

## DOE Office of Science Director Raymond Orbach Meets at BNL With Northeastern University Research VIPs

At the Lab to attend the next day's BNL Institutional Review, DOE Office of Science Director Raymond Orbach met with approximately 20 vice presidents, provosts, and deans for research from 18 Northeastern universities and colleges. The meeting was one of a series being held by Orbach during the institutional review of each of the five major Office of Science multiprogram laboratories, to discuss topics of mutual interest and concern with the university community. It was the first time BNL had hosted so many academic research representatives at once.

The attendees included BNL's Interim Director Peter Paul and other senior BNL staff, Office of Science program managers and staffers, and senior representatives from Battelle, which, with Stony Brook University, forms Brookhaven Science Associates, the company that manages BNL for DOE.

To begin his presentation, Orbach reminded the group that DOE supports 40 percent of physical science research in the U.S., is a major funder of chemical sciences, and a strong supporter of the life sciences. Of DOE's annual budget of about

\$3.3 billion, Orbach said, about half goes to operating facilities, and the rest supports research at DOE's ten national labs and U.S. universities.

"We rely heavily on universities for the strength of our programs," he said.

Orbach pointed out that there is a diversity of U.S. funding sources and that DOE's programs are interdisciplinary, large, focused, and disciplined, and able to take appropriate risks — which are "the lifeblood of science," he said.

Orbach's aim is to see the Office of Science "at the very top across the board." To achieve this, he said, in addition to the five major areas for research funding, "We have tried to determine the most exciting areas of science in which the Office of Science would want to become a leader."

As Orbach explained, these areas are described in seven brief "occasional" papers, available from the Office of Science web site at [www.science.doe.gov](http://www.science.doe.gov).

Orbach expanded on some of these areas for the attendees, first focusing on the need to reassert U.S. leadership in scientific computation, emphasizing the vital need for computational simula-



DOE Office of Science Director Raymond Orbach (front, fourth from right) and BNL Interim Director Peter Paul (front, fourth from left), are seen with many of the approximately 20 vice presidents, provosts and deans for research from Northeastern universities and colleges and others who attended a meeting at BNL on July 25. Universities and colleges represented included Boston College, Boston University, the City University of New York, Columbia University, Harvard University, the Massachusetts Institute of Technology, Northeastern University, Pennsylvania State University, Polytechnic University, Rensselaer Polytechnic Institute of New York, the State University of New York (SUNY) at Albany, SUNY at Binghamton, SUNY at Buffalo, SUNY at Stony Brook, the University of Connecticut, the University of Pennsylvania, the University of Pittsburgh, and Syracuse University.

tions as a way to make new discoveries. "I am convinced that we are in a new era of computational science," he said.

Orbach also discussed the importance of science education, in which "interest is phenomenal in Congress," he said. DOE hopes to increase its budget in this area, and it already supports many programs that promote hands-on discovery in elementary, middle, and high schools; grants to teachers to visit national labs and do research one-on-one with scientist-mentors; and fellowships for graduates — "the most precious resource we have," he said.

Nanotechnology is another area selected by the Office of

Science as paramount to the success of future U.S. science. Orbach recalled being present on June 14 when Secretary of Energy Spencer Abraham visited the Lab to announce that BNL would be the site of one of DOE's five nanoscience centers being developed nationwide. "Each of the five centers will have its own characteristics," said Orbach. "We'll take nanoscience to a new level."

After speaking about fusion energy, Orbach went on to say that, as electric consumption increases nationally, alternate sources of energy not detrimental to the environment will be needed to ensure energy security. The Office of Science

strongly promotes biotechnology for energy security, the topic of another occasional paper.

In looking to the future, Orbach hopes that new concepts will emerge in solar energy — for example, using nanoscale devices. He spoke of the Office's determination to use "all the tools that nature gives us," including, for example, microbes used in bioremediation.

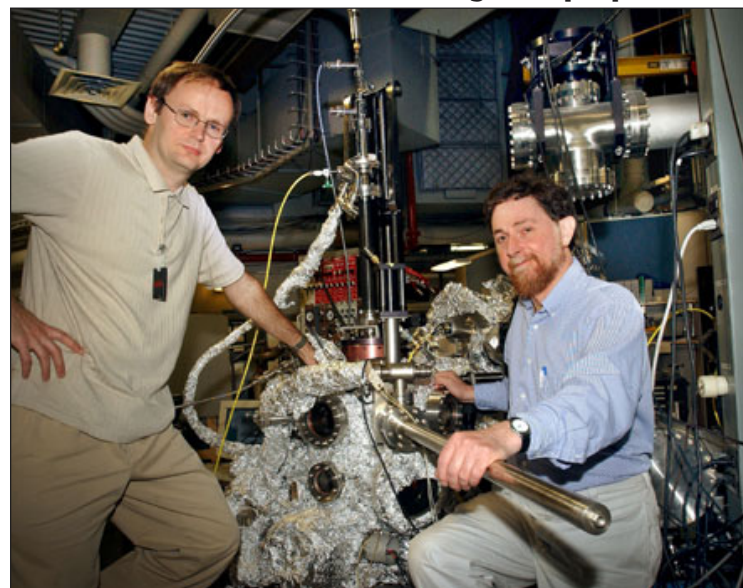
Two other high-profile topics, Orbach discussed were "the science of the beginning of time," and counter-terrorism.

