Diversity, Equity, and Inclusion

Snowmass Community Meeting: AF1 Beam Physics and Accelerator Education

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U.S. DEPARTMENT OF **ENERGY**   Stanford University

SLAC NATIONAL ACCELERATOR LABORATORY

Overview

Data, data, data

- **Lab demographics**
- **Accelerator directorate**
- **USPAS**

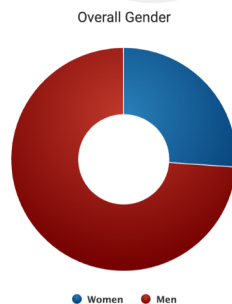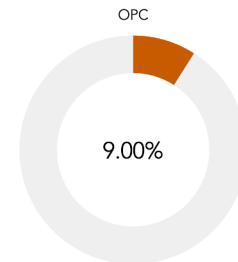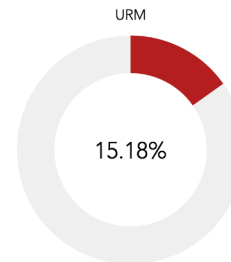Ongoing efforts

- USPAS
- Lab level

Recommendations & Discussion
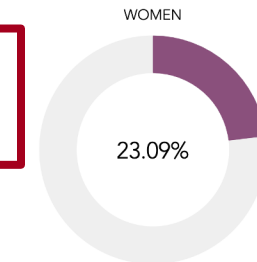
Demographics across DOE:

- DOE is improving data collection
- ~23-30% women
- ~50*-83% white

Jefferson Lab

WOMEN — 23.09%

URM — 15.18%

OPC — 9.00%

Argonne National Laboratory | 75 1946–2021

Workforce

Employee ethnicity

- 7.14% Hispanic or Latino
- 0.69% Two or more races
- 5.86% Black or African American
- 9.22% Asian/Asian American
- 0.11% American Indian or Alaska Native
- 76.88% White

3/2021

~30 GENDER ~70

- Men
- Women

ETHNICITY ~70

- African American/Black
- American Indian/Native Alaskan
- Asian
- Hispanic/Latino
- Pacific Islander/Native Hawaiian
- Two or More Races
- White
- Unknown

Brookhaven National Laboratory

Overall Gender

- Women
- Men

Overall Ethnicity

- % URM
- % OPC
- % 2 or More
- % White

Gender	
% Women	26.12%
% Men	73.88%

Ethnicity	
% URM	12.26%
% OPC	15.59%
% 2 or More	0.5%
% White	71.66%
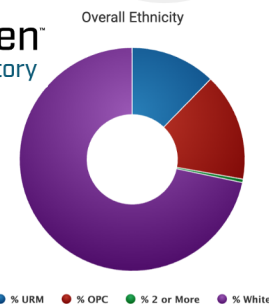
Oak Ridge National Laboratory

Gender	Female - 26.0%	Race/Ethnicity	White - 82.9%
	Male - 74.0%		URM - 6.0%
			OPC - 10.5%
			2+ Races - 0.6%
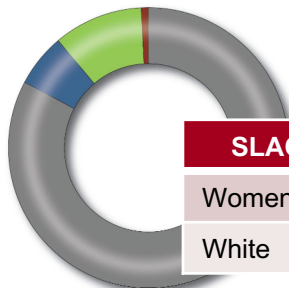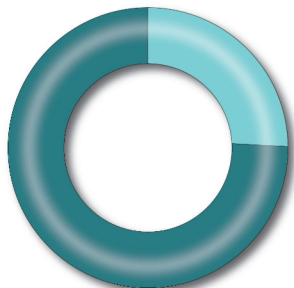
SLAC	All Employees
Women	25%
White	52%

ALL JOBS BERKELEY LAB

*10% not reporting

WOMEN	UNDER-REPRESENTED MINORITIES	OTHER PEOPLE OF COLOR	TWO OR MORE RACES/ETHNICITY	WHITE
31.93%	9.09%	27.09%	4.08%	48.13%
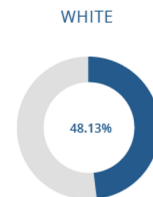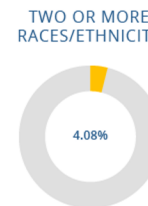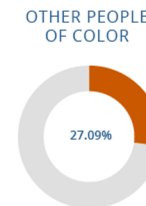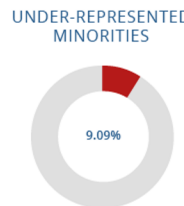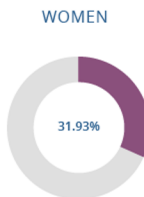
Accelerator Directorate (at SLAC)

