

At PPPL THIS WEEK

MONDAY, JANUARY 14

Deadline to volunteer for PPPL's employee-led "Safety Champions Committee." Please contact Adam Cohen, chair of the ES&H Executive Board (acohen@pppl.gov).

MON., JAN. 14 - FRI., JAN. 18

Fire Protection Systems Audit

WEDNESDAY, JANUARY 16

PPPL Colloquium

4:15 p.m. ♦ MBG Auditorium

Excitement at the Plasma Boundary

Rob Goldston, Princeton University

Refreshments at 4 p.m. in the LSB Lobby

[Click here for link](#)

SATURDAY, JANUARY 19

Science on Saturday

9:30 a.m. ♦ MBG Auditorium

Outer Space!

Joshua E. G. Peek, Columbia University

UPCOMING EVENTS

Jan. 21

Martin Luther King, Jr. Day

Week of Jan. 21

Look for the safety culture survey in your email box!

The Mastermind: DeLooper handles complex tasks at PPPL with grace

By John Greenwald

Helping others comes naturally to John DeLooper. He hung around the Lodi volunteer ambulance corps as a teenager and joined up as soon as he turned 18. He went on to become captain of the Lodi ambulance and rescue squad, which answered some 2,000 emergency calls a year. "I enjoyed helping people in their time of need," he recalled.

DeLooper's rapid response to challenges comes in handy at PPPL, where his role as head of Best Practices and Outreach touches virtually every aspect of the Laboratory. Whether the job is ensuring compliance with federal directives or hosting high-profile visitors, DeLooper is invariably the person to see. "I do whatever I have to do to support the folks in the Director's Office," said DeLooper, who joined the Lab in 1988 as a quality engineer. "My goal is to make the office a success in carrying out the mission of the Laboratory."

His efforts are well recognized. "John masterminds and executes a wide array of Lab responsibilities with amazing dexterity," said PPPL Director Stewart Prager. "He somehow pulls off many arduous accomplishments with grace. He is an expert resource for many of us and functions, in effect, as a 'chief of staff' for the lab."

DeLooper takes his profusion of duties in stride. "The old saying is, 'Find something you love to do and you'll never work a day in your life,'" DeLooper said. "And that's the way I feel."



John DeLooper

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High praise for PPPL's security booth and officers

By Jeanne Jackson DeVoe

Department of Energy evaluators had high praise during a recent visit for PPPL's security booth and its team of emergency service officers who serve as security officers, fire fighters and EMTs.

The DOE assessment in late November found the Laboratory's security booth operations and management of visitors stand out as best practices and the Lab's mutual aid program was the best in its class among DOE national laboratories with such programs.

"This was a very positive visit for us and it underscored that we're on the right track and we're using resources effectively and efficiently," said Fran White, head of Site Protection. "We work hard to try to be forward looking and forward thinking and they recognized that we are making great use of technology. We take the view that we are reflective of the entire Lab."

Booth 6 singled out

The security booth, known as "Booth 6," was singled out as a best practice for its operations handling of thousands of visitors who come to PPPL each year, said Dolores Stevenson, deputy head of site protection.

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Officer John Mazukewicz (left) checks the ID of visitor Joe Cardello at Booth 6. Thousands of visitors come to PPPL each year.

His job, in a nutshell, is to help PPPL fulfill the 600-page contract that the U.S. Department of Energy (DOE) has given Princeton University to run the Laboratory. The task calls for overseeing a bevy of functions:

Best Practices: This office identifies and helps install best industry and DOE laboratory practices for everything from hallway signs to safety management. The division also reviews proposed new policies and procedures, and is developing a dashboard of indicators that managers can use to gauge their departments' progress.

Quality Assurance: Members of this office audit how well the Laboratory performs work as varied as handling hazardous waste and testing new equipment. Staffers also help scientists and engineers draft procurement documents, and inspect jobs like the welds on the NSTX upgrade project.

