Mr. Particle Physicist Goes to Washington
HEP User Community Government Outreach

Breese Quinn
University of Mississippi
Past Chair, UEC Govt. Relations

DPF 2015, Ann Arbor, MI
8/7/15
HEP Government Outreach

Why…
- do we need to do it?

Who…
- do we need to reach?

Where and When…
- is best to do it?

What…
- exactly are we doing?

How…
- can you help?
Budget Context

President's Proposed $4.1 Trillion Budget by Mandatory and Discretionary Spending and Interest on Federal Debt (FY 2016)

- Mandatory Spending: $2.63 trillion - 65%
- Discretionary Spending: $1.15 trillion - 28%
- Interest on Debt: $283.0 billion - 7%

Where we live

Source: OMB, National Priorities Project
President's Proposed $1.15 Trillion Discretionary Spending Budget (FY 2016)

- Social Security, Unemployment & Labor: $31.4 billion (3%)
- International Affairs: $41.6 billion (4%)
- Energy & Environment: $41.6 billion (4%)
- Medicare & Health: $60.6 billion (5%)
- Government: $66.2 billion (6%)
- Veterans' Benefits: $70.5 billion (6%)
- Housing & Community: $72.2 billion (6%)
- Education: $74.1 billion (6%)
- Science: $31 billion (3%)
- Transportation: $27.4 billion (2%)
- Food & Agriculture: $13.3 billion (1%)
- Military: $625.2 billion (54%)

Where we live
Budget Context

President’s Proposed $4.1 Trillion Total Spending Budget (FY 2016)

Where we live

Source: OMB, National Priorities Project
Mandatory programs and interest costs are taking over more and more of the federal budget, crowding out important discretionary programs.

**Total Mandatory Spending 1970:** $900 Billion

**Total Mandatory Spending 2010:** $3.5 Trillion (est.)

**Total Mandatory Spending 2040:** $12.3 Trillion (est.)


Notes: Data is in constant 2009 dollars. Mandatory programs include Social Security, Medicare, Medicaid and other entitlement programs.
HEP within Office of Science

DOE Office of Science Funding: % of Total Appropriation

- Nuclear Physics
- High Energy Physics
- Fusion
- Bio and Env Research
- Basic Energy Science
- Advanced Computing

FY 1996 - FY 2012

AGS, BTeV, PEP-II, Tevatron

B. Quinn
University of Mississippi
DPF2015
8/7/15
# HEP within Office of Science

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The Federal Budget Players

Executive

- President

Office of Management & Budget (OMB)

Office of Science & Technology Policy (OSTP)

Department of Energy (DOE)
  - Office of Science (OSc)
    - Office of High Energy Physics (OHEP)

National Science Foundation (NSF)
The Federal Budget Players

Congress

Authorizing Committees (budget and oversight jurisdiction)

House Committee on Science, Space & Technology
  - Subcommittee on Energy (DOE)
  - Subcommittee on Research & Technology (NSF)

Senate Committee on Energy & Natural Resources
  - Subcommittee on Energy (DOE)

Senate Committee on Commerce, Science & Transportation
  - Subcommittee on Science & Space (NSF)
The Federal Budget Players

Congress

- Appropriations Committees (allocate money)
  - House Committee on Appropriations
    - Subcommittee on Energy & Water Development (DOE)
    - Subcommittee on Commerce, Justice, Science & Rel. Agencies (NSF)
  - Senate Committee on Appropriations
    - Subcommittee on Energy & Water Development (DOE)
    - Subcommittee on Commerce, Justice, Science & Rel. Agencies (NSF)

- Sen & House Auth. & Approp: ~160 out of 535 members
When and Where to Interact

- **MARCH - Washington, DC**
  - Federal Budget Cycle – between President submitting budget proposal and Congress putting the budget together

- **AUGUST – Local Congressional Districts**
  - Senators and Representatives are home while Congress is in recess
  - Easier to meet with Sen/Rep and develop personal relationship with staff
  - *Possibility* to get more people involved

Specific Opportunities

- Higgs Celebration Reception on Capitol Hill

Throughout the year

- Written testimony to Congressional committees
- Letter writing in support of legislation (e.g. America COMPETES, FIRST, Einstein Acts)
March DC Trip

Purpose: to visit with as many Congressional member and relevant staff offices as possible, as well as with particular representatives of the administration and funding agencies.

Message: garner support for funding of HEP.

Unified and Consistent!

