DOE Princeton Plasma Physics Laboratory

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HOTLINE

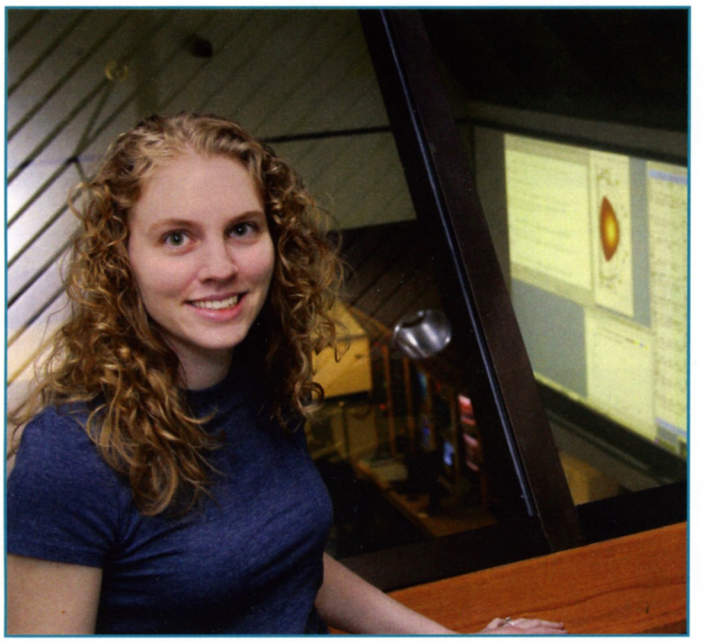
The Princeton Plasma Physics Laboratory is a United States Department of Energy Facility

Office of Science Head Orbach Visits PPPL

Above, right, DOE Office of Science Director Ray Orbach addresses staff in the MBG Auditorium. Above, top, PPPL physicist Michael Zarnstorff (back to camera) shows Orbach (third from left) photos of the NCSX vacuum vessel. With them are NCSX Project Head Hutch Neilson, PPPL Deputy Director Rich Hawryluk, and PPPL External Affairs Head John DeLooper. Below, Orbach tours the NCSX Coil Winding Facility. From left are NCSX staff members Mike Anderson, Steve Raftopoulos, and Bob Tucker, Jr., with Neilson and Orbach.

DOE Office of Science Director Ray Orbach discussed the American Competitiveness Initiative and the Advanced Energy Initiative, in which fusion plays a role, during an "all hands" meeting in the MBG Auditorium on April 25. Orbach and DOE Secretary Samuel Bodman were principal architects of the American Competitiveness Initiative, which lays out a plan for the doubling of funding to the DOE Office of Science over the next decade, starting with a substantial increase next year. This plan makes it possible for the U.S. both to participate in the construction of ITER and also to have a robust program of domestic fusion research, allowing the U.S. to be competitive in the ultimate deployment of fusion energy. Prior to addressing PPPL staff and collaborators at the meeting, Orbach toured the National Compact Stellarator Experiment Coil Winding Facility. ●

Diem Wins Stix Prize and Tours Culham Experiments



Steffi Diem

Thanks to a fund set up in memory of physicist Thomas Stix, PPPL graduate student Steffi Diem spent a week last summer at Culham Science Centre, meeting with researchers and touring experimental areas.

Diem is the third recipient of the Thomas H. Stix '54 Plasma Physics Prize, which she received last spring as a second-year graduate student in Princeton University's Program in Plasma Physics. Prateek Sharma won in 2003 and Wei Liu won in 2004.

Diem used the $2,000 prize for travel expenses to visit the Culham campus, which is in the U.K. outside Oxford. She toured the Mega Amp Spherical Tokamak (MAST) and the Joint European Torus (JET), two fusion experiments at Culham.

"I was especially interested in Electron Bernstein Wave (EBW) plasma heating. One person on MAST who works on EB waves gave me a tour and showed me what they do there," said Diem, who spent about three days at MAST. She spent another two days at JET, where the head of the Heating Task Force showed her the control room, robotic set up, and radio frequency heating and current drive area. EBW is a method to heat plasma in fusion experiments.

During the evenings, Diem was on her own, and toured various colleges and museums at Oxford. One highlight was touring the MINI Cooper factory. For accommodations, she rented a room from a JET scientist.

Presently Diem is working on NSTX with physicists Gary Taylor and Cynthia Phillips. She came to Princeton University to pursue graduate studies in plasma physics after receiving a bachelor's degree in nuclear engineering from the University of Wisconsin in Madison in 2004. "I started out in aerospace engineering and then went into nuclear engineering at the University of Wisconsin," she said.

