

Community Communications Activities

Joseph Zennamo, Fermilab
On behalf of
Fermilab UEC, US LHC UA, and SLAC UO

HEPAP,
May 15, 2018

Annual DC Trip

- For 35 years members of the three major HEP Users' groups have visited the capitol
- **Goal of trip:** visit with Congressional members, their staff, committee staff, administration and funding agencies
- **Message:**
 1. Share our excitement
 2. Thank everyone for their continued support
 3. Help convey the value added to society by HEP



Layout of Trip

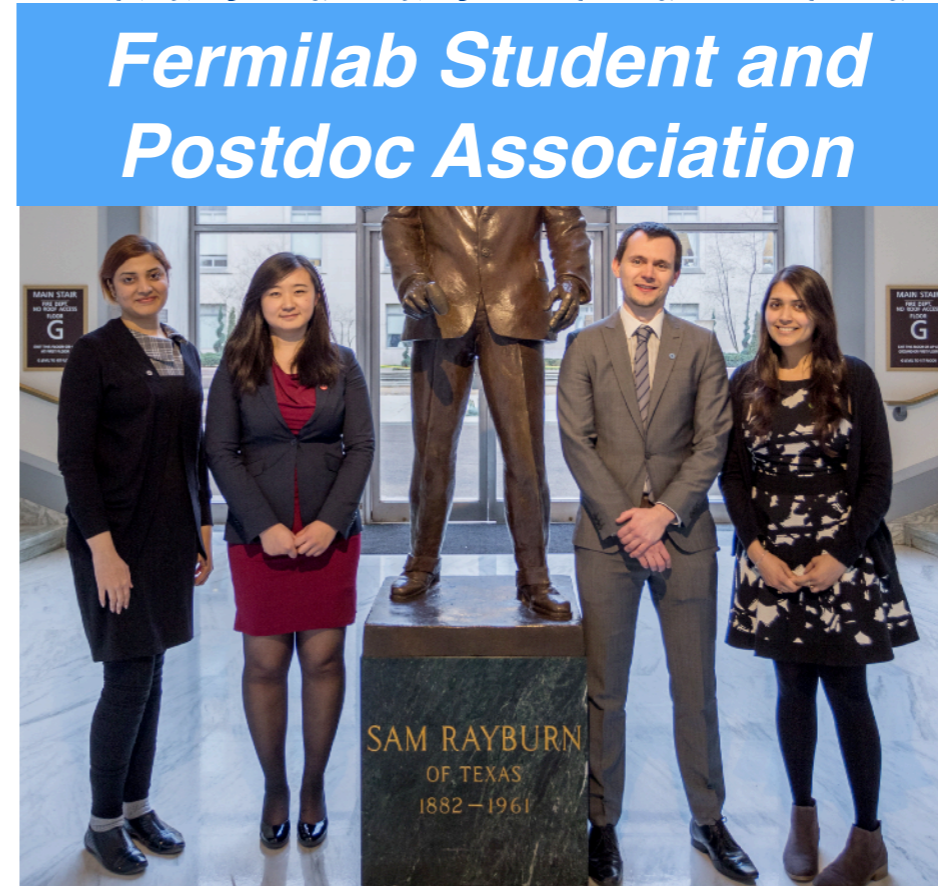
- Trip organized by the Fermilab UEC in conjunction with US LUA and SLUO
- Use **algorithm** to assign trip attendees to contact specific people based on their connections
 - Offices are contacted by this 'primary' and a meeting is arranged
- Over three days trip pairs attendees visit every office that a meeting could be scheduled
 - **Packets of materials are brought to help reinforce the message**
- Practice sessions are held to help educate about congressional process, meeting etiquette, **science communication**, and the **materials**



