BROOKHAVEN BULLETIN
Vol. 51 - No. 46 November 21, 1997
BROOKHAVEN NATIONAL LABORATORY

Preparation Tool for UN Global Climate Change Talks

BNL's MARKAL Used by U.S., Growing List of U.N.-Affiliated Nations To Assess Countries' Energy Use, Environmental Impact, Economic Effect

To prepare for the United Nations Global Climate Change talks to be conducted in Kyoto, Japan, in early December, the United States Interagency Assessment Team — which includes participation from the U.S. Department of Energy (DOE), Environmental Protection Agency, Department of Commerce and the White House Office of Science & Technology Policy — is using BNL's energy analysis and planning tool known as MARKAL-MACRO.

Born in the Department of Applied Science (DAS) during the energy crisis of the 1970s, MARKAL-MACRO is a computer software package that integrates information on energy, the economy and the environment at national, regional and local levels.

The primary tool for the International Energy Agency's (IEA) Energy Technology System Analysis Program, MARKAL is being used by an increasing number of governments and other institutional decision-makers to help devise strategies for efficient and cost-effective, yet environmentally sound energy use.

The MARKAL computer model was developed in a cooperative venture by more than 15 IEA countries, to analyze energy systems employing many different technologies and to identify the best energy-technology choices that could be made for the lowest cost and least environmental impact.

Roger Stoutenburgh

At a MARKAL-MACRO workshop sponsored by BNL and the U.S. Environmental Protection Agency (EPA) and organized at the Lab this September under the aegis of the Department of Advanced Technology's (DAT) International Programs Division (IPD), attendees spent three weeks in training with BNL scientists and consultants, learning to use a MARKAL-MACRO back in their home country or institution. Joined by DAT Chairman Robert Bari (center, back row) are workshop participants: (from left): Jae Jo, BNL; Samuel Morris, BNL; John Lee, BNL; Captain George Simon III, U.S. Army; Yu-Ting Liu, EPA; IPD Head Ann Reisman; Sau-Kit Tong, Electrical & Mechanical Services Department of Hong Kong; Upendra Rohatgi, BNL; Michael Aucott, New Jersey Department of Environmental Protection; Su-Chih Hsu and Li-Ying Lai, both of the Taiwan Environmental Protection Administration; and Edward Linky, EPA Region II. Missing from the picture is BNL consultant Gary Goldstein of DecisionWare, Inc.

In the late 1980s, MARKAL was coupled with a Stanford University macro-economic model in a cooperative effort by researchers from DAS, Stanford and Chalmer's University, Sweden, which resulted in MARKAL-MACRO.

This compound program allows energy and environmental analysis to be made with economic issues factored in. Thus, it can estimate costs and evaluate technologies in order to reduce environmental risks such as air pollution and global climate change, while providing estimates of the impact on gross domestic product.

Said Ann Reisman, who heads the Department of Advanced Technology's (DAT) International Projects Division (IPD), which now is responsible for transferring the MARKAL-MACRO program internationally, "We are proud that MARKAL-MACRO was chosen by the U.S. Interagency Assessment team to prepare for the present UN talks on global warming, especially in view of the importance that global climate change and its implications are given by President Clinton."

(continued on page 2)

331st Brookhaven Lecture

Clearing the Air — A Talk On Ozone's 'Mr. Hyde' Side

Ozone, a molecule made up of three oxygen atoms, leads a double life.

Far up in the stratosphere, ozone protects life on Earth by acting as a shield against excessive ultraviolet light from the sun. But in the lowest part of the troposphere — the 10-kilometer layer of the atmosphere that stretches down from the stratosphere to the Earth's surface — ozone is a harmful pollutant, causing lung malfunction, materials damage and crop loss.

Peter Daum — photo by Roger Stoutenburgh

In the Department of Applied Science (DAS), environmental chemists are investigating ozone processes. Their basic research focuses on understanding what controls ozone formation and on developing new measurement techniques for gathering data at the surface and in the air.

Their sampling extends over the U.S. and abroad. For instance, BNL scientists have studied ozone formation processes around New York, Atlanta, Nashville and Halifax, and even in the plume of the 1991 Gulf War oil-fires in Kuwait.

To describe this research into ozone, Chemist Peter Daum, DAS, will give the 331st Brookhaven Lecture, "Ozone in the Troposphere — From Nashville to Kuwait." The lecture will be held on a nonstandard day — Monday, November 24 — in Berkner Hall, at 4 p.m., when Daum will be introduced by DAS's Environmental Chemistry Division Head Leonard Newman.

Daum will explain how tropospheric ozone is formed in the atmosphere when nitrogen oxides from vehicles and power plants mix, in the presence of sunlight, with hydrocarbons, which come from a variety of natural and man-made sources.

Although auto emissions have been strictly controlled since the 1970 Clean Air Act and air quality has improved greatly in, for example, Los Angeles, road traffic and miles driven have nearly tripled in the past 30 years, counterbalancing many of the emissions-control regulations that have been passed.

While 70 million people still live in areas in the U.S. which do not meet the 1970 standards, a recent Congressional act has made standards yet more stringent. As Daum will emphasize, the development of effective ozone-pollution controls to allow the standards to be met at an affordable cost depends on basic research efforts, such as his, that are now in progress.

