BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

BNL Model Foretells Traffic Tie-Ups — and May Help Prevent Them

Driving on some of Long Island's major roads at rush hour has become, for most motorists, a major pain. The Long Island Expressway? Often, it's anything but express. The Northern State and Sagtikos Parkways? At times, "parking lots" would be more like it. And construction work, accidents and bad weather only worsen the situation.

But even as drivers steamed and stewed in this summer's crawling traffic, a team of scientists from BNL and Polytechnic University was proving for the first time that it *is* possible to predict, and therefore help prevent, such highway snarls. They did it using a package of powerful computer software called ATOP, for Advanced Traffic Occupancy Prediction, developed in the Department of Advanced Technology (DAT).

A multifaceted piece of software, ATOP uses a number of different information sources and analytical techniques to predict traffic flow. It draws from an extensive database of historical traffic flow patterns, and from data about the current state of the highway, before feeding that information through sophisticated statistical routines. The result is a forecast of traffic volume entering and exiting an area of the highway.

Then, using conservation equations, ATOP simulates the movement of that traffic through the highway system. All the while, more information on actual traffic movement continues to come in — and if it doesn't match the prediction, the computer model corrects itself.

The project has passed several technical reviews and its results will be published shortly in a BNL report. Meanwhile, a team of seven DAT researchers and two professors and two doctoral students from Polytechnic is upgrading ATOP to take on data in real time — as it happens — and make its predictions equally swiftly.

Roger Stoutenburgh

At the Hauppauge headquarters of the INFORM highway-monitoring system, which will soon begin using a BNL-developed traffic simulator, are: (from left) Ali Azarm, Department of Advanced Technology (DAT); Robert Rosendahl, INFORM director; David Stock, DAT; Elizabeth Selcow, DAT; and Robert Hall, DAT.

The team works closely with members of the staff of the New York Department of Transportation's (DOT) INFORM system, an advanced traffic management system that collects and evaluates roadway data. Since ATOP will eventually communicate directly with INFORM, this cooperation has already helped make the team's program a success.

Informed Motorists

If drivers can know what conditions may lie ahead, the state and federal DOTs reason, they can do something about it — such as change to a less-congested route. So, last year, the federal DOT granted $1.0 million to a DAT team led by Robert Hall to develop ATOP into a workable package of software and hardware. The project comes under DOT's Intelligent Vehicle Highway Systems program, and another $1.8 million has been requested for 1995.

"The bill that funds all of this looks at the use of intelligent transportation to do a number of things, on the assumption that there will be no new highway capacity added in the future," Hall said. "It looks at how we can increase efficiency by reducing congestion, as well as decrease environmental impact and increase public safety."

Already, INFORM has a system of computerized signs in place on the L.I.E. and the Northern State and Sagtikos Parkways. The signs now alert motorists whether traffic ahead is congested or normal — but they only tell drivers what is currently going on ahead, not what to expect by the they get there.

When ATOP is installed on the INFORM system's computers in Hauppauge next year, Hall predicted, the electronic messages will become more meaningful for motorists. And traffic authorities will be able to determine the effects of their efforts, including minute-by-minute changes in the very electronic road signs that ATOP will feed into.

The BNL simulator takes its input from INFORM's system of magnetic flux, or loop, detectors embedded in the L.I.E., the Northern State Parkway, and their interconnecting north and south routes. As a car passes over

(continued on page 2)

PE Group Takes an Energetic Approach to Reducing Energy Use

A lot of energy is being used at BNL in order to make sure that a lot *less* energy is used here.

And the energy expended in brain power by the Plant Engineering Division's Energy Management Group (EMG), headed by Mark Toscano, has already significantly decreased the Lab's use of fuel and electric power.

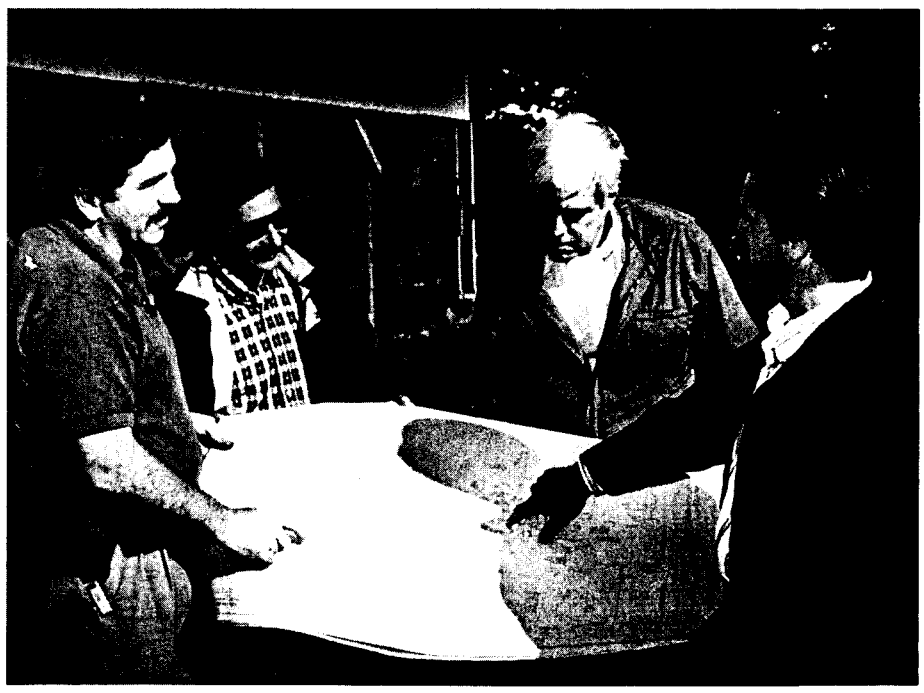
To conserve energy is a concern of most responsible citizens, but for national laboratories, this policy is also the law.

In 1992, the Energy Policy Act was passed, requiring that each federal agency consume 20 percent less energy per square foot of building than the amount consumed in 1985. And, last March, President Clinton signed Executive Order 12902, expanding that goal to a 30 percent energy reduction by 2005. In addition, earlier laws had required a reduction of 10 percent by 1995.

"We're confident that BNL will meet the 1995 goal, as well as the later goals," said Toscano, whose group ensures that federal energy requirements are met and reports the Lab's energy use to the U.S. Department of Energy (DOE). "In addition to meeting the federally mandated goals for reducing energy use, BNL is interested in reducing actual cost. Since 1985, although the total square footage of Lab buildings has increased by 5 percent, site energy use has decreased by 7.2 percent and costs have decreased by 6.3 percent."

Working with Toscano are Energy Engineers Christopher Channing, Thomas VanderPutten and Barbara Pierce. Since 1979, the EMG has effectively initiated the reduction of fuel oil use at the Central Steam Plant, improvement of the on-site apartments' insulation, and installation of more efficient lighting in Bldg. 526, as well as a more efficient heating and cooling system in Berkner Hall.

EMG works by first identifying and evaluating potential energy-saving projects. Then, if the technical and life-cycle costing analyses show that a project will be cost-effective, they apply to DOE's In-House Energy Management program for funding. "We've been one of the most successful national labs in obtaining these funds, with $3.6 million last year, and $1.5 million this year," noted Toscano.



Roger Stoutenburgh

At the location of what will be a 3.2 million-gallon tank for the soon-to-be-constructed Chilled Water Storage System, part of the Central Chilled Water Facility on Rochester Street, are: (from left) Plant Engineering Division's Thomas Butler, Christopher Channing, Thomas VanderPutten and Mark Toscano.

Currently, EMG has obtained funding to modify lighting and install energy-efficient windows and more insulation in several buildings, improve heating and air-conditioning equipment, and expand the computerized Labwide Energy Management Control System. Also, the design is almost complete for a chilled water storage facility at the Central Chilled Water Facility that is expected to save BNL over $650,000 a year.

During FY 1994, BNL used an estimated 5 million gallons of fuel oil and 209 gigawatt hours of electricity. Total energy costs were $15 million, and, according to Toscano, would have been much higher except that the Lab buys

(continued on page 2)

Coming Up

BNL Historian Robert Crease will deliver the 299th Brookhaven Lecture on Tuesday, October 18. His talk on "History of the Laboratory, Part II: The Haworth Years" will begin at 4 p.m. in Berkner Hall.

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Vera Rubin, an astronomer at the Carnegie Institution of Washington's Department of Terrestrial Magnetism and a trustee of Associated Universities, Inc., will deliver a Brookhaven Women in Science seminar on Thursday, October 20. Her talk on "Bright Galaxies, Dark Matter" will begin at 3 p.m, in the Chemistry Department's Hamilton Seminar Room, Bldg. 555.

Twin Fire Trucks Now Protecting BNL and Bulgarian Nuclear Facilities

The food was different, the beer was strong, and almost no one spoke any English. But Fire Captain Russell Dunn of BNL's Fire/Rescue Group wasn't in Bulgaria to vacation. He was there to bring modern firefighting equipment to a huge, aging nuclear facility that desperately needed it.

For two weeks including Easter of this year, Dunn worked to deliver vehicles, instruments and a share of his firefighting expertise to the six-reactor nuclear power plant site at Kozloduy, Bulgaria. He may return in November to see the results of his efforts, which came as part of a U.S. Department of Energy program, managed by the International Nuclear Safety Project Office in BNL's Department of Advanced Technology, to assist Eastern European countries in improving safety at Soviet-designed reactors.