Summary of 2018 Trip

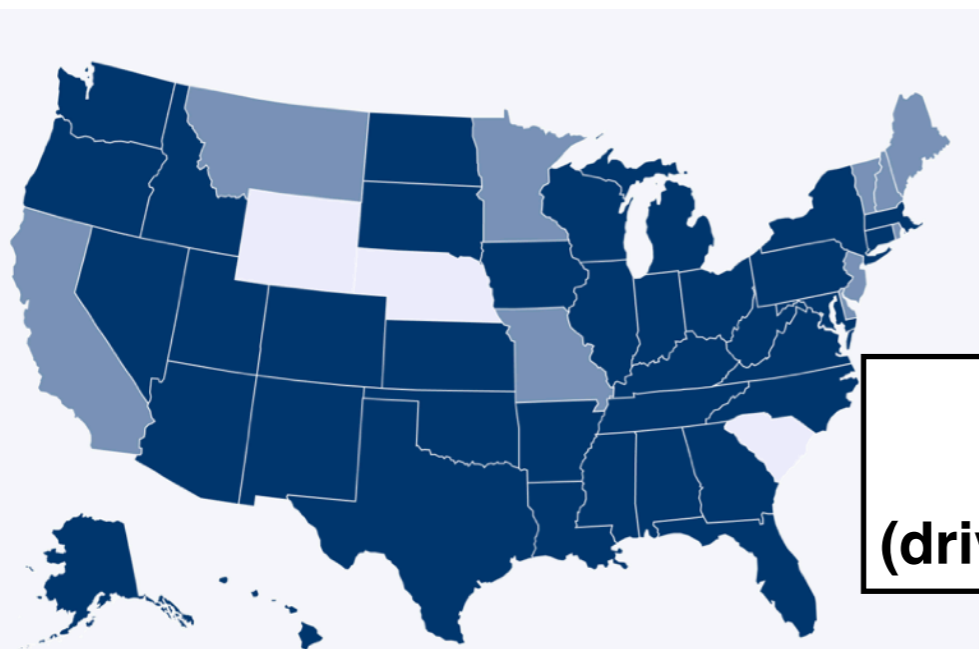
- 54 trip attendees:
 - 34 FNAL UEC, 13 US LHC, 7 SLAC
 - 22 women
 - 2 under-represented minorities*
 - 35 early-career

*American citizens who are Blacks, Hispanics, and American Indians or Alaska Natives (APS Reference)



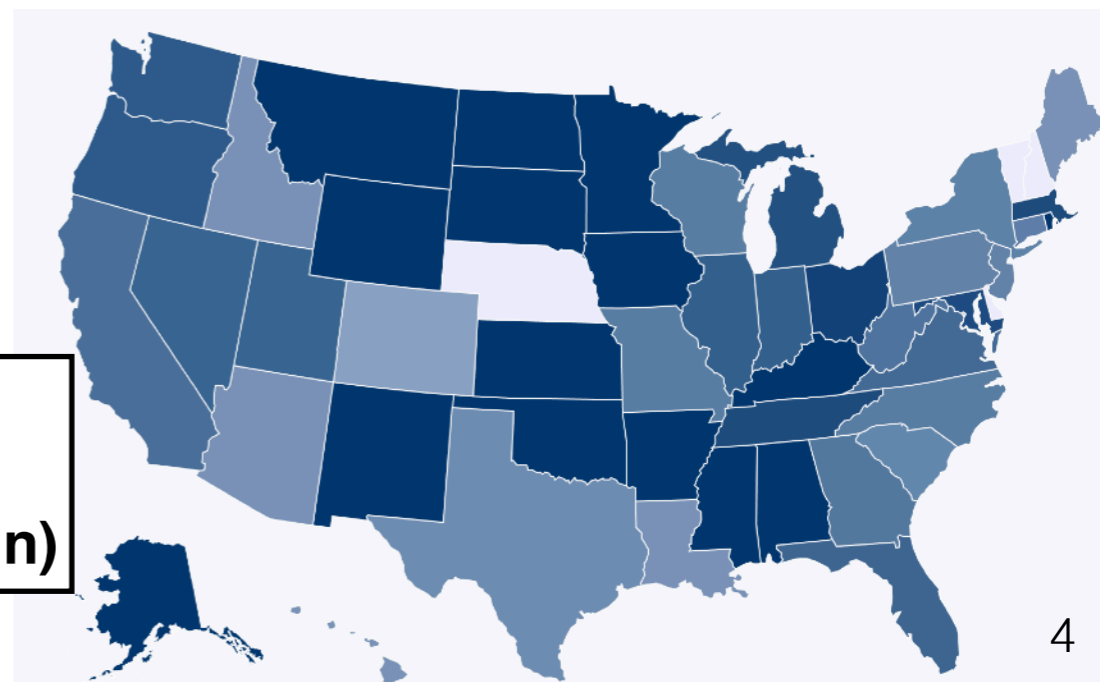
Left to Right:
A. Rafique
X. Chen
K. Warburton
M. Farooq

**Visited 84/100 Senate offices
(12 more than last year)**



**7/8 of the
“big” committees
(driven by Prof. B. Quinn)**

**Visited 305/435 House offices
(29 more than last year)**



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Fermilab Student and Postdoc Association

