U.S. DEPARTMENT OF ENERGY | Office of Science

Office of Science Outreach

http://science.energy.gov/

Recorded Webinar

An Introduction to the Office of Science recorded webinar (6/11/2015), and a copy of the slides, are available at:

http://science.energy.gov/wdts/outreach/

- A guided tour of the Office of Science website
- Slides highlighting opportunities for undergraduate, graduate, and visiting faculty

Please address comments and questions to:

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Programs in the Office of Science / Office of Workforce Development for Teachers and Scientists (WDTS)

Opportunities for Undergraduates and Faculty at DOE Laboratories

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The DOE Office of Science (~$5B/year)

The undulator hall at SLAC's Linac Coherent Light Source (LCLS).

- The Office of Science (SC) is the single largest supporter of basic research in the physical sciences in the United States.
- Funds 25,000 Ph.D. scientists, graduate students, undergraduates, engineers, and technical staff supported at more than 300 institutions in all 50 States and DC through competitive awards
- 26 national user facilities serving more than 29,000 users each year
- 100 Nobel Prizes during the past 6 decades—more than 20 in the past 10 years

Office of Science

The Office of Science's (SC) mission is to deliver scientific discoveries and major scientific tools to transform our understanding of nature and advance the energy, economic, and national security of the United States. The SC is the Nation's largest Federal sponsor of basic research in the physical sciences and the lead Federal agency supporting fundamental scientific research for energy.

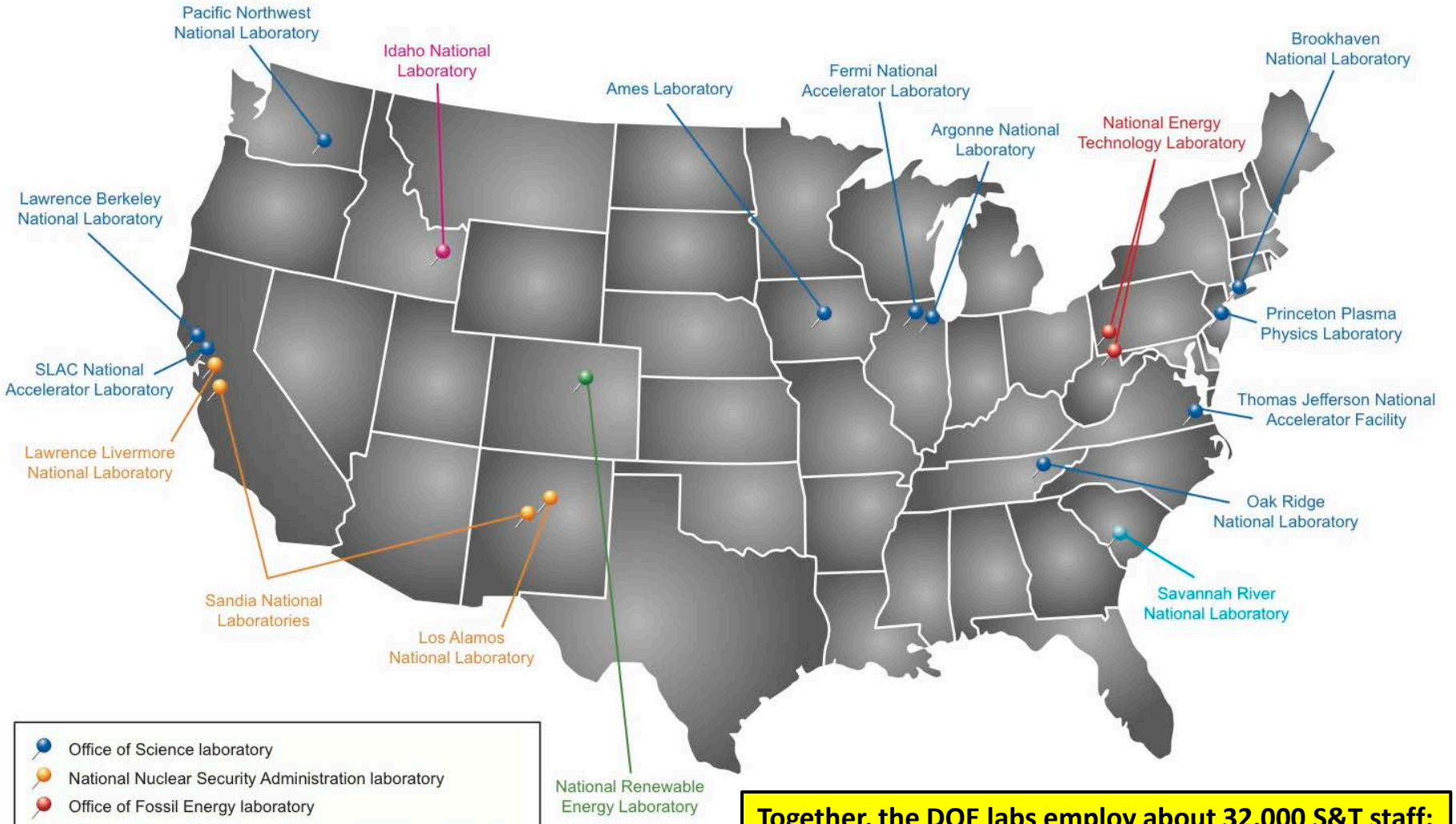
The SC accomplishes its mission and advances national goals by supporting:

