# BROCHHARD BULLETIN Vol. 52 - No. 32 BROOKHAVEN NATIONAL AUGUST 14, 1998 LABORATORY

# **BNL Establishes Center for International Security Studies**

Last Friday's bombings of U.S. embassies in Nairobi, Kenya, and Dar es Salaam, Tanzania, left nearly 200 dead and more than 4,000 wounded and gives a terrible timeliness to a recent BNL initiative: the establishment of the Center for International Security Studies.

Formed this June in the Department of Advanced Technology (DAT), the center is a forum for scientists and academics working on solving technical and policy problems related to international security.

"Through this new center, we hope to encourage a new generation of technically trained people to enter this



**Mark Sakitt** 

exciting field, to enhance the understanding and teaching of this subject in academia, and to enrich our existing staff and programs through interactions with people of diverse backgrounds," said Laboratory Director John Marburger.

The center's director is Mark Sakitt, who had moved to DAT early this year, after eight years as BNL's Assistant Director for Planning & Policy, to develop the center's concept into a reality. Sakitt had long been considering creating the center as a result of his general concern about escalating global nuclear proliferation and terrorism.

"We've set up the center as a focal point for studying issues such as national security, arms control and nonproliferation, including problems related to biological and chemical as well as nuclear weapons," said Sakitt. "With what's been happening in Pakistan and India, as well as in Africa, it's evidently vital to share knowledge and develop new ideas with as big a network of interested people as possible."

Sakitt explained that the center builds on DAT's long-standing involvement in international security, for example, DAT scientists' ongoing work with former Soviet states to safeguard nuclear materials using devices and techniques developed at BNL. Activities at the center will complement the Lab's existing \$25-million research in nonproliferation and national security funded by the U.S. Department of Energy (DOE) and the U.S. Department of State. In addition, BNL can literally draw on hundreds of workyears of expertise — dating back to before 1968 (see box on page 2) — in supplying advice and technical support in matters of international security.

The center, which will be mainly funded by private foundations, is designed to complement similar centers across the U.S. "We're all working at the intersection of technology and policy," Sakitt explained. "We will be collaborating with other centers, especially those at the Massachusetts Institute of Technology [MIT], Princeton University, and Stanford University. We're even having discussion with a center for arms-control studies as far away as China."

One great advantage, Sakitt said, will be the opportunity for close interaction with faculty and students at the State University of New York at Stony Brook (USB). In collaboration with the USB Center for Science, Mathematics & Technology Education, Sakitt is already preparing a workshop for college teachers on nuclear nonproliferation. It will be held at BNL in early spring 1999, funded by the National Science Foundation.

More programs in the works include summer institutes for students planning to enter the international security field, an internship program for academic researchers already involved in this area, and a visitors' program to bring more experts to BNL.

National interest in international security is high, as was demonstrated last November, in a poll of 800 registered voters taken by the Committee on Nuclear Policy, which posed a variety of questions on nuclear-terrorism anxiety.

The survey found that, of those polled, 76 percent thought that the U.S. is likely to be attacked by terrorist groups that have smuggled nuclear bombs into the country, 90 percent thought "many other countries could get their own nukes soon," 85 percent favored increasing security at nuclear (continued on page 2)

#### **Chinese Visitors Discuss Safeguards, Arms Control**

# John Meersman Named Manager Of Environmental Restoration

John Meersman, a senior project manager from the Oak Ridge, Tennessee, office of Bechtel National, Inc., has been named Manager of the Environmental Restoration Division (ERD), effective June 30. He succeeds Jim Kannard, who has moved back to Nevada, due to family illness.

"John's background and experience will be a boost to the environmentalrestoration program" said Michael Schlender, BNL's Assistant Director for Environmental Management. "So, we are fortunate to have him leading the division."

