U.S. DEPARTMENT OF ENERGY | Office of Science

Accelerator Stewardship Test Facility Program

Fall 2018

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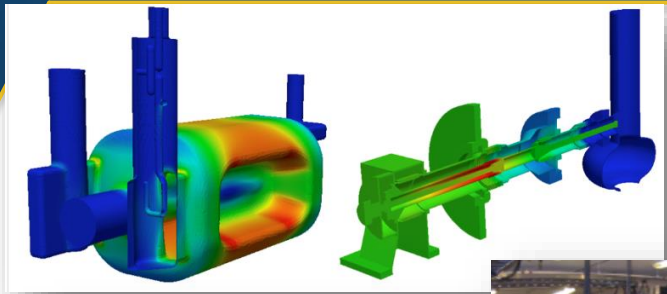
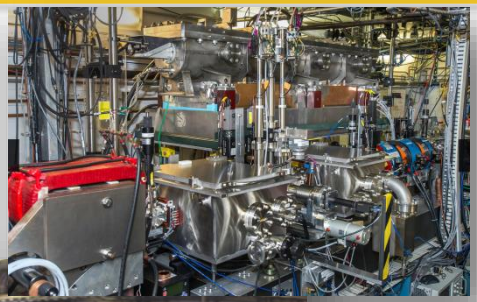
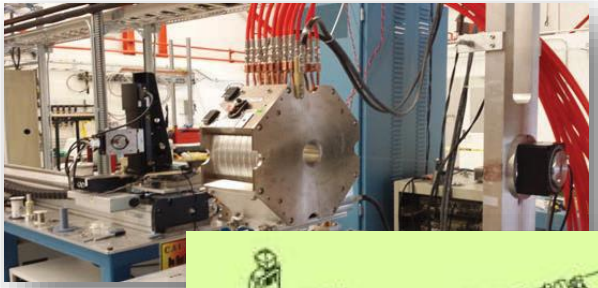
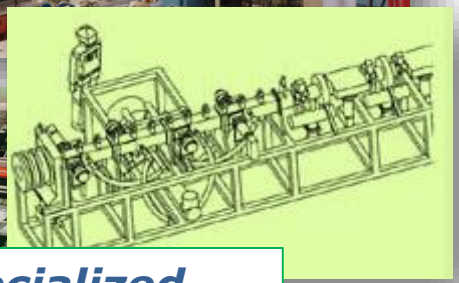
DOE Office of Science Accelerator R&D Capabilities

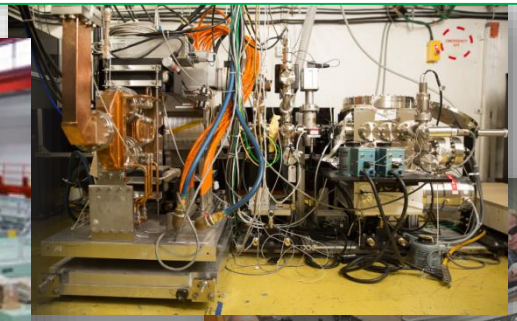




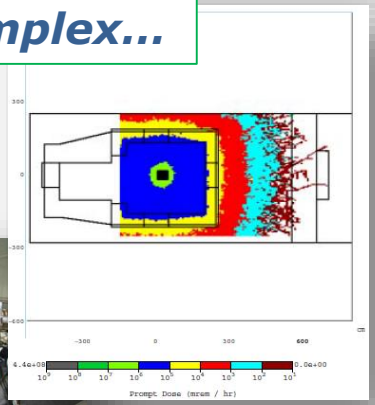




These are just a few of the more than 50 specialized accelerator R&D capabilities across the DOE SC complex…





