

LANSCCE 2019 User Survey Q&A:

LANSCCE Proposal Submission and Decision Process Related

Could the PI receive useful feedback from the PAC like in previous years?
LANSCCE will address the issue. Feedback will be sent out for 2020 proposals after the PAC review is done.

Could the desired dates be accommodated instead of being blindly assigned a timeslot?

Desired dates are accommodated when the schedule allows. Proprietary users and programmatic proposals are scheduled first according to their desired dates. University and other Labs are scheduled after industry users and programmatically-funded experiments are accommodated.

LANSCCE User On-boarding Process Related

Several collaboration members could not get foreign national access approval in time for the scheduled run time. Is it possible to not have to redo the background check each year?

DOE policy requires a new background check be performed every time a non-US citizen visits the Lab.

The PI needs to add collaborators to the proposal for the User Office to obtain the required approvals. The User Office will follow up on the registration requirement for users to make sure the paperwork is in place for the experiment. Proper planning and advanced notice to the User Office of foreign national access can mitigate problems.

Can the hours of the Training Office be more flexible?

The Training Office hours were extended to accommodate users' schedule. We will pursue the option to allow users to schedule appointments with the Training Office.

Work/Beam/Flightpath Related

Could the scheduled down times be more coherent?

We will continue to schedule experiments to optimize the user's beam time.

The new schedule has reduced numbers of maintenance days compared to recent run cycles.

Can staffing levels at pRad be addressed to reduce inefficiencies?

Recent changes in the staffing mix and in conduct of operations will hopefully improve operating efficiency. The User program welcomes user feedback from the next run cycle regarding the impact of these changes.

Process Related/Post Experiment

Can unaffected beamlines be exempted from mandatory work pauses across the entire TA?

LANSCCE is required to follow LANL safety protocols, which sometimes introduces site-wide work pauses. Exemptions defeat the purpose of work pauses, which serve to ensure safe operating procedures are consistently applied across the institution.

Can an in-situ radiation monitor that is independent of the shutter state be available for the ICE House flight paths?

Geiger counters are provided at the ICE House and ICE-II flight paths for use by users when making entries into PACS-controlled areas. Users are reminded that Geiger counter use should be for user assurance only, and must not serve as a means to bypass radiation protection procedures. Users are encouraged to call upon Health Physics support whenever they have questions concerning radiation protection.

The facility management doesn't seem to trust its explosive SME's on the level of controls required for the safe handling of explosives. There is a lot of overkill procedures and rules in place compared to other firing sites at both LANL and other labs.

LANSCCE works closely with Laboratory high explosive SMEs to establish proper protocols for the safe handling of HE at pRad, and HE SMEs are deployed to pRad to support HE operations. Users are reminded that pRad has environmental conditions that are different from other firing sites at LANL, which can result in different rules and procedures.

How can users reduce the radiation exposure during experiments?

Users are advised and briefed to use the remote data rooms to reduce radiation exposure.

pRad has become less disciplined relative to the last time I worked here. It seems like team members sometimes disagree on procedures.

The pRad team has clarified roles and responsibilities for each team member, and has addressed conduct of operations. These changes will

hopefully improve operations and efficiencies. The User program welcomes user feedback from the next run cycle regarding the impact of these changes.

Could the requirement for Rad Worker II training for FP5/6 be lifted?

LANSCE management is aware of the inconvenience this causes users and has explored options to address this issue in the past, but no easy solution exists. For now, FP5/6 users will continue to be required to be RWII-trained or be escorted in ER1. The user will be contacted immediately after registration to schedule the required RWII training in time.

Improvement Suggestions

Can the return time of shipping back experimental materials be decreased?

User items removed from the flight paths must be free of residual radioactivation before they can be released, at which time they are shipped back to the user.

Can down times better communicated?

The CCR staff will be reminded to post down times and anticipated return to production on the LANSCE status screen.

