the Bulletin

BROOKHAVEN NATIONAL LABORATORY

Vol. 60 - No. 7 March 10, 2006

Samuel Aronson Named as AAAS Fellow

Roger Stoutenburgh D0150405

Samuel Aronson

Samuel Aronson, BNL's Associate Laboratory Director for High Energy & Nuclear Physics (HENP) , has been awarded the distinction of Fellow by the American Association for the Advancement of Science (AAAS). The award was presented at the 2006 AAAS Annual Meeting in St. Louis, Missouri, on February 18.

The honor of being named a Fellow recognizes individual AAAS members for their "efforts toward advancing science or fostering applications that are deemed scientifically or socially distinguished." This year, 376 of the more than 138,000 members were elevated to the rank of Fellow.

Aronson was cited for his "leadership in the science and management of experimental particle physics, especially heavy ion physics at Brookhaven National Laboratory." In his position, he is responsible for overseeing a $190-million annual budget and about 750 employees. The HENP directorate encompasses the Collider-Accelerator Department, the Physics Department, the Superconducting Magnet Division, the Instrumentation Division, and the Center for Accelerator Physics.

"It's an honor to be recognized by the AAAS. Nuclear and particle physics have had a long and productive tradition at the Laboratory. A remarkable group of staff and users in the international scientific community have produced many important discoveries over the years," Aronson said. — Laura Mgrdichian

General McCaffrey Visits Brookhaven Lab

Focuses on PET studies, Homeland Security

Barry McCaffrey, retired four-star general from the U.S. Army, visited BNL on March 1, with a view to using his specialized experience to help the Laboratory focus on ideas to increase its sponsorship in areas related to homeland security and the understanding and treatment of drug addiction. McCaffrey, who had served as the Commander-in-Chief of the U.S. Armed Forces Southern Command, coordinating all national security operations in Latin America, had also served as the Director for Strategic Plans and Policy on the Joint Chiefs of Staff. In addition, he had followed this distinguished record by serving as Director of the Office of National Drug Control Policy under President Bill Clinton, 1996-2001. McCaffrey's visit to BNL included tours of the Positron Emission Tomography imaging facility, the Radiation Detector Testing and Evaluation Facility, the National Synchrotron Light Source, and labs developing nuclear-detector instrumentation, giving him first-hand contact with several BNL scientists and an opportunity to learn more about some of the Lab's research and development programs.

Commented Associate Laboratory Director for Energy, Environment, & National Security Ralph James, who accompanied McCaffrey around the Lab, "The General's recommendations and perspectives on ways to generate new business were appreciated by all tour participants."

Joseph Rubino D2620206

General Barry McCaffrey (right) and Ralph James (center), Associate Laboratory Director for Energy, Environment, & National Security, talk at BNL's Radiation Detector Testing & Evaluation Facility with Carl Czajkowski, who heads the Detector Development & Testing Division in the Nonproliferation & National Security Department.

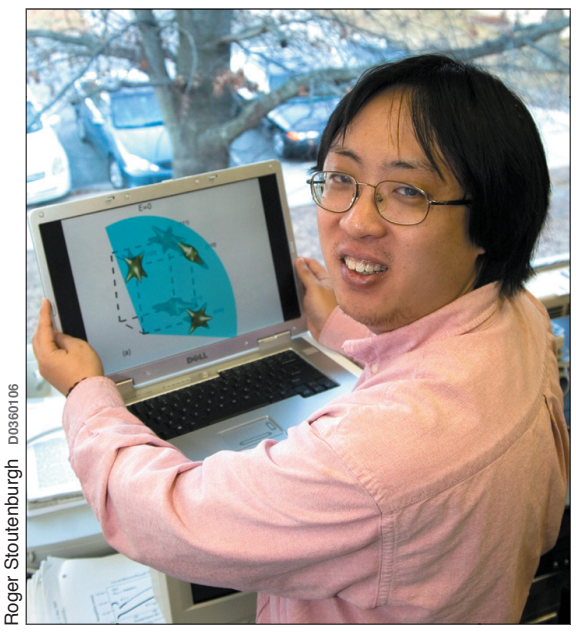
'Ferroelectric' Material Reveals Intriguing Behavior

May lead to new uses in electronic devices

In electronics-based technologies, metal-oxide compounds known as "relaxor ferroelectrics" often make up key circuit components due to their unique electrical behavior. They are good insulators and can sustain large electric fields, making them excellent at storing electric charge. They can also turn a mechanical force, like squeezing, into electrical energy.

Recently, scientists at BNL investigated the poorly understood origin of these abilities — with surprising results. This work, which may lead to new ways to use relaxor ferroelectric materials in electronic devices, is published in a series of articles in *Nature Materials* 5, 134, (2006), and *Physical Review B* 72, 214106 (2005). The research was funded by the Office of Basic Energy Sciences within DOE's Office of Science, the U.S. Office of Naval Research, and the Natural Science and Research Council of Canada.

For this research, the group used the neutron scattering facility at the National Institute of Standards & Technology, and high-energy x-rays at beam line X-17B-1 at the Lab's National Synchrotron Light Source (NSLS) to study a characteristic feature of relaxor ferroelectrics — billionth-of-a-meter-sized sub-regions that each carry a tiny electric field. These "polar nanoregions" (PNRs), embedded within the material's crystal lattice, are thought to produce the materials' intriguing electrical traits, but little is known about them. The BNL team, led by physicist Guangyong Xu of the Condensed Matter Physics & Materials Science Department (CMP/MSD), and including the late Gen Shirane of CMP/MSD and Zhong Zhong, NSLS Department, studied PNRs by subjecting a relaxor ferroelectric sample to a strong external electric field.



Roger Stoutenburgh D0360106

Guangyong Xu

"We noticed that the weak PNR fields rotated spatially but resisted lining up with the powerful outside field," said Xu. "This is very surprising and extremely interesting, as we know of no other material in which this has been observed. This finding could lead to new uses for these materials, such as extremely sensitive transducer devices that convert mechanical or light energy into electrical energy." — Laura Mgrdichian

For more details on this research, see www.bnl.gov/bnlweb/pubaf/pr/PR_display.asp?prID=06-06.

413th Brookhaven Lecture

Fischer on 'The Quest for High Luminosity in Hadron Colliders'

In 1909, by bombarding a gold foil with alpha particles from a radioactive source, Ernest Rutherford and coworkers learned that the atom is made of a nucleus surrounded by an electron cloud. Ever since, scientists have been probing deeper and deeper into the structure of matter using the same technique. With increasingly powerful machines, they accelerate beams of particles to higher and higher energies, to penetrate more forcefully into the matter being investigated and reveal more about the contents and behavior of the unknown particle world.

