

Government Relations Update

Joseph Zennamo, Carrie McGivern

September UEC Meeting
Oct. 13th, 2017



THE UNIVERSITY OF
CHICAGO

October Trip



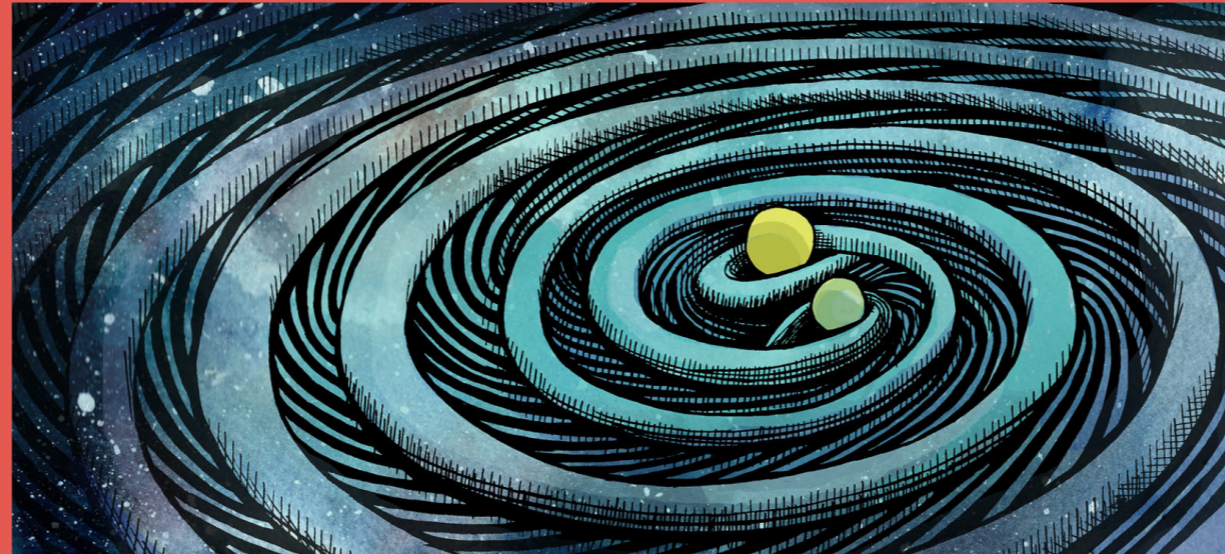
Our Message:

- 54 meetings
 - Met with big 8 and many other Congressional members
- 7 participants, over 2 days

**Please support funding for
High Energy Physics in FY2018 by sponsoring:**

- \$860M for High Energy Physics within the Department of Energy's Office of Science in the Energy and Water Appropriations bill
- \$7.8B for the National Science Foundation in the Commerce, Justice, Science, and Related Agencies Appropriations bill

Nobel Waves



Nobel recognizes gravitational wave discovery

10/03/17 | By Kathryn Jepsen

Scientists Rainer Weiss, Kip Thorne and Barry Barish won the 2017 Nobel Prize in Physics for their roles in creating the LIGO experiment.

Three scientists who made essential contributions to the LIGO collaboration have been awarded the 2017 Nobel Prize in Physics.

Rainer Weiss will share the prize with Kip Thorne and Barry Barish for their roles in the discovery of gravitational waves, ripples in space-time predicted by Albert Einstein. Weiss and Thorne conceived of LIGO, and Barish is credited with reviving the struggling experiment and making it happen.

"I view this more as a thing that recognizes the work of about 1000 people," Weiss said during a Q&A after the announcement this morning. "It's really a dedicated effort that has been going on, I hate to tell you, for as long as 40 years, people trying to make a detection in the early days and then slowly but surely getting the technology together to do it."

Another founder of LIGO, scientist Ronald Drever, died in March. Nobel Prizes are not awarded posthumously.

According to Einstein's general theory of relativity, powerful cosmic events release energy in the form of waves traveling through the fabric of existence at the speed of light. LIGO detects these disturbances when they disrupt the symmetry between the passages of identical laser beams traveling identical distances.