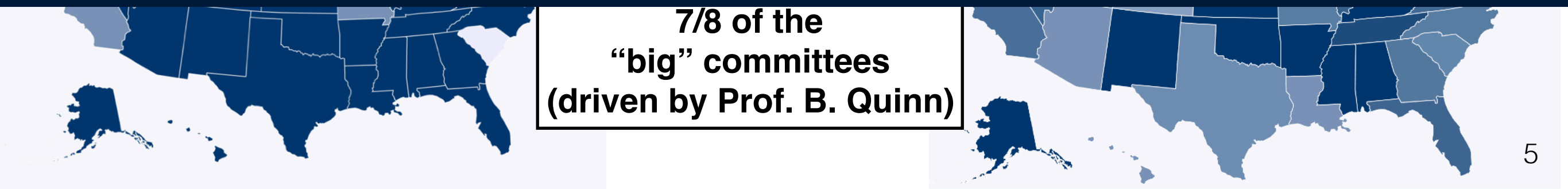


Left to Right:

A. Rafique
X. Chen
K. Warburton
M. Farooq

Quote from a Graduate Student (to Y. Cheng):

- *“It was absolutely one of the most empowering experiences I've ever gotten the chance to participate in, so thank you so much to you and all the other organizers for organizing this and for inviting me.”*



7/8 of the
“big” committees
(driven by Prof. B. Quinn)

Who Were We?

Slide Adapted from
J. Vasel & B. Nord

Organizers:

Joseph Zennamo (UEC Govt. Rel. Co-Chair)
Carrie McGivern (UEC Govt. Rel. Co-Chair)
Fernanda Psihas (UEC Govt. Rel. Deputy Chair)

Trip Preparation and Training:

Brian Nord (Pre-trip training, UEC Outreach Chair)
Justin Vasel (WHIPS planning system, UEC Govt. Rel.)

Meeting Planning

Breese Quinn (Congressional committee scheduling)
Harvey Newman (Executive office scheduling)

Institutional Support

University Research Association (URA)

54 trip attendees

Sebastian Aderhold
Andrea Albert
Leonidas Aliaga
Daniel Antrim
Leo Bellantoni
Saptaparna Bhattacharya
Robin Bjorkquist
Xuan Chen
Yangyang Cheng
Frank Chlebana
Gavin Davies
Aaron Dominguez
Scott Ely
Alden Fan
Midhat Farooq
Rob Fine
Sergei Gleyzer
Wes Gohn
Sowjanya Gollapinni
Elena Gramellini
Joseph Grange
Joseph Haley
Jiyeon Han
Lukas Heinrich
JoAnne Hewett
Cindy Joe
Ryan Linehan
Kevin McDermott
Jane Nachtman
Harvey Newman
Brian Nord
Jesus Orduna
Michela Paganini
Jannicke Pearkes
Mariel Pettee
Fernanda Psihas
Breese Quinn
Aleena Rafique
Salvatore Rappoccio
Michael Sokoloff
Kelly Stifter
Louise Suter
Savannah Thais
Samuel Totorica
Justin Vasel
Sean-Jiun Wang
Thomas Warburton
Herman White
Justin Williams
George Wojcik
Katherine Woodruff
Joseph Zennamo
Jingyu Zhang
Yuanyuan Zhang



New Tools - WHIPS

- Much of this year's success was thanks to the "Washington-HEP Integrated Planning System"
- Web-based tools aimed at automating much of the trip logistics:
 - Who are you connected to
 - Your meeting assignments
 - Centralized forum to fill open meeting
 - Meeting reports
 - Trip data analysis



WHIPS team:
J. Vasel and F. Psihas



Joseph Zennamo
 ✉ jzennamo@gmail.com
 ☎ 315 243 2232
 🏠 uec
 🏢 Neutrino

📌 Joseph is currently **ELIGIBLE** for more primary assignments.

Joseph's Full Schedule

🟢 Green rows indicate that Joseph is the primary for that meeting.

Search:

