

At PPPL THIS WEEK

MONDAY, DECEMBER 5

PICSciE Colloquium

12:30 p.m. ♦ 346 Lewis Science Library

Blue Waters Plus: A Super System to Solve Super Challenges

Dr. William Kramer (National Center for Supercomputing Applications)

TUESDAY, DECEMBER 6

Special PPPL Theory Seminar

2 p.m. - 3 p.m. ♦ T-169

Disruption Simulations with M3D Code

H. Strauss (HRS Fusion)

WEDNESDAY, DECEMBER 7

PPPL Colloquium

4:15 p.m. ♦ MBG Auditorium

Evidence for a Phase Transition Inside a Sonoluminescing Plasma

Professor Seth Putterman
(University of California - Los Angeles,
California NanoSystems Institute)

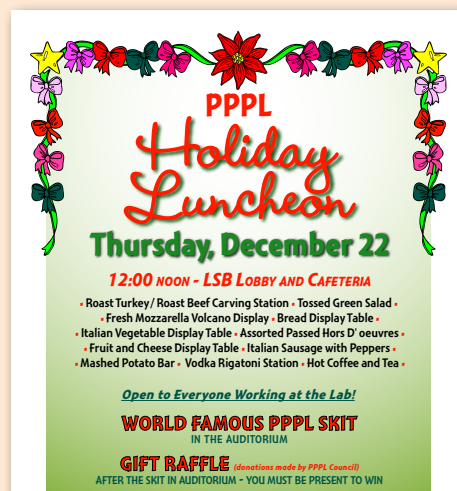
[CLICK HERE FOR ABSTRACT](#)

FRIDAY, DECEMBER 9

DIII-D Science Meeting

1 p.m. - 2:30 p.m. ♦ B-233

COMING SOON



**PPPL
Holiday Luncheon**
Thursday, December 22
12:00 NOON - LSB LOBBY AND CAFETERIA

- Roast Turkey / Roast Beef Carving Station • Tossed Green Salad •
- Fresh Mozzarella Volcano Display • Bread Display Table •
- Italian Vegetable Display Table • Assorted Passed Hors D'oeuvres •
- Fruit and Cheese Display Table • Italian Sausage with Peppers •
- Mashed Potato Bar • Vodka Rigatoni Station • Hot Coffee and Tea •

Open to Everyone Working at the Lab!

WORLD FAMOUS PPPL SKIT
IN THE AUDITORIUM

GIFT RAFFLE donations made by PPPL Council
AFTER THE SKIT IN AUDITORIUM - YOU MUST BE PRESENT TO WIN

see page 4

PPPL Receives \$658,000 for Energy Efficiency Activities

By Patti Wieser

PPPL is receiving \$658,000 from Pennsylvania State University to perform energy efficiency activities, as well as to develop educational models to inspire the next generation of energy efficient building professionals. The funding, which will be awarded in February, supports PPPL's second year of activities as a partner in the Greater Philadelphia Innovation Cluster (GPIC) for Energy Efficient Buildings. This effort, funded over five years, is part of a U.S. DOE Energy Innovation Hub started last year and led by Pennsylvania State University.

"Through the Hub award for the second year, PPPL will become a test bed for new technologies and education initiatives in energy efficiency in buildings," said Andrew Zwicker, Head of Science Education at PPPL and Associate Director for Education and Workforce Development for GPIC. "Creating innovative ways to conserve energy and new educational programs focused on energy efficiency for K-12 students complements our Laboratory's coupled missions to develop a clean, new energy source — fusion — and to nurture the next generation of scientists." PPPL, partnering with other institutions, will use its technical and educational expertise for these sustainability efforts, which are primarily funded by the DOE.

[continued on page 2](#)

Adam Cohen Joins Oyster Creek Safety Advisory Panel

Adam Cohen, PPPL Deputy Director for Operations, has been appointed as the independent expert to the Oyster Creek Safety Advisory Panel. The panel was created earlier this year to supplement oversight of the safe operation of the nuclear power plant — the Oyster Creek Nuclear Generating Station — in Lacey Township leading up to its closure by the end of 2019.

