BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

Global Climate Not a Casualty of Kuwaiti Oil Fires, BNL/PNL Study Concludes

With the first anniversary today of the end of the Persian Gulf War comes more good news: Unlike the environment of the Gulf region, the global climate is not a casualty of the Kuwaiti oil-well fires that were set by retreating Iraqi troops.

"The oil-fire plume was confined to the bottom layer of the atmosphere and removed by wet-deposition processes — which may sound odd for a plume that originated in a desert region," explains BNL Chemist Peter Daum, of the Environmental Chemistry Division of the Department of Applied Science (DAS). "Because of the relatively prompt removal of pollutants from the atmosphere, there are no long-term, global climate effects due to the oil-well fires."

This conclusion was drawn by Daum and his six collaborators from Battelle Pacific Northwest Laboratories (PNL), following their analysis of samples gathered during 12 research flights last summer into the oil-fire plume over Saudi Arabia. Their research was supported by the Office of Health and Environmental Research of the U.S. Department of Energy.

According to Daum and his colleagues, the wet deposition of the chemicals and particulate matter released by the desert oil fires actually took place in the form of rain over the Indian Ocean.

The dispersed plume was first incorporated into clouds south of the Persian Gulf, in the Gulf of Oman. Trade winds then blew these clouds southeast towards the equator and the intertropic convergence zone that divides the trades of the Northern and Southern hemispheres. Once across the Arabian Sea, the oil-fire plume remains were rained down into the Indian Ocean during thunderstorms.

Environmental Damage

When the Gulf War fighting began on January 17, 1991, few, if any, could predict that the war's end on February 28 would bring the environmental damage caused by the Iraqis during that last month. In total, the Iraqis damaged 749 of Kuwait's 940 oil-producing wells, including 650 that were set ablaze.

At the peak of destruction, about 1.5 to 3 million barrels a day of oil burned, dumping carbon soot, carbon dioxide, nitrogen oxides and sulfur dioxide into the air. Costing $2.2 billion and seven lives, it took nearly 10,000 workers from 34 countries until last November 6 to cap the last well.

While the workers fought the fires on the ground, scientists were flying through the smoke above to characterize the source plume. To determine how quickly the smoke components were being transported in the atmosphere relative to how rapidly they were being removed from it, Daum and company chose to fly through the far field plume as it drifted across Saudi Arabia.

Cultural Expedition

Daum's journey began last July 24, when he left Long Island for Manama, the capital of Bahrain and chief port of this small, island emirate in the Persian Gulf about 300 miles south of Kuwait. Until Daum returned last August 22, his was not only a scientific expedition, but a cultural one as well.

On the tarmac in Manama, Bahrain, BNL's Peter Daum (right) stands before Battelle Pacific Northwest Laboratories' (PNL) Grumman G-1 aircraft with some of his colleagues from PNL.

"Because Bahrainain oil reserves are getting low, Bahrain is diversifying its economy," explains Daum. "So, as part of this effort, Manama is trying to become the place for Westerners to conduct business in the Gulf. By opening itself up to the West, Bahrain is a much more liberal country than others in the region and has all the conveniences of home."

Before observing the country's Westernization, Daum could not help but notice the "black cloud" hanging over the country the moment he stepped off the plane.

"Besides a huge amount of dust from all the sand and some industrial activity, the oil-fire smoke was visible in the air as a persistent haze and high cirrus-like clouds, which resulted in the most spectacular red sunsets," recalls Daum. "The plume did reduce the sunshine enough so that you could sit outside without feeling like you were frying in the 100-degree heat."

In addition to causing a 10-degree reduction in temperature and the

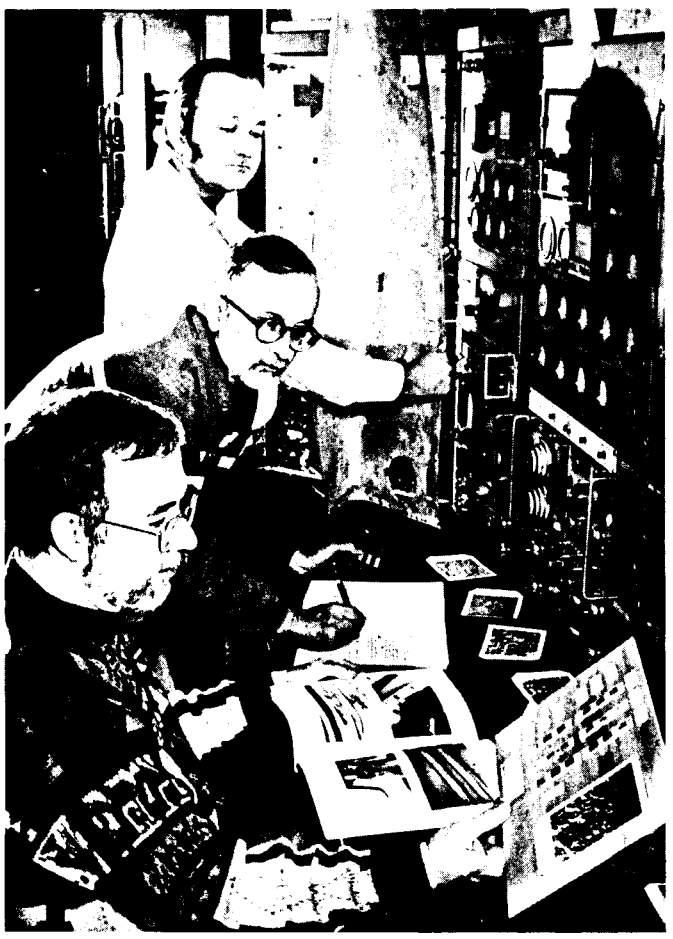
(continued on page 2)

Westinghouse-Built SSC Magnet Tested Successfully at BNL

Employees of the Westinghouse Electric Corporation have assembled their first full-size prototype magnet for the Superconducting Super Collider (SSC) — a 15-meter-long-dipole that was successfully operated and tested at BNL on Monday, February 10. As tests in the Magnet Division of the Accelerator Development Department (ADD) showed, the magnet exhibited excellent performance with a comfortable operating margin.

This magnet is the third of seven dipoles scheduled to be built and tested at BNL during the current fiscal year. The first two were built by Magnet Division staff as part of BNL's collaboration with Fermi National Accelerator Laboratory, Lawrence Berkeley Laboratory and the SSC Laboratory in Dallas. As part of a technology transfer effort, BNLers have been instructing Westinghouse personnel, who are building the last five of these magnets at Brookhaven.