By the time Dunn left Kozloduy in April, the facility's mostly decrepit fleet of Soviet and Czech fire trucks had two brand-new U.S.-made additions: a small crash truck with a dry chemical and foam system, and an exact replica of the 16-ton Cyclone pumper originally customized for BNL's Fire Truck Committee by its manufacturer, E-One of Ocala, Florida, for better safety in fighting hazardous materials fires. Dunn headed the committee, which also included firefighters Kevin Cosgrove, Ken Licata and Frank Palmeri.

BNL Fire Captain Russell Dunn, at left, poses with officers and drivers of the fire company at Bulgaria's Kozloduy nuclear facility in front of two brand-new fire trucks donated by the U.S. Department of Energy. The truck at left is an exact replica of one originally customized for BNL's Fire/Rescue Group.

With the trucks, Kozloduy's 140 firefighters are now much more prepared to respond to emergencies specific to nuclear facilities. But getting them to that point wasn't easy, Dunn reported.

First, it took 30 hours of traveling time to get to the port city of Borgus. Then, after locating the trucks, still on their freighter, Dunn found that the pumper's batteries had been drained by bored sailors running the sirens and lights at sea. Bulgaria's entire phone system also chose that exact time to give out for two days.

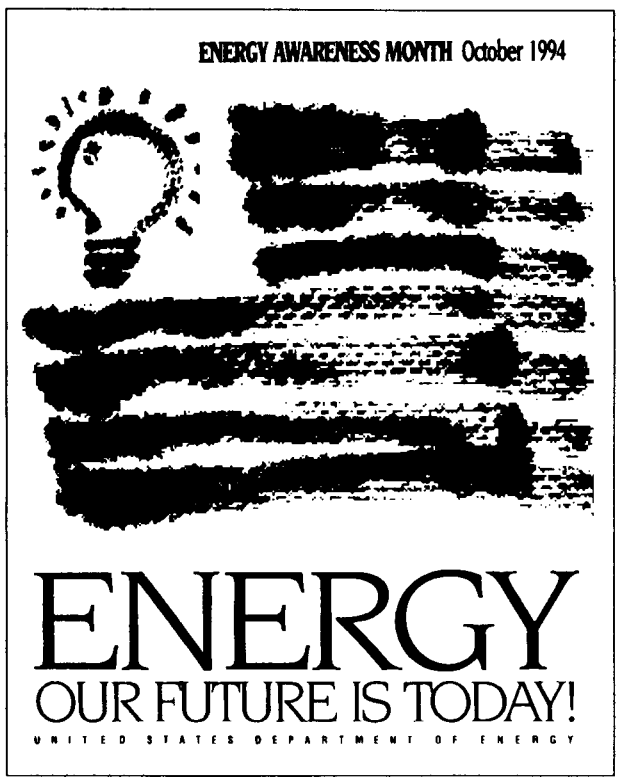
But eventually, Dunn managed to deliver the equipment to Kozloduy, and to start training its firefighters on how to use the deluxe BNL-style truck. "Firemen are the same here as over there," he said. "The officers and drivers all wanted to learn, and they could relate to what I taught them."

— Kara Villamil

Make Fire Safety A Year-Long Habit

In conjunction with Fire Safety Week, October 9-16, the Bulletin salutes the BNLers who work to protect people and property from fire.

For the rest of us, observing Fire Safety Week, means changing smoke detector batteries, planning escape routes at home and doing all you can to stop fires before they start, says BNL Fire Chief James Roesler. "Although Fire Safety Week highlights this," Roessler said, "we should all practice fire safety all year long."



Reducing Energy (cont'd)

most of its electricity from the New York Power Authority at a much lower rate than the Long Island Lighting Company charges.

"Since this is October, which DOE has named Energy Awareness Month, we're hoping that all BNL staff will make an extra effort to turn off any equipment that's not in use, and make sure that it's operated and maintained properly," said Toscano. "And, of course, we hope that these good habits will last the rest of the year."

To help BNLers to be aware of more of the facts and figures of the Lab's energy usage, EMG has compiled the 1993 In-House Energy Management Factbook, which is available to read in the lobby of the Public Affairs Office, Bldg. 134.

"We'd like everyone to be involved with saving energy," said Toscano.

— Liz Seubert

Golf Tournament & Dinner

The BERA Golf Association End-of-Season Tournament and Awards Dinner will be held Friday, October 14, at the Rock Hill Country Club, in Manorville. Tee times start at noon, and the format is a two-man scramble. Cost for BGA members is $43 per person, $63 for nonmembers. Golf or dinner can be attended separately. Deadline for sign-up is October 11. For tee times, information or sign-up, call Rick Jackimowicz, Ext. 3803.

SUN Seminars

The next technical seminar of the SUN series will be "Networks and Interoperability," on Wednesday, October 12, in the CCD Seminar Room, Bldg. 515, from 9:30 to 10:30 a.m., followed by a Q&A session. This seminar will cover: interoperability between PCs and SUN workstations, local area networks and connectivity, wide area networks and connectivity, and Solarnet and other products.

All are welcome. For more information, call Susan Eng, Ext. 7988, or send e-mail to sge@bnl.gov.

Traffic Tie-Ups (cont'd)

it, the detector registers its presence and sends that information to the INFORM center in Hauppauge, where it is combined with data from the entire highway and analyzed.

Those data alone are interesting. But the ATOP team developed an algorithm that computes each vehicle's speed, and the density of the surrounding traffic, based on the detectors' readings. Then, using the DAT staffers' experience in nuclear engineering, physics and statistics, they developed their unique model. Weather, accident and construction information are also added in.

"We've applied a lot of our analytical skills while developing the solution to a new problem, translating them to a new technology and to transportation," said Hall. "As a result, this simulation, which is the first of its kind, operates in real time — and the software must, and does, run faster than real time," in order to compute a useful prediction.

Out of the Lab, Onto the Road

ATOP's implications stretch beyond electronic-sign messages that reach only the motorist already on the road. The designers also believe that the information could be posted on a computer system available to both TV and radio traffic reporters and any Internet users. And, Hall said, cellular phone companies could even make recordings of up-to-the-minute traffic predictions for callers approaching main roads.

Working With the Private Sector

Another area to be developed is the data-collection point: the detectors. The team is working with Northrop Grumman Corporation to develop a better traffic motion detector, using infrared cameras installed along the highway instead of the embedded loops currently used on Long Island and throughout the U.S. The new detectors may supply more information about traffic patterns, thus enhancing ATOP's predictions.

"It's a good example of the Lab working with the private sector — Northrop Grumman — as well as a university and government," said Hall. And in the end, the collaboration will make traveling Long Island's major roads a more pleasant, or at least less annoying, experience.

— Kara Villamil

Second Chance For License Photos

If you missed last month's opportunity to have your next driver's license photo taken early and on site, mark your calender for Tuesday, October 18. On that day — from 7:30 a.m. to 4:30 p.m. in Berkner Hall — representatives of the New York state Department of Motor Vehicles (DMV) will again bring portable digital cameras to BNL, as part of the DMV's "Early Bird" imaging effort.

Even if your present, old-style photo license is valid for several years to come, your new photo can be taken now. Then, when your license is about to expire, you can renew it by mail.

There is no fee for having the photo taken, although the normal license fee will apply when the license is renewed. The DMV representatives will also administer simple eye exams at the time of the photo and will need to see current photo licenses or non-driver ID cards.

Note to Employees:

Attendance at lectures, meetings and other special programs held during normal working hours is subject to supervisory concurrence.

Healthfest '94 Begins Monday

Healthfest '94 — BNL's second celebration of personal health, fitness and safety — will take place next week, including the following events:

- **2-mile Fitness Walk** — Monday, October 10, noon to 1 p.m., start at Science Education Center, Bldg. 438, preregistration required.
- **5-kilometer (3.1-mile) Fitness Run** — Thursday, October 13, noon to 1 p.m., start at Medical Department, Bldg. 490, preregistration required.
- **Health, Fitness & Safety Fair** — Tuesday & Wednesday, October 11 & 12, 11 a.m. to 2 p.m., Berkner Hall, preregistration required for foot screening.
- **"Ergonomics — Reducing Physical Stress at Home and at Work" Lecture** — Tuesday, October 11, noon to 1 p.m., Berkner Hall, preregistration required.
- **"Stress Management From a Behavioral Medicine Perspective" Lecture** — Wednesday, October 12, noon to 1 p.m., Berkner Hall, preregistration required.
- **"Smoking — How to Quit and Stay Quit" Lecture** — Thursday, October 13, noon to 1 p.m., Berkner Hall, preregistration required.

For registration forms, see last week's Bulletin or the recent Healthfest mailing to all employees. For more information, call Mary Wood, Ext. 5923.

BNL's Intro to Computer Class Celebrates First 10 Years

Past, present and future participants in the Introduction to Computer Class that BNL offers to children and adults in surrounding communities came to BNL on September 21 to celebrate the program's 10th anniversary.

In the ten years to date, some 720 children and adults have participated in the six-week course, said program coordinator Frances Ligon, Office of Equal Opportunity. For students in the Riverhead School District, the first classes started in February 1984, at the First Baptist Church in Riverhead. Classes were initiated in 1990 at the Victory Church of God in East Patchogue, for students in the South Country School District.

