

On April 7, Sheila Bubka (standing), who led the Employee Focus Group on Communication, was one of the four focus group leaders to present recommendations to Laboratory Director John Marburger and the Integration Council.



Roger Stoutenburgh

## Focus Groups' Findings Now on Web — Your Comments Requested by May 15

They're on the Web — the recommendations of the four employee focus groups regarding four issues of Lab-wide significance identified through the 1998 employee survey (see Brookhaven Bulletin of August 21, 1998). Lab employees are encouraged to comment on these findings by May 15.

To make these recommendations, the focus groups met weekly from November 1998 through mid-February, each group addressing one of the following: communication, diversity, employee involvement, and training & development (see Brookhaven Bulletin of December 11, 1998).

On April 7, at a final meeting, the group leaders presented the recommendations to Laboratory Director John Marburger and the Integration Council. Employees can view a video

of the meeting by e-mailing a request to hoey2@bnl.gov.

Lab employees' comments on the recommendations are most welcome, says Robert D'Angio, Director, Human Resources Division. These opinions will be used to help prioritize the order in which the focus groups' recommendations will be addressed.

The Employee Survey Project recommendations are on the Web at <http://www.bnl.gov/PERSONNEL/survey1.htm>. Comments should be sent by the e-mail link on the survey Website or by regular mail to Lorraine Merdon, Employee Survey Project Chair, Bldg. 185A. Employees who do not have access to the Web may call Nanci Hoey, Ext. 2821, then pick up a copy of the summary at the Diversity Office, Bldg. 185A.

— Liz Seubert

## BSA Distinguished Lecture

## Space-Time Warps: Future Glimpse

Two great discoveries of the 20th century were Einstein's laws of general relativity, which explain that space and time are distorted, or warped, by mass and energy, and the law of quantum mechanics, which examines the unpredictable behavior of atoms and molecules.

But the light of these discoveries is still surrounded by shadows of speculation: Did warp-age and the quantum together create the universe? Is there a "dark side of the universe" populated by objects such as black holes? Can we observe the birth of the universe and its dark side using radiation made from space-time warp-age, or so-called "gravitational waves?" Will 21st century technology reveal quantum behavior in the realm of human-size objects?

To discuss these and related questions, Kip Thorne, a theoretical physics professor at the California Institute of Technology (CalTech), will give a lecture entitled "Space-Time Warps and the Quantum: A Glimpse of the Future," on Friday, April 30, at 4 p.m. in Berkner Hall. All are welcome, and refreshments will be offered after the lecture.

Thorne received a B.S. in physics from CalTech in 1962 and a Ph.D. in physics from Princeton University in

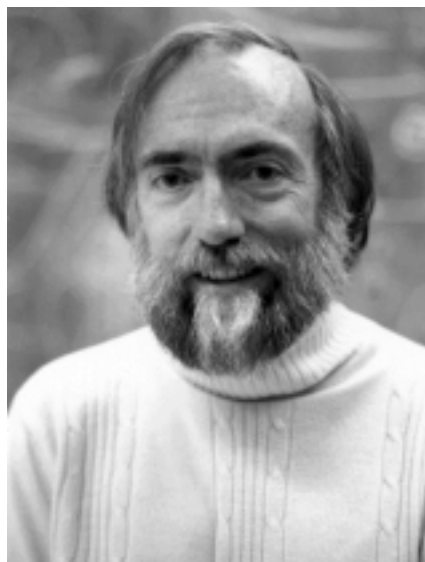
1965. He returned to CalTech in 1967, becoming a professor of theoretical physics in 1970, the William R. Kenan, Jr. Professor in 1981, and the Feynman Professor of Theoretical Physics in 1991.

Thorne's research has focused on gravitation physics and astrophysics, with emphasis on black holes and gravitational waves. He was a co-founder of the Laser Interferometer Gravitational Wave Observatory Project.

Elected to the American Academy of Arts and Sciences in 1972 and the National Academy of Sciences in 1973, Thorne has been awarded the 1996 Lilienfeld Prize of the American Physical Society and the 1996 Karl Schwarzschild Medal of the German Astronomical Society. He was also the recipient of the American Institute of Physics Science Writing Award in Physics in 1969 and 1994, and the Phi Beta Kappa Science Writing Award in 1994.