AD, as a whole:

- Lowest % of women (~16%) at SLAC

- Other directorates at 20-23% women

Improving AD/operator diversity, would improve USPAS diversity

Accelerator Operations:

- Common entry point to accelerator community

- Supply students to USPAS classes regularly

- Turn over at ~2-year mark = often hiring

- Diversity of operators has improved, but remains low

  - Mainly improved through 1-1 outreach from current operators
  - "The candidate pool is not diverse enough"
  - **Lack of diversity hurts retention**
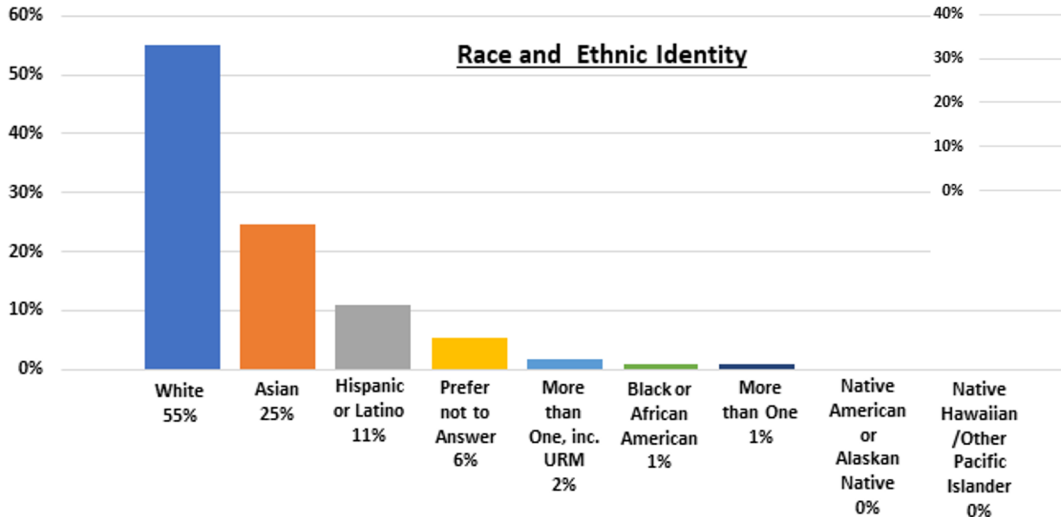
USPAS is an important entry point to the community but does not include everyone.

Gender Identity

| Male 72% | Female 23% | Prefer not to answer 5% | Custom 1% |

Race and Ethnic Identity

| White 55% | Asian 25% | Hispanic or Latino 11% | Prefer not to Answer 6% | More than One, inc. URM 2% | Black or African American 1% | More than One 1% | Native American or Alaskan Native 0% | Native Hawaiian /Other Pacific Islander 0% |

USPAS – 5 year snapshot

Women PhDs in Phys & Eng
Doctoral Degrees Earned by Women
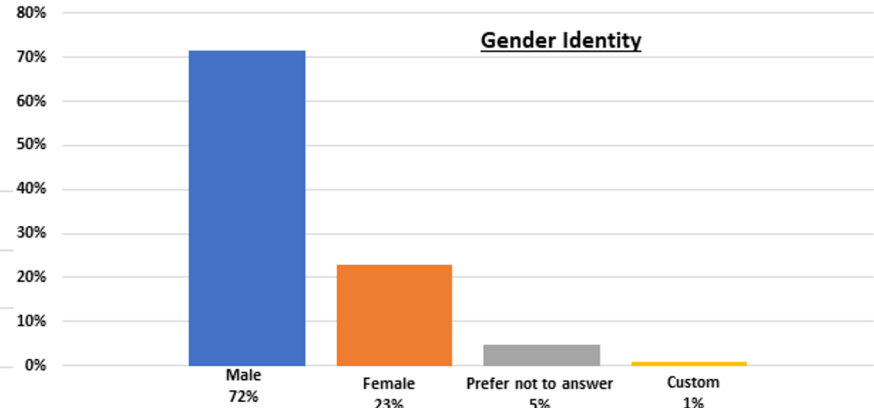
- Retention problems
  - \# of women falls off with seniority
  - Staff < postdocs < grad students < undergrad
  - https://www.aip.org/statistics
  - https://www.aps.org/programs/education/statistics/index.cfm
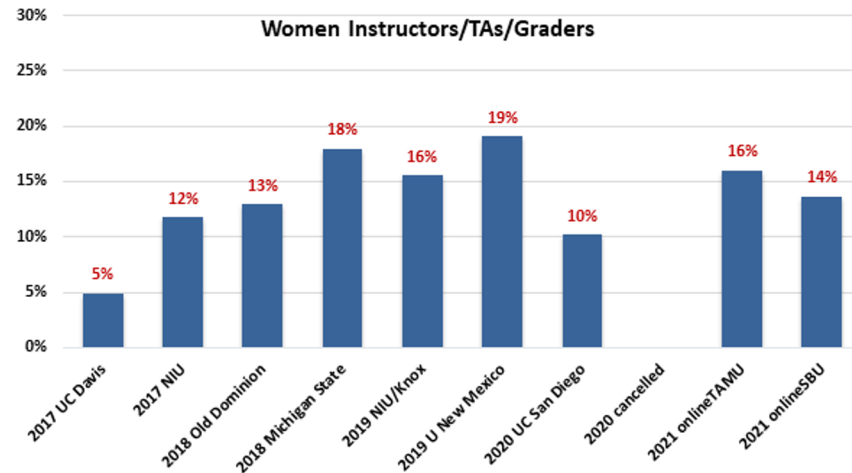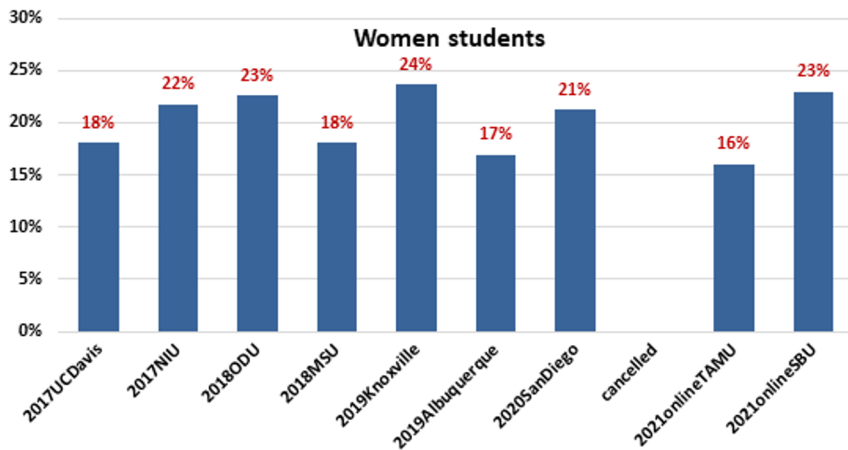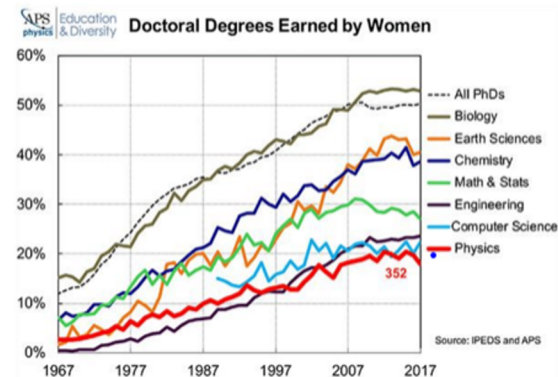
Women students

Women Instructors/TAs/Graders

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- USPAS

Ongoing efforts

- **USPAS**
- **Lab level**

Recommendations & Discussion

Current Strategies

USPAS:

- Inclusive hiring of graders and TA's & mindful when awarding scholarships

- Recruiting and outreach to universities
  - With focus on HBCU's
  - HBCU will host a future session (in progress)
  - Targeted advertising

- New Mtingwa Scholarship
  - Brings awareness to expanded audience

- Modernized data collection
  - yields more detailed and useful statistics

- Updating language to be gender neutral and inclusive
- Created a Diversity & Inclusion Statement; Code of Conduct

Labs:

- Formalization of EDI/DEI offices and efforts
- Support of Employee resource groups
- Education/Outreach offices (at some labs)
- Named fellowships, internships, and traineeships (partial list):
  - Lee Teng internship program (ANL+FANL)
  - ASPIRE at FNAL, starting this year
  - Al Ashley at SLAC, started 2011
    - 19 fellows to date
    - ~80% stayed at SLAC (15/19)

- APS-IDEA teams:
  - SLAC, ANL, Los Alamos, LBNL, LLNL
  - https://www.aps.org/programs/innovation/fund/idea.cfm
  - Re-examining summer internship programs and general hiring practices (SLAC), among other efforts

Current Strategies: Fermilab Operations Department

Race:

Pie chart showing Race distribution:
- OPC: 3%
- URM: 21%
- White: 69%
- two or more: 7%
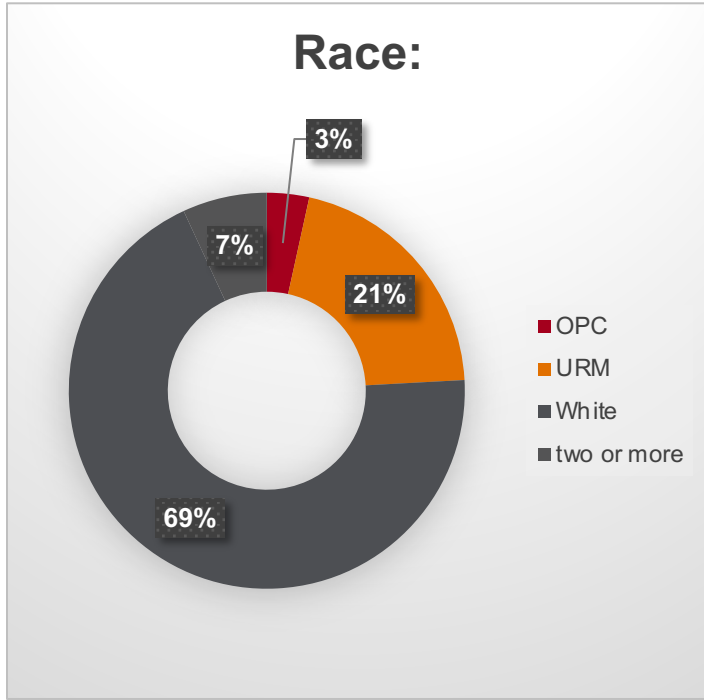
- Department participation in Fermilab outreach programs

- Having a diverse interview team made up of different individuals inside and outside our department, across departments, groups, and job levels.

- Edited the job description to make it more inclusive. Qualifications and requirements more clearly defined.

- Talking with current and former Operators to see if they know of physics students who may be interested in becoming Operators.

- Conducting Zoom interviews, allowing more candidates to be interviewed and providing a more interactive experience with the interview team members.

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Recommendations & Discussion

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Recruiting:

1. **Put in writing the selection criteria for USPAS (scholarships)**
   a. To keep process inclusive when application #'s increase

2. When looking for new instructors:
   a. **Ask people to look for diverse candidates within their network**
   b. Consider a named instructor position; to recruit from MSI's

3. Consider an occasional pre-fundamentals class
   a. As a second undergraduate class offering
   b. Chance to reach high school students entering college
   c. Use as training course for new instructors

4. Outreach to HBCUs
   a. Expand outreach to other MSI's
   b. Hire/find an outreach coordinator (there was a person in the past)

5. Emphasize benefit of participating in outreach
   a. Most labs have outreach or educational opportunities several times a year

6. Named scholarships and fellowships

Key:
Red = strongly suggested
Orange = suggested
Green = in progress
MSI = Minority serving institution

Recommendations & Discussion

Key:
Red = strongly suggested
Orange = suggested
Green = in progress

SLAC

Materials (course descriptions, applications, etc):

1. Updating language to be gender neutral/inclusive in course descriptions

   a. Mainly a reminder for instructors, when writing new course descriptions

   b. USPAS has done a good job with this on main USPAS pages

2. **Consider multiple metrics, possibly deemphasizing GPA for all application (interns, traineeships, hiring)**

   a. Doesn't apply to USPAS currently

Retention:

   How do we make sure culture/environment in accelerator community is welcoming/safe/inclusive?