### Orbach Answers Questions

During the second part of the meeting, questions were well (continued on page 2)

## Conducting-Insulating Materials Reveal Intriguing Secrets

NSLS study gives insight into superconductors and materials with new electrical, magnetic properties



Tonica Valla (left) and Peter Johnson of the Physics Department

Research by Tonica Valla and Peter Johnson of BNL's Physics Department provides new insight into why some materials made of stacks of metallic planes are conductors in the direction of the planes and insulators in the direction perpendicular to the planes.

Such behavior is in marked contradiction with scientists' traditional understanding of metallic conductivity, where the electrical current is carried by electrons in every direction.

Understanding materials that are both conducting and insulating will help scientists gain new insight into superconductors — materials that, below a critical temperature, conduct electricity with no energy loss.

Scientists have suspected that the dual conducting-insulating property is due to electrons that interact so strongly with each other that they do not move individually, but collectively to carry the current within the planes. But no evidence of such interactions has been observed — until now.

"A material that is both conducting and insulating is quite intriguing," says Valla, the lead author of the study, which appears in the June 6, 2002, issue of *Nature*. "Such a dual behavior has puzzled physicists for several years. And though theoretical explanations have been suggested, we now show for the first time that the strength of the interactions (continued on page 2)

## Future Science Teachers Summer at BNL, Mentored by Lab Scientists, Staff

Doing science to learn how to teach science, 11 college students and recent college graduates from as far away as Puerto Rico and California are spending the summer at BNL, learning about science firsthand from Lab researchers.

All the students plan to be science teachers, and they are honing their skills in a pre-service teacher program sponsored by DOE's Office of Science Education. In this program, these science, mathematics, and technology teachers-in-training are each paired with a mentor specializing in the student's field of study, such as physics, environmental research, or chemistry.

The BNL mentors are: Patricia Bender, Plant Engineering Division; Gail Donoghue, Office of Educational Programs (OEP); Keith Jones, Environmental Sciences Department; Edwin Haas, National Synchrotron Light Source Department; Brian Murfin, OEP; Trevor Sears, Chemistry Department; and Helio Takai, Physics Department. Other mentors are John Black, a retired Suffolk Community College professor of environmental science and biology; and Peter Kelly of the U.S. Fish & Wildlife Service.



The students in the program are: (seated, from left) Javier Perez Irizarry and David Figueroa Hernandez, (front row, from left) Roseangely Pinto Rodriguez and Barbara Melendez Sanchez, (back row, from left) Charis Walker, Lizbeth Troche Flores, Debbie Sims, Yuleska Burgos Aponte, Lisa Polanski, Jeannette Santos Rentas, and Jahaira Rivera Cabrera. All are students or graduates of the University of Puerto Rico, except for: Walker, who is from Saint Augustine's College, Raleigh, North Carolina; Sims, California State University, Northridge; and Polanski, Marist College, Poughkeepsie, New York.

At BNL, the future teachers are becoming familiar with the skills and knowledge required of scientists by participating in a research project. At the end of their internship, the student teachers will complete an edu-

cation module and a research paper or a poster presentation based on their work. They are aided by a master teacher at BNL, Anthony Abbate, a science teacher in Amityville High School. — Diane Greenberg

## 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 Chris Carter, Ext. 2873.
- Additional information for Hospitality Committee events can be found at the Lollipop House and the laundry in the apartment area.
- The Recreation Building (Rec. Bldg.) 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, and Advanced classes. Various times. All are welcome. Learn English, make friends. See [www.bnl.gov/esol/schedule.html](http://www.bnl.gov/esol/schedule.html) for schedule. Jen Lynch, Ext. 4894.

#### Mon., Tues., & Thurs.: Kickboxing

\$5 per class. Mon. & Thurs. noon-1 p.m. in the gym; Tues., 5:15-6:15 p.m. in the gym; Thurs., 5:15-6:15 p.m. in Brookhaven Ctr. Registration is required. Mary Wood, Ext. 5923, or wood2@bnl.gov.

#### Mon., Tues., & Fri.: Tai Chi

Noon-12:45 p.m., Rec. Bldg. Scott Bradley, Ext. 5745, [bradley@bnl.gov](mailto:bradley@bnl.gov).