To achieve the highest collision energies, projectile particles must be as heavy as possible, and collide not with a fixed target but another beam traveling in the opposite direction. These experiments are done in machines called hadron colliders, which are some of the largest and most complex research tools in science. Five such machines have been built and operated, with Brookhaven's Relativistic Heavy Ion Collider (RHIC) currently the record holder for the total collision energy. One more such machine is under construction.

Colliders have two vital performance parameters on which their success depends: one is their collision energy, and the other, the number of particle collisions they can produce, which is proportional to a quantity known as the luminosity. One of the tremendous achievements in the world's latest collider, RHIC, is the amazing luminosity that it produces in addition to its high energy.

To learn about the performance evolution of these colliders and the way almost insurmountable difficulties can be overcome, especially in RHIC, join Wolfram Fischer, a physicist in the Collider-Accelerator (C-A) Department, who will give the next Brookhaven Lecture, on "The Quest for High Luminosity in Hadron Colliders." The talk will be held in Berkner Hall at 4 p.m. on Wednesday, March 15, and the speaker will be introduced by C-A Chair Derek Lowenstein.

Fischer earned his Ph.D. in accelerator physics with work at CERN in Switzerland, and DESY in Germany. He joined BNL in 1995 and was a leader of the team that established a new machine record for heavy ion luminosity in RHIC in 2004. He is now C-A's Deputy Head of the Accelerator Division, and the Accelerator Physics Manager within the U.S. Large Hadron Collider Accelerator Research Program.

Refreshments will be offered before and after this free lecture, which is open to the public. To join the lecturer for dinner at a restaurant off site after the talk, contact Anna Petway, Ext. 4776. — Liz Seubert

Roger Stoutenburgh D1480404

Wolfram Fischer

INSIDE NEWS: BNL SPONSORS GREEN INSTITUTE, BNL WINS TWO DOE P2 AWARDS

CALENDAR
OF LABORATORY EVENTS

- *The BERA Sales Office is located in Berkner Hall and is open weekdays from 9 a.m. to 3 p.m. For more information on BERA events, contact Andrea Dehler, Ext. 3347, or Christine Carter, Ext. 2873.*
- *Additional information for Hospitality Committee events may be found at the Lollipop House and the laundry in the apartment area.*
- *The Recreation Building (Rec. Hall) is located in the apartment area.*
- *Contact names are provided for most events for more information.*
- *Calendar events flagged with an asterisk (*) have an accompanying story in this week's Bulletin.*

— EACH WEEK —

Weekdays: Free English for Speakers Of Other Languages Classes
Beginner, Intermediate, Advanced classes. Various times. All are welcome. Learn English, make friends. See www.bnl.gov/esol/schedule. html for schedule. Jen Lynch, Ext. 4894.

Mondays & Wednesdays: Pilates
Mondays at noon, Wednesdays at 5:30 p.m., both in Rec. Hall. 9-week session, $60 for once a week, $70 for twice a week. Registration is required. Christine Carter, Ext. 5090.

Mondays & Thursdays: Kickboxing
$5 per class. Noon-1 p.m. in the gym. Registration is required. Christine Carter, Ext. 5090.

Mon., Wed., & Fri.: Tai Chi
Noon-1 p.m., Brookhaven Center North Rm. Adam Rusek, Ext. 5830, rusek@bnl.gov.

Tues. & Thurs: Aerobics
5:15-6:30 p.m., Rec. Hall. 10 classes for $40, or $5 per class, pay as you go. Pat Flood, Ext. 7866.

Tues. & Thurs: Aqua Aerobics
5:15-6:15 p.m. $20 to attend once a week, $40 to attend twice a week. For more information, call Ext. 2873.

Tues. & Thurs: Jazzercise
Noon-1 p.m., Rec. Hall. $88 for twice-a-week eight-week session, you may use the membership at several Jazzercise locations. Christine, Ext. 5090.

Tues. & Thurs.: Ving Tsun Kung Fu
Noon-1 p.m., Brookhaven Center, North Room. $80/month or $10 per class, pay as you go. Taught by Master William Moy. Scott Bradley, Ext. 5745 or bradley@bnl.gov.

Tue., Thu. & Fri: Upton Nursery School
8:30 a.m.-noon, Rec. Hall. 2- and 3-day programs available. Kati, 821-4131.

Tuesdays: Welcome Coffee
10 a.m-noon, Rec. Hall. First Tuesday of every month is special for Lab newcomers and leaving guests. Lisa Yang, 979-3937.

Tuesdays: BNL Music Club
Noon, North Room, Brookhaven Center. Come hear live music. Joe Vignola, Ext. 3846.

Tuesdays: Jiu Jitsu Club
6:30-7:30 p.m. in the gym. All levels, ages 6 and above. $10 per class. Tom, Ext. 4556.

Tuesdays: Toastmasters
1st and 3rd Tuesday of each month, 5:30 p.m., Bldg. 463, room 160. Guests, visitors always welcome. www.bnl.gov/bera/activities/toastmstrs/.

Tues., Wed. & Thurs: Rec Hall Activities
5:30-9:30 p.m. General activities, TV, ping pong, chess, games, socializing. Christine Carter, Ext. 5090.

Wednesdays: On-Site Play Group
10 a.m.-noon. Rec. Hall. An infant/toddler drop-in event. Parents meet while children play. Fang Dong, 871-5362.

Wednesdays: Weight Watchers
Noon-1 p.m. Michael Thorn, Ext. 8612.

Wednesdays: Yoga
Noon-1 p.m., B'haven Center. Free. Ila Campbell, Ext. 2206, ila@bnl.gov.

Wednesdays: Ballroom Dance Class
Brookhaven Center, N. Ballroom. Instructor: Giny Rae. New series starts 3/15. See notice, page 3. John Millener, Ext. 3853; Madeline Windsor, Ext. 5069.

Thursdays: Reiki Healing Class
Noon-1 p.m., Bldg. 211 Conference Rm. Nicole Bernholc, Ext. 2027.

Fridays: Family Swim Night
5-8 p.m. BNL Pool. $5 per family.

Fridays: BNL Social & Cultural Club
6-9 p.m., North Ballroom, Brookhaven Ctr., dance lessons, 9-11:30 p.m. general dancing. Rudy Alforque, Ext. 4733, rudy@bnl.gov.

New GREEN Institute Open Space Stewardship Program
Proposed by Brookhaven Lab for Suffolk County Students

Joseph Rubino D2730106

(From left) Michael Holland, DOE's Brookhaven Site Office Manager; Melvyn Morris, BNL Educational Program Administrator; Steven Englebright, New York State Assemblyman, District 4; Michael Bebon, BNL Deputy Director for Operations; Michael Deering, Suffolk County Director of Environmental Affairs; and Tim Green, BNL Cultural & Natural Resources Manager, were key participants in the planning meeting of BNL's GREEN Institute Open Space Stewardship Program.