Participants: members of the HEP User groups’ executive committees (FNAL UEC, USLUA, SLUO) along with selected students and others recruited to cover key districts. ~ 40-50 people in total

Significant training (role playing, study material)
DC Trip: How does it work?

Senate and House Office Meetings

- Usually 15-30 minutes with a staffer (Legislative Correspondent → Legislative Assistant → Senior LA → Legislative Director → Chief of Staff (very rarely!))
- About 5% of meetings with Senator or Representative
- Almost always supportive to varying degrees
- Ranges from very basic with an LC of member on no science committees, to very detailed with LD or science Fellow from E&W Appropriations member
DC Trip: How does it work?

Committee Staff

- Among the most important meetings we have
- Not Congress members’ personal staff, but professional Majority and Minority staff explicitly for that committee. Lead staff generally Chairman and Ranking Member’s designees.
- These are the people who know more about many aspects of our field than we do. They are the ones actually writing the bills.
- Very smart people who ask very hard questions, and can give very good advice.
- Definitely not amateur hour – experienced trippers only!
DC Trip: How does it work?

**DOE/NSF**
- Basically briefings to them of what we are hearing on the Hill.

**OMB/OSTP**
- Often the toughest meetings.
  - Can be generally receptive, or at times hardball. Needs senior representatives of the field who can stay on message.
DC Trip: How does it work?

Schedule Meetings

- ~50 people at ~350 meetings in multiple locations over 3 days - Logistical nightmare!!

U.S. Capitol Map

1. U.S. Capitol Building
2. Russell Senate Office Building
3. Hart Senate Office Building
4. Longworth House Office Building
5. U.S. Supreme Court
7. Adams Building; Library of Congress

Fermilab UEC

B. Quinn
University of Mississippi
DPF2015
8/7/15
Prepare Message

Mainly in form of our HEP Brochure, or 1-pager:

High-Energy Physics Is a National Effort

Scientists, engineers, and technicians at more than 190 universities and laboratories in 45 states partner with their international colleagues to build high-tech tools and components, conduct scientific research, and train and educate the next generation of innovators. High-energy physics facilities at laboratories in the United States attract more than 4,000 scientists from around the world every year.

Accelerating National Innovation
High-Energy Physics in the United States

Please sustain funding for High-Energy Physics through the Department of Energy’s Office of Science and the National Science Foundation to continue the process of innovation and discovery.
**DC Trip: How does it work?**

**Prepare Message**
- Mainly in form of our HEP brochure, or 1-pager:

  ![HEP Brochure](image)

  **Our “Ask”**
  Please sustain funding for High-Energy Physics through the Department of Energy’s Office of Science and the National Science Foundation to continue the process of innovation and discovery.

  — B. Quinn
  University of Mississippi
  DPF2015
  8/7/15
**DC Trip: How does it work?**

**Prepare Message**
- Mainly in form of our HEP brochure, or 1-pager:

---

**Exploration that Propels U.S. Progress**

The challenge of high-energy physics is to discover what our world is made of and how it works. Particle physics, the science of the very small, teams up with astrophysics and cosmology, the sciences of the very large, to explore the undiscovered universe from the tiniest particles to the outer reaches of space.

The quest to better understand our world inspires and educates tens of thousands of students across the country and creates a globally competitive, highly trained workforce in the United States. Advanced research and development (ARD) for the tools of high-energy physics drives innovation that improves the nation’s health, wealth, and security.

---

**Leading the World to New Discoveries**

America’s high-energy physics research program positions U.S. scientists to make the next generation of discoveries at home and abroad. U.S. university and national laboratory researchers lead in the global search for answers to some of mankind’s biggest questions:

- **What are the building blocks of matter and the fundamental forces of nature?**
- **High-energy physicists from the United States lead the way in the quest to understand the Higgs boson and to search for other new particles and forces.**

- **How did the universe develop into what we see today?**
  - Pioneering research with powerful beams of neutrinos produced at Fermilab may uncover the mysteries of the dynamics of the early universe.

- **What makes up the 99 percent of the universe we can’t see?**
  - We understand only four percent of our universe. U.S. scientists lead pioneering Earth- and space-based experiments to search for the dark matter and dark energy that could explain the rest.

---

**Driving Innovation with High-Energy Physics**

High-energy physics discoveries require powerful research tools. These bold and innovative technologies have entered the mainstream of society to transform the way we live and do business. More than 30,000 particle accelerators are in use worldwide in industries including medicine, manufacturing, and materials processing. The Department of Energy’s Office of High-Energy Physics is the designated steward of the nation’s program for particle accelerator R&D.

