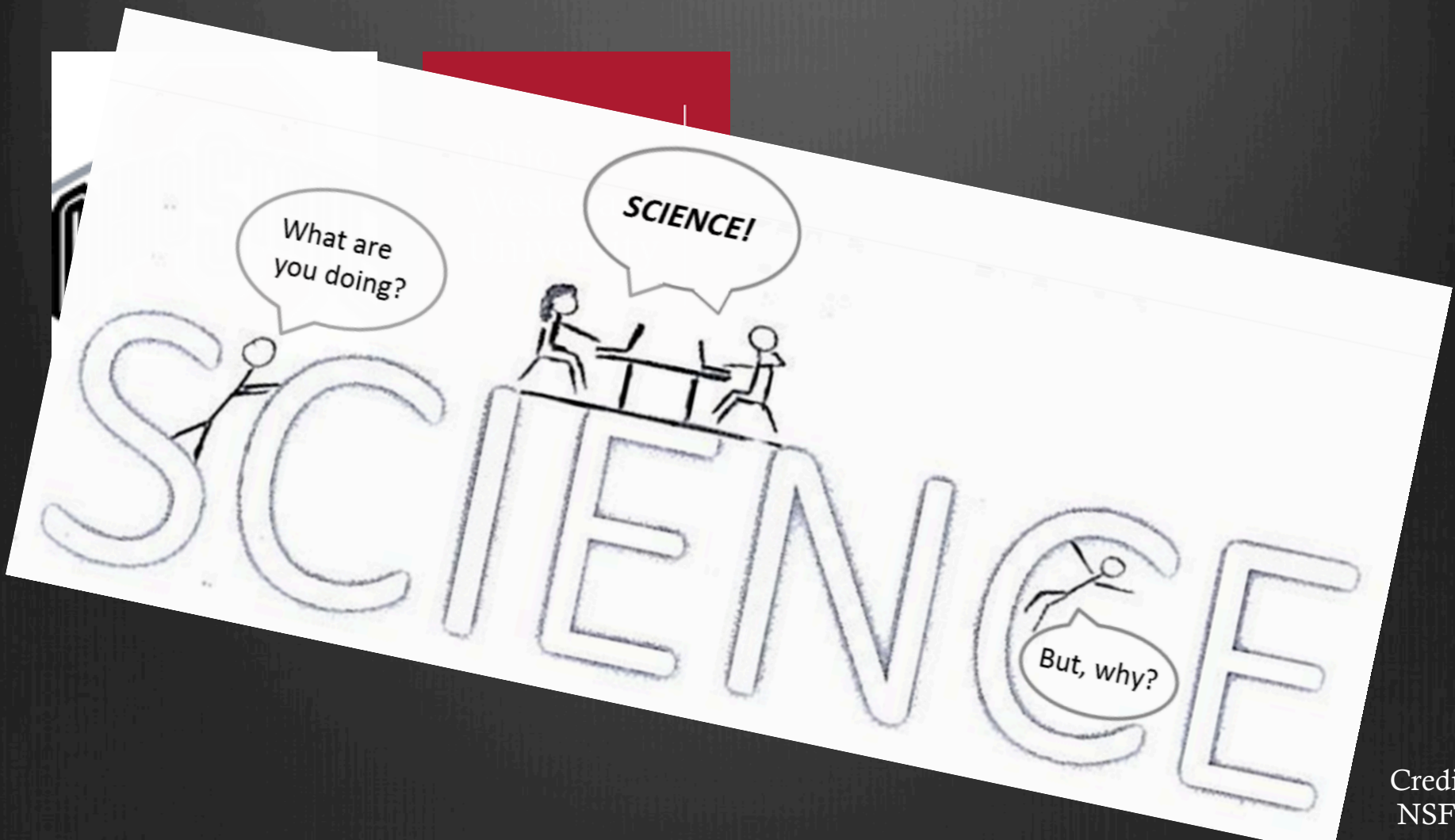


A Physicist Goes to Washington

Gregory Mack, PhD
Government Relations Specialist
American Physical Society
Twitter: @GregDMackPhD