- The frontiers of science—discovering nature's mysteries from the study of subatomic particles, atoms, and molecules that are the building blocks of the materials of our everyday world to the DNA, proteins, and cells that are the building blocks of entire biological systems; each of the programs in the SC supports research to probe the most fundamental questions of its disciplines.

- The 21st Century tools of science—providing the Nation's researchers with 26 state-of-the-art national scientific user facilities, the most advanced tools of modern science, enabling the U.S. to remain at the forefront of science, technology, and innovation.

- Science for energy and the environment—advancing a clean energy agenda through fundamental research on energy production, conversion, storage, transmission, and use and through advancing our understanding of the earth and its climate; targeted investments include the three DOE Bioenergy Research Centers (BRCs), the Energy Frontier Research Centers (EFRCs), two Energy Innovation Hubs, and atmospheric process and climate modeling research.

DOE Labs Employ >30,000 Scientists and Engineers



Together, the DOE labs employ about 32,000 S&T staff; SC labs employ about 14,000 S&T staff; many at the Ph.D. level.

Why Office of Science (SC) sponsored internships?

In a word… **WORKFORCE***

The Workforce Development for Teachers and Scientists (WDTS) program mission is to ensure that DOE has a sustained pipeline of science, technology, engineering, and mathematics (STEM) workers. This is accomplished, in part, through support of undergraduate internships and visiting faculty programs at the DOE laboratories, administered by WDTS for DOE; and Nation-wide, middle- and high-school science competitions that annually culminate in the National Science Bowl® in Washington D.C. These investments help develop the next generation of scientists and engineers to support the DOE mission, administer its programs, and conduct its research.

WDTS activities rely significantly on DOE's 17 laboratories, which employ more than 30,000 workers with STEM backgrounds. The DOE laboratory system provides access to leading scientists; world-class scientific user facilities and instrumentation; and large-scale, multidisciplinary research programs unavailable in universities or industry. WDTS leverages these assets to develop and train post-secondary students and educators to enhance the DOE mission.

SC sponsors and operates these programs to help sustain the DOE's scientific and technical workforce pipeline.

**As a mission agency ,"education" programs cannot be supported. As a result, WDTS does not solicit or provide direct awards to campuses, and instead, offers experience based learning opportunities directly to students and faculty.*

The Office of Workforce Development for Teachers and Scientists (WDTS) manages these programs

Mission: WDTS program mission is to ensure that DOE* has a sustained pipeline of highly skilled and diverse science, technology, engineering, and mathematics (STEM) workers.