Now plans are under way to add two new sites to the program: The Clinton Memorial A.M.E. Zion Church in Greenport will hold classes for students in the Greenport School District, and the Faith Baptist Church in Longwood will open its doors to Longwood Central School District students.

"These computer classes have been very important, not only to the community but also to the Laboratory," said BNL Deputy Director Martin Blume. "A key to success for all students in the future will involve being literate with computers — and the Lab needs employees who are computer literate. With some 2,500 computers here, much of our work is now being done by computer, and more will be done in the future."

Roger Stoutenburgh

At the 10-year celebration of BNL's Introduction to Computer Class, program coordinator Frances Ligon (second from right) greets BNLer Crystal Allen (right), a former participant who represents the program's past success, and two representatives of the program's future — Rev. Odessa Henry (left) of the Clinton Memorial A.M.E. Zion Church in Greenport and Peter Strafaci, Assistant Superintendent, Longwood Central School District.

Crystal Allen will vouch for that. Computers have been a big part of her job in the administrative office of BNL's Supply & Materiel Division since she started working there, first as a temporary employee in 1988, then full-time in 1991.

But the first computer Allen ever worked with was the Commodore 64 computer she used in 1984, while a participant in the first Introduction to Computer Class in Riverhead. Today she credits the program with giving her the basic technology to be comfortable using computers. Allen went on to graduate from Riverhead H.S., then earn a B.S. in human services at the University of Bridgeport, before joining BNL.

For its pioneering and continuing involvement, the Riverhead program was presented with a plaque of appreciation. Rosa Palmore of BNL's Personnel Division accepted the award in the absence of Rev. Charles Coverdale of First Baptist Church of Riverhead.

"We are pleased to be involved with this program," Blume concluded, "and we thank those people at the Lab who have helped, especially Fran Ligon."

Among those people Ligon cited were Karl Swyler, Manager of the Office of Educational Programs, and more than ten BNL employees who have served as volunteer instructors over the years. She also thanked the U.S. Department of Energy and Associated Universities, Inc., for their continued support. — Anita Cohen

AUI Scholarship Alert

Applications for 1995 AUI Trustee Scholarships can now be obtained from the Office of Scientific Personnel. Children of regular employees of BNL are eligible to compete for up to 14 AUI scholarships, each for $2,500 per year renewable for up to four years of study toward an academic degree.

In addition, up to three scholarships may be awarded to BNL and National Radio Astronomy Observatory (NRAO) employees' children who are Black, Hispanic or Native American. One such scholarship is open to qualified children of employees at BNL and another for children of NRAO employees. One may be awarded to an additional applicant from either institution.

Qualified applicants are: children of BNL employees who began regular, full-time or regular, eligible part-time employment no later than November 15 of this year and who are employed by BNL at the time the award is announced; or children of retired employees or employees who died while in regular service at the Laboratory. Stepchildren are eligible if the employee regularly claims the child as a dependent for income-tax purposes, or if the stepchild has resided in the employee's household for the two-year period immediately prior to application.

Applicants must be secondary school seniors who will be graduating during the current academic year and entering college by fall 1995.

For further information, contact the Office of Scientific Personnel, Bldg. 185A, Ext. 3336.

Next BERA Concert — Chamber Music Masterpieces

Chamber music masterpieces of the romantic repertoire from Brahms, Rachmaninoff and Schubert will be featured at the next BERA concert, on Wednesday, October 12, at 8 p.m. in Berkner Hall.

This special concert will be performed by outstanding music students from the State University of New York at Stony Brook. They are Lisa Deluca and Andres Schultz, violin; Jennifer Stirling, viola; Heidi Hoffman and Rupert Thompson, cello; and Leone Alitowski, piano.

A donation of $6 is suggested for the performance.

Inside Info

Sy Baron, who had served as BNL's Associate Director for Applied Programs since October 1984, stepped down from this position on September 30, to take a leave of absence to head a major project on risk assessment at the Medical University at South Carolina.

As BNL Director **Nicholas Samios** noted, "Sy has been responsible for some of our critical areas, the applied programs in both the Department of Advanced Technology [DAT] and the Department of Applied Science [DAS], and, in addition, our Office of Technology Transfer [OTT]."

As an interim measure, as of October 1, Baron's line responsibilities were divided among three members of the Directorate: Deputy Director **Martin Blume** is overseeing DAT; **John Axe**, Associate Director for Basic Energy Sciences, is taking care of DAS; and **Mark Sakitt**, Assistant Director for Planning & Policy, is responsible for OTT.

Under Baron, Samios added, "All three of these areas have expanded and have developed new, vigorous programs. His technical expertise and his management skills have played an important role in accomplishing these objectives. We appreciate and thank him for these efforts."

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Michael Carroll II, Safety & Environmental Protection Division (SEP), has been made Deputy Fire Chief in the Fire/Rescue Group, officially effective October 1.

Previously Training Captain, Carroll assumed the new title on July 1 to reflect his expanded responsibilities within the group. These extend beyond training to include day-to-day and long-range operations and planning, as well as assisting in implementing regulations and service as a relief captain and acting chief when necessary. As Deputy to Fire Chief **James Roesler**, Carroll also assists in the administration, coordination and supervision of the group.

Said Roesler, "The position of Deputy Fire Chief requires a strong leader who is dedicated to working selflessly on the Fire/Rescue Management Team; Michael Carroll is such a person."

Carroll came to BNL 30 years ago August 31, after serving as a firefighter with the U.S. Air Force. He has served as Training Captain since 1980, and has assumed responsibility for developing the training curriculum, including new confined-space rescue and physical fitness programs.

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Senior Scientist **Stephen Schwartz** of the Environmental Chemistry Division in the Department of Applied Science testified before the U.S. Senate's Committee on Energy and Natural Resources on May 24, regarding atmospheric aerosols and their contribution to what he refers to as the whitehouse effect. Schwartz was one of six university and government scientists who were invited to testify at a hearing on the science concerning global climate change.

As Schwartz informed the senators, atmospheric aerosols are suspension of fine particles in the air, or hazes, that scatter solar radiation from the planet, thus decreasing the solar heating of the earth. This cooling influence — the whitehouse effect — is thought by some to be comparable in magnitude to the better known greenhouse effect. Therefore, the cooling whitehouse effect is thought to mask somewhat the warming greenhouse effect, which is thought to be due to the increasing concentrations of greenhouse gases that humankind has contributed to the atmosphere since the Industrial Revolution.

As Schwartz explained in his testimony, "Compared to greenhouse gases, whose atmospheric residence times are on the order of a hundred years, the aerosols are short-lived in the atmosphere, with a mean residence time of about a week. At present, the atmosphere contains an amount of carbon dioxide [CO_2] in excess of the preindustrial amount that is equal to about 30 years' worth of present fossil-fuel-combustion CO_2. To the extent that anthropogenic aerosols are offsetting a fraction of the greenhouse effect of this CO_2, it is a week's worth of aerosols that is offsetting three decades' worth of CO_2."

While some have suggested increasing haze to slow the pace of the greenhouse effect, Schwartz said, "Such a strategy would be relying on an ever-increasing, short-term fix to solve a long-term problem. Rather than solve the problem, such a strategy would only exacerbate it."

Instead, Schwartz advocated further study of anthropogenic aerosols, to "improve the interpretation of climate change over the industrial era and to formulate scientifically based policy to deal with climate change in the future."

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Softball Champs

The Blue Jays flew to the top of League E1: (from left) Mike O'Connor, Alan Jones, Joe Tullo, Gerry Shepherd, George Oldham (captain), Charlie Johnson, Larry Musso (co-captain), Jim Forkin, Danny Martin, Frank Palmeri and Jerry Hobson. Not pictured: Bob Medina and Chris Saxen.

The Well Heads came in well ahead of the others in League M2: (back, from left) Victor Cassella, Tom Doyle, Jim Kos, Michael Cowell, Bill Pemberton; (front, from left) Millie Laster, Carlee Beecher, Wayne Alvarez, Donna Alvarez (co-captain) and Bob Howe (captain). Not pictured: Steve Barcelo, Stacy Cassella, Tom Hayes, Doan Hansen, Laura Howe, Jon Laster, Skip Medeiros and Darlene Reeves.

The Titans towered over everyone in League E2: (from left) Greg Condemi, Pete Stillman (captain), Joe Skelly, Bernie Stepnoski (co-captain), Bill Schoenig, Gary Danowski, John Niemczyk, Fred Schaeffer, Frank Stepnowski, Ed Meier, Pete Abrams, Vinny Chiampou and Biays Bowerman. Not pictured: Ken Asselta, Ed Beadle, Jim Boomer, Omar Gould, Tom Hayes, Jon Sandberg and Steve Savatteri.

— Photos by Roger Stoutenburgh

The Good Timers had a great time winning League M1 for the second consecutive year: (front, from left) Luke Greco with young Luke Greco, Kerry Bonti, Maryann Reynolds, Jennifer Schwartz (co-captain) holding "little" Michael O'Connor, Fran Salpietro, Carlos Victoria; (back, from left) Pete Bonti (captain), Mike O'Connor, Dina Tullo, Claudia Jones, Alan Jones and Larry Musso. Not pictured: Jerry Gaeta, Jody Greco, Terri Lacker, Pete La Salla, Barbara McCarrick, Brian McCarrick and Chris Saxen.