About 50 key leaders in education, government and environmental organizations attended a planning meeting at BNL to discuss a program proposed by the Lab in which students in grades K through 12 would perform environmental research on undeveloped land. Called the GREEN Institute Open Space Stewardship Program, the initiative is expected to begin in the fall of this year, primarily in mid and eastern Suffolk school districts. GREEN stands for "Gaining Research Experience in the Environment."

New York State Assemblyman Steven Englebright, 4th District, strongly supported the proposed program, saying it will "bring a coherence to our long-term management of our greatest treasure — our wild lands of Suffolk County." He added that Long Island is biologically the richest part of New York State, with the greatest collection of rare and endangered plants and animals. "It is wonderful that the Lab has taken this initiative . . . which may become a national model," Englebright said. Participants in the workshop also were very enthusiastic about the program.

Melvyn Morris, an educational program administrator in BNL's Office of Educational Programs (OEP), said that schools would be partnered with land stewards in their local communities. Areas of interest for monitoring the health of the property would be defined, and research protocols to gather desired data would be developed. The Lab plans to hold workshops in the summer for interested teachers.

"Students can provide data that will help land stewards in making informed decisions," Morris said. "For example, students can make invasive species assessments, perform a water pH or soil analysis, study insect populations or identify plant and animal DNA." He added that there would also be opportunities for interdisciplinary studies on open lands, involving photography, poetry and literature, art, history and adopt-a-tree programs.

The program would promote a consolidation of efforts already being made by some school districts and landowners and develop new partnerships with a focus on preserving valuable environmental assets in local communities, commented OEP Manager Kenneth White. "The program integrates the challenges each of the participating communities faces, such as managing open space properties and improving science and math capabilities of students. With the support of leadership displayed at this initial planning meeting, we will move forward confidently to implement the program." — Diane Greenberg

For more details on the meeting, see www.bnl.gov/bnlweb/pubaf/pr/PR_display.asp?prID=06-12. Open space property managers, teachers and environmentalists interested in participating in the Open Space Stewardship Program may contact OEP's Melvyn Morris, Ext. 5963, for information.

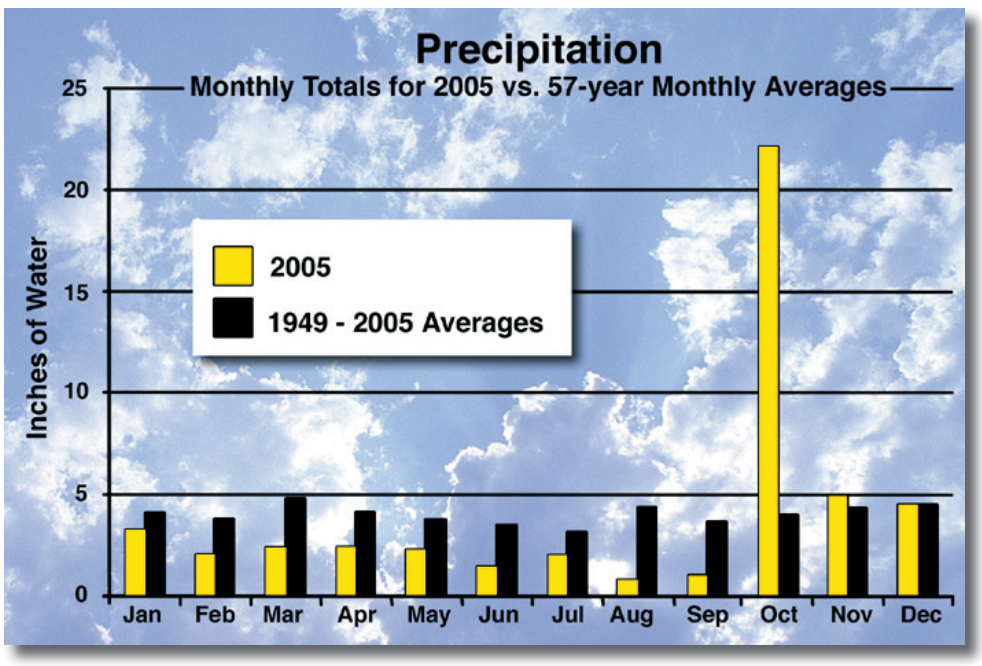
Record-Breaking Weather of 2005

Long Island's weather has been so unusual in the first two months of 2006, that it is hardly surprising to look back and find that local weather was far from normal in 2005, although the Island was spared the fury of 27 hurricanes and tropical storms that developed last year in the Atlantic, including devastating Hurricane Katrina.

According to BNL records, January 2005 brought record snowfall of 29 inches, beating the previous record, set in 1948, by three inches. The year also brought the hottest August on record, with an average temperature of 76.2 degrees Fahrenheit (F), 1.9 degrees higher than the previous record set in 2003. And, in October, record rainfall of 22.14 inches soaked the ground, causing local flooding.

"October 2005 was by far the wettest month in the last 57 years that the Lab has been keeping weather statistics, with almost double the amount of rain recorded in any October, and easily beating the previous monthly 13.01 inches of record rain in January 1979," said Victor Cassella, a Lab meteorologist. "We received 17.23 inches of rain in five consecutive days, from October 10 to 15, with 9 inches on October 14. Only in 1954, when Hurricane Edna dumped 9.02 inches of rain, did we get more than that amount of rain in one day."

Cassella said that the 2004-2005 snow season brought 78.5 inches of snow, the second snowiest season ever recorded. In the 1995-1996 season, 90.8 inches of snowfall was recorded at the Lab. But 2005 was the third consecutive year of more than 60 inches of snowfall, a pattern that has never been seen previously in the Lab's records. The average yearly snowfall in the area is 31.2 inches.