Ohio
Wesleyan
University

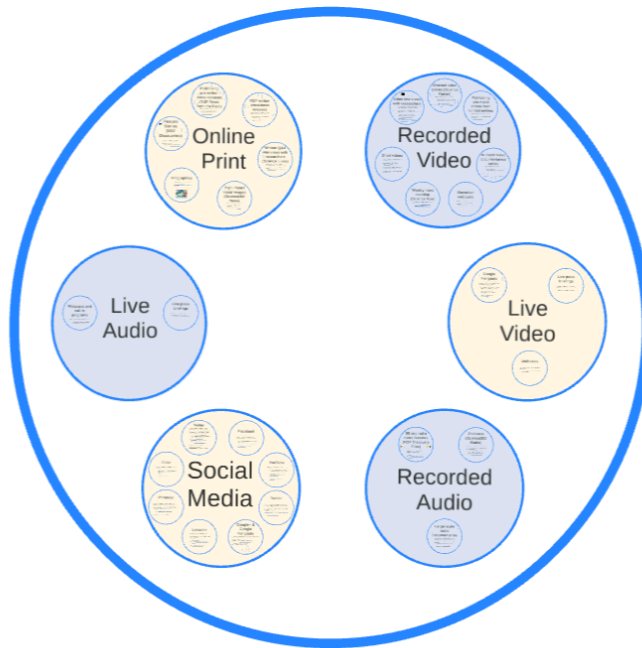




NSF, Science Communication, and You

To zoom **IN** or **OUT**, click **INSIDE** or **OUTSIDE** a circle or bracket, on the floating buttons that appear on the right of the page, or use the mouse scroller.

What are NSF's Options for Communicating Your Research and Broader Impacts?



How Do You Interact with NSF When You Have Something to Communicate?

Ideal communication chain

- You contact your Public Information Officer (PIO) who contacts your NSF Office of Legislative and Public Affairs (OLPA) representative directly.
- <http://www.nsf.gov/home/olpa/olpa.jsp>
- You simultaneously contact your NSF Program Director.

Alternative communication chains

- You contact your NSF Program Director who contacts OLPA.
- OLPA discovers your news through third-party sources.

A few examples of when to contact NSF

- You are thinking of writing or have written a press release.
- You would like to quote a Program Officer at NSF in your media product.
- You would like NSF to publish your press release on NSF's website.
- You would like to share an interesting result of your NSF-funded research that is not breaking news.
- You would like to share videopictures of your research or Broader Impact activities.



Why Should You Communicate?



What Can You Communicate?

- Research results that are breaking news
- Research results that are not breaking news
- Broader Impact activities and outcomes
- Other interesting aspects of you, your research, and your activities connected to your NSF funding

Click the light gray rectangle in the gray bar to make it **Fullscreen**. Click and drag to move around. Click on the floating **Home Icon** on the right to zoom all the way out.

What are Some Helpful Tips for Communicating Science?

3 questions to think about when creating communication materials

1. What is the goal of your communication materials?
2. Who is your target audience?
3. How will you measure the success of your communication materials?

7 DOs and DON'Ts for communicating science

1. DO provide context for your science.
2. DO use plain language.
3. DO use analogies and metaphors.
4. DO use visuals.
5. DO use storytelling.
6. DO use humor.
7. DO use social media.



How Can You Improve Your Interaction With the Media and the Public?

7 ways to communicate science and engineering

1. Use social media.
2. Use email newsletters.
3. Use press releases.
4. Use blog posts.
5. Use podcasts.
6. Use video.
7. Use infographics.

7 secrets for holding an audience's attention

1. Start with a hook.
2. Use storytelling.
3. Use analogies and metaphors.
4. Use visuals.
5. Use humor.
6. Use social media.
7. Use plain language.

5 best practices for preparing for an interview

1. Research the interviewer.
2. Prepare talking points.
3. Practice your answers.
4. Dress professionally.
5. Arrive on time.



8 questions you can and should ask reporters during an interview

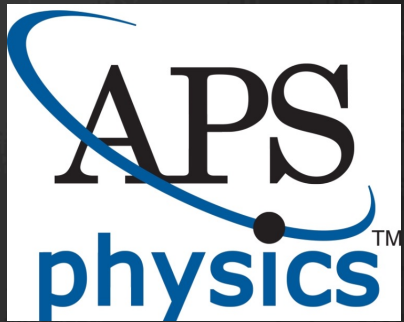
1. What is the angle of your story?
2. How do you see this story developing?
3. What do you think the public needs to know?
4. How do you see this story being covered?
5. What do you think the public needs to know?
6. How do you see this story being covered?
7. What do you think the public needs to know?
8. How do you see this story being covered?

7 tactics for when your mind goes blank during an interview

1. Take a breath.
2. Ask for a moment.
3. Repeat the question.
4. Use a transition phrase.
5. Use a general statement.
6. Use a personal anecdote.
7. Use a relevant example.

