



#### August 10, 2012

# **BNL Director Aronson Gives Update on Lab**

By Lab Director Sam Aronson Last week's all-employee meeting showed me two very positive things I'd like to highlight. First, during the question-and-answer session, the dialogue we had about our challenges - especially safety - was constructive and much appreciated. Second, many of us recognize we must confront the serious safety and operational issues we face if we want our Laboratory to succeed. The video replay, presentation, and resources are now available: http://1.usa.gov/OM89DC.

#### Path to Sustained Safety & **Operational Excellence**

Many of us are already working conscientiously to keep ourselves and others safe. I deeply appreciate your commitment. Our challenge is to go farther because our operational performance is not where it must be. We're risking our health, and we're risking our reputation. If we want Brookhaven to be viewed as a place worthy of investment, we must stop putting people in harm's way and strengthen operational perfor-



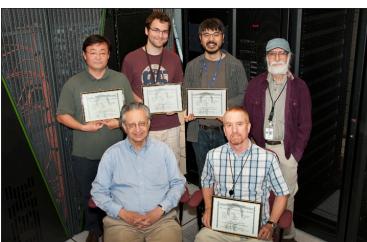
Sam Aronson during the all-employee meeting on Thursday, August 2

mance to prevent mishaps. The feedback I've received from the directorate stand-

downs and meetings, from the Sustained Excellence Improvement Agenda, and from individual comments from so many of you, tells me many of us recognize the seriousness of the situation and want to help the Laboratory improve as a whole.

One of the most valuable types of feedback is when someone takes a moment to speak up when he or she sees something dangerous or something that simply doesn't look right. We have a robust system for reporting safety concerns, and you can now find a highly visible "Report Concern" link on the upper-right corner of our intranet homepage.

Starting August 6, safety and operational professionals from several Battelle labs and... See Director's Update on p.2



## Scientists Honored for Groundbreaking **Matter/Antimatter Calculation** Scientists from BNL and RIKEN-BNL Research Center **Receive Ken Wilson Lattice Award for supercomputing** evidence of kaon particle's decay process

In March 2012, Physical Review Letters published results from an international collaboration of scientists' groundbreaking calculation that showed a kaon decay into two pions - a major first step in providing evidence of asymmetry in the universe, why there is more matter than antimatter. The scientists, including four from BNL and the **RIKEN-BNL Research Center** (RBRC) on site, were recognized at the 30th International Symposium on Lattice Field Theory held in June, when they were given the Ken Wilson Lattice Award for their major findings.

The annual award is given to recognize a paper that has broad impact to enable new research in lattice field theory, which is used to calculate the "strong" interactions between quarks and gluons. Taku Izubuchi, Chulwoo Jung, Christoph Lehner, and Amarjit Soni of Brookhaven and the RBRC shared the prize with other 12 collaborating scientists from Columbia University; the University of Connecticut; Washington University; the University of Edinburgh and the University of Southampton in the United Kingdom; and the Max Planck Institute for Physics in Germany. "This award duly recognizes a fantastic theoretical lattice gauge calculation on a fundamental experimental physics finding, namely charge-parity violation," said Nicholas Samios, RBRC Director.

Photo above: Awardees: (back row, from left) Chulwoo Jung, Christoph Lehner, Taku Izubuchi, Amarjit Soni from BNL and the RBRC, (front row, from right) Tom Blum from the University of Connecticut, with RBRC Director Nicholas Samios, in front of the new supercomputer at Brookhaven: QCDCQ.

puting Group. "It is exciting to work with great scientists and the most advanced tools of our time to learn why the universe is the way it is."

The subatomic particle decay process that the scientists calculated using some of the most powerful supercomputers in the world is the same process that four physicists at Brookhaven - James Christenson, James Cronin, Val Fitch, and Rene Turlay — first observed at Brookhaven's Alternating Gradient Synchrotron in an experiment in 1964. Cronin and Fitch won a Nobel Prize in Physics for this work, which revealed the first experimental evidence of a charge-parity (CP) violation: a flaw in the commonly held view of the time that the universe is symmetrical. The recent calculation builds on work done since 1964 and is a major development in testing facets of the Standard Model of Particle Physics - the theory to describe the fundamental particles of matter and how they interact. Major components of the calculation were done using the RBRC supercomputer QC-DOC. That supercomputer, and others, allowed the researchers to perform mathematical operations using new techniques... See Prize Winners on p. 3



Maki Kawai, Executive Director of Japan's RIKEN - a multidis-visited the Lab earlier this year and, with BNL Director Sam Aronson, signed a six-year extension of the current agreement regarding the physics program at the Relativistic Heavy Ion Collider and the RIKEN BNL Research Center (RBRC) at BNL. The program originated in 1997, was renewed in 2002, again in 2007, and now in 2012.

The signing followed a comprehensive review process by several advisory committees, all of which strongly endorsed RBRC's excellent science. The document was signed at a ceremony following a meeting of the RIKEN BNL Management Steering Committee. Included in the committee's commendations were RBRC's potential for making major scientific in RHIC's physics program

of the RBRC Management Steering Committee, RBRC and BNL observers, RIKEN administrative staff, and other distinguished attendees. discoveries in the most important questions in nuclear and particle physics, fostering international collaboration on

Research Center (RBRC) are: (front) Maki Kawai, Executive Director of

Japan's RIKEN, and Sam Aronson, BNL Director. With them are members

develop scientific leaders. In one recent collaboration, RBRC, BNL and scientists from the U.S., U.K., and Germany used the RBRC QCDOC supercomputer for much of the groundbreaking research reported in the Physical Review Letters article on the decay of the kaon into two pions that won the 2012 Ken Wilson Lattice Award (see story at left). In addition, RBRC will participate in future developments

three continents, and helping

of quantum chromodynamics, the theory that describes the nature and interactions of the basic building blocks of the universe.

Said Nicholas Samios, RBRC Director, "The program at RBRC has been extremely productive over this 15 year period involving major theoretical, experimental, and computational contributions to the study of Quantum Chromodynamics (QCD). In addition, RBRC has trained over 100 physicists in this field (with 54 having already attained tenure positions) and hosted more than 60 workshops...quite a record!"

