

At PPPL THIS WEEK

WEDNESDAY, JAN. 28

PPPL Colloquium

4:15 p.m. ♦ MBG Auditorium
[EB Comets and the Origin and Evolution of the Solar System](#)

David Jewett, Univ. of California, Los Angeles

SATURDAY, JAN. 31

Ronald E. Hatcher Science on Saturday Lecture Series

9:30 a.m. ♦ MBG Auditorium
[The Road to a Sustainable Energy Future](#)

Emily Carter, Director of the Andlinger Center for Energy and the Environment, Princeton Univ.

UPCOMING EVENTS

FEB. 7

Ronald E. Hatcher Science on Saturday Lecture Series

9:30 a.m. ♦ MBG Auditorium
[Is SUSY the Guardian of Our Reality From Oblivion?](#)

S. James Gates, Director of the Center for String & Particle Physics, Univ. of Maryland

FEB. 10

New Jersey Technology Council Innovation Forecast 2015

1 p.m. to 5 p.m.

Program in Plasma Science & Technology Distinguished Speaker Series

7:30 p.m. ♦ Room J-232, E Quad, Olden Ave. Princeton University
[Plasma Physics at the Atomic Level](#)
Paul Corkum, Dept. of Physics, University of Ottawa

FEB. 20-21

DOE N.J. Regional Science Bowl

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Doug Loesser and colleagues commended for work on ITER

By John Greenwald

When the ITER Organization (IO) sought help with the design of components able to withstand superharsh conditions during fusion experiments, it turned to a team of PPPL engineers managed by Doug Loesser. His team performed so well that the IO last month awarded it a commendation as part of an international group that collaborated on a set of design possibilities for diagnostic first wall (DFW) panels — elements that will face the hot, charged plasma gas that will fuel fusion reactions when the ITER tokamak starts operating.

In recognizing the achievement of the overall group, the IO termed it “a good example of teamwork and cross-collaboration” on the demanding project.

“The components Doug is engineering will confront the most challenging conditions inside the machine,” said physicist Dave Johnson, who heads development of the diagnostic tools that the U.S. is designing for ITER, which is under construction in France to demonstrate the feasibility of fusion power. Such extreme conditions will include huge heat loads and powerful electromagnetic forces that could strike the components if the plasma disrupts.

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New counterintelligence officer prefers accessibility to secrecy

By Jeanne Jackson DeVoe

Most counterintelligence officers keep a low profile. However, Tony Frangello, the DOE counterintelligence officer newly assigned to PPPL, wants people at the Lab to know that he’s here to help with any counterintelligence concerns they might have, especially when they are traveling overseas.

“It runs contrary to our stay-in-the-shadow ethos,” he said with a smile. “But talking about what we do and why we do it is fine. Demystifying counterintelligence and making ourselves more accessible, not less accessible, is probably good for everybody.”

Frangello took the reins in September as a counterintelligence officer for the DOE’s Brookhaven Field Office at the Brookhaven National Laboratory with responsibilities for Brookhaven, PPPL and the University of Rochester Laboratory for Laser Energetics. He replaced Paul Moskal, who took a position in private industry.

Frangello says he sees his role as supporting the Lab’s mission. “We’re very aware that the scientific mission is primary and our role is a supporting role.”

His primary focus is dealing with PPPLers who are traveling to foreign countries. Frangello said he wants travelers to be aware that they may know enough about certain technologies to make them a target of foreign governments even if that information isn’t classified.

“Adversaries and partners aren’t just seeking information about classified weapons,” Frangello said. “There’s non-publicly available information that could potentially be of interest to foreign governments because of the economic applications of that technology or dual applications in some circumstances.”



Tony Frangello

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Authors, Don't Check the Box



By Lew Meixler, head of Technology Transfer and Applications Research

PPPL authors are free to publish articles that department or division heads have approved in journals of the authors' choosing. Many journals require authors to pay a fee beyond the normal publication cost to have articles published on an "open access" basis so that anyone can read them for free on the internet. Such journals include a box on their publication forms for authors to check if the authors' organizations are willing to pay for open access.