9 tips to get noticed at a trade show

1. Research the show.
2. Prepare a booth.
3. Hire staff.
4. Offer incentives.
5. Use social media.
6. Collect contact information.
7. Follow up.
8. Evaluate the show.
9. Thank the attendees.



Why?

What do we need to do physics?

INFRASTRUCTURE

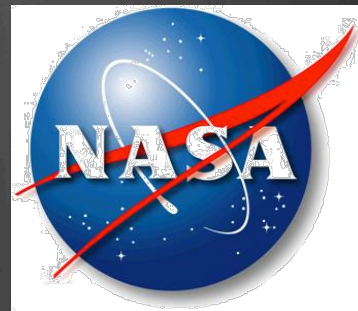
EDUCATION

LAWS &

REGULATIONS

Computers
Detectors
Equations
Complex
Equipment
Code
Circuits
Diagrams

FUNDING



PhD Physicist:
Rep. Bill Foster
(D, IL-14)



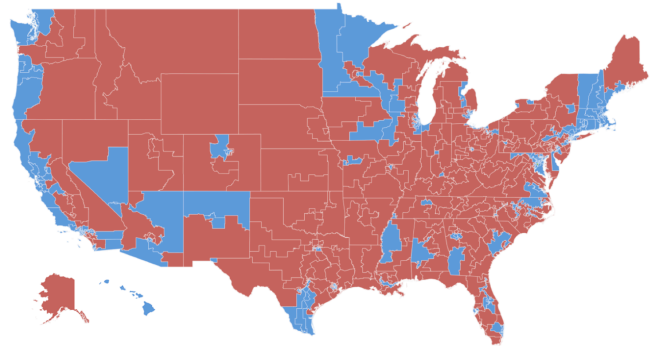
PhD Mathematician:
Rep. Jerry McNerney
(D, CA-9)