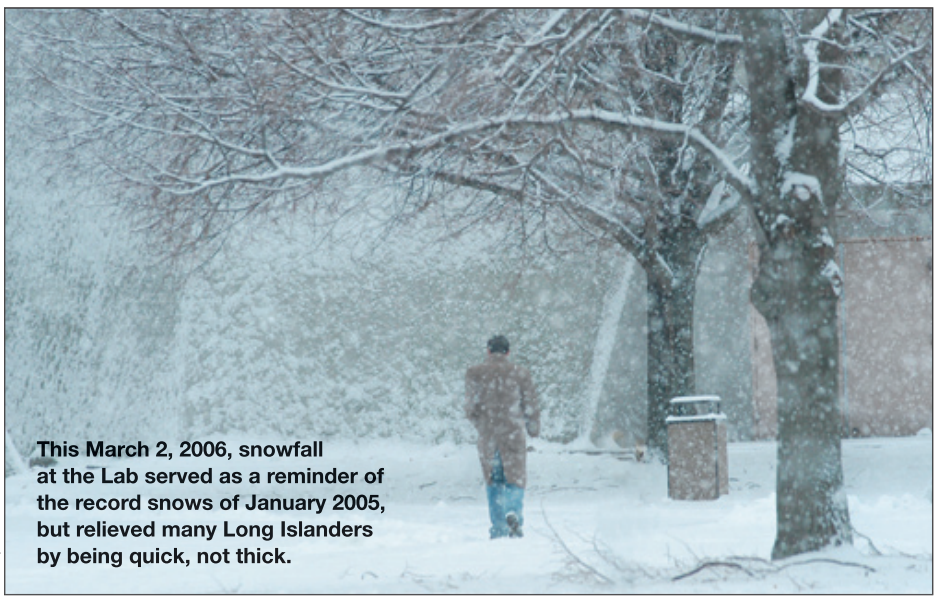
The yearly average temperature for 2005 was 51.9°F, 1.8 degrees warmer than average. Eight new daily high temperatures were set in 2005. On January 13, the thermometer climbed to 57°F, beating the record set in 1992 by one degree. July 26 brought a record high of 93.5°F, one-half degree higher than the 1989 record. August 3, 4, and 12 brought temperatures of 96.5, 93, and 92.5°F respectively, beating records of 96° in 1975, 91° in 1989, and 91° in 1988. September, a warmer than average month, also brought three new record highs on the 12, 13, and 15, with temperatures of 92.5, 91.5, and 83°F respectively. Previous records for those dates were 91.5, 88, and 81°F.

Cassella predicted last year that 2005 snowfall would be normal to slightly above normal and that there would be a pattern of extreme temperatures during the year — a partially accurate prediction.

For 2006, Cassella predicted another year of above-average snowfall. Also, he warns that people should be prepared for hurricanes on Long Island. "We've recently had some very active hurricane seasons," he said. "Even though we've been spared from hurricanes over the last several years, we have to be prepared for the one that does make its way to Long Island."

The February "Take-5," the five-minute video on Lab topics (available on the BNL Intranet at http://intranet.bnl.gov/video/take5.asp) gives an interview with Cassella.

— Diane Greenberg


Joseph Rubio D0060306

This March 2, 2006, snowfall at the Lab served as a reminder of the record snows of January 2005, but relieved many Long Islanders by being quick, not thick.

BNL Wins Two of Seven DOE P2 Awards

Every year DOE's Office of Science recognizes innovative and exciting approaches to pollution prevention that have been implemented across the DOE complex during the year. This year, from a total of 71 nominations, BNL received two of the seven pollution prevention awards: for noteworthy practices in bio-based hydraulic fluid use and hydrogen peroxide paint-stripping.

Says Peter Pohlot, BNL Pollution Prevention Coordinator of the Environmental and Waste Services Division, "As happens every year, BNL research and operations directorates came up with some unique, innovative pollution prevention ideas and processes. Now, these two winning BNL proposals will be forwarded to the White House by the Office of Science, along with proposals from other federal agencies, such as the Department of Defense and the Environmental Protection Agency, to be considered for a "Closing-the-Circle Award."

The two winning BNL awards are:

"***Historical Use of Bio-Based Hydraulic Fluids at BNL***," submitted by Roland Baillargeon, Patty Bender, Greg Flett, Ove Dyling, and Peter D. Pohlot

The Lab began switching many of its petroleum-based lubricants and hydraulic fluids to bio-based products to eliminate soil and groundwater contamination. Hydraulic vehicle lifts and hydraulic components from equipment such as lawnmowers, cranes, backhoes and garbage trucks are now being replaced with steel-braided hoses, abrasion collars and vegetable-based hydraulic oil.

Says Pohlot, "As a result of the replacement of these components and the use of vegetable oil, the number of reportable spills and the requirement for cleanup has been reduced over 70 percent. Bio-based hydraulic oil is also being considered for use for the elevators in the new Research Support Building and the Center for Functional Nanomaterials."

"***Hydrogen Peroxide Paint-Stripping at BNL***," submitted by Peter Stelmaschuk, Robert Lee, Gary Olsen and Peter D. Pohlot

Last year, BNL used a hydrogen peroxide paint-stripping process to repaint the tanks in the helium tank farm and other associated equipment needed to run RHIC. According to Pohlot, "This process not only reduced labor and waste disposal costs in excess of $100,000, but most importantly, it provided a safer environment for the workers performing the tasks." (For more on the paint-stripping process see the June 25, 2004 issue of The Bulletin.)

— Jane Koropsak

For more information on the pollution prevention award nominations go to: www.bnl.gov/esd/pollutionpreve/P2awards.htm If you have any pollution prevention ideas, contact Pohlot, Ext. 5660 or pohlot@bnl.gov.

BERA Board Election: Candidates Selected

The BERA Nominating Committee has selected the following slate of four candidates for the 2006 BERA Board Elections: Joseph Gadbois, Plant Engineering (PE) Division; Thomas Nolan, Collider Accelerator Department; Ed Sperry, PE; and Celeste Tymann, Staff Services Division.

During the week of March 27-31, all eligible employees of BNL, DOE, and all other permanent on-site employers, may cast their ballots to elect two of the four candidates to serve on the BERA Executive Board beginning May 1.

More information on the candidates and the election will be published in an upcoming Bulletin.

New Food Service Contractor

After a one-month extension, the food service contract between FLIK International and BNL expires today, March 10, 2006. The Lab is working with Nayyarson's Corporation to meet BNL's food service requirements. A transition plan has been developed and the Staff Services Division will be working with all parties to allow for a seamless changeover.

For additional information, contact Staff Services Manager Jeff Swenson, Ext. 2525 or swenson@bnl.gov.

Hispanic Heritage Club Elections

The Hispanic Heritage Club (HHC) will hold elections for all HHC board positions on Friday, March 24, at Berkner Hall, Room C, 11:30 a.m.-1 p.m. Only members of the HHC are allowed to vote. If you have questions regarding your membership status, contact a HHC board officer — Omar Gould, ogould@bnl.gov, or Yvette Malavet-Blum, malavet@bnl.gov. Nominees are presently being sought. Contact Annabelle Petway, Ext. 4776, Petway@bnl.gov, if you are interested in being a HHC board officer.