Diem grew up in Wisconsin and was always drawn to science and physics. "I didn't know a lot about fusion until I was an undergrad. I was looking for a job as an engineering student and the person who hired me — former PPPL'er Ray Fonck — worked on a spherical torus called Pegasus. He later became my advisor and convinced me to switch my focus to fusion research," Diem said.

Stix Prize

Last spring, she applied for the Stix Prize. She submitted a proposal outlining how she would use it. "I never met Stix, but I took waves a couple of times, once at the University of Wisconsin and later at Princeton as a gra student. We used the Stix textbook for both courses. It is kind of a primer," said the prize winner, referring to *The Theory of Plasma Waves*, the classic text authored by Stix in 1962.

Stix, who died in 2001, was the founder and longtime director of graduate studies for the University's Program in Plasma Physics and a leader in the development of plasma physics. In 2002, a fund was created in his memory to establish a prize for first and second-year graduate students studying plasma-related topics. The prize would enable international travel for conferences or research.

Diem discussed how the prize was personally beneficial. "The Stix Prize gave me a chance to see how research is conducted overseas. It also was a great experience to see how people from different countries were able to come together to do research on a large experiment like JET. It shows how people can work together on ITER," said Diem, who hopes someday to be involved in ITER in some way. ●

Hotline

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2006 PPPL Safety Forum

Monday, May 15

8:15 a.m. to Noon
MBG AUDITORIUM

"Celebrating the Human Side of Safety"

presented by

T. Shane Bush

Manager, Senior Leadership and Management Skills Development
Idaho National Laboratory

For years companies and organizations have struggled with human errors that result in an accident or incident. In some cases they even have tried to remove the human element all together. Because humans are fallible and will make errors and mistakes, for the most part these previous attempts have been in vain. Studies now show that the majority of human errors are a result of error provoking systems and processes. The human interaction with these systems and processes creates vulnerabilities.

It is generally believed that organizations with good safety statistics have gained this by reducing the human influence in their processes. The Safety Forum discussion will attempt to show that the opposite holds true and that "People Create Safety." Procedures and processes are frequently flawed — humans typically compensate for these flaws to "Create" good outcomes.

Please attend this interactive presentation about why humans are fallible yet ingenious. Attendees will be introduced to their own error rate and tools to compensate for the consequences of their errors. Everyone will discover why errors are made and how this knowledge can be used to create a safer work environment by "Celebrating the Human Side of Safety."

Additional Safety Forum Activities:

Report on the Performance of the PPPL Safety Program

Review of Staff Feedback from Small Group Meetings

Breakout Sessions

Refreshments served at 8:15 a.m.

What's Happening at PPPL?

PPPL hosted the New Jersey Regional Competition of the National Middle School Science Bowl® on April 1. Seven teams participated in the Jeopardy!-like tournament, which included two portions — a model hydrogen fuel-cell car competition and a fast-paced academic question-and-answer contest covering earth, physical, life, and general sciences, and math. Joyce Kilmer Elementary School won first place in the event sponsored by the U.S. Department of Energy. Above, a middle school student participates in the model hydrogen fuel-cell car competition.

Photo by Alexandra Budny

On April 29, PPPL participated in Communiversity, a town-gown community arts festival in downtown Princeton that drew several thousand people. Above, PPPL physicist Robert Budny discusses fusion with folks who stopped by the PPPL exhibit. In addition to Budny, Henry Carnevale, Tony DeMeo, John DeLooper, Dick Majeski, David Mikkelsen, Michael Zarnstorff, and Patti Wieser staffed the PPPL table.

PPPL hosted a Blood Drive at the Laboratory on March 29. Blood donor Sue Hill, above, stands next to the American Red Cross van, which was stationed in front of the Lyman Spitzer Building. Twenty-nine people at PPPL donated blood. Thanks to all the donors!

Photo by Margaret Kevin-King

PPPL's John DeLooper presents the Plasma Show to 60 DeMasi Elementary School fifth grade students on May 2 in the MBG Auditorium. As part of the show, he included hands-on science demonstrations about plasmas and magnets. DeMasi is in Marlton.