A Woodrow Wilson Fellow, a Danforth Foundation Fellow, a Guggenheim Fellow, and a Fulbright Fellow, Thorne has served on the International Committee on General Relativity and Gravitation, the Committee on US-USSR Cooperation in Physics, and the National Academy of Sciences' Space Science Board.

— Diane Greenberg



Kip Thorne

## BSA Cited, Fined for Violations — But DOE Notes Progress

Last Monday, Brookhaven Science Associates was cited by the U.S. Department of Energy (DOE) and fined \$27,500 for failing to comply with nuclear safety requirements. The violations took place from March through June 1998 at three BNL facilities: the High Flux Beam Reactor (HFBR), the Alternating Gradient Synchrotron (AGS) and the Radiation Therapy Facility, which is owned and operated by the University Hospital and Medical Center at Stony Brook.

As stated in the DOE press release, although the three incidents cited had the potential to result in unnecessary exposures to workers, no BNL employees were exposed and none of the incidents represented a safety threat to the public. All of the incidents cited by DOE were self-reported by the facilities involved.

The three incidents included:

**In March 1998**, a reactor employee removed potentially contaminated equipment from a controlled area at the HFBR without wearing protective clothing or notifying radiation protection personnel. This incident was considered the most serious of the three cited and would have resulted in a civil penalty of \$55,000.

**In June 1998**, a technician was inadvertently left inside the AGS ring, an area that becomes a "high radiation area" during operation. The technician immediately notified the main control room and exited the ring before the AGS began operation.

**In March 1998**, workers at the Radiation Therapy Facility taped

down one of two safety switches controlling access to the facility. The switch, which had malfunctioned, was taped down to allow cancer patient treatment to continue at the facility.

The DOE release also noted that in recognition of the significant progress BNL has made since the incidents occurred, the proposed fine would be reduced by 50 percent. The "broad and effective" corrective actions cited by DOE included comprehensive investigations by the newly created Office of Independent Oversight.

Laboratory Director John Marburger said the Laboratory will continue working to raise employee awareness of the importance of radiological safety. "We are disappointed that these events occurred at all, and they are certainly below our expectations for the Laboratory," he said. "Last fall I implemented a sweeping review and reorganization of the Laboratory's radiological safety program, and I have personally emphasized to all employees that excellence in radiological performance is a condition of employment at Brookhaven National Laboratory. Since then, many actions have been taken to improve the safety culture of the Laboratory."

These actions include the increased involvement of the Independent Oversight Office, headed by Robert McNair, the appointment of Steve Layendecker to head the Radiological Controls Division and serve as BNL's Radiological Safety Officer, and a re-engineering of the Laboratory's entire radiation protection program. — Pete Genzer

## BNL, USB Lectures Celebrate

## 50th Anniversary of Bigeleisen's Kinetic Isotope Effects Publication

Next week, BNL and the State University of New York at Stony Brook (USB) will celebrate the 50th anniversary of the publication of a landmark paper on the theory of the kinetic isotope effect, which was written by Jacob Bigeleisen, who was then a chemist in BNL's Chemistry Department and is now USB Distinguished Professor emeritus.

For the occasion, two lectures will be given: Max Wolfsberg, formerly of BNL's Chemistry Department and now University of California (UC) Irvine, will talk on "Fifty Years of the Kinetic Isotope Effect," at 4 p.m. on Thursday, April 29, in BNL's Hamilton Seminar Room, Bldg. 555; and Judith Klinman, UC Berkeley, will lecture on "Kinetic Isotope Effects in Enzymatic Reactions," in the USB Chemistry Department on Friday, April 30, at 4 p.m.

A dinner will be held in Berkner Hall at 6 p.m. on Thursday, April 29. The cost is \$35 per person; all are welcome. Call Jean Petterson, Ext. 4302, by Monday, 26 April, for information or to reserve a place.

Isotopes, which were discovered early in the 20th century by the study



Jacob Bigeleisen



Max Wolfsberg



Judith Klinman

of natural radioactive decay of heavy elements, are forms of a chemical element that contain the same number of protons, giving them the same atomic number, but that have different numbers of neutrons, giving them different atomic weights.