Child, Family Safety Presentation, 3/31

All are invited to a talk by Jim Nemeth of the BNL Training Office on general home safety and the Heimlich maneuver as it applies to children. Sponsored by BNL's Quality of Life/BERA/Recreation Office, the talk will be held on Friday, March 31, 11 a.m.-noon, in the Recreation Bldg. 317 in the apartment area. The Safety & Health Services Division, with Liberty Mutual Insurance, will also provide brochures on Taking Medicine Safely, Car Seat Safety, Poison Oak, Poison Ivy and Poison Sumac, Bike Helmets, Car Seat Safety, Water Safety, Home Safety, and Animal Safety. During the talk, a children's movie will be shown in the lounge area. To attend, contact Christine Carter, Ext. 5090 or ccarter@bnl.gov.

New York City Bus Trip, 3/26

The Hospitality Committee invites all BNLers to join a bus trip to New York City on Sunday, March 26. The bus will depart from the Recreation Building at 9:30 a.m. and will leave the City for the return trip to BNL at 5 p.m. Tickets cost $10 for adults and $5 for children age 2-12. To make a reservation, contact Hanne Herman, haniaherman@yahoo.com or 849-2249. Payments can be made on Tuesday, March 14, and Tuesday, March 21, from 11 a.m. to noon at the Recreation Building.

Weekly Ballroom Dance Lessons Start 3/15

The BNL Ballroom Dance Club's two new six-week dance lesson series will start on Wednesday, March 15, in the North Ballroom at the Brookhaven Center, with beginner waltz, 6 -7 p.m., and advanced cha-cha, 7-8 p.m., given by instructor Giny Rae. Prospective new members may attend the first two weeks as a free trial and pay $20/person for the remaining four weeks of the series if they join. As a one-time spring bonus, other participants will pay $20 each, not the usual $30, for the full six weeks.

The lessons are open to BERA members with one guest permitted per member. For more information call John Millener, Ext. 3853; Madeline Windsor, Ext. 5069; or Vinita Ghosh, Ext. 6226.

LabVIEW Intermediate Training, Anyone?

The Information Technology Division and National Instruments would like to schedule a five-day LabVIEW Intermediate I and II, this spring, open to all BNL employees.

Intermediate I: Successful Development Practices: A three-day course teaching structured practices to design, develop, test, and deploy LabVIEW applications. Includes hierarchical VI development, event-based architectures, appropriate user interface design, error handling strategies and effective documentation.

Intermediate II: Connectivity: A two-day course in identifying the components of integrated systems and implement networking technologies for different applications. Participants learn how to extend application functionality and reduce development time, using connectivity technologies such as DLLs, ActiveX, and the Internet.

The full course curriculum is available at National Instruments website at www.ni.com. Space is limited to 12 seats. If you are interested, contact Marcia Swiss, Ext. 4120 or swiss@bnl.gov, immediately.

BSA Noon Recital

Pianist Jiayin Shen in Concert, 3/22

Pianist Jiayin Shen will give a concert on Wednesday, March 22, at noon in Berkner Hall. Sponsored by BSA, the company that manages the Lab, the concert is free and open to the public. All visitors to BNL age 16 and over must bring a photo ID.

Shen was awarded the top prize in the Xin Hai National Piano Competition in Beijing, China, and the University of Michigan Concerto Competition. In addition to performing solo, Shen frequently collaborates with various chamber music ensembles.

TIAA-CREF One-on-One Retirement Counseling

A TIAA-CREF consultant will visit BNL on Monday, March 13, Thursday, March 16, and Tuesday, March 21 to answer employees' questions about financial matters. The consultant will help you understand the importance of protecting assets against inflation; find your right allocation mix; learn about TIAA-CREF retirement income flexibility; and compare lifetime income vs. cash withdrawal options. For an appointment, call Arlene Lyons, (866) 842-2053, Ext. 4629.

Children's Swim Lessons, Summer Camp

Applications for swimming lessons and summer camp are now available at www.bnl.gov/bera, or in the Recreation Office in 179B, and at the gym & pool.

Fidelity Investment Counseling, 3/30

A Fidelity Investment representative will be at the Lab on Thursday, March 30, to hold sessions with individual employees interested in learning more about their retirement-savings and investment options. Schedule one of the 30-minute appointments by calling (800) 642-7131.

Summer Camp Expo Today, 3/10

Today, Friday, March 10, 11:30 a.m.-1:30 p.m., in Berkner Hall, Long Island summer camps will provide information to BNLers. For more information, contact Susan Foster, Ext. 2888; or Liz Gilbert, Ext. 2315.

ASAP Social, 3/16

Association for Students & Postdocs (ASAP) members are invited to a social gathering, with free hero sandwiches, assorted beverages, and a movie, on Thursday, March 16, at 5:30 p.m., at the ASAP Lounge, Bldg. 750. ASAP is for all students & postdocs on site: see www.bnl.gov/asap for more information.

Arrivals & Departures

— Arrivals —

Jennifer Cafiero	PPM
Richard Jackimowicz	Biology
Bjorn Junker	Biology

— Departures —

Jason Gardner	CMPMS
Dongfeng Liu	NSLS
K. Jessica Thomas	CMPMS

CALENDAR (CONTINUED)

— THIS WEEKEND —

Friday, 3/10

***Summer Camp Expo**
11:30 a.m.-1:30 p.m. Berkner Hall. See notice below, left.

Saturday, 3/11

BERA Trip to *Hairspray* Show
Tickets available at BERA Store, Ext. 3347. $60 includes bus.

— WEEK OF 3/13 —

Tues.-Thurs., 3/14-16

Ergonomics Training Workshop
Bldg. 490, Large Conference Room. Organized by Occupational Medicine Clinic and Liberty Mutual. Four-part event on ergonomic issues, such as low back pain, risk factors, repetitive task analysis, etc. For more information, contact Maria Beckman, beckman@bnl.gov, Ext. 5483.

Wednesday, 3/15

Ergonomics Training Workshop
Bldg. 490. Workshop continues.

Hampton Inn Brookhaven Demo
11 a.m.-2 p.m., Berkner Hall. Hampton Inn Brookhaven representatives will present BNLers with special rates and information on services. For more detail, call Jennifer Welsh, 732-7300.

***413th Brookhaven Lecture**
4 p.m. Berkner Hall. All are welcome. The Collider-Accelerator Department's Wolfram Fischer discusses "The Quest for High Luminosity in Hadron Colliders." See story, page 1.

Thursday, 3/16

Ergonomics for All: Work & Home
9-11 a.m. Bldg. 490 Large Conference Room: Discussion on Office Ergonomics, for all.

Noon-1 p.m. Berkner Hall. Review of working with tools, computer stations for children and adults, etc. All are welcome. 1-2 p.m. Session continues so that people can express concerns.

Friday, 3/17

***'Dangerous' St. Patrick's Day Ball**
8 p.m.-12 p.m. B'haven Center. "New York's Most Dangerous Big Band." Advance tickets, $20, BERA Store. See notice, page 4.