Type	Meeting	Time	Location	Primary	Secondary
Legislator	Cardin, Benjamin D-MD	2018-03-07 11:00:00	HSOB 509	Jesus Orduna	Joseph Zennamo
Legislator	Russell, Steve R-OK 5	2018-03-07 13:30:00	CHOB 128	Joseph Zennamo	Robin Bjorkquist
Legislator	Weber, Randy R-TX 14	2018-03-07 14:30:00	LHOB 1708	Wes Gohn	Joseph Zennamo
Legislator	Culberson, John R-TX 7	2018-03-07 16:00:00	RHOB 2161	Xuan Chen	Joseph Zennamo
Legislator	Johnson, Sam R-TX 3	2018-03-07 17:00:00	RHOB 2304	Joseph Zennamo	Jane Nachtman
Legislator	Schweikert, David R-AZ 6	2018-03-08 09:30:00	RHOB 2059	Joseph Zennamo	Herman White
Executive	Office of Management and Budget (OMB)	2018-03-08 11:00:00	NEOB 10258	--	[Multiple]
Executive	DOE Office of Science HQ	2018-03-08 14:00:00	DOEH TBD	--	[Multiple]
Executive	DOE Germantown	2018-03-09 10:00:00	DOEG TBD	--	[Multiple]
Legislator	Marchant, Kenny R-TX 24	2018-03-09 13:00:00	RHOB 2369	Michael Sokoloff	Joseph Zennamo
Legislator	Heinrich, Martin D-MN	2018-03-09 14:00:00	HSOB 303	Brian Nord	Joseph Zennamo
Legislator	Tenney, Claudia R-NY 22	2018-03-09 15:00:00	CHOB 512	Joseph Zennamo	Kevin McDermott
Legislator	Loeback, Dave D-IA 2	2018-03-09 16:00:00	LHOB 1527	Jane Nachtman	Joseph Zennamo

Showing 1 to 13 of 13 entries

Meeting Assignments

Primaries 3 Secondaries 6 Executive 3

Office	Member	Score	Secondary	Time	Location
Enzi, Michael R-WY	0				
Johnson, Sam R-TX 3	0	Jane Nachtman	2018-03-07 17:00:00	RHOB 2304	
Russell, Steve R-OK 5	0	Robin Bjorkquist	2018-03-07 13:30:00	CHOB 128	
Schweikert, David R-AZ 6	0	Herman White	2018-03-08 09:30:00	RHOB 2059	
Tenney, Claudia R-NY 22	0	Kevin McDermott	2018-03-09 15:00:00	CHOB 512	

Showing 1 to 5 of 5 entries

WHIPS

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Science Communication Training

- To help us deliver our message clearly a science communication program designed
- Aimed to be curriculum based such that it could be built upon in future years and broadly applicable
 - Aimed to teach communication strategies and best practices
 - Normalization of science and scientists
 - Focused on providing a clear and concise message to the public
 - Identifying the clear benefits to society of fundamental research
 - Clarify the goals of making a lasting impression in the minds of people we talk to