PPPL authors should not check this box. This is because the Department of Energy supports open access for articles based on DOE-funded research and provides such access to articles through the Office of Science and Technical Information (OSTI) website (<http://www.osti.gov/pages/>). OSTI will post articles, with all peer-reviewed content, 12 months after they have appeared in journals. Since DOE will not pay a fee for a service it already provides, the public access fee imposed by a journal will

not be reimbursed to the Laboratory. DOE provides this access in accordance with the DOE Public Access Plan (<http://energy.gov/downloads/doe-public-access-plan>).

I would also remind authors to submit the accepted peer-reviewed manuscripts of their articles to the Lab's Publications Office as soon as the manuscripts become available, but no later than the date of publication, so that the office can forward copies to OSTI. PPPL is also developing a plan for implementing a recent DOE requirement that calls for authors to submit digital data along with the peer-reviewed accepted manuscripts.

For further information, PPPL authors can contact me at lmeixler@pppl.gov, or Pamela Hampton in the Publications Office at publications@pppl.gov, and can refer to the "Publication, Copyright, and Patent Clearance Information for Authors" page on the PPPL website at <http://www.pppl.gov/Information%20for%20Authors>. 📧

ITER Commendation

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These stainless steel DFW panels will cap the shield modules in eight equatorial and 12 upper ports that will house diagnostic systems that are to peer into the plasma from sites in the tokamak's walls. PPPL is responsible for the drawer-like modules in four of the ports under an effort led by Russ Feder. Since the final form of the modules has yet to be determined, Loesser's team had to contend with a range of possibilities. "It was a highly complex task," said Loesser, who began work on the DFW panels three years ago.

A key issue was the size, shape and location of the apertures the modules will have to enable the diagnostics to view the plasma. Some modules will have many apertures while others may have only one. Some openings could be the size of basketball hoops. The more apertures a module has the

more challenging the job of designing panels to shield the sensitive instruments inside.

Complicating the overall task was the fact that some ports were resized and the stresses on some panels recalculated while the design work was in progress, requiring Loesser's team to cope with a series of revisions. Members confronting such challenges included engineers Mark Smith, Wenping Wang and Yuhu Zhai and designers Mike Duco and Mike Hause.

The group successfully set the parameters for first wall panels capable of capping whatever form the modules ultimately take. Having come this far, Loesser now desires to support design of the final panels as well. "We're a very cohesive and well-oiled machine," Loesser said. "We're all tuned up and ready to go." 📧



Diagnostic first wall design team, beginning front row from left: Yuhu Zhai, Wenping Wang, Mark Smith. Rear row: Mike Duco, Doug Loesser, Mike Hause.

Undergraduate Women in Physics group tours PPPL



One of the students has a hair raising experience with the Van De Graaff generator in the Science Education laboratory as volunteer Nate Allen looks on.

Some 65 future physicists from colleges across the country toured PPPL on Jan. 16 as part of a three-day Conference for Undergraduate Women In Physics at Rutgers University last weekend.

The college students had a lively discussion about fusion energy in the MBG Auditorium after viewing the “Star Power” and PhD Comics videos. They were full of questions for organizer Andrew Zwicker, and physicists Sam Lazerson, Stephan Gerhardt, Walter Guttenfelder, and Stewart Zweben. Deedee Ortiz and Jeanne Jackson DeVoe helped organize the tour and Nate Allen volunteered in the Science Education Laboratory.

For Lauren Olivieri, a junior and one of three students visiting the Lab from Puerto Rico, the exchange with the physicists was the highlight of the tour. “It was really cool,” she said. “I love the Q&A.”

The physicists then led small groups on a tour of the Laboratory in which various groups visited the NSTX Control Room, QUASAR, and the Science Education Laboratory, as well as the Lithium Tokamak Experiment (LTX) and Sam Cohen’s experiment.

Claire Weaver, a junior at Hofstra University in Hempstead, N.Y., left the Lab full of enthusiasm about plasma physics. “I loved the tour,” she said. “Plasma physics isn’t something we’re introduced to so it’s like showing you a star for the first time. You have no idea it’s out there.”

Weaver said she planned to show PPPL’s videos to her Society of Physics Students chapter at Hofstra. “I can’t wait to take the video back and be like, ‘Did you guys even know this field is out there?’” 📺



Physicist Stewart Zweben shows off the stellarator model during one of the tours.



Andrew Zwicker shows students a plasma ball in the Science Education laboratory.