Liz Seubert

of your organization; or you use a process in your daily work; or perhaps you are the recipient/customer of the end result. Whatever your involvement, your insight is an asset. It will help in identifying areas for improvement.

"I am honored to be recognized with my collaborators among our peers," said Izubuchi, a leader of the RBRC Com-

By Stasia Ann Scocca, CIP Project 📂 📔 📔 📂 Manager, Quality Management Office

**CIP Office Looks to BNLers** 

**For Next Improvement Projects** 

Since 2010, the Competitiveness Improvement Project (CIP) Office within the Quality Management Office (QMO) has been working with senior management and guiding CIP at Brookhaven Lab. CIP's purpose is to increase the operational effectiveness and efficiency of our repetitive business processes, making us more effective overall and attractive as the user facility of choice within the DOE national laboratory complex. CIP began as a Blueprint initiative and is now a permanent process at the Lab. We're pleased today to report improvements to our own process for soliciting ideas and selecting new projects to pursue.

I'd like to introduce a new feature on the QMO website that lets anyone at the Lab submit an idea for a CIP process improve-



ment project. To submit an idea, go to the CIP tab on the QMO site (*http://bit.ly/OL3vpn*) and click on "Submit Process Improvement Idea." You'll be taken to a form that asks for information including the "issues, problems, or opportunities for improvement" that you see with this process. These questions will help you begin to define a potential project's needs and goals. Please visit the webpage. We want to hear from you.

A process is an activity that transforms a resource (people, material, equipment) into a result (product, service, performance). What processes are you involved in every day or every week? Maybe you deliver a service; or provide information, material, or assistance for a process performed outside

Besides improving our own process for soliciting CIP ideas, we've made progress in other areas through CIP team activity. One great example is the new features the Guest, User, and Visitor (GUV) Center and the Guests & Visitors CIP Team have implemented to assist BNL guests and their hosts. Keep an eye out for an upcoming article about these new tools, including the Guest Boarding Pass, Guest Central, and Host Central.

The current CIP teams are continuing through different phases in the improvement cycle; some are measuring the current state, others are analyzing data, and others are in various stages of improvement, with... See CIP Office on p.2

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#### (continued from p.1)

CALENDAR OF LABORATORY EVENTS

#### • The BERA Store in Berkner Hall is open weekdays from 9 a.m. to 3 p.m. For more informa tion on BERA events, contact Andrea Dehler, Ext. 3347, or Christine Carter, Ext. 2873.

#### - REGULARLY -

#### Weekdays: Free English for Speakers Of Other Languages Classes Beginner, Intermed., Adv. classes, various times. All welcome. Learn English, make

friends. See http asp for schedule. Jen Lynch, Ext. 4894. Mon. & Thurs.: Kardio Kickboxing

\$5 per class. 12:15-1:15 p.m. in the gym (Bldg. 461). \$5 per class. Ext. 2873.

Mon., Tues., Thurs., & Fri.: Tai Chi Noon-1 p.m., B'haven Cntr (Bldg. 30), N. Rm. Adam Rusek, Ext. 5830, *rusek@bnl.gov*.

**Tuesdays: Hospitality Welcome Coffee** Will resume in September

#### Tuesdays & Wednesdays: Zumba Tuesdays: Noon–1 p.m., in gym (Bldg 461). Wednesdays: 5:15-6:15 p.m., at the Rec Hall (Bldg. 317). On summer break.

#### **Tuesdays: Toastmasters**

Two monthly meetings: 1st & 3rd Tuesdays, 5:30 p.m., Bldg. 463, Room 160. Guests and visitors welcome. www.bnl.gov/bera/activi

Tuesdays & Thursdays: Aerobic Fitness Will resume in September.

Tuesday & Thursday: Aqua Aerobics Will resume in September

Wednesdays: Ballroom Dance Will resume in September.

Wednesdays: Play Group Will resume in September

Wednesdays: Yoga Noon-1 p.m., B'haven Center (Bldg. 30). Free. Ila Campbell, Ext. 2206, ila@l

1st Wednesday of month: LabVIEW 1:30-3 p.m., Bldg. 515, 2nd fl. Seminar Rm. Free technical assistance from LabVIEW consultants. Ext. 5304, or Terry Stratoudakis, (347) 228-7379.

Thursdays: BNL Cycletrons Club 5 p.m., Brookhaven Center. First Thurs. of month. Andy Mingino, Ext. 5786.

Thursdays: Reiki Healing Class Noon-1 p.m., Call for location. Nicole Bernholc, Ext. 2027.

Thursdays: Postdoc Social Night vw.bnl. 6:30 p.m. ASAP Lounge (Bldg. 462).

Thursday: Judo Class 7:30 p.m. Gym (Bldg. 461). Tom Bald-win, Ext. 4556.

Fridays: Family Swim Night 5-8 p.m. Pool (Bldg. 478). \$5/family. Ext. 2873.

#### CIP Office from p.1 ...some approaching completion. Current projects include:

#### **Institutional Projects**

- Improve the Electronic **Experimental Safety Review**
- Develop an Integrated Quality Information System
- Improve on SBMS' document development and revision processes
- Understand the many components to space management

#### **Continuing Projects from** Fiscal Year 2011

Guests and Visitors Registration System (as noted

... Stony Brook University visited Brookhaven for a peer review at the request of the Brookhaven Science Associates Board of Directors. I thank the peer team for their time and I expect valuable feedback. The team will bring a fresh perspective as they observe, listen, and help us better understand our processes and how we can improve. We'll get the most value out of this assist visit by carrying out our work as we normally do.

#### **Our 10-Year Strategic Plan**

As noted during our allemployee meeting, improved

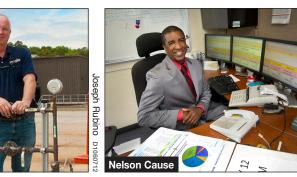
**BNL Director Aronson Gives Update on Lab** safety and operational excellence will help us deliver on our latest 10-Year Strategic Plan. We're working towards a smooth transition from the National Synchrotron Light Source (NSLS) to NSLS-II, and our commitment to the continued operations of the Relativistic Heavy Ion Collider (RHIC), including the transition to an electron ion collider (eRHIC), is unwavering.