Service Awards

The following employees celebrated BNL service anniversaries during September 1994:

45 Years

Garman Harbottle ..... Chemistry
Seymour Rankowitz ..... Instrum.

35 Years

Stanley P. Cherouski .... Ph. & Gr. Arts

30 Years

Lester G. Epel ..... Adv. Tech.
Geoffrey Hind ..... Biology
Kelvin K. Li ..... Physics
Edward D. Platner ..... Physics

25 Years

Barbara Boerjes ..... Sup. & Mat'l.
John Czachor ..... AGS
Theolphilus A. Gray ..... Plant Eng.
H. Ronald Manning ..... Staff Services
James T. Muckerman ..... Chemistry

20 Years

Thomas W. Burrows ..... Adv. Tech.
Joseph M. Carraba ..... Cent. Shops
Tzi-Shan Chou ..... NSLS
Mundrathi Divadeenam .... Adv. Tech.
Theodore Ginsberg ..... Adv. Tech.
Ernest J. Jochen ..... Cent. Shops
C.R. Krishna ..... App. Science
Kelvin G. Lynn ..... Physics
Alan H. Rosenberg ..... Biology
Richard R. Ryder ..... Cent. Shops
Dorothy Scheffer ..... Fiscal
Richard B. Setlow ..... Dir. Off.
Nancy L. Sobrito-Menekoff ..... Pers.
Rosemary Taylor ..... Cent. Shops
Otto White Jr. ..... Saf. & Env. Prot.

10 Years

Maged S. Atiya ..... Physics
Kevin A. Brown ..... AGS
Charles N. Flagg ..... App. Science
Joseph A. Harder ..... Instrum.
Richard A. Jones ..... Plant Eng.
Marguerite M. Marsch .... App. Science
Mary E. White ..... Personnel
Alexander Zaltsman ..... AGS

Arrivals & Departures

Arrivals

Thomas B.W. Kirk ..... Dir. Off.

Departures

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

Joseph F. Aloia ..... NSLS
John N. Aliberti ..... Ph. & Gr. Arts
Raymond R. Axmacher Ph. & Gr. Arts
Leonard S. Bacelli ..... Plant Eng.
Harold C. Berry ..... Comp. & Comm.
Leroy N. Blumberg ..... NSLS
Charles Bohnenblusch ..... AGS
Henry G. Bornbusch ..... Plant Eng.
Bing C. Chan ..... Adv. Tech.
Johannes Claus ..... RHIC
Peter Colombo ..... Adv. Tech.
Mirek Fatyga ..... Physics
Michel Gonin ..... Physics
Samy M. Hanna ..... NSLS
Frank G. Heimburger ..... AGS
Ernest P. Heppner ..... AGS
Ivan Horvath ..... Physics
Martin Howard ..... Physics
Jing-Zhen Jin ..... App. Science
Theodore R. Johnson ..... Medical
Joseph Kats ..... AGS
Fred H. Kuehl ..... AGS
Jianming Li ..... App. Science
Melvin Lindner ..... RHIC
Nancy B. Mayeski ..... Plant Eng.
Raven B. McKenzie-Wilson ..... RHIC
Paul A. Michael ..... App. Science
Mordechai Montag ..... Physics
Gerry H. Morgan ..... RHIC
Tom Oversluizen ..... NSLS
Constantino J. Posillico App. Science
Peter D. Raynor ..... Ph. & Gr. Arts
Richard C. Richardson ..... Instrum.
Albert M. Roberts ..... Physics
Alfred D. Roebuck ..... Physics
Eugene W. Rogers ..... RHIC
Morton Rosen ..... Ph. & Gr. Arts
Charles V. Seaton ..... Sup. & Mat'l.
Richard Skelton ..... Medical
Edward Skrezec ..... Staff Serv.
Herbert Susskind ..... Medical
Michael Tartakovsky ..... AGS
Frederick J. Usack ..... AGS
Philip H. Warner ..... AGS
Mary Wigger ..... Ph. & Gr. Arts
John A. Wilcenski ..... RHIC
Akihiro Yamashita ..... Physics
Ling Ye ..... Physics

Film badges will be changed tomorrow. Please place your badge in its assigned rack space before leaving work today.

PSI Meeting

The next meeting of the Upton Chapter of Professional Secretaries International (PSI) will be held at Borders Book Shop on Sunrise Highway in Bohemia, on Tuesday, October 11, at 2 p.m.

Author Jacques Weisell will speak on "How to Accentuate the Pro in Professional Secretary."

Indo-American Meeting

The BERA Indo-American Association will have its annual general meeting today, Friday, October 7, in Room D, Berkner Hall, from noon to 1 p.m. All present members and interested persons are invited to attend. For more information, call Anand Saxena, Ext. 4844; Ramesh Gupta, Ext. 4805; or Anant Moorthy, Ext. 7562.

Bowling

Red & Green League

A. Warkentien 246/205/639 scratch series, K. Koebel 244/625 scratch, R. Mulderig Sr. 226/208/204/638 scratch, R. Larsen 222, J. Goode 220, R. Raynis 219, J. Griffin 215/207/201/623 scratch, R. Eggert 214/204, F. Griswold 213, E. Sperry IV 212/209/200/621 scratch, R. Wiseman 211, H. Dawson 210, B. Giulano, 203, K. Riker 202/202, E. Larson 202, H. Arnessen 201, T. Prach 200.

Purple/White League

J. Biamonte 201, E. Zukowski 190/175, D. Botts 187/181, L. Farmer 182/176, K. Batchelor 182, J. McCarthy 180, M. Addessi 179, M. Picinich 175, C. MacDougal 172, M. Yanez 171.

Calling All Craftsmasters!

Craftsmasters — get weaving, crocheting, quilting, metalworking, knitting, sewing, macraméing, woodworking — or whatever you do that will result in an exhibit for the upcoming 7th BERA Craft Show. Sponsored by the BERA Art Society, the show will be held at Berkner Hall from Wednesday to Friday, November 16-18, daily from 11:30 a.m. to 1:30 p.m., with an evening reception from 5 to 7:30 p.m. on Wednesday, November 16.

BNL employees, their family members 15 years and older, retirees and guests of BNL may all contribute. More than one piece may be entered by an exhibitor, to be shown as space permits.

Exhibits for the show will be collected on Tuesday, November 15. So that a catalog can be made, please complete two forms for each work that you will enter and return them no later than Wednesday, November 2, to Robert Chrien, Bldg. 510A. More forms are available at the BERA Store at Berkner Hall, and copies are acceptable.

Entry for 7th BERA Craft Show, November 16-18, 1994.

Name _____ Phone _____

Craft _____

Space needed _____

Vertical or Horizontal, table or floor _____

BNL contact & phone _____

Return to Robert Chrien, Bldg. 510A, by November 2.

Cafeteria Menu

Monday, October 10	
Soup: Chicken noodle	.90/1.20
A la Carte: Chicken w/lemon & basil	3.75
Fitness: Steamed halibut	3.95
Deli: Pastrami w/mustard	3.20
Grill: Reuben	3.30
Tuesday, October 11	
Soup: Vegetable	.90/1.20
A la Carte: Stir-fry beef & vegetable	3.85
Fitness: Baked fish & lemon sauce	3.95
Deli: Virginia ham	3.20
Grill: Lamb kabobs	3.30
Wednesday, October 12	
Soup: Spinach & rice	.90/1.20
A la Carte: Italian fish roll	3.95
Fitness: Pasta w/baby shrimp & herb oil	3.85
Deli: Roast beef	3.20
Grill: Monte Cristo	3.30
Thursday, October 13	
Soup: Beef & vegetable	.90/1.20
A la Carte: Sweet & sour pork	3.95
Fitness: Pasta primavera	3.65
Deli: Turkey	3.20
Grill: Philly cheesesteak	3.30
Friday, October 14	
Soup: Fish consomme	.90/1.20
A la Carte: Curried vegetable stew	3.50
Fitness: Baked fish w/lemon & mustard	3.95
Deli: Corned beef	3.20
Grill: Tuna melt	3.30

***Center Club**—Watch Monday Night Football, enjoy 25¢ Buffalo wings during first half . . . Dinner specials nightly, 5-8 p.m.*

See Supplement for Classified Ads and Placement Notices.

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position. Consideration is given to candidates 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, handicap or veteran status.

Each week, the Personnel Division lists new placement notices. The purpose of these listings is, first, to give employees an opportunity to request consideration for themselves through Personnel, and second, for general recruiting under 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, or call the JOBLINE, Ext. 7744 (282-7744), for a complete listing of all openings.

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

SENIOR POSTDOCTORAL RESEARCH ASSOCIATE - Trained in biochemistry, molecular biology, microbiology, chemistry or cell biology, for dual function at the AGS Radiological Beam Line. Function will comprise administrative management of the user program at the beam line, and the opportunity to conduct biological experiments on DNA damage and repair in mammalian cells or *in vitro*. A research background in DNA damage and repair, especially at the molecular level, is preferred, as is experience in performing biological experiments at accelerators. Contact: Betsy Sutherland, Biology Department.

POSTDOCTORAL RESEARCH ASSOCIATE - Trained in environmental engineering with experience in geothermal and petroleum engineering. Experience in the processing and analysis of heavy crude oils by novel technologies is preferred. Successful candidate will join the Advanced Biochemical Processes for Geothermal Brines Program, which will involve the construction of a pilot plant, and automation and optimization studies. Contact: Eugene Premuzic, Department of Applied Science.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees.