After receiving his B.S. in chemistry from Drexel Institute of Technology in 1965 and his Ph.D., also in chemistry, from Michigan State University in 1969, Daum taught at Northern Illinois University, 1969-1980, and was also a visiting professor at the University of North Carolina at Chapel

(continued on page 2)

50th-Anniversary Lecture

Brookhaven: Then and Now

The final talk in BNL's 50th-Anniversary Distinguished Lecture Series will be presented by world-renowned physicist T.D. Lee. He will speak on "Brookhaven National Laboratory: Then and Now," on Thursday, December 4, at 4 p.m. in Berkner Hall. All are invited.

During his lecture, Lee will present his impressions of BNL from the beginnings of his association with the Lab in the 1950s through to today. In addition, he will express his opinion on what Brookhaven's role will be during its next 50 years, as science moves along with the rest of the world into the 21st century.

T.D. Lee

T.D. Lee has a long association with Brookhaven. In 1957, he shared the Nobel Prize in Physics for theoretical work done while visiting BNL in 1956. Now, Lee is the Director of the RIKEN BNL Research Center, an institute established at Brookhaven earlier this year by Japan and the U.S. to foster physics research related to BNL's upcoming Relativistic Heavy Ion Collider.

T.D. Lee took his Ph.D. in physics from the University of Chicago in 1950. After working as a research associate at the University of Chicago and the University of California, Berkeley, he joined the Institute for Advanced Study in Princeton, New Jersey, 1951-53. Then, in 1953, he joined Columbia University, where he is currently University Professor and Enrico Fermi Professor of Physics.

In addition to directing the RIKEN BNL Research Center, Lee is the Director of the China Center of Advanced Science & Technology in Beijing; the Beijing Institute of Modern Physics; and the Zhejiang Institute of Modern Physics, all in China. He is a member of the American Academy of Arts & Sciences, the National Academy of Science and the Chinese Academy of Sciences. — Diane Greenberg

Pick a Student

Until Wednesday, November 26, applications for the 1998 BNL Spring Semester Student Research Participation Program will be available for review, 9 a.m. - 4:30 p.m., in the Science Education Center, Bldg. 438.

The program will provide academic semester appointments in BNL's research programs to students who are currently sophomore, junior or senior undergraduates in a U.S. college or university.

The BNL Semester Program will run for 16 weeks, from January 19 through May 8, 1998. The Office of Educational Programs will cover stipends and travel expenses for individual appointments. Each sponsoring department will be asked to pay the student's housing expense of $105 per week.

All requests for students must be submitted to department coordinators by Wednesday, November 26. For more information, call OEP, Ext. 4503.

IBEW Meeting

Local 2230, IBEW, will hold its regular monthly meeting on Monday, November 24, 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.

Computing Corner

The Computing & Communications Division (CCD) is offering the following. For more information or to register, contact Pam Mansfield, Bldg. 515, Ext. 7286.

LabVIEW Training

The next LabVIEW training class will be held on January 26-30, 1998. This five-day class consists of three days of introductory-level and two days of advanced-level training. The class will meet in the Human Resources Division's training room in Bldg. 459, from 9 a.m. to 4:30 p.m. The training fee for the five days is $1,875 per person.

To register, send an ILR for $1,875.

PC Training

Personal computer (PC) training classes are scheduled as follows for December:

12/2	beg. PowerPoint
12/4	beg. Word
12/10	moving up to Windows 95
12/16	int. PowerPoint

Arrivals & Departures

Arrivals

Paul G. Hawthorne.....Director's Office
John J. Mingoia.....RHIC

Departures

This list includes all employees who have terminated from the Lab, including retirees:

Robert Dore.....Financial Services
Nick Earl.....Financial Services
Edwin Rodger.....AGS

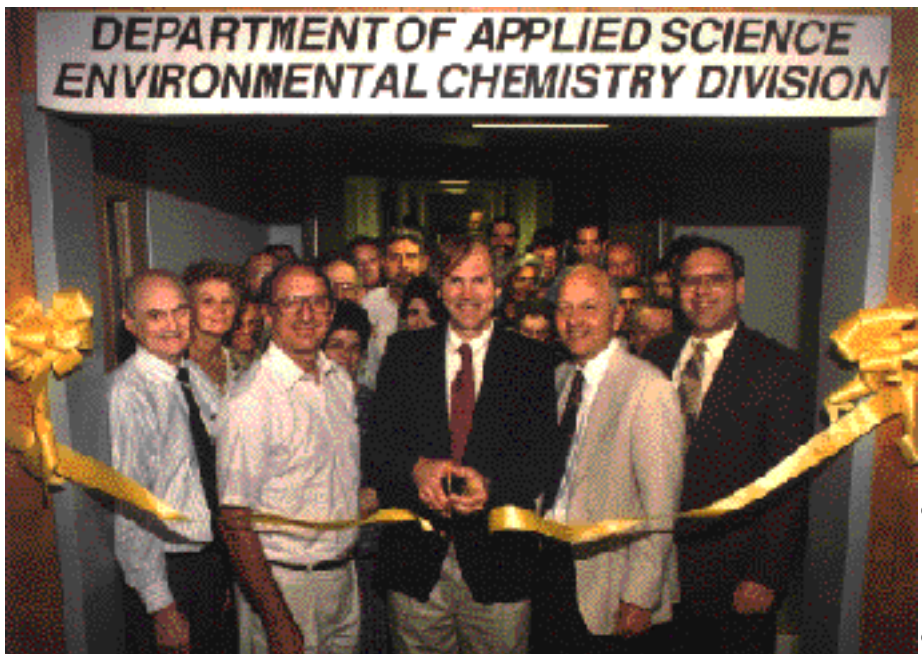
Brookhaven Lecture (cont'd.)