These dipoles are preproduction prototypes for the eventual 8,600 units that will bend beams of high energy particles around the SSC's 87-kilometer-(54-mile)-in-circumference tunnel. Along with General Dynamics Corporation, Westinghouse is one of two companies serving as industrial partners with the SSC Laboratory to complete magnet development and then produce them, beginning in 1994.



At the console of the Research Van de Graaff, (from top) Robert Mills and Keith Jones, both of the Department of Applied Science, and Richard Maldonado, Basic Aircraft Research Corrosion Facility, compare test results from a corroded section of light-aircraft wing with test specimens obtained from aircraft in different regions of the country.

Photo by Roger Stoutenburgh

First CRADA Signed at Brookhaven

Brookhaven's first Cooperative Research and Development Agreement (CRADA) was signed recently with Basic Aircraft Research Corrosion Facility (BAR), a small Long Island-based firm.

According to Margaret Bogosian, Deputy Manager of the Office of Technology Transfer, a CRADA is essentially an agreement between a federal laboratory and a non-federal party, under which both parties can provide personnel, services, facilities and/or equipment toward the conduct of specified research or development efforts.

"CRADAs require exchange of research results between parties, to encourage technology transfer," says Bogosian.

The principal BNL researcher involved in the new CRADA is Keith Jones, Department of Applied Science. He and several other BNL staffers will be working closely with Richard Maldonado of BAR, primarily in research related to aircraft corrosion.

According to Maldonado, as the U.S. fleet of commercial and general aviation aircraft ages, aircraft corrosion will become a problem of ever greater significance because of safety and economic concerns.

The BNL/BAR project is aimed at developing corrosion test methods, as well as new materials that can retard or prevent corrosion. The work will involve both basic research and field testing, which will be done in coordination with the aircraft industry and with the Federal Aviation Agency through BAR.

The collaboration will give BAR access to BNL staff who are able to apply different research techniques to corrosion problems. These techniques may be drawn from various fields, thus taking advantage of the interdisciplinary team approach for which BNL is well-known. At the same time, BNL scientists working with the company will gain experience that may lead to new directions in basic research related to the mechanism of corrosion and its prevention.

"A key component of this CRADA is the 3.5-million-volt Research Van

(continued on page 3)

Leaving the Lab — After 35 Years or More

The Bulletin salutes employees who are retiring with 35 or more years of Laboratory service.

The second time the word atomic made an impression upon Murray Klein was about three years after the atomic bomb was dropped, after his Navy discharge and following his graduation from the New York Technical Institute with an associate's degree in industrial electronics.

On August 30, 1948, Ray Klein, as he is known to his friends, began work at Brookhaven, as the second technician hired to work on the Brookhaven Graphite Research Reactor (BGRR) — then under construction as the first atomic reactor designed for peacetime research use.

Today, Reactor Maintenance Supervisor Ray Klein is retiring as the most senior person in the Reactor Division, after 43 years of service to that division and its Instrument Group. Over the years, Klein has been very impressed with the changes that the Lab and its reactors have under gone, and with the fact that, in one sense, they have stayed the same — dedicated to peaceful use of the atom.

Since his first day at BNL, Klein dedicated himself to maintenance, repair and calibration of instruments that monitor, control, start up and shut down BNL's research reactors, both past and present — the BGRR;

Roger Stoutenburgh

Ray Klein

its successor, the High Flux Beam Reactor; and the Brookhaven Medical Research Reactor.

"Instruments have minds of their own at times," muses Klein. "Although manufacturers provide training, manuals and helpful hints, only hands-on experience with each instrument will suffice in mastering it."

Over the years, the instrument that continued to provide Klein with the most challenge is a reactor's automatic power regulator. It moves a control rod in or out to keep a reactor's power at a steady state "so we can provide a constant neutron flux and our scientists don't get mad at us," explains Klein. "Because of its complexity, having all kinds of circuits, it can be quite obstinate, unless you know how it works and how to deal with it if it doesn't."

To pass on his 43 years of hands-on experience and knowledge of technical advances, Klein most recently has been training his group's new technicians, as well as working with new HFBR reactor operators.

"I love to hand down my knowledge to these 'kids,' who are mostly fresh off of nuclear submarines, because they are this Lab's future and I remember what it was like being new here," says Klein.

Never statisfied doing routine jobs, Klein preferred to solve "unique problems, which I could go home and think about." For instance, in 1954, Klein designed a simple instrument for starting up and shutting down the BGRR at a constant temperature rise or fall of 20°C per minute. Later, he was inspired by a retractable ballpoint pen in devising a radioactive cobalt-60 source holder that safely retracted the source automatically into a holder after it was used to test the fission-products monitor.

His interest in devising solutions for heretofore unsolved problems extended after work as well. For instance, he patented a positive displacement flowmeter for measuring the gasoline used in a power boat engine, after almost running out of gas in a fog and high seas with a BNL friend near Nantucket. Before Klein sold the rights to use the device, it was tested at the University of Pennsylvania to check the output of artifical heart pumps.

After climbing up the technician ranks with a series of six promotions, Klein was named Technical Supervisor in the late 70s and to his final postion in 1987.

When retired, Klein will return to the sea, in a twin-diesel power boat that he will cruise between Nantucket and Key West. When at home, Klein will have time to indulge in his twin passions: for playing the clarinet and Beethoven, and for turning out fine hardwood furniture in an eclectic range of styles.

"I have always been impressed with the character and expertise of the people working and doing research within my division," states Klein. "With scientists and support staff of this high caliber, it is no wonder that the U.S. is first in the world in scientific research. I am very proud to have contributed what I could to the Reactor Division, its reactors and researchers."

— Marsha Belford

Global Climate (cont'd)

second coolest summer this century, the plume reduced the amount of sunlight by one hour a day, decreased humidity, and degraded visibility.

In fact, "It was like going from day to night when we flew into the plume," reports Daum. "We had to turn on the lights inside the plane to see our instruments."

Vertical Profiles

Daum and his colleagues flew their missions in PNL's Grumman G-1 aircraft, which also arrived on July 25. While the airplane was being reequipped with its comprehensive array of scientific instruments to study the chemical and physical properties of the plume, final permission for the research flights over Saudi Arabia was being arranged through U.S. Embassy, Bahrainian and Saudi officials.

The first of the 12 research flights was made on July 31 (see map), and, every other day, the researchers flew the remaining missions, taking "vertical profile" samples of air as the plane flew the same path at altitudes from 1,000 to 20,000 feet above the desert.

"While it was very evident on satellite photos, the plume, though it was 20 miles wide by 2 miles high, was not easy to find as we flew over this most desolate part of the earth," adds Daum.

The plume was usually found below 10,000 feet, and it was never observed above 18,000 feet. With this finding, Daum and company were able to dispel the worst-case scenario that had been proposed for the fate of global atmosphere as a result of the oil fires: global cooling — which is also known as nuclear winter.