MK 2977. CRAFT APPRENTICE - ELECTRICIAN - Participate in a formal, four-year training program during which time the apprentices will receive on-the-job instructions and enroll in outside study programs in subjects related and supplementary to his/her occupation. At the successful completion of the four-year program, the apprentices will graduate to the position of Electrician. The position description for Electrician is as follows:

> Under minimum supervision lays out, constructs, installs, maintains, repairs and operates (in accordance with the national electrical codes, or as otherwise directed) electrical systems, equipment, controls and related devices.
>
> May be required to perform similar duties on other than maintenance division equipment and facilities.

MK 2978. CRAFT APPRENTICE - REFRIGERATION AND AIR CONDITIONING ENGINEER - Participate in a formal, four-year training program during which time the apprentices will receive on-the-job instructions and enroll in outside study programs in subjects related and supplementary to his/her occupation. At the successful completion of the four-year program, the apprentices will graduate to the position of Refrigeration and Air Conditioning Engineer. The position description for Refrigeration and Air Conditioning Engineer is as follows:

> Under minimum supervision constructs, installs, repairs, maintains and operates refrigeration, air conditioning, ventilating and auxiliary and related equipment.
>
> Will perform the same work on air compressors and vacuum pumps whether or not associated with the above equipment.

MK 2979. CRAFT APPRENTICE - STEAMFITTER - Participate in a formal, four-year training program during which time the apprentices receive on-the-job instructions and enroll in outside study programs in subjects related and supplementary to his/her occupation. At the successful completion of the four-year program, the apprentices will graduate to the position of Steamfitter. The position description for Steamfitter is as follows:

> Under minimum supervision lays out, constructs, or installs, repairs and maintains heat, steam and water distribution systems, related facilities and auxiliary equipment and piping and equipment utilizing heat, steam and water distribution services.

Applications for the Apprentice Program are available in the Personnel Division.

DD 0772. SECRETARIAL POSITION - Requires an AAS in secretarial science or equivalent and a thorough knowledge of Laboratory policies and procedures. IBM PC experience required as is WordPerfect 5.1. IPAP experience desired. Will provide varied secretarial support to Division Manager. Supply and Materiel Division.

DD 6448. OFFICE SERVICES POSITION - Requires an AAS or equivalent experience, excellent computational skills, a solid background in a payroll-type environment and experience that demonstrates an aptitude for figures and accuracy. Proficient use of calculator and data-entry experience are also necessary. Responsibilities will include the processing of employee time cards, preparing reports and payroll-related documents. (reposting) Fiscal Division.

Motor Vehicles & Supplies

87 MAZDA 626 LX - 4-dr. sedan, a/t, ac, p/s, p/b, p/w, am/fm cass. stereo, cruise, air bag, 100k mi., $3,000 neg. Joe, Ext. 7496 or 924-7823.

81 FORD GRANADA - 6-cyl., red/silver, runs well, $700. Ext. 2816 or 878-0480 eves.

70 CHRYSLER NEWPORT - runs well, $600 neg. Joe, Ext. 4826 or 821-3762.

69 STARCRAFT POP-UP - sleeps 6, good cond., $500. Ken, Ext. 2011.

60 INTERNATIONAL FLATBED TRUCK - 6-cyl., 4-spd., 12' bed, long w/b, new tires, 2 large toolboxes, $900. Tom, Ext. 4507 or 878-1060.

NERF BARS - black w/diamond step plates, for S-10 Blazer, $65. Chris, Ext. 2022 or 395-6112.

RIMS - 16", sets of orig.l & Enkei, black/silver for '86+ Corvettes, best offer over $200/set. Frank, Ext. 5377.

TIRES - 4, 6-ply beach tread on chrome, 5-lug, 15" rims, 14/35-15LT, $50. Frank D., Ext. 2022 or 399-4480.

TIRES - 4 ea., 195/75/14 & 235/60/15, excel. cond. Brian, Ext. 4028.

TIRES - 4, Michelin, XCH4L/T235/75R15, $30 ea.; 4, General, XTP235/75R15, $30 ea.; 2, General, P195/75R14, $20 ea. 286-4237.

88 TOYOTA TERCEL - a/t, p/s, radio, 95k mi., 5-dr., exel. cond., $2,300. Li, 744-7097.

88 OLDS FIRENZA - a/t, full power, cruise, ac, 88k mi., gray, excel. cond., asking $2,800. Jack, Ext. 7942.

87 SUBARU XT - burgundy, 5-spd., new p/s pump, valve cover gasket, timing belt, new brakes, muffler, excel. cond., must see, $1,300. Steve, Ext. 4417.

87 FORD ECONOLINE 150 VAN - high mi., good cond., $2,000 firm. Leo, Ext. 2952.

87 MERCURY COUGAR LS - all power. Jerry, Ext. 7238.

87 DODGE DAYTONA - all power, am/fm cass., ac, new brakes, tires, 65k mi., asking $2,800. 395-1770.

87 TOYOTA CAMRY - ac, a/t, am/fm cass., 123k mi., cruise, mint, gar., $4,000 neg. Bill, 878-4356.

87 PLYMOUTH VOYAGER MINIVAN - many new items, 5-pass., fold-down bed, $3,750, seller motivated. Bob, Ext. 4637.

86 VW JETTA GLI - red, 5-spd., ac, sunroof, am/fm cass., 71k mi., good cond., $4,300 neg. John, Ext. 5599.

86 MAZDA 323 - 4-dr. sedan, 4-cyl., a/t, ac, alarm, p/w, p/s, good engine, new tires/exh./batt, 86k mi., needs trans. work, good cond., $900. Jim, Ext. 5537.

BNL Dance Club

presents the

Halloween Big Band Bash

Friday, October 28, 1994, 8 p.m. to midnight

North Ballroom, Brookhaven Center

Brookhaven National Laboratory, Upton, New York

dance to the Big Band sound
of the 10-piece George Gee Orchestra

"Expect knock-'em-dead brass playing, forties-redux big-band choreography, . . . and expect to have a real swell time." – The New Yorker

international dessert table and coffee served at 9:30 p.m.

cash bar available

costumes or formal attire encouraged

prize awarded for best costume

Bash tickets: $15 per person

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Pre-Bash Dinner

Friday, October 28, 1994, 6 to 7:30 p.m.

South Dining Room, Brookhaven Center

Buffet dinner includes: tossed salad, beef stroganoff, chicken piccata, vegetable lasagna, wild rice, mixed vegetables and assorted breads.

Dinner tickets: $15 per person

limited to those attending the Bash

(Dinner and dancing: $30 per person)

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For dinner and/or dance tickets, contact:

Rudy Alforque, Ext. 4733, Bldg. 830M
Nelson Cause, Ext. 4999. Bldg. 134C
Inan Feng, Ext. 3372, Bldg. 463
Joe Harder, Ext. 3587, Bldg. 535B
Gail Schuman, Ext. 7985, Bldg. 463
Madeline Windsor, Ext. 5069, Bldg. 477B

no tickets will be sold at the door

TIRES - 4, BF Goodrich, size 235; parting out Ford F150, 4wd truck, cap, bed, etc. Wayne, Ext. 7238.

TIRES - 2, P235/75R15, good cond., $25 ea.; donut spare, new, T125/80016, make offer. Sue, Ext. 7235 or 395-3529.

TRAILER - stripped '79 Coleman camper, good for utility trailer, asking $100 or best offer. Paul, Ext. 3848 or 821-1560.

TRAILER HITCH - Class III, Draw-Tite model, removed from Dodge, $20. Don, Ext. 7237 or 744-2921 after 5:30 p.m.

WHEEL & TIRE - donut, for Ford Thunderbird, never used, $275 new, sell for $175. 744-5448.

94 YAMAHA - stern drive pkg., V-6, $4,900; '93 Arctic cat 580Z snowmobile, Moto Fox shocks, $4,800; '89 Kawasaki KX125 motorcycle, $1,600. Kelly, 864-9290.

92 DAKOTA 4x4 MAGNUM - V-6, ABS, a/t, am/fm cass., ext. cab, tow prep. pkg., 40k mi., $12,500. Nate, Ext. 4058.

92 MUSTANG LX - convertible, white w/white roof, tape deck, p/w, 19.5k mi., new car warr., excel. cond., $11,950. Mott, Ext. 7108.

92 CHEVY LUMINA - white, p/w, p/l, cruise, ac, am/fm stereo, $9,000 neg. Steve, Ext. 7309.

90 T-BIRD SC - turbo, leather, moonroof, all options, sports gearbox & clutch, $6,000. Ext. 7699 or 821-1435.

90 PONTIAC 6000 WAGON - V-6, a/t, ac, am/fm stereo, 85k mi., excel. cond., asking $4,100. Michael, Ext. 3571/2201 or 341-1079.

89 EAGLE PREMIER - p/s, p/b, a/t, stereo, ac, 7/70 warr., 60k mi., excel. cond. David, Ext. 4587 or 286-3570 after 6 p.m.