---

**Providing Tools for STEM Education**

Every year, high-energy physics programs at more than 100 universities and five national laboratories give tens of thousands of U.S. students hands-on learning experiences in science, math, computing, and engineering. Students, scientists, engineers, and technicians trained in the cutting-edge science of high-energy physics give the U.S. workforce an edge in the high-tech global economy.

---

**Why Particle Physics Matters**

Learn more about what motivates high-energy physicists.

---

B. Quinn  
University of Mississippi  
DPF2015  
8/7/15
DC Trip: How does it work?

Prepare Message

Mainly in form of our HEP brochure, or 1-pager:

IDEAS: our science

Exploration that Propels U.S. Progress

The challenge of high-energy physics is to discover what our world is made of and how it works. Particle physics, the science of the very small, starts up with astrophysics and cosmology, the sciences of the very large, to explore the undiscovered universe from the tiniest particles to the outer reaches of space.

The quest to better understand our world inspires and educates tens of thousands of students across the country and creates a globally competitive, highly trained workforce in the United States. Advanced research and development (R&D) for the tools of high-energy physics drives innovation that improves the nation’s health, wealth, and security.

Leading the World to New Discoveries

America’s high-energy physics research program positions U.S. scientists to make the next generation of discoveries at home and abroad. U.S. university and national laboratory researchers lead in the global search for answers to some of humanity’s biggest questions:

What are the building blocks of matter and the fundamental forces of nature?

High-energy physicists from the United States lead the way in the quest to understand the Higgs boson and to search for other new particles and forces.

How did the universe develop into what we see today?

Pioneering research with powerful beams of neutrinos produced at Fermilab may uncover the mysteries of the dynamics of the early universe.

What makes up the 96 percent of the universe we can’t see?

We understand only four percent of our universe. U.S. scientists lead pioneering Earth- and space-based experiments to search for the dark matter and dark energy that could explain the rest.

PEOPLE: student/workforce training

Driving Innovation with High-Energy Physics

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Keys to Success: P7

- Persistence – in making initial contact
- Preparation – for your visit
- Passion – for particle physics
- Positive – in everything
- Personal – build relationships
- Profuse – in thanks
- Politics – AVOID!
### DC Trip: How did we do?

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<th>Total Members</th>
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<td>Congress</td>
<td>531*</td>
<td>350</td>
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<td>Target Committees</td>
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<td>Senate</td>
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<tr>
<td>House</td>
<td>431*</td>
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<td>95</td>
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- All Chairs and Ranking Members of the important cmtes and subcmtes
- Plus 6 subcommittee staff, DOE (x2), NSF, OMB, OSTP
Other Activities

August Local Visits

Some years have mounted efforts to get Users all across the country to schedule visits in their local Congressional districts during August recess

HUGE logistical challenge, limited participation…

Special Events – generally led by DPF

Higgs Celebration

Reception with 5 members speaking, and a dozen other offices represented

Dozens of office visits

P5 Rollout

Letter of support with >2000 HEP User signatures
How Can You Help?

- **Respond to action calls**
  - Letter writing campaigns to Congress (e.g. P5 rollout, support for authorization and appropriations bills)

- **Local Office Visits**
  - We have always had VERY poor participation from the field. We NEED people to step up in their districts!
  - Materials are available (message, information, preparation, training)
  - STAY ON MESSAGE!!! Use the 1-Pager.
  - Communicate with User Govt. Relations leadership (left hand needs to know what the right hand is doing)

- **Run for UEC/USLUA/SLUO/DPF!**
  - This is where you’ll get into the thick of things – but be prepared to work!
Useful Links

 Longer, more detailed version of this talk (with P5 specific content included)

 2015 DC Trip Materials
   - http://www.fermilab-uec.org/2015/
     - HEP Brochure
     - Other packet materials
     - Background information
     - Advocacy communication guides
     - Tips on contacting Congress and scheduling meetings

 President’s FY2017 Budget S&T Priorities
Budget Context

President's Proposed $2.63 Trillion Mandatory Spending Budget (FY 2016)

- Transportation: $80.4 billion - 3%
- Veterans' Benefits: $95.4 billion - 3%
- Food & Agriculture: $126.3 billion - 5%
- Medicare & Health: $1,045.4 billion - 38%
- Other: $44.9 billion - 2%
- Social Security, Unemployment & Labor: $1,337.7 billion - 49%

Source: OMB, National Priorities Project

B. Quinn
University of Mississippi

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