Technology Transfer, Patents and Publication: This function transfers patented PPPL inventions to public and private organizations through licensing and other arrangements. The process includes reviewing PPPL technical papers before they are published to see if they discuss inventions that could be patented. If so, the Laboratory works with Princeton University to prepare patent applications.

Science Education: The Laboratory regularly reaches out to students, teachers and the general public. Programs range from student internships and week-long "plasma camps" for college students and high school teachers, to Science on Saturday lectures that attract hundreds of people to the Laboratory for weekly talks on scientific topics from January through April.

DeLooper might also be called "compiler-in-chief." He works with Laboratory leaders to compile the more-than-100-page report that DOE uses to grade PPPL each year. He also assembles the Laboratory's annual business plan. And when the PPPL advisory committee arrives twice a year to review the Laboratory, he compiles and keeps track of the group's recommendations.

DeLooper brings both an engineering and a business perspective to such tasks. He holds both a bachelor's degree in mechanical engineering and an MBA from Fairleigh Dickinson University. His technical background has enabled him to participate in some Laboratory engineering projects. "It's a great basis to go from," he says of his engineering degree.

That training helped DeLooper join Burns and Roe Enterprises, an Oradell engineering and construction firm, straight out of college. He rose to the position of manager of corporate quality assurance before being recruited to PPPL in the late 1980s. "They were designing different teams at the time and were looking for someone to be the quality engineer," DeLooper recalls.

The job soon tested his organizing skills when James Watkins, the U.S. Secretary of Energy at the time, decreed that each national laboratory had to be scrutinized by a team of experts. That brought some 50 investigators called the "Tiger Team" to PPPL for a four-week evaluation that DeLooper helped organize. The cafeteria became the office for all the visitors, he recalled, which required the real cafeteria and its diners to move into the lobby.

Rejoining ITER

DeLooper was called on again when the Laboratory handled logistics for some 300 experts from around the world who met in Snowmass, Colo., in 1999 and 2002 to discuss pathways to fusion energy. The second gathering urged the United States to rejoin ITER, the international fusion



John DeLooper shows a young woman how she can create turbulence in a thin soap bubble demonstration at the November APS Conference, Plasma Expo in Providence, R.I. that more than 2,000 middle school and high school students attended. DeLooper also gave a "Plasma 101" workshop to middle school science teachers for Science Teacher's Day.

project currently under construction in France, which the U.S. had withdrawn from for budget reasons in 1998. The U.S. subsequently rejoined ITER in 2003.

"We had to worry about all the meeting arrangements," DeLooper said of the Snowmass gatherings. "Lots of times when I've been successful," he added, "it's because when I ask for help, people in the Laboratory give it."

A family that helps people

DeLooper shares his own life-long interest in helping people with his wife, Carol, a nurse who recently became a nurse practitioner. They met while DeLooper was giving a course on extricating drivers and passengers from car accidents to members of the Moonachie first aid squad. Carol wasn't taking the course but happened by as a member of the ambulance corps. The couple has three children: John, a librarian at Hudson County Community College; Raechel, a special education teacher in Virginia; and David, a business student at the College of New Jersey.

DeLooper takes to heart a creed a mentor taught him "when I was feeling a little too cocky back in my younger days." He has tacked the motto to an office wall in the form of a poem by an unknown author. The final stanza reads:

*The moral in this quaint example,
is do just the best that you can.
Be proud of yourself, but remember,
there is no indispensable man.*

"I always live by that creed," DeLooper said. ☐

2013 Science on Saturday
Princeton University Plasma Physics Laboratory Lecture Series

Outer Space!
JOSHUA E. G. PEEK
Columbia University

Saturday, January 19, 2013
9:30 a.m. • M.B.G. Auditorium

Security

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The evaluators also praised the booth's physical layout, with two lanes going in and out of the facility, a gate arm that keeps non-authorized cars from entering and a retractable hydraulic steel barrier, as well as boulders on each side, Stevenson said.

The five evaluators on the DOE's Safeguards and Security Peer Review Risk Assessment team also liked the fact that the booth operates efficiently with just one officer manning the booth most of the time and additional officers helping out if there are a large number of people entering the Laboratory. They also noted the call-in process, in which officers check with visitors' hosts to make sure they're authorized to enter PPPL.

Focus on handling potential threats

The four-day DOE assessment called the "Safeguards and Security Risk Assessment Peer Review," which was also performed at other DOE labs, focused on the potential threat each laboratory faces and how it handles those threats. The DOE will use that information to develop a new baseline of protection that informs and standardizes how labs identify and manage risks. PPPL was the last of DOE's facilities to be evaluated. The team looked at each laboratory's program management and budget, security operations, use of technology and communications, its facilities and how it handles hazardous substances. The report on those findings will likely come out in early spring. "It was very productive," White said. "It was a very impressive group."

The assessment was very hands-on, according to members of the Site Protection Division. The five evaluators talked to security officers, watched the security booth in operation, and interviewed about 25 people. They not only talked to managers and staff at PPPL but also officials from the local F.B.I. office, local police and Princeton University's Public Safety office and PPPL's DOE counterintelligence officer.

"The basic thing is what are the risks you have that need to be secured and how are you securing them," explained Jerry Levine, head of Environment, Safety, Health and Security.



The PPPL security booth

PPPL's responders are best in class

The evaluators praised PPPL's use of "multi-tasked responders" as a best practice at PPPL. The Laboratory is covered 24 hours a day, seven days a week by three platoons that each work 24-hour shifts. All the officers wear numerous hats. They are trained as security officers - patrolling PPPL and responding to a wide range of emergencies at the Laboratory from medical emergencies to fires and incidents involving hazardous chemicals.



Fran White

Each officer is trained in security, EMT, fire fighting and hazardous material cleanup, as well as handling emergencies involving confined spaces. "That actually helps us be extremely efficient and have a lot less people than we would need if we didn't do it that way," said Levine.

The team singled out PPPL's mutual aid program, in which officers respond to fire and medical emergency calls in the community, as "best in its class." In 2012, PPPL officers helped out with more than 280 such calls. "The robustness of our program is highly unusual and unique," White said.

The evaluators were impressed by the security officers' random patrols of the buildings and grounds of the Laboratory and liked how they combine visible and more covert patrols, as well as bicycle patrols when weather permits.

Members of PPPL's senior management received kudos from the evaluators for their commitment to safety and security. "They noted a couple of times that it's very apparent that senior management supports this program in a big way, as does the DOE Site Office," White said.

Praise for use of technology

The DOE team also praised the Site Protection Division's use of technology. The Division uses a DOE software program called "Night Owl" to track Division of Safety emergency vehicles on an interactive computer map in real time. The program puts notes right on the map so that other officers and patrols can see exactly where there may be potential problems.

Site Protection is using the Night Owl platform to create Wi-Fi access throughout the PPPL grounds that will allow officers to use their iPads to check in and see what's going on throughout the Laboratory. The Wi-Fi on the PPPL grounds will also be available to all staff on a separate channel in the spring, Stevenson said.

The DOE team found there was room for improvement in a few areas and discussed how the Laboratory could anticipate future risks. White noted that the mission of protecting the Laboratory has changed over the years from merely protecting PPPL's buildings and property to also protecting its computer systems and technology. PPPL, he said, has been evolving with that mission. "They have given us a roadmap on how to evolve because risks change," White said.

"The threat is evolving from hard targets to include soft targets," he added, "and they're helping to identify and plan for these emerging threats."

Team will evaluate PPPL's fire protection systems

By Jeanne Jackson DeVoe

A team of four outside fire protection experts will be evaluating PPPL's fire protection systems this week as part of an assessment required by the U.S. Department of Energy every three years.

"The plan is to introduce them to the layout and design of our fire protection systems at the Laboratory and then basically spend a week to allow them to determine whether we meet all applicable standards," said Mike Williams, Associate Laboratory Director for Engineering and Infrastructure.