88 OLDS 98 - white/blue, fully loaded, 61k mi., $6,000. Steven, Ext. 5694.

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

86 HONDA SHADOW 700 MOTORCYCLE - black & chrome, 8k mi., excel. cond., asking $2,500. Peter, 821-3693.

86 HYUNDAI - 4-spd., 4-dr., no rust, 84k mi., many new parts, excel. cond., $1,395. 467-1343.

86 FIREBIRD - a/t, V-6, T -top, asking $3,500 neg. Andrew, 821-0450.

85 MUSTANG GT - 5-spd., white, extras, $2,400 neg. 223-4778.

85 HONDA CIVIC CRX SI - p/sunroof, alloy wheels, 5-spd., very clean, must see, $2,300. 929-5781.

84 FIREBIRD - red, p/w, V-8, T-top, new tires, 98k mi., good running cond., $2,800. Barbara, 281-7481.

84 TOYOTA COROLLA - 5-dr., 5-spd., ac, 30+ mpg, 136k mi, runs well, $1,200. John, 821-2602.

83 MAZDA - clutch assembly and 5-spd. transmission, $250. Julian, 924-0960.

82 MONTE CARLO - $1,000. Duke, Ext. 7859 or 289-3586.

82 KAWASAKI KX125 - sidewinder chain & sprocket, Boyseed reeds, D6 type II silencer, new tires, rebuilt top end, $650. Dan, Ext. 4605 or 475-3527.

82 HONDA PRELUDE - 5-spd., am/fm cass., sunroof, high mi., new tires, good cond., $800 or best offer. 722-4165.

79 PONTIAC CATALINA - black w/landau roof, a/t, 120k mi., runs well, good body, $1,200. Jim, Ext. 2432 or 821-9178.

77 BMW 320I - needs work, no reasonable offer refused. Jim, Ext. 7912.

76 PLYMOUTH VOLARE - 4-dr., blue, 4-spd., m/t, best offer over $100. 728-4495.

72 DODGE BANNER MOTOR HOME - 28', sleeps 6 adults, 45k mi., excel. cond. Joel, 289-8060.

69 MUSTANG - convertible, 6-cyl., 3-spd., recent tires, brakes, shocks & top, am/fm cass., good running cond., ask. $4,600. Tirre, Ext. 3288 or 281-0360.

VW FENDERS - 4, fg, new, $200. John, 473-3020.

TIRES - 4, General, P235/75R15, all-season radial, new, $200. Norbert, 929-4886.

Boats & Marine Supplies

25' AQUASPORT - 1987, 200-h.p. Merc., 9.5 Yamaha Kicker, new batt., Loran, radios, full canvas, excel. cond., $13,000 neg. 878-0480.

23' PEARSON SAILBOAT - 1979, P23K cruiser/racer, fixed-keel version, sleeps 4, galley, ob., 3 sails, v.g. cond., asking $4,900. John, Ext. 2788.

21½' PURSUIT - 1991, deep V cuddy, 150-h.p. Yamaha ob., 140 hrs., loaded, '93 E-Z trailer, full canvas, mint, asking $18,000. Lloyd, 587-7876.

21' RENKEN C.C. - 1980, 140-h.p. Volvo Penta, FWC, excel. running cond., good fishing boat, trim tabs, am/fm cass., $3,100. Patrick, 471-7853.

19' CRUISER BOWRIDER - 115-h.p. Johnson, nearly new trailer, p/winch, $2,200. Jim, Ext. 3372 or 821-0250.

14' MFG - fg, tri-hull, no papers, free. Dave, Ext. 2109 or 472-9199.

OUTBOARD MOTOR - 1977, 6-h.p. Chrysler, long shaft, good cond., asking $200. Chris, Ext. 2022 or 395-6112.

MOTOR - 1968, 65-h.p. Evinrude, $200. John, Ext. 4028.

BOAT DOCKING - private, near Smith Point Park for 1995 season, approx. 22', $500. Jim, 929-6896.

30' BAYLINER BUCCANEER SAILBOAT - 1979, ib diesel, furling jib, cradle, v.g. cond., Ext. 7699 or 821-1435.

23' AUX KETCH - centerboard, shallow draft, 6-h.p. ob, sleeps 2, $1,500. Ext. 3749 or 286-5897.

23' KELLS SAILBOAT - swing keel, fg, 7½-h.p. Honda, 3 sails, trailer, DF, $3,000. John, Ext. 5599.

17' COBIA - deep V Bowrider, 70-h.p. Johnson, galv., trailer, v.g. cond., $1,700. Bob, 265-0391.

PROPELLER - OMC SST 13x19, good cond., $50. Bart, 924-6761.

ENGINE - Universal Atomic 2 inboard w/folding prop., running cond., $400. Roger, Ext. 7518 or 878-8847.

ENGINE - Merc O/B Mark 55H Hydroshort for APBA racing, only 65-mph racing runabout class D, bal. s/s props, tools, more, $650. Joe, Ext. 3464 or 281-7683.

Furnishings & Appliances

AIR CONDITIONER - GE5940 Btu, $30; Tefal juicer, $15; baby's swing, Graco, battery operated, $12; infant's car seat/carrier. 341-1054.

BED - antique, oak, double, 6' headboard, footboard, side boards, $195. 928-8465.

BED - queen, mattress, foundation, frame, 1 wk. old, student can't use at college, $175. 289-7383.

BEDROOM SET - Colonial, dark wood, full size, 9 pieces, $350. John, 928-6791.

BEDROOM SET - 7 pieces, dark wood, armoire, dresser, end tables, mirror, frame, headboard, $400/all. N. Tyler, Ext. 2089.

COUCH - chair, 3 tables, 2 lamps, Colonial, $450. John, 331-3724.

COUCH - beige w/ blue flowers, traditional, $45; curio cabinet, walnut, excel., $150; rowing machine, $20. Ann, Ext. 7611.

COUCH - w/matching chair, lamp table, $75; This End Up couch & chair, like new, $250. $75. 563-2889.

DESK - solid pine, 50"x32"x30½"H, 4 drawers, 1 file drawer, v.g. cond., $80 neg. Ext. 2683.

DINING ROOM TABLE - white Formica, drop-in leaf, 6 swivel armchairs, $100. Don, Ext. 7237 or 744-2921 after 5:30 p.m.

DINING ROOM - Broyhill, china cabinet, buffet, good cond., large table, 3 leaves, 6 chairs, fair cond., asking $450. Lloyd, 422-5881.

DINING ROOM TABLE - 4 chairs, w/leaves, excel. cond., $100. 289-8105.

FREEZER - Gibson, upright, reasonable. 363-7032.

FREEZER - 21.2 cu. ft., Hotpoint, upright, excel. cond., $175. 929-4529.

HOPE CHEST - cocktail table; 2 end tables; ladderback chair; glassware; auto. cooker; plates. 286-0376.

REFRIGERATOR - Amana, 16 cu. ft., 1980, v.g. cond., $150. Mark, Ext. 5350 or 369-0793.

REFRIGERATOR - Gibson, 16 cu. ft., frost-free, $150; Welbilt electric range, $125; gold vinyl sofa, $75; all good cond. Steve, Ext. 7862.

REFRIGERATOR - Avanti, 5 cu. ft., excel. cond., $80. Bruno, Ext. 1373.

REFRIGERATOR - Sears, model L, stock #6601, white, good for small apt., orig. $400. sell for $100. 727-0488.

REFRIGERATOR - apt. size, Welbilt, brown, $50. Pam, 474-2792.

RUG - 1 yr. old, pattern of light colors on dk. background, orig. $199, ask.$80. Tang, Ext. 7022.

SEWING MACHINE - Kenmore, all attach., never used, orig. $425, sell for $200. 226-1828, after 5 p.m.

TABLES - coffee & end, $30; TV cart, w/wheels, 2 shelves, $15; dining set, table, 6 chairs, pedestal base, 2 leaves, ask. $275. Tim, Ext. 4630 or 878-3947.

TABLES - end, coffee, oval, dark walnut, like new, $100. Marty, Ext. 2214.

TABLE - coffee/cocktail, glass top, w/wood bottom, $35 or best offer, good cond. 281-3515.

TABLE - oak parquet, 4 chairs, 2 leaves, lighted corner cabinet, server, $600; 3-piece wall unit, pine, excel. cond., asking $400. 563-2889.

TABLE - & chairs, antique, round; bdrm. furn.; couches; chairs; lamps; tables; rugs; more. Dick, 286-3372.

VACUUM - Hoover Quick Broom II, 3.0A, $15; Black & Decker 4-slice toaster, $15. 475-8242.

WATER BED - king size, w/heater, frame, $100. Leslie, 473-8562.

WATER COOLER - Oasis, w/cup holder, excel. cond., asking $70. Chris, Ext. 2022 or 395-6112.

BEDROOM SET - double dresser w/nightstand, desk, bookcase; couch & matching Lazy Boy recliner, $350; full-size bed, oak, hbrd. & ftbrd., $75. 289-8105.

(continued on back of page)

CHAIR - easy, maple frame, w/loose cushions, $15; coffee & end tables, wrought iron, glass tops, $15/pair. Judy, 924-7077.

COUCH - $500; love seat, $450; chair, $250; all 3, $1,100; Italian leather, beige, 5 yrs. old. 689-5374.

DINING ROOM SET - table, 6 chairs, buffet, china closet, 1920s, must be sold, excel., $275. 363-9527.

DRYER - Magic Chef, high capacity, gas, propane or natural, 1 yr. old, like new. Linda, 689-7000, Ext. 114 days or 588-0910 eves.