Hill, 1978-79. He joined DAS as a chemist in 1980 and received a continuing appointment in 1984.

Daum's experience includes acting as chief scientist for the U.S. Department of Energy's study of the Kuwait oil-fire plume, 1991, and for the summer 1993 North Atlantic Regional Experiment. He was an experiment mentor for the summer 1995 Southern Oxidants Study in Nashville.

After the lecture, all are invited to join Daum for discussion and refreshments. Those wishing to dine with the speaker at a restaurant off site may call Maggie Marsch or Pat Kriss, Ext. 3275, before noon on Monday, November 24. — Liz Seubert

New Wing for Environmental Chemists



Roger Stoutenburgh

Although the official opening of Bldg. 815's new 23-office, ten-laboratory wing earlier this summer was momentarily symbolized by a ribbon's being cut, the real-time celebration is long-term: In the Phase I, 12,000-square-foot, two-story new L-shape wing, which is attached to the west side of Bldg. 815 on Rutherford Drive near Railroad Avenue, the previously scattered members of the Department of Applied Science's (DAS) Environmental Chemistry Division (ECD) are for the first time working under one roof — all tied together. Cutting the ribbon and symbolically opening the ECD door to much easier collaborations among colleagues is DAS Chairman James Davenport. With him are: (front, from left) then U.S. Department of Energy Brookhaven Group Manager Carson Nealy, ECD Head Leonard Newman, Interim Director Peter Bond and Interim Deputy Director Michael Bebon, and a host of ECD members and friends. Now, within Bldg. 815, ECD scientists, who work, for example, on atmospheric chemistry, tracer technology and the properties of aerosols and ozone (see story, page 1), are immediate neighbors of members of two other DAS divisions — the Chemical Science Division and the Energy Science & Technology Division — many of whom have shared research interests. In addition to being all in one location, ECD scientists gained state-of-the-art chemistry labs while losing the need for duplicated instrumentation and for much driving around site. Consequently, site auto emissions should drop!

In Memoriam

The following retirees have passed away recently:

Albert Manger, who had joined the Laboratory 49 years ago as an experimental machinist, died on August 11. He was 90 years old. He started in the Buildings Maintenance Group on September 20, 1948, and retired from the Central Shops Division as a tool and instrument maker leadman, on June 30, 1972.

Frank Volny, who had been a cabinetmaker in the Plant Engineering Division, died on October 9 at the age of 84. He had joined BNL on December 27, 1955, and had left the Lab on long-term disability in November 1974.

Holiday Notes: Thanksgiving

In observance of Thanksgiving, the Lab will be closed on Thursday and Friday, November 27 & 28. As a result, the following schedules will be in effect:

• **Brookhaven Bulletin** — There will be no Bulletin next Friday; the next issue will be published December 5. The classified ad deadline for that issue is noon on Wednesday, November 26.

• **Credit Union** — The Teachers Federal Credit Union branch on site will be closed onThursday, November 27, but open on Friday, November 28. The automatic teller machine in the foyer of Berkner Hall will be open throughout the holiday.

• **Food Service** — The Cafeteria will be closed on November 27, but will operate from 9 a.m. to 2 p.m. Friday through Sunday, November 28-30. The Brookhaven Center Club will be closed Thursday through Saturday, November 27-29; it will reopen on Sunday, November 30, at 5 p.m.

• **Gym & Pool** — Both will be closed from Thursday through Sunday, November 27-30. These facilities' usual schedules will resume on Monday, December 1.

• **Omega Leisure Travel Office** — The Omega Leisure Travel Office in Berkner Hall will be closed November 27 & 28.

• **U.S. Post Office** — The Upton Branch of the U.S. Postal Service will be closed on November 27. On Friday, November 28, the mail will be delivered to post office boxes and window service will be available from 8 a.m. to noon.

1998 Laboratory Holidays

Holiday	Holiday Observed: Day	Date
New Year's Day	Thursday	January 1
Floating Holiday (Martin Luther King Jr. Day)	Monday	January 19
Presidents' Day	Monday	February 16
Memorial Day	Monday	May 25
Independence Day	Friday	July 3
Floating Holiday	Monday	July 6
Labor Day	Monday	September 7
Veterans Day	Wednesday	November 11
Thanksgiving Day	Thursday	November 26
Day After Thanksgiving	Friday	November 27
Christmas Eve	Thursday	December 24 (1/2 day)
Christmas Day	Friday	December 25

Coming Up

For the next BERA concert, the Stony Brook Opera Ensemble will perform "An Evening of Opera Scenes" at Berkner Hall on Thursday, December 11, at 8 p.m.

