



Director's Matters

By H. Frederick Dylla, Executive Director & CEO

A big debate

Physics and physical sciences research supported by the federal government is at an important crossroads. In less than two months, a short-term law providing funding for federal departments and agencies will expire. Congress must decide if it should keep FY 2010 funding for federal R&D in place until the end of September, increase it, or reduce it to the level spent in FY 2008. Similar decisions must be made about funding in future years.

AIP and many other organizations advocate increasing federal support for R&D, of course. But two recent sources of such advocacy have been especially encouraging.



Freshman members of the 112th Congress

Last month, a high-profile, bipartisan commission charged with finding ways to reduce the deficit recommended hundreds of billions of dollars of cuts in domestic and defense programs, but called for an expanded investment in "education, infrastructure, and high-value research and development to help our economy grow, keep us globally competitive, and make it easier for businesses to create jobs."

And last week, the conservative columnist George F. Will called for Republicans in the new Congress to exercise careful wisdom as they look for ways to reduce federal spending. He wrote, "Republicans are rightly determined to be economizers. They must, however, make distinctions. Congressional conservatives can demonstrate that

skill by defending research spending that sustains collaboration among complex institutions—corporations' research entities and research universities."

Encouraging though such statements may be, it remains far from certain how much support Congress will ultimately provide for research in this and future fiscal years. Many in Congress are concerned about the growing federal deficit, and want spending reduced to FY 2008 levels. This would have a profound impact on the research conducted by scientists in AIP's Member Societies.

President Obama recently spoke about future federal spending for research and our deficit problem. His words frame the tough decisions that Congress and the American people will be making:

So what are we doing to revamp our schools to make sure our kids can compete? What are we doing in terms of research and development to make sure that innovation is still taking place here in the United States of America? What are we doing about our infrastructure so that we have the best airports and the best roads and the best bridges? And how are we going to pay for all that at a time when we've got both short-term deficit problems, medium-term deficit problems, and long-term deficit problems? Now, that's going to be a big debate.

Fred

MEMBER SOCIETY SPOTLIGHT



Unlocking the secrets of our surroundings

On the opening day of the AGU 2010 fall meeting, chair Catherine Johnson of the University of British Columbia greeted attendees with an astounding statistic. With registration at 16,000 and climbing, [this event] "makes us the largest international meeting in the physical sciences. Your presence here this week has quite an impact!" In fact 18,294 researchers, teachers, and students from around the world came to San Francisco just before the holidays to present and review the latest issues affecting Earth and space. With 5,852 talks and 11,517 posters scheduled, there was no shortage of interesting material. Several prominent speakers' [presentations](#) were captured for viewing via web video.

AIP ran [Inside Science News Service](#) stories on three topics of interest to the general public:

In "[Giant Ice Volcano Candidate Found on Saturn Moon](#)," which also appeared in *New Scientist*, Eric Betz writes about the strongest evidence for volcanoes spewing out ice from beneath the surface of Titan.



Sotra Facula is the best example found

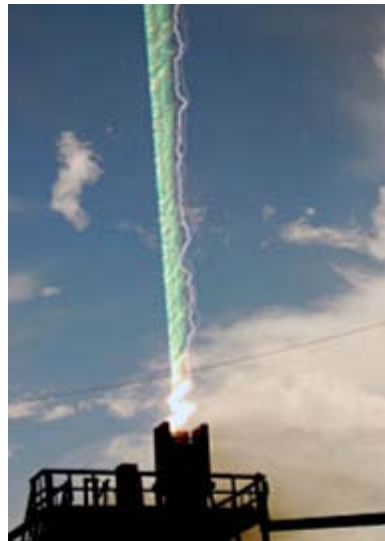
so far of an ice volcano on the Saturn moon of Titan. Credit: NASA

In "[Lightning Offers Early Warnings of Volcanic Ash](#)," Emilie Lorditch tells how pilots received the first successful warning of volcanic activity based on lightning. The story was picked up by the [Pacific Free Press](#).



Credit: Harald Edens

In "[X-Rays from Lightning Photographed](#)," Carrie Peyton Dahlberg writes about how researchers hope this technique will facilitate better predictions of how lightning moves. Both [MSNBC](#) and [Fox News](#) ran the story.



Rocket-triggered lightning allows scientists to measure the properties of a bolt. Credit: Dustin Hill / Int'l Center for Lightning Research and Testing

Several *Physics Today* editors attended sessions to get article ideas and news leads for future articles. Staff members from *Physics Today* and *Computing in Science and Engineering*, a joint publication of AIP and the IEEE Computer Society, ran side-by-side booths. They promoted both publications and a new CD compilation of *PT* articles written by Nobel laureates.



Jeff Bebee, Marketing Director for *Physics Today*, helps conduct a survey to assess the value AGU members derive from the magazine.



CiSE Associate Editor George Thiruvathukal (center) interacts with booth visitors.

AIP Publishing staff represented AIP Journals at yet another booth, promoting those journals of high interest to the AGU community, namely *Journal of Renewable and*

Sustainable Energy, Chaos, Physics of Plasmas, and AIP Advances.

Emilie Lorditch, Senior Science Editor, and Cathy O'Riordan, Vice President of Physics Resources, presented a paper on pathways for effective science communication, entitled, "Everything I Need to Know about Science Communication, I Learned from Local Television News." Greg Good, Director for the Center for History of Physics, co-chaired a session on the history of geophysics and participated in AGU's History Committee meeting.

With so much to take in, every attendee of the AGU fall meeting had a unique experience. There was no chance of digesting *all* the new developments within the immense discipline of geoscience. Understanding the workings of our surroundings takes multitudes.

AROUND AIP

Green tip: Resolve to be greener in 2011

As you start the New Year, why not promise to be friendlier to the environment? The following tips are courtesy of the ACP Green Committee:

- Take your name off junk/catalog mailing lists through online websites like CatalogChoice.org.
- Ask organizations to remove your name from their mailing lists if you are no longer interested in the organization or product they advertise.
- Opt to receive newsletters and bills online.



WHAT'S HAPPENING THIS WEEK

January 8 – 12

- AAPT 2011 Winter Meeting, Jacksonville, FL

January 9 – 13

- AAS 217th Meeting, Seattle, WA. On January 12, Cathy O'Riordan will present the [2010 Dannie Heineman Prize for Astrophysics](#) to Edward W. Kolb and Michael S. Turner.

We invite your feedback to this newsletter via email to aipmatters@aip.org.

For past issues of this newsletter, visit the [AIP Matters archives](#).