FIREPLACE DOORS - glass, brass finish, grate, fireplace tools, firewood, like new, $50. Mike, Ext. 5319.

LAMPS - 2, white ceramic, 3-way, orig. $200/ea., now $100/both; tables, 2 end, 1 coffee, off white & glass, $75/all. Donna, Ext. 4430 or 369-5704 after 6 p.m.

SOFA - $150; 2 end tables, $75/ea.; 3 lamps, $50/ea.; wing chair, $35. Jules, 929-3683.

SOFA & LOVE SEAT - tan w/floral pattern, high back, excel. cond., $200. Richie, Ext. 2175 or 734-7342.

TABLE - dining room table, white Formica w/drop-in leaf, 6 swivel armchairs, $100. Don, Ext. 7237 or 744-2921 after 5:30 p.m.

VACUUM - Hoover Spirit, canister, 3.1 peak h.p., edged cleaning on both sides, attachments, excel. cond., $65. 345-5365.

Tools, House & Garden

BAND SAW - Delta, 8", w/fence & meter gauge, 2 blades, 6 mo. old, excel. cond., $145. Chris, Ext. 2022 or 395-6112.

PATIO SET - wrought iron, 4 swivel chairs, table w/ Formica top, indoor, $200. Marty, Ext. 2214.

JADE PLANTS - 2, beautiful, 10" pots, 18"H x 26"D, $35. Mickey, Ext. 7908.

ROTOTILLER - TroyBuilt, w/plow, 3½ h.p., rear tines, powered wheels, $50; wheelbarrow, large bucket, 15" wheel, $10. 821-5266.

BLACK PINES - all sizes. 734-5121.

CHIPPER/SHREDDER - Simplicity, elec., 1.5 h.p., 1 yr. old, 1¾" cap., 10:1 reduction, bag, wheels, orig. $400, ask. $200. Regina, Ext. 7850 or 878-3553.

COAL STOVE - Mark, Ext. 4347 or 924-2932.

FIREWOOD - seasoned hardwood, split, delivered, $115/cord, $60/half cord. Glenn, 924-2035.

GENERATOR - 4,500W, Yanmar diesel, elec. start, excel. cond., $800. Bart, 924-6761.

LAWN MOWER - Snapper, 21" cut, excel. cond., 2 yrs. old, $175. Dan, Ext. 4220 or 698-7322.

PATIO SET - 54", round glass table, 6 chairs, umbrella, cushions, good, ask. $250. Steve, Ext. 2897.

POOL FILTER - sand, 7 gal., s/s tank, pump, valve, hoses, $50; tumbler, 2 barrels, rubber lined, 12 lbs. cap., ⅓ h.p. motor, stand, $100. Fred, Ext. 5032.

STORE SHELVING - complete gondolas, all sizes, w/ pegboard backs, $500; light-up sign, 2 boxes, wall mount, 2'x5', 18"x12', $150/ea. Kelly, 864-9290.

Sports, Hobbies & Pets

BIKE - Schwinn, men's, 10-spd., $50; girl's, Huffy, 20", $25. Tom, Ext. 7287 or 744-4535.

BICYCLE - girl's, good for 10-13 yr. old; 10-spd., pink & gray, v.g. cond., w/helmet, $70. Nick, Ext. 2490.

DOG - Doberman, lovable, 5 yrs. old, all shots, excel. health, excel. protector, needs loving home. Tina, Ext. 5350.

DOG CAGES - 2, 22"Wx26"Hx41"L, steel, collapse for storage, foam pad for comfort, $35/ea. Ext. 4747 or 765-1075.

DOG MEDICATION - heartworm, hookworm, whip worm, 150 tablets, daily, Filaribits, $20. 744-5448.

HOME GYM - Weider Flex 110, directions & exercises, orig. $189, moving, used once, $100 or best offer. Loretta, 744-5553.

PARROT - male, yellow nape Amazon, 3 yrs. old, looking for a mate, $600. 281-3515.

PLAYER PIANO - circa 1920's, Wurlitzer, needs some work, best offer. Joe, Ext. 4826 or 821-3762.

RC CAR - JrT, w/charger, extras, best offer. Ext. 7225.

SKI PASS - lifetime at Killington, Vermont. Ext. 3334 or 744-2404.

SKIS - Olin, 180 cm, w/Salomon 444 bindings, runaway straps, $20 neg. Don, Ext. 7237 or 744-2921 after 5:30 p.m.

TRICYCLE - girl's, 12", pink; boy's bicycle, 20", black; girl's, 16", black, $10/ea. Tang, Ext. 7022.

WET SUIT - O'Neill, full ⅛", w/shoulder zipper, size med., fair cond., $50. Ernie, 281-7873.

BICYCLE - Huffy, 26", girl's, 10-spd., pink & gray, great cond., $50. Fred, Ext. 5032 or 744-2655.

BICYCLES - girl's, 20", $10; girl's, 16", $15. Ben, Ext. 4299.

BOWLING BALL - women's, 12-14 lbs.; bowling bag, women's, blue; tennis racquets: Wilson, sting graphite, w/cover & Head Director, graphite, 475-3473.

EXERCISE BIKE - Whitley, AMF, excel. cond., $35. Paul, Ext. 4156.

PIANO - reconditioned, upright, refinished mahogany case, new hammers, dampers, strings, key tops, just tuned, $1,000. Nancy, Ext. 5744 or 286-0353.

ROWING MACHINE - DP-300, good cond., $75. Kelly, 864-9290.

SKI BOOTS - men's, Nordica NR980, size 9½-10, used once, $70. Georgia, Ext. 7957.

SPA MEMBERSHIP - Women's Way, take over full membership, no registration fee, Lake Grove Club, $29 per month. Michele, 474-2780.

TRACKER - Alpine, like new, $60. 543-6402.

VIOLIN - child's, ½ size, w/case, good cond. Ext. 7785.

WEIGHT-LIFTING BENCH - Olympic, lateral pulldown bar attach., $350; Olympic pec machine, $350; Continental stair stepper, $100. Kelley, 864-9290.

WET SUIT - full size, medium, used 4 times, orig. $300, sell for $75. 289-8105.

Audio, Video & Computer

COLOR ENLARGER - C760 Omega, used twice; Telesar black & white enlarger; other darkroom equipment. Greg, Ext. 7617.

COMPUTER MONITOR - SVGA, 14", 0.39 dot pitch, Sirex, like new, $175; CPU, Intel, 486, DX-33, $175; SVGA card, Trident, 8900C, w/256k, $50. Ext. 2683.

COMPUTER - AppleIIC, w/dot matrix printer, software, excel. $150 neg; computer table & chair, excel. cond., $100, will separate. Donna, 924-9355.

RACK - CD, holds 104, new, $15. Tim, Ext. 4630 or 878-3947.

SOFTWARE - & games, Amiga 500, $275. Dick, Ext. 7185.

STEREO - Panasonic, $25; IBM XT computer, 40MB HD, w/monitor, printer, lots of software, $500. Tom, 744-4535.

TV - color, works fine, J.C. Penny, $20. Sarah, 821-2602.

TV TABLE - $10; bookcase, $20; exercise bike, $20; kerosene heater, $20; backpack, $8; Dust Buster, $10. 744-2203.

TV - 19", color, good cond., $50. George, Ext. 4013 or 588-1983.

COMPUTER - Macintosh SE, w/keyboard, mouse, 20 MB HD, WordPerfect, ImageWriter printer, 3 yrs. use, will sell separately. Maurice, 474-2758.

COMPUTER - IBM PS1, 286, modem, b&w VGA monitor, some software, 3.5" drive, like new, asking $250 neg. John, Ext. 5599.

COMPUTER - Macintosh, 20 MB external HD, modem, printer, software, $700 neg. Steve, Ext. 7309.

GAMEBOY - w/5 games, magnifier, light, $75/all. Dennis, 924-3316.

MOVIE TAPES - orig., hundreds to choose from, $1-$2/ea. Ext. 7496.

TV - 19", Sony Trinitron KV1943R, sharp picture, color needs work, $60. Millie, Ext. 3775.

Miscellaneous

BABY ITEMS - Fisher Price, turtle sandbox, $15; walker, $10; infant seat, $5; high chair, oak, $25; baby bath, $5. Ann, Ext. 7611.

CRIB - Child Craft, Chesapeake oak, w/mattress, excel. cond., $150. 929-3235.

CRIB - light oak, $150; matching changing table, $25. Tom, Ext. 7287 or 744-4535.

DOUBLE STROLLER - Perego, very clean, gray, spring chassis, reversible seats, $90. Bill, Ext. 2762 or 665-3782.

GIFT CERTIFICATES - limousines, restaurants, Theatre III, Radio City Music Hall, 20% discounts, good dates available. Tom, 736-6691.

HIGH CHAIR - Fisher Price, $30; maple changing table w/mattress, $30; rocking pony, Fisher Price, $10. John, 928-6791.

ROPE - poly, approx. 75', 3½" dia., w/spliced eye on ends. 689-9234.

CRIB - Behr's, maple spindle, excel. cond., asking $250. Donna, 821-3739.

SHOWCASES - 6'-long, mirror doors, 4 shelves, $300. Leo, Ext. 2952.

TICKETS - Metropolitan Opera, 2, Sat. matinee, 11/5, Pagliacci and Cavalleria Rusticana, balcony box. Bob, Ext. 4637.

