Solicitations and Partners

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Idaho National Laboratory

ATR
National Scientific User Facility

Solicitations – Benefits to You

- Free Research – irradiation/PIE costs born by User Facility
- Collaborations – an opportunity to work with INL or partner facility staff
- Students – internship opportunities at INL, experiment opportunities for hands-on learning, assistance in student support
- Facilities – INL and partner facility capabilities continue to grow (ORNL, UCB)

ATR NSUF offers universities, national laboratories and industry the chance to become leaders in the Nuclear Renaissance

Solicitation Types & Awards

Two types of solicitation & award processes

- **Open Call for Proposals:** Includes Irradiation, Combination, PIE-only, Synchrotron Irradiation. Rolling call, closes twice per year with awards typically made twice per year.

- **Rapid Turnaround Experiments:** Open all year, proposals reviewed as they come in. Award based on technical merit and priority. High priority awarded immediately if funding available. Recommended placed in queue and awarded every other month based on funding. Not recommended, not awarded.

Open Call for Proposals Award Process

Irradiation, Combination, PIE only and Synchrotron Irradiation:

- **Proposals must pass several reviews and rank high on the list of proposals received**
  - Technical – scored based on 4 criteria
  - Feasibility – determined by facility personnel
  - Programmatic Relevance – Both HQ and INL program experts (need to be relevant to at least one)
  - Panel Committee final review and ranking
- **Funding must be available**

Rapid Turnaround Experiments Award Process

Rapid Turnaround Experiments:

- **Proposal must pass several reviews and rank high on the list of proposals received**
  - Technical – scored and ranked
  - Feasibility – determined by facility personnel
  - Programmatic Relevance –INL program experts
  - Priority – determined by technical reviewers
- **Funding must be available**

Technical Review Common to All Awards

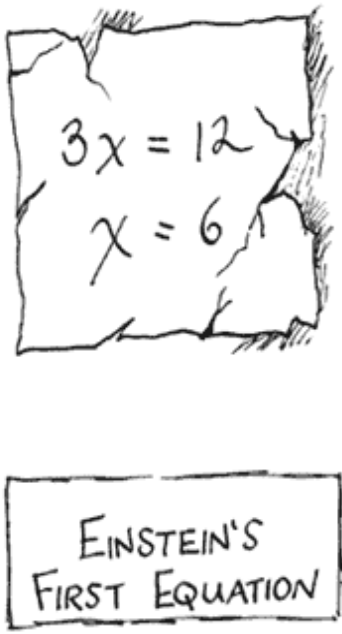
Feasibility and programmatic relevance play a role in the award, but a high score on the technical review ultimately determines the proposal ranking.

Open Call – Technical Review Scoring

Total Score possible – 100 points

Score based on four criteria:

- Technical Merit - 60 points
- Proposed Research Plan – 15 points
- Resources – 15 points
- Team Qualifications – 10 points



Open Call – Technical Review Scoring

Criteria	Points Available	Points for 90% and Above	Points for 80% - 90%	Points for 70% - 80%
Scientific Merit	60	55 and up	48 – 54	42 – 47
Proposed Research Plan	15	13 and up	12	10.5 – 11.9
Resources	15	13 and up	12	10.5 – 11.9
Team Qualifications	10	9	8	7

Rapid Turnaround Experiments Technical Review Scoring

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Total Score possible – 100 points

Score based on three criteria:

- Scientific Merit – 50 points
- Technical Feasibility – 30 points
- Team Capability – 20
- Overall Recommendation – High Priority, Recommended, or Not Recommended.

Rapid Turnaround Experiment Technical Review Process

Criteria	Points Available	Points for 90% and Above	Points for 80% - 90%	Points for 70% - 80%
Scientific Merit	50	45 and up	40 – 44	35 – 39.5
Technical Feasibility	30	27 and up	24 – 26	21 – 23.5
Team Capability	20	18 and up	16 – 17	14 – 16.5

Open Call – What Helps a Proposal Score High?

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A Good Proposal Answers the Questions: Who, What, When, Where, Why, and How (*and it's the details that count*)

Technical merit: This is the **what** are you doing and **how** will it be done of the research proposed. Should include a description the research objectives and of the methods to be used in achieving the scientific goals, an understanding of the state-of-knowledge in the field, citation of references (because reviewers are often experts in the field), an explanation of **why** the research is important (what problem is it solving or what question is it answering).

