

## Calendar of Events

### THIS WEEK

AUG. 22-25

**Technology of Fusion Energy  
(TOFE) Conference**  
Philadelphia

### UPCOMING

FRIDAY, SEPT. 2

**Open Public Tour**  
10 a.m.  
Go to <http://www.pppl.gov/about/tours> for information and registration.

MONDAY, SEPT. 5

**Labor Day**  
Laboratory closed

WEDNESDAY, SEPT. 14

**Princeton University classes begin**

### SUMMER SCHEDULE FOR PPPL WEEKLY

The next issue of the PPPL Weekly will be on Tuesday, Sept. 6. The Weekly will resume its regular weekly schedule on Sept. 12.

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## PPPL wins contract to conduct plasma-materials interaction studies on EAST

By John Greenwald

**P** PPL has been named principal investigator for a multi-institutional project to study plasma-materials interaction (PMI) on the Experimental Advanced Superconducting Tokamak (EAST) in China. The centerpiece of the PPPL role in this project is the optimization of lithium delivery systems. The tests will be designed to optimize the production of long-pulse plasmas that last from 30 seconds to more than one minute. This project is supported by Fusion Energy Sciences in the DOE Office of Science.

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## Svetlana Drapkin brings her business acumen to controller position

By Jeanne Jackson DeVoe

**S**vetlana Drapkin, PPPL's new controller, brings five years of accounting experience at PPPL and a decade of experience in public accounting to a position overseeing PPPL's accounting and financial controls division.

Drapkin began the position on June 1. She heads a team of 12 people that includes general accounting, payroll, accounts payable, and travel. Tony Bleach, who formerly held that position, is now working as a planning and control officer on General Plant Projects for Chief Financial Officer Kristen Fischer. "I appreciate Tony's commitment to assist Svetlana during the transition, and will continue to value his advice and work ethic in his new role at the Laboratory," Fischer said.



Svetlana Drapkin

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## New Procurement director emphasizes positives as well as challenges

By Jeanne Jackson DeVoe



Patrick Schurott

**W**hen Patrick Schurott began work as the new director of Procurement in April he realized he had to lead the group through several challenges but at the same time recognize the group's strengths.

"I wanted to come in and immediately start doing some team building," he said. "I know that the division had been through a lot of scrutiny in the last year and it was important to come in and start identifying early on some of the successful things we do. That's challenging because there are still some very significant issues that need to be addressed." Schurott served on two panels of outside experts who reviewed PPPL's Procurement division so he knew the areas needing improvement coming into the job.

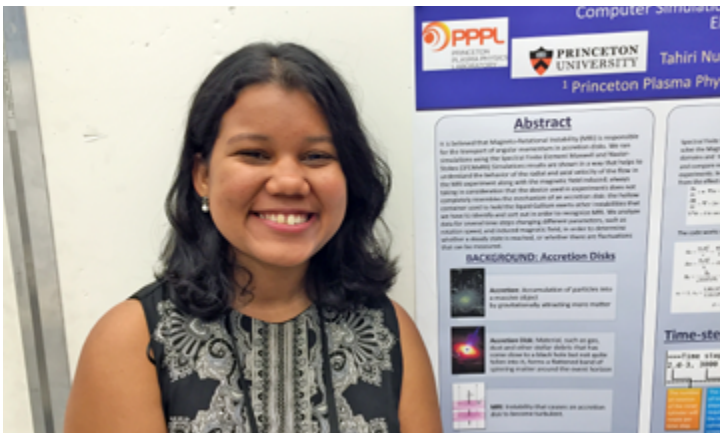
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# Interns show off a summer of research at PPPL

By Raphael Rosen and Jeanne Jackson DeVoe

Hot summers in New Jersey usually involve ice cream cones and the beach, but at the Princeton Plasma Physics Laboratory (PPPL), a group of college and high school students spent the summer of 2016 conducting advanced plasma physics research. Some 35 undergraduates teamed with top scientists to study topics ranging from nanotubes to advanced kinds of thrusters that one day may power spacecraft to far-off worlds. And on Aug. 10 the interns presented their research in a poster session in PPPL's lobby.