Not Enough Energy

Predicted to occur following the explosion of nuclear weapons, global cooling has been experienced worldwide following major volcanic eruptions. It results when debris is expelled high into the atmosphere, where it blocks significant amounts of solar energy from reaching the earth.

To have a global influence, however, an aerosol of dust, debris or smoke particles must first be propelled from its origin into the stratosphere, the atmospheric layer 30,000 to 50,000 feet above the earth's surface, where it can spread globally before being removed from the atmosphere.

Oil fires alone, as Daum and his colleagues concluded, did not provide enough energy to project their contents beyond the troposphere, which is the lowest layer of the earth's atmosphere.

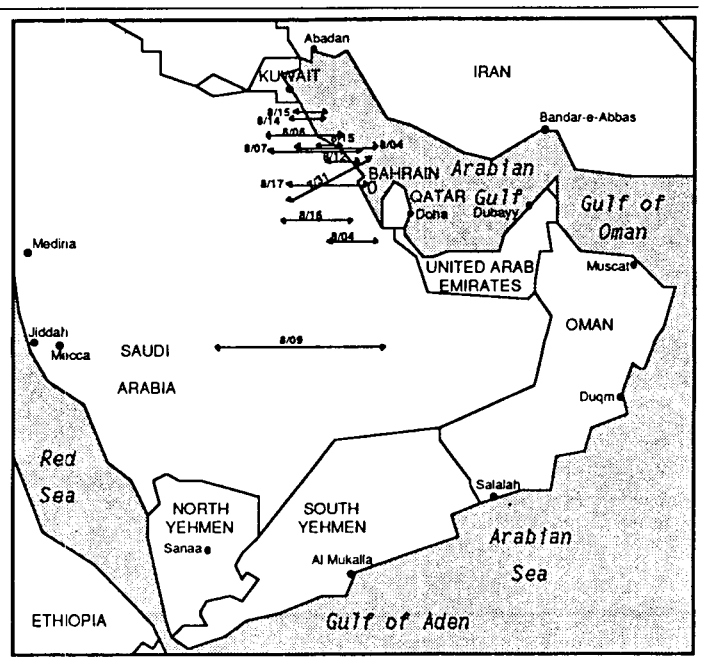
"With little vertical transport of the plume, its long-term effects will be felt primarily at the surface in Kuwait," concludes Daum.

No Smog or Acid Rain

In addition to ruling out the possibility of global cooling, the atmospheric researchers eliminated the likelihood of smog and acid rain resulting from the plume.

With the combined presence of the hydrocarbons and nitrogen oxide, the plume had "all the makings of a photochemical smog," commented Daum.

However, because the black cloud absorbed a significant fraction of the sunlight, the photochemical reaction rate was suppressed; So the ozone that was being produced was not significant. And, though sulfur dioxide, was present, it was not being rapidly oxidized into sulfuric acid of acid rain fame. — Marsha Belford



Flight tracks of Peter Daum's 12 scientific missions last summer, investigating the Kuwaiti oil-fire plume over Saudi Arabia. During each flight, Daum and his PNL colleagues sampled the air over the track at altitudes ranging from 1,000 to 20,000 feet above the desert.

Outreach Workshop
Talking to Your Significant Other

As psycholinguistic research has shown, females and males have distinctively different conversational styles, based upon gender and cultural conditioning. Women talk to signal intimacy and connection, while men use language to establish independence and status.

With such different ways of conversing, it is a wonder that women and men within significant relationships can talk to each other at all.

"Improving Relationships Through Effective Communication" will be the next topic discussed during an Outreach workshop offered by the Employee Assistance Program (EAP). On Tuesday, March 3, from noon to 1 p.m. in Room B, Berkner Hall, the speaker will be clincial psychologist Patricia Pitta.

As Pitta will explain, language differences can be spotted on girls' and boys' playgrounds. Pitta will explore the development of these differences by looking at genetics, families' communication styles, and society's sexual messages.

After contrasting women's and men's definitions of love, personal growth and maturity, Pitta will explore how these different word definitions come out in conversation, affecting partners' expectations and the relationship itself. Finally, she will discuss ways of translating what the opposite sex means and learning to talk the same language to improve communication and, hence, the relationship.

Patricia Pitta received her Ph.D. in clinical psychology from Fordham University in 1975. In private practice since 1978, she specializes in the treatment of anxiety and depression, marital and family conflict, and addictive behavior. As a faculty member of the Long Island Institute of Psychoanalysis, she teaches family therapy techniques.

To register for this workshop, return the bottom portion of the Outreach flyer by Monday, March 2, to EAP Staff Psychologist Dianne Polowczyk, Bldg. 490. For more information about EAP and its Outreach workshop series, call Ext. 4567.

Panel to Discuss DOE Review

March is Women's History Month, and, to kick off this year's observance, Brookhaven Women in Science (BWIS) will host a "Report on the Second DOE Review of Laboratory Programs for Women."

A five-woman delegation represented BNL at the review, which was held at Lawrence Livermore and Sandia National Laboratories, February 4-5. Headed by Victoria McLane, Department of Nuclear Energy, the BNL delegation included Carol Creutz, Chemistry Department; Susan Eng, Computing & Communications Division; Louise Hanson, Department of Applied Science; and Frances Ligon, Office of Equal Opportunity.

The program's participants were charged with recommending how DOE and its laboratories can work to become model employers, and be more actively and effectively engaged in outreach efforts targeting women.

The review attendees will discuss the program in detail, on Thursday, March 5, at noon, in Room A, Berkner Hall. All are invited. Bring your lunch; coffee, tea and cookies will be served.

Pick a Student

Applications for two summer programs run by the Office of Educational Programs (OEP) will be available for review March 2-13, from 9 a.m. to 4:30 p.m., in the conference room of the Science Education Center, Bldg. 438.

The two programs are:

• **Summer Students** — The traditional summer program in which junior and senior undergraduates receive ten-week summer research appointments, June 8 to August 14. OEP pays the individual stipends of $200 per week and round-trip transportation. The sponsoring department pays for the student's housing at $77 per week.

• **Summer Interns** — This is the same as the Summer Student program except appointments are offered to students who have participated in prior U.S. Department of Energy High School Honors Programs at BNL. Generally, these students are finishing their college freshman year, but a few may be recent high school graduates. OEP pays all costs associated with these students — stipend, travel and housing.

A special effort is made to offer minority students summer research opportunities at BNL. If your student choice is a minority, you will substantively contribute to this effort. All requests for students must be submitted to Departmental Coordinators by Wednesday, March 18. For more information, call OEP, Ext. 4503.