Proposed Research Plan: Needs to be organized, logical and achievable. The reviewers are looking to see if you have thought through how all the activities will be accomplished, by **whom**, **when** and **where**. Basically its the mechanics needed to accomplish the research.

Resources: This section describes **who** will do **what**, and **who** will provide **what**. Clearly state the part each team member will contribute to the research. This is also the place to discuss access to technical expertise, state-of-the-art facilities, industry involvement.

Team Qualifications: This is the main "**who**" of the proposal and helps the reviewers understand the technical expertise behind the proposal.

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RTEs – – What Helps a Proposal Score High?

Same Principles, (less detail)
Who, What, When, Where, Why, and How

Only three elements to score for this review:

1. **Scientific Merit** – scientific importance or technological need as well as innovation & validity of the approach.
2. **Technical Feasibility** – risk of research tasks being accomplished.
3. **Team Capability** – background and past performance of the PI/team and the research environment and facilities provided by the PIs and co-PIs.

Overall Recommendation:

- **High priority:** the proposal has clearly shown that the research will benefit the state-of-knowledge in a field of importance and should be awarded immediately.
- **Recommended:** the proposal has shown the research will benefit an area of interest to the nuclear research community and should be awarded if funding is available.
- **Not Recommended:** the proposal did not show technical merit or the research is of little value to the nuclear research community.

Getting an Award

Proposals require work (even short ones!):

•Organize your proposal to answer the questions from the technical review (technical review criteria are listed on the proposal website). If a reviewer doesn't understand what you are trying to do without reading and re-reading the text, the score will go down.
•Have someone knowledgeable about the research review the proposal before you submit.
•Be sure you have done a good literature search.
•Images can help a proposal, but need to be of good quality. Poor images that don't enhance a proposal may mean a lower score.
•Even short proposals should be organized and answer the technical review questions addressed in the technical review criteria.

"I'm sorry, Prof. Minskov, but that article about Minskov's Theory... they want someone else to write it."

When in doubt, seek advice. ATR NSUF staff is here to help!

Partnerships – a Foundation for Growth

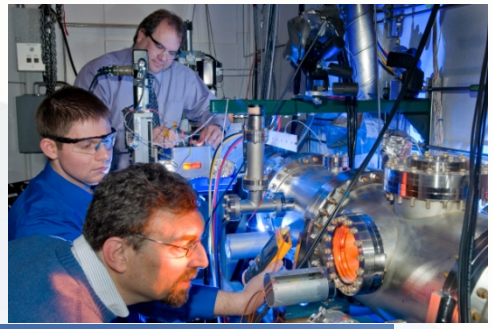
Partnerships bring additional capabilities to the ATR NSUF, offer collaborative opportunities beyond the INL and form a foundation for nuclear research that reaches across the U.S.

Fiscal Year 2011 has seen continued growth with the addition of two new partners and others lining up to become future partners

Rapid Turnaround Experiments are an ideal venue for these kinds of collaborative endeavors

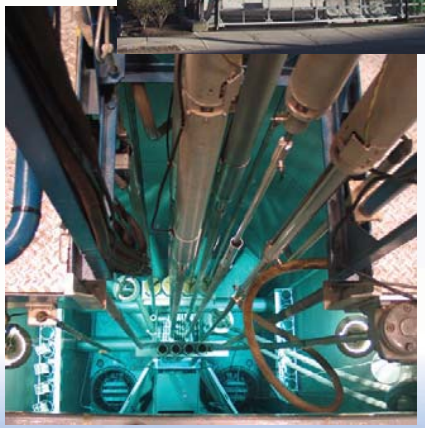
Partner Institutions

Illinois Institute of Technology – Synchrotron Radiation utilizing the Materials Research Collaborative Access Team (MRCAT) at the Advanced Photon Source



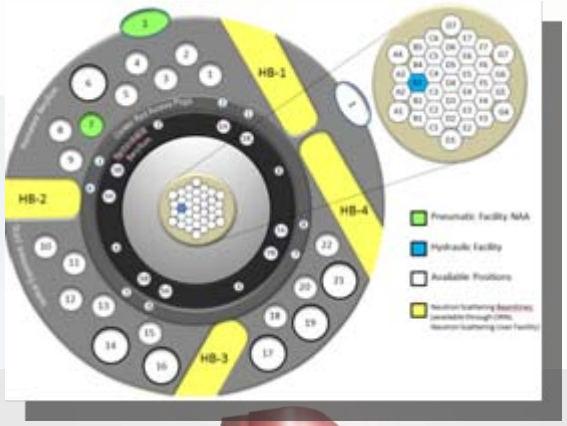
MIT Reactor – 5 MW test reactor with 27 fuel element positions and 3 positions for in-core experiments.