The setup for the LIGO experiment looks like a giant L, with each side stretching about 2.5 miles long. Scientists split a laser beam and shine the two halves down the two sides of the L. When each half of the beam reaches the end, it reflects off a mirror and heads back to the place where its journey began.

Normally, the two halves of the beam return at the same time. When there's a mismatch, scientists know something is going on. Gravitational waves compress space-time in one direction and stretch it in another, giving one half of the beam a shortcut and sending the other on a longer trip. LIGO is sensitive enough to notice a difference between the arms as small as 1000th the diameter of an atomic nucleus.

Scientists on LIGO and their partner collaboration, called Virgo, reported the first detection of gravitational waves in February 2016. The waves were generated in the collision of two black holes with 29 and 36 times the mass of the sun 1.3 billion years ago. They reached the LIGO experiment as scientists were conducting an engineering test.

"It took us a long time, something like two months, to convince ourselves that we had seen something from outside that was truly a gravitational wave," Weiss said.

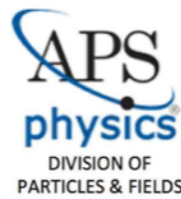
LIGO, which stands for Laser Interferometer Gravitational-Wave Observatory, consists of two of these pieces of equipment, one located in Louisiana and another in Washington state.

The experiment is operated jointly by Weiss's home institution, MIT, and Barish and Thorne's home institution, Caltech. The experiment has collaborators from more than 80 institutions from more than 20 countries. A third interferometer, operated by the Virgo collaboration, recently joined LIGO to make the first joint observation of gravitational waves. **s**

Debriefing

- In the process now of organizing a debriefing website
 - Similar to what has been put together in the past
- There are still a few last min meetings happening today

Letters from the Community



October 9, 2017

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

- Working with the heads of the other Users' Groups and the DPF EC we put together a letter to the chairs of the House and Senate Energy-Water committees
 - Also trying to organize with DPF and APS to have a community wide action to help reinforce our message

USParticlePhysics.Org



U.S. Particle Physics: Building for Discovery

[U.S. Particle Physics Strategy](#)

[Education and Outreach Site](#)

- There have been meetings happening about the future of “USParticlePhysics.org”
 - This website has been many things in the past but the future of the site is aiming to be an ever-green website that hosts our communities advocacy materials
 - First meeting was at DPF to discuss the goals
 - Second meeting was largely about stakeholders
 - Third meeting is being planned now and will begin the process of revamping and updating advocacy materials

Discover

U.S. particle physics strategy, recent advances, and top priorities

[Building for Discovery: Strategic Plan for U.S. Particle Physics in the Global Context \(P5 report\)](#)

[Recent advances and top priorities \(2017\)](#)

Explore

About U.S. particle physics and how it benefits all of us

[Particle Physics is Discovery Science \(Overview brochure about U.S. particle physics\)](#)

[Particle Physics Makes a Difference in Your Life \(Overview brochure about the benefits of particle physics research for society\)](#)

Review

Past program highlights and community input to the P5 strategy

[Summary of the P5 report \(2014\)](#)

[Recent advances and top priorities \(2016\)](#)

[P5 community portal \(archived\)](#)

Looking Forward

- Currently the Gov't relations group has some pretty active membership
 - New deputy chair, Fernanda Psihas
- We are going to start regular meetings to start making progress towards planning for the March trip
- If you are interested in getting involved please let me know!
 - There is a lot to do and it is a very high visibility group



New Deputy-Chair

Goals for the Next Few Months

- Need to define a budget for Kim
 - Aim for this next trip is to get 100% coverage (last year we had >70%)
- Need to update materials with the latest numbers
 - Want to expand what is brought:
 - Procurement and grant information at the district (or near district) level
 - Get more NSF and Astro representation
 - More educational information
 - Web and VR enhanced materials have been floated
 - Tested during this trip, waiting to get feedback
- Need to update our trip infrastructure
 - Many of the scripts and wiki resources are highly dated
- Want to reinforce the strong connections we have among the other Users' organizations and the DPF EC