For many years, it was assumed that isotopes of an element have identical chemical properties. Then, in 1931, Harold Urey of Columbia University, with colleagues Ferdinand Brickwedde and George Murphy, discovered deuterium, an isotope of hydrogen. Its properties differed significantly from those of the common hydrogen isotope: protium.

Early in World War II, Bigeleisen became associated with Urey and others working on problems connected with isotope separation. From 1943 to 1945 on the Manhattan Project at Columbia University, and again at the University of Chicago, 1946-48, he and Maria Goeppert-Mayer, who later won the 1963 Nobel Prize in physics, studied and developed the definitive theory of the difference in chemical properties of isotopic systems at equilibrium.

(continued on page 2)



## Equipment Demos

On Tuesday, April 27, from 10 a.m. to 2 p.m., in Berkner Hall, Mobile Phone Center Wireless will present a new promotion for BNL employees, including a “free” DMN phone, more minutes and other free features. For more information, call (516) 385-4141.

On Monday, May 3, from 10 a.m. to 3 p.m., in Berkner Hall, Hewlett-Packard will present new products. Company representatives will display instrumentation and demonstrate spectrum, network, logic and vector-signal analyzers; portable VXI data acquisition; and EMC precompliance instrumentation.

For more information, contact Tammy Kubasko and Maribel Thomas, (732) 562-6114.

## Arrivals & Departures

### Arrivals

**Alain S. Domingo** ..... Env. Restor.  
**Donald M. Fleming** ..... Director's Off.  
**Michael A. Robles** ..... Rad. Control  
**Ralph T. Wiedmann** ..... Inform.Tech.  
**John R. Zullo** ..... AGS

### Departures

**Jack Allentuck** ..... Adv. Technology  
**Percephon Doufou** ..... Chemistry  
**J.T. Adrian Roberts** ..... Director's Off.  
**Ulrich C. Wildgruber** ..... Physics

## Bigeleisen Lecture (cont'd)

In July 1948, Bigeleisen joined BNL's Chemistry Department. While waiting for temporary chemical laboratories to be completed (see sidebar), he turned his attention to the general question of the effect of isotopes on the rates of chemical reaction.

Chemical reactions occur when bonds in one or two molecules are broken and new bonds are formed. This requires energy — enough to surmount the barrier of the bond-rupture process. The rate of a reaction depends on the properties of this barrier.

Bigeleisen realized that the theory defining the effect that different isotopes have when they are at rest, or in equilibrium, could be applied to reaction rates. By including in the calculations terms that depend on the reaction barrier, he derived a comprehensive treatment of kinetic isotope effects — the changes in the rates of chemical reactions caused by isotopic substitution. More simply and accurately than by previous methods, he showed that, by comparing different isotopic species, it is possible to see how very subtle differences in the chemical properties of isotopes lead to small shifts in chemical equilibria and rates of chemical reactions.

This theory, published in August 1949, was the starting point for new insights into the origin of kinetic isotope effects, and it was to have applications in many fields: chemistry, biochemistry, geochemistry, atmospheric science, and others. For his work on the theory and experiments related to the kinetic isotope effect, Bigeleisen received the 1958 American Chemical Society Award in Nuclear Chemistry and a 1964 U.S. DOE Lawrence Award.

Bigeleisen left BNL in 1968 to head the Chemistry Department at the University of Rochester. In 1978, he moved to USB, and, on his retirement, friends endowed the annual Bigeleisen Lectures, now in their tenth year.

Long before Bigeleisen left BNL, however, he had been joined in Chemistry in 1951 by Max Wolfsberg, who collaborated with him during the 1950s in the further development of the theory of the kinetic isotope effect. Wolfsberg had received his Ph.D. in chemistry from Washington Univer-

## Science In Society: Essay Contest Awards

On Wednesday, April 28, at 4 p.m., the five award-winning finalists of a high-school essay contest sponsored by BNL's Office of Educational Programs will present their essays on “Science in Society” at a ceremony to be held in the Hamilton Seminar Room in the Chemistry Department's Building 555.

After being welcomed by Laboratory Director John Marburger, the winners will be addressed by Lab Historian Robert Crease. All are invited, and refreshments will be served after the event.