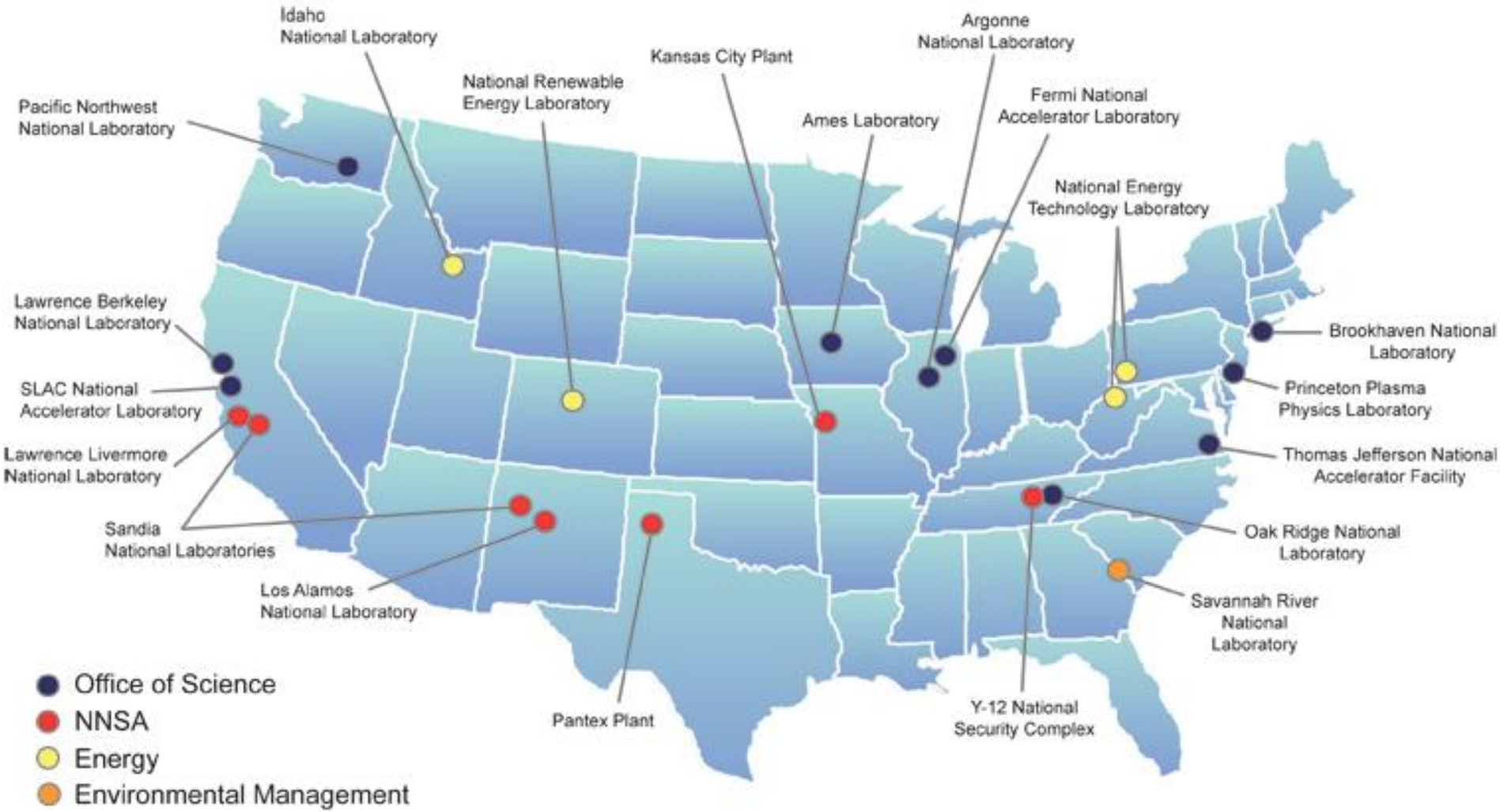


Argonne NATIONAL LABORATORY | BROOKHAVEN NATIONAL LABORATORY | Fermilab | Jefferson Lab EXPLORING THE NATURE OF MATTER | OAK RIDGE National Laboratory | BERKELEY LAB Bringing Science Solutions to the World | SLAC NATIONAL ACCELERATOR LABORATORY