The interns were part of the U.S. Department of Energy's (DOE) Science Undergraduate Laboratory Internship (SULI) and the Community College Internship (CCI) programs, as well as PPPL's engineering apprenticeship and other intern programs. SULI and CCI are sponsored and managed by the DOE Office of Science's Office of Workforce Development for Teachers and Scientists. Students can apply for a fall, winter, or spring term, and they work closely with laboratory scientists and engineers during their appointments.



Tahiri Nunez, a CCI intern from Hudson Community College, with her poster. She will attend New Jersey Institute of Technology in the fall. (Photo by Raphael Rosen)

Deedee Ortiz, Science Education program manager and the organizer of the SULI and CCI programs, said this year's internship program was very successful. "They were very engaged with their projects and their mentors," she noted. "They worked very independently and pretty much took care of whatever they needed themselves."

When the interns arrive at PPPL for their 10-week stint, they first must complete a one-week course in plasma physics. Afterwards they are assigned to a Laboratory scientist or engineer and begin their research. Before they complete their term, however, each intern must make either an oral or a poster presentation on their summer's work. A group of 23



Shannon Greco, Science Education program leader, left, speaks with high school intern Desirée Koontz, a student at North Star Academy Charter School, a high school in Newark, New Jersey. (Photo by Chris Cane)



Luca Comisso, back left, a postdoc in the Theory Department, examines a poster by high school interns Xaymara Rivera, center, a rising freshman at Lehigh University and Willma Arias de la Rosa, a rising freshman at Pennsylvania State University, and Mark Thom, right, an engineering apprenticeship intern who is a graduate student at Howard University, standing next to high school intern George Iskander, of High Tech High School in North Bergen, New Jersey. (Photo by Chris Cane)

SULI interns and two CCI interns will present their research in poster sessions at the American Physical Society's Division of Plasma Physics conference Oct. 31 to Nov. 4 in San Jose, California. They will be sponsored by the FES.

Arturo Dominguez, Science Education's senior program leader, organized the one-week plasma physics class at the start of the program and mentored a few of the students. "Actually doing a research experience is much different than taking a class because it prepares them for what they're actually doing in grad school and in jobs in industry," Dominguez said. "They learn problem-solving and tackle problems that don't necessarily have a simple solution. They have to go in and fail quite a few times and remold what they're doing so they get a good experience out of it."

Almost to a person, the interns said the summer research was invaluable. "I really enjoyed it," said Sam Frank, a rising senior at the University of Michigan majoring in engineering physics. "There's lots of stuff here that you can't find anywhere else." Frank spent the past 10 weeks working on FLARE, a new device that will let scientists study magnetic reconnection, a phenomenon that occurs both in laboratory plasma and in outer space. Frank also noted that one benefit of conducting research at PPPL is that if you have a question, you don't have to go far to find someone who has the answer.

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Max Wallace, left, a CCI student at Laney College in Oakland, California, with Joseph Labrum, a SULI student from the University of California-Berkeley. (Photo by Chris Cane)

# Summer interns

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Akhil Ghanta, a rising senior at Duke University majoring in physics, noted that his intern experience would prepare him for more advanced studies. "I loved my time here," he said. "This is the first time I've gotten hands-on experience with hard-core computational theory. I now have a lot of tools for graduate school."

The high school interns, too, reflected on their good fortune. "High school students usually don't have experiences like this before going to college," said Willma Arias de la Rosa, a rising freshman at the University of Pennsylvania who is considering majoring in chemical engineering. Ryan Catalano, who graduated from North Brunswick Township High School and will be attending MIT in the fall, was happy that he was able to help install a neutral beam injector on PPPL's Lithium Tokamak Experiment (LTX), a machine designed to test how liquid lithium walls affects the efficiency of fusion reactions. "It was nice to see these systems first-hand," he noted, "The experience was pretty rewarding for me."