Composition of the 115th House

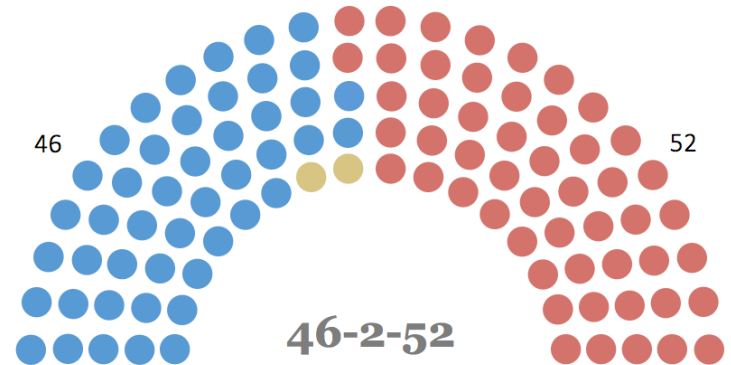
HOUSE: 241 R - 194 D

■ Democratic winner ■ Republican winner



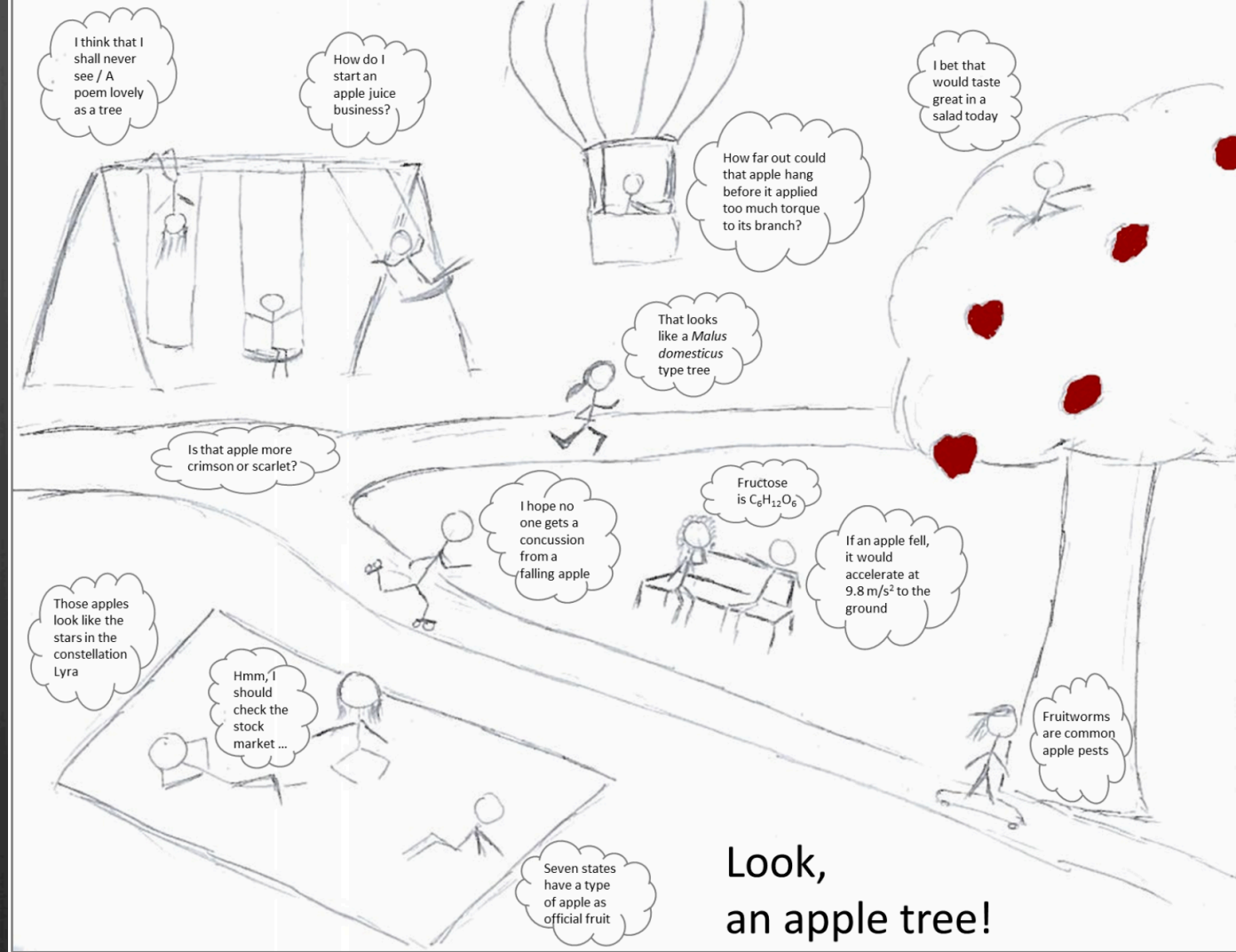
Democrats: 194
Republicans: 241

Control of the 115th Senate (2016-2018)




Republican Senate Majority


Not everyone
thinks like
you do ...




Look,
an apple tree!




How do I start an apple juice business?




I bet that would taste great in a salad today




How far out could that apple hang before it applied too much torque to its branch?




That looks like a *Malus domestica* type tree



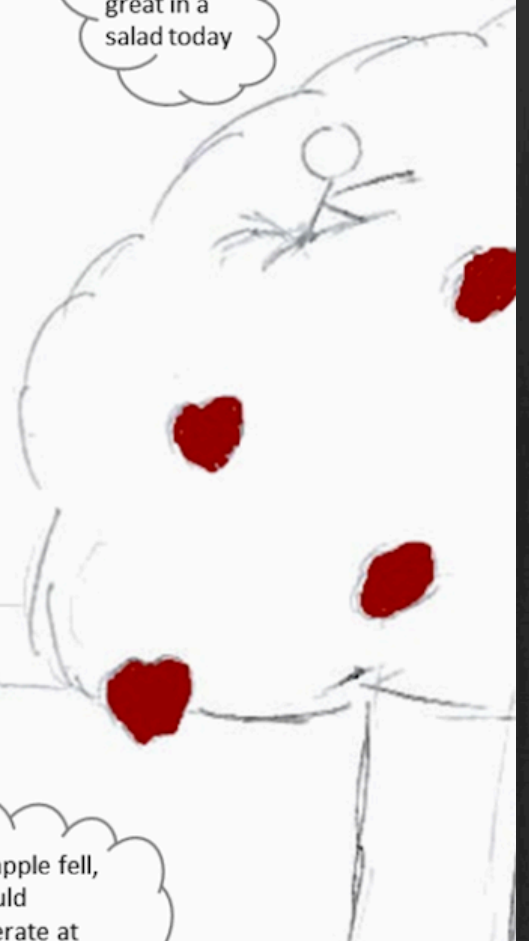
I hope no one gets a concussion from a falling apple