DOE Office of Science Accelerator R&D Capabilities

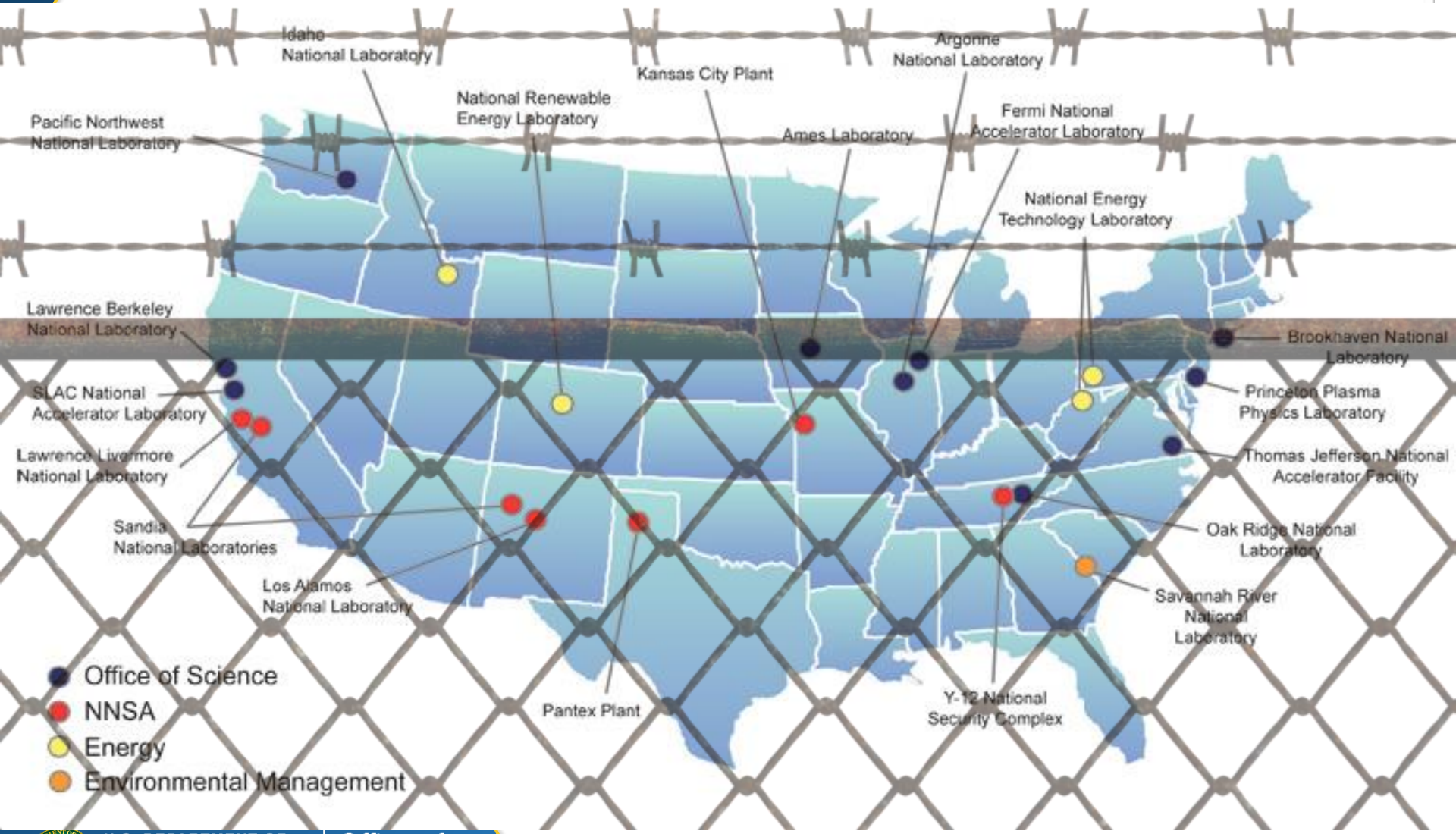
- Many unique accelerator R&D capabilities have been developed to support the scientific research of the Office of Science:
  - **Accelerator Design & Engineering**
    - Beam physics and high-performance computing expertise
    - Design and engineering of accelerator components
  - **Fabrication & Component Testing**
    - Superconducting cable/strand and cavity preparation and testing facilities
    - Magnet test facilities
    - Radiofrequency and laser test facilities
    - Fabrication and materials characterization facilities
  - **Particle Beam Testing Facilities**
    - Provide electrons, neutrons, protons, light and heavy ions, x-rays, gamma rays, …
  - **And more!**

This is how DOE National Laboratories see themselves…



Slide courtesy of Eric Isaacs

…and this is how industry has viewed us.

