

## RHIC Produces World's First Collisions of Polarized Protons

From last November through this January, the Relativistic Heavy Ion Collider (RHIC) took a break from colliding gold ions in an attempt to recreate the conditions of the early universe — to become the world's first collider of spin-polarized protons.

Physicists are using RHIC in this way to investigate a fundamental question: Where do protons get their "spin"?

A magnetic property of particles as basic as mass and electrical charge, spin is a particle's intrinsic angular momentum. The spin of a minute particle such as the proton is classically analogous to the spin of a large, composite body such as a planet.

Understanding spin is of importance not only to physicists interested in the interactions of subatomic particles, but also to astronomers studying astrophysical phenomena such as solar winds and to medical scientists using magnetic resonance imaging to diagnose injury and disease.

Lab and sponsored by the Japanese Institute of Physical and Chemical Research, known as RIKEN, which has helped make spin physics at RHIC possible.

"Thanks to this collaboration between RIKEN and Brookhaven, experimental physicists and theorists from around the world are looking forward to the spin-physics results from the now ongoing analysis of the data from RHIC's inaugural polarized-proton run," says Thomas Kirk, BNL's Associate Laboratory Director for High-Energy & Nuclear Physics.

Adds RBRC Associate Director Hideto En'yo, "It is a truly international team that has allowed the spin-physics program to achieve our recent success."

Meanwhile, the pp2pp experiment at RHIC is also examining polarized-proton data, but from elastic collisions. The purpose is to understand how protons scatter elastically, like

were collided at RHIC to measure the direction of gluon spin within the proton for the first time.

This was done by using the quarks in one beam to probe the properties of the gluons in the other beam. In other words, the products — particles and energy — that come out of a very high-energy inelastic collision between a quark in one beam and a gluon in the other beam are analyzed to reveal the properties of the colliding pair, including the gluon's spin.

'Siberian snakes'

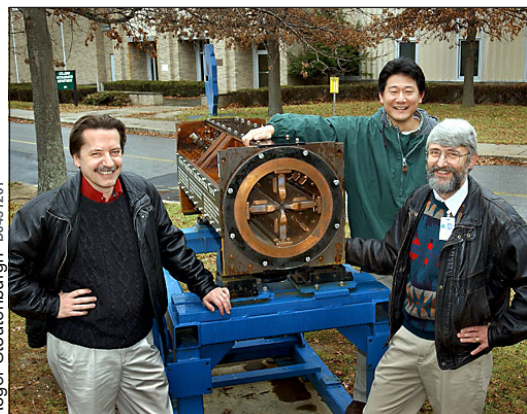
To expand upon the spin-polarized physics performed since 1984 at BNL's Alternating Gradient Synchrotron and to increase the capabilities of the then-only-proposed RHIC, Gerry Bunce, Thomas Roser, Michael Tannenbaum, Yousef Makdisi, and Satoshi Ozaki (see photo above), among others at the Lab and around the world,

Gathered in this group are many of the accelerator physicists, experimenters, engineers, technicians, and support staff involved in the world's first collision of polarized protons, at BNL's Relativistic Heavy Ion Collider.

Photo by Roger Stoutenburgh, D0250202



Gerry Bunce, Michael Tannenbaum, Thomas Roser, Yousef Makdisi, and Satoshi Ozaki are five BNLers who led the effort to start spin-physics research at RHIC.



Outside Bldg. 911 are: (from left) accelerator physicist Thomas Roser, BNL; RIKEN physicist Naohito Saito, now at the RIKEN-BNL Research Center; and physicist Gerry Bunce, BNL.

In spin-polarized proton beams, a percentage of the protons are spinning in the same direction. It took many years, and much hardware and dedicated staff to turn RHIC into the world's only collider capable of accelerating and colliding high-energy spin-polarized protons (see photos).

Ready for its first polarized proton run last November, RHIC accelerated two beams of protons with 25 percent polarization to 100-billion electron volts (GeV) per nucleon — the first record to be set. These beams were then collided, producing a center-of-mass energy of 200 GeV — another benchmark.

"During this very short run, all the components required for successful polarized-proton acceleration worked flawlessly, thanks to the hard work of the BNL staff and many collaborators from the U.S., Japan, and Russia," said Thomas Roser, head of the Accelerator Division of BNL's Collider Accelerator Department, whose accelerator physicists and other staff produced the polarized-proton run.