- WDTS undergraduate student intern programs (one for 2/4-yr institutions and one for community colleges) and a visiting faculty program at the DOE laboratories:
  - *Science Undergraduate Laboratory Internship (SULI) - ~725/year*
  - *Community College Internship (CCI) - ~80/year*
  - *Visiting Faculty Program (VFP) - ~(60/25)/year*
- WDTS funds these programs, provides oversight, manages their national application systems, and ensures that a common set of core program elements are delivered.
- Host labs and facilities operate these programs locally; *e.g.* - identifying mentors and projects according to their mission overlap, reviewing & selecting candidates, and executing professional development activities per common programmatic baselines.

**project scope for these opportunities span the entire DOE mission space, less certain national security areas*

Science Undergraduate Laboratory Internship (SULI)

The SULI program places undergraduate students(from 2 or 4 year institutions) in paid internships in science and engineering research activities at 16/17 DOE Laboratories, and one National User Facility. Students work with laboratory staff scientists or engineers on projects related to ongoing research programs. This, or its predecessor programs, have been in operation since the early '90s.

- Appointments are for:
  - 10 weeks during the Summer Term (May through August) or 16 weeks during the Fall Term (August through December) and Spring Term (January through May).
  - Application process for the 2015 Summer and Fall Terms are closed – The 2016 Spring Term application will open in late-July 2015.
- All interns have defined research projects that must be within the DOE mission space.
- All interns have required deliverables: A research report, an oral or poster presentation, a peer review, a general audience abstract, and pre- and post- participation surveys.
- Interns receive a $500 weekly stipend, travel to and from the laboratory, and possibility for a housing allowance.
- Laboratories also provide an array of seminars and professional development opportunities.
- Undergraduates from 2 or 4 year colleges, in their sophomore through senior year, or recent graduates, are eligible to apply.
- Must be at least 18 years old at the time of application; and a U.S. citizen or PRA.
- Must have a minimum cumulative GPA of 3.0.
- May participate as an intern a maximum of two times; May apply a maximum of three times.
- WDTS sponsors ~700 participants per year, majority (~535) in the Summer Term.

Please visit http://science.energy.gov/wdts/suli/ for full details and how to apply.

Community College Internship (CCI)

The Community College Internship (CCI) places students from community colleges in paid internships in technology based projects supporting laboratory work under the supervision of a laboratory technician or researcher. This, or its predecessor program, have been in operation since 1999.

- Operates primarily during a 10-week Summer Term (May through August), but a semester term opportunity pilot is planned the 2016 Spring Term.
  - Application process for the 2015 Summer Term is closed – New Spring Term pilot program opportunity (applications open late-July 2015).
- All interns have defined technical projects that are within the DOE mission space.
- All interns have required deliverables: A research report, an oral or poster presentation, and pre- and post- participation surveys.
- Interns are compensated as follows: $500 weekly stipend, travel to and from the laboratory, and a housing allowance.
- Laboratories also provide an array of seminars and professional development opportunities.
- Must be at least 18 years old; and a U.S. citizen or PRA.
- May participate as an intern a maximum of two times; May apply a maximum of three times.
- Must have a minimum cumulative GPA of 3.0.
- WDTS supports ~70 participants each Summer Term.

Please visit http://science.energy.gov/wdts/cci/ for full details and how to apply.

Visiting Faculty Program (VFP)

Opportunities for faculty from academic institutions that are typically underrepresented in the DOE research community to engage in a jointly developed research project at a DOE laboratory during the Summer Term. The scope of the projects should be robustly connected to ongoing host lab research project activities. This, or its predecessor program, have been in operation since 2003.

- Faculty may optionally invite up to two students to participate, one of whom may be a graduate student. VFP- Students must meet SULI requirements, apply separately, and only if invited.
  - Students must have a minimum cumulative GPA of 3.0.
  - Student interns have required deliverables matching those for SULI: A research report, an oral or poster presentation, a peer review, general audience abstract, and pre- and post- participation surveys.
- Operates during a 10-week Summer Term (May through August) - Application process for the 2015 Summer Term is closed; reopens for 2016 in early October 2015.
- Faculty receive stipend of $13,000 for 10 week term, undergraduates receive stipend of $500/week; all participants are provided travel to and from the laboratory, and possibility for a housing allowance.

Please visit http://science.energy.gov/wdts/vfp/ for full details and how to apply.

Visiting Faculty Program (VFP), *cont.*

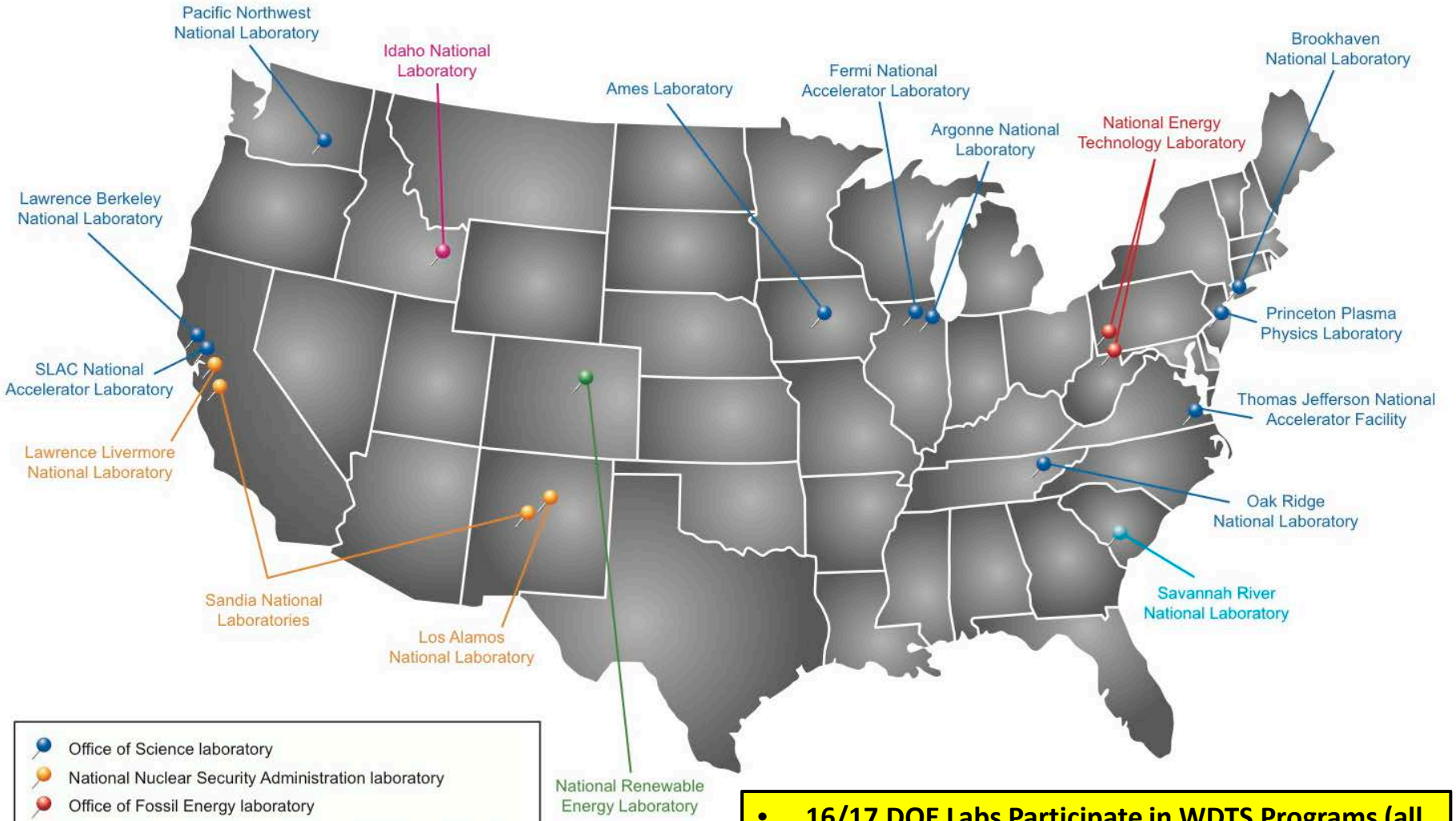
- Must be a full-time faculty member at an accredited U.S. degree granting, postsecondary, institution of higher education historically underrepresented in the U.S. research community, in an area of physics, chemistry, biology (non-medical), mathematics, engineering, environmental sciences, materials sciences, or computer / computational sciences (link to list of ineligible institutions from VFP webpages).
- Must be a U.S. citizen or LPR. Faculty may participate up to three terms.
- Faculty must, through their own efforts, establish a collaboration with a laboratory scientist to co-develop a 6-page research project proposal prior to applying to the program.
  - Faculty can contact host labs by using the POCs listed at: http://science.energy.gov/wdts/vfp/how-to-apply/selecting-a-host-doe-laboratory/
  - Proposal requirements are posted at: http://science.energy.gov/wdts/vfp/how-to-apply/submitting-a-proposal-to-doe/
- Students may only apply after receiving an invitation through the online system
  - Faculty, in their application, must list student(s) to receive system-generated invitation(s)
  - If a student had already applied to CCI or SULI, they must first "un-submit" this application
- WDTS supports ~ 50 faculty and ~25 students each Summer Term (this ratio is not prescribed).

Please visit http://science.energy.gov/wdts/vfp/ for full details and how to apply.

Navigating the Online Application System

- Applications, and all required materials, must be submitted using the WDTS online application system:
  - Account creation is required for access (links are on WDTS website program pages)
  - When completing (student, not faculty applicants) an application, have available pdf copies of your most recent transcripts (and from all other institutions attended)
  - Have available names and email addresses for at least 2, but no more than 3, individuals able to complete a recommendation form on your behalf (the first two received recommendations by the online system fulfill this requirement)
    - The system sends a recommendation request email to your recommender proving them a link to its form
- The application, in addition to general information, includes:
  - Numerous elements that tie directly to the eligibility requirements
  - A cumulative GPA calculator
  - Inquires about your areas of STEM studies, specialization, and interests
  - Inquires about your skills and experience
  - Four short essay questions
- **Applicants** select a 1st and 2nd choice host DOE lab
  - Only these labs will view your application
  - Host labs do not all offer the same STEM specialization areas
  - Information on specific project opportunities may be available from host labs
  - Host labs do all offer similar professional development activities

DOE Laboratories (16/17 are WDTS Host Labs)



- **16/17 DOE Labs Participate in WDTS Programs (all except NETL) + a facility at General Atomics**
- **Project areas vary by stewardship and mission**

SULI, CCI, and VFP Information Resources

- Review the WDTS program web pages, including the FAQs:
  - The left-hand navigation items provide links to information related to eligibility, compensation, obligation, applying, selecting a host lab, recommendations, key dates, notification, and FAQs

    Science Undergraduate Laboratory Internships (SULI)
    http://science.energy.gov/wdts/suli/

    Community College Internships (CCI)
    http://science.energy.gov/wdts/cci/

    Visiting Faculty Program (VFP)
    http://science.energy.gov/wdts/vfp/

- Visit the WDTS Outreach page for additional presentations and recorded webinars:

  http://science.energy.gov/wdts/outreach/

SC/WDTS Points-of-Contact

Jim Glownia – james.glownia@science.doe.gov; (301) 903 2411

http://www.science.energy.gov/wdts

- SULI, CCI, & VFP:
  - **Cindy White** - Program Manager: cindy.white@science.doe.gov

    - http://science.energy.gov/wdts/suli/contact/
    - http://science.energy.gov/wdts/cci/contact/
    - http://science.energy.gov/wdts/vfp/contact/
    - sc.suli@science.doe.gov
    - sc.cci@science.doe.gov
    - sc.vfp@science.doe.gov

Closing Words and Tips for Applicants

Application deadlines and requirements are firm, including receipt of recommendations (**no exceptions!**)

- Don’t wait until the last minute, especially for requesting recommendations
- Host labs offer additional information resources regarding their programs and opportunities - visit their websites listed on our program pages or ask us for their contact information
- Ask us any questions using the provided resources
- Technical support for the online system is available during regular business hours
- One application per program, per term (see eligibility information for other limitations)
- When determining the SULI one-year completion requirement, we only count credits earned *while enrolled as a matriculating student*
- Only complete, compliant, and eligible applications are released to host labs
- One offer per term only, independent of acceptance or declination