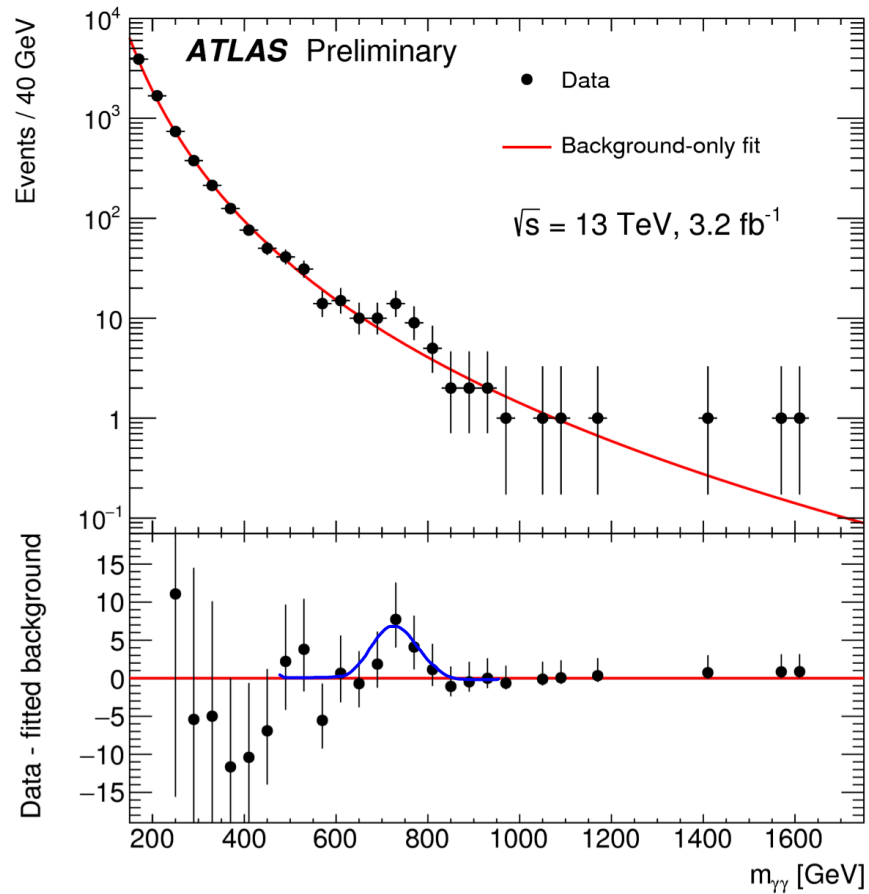


Fructose is $C_6H_{12}O_6$



If an apple fell, it would accelerate at 9.8 m/s^2 to the





ATLAS Collaboration



APS Office of Public Affairs (OPA)

- Purpose: Connect physicists, the public, and the government on relevant issues for APS and the physics community
- Located near the White House and Capitol Hill



APS Office of Public Affairs (OPA)

Overseen by / interacts with
4 groups:

- Physics Policy Committee
- Panel on Public Affairs
- Education Policy Committee
- Industrial Policy Advisory Subcommittee



He

Research Funding



- Advocate for robust and reliable funding for science agencies
- Monitor and advocate on Authorization and Appropriations bills



Research Funding



- Advocate for robust and reliable funding for science agencies
- Monitor and advocate on Authorization and Appropriations bills
- APS does not pit physics against the other sciences





NIST

Commerce, Justice,
and Science



Energy and Water



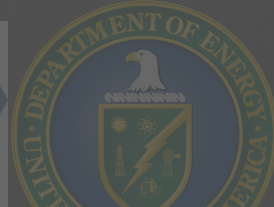
National Institutes
of Health



Labor, HHS, and
Education

Interacting with Congress & Executive Branch Agencies

Comments on American Innovation and Competitiveness Act



APS Member Mobilization



Keep America strong through robust funding of scientific research

BY JESSICA O. WINTER, OPINION CONTRIBUTOR - 04/10/17 10:15 AM EDT

12 COMMENTS

1,878 SHARES



Just In...

APS Member Mobilization

“As details on the spending plan become clearer in the coming weeks, I urge Sen. Portman and other members of Congress to follow their earlier wise decision and provide the [DOE] Office of Science the support they have said it deserves.

**THE
HILL**

Just In...

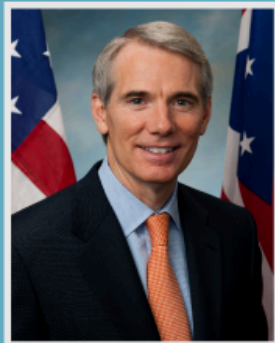
Robust

12 COMMENTS

ONE



Ask Senator
Portman to **reject**
the proposed cuts
to the DOE Office
of Science.



The Trump administration has proposed a dramatic 17% budget cut for the U.S. Department of Energy's Office of Science. Your Senator, Rob Portman, needs to hear from you that he should reject that plan.