The Greening of America: PPPL Celebrates Earth Day

On April 20, PPPL celebrated Earth Day with exhibits in the Lobby, alternative fuel and hybrid vehicle demonstrations outside the LSB, and presentations in the MBG Auditorium. Edward Linky, of the U.S. Environmental Protection Agency (EPA) Region II, discussed the EnergyStar program — a partnership between EPA and the Department of Energy to identify and promote energy efficient products, equipment and buildings. PPPL's Rob Sheneman presented an overview of the Lab's Environmental Management System and PPPL Director Rob Goldston gave the 2006 PPPL Green Machine Awards to 18 employees who have made a special effort to embrace pollution prevention, energy efficiency, recycling, and environmentally preferred purchasing. Their efforts saved the Lab about $200,000 in energy and waste disposal costs. Clockwise from top left are (from left) Larry Jones, Margaret Kevin-King, Virginia Finley, Kim Tafe, and Sarah Stines picking up small trees from a Lobby display; a hybrid car demonstration in the front of the Lyman Spitzer Building; Rob Sheneman delivering a talk in the Auditorium; the 2005 Green Machines with their awards; and John Bennevich (middle) discussing environmentally preferred products with Garry Stevens (left) and Mark Snyder. ●

In Our Own Back Yard ...

PPPL physicist Charles Skinner shot these images at the J.P. Moran Woods behind the TFTR Building at D-site the last week of April.

travel notes

Conference Management 101

Below is guidance for submitting a conference sponsorship approval request:

- Talk to your P&C Officer. Not only must they approve the request, but P&C Officers have a wealth of knowledge about the conference management process and can help you determine whether your conference is indeed a conference or whether it qualifies as an exclusion. Make sure you sit down with them early to get the paperwork rolling.

- Turn in your sponsorship request as early as possible. According to the new guidance from the DOE Office of Science, all conferences with more than 29 attendees and/or total costs greater than $10,000 must be submitted for approval by DOE at least 90 days prior to the conference date. The Travel Office needs 10 days on top of that to perform its review and secure the necessary internal approvals.

- Lean toward higher attendance and cost estimates. Have a few invitees that you're not 100 percent sure will attend? Include them in the head count and cost estimate anyway. It's better to guess high than to have to submit a late revision to your sponsorship request for the additional attendees.

- All conference sponsorship approval requests must include a detailed agenda. If a final version is not available, mock up a preliminary one. If you are hosting a recurring meeting, you may submit the agenda from the previous year with a note explaining that the current agenda is not yet available, but is expected to be similar to the previous one.

- All conference sponsorship requests must include abstracts of the talks to be presented, which must be sent electronically to travel@pppl.gov.

- Refreshments can not be charged to DOE contract funds. If you expect hungry attendees at your conference, you can either charge a separate registration fee to cover any refreshments or you can apply for non-discretionary funding. Get a plan in place early and run it by the Travel Office for approval prior to making any commitments.

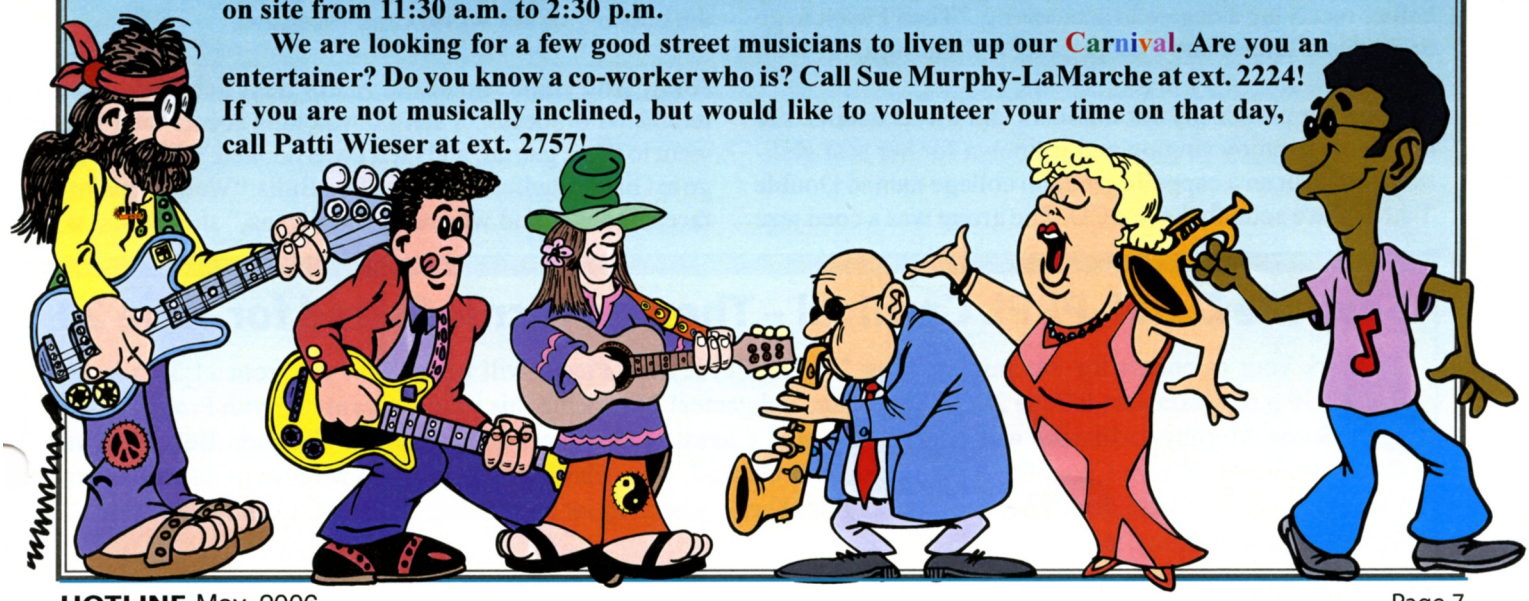
The Travel Office is open from 1 to 4 p.m., except on Wednesdays, and is located between the Payroll and Petty Cash Offices. More information can be found on the web at http://oorm-1.pppl.gov/public/act/travel/ . ●