North Carolina State University – PULSTAR reactor, and Neutron Powder Diffraction, Neutron Imaging, Intense Positron Source facilities.

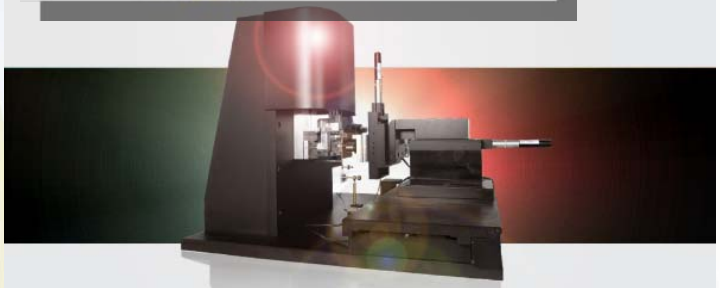


Partner Institutions

Oak Ridge National Laboratory – High Flux Isotope reactor with hydraulic and pneumatic tubes, Gamma irradiation and in-core radiation facilities. Hot cell facilities including irradiated materials examination and testing, Irradiated Fuels Examination Laboratory and radiochemical processing facilities.



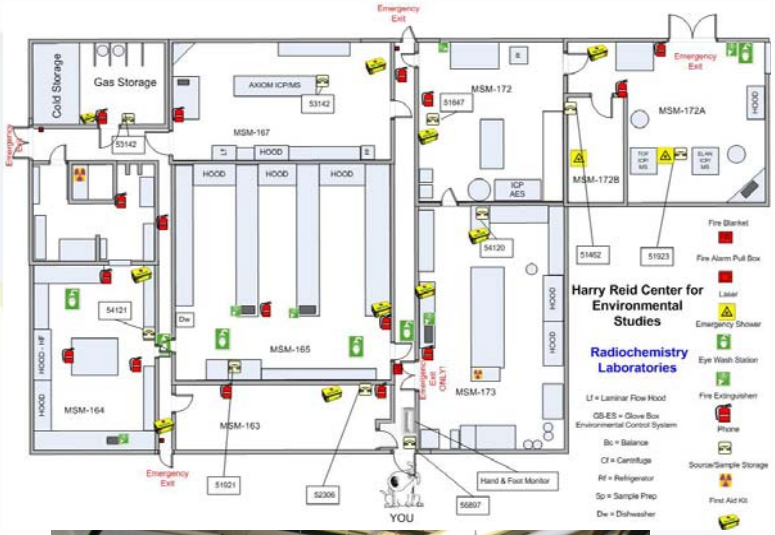
University of California, Berkeley – Positron annihilation spectroscopy, nanoindentation, and warm sample preparation.



University of Michigan – Ion Beam Laboratory, and Irradiated Materials Complex

Partner Institutions

University of Nevada, Las Vegas – Radiochemistry Laboratory, Metallographic Microscope, X-Ray Powder Diffraction, Rietveld Analysis, Scanning Electron Microscopy, Electron Probe Micro-Analyzer (EPMA), Analytical Transmission Electron Microscopy, X-Ray Fluorescence, PANalytical Axios Sequential Wavelength-dispersive X-ray Fluorescence Spectrometer



University of Wisconsin – Characterization Laboratory for Irradiated Materials (includes Accelerator Ion Beam and Electron Microscopy Laboratory)

Conclusions

ATR NSUF research opportunities continue to grow.

Prepare a good proposal and chances are good you will receive an award.

Partner facilities continue to be added increasing capabilities offered and the opportunity for cross-fertilization of nuclear science.

For a list of current research projects, access to the solicitation site, and Information on partners, please see the ATR NSUF website at http://atrnsuf.inl.gov

Lunch-Time!