The Lab's future includes intriguing options for the application of our accelerator technology. Of course, our contribution to energy solutions will continue to grow this is a vital part of our mission to support the country's energy needs.

As I mentioned during our meeting, DOE has asked us to develop a contingency plan in case major federal budget reductions force us to end RHIC between fiscal years 2014-18. This plan would include accelerating NSLS-II's availability and advancing our "discovery-to-deployment" emphasis even more aggressively, while preserving our world-leading accelerator science and technology research and R&D programs that are es-

sential for future nuclear physics and basic energy sciences facilities. We'd also look to accelerate and expand our materials science impact and our synthetic biology and data-intensive computing efforts. But, make no mistake, we're fully focused and committed to making the case for RHIC and eRHIC, which would help ensure the U.S. remains a world leader in nuclear physics research.

Visit the 10-Year Strategic Plan website to learn more about our strategic plan and the presentation to DOE: http://1. usa.gov/OM89DC.







# **Meet 2012 Brookhaven Award Recipients** Biggs, Cause, Dorsch, Golden, & Pate

Brookhaven Awards are given to recognize key contributors in support functions whose performance and achievements represent outstanding service to the Laboratory. The 2012 Brookhaven Awards were presented by Laboratory Director Sam Aronson in June, and the recipients were:

#### **Carter Biggs**

Carter Biggs, Physics Department, is recognized for his outstanding contributions to the design, construction and continuous improvement of the Relativistic Heavy Ion Collider's (RHIC) PHE-NIX detector gas facility.

This facility mixes and distributes nearly \$200,000 worth of research-grade gas per year, operates nearly autonomously 24 hours a day, 7 days a week during RHIC runs, and has maintained an uptime of essentially 100 percent for over a decade. The different gas systems in the facility are tuned precisely to the very specific needs of each detector subsystem to provide optimum performance. The gas facility operation is maintained by a sophisticated array of mechanical active control compoobtaining, analyzing and presenting data in ever-evolving and improving ways is an asset to all of BNL. He served as the first intern to the now Deputy Director for Operations, mentored many students and employees, developed innovative rate development processes and designed user-friendly reporting for the Facilities & Operations Directorate.

Cause was an essential contributor to the Leadership Action Plan/Blueprint Project Team for the implementation of the Integrated Facility Management model or IFM effort. He was also responsible for implementing an Earned Value Management System (EVMS) reporting process within the Facilities and Operations Directorate. He received high accolades from DOE and public recognition from the Interdisciplinary Science Building Project Manager as an important contributor to the quality of its project status reporting. Quality and continuous improvement underlie all of Cause's efforts.

in the planned transition of the groundwater restoration program from DOE's Office of Environmental Management to the Office of Science and has recently assumed responsibilities for the long-term surveillance and maintenance of the decommissioned High Flux Beam Reactor and Brookhaven Graphite Research Reactor facilities.

Finally, Dorsch has been an on-going supporter of the Community Advisory Council. He and his staff provide frequent, in-depth, accurate and transparent communications detailing the status of the BNL groundwater and soil clean-up program. His knowledge and understanding of community perspectives has been vital to how stakeholders view the Lab and its operations.

opment for the Interdisciplinary Science Building now under construction, and American Recovery and Reinvestment Act projects, claim support and other high profile activities that require detailed analysis and are subject to customer and public scrutiny. Her professionalism and willingness to help others across the Lab are Golden's trademarks, as are her dedication, accomplishments, and many friends and colleagues who respect and appreciate her camaraderie and sense of humor.

#### **David Pate**

Over his 25 years of employment at BNL, David Pate, Collider Accelerator Department, has been consistently recognized for his exceptional job performance, dedication, and contributions to the vari ous projects he has worked on, as well as for his community involvement. Pate started at the Alternating Gradient Synchrotron (AGS) neutral beam development group and then moved on to the Relativistic Heavy Ion Collider (RHIC) project in 1988. His career has always been focused on accelerator physics. He contributed to improving the AGS accelerator performance and building the RHIC collider. He stayed for one year at the European particle physics laboratory, CERN, in Switzerland, to work on the ATLAS detector in the Large Hadron Collider experiment, then returned to the Lab to work on the Energy Recovery Linac upgrade and research and development projects related to RHIC. Pate's knowledgeable, dedicated work and initiatives have been invaluable to BNL's achievements in accelerators.

- above)
- Hiring/On-boarding of New Employees
- Immigration Green Cards
- Scientific Proposals

#### **Directorate/Department Projects**

- Calibration
- Radioactive Waste Processing
- **Integrated Facility** Management Improvement Project

As current projects are completed and as the new fiscal year approaches, the Competitiveness Improvement Committee is looking for input regarding proposed improvement projects for the next year.

Although the CIP will not be able to address every improvement suggestion submitted through the new website, your input will help pinpoint areas in need of improvement and will be used to prioritize our projects.

nents driven by a computerized monitoring and feedback system.

Biggs is responsible for all of these components. The addition of new detector subsystems to enhance the scientific capability of PHENIX calls for unique and creative solutions for the gas facility. Biggs has consistently risen to the task and assured that each and every new subsystem meets and even exceeds its design goal.

#### **Nelson Cause**

Nelson Cause, Business Operations Directorate, has been a dedicated and valued employee for more than 20 years. His expertise in

#### William Dorsch

William Dorsch, Environmental Protection Division, manages the Groundwater Protection Group and is recognized for his extensive work in managing the BNL groundwater and soil clean-up programs for the past 15 years. He has played a key role in characterizing the extent of surface and groundwater contamination, improving understanding of the local hydrogeology and installing and operating 16 groundwater treatment systems. Annually, these systems treat approximately 1.5 billion gallons of water.

Dorsch has taken a lead role

#### **Sheryl Golden**

Sheryl Golden, Environmental Restoration Projects, who retired on May 1, 2012, first came to BNL in 1977 working for Associated Universities, Inc. (AUI), as an assistant auditor in the Internal Audit group. In 1982, she joined the administrative ranks in BNL's Reactor Division. She stayed at the High Flux Beam Reactor through its operation and shutdown in the late 1990s. During this very difficult time for the program and the Lab, she was part of the team that oversaw the closeout of the reactor program.