Now analyzing data collected from the inelastic collisions of polarized protons, spin physicists on RHIC's two largest experiments — PHENIX and STAR — hope these results will help reveal what makes up a proton's spin. These experimenters and theorists include members of the RIKEN-BNL Research Center (RBRC), headquartered at the

billiard balls, via the nuclear, or strong, force, which is one of the four fundamental forces in nature.

### Summing up spin

"Unlike previous experiments at the Alternating Gradient Synchrotron and other accelerators around the world, data from the collisions of spin-aligned [polarized] protons at RHIC will allow us to tease apart the individual contributions to spin of both the quarks and the gluons within the proton," explains BNL Senior Physicist Gerry Bunce of the Physics Department, who is leading the RHIC Spin Collaboration.

It was long thought that the spin of a proton, which has a value of  $\frac{1}{2}$ , resulted from the spins of its three constituent quarks. Experiments through the 1990s, however, have shown that the quarks account for only about one quarter to one third of the proton's spin. That has left the scientists with the question: What accounts for the rest of the proton's spin?

The most likely explanation, physicists think, is that gluons, which are the carriers of the strong force holding quarks together, must also contribute to the proton's spin.

The hypothesis is that, for gluons to contribute such a large proton-spin effect, the vast majority of them must be spinning in the same direction. Thus, spin-polarized protons

Specialized magnets known as Siberian snakes are part of the hardware necessary for the acceleration and collision of the spin-polarized protons at RHIC. Magnet fabrication took place in the Bldg. 902 magnet factory of BNL's Superconducting Magnet Division. Surrounding the first Siberian snake, which was completed in July 1999, are many of the staff involved in its production.



Photo by Roger Stoutenburgh, D0070799

ing spin physics was signed between BNL and the Japanese laboratory RIKEN. In addition to setting up the RIKEN-BNL Research Center (RBRC) on site as a home for visiting theorists and experimentalists pursuing spin physics at RHIC, RIKEN provided much of the hardware needed to collide polarized protons at RHIC, plus a spin-physics detector for PHENIX.

Within the RHIC accelerator-collider complex, polarized protons start out as polarized negative ions of hydrogen. After acceleration by the AGS Linac, the polarized hydrogen ions are stripped of their electrons. Now polarized protons, these particles are further accelerated to higher and higher energies, as they make their way from the Booster, to the AGS, and into RHIC.

Because spinning protons are like tiny magnets, keeping the beams polarized, however, is no easy task. After initial polarization, the beam moves through the bending and focusing magnets of four accelerators, all of which interfere with polarization.

To overcome this problem, BNL and RIKEN worked with the Budker Institute in Russia to design and build specialized sets of four magnets, two for each RHIC ring. These "Siberian snakes" (see photo, left) have a corkscrew-like design, which causes the direction of the magnetic field to spiral along the direction of the beam.

To maintain stable beam polarization, a snake works by (continued on page 2)



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 M. Kay Dellimore, 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 —

**Mondays: BNL Gospel Choir**  
5:15-7 p.m. Berkner Hall. [www.bnl.gov/bera/activities/choir/](http://www.bnl.gov/bera/activities/choir/).

**Mon., Tues., & Thurs.: Aqua Aerobics**  
5:15-6:15 p.m. \$2 pool fee per class or use pool pass. Mary Wood, Ext 5923.

**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](mailto: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: 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 Mimi Luccio, 821-1435.

**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.

**Mon. Tues., Wed., Thurs., & Fri.: English for Speakers of Other Languages Classes**  
Various times. Rec. Bldg., 2nd Floor. Learn English or other languages, make friends. Jen Lynch, Ext. 4894.

**Wednesdays: On-Site Play Group**  
9:30-11:30 a.m., Rec. Bldg. Parents meet while children play. Monique de la Beij, 399-7656.

**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., Rec. Bldg. 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.  
• Register now for series 4 classes (see 4/10)  
• Ballroom dance socials: 4/13 and 5/18.  
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: 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., dance social. Rudy Alforque, Ext. 4733, [rudy@bnl.gov](mailto:rudy@bnl.gov).

— THIS WEEKEND —

Sunday, 3/31

Easter Egg Hunt

11 a.m. in the Rec. Bldg. Each child should bring 15 plastic eggs filled with candy. (No hard candy.) There will also be craftmaking and a piñata. Bring a desert to share. Monique de la Beij, 399-7656.

— NEXT WEEK —

Tuesday, 4/2

Workshops: Cholesterol & Hypertension

Cholesterol workshop: 11:30 a.m.-12:15 p.m. Bldg. 490, Small Conference Room. Participants must register in advance to have blood work done prior to the workshop.

Hypertension workshop: 12:30-1:15 p.m. Bldg. 490, small Conference Room. Topics will include nutritional foods, healthy dining out, easy cooking, travel monitoring for success. Program will be facilitated by a registered dietitian. For registration information, contact Mary Wood, Ext. 5923, [wood2@bnl.gov](mailto:wood2@bnl.gov).

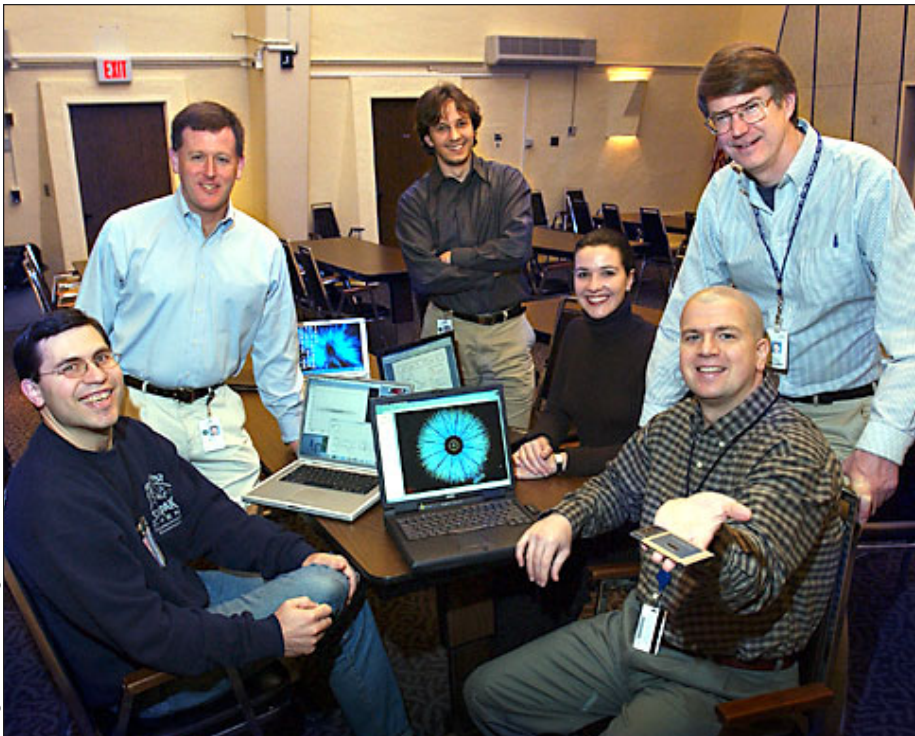
Wednesday, 4/3

\*Music Recital

Noon, Berkner Hall. The Metropolitan Brass Quintet will give a preview of their Carnegie Hall debut performance. All are welcome. For more information, see <http://music.bnl.gov>.

ITD Provides New Services

Lab Visitors Gain Internet Access Without Compromising Computer Security



Roger Stoutenburgh D106302

ITD's Scott Bradley, (second from left) and Vincent Bonafede (right) demonstrate the new wireless-access service in Berkner Hall, Room B, to: (from left) Gene Van Buren, Frank Laue, and Patricia Fachini, all with the STAR experiment at RHIC, and to Jim Thomas, a Berkeley Lab physicist with STAR.

Visitors to the Lab can now use their personal computers to access the Internet directly by using wireless modems without compromising BNL computer security. The wireless service is available in the Berkner auditorium as well as in Berkner Room B, areas that see the highest concentration of visitors.

According to the Information Technology Division's (ITD) Network Operations Manager Scott Bradley, the division installed the wireless access points to support the collaborative needs of the BNL visitor community and the Lab's own scientists. "As more Lab funds become available, we'll install additional wireless access points in other major meeting areas," said Bradley.

One user who gives kudos to ITD for providing the new service is Jim Thomas, a Lawrence Berkeley National Laboratory physicist with the STAR collabora-

tion at RHIC. "Our productivity is driven by the 25-year-old crowd, who use wireless tools," said Thomas. "Go to any meeting nowadays and you'll find the key clicks deafening. It's all the young people. They just keep working, talking to a supercomputing facility no matter where they are."

Visitor Network

ITD has also installed wall jacks in conference rooms and common-use areas around the site. "We call this the Visitor Network," said Bradley, who explained that 52 color-coded jacks provide external Internet access for visitors not requiring internal BNL network access. As a result, these visitors do not have to register their computers with BNL or be otherwise impeded by the Lab's cyber security.

"Previously, users would have to work out of Berkner Hall if they

needed unrestricted Internet access to reach their home institutions," said Bradley. "Having the Visitor Network in department and division public work spaces makes external network access much more convenient."

Bradley thanked all the building representatives who worked with him, Project Manager Vincent Bonafede, and others in ITD to find the best locations for the wall jacks.

It's simple to use the Visitor Network, Bradley said. "Find a purple wall jack and plug in your laptop. If your computer has a wireless modem, you can work in Berkner, with many more locations soon to follow." He added that each wireless access point can support up to 30 users at one time. — Mona S. Rowe  
*If you have questions or comments about the new services, contact Bradley, Ext. 5745 or [bradley@bnl.gov](mailto:bradley@bnl.gov).*

World's First Colliding Polarized Protons (cont'd.)

flipping the beam's polarization, or direction of spin, and, at the same time, averaging out many smaller effects of the other accelerator magnets.

RIKEN also funded and BNL built two other devices: spin rotators, devices that allow the

spin direction to be selected at the collision points; and polarimeters to measure the polarization exactly, something which must be known to analyze spin data accurately.

— Karen McNulty Walsh and Marsha Belford



Roger Stoutenburgh CNE-276-00

A coil form of a Siberian snake magnet is being measured by Chris Cleary of BNL's Central Shops Division, where all 96 forms for the four Siberian snakes and eight spin rotators inserted into RHIC's rings, plus spares, were machined.

COMPUTER  
TRAINING

A Very High Speed Integrated Circuit Hardware Description Language (VHDL) training program has been scheduled for May/June. Classes will meet from 9 a.m. to 4 p.m. in room M1-57 of Bldg. 515 on May 16, 23, and 30, and June 6 and 13. The fee for this five-day class is \$1,355, which includes books. To register for this class, send an ILR for the appropriate amount to Pam Mansfield, Bldg. 515, by April 19.

The following PC training classes have been scheduled for April 2002:

- HTML, 4/4
- Project - beginner, 4/8&9 (2-day class)
- Excel - intermediate, 4/11
- FrontPage - intermediate, 4/16
- PowerPoint - beginner, 4/19
- Access - intermediate, 4/25&26 (2-day class)
- Project - intermediate, 4/29&30 (2-day class)

To register for the classes listed, or to register your interest in a future class, submit a training request form and an ILR or Web requisition for the appropriate amount to Pam Mansfield, Bldg. 515. When the form is received, your name will be placed on a waiting list. All classes are scheduled based on the number of requests received. For more information, registration forms, and class schedules, visit the ITD training page at: <http://training.bnl.gov/>.

Arrivals & Departures

Arrivals

Robert Bennett ..... ITD  
Gabriele Carcassi ..... Physics  
Abid Patwa ..... Physics

Departures

Robert Jeffries ..... Plant Eng.

BNL Bowlers Are Long Island Champs



Pictured at the awards presentation are: (from left) Tournament Chair Laurie Erb and winning BNL team members: Richard Deem, Energy Sciences & Technology Department; Ray Edwards, Environmental Sciences Department, who, with a 243 average over the 16 games, won the Bob Benn Outstanding Bowler Award; John Hammond, Physics Department, who averaged over 223; Brian Mullany, Collider-Accelerator Department; Ken Asselta, Physics; and Jim Cullinan of Coverage Consultants, the tournament sponsor. Deem and Mullany were also members of the 2000 team that won the championship for the Lab. Mullany was also a member of the 2001 Lab team that won the Incentive Division Championship.

On March 2, a team of BNL bowlers won the championship in the 2002 Long Island Men's Industrial Tournament, having played four games a week over four weeks at North Levittown Lanes in Nassau County.

According to Rich Deem, Energy Sciences & Technology Department, who put the team together, this year's group had to overcome a strong showing from Northrop/Grumman as well as from last year's champion, BAE Systems. "After the first week, the team was in fifth place out of a field of 18," Deem recalled. The second week, after combining to play a tournament high team game of 1046, the team moved into second place. During week three, the BNLeers edged out Northrop/Grumman for the lead.

The last two games were the most exciting, Deem says, because BNL withstood major pushes from BAE Systems, which bowled a team high game of 1025, and Northrop/Grumman, which closed within 17 pins after the first two games. BNL prevailed, however, ending up with a 135-pin margin of victory.

"We look forward to going back next year to defend the championship," said Deem. "A back-to-back win would be nice, and with such a strong team, BNL has a good chance of a repeat."



## Members of Brookhaven Women Engineers' Network Celebrate Their First-Year Anniversary



Roger Stoutenburgh b2a2n02

Members of the Brookhaven Women Engineers' Network (BWEN), joined by supporters from the Diversity Office, Human Resources, and other Lab departments and divisions met in Berkner Hall on January 17 to celebrate BWEN's first-year anniversary (see photo above).

"We have come a long way during this past year," said Research Engineer and BWEN organizer Arlene Zhang (standing, second from right) of the Collider-Accelerator Department, who opened the celebration.

"While the group is still early in its development, it has successfully provided a forum to share ideas, concerns, and knowledge for BNL women in engineering, computer science, and other technical fields."

Zhang explained that females make up only a small percentage of the engineering population at BNL and work in different areas throughout the site. So, they do not have regular interaction with each other in their individual work environments.

"That's why a group of us decided to start BWEN," Zhang said.

With the help of the Diversity Office, the Human Resources Training Office, and the Standards Based Management System Office, BWEN was set up and now meets monthly in Berkner Hall. Participants take turns in hosting the meetings, giving informal talks on their areas of expertise, and coming up with ideas for future discussions.

"This gives everyone in the group the opportunity to grow,"

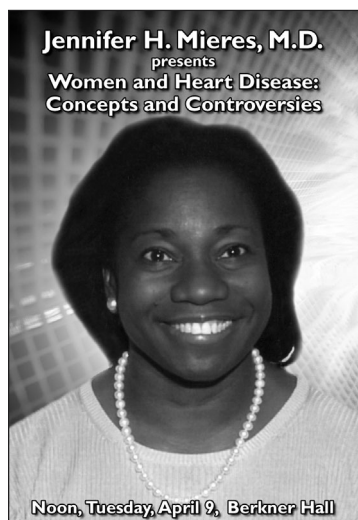
commented Zhang. In addition to regular meetings, the group has also sponsored presentations on topics such as AutoCad, international atomic safeguards, and program analysis.

New members are always welcome, including men. However, say the members, BWEN discussions focus mainly on issues that relate to females in BNL's engineering fields. For more information, contact Zhang, Ext. 5369, arling@bnl.gov, or see [www.bnl.gov/bwen/](http://www.bnl.gov/bwen/).

— John Galvin

## Healthline Lecture

Heart Disease is not just a man's disease. It can strike women at any age. The processes that lead to coronary heart disease, heart attack, and stroke can start at young ages and develop over time.



Join Physician Jennifer Mieres, Director of Nuclear Cardiology at North Shore University Hospital, at noon on Tuesday, April 9, in Berkner Hall. She will give the Healthline Lecture, "Women and Heart Disease: Concepts and Controversies." Mieres will discuss the significance of heart disease in women, common controversies, warning signs, modifiable risk factors, and new diagnostic tools.

Check your mailbox for registration forms. For more information, contact Mary Wood, Health Promotion Coordinator, Ext. 5923, or [wood2@bnl.gov](mailto:wood2@bnl.gov).



### Metropolitan Brass Quintet to Perform Preview of Carnegie Hall Appearance

At noon on Wednesday, April 3, the Metropolitan Brass Quintet (MBQ) will give a recital in Berkner Hall, a preview of the Quintet's upcoming appearance at Carnegie Hall.

As the resident brass ensemble of the Department of Music at Stony Brook University, MBQ has participated in numerous performances of the Stony Brook Contemporary Chamber Players, Chamber Music Concerts, and their own MBQ Solo Recital Series at Staller Center.

With a reputation of being one of the finest young brass ensembles in the new millennium, MBQ performs a wide variety of styles in classical, jazz, and pops. From Bach and Brahms to Bozza and Druckman, MBQ reaches out to its audience with aesthetic approaches to brass music.



### Inside Information

Staff Services announces the arrival of a new, full-time Off-Site Housing Coordinator, Evelyn Silverman. A housing specialist with ten years of experience in the local housing market, Silverman began working at BNL in Building 179 on March 18. Her services are available all year round to BNL guests, visitors and employees, who may contact her at Ext. 4489.

### Defensive Driving

A six-hour defensive driving course will be held on Saturday, April 27, 9 a.m.-3:30 p.m., in Berkner Hall, Room B.

To register, send a check for \$23 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. Checks must be received no later than April 19.

## Calendar

### Wednesday, 4/3 cont'd

#### Softball Captain's Meeting

Noon, Berkner Hall, Room A. (Note room change.) The balance of fees will be collected. Schedules and other information will be distributed. Anyone interested in playing softball should e-mail [softball@bnl.gov](mailto:softball@bnl.gov).

### Thursday, 4/4

#### BERA Bridge Club

7 p.m., Berkner Hall Cafeteria. Morris Strongson, Ext. 4192, [mms@bnl.gov](mailto:mms@bnl.gov).

### — WEEK OF 4/8 —

### Tuesday, 4/9

#### \*Healthline Lecture

Noon to 1 p.m. Berkner Hall. Jennifer Mieres, Director of Nuclear Cardiology at North Shore University Hospital, will present "Women and Heart Disease: Concepts and Controversies." Mary Wood, Ext. 5923 or [wood2@bnl.gov](mailto:wood2@bnl.gov).

### Wednesday, 4/10

#### Rifle & Pistol Club Meeting

Noon, Conference Room, Bldg. 535. Jim Durnan, Ext. 5993, Otto Jacobi, Ext. 2710, or [www.bnl.gov/bera/activities/rpc/](http://www.bnl.gov/bera/activities/rpc/).

#### BNL Ballroom, Latin & Swing Dance Club: series 4 starts

Start of eight-week classes, 4/10-5/29, North Ballroom, Brookhaven Center:

- 5-6 p.m. beginner mambo & merengue, (4 weeks per dance), cost based on enrollment/8 weeks.
- 6-7 p.m. advanced-beginner American peabody & International quickstep I (4 weeks per dance), \$30/person/8 weeks.
- 7-8 p.m. intermediate American rumba & waltz review III & IV (4 weeks per dance), \$35/person/8 weeks.
- 8-9 p.m. intermediate/advanced International rumba/cha cha and American bolero technique and principles (4 weeks per dance), \$40/person/8 weeks.

To register, contact: Marsha Belford, [belford@bnl.gov](mailto:belford@bnl.gov) or Ext. 5053; or Sue Perino, [perino@bnl.gov](mailto:perino@bnl.gov) or Ext. 2483.

### Saturday, 4/13

#### BNL Ballroom, Latin & Swing Dance Club: April Saturday Social

8-11:30 p.m., monthly informal evening of ballroom, Latin & swing dancing to the MacIntosh MP3 Laptop Orchestra. Marsha Belford, [belford@bnl.gov](mailto:belford@bnl.gov) or Ext. 5053.

### — WEEK OF 4/15 —

### Thursday, 4/18

#### BAC Meeting

12:30-1 p.m., Berkner Hall, Room D. Brookhaven Advocacy Council Meeting, Open Session. [www.bnl.gov/bac](http://www.bnl.gov/bac).

#### BERA Bridge Club

7 p.m., Berkner Hall Cafeteria. Morris Strongson, Ext. 4192, [mms@bnl.gov](mailto:mms@bnl.gov).

### Wednesday, 4/17

#### 372nd Brookhaven Lecture

4 p.m., Berkner Hall. Bill Weng of the Collider Accelerator Department will present the 372nd Brookhaven Lecture.

### Saturday, 4/20

#### \*Earth Day Run

See details on page 4.

### — WEEK OF 4/22 —

### Monday, 4/22

#### 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.

### Tuesday, 4/23

#### Healthline Lecture

Noon to 1 p.m., Berkner Hall. Carolyn Gallogly, Associate Dean at St. Joseph's College, will present "Vital Aging: A New Variation of Growing Older." All are welcome. Mary Wood, Ext. 5923.

*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. Please enter the 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.*

## In Memoriam

**Madeline Meo**, who had taken a position as a Chemistry Department research services assistant on July 29, 1974, and had left the Lab on November 30, 1982, died on September 23, 2001. She was 81.

**Eleanor Murgatroyd**, who, as a clerk B, had joined the Director's Office on November 14, 1962, died at age 76 on July 29, 2001. She had moved to the Budget Office and become an assistant budget analyst before retiring from the Lab on March 31, 1987.

**Casimer Nawrocki**, Life No. 968, who had come to BNL on June 16, 1947, as an electronics research associate in the Health Physics Department, died on September 25, 2001, at the age of 88. He had retired as Experimental Engineer 1 from the Instrumentation Division on December 31, 1977, after 30 years of service.

**Ronald Graeser**, who had joined BNL's Reactor Physics Group as a technician on October 14, 1952, died on September 28, 2001, at age 77. After 35 years' service, he had retired as Technical Associate II from the Department of Advanced Technology on April 3, 1988.

**Maddie Miles**, who had joined the Staff Services Division as a custodian on July 25, 1973, and had left BNL on June 24, 1983, died on October 24, 2001, at the age of 83.

**Alice Mabry**, who, on March 17, 1947, had joined Personnel Records as a clerk A with Life No. 193, died on December 11, 2001 at age 88. She had given 30 years' service to BNL before retiring as an administrative assistant on December 31, 1977.

**Clemens Auerbach**, who had joined the former Department of Nuclear Energy on July 23, 1956 as an assistant analytical chemist, and had retired as a chemist after 36 years at the Lab on December 31, 1992, died on January 20, 2002. He was 78.



# BNL to Host Earth Day Run, 4/20

BNL will host a four-mile Earth Day Run/Walk on Saturday, April 20, at 3 p.m. Children 12 and under are invited to participate in a free one-half-mile Fun Run at 4 p.m. Race-day registration/check-in will begin at 1 p.m. in Berkner Hall. All entry fees from the 4-mile event will benefit Long Island Cares, Inc., a regional food bank. All visitors to BNL age 15 and older are required to bring a photo ID to be admitted.

The race will be held on a U.S. Track & Field Federation certified course consisting of a combination of road and wide trails through the Pine Barrens on site. The course is relatively flat, with some slight rolling hills in the last mile. Miles will be marked, a two-mile water stop will be available, and mile split times will be called out.

Applications to enter the race may be downloaded from [www.bnl.gov/eday](http://www.bnl.gov/eday), or call Peter Pohlott, Ext. 5660. If you register before April 12, the entry fee is \$15. If your application is postmarked after April 12, the fee will be \$18. Both fees will be discounted by \$3 if you bring a nonperishable food item to donate to the lo-



cal food bank. Send applications and checks made payable to BSA to Peter Pohlott, Bldg. 426.

The overall male and female winners will receive prizes from Adobe Artes of Huntington. The top three male and female runners and the top three master male and master female runners (runners over age 40) will receive merchandise certificates from some of Long Island's top running stores. The first 300 registered runners will receive a pullover running jacket.

All children who participate in the Fun Run will take home a tree seedling to plant in honor of Earth Day. Immediately following the races, a raffle will be held for all participants.

Long Island Cares, Inc., is a not-for-profit, community-based, regionally responsive organization working in partnership with charitable agencies in Nassau and Suffolk Counties. The anti-hunger organization and food bank was founded in 1980 by the late singer and activist Harry Chapin, in response to the immediate needs of hungry Long Islanders.

## U.S. Open Tennis, 9/3

The BERA Tennis Committee has scheduled a bus trip to the U.S. Open Tennis Championships at the National Tennis Center in Flushing, Queens, on Tuesday, September 3. The cost of \$61 per person includes round-trip bus transportation and a ticket for the day session. The bus will leave from the BNL tennis court parking lot at 8:30 a.m. and will stop at the LIE exit 63 park & ride. Bus returns home from the Tennis Center at 7:30 p.m.

Paid reservations can be made at the BERA Sales Office in Berkner Hall, weekdays, from 9 a.m. to 3 p.m.

## BERA Volleyball

Standings as of 3/15/02

### Open League A

Shank, Carry, Throw .....	58 - 27
Death Volley .....	55 - 30
UCB Roof Company .....	37 - 48
Far Side .....	20 - 65

### Open League B

Easy Spikers .....	49 - 8
What Ball, Where? .....	41 - 16
PHENIX Fire .....	32 - 22
Late Entry .....	31 - 26
Setting Ducks .....	30 - 27
Starmageddon .....	24 - 30
Bumpin Ugles .....	16 - 41
Six Samurai .....	2 - 55

### Mixed League 2

Upsetters .....	32 - 10
Nuts and Bolts .....	34 - 11
Group Sets .....	26 - 16
Spiked Jello .....	36 - 19
Underdogs .....	20 - 25
Wazups .....	11 - 34
Newbies 2 .....	4 - 38

### Mixed League 3

Upton Ups .....	35 - 16
Net Workers .....	31 - 17
New Blood .....	32 - 19
Net Setters .....	20 - 13
NWO .....	15 - 27
Newbies 3 .....	5 - 46

## Aqua Aerobics

Register for the next eight-week session of Aqua Aerobics, which starts April 2. BNLers can register for Tuesday and/or Thursday classes, which are held from 5:15 to 6:15 p.m. at the pool. Participants must pay a \$2 pool fee per class, or have a pool pass. To register, contact Mary Wood, Ext. 5923, or [wood2@bnl.gov](mailto:wood2@bnl.gov).

## Hot Hoops

### Basketball Scores From 3/21

Fab Five 58 — Titans 52  
Shorties 66 — Chemically Imbalanced 44

## 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 JOBSITE, 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/JOBS/jobs.html](http://www.bnl.gov/JOBS/jobs.html).

**LABORATORY RECRUITMENT** - Opportunities for Laboratory employees.

**MK3075. TOOL AND EQUIPMENT ATTENDANT** (Temporary Opening) - Under minimum supervision, responsible for the complete and full-time operation of the EP tool rooms. Receives and issues tools and equipment. Responsible for the tracking, whereabouts, and condition of all tools and equipment assigned to the tool room. Performs safety and operational checks (calibration, test, run, etc.) of equipment before issuance. May be required to perform inspections of equipment in the field. Insures that all requestors are qualified for use of equipment before issuing. Maintains the tool room, equipment, records, and paper work in an orderly and efficient manner. Duties may include the control of inventory records associated with tool crib activities. Plant Engineering Division.

**NS2997. RESIDENCE CUSTODIAN** (LG3, Temporary Employment, 4/29-9/27/02) Staff Services Division.

**OPEN RECRUITMENT** - Opportunities for

Laboratory employees and outside candidates.

**MK8565. BUSINESS OPERATIONS MANAGER 2** (M-1, reposting) - Reporting to the Assistant Laboratory Director, Facilities and Operations, responsible for business administration for a large and complex directorate. Manages overall business operations for the Plant Engineering, Central Shops, Safeguards and Security and Emergency Services Divisions and the administrative staff assigned to these divisions. Prepares and submits budgets for assigned resources, develops rate structures and cost plans, and monitors funding flow, revenues and expenditures, etc. Complexity of business operations includes integrating the provisions of two bargaining unit agreements into business processes, supporting the needs of major charge-back services operations using both in-house and contract labor, and coordinating with construction budgeting and contract administration activities. Performs financial analysis for trending and corrective actions, as well as financial studies for new F&O initiatives. Will develop and deliver presentations as well as support the negotiations for electric power, natural gas and fuel contracts and assist in the billing process. Extensive interaction with key business support functions including Budget, Legal, Procurement and Property Management, Fiscal, Human Resources and the Department of Energy. Requires a minimum of an MBA or equivalent; CPA certification highly desirable. Extensive, progressively related work experience (ten years or more), including demonstrated supervisory skills, and broad knowledge of BNL budgetary and financial management processes required, as well as several years of activity-based costing modeling. Must have significant experience with PC-based business software applications including MS Excel, Access, Word, PowerPoint, etc., and have extensive knowledge of Peoplesoft applications. Must possess excellent organization, interpersonal, analytical, written and communication skills. Facilities and Operations Directorate.

**TB3853. CHEMISTRY/MICROBIOLOGY ASSOCIATE III** (P-3) - Requires a BS or MS in environmental chemistry or microbiology with some experience in microbiological culture techniques and a working knowledge of GC, ICP-AES, HPLC, and UV-vis spectrophotometry. Will be expected to assist and interact with a multidisciplinary research group involved in the study of radionuclide-organic-microbe interactions. Environmental Sciences Department.