— Submitted by Kim Buturla, PPPL Travel Office

Call for Talent at the PPPL Staff Picnic

The PPPL Staff Picnic, with the theme of Carnival, is scheduled for Wednesday, June 21, on site from 11:30 a.m. to 2:30 p.m.

We are looking for a few good street musicians to liven up our Carnival. Are you an entertainer? Do you know a co-worker who is? Call Sue Murphy-LaMarche at ext. 2224! If you are not musically inclined, but would like to volunteer your time on that day, call Patti Wieser at ext. 2757!



Spotlight

Name: Kim Buturla

Position: Staff Accountant and Head of the PPPL Travel Office, working on accounts payable for subcontracts, analyzing fixed asset accounts, and taking care of all travel arrangements for staff. While making travel arrangements, she ensures that conference management procedures are followed. She also assists with foreign travel, including passport and visa applications.

Quote: "If someone asks me to get them somewhere, I get them there," Buturla says of her duties from the Travel Office.

Buturla says the travel office job is demanding — offering challenges she enjoys — and it gives her the chance to interact with many at the Lab. "I appreciate being busy and I've gotten to meet a lot of really nice people, and I like that," she notes. "I like PPPL. There are some good folks here."

Other interests: Buturla is quick to summarize her outside interests: psychology and music. "Originally I wanted to be a music therapist, but the requirements are astronomically complicated. You have to know many instruments and then getting a job in the field is not that easy," she says. After receiving a bachelor's degree from the College of William and Mary in Williamsburg, Virginia, with a double major in psychology and music (voice), which she described as a "wonderful 'do you want fries with that?' kind of degree," she went into sales at a long haul freight trucking company.

Eventually Buturla landed a job in mergers and acquisitions at Bloomberg, which piqued her interest in accounting. She has been steadily taking classes — maintaining a perfect 4.0 grade point average — and has three more courses to complete before receiving a degree in accounting. "Then I want to go to graduate school and then get a CPA," she says.

Despite her propensity for numbers and travel details, she continues to enjoy singing and is known for her scat abilities. "I was in an a cappella group in college named Double Take and we actually have a CD. The group was a coed jazz ensemble made up of about a dozen singers," Buturla says, adding that about the only time she gets to hone her vocal skills now is through Kareoke.

Her other "deep abiding passionate interest" is soccer. "My fiance, Andy, and I are both soccer fans. The local team we follow is the New York Red Bulls, which used to be called the Metro Stars, and we also support a non-local team, Manchester United. On June 9, we will be sitting at our new home in Pennsylvania in front of a new plasma TV watching the opening of the World Cup," she says.

Andy, who Buturla plans to marry next February, got her interested in soccer. "I started watching soccer on TV, then went to some games, and then I was hooked." The two often go to Giants Stadium to see the Red Bulls. "We don't paint our faces, though, and we are not hooligans," she insists. ●

Save the Date! PPPL Carnival – Themed Picnic Slated for June 21

Mark your calendars for Wednesday, June 21. The PPPL Staff Picnic will be held on site from 11:30 a.m. to 2:30 p.m. (Rain date is June 23rd.) Food, fun, and games! The theme this year is **Carnival**, with Project Managers Susan Murphy-LaMarche and Patti Wieser, and **Carnival** Designers and Engineers Shannon Belloni, Ewa Ciesla, Sue Hill, Shawn Connolly, Rose Fuchs, Bill Gervasi, Kim Mastromarino, James Morgan, Andrea Moten, Erik Perry, Al von Halle, Jean Wernock, and Regina Worthy planning for everything from cotton candy to a midway filled with amusements. ●