



# Fermilab Education Update

Spencer Pasero

Community Advisory Board meeting

24 May 2018

# Scope

- First task: define “public outreach.”
- We took an expansive view, including five categories of programs:
  - **Formal education:**
    - Professional development for teachers and engagement with students as part of their school or university curriculum, or
    - A Fermilab-organized educational program with its own rigorously defined units of study.
  - **Informal education:** Raising awareness and appreciation of science, including Fermilab’s science areas, with in-person programs and activities outside the classroom.
  - **Internships & Fellowships**
  - **Community relations:** Building and maintaining supportive relationships with members of the local and regional communities.
  - **Online communication products:** Raising awareness about particle physics and Fermilab among the local, national, international public.

# Scope

- What is not included?
  - Educational programs aimed at postdocs, faculty members or staff scientists;
  - Programs aimed primarily at Fermilab employees, facility users or the global particle physics community;
  - Programs organized and carried out by Fermilab clubs or affiliated not-for-profit organizations (Fermilab Natural Areas or Fermilab Friends for Science Education);
  - Programs other than community relations and online communication products that are part of Fermilab's strategic communication program;
  - Activities intended to recruit new industrial partners;
  - Government relations activities.

This inventory included 69 programs reaching a total of 93,509 people in FY2016.





# Organization of outreach at Fermilab

Fermilab has a large, varied suite of programs and activities that reach the public.

They are led by people from all over the lab.

Most are led or supported by three organizations:

- Office of Education and Public Outreach
- Office of Communication
- Office of Talent Acquisition, Diversity and Inclusion

Hundreds of employees and users support these programs.

# Formal education programs

Hallmark of the lab's education program:

- Field trip programs
- Teacher professional development
- School district improvement
- Summer schools for physicists

All formal education programs connect to the lab's physics mission or its National Environmental Research Park; programs served about 13,800 students and teachers in FY16.



# Informal education programs

Share goal of engaging young people and families in science

- Classroom presentations (incl. Mr. Freeze) most popular
- Four annual major public events:
  - Family Open House, STEM Career Expo, Wonders of Science, Outdoor Family Fair
- Informal education programs (Science Adventures)
- Ecology programs

Aim of these programs tends toward inspiration; in FY16 all informal programs together served more than 42,000 people.



# Internships and fellowships

Inventory includes programs from high school through grad school.

- Pipeline:
  - High school students and teachers
  - Undergraduates
  - Graduate students



Total of about 100 students served every year.



# Internships and fellowships

Inventory includes programs from high school through grad school.

- High school students and teachers:
  - TARGET, QuarkNet, TRAC
- Undergraduates:
  - SIST, Lee Teng, SULI, CCI, VetTech, Helen Edwards
- Graduate students:
  - GEM, various fellowships
- Faculty (and students):
  - Visiting Faculty Program



# Community relations

Programs targeted at building a positive community relationship:

- Open site access
- Self-guided tours
- Arts & Lecture Series, Art Gallery
- Special events
- Community festivals, Ambassador Program

Plus all other programs that reach members of the local/regional community.

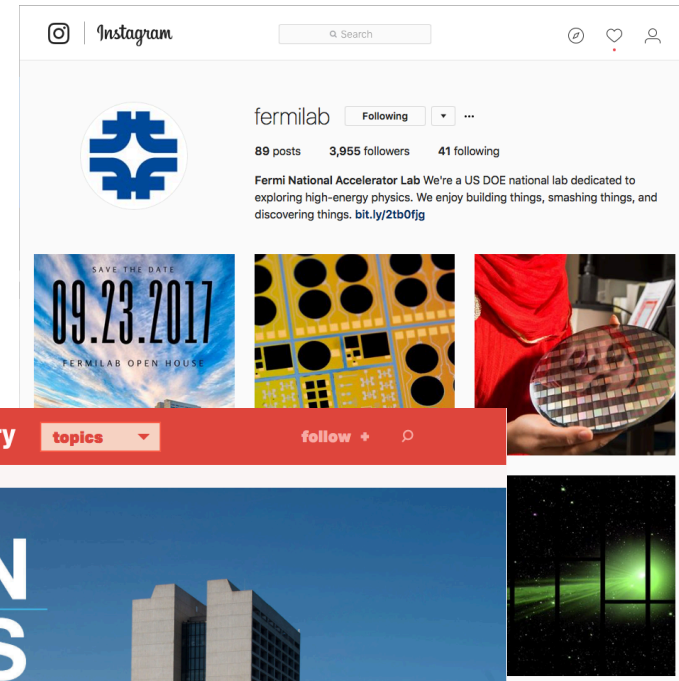


# Online communication products

Driven by Fermilab's communication strategy; convey information about research, people, accomplishments:

- Social media
- Websites
- *Fermilab Frontiers*
- *Symmetry*

Together, these programs represent an online public communication presence that reaches millions each year.



# Summary:

- First complete inventory of all outreach programs.
- Extensive program that reached nearly 100,000 people in FY16 through in-person programs.
- Mark of the importance of outreach to Fermilab.
- Provides many opportunities for employees, users to support and engage.
- Still work to be done!
  
- [spasero@fnal.gov](mailto:spasero@fnal.gov)