Saturday, 3/18

***Railroad Earth, Blue Grass, Rock**
8 p.m. Berkner Hall. Railroad Earth band. See page 4.

— WEEK OF 3/20 —

Wednesday, 3/22

***BSA Concert, Pianist Shen**
Noon. Berkner Hall. Pianist Jiayin Shen. See notice at left.

Friday, 3/24

Employee Tour, Stardust, NSLS
Noon-1 p.m. Visit NSLS to learn about analyzing Stardust samples from the recent NASA voyage. The group meets in Berkner Hall lobby at noon, returns to Berkner by 1 p.m.

Saturday, 3/25

See Bill Cosby Show, Tilles Center
Leave BNL 3:30 p.m. $45/person includes great seats, luxury bus. For details and other trips, see BERA webpage or call or visit the BERA Store, Berkner Hall, 9 a.m.-3 p.m. Ext. 3347.

***Rock Band 'Afterlife'**
8 p.m. Berkner Hall. See page 4.

— WEEK OF 3/27 —

Monday, 3/27

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.

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/.

Laboratory RECRUITMENT - Opportunities for Laboratory employees.

TB3716. WATER & SEWERAGE OPERATING ENGINEER - Under minimum supervision lays out, constructs or installs, repairs, maintains and operates water and sewerage systems, related facilities and auxiliary equipment. Must obtain and maintain appropriate licensing or certification requirements. Plant Engineering Division.

OPEN RECRUITMENT – Opportunities for Laboratory employees and outside candidates.

MK4096. DIRECTOR – CENTER FOR FUNCTIONAL NANOMATERIALS (CFN)-M-4. The CFN will be a premier user facility for interdisciplinary research on new functional nanomaterials with a full time staff of 50 or greater and users from academic, industrial, and government sources. The initial scientific theme areas are: nanostructured catalysts, electronic materials, bio/soft nanomaterials and interfaces. The CFN will be part of an interdisciplinary complex at BNL with strong links to materials and chemistry efforts and to the world class synchrotron facilities of NSLS and the planned next generation NSLS II. Detailed information about the BNL CFN is available at http://www.cfn.bnl.gov/. The CFN will be a department level organization and the Director will report to the Associate Laboratory Director for Basic Energy Sciences. The successful candidate should have a doctorate in Physics, Chemistry, or Materials Science with extensive scientific accomplishments coupled with proven managerial capabilities and should be a recognized authority in his/her field. Will be responsible for providing leadership in nanoscience program development, for overseeing the future operation of the CFN, and for continuing to build participation and commitment from the broad outside research community. Applications and nominations should be sent to Dr. Doon Gibbs, Associate Laboratory Director, Brookhaven National Laboratory, Building 460, P.O. Box 5000, Upton, New York 11973-5000.

MK2674. PHYSICIST (S-3, reposting) – Requires a Ph.D., demonstrated experience in both the design and operation of the following accelerator devices: Radiofrequency Quadrupole (RFQ) accelerators, Linear accelerators, ion beam transport lines, polarized ion sources, heavy ion sources, and superconducting magnets. In addition, must have experience in the design, fabrication, and tuning of RF structures and be able to run beam transport optics codes, magnet design codes, and RFQ design codes. Must be able to perform spin tracking calculations and ion beam extraction calculations, including writing of specialized code for ion source applications. Must be experienced in the operation of lasers. Experience in RF power systems and beam diagnostic devices is highly desirable. Will participate in the design and operation of an Electron Beam Ion Source, a heavy ion Radiofrequency Quadrupole and Linear Accelerator. Perform beam optics calculations for heavy ion and proton transport lines. Assist in the operation of an Optically Pumped Polarized Ion Source. Will perform research on alternative heavy ion sources, including laser-based sources. Perform spin-tracking calculations in ion sources and transport lines. Under the direction of J. Alessi, Collider-Accelerator Department.

MK3958. MEDICAL SCIENTIST (S-3) – Requires a Ph.D. in physics with significant experience and knowledge in the area of MRI imaging and instrumentation, expertise for maintaining hardware, software and new updates on the microMRI 9.4Tsystem. Experience using image processing, scientific writing, grant writing and funding is desirable. Will be responsible for initiating research studies with investigators working within the Center for Translational Neuroimaging as well as investigators at SUNY Stony Brook and elsewhere. The area of research will be focused on developing new Life Science/Physics translational initiatives in the area of imaging instrumentation, multimodality imaging (e.g. Optics and MRI or PET/MRI) which will include the creation of collaborations with BNL's Instrumentation Division and Physics/Chemistry Departments as well as other institutions and the biotechnology industry. Recent and current research in the laboratory has focused on the application of advanced magnetic resonance imaging (MRI) and spectroscopic (MRS) techniques to the study of various brain diseases especially diseases such as autism spectrum disorder, Alzheimer's Disease, and Stroke. We are especially interested in implementing transcranial magnetic stimulation in association with cognitive treatment for the above-mentioned diseases. Research is also focused on development of novel instrumentation for measurement of neural activity and general physiology. Ongoing research is funded by the DOE and NIH. Under the direction of H. Benveniste, Medical Department.

MK3431. POSTDOCTORAL RESEARCH ASSOCIATE – Requires a Ph.D. in solid state physics, materials science or an equivalent field, strong background in crystallography and a deep understanding of measuring the phase and amplitude of the scattered electrons in an electron microscope. The main focus of the research is to develop nanoscale electron diffraction techniques to determine unknown structure of individual nano objects, and to measure their electronic structure including charge density. A novel precision camera will be used to measure both high-order and low-order reflections of nanocrystals. Under the direction of Y. Zhu, Center for Functional Nanomaterials.

NS2877. MANAGER, SAFETY ENGINEERING (M-1) – Requires a bachelor's degree in safety engineering/safety science or equivalent, excellent communication skills (oral and written), strong background in industrial safety and health with a minimum of 15 years of progressive safety experience including supervising technical personnel. An advanced degree and professional certification are required. Must have excellent customer relationship skills. The candidate must be capable of prioritizing assignments and facilitating staff completion of programmatic activities; be conversant with OSHA regulations, other external regulations and national consensus standards. Candidate should have experience conducting formal incident investigations, be knowledgeable of the administration of workers' compensation, liability and other casualty issues, self-assessment process, developing Standards Based Management System Subject Areas, be familiar with associated DOE Orders, be capable of working with all levels of management, DOE and outside regulators. Will supervise the Safety Engineering Group within the Safety & Health Services Division providing leadership, planning strategic direction, organizing and evaluating personnel, developing and maintaining budgets, career development and oversight to ensure full implementation of the Group's responsibilities and objectives to the satisfaction of customers and stakeholders. Safety & Health Services Division.

