# Nuclear Science User Facilities releases report from Ion Beam Investment Options Workshop

**IDAHO FALLS, Idaho** -- The U.S. Department of Energy (DOE) Nuclear Science User Facilities (NSUF) hosted a workshop March 22-24, 2016, at Idaho National Laboratory's Energy Innovation Laboratory to develop a set of recommendations and priorities for possible funding for domestic ion beam irradiation capabilities for nuclear energy-focused RD&D. The results of this workshop were intended for the Department of Energy - Office of Nuclear Energy (DOE NE) when considering support of these facilities. The workshop facilitators considered input submitted through the Office of Nuclear Energy Request for Information (RFI) (DE-SOL-0008318, April 13, 2015), but welcomed discussion and presentation of other options, whether specific or general in scope. Input from users, including DOE NE program interests and needs for ion irradiation R&D was also included.

Participants were selected from various sources: RFI respondents, NEUP/NEET infrastructure applicants, universities with known expertise in nuclear engineering and materials science and other developed sources.

Thirty-one members of the ion beam community attended the workshop, including 15 ion beam facilities, six scientists representing Office of Nuclear Energy R&D programs, an industry representative from EPRI and the chairs of the NSUF Users Organization and the NSUF Science Review Board. Another four ion beam users attended, acting as advisors to the process. Three members of the sponsoring agency, the DOE NE Office of Science and Technology Innovation (NE-4), also attended the workshop.

The report (INL/EXT-16-38957 June 2016) contains the presentations delivered at the workshop as well as the comments from the workshop participants. During the workshop, the participants developed 10 criteria to evaluate 11 existing and four proposed ion beam irradiation facilities. The participants then produced a final list of facilities ranked by community interest.

Through a solicitation process not associated with the workshop, the two highest-ranking facilities — the Intermediate Voltage Electron Microscope Tandem User Facility at Argonne National Laboratory and the Michigan Ion Beam Laboratory at the University of Michigan — received infrastructure awards totaling $480,000 from DOE NE in FY2016 to enhance their capabilities. Both facilities will now have the capability to view samples in situ under irradiation by dual ion beams converging in a transmission electron microscope. This capability is considered to be at the leading edge of irradiated materials research with only a handful of similar capabilities in the world. Both facilities are current partners of the NSUF and available for access to researchers through the NSUF solicitations. Several other ion beam facilities will be considered for invitation to join NSUF as partners during FY2017 as a result of the workshop.

To access the full report and for more information about NSUF opportunities, visit the NSUF website at https://nsuf.inl.gov.