The program will include scenes from Mozart's *Le Nozze di Figaro* and *Cosi fan Tutte*, Donizetti's *Lucia de Lammermoor*, and an abridged version of Humperdinck's *Hansel and Gretel*.

The concert is open to the public, and tickets can be purchased at the door at $6 for adults, $3 for children of 18 and under, and free for students at the State University of New York at Stony Brook.

FSA Deadline Nears

Wednesday, November 26, is the deadline for establishing a flexible spending account for health care and/or dependent care for 1998. Obtain enrollment forms for the Health Care Reimbursement Account and the Dependent Care Reimbursement Account from the Benefits Office, Human Resources Division, Bldg. 185.

CDC Registration Fee

Effective January 1, 1998, a registration fee of $50, applicable toward the first month of tuition charges, will be required to place each child on the waiting list to attend the Child Development Center (CDC). Should a child age out of the program or the parent leave BNL employment, the fee will be refunded.

MARKAL-MACRO (cont'd.)

The President, on October 22, outlined future U.S. energy policy mandating a cutback of U.S. carbon dioxide and other gas emissions to 1990 levels within 15 years. "Make no mistake, the [threat of global warming] is real," he said. "If we do not change our course now, the consequences sooner or later will be destructive for America and for the world."

"Because MARKAL-MACRO has been tested and proven for so long, by so many users, in such different situations — it has a unique dependability and flexibility," stated Reisman. "It can handle extraordinary amounts of data, yet it's scaleable, so it can be applied at national, regional and local levels, and it can be extended to link to transport, land and waste management and other planning models. These are some of the reasons why it's already being used by 35 countries and over 70 institutions."

To make it easier for potential new MARKAL-MACRO users to learn about the model, workshops organized by IPD are held periodically at BNL.

For example, at a three-week workshop in September (see photo on page 1), participants from Hong Kong and Taiwan received training enabling them to run MARKAL-MACRO for their repsective countries on their return home.

Also, after attending an introductory one-week mini-workshop given at the Lab in October, representatives from Puerto Rico, New Jersey and the U.S. Army, which now must provide a regulation energy assessment of every base in the country, are now deciding how MARKAL-MACRO can answer their requirements, and they anticipate receiving more extensive training in 1998. — Liz Seubert

Book Fair Reminder

BERA's annual book fair will take place on Thursday and Friday, December 4 & 5, from 10 a.m. to 3 p.m. in Berkner Hall.

To view a complete list of the books, as well as a display of some of what will be available at the fair for immediate purchase, go to the BERA Sales Office, weekdays, 9 a.m. to 1:30 p.m.

For more information, call Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.

BERA Toy Drive

For the 14th year, BERA is participating in Brookhaven Town's Toy Drive, which is organized to provide happy holidays for needy children in the local community. From Monday, December 1, through Friday, December 19, toys, preferably new, for infants through teenagers, may be brought to the BERA Sales Office, Berkner Hall, weekdays, 9 a.m. to 1:30 p.m. For more information, call Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.

Calling All Carolers

The BNL Choral Group will once again present its annual Christmas Concert in the cafeteria at the special Christmas luncheon, the date of which is to be announced.

So, to prepare, the first rehearsal for this concert will start at noon sharp on Wednesday December 3, in Berkner Hall; other dates will be announced.

Singers are needed for all parts: soprano, alto, tenor and bass. Come to have fun with the group in practising well-known carols — rehearsals are never flat! For more information, call Kara Villamil, Ext. 5658; or Liz Seubert, Ext. 2346.

Basketball Meeting

On Monday, November 24, at noon in the gym, the BERA Basketball League will hold a meeting for all those interested in playing on its teams and competing during the upcoming season. In addition to looking for players, the League is seeking a president, vice president and team captains. For more information, call Terry Buck, Ext. 5475.

Art Show in Early 1998

Attention, BNL artists and sculptors: There's life beyond the holiday season, art to create, more deadlines to meet — but not until February. Then, your finest art will be needed for the BERA Art Society's next art show in Berkner Hall.

Therefore, BNL employees, retirees, guests and their family members 15 years and older are encouraged to get drawing, painting and/or sculpting. Entry coupons and more information will be published in a January 1998 Bulletin. So, start creating and watch this space!

BROOKHAVEN BULLETIN

Published weekly
by the Public Affairs Office
for the employees of
BROOKHAVEN NATIONAL LABORATORY

ANITA COHEN, Editor
MARSHA BELFORD, Assistant Editor

Bldg. 134, P.O. Box 5000
Upton NY 11973-5000
Tel. (516) 344-2345; Fax (516) 344-3368

World Wide Web:
http://www.pubaf.bnl.gov/bulletin.html

The Brookhaven Bulletin is printed on paper containing at least 50 percent recycled materials, with 10 percent post-consumer waste. It can be recycled.

The Power of U

A Fair Way to Learn About United Way Agencies

Roger Stoutenburgh

Symbolizing "the power of U" are many of this year's BNL-United Way Fund Drive campaign captains from BNL's departments and divisions.