Meersman oversees an ERD staff of 30 employees who are responsible for planning and implementing the cleanup of soils and groundwater that were contaminated due to past use and disposal practices at BNL. In 1989, the Lab was placed on the EPA's National Priorities List, a roster of sites across the country which are considered high priority for environmental cleanup under the federal law called the Comprehensive Environmental Response, Compensation and Liability Act, which is commonly known as the Superfund act. Since 1992, Superfund environmental-restoration work on site has been performed by contractors, using U.S. Department of Energy funds and subject to oversight by the New York State Department of Environmental Conservation and the U.S. Environmental Protection Agency (EPA). In carrying out this work, the Lab has also worked closely with federal and state legislators, Suffolk County officials, civic associations, special-interest groups, and the general public. Approximately 2 percent of the Lab's 5,265 acres is being cleaned up. The projected completion date for the



John Meersman

cleanup is 2006, and the final cost is expected to be \$285 million. "ERD staff has done a great job in characterizing contamination problems and identifying cost-effective cleanup strategies," Meersman said. "The challenge for the future is to build a consensus with our regulators as to how the cleanup should proceed, and then to implement the cleanup on schedule and within budget. We will continue to solicit input and guidance from our regulators and stakeholders every step of the way." Meersman commented that ERD has successfully completed seven removal action projects at BNL, including the excavation and refill of 55 waste pits, capping the three inactive landfills on site, and the start-up of four groundwater-remediation systems. Before BSA became the Lab's new managers in March, Meersman was becoming familiar with BNL as part of the transition team brought in by BSA. (continued on page 2)



To establish contacts with international safeguards and security specialists, and to start an exchange of views on security and arms-control issues between scientists of the U.S. and China, Hu Side (front row, right), President of the China Academy of Engineering Physics (CAEP), visited BNL's Department of Advanced Technology (DAT) in June. Accompanying Hu are Li Bin (second row, third from left), and Zhao Wumen (to Hu's right), both of CAEP. During the visit, Hu presented a Lab-wide talk on CAEP, giving an overview of the Academy's past, present, and future. Involved in the discussions with the CAEP delegation were: (front, left) Inan Feng, Biology Department; (second row, from left) DAT Chair Robert Bari; Lester Paldy, State University of New York at Stony Brook; Leslie Fishbone, DAT; (third row, from left) James Busse, U.S. Department of Energy Office of Arms Control; Joseph Indusi, Head of DAT's Safeguards, Safety & Nonproliferation Division; (back, from left) DAT Deputy Chair Ruth Kempf; Jonathan Sanborn, DAT; Mark Sakitt, now Director of DAT's Center for International Security Studies (see story above); and Ming-Shih Lu, DAT.

# Summer Students Learn Magnet Mapping From BNL Scientists, Summer Visitors

The PHENIX detector, one of two major experiments now under construction for the Relativistic Heavy Ion Collider (RHIC), is dominated by a 9.5-meter-high, 450-metric-ton central magnet. That central magnet is crucial to many of the particle-identification subdetectors that will make up PHENIX because, in a magnetic field, tracks of electrically charged particles are bent, so a curving track is the signature of a charged particle.

Putting PHENIX on the Map

Knowing the direction of the magnetic field allows researchers to tell whether the particle is positively or negatively charged. And precisely knowing the magnetic field within the magnet will allow scientists successfully to calculate each charged particle's momentum accurately. Knowing the momentum will help the PHENIX experimenters to characterize the particles that are produced in the heavy-ion collisions at RHIC that pass through the PHENIX detector.

Before the magnet map can be made, however, the 288 Hall probes that will measure the magnetic field had to be tested and then mounted on a mapping fixture.

That job was undertaken this summer by a PHENIX magnet-mapping team led by Physicist Wlodek Guryn, RHIC, and Assistant Physicist Ralf Prigl, Alternating Gradient Synchrotron (AGS) Department, who were assisted by experienced BNL staff and summer visitors from Efremov Institute in St. Petersburg, Russia, and by apprenticed summer students from high school through graduate school.

After two months of the team's preparatory work, mapping the magnet, which should take four hours, is scheduled to take place this week.

