@lanl.gov</a>	505-665-0589
East Port	Neutron activation, neutron irradiation	Michael Mocko	<a href="mailto:mmocko@lanl.gov">mmocko@lanl.gov</a>	505-667-0628

#### Target 2 (Blue Room) Proton Irradiations / Sole Use:

Radiation effects, proton-induced reaction cross sections, Lead Slowing-Down Spectrometer, PSR beam, Linac beam including beam energy other than 800 MeV, sole use. Instrument Scientist: Steve Wender, [wender@lanl.gov](mailto:wender@lanl.gov), 505-667-1344.

## Proposal Submission and Selection

Proposals are reviewed by flight path scientists for technical feasibility and safety issues, then reviewed for scientific merit and program relevance by the Nuclear Program Advisory Committee (NPAC). When submitting your requested beam days make your request on the assumption that WNR intends to run at approximately 4  $\mu\text{A}$  at 100 pulses per second and the Lujan Center nominally operates at 100  $\mu\text{A}$  at 20 pulses per second.

## Proposal Submission

Proposals must be submitted using the LANSCE Experiment Management System: <https://lems.lanl.gov/login>. Users need to create an account first. If you have an account in the old LANSCE proposal portal please use the "[Forgot your Password?](#)" to reset your password and access your account in the new system. The system requires completion of a web-based form and upload of a proposal document. The proposal document should be formatted with fonts no smaller than 12 pt with a maximum of 5 text pages plus figures and appendices, and should contain the following technical information:

1. Research goals including background needed to place your proposal in the proper context, and the significance of the proposed work.
2. Experimental details sufficient for the PAC to determine the feasibility of your experiment: what you want to measure, estimates of signal and background including any assumptions, and a justification for time request including any contingencies.
3. If you require special help in the form of specialized equipment or personnel expertise, discuss these needs.

Users should expect a conversation regarding the disposition of samples brought into the facility as part of the proposed experiment.

Please, contact the User Program Office, [lansce-user-office@lanl.gov](mailto:lansce-user-office@lanl.gov), or 505-665-9967 for assistance with the proposal process or the instrument scientist for technical questions.

**Note:** The Department of Energy (DOE) requires users of any LANSCE Facility to have a User Agreement (UA) in place between Los Alamos National Laboratory and the user's home institution **before the experiment can be scheduled**. The description and list of existing UA can be found at <https://lansce.lanl.gov/users/become-a-user/user-agreements.php>. If your institution does not have a valid UA in place, please contact the User Office at [lansce-user-office@lanl.gov](mailto:lansce-user-office@lanl.gov) to start the process as early as possible.

### Important:

- DOE requires that all personnel associated with each experiment (including citizenship) are listed in the proposal.
- All visiting US citizen users need to register the visit three weeks before the scheduled experiment. Non-US citizens must register 60 days before their visit.
- DOE requires additional information to grant non-US citizens access to Los Alamos National Laboratory (LANL). Foreign national visitors must have an approved visit request, present a valid passport and documentation of US legal status and work authorizations. (<https://www.lanl.gov/community/visitors/badging/index.php>).

## **Classified Proposals Submission**

If you plan to submit a classified proposal, please contact Morgan White (505-665-3684) as early as possible to discuss how to do so.

## **Neutron Radiation Effects Proposals**

When requesting access to the semiconductor irradiation and testing facilities at the ICE Houses, please specify which flight path is your first choice (ICE House or ICE-II). Note that proprietary users planning full cost recovery experiments *must also submit a proposal*, though these proposals are not reviewed by the NPAC. For technical questions contact Steve Wender ([wender@lanl.gov](mailto:wender@lanl.gov), 505-667-1344). For administrative questions regarding contracts for these experiments, please contact Nina Roelofs ([nroelofs@lanl.gov](mailto:nroelofs@lanl.gov), 505-665-9967).

For questions regarding full cost recovery experiments on any other flight path, please contact Morgan White ([p27-go@lanl.gov](mailto:p27-go@lanl.gov), 505-665-3684).

## **Technical Questions**

For technical questions regarding details involved in fielding experiments or in other types of experiments that could be fielded, please contact the individual instrument scientists or Morgan White, P-27 Group Leader ([p27-go@lanl.gov](mailto:p27-go@lanl.gov), 505-665-3684), or the User Program Office ([lansce-user-office@lanl.gov](mailto:lansce-user-office@lanl.gov), or 505-665-9967) who will then refer you to the appropriate expert in your area of interest.

For more information about the Nuclear Science Call for Proposals go to:  
<https://lansce.lanl.gov/users/become-a-user/proposals.php>

We look forward to your submissions,  
Nuclear Science User Program  
[lansce-user-office@lanl.gov](mailto:lansce-user-office@lanl.gov)