So many Long Islanders — one in every three — are helped through agencies supported by the United Way that it is hard to find a family which has not benefited in some way from this caring institution.

To learn more about where your United Way Fund donations could go this year, come to the United Way Agency Fair in Berkner Hall on Wednesday, December 3, 11 a.m. to 2 p.m. There, various agencies drawing support from the United Way will be eager to tell you about how much your donating power — "the power of U" — can help the United Way turn many people's lives around for the better.

Also in Berkner Hall, United Way representatives Caroline Jaskot and Bob Sewell will be stationed in Room D, Ext. 3548, from now through Wednesday, November 26. "Caroline and Bob are both ready to give help, information and answers to questions you may have about how your hard-earned dollar will be spent to help others. Remember, the United Way of Long Island is run separately from that of the rest of the country, and, without exception, 85 cents in every donated dollar goes directly to a support agency," said Ann Emrick, Chair of the 1998 fund drive, who may be reached on Ext. 5756.

Once again this year, early pledges will be eligible for a series of drawings for prizes, thanks to the generosity of Associated Universities, Inc., the Suffolk County Police Association; Local 8-431 of the Oil, Chemical and Atomic Workers International Union; and Local 2230 of the International Brotherhood of Electrical Workers.

So, by sending in your pledge card now, you may win a free overnight theater trip to New York City with Sunday brunch to follow, dinner for two at a local restaurant, an American Express gift certificate, an inflatable raft donated by the Bargain Bilge of Patchogue, or an autographed Jets football provided by the United Way.

"Our goal this year is $90,000," said Emrick, "so every contribution, whatever the amount, makes a difference. However, early pledges are extra helpful, because they allow agencies to know that they can count on certain funds for the coming year. If BNLers will make a very special effort in this 50th anniversary year, then we may reach our goal in record time."

— Liz Seubert

Help Women to Dress for Success And Have Brighter Tomorrows

If a suit doesn't fit, if the shampoo isn't your brand or if your child has outgrown some clothes, *don't* throw them out! Bring them to BNL by December 12, to benefit women in need, through the following two programs being jointly supported by the Women's Program Advisory Committee and Brookhaven Women in Science:

• **Brighter Tomorrows** — This refuge for victims of domestic violence has given shelter to more than 2,500 women and children, and has placed many of these families into transitional homes operated by the organization. Brighter Tomorrows needs women's and children's clothing, as well as toiletries, including manufacturers' samples.

• **Dress for Success Brookhaven** — Run by the Town of Brookhaven Office of Women's Services, this program provides work-related clothing to low-income women seeking employment. They accept skirt and pant suits, skirts, blouses, jackets, dresses, handbags and new, packaged pantyhose. They do *not* accept undergarments, shoes, jewelry, cosmetics, used pantyhose, non work-appropriate clothing or men's clothing.

If you have something to donate, you may drop it off with any of the following people: Maureen Anderson, Bldg. 197; Anita Cohen, Bldg. 134; Sydell Lamb, Bldg. 463; Stephanie Lamontagne, Bldg. 1005; Jackie Larrie, Bldg. 490; Vicki McLane, Bldg. 197; Marilyn Pandorf, Bldg. 185; Gail Schuman, Bldg. 515; Michiko Tanaka, Bldg. 477; or Dorry Tooker, Bldg. 475.

If you'd like to volunteer to accept donations in your building, call Vicki McLane, who is coordinating this effort on site, at Ext. 5205.

Cycletrons Ride Again!

The BNL Cycletrons motorcycle club meets at 4:45 p.m. in the Brookhaven Center on the first Thursday of each month, so the next meeting is on December 4. All BNL bikers, members or not, are invited to attend.

The club's purpose is to promote motorcycle safety, upgrade the image of motorcyclists, share a common interest and have a good ol' time! Members participate in group rides and local motorcycle events. The cost to join is only $10 per year.

In addition, the club is now offering free MSF classes on site for beginning and experienced BNL-employee riders. These classes involve classroom and riding training, under the supervision of instructors from the Trama's Driving School. The benefits of taking these classes are point and insurance reductions, and a waiver of the road test following the completion of the beginner's course.

To find out more about the club and its offerings, call Frank Dusek, Ext. 2022, or visit its website at www.mycycle.bnl.gov.

Volleyball

Standings as of November 13

League I		**League III**	
Bikers & Spikers	15-3	Silver Bullets	15-0
Rude Dogs	14-4	Group Sets	9-3
Set to Kill	9-9	Just 4 Fun	7-8
Scared Hitless	7-11	Just in Time	5-7
ReTurners	0-18	Six Samurai	5-7
League II		Upton Ups	4-8
Spiked Jello	13-2	NWO	0-12
Monday Nite Live	12-3	**Open League**	
Safe Sets	11-4	Shank,Carry&Throw	11-7
Jao-About-That	10-5	Death Volley	10-8
Undecided	8-7	Spikers	9-9
Nuts & Bolts	4-11	Pass, Set & Crush	8-10
Fossils	2-13	Far Side	7-11
Setups	0-15		

Photo Opportunity: Help Form the Big 5-0!