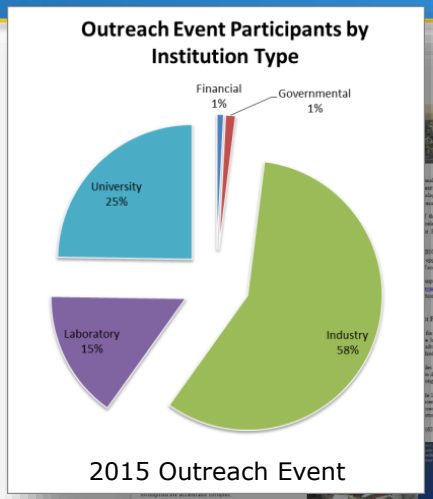


Slide courtesy of Eric Isaacs

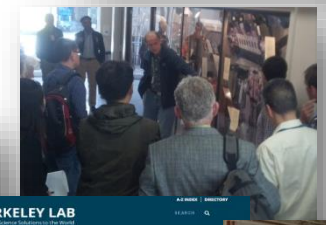
Making lesser-known SC accelerator R&D capabilities generally available:

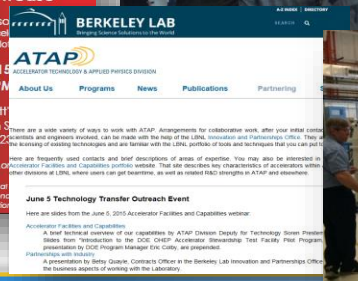
Accelerator Stewardship Test Facility Program

- Broaden public awareness of the broad range of accelerator R&D capabilities at the DOE National Labs.
  - ***Public Outreach Events***
    - 2015 events reached over 450 participants!
  - ***Accelerators for America's Future*** web portal
- Facilitate access to SC National Laboratory accelerator R&D infrastructure
  - Provide applicants up to $300k and 12 months to engage a National Lab's capabilities to advance an R&D project
    - 8 awards to date resulting in 3 patents, 9 publications, and more!