Call for Voices

For an upcoming concert, the BNL Gospel Choir will rehearse on Monday evening, March 2, at 6 p.m., in Berkner Hall. The choir is open to BNL employees only, and new members are welcome. All those who plan to participate should contact April Donegain, Ext. 2459, before the end of the day today.

In Memoriam

Louis De Rosa, a former stores clerk in the Supply & Materiel Division who retired in July 1975, died on January 10. His 16 years at BNL began on September 16, 1959. De Rosa, who was 72 years old and a resident of Bellport, is survived by his wife Martha, daughter Joyce Balá, son Frank De Rosa of the Plant Engineering Division, and five grandchildren.

•

Willy H. Thatner, one of BNL's earliest employees, died on January 10, at the age of 85. He started at the Lab on March 22, 1947, and retired from the Plant Engineering & Planning Division almost 19 years later, as a leadman steamfitter A, in January 1968. Thatner had lived in Ridge, and he is survived by his son and daughter-in-law William and Patricia Thatner.

•

Charles F. Van Valkenburgh, who retired from his position as a heavy equipment mechanic operator in the Plant Engineering Division in May 1981, died on January 27, at the age of 73. Van Valkenburgh, who had come to BNL on December 9, 1963, was a resident of Patchogue. He is survived by his wife Dorothy, daughters Emily Babcock and Susan Needham; and son Robert Van Valkenburgh.

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Attn: Women Re-Entering School

If you're a woman who had to interrupt formal studies in the sciences, engineering or mathematics, but who is now back to the books, you may be eligible to win the Renate W. Chasman Scholarship for Women.

This one-time award of $1,000 is given annually by Brookhaven Women in Science to a woman who is currently enrolled or has been accepted in a degree program at an accredited institution. To be considered for the 1992 scholarship, you must be studying for 1991-92 at the junior or senior undergraduate level or first-year graduate level on a half-time or greater basis. You also must be a U.S. citizen or permanent resident alien who lives in Nassau or Suffolk County.

If you're the winner chosen by an independent committee, the award will be presented to you in August, and you will be expected to complete at least two consecutive school terms in good academic standing.

For application forms and more information, contact Harriet Martin, Ext. 7761. The deadline for applying is June 1.

First awarded in 1986, the scholarship honors the late Renate Chasman, a noted BNL nuclear physicist and accelerator theorist. She co-designed the Lab's National Synchrotron Light Source, and her work influenced the design of other synchrotrons around the world.

Volunteers Needed

Male volunteers, ages 20 to 60 and in good health, are needed to participate in brain and heart-imaging studies being conducted by BNL. A fee will be paid. For more information, call Naomi Pappas, Ext. 2694.

CRADA (cont'd)

de Graaff, which is used for different types of basic and applied research," says Jones. "For corrosion work, the machine's ion beams can be used for nuclear-reaction analysis of aircraft materials in ways not feasible with higher-energy ion beams or with photon beams." He says that the first BNL/BAR experiments at the Van de Graaff have already been performed, yielding promising results.

Adds Maldonado, "Today, not only can a research organization like BNL pride itself on advancing the frontiers of science, but the results of the basic research can be linked to application development by companies such as BAR." — Mona S. Rowe

Hospitality News

Tom Casey, a member of the Long Island Greenbelt Society, will be the guest speaker at the next Hospitality Committee get-together on Tuesday, March 3, at 9:30 a.m., in the Brookhaven Center. Casey will provide information on some of the hiking trails on Long Island.

Spouses of Lab employees and guests are welcome. Come and bring the children, as free baby-sitting will be provided. Refreshments will be served.

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

Service Awards

The following employees celebrated BNL service anniversaries during the month of February:

35 Years

Gordon T. Danby.....AGS
Harvey J. Lotko.....Accel. Dev.
Ralph G. Perry.....Instrum.
Meyer Steinberg.....Nuc. Energy

30 Years

Dean Campbell.....Accel. Dev.
Eena Mai Franz.....Nuc. Energy
Edward T. Grahn.....AGS
Austin R. Gwilt.....Accel. Dev.
James J. Hurst.....App. Science
Vincent Polywoda.....Saf. & Env. Prot.
Gen Shirane.....Physics

25 Years

Robert L. Marascia.....AGS
Arnold M. Peskin.....Comp. & Comm.
Carl E. Schwarz.....Nuc. Energy

20 Years

Jesse E. Becker.....AGS

10 Years

Joseph R. Jahelka.....Nuc. Energy
Donald S. Makowiecki.....Physics
Claire Zahra.....Plant Eng.

Equipment Demo

Lanier Worldwide Incorporated will show their products in Berkner Hall on Wednesday, March 4, from 11 a.m. to 2 p.m. Equipment on display will include voice products, facsimile systems, copy systems and presentation systems.

Software Demo

Structural Dynamics Research Corporation will present its Data Management & Control System on Thursday, March 5, at 2 p.m., in the CCD Seminar Room, Bldg. 515.

The software addresses several challenges faced by the Computing & Communications Division (CCD) due to the proliferation of engineering data. These include: data-sharing among the people and applications that CCD supports, controlling the process, and managing product information in the Lab's heterogeneous CAD/CAM environment.

For more information, call Ted Daniels, Ext. 5555.

Bowling

Red/Green League

T. Prach had a 232, A. Warkentien 223/213/616 scratch series, R. Wiseman 221, J. Muller 219, A. Sauerwald 213, P. Ouvrard 211, R. Larsen 205/203, R. Raynis 201, R. Eggert 200, N. Parrinello 200, S. Thompson 200.

White League

John McCarthy had a 220, Joe Ferrante 213, Craig Diaz 204, Sharon Smith 189, Gerri Riker 182, Ellie Adams 181, Phyllis Fewell 180.

Purple League

Maryellen Hubner had a 214, Phil Radusewicz 213, Jim Goode 205, Ray Raynis 205, Caryl MacDougall 197, Nancy Erickson 181.

Basketball

Week of February 17

Scram 57		Deep Six 34	
E. Gregory	13	J. Simms	11
T. Powers	10	P. Brown	7
J. Duggan	9	M. Williams	4
J. Rank	9	C. Saxton	4
J. Skonieczny	8	M. O'Connor	3
P. Bergh	8	R. Hart	3
		S. Olsewski	2

3-point shots: M. Williams

X-Men 72		Trailblazers 71	
J. Hopson	18	T. Buck	20
E. Meier	13	T. Mayo	16
G. Mack	12	C. Edwards	13
B. Gunther	10	R. Domenech	11
G. Smith	6	R. Garappolo	5
J. Garrison	6	S. Springston	2
E. Taylor	4	A. Ratti	2
R. Schuhmann	3	A. Jones	2

3-point shots: R. Domenech, R. Garappolo, J. Garrison (2), J. Hopson, T. Mayo (3), E. Meier, R. Schuhmann.