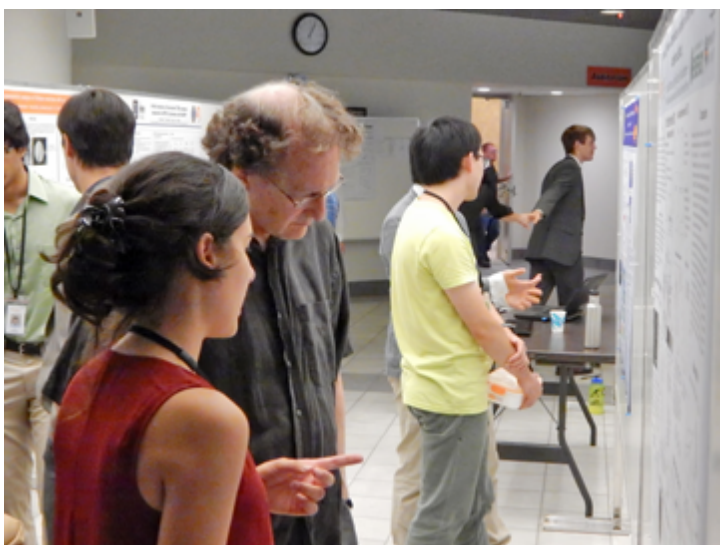
Overall, the summer proved to be a beneficial experience, introducing students to plasma physics research in a national laboratory setting, as well as helping them bond as a group. "It was a wonderful group of students this year," said Ortiz. "I think they became a little family."



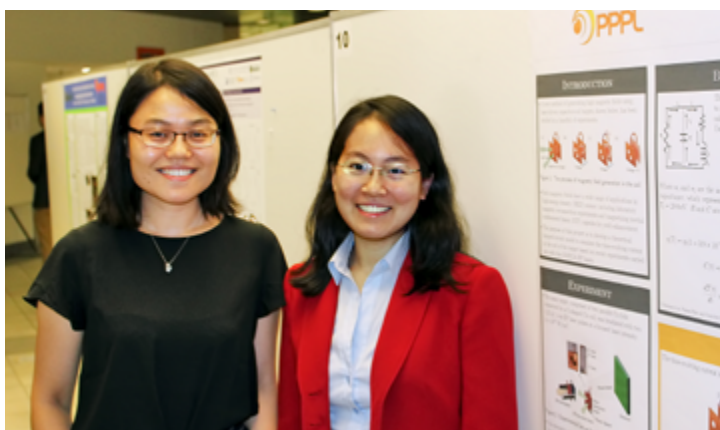
Graduate student Charles Swanson, left, examines a poster by Kuishon Brown, center, and Emmanuel Balogun, both engineering apprenticeship interns from Howard University. (Photo by Chris Cane)



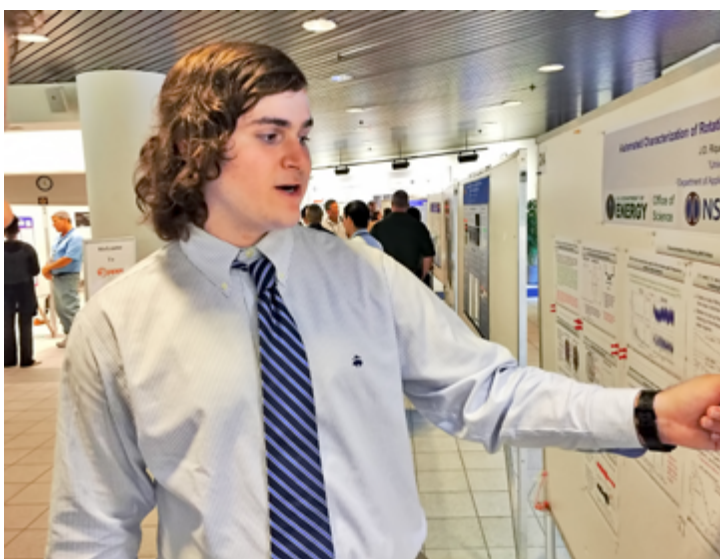
Priya Jaglal, an engineering apprenticeship intern from Howard University, speaks with Lenore Rasmussen, founder and chief technology officer at RAS Labs. Some interns worked on tests of her synthetic muscle experiment this summer. (Photo by Chris Cane)