This year's evaluation will be more extensive than in previous years because PPPL is bringing in outside evaluators and is looking at the entire fire protection system, Williams said. The DOE's audit, which is separate, will take place this spring.

The evaluation comes in the wake of two incidents involving the Laboratory's fire protection systems during the summer, Williams said. In the first, halon used in a fire suppression system in the National Spherical Torus Experiment (NSTX) control room accidentally discharged, prompting the building to be evacuated.

In the second, several people were evacuated after a small amount of what appeared to be deactivated lithium powder was vacuumed up in a laboratory workshop causing the plastic of the vacuum to melt and creating heavy smoke.


No one was hurt in either incident. In the case of the halon discharge, the Laboratory stopped using halon, which is a greenhouse gas. In the incident involving lithium, the Lab stopped using all lithium at the time and convened a lithium safety committee, which was already in the works.

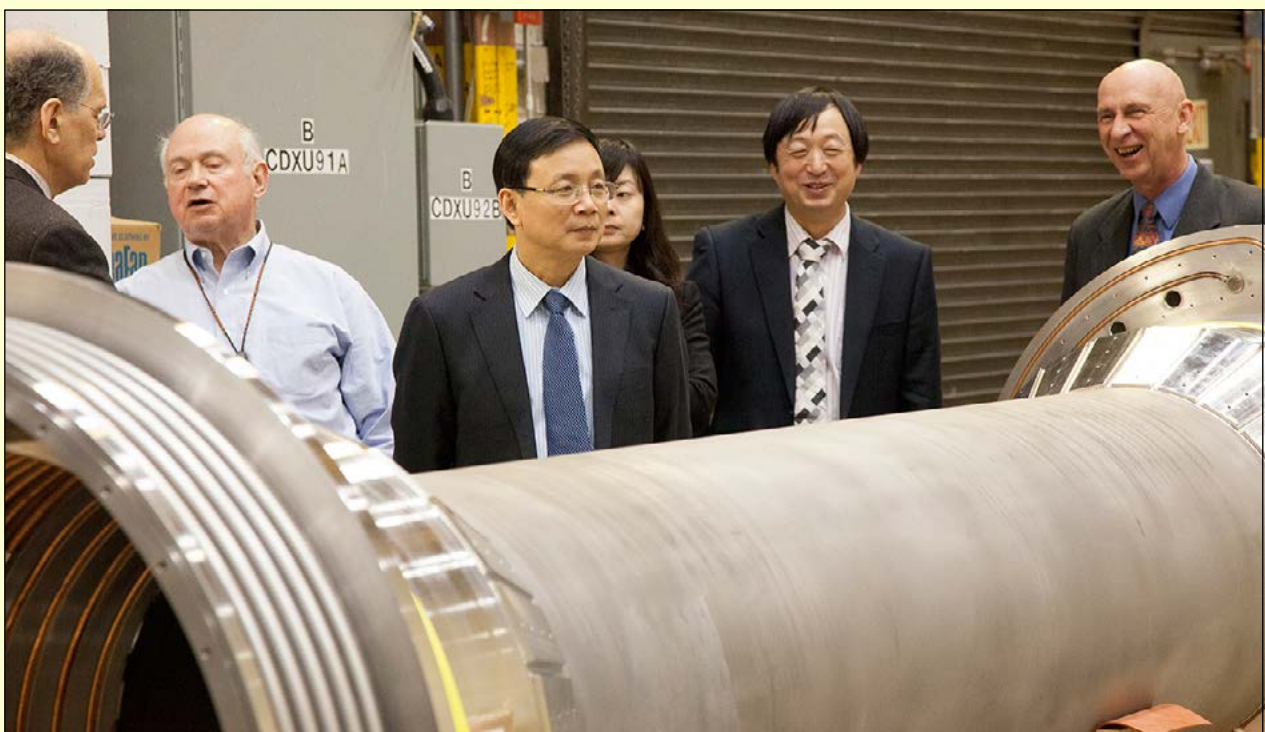
The four evaluators include a fire protection expert from the DOE, two from the Brookhaven National Laboratory and one from the Fermi National Accelerator Laboratory.