— Marsha Belford

Sitting within the central magnet, in front of the magnet mapping fixture, is the PHENIX magnet-mapping team, which includes: (front, from left) Wlodek Guryn, RHIC; Patrick Harris, RHIC; Vladimir Vassiliev, Efremov Institute, Russia; Dasha Lymar, a Community Summer Science Student from Longwood High School; Evan Crocker, a National Science Foundation student from the State University of New York (SUNY) at Buffalo; (back, from left) Jamil Edgemir, RHIC; Ralf Prigl, AGS; Ed Blandford, a DOE Energy Research Undergraduate Laboratory Fellow and undergraduate from the University of California, Los Angeles; Slava

Kislov, Efremov Institute; Juana Rudati, a graduate student from SUNY Stony Brook; and Keith Carney, an

#### International Security (cont'd.)

sites to prevent the theft of nuclear weapons, and 81 percent wanted the U.S. and NATO to help dismantle nuclear weapons in Russia.

"These survey results reveal the high level of concern about these issues among the general public," said Sakitt. "It is equally significant that we could immediately persuade five nationally recognized experts in armscontrol and security affairs to form the center's external advisory board which shows the level of concern about these issues among specialists in the field.'

The five advisory board members are: Victor Alessi, President of DynMeridian and former Chief of the Office of Strategic Affairs, U.S. Arms Control Disarmament Agency; Coit Blacker, Senior Fellow at the Institute for International Studies, Stanford, and former Special Assistant to the President for National Security Affairs; Frank von Hippel, Princeton, Chair of the research arm of the Federation of American Scientists and former Assistant Director for National Security, White House Office of Science & Technology Policy; Harvey Sapolsky, Director of the Securities Studies Program at MIT, consultant to the Office of the Secretary of Defense; and Jeremiah Sullivan, University of Illinois, a member of the Board of Directors of the Arms Control Association and the Committee on International Security Studies, American Academy of Arts & Sciences

intern from SUNY Stony Brook.

Sakitt explained that he has been involved in this area for some time. "I spent a year at the Stanford Center for Arms Control and International Security in the late 1980s," he said. "But it was only possible to be involved in a part-time way. Now, I'm able to enjoy doing it full time. We hope that building this bridge between technical work

## **Three Decades of Safeguards at BNL**

Thirty years ago, in January 1968, the Technical Support Organization (TSO) was formed at BNL to provide experts to advise and assist the then U.S. Atomic Energy Commission, now the U.S. Department of Energy (DOE), and the Nuclear Regulatory Commission, on nuclear safeguards and arms-control decision-making.

Since then, TSO's multidisciplinary staff has worked on developing systems to protect nuclear materials against theft, misuse or sabotage; reviewing technical reports on safeguards research and development; advising on possible changes in techniques for nuclear verifications in the U.S. and abroad; and analyzing safeguards systems of nuclear fuelcycle facilities worldwide.

In addition, TSO has performed many technical studies related to classifying safeguards-and-security information and supplied experts for DOE safeguards and security inspections.

TSO's work also had led to several firsts now in common worldwide use: for example, an automated device developed at BNL in 1978 for measuring large volumes of plutonium and uranium solutions is used internationally in reprocessing plants.

TSO has also developed what is probably the world's most widely

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and policy areas will encourage the development of creative ideas to promote international security.'

— Liz Seubert and Kara Villamil

#### John Meersman

(cont'd.)

Working for Bechtel National, Inc., which is now overseeing the Lab's environmental restoration programs for BSA, Meersman was in charge of assessing these programs' operations. During the three-month transition, he also compiled best-practices, improvement recommendations, and managementtraining materials.

"While ERD can take pride in its accomplishments to date, there is now a tremendous base of experience with environmental restoration throughout the DOE complex," Meersman observed. So, "Over the next few months, we will be evaluating proven systems for project controls, project management and subcontract administration for possible inclusion in ERD's program. In doing so, our goal is to achieve an environmentally clean Lab that is compliant with all applicable environmental laws as soon as possible."