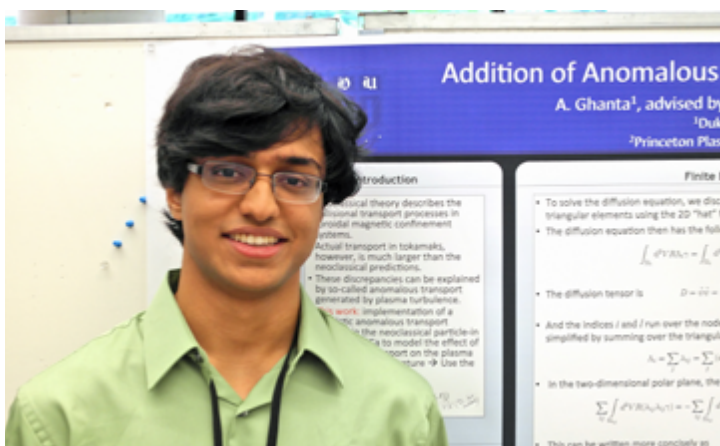
Angelica Ottaviano, an engineering apprenticeship student and former SULI student speaks to Nat Fisch, director of PPPL's Program in Plasma Physics. Ottaviano will attend graduate school for physics in Switzerland this fall. (Photo by Chris Cane)



Jessica Cheng, right, a SULI student from Brown University, with her mentor, physicist Lan Gao. (Photo by Chris Cane)



Juan Riquezes, a SULI student from the University of Michigan-Ann Arbor, shows off his poster. (Photo by Chris Cane)



Akhil Ghanta, a SULI student at Duke University, with his poster. (Photo by Raphael Rosen)

## EAST contract

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The three-year, approximately \$2.1 million contract — subject to annual budget availability — is synergistic with other PPPL collaborations funded by DOE to investigate long-duration plasma confinement. These collaborations involve EAST, the Korean Superconducting Advanced Research (KSTAR) tokamak, and the Wendelstein-7X (W-7X) stellarator in Germany.

For the PMI project, PPPL will use devices called flowing liquid lithium limiters and granule injectors, as well as optimization of coating techniques, to protect the plasma-facing components inside the EAST facility. PPPL has applied lithium to its National Spherical Torus Experiment (NSTX), which has recently been upgraded, and will continue to use lithium. Also housed at PPPL is the Lithium Tokamak Experiment (LTX), a small, short-pulse complementary experiment that explores the effect of a liquid-lithium boundary on the plasma.

The new experiments will test the ability of lithium to protect the EAST walls and prevent impurities from bouncing back into the core of the plasma and halting fusion reactions. Success of such efforts could point to a method for optimizing long-running plasmas. “We’re trying to make a cohesive program so the things that we’ve learned in this country can be tried over there,” said physicist Rajesh Maingi, who will lead the PPPL effort. “Then we can bring back what we learn there to help us here.”



Physicist Rajesh Maingi will lead the PPPL effort.

Collaborating with PPPL on the PMI project are the Los Alamos and Oak Ridge national laboratories, together with Johns Hopkins University, the Massachusetts Institute of Technology, the University of Illinois and the University of Tennessee. 📍

## Household Hazardous Waste?

Please do not bring it on site. Dispose of it here:

Old fluorescent bulbs can be recycled at the Home Depot or Lowe’s.

Rechargeable batteries (including ones in power tools, digital cameras, laptops, etc.) can be recycled at many stores like Lowe’s, the Home Depot, Best Buy, and Staples.

Button batteries from things like hearing aids are often recycled by individual counties or municipalities at hazardous waste events.

Stores like Staples, Best Buy and At&T will recycle old cell phones and other electronics.

For more information on household hazardous waste disposal and recycling programs visit [www.sites.google.com/a/pppl.gov/environmental-services/haz-waste-management/employee-recycling](http://www.sites.google.com/a/pppl.gov/environmental-services/haz-waste-management/employee-recycling)

## Submissions wanted for art exhibit on “The Art of Discovery”

The West Windsor Arts Council is seeking submissions from scientists and artists for an exhibit on “The Art of Discovery.” The deadline is Aug. 21.

Details are available at the [Arts Council website](#). Andrew Zwicker, head of PPPL’s Science Education, will judge submissions. The exhibit will be Sept. 12 to Oct. 29 at the West Windsor Arts Center in Princeton Junction.

## Svetlana Drapkin

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"I'm really excited about this opportunity," Drapkin said. "I get to work with a wonderful group of people in accounting. We have a big responsibility in safeguarding the assets of the Laboratory and making sure the Laboratory has effective internal controls over financial reporting."

"Svetlana has a great deal of business acumen," said Fischer. "She's such a professional; she's a pleasure to work with. She handles every scenario calmly, no matter how intense it gets. One of her greatest strengths is that she's very thorough. When you ask her to help solve an issue, she does her due diligence before she comes to me and we're able to make a decision."

Drapkin said the job involves making sure that PPPL's monthly reporting is accurate, ensuring the Laboratory is not incurring any unallowable costs, and that the Laboratory is complying with internal auditors and managing the various areas of accounting. She noted that there are some challenges ahead in refining the division's processes, especially in certain areas in which there are new DOE regulations, such as travel and conference management.

### Headed new Cost Compliance Division

A cost compliance manager at PPPL for the past two years, Drapkin filled a newly-created position and division required by the Department of Energy that is charged with reviewing PPPL's subcontracts. Drapkin visited another national laboratory to review best practices and put together PPPL's new program. The DOE recognized the process improvements in its reviews, Fischer said.


Drapkin has a bachelor's degree in business administration and accounting from Philadelphia University and is currently pursuing a master's degree in accounting from La Salle University. She is a certified public accountant.

She was a staff accountant for public accounting firms in Pennsylvania, working in numerous areas, including performing audits of school districts and municipalities in Montgomery County, Pennsylvania. She spent almost 10 years working as an independent accountant for corporations and individuals. Her most recent position before coming to PPPL was as an accountant with Greenberg & Associates in Marlton, New Jersey.

Drapkin and her husband, Michael, a systems architect/engineer who works in Philadelphia, live in Langhorne, Pennsylvania, with their two children Greg, 15, and Matt, 13. She spends most of her free time with her children and their in-school and extracurricular activities.

A PPPL employee since 2011, Drapkin came to the Lab as a staff accountant, a position in which she had numerous duties including compiling and analyzing information for financial reports to the DOE, and in several other areas including accounting for conference management and accounts payable.

Drapkin said she enjoys the variety that comes with working with everyone from physicists to technicians at PPPL. "It's exciting being part of what the Lab is doing and the mission of the Lab," she said. "Our function in accounting is to support the mission of the Lab by providing accurate financial information to the Lab community to support management decision making. Our goal is to make it as easy as possible for the Lab community but at the same to ensure that we are in compliance with our prime contract and other regulations."

Fischer said she is confident in Drapkin's abilities. "Svetlana is a future leader at PPPL," she said. "I feel fortunate to have her in the organization." 

## September 24th Bluefishing Trip Aboard the Suzie Girl

**Date:** Saturday September 24th 2016

**Departure:** 7:30 a.m. SHARP!!!

**Location:** Belmar Marina Hwy. 35, Belmar, NJ 07719

**Cost:** \$80 Per person ALL INCLUSIVE

Cost includes everything: rods, bait, fish cleaning, food, beverages. All you need to do is show up!

**Money due by Friday, September 16th. NO REFUNDS**

**Contact Andy Carpe ext. 2118 [acarpe@pppl.gov](mailto:acarpe@pppl.gov)**

**Bob Tucker Jr. ext. 3190 [rltucker@pppl.gov](mailto:rltucker@pppl.gov)**

# Patrick Schurott

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The Procurement director gained expertise in developing training and procurement tools as a manager at the National Renewable Energy Laboratory in Golden, Colorado, for several years. He won a Contracts & Business Services Excellence Award for developing technical monitor procurement awareness training, which focused on clearly communicating procurement's roles and responsibilities throughout the laboratory. He also won an NREL Director's Award for implementing alternative payment protections for construction contracts.

## An experienced procurement leader

Kristen Fischer, PPPL's chief financial officer, said Schurott is an experienced procurement leader whose knowledge of contracts, procedures, and training, as well as his experience working with the Department of Energy, will be very valuable to the Procurement division.

"Pat brings a leadership to the organization that I feel was desperately needed for some time – someone who can serve as a mentor but also can advise with confidence, how to develop the contracts we execute," Fischer said. "He also has a sense of humor that makes him a joy to work with. I think he will also help build up the morale of the organization."

Fischer thanked Skip Schoen who served as interim director for about six months before Schurott began in mid-April. "The Laboratory thanks Skip for his tireless dedication," Fischer said. "His calm and respected leadership style, along with his ability to prioritize and execute contracts kept the operation going while the search committee filled the position."

Schurott is working hard to emphasize a comprehensive "cradle to grave" process for subcontracts that standardizes virtually every step of the process and will be consistently followed by the procurement staff. Many of the staff members are relatively new, so they need the tools that will help them with this process through contract templates, desktop procedures, and checklists, Schurott said. "While critical thinking and an independent work ethic are essential, it's critical that all of the procurement specialists approach their job in the same systematic way," Schurott said. "In some cases we have the tools but they're not being used, and in some cases they have to be created." Procurement's work is reviewed by the Department of Energy and others through periodic reviews and the division must show that everyone is following the same processes, Schurott said.

## Supporting PPPL's mission

At the same time, Procurement must ensure that it continues to support the Laboratory's mission, Schurott said. "We are here to support the Lab's core functions, so we have to do that and continue to provide outstanding support while we correct how we do business," Schurott said.

Schurott said he has consulted other laboratories to benchmark best practices across a number of procurement functions. One area in which the Procurement division has made strides is in procurement training. The Procurement staff has taken extensive relevant training with 25 internal training sessions during fiscal year 2016, he said.

PPPL has hired a subject matter expert to assist with the revision of PPPL's procurement manual. The division will also get support from a National Nuclear Security Administration manager who will be at PPPL for a six-month rotation working on the subcontract tools, templates, and the standardization project.

Schurott has returned to his childhood roots in New Jersey. He and his family lived in East Brunswick until Schurott was 12. His family moved to Denver when his father took a job there.

Schurott has been commuting frequently to his home in Highlands Ranch, Colorado, south of Denver, to see his 16-year-old son Anthony. He has recently settled in Robbinsville, New Jersey. Schurott said he loves the Princeton area and is happy to be back closer to his beloved NY Mets, the baseball team for which he never stopped rooting. To unwind, he enjoys playing softball, watching baseball, football and hockey, and playing blues and classic rock on his guitar.

Schurott received a bachelor's degree and a master's degree in business administration from the University of Phoenix. He is also a certified professional contracts manager (CPCM) by the National Contracts Management Association and is a certified purchasing manager (CPM) by the Institute for Supply Management.

He has always reveled in his career choice. "I was intrigued by the types of benefits that a good procurement organization can provide: the cost savings, the risk mitigation," Schurott said. "It's just been a very satisfying experience where I have constantly been challenged and have been given opportunities to be successful."

Schurott began working in accounting after college but soon started work in purchasing positions at various Denver-area companies. Before going to NREL, Schurott worked for the Raytheon Polar Services Co., which supplies polar expeditions to the Antarctic, first as a subcontractor administrator and then a manager.

The new procurement director said he feels upbeat about his new position and the Procurement division's ability to meet any challenges. "I'm really excited to be here and to have this opportunity," he said. "Now everyone's sailing in the same direction. People are going to be really excited about what we're going to accomplish." 📌

# Yoga Classes

**PPPL offers lunchtime yoga classes each Monday and Wednesday from noon to 1 p.m. in the LSB Commons.**



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 August 22	Tuesday August 23	Wednesday August 24	Thursday August 25	Friday August 26
<b>COMMAND PERFORMANCE Chef's Feature</b>	<b>Zesty Orange Chicken &amp; Broccoli</b> over Rice	<b>Vegetarian Chili</b> over Rice with Cornbread	<b>CREATE YOUR OWN Burrito Bar</b>	<b>Baked Macaroni</b> with Ham served with Stewed Tomatoes	<b>OUTDOOR BBQ Hamburgers, Hot Dogs, Chicken,</b> Beans, Corn, Coleslaw, Watermelon, Beverage
Early Riser	<b>Breakfast Club Sandwich</b>	<b>Greek Egg White Omelet</b> with Spinach, Tomato, Peppers & Feta Cheese	<b>Breakfast Pizza</b> with Ham, Bacon & Sausage	<b>Omelet Florentine</b> with Spinach, Tomato & Mozzarella	<b>Breakfast Tacos</b>
Country Kettle	<b>Mushroom Barley Kielbasa</b>	<b>Pasta Fagioli</b>	<b>Chicken &amp; Quinoa</b>	<b>Tomato Spinach Lentil</b>	<b>Seafood Bisque</b>
Grille Special	<b>Colossal Burger</b> with 2-5.3 oz patties, American Cheese, Lettuce, Tomato & Onion	<b>Pepperoni Pizza Steak Sandwich</b> with Fries	<b>Tuna Melt</b> on Rye served with Onion Rings	<b>Taco Dogs</b>	<b>Spinach Salad</b> with Turkey Bacon, Hard-Cooked Egg, Mushrooms & Raspberry Vinaigrette
Deli Special	<b>Stacked Veggie Sandwich</b> with Guacamole	<b>French Dip</b> with Swiss Cheese, Caramelized Onion & Horseradish Cream served with Potato Wedges	<b>Prosciutto, Pesto, Roasted Peppers &amp; Arugula</b> on Ciabatta	<b>Krabby Kake</b> on a Kaiser with Lettuce & Tomato	<b>Buffalo Chicken Wings</b> with Blue Cheese, Fries & Celery
Panini	<b>The Cubano</b>	<b>Popcorn Chicken &amp; Mashed Potato Bowl</b> topped with Seasoned Corn & Country Gravy	<b>Southwest Turkey,</b> Peppers & Cheddar with Jalapeño Ranch Spread	<b>Tomato &amp; Fresh Mozzarella</b> on Ciabatta with Basil, Red Onion & Arugula	<b>Turkey French Dip</b> with Swiss Cheese

	Monday August 29	Tuesday August 30	Wednesday August 31	Thursday September 1	Friday September 2
<b>COMMAND PERFORMANCE Chef's Feature</b>	<b>Baked Rosemary &amp; Garlic Chicken</b> Served with Cajun-Spiced Roasted Potatoes	<b>Vegetable Baked Ziti</b> with Parmesan Pink Sauce served with Garlic Bread	<b>CARLA'S RAVIOLI Create your own pasta bar!</b>	<b>Baked Moussaka</b> served with a Greek Salad	<b>Seafood-Stuffed Tilapia</b> served with Rice Pilaf
Early Riser	<b>Blueberry Pancakes</b>	<b>Roast Vegetable Egg White Omelet</b> with Home Fries	<b>Tater Tot Breakfast Bake</b>	<b>Ham, Egg &amp; Cheese French Toast</b>	<b>Bacon, Spinach &amp; Mozzarella Quesadilla</b> with Cilantro Cream
Country Kettle	<b>Black Bean &amp; Ham</b>	<b>Minestrone</b>	<b>Potato, Cheddar &amp; Bacon</b>	<b>Tuscan Bean</b> with Escarole	<b>White Bean Chicken Chili</b>
Grille Special	<b>Gyro Turkey Burger</b> with Feta Cheese, Lettuce, Tomato, Red Onion & Tzaziki Sauce on an Onion Roll	<b>Sausage &amp; Peppers Torpedo</b>	<b>Salmon Burger</b> on a Whole Wheat Roll with Lettuce, Tomato & Tzaziki Sauce	<b>Blackened Chicken</b> with Sautéed Onion & Peppers, Pepperjack Cheese, Tomato & Chipotle Mayonnaise on a Kaiser Roll	<b>Philly-Style Cheesesteak Calzone</b>
Deli Special	<b>Egg Salad Club Sandwich Wrap</b>	<b>Caesar Salad</b> with Grilled Tuna, Hearts of Palm, Artichoke, Roasted Peppers & Kalamata Olives	<b>Pizza Steak Sub</b> with Pepperoni, Provolone & Marinara	<b>Italian Tuna Salad</b> with Capers, Olives, Sundried Tomatoes and Basil on Choice of Bread	<b>Cobb Salad Wrap</b> with Turkey, Spinach, Tomato, Blue Cheese, Bacon & Hard-Cooked Egg
Panini	<b>Chicken Breast,</b> Tomato, Pesto Mayonnaise and Arugula on a Fresh-Baked Asiago Cheese Roll	<b>Chicken Breast,</b> Fontina Cheese, Pesto Mayonnaise & Tomato on Ciabatta Bread	<b>Buffalo Chicken Sliders</b> served with Fries	<b>Vegan BLT</b> with Tempeh, Tomato, Romaine & Veganise on a Whole Wheat Roll	<b>NY Street Dog—</b> 2 Sabrett Hot Dogs with Sauerkraut, Red Onions & Mustard served with Fries

MENU SUBJECT TO CHANGE WITHOUT NOTICE

HEART HEALTHY

VEGETARIAN OPTION