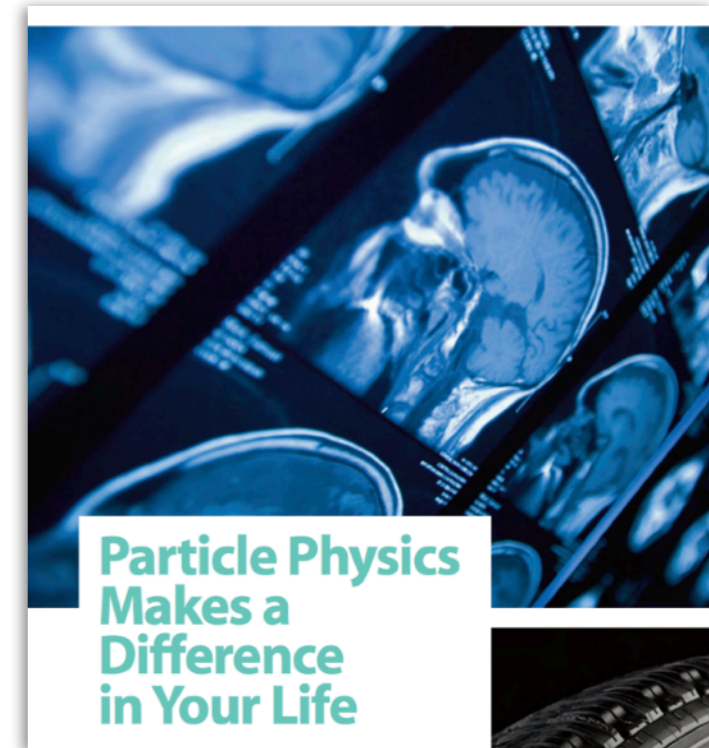
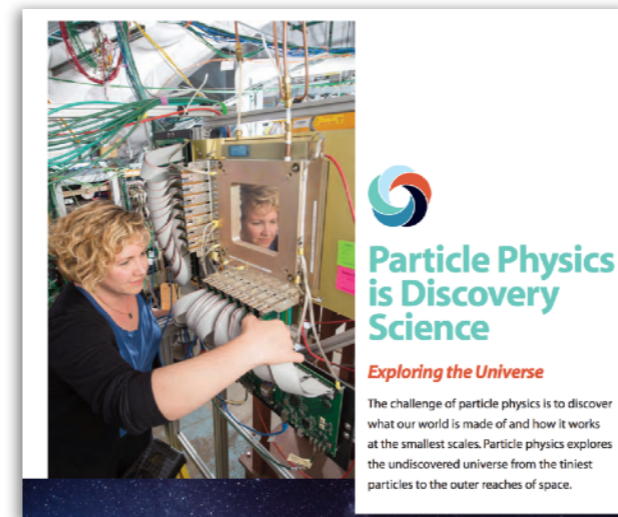
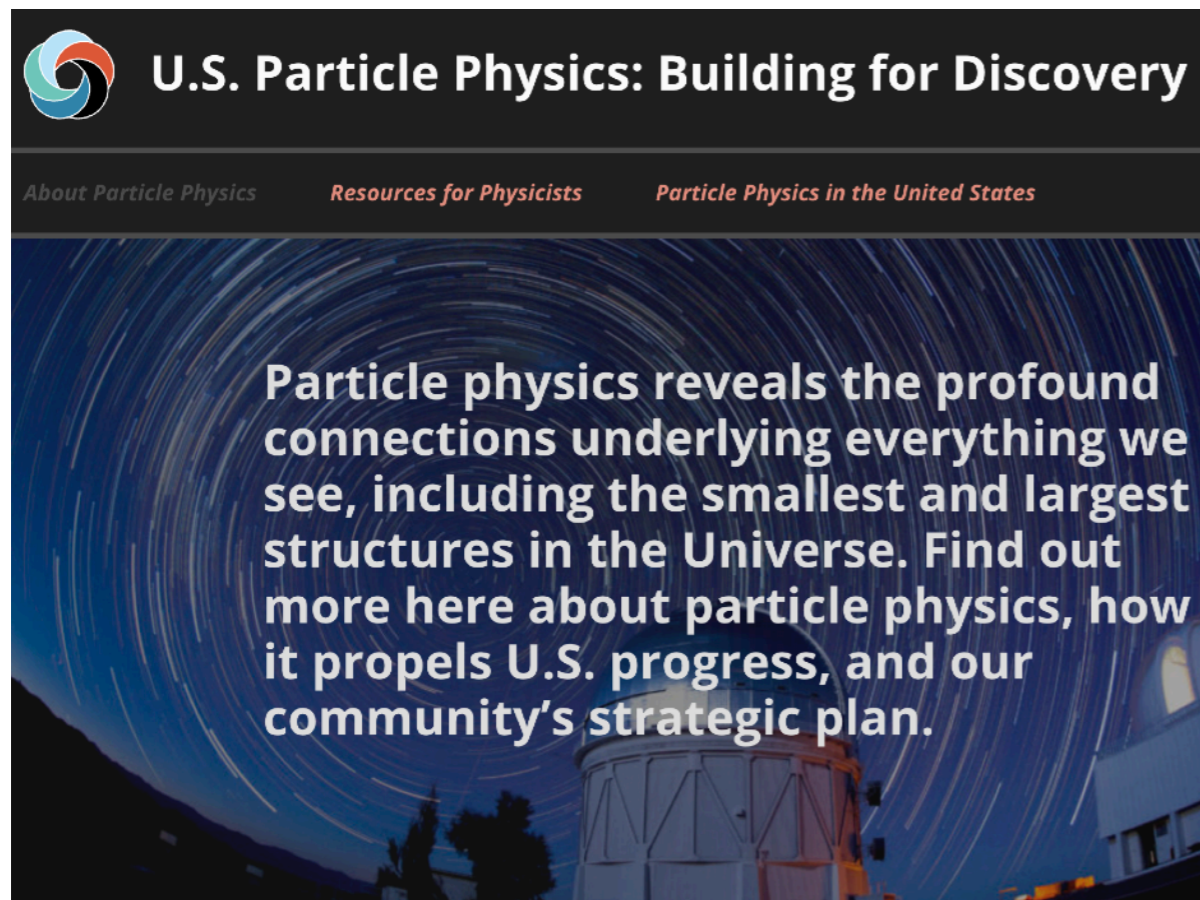
From a recorded training session:



*Science Communications Team:
B. Nord and K. Yurkewicz*

Community Supported Materials

- Mike Cooke (DOE) and Andrea Peterson (AAAS Fellow) formed and coordinated a group of community stakeholders to spearhead an update of materials the community can utilize for outreach
 - This involved a complete revamping and rebranding of usparticlephysics.org
- The refreshed materials formed the foundation of our “packets”



Newest Material

- One key packet added this year included how HEP helps to build leaders in the STEM fields
 - A special focus was placed on the innovation economy
- These materials resonated strongly
 - More information was requested about this type of impact
- One trip attendee (J. Orduna) is an ex-physicist data scientist and his anecdotes proved to be very valuable



Contributing to the innovation economy

We develop our students' analytical and technical skills, enabling them to excel in today's technology-driven economy. Particle physics students pursue many career paths and become leaders in their fields. Their contributions spur innovation in medicine, manufacturing, and technology.