Senator Portman [has an influential role with the Trump Administration](#). Ohio State professor Jessica O. Winter has written an op-ed in The Hill that makes a strong case for federal investment in science. Winter, associate director of the Ohio State Physics-led Center for Emergent Materials, writes: "As details on the spending plan become clearer in the coming weeks, I urge Sen. Portman and other members of Congress to follow their earlier wise decision and provide the [DOE] Office of Science the support they have said it deserves." [Read the op-ed here.](#)

As an APS member in his state, please take a moment to contact his office to urge him to read Dr. Winter's op-ed. Current data suggests that tweets are the most effective method, followed by phone calls and emails.

Suggested tweet:

(Tweet by April 12 for maximum impact)

I live in Ohio & support federal research funding. @senrobportman please read Dr. Winter's op-ed <http://go.aps.org/2nxVw8x> #voice4physics

[Tweet Now »](#)

Phone:

Cincinnati: (513) 684-3265

Cleveland: (216) 522-7095

Columbus: (614) 469-6774

Toledo: (419) 259-3895

Washington, D.C.: (202) 224-3353

Email Senator Portman

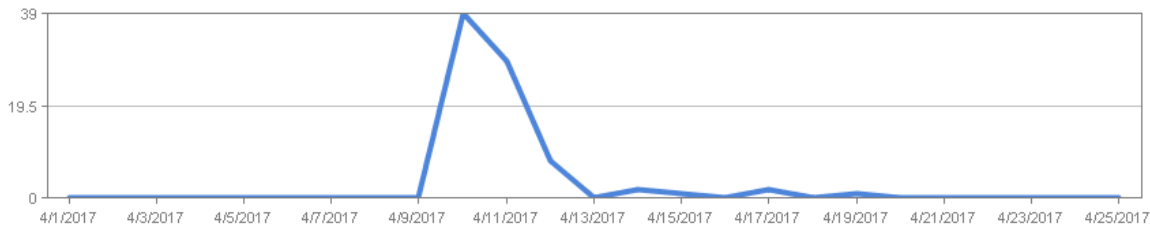
Clicking the above button lets you quickly send a drafted email that I encourage you to personalize by **briefly** describing your own research/scientific activities in Ohio and why this issue matters to you.

If you have any questions or need clarification, please feel free to contact me directly. Your voice can help the physics community be a signal above the noise of competing interests on Capitol Hill.

Gregory Mack
Government Relations Specialist, APS
(202) 662-8709
mack@aps.org

Summary Recipients Advocates

Messages Sent



Unique Page Views	Messages Sent	Conversion Rate	Action Alerts Sent	Action Alert Conversion Rate
129	82	63.57%	0	0.00%
% of Total: 98.47% (131)	% of Total: 100.00% (82)	All Time: 62.60%	% of Total: 0.00% (0)	All Time: 0.00%

Messages	Recipient	Messages	% of Messages
Recipient	Sen. Rob Portman (R-OH)	82	100.00%

██████████ Apr 14
 I live in Ohio & support federal research funding. @senrobportman please read Dr. Winter's op-ed go.aps.org/2nxVw8x #voice4physics



Keep America strong through robust funding of scie...
 OPINION | Our country is stronger because of early investments in science – the backbone of our innovation economy.
 thehill.com

← ↻ ❤

██████████ Apr 12
 I live in Ohio & support federal investment in science. @senrobportman please read Dr. Winter's op-ed go.aps.org/2nxVw8x #voice4physics

← ↻ ❤ 1

██████████ Apr 11
 I live in Ohio & support federal research funding. @senrobportman please read Dr. Winter's op-ed go.aps.org/2nxVw8x #voice4physics

← ↻ ❤

██████████ Apr 11
 I live in Ohio & support federal research funding. @senrobportman please read Dr. Winter's op-ed go.aps.org/2nxVw8x #voice4physics

← ↻ ❤

██████████ Apr 11
 I live in Ohio & support federal research funding. @senrobportman please read Dr. Winter's op-ed go.aps.org/2nxVw8x #voice4physics

← ↻ ❤ 2

██████████ Apr 11
 I live in Ohio & support federal research funding. @senrobportman please read Dr. Winter's op-ed go.aps.org/2nxVw8x #voice4physics

← ↻ ❤

██████████ Apr 11
 I live in Ohio & support federal research funding. @senrobportman please read Dr. Winter's op-ed go.aps.org/2nxVw8x #voice4physics

