

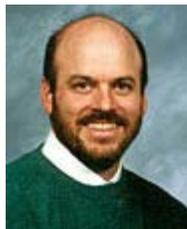
## Director's Matters

The Society of Physics Students (SPS) interns wrapped up their summer work last week, so I've asked Gary White to share program details and to offer some insights on the importance of internships.

—Fred

*Guest column by Gary White, Director of SPS and Sigma Pi Sigma*

### A summer of high productivity



What's the moon made of? Many a child has been fascinated by this question, and some of us just never stop asking questions like this. Curiosity is one of the identifying traits of scientists, especially physicists. Carl Campbell, SPS intern of Rowan University in New Jersey, addressed that question last Tuesday, August 3, during his closing presentation about the Lunar Reconnaissance Orbiter. Carl is one of a dozen SPS interns who spent the summer in the DC area putting their physics training to good use in research, outreach, or policy internships. The AIP Education Division invests lots of energy and resources in these internships each year, and I thought I would take this opportunity to explain a little about why we do this.



**2010 SPS interns**, from left to right. Front row: Jasdeep Maggo (East Carolina University, NC); Foha Rafiq (University of Denver, CO); Raina Khatri (Hope College, MI); Linda Henneberg (Northern Arizona University). Middle row: Wahab Salami (Chicago State University, IL); Patrick Haddox (University of Illinois at Urbana-Champaign); Alex Tuna (Duke University, NC); Amy Ferguson (Brigham Young University-Idaho); Zachary Carson (Dickinson College, PA). Back row: Shane Allison (University of Wyoming); Carl Campbell

There are many reasons why undergraduate research is good for science, and for physics in particular. Overwhelmingly, studies conclude that students who have engaged in an undergraduate research experience show impressive learning gains in a variety of areas, show deeper commitment to the field, and become much better informed about career options. Students and mentors alike cite the undergraduate research experience as when the student begins “to think and work like a scientist” and when the student begins to feel part of the larger scientific community. Students participating in outreach and education internships show similar types of gains.

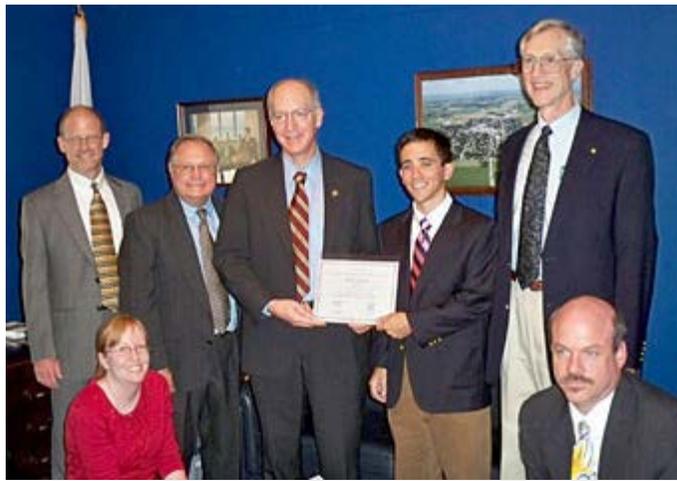
Linda Henneberg of Northern Arizona University, for example, worked this summer to develop activities for middle schoolers; her presentations demonstrated her growth as a scientist: homemade “Newton’s cradles,” which demonstrate conservation of momentum and energy via a series of swinging spheres, and a rousing “egg drop” competition, where competitors find ways to keep a raw chicken egg from breaking when dropped from a height.



SPS interns Linda Henneberg (center) and Raina Khatri test materials for the egg drop experiment.

My own such experience, participating in a “Research Experience for Undergraduates” program in 1981 at the Louisiana State University, proved to be very influential in many of my own career decisions and learning. Therefore, I can attest that such opportunities have positive impacts on the student. Yet there are also benefits to the mentors and the audience of outreach activities, and to science and education. Institutions that support the internships also gain; to host vibrant representatives of the next generation of physicists, who talk about their exciting adventures in research, education, and policy, is inspirational to the staff, and furthers our common mission.