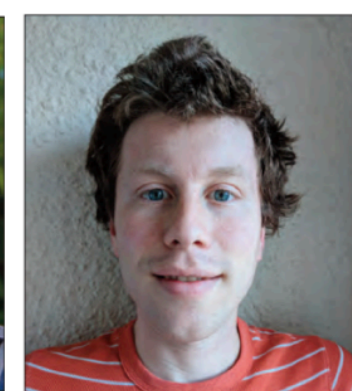
—Ruth Toner,
Twitch



—Alex Mott,
DeepMind



—Rishiraj Pravahan,
INQNET



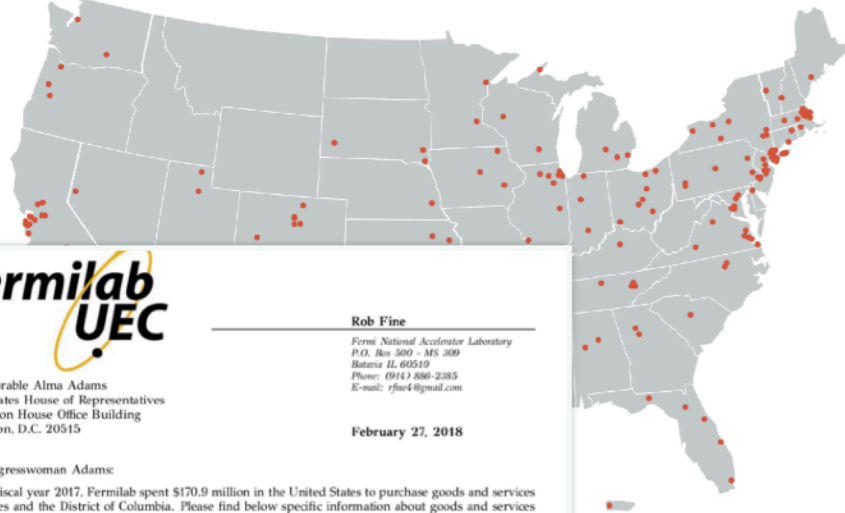
—Brian Coopersmith,
Google

Additional Materials Brought

- Beyond what is available on usparticlephysics.org we also brought a selection of other materials
 - Brochures/Infographics
 - P5 Report overview & update
 - Map/list of US HEP institutions
 - Procurement/Grant information
 - Fact Sheets on US LHC, Fermilab, and LNBF/DUNE
 - Symmetry Magazine articles on the US-CERN partnership, LBNF groundbreaking, and the Muon g-2 magnet arrival
 - Fermilab-360 VR headset & Particle Zoo pins

Particle Physics in the United States

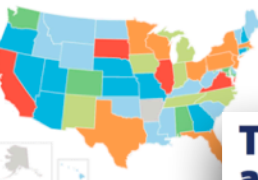
Scientists, engineers, and technicians at more than 160 universities, institutes, and laboratories throughout the U.S. are working in partnership with their international colleagues to build high-tech tools and components, conduct scientific research, and train and educate the next generation of innovators. Particle physics activities in the U.S. attract some of the best scientists from around the world.



The Honorable Alma Adams
United States House of Representatives
222 Cannon House Office Building
Washington, D.C. 20515

Dear Congresswoman Adams:

In fiscal year 2017, Fermilab spent \$170.9 million in the United States to purchase goods and services in 48 states and the District of Columbia. Please find below specific information about goods and services purchased by Fermilab from your state and district during this time.



\$1,000 - \$100,000	\$100,000 - \$100,000
Delaware, Hawaii, Idaho, Kentucky, Louisiana, Maine, Mississippi, Montana, North Dakota, Oklahoma, South Carolina, Vermont, West Virginia, Wyoming	Arizona, Connecticut, Georgia, Kansas, Missouri, Nebraska, Nevada, New Hampshire, Oregon, Utah
\$500,000 - \$1 million	\$1 million - \$2 million
Indiana, Iowa, Michigan, New Mexico, North Carolina, Tennessee	Alabama, Colorado, Maryland, Rhode Island, Washington



Vendor Name
CAROLINA NARROW FABRIC CO
TRUE LOOK INC
AMERESCO FEDERAL SOLUTION
HUBER AND SUHNER INC

Vendor Name
WT COX INFORMATION SERVICE
AMERESCO FEDERAL SOLUTION
DUKE UNIVERSITY
SMALL DOG ELECTRONICS
HUBER AND SUHNER INC
MICROLEASE
BKC INDUSTRIES INC

The United States at the Large Hadron Collider



Why the Large Hadron Collider at CERN?

