



Fermilab Education Update

Spencer Pasero

International Particle Physics Outreach Group

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Updating the vision for Fermilab outreach

Three-phase plan:

- **Phase I: Inventory**
 - **The Office of Communication and the Office of Education and Public Outreach compiled an inventory of current outreach programs at Fermilab, including goals, audiences, recent impacts, and self-assessment.**
- **Phase II: Independent Committee**
 - Director Lockyer convened a committee to review the inventory and draft a report describing a vision for the future of Fermilab's outreach. That report is expected next month.
- **Phase III: Design and Transition**
 - A team of Fermilab outreach personnel will develop a long-term strategic outreach plan for the Lab informed by the committee's report and our resources and expertise.

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

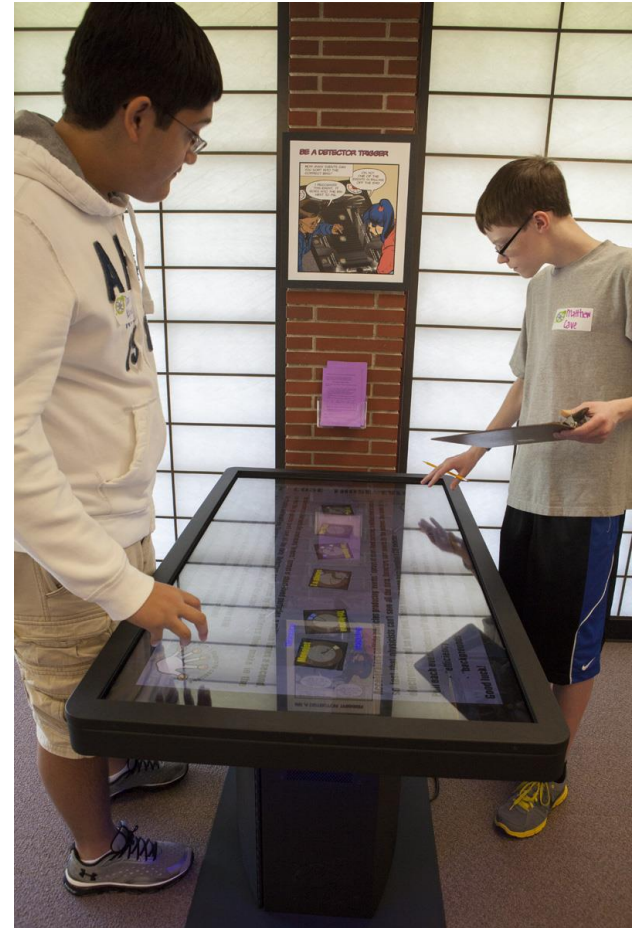
Hundreds of employees and users support these programs.

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
- Three annual major public events
- Informal pipeline programs
- 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 through graduate school.

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



Total of about 100 students served every year.

Community relations

Programs targeted at building a positive community relationship

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

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

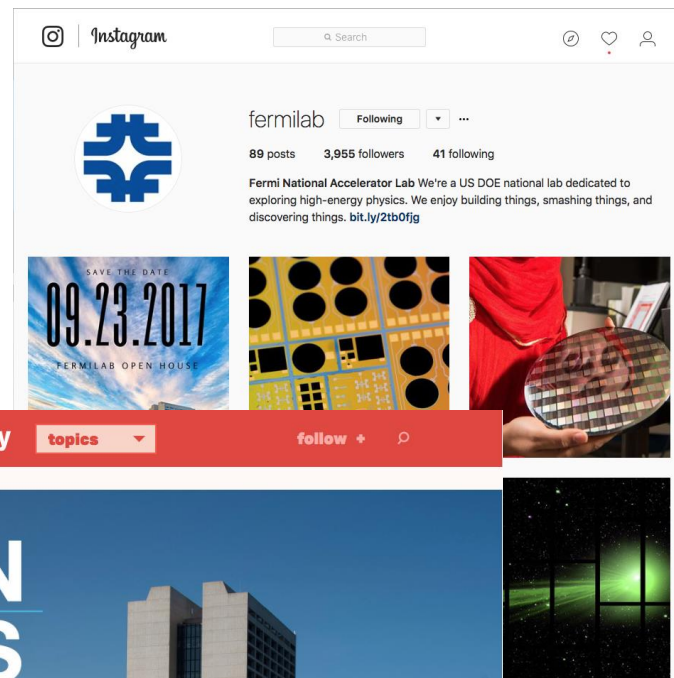


Online communication products

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 to improve diversity & inclusion, international reach/partnership.
- As we look back on 50 years, it's great to also be looking ahead.