They will review fire protection systems at PPPL including the fire alarm system of 25 fire alarm panels, which sounds when there is a problem and transmits an alarm to the communications system that dispatches fire trucks; the emergency voice evacuation system, smoke detectors or heat detectors and 41 sprinkler systems, said Raymond Jeanes, the Lab's fire protection engineer. In addition, there are special systems in place in the cafeteria and in the NSTX and other test cells, where there is a more sensitive smoke detection system called VESDA (very early smoke detection apparatus) and chemical suppression systems.

The evaluators will likely walk around the PPPL Laboratory buildings and watch some of the systems being tested. They will hold a debriefing on Friday to discuss some of their findings before issuing a more formal report down the road.

"It's always helpful to take a fresh look," Williams said. 



A delegation from the University of Science and Technology of China (USTC) took a tour of PPPL on Jan. 8 following a ceremony at Princeton University in which the University signed a memorandum of understanding with USTC to promote science collaborations, including research in fusion energy and plasma science. From left to right PPPL Director Stewart Prager; A. J. Stewart Smith, Princeton University dean of research; Jianguo Hou, president of USTC; Mi Zhou, office director of the Steering Committee for International Cooperation at USTC; Jiangang Li, vice president of USTC and director of the Institute of Plasma Physics; and John DeLooper, head of Best Practices and Outreach, PPPL.

Look for New Quarterly Safety Survey Next Week


By Jeanne Jackson DeVoe

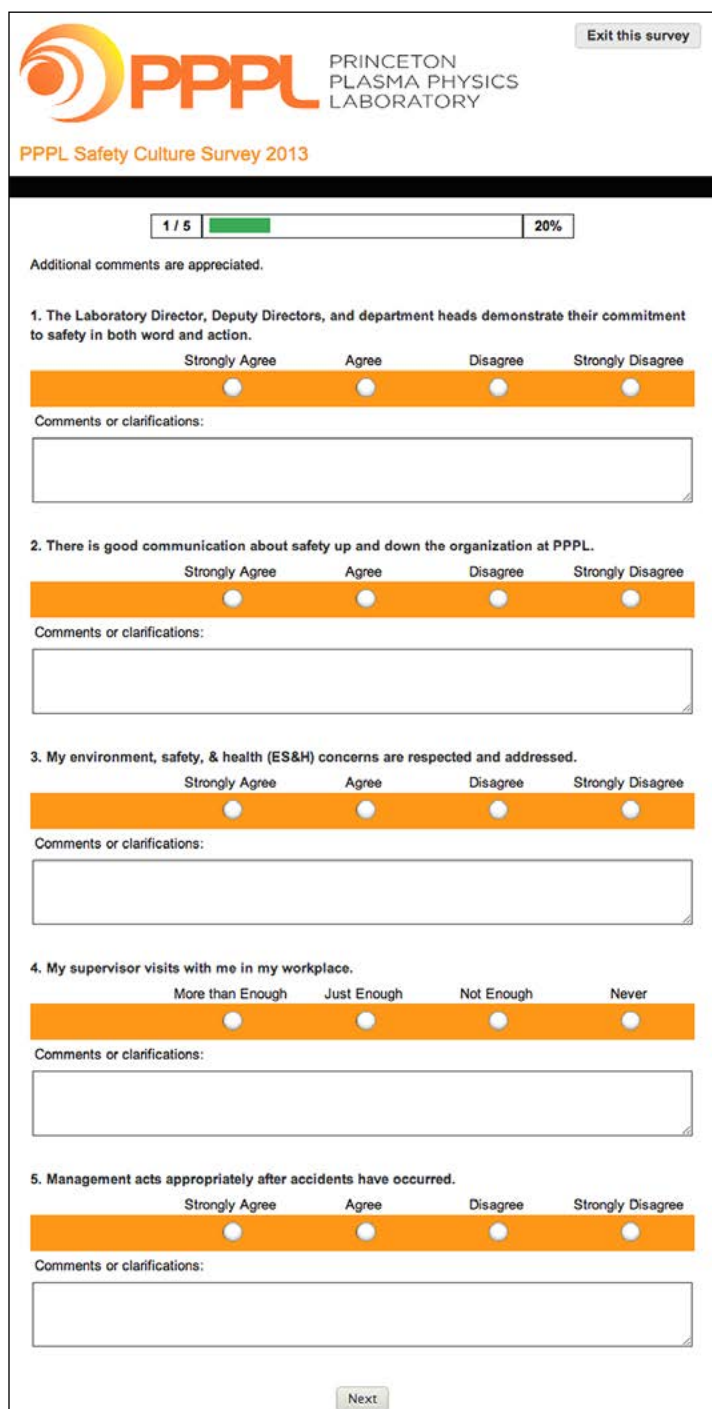
PPPPL needs your input about safety at the Laboratory. Next week, about one-fourth of PPPL'ers will be asked to fill out a new quarterly safety survey that is aimed at getting a continuous picture of the safety culture at the Laboratory.