The LHC, located near Geneva, Switzerland, is the world's most powerful particle collider. It accelerates and smashes atomic nuclei together, recreating the energetic conditions that existed after the Big Bang and generating new particles. Huge detectors record the collisions, and scientists study the products.

What does this research accomplish?

- **Uncovers** the ultimate laws of nature
- **Charts** the origins of matter
- **Explores** the properties of matter and energy

What's next?

Scientists are characterizing the newly discovered Higgs boson, investigating subatomic interactions and searching for new particles and forces. The next steps and goals are outlined in a long-term strategic plan for the US particle physics program called the P5 Report.

What are the smallest things that exist?

The subatomic world is a complex mosaic of fundamental particles, fields and forces. But there are still many pieces we don't understand.

How can we find these particles?

Albert Einstein discovered that energy and mass are two sides of the same coin. Pack enough energy into a tiny region of space, and new particles will pop into existence.



P5 Progress

- It was made a special point to tie all the excitement of our research back to the P5 Report and its progress
 - Name recognition was high but not 100%
- Two messages resonated strongly
 - This document codifies the communities desire to be good stewards of the taxpayers monies
 - All P5 projects have been within budget and schedule

The P5 Report provides the strategy and priorities for U.S. investments in particle physics for the coming decade.

The top four priorities in 2018

Advance the High-Luminosity LHC (HL-LHC) accelerator and ATLAS and CMS detector upgrade projects on schedule, continuing the successful bilateral partnership with Europe. This is P5's highest-priority near-term large project.

Advance the Long-Baseline Neutrino Facility (LBNF), Deep Underground Neutrino Experiment (DUNE), and Proton Improvement Plan II (PIP-II), working with international partners on the design, prototypes, initial site construction, and long-lead procurements. This is P5's highest-priority large project in its time frame.

Support the existing construction projects enabling the next major discoveries in particle physics, including LSST, DESI, Mu2e, LHCb, LZ, and SuperCDMS-SNOLAB.

Balance scientific research with facility operations and the carefully selected portfolio of small, medium, and large projects that together facilitate the success of the community's strategic vision. The P5 Report provides the strategy and priorities for U.S. investments in particle physics for the coming decade.

These carefully chosen investments will enable a steady stream of exciting new results for many years to come and will maintain U.S. leadership in key areas.

Recent results

Higgs, dark matter, and dark energy

Also highlighted particle physics contributions to:
Fermi Space Telescope and LIGO/Virgo

Program advances in 2017

US-CERN partnership, DUNE, Muon g-2, Fermilab proton power, next gen dark matter and dark energy, next gen CMB facilities

Looking forward

LHC, ILC (Japan), HEP Theory investment, QIS

Community Communication



Building for Discovery

*Strategic Plan for
U.S. Particle Physics
in the
Global Context*

Supported by: APS Division of Particles and Fields, Fermilab Users Executive Committee, SLAC Users Organization, and the U.S. Large Hadron Collider Users Association

- Thanks to the work begun by Mike Cooke the HEP stakeholders group formed the core of the group that developed our messaging for the trip
 - Including reps from Labs, Users' groups, DPF, and the P5 process
- Communication started early and continued to help build a coherent and unified voice within the community
 - One item that was raised was the status of research funding
- These conversations helped us to form the message
 - Including the impact that ex-HEP scientists have on the broader economy and helped define the “value lost” by shrinking our support

Feedback From Offices Visited

- We have collected 76 pages of feedback from trippers on each meeting attended
- Working to analyze this feedback and produce a concise document that summarizes the trip
- This document could be given to the community to allow them to better understand the messages we deliver and the feedback that we are receiving from that message
- Working with the WHIPS development team to include significantly more analytics for next trip
 - Similar to what was collected last year



Agency and Administration Office Visits

- Beyond visiting with congress we also visit OMB/OSTP, NSF, DOE (Germantown and Office of Science)
- These meetings enable us to communicate directly to the agency's what we are hearing on the hill and to convey the messages we are delivering