#### Tuesdays: Aqua Aerobics

5:15-6:15 p.m. \$2 pool fee per class or use pool pass. Mary Wood, Ext. 5923.

#### Tuesdays: BNL Music Club

Noon, North Room, Brookhaven Center. Come hear live music. Joe Vignola, Ext. 3846.

#### Tuesdays: Welcome Coffee

10-11:30 a.m. Rec. Bldg. Hospitality event. Come and meet friends. The first Tuesday of every month is special for Lab newcomers and leaving guests. Hospitality Chair Monique de la Beij, 399-7656.

#### Tuesdays: Toastmasters

Meetings are 1st and 3rd Tuesday of each month at 5:30 p.m. in Bldg. 463, Room 160. Guests, visitors always welcome. [www.bnl.gov/bera/activities/toastmasters/default.htm](http://www.bnl.gov/bera/activities/toastmasters/default.htm).

#### Tuesdays & Thursdays: Aerobics

5:15-6:30 p.m., \$4 per class. Rec. Bldg. Pat Flood, Ext. 7886.

#### Wednesdays: On-Site Play Group

9:30-11:30 a.m., Meet at the playground in the apartment area. Parents meet while children play. Monique de la Beij, 399-7656.

#### Wednesdays: Farmer's Market

11:30 a.m.-1:30 p.m., Berkner Hall parking lot.

#### Wednesdays: Hispanic Heritage Club

11:30 a.m., Berkner Hall, Room D. All are welcome. Carmen Narvaez, Ext. 3254, or [www.bnl.gov/bera/activities/hispanic](http://www.bnl.gov/bera/activities/hispanic).

#### Wednesdays: Weight Watchers

Noon-1 p.m., Brookhaven Center South Room. Mary Wood, Ext. 5923, [wood2@bnl.gov](mailto:wood2@bnl.gov).

#### Wednesdays: Yoga Practice

Noon-1 p.m., Brookhaven Ctr. Free. Ila Campbell, Ext. 2206.

#### Wednesdays: Stretch

5:15-6:15 p.m., \$4 per class. Rec. Bldg. Pat Flood, Ext. 7886.

#### Wednesdays: BNL Ballroom, Latin & Swing Dance Club Lessons

5-9 p.m., North Ballroom, Brookhaven Center. Marsha Belford, [belford@bnl.gov](mailto:belford@bnl.gov) or Ext. 5053, or [www.bnl.gov/bera/activities/dance](http://www.bnl.gov/bera/activities/dance).

#### Thursdays: Science Discussion Group

12:30-1:30 p.m., Berkner Hall, Room A or D. Patrice Pages, Ext. 3270, [pages@bnl.gov](mailto:pages@bnl.gov).

#### Thursdays: Falun Dafa Class

Noon-1 p.m., Free. Rec. Bldg. Falun Dafa refines the body and mind through exercises, meditation. [www.falundafa.org](http://www.falundafa.org).

#### Fridays: BNL Social & Cultural Club

7-11:30 p.m., Brookhaven Ctr., social. Rudy Alforque, Ext. 4733, [rudy@bnl.gov](mailto:rudy@bnl.gov).

#### Fridays: Science Museum Tours

11 a.m.-2 p.m. BNLers are invited to a free tour of the BNL Science Museum. No reservations are needed. Gail Donoghue, Ext. 2838.

### — NEXT WEEK —

#### Tuesday, 8/6

##### St. Joseph's College Expo

11 a.m.-2 p.m., Berkner Hall. A representative from St. Joseph's College School of Adult and Professional Education will discuss day, evening, and accelerated weekend courses, as well as answer questions. BNL employees may receive tuition assistance for approved college courses. For more information about BNL's tuition reimbursement program, contact Marilyn Pandorf, Ext. 5251.

#### Wednesday, 8/7

##### BSA Noon Recital

Noon, Berkner Hall. Musical Director Paul Schenly presents three rising stars from Pianofest in the Hamptons. See <http://music.bnl.gov>.

#### Thursday, 8/8

##### BERA Bridge Club

7 p.m., Brookhaven Center. South Room. Morris Strongson, Ext. 4192, [mms@bnl.gov](mailto:mms@bnl.gov).

## Orbach Meets University Research VIPs (cont'd.)

comed, and, in his answers, Orbach developed some of the themes that he had discussed.

To questions about the Office of Science's plans for improving the nation's computational capacity, Orbach's answers indicated that, whatever pathways were explored, the science would come first.

"We want to make the chip design fit the science," he said.

The Office of Science Director repeated that he sees great opportunities in innovative use of computer simulations, and especially in the life sciences and environmental research. "The Office of Science will be very supportive of ideas for simulations in biology," he said.

Asked whether he thought that Congress was becoming more supportive of science, Orbach answered yes. He believes that this is partly a result of the President's actions — for example, by choosing to make his recent speech on national security from a DOE national lab — Argonne National Laboratory — President Bush gave prominence to the national labs and their achievements.