John Meersman attended Stanford University, where he earned a B.S. in civil engineering in 1976, an M.S. in environmental engineering in 1977, and, in 1978, a one-year postgraduate degree in environmental planning. As an employee of Bechtel since 1978, Meersman has worked for environmental-restoration programs at several DOE sites, including Hanford, Savannah River, Nevada Test Site, and Oak Ridge, and at several U.S. Department of Defense sites.

ranging nuclear safeguards library, dedicated in 1988 to BNL's late William Higinbotham, a founding TSO member who had led the organization from 1973 to 1975.

After 1988, the changing world political landscape added nonnuclear materials and weapons systems to the list of materials to be inspected. So, TSO began work on a DOE project to develop new verification tools and methods which included checking for chemical weapons that could be made from illegally diverted pesticides, fertilizers, and other commercial chemicals.

In 1992, to recognize the expanding role played by DAT staff in DOE safeguards programs, a regrouped TSO received a new name - the Safeguards, Safety & Nonproliferation Division. Already, by fall of that year, division scientists were participating in DOE programs to improve nuclear safeguards at nuclear facilities in Russia following the breakup of the Soviet Union. Liz Seubert

### **On-Site DMV Forms No Longer Available**

Due to the lack of use of the service, New York State Department of Motor Vehicles (DMV) forms are no longer available at the BERA Sales Office or in the lobby of the Human Resources Division, and the DMV no longer picks up these forms on site for processing.

For more information about obtaining forms elsewhere, call the DMV hotline, 227-3537.

### To Understand High-Tech Institutions Better, L.I. Guidance Counselors 'Extern' at BNL

To increase their understanding of the need by a high-tech institution such as BNL to have a well-educated, technically literate and highly skilled workforce, seven secondary-school guidance counselors from one Nassau and six Suffolk County schools participated in a two-day "externship" at BNL, July 21 & 22. For the two-day, paid, in-service program, the seven were sponsored by the Long Island Association (LIA), which is the region's largest business and civic association. The program is part of LIA's Project Long Island, which is an initiative to keep guidance counselors, teachers and principals up to date on Long Island's technology-based industries and their products, the post-secondary education required for jobs within these industries, and the career opportunities for students with such education. The goal of this program is to have the educators, inspired by their experience at BNL or one of the other 40 institutions offering an externship this summer, bring this information back to the classroom for their students' benefit.



While visiting a Chemistry Department lab, BNL's seven externs are pictured with staff from the Office of Educational Programs (OEP) and Museum Programs, which coordinated the externship: (standing, from left) Katherine Doroski, Shelter Island High School; Cornelia Gevinski, Riverhead High School; Michelle Coburn, Smithtown High School; Carol McCavitt, Garden City High School; Karen Poidomani, William Floyd High School; Elaine Kelly, Miller Place High School; and Clive Mutschler, Longwood Junior/Senior High School; (seated, from left to right) Grace Murphy, OEP; Renée Flack, OEP; and Elaine Lowenstein, Museum Programs.

#### **Masthead Changes**

Effective August 1, after almost 12 years a editor of the Brookhaven Bulletin, Anita Cohen, who had joined the Bulletin staff in 1980, has taken on new responsibilities: in addition to continuing as Supervisor of the Internal Communications Group within the Media & Communications Office (M&CO), Cohen will be responsible for a magazine-format publication that will showcase BNL's science. She will also serve as the coordinator for the Lab's new institutional-identity system, which will presently enter the design phase and should be unveiled before the end of the year.

Marsha Belford, who had joined the Bulletin staff in 1983 and has served as the Bulletin's assistant editor since 1987, has been named editor. She continues as an authorized contact for the distribution of Lab-wide email, and as coordinator of the department and division liaison committees which were established to allow interchange with the Community Involvement, and Government & Public Affairs staff. haven Bulletin staffer since 1986, is now assistant editor. In addition to reporting for the Bulletin and serving as managing editor in Belford's absence, Seubert continues to maintain the growing network of Employee Information Center bulletin boards around the site.