As part of the Lab's 50th-anniversary celebration, all BNLers — employees, retirees, guests, on-site residents, contractors — are invited to be part of a photo opportunity of a lifetime: On Thursday, December 11, at 12:10 p.m., come to the field on the side of Berkner Hall to form a living 5-0! This human formation of the number 50 will be photographed from atop Berkner Hall by Bulletin photographer-in-chief Roger Stoutenburgh. The photo will then be published in the Brookhaven Bulletin of December 19. So save the date!

Classified Advertisements

Placement Notices

The Lab's placement policy is to select the best-qualified candidate for an available position. Candidates are considered in the following order: (1) present employees within the department/division and/or appropriate bargaining unit, with preference for those within the immediate work group; (2) present employees within the Laboratory; and (3) outside applicants. In keeping with the Affirmative Action Plan, selections are made without regard to age, race, color, religion, national origin, sex, disability or veteran status.

Each week, the Human Resources Division lists new placement notices, first, so employees may request consideration for themselves, and, second, for open recruitment. Because of the priority policy stated above, each listing does not necessarily represent an opportunity for all people.

Except when operational needs require otherwise, positions will be open for one week after publication.

For more information, contact the Employment Manager, Ext. 2882; call the JOBLINE, Ext. 7744 (344-7744), for a 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.

SCIENTIFIC RECRUITMENT - Doctorate usually required. Candidates may apply directly to the department representative named.

POSTDOCTORAL RESEARCH ASSOCIATE - Trained in theoretical/computational chemistry with a working knowledge of quantum chemical reaction field techniques and kinetic theory of adiabatic and nonadiabatic charge transfer kinetics. Will carry out quantum chemical calculations for analysis of redox processes involving complex molecular systems in polar media, and perform theoretical analysis of chemical reaction mechanisms. Contact: Marshall Newton, Chemistry Department.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees.

MK4127. SECRETARIAL/ADMINISTRATIVE POSITION - (50% part-time) Requires an AAS in secretarial science or equivalent experience, knowledge of IPAP, JCARS, and Laboratory policies and procedures, as well as excellent oral and written communication skills and interpersonal skills. Also requires good word processing skills, with knowledge of dBase and Windows 95 highly desirable. Will be responsible for providing secretarial/administrative support functions, including report writing, maintaining files, processing ILR and, purchase orders, arranging travel and performing other duties as required. Human Resources Division.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

DD2269. PROGRAMMER/ANALYST POSITION - (term appointment) Requires a BS in computer science or equivalent experience including several years' experience in the development and application of simulation, reconstruction and analysis codes for high-energy and/or nuclear physics. A good knowledge of FORTRAN, willingness to learn C++ and tools for scripting (Perl) and code management (GNU make) also required. Responsibilities will include the coordination of the release of new versions of software, maintenance of the STAR software library, and quality assurance to ensure compliance with STAR coding standards. Physics Department.

DD8021. RADIOLOGY TECHNICIAN POSITION - (part-time, on-call) Requires NYS license as a diagnostic radiology technician. Primary responsibility will be to take x-rays as part of Clinic exams. Additional duties will include performing clinical laboratory procedures (vision and hearing tests), electrocardiograms and phlebotomy. Experience in performing or willingness to be trained in these secondary tasks is essential. Training will be provided. Occupational Medicine Clinic.

MSIP — Leading the Way to Improved Performance

Last month, we talked about Integrated Safety Management (ISM) and how using this approach can help us improve our environmental, safety and health performance at the Laboratory.

However, to be successful in fully implementing ISM, an organization needs to have strong leadership and a structured approach to day-to-day operations that focuses on performance at all levels. Since May, we have been working toward upgrading the Laboratory's management systems to meet this need. The framework for our efforts is the Management Systems Improvement Program, or MSIP. The MSIP consists of three distinct but integrated initiatives — Leadership, Communications and Integrated Safety Management. Many people across the Laboratory are actively involved in the over 100 activities under these three initiatives.

This month I'll describe the work under the Leadership Initiative, and, over the next few months, we'll cover the Communications and ISM Initiatives.

The Leadership Initiative was designed to take a look at our current management structure and strengthen it where necessary, to provide a sound framework for our future success and for the implementation of ISM. The work started with a review of the Laboratory's Mission and Vision Statements, Core Competencies and Core Values. The Mission Statement describes our four core missions: research facilities, scientific research, technology development and knowledge transfer. The Vision Statement states our five higher-level objectives, and our Core Competencies listing identifies specific strengths within our four core missions. Our Core Values define the kind of organization we are and the principles we use in all of our actions and decisions.

This work has been completed, and the details of our Mission, Vision, Core Competencies and Core Values can be found on the World Wide Web at http://www.pubaf.bnl.gov/mission.html.

With Mission, Vision, Core Competencies and Core Values well defined and understood, the next focus is how we can strive toward our vision, using our values and core competencies. The "how" is complicated and has lots of constraints, including budgets, but the process we will follow will be laid out in a strategic plan. For DOE's Energy Research laboratories, this is the Institutional Plan. We submitted an abbreviated version this year. Next year's will be more detailed and will capture strategies, goals and objectives.

Having defined near- and long-term goals and objectives for the Laboratory, the next step is to decide how progress can be accurately measured so managers can determine if we're going to meet our goals and objectives, or if corrective action is needed. The MSIP includes the development of a set of performance measures that will go beyond those that DOE requires us to track and will focus more on BNL's specific goals and objectives. Additional measures will then take the overall Laboratory measures and key them to each senior manager's area of responsibility. Each manager's evaluation and compensation will be tied to his or her success in meeting Laboratory goals and objectives.

To assist present and future managers to succeed, a program of management development will be created that will identify specific training for different levels in a manager's career and for various positions at the Laboratory. A management internship program will also be created to prepare the next generation of BNL managers.

With well-established strategies, goals and objectives, the ability to measure progress, and a system to give managers the tools to succeed all in place, the MSIP will develop an organization to optimize the Laboratory's probability of success. The work that has been done to date in this area has been the development of the "Interim" organization and a description of the current roles, responsibilities, authority and accountability of the Director, Deputy Director, Associate/Assistant Directors and Department Chairs. The new contractor will complete this work and put in place a permanent organization for the long term.

I am encouraged by the progress that has been made. There has been a lot of hard work by many people to get us to where we are today. A lot remains to be done, and we are constantly being challenged by scarce resources and tight schedules. Change is always difficult, but, in this case, change is the key to our future success. I know I can count on you for support.

— Mike Bebon, Interim Deputy Director

During October, 31 occupational injuries and illnesses were reported to BNL's Occupational Medicine Clinic. Of those, the 13 described below were OSHA-recordable because they met the requirements for being reported to the U.S. Occupational Safety & Health Administration, in addition to DOE. The OSHA-recordable injuries do not include first-aid cases (18), injuries to non-employees (7), or athletic or recreational injuries (3). October's reportable injuries translated to a rate of 4.3 per 100 workers — somewhat lower than the yearly rate to date of 4.6 for calendar year 1997 and the same as for all of calendar year 1996.

Below are the injuries incurred during October, along with measures that might have prevented them. But hindsight is easy. The best solution is to prevent accidents before they occur. If you need help identifying and preventing hazards, see your Safety & Environmental Protection (SEP) Division Representative or ES&H Coordinator.

- **Six sprains/strains** —
  - Two employees exacerbated preexisting back problems: One was lifting heavy pumps and other equipment; **result:** 6 lost workdays (LWD), 8 restricted workdays (RWD). The other was moving pumps and hoses; **result:** no lost time.
  - An employee fell while stripping floor wax, as the machine that the worker was operating struck a floor bolt; **result:** 5 LWD.
  - Another BNLer exacerbated preexisting, chronic, lower-extremity injuries by walking and climbing; **result:** 6 LWD, 11 RWD.
  - While lifting equipment, an employee injured a shoulder; **result:** 6 RWD.
  - A worker incurred a back injury while lifting a lead brick; **result:** 3 RWD.

  ☛ ***Prevention:*** *All these injuries could have been prevented by better work planning, such as: considering the use of mechanical lifting devices, using a team of workers to help and conducting Job Safety Analyses (JSA).* ***SEP offers a "Job Safety Analysis" class.****
- **Five cuts** —
  - An employee required sutures after the tool being used slipped and cut an unprotected hand; **result:** no lost time.
  - When a door blew shut, a worker's fingers were pinched in the doorway, requiring ten sutures; **result:** 6 RWD.
  - One individual needed steristrips on the hand as a result of coming into contact with a spinning tool bit; **result:** no lost time.
  - An employee lacerated both legs while moving metal siding; **result:** no lost time.
  - One worker had steristrips applied to a scalp wound incurred by striking a threaded pipe, after a hard hat fell off; **result:** 3 LWD.

  ☛ ***Prevention:*** *These injuries could have been avoided through better work planning and by conducting JSAs to help determine the correct tools and personal protective equipment for the job. In the case of the door shutting on an employee's hand, installation of a device to prevent the door from slamming would prevent future incidents.*
- **One contusion** —
  - While attempting to remove a helmet, an employee working under a magnet bumped an elbow, receiving a chip fracture to the elbow; **result:** 2 LWD.

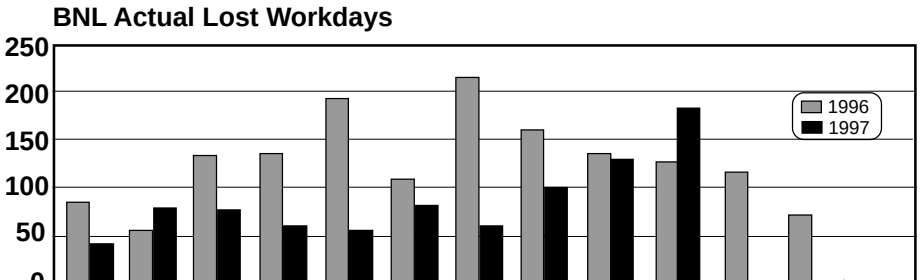
  ☛ ***Prevention:*** *Review procedures for this type of work and conduct a JSA.*
- **One illness** —

  An employee working in flower beds contracted poison ivy on face, hands and torso; **result:** no lost time.