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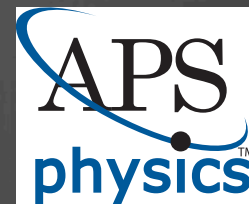
RESPONDING TO

The U.S. Research Community's Liquid Helium Crisis



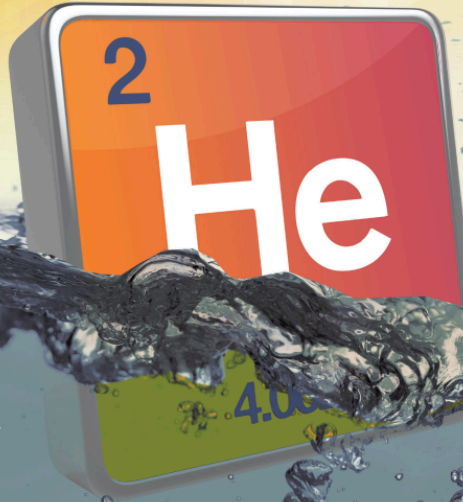
An Action Plan to Preserve U.S. Innovation

ISSUED BY: American Physical Society, American Chemical Society, Materials Research Society
Representing more than 200,000 scientists, engineers, and innovators worldwide



RESPONDING TO

The U.S. Research Community's Liquid Helium Crisis



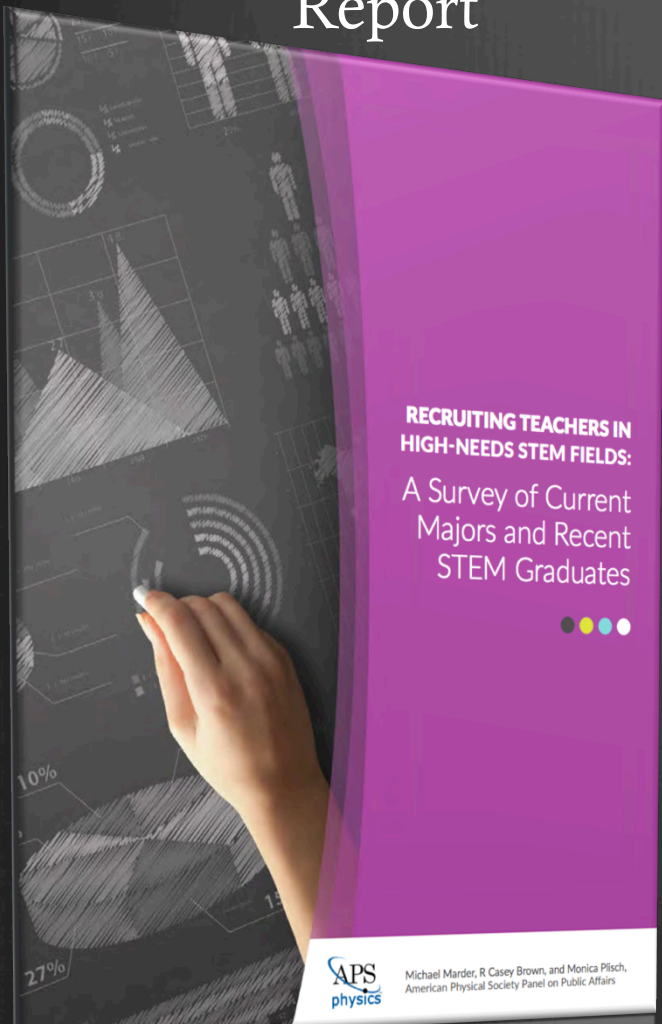
An Action Plan to Preserve U.S. Innovation

ISSUED BY: American Physical Society, American Chemical Society, Materials Research Society
Representing more than 200,000 scientists, engineers, and innovators worldwide

Specific recommendations:

- White House Office of Science and Technology Policy (OSTP)
- Office of Management and Budget (OMB)
- Congress
- Bureau of Land Management
- Professional Societies

Report



RECRUITING TEACHERS IN HIGH-NEEDS STEM FIELDS:

A Survey of Current
Majors and Recent
STEM Graduates



Michael Marder, R Casey Brown, and Monica Pilsh,
American Physical Society Panel on Public Affairs



Advocacy

Every
Student
Succeeds
Act

WHICH ISSUES MATTER MOST TO YOU?