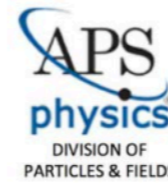


Photo from 2017 Trip

Letters to Chairs

- The heads of the three Users' groups along with the chair of DPF sent a letters to the chair and ranking members of the appropriations committees to helped to further reinforce the message that we delivered
- Last year there was also a targeted October follow-up trip to reinforce our message
 - A handful of people went to the hill to meet with key offices and committees

J. Zennamo, Fermilab



April 4, 2018

Chairman Mike Simpson
Subcommittee on Energy and
Water Development
Committee on Appropriations
2362-B Rayburn House Office Building
Washington, D.C. 20515

Ranking Member Marcy Kaptur
Subcommittee on Energy and
Water Development
Committee on Appropriations
1016 Longworth House Office
Washington, D.C. 20515

Dear Chairman Simpson and Ranking Member Kaptur:

■ ■ ■

Our priorities are based on the 10-year strategic plan with a 20-year vision "Building for Discovery", also known as P5, that was developed by the HEP community in close consultation with our funding agencies. Our community has come together behind the P5 plan, its compelling comprehensive scientific vision, and the tough decisions made to fit the research program within the available funding envelope. Guided by the P5 strategic plan, our community continues to achieve groundbreaking scientific milestones and has an excellent track record of delivering projects on time and on budget. Since the launch of the P5 strategic plan in 2014, we have explored the nature of the Higgs boson and new states of quark matter with LHC experiments that have outperformed expectations, delivered the world's highest intensity neutrino beam, set the world's best constraints on dark matter, constructed a successful prototype of the strongest accelerator magnet ever built, and demonstrated multi-stage acceleration in laser-driven plasmas.

■ ■ ■

Professor Joseph Incandela
Chair, Division of Particles and Fields
of the American Physical Society
Joe and Pat Yzurdiaga Chair in
Experimental Science
Physics Department, Broida Hall 5105
University of California
Santa Barbara, CA 93106

Professor Sowjanya Gollapinni
Chair, Fermilab Users Executive Committee
Department of Physics & Astronomy
University of Tennessee, Knoxville
1408 Circle Drive
Knoxville, TN 37996

Professor Harvey B Newman
Marvin L. Goldberger Professor of Physics
Chair US LHC Users Executive Committee
Charles C. Lauritsen Laboratory
of High Energy Physics
Division of Physics, Mathematics and Astronomy
California Institute of Technology
1200 East California Boulevard
Pasadena, CA 91125

Dr. Nicola Omodei
Chair SLAC Users Organization Executive
Committee
Hansen Experimental Physics Laboratory and
Kavli Institute for Particle Astrophysics
and Cosmology
Stanford University
Stanford, CA 94035

Additional Communication Activities

- Beyond the DC Trip there is a significant amount of community communication that happens
- This is an incomplete look at two recent events



Society for Science at User Research Facilities User Science Expo

- SSURF hosted a Science Expo on the hill and held office visits
- The major HEP labs participated hosting booths

SSURF Capitol Hill Expo Messages/Talking Points

- **America's network of scientific user facilities is the nation's shared innovation toolbox.** The network is a major engine of our leadership in scientific discovery and technology development, and in American economic competitiveness.
- User facilities are **located at national laboratories, universities, and at standalone sites nationwide.**
- **Each facility is a highly specialized center of scientific equipment and scientific experience & expertise** that is beyond the means of any single company, university, or laboratory. Researchers



USA Science & Engineering Festival

- USA Science & Engineering festival has > 350k attendees over 3 days
- Science Expo with many activities from exhibitors across all areas of STEM
- US LUA participated with Fermilab and Johns Hopkins University
- The event was successful in reaching out to many visitors, especially families and kids!

R. C. Lopes de Sa



LHC Virtual Tours



D. Miller

Atlas Rift

Slide Adapted from V. Martinez

Summary of This Year

- **After 35 years the DC Trip has continued to be a success!**
- This year we have built upon the tradition of investment into it by spearheading new projects
 - Whips, science advocacy training, community driven materials, etc.
- Communication within the community is essential to the success of this trip and continually reinforcing that we, as a community, need to speak with a set of unified voices needs to be fostered
 - Transparency is essential and we hope to deliver that with a report to the community summarizing this trip
- Beyond this successful trip to DC many exciting and fruitful advocacy efforts are being developed and driving us forward



Prof. B. Quinn

Looking Forward

- Want to continue to build upon our progress, WHIPS is designed to help provide a better model for selecting trip attendees and will be able to help maximize our district coverage in the future
- Looking into best metrics of success such that we can provide quantitative feedback
- Continue to foster an atmosphere of community-wide communication and make sure that all members of the community are being represented by elected members of users' bodies