  ☛ ***Prevention:*** *The use of barrier creams and Tyvek clothing would have reduced or eliminated this exposure.*

***To register, see your training coordinator or call Ext. 4151.**

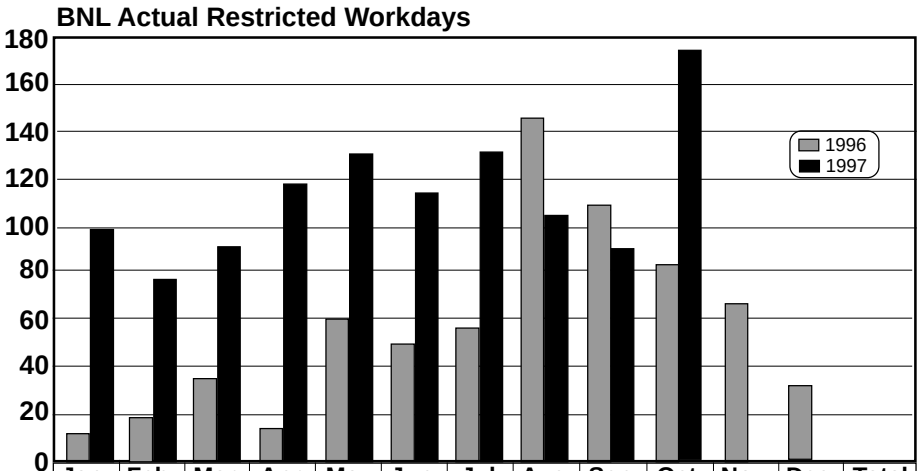
BNL Actual Lost Workdays



	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
'96 Total	87	140	274	409	599	718	938	1098	1233	1361	1479	1551	1551
'97 YTD	42	120	197	254	307	387	448	548	677	856			856

Some lost and/or restricted workday data for each month may reflect injuries/illnesses initiated in a previous month. SEP discovered an error in the data provided and reported for the Occupational Safety Supplement of October 24, 1997, which had made the Lab's occupational safety performance for September appear better than it actually was. The correct values have been added to this report.

BNL Actual Restricted Workdays



	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
'96 Total	11	30	64	78	138	185	242	386	501	583	649	683	683
'97 YTD	100	178	270	388	518	634	766	870	959	1134			1134

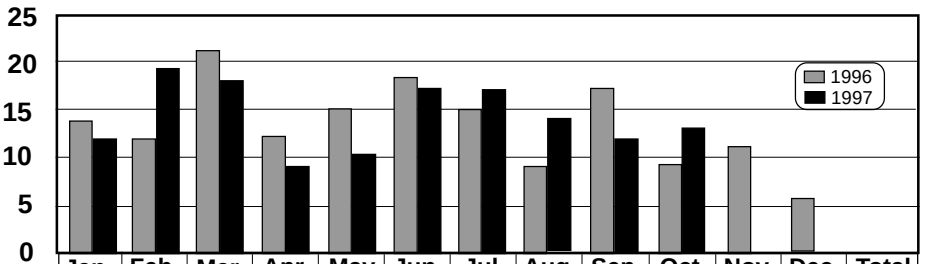
Three Traffic Accidents on Site in October

Two of the three traffic accidents that occurred on site in October involved deer that darted out into the road.

In the third accident, a driver hit a vehicle that was backing up into the road.

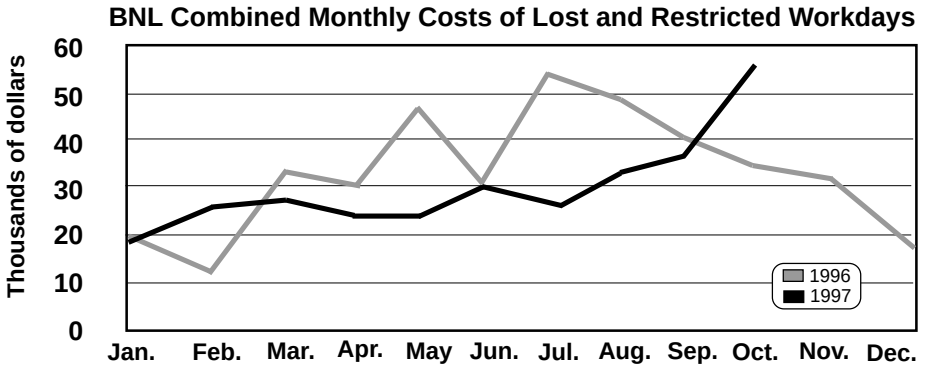
Though no people were injured in these accidents, both deer were killed.

BNL OSHA Recordable Cases



	Jan.	Feb.	Mar.	Apr.	May	Jun.	Jul.	Aug.	Sep.	Oct.	Nov.	Dec.	Total
'96 Total	14	26	47	59	74	92	107	116	133	142	153	159	159
'97 YTD	12	31	49	58	68	85	102	116	128	141			141

BNL Combined Monthly Costs of Lost and Restricted Workdays



Average Costs: lost workday = $215, restricted workday = $102