



Nuclear Science User Facilities (NSUF)

Users Meeting 2016

Topic: Nuclear Science: Irradiation and Post-irradiation Examination of Fuels and Materials

Dates: June 6-9

Where: Idaho National Laboratory, Idaho Falls, Idaho and Broadcast to NSUF Partner Facilities throughout the U.S.

The Nuclear Science User Facilities (NSUF) is one of a growing number of Department of Energy user facilities in the U.S., and is the nation's only designated nuclear energy user facility. Through a peer-reviewed application process, NSUF provides external research teams with no-cost access to reactor, post-irradiation examination (PIE) and beamline capabilities at Idaho National Laboratory (INL) and a diverse mix of affiliated partner institutions at universities, national laboratories and industry facilities located across the country.

Summary: The annual NSUF Users Meeting is intended for researchers from industry, national laboratories and students, faculty and post-docs from universities who are interested in irradiation effects on nuclear fuels and materials.

This year's NSUF Users Meeting will broadcast to participating NSUF partner facilities online in a webinar format. Users are encouraged to attend the meeting at a NSUF facility either for geographical convenience or to explore a specific facility capability of interest.

The meeting will kick off with an introductory workshop to familiarize participants with NSUF. During the workshop participants will receive an overview of the NSUF solicitation process and an introduction to the NSUF irradiation, PIE, beamline and computing/simulation capabilities. Technical sessions will also be held that highlight NSUF projects. These sessions include beamline, fuels development, cladding, structural materials, instrumentation, and nuclear data.

All participants are also welcome to attend the annual NSUF Users Organization meeting. If you are not a member of the Users Organization, you will be invited to join the group. A social and poster session will follow the Users Organization meeting where attendees are encouraged to present their research.

Finally, tours of irradiation and post-irradiation examination facilities will be offered.

Tentative Program

(More details and a final agenda will be provided prior to the meeting.)

All times MDT

June 6

8 a.m.-3:30 p.m.

Introductory Workshop

This workshop is designed to introduce participants to the facilities and capabilities of the NSUF. Presentations will include an overview of irradiation capabilities, beamline, High Performance Computing and PIE facilities. Participants will also learn about the solicitation process and the application submission system.

June 7

8:30 a.m.-4 p.m.

Technical Sessions from NSUF Experimenters

- Beamline
- Fuels Research and Development

4-5 p.m.

NSUF Users Organization Meeting

Upcoming business will be discussed and input will be sought from the past, current and future users of the NSUF. This is the forum for users to influence the direction of NSUF.

5-7:30 p.m.

Users Meeting Social and Poster Session

The social and poster session provides participants an opportunity to meet and interact with one another, NSUF personnel- including technical leads involved in current research- and past and present users. Participants are invited to present and discuss their research during the poster session.

June 8

8:30a.m.-4 p.m.

Technical Sessions from NSUF Experimenters continued

- Cladding and Structural Materials
 - Instrumentation and Nuclear Data
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June 9

Tentative Tours

6:45a.m.-3:30 p.m.

Idaho National Laboratory

An optional tour of the post-irradiation facilities at INL's Materials and Fuels Complex, as well as a tour of the Advanced Test Reactor will be offered.

University of Wisconsin

An optional tour of the Ion Beam Laboratory and post-irradiation facilities at UW-Madison Characterization Laboratory for Irradiated Materials and Materials Science Center, as well as a tour of the research nuclear reactor will be offered.

Massachusetts Institute of Technology

An optional tour of the MIT Nuclear Reactor Laboratory will be offered.

North Carolina State University

An optional tour will be offered of the PULSTAR research reactor and its associated facilities including the neutron imaging facility, the ultracold neutron facility, and the Neutron Activation Analysis laboratory.

Oak Ridge National Laboratory

An optional tour of ORNL's PIE capabilities in the Low-Activation Materials Development and Analysis lab, Irradiated Fuel Examination Laboratory Hot Cell Facility, Irradiated Materials Examination and Testing Hot Cell Facility, as well as the High Flux Isotope Reactor will be offered.

Pacific Northwest National Laboratory

An optional tour of the Radiological Processing Laboratory, the Materials Science and Technology Laboratory, and the Salk Facility will be offered. The Salk Facility tour will only be available to US citizens.

Registration: The Users Meeting is open to participants from academia, industry and national laboratories working in or studying nuclear energy, including technical fields such as nuclear engineering, materials science, physics and other related engineering and science fields. The meeting content is technical, and as such, participants must have at least an advanced undergraduate-level understanding of nuclear technology and materials.

If you would like to view online the Users Meeting at one of the partner facilities, or view online from your personal device, please select the appropriate option upon registration. Additional information regarding specific facility visits and online participation will be emailed to all registered participants after registration closes.

Due to security requirements associated with the optional tours, the **deadline for registration is April 10**. [Click here to register](#).

Cost: There is no registration fee for the 2016 NSUF Users Week. All participants will be responsible for their own travel, lodging and meals. A limited amount of travel support is available for university students on a competitive basis, which includes round-trip travel to Idaho Falls plus hotel and meal expenses. Preference will be given to graduate students in relevant fields of research or from minority-serving institutions and/or underrepresented groups. Students applying for travel support must be enrolled at a U.S. university. Applications for travel support are located on the registration website and are **due by March 27, 2016**.

For questions or for additional information, contact Renae Soelberg (208-526-6918), renae.soelberg@inl.gov

Partner Facilities Details

University of Wisconsin Tandem Accelerator Ion Beam /Characterization Laboratory: Beata Tyburska-Puschel, tyburskapusc@wisc.edu, 608-890-3578

Massachusetts Institute of Technology MITR Nuclear Reactor Laboratory: Tom Bork, tbork@mit.edu, 617-253-4211

North Carolina State University PULSTAR Reactor: Ayman Hawari, ayman.hawari@ncsu.edu, 919-515-4598

Oak Ridge National Laboratory HFIR/LAMDA: Kory Linton, lintonkd@ornl.gov, 865-241-2767

Pacific Northwest Laboratory, Radio Chemical Processing Laboratory: Dave Senior, david.senor@pnl.gov, 509-371-6936