Motor Vehicles & Supplies

01 KAWASAKI ZX9R - metallic green, adult driven, good cond., needs rear tire. 9200 mi. $4,800/neg. Ext. 4797.

01 VW JETTA WOLFSBURG ED. - 1.8T 5spd., APR chip & sst exhst., LSD, more, mint. 77K mi. $13,000/neg. mark, 902-8188.

97 FORD F150 4WD TRUCK - . 190K mi. $4,500/neg. 727-5426.

97 DODGE GRAND CARAVAN - 3L, V6, full pwr., 5dr., 7pas, child seats, CD, more, new M/lin tires, 159K mi. $2,500/neg. 475-6981.

95 DODGE AVENGER ES - 2.5L V6, alarm, spoiler, alloy whl., maint. w/rcrds, slight dmg. fr. fnder, 134K mi. $1,750. 516-807-8982.

95 MITSUBISHI ECLIPSE RS - 2dr, a/t, new tmg belt, tires, brks, more, 167K mi. $1,550/neg. 925-586-3089, aygarnov@bnl.gov.

94 FORD F150 XLT 4X4 - 8' bed, cap, p/w, p/l, a/c, cb/rd, wnsh/viser, runig brds, new tires, more, 143k mi. $3,700/neg. 219-7241.

91 MERCEDES BENZ 300SE - beige, lthr., 6cyl, a/t, 120K mi. $3,950/neg. Ext. 4797.

86 OLDSMOBILE CUTLASS - 8 cyl, gd. heavy car in v. gd. cond. 60K mi. $2,000/neg. 208-9091.

Audio, Video & Computers

DVD PLAYER - DESAY model DS-501, 1 yr. old, slim design w/remote & owner's manual. $20. Fan, Ext. 4353.

TELEVISIONS - 13" RCA, $50; 26" RCA, $125. Both in excel. cond. 803-0506.

Furnishings & Appliances

CARPET - 9'x10' amber/sand color, excel. cond., non-smkg home. $50 obo. 803-0506.

DINING TABLE - dark pine w/6 chairs, $120. Chris, Ext. 2094 or 929-5008.

ELECTRIC HEATER - Honeywell baseboard heater, adj. thermostat, 2 htg levels, 1000/1500W, 40" lg. $25. Ext. 3217.

GAS RANGE - GE Profile, 30", $275; bed, high-riser, $100; wedding gown, w/headpc., white, 4/6, $100/obo on all. 395-9610.

LOFT BED - twin, light wood w/ladder, have pics. $75. Thomas, 909-1498.

MICROWAVE CART - 5"h x 28"w x 20"d w/2 shelves, middle & lower cabinet for storage, $20. Mundrathi, 382-7386.

VACUUM - Eureka, canister style, w/pwr. head for rugs. $40. Dennis, Ext. 4028.

VACUUM - Dirt Devil Ultra Vision Turbo 12-Amp bagless upright, $60. Ext. 3319.

WALL OVEN - 27" elect., white, brand new, manual & all parts, moving, must sell, cost $900, sell $250. 736-7942.

WALL UNIT - 3 pc, hardwd & glass, $300; desk, 48"x18", ideal for laptop, $40; kit. dinette, 48" w/4 chairs, $130. 382-7386.

Sports, Hobbies & Pets

DRAFTING TABLE - all wood, used, you pick up, $30. Susan, Ext. 7647.

LACROSSE HELMETS - 2, 1 CPro used one season. $40. Other used helmet $15. Men's small/med. Helen, 849-2382.

SKI BOOTS - Salomon, men's size 11; Raichle 10.5, $25/ea. Ben, 513-8275.

SKIS - K2 TNC 207cm w/Marker bindings, $50; Head 190 w/Tyrolia, $40; Hart Gremlin 150 w/Tyrolia, $20. Ben, 513-8275.

Miscellaneous

AQUARIUM - 45 gal., incl. filter, heater, UV sterilizer, glass cover, light, custom built solid oak stand, $250. Bill, 866-1182.

CHRISTENING OUTFITS - boys' & girls', never worn, photos avail. 208-0196.

EXERCISE - 2 stairgliders for step, works excel. for 5 or 6 steps, $400/ea. or $600 for both, you pick up, more. 736-7942.

METAL-WORKING LATHE - Maximat V10 lathe w/integral milling attachment, many extras. 878-2197.

Happenings

SBU UNIV. CAFE - 3/19, 2 p.m., features Rod Picott; Gene Casey & The Lone Sharks to open. $20, ($15 students), 632-6027.

BILL COSBY SHOW - Tilles Center, Brookville, NY, Sat., 3/25, $45 ea incl. lux. bus, grt seat. Lve. BNL 3:30 p.m. Ext. 3347.

Farewell Gathering

LOIS MARASCIA - 3/28, 6 p.m., Rock Hill Country Club, Manorville, $32./pp incl. dinner, gift (cash bar). Pam Yerry, Ext. 7774.

Free

WASHING MACHINE - Sears Kenmore, full size, 24"w, white, appx 5 yrs. old, works fine, you pick up, Blue Point. 363-6289.

Wanted

HV CONTROLLER BOARD - for Varian MiniVac ion pump controller model 9290191. Karl, Ext. 3116.

NEXTEL - i1000+ cellphone, good cond. only; WinXP upgrade CD w/key, under $35. Karl, Ext. 3116.

PERSIAN KITTEN - seeking to adopt Persian kitten. Linda, Ext. 5384.

TREADMILL - foldable, reasonably priced, automatic. Melissa, Ext. 7615.

Lost & Found

LOST: NECKLACE - man's gold chain lost around 3/1/06 possibly at Berkner or NSLS. Ext. 2295.

For Rent

BROOKHAVEN HAMLET - room for rent, 9 miles to Lab. use of whole house, kit., laund., cable TV, yard, 1 acre, quiet, util. incl. $500/mo. Sidney, 286-4028.

CENTER MORICHES - 2-bdrm. house w/carport, d/w, w/d, f/p, new paint & w/w carpet, near shppg., 1 blck to wtr., no pets/smkg. util. not incl. $1,400/mo. 878-6016.

EAST MORICHES - new 1-bdrm. grd.-lvl apt., l/r, full kit. & bath, hdwd. flrs., clng. fans, cac, own therm., cable, util. inc. pvt. ent. $985 coupl, singl. $965/mo. 878-5798.

EAST YAPHANK - 1-bdrm. apt, l/r kit. combo, full bath, pvt. ent. w/deck. $900/mo./neg. Patricia, Ext. 3545.

FARMINGVILLE - 1 lg. bdrm in house, share bath w/1, full kit., elec incl., avail. 4/1/ $450/mo. Ben, 513-8275.