Also, the importance of technology in national security is recognized on the Hill, Orbach said. Counter-terrorism is another of the most important DOE interests, Orbach made clear, and DOE labs have many contributions to make in this field.

Each national lab has a coordinator as a point of contact for Homeland Security, and Orbach expects that involvement will

work two ways. "They [Homeland Security] will have needs, and we will have ideas," he said.

Orbach also believes that Congress is becoming more conscious of the role science plays in the U.S. economy. He looks forward to the new opportunities that could be made possible by a general increase in science funding.

Several times during his remarks, Orbach had referred to the "superb" quality of science performed at BNL and other DOE labs by national lab staff and facility-users. He summed up his confidence in the future: "We are the Department of Energy, and energy is the basis of our national security and economy," he said.

#### Before and After

Before the talk with Orbach, the university visitors had toured BNL in two groups, stopping at the Relativistic Heavy Ion Collider and the PHENIX detector, the National Synchrotron Light Source, the single particle molecular fingerprinter, and the magnetic resonance imaging facility.

All the visitors then gathered at the Office of Educational Programs to hear about BNL's programs on science education and quality of life for facility-users.

After the meeting, Orbach, Paul, and the attendees met with BNL scientists and learned about their research on DOE programs at a poster display set up in Berkner Hall lobby.

— Liz Seubert

## Brookhaven Lab Wins Gold Award As 'Psychologically Healthy' Workplace



(From left) Joshua Erlich and Catherine Masterson of the New York State Psychological Association present the Gold Award won by the Lab to BNL's Susan Foster and Joseph Gisondo.

**B**NL has won a New York State Psychological Association (NYSPA) Gold Award for having the best "psychologically healthy workplace" in the category of large, non-profit organizations in New York State.

Presented for the first time this year, the Gold Award recognizes employers who demonstrate an exemplary commitment to their employees' psychological health and well-being. With the award, NYSPA honors BNL for "providing an environment that nurtures creativity and the growth and development of its diverse, and highly-skilled and highly-trained workforce."

"The Lab takes an all-round approach to ensuring a psychologically healthy workplace," said Susan Foster, Human Resources (HR) Division, BNL's Employee Relations Manager. "We understand that people are healthiest when they are treated with respect and acknowledged for their contributions. We also know the importance of providing an outlet to solve problems and educate employees on how to enhance their lives at work and at home."

Foster and the Occupational Medicine Clinic's Joseph Gisondo, Manager of BNL's Employee Assistance Program, were on hand to receive the award from NYSPA at a ceremony in New York City on June 14. A private, non-profit professional association representing licensed psychologists, NYSPA's mission is to advance science and psychology while supporting education, training, research, advocacy, and service.

To be considered for the award, Foster wrote an essay describing the Lab's many health-oriented programs, including the health lecture series, Employee Assistance Program, Child Development Center, and a variety of Lab-sponsored sports and fitness clubs. As part of the consideration process, a team of four psychologists visited BNL to interview Lab staff members and employees.

— Jane Koropsak

## Conducting-Insulating Materials (cont'd.)

between excited electrons influences their behavior."

In research funded by DOE's Office of Basic Energy Sciences, Valla and his collaborators from BNL, the University of Connecticut at Storrs, Princeton University, and Osaka University in Japan studied two different conducting-insulating materials. They showed that electrons that were confined in the planes at high temperatures are able to move between the planes at lower temperatures, allowing the material to behave more like a metal.

The critical temperature at which the change occurs ranges between  $-100^{\circ}$  and  $-300^{\circ}$  Fahrenheit, depending on the material.

"These planes act like trains and the electrons act like passengers in the trains," says study co-author Johnson. "At high temperatures, the electrons are bound together in the planes like passengers who are inside moving trains. Then, below the critical temperature, the electrons are no longer bound and start moving around in the same way that passengers leave a stopped train."

To examine the interactions between the electrons, the scientists used extremely intense ultraviolet light generated by the National Synchrotron Light Source at BNL. They looked at how the light excites the electrons in each of the two materials and used a method called angle-resolved

photoemission spectroscopy (ARPES) for an accurate measurement of the intensity of the light emitted by the electrons as a function of their energy. The resulting ARPES spectrum was determined for various temperatures.

Below the critical temperature, a signal started to appear in the spectrum. Weak at first, the signal became more apparent as the temperature decreased. "This signal is the tell-tale evidence of individual electrons," Valla says. "Theorists had predicted the existence of such a signal, but nobody had observed it before."

The results of this study promise to provide further insight into how superconductors conduct electricity without heat dissipation when they are cooled below their critical temperature. In particular, the cause of high-temperature superconductors, with critical temperatures ranging from  $-396^{\circ}$  to  $-216^{\circ}$  Fahrenheit, remains mysterious, but is assumed to be due to strong interactions between electrons.