Free

23' THUNDERBIRD BOAT - f.g. hull w/cuddy cabin, excel. cond., no motor, no trailer, you haul. 281-1832 eves.

CHAIN-LINK FENCE - about 30 ft. Dick, Ext. 7185.

Car Pools

BNL-SPONSORED VAN POOL - passengers needed, pickup points, LIE, mid-Queens, Plainview, Huntington. Ron, Ext. 2175.

LIE EXIT 36 - fourth person needed. John, Ext. 5181.

Wanted

BAR STOOLS - need four, in good cond., reasonable price. Bob, Ext. 7257.

BOOKCASE - wood, open-shelf cabinet, 4-5' high, but not more than 28" wide. John, Ext. 7671.

CARS - trucks & motorcycles. 467-1343.

CLARINET - in good working condition for young beginner student. Anne, 361-6835.

CRADLE - or bassinet; dryer; baby monitor. Sonja, 929-0906.

GUITARS - 467-1343.

HOUSEMATE - female to share house, 6 mi. BNL, walk to beach, RR, shopping, quiet area. Marilyn, Ext. 2259.

HYDRAULIC PRESS - for automotive use, 3-10 tons, reasonable, oldie okay. Bill, 281-6498.

PROFESSIONAL ENGINEER EXAM REVIEW STUDENTS - If interested in course, e-mail Bob Lambiase, lambiase@bnl.gov, or write him at Bldg. 830.

Services

*Services are listed in the first **Bulletin** of every month as a courtesy to BNL employees. They are neither screened nor recommended by the **Bulletin**. Services forms are available in the **Bulletin** lobby, Bldg. 134.*

ACRYLIC NAILS - full set, $20, fill-ins $15, includes broken nails, done in my Holbrook home, licensed. Theresa, 479-3349.

ART - antiques, bought, sold and appraised. Tim Dwyer, 744-2203.

BABY-SITTING - 14-yr.-old to babysit for your night out, your home or mine, reasonable. Lee, 345-6762.

BABY-SITTING - mature woman will take care of your child in our apt., Chinese-speaking preferred. 821-5240 eves.

BRICKWORK - masonry, patios, walks, swimming pools, retaining walls, landscaping ties, Belgium block, 25 yrs. exp., Lab disc. Tony, 698-9274.

CATERING - DLC, no affair too small, homemade specialties, call for menu, Lab discount, free delivery, stands, sternos incl. Dave, 696-1927.

CHILD-CARE SERVICE - mother of grown children, experienced, available your home or mine, local. Maureen, 281-5445.

CHIMNEY CAPS - sweeping, fireplaces and oil flues, stainless steel caps, all chimney types, lifetime warranty, Lab disc. Mike, 821-5526.

CHOCOLATE - party favors for bridal and baby showers, weddings, birthdays, etc. Cathryn, 821-7327.

DJ/MC - professional, rap, club, house, 50s, all occasions, demo tape avail., refs. Alex, Ext. 7752.

DJ/MC - party & dance music from 40s-90s, all occasions, music & entertainment personalized for your affair, BNL refs. Lou, 698-8210.

ELDERLY CARE - on weekends in their home, I give TLC and stay overnight, a break for the family, reasonable. Susan, 286-4225, eves.

ELECTRICIAN - outlets, lighting, repairs, service upgrades, lic./ins. Steve, 758-7002.

FINANCIAL - evaluations for retirement planning and insurance programs, tax savings. Rich, 744-4816.

FITNESS - training, nutritional counseling, body fat analysis, weight training programs, martial arts. Dan, 546-2947.

GUTTERS - cleaned. 281-2746.

HAIR BRAIDING - various styles. 924-6250.

HANDYMAN - odd jobs, cleanups, etc., reasonable. Frank, 399-4480.

HOME IMPROVEMENT - carpentry, drywall, spackling, painting, plumbing, ceramic tile, storage sheds, free est., Lab disc. Don, 744-2921 after 5:30 p.m.

JEWELER - special orders, repairs, honest, affordable, no jobs too large or small. Kelly, 821-5239.

LAND CLEARING - trees, stumps, brush removed, topsoil graded and raked w/450 Loader, $70/hr. Tom Muller, 878-1060.

LAWN SPRINKLERS - automatic systems, prof. installed, repairs, alterations, spring turn-ons and winterization service. Lou, 928-7042.

LAWN MOWER - and lawn tractor repairs and service, reasonable rates, fast service, have trailer will travel. Dan, 698-7322.

LOCKSMITH - sales & service, 10% Lab discount, keys cut during lunch. Pete, 399-2813 after 5 p.m.

MAILBOXES - distinctive, custom-made, many sizes, shapes, free lettering & catalog, installation avail. Mike, 821-5526.

MARINE - winter storage, secure property, hauling, power wash, blocking, launch, incl. shrinkwrap, bottom painting, zincs, props. Don, 475-1612.

PAINTING - int./ext., Sheetrock, tape, spackle, wallpaper, stain, power wash, sandblast, insured, refs. James, 399-4912.

PAINTING - wallpaper, power wash, staining, spackle, int./ext. painting. 563-6596 after 5 p.m.

PARTY TENT - 20'x30' w/side curtains, we set up and take down, $250/38 hr. 321-2889.

PICKUP TRUCK - and driver for hire, small-medium jobs, reasonable, experienced, local only. 821-4407.

PLUMBING & HEATING - alterations, repair work by retired BNL employee Jim Morris. 472-1205.

SCUBA LESSONS - NAUI-certified instructor, class forming, beginner to advanced, private or group, dive rescue, OP II advanced. 929-3235.

SELF-HELP WORKSHOP - let us help you identify your irrational beliefs and develop positive attitudes. Marilyn, 878-0939.

SHEETROCKING - and spackling, free estimate. Kevin, 567-6621.

SKINCARE & MAKEUP - 2 consultants, open-house 10/8, 10 a.m.-1 p.m., & 2 -5 p.m., 28 Newcomb Tr., Ridge, call for directions. Barbara Jean, 929-3235.

TOWING - cars towed, transported or removed, running or not, local or long distance, best prices. Jim, 929-6896.

TRAINING - personal computer applications, from accounting programs to word processing, introductory, intermediate and advanced. Gina, 929-3649.

TREE CUTTING - 281-2746.

TUTOR - certified teacher, any grade, any subject, your house or mine, $25/hr. Danielle, 369-0904.

TYPING SERVICES - term papers, resumes, letters, etc., laser printer, quick service, pick up or delivery. Cathryn, 821-7327.

VIDEOGRAPHER - capture those precious moments on video, will tape weddings, parties, all occasions. Larry, 281-7240.

WOODCHIPS - topsoil, fill, gravel, mulch, bluestone, cleanups, free delivery. 744-4003, leave message.

In Appreciation

For support and encouragement concerning my IAEA tenure, my family and I are grateful to the BNL community. — Les Fishbone

As I retire, I thank everyone at BNL & AGS for your friendship & kindness during my 34 yrs. God bless you. — Fred Kuehl

Classified Ad deadline is 4:30 p.m. Friday for publication Friday of the next week.

Brookhaven Bulletin
SALES & NOTICES
Classified Advertisement Form

Items submitted on this form must be owned or offered by the submitting employee or by members of the employee's immediate family living in the same household.

FOR SALE
☐ Motor Vehicles & Supplies ☐ Tools, House & Garden
☐ Boats & Marine Supplies ☐ Sports, Hobbies & Pets
☐ Furnishings & Appliances ☐ Audio, Video & Computers
☐ Miscellaneous

NOTICES
☐ Lost & Found ☐ Yard & Garage Sales
☐ Free ☐ Car Pools
☐ Wanted ☐ In Appreciation

— 20 WORDS MAXIMUM —

ITEM

NAME EXT./PHONE

PRINT YOUR NAME SIGN YOUR NAME

LIFE NUMBER LAB BLDG. LAB EXT. HOME TELEPHONE #

The Fine Print

- *Classified advertisement deadline is 4:30 p.m. of the Friday before publication.*
- *Deliver completed sales & notices forms to: Brookhaven Bulletin, Bldg. 134, 37 Brookhaven Avenue, Upton, NY 11973.*
- *The policy regarding classified advertisements is posted in the Brookhaven Bulletin lobby. For further information, call Ext. 2345.*

BNL F 2152F REV. 3/92

Highlights of Classified Ad Policy For the Brookhaven Bulletin

The following three forms are to be used for placing classified advertisements in the Brookhaven Bulletin.

- **Sales & Notices** (left) — These ads *run weekly as space permits*; items offered for sale or mentioned within notices must be owned by the employees who are advertising them or by members of their immediate families living within the same household.
- **Real Estate** — These ads *run only on the second and fourth Fridays of the month*; real estate for sale or rent must be owned by the employee who is advertising it and must be offered for sale or rent by that employee without the assistance of a real-estate agent.
- **Services** — These ads *run only on the first Friday of the month*; services must be performed by the employees who are advertising them or by members of their immediate families living within the same household.

All forms are available in the lobby of the Public Affairs Office, Bldg. 134. Deadline for submission is 4:30 p.m. of the Friday before publication. Each ad will be run only once and must be resubmitted to be repeated. Ads withheld from publication due to lack of space do *not* have to be resubmitted as they will automatically be published the following week.

For a copy of the complete Brookhaven Bulletin Classified Advertisement Policy, call Ext. 2345.