LAKE RONKONKOMA - no smkg./pets, lg. studio w/pvt. ent. & plenty of storage, utils., TV cable & internet incl., near LIE & LIRR. $700/mo. Rob, 988-2519.

MATTITUCK - lg. l/r, kit, bath, bdrm. w/a lg. storage or spare rm., all on the water w/very nice view, 1 person, no pets/smkg., util. incl. $900/mo. 298-5625.

MIDDLE ISLAND - new lg. 1-bdrm. bsmt. apt., pvt. ent., laundry, cable, internet, no pets/smkg., quiet, all incl. but phone, close to Lab, 1 mo. sec. $800/mo. 672-2451.

RIDGE - 1 lg. studio, bright & warm, w/full bath, priv. ent. and fenced garden, house apart from owner, park in drway, quiet & safe n'hood. $700/mo. Zhen, 821-0859.

SOUND BEACH - 1-bdrm. apt., kit./l/r combo, waterview on LI Sound, heat/elect. incl. $950/mo. Margaret, 744-8454.

WADING RIVER - 2 bdrm., eik, lg. l/r., lg. den, lg. deck, pvt. pkg., no kids/pets/smkg. util. extra. $1,500/mo. 928-9328.

For Sale

CENTEREACH - 4-yr.-old Center Hall Colonial, 5 bdrm., 2-1/2 bath, eik, great room, d/r, fin. bsmt., f/p,1st flr. laundry, 20 min to Lab & 5 min to SBU. $509,990. 981-2471.

NEWPORT, TN - Golf Course Rd., 1.6-acre corner lot, across road from fairway, 5 min. to town. $30,000/neg. 513-8275.

Railroad Earth in Concert, 3/18

Railroad Earth, playing a mixture of bluegrass and rock & roll, will give a concert in Berkner Hall on Saturday, March 18, at 8 p.m. The Electrix, an acoustic trio, will open the show. Sponsored by the BNL Music Club, the concert is open to the public. All visitors to the Laboratory age 16 and over must bring a photo ID.

Railroad Earth has attracted legions of loyal fans since their first concerts in 2001, and their songwriting ability and adept improvisation have won them the praise of Grateful Dead bass player Phil Lesh, who invited the band to open for him.

Tickets for the concert cost $20 each if bought in advance from the BERA Store, Berkner Hall, or ticketweb.com; or $25 at the door on the night of the show. Call Ext. 3846 for more information.

'Dangerous' Band for St. Patrick's Day Ball, 3/17

The 20-piece "New York's Most Dangerous Big Band" will perform during a St. Patrick's Day Ball at the North Ballroom of the Brookhaven Center on Friday, March 17, 8 p.m.-midnight. Sponsored by the BNL Social & Cultural (S&C) Club, the event is open to the public. All visitors to the Lab age 16 and over must bring a photo ID.

This "Dangerous" band is popular over the Tri-State area. Some members are musicians from the NYPD, thus the name "NY's Most Dangerous Big Band." To learn more about them, see www.nymdbb.com. Conducted by Ed deCorsia, the band is primarily known for its swing music, but they also play Latin and foxtrots for a varied dance party. There will also be Latin and hustle DJ music in between sets.

Tickets cost $20 each in advance, or $35 at the door; they are available at the BERA Store in Berkner Hall or at the BNL S&C Club's weekly dance socials on Friday nights at the North Ballroom of the Brookhaven Center. Only 160 tickets will be sold. Order tickets early since they may be sold out before 3/17. Contact Rudy Alforque, Ext. 4733 or rudy@bnl.gov for more information.

Rock Band 'Afterlife' in Concert, 3/25

Afterlife: The Ultimate Progressive Rock Experience will perform in concert on Saturday, March 25, at 8 p.m. in Berkner Hall. Sponsored by the BNL Music Club, the concert is open to the public. All visitors age 16 and over must bring a photo ID.

Afterlife pays tribute to the golden era of progressive rock with performances of hallmark tunes from the masters from the early 1970s to the early 1980s: Emerson, Lake and Palmer, Genesis, and YES to Asia and Saga. Tickets cost $15 each, and may be bought in advance at the BERA Store, Berkner Hall, or www.ticketweb.com; or at the door on the evening of the show. Call Ext. 3413 for more information.

Take Our Daughters & Sons To Work Day

Live video talks between BNL, ANL, JLab volunteer students

BNL will hold "Take Our Daughters & Sons To Work Day" on Thursday, April 27. This year, six students at BNL will participate in a live video conference with students from Argonne National Laboratory and Thomas Jefferson National Accelerator Facility, using global warming as the topic of discussion. Meteorologists Victor Cassella of BNL and Michael Wyllie of the National Oceanic & Atmospheric Administration have prepared student work and presentations for the inter-lab video-conferencing discussions.

To hold this event, six students between the ages of 13 and 15 will be chosen by each participating Lab as representatives of that Lab. The students will work as a team via e-mail to prepare themselves, mentored by Cassella and Wyllie.

If you have a son, daughter or grandchild who may be interested in being a part of this inter-Lab panel discussion, contact Liz Gilbert, gilbert@bnl.gov or Ext. 2315, no later than Friday, March 17. At the end of that day, all responses will be mixed up and drawn from a hat: the first six drawn will be the BNL representatives. Only respond at this time if your child meets the eligibility criteria and is interested in participating in the global warming research project. In a few weeks, registration forms will be sent to all employees for general registration for the Take Our Daughters & Sons To Work Day program.

Spring Program Focuses on Stress Reduction

The year's Spring activity program "Rise & Shine" focuses on stress reduction and moderate physical activity. During the eight week "Rise & Shine" program, BNLers will learn how to deal with stress using a wide range of methods including yoga, tai chi, relaxation response, meditation, massage, journaling, walking a labyrinth, and more. To register, go to www.bnl.gov/hr/occmed/HPP.asp and download the registration materials.

On-Site Services

ENTERPRISE RENT-A-CAR - The on-site office at Bldg. 355, 50 Brookhaven Ave., has weekend specials, daily rates. Call Ext. 4888 or see www.enterprise.com.

ON-SITE SERVICE STATION - oil changes, checkups, NYS inspections, new batteries, tires, timing belts, repairs, much more, while you are at work. Ext. 4034.

the Bulletin

Published weekly by the Media & Communications Office for the employees, facility users, and retirees of Brookhaven National Laboratory.

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John Galvin, reporter
Roger Stoutenburgh, photographer

On the Web, the Bulletin is located at www.bnl.gov/bnlweb/pubaf/bulletin.html. A calendar listing scientific and technical seminars and lectures is found at www.bnl.gov/bnlweb/pubaf/calendar.html.

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