The SPS internship program was expanded this year to include two interns working on science policy—Mather Policy Interns, funded by the John and Jane Mather Foundation for Science and the Arts. Nobel Prize winner John Mather initiated these internships to promote awareness of policy process among young scientists by directly engaging them in the work that goes on in the federal government (see the [November 16, 2009, issue of AIP Matters](#)). Alex Tuna filled one of the new positions, writing for Scientists and Engineers for America and working in Congressman Bill Foster’s office. Tuna just completed his physics bachelor’s degree at Duke University in North Carolina and will be attending graduate school at the University of Pennsylvania in the fall. Travis Barnett of Angelo State University in Texas also served, working in the US House Committee on Science and Technology. From meeting famous scientists and members of Congress to schmoozing with Kevin Costner and bowling in the White House, these two interns had many tales to share with AIP staffers and to take back home with them.



SPS intern Alex Tuna (back, second from right) and AIP staff visit with John Mather (back right) and Congressman Bill Foster (back center).



SPS intern Travis Barnett (back center) and AIP staff meet with John Mather (back, second from right) and Dahlia Sokolov (back, second from left) of the US House Committee on Science and Technology.

For more information about the program, the interns, and how they spent the summer, check out the [intern web pages](#).

So, what is the moon made of? I remember the moon being a subject of great interest when I was a kid. “Green cheese” was the usual answer that I recall. And what color is the moon anyway? White ... yellow ... green? Wait, I’ve seen that moon rock at the Smithsonian—the moon is dark gray, almost black! It just looks yellowish because it’s reflecting the sun’s light and everything else around it is so dark. Wow!

## PUBLISHING MATTERS

### Success on the ACA show floor

AIP provided sales and exhibits management services for the American Crystallographic Association at the [2010 ACA Annual Meeting](#), held July 24–29 in Chicago. [This year’s event](#) was especially significant for AIP



Bob Finnegan, Director, Journal Advertising and Exhibits, and S. N. Rao, ACA Chief Financial Officer.

because it marked the 20th consecutive year in our exhibits partnership with ACA in support of its annual meeting. The ACA exhibit has grown in size and scope throughout those years, and AIP is pleased to have contributed to its success with increased booth sales and management efficiencies.

For example, all exhibit-related information is now provided to exhibitors online. While the economy continues to struggle to recover from recession, the 2010 ACA exhibit revenue surpassed that of 2009. Vendors commented favorably on the high level of activity in the exhibit hall, due to the large attendance of the world's leading crystallographers and a variety of receptions, coffee breaks, and poster sessions strategically located in the exhibit area. For meeting highlights, see the [July 26, 2010, issue of \*AIP Matters\*](#)



Exhibitor Michael Ruf of Bruker AXS (right) discusses his company's offerings with attendee Fook Tham of the University of California, Riverside.  
photo credit: Peter Mueller

## PHYSICS RESOURCES CENTER MATTERS

### *Physics Today* editor attends Paris colloquium

The stuff of our world is, by cosmic standards, relatively rare. The great majority of the matter in the universe—dark matter—is an otherworldly material whose nature is not yet understood. Dark matter, and its relation to the impressive but not completely successful “concordance model” of cosmology, was a principal topic of the 14th Paris Cosmology Colloquium, an intimate conference held at the Paris Observatory July 22–24 and attended by an international group of physicists and journalists. *Physics Today* was represented at the conference by editor Steve Blau (pictured at right), who extended a previously planned Paris vacation to attend the event.



Norma Sanchez (left), a physicist at CNRS and one of the organizers of the 14th Paris Cosmology Conference, shows off an old spectrograph during a historical tour of the Paris Observatory.

## THIS WEEK AT AIP

### Events at the Publishing Center (Melville, NY)

#### Wednesday, August 11

- Blood Drive, 9 am – 2:30 pm. Please donate blood...people can't live without it. To schedule an appointment please contact [Judy Rance](#). All donors will be entered into a raffle for a Target Gift Card.

#### Through August 13

- School supplies drive, benefitting the children of Long Island, NY. Bring your donations of new backpacks, notebooks, pens, pencils, crayons, erasers, glue, scissors, file folders, rulers, etc., to the Human Resources department. The drive is coordinated by the [Family Service League of Bay Shore](#).

### Events at ACP (College Park, MD)

#### Through August 20

- School supplies drive, benefitting Langley Park/McCormick Elementary School. Donations of new school supplies and uniforms can be placed in the lobby receptacle.

We invite your feedback to this newsletter via email to [aipmatters@aip.org](mailto:aipmatters@aip.org).

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