Capabilities Needed

It would be helpful to have some estimates of circuit board attenuation, or another smaller dosimeter such that we could test ourselves / estimates of beam attenuation due to PCBs, or a portable dosimeter to take those measurements ourselves.

LANSCE developed a process to measure beam attenuation by PCBs. The next step is to make it user-friendly (timeline: targeted for 2021 run cycle).

Some room for improvement on the translation stage (more automated axis of motion) were discussed with the beamline scientist

LANSCE will explore this in further discussion with users.

3D Mapping of Crystallographic Phase Distribution

LANSCE has the capability to perform this measurement via energy-resolved Bragg edge imaging, but it's quite some effort for data analysis.

The user is encouraged to discuss their needs with the neutron scattering team.

3D scan of exp. area and our setup

3D scan is in progress for the Lujan Center flight paths.

It would be exceedingly helpful to have a script to automate cross-section computations. A time series of all the information required to do so (except the faults observed), along with a detailed timestamp would be sufficient

The user is encouraged to discuss this idea with the cognizant Instrument Scientist.

Optical camera and improved alignment process that does not require opening/closing shutters

The majority of flight paths have laser alignment available. The user is encouraged to discuss alignment concepts with the cognizant Instrument Scientist.

Add wall mounted laser system for beam alignment.

LANSCCE is exploring to add a wall-mounted laser system to some flight paths.

It would be good if the users had a way to obtain more details on how the neutron fluence is measured, the uncertainties related to values, etc.

Details on the method of measuring the neutron flux on WNR flight paths may be found in the journal article: "A Fission Ionization Detector for Neutron Flux Measurements at a Spallation Source," S.A. Wender, R.C. Haight, R.O. Nelson, C.M. Laymon, A. Brown, S. Balestrini, W. McCorkle, T.M. Lee and W. Parker, Nucl. Instr. and Meth. A336 (1993) 226.

Permanent fast neutron radiography setup (optics and position-sensitive detector) for scintillator materials evaluation.

This requires funding from an appropriate sponsor. Users are encouraged to engage program managers on the benefits of such a setup.

Ability to tune the second imaging station on pRad independently from the first to do material identification.

pRad staff have ideas for making this capability available to users, possibly as soon as the 2021 run cycle.

Add the capability to remotely control the shutter of ICE house.

Shutter remote control from the remote data rooms is feasible. LANSCCE is pursuing implementation.

Additional Ethernet connection between ICE house and Control Room.
This is already in place.

Thermal Neutron beam line.

FP5 exists as a general-purpose thermal neutron beam line. LANSCE recognizes the potential benefit of a second thermal neutron beam line and is exploring funding opportunities.

New radial collimators for SMARTS, higher neutron flux, and improved beam endurance.

New radial collimators were recently ordered and should be installed in the near future. The new Lujan Center Mark IV target is expected to deliver reduced neutron flux per unit beam current to SMARTS, which we hope to recover by increasing the beam current delivered to the Lujan Center.

To open LANSCE again as a general user facility. There is no other neutron facility in the US for quantitative texture analysis.

LANSCE operates three DOE NNSA designated user facilities (WNR, Lujan Center, pRad) that invite proposals for beam time nearly without restrictions. Beam time is however prioritized for experiments that benefit NNSA programs.

Energy resolved tomography (time of flight) and fast time resolved (~10us) neutron resonance imaging.

The capability of fast time resolved (~10us) neutron resonance imaging exists on FP5. Energy-resolved tomography has been demonstrated though not regularly practiced and requires more efforts to build a robust and standard setup.

Dedicated thermal neutron SEE line high energy proton line either Area A or at least better diagnostics/access in Blue Room.

Proton beam and high flux thermal neutron beam would be great. LANSCE is aware of the user need and is exploring possibilities for funding.

Higher energy pRad is my number one and only priority.

This needs to be explored with sponsors and requires significant investment.

pRad could really use a TOAD rack.

We can explore implementing a deployed TOAD rack on your next experiment, so please request it. pRad will need to seek funding for a lasting capability, however.