Golden joined the Office of Management Services in 2000 and ultimately joined Environmental Restoration Projects in 2003, working on the Brookhaven Graphite Research Reactor project until this year. She also supported the Earned Value System devel-

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#### Prize Winners from p.1

... that they developed to determine an unknown quantity that is important in understanding kaon decay and its relation to CP violation.

Earlier this year, QCDOC was retired and replaced with RBRC's next generation supercomputer, QCDCQ, which is now being used to complete the calculation of matter/ antimatter asymmetry and to address many other important issues.

"The new QCDCQ is already being used to perform calculations that are more significant and were not possible before," Izubuchi explained. "We look forward to many more interesting discoveries in the future."

— Joe Gettler

#### **Related Links:**

Supercomputing the Difference Between Matter and Antimatter: http://1.usa.gov/OHL17K Scientific Paper:  $K \rightarrow (\pi \pi)_{I=2}$ Decay Amplitude from Lattice QCD: http://bit.ly/NXZfDW

## See Something **Unsafe?** Call Ext. 8800.

# **OMC Welcomes Outstanding SBU Doctors-in-Training to BNL**

With the Occupational Medicine Clinic (OMC) here on site, BNLers are accustomed to receiving quality care that is convenient, confidential, and individualized. Under Manager Joe Falco, OMC staff live up to their mission statement of maintaining a proactive approach to health, including a healthy lifestyle, emotional health, disease prevention, and early detection.

Now the OMC is making even more use of its experience and expertise. The BNL Clinic is serving as a clinical rotation site to host doctors-in-training from Stony Brook School of Medicine's Preventive Medicine residency, one of the leading training programs of its kind in the country.

Said Falco, "Occupational Medicine is considered to be a Preventive Medicine field, and our whole focus is preventing illness and injury, and encouraging BNLers to lead a healthy lifestyle. The enthusiastic, energetic young residents we host get valuable clinical experience here. And in turn, they keep us on our toes at OMC, making



Stony Brook Preventive Medicine resident, Dr. Matthew Barnhart (second from right), with Occupational Medicine Clinic nurses (from left) Michael Thorn and Sue McCafferty, and doctors Carol Davis and Joseph Falco.

sure we're aware of all the latest research and trends in screening, prevention and health promotion."

Falco explained that BNLers can help train the outstanding young professionals who are hosted at OMC. When Lab staff go for a physical, they may be asked if they would be willing to have one of the residents perform the physical under the careful supervision of Falco or one of his OMC colleagues.

"You'll get an outstanding exam, excellent advice on prevention, and you can also feel good about the contribution you've made toward developing the next generation of health care professionals," said Falco.

"I am looking forward to furthering OMC's role in teaching, which, as a result of our worldclass research, is an important part of BNL's mission," he said. Liz Seubert

# Roger Sto

# Sarah Ackerman Explores How Cells Fare in Space

Sarah Ackerman, a junior at the State University of New York at Geneseo, did not have to look far for something to do this summer vacation.

A resident of nearby Stony Brook, she was already very familiar with the internship program at BNL. Her father, Andrew Ackerman, works at the National Synchotron Light Source.

"I've visited Brookhaven lots of times, and I realized that the program would be a good thing apply to," she said

Keszenmen thinks the defects may lead to one hidden benefit. "Cells defective in mitochondrial function might be more resistant to ionizing radiation," she said.

For the last six months. Keszenman has been working with connective tissue cells called fibroblasts in an effort to isolate the cells with mitochondrial defects. Ackerman's task is to characterize the experimental cells to confirm that they are defective. Once she has done that, they

## Sleep Screening Week, 8/13-16

The Sleep Screening week, offered twice a year, is one of the most popular items offered in BNL's Employee Assistance Program. The screening only takes 30 minutes and gives you guidance about how you may find answers to your sleep problem, via educational materials, websites, and community based sleep consultations.

Come in for a short sleep screening if you:

- Have trouble falling asleep or staying asleep
- Have daytime drowsiness or drowsiness while driving
- Waken in the a.m. feeling unrefreshed or with headache
- Have had recent weight gain, have high blood pressure, diabetes, or heartburn, especially if you are 40+ years
- Snore loudly

To obtain an appointment, contact Nancy Losinno, who heads the Employee Assistance Program, at nlosinno@bnl.gov or Ext. 4567. You will complete a short screening, be given educational materials about sleep, and be referred to appropriate medical resources in the community if further diagnostics are needed. Untreated sleep problems can create accidents on and off the job, long-term health problems, depression & problems getting along with others, excessive use of substances in order to fall asleep, and poor stress management.

## **One-on-One Retirement Counseling**

Consultants from Fidelity Investments and TIAA-CREF will come to Brookhaven to meet with employees on several days in August and September. The consultants will help you: understand the importance of protecting your assets against inflation, find the right allocation mix, learn about retirement income flexibility, and compare life-time income vs. cash withdrawal options.

## CALENDAR - WEEK OF 8/13 -

#### Mon.-Fri., 8/13-16

\*OMC Offers Sleep Screening Week See notice below, left.

#### Monday, 8/13

**Defensive Driving, Part II** 6 p.m. Brookhaven Center South Rôom

#### Wednesday, 8/15

\*BWIS Networking Luncheon Noon-1 p.m. Berkner Hall, Room B. All welcome. Lunch provided, RSVP. See notice below

#### — WEEK OF 8/27 —

#### Tuesday, 8/28

**IBEW Meeting** 

6 p.m. Centereach Knights of Columbus Hall, 41 Horseblock Rd., Centereach. A meeting for shift workers will be held at 3 p.m. in the union office. The agenda includes regular business, committee reports, and the president's report.

### **BWIS Networking Lunch** — All Welcome, 8/15

On Wednesday, August 15, Brookhaven Women in Science (BWIS) will hold a networking luncheon, noon-1 p.m. in Berkner Hall, Room B. Lunch will be provided. Please RSVP to Vinita Ghosh, ghoshvj@bnl. gov, if you plan to come. Nonmembers are welcome, and membership forms will be available should you wish to join BWIS. The membership fee of \$10 will be applied to 2013. Also welcome will be suggestions for future events and activities.