The contestants — juniors from Center Moriches, Longwood, Rocky Point, Shoreham-Wading River and William Floyd High Schools — have each written an essay on Science in Society, a topic chosen to challenge the students to question and deliberate the purposes and social implications of scientific research.

With funds provided by Friends of Brookhaven, a nonprofit organization for advancing the cause of scientific and medical research, each finalist will receive a prize of \$200. The Grand Champion prize winner, who will be announced at the ceremony, will be awarded an additional \$500.

## Go Green at Berkner

The Green Seminar combines the power of hypnosis with standard behavior-modification techniques to help smokers to quit or dieters to lose weight.

On Monday, April 26, from 4:30 to 6:30 p.m., the Green Seminar will be offered to all employees and their dependents. However, the place has been changed — the seminar will be held in Room B, Berkner Hall, not in the Brookhaven Center.

The one-session program will be presented by Stuart Green, the president of GSI, a New York company that specializes in corporate wellness programs. The cost is \$10 for new attendees, payable after the first hour of the two-hour session. Previous participants may attend for free. Participants will receive an audiotape and written material for use at home.

For more information or to reserve a place, call Health Promotion Specialist Mary Wood, Ext. 5923.

tritium-substituted substrates on enzymatic reactions.

According to quantum mechanics, a theory that describes the mechanics of atoms, molecules and other very small systems, the wave-like properties of a hydrogen atom allow it to be on either side of a barrier without going over the top.

Thus, in a chemical reaction, the hydrogen atom is said to tunnel through the barrier, because it has a certain probability of finding itself on the product side. This tunneling depends critically on the mass of the atom, and therefore will change with isotopic substitution.

## Kinetic and Other Laboratory Effects

*In July 1948, BNL was 15 months old, and the four World War II Camp Upton classrooms that had been converted into chemistry labs were already full of experimenters.*

*Fresh from two years of work at the University of Chicago was a new recruit to the Chemistry Department — Jacob Bigeleisen. At Chicago and previously, from 1943-45, on the Manhattan Project, he and Maria Goeppert-Mayer (see accompanying story, page 1) had developed the definitive theory of the difference in chemical properties of isotopic systems at equilibrium.*



**This 1959 view shows Chemistry offices carved from corridor space, as they were when Jacob Bigeleisen sat here in 1948.**

*At Upton, Bigeleisen sat at a desk in a small annex to the temporary Chemistry facilities at the corner of Brookhaven Avenue and Rochester Street. He hoped that the conversion of the next five classrooms would not take too long, since he had joined BNL mainly to study the spectroscopy of transuranic elements, and he needed a lab to do this.*

*A friend who had been a fellow graduate student was arranging a December conference on the use of radiotracers. He had invited a presentation by the authors of a paper reporting what seemed to be a very large effect of carbon-14 in a chemical reac-*

## Piano Recital, 4/28

The next BSA Lunchtime Recital will be presented on Wednesday, April 28, 12-12:45 p.m., in Berkner Hall, by pianist Jeff Meyer, playing music by Mozart, Beethoven and Schubert.

Meyer has performed in master classes with Richard Goode and Leon Fleischer, and he has received prizes both for piano and composition. He appears as soloist, chamber musician, conductor and coach in venues around the United States and Europe. His repertoire runs from the Baroque to the contemporary, and he has premiered several new works.

BSA Lunchtime Recitals are free, informal and open to all. Audience members may bring a box lunch into the hall to enjoy with the music, and may come and go as they please.

## IBEW Meeting

Local 2230, IBEW, will hold its regular monthly meeting on Monday, April 26, at 6 p.m. in the Knights of Columbus Hall, Railroad Avenue, Patchogue. There will be a meeting for shift workers at 3 p.m. at the union office. The agenda includes regular business, committee reports and the president's report.

As Klinman will relate in her lecture, her work shows that enzymes may actually induce quantum mechanical tunneling as a means of allowing reactions to take place, even when there is not enough energy to surmount the barrier.

“Bigeleisen's work has had great impact on the biological sciences as well as many other disciplines,” Klinman said. “Using isotopes to probe biological function in terms of structure has provided a framework of information. Now, in the next generation, we can go beyond the classical picture, looking for deviations to find out new features of enzyme catalysis.”