The new study also gives insight into materials with new electrical and magnetic properties that are likely to arise from strong interactions between electrons.

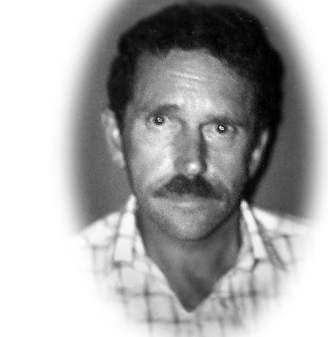
"We expect to see dramatic new results and applications stemming from the study of materials with strongly interacting electrons," Johnson says.

— Patrice Pages

## In Memoriam

Ronald Zalweski, who joined BNL on July 10, 1989, as a steamfitter A in the Plant Engineering Division, died on February 1, 2002, at the age of 57.

Tirre Farmer, Zalweski's supervisor, said, "Ron was a valued member of the small group of steamfitters here at the Lab. They are responsible for the maintenance, repair, and installation of site-wide heat, steam, and hot water distribution systems. He was well liked by his co-workers and is missed by all."



A resident of Blue Point, Zalweski is survived by his wife Susan and his daughter Brynn.



## 'Pianofest' Piano Solos, 8/7

Pianofest Director Paul Schenly, who heads the Cleveland Institute of Music's Piano Department, brings three young pianists to BNL on Wednesday, August 7, to give a noon piano recital in Berkner Hall that varies in performer style as well as the music performed.

Pianofest is a summer festival in the Hamptons which offers time for concentrated study to a small group of pianists selected by audition. The teaching at Pianofest stresses support rather than competition. In addition to developing their solo repertoire, students accompany each other in concertos and explore the duo piano literature. Many of Pianofest's students have gone on to make their mark nationally and internationally.

Noon recitals are free and open to the public. Bring your lunch, and come and go as you please.

# Cool Tunes, Great Vibes at BNL's Blues-and-Rock Concert



Joseph Rubino A0080702

They say, "the blues hurt so bad, they make you feel good," states Joe Vignola, who heads the BNL Music Club, organizers of BNL's Summer Blues and Rock Concert, held on July 13. "The root of American popular music, twelve-bar blues speaks in a vocabulary that many can understand. So, we were pleased when 500 or so families, friends, coworkers, and neighbors came to hear the cool music speak. The Music Club greatly appreciated the generous assistance given by the Facilities & Operations and the Community, Education, Government & Public Affairs Directorates and many BNL volunteers who helped make it all such a success."

Joseph Rubino, of BNL Photography & Graphic Arts and the Muddy River Band, commemorates the event with a photo essay

of the groups that played: Sam "Bluzman" Taylor (top left), and his band (top center); BNL's George Bostick (top right) and Blue House, Chicago and electric blues; the acoustic rock Muddy River Band (lower left), which includes (from left) BNL's keyboard and accordionist John Ostaszewski, guitar and mandolin player Sean Stoll, bass guitarist Rubino, vocalist and blues harpist Joe Carbonaro, and vocalist and guitarist Vignola (right), with Mike DiGeronimo (second from right), drum; and BNL's Gregory Condemni (lower right), guitarist to the Hadicus Road classic rock band. Also, the Whiz Bang Science Show, shown in Berkner Hall during the event, intrigued an audience of about 300. All who attended are eagerly waiting for next year's blues at BNL.

## Boston Russian Chorus at BNL, 8/10

The Boston Russian Chorus, directed by Irina Shachneva, will present Russian liturgical, romance, and folk music in a concert sponsored by the Hospitality Committee and Quality of Life Office. The concert will be held on Saturday, August 10, at 5 p.m. in the Recreation Hall in the BNL apartment area.

The chorus, with soloists Alexander Prochorov and Larisa Fillipenko, will perform music of Rachmaninoff, Chesnokov, Tchaikovsky, and others, in the spirit of original Russian village singing. After the concert, the audience is invited to meet the artists at a coffee reception. Donations of \$5 per person or \$7 per family will be appreciated. For more information, call Joe O'Connor, Ext. 2212.

## BNL Now Offers a New Service: Direct-Banking Reimbursements

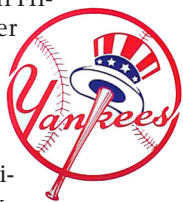
Instead of having to cash or deposit BNL checks for travel advances, travel reimbursements, and tuition refunds, Lab employees and guests can now have these checks deposited directly into their checking accounts.

To be eligible for this form of direct deposit, download the employee/guest agreement for automatic deposits, ACH Credits, (which stands for Automated Clearing House Credits) from the Fiscal Services Division's Home Page, <http://www.fsd.bnl.gov/employee.doc>. Fill in the required information, attach a voided check, sign the form, and forward it to Accounts Payable, Bldg. 134B.

When the Business Services Division's PeopleSoft Version 8 software is installed, it will be possible to make deposits to savings accounts as well. When this option is available, it will be announced in the Bulletin. For more information, call Dawn Schick of Accounts Payable, Ext. 2463.

## NY Yankees Trip U.S. Open Trip

Join BERA on Friday, September 13, for a bus trip to watch the New York Yankees as they take on the Chicago White Sox.



Tickets cost \$55 and include round-trip bus transportation. The bus will leave from the Brookhaven Center at 4 p.m. and will return at approximately 11:30 p.m. Make paid reservations at the BERA Sales Office, weekdays, 9 a.m.-3 p.m.

Some seats remain on the BERA Tennis Committee's trip to the U.S. Open Tennis Championships at the National Tennis Center, Flushing, Queens, on Tuesday, September 3. The cost of \$61 per person includes the bus fare and a day-session ticket. The bus will leave from the BNL tennis court parking lot at 8:30 a.m., stop at the LIE exit 63 park & ride, and return from the Tennis Center at 7:30 p.m.

Make paid reservations at the BERA Sales Office, Berkner Hall, weekdays, 9 a.m.-3 p.m.

## Atlantic City Trip 9/21

The next BERA-sponsored, one-day trip to Atlantic City will be on Saturday, September 21, at \$24 per person. The name of the hotel-casino and the amount of the coin return will be announced later.

The bus will leave the Brookhaven Center at 8 a.m. As usual, there will be free movies, games, and rolls or donuts on board; bring your own juice and coffee. After a seven-hour stay in Atlantic City, the bus will return around 11:30 p.m.

Buy tickets now at the BERA Sales Office in Berkner Hall, 9 a.m. to 3 p.m.

For more information, call Andrea Dehler, Ext. 3347, or Chris Carter, Ext. 2873.

## Walk to Fund Cancer Research

The Women's Program Advisory Committee is organizing BNL's participation in the ninth annual "Walk for Beauty," which will be held on September 22 to benefit research at Stony Brook University Hospital on breast and prostate cancer. The Lab community — employees, retirees, facility users, guests, and families — is invited to join the BNL group for the walk, which will start at 9:30 a.m. at the Stony Brook Village Green. For more information or to be added to the mailing list, contact Kerry Mirabella, Ext. 2632 or [mirabella@bnl.gov](mailto:mirabella@bnl.gov).

## Don't Miss the Boat!

### Join Port Jeff's Sunset, Banjo Cruise

It's the last month of summer and you have not yet seen the sunset from the middle of Long Island Sound? There's still time! The Hospitality Committee cordially invites the Lab community to mark Wednesday, August 28, on the calendar, bring friends, and sail away on an evening "Cruise to Nowhere" on the Port Jeff Ferry. The spacious ferry boat will cruise across the Sound to Bridgeport, Connecticut, and return in the sunset. Pack a picnic dinner or buy snacks and drinks on board to enjoy with the spectacular scenery and the lively music of Banjo Bob and Crazy Henry.

Special rates for all BNL community members and families are: adults, \$10; children 6-12, \$6; and age 5 and under, free. Tickets may be purchased on the boat; cash is preferred, but credit cards will be accepted. Hospitality Committee members will meet participants on the pier to give out BNL-group name tags.

Parking is free in the lot west of the ferry with proof of Brookhaven township residency on driver's license or car sticker. The ship departs at 6 p.m. sharp and returns at 9 p.m. Questions? Call Michelle Herman, Ext. 8481.

## Arrivals & Departures

### Arrivals

none

### Departures

Richard Murgatroyd ..... Plant Eng.  
Jacqueline Yates..... S&H Svcs.

## BERA Off-Road Club Get-Together, 8/4

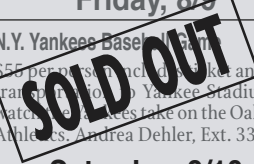
The BERA Off-Road Club will meet at 8:30 a.m. on Sunday, August 4, in the parking lot of Carvel on William Floyd Parkway and will leave promptly at 9 a.m. for Smith's Point. All BNLers are welcome as long as they have appropriate four-wheel drive equipment and accessories, a valid sticker, and Green Key. For more information, e-mail [borc@bnl.gov](mailto:borc@bnl.gov).

## Calendar

(continued)

Friday, 8/9

N.Y. Yankees Baseball Game  
\$55 per person, includes ticket and bus transportation to Yankee Stadium to watch Yankees take on the Oakland Athletics. Andrea Dehler, Ext. 3347.



Saturday, 8/10

### Defensive Driving Course

9 a.m.-3:30 p.m., Berkner Hall, Room B. To register, send a check for \$26 per person, made out to Empire Safety Council, in care of Scott Zambelli, P.O. Box 670, Mount Sinai, NY 11766. Include your telephone number in case you need to be contacted. All checks must be received by August 2.

### \*Boston Russian Chorus Concert

5 p.m. in the BNL Apartment Area Recreation Hall. The Hospitality Committee and the Quality of Life Committee sponsor a concert of Russian liturgical, romance, and folk music by the Boston Russian Chorus, under the direction of Irina Shachneva. A "meet the artists" coffee reception will follow the concert. Suggested donation: \$5 per person or \$7 per family. Joe O'Connor, Ext. 2212.

— WEEK OF 8/19 —

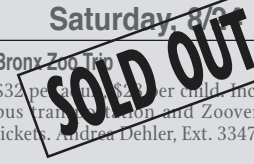
Thursday, 8/22

### BERA Bridge Club

7 p.m., Brookhaven Center. South Room. Morris Strongson, Ext. 4192, [mms@bnl.gov](mailto:mms@bnl.gov).

Saturday, 8/24

Bronx Zoo Trip  
\$32 per person, \$20 per child. Includes bus transportation and Zooventure tickets. Andrea Dehler, Ext. 3347.



— WEEK OF 8/26 —

Monday, 8/26

### IBEW Meeting

6 p.m., Knights of Columbus Hall, Railroad Ave., Patchogue. 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.

— WEEK OF 9/2 —

Tuesday, 9/3

### \*U.S. Open Tennis Trip

\$61 per person; includes ticket and round-trip bus transportation to the U.S. Open Tennis Championships. See notice below, left. BERA Sales Office.

— WEEK OF 9/9 —

Thursday, 9/12

### BNL Blood Drive

9:30 a.m.-3 p.m., Brookhaven Center. BNLers from 17 to 75 years of age, in good health, and weighing over 110 lbs. are welcome. All donors should have photo identification and know their social security number. Susan Foster, Ext 2888, [donateblood@bnl.gov](mailto:donateblood@bnl.gov).

Friday, 9/13

### Yankee Baseball Game

\$55 per person, includes ticket and bus transportation. Bus leaves the Brookhaven Center at 4 p.m. for the 7 p.m. Yankees vs. White Sox game. Prepaid reservations can be made at the BERA Sales Office in Berkner Hall on weekdays from 9 a.m. to 3 p.m.

## BNL Logo Merchandise, Discount Tickets Available at the BERA Sales Office

Stop by the BERA Sales Office in Berkner Hall, weekdays, from 9 a.m. to 3 p.m., to purchase BNL logo merchandise and discount admission tickets to many local and regional attractions.

For more information, contact Andrea Dehler, Ext. 3347.

*Note: This calendar is updated continuously and will appear in the Bulletin whenever space permits. Submissions must be received by the preceding Friday at noon to appear in the following week's Bulletin. Enter information for each event in the order listed above (date, event name, description, and cost) and send it to [bulletin@bnl.gov](mailto:bulletin@bnl.gov). Write "Bulletin Calendar" in the subject line.*

Dosimetry badges will be exchanged today, Friday, August 2. Remember to place your badge in its assigned rack space before leaving work today.

Free  
**Summer  
Sundays**

**BROOKHAVEN**  
NATIONAL LABORATORY

**This Sunday, August 4,  
Tour Brookhaven's Firehouse,  
Meet Lab Police Officers,  
Check BNL's Heavy Equipment**

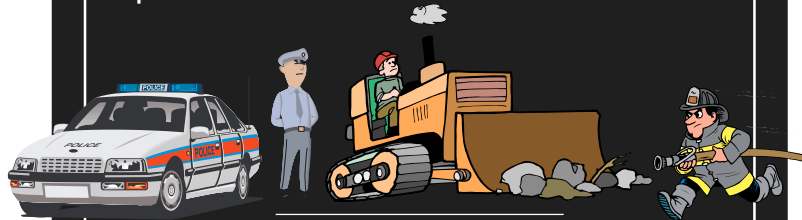
If you wanted to be a firefighter when you grew up and/or have kids who still do, then come back to the Lab this Sunday, August 4, when the Fire-Rescue Group opens the bay doors to BNL's own firehouse, Bldg. 599, and the compartments of its various fire engines for an inspection.

In addition to the tour of the firehouse, Summer Sunday visitors will meet BNL police officers, who will discuss the various aspects of securing a national laboratory.

Representatives from the Lab's Plant Engineering Division will also be on-hand to display some of the heavy equipment — bulldozers, cranes, forklifts, and more — used to maintain and to make upgrades to the BNL facility.

A new hands-on exhibit called "Brain Teasers," a collection of 20 puzzles ranging from giant jigsaws to rope tricks that will challenge both children and adults, is available in Berkner Hall. Also, local high school students will demonstrate the robots they built. In addition, the "Whiz Bang Science Show" — popular with both adults and children — will be shown at 10:30 a.m., noon, 1:30 p.m., and 3 p.m. every Sunday during the summer program.

Tour hours are between 10 a.m. and 3 p.m. Admission is free and no reservations are needed, but, to be admitted on site, all visitors age 16 and over must bring a photo ID.



**Tours Continue Through August 25**

**Indian Classical Music Concert, 8/3  
'Music of the East — Instruments of the West'**



The BERA Indo-American Association invites all BNLers to an evening of Indian classical music when Dee Harris and Viral Pandya present the concert "Music of the East — Instruments of the West" on Saturday, August 3 at 7 p.m. in Berkner Hall.

Dee Harris, a guitarist and multi-stringed instrumentalist of western music, studies north Indian classical music with Sitarist Daisy Paradis and Kinner Seen, and he has received further direction from Sarodist Aashish Khan. He studied the lute with world-renowned teacher Pat O'Brian.

As a guitarist, Harris is largely self-taught. He has developed many new techniques on his instrument and has re-designed his guitar to achieve the subtleties of Indian classical music. His guitar has 20 strings: four of them for playing melody, three chikari, four support, and nine sympathetic strings tuned to the notes of the raga being played. Harris plays this eclectic instrument with a slide as well as the fingers of his left hand on the frets. He wears a thumb pick on his right hand and mizrabs (sitar picks) on three fingers.

Dee Harris has been involved with many east/west recording projects, including his trio "Spirit Form," which mixes Celtic and Indian music. He was recently commissioned to compose and record the soundtrack for a documentary entitled "Silver Bear, a Shaman's Journey."

A young tabla player, Viral Pandya is involved in the Indian classical music as well as in the east/west fusion. He has studied with Kinnar Seen and other artists.

Tickets cost \$5 per person and children under 12 years of age will be admitted for free. For more information and to purchase tickets, contact: Kumi Pandya, Ext. 7734; Achyut Topé, Ext. 5672; or Sharada Sambasivan, Ext. 4862.

**Softball Standings  
as of July 1, 2002**

League E1	W	L
Blue Jays	8	0
System	7	1
Phase Out	6	2
Survivors	5	3
Hammerheads	3	5
HyTech	1	7
Gas House	1	7
Mesocyclones	1	7
League E2	W	L
Bombers	5	2
Chemically Imbalanced	5	2
Sure fire	5	2
Barflies	4	3
Medical	1	6
Team Samuri	1	6
League M1	W	L
Happy Hour	6	2
OER	5	3
Gour Mets	3	5
Stingrays	2	6
League M2	W	L
Hounds and Foxes	7	1
Diamond Dawgs	6	2
Guzzlers	5	3
Sandlot	4	4
Here for The Beer	1	7
Jello Shots	1	7

**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 employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present 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; call the JOBLINE, Ext. 7744 (344-7744), for a list of all job openings; use a TDD system to access job information by calling (631) 344-6018; or access current job openings on the World Wide Web at [www.bnl.gov/HR/jobs/default.htm](http://www.bnl.gov/HR/jobs/default.htm).

**OPEN RECRUITMENT** — Opportunities for Laboratory employees and outside candidates.

NS2113. PHYSICS ASSOCIATE III (P-3/ term appointment) — Requires an MS in physics, completed Ph.D. course work, and knowledge of accelerator physics. Experience with rf techniques and coating surfaces for high vacuum necessary. Will work on installation and commissioning of electron detectors, as well as associated equipment, and assist scientific staff on the electron cloud/vacuum pressure rise problem at RHIC. Collider-Accelerator Department.

TB3007. AUTO-TRUCK MECHANIC - Under minimum supervision, performs required repairs, maintenance, servicing and incidental operation of gasoline and diesel engine driven vehicles such as automobiles, trucks, trailers and material handling equipment. Performs limited welding, brazing and painting and other body and fender repair work in order to maintain vehicles in operating order. Uses and maintains all

hand and portable tools, shop machines and equipment necessary to perform assigned work. Staff Services Division.

TB2866. LABORATORY SPECIALIST (A-2) — Requires AAS degree or equivalent. Will work with the Chemical Management System (CMS) and the Industrial Hygiene Group in surveying areas, inventorying chemical containers, and maintaining records. Must be able to operate independently. Responsibilities in support of the CMS program are database entry from multiple format sources, accessing information for existing databases, bar-coding chemical containers, manipulating the record database, and occasional scanning of documents. Microsoft Access interfacing in data entry, database structure development, queries generation, report generation and macro development is required. Additional computer programming knowledge and familiarity with Oracle a plus. A science background, knowledge of chemistry, or familiarity with chemical naming, and ability to work with customers is desired. Work will involve entry into shipping and chemical handling use areas. Safety & Health Services Division.