The 24-question anonymous survey on Survey Monkey will be sent via email to a quarter of all employees and managers. Surveys will take place in January, April, July and October, giving each staff member the opportunity to participate once a year.

Continuous feedback

The continuous feedback provided by routine surveys will allow the Laboratory to respond to any concerns raised and to measure the effectiveness of the actions taken, said Jerry Levine, head of the Environment, Safety, Health and Security Department.

"Safety culture is a measure of how the Lab feels about safety, which translates into how safe they're working," said Levine, "so measuring that is something that Laboratory management can use to try to improve their safety programs and communication." 



PPPL PRINCETON PLASMA PHYSICS LABORATORY
PPPL Safety Culture Survey 2013

1 / 5 20%

Additional comments are appreciated.

1. The Laboratory Director, Deputy Directors, and department heads demonstrate their commitment to safety in both word and action.

Strongly Agree Agree Disagree Strongly Disagree

Comments or clarifications:

2. There is good communication about safety up and down the organization at PPPL.

Strongly Agree Agree Disagree Strongly Disagree

Comments or clarifications:

3. My environment, safety, & health (ES&H) concerns are respected and addressed.

Strongly Agree Agree Disagree Strongly Disagree

Comments or clarifications:

4. My supervisor visits with me in my workplace.

More than Enough Just Enough Not Enough Never

Comments or clarifications:

5. Management acts appropriately after accidents have occurred.

Strongly Agree Agree Disagree Strongly Disagree

Comments or clarifications:


Next

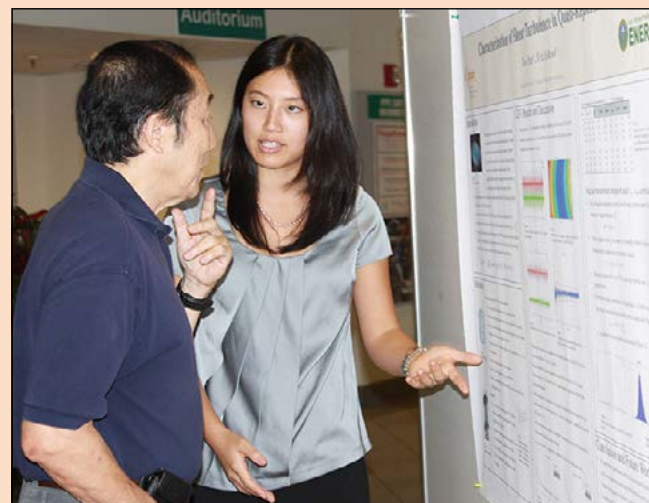
Top physics college seniors urged to apply for NUF program

Outstanding physics undergraduates entering their senior year of college next fall who are U.S. citizens are encouraged to apply for the National Undergraduate Fellowship Program in Plasma Physics and Fusion Energy Sciences (NUF).

Students in the program win a generous fellowship to work on a fusion research project with leading scientists at laboratories all over the country during the summer. They begin the 10-week program with a one-week introductory course at PPPL and then work with a physicist mentor on research projects. Many students complete their research at PPPL, while others do research at sites that in the past have included General Atomics, the University of California – Davis and Los Alamos National Laboratory and other prestigious institutions.

The deadline for the program is Feb. 1. More information and an application is available under **NUF** at the Science Education website.


For additional information, contact Deedee Ortiz at dortiz@pppl.gov. 



Zoe Yan, a 2012 NUF fellow at PPPL who is a student at Stanford University, shows her poster to physicist Wei-li Lee.

Register Your Future Scientist for Young Women's Conference

Young women with a passion for science are welcome to register for the Young Women's Conference in Science, Mathematics, Technology and Engineering, hosted by PPPL, on March 22 at Princeton University.

The all-day conference for seventh through tenth-graders will include lectures, hands-on activities and tours of Princeton University's laboratories. Registration is open to the daughters of PPPL staff and to school groups on a first-come, first-served basis through Feb. 15. For more information and to register visit the Young Women's Conference website at <http://science-education.pppl.gov/YWC>. 



2013 Science on Saturday

Princeton University Plasma Physics Laboratory Lecture Series

JAN. 19	OUTER SPACE! by Joshua E. G. Peek, Hubble Fellow, Department of Astronomy, Columbia University
JAN. 26	DISASTROUS EQUATIONS: THE ROLE OF MATHEMATICS IN UNDERSTANDING TSUNAMI by J. Douglas Wright, Associate Professor, Department of Mathematics, Drexel University
FEB. 2	FROM 0 TO C IN 60 MINUTES: A CRASH COURSE IN EINSTEIN by Prof. R. Shankar, John Randolph Huffman Professor of Physics, Department of Physics, Yale University
FEB. 9	FINDING A NEEDLE IN A (GENOMIC) HAYSTACK OR HOW CAN COMPUTERS HELP CURE CANCER by Prof. Olga G. Troyanskaya, Lewis-Sigler Institute for Integrative Genomics and Department of Computer Science, Princeton University
FEB. 16	FROM ROBOT SOCCER TO AUTOMOTIVE SAFETY: AN OPTICAL TOUR by Prof. R. Andrew Hicks, Department of Mathematics, Drexel University
FEB. 23	NO LECTURE — DOE'S NJ HIGH SCHOOL SCIENCE BOWL®
MAR. 2	LIGHT AND NANOTECHNOLOGY — ENGINEERING AND SO MUCH MORE by Prof. Claire Gmachl, Department of Electrical Engineering, Princeton University
MAR. 9	A SHORT HISTORY OF LENGTH by Prof. Joel Langer, Department of Mathematics, Case Western Reserve University
MAR. 16	A ROBOT'S VIEW OF OUR OCEAN PLANET by Josh Kohut, Assistant Professor of Oceanography, Center for Coastal Physical Oceanography, Rutgers University

Talks will be held in the Auditorium of the Princeton Plasma Physics Laboratory, James Forrestal Campus, U.S. Route 1 North in Plainsboro, NJ
FOR ADDITIONAL INFORMATION PLEASE VISIT OUR WEBSITE AT: www.pppl.gov

SCIENCE ON SATURDAY is a series of talks geared toward high school students but open to all. Students, teachers, parents, and community members are welcome. There is no fee for the program.


REGISTRATION: Register on site prior to each session. No preregistrations accepted. Seating is on a first-come first-served basis.

CANCELLATIONS: If it becomes necessary to cancel a session due to inclement weather, laboratory or national emergency, a message will be left on the Science-on-Saturday Hotline at (609) 243-2121.

TIME: Doors open at 8:15 a.m. Lectures begin promptly at 9:30 a.m. and usually last one hour followed by a moderated question-and-answer session which typically ends by 11:15 a.m.

Presently, PPPL, a federal facility, is taking heightened security measures. Upon arrival, all adult visitors must show a government-issued photo ID. This could include a passport or a driver's license. Non-U.S. citizens must show a photo ID, plus provide the following information: citizenship, date of birth, and place of birth. For the welfare of both our staff and visitors, PPPL security staff retain the right to inspect vehicles and personal packages such as briefcases, satchels, bookbags, and purses.

COLLOQUIUM




Excitement at the Plasma Boundary

ROB GOLDSTON
Princeton University

Wednesday, January 16

4:15 p.m. (Coffee/Tea at 4 p.m.)
M.B.G Auditorium, Lyman Spitzer Building



*Thank you to all the PPPL'ers who contributed **\$31,862** to the PPPL and Princeton University United Way as of Jan. 8. Your contributions will help numerous organizations in Mercer County.*

The Plasma Hutch now has an order form that allows you to order items anytime! You can pick up an order form at the Plasma Hutch and give or send it to Kim Mastromarino in HR or download it from the HR website at hr.pppl.gov and send it via email to Kim at kmastrom@pppl.gov.

Come check out the new items in the Plasma Hutch: ceramic mugs, long sleeve T-shirts, crew neck sweat-shirts and T-shirts in new colors, including pink!








THE PLASMA HUTCH
OPEN FRIDAYS
11:30 A.M. to 12:30 P.M.



PPPL Café Menu

BREAKFAST 7 a.m. • 10 a.m.
CONTINENTAL BREAKFAST..... 10 a.m. • 11:30 a.m.
LUNCH 11:30 a.m. • 1:30 p.m.
SNACK SERVICE until 2:30 p.m.

	MONDAY JAN. 14	TUESDAY JAN. 15	WEDNESDAY JAN. 16	THURSDAY JAN. 17	FRIDAY JAN. 18
COMMAND PERFORMANCE CHEF'S FEATURE	 LINGUINE WITH CHICKEN 🍅	 BAKED POTATO BAR	 MOUSSAKA WITH GREEK SALAD	 BEEF STROGANOFF OVER EGG NOODLES	 FRIED CHICKEN SERVED WITH MAC & CHEESE
EARLY RISER	Pumpkin Pancakes	Smothered Hash Browns	Ham & Cheddar Croissant	Banana Stuffed French Toast	Eggs Benedict
COUNTRY KETTLE	Chicken Noodle	Escarole & White Bean	Potato with Bacon & Cheddar	Split Pea With Ham	Beef Noodle
GRILLE SPECIAL	BBQ Chicken Cheesesteak with Peppers & Onions & Fries	California Turkey Burger with Avocado & Fries	Turkey Reuben On Rye Served With Cole Slaw 🍅	Fried Fish Sandwich with Fries	Chicken Tender Hoagie with Fries
DELI SPECIAL	Liverwurst & Onion On Rye	Southwestern Chicken Salad Wrap	Proscuitto, Provolone & Salami Hoagie	Chicken, Goat Cheese, Sundried Tomatoes & Tarragon Mayo	Caprese Sandwich with Eggplant, Fresh Mozzarella & Basil 🍅
PANINI	Turkey, Bacon, American Cheese & Tomato Ciabatta	Chicken Breast, Fresh Mozzarella, Basil Mayo, Tomato	Pulled Pork, Broccoli Rabe & Sharp Provolone	Bacon, Cheddar & Pear Panini with Jam	Vegetarian Mexican Wrap 🍅

MENU SUBJECT TO CHANGE WITHOUT NOTICE

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

WEEKLY

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The **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. Comments: commteam@pppl.gov ♦ **PPPL WEEKLY** is archived on the web at: <http://www.pppl.gov/ppplweekly.cfm>