New to M&CO is intern Amena Saiyid, who will soon receive her M.A. from the University of Missouri School of Journalism. She will report for the Brookhaven Bulletin, write science stories for the new magazine, and assist in other M&CO efforts.

#### **Call for Bowlers**

Summer may not yet be over, but it's time to "think bowling" again!

Applications for the Tuesday night men's league in Port Jefferson and the Thursday night mixed league in Rocky Point are available now.

## *Nobel Laureate, National Medal Winner Talk Chemistry With High School Students*



As OEP's Louise Hanson (center) looks on, Isabella Karle (front, left) and Jerome Karle explain the molecular structure of poison-dart frog toxin to CSSP students: (second row, from left) Jeremy Drysdale of Shoreham-Wading River High School, David Kwartowitz of Elmont Memorial High School, and Dara Ann Coleman of the Academy of St. Joseph.

The 1985 National Medal of Science winner Isabella Karle and 1985 Nobel laureate Jerome Karle returned to BNL on July 24 for the fourth consecutive year to each present a seminar on their science — chemistry talks geared especially to the local high school students within BNL's annual Community Summer Science Program (CSSP).

In honor of CSSP's tenth anniversary and in recognition of the Karles' interest in encouraging the next generation of scientists, the dynamic husband-and-wife duo of chemists from the U.S. Naval Research Laboratory was again invited back to the Lab by their daughter, chemist Louise Hanson, who works within the Office of Educational Programs (OEP) and manages CSSP.

Before an audience of 31 high-schoolers from 25 different Nassau and Suffolk County schools, Jerome Karle spoke on toxins, such as the one produced by the skin of the poison-dart frog (shown in the picture's background), and Isabella Karle discussed ion transport — and they added more on the topics in conversations with interested students after the seminars and over lunch.

#### SCC, USB Courses to Be Held On Site This Fall

This fall, undergraduate and graduate courses will be offered on site by, respectively, Suffolk Community College (SCC) and the Department of Technology & Society of the College of Engineering & Applied Science at the State University of New York at Stony Brook (USB).

Employees taking these courses who work at least 20 hours per week may apply for tuition refund under the Lab's tuition-reimbursement program. This year, the Lab is offering an advance on tuition to offset employees' initial outlay of money. For more information, call Marilyn Pandorf, Ext. 5251.

#### SCC: Undergraduate Courses

The following four SCC undergraduate courses will be held on site this fall:

day	no.	course			
Tue.	MA07	Algebra I			
Tue.	MA21	Survey of Mathematical			
		Reasoning			
Wed.	EG11	Freshman Composition			
Thu.	CS30	Portfolio Preparation			
To find out more about the courses					

and how to apply for enrollment, attend

of the Department of Advanced Technology. A prerequisite for this course is one year of calculus.

Diagnosis of Environmental Disputes will offer practical tools for: assessing environmental controversies, including issues pertaining to the BNL site; evaluating environmental models, analyses methods and regulation interpretation; and understanding regulatory compliance issues such as pollution prevention measures, waste minimization and recycling, and risks and liabilities. The course will start on September 2 and will be taught by USB's Sheldon Reaven, who is the graduate program director of the Department of Technology & Society. Those interested in enrolling as nonmatriculated graduate students may call 632-7050. To enroll as a student admitted to USB's 30-credit master's degree program in environmental and waste management, call 632-8765 for information.

Liz Seubert, who has been a Brook-

# BROOKHENEN BULLETIN

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MARSHA BELFORD, Editor UZ SEUBERT, Assistant Editor

Bidg. 134, P.O. Box 5000 Upton NY 11973-5000 Tel. (516) 344-2345; Fax (516) 344-3368 All BNL, BSA and DOE employees, retirees, facility-users and on-site contractors and their immediate family members can join up for a night of fun each week — you don't have to be a great bowler, just a willing one!

All team registrations are due by August 27. A captains' meeting will be held on Friday, August 28, at noon in Berkner Hall, Room B.