**LAB &
FACILITY
UPGRADES**

**RESEARCH
FUNDING**

**VISAS &
IMMIGRATION**

**CLIMATE
CHANGE**

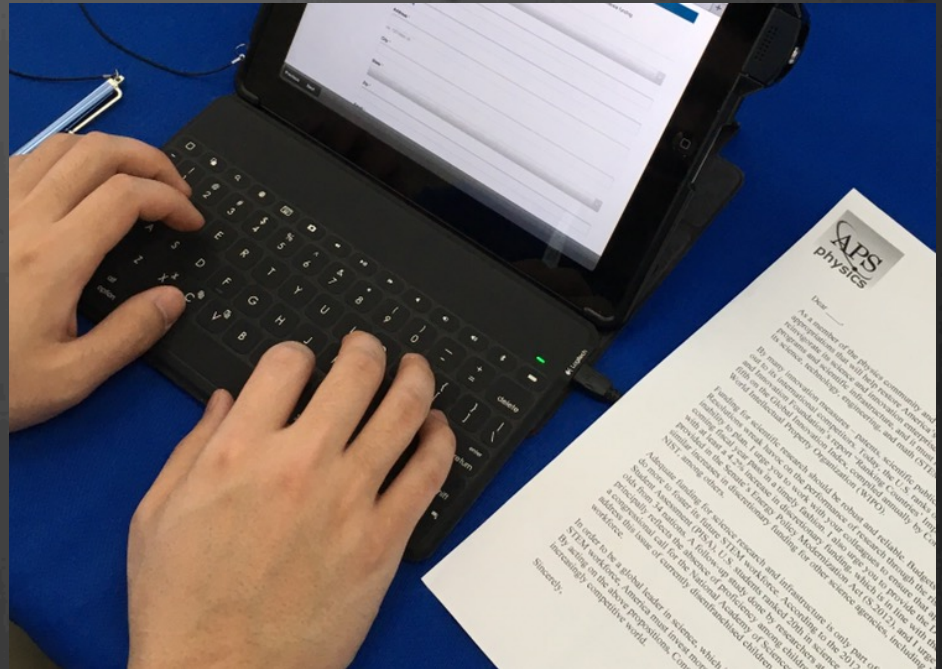
**STEM
EDUCATION**

**GLOBAL
ENERGY
DEMAND**



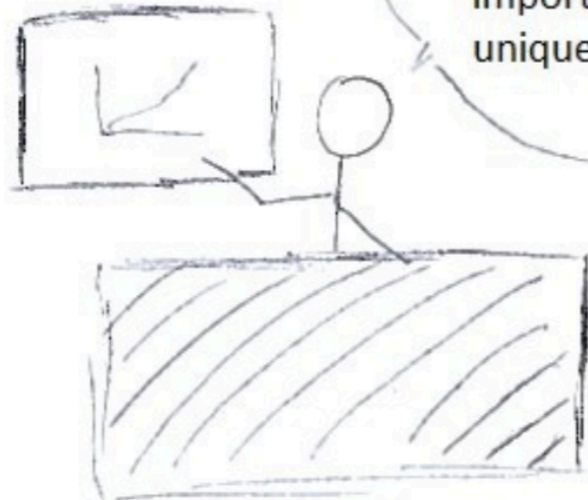
Member Involvement in Policy/Advocacy

- APS campaigns
 - Emails
 - Phone Calls
 - Social Media
- Op-Eds
- Congressional meetings in DC and in your state





What you said:

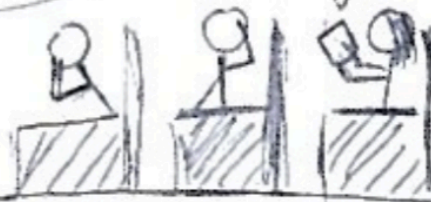


This is why this research is important and unique!

What they heard:

The Rictonic experiment's paratransdydactic compiler will revolutionize the field of subPGT and drive innovations in hexatriangular matror theory, resulting in....

translation not found



A graphic with a dark blue background. A glowing cyan line with small dots at intervals, resembling a signal or data plot, curves across the frame. The text "SIGNAL BOOST" is written in large, white, sans-serif capital letters in the center.

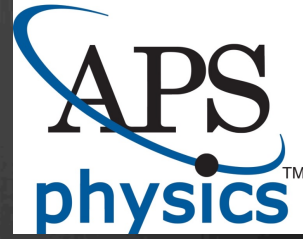
SIGNAL BOOST



Things I've Learned

- Words matter
- Yes, scientists need to speak up
- The government is complex, with lots of voices and lots of priorities
- Not everything is logical...

<http://www.aps.org/policy/>



Be the Signal Above the Noise!

If physicists don't speak up for the needs of
physicists, who will?

Contact Greg Mack to get involved with APS
mack@aps.org