Physicist Walter Guttenfelder explains QUASAR.

Photos by Elle Starkman and Jeanne Jackson DeVoe

Counterintelligence officer

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Advising vigilance for travelers

Travelers should be on guard whenever they travel but should be especially vigilant when traveling to sensitive foreign countries, Frangello said. That means ensuring that information on laptops, tablets, and cell phones is protected and being vigilant when discussing research with others, Frangello said. He said he knows of more than one case in which an international traveler made friends with a seemingly trustworthy person only to find out that the person was feeding information gleaned from the traveler to a foreign intelligence officer.

“Our main goal is we try to protect DOE people, facilities, without doing anything to impede the scientific mission,” Frangello said. “We’re very aware that the scientific mission is primary and our role is a supporting role. There’s a certain amount of detail that we require to do a certain amount of due diligence for that traveler.”

Frangello briefs travelers going to sensitive countries and talks with them after their travels about why they were traveling, whom they spoke to, etc. He also may discuss staff interactions with people from sensitive countries in the U.S. even if the meeting took place at a meeting at the Lab or a conference.

However, Frangello said he recognizes that many PPPL researchers are foreign nationals themselves or have long-term collaborations with foreign nationals. He also makes an effort not to be intrusive. “There’s a level of privacy that I would prefer and I honor that with our workforce,” he said. “I try to just be careful and empathetic toward our travelers and hope that if people have issues they want to talk about, they’ll offer it up. If there are things they don’t really want to talk about that bear no relation to our mission I’m not going to try to pry something out of them.”

Many years of experience in counterintelligence

Frangello brings many years of experience to his current position. He worked in the Office of Intelligence and Counterintelligence at DOE headquarters in Washington from 2008 until last fall. He and the HQ team he led were awarded the Secretary of Energy’s Achievement Award last year.

Before coming to the DOE, he was an intelligence officer for the U.S. Navy from 1996 to 2004 with tours that included serving on the Admiral’s staff at the Navy’s European headquarters in London and with the U.S. Special Operations Command in Tampa. He also worked as a civilian for the Department of Defense from 2004 to 2008 in England.

Frangello has a well-rounded educational background. He received a bachelor’s degree in finance at the University of Georgia, a master’s degree in East Asian studies from Florida State University and another master’s degree in international relations from the London School of Economics.

Frangello met his wife Debbie, who was then a partner in a law firm, in London. The couple has an 8-year-old daughter and they live in Northport on Long Island. He and his family have enjoyed taking walks, paddle boarding and kayaking since they moved to the area last fall, he said.

A “fan” of fusion energy

Frangello said he has enjoyed getting to know people at PPPL and learning about the Lab’s mission. “I’ve become a fan of fusion energy and I hope it comes to fruition here,” he said. “I’ve learned a lot more about the international fusion community and the strides that are being made and some of the technical and financial constraints when it comes to fusion energy. I find it very, very interesting.”

“People have been very gracious with their time and very patient with me with some of my rookie questions,” he added.

Frangello said he hopes PPPL’ers will feel free to email him at afrangello@bnl.gov if they have any questions or concerns. “My goal is that in time I will have people contacting me; I’ll be a known and trusted Lab member, team member, and people will feel comfortable coming to me.” 📧

ServiceNow makes requesting help from Help Desk easier.

The Help Desk has a new cloud-based solution that should make it faster and easier for PPPL staff to get help with computer problems.

The Help Desk will switch from the existing ticketing system to the new solution on Feb. 4. Users can request help online or access a knowledgebase that already has 100 articles on computer programs available at PPPL and is growing daily.

“We’re excited to be moving in this direction,” said Marc Cohen, the head of User Support and Operations, which includes the Help Desk. “It’s very flexible and can be accessed from any device including desktops, tablets, and smartphones. I think the powerful and easy to use interface will encourage people to take advantage of this new tool.”

The Help Desk will hold workshops introducing the software on Jan. 29 from 3 to 4 p.m.; Jan. 30, from 11 a.m. to noon; Feb. 2, from 11 a.m. to noon; and Feb. 3, from 3 p.m. to 4 p.m., in the Theory Conference Room, T168-169.

The ServiceNow software notifies everyone on the Help Desk when someone logs in with a computer problem. The heightened visibility will translate into quicker response time. The system also automatically sends out a message telling users that the ticket has been assigned and letting them know who was assigned to it.

Because it’s cloud-based, ServiceNow can also be accessed on any device outside the Laboratory so staff members could get help with devices from at home or from anywhere with an active internet connection. 📧

SPD Tip of the Week

Fire Alarm Activation Tips

When the fire alarm sounds in your area, act immediately to ensure your safety. The fire alarm system gives you an early warning to allow you to safely exit the building during an emergency.

Never ignore the alarm, assume the alarm is false, or assume it is only a fire alarm test.


Evacuating personnel should make every possible attempt to evacuate their area by way of the safest and closest exit and/or stairway. Never use an elevator to exit after the fire alarm has gone off.

Move away from the building and report to your designated evacuation assembly area. Stay clear of Emergency Services Unit (ESU) activities and responding emergency vehicles. Give your name to the designated building evacuation monitor and wait for instructions. Do not reenter the building.

Follow instructions from ESU personnel as well as instructions communicated via the overhead emergency voice evacuation system (EVES).

When in doubt, evacuate to your designated evacuation assembly area and seek guidance from your designated building evacuation monitor or Emergency Services personnel. 📞

COLLOQUIUM



EB Comets and the Origin and Evolution of the Solar System

David Jewett, Univ. of California, Los Angeles

Wednesday, January 28

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

RONALD E. HATCHER
Science on Saturday Lecture Series



The Road to a Sustainable Energy Future

Emily Carter
Director of the Andlinger Center for Energy and the Environment, Princeton Univ.

Saturday, January 31




MBG AUDITORIUM • Doors open at 8:15 a.m.
Lectures begin promptly at 9:30 a.m.

BROCK Café Menu

at PPPL

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.

— MARK GAZO, *Chef Manager*

	MON. 26 JAN.	TUE. 27 JAN.	WED. 28 JAN.	THU. 29 JAN.	FRI. 30 JAN.
COMMAND PERFORMANCE CHEF'S FEATURE					
	Chicken Oscar- Chicken Breast topped with Crabmeat, Asparagus & Hollandaise Sauce served with Rice Pilaf	Baked Potato Bar	Carved Roast Beef served with a Baked Potato and Vegetables	Italian Breaded Baked Pork Chop served over Pesto Linguine	Beef Nachos Grande
EARLY RISER	Greek Omelet with Spinach, Tomato & Feta Cheese	Steak, Egg & Cheese Quesadilla	Blueberry Pancakes served with Sausage	Grilled Kielbasa, 2 Eggs & Potatoes	Sausage, Egg and Cheese Croissant
COUNTRY KETTLE	Escarole & White Bean	Potato with Bacon & Cheddar	Chicken Barley	Split Pea	Beef Chili
GRILLE SPECIAL	Handmade Burger Bar-Build Your Own served with Fries	Pork Cutlet Parmesan Sandwich served with a Side	Grilled Tuna Salad & Cheese on Rye served with a Side	Philly Chicken Cheesesteak with the Works on French Bread served with a Side	Cheesesteak or Pulled Pork Sliders served with a Side
DELI SPECIAL	Sautéed Mushrooms & Leeks served over Polenta with Blue Cheese	Roast Beef & Cheddar Wrap with Chimichurri Sauce & Sautéed Peppers & Onions	Liverwurst & Onion on Rye Bread	Greek Gyro	Italian Sub Cut from our 6-Footer
PANINI	Pulled Pork, Broccoli Rabe & Provolone Cheese on French Bread	Homemade Tuna Burgers on a Kaiser Roll with Lettuce & Tomato	Pesto Chicken Panini with Mozzarella, Spinach & Tomato	Portobello, Bell Pepper & Goat Cheese Panini	Chicken Wing Bar with a variety of Sauces

MENU SUBJECT TO CHANGE WITHOUT NOTICE

VEGETARIAN OPTION

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

WEEKLY

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DEADLINE for calendar item submissions is noon on WEDNESDAY. Other stories should be submitted no later than noon on TUESDAY.

Comments: commteam@pppl.gov ♦ PPPL WEEKLY is archived on the web at: <http://w3.pppl.gov/communications/weekly/>.