For applications and more information, call Debbie Keating, Ext. 3888, or Tracy Blydenburgh, Ext. 4422.

#### New Bowling Officers

	Bldg.	Ext.
John McCaffrey, president	902Ā	2075
Tom Dilgen, vice president	902A	7455
Ken Koebel, league treasurer	725D	7351
secretaries:		
Ron Mulderig, Red/Green	326	3084
Debbie Keating, Purple/White	355	3888
Tracy Blydenburgh, recording	725	4422
treasurers:		
Ron Mulderig Jr., Red/Green	326	3084
Sanny Dimaiuta Dumla/White	0024	5965

a meeting presented by SCC on Monday, August 31, beginning at 4:45 p.m. in Room B, Berkner Hall.

SCC accepts for enrollment all residents of Suffolk County who have been graduated from an approved high school or hold an equivalency diploma.

#### USB: Graduate Courses

The following two USB graduate courses will be offered on site this fall:

- day no. course
- Mon. EST595 Principles of Environmental Systems Analysis
- Wed. EST594 Diagnosis of Environmental Disputes

Principles of Environmental Systems Analysis will offer a case-study approach to Long Island's environmental issues, teaching environmental systems, computer modeling, and environmental management in industry and government.

The course will begin on August 31 and be taught by BNL's Edward Kaplan

### **Arrivals & Departures**

Arrivals Rafal Goraczniak ...... Biology Lawrence Premisler ..... Physics Sabina N. Sheikh ...... Biology Departures Michael J. Miley ...... Biology Stanislav Uryasev ..... Adv. Technology

#### **BERA Program Offers**

The following offers are available at the BERA Sales Office in Berkner Hall, Tuesday-Friday, 9 a.m. to 1:30 p.m. when tickets will be on sale, firstcome, first-served. All bus trips leave promptly from the Brookhaven Center be there at least 15 minutes before the departure time. There will be one extra pickup, only at Exit 63 on the LIE, if requested. For more information, call Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.

Waldbaum's Balloon Festival, Brookhaven Airport, Friday, August 14 to Sunday, August 16: Today is the last day to buy BERA-discounted tickets at \$11 (saving \$4) or \$6 (saving \$5) for children 4-12. The festival will be held 1 p.m.-10 p.m. on Friday, 6 a.m.-10 p.m. on Saturday, and 6 a.m.-8:30 p.m. on Sunday.

More than 100 unique, colorful balloons will participate in five ascensions at dawn and dusk — at 6:30 p.m. on Friday, Saturday, and Sunday; and at 6:30 a.m. on Saturday and Sunday.

Events also include an old-time barnstorming air show featuring the Iron Eagles, arts & crafts exhibits, a petting zoo, the Skydiving Elvises in a 10,000-foot free-fall, and PBS's Arthur in his "Kids-Day Play Along Show."

Friday night features the Coasters, Drifters and the Platters. On Saturday night, the Beach Boys will perform, followed by a Grucci fireworks extravaganza.

New York Yankees Game, Friday, September 25, \$37 per person: The bus will leave at 4:30 p.m. and arrive at Yankee Stadium for the 7:35 p.m. game against the Tampa Bay Devil Rays.

Keep your eye on the scoreboard, because BERA/Brookhaven National Laboratory will be announced! The bus will leave after the game, at approximately 10:30 p.m.

# Classified Advertise ments

#### **Placement Notices**

The Lab's placement policy is to select the bestqualified 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 employ-ees 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 repre sent 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. The following vacancies are exempt from the Director's hiring freeze

**OPFN RECRUITMENT** - Opportunities for Laboratory employees and outside candidates

#### Summer Sundays Continue Through August 31st This Sunday's Mini-Tour Features Biology

Summer Sunday visitors to BNL will find a fascinating mini-tour scheduled for them this Sunday, August 16, when the Biology Department opens its doors to display some of the world-class research being done here by biologists from BNL and other institutions.