# **Arrivals & Departures**

| William Branigan Photon Scis |
|------------------------------|
| Kai Chen Physics             |
| Dajun Huang Instrumentation  |
| Pavol JuhasCMPMS             |
| Uduwanage Gayani Perera CFN  |
|                              |

- Departures -

Annick Anctil...... Sust En & Tech Danvers Johnston ..... CFN Andrew Rohkohl .....ITD

#### **Discounts for BNLers**

The BERA Employee Discount Program has a list of businesses giving BNLers a discount. The businesses are not recommended or endorsed by BNL or BSA. Any discounts may be discontinued without notice. For the list, go to www.bnl.gov/bera/ and click on "Employee Discounts" in the lefthand column, or check in at the BERA Store, Berkner Hall.

#### School Supply Drive

Ackerman is interning under the Biology Department's Deborah Keszenman, a beamline scientist for NASA's Space Radiation Laboratory (NSRL). Keszenman studies the effects of different types of radiation on cells in order to understand how to protect astronauts from radiation in space. Cosmic radiation can cause genetic mutations, cancer, and premature aging.

Keszenman is currently investigating cells with defective mitochondria. Mitochrondria are mainly responsible for producing energy in the cell, but they also produce free radicals atoms with unpaired electrons. When combined with ionizing radiation, free radicals can seriously damage the cell's DNA.

Cells with defective mitochondria have lower energy and fewer chemically reactive molecules containing oxygen.

will test just how sensitive those cells are to ionizing radiation.

"This issue with astronauts is that they will be exposed to constant ionizing radiation as they travel to Mars, which takes three years one way," Ackerman explained. "So, it is important to understand everything about cells' reaction to low dose radiation to keep them protected and understand the risks."

Ackerman appreciates her mentor's patience as she learns a host of new laboratory techniques. She hopes that her time at Brookhaven will help her in college, where she assists a professor in his genetics research.

"Deborah is very helpful. She lets us have freedom, but she also shows us what to do," Ackerman said. "My experiences here will be really good practice for when I go back to school in the fall." — Aviva Hope Rutkin TIAA-CREF: A TIAA-CREF consultant will visit BNL on August 23 and 29; and September 7, 17, 20, and 27. For an appointment, call 1-800-732-8353 or go on-line at www.tiaa-cref.org/bnl and select "contact" on the bottom of the page then select "contact us on line" and "schedule a personalized advice consultation."

Fidelity Investments: A Fidelity Investments representative will visit BNL on September 21. To schedule an appointment, please call 1-800-642-7131 or go online at www.Fidelity.com/atwork/reservations.

# **Upcoming BERA Trips**

Purchase tickets at the BERA Store in Berkner (Bldg. 488), which is open Monday through Friday from 9 a.m. to 3 p.m. All tickets are non-refundable and are for those 21 years and older unless accompanied by BNL employee/parent. More details are available online: www.bnl. gov/bera/recreation/events.asp.

"Do As You Please" in NYC: Saturday, August 11. Depart BNL at 10 a.m., drop off near

Bryant Park, and leave the city at 7 p.m. \$12 per person, no charge for children age two and under who sit on a parent's lap. U.S. Open Tennis: Tuesday, September 4, in Queens, NY. Note: This is a regular workday. Tentative times: depart at 8:30 a.m., leave the event at 7:30 p.m. \$60 per person, includes admission and transportation. **Greenwich Village Scaven**ger Hunt: Saturday, September

BERA is collecting school supplies for local families who cannot afford pens, pencils, backpacks, etc. for their students. Please donate supplies at Bldg. 400 lobby or the BERA Store. Berkner Hall. Cash is also welcome, please give to Chris Carter or Joanne Rula-Delles, Bldg. 400, or at the BERA Store.

22. Depart BNL at 9 a.m., leave city at 5 p.m. Scavenger hunt 11 a.m.-1:30 p.m. and "Do As You Please" until 5 p.m. For ages 12 and older. \$40 per person. NASCAR Race: Sunday, September 30, in Dover, Delaware. Depart BNL at 5 a.m., leave Dover at 6 p.m. \$200 per person includes admission, program, souvenir, and transportation on luxury bus with catered food and beverages.

L.I. Ducks Baseball: Tickets are available at the BERA Store.



# Higgins Helps Bike Riders Know the BNL Rules of the Road

Many BNLers and visitors to the Lab ride bicycles around the site's roads. But how are the Lab's bike safety rules communicated? And what do you do if you see someone riding without a helmet, or on a sidewalk? Watch the video with Jim Higgins to find out: *http://bit.ly/RmtR1n*.

## **Safety** makes science possible at Brookhaven National Laboratory

## Classified Advertisements

#### Placement Notices

The Lab's placement policy is to select the best-qualified candidate for an available position. Candidates are considered in the following order: (1) present benefits-eligible employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present benefits-eligible employees within the Laboratory; and (3) outside applicants. In keeping with the Affirmative Action Plan, selections are made without regard to age, race, color, religion, national origin, sex, disability or veteran status Each week, the Human Resources Division lists new placement notices, first, so employees may request consideration for themselves, and, second, for open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people. Except when operational needs require otherwise, positions will be open for one week after publication. For more information, contact the Employment Manager, Ext. 2882. Access current job openings on the World Wide Web at www.bnl.gov/HR/jobs/

#### To apply for a position, go to *www.bnl.gov*. Select "Job Opportunities," then "Search Job List."

LABORATORY RECRUITMENT - Opportunities for Laboratory employees only. Refrigeration and Air Conditioning Engineer (TERM APPOINTMENT) - Under minimum supervision constructs, installs, repairs, maintains and operates refrigeration, air conditioning, ventilating and auxiliary and related equipment. Will perform the same work on air compressors and vacuum pumps whether or not associated with the above equipment. Shift workers assigned to Building 600 acknowledge all Laboratory alarms in the control room and make appropriate notifications. Please apply to Job ID # 16178.

#### Motor Vehicles

11 TOYOTA RAV4 (MODEL 4432K) – 11.5K mi. Silv met, excel cond, 2.5L DOHC 4cyl w/ dual vvt-i, 4spd, awd, a/t, a/c, p/s, p/w, abs, w/flr mats, r/rack. \$18,500 neg. 229-6162.

11 H-D WIDEGLIDE - w/PowerCommander, Vance & Hines pipes, S&S air

tires, needs some work. \$2,500. 878-0331. 99 DUCATI SPORT TOUR 4 – 8.8K mi. Bike is mint. Ready to ride. call for more details. \$4,500 neg. John, 772-359-9198. 98 HONDA ACE 750 – 13.5K mi. excel cond, gard kept, rec. tuned, new tires, w/ saddle bag, windshield & luqqade rack.

00 AUDI 2000 A6 - 128K mi. new brakes, batt,

\$2,500 neg. Bob, Ext. 5163, 312-0841. 97 HONDA ACCORD - 138.3K mi. 4dr, sedan, a/t, p/s, c/c, am/fm/CD, no/a/c, reg maint'd, gd cond, new brakes, sunroof, avail Aug-end. \$2,200 neg. 512-2105.

96 H-D FLH – w/93ci S&S Sidewinder kit, S&S E carb, PowerCommander, V&H true duals & 6-spd trany, solid tourer. \$7,500 neg. Dave, 902-5453.

89 TOYOTA CAMRY – 160K mi. Orig owner, new AM/FM CD MP3 Stereo, cold air cond. \$500. 404-6926, bourquin@bnl.gov.

#### Marine Supplies

MARINE SEXTANT – Davis Instrumetns Mark 3; in orig box, \$60 new, ask \$30. Lynda, Ext. 7235 or fitz@bnl.gov.

#### Tools, House & Garden

ABOVE GROUND POOL – Doughboy 18' round, excel cond, new sand filter, 7yrs old, \$1000/neg. Judi, Ext. 7430, 286-6492. CHANDELIER – beautiful glass & brass, excel cond, \$100, pic avail. difilip@bnl.gov.

#### **Furnishings & Appliances**

8 SEATER PATIO SET - 8 chairs, One large table, one side table. Barely used, you pick up, \$200. dmcarthur@bnl.gov.

AS SEEN ON TV – Rotisserie - Set it and forget it; has been sitting in my garage (dusty) \$10. Michelle, mbarsalo@bnl.gov. DINING ROOM – Bought fr. Stanley's

Furn, dark wood, Hutch, table/2 leaves & table pads, seats 10, 6 chairs, pic avail, \$1,200. difilip@bnl.gov.

FREEZER/PARTS WASHER – Freezer, United, heav duty upright, 60x28x24, gd working cond/\$100; Parts washer/Steel 20-gal w/flex nozzle & tray, \$75. 902-5453.

IKEA FURN – TV, Home Theater, bought Oct 2011, like new, moving sale, u-pic-up as is, price/neg, pics, prices at http://tinyurl.com/7xpnhpx. Dipti, Ext. 2398.

MICROWAVES – Emerson, .9 cu ft, 900/ watts, MW8997W, \$25; GE Mwave, 1.1 cu ft, 1100/watts, WES1130DMBB-in orig

# Halfway Around the Storage Ring: 75th Magnet Girder Moved Into NSLS-II



At the end of July, construction at the National Synchrotron Light Source II (NSLS-II) project was 80 percent complete. And on August 3, a noteworthy milestone was reached: the 75th magnet girder was moved into the NSLS-II storage ring. Since NSLS-II will have 150 girders in all, this marks the halfway point of installation. The 20,000-pound girder is floated on air casters as it is carefully pushed and pulled into the tunnel. The milestone 75th girder will be placed in its final position in a few weeks, and complete alignment will come later. All the girders are expected to be installed by July 2013. See more photos at http://bit.ly/NSLSII75MAGNET.

GAME TABLE (TOP) – Poker & Blackjack, sits on a table, never used/\$40. Mary, Ext. 6344 or phraner@bnl.gov.

GOLF SET R/HAND PLAYER – Wilson Profile Sr Golfer Pkg Set, slightly used 12 pcs, w/stand bag, 2/shldr straps, head covers, \$190. 929-3388, phraner@bnl.gov. KODIAK K235 CAMPER – excel, 23'l, slide out, dinette, couch, 2 q/beds, m/wave, oven, stove, frig/frzer, full ba, heat, a/c, awng, antenna, cable, more, sleeps 6+, \$8000. 744-9308. MEN'S MOUNTAIN BIKE – 2012 Fuji Tahoe 4.0, 19", less than 50 mi, like new, list/\$1200, ask/\$900. Mark, Ext. 3970.

PIANO AND BENCH – Yamaha, brown walnut, excel cond, \$1,500. 288-3112.

SKATEBRDS/PAINTBALL GUNS – 3 skatebrds; 1 ZooYork/Deck only, 1 Enjoi & 1 Plan B full brds/\$125/all, Tippman Gryphon & T'man 98 Cust., like nw/\$150/both. tlazar@bnl.gov. WET SUITS - 3-2-1 mm suit, 1/pc full, ML, used once, \$45, 3/mm full wet suit, teen L, \$35. Bill, Ext. 2906, 929-6189.

#### Audio, Video & Computers

10WESTCOAST CUSTOMS WCC-PB500 – RMS Pwr Range, 250w, peak pwr handling: 500w, built-in Orion amplifier, \$250. 561-1228 or ascavelli@albany.edu.

COMPUTER & SLINGBOX – AMD Athlon XP 2400+, 3GB RAM, 500GB HD, BenQ 20.1" LCD, w/less kybrd/mouse, w/Windws XP, \$275; Sl/box Pro-HD lk new in box/\$240. Ext. 3970.

LCD TV – 17" flat screen TV w/built-in DVD player, Articulating wall mount incl, \$50. Rick, Ext. 6183 or backofen@bnl.gov.

PRINTERS – HP Offc Jet wide format printer br. new \$100; HP Desk Jet 9800 wide format printer/used, excel cond, \$60. 929-3388.

TOSHIBA TV – 14", /\$25; 20" Panosonic tv/\$35. 929-4978 or mjulian@bnl.gov.

#### **Community Involvement**

EMS FUNDRAISER – support Rocky Point Fire Dept EMTs, breakfast at Applebees in Miller Place, \$10/ticket Sep 22, 8am–10am. Mark, Ext. 7978, 744-9308.

GREEK CHURCH FESTIVAL – 8/23 - 8/26 (Port Jeff) Food, drinks, music, fireworks. Raffle \$100 - win cars (Mercedes Benz GLK), boat, \$10K cash, trip etc. Call me for tickets. http:// tinyurl.com/96bxdf9. Maria, Ext. 7340. ESPN AIR HOCKEY TABLE – Glow in the dark, \$30, u-pic-up. dmcarthur@bnl.gov. KIDS PLAYARD – Todays's Kids colorful plastic playard: 2 sets, 6 panels in ea, ea panel 28"w, 22"L, gd cond, \$80/neg. Alexander, Ext. 3712 or shura@bnl.gov.

TICKETS – craft wine and beer festival at Martha Clar, 4 Tkts avail, Aug 11th at 2pm. deb, 334-7809.

TICKETS: LI DUCKS 8/4/12 – 4, w/VIP access to Duck Club, 7:05 pm; Sec 205, Row J, Seats 7-10, \$40/neg. Anna, Ext. 7132 or asweet@bnl.gov.

TOYS – Playskool BBQ w/play food/\$10, Toss Acros/\$10, Play Hut/\$20, FP Bsktbl Hoop/\$20, Smartcycle w/2 games/\$40, HandyManny Wkbnch/Tools/\$40, pics. difilij@bnl.gov.

TUFF BIN STORAGE BOX – All purp. Ig capac., blk, molded-in hasps for added sec, rugged foam construc, 36"Lx21"dx19"h Used \$30. Mary, Ext. 6344.

VEGGIE CLUB – Remainder of my veggie club season for \$200. Laiman, Ext. 8113.

ZARKANA TICKETS – 2, for Cirque Du Soleil's Zarkana. Sat 8/25, 3pm, Radio City Msic Hall, 2nd Mezz 5, Rw D, 505 & 506, \$150 face value/ both, sell for \$100. Deborah, Ext. 5664.

#### Wanted

CAR – live on-site in BNL apt and need transportation, pls email or call. 347-265-4749 or plane83@gmail.com.

FIREARMS – wanted new or old, will pay fair \$\$ depending on cond. Remember, no firearms on BNL site. Joe, 487-1479. POP TOPS FROM SODA/BEER CANS – Collecting for Shriner's Children's Hospital. Please send or drop off @ Bldg. 400A, Transportation Office. Paula, Ext. 2535.

TRADITIONAL ALL WOOD BDRM SET – bed frame, dresser, night table, mattress a plus, will pay reasonable price. brookhaven@optonline.net.

WANTED: TV-20" AND LARGER – Looking for a good used TV. 20" and larger. Charlie, ccardone@bnl.gov.

#### For Rent

MILLER PLACE – new, immac apt, 1 lg bdrm, l/r, full ba, eik, own therm, quiet n'hd off 25A, nr Cedar Beach, SBU, all utils/cable/ int/incl, no pets smkg. \$950/mo. 235-8217.

N.SHIRLEY – 1 bdrm furn apt, grnd flr, quiet area, pvt ent/yd, close to lab, walk to store, util incl, no smkg/pets, 1 mo rent/sec. \$850/mo. Ext. 3849.

RIDGE – oversized, legal 1 bdrm apt, a/c, util incl, no pets/smkg, 1 mo sec. \$1,300/ mo. Tony, 275-0694.

RIDGE – eik, all new applis, full ba, l/r, single occup, all utils incl, 1 mo sec/1 mo rent, job info & 2 refs req, avail now. \$850/ mo. Grace, 839-6957.

RIVERHEAD – 3 bdrm, 2 full ba, ranch, kit, dw, l/r, d/r, w/d, gar, new windws & furn, nr shops, no smkg/pets, refs, credit ck reqd, 1/ mo sec + util, Sec8 ok. \$2,150/mo. 512-6470. ROCKY POINT – 2 bdrm 2nd flr apt, nr

beach, water views, priv prkg, eik, no pets, gd for single prof, quiet area w/ beautiful scenery, \$1,275/mo. 849-6430.

SHOREHAM – 1 bdrm furn apt, I/r, d/r, full kit & ba, no smkg/pets, pvt ent/drvwy, util, incl 1/mo sec 5min to Lab. \$1,150/mo. Judy, 375-7959 or judyb55@optonline.net.

YAPHANK – spacious 2/bdrm apt, full size windows, //r, eik, storage, f/bth, priv ent, no smkg/pets. \$1,350/mo. 495-7853. CANCUN, MEXICO – Dec 1-8, Villa sleeps 6/\$1,000, suite sleeps 4/\$800 or 1 bdrm lockoff/microwave/coffee refrig. \$600/ mo. 352-509-4265.

#### For Sale

CHESTERVILLE, ME – LAKEFRONT: half acre owned w/4-way ownership of 50' w'front on Parker Pond, Kennebec Cnty, Perc tested, septic design done, approved for 3-bd home. \$30,000 neg. Ext. 4475.

CORAM – Ig 1 bdrm co-op, updated kitch & b/r, laundry across from unit, in/outdr pool & gym. \$104,900. Warren, Ext. 8329 or whalbig@bnl.gov.

MANORVILLE – 8+ acres in Horse Country-Backs to Pine Barrens, Trails, Peconic River, expanded Cape w/lg rms, 4 bdrm, 3 bth, lg eik, den, lr/dr, http://tinyurl.com/ cz5459c. \$525,000 neg. 208-3066.

PORT JEFF STATION - Ig upper 1 bdrm,

cleaner, Dyno tuned, excel cond, w/OEM parts avail. \$13,000 neg. Dave, 902-5453.

08 FORD EDGE SEL – 34K mi. Sync Computer, new tires, s/roof, chro. factory wheels, a/c, p/w, p/d, p/l, rem strt, 6/CD Chngr/ SAT Radio, grt cond. \$17,200 neg. 872-9268.