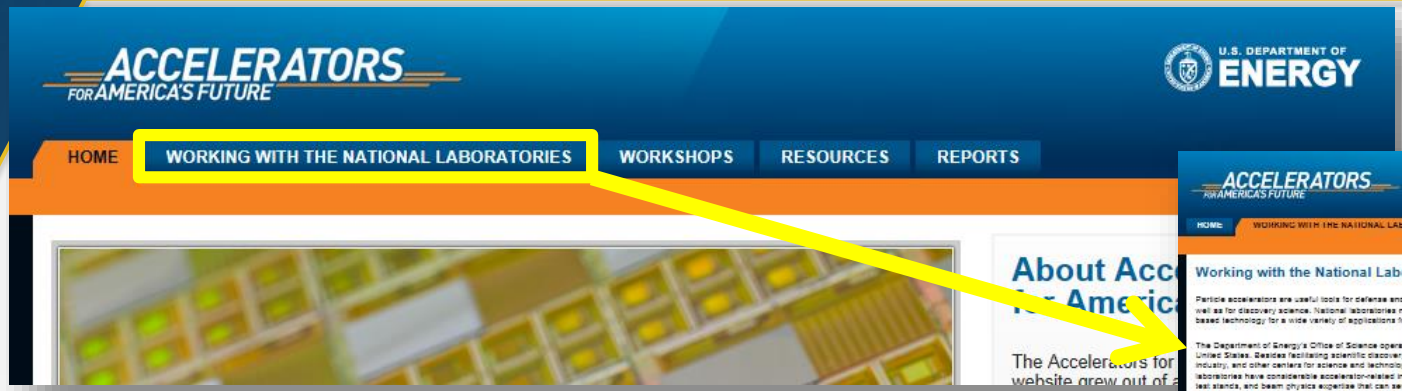
2015 Outreach Event

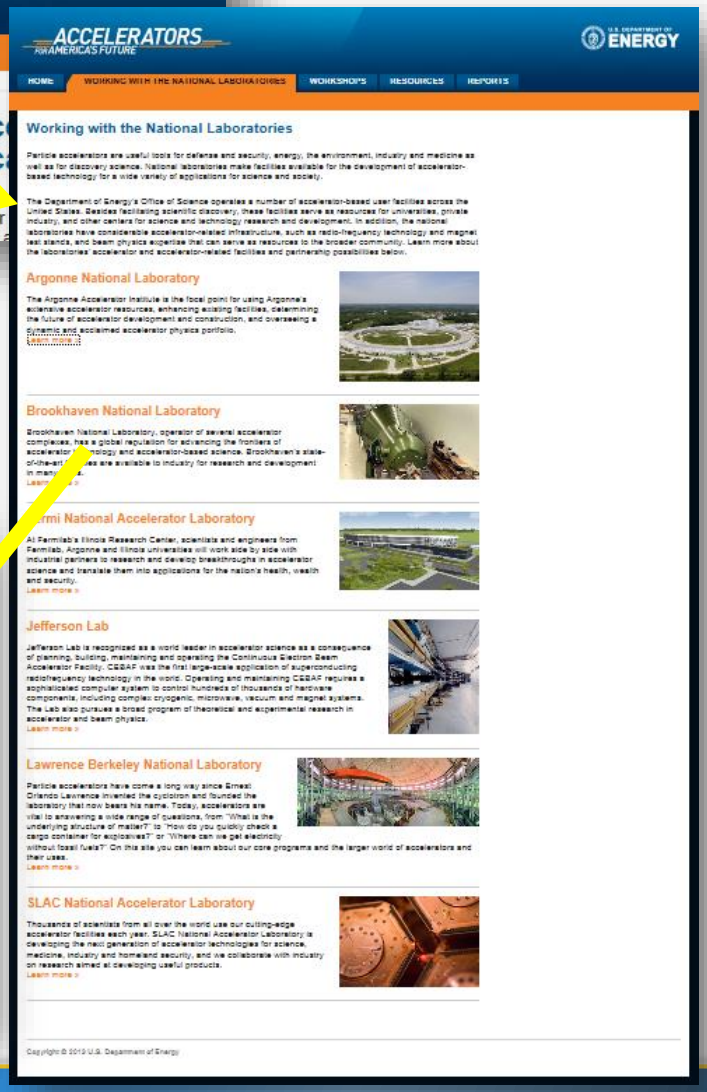




"One-Stop Shopping" for finding Accelerator R&D Capabilities at the DOE Office of Science National Laboratories

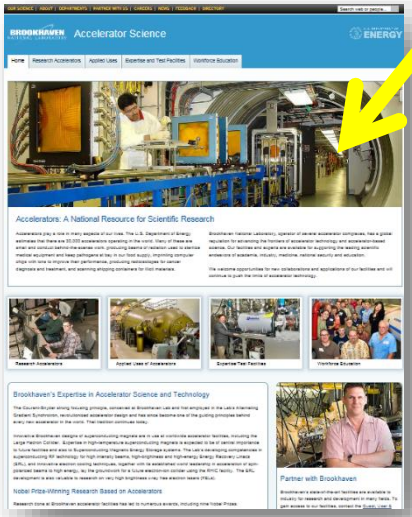
http://www.acceleratorsamerica.org





Accelerators for America's Future
is a portal to the accelerator R&D capabilities at the SC National Labs

- ✓ Learn what's available
- ✓ Find a contact to speak with



ASTFP Program Timeline

- 2015: First public outreach events and awards
  - Early 2017: Start of annual calls for ASTFP proposals
  - Early 2018: 2nd annual call for ASTFP proposals

- November/December 2018: Public outreach events
  - BNL – November 28
  - FNAL & ANL – December 5 & 6
  - JLAB – December 17
  - LBNL, ORNL, SLAC – no events planned this year
- Early 2019: 3rd annual call for ASTFP proposals
  - "Track 3" of the Accelerator Stewardship annual solicitation
- Summer 2019: Awards issued and work begins
  - Final reports due in fall 2020

- Early 2020: Next call for proposals…

Thank you for taking time to visit your National Laboratories!

Before you leave today, please take a moment and tell your Lab hosts how to make this event even more useful in the future!

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Image courtesy of Oak Ridge National Laboratory

Useful Resources

- The HEP Accelerator Stewardship program is described at:
  - http://science.energy.gov/hep/research/accelerator-stewardship/
- Accelerator Stewardship solicitations may be found at:
  - https://science.energy.gov/hep/funding-opportunities/ and
  - www.grants.gov
- The HEP Accelerator Stewardship program has developed the Accelerator for America's Future website to serve as a portal to the SC accelerator facilities:
  - http://www.acceleratorsamerica.org/working-with-labs/index.html
- More generally, the DOE Office of Technology Transitions maintains:
  - "How-to" guides for interacting with the labs:
    - https://www.inl.gov/wp-content/uploads/2016/05/Revised-Guide-Partnering-with-National-Labs-Final.pdf
  - A general "Portal" for Business to find DOE Labs facilities of all kinds:
    - http://www.energy.gov/technologytransitions/who-do-i-contact-labs
  - A detailed list of all kinds of facilities:
    - http://www.energy.gov/technologytransitions/technology-transitions-facilities-database