Cohen, a veteran expert on nuclear power and safety issues, will serve as the third member of the advisory panel, along with New Jersey Department of Environmental Protection (DEP) Commissioner and Safety Advisory Panel Chairman Bob Martin and Charles B. McKenna, Director of the State Office of Homeland Security and Preparedness. DEP nuclear engineers and experts will provide their expertise to the panel and serve as its staff.

Cohen has more than 25 years of experience in management of research and development, strategic planning and operations at PPPL, Argonne National Laboratory, and the U.S. Department of Energy. He served as senior adviser to the DOE for nuclear energy programs.



Adam Cohen

[continued on page 2](#)

Cohen

continued from page 1

"It is important to ensure this nuclear plant continues to operate safely until its closure," Martin said. "Towards that end, we have selected a very qualified individual with years of experience and knowledge regarding nuclear power, and who is a recognized leader in his field, to be a member of the Oyster Creek Panel. Dr. Cohen also is a resident of New Jersey, who understands the state's needs and concerns. He brings great integrity to the process and will be an invaluable asset to the advisory panel."

Cohen was chosen for the paid position through a public request for proposal process, which drew six qualified respondents. "I am excited about being chosen for this position and welcome the opportunity to help ensure the continued safe operations at Oyster Creek, as well as moving forward in plans for the decommissioning of the nuclear plant," Cohen said.

The panel will assist the DEP with evaluation of the continued safe operation, decommissioning planning, and cessation of operations at the Oyster Creek Nuclear Generating Station. It will actively engage the public as it reviews ongoing operations and safety plans in the years leading up to plant closure. The panel will hold its first public hearing early next year. It will monitor the Exelon Corporation's compliance with the Administrative Consent

Order signed Dec. 9, 2010, which is designed to ensure that the shutdown of the nuclear plant is executed in a safe, well-planned manner. The Administrative Consent Order includes an implementation schedule, progress report requirements, and requirements for development of post-shutdown activities.

Cohen's duties as a panel member will include reviewing records and conducting independent evaluations of the nuclear facility, making recommendations to the Nuclear Regulatory Commission, issuing reports on review findings, and conducting public meetings, at least annually, to discuss those findings.

Closure of the Oyster Creek Nuclear Generating Station, the oldest nuclear reactor in the nation, is a key component of Governor Chris Christie's comprehensive plan to restore and protect the ecologically unique and economically important Barnegat Bay.

In December, the Christie Administration negotiated an agreement with Exelon Corp. to shut down the reactor, which diverts massive volumes of cooling water from the bay, rather than build a closed-cycle cooling system to reduce impacts to aquatic life. The deadline for shutdown is Dec. 31, 2019, ten years ahead of Oyster Creek's NRC license expiration. ■

Energy Efficiency

continued from page 1

PPPL Hub activities for the second year include: employing PPPL as a test-bed to evaluate the usability of energy efficient designs; conducting an experimental evaluation of cool, vegetative, and black roofs; and leading the "Future Building Energy Workforce" activities.

The first task supports collaborators in assessing the usability of buildings — how well the design of a building works for user needs and how well the building responds to environmental demands — and emerging energy-efficient innovations. In addition, they will evaluate the performance of buildings that have been retrofitted to be more energy efficient. Collaborators will study usability metrics in case study buildings at the Philadelphia Navy Yard and PPPL, while PPPL will evaluate modeled vs. measured building performance in response to planned energy retrofit projects at PPPL and other GPIC technology field tests. "These activities simulate the likely usability of design alternatives before committing resources to a construction project," said Keith Rule, a senior environmental engineer at PPPL who is leading the Lab's effort in the first two tasks.

The second task includes monitoring, evaluating and modeling the thermal properties of various flat roof scenarios — using building roofs at PPPL — to determine the most



Andrew Zwicker



Keith Rule

suitable roofing materials, in terms of energy efficiency, for this region. "Through this study of actual performance on a flat roof in a controlled setting in the Northeast, we will help determine the efficacy of different roof options and through the GPIC can provide input for determining optimal use in northeast cities, such as Philadelphia and the surrounding region," Rule said. Sensors will be installed at selected layers within four different roofing combinations to collect data for trending, analysis and modeling.

The third task focuses on transforming the greater Philadelphia region's K-12 educational activities to create pathways for the next generation of energy efficient building professionals and creates hands-on internships for high school students. ■

Teaching Science at the Annual Plasma Physics Meeting



By John DeLooper - Head, PPPL Outreach and Best Practices

PPPL's Science Education staff co-organized and participated in educational outreach activities during the American Physical Society-Division of Plasma Physics (APS-DPP) meeting, co-hosting more than 60 teachers during the educational workshop "Teacher's Day" and more than 2,500 local students during the Plasma Expo. This year's meeting took place November 14-19 in Salt Lake City, Utah. The annual APS-DPP conference is the largest meeting in the U.S. for scientists to report their results when it comes to plasma science and fusion energy results. More than 1,650 individuals came from around the world to give presentations and review information with their colleagues through poster sessions.

Education staff from PPPL and other research centers — including General Atomics, the Massachusetts Institute of Technology, Oak Ridge National Laboratory, the University of Wisconsin, and US ITER — coordinated Teachers Day and the Plasma Sciences Expo. On November 15, we hosted teachers from the local school district for a day of professional development focused on learning about plasmas. Teachers got to participate in three workshops including a generic "plasma 101" workshop. On November 17 and 18, we set up and operated displays with hands-on science demonstrations for the Expo. PPPL staff joined the Science Ed team in introducing plasma physics to students and their teachers during the Expo, where they could talk to a

scientist, as well as view hands-on displays and a variety of exhibits. Students experienced the fourth state of matter firsthand.

As usual, our volunteers did a superb job. It's not always easy explaining plasma to a middle school student or how the plasma in a fluorescent tube can be 10,000 degrees. It's always wonderful to witness a look of amazement on a student's face when he or she sees something unusual (like crushed marshmallows or a Jacob's ladder) and absorbs the scientific message. That makes our day.

Another component of the educational effort is the poster session that occurred on November 15. This allows students who have worked at the Laboratory or another research organization to present their results to the scientific community. Seventy-six students, of which 31 were supported by PPPL programs, presented their research at this session. In addition, Andrew Zwicker, Stephanie Wissel and Aliya Merali presented posters on our education work at PPPL.

The students' posters were judged by scientists (the students don't know who is judging) and the best were recognized in a student appreciation session. Of the six winners, two were PPPL students.

My thanks to the Science Education staff, our scientists, post-docs, and graduate students for all of their help in a successful educational outreach effort! ■

Holiday Food Drive Continues

The Mercer Street Friends Food Bank has been at the forefront of the fight to end hunger in the greater Mercer County area, supplying food to nearly 50 pantries, shelters, and soup kitchens for over two decades.

COLLECTION: LSB LOBBY — NOW THROUGH FRIDAY, DECEMBER 16

Most needed food and home and beauty products: Canned protein (tuna fish, sardines, salmon, chicken), canned fruit (in light syrup or juices), canned vegetables, rice, pasta, pasta sauce, Parmalat or other shelf stable milk, cereals and oatmeal (non-sugar), peanut butter, jelly, dish and laundry soap, soaps and body wash, shampoo, conditioner, deodorant, feminine products.

The Send Hunger Packing Program provides school aged children in need with nutritionally sound, easy-to-open meals to get them through the weekend. Items needed include: shelf stable 2% reduced fat milk in 8 oz. single serving size, cereal — individual bowls or boxes, Starkist Tuna to Go or equivalent, Bumble Bee Tuna Salad with Crackers to Go or equivalent, Chef Boyardee Microwaveable Bowls or equivalent, Campbell or Progresso Microwaveable Bowls or equivalent, Hormel Completes Entrees or equivalent, peanut butter — 18 oz., Jif to Go — little peanut butter cups, grape jelly in plastic containers — 14 to 18 oz., Yo On The Go — yogurt smoothie drink in shelf stable brick packs, granola bars, shelf stable pudding cups.

Please note: We cannot accept home-canned food, open packages, expired baby food, or any kind of glass container.