03 FORD FOCUS – 102K mi. origl owner, v/gd cond. \$2,800 neg. 828-6884.

03 TOYOTA CAMRY – 110K mi. XLE V6 3 ltr eng, a/t, a/c, c/c, lthr, dual htd/pwd seats, 6CD, m/rf, new tires, drives v.well, pics http:// tinyurl.com/c64rfpo. \$8,500 neg. Eli, Ext. 5910.

03 CHRYSLER SEBRING CONVERTIBLE – 66K mi. LXi 2.6 ltr, a/t,a/c, c/c, abs, lthr int, pwd drvr seat, CD/FM/AM, new wtr pump, t-belt, pics. \$4,800 neg. istavitski@bnl.gov.

02 DODGE STRATUS ES – 140K mi. 4 dr V-6, Gold, tan Ithr int, reblt eng w/6 cd chngr, satellite antenna, fully tuned ready to go. \$3,450 neg. Charlie, 681-9800.

01 TOYOTA TACOMA - 43.3K mi. 4-cyl, 2wd, 4/spd a/t, a/c, 2.4 ltr, am/fm/cass, 4 spkrs, blk, styld steel wheels, cargo bed liner, more, excel mech. \$7,500. Mary, Ext. 6344. box/\$50. Maryann, Ext. 4705, 929-4978.

MINI-FRIDGE – 2.7 cu ft, approved for SUNY dorms, v/gd con/\$45, Bill, Ext. 2906, 929-6189 or behrens@bnl.gov.

OAK MANTLE SHELF - 6'L, 6" W; Pics avail; \$60. Ext. 4905, mbarsalo@bnl.gov.

ROLL TOP DESK – Cylinder roll top, hunter green & dark oak, Yield House, a few dings but in gd shape, pics avail, \$100. Kelly, Ext. 8938.

SOFA-BED – dble, excel cond, \$150/neg. Alexander, Ext. 3712 or shura@bnl.gov.

TV ARMOIRE – Thomasville Summer Cottage, w/wash finish, beadbrd fr & sides, 70"Hx41"Wx24"D, openg 34"Hx 38"W, fits up to 40" TV \$750/neg, pics. Ext. 8938.

TV ARMOIRE/WARDROBE – like new, lt wood, w/3 drwrs & shelf, 68"H x 40"W x 21"D, \$375, pics. 457-0132, tcutrone@bnl.gov.

#### Sports, Hobbies & Pets

BEAGLE PUPPIES – A.K.C. reg, pure breed, all shots, grt family pets/hunting, 8 avail. Frank, 965-1587.

FUNDRAISER – On Aug 11, for Stephen Peragine who was involved in a motorcycle accident. Support will be greatly appreciated. For info please see www.supportstephen. com. Lauri, Ext. 7090, lperagine@bnl.gov.

#### Yard & Garage Sales

MANORVILLE – Gar. Sale, Sat & Sun Aug. 11 & 12, 8a-4p, 317 Dayton Ave. 334-1462.

#### Miscellaneous

AUDI & VW REPAIR – Certified VW tech w/8 yrs dealer exper, all types repairs,, Dealer parts & service, reasnble prices. Estimates, ref avail. William, 484-9888.

CAR SEAT – front facing/\$5; booster seat/\$5. Prad, 879-5263.

CHARCOAL GRILL – Master Forge Patio Barrel, steel ext, 16"x18" cooking surface 280 sq in, new/\$69, used once, ask/\$50, neg. Mary, Ext. 6344 or phraner@bnl.gov. FARMINGVILLE – fully furnd legal apt, l/r, lg bdrm, full kit/ba, priv ent/drivwy/yd, util. incl, cable, own therm., no smkg/pets, 1 mo sec/rent. \$1,000/mo. 732-2472.

MANOR PARK – bsmt apt, avail now, lg bdrm, lr/kitch combo,full bath, priv ent&off rd prkg, no smkg/pets, utils incl, 1 mo sec req. \$1,000/mo. Gina, 399-8491.

MASTIC – Share Victorian hse, nice n'borhd, nr all, 8 min BNL, heat, TV cable, int, I/r, d/r, f/p, new big eik, own bdrm, all incl, no smkg/pets, 1 mo sec. \$800/mo. 339-3444.

MASTIC – 3 Bdrm hse, 2 full ba, formal I/r, d/r, f/p, new eik, quiet, nice n'hd nr all, 7 min to BNL, no smkg/pets, 1 mo sec + util. \$2,250/mo neg. 339-3444.

MIDDLE ISLAND – 2 bdrm mint condo, 1st fir, bamboo firs, eik, steel applis, I/r & den; 2nd fir: 2 bdrm, laundry area, full b/r & w/in closet, \$1,700/mo neg. 384-5472.

MILLER PLACE – share furnd Colonial home in prof resid area, 10 mi to BNL, int, a/c/heat, TV cable, own bdrm, all incl responsible no pet non-smkr. \$750/mo. 744-8386. 1 bath co-op, eik, updated applis/win, dows, a/c, d/w, next to pool/grills, Indry on site. \$75,000. Megan, 828-2743.

RIDGE – mins to Lab, 3 bdrm, 1 ba, I/r, I/r, laundry, granite kitch, new applis, 1 car gar, cac, igs, full finish bsmt, new roof, wood firs. \$259,000 neg. Joe, Ext. 3252 or jcosentino@bnl.gov.

RIDGE – custom mint Colonial, 1 priv acre, many amenities, For sale by owner.com, List ID" 23916097, Open House, Sat, 8/19, 11a to 3p. \$362,500. Ray, Ext. 3541.

RONKONKOMA – 5 bdrm, 3.5/baths, both formals, updated kitch & ba, 2/masters, all new lighting, finished bsmt, igs, new fencing. \$390,000. dmcarthur@bnl.gov.

#### Services

A list of services performed by BNL employees is available on the intranet homepage under "See all ads." These services cannot be accessed from offsite. Contact Ext. 2346 or Iseubert@bnl. gov for a paper or email copy.

# Bulletin

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