*tion. Bigeleisen remembers a discussion in which his friend outspokenly reminded him that his expertise was only in systems at equilibrium. “Jake, you know nothing about [reaction] rates!” he was told.*

*This was not to be the case for long. Since the new labs were not yet completed. Bigeleisen took to BNL's library — a good library, he recalls — and steeped himself in the theory of chemical reaction rates and the current literature. “I believed that I could simplify the procedure and also get more accurate results,” he said.*

*Bigeleisen was right. His dramatic presentation of his ideas at the December conference is still remembered. Shortly after the conference, Bigeleisen recalls, he and Lewis Friedman, who retired from BNL's Chemistry Department in April 1996, repeated the experiment with another isotope of carbon, carbon-13. Their work and subsequent experiments done by one of the original authors who used both carbon-13 and carbon-14, showed that the original experiments showing large isotope effects had been flawed.*

*The new kinetic isotope effects theory lived up to its promise, giving insights that have continued to produce a wealth of new information.*

*BNL's chemistry labs had another, smaller, effect on Bigeleisen's career. In 1959, he chaired a committee to plan a permanent chemistry building at BNL — the present Bldg. 555, which was dedicated in 1966. The committee's collaboration with architect Marcel Breuer established a new direction in scientific laboratory design, and the seating specifications in the auditorium have been often reproduced, as, for example, in the Kennedy Center in Washington, DC. For some time afterwards, Bigeleisen was in demand as a consultant in this field also.*

— Liz Seubert



# L. I. Weather in 1998 — Hottest, Wettest, Driest Months on Record

On Long Island, 1998 was a year for swimsuits and sailboats — not for down jackets or snow blowers. With an average temperature of 53.1°F, last year was the hottest on record according to meteorological records that have been kept at the Lab since 1949.

The new yearly high temperature beat the 1991 record of 52.9°F, and it was considerably above the normal average yearly temperature of 49.9°F.

Also, the snowfall for the 1997-98 snow season was 4.5 inches, making it the least snowy winter ever recorded. Long Island's average yearly snowfall is 29.7 inches, and the runner-up for the year with the least amount of snow is the winter of 1972-73, with 5.7 inches.

At 56.6 inches, total precipitation in 1998 was more than the yearly average of 48.3 inches, but if the year is cut into two equal parts, extreme precipitation patterns emerge. The first six months of the year had 44.3 inches of precipitation, making it the wettest half-year on record. From July through December, only 12.3 inches of precipitation were recorded, making that period the driest half-year ever recorded.

BNL meteorologist Victor Cassella said the warm temperatures and the large amount of rainfall in the first half of the year were due to the effects of El Niño, which typically causes warmer, wetter weather in the Northeast.

While there were no new low daily temperature records set in 1998, there were a dozen new highs.

On January 4, the thermometer hit 64.5°F, which beat the previous record of 55°F set in 1950. On January 8, a high of 61°F was recorded, two degrees more than the high set in 1949.

While there were no new daily high temperatures set, February was the hottest on record, with an average temperature of 37.3°F — 0.2° more than the previous record set in 1984.

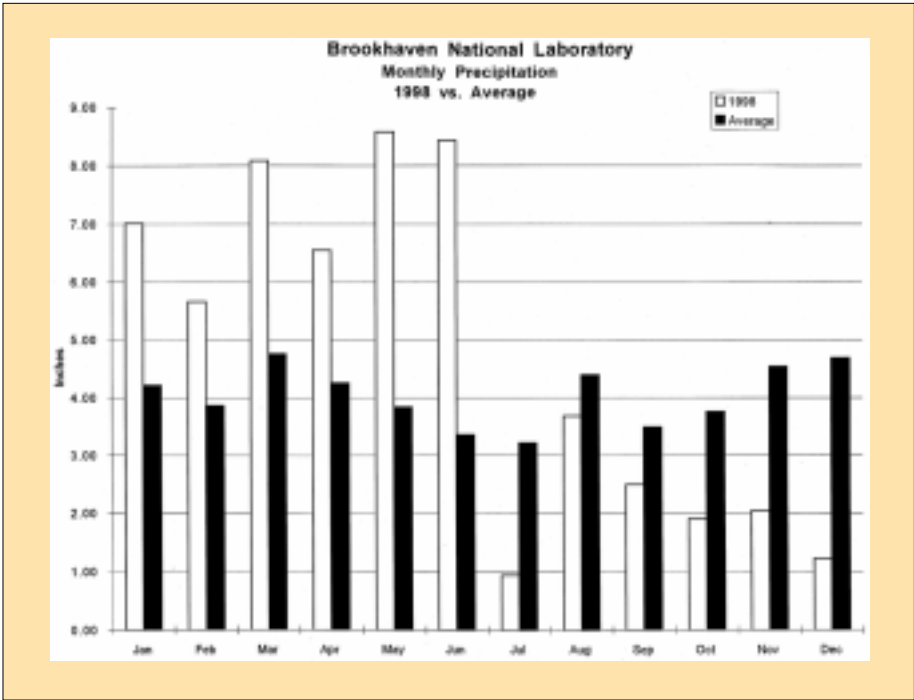
March really went out like a lamb, with some of the warmest temperatures ever recorded in the month. On March 27, Long Islanders enjoyed a balmy high of 80°F, which beat the previous 1986 record by a whopping 13°F.

On March 29, a new high of 80.5°F was recorded, beating the previous high of 72°F, recorded in 1985. March 30 and 31 brought temperatures of 75.5°F and 72°F, both beating previous records set in 1977 and in 1986 consecutively by one degree. The next high temperature of the year was 86.5°F, beating the previous high recorded on September 27 by three degrees.

A heat wave in early December brought four new high temperatures: on the third, at 68°F; the fourth, at 72°F; the sixth, at 67.5°F; and the seventh, at 76.5°F. These temperatures consecutively beat previous highs of 62.5°F set in 1994, 68.5°F set in 1982, 62.5°F also set in 1982, and 63°F set in 1951. Also, on December 2, a high of 61.5°F tied with the record set in 1970. — Diane Greenberg



Roger Stoutenburgh



## Benefit Notes

### CIGNA Dual Coverage

The Laboratory is implementing a new procedure for filing the medical claims of participants in the CIGNA indemnity or PPO medical programs who have dual coverage through BNL. The Benefits Office has available an additional form to be filed with the medical claims which will identify the participant as having dual coverage.

Dual-coverage participants should submit the new form with a medical claim form and medical bills to the address on the claim form. CIGNA will

process the claim under the participant's social security number and then process it under the spouse's social security number. This should improve the claims processing for those with dual coverage.

The new forms are available in the Human Resources Division, Bldg. 185, or by contacting the Benefits Office, Ext. 2877.

### Qualifying Events

Changes to medical and/or dental coverage may be made only during the annual open enrollment or when a qualifying event occurs.

Qualifying events, such as birth or adoption of a child, marriage, divorce or legal separation, loss of dependent status (such as graduation), or spouse's gain or loss of employment, allow participants to make certain changes to their coverage within 60 days of the event.

## Outreach: Mind-Body Workshop Postponed

The Tuesday, April 27 Outreach Workshop on the Mind-Body Connection, Part II, that was announced in the Brookhaven Bulletin of February 5, 1999, has been postponed. It will take place on Tuesday, June 22.

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## Hospitality Committee Family Night Tonight

Tonight, Friday, April 23, on-site residents are invited to bring their families and friends plus a dish to share to the April potluck family night from 6:30 p.m. to 8:30 p.m. in the Recreation Building in the apartment area.

After sharing supper, spend an evening talking and playing games with your neighbors and friends.

## WalkAmerica

It is not too late to join the BERA team as a walker or a contributor for the Sunday, April 27, WalkAmerica for Healthier Babies sponsored by the March of Dimes. You may pick up a sponsor sheet today, 9 a.m.-1:30 p.m., at the BERA Sales Office, Berkner Hall.

If you cannot join the walk, but want to make a donation, send your check payable to the March of Dimes to BNL's Recreation Office, Human Resources Division, Bldg. 185, or drop it off at the BERA Sales Office. For more information, call Andrea Dehler, Ext. 3347; M. Kay Dellimore, Ext. 2873; or Mary Wood, Ext. 5923.

## Defensive Driving

The training group of the Safety & Health Services Division will offer a six-hour defensive driving course on Saturday, June 5, 9 a.m.-3:30 p.m., in Berkner Hall, Rooms B & C. A Metropolitan Life instructor will teach the course, which is open to BNL, BSA and DOE employees, BNL facility-users, and their families, at \$23 per person.

Completing the course entitles participants to a 10-percent discount on vehicle collision and liability insurance for three years, and to have up to four points deducted from their driving records if they were incurred during the 18 months before the completed course. To register, call Scott Zambelli, 249-3000, Ext. 5877 (not the on-site Ext. 5877).

## Basketball

### Championship Game April 15

Wizards 70		Bombers 62	
Santos Ortiz	21	Doug Aichroth	17
Al Boerner	15	Jerry Gaeta	15
Terry Buck	15	Donald Davis	12
Rob Singleton	11	Tracy Fountaine	9
Charlie Edwards	6	Steve Jao	7
Jim Rank	2	Brian Hobson	2
Three-point shots: Gaeta (4), Ortiz (4), Fountaine (2), Aichroth, Boerner, Jao.			



Life’s a Beach

Tomorrow, Saturday, April 24, BNL volunteers are needed from 9 a.m. to noon to help clean up the beach at Smith Point Park, as part of an extended Earth Day celebration.

No experience is necessary, just bring your family, friends and community spirit. To volunteer, call Elaine Lowenstein, Community Relations Office, Ext. 2400.

Great Adventure  
Tickets Sales

Tickets for Six Flags Great Adventure Amusement Park are now on sale at the BERA Sales Office, Berkner Hall, weekdays, 9 a.m. to 1:30 p.m.

Great Adventure features “The Great American Scream Machine,” the “Batman” ride, and “The Viper,” the indoor roller coaster “Skull Mountain,” the “Lethal Weapons” water-stunt show, and the new Batman & Robin ride “The Chiller.”

At Great Adventure, regular park tickets are \$38.15 for adults, while the park-safari combo is \$41.34. The BERA price is \$28 for the park and \$31 for the combo, which includes tax and saves waiting on line. BERA sells children’s combo tickets at \$20 for children of up to 48 inches tall. Children under 3 years old are free. Also available are food vouchers at \$5.50.

In addition, BERA is selling early-bird park-safari combo tickets at \$24. The tickets, which are not available at the gate, may be used until Sunday, June 27. For more information, call Andrea Dehler, Ext. 3347.

Computer Training

*The Information Technology Division (ITD) will offer the following software classes in April and May. See the ITD training page at [www.ccd.bnl.gov/bnl/training](http://www.ccd.bnl.gov/bnl/training) for registration information and course outlines:*

date	class	level
4/27-28	Microsoft Project	beginner
5/4	Outlook	beginner
5/5	Excel	beginner
5/18-19	Access	beginner
5/20	Word	beginner
5/24	Outlook	beginner
5/25	Excel	intermediate

Classified

Advertisements

Placement Notices

The Laboratory’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 complete list of all job openings; use a TDD system to access job information by calling (516) 344-6018; or access current job openings on the World Wide Web at <http://www.bnl.gov/JOBS/jobs.html>.

LABORATORY RECRUITMENT - Opportunities for Laboratory Employees

DD7374. SECRETARIAL POSITION - Requires an AAS degree in secretarial science or equivalent experience and knowledge of MS Word. Must be able to handle frequently changing priorities. Will provide varied secretarial support for various groups within the Reactor Division. Additional duties will include preparing procedures, correspondence and reports, and maintaining and organizing files. Reactor Division.

OPEN RECRUITMENT - Opportunities for Laboratory Employees and Outside Candidates.

MK7667. POSTDOCTORAL RESEARCH ASSOCIATE - Requires a Ph.D. in solid state physics, knowledge of infrared spectroscopy of ultra-thin films and high-Tc superconductors, and knowledge of cryogenics, ultra-high vacuum and computers. Experience with far infrared spectroscopy using Bruker 113 and Bruker 66 spectrometers and their use with synchrotron light is preferred. Will work in a program concerned with Fundamental Properties of Bad Metals (systems that violate the Ioffe-Regal condition). This includes ultra-thin layers, high-Tc superconductors and other oxides and organics. Under the direction of P. Johnson. Physics Department.

Opening Next Wednesday, April 28:  
Vehicle-Inspection Loop at Main Gate



Roger Stoutenburgh

**At the Lab’s Main Gate, a patrol officer (left) from the Safeguards & Security Division (S&SD) inspects an incoming delivery truck, while Mechanical Engineer Scott Guthrie (center) and Architect John Castro (right), both of the Plant Engineering (PE) Division, review the layout of the new vehicle inspection loop, which will open next week, on Wednesday, April 28 (see Brookhaven Bulletin, April 16, 1999). The loop will allow S&SD patrol officers to inspect trucks and other incoming vehicles and control the access of contractors and visitors to the site, all without tying up authorized traffic or endangering their own safety. The loop has been the project of Castro, Guthrie and Electrical Engineer Abass Wessen (not present), also of PE, who have been working with Martin Fallier, PE’s Project Coordination Manager.**

### Traffic-Flow Procedures at the Main Gate

To keep main gate and inspection-loop traffic flowing smoothly, new procedures will include:

**Between 7:45 and 9 a.m.:** drivers who are BNL, BSA, DOE and National Weather Service employees, and BNL guests with room keys who have either a Lab vehicle-identification sticker or the appropriate ID badge should stay in the left lane as they enter the Lab.

Contractors, visitors, trucks and employees without vehicle stickers or ID badge should use the right lane.

Employees going to the Child Development Center may use the right lane, but they may be delayed while others in that lane are screened.

Drivers directed into the inspection loop will be asked to use either the outer truck lane or the inner car lane, depending upon their vehicle, and will be required to stop at the stop line in front of the guard booth within the loop. The center lane will be used by patrol officers. After the inspection, the driver may proceed to the yield line, then merge with traffic in the right entrance lane.

**Off-peak daytime hours:** only the right lane will be open, so that vehicles may enter and exit the loop easily.

**Evening hours:** only the left lane will be open since patrol officers monitor both entering and exiting traffic.

DD8005. MR/NMR ENGINEERING POSITION - Requires a BS degree in electrical engineering, physics, computer science or equivalent; advanced degree beneficial. The ability to work with scientists, understand research problems and apply electronic or computer based technology solution is also required. Will provide technical support to the High-Field MRI program. Responsibilities include troubleshooting and repair of digital and RF electronic equipment, and the design and implementation of computer based data acquisition (UNIX) and experiment-control systems including hardware, software and graphical user interfaces. Chemistry Department.

NS8182. COMPUTER ANALYST POSITION - Requires a bachelor's degree in computer science or a similar field, and demonstrated knowledge of network infrastructure and desktop support issues. Extensive experience in information system design, including documentation and QA requirements; relational database design and web-based information delivery is necessary; as is demonstrated system administration knowledge of Windows 95/98/NT and UNIX. Prior supervisory and leadership background and excellent interpersonal, oral and written communication skills are required, as is experience in technical leadership, planning and implementing strategy, supervising and motivating staff through team-building and teamwork. Will supervise computer support group providing services to ESH&Q Directorate. Safety & Health Services Division.

DD7375. FACILITY SUPPORT TECHNICIAN POSITION - Requires an AAS degree in a related technical field or equivalent experience. Experience with RCRA, RADIGEN and CMS programs is highly desirable. The ability to obtain and maintain a DOE security clearance and respirator qualification also required. Will support the Reactor Division by assisting with the relocation and processing of all documentation for the disposal of radioactive, hazardous and mixed waste. Will provide chemical inventory support and perform routine inspections of housekeeping, Satellite and 90-Day Accumulation Areas in addition to the processing of contaminated clothing. Reactor Division.

DD8133. SEWAGE TREATMENT PLANT OPERATOR A - Under minimum supervision, maintains and operates sewage Treatment Plant. Conducts a variety of chemical, quality and other tests of sewage influent and effluent and ground water associated with the operation of the Sewage Treatment Plant. Maintains necessary records. Must have and maintain valid 3-A certification. Plant Engineering Division.