Questions? Call Erin Metro at (609) 258-5144 or email emetro@princeton.edu. ■





PPPL

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GIFT RAFFLE *(donations made by PPPL Council)*

AFTER THE SKIT IN AUDITORIUM - YOU MUST BE PRESENT TO WIN

Interested in contributing a dessert? Contact Kim Mastromarino

kmastrom@pppl.gov



Last Chance to Donate to United Way



Wednesday, December 7, is the last day to contribute to Princeton's campaign for the United Way.

So far, PPPL is at 77 percent toward our goal of \$30,000.

The University will match 15 cents per dollar for all employee donations made through payroll deduction and 10 cents per dollar for all other gifts.

Please join us in demonstrating that, with your financial support, members of the University community care about the people and programs where we live and work.

Please complete and mail your pledge cards TODAY to Kim Mastromarino at MS-33.



Our Goal: \$30,000

Donated so far: \$23,141

PPPL Voicemail System Shortcuts

A list of shortcuts for using the new voicemail system at the Laboratory is available to download at the following link on PPPL's internal web page:

<http://www-local.pppl.gov/mo/Telecommunications/index.html>



PPPL Tagline Contest Ends Tonight

Don't forget to send your suggestions for a new PPPL tagline to commteam@pppl.gov by midnight — tonight — Monday, December 5, 2011.

The Office of Communications is sponsoring a labwide contest for a new tagline — a memorable statement that succinctly conveys the essence of the Lab and its purpose.

The winner will receive a \$25 gift certificate to the Plasma Hutch.

PPPL CAFÉ MENU






MONDAY, DEC. 5

TUESDAY, DEC. 6

WEDNESDAY, DEC. 7

THURSDAY, DEC. 8

FRIDAY, DEC. 9

| | MONDAY, DEC. 5 | TUESDAY, DEC. 6 | WEDNESDAY, DEC. 7 | THURSDAY, DEC. 8 | FRIDAY, DEC. 9 |
|---|---|--|--|--|--|
| COMMAND PERFORMANCE CHEF'S FEATURE |  Baked Ziti with a Garlic Roll |  Top Round Roast Beef with Rice, Veg. |  BBQ Pulled Pork Sandwich |  Create Your Own Strawberry Salad |  Chicken Saltimbocca over Pasta |
| EARLY RISER | The XL Western Omelet | Sausage, Egg and Cheese Quesadilla | Pork Roll, Potato and Cheese Frittata | Bacon, Egg and Cheese on an Oversized Biscuit | Meatlovers Omelet Wrap |
| COUNTRY KETTLE | Chicken and Wild Rice | Seafood Chowder | Texas Chili | Cream Of Chicken | Vegetarian Vegetable |
| GRILLE SPECIAL | Caribbean Chicken Club | Bruschetta Grilled Chicken Sandwich with Provolone | Chicken Chili Cheeseburger | Tuna Melt | Ham & Swiss Melt |
| DELI SPECIAL | Turkey, Ham and Swiss with Honey Mustard | Cajun Roast Beef Wrap | Salami, Capicola and Provolone with Peppers | Turkey Ranchero Roll-Up with Horseradish, Mayo | Ham Salad Wrap |
| PANINI | The Italiano | The Mediterranean Chicken | Sausage, Pepperoni and Provolone Grilled Wrap | Eggplant Parmesan | Crispy Chicken Ranchero |

MENU SUBJECT TO CHANGE WITHOUT NOTICE

[CLICK HERE FOR A PRINTABLE WEEKLY MENU](#)

WEEKLY

Editor: **Patti Wieser** ♦ Copy Editor /Graphic Design: **Gregory Czechowicz**
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PPPL WEEKLY is published by the PPPL Office of Communications on Mondays throughout the year except for holidays. Deadline for calendar item submissions is noon on Thursday. Other stories should be submitted no later than noon on Wednesday.

Send to: pwieser@pppl.gov ♦ Comments: commteam@pppl.gov

PPPL WEEKLY is archived on the web at: <http://www.pppl.gov/ppplweekly.cfm>