League standings as of February 20

Trailblazers	4-1	Scram	1-4
Runaways	3-1	Deep Six	0-5
X-Men	3-2		

Arrivals & Departures

Arrivals

Geeta A. Joshi-Tope.....App. Science
Roy H. Lebel.....Accel. Dev.
Tom T. Lee.....App. Science
Richard S. Rose.....NSLS

Departures

None

Broadway Bound

If you want the excitement of Manhattan — without the hassle of driving or taking the train. . .

If you've been dying to see *Phantom of the Opera* — but couldn't get tickets or were reluctant to buy them at $65 each . . .

Then, has BERA got a deal for you!

On Saturday, September 12, BERA will sponsor a full-day trip to New York City for BNL employees and their family members and friends. The cost of $125 per person includes:

• round-trip bus transportation.
• brief tour of the South Street Seaport and Soho.
• orchestra seat to matinee performance of the sellout Broadway show, *Phantom of the Opera.*
• full-course dinner at the famous Pen & Pencil Restaurant, with a varied menu and all taxes and tips prepaid.

Reservations are being taken at the BERA Sales Office in Berkner Hall, weekdays, 9 a.m. to 2 p.m. A $50 deposit to reserve theater tickets is due immediately, with the balance due by August 12. For more information, call M. Kay Dellimore, Ext. 2873, or Carolann Zebrowski, Ext. 3347.

Softball Captains

A Softball captains' meeting will be held on Wednesday, March 11, at noon, in Berkner Hall, Room B, during which preliminary rosters must be turned in. Anyone interested in forming a team or finding a team to play on may call Denise Miesell, Ext. 5873.

Archery Club

The Archery Club will hold its monthly meeting on Thursday, March 5, at noon, in the Physics seminar room lounge, Bldg. 510. New members are welcome. For information, call Bill Schoenig, Ext. 2377.

Volleyball

Standings as of February 20

Open League		League I	
Magnum	32-4	Upfagrabs	40-11
Phoenix	20-16	Network News	38-16
G-Team	20-16	Rude Dogs	33-18
Me and the Boys	18-18	Dinkers	31-20
Penetrating Vollies	10-26	Six Pack Attack	22-29
Leftovers	8-28	Setups	12-39
		Bumps & Sets	4-47
League II		**League III**	
Monday Night Live	30-3	Renegades	29-13
Net Wits	22-11	High Volley'em	26-13
Just Ups	19-14	Nutcrackers	27-15
Nuts & Bolts	16-14	Over the Top	27-15
Fossils	16-14	Interns	24-18
Night Court	17-16	Good Timers	18-21
Volley of the Dolls	11-19	Sourcerers	17-22
Upton Ups	8-25	Undertakers	6-30
Muffits	5-28	Silver Bullets	6-33

Cafeteria Menu

Luncheons

Monday, March 2
Soup: Split pea .80/1.10
Entree: Stir-fry beef & broccoli w/1 veg. 3.65
Fitness: Linguini w/marinara sauce 3.20
Entree: Chef's choice 3.20
Carvery: Hot pastrami sandwich 2.95
Grill: Teriyaki chicken club 2.85

Tuesday, March 3
Soup: Onion .80/1.10
Entree: Hunan beef over rice 3.65
Fitness: Spaghetti w/white clam sauce 3.20
Entree: Personal pizza 2.25
Carvery: Hot roast beef sandwich 2.95
Grill: Fish sandwich 2.85

Wednesday, March 4
Soup: Home-style turkey .80/1.10
Entree: Turkey divan 3.45
Fitness: Baked eggplant Parmesan 3.20
Entree: Chef's choice 3.20
Carvery: Baked Virginia ham sandwich 2.95
Grill: 3-cheese melt 2.85

Thursday, March 5
Soup: Cream of tomato .80/1.10
Entree: Sausage & peppers 3.20
Fitness: Beef burgundy over noodles 3.45
Entree: Chef's choice 3.20
Carvery: Hot corned beef sandwich 2.95
Grill: Philly cheese steak 2.95

Friday, March 6
Soup: Manhattan clam chowder .80/1.10
Fitness: Fresh baked fish w/1 veg. 3.45
Entree: Grilled New York shell steak 3.65
Entree: Chef's choice 3.20
Carvery: Hot turkey sandwich 2.95
Grill: Tuna melt w/French fries 2.85

Trip to U.S. Open

The BERA Tennis Committee has scheduled a repeat of its popular bus trip to the U.S. Open Tennis Championships at the National Tennis Center in Flushing, Queens.

On Tuesday, September 8, the bus will leave from the Lab's tennis-court parking lot at 8:30 a.m., and make one stop at the LIE Exit 63 Park & Ride. The bus will depart the National Tennis Center at 7 p.m.

The cost of the trip is $40 per person, which includes one $27 ticket for the day session and the round-trip bus fare. Paid BERA reservations are now being accepted in the BERA Sales Office, Berkner Hall. Sign up early, as there are only 49 seats available on the bus.

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.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside candidates.

LF 8060. BIOLOGY ASSOCIATE POSITION - Requires a BS in biochemistry, molecular biology, chemistry or related field, with course work in biochemistry and molecular biology. Previous experience in molecular biology and/or biophysical chemistry desirable. Responsibilities include participating in studies of DNA damage by ultraviolet light and other agents, and other biophysical studies of proteins and nucleic acids. Must be able to learn to use computers and computer-controlled analytical instruments. Some experiments will be performed at the NSLS and will require irregular hours. Biology Department.

DD 6605. P&GA SPECIALIST (term position) - Requires excellent WordPerfect 5.1 skills. Familiarity with scientific notation for preparation of technical documents containing mathematical equations highly desired. Knowledge of typesetting and good English skills helpful. Photography and Graphic Arts Division.

DD 0146. MASON (temporary position) - Performs a wide variety of cement and concrete work. Lays brick and blocks, and does grouting and finishing as required. Plant Engineering Division.

Motor Vehicles & Supplies

90 GEO STORM GSI - ac, stereo cass., alarm, sports pkg., $11,000 or assume loan. Roy, Ext. 7357.

88 VW FOX - 40k mi., 4-spd., p/b, p/s, ac, mint cond., asking $3,900. 588-3149.

88 FORD BRONCO 4x4 - 302, a/t, ac, full power, 57k mi., push bar, running boards, $10,000. Ken, Ext. 2350 or 732-2635.

88 NISSAN MAXIMA SE - sport pkg., 5-spd., white, p/w, p/seat, p/l, ac, cruise, sunroof, tilt, am/fm cass. Chris, Ext. 3292 or 286-1348.

88 FORD TEMPO - all-wd, loaded, clean, well maint., $4,800. E. Harris, Ext. 4095 or 475-8504.

88 FORD VAN - 12-pass., 35k mi., new tires, recently tuned, runs well, good cond., $8,000. Victor, Ext. 2395.

88 MAZDA SES TRUCK - 5-spd., am/fm cass., bed-liner, mint cond., $5,800. John, Ext. 7273.

87 BRONCO II - gray, p/s, p/b, ac, anti-lock brakes, excel. cond., asking $7,200. Dick, Ext. 4313 or 722-4094 after 6 p.m.

87 MUSTANG GT - 5-spd., dark blue/silver, ac, p/w, p/l, 58k mi., gar., orig. owner, $7,900. Rich, Ext. 2386.

87 YZ125 DIRT BIKE - new parts, great cond., hardly used, $1,000. Danny, Ext. 4988 or 286-8541.

86 FORD TAURUS LX - clean, keyless, p/s, p/b, Climate alloy wheels, 91k mi., $3,500. Kathy, Ext. 2223.

86 DODGE COLT E - 2-dr. h/b, 4-spd., m/t, 58k mi., new tires, perfect mech. cond., prof. cleaned & waxed, cream puff, $2,200. Ext. 7159.

86 FORD CARGO VAN E-350 - a/t, p/s, p/b, loaded, 74k mi., Kathy, 928-6387.

85 FORD ESCORT - 4-dr. h/b, white, a/t, 80k mi., needs exhaust, $750 or best offer. Vishwas, Ext. 3087.

85 FORD BRONCO II XLT - 113k mi., new clutch, sunroof, am/fm cass, good tires, runs well, must sell, asking $3,900. Kathy, Ext. 7105.

85 PONTIAC SUNBIRD - a/t, p/s, p/b, ac, sunroof, stereo, tilt, 75k mi., new brakes, etc., 35 mpg, avail. mid-Mar., $2,150. Richie, Ext. 2216 or 734-7342.

84 FORD ESCORT - s/w, new clutch & battery, 75k mi., runs well, little rust, $750 or best offer. Ext. 7897 or 331-0807.

84 VOLKSWAGEN JETTA - 5-spd., 4-dr., beige, am/fm cass., metic. maint., orig. owner. Ext. 3664 or 689-8090.

83 OLDS DELTA ROYALE - metallic brown, a/t, p/w, cruise, fully loaded, 87k mi., orig. owner, $1,700. Chan, Ext. 4059.

82 CHEVROLET CHEVETTE - 79k mi., a/t, ac, p/s, p/b, am/fm cass., new tires & brakes, looks good, runs well, $800 or best offer. Ext. 3057.

82 GMC PICKUP 2x4 - 8' bed, 6.2 diesel, two 20-gal. fuel tanks, 4-spd., m/t w/o.d. Pat, Ext. 2452 or 722-4706 eves.

82 VOLKSWAGEN RABBIT - h/b, runs well, good cond., $650. 878-1617.

80 PONTIAC TRANS AM - charcoal gray, p/s, p/b, T-top, low mileage, runs well, looks good, asking $2,200. Jeff, 286-1348 after 6 p.m.

77 FORD LTD II - 302 cu. in. eng., a/t, p/s, p/b, ac, new battery & brakes, runs well, $500. Frank, Ext. 7519, or Vita, 277-0464.

76 AMC HORNET - $200. Kathy, 744-2203.

73 JEEP PICKUP - w/cap, running, for parts, $500. Tom, Ext. 3965 or 325-5541.

72 TORINO - parts car, 429 eng., 850 Holly carb., Craigers, more, $650. Ext. 7121 or 399-2179.

64 CHEVY BISCAYNE - 2-dr., 6-cyl., many new parts, best offer. Dan, Ext. 7271.

AM/FM CAR RADIOS - two available for GM cars w/large face plates, $45 & $50. Walt, Ext. 7154.

CHEVY 454 BIG BLOCK - disassembled, new oversized cam, rings, bearings, gaskets, block cleaned & honed, $950. Ed, 661-9155.

TIRES - 2, GR78-14 radials, like new, all winter, $20/ea. Nancy or Joann, 584-5493 after 7 p.m.

MINI BIKE - new Tecumsh 5-h.p. motor, w/back brake, $250; Mongoose Decade, chrome 20", new Odyssey brake system, $150. Ext. 3457.

WHEELS - 4, slotted, for Ford pickup, need paint, $75. Kathy, Ext. 2223.

PARTS - rear seat for 1969 Mustang, black, R.E. headers & heads, 31x10.50 Laredo half-life tires, $100. Wayne C., Ext. 3084.

TIRES - 4, white wall, 195-14", less than 500 mi. on Pontiac rims, $100. 744-3421 after 5 p.m.

Boats & Marine Supplies

30' CHRIS CRAFT - 1959, T/350s FWC, FB, depth, Loran, VHF, $3,000 firm; 28' Carver T/289s FWC, etc., $12,000 neg. Harry, Ext. 7527 or 744-2715.

26' SEARAY SUNDANCER - 1984, cabin sleeps 6, stove, frig., head, hot shower, camper back, Loran, many extras, $21,000. 751-8133 after 6 p.m.

25' HOLIDAY FREESPIRIT - 1979, front bunkhouse sleeps 7, ac, full awning, new furnace, nice cond., asking $5,300. 981-1030.

24' SEARAY - flybridge, many extras, good cond., asking $6,000. 475-9643 or 289-1726.

17' BOAT - f/g, full canvas, new int., windshield, all access., plus galv. trailer, excel cond., 60-h.p. Evin., needs work, $1,000. 878-1617 after 6 p.m.

Furnishings & Appliances

AIR CONDITIONER - Westinghouse, window, 5,900 Btu, 115 volt, new cond., ask. $150. 929-4701.

CREDENZA - antique, early 1920s; 7-piece bedroom set, wall mirrors & curved dressers, early 1930s, must sell. 698-0654 after 4 p.m.

BOOKCASE - w/glass doors, cabinet, $60; wing chair, $85; 2 director's chairs, $15; contemp. sofa & chair, w/glass top end table, $175. 732-1389.

CHAIR - club, orange, modern, very comfortable, $40. Paul, Ext. 2961.

CORNER HUTCH - dark pine, enclosed glass top, excel. cond., asking $125. 473-8426.

COUCH BED - queen, like new, $250; 1962 Serro alum. trailer, small, $500; coffee table, solid oak, free. 281-6263.

DINING ROOM - contemp., dark wood table w/1 leaf, 6 chairs, china closet, buffet, 5-light chandelier, $350 firm. Ed, Ext. 4792 or 265-3731.

DRYER - Westinghouse, gas, $60. 689-9234.

LIVING ROOM SET - complete, $350; dining room set, $400; wall unit, $350. Jerry, 281-5667.

LIVING ROOM - sofa, loveseat, chair, 3 pine tables, 2 lamps, good cond., $500 neg. 588-3999.

MEAT SLICER - Hobart model 1612, ¼ h.p. Rich, Ext. 7129 or beeper 3003.

SOFA BED - queen, Colonial, w/dark pine, good cond., $300 neg. Rick, Ext. 3932 or 472-9789.

TABLE - glass top, 72"x42", marble base, $350 neg.; king-size water bed, base, liner, heater, complete, $100 neg. Don or Jackie, 744-2921.

Tools, Hosue & Garden

BARBEQUE - gas, w/tank, needs burner, $20. Chris, Ext. 2326.

FIREWOOD - seasoned, hardwood, split, deliverd, $110/cord, ½ cord avail. Glenn, 924-2035.

FLUORESCENT FIXTURES - three, 2-bulb, ceiling flash mount, $10/all. Victor, Ext. 2395.

LAWN MOWER - Snapper, rear bagger, $75. John, Ext. 4028.

UMBRELLA - patio crank-up, good cond., $15. Victor, Ext. 2395.

Sports, Hobbies & Pets

AIR HOCKEY TABLE - full size, AMF deluxe, orig. $475, ask. $250, local delivery. Walt, Ext. 7154.

BICYCLE - Colnago Master frame, 56cm, w/Dura Ace headset & BB, $400. Oscar, Ext. 3499.

BIKE - 20", boy's, freestyle rotor, caliper brakes, new tires, $50. Ext. 5080 or 751-1884.

CAMERA - Nimslo, 35mm, stereo, w/flash, new, $65. Paul, Ext. 2961.

FISH TANK - 20-gallon, stand, heater, air pump, filter, gravel, plants, rocks, $45. Roy, Ext. 7357.

HANG GLIDER - Quicksilver B, used once, best offer; 2 bar stools, 30" seat height, very sturdy, $60. 447-1417.

PIANO - Cable/Nelson, trad., w/bench, walnut color, v.g. cond., just tuned, $850. Ext. 5318.

RABBIT - Mini Rex, white & tan, black spots, w/cage, trained to sleep on back, loves running around house, $50. Kelly, 744-3069.

R/C HELICOPTER - Superior .61 engine, 8-channel FM radio, orig. $900, asking $550; crib w/mattress, $30. Nancy or Joann, 584-5493.

ROWING MACHINE - $30; Wurlitzer upright piano, $100. Frank, Ext. 4489 or 736-2575.

TREADMILL - folding, portable, $25; exercise bicycle, CCM, $25. Roy, Ext. 4600.

TREADMILL - Schwinn Cadence 10.1, $500; Schwinn bicycle, woman's World Tourist, $125. Jack, Ext. 7749.

UNDERWATER CAMERA - Nikonos II, completely refurbished by Nikon, $325. Carl, Ext. 4420.

WEIGHT-LIFTING BENCH - 1 w/leg-lift exerciser, $50; 1 w/o leg exerciser, $30. Victor, Ext. 2395.

Audio, Video & Computer

STEREO CASSETTE - Realistic, Clarinette 96, $50; Arelet power supply adapter, 120 Vac to 7.3 Vdc, $5. Pete, Ext. 4581 or 399-2813 after 5 p.m.

COMPUTER - Apple dual processor II+/CPM-80, dual drives, monitor, Epson NLQ FX-80 printer, software, $300 or best offer. Don, 744-2921.

COMPUTER - IBM Turbo-XT, 3 pieces, $285. Xue, Ext. 2846.

COMPUTER - Apple IIC, color monitor, Image Writer II printer, desk, software, $750. John, Ext. 7273.

GAME CONSOLES - 7600 Atari & Coleco, 31 game tapes, $20/all. Al, Ext. 2023.

STEREO SYSTEM - CD, equal., tuner, dual cass., turntable, $350; telephone answering machine, $40. Mike, Ext. 2050 or 266-1713 after 6 p.m.

TAPE DECK - Nakamichi RX-505, 3-head deck, like new, less than 50 hrs., orig. $1,300, sell for $700. Chris, Ext. 2326.

TAPE RECORDER - Sony reel-to-reel, stereo w/tape, $25 or best offer. Jack, Ext. 7749.

TV - 20", b&w, excel. cond. Khan, Ext. 3120.

TV - GE, 5", color, ac/dc, w/battery pack, used 2 mo., orig. $280, sell for $140. Jack, Ext. 4274.

Miscellaneous

ENCYCLOPEDIA - Britannica, full set, mint cond., never used, ask. $900 neg. Janet, 474-3958.

JACKET - Hein Gericke, motorcycle leather, size 42, also pants, size 32, like new. Richard, Ext. 7129 or beeper 3003.

MATERIAL - many pieces, most under 1 yard, perfect for applique, mostly children's patterns, $1/piece. Donna, 563-1940.

OPERA TICKETS - Met Opera, Sat. matinee, March 14, *Don Carlo*, Levine conductor, row K, center orchestra. Ext. 3922.

SUITCASE - $10; am-fm radio, $10; brass clothes rack, $10; wicker chair, $20; rocking chair, $25; candle lamp, $10. Kathy, 744-2203.

WEDDING GOWN - silk organza, new, size 10, orig. $600, sell for $300. 878-1617 after 6 p.m.

Free

DOG - Lab mix, male, 9-mo.-old, very friendly, housebroken, needs new home. Victor, Ext. 2395.

PUPPY - very special, 6-mo.-old, spayed, all shots, loves children, black/white, housebroken, needs good home. Ron, Ext. 2525, or 286-0353 eves.

Real Estate

Real Estate advertised for sale or rent is available without regard for the race, color, creed, sex or national origin of the applicant.

For Rent

BELLPORT - 1 bdrm., l/r, d/r, full kit., bath, beach & village privileges, cable, heat incl., no pets, $625/mo. + sec; also, business space, 2,000 sq. ft., will subdivide. 447-1417.

CORAM - own room in spacious house, $350/single or $550/huge master bdrm. w/priv. bath. Ext. 7887 or 331-0807.

E. PATCHOGUE - 1 bdrm., kit., l/r, bath, sep. ent., mature, single nonsmoker, no children, 1 mo. sec., refs., $500/mo. incl. util. Marilyn, 286-3508 after 6 p.m.

EASTPORT - townhouse, 3 bdrm., 2½ baths, gar., fp, skylights, tennis courts, wooded, no pets, $1,200/mo. (301)903-7684 days or (301)540-8507 eves.

FARMINGVILLE - apt., lr/bdrm. combo, full kit., bath, priv. ent. & drive, furn., cable, 10 min. to Lab, $550/all. Ext. 3160 or 289-5704 after 5 p.m.

MASTIC PARK - 1½-bdrm. apt., heat, city water, suitable working couple, $625/mo. + sec. & refs. 281-7844 eves.

MIDDLE ISLAND - share condo, master bdrm., walk-in closet, furn., pool, tennis, cable, $450/all. Ext. 3160 or 289-5704 after 5 p.m.

MIDDLE ISLAND - 4-yr.-old furn. condo, 2 bdrm., 1½ baths, l/r, d/r, clubhouse, $875/mo. 751-8351.

NORTH SHIRLEY - 2-bdrm. upstairs apt., eik, l/r, all utilities, 5-10 min. to Lab, full bath, $750/mo. 924-7849 after 5:30 p.m.

OLD MASTIC - small 2-bdrm. house, 1½ baths, w/2-rm. studio w/full bath, all appl., 2 fp, screened porch, wooded setting, near water, 20 min. to Lab, April 1, $880/mo. + util. Hans, Ext. 3737.

RIDGE - furn. studio apt., private, fenced-in yard, kitchen, bath, 5 min. to Lab., $490/mo. 744-8632.

RIDGE - immaculate, 2-bdrm. condo, w/d, dw, w/w, $750/mo. 878-6016 eves.

SHIRLEY/SOUTHAVEN - custom 3-bdrm. California ranch, 2 baths, stone fp, laundry rm., cathedral ceiling, 2-car gar., deck, fenced, landscaped, avail. June, $950/mo. + util. Keith, 924-5062.

SPEONK/WESTHAMPTON BEACH - 2 bdrm., 1½ baths, cac, patio, approx. 1,000 sq. ft., skylights, all appl., fully furn., 20 min. to Lab, $875/mo. + sec. Rich, Ext. 4834.

WADING RIVER - furn. 1-bdrm. basement apt. on beach, priv. ent., 15 min. to Lab, cable, $400/mo. incl. util. 929-8443.

WADING RIVER - cozy 4-rm. house, large shaded yard, near beach, avail. March 1. 437-2881.

YAPHANK - room, Colonial Woods condo, 5 min. to Lab, $300/mo., share util. Arlene, Ext. 2387.

KEY WEST, FL - April 18-25, condo, sleeps 2, on water, kitchenette, pool, private beach, gym, marina, water/sport rentals, walk to town, Tiki bar, fishing, snorkeling, $800. Ext. 7716 or 929-8741.

FLORIDA KEYS - Marathon area, convenient middle Keys location, 2 bdrm., 2 baths, kit., canal front w/dockage, priv. beach, weekly rentals at reasonable rates. 878-6296.

CLAREMONT, NH - 2-bdrm. condo, furn., kitchenware, VCR, phone, skiing, 25 mi. to Okemo, 8 mi. to Ascutney and Sunapee, $300/wk., $225/4-day wknd. Frank, Ext. 7749.

CATSKILLS, NY - 3-bdrm. chalet w/sleeping loft, fully furn., near Hunter & Windham Mts., skiing, hiking, etc. Kay, Ext. 4501, or Bea, Ext. 3642.

SALEM, NY - 3-bdrm. ski house, 2 baths, sleeps 6, near Bromley, Stratton, Mt. Snow, factory outlets, $250/Fri-Sun. Willy, 924-6724.

HILTON HEAD, SC - 2-bdrm. condo, sleeps 6, fully furn., 2 baths, tennis, beach, golf nearby, Jan.-March, $300/wk. Guy, Ext. 3147 or 689-5378.

For Sale

CALVERTON - 4-bdrm. ranch, 2 baths, den w/fp & skylights, ½ acre, taxes $3,000, ask. $170,000. John, 727-7794.

CORAM - N. of Rt. 83, 4-bdrm. contemp. Col., l/r, d/r, fam. rm., fp, fin. bsmt. w/nightclub, 2-car gar., ⅓ acre, $135,000. Ext. 7897 or 331-0807.

LAKE GROVE - 3-bdrm. hi-ranch, l/r, d/r, new eik, den, 1½ baths, 2-car gar., new carpets, remodeled bath, Andersen windows, vinyl siding, covered patio, igs, appl., $162,500. 588-6417.

MIDDLE ISLAND - Coventry Manor, 3-bdrm. townhouse, 2 baths, kit., l/r d/r, cac, 5 appl., pool, tennis, clubhouse, new carpet, more, ask. $95,000. Rosalie, Ext. 3160 or 289-5704 after 5 p.m.

N. SHIRLEY - 2-story, 3-4 bdrm., l/r, d/r, 2 baths, ½ bsmt., new appl., laundry rm., 2 decks + pool w/deck, ½ acre, near LIE, Lab, Longwood HS, $124,000. Kathey, 345-3778.

N. SHOREHAM - 3-bdrm. L-shaped ranch, d/r, sunken l/r, eik, oak floors, fin. bsmt., workroom, 2-car gar., ½ acre, igs, deeded beach rights, $179,900. Mike, Ext. 5972 or 744-4579.

RIDGE - 2-bdrm. condo, 1½ baths, new appl., move-in cond., 5 min. to Lab, w/w, new appl., low maint. $75,900. Rob, 924-2832.

ROCKY POINT - 2 bdrm., eik, encl. porch, bsmt., dead-end street, walk to stores, new OHWH, new elec. service, low taxes, $83,000. 821-0379.

ROCKY POINT - 3-bdrm. ranch, 5 yr. old, oak floors, 2 full baths, gar., bsmt., all appl., city water, fenced yard, excel., $130,000. Sue, 744-8065.

SAYVILLE - large 10-rm. house, 6 yrs. old, excel. cond., walk to town, LIRR, possible M/D floor plan, 25 min. drive to BNL. Jim, 589-1875.

SELDEN - 4-bdrm., 1½ baths, splanch Colonial, eik, l/r, d/r, fam. rm., fin. bsmt., gar., energy eff. windows, fenced-in yard, extended driveway, excel. cond., $128,500. 732-1389.

SHOREHAM - 3-4 bdrm. ranch, fieldstone exterior, low taxes, double-sided fp, eik, 2 baths, workshop w/storage, ac, gas heat, igs, parklike property, ask. $145,000. Ext. 2833.

SPEONK/WESTHAMPTON - 1987 Liberty mobile home, 2 bdrm., eik, 14'x60', 10'x'10' shed, family park, $36,000. Dave, Ext. 5460.

SPEONK/WESTHAