



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

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University of Mississippi
Past Chair, UEC Govt. Relations

DPF 2015, Ann Arbor, MI
8/7/15

◆ Why...

◆ do we need to do it?

◆ Who...

◆ do we need to reach?

◆ Where and When...

◆ is best to do it?

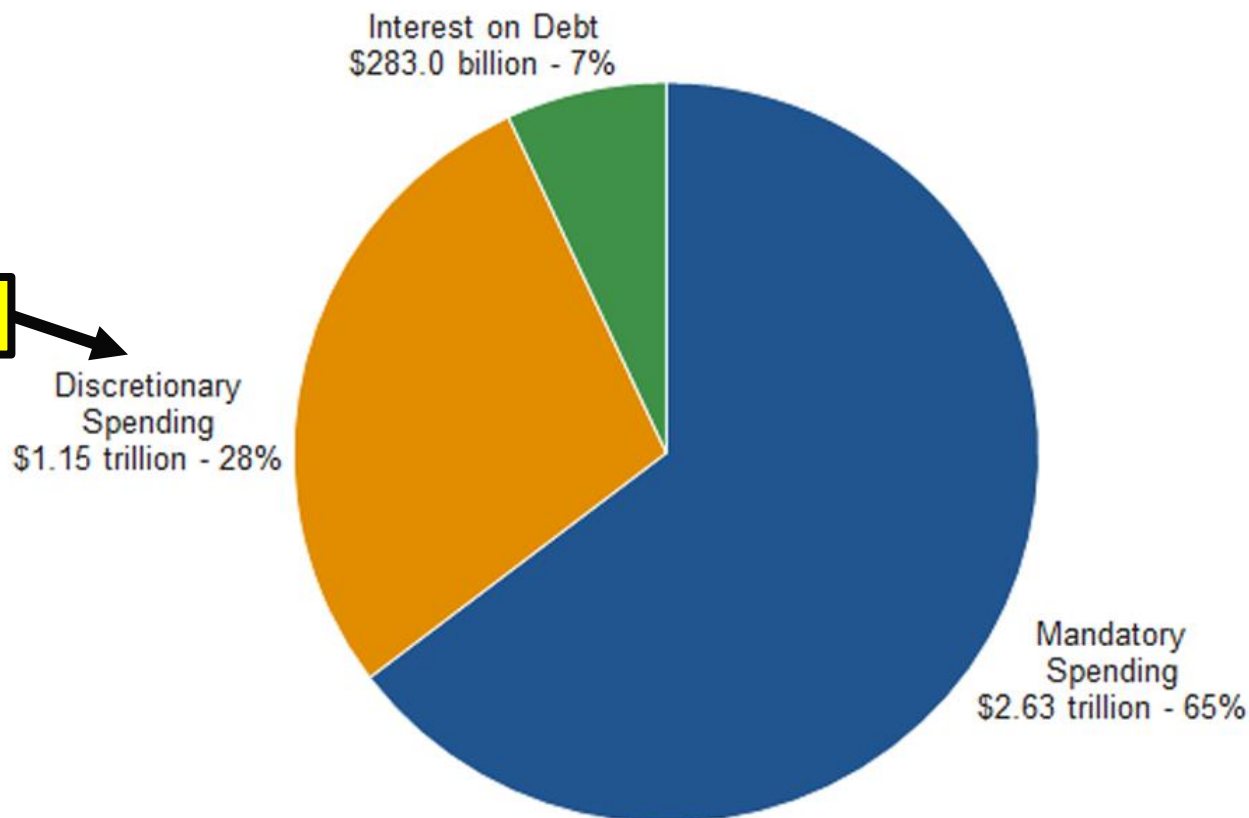
◆ What...

◆ exactly are we doing?

◆ How...

◆ can you help?

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

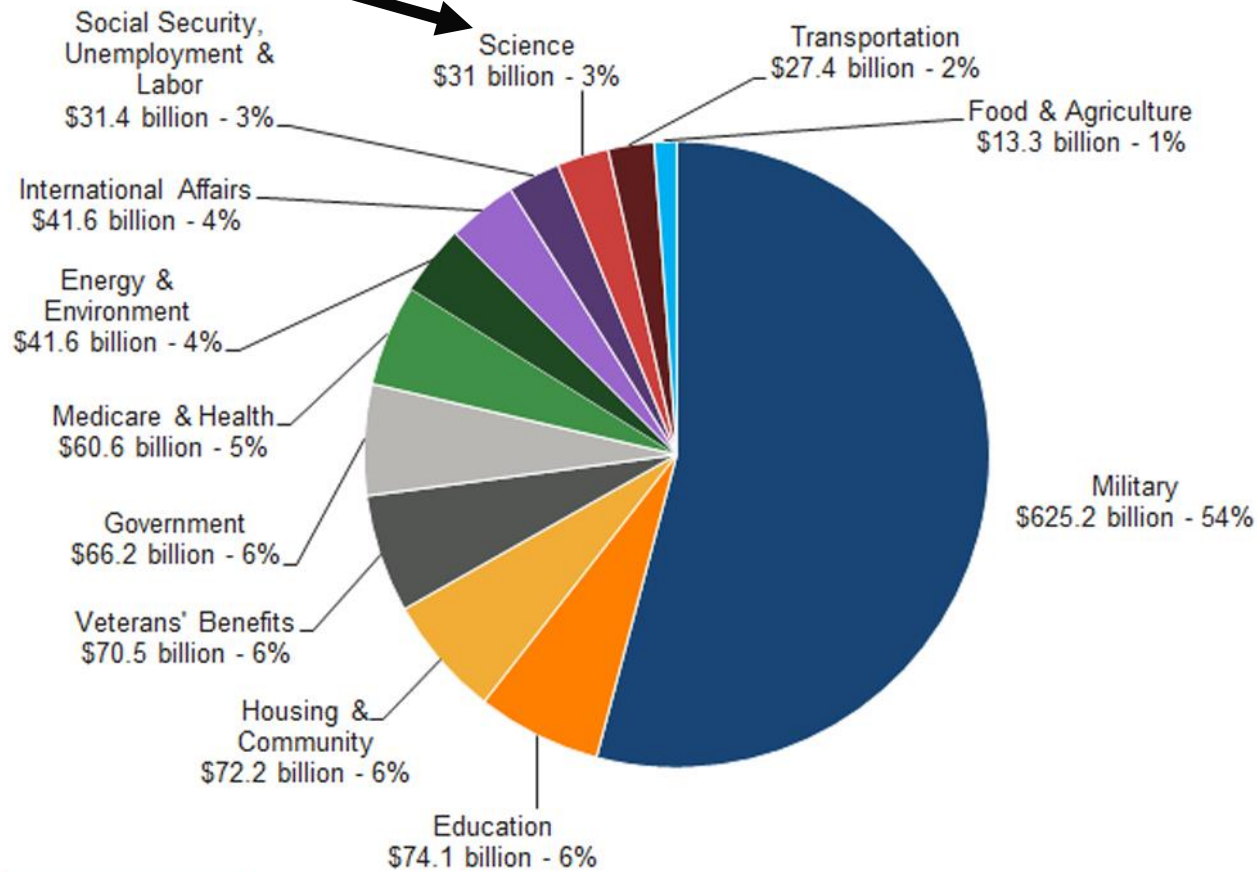


Where we live

Budget Context

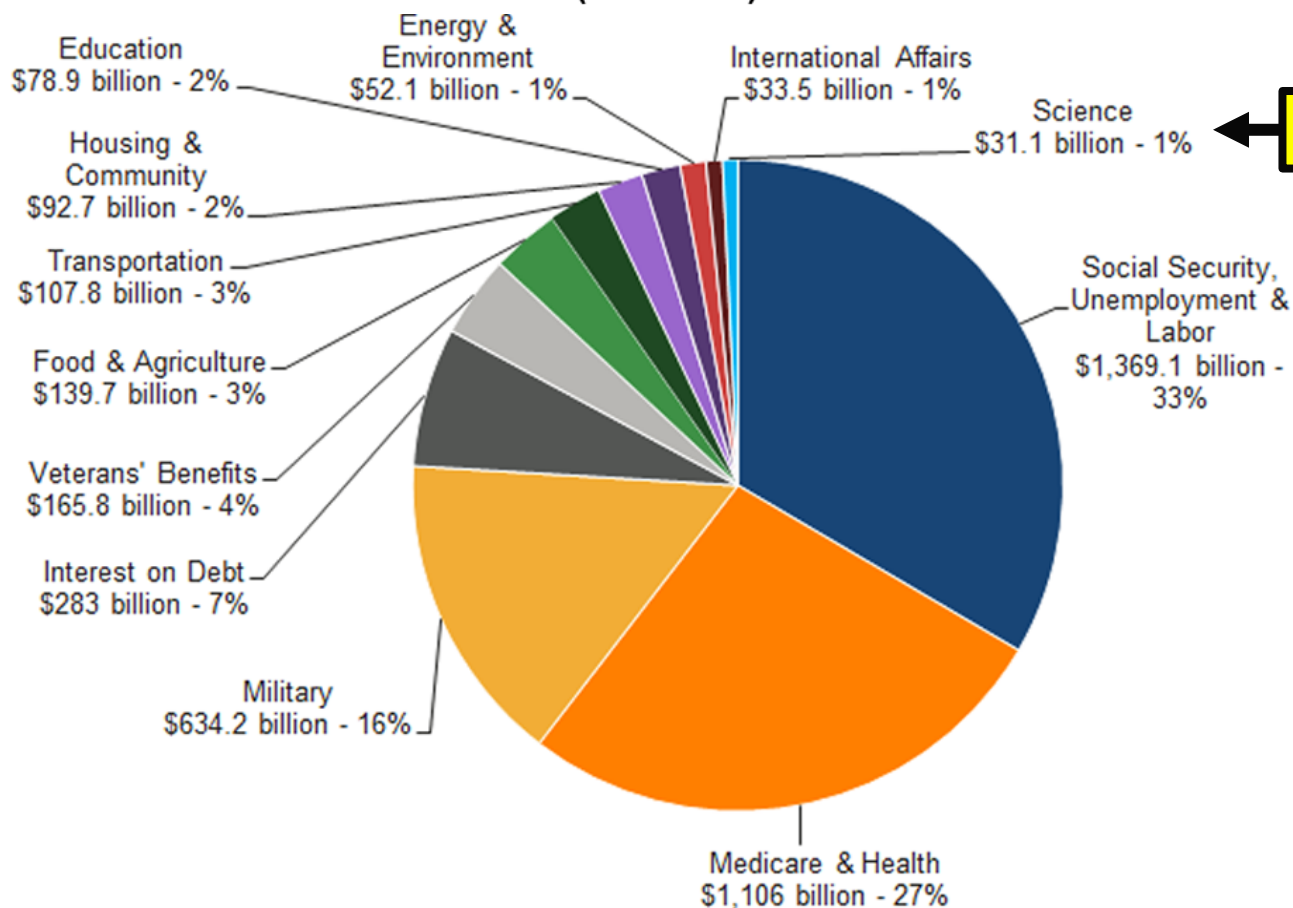
Where we live

President's Proposed \$1.15 Trillion Discretionary Spending Budget (FY 2016)



Budget Context

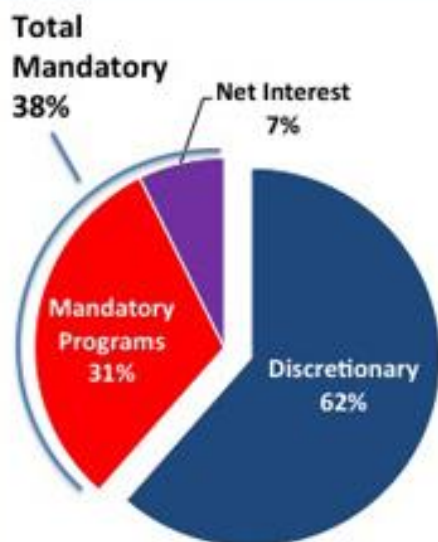
President's Proposed \$4.1 Trillion Total Spending Budget (FY 2016)



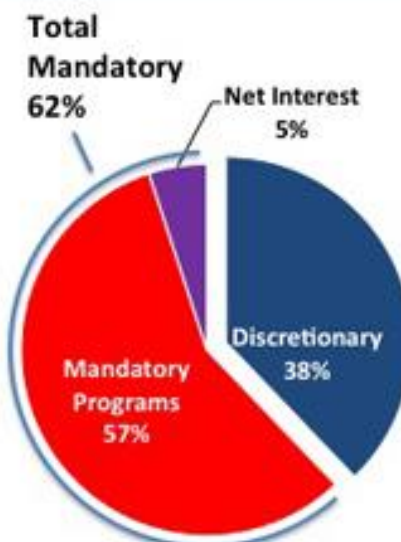
Where we live

Budget Context

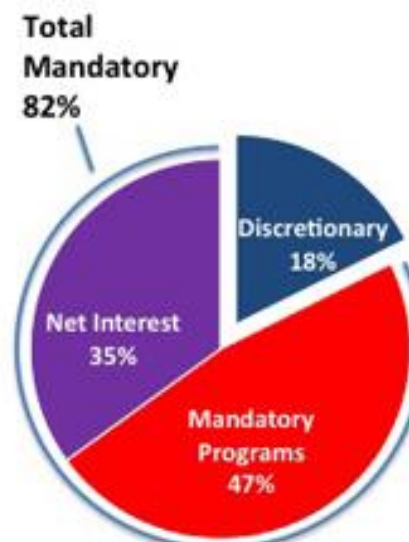
Mandatory programs and interest costs are taking over more and more of the federal budget, crowding out important discretionary programs



Total Spending 1970:
\$900 Billion



Total Spending 2010:
\$3.5 Trillion (est.)



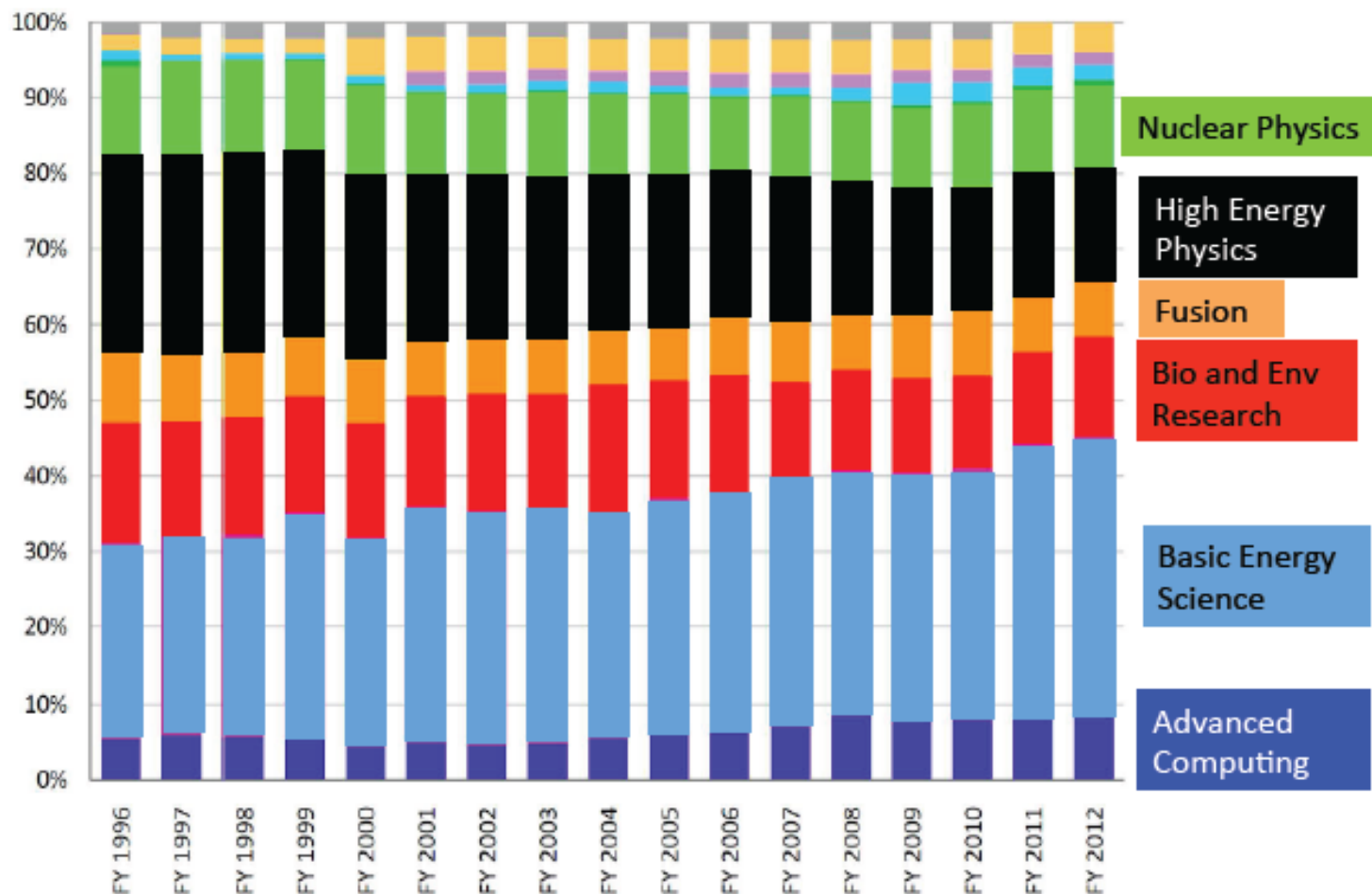
Total Spending 2040:
\$12.3 Trillion (est.)

SOURCES: Data derived from the Office of Management and Budget, *FY 2011 Budget, Historical Tables*, February 2010; and the Government Accountability Office, *The Federal Government's Long-Term Fiscal Outlook*, January 2010 Update, alternative simulation using Congressional Budget Office assumptions. Calculated by PGPF.

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



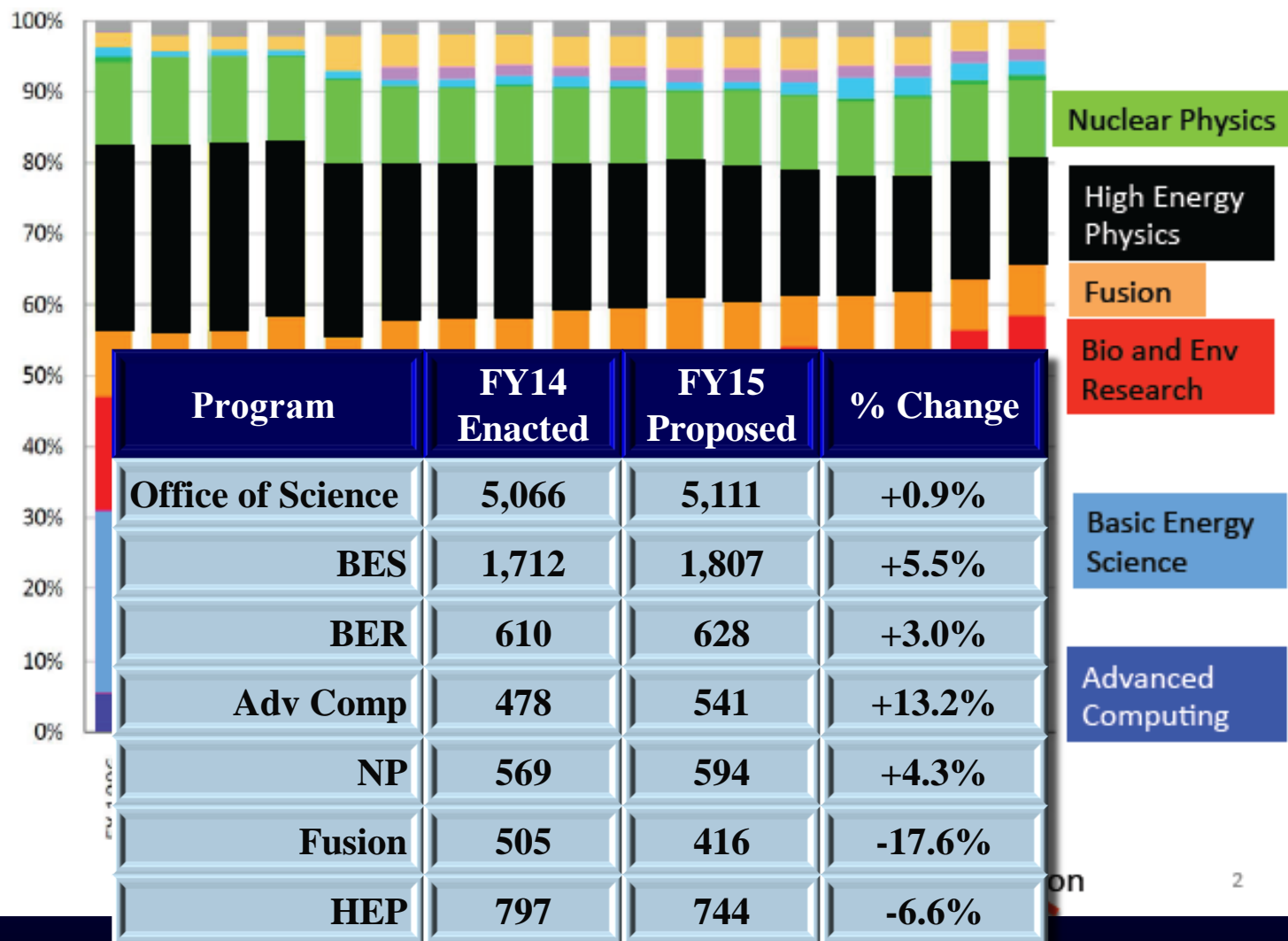
~~AGS~~ ~~BTeV~~ ~~PEP-II~~ ~~Tevatron~~

B Lee Roberts - P5 Town Hall Meeting at Fermilab, 3/13/2013

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HEP within Office of Science

DOE Office of Science Funding: % of Total Appropriation



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

◆ **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 year**

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

- ◆ **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



◆ 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

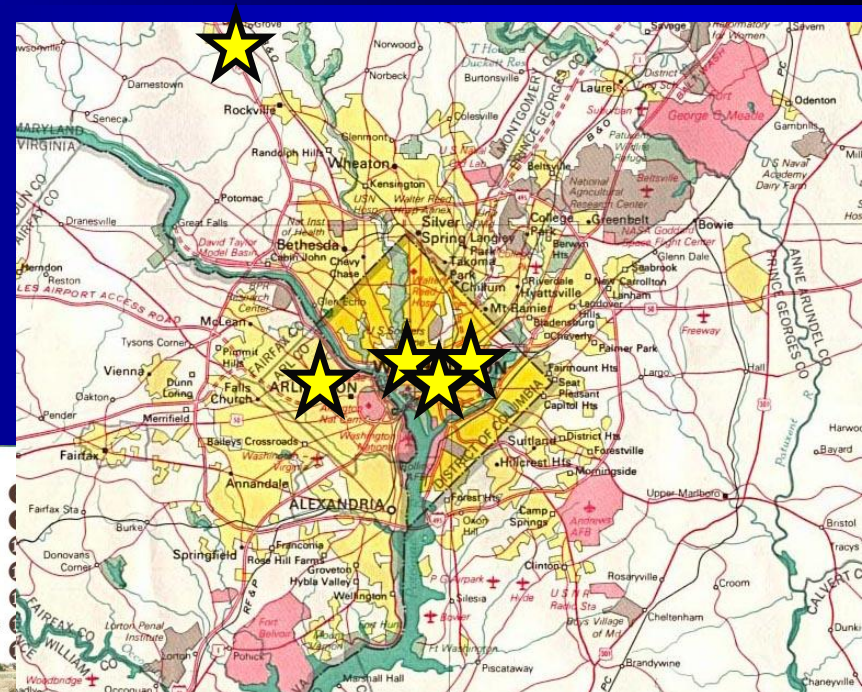
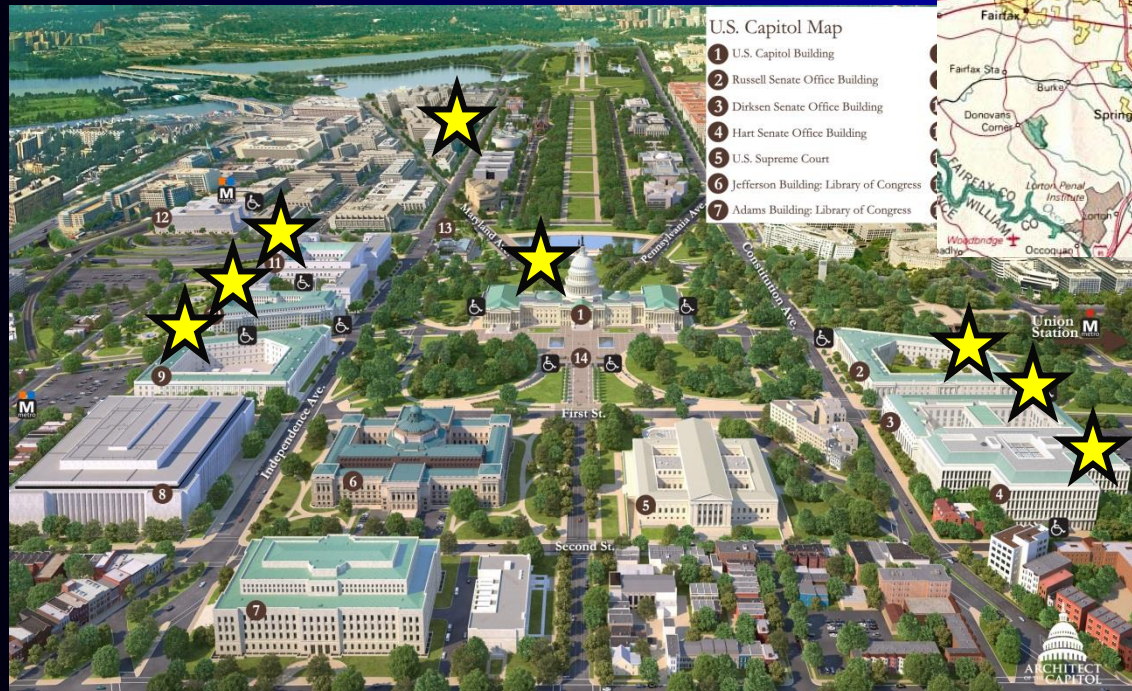
- ◆ Often the toughest meetings. Can be generally receptive, or at times hardball. Needs senior representatives of the field who can stay on message.



DC Trip: How does it work?

◆ Schedule Meetings

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



DC Trip: How does it work?

◆ Prepare Message

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











1. More than 1,700 U.S. scientists and students drive science forward through experiments at the Large Hadron Collider in Geneva, Switzerland, including using the CMS experiment.
2. High-energy physics partners with other scientific fields and agencies like NASA to push the boundaries of research through experiments including the Fermi Gamma-ray Space Telescope. 3. The United States is a leader in the study of neutrinos, mysterious particles that may help explain why the universe has evolved to the form we know today. New technologies such as innovative large-scale liquid argon detectors are being developed to study neutrinos.
4. Computing tools and distribution systems created to process and analyze high-energy physics data have found their way into many areas of industry and society. 5. National laboratories work with industry to train workers and develop manufacturing capabilities, such as building components for the next generation of particle accelerators.

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.



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.

Accelerating National Innovation

High-Energy Physics in the United States



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Our "Ask"

U.S. scientists and students drive science forward through experiments at the Large Hadron Collider in Geneva, Switzerland, and at other facilities around the world. Research through experiments including the Fermi Gamma-ray Space Telescope, the United States is a leader in the study of neutrinos, mysterious particles that help us understand why the universe has evolved to the form we know today. New technology, such as innovative large-scale liquid argon detectors are being developed to study neutrinos. 4. Computing tools and distribution systems created to process and analyze high-energy physics data have found their way into many areas of industry and society. 5. National laboratories work with industry to train workers and develop manufacturing capabilities, such as building components for the next generation of particle accelerators.

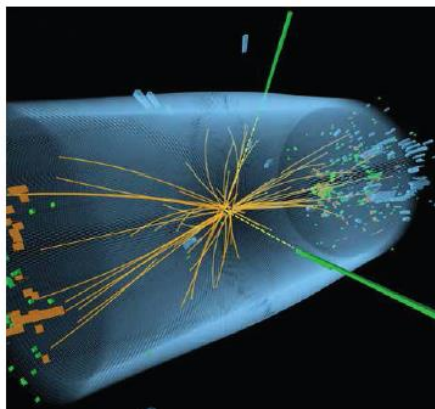
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Exploration that Propels U.S. Progress

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 (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 humankind'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.



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.



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 material 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.

Why Particle Physics Matters

Learn more about what motivates high-energy physicists:



How high-energy physics changes your life:



DC Trip: How does it work?

Prepare Message

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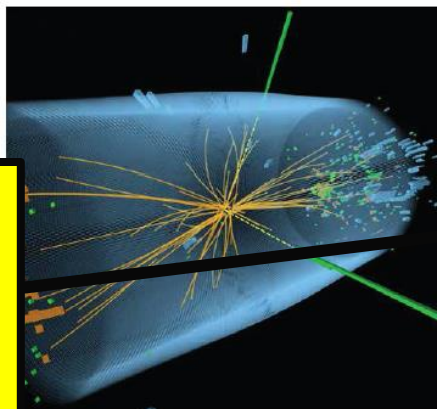
TOOLS:
impact on,
benefit to
society

IDEAS:
our
science

Exploration that Propels U.S. Progress

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PEOPLE:
student/
workforce
training

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How high-energy physics changes your life:



- ◆ Persistence – in making initial contact
- ◆ Preparation – for your visit
- ◆ Passion – for particle physics
- ◆ Positive – in everything
- ◆ Personal – build relationships
- ◆ ~~Politics~~ – AVOID!
- ◆ Profuse – in thanks

DC Trip: How did we do?

2014	Total Members	Scheduled Meetings	%
Congress	531*	350	66
Target Committees	160	140	88
Senate	100	85	85
Target Committees	65	59	91
House	431*	265	61
Target Committees	95	81	85

- ◆ All Chairs and Ranking Members of the important cmtes and subcmtes
- ◆ Plus 6 subcommittee staff, DOE (x2), NSF, OMB, OSTP

◆ 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!

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

- ◆ http://quark.phy.bnl.gov/www/colloquia_FY14_files/Quinn.pdf

- ◆ 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

- ◆ <https://www.whitehouse.gov/sites/default/files/omb/memoranda/2015/m-15-16.pdf>

Budget Context

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