For example, every year, at least 60 visiting scientists come to BNL to do their periments at the Scanning Transmission Electron Microscope known as

STEM

(shown above). This powerful instrument is one of only three in the world that can image single atoms, magnifying samples to ten millions times their original size.

Lab tourists will be able to scan for proteins in a hands-on visit to BNL's Protein Data Bank (PDB), which houses computer images of protein structures used in basic research and drug design. Biologists and chemists from all over the world may spend years to uncover these three-dimensional structures. Afterwards, they send the structures to be archived in the PDB, where they are available to the international scientific community, as well as to students and the general public via the World Wide Web.

Some of the investigations that BNL biologists are conducting as part of the National Human Genome Project will also be shown, and visitors will be able to learn how DNA can be sequenced or copied. Then, in the Biology greenhouses, visitors will see forefront research flourishing on re-engineering plant oils and growing cotton with longer, stronger fibers. And, during a visit to the fish house, they can learn about research on skin cancers.

In addition to taking the Biology mini-tour, visitors may take the guided bus tours of the Lab site that will run continuously throughout the day, and participate in the Whiz Bang Science Show. Fun for children of all ages, this show is a lively, interactive demonstration of basic scientific principles. It will be presented at 10:30 a.m., noon, 1:30 p.m. and 3 p.m. in Berkner Hall. BNL's Summer Sunday tours run from 10 a.m. to 5 p.m., but visitors must arrive before 3 p.m. The tours are free and open to the public, and no reservations are needed.

### Slogans Due Today!

Today is the last day to submit your catchy phrase as an entry in the BNL Slogan Contest. So, if you are a BNL, BSA or DOE employee or retiree, or an on-site contractor, rush your entry into the intraLab mail, addressed to: Slogan Contest, Brookhaven Bulletin, Bldg. 134. The person submitting the winning entry will earn a \$100 American Express gift check, while everyone who entered will be eleigible for a drawing for a \$50 dinner for two at the restaurant of their choice.

The Lab's management, however, reserves the right not to adopt any of the finalists as BNL's official slogan, if none is appropriate in its and/or the public's mind.

#### BNL Q&As on the Web

If you are looking for answers to general and environmental questions regarding BNL, then one stop can be the World Wide Web location www.bnl. gov/bnlweb/envQA.html. Another Web route to these Q&As is to go to the Lab's homepage, www.bnl. gov, look under the "Environment" header, and click on "questions and answers."

There, you, your family and neighbors can read up on answers to general questions such as "What is the purpose of BNL?", and environmental questions such as "Isn't BNL the most contaminated location on Long Island?"

#### Summer Party Tonight!

This evening at 6 p.m., it's party time for BERA members and their guests at the Rock Hill Country Club in Manorville. The cost of \$5 at the door covers hors d'oeuvres and music by E.T., and a cash bar will be available.

For more information, call Charles Gardner, Ext. 5214.



DD8026. ELECTRICIAN A POSITIONS - (temporary) Under minimum supervision and in accordance with the National Electrical Code, or as otherwise directed lays out, constructs, installs, maintains, repairs and operates electrical systems, equipment, controls and related devices. May be required to perform similar duties on other-than-maintenance-division equipment and facilities. Plant Engineering Division.

NS7866. ENGINEERING POSITION - (term appointment) Requires MS in engineering, hands-on experience in clean-room operation and semiconductordevice processing, and basic understanding of processing and device physics. Knowledge of ACAD design and processing and device simulation is desirable. Will develop and process silicon-drift detectors in clean room, including simulation and design, oxidation, wet cleaning and etching, photolithography, metallization, and annealing. RHIC Project.

NS7600. ENGINEERING POSITION - Requires MSEE, training in semiconductor-circuit design, at least five years' experience in monolithic technology, and familiarity with IC CAD tools. A thorough knowledge of analog and digital signal processing is essential; the ability to work with scientists and/or facility-users to develop specifications based on system requirements is necessary. Will be responsible for designing a wide variety of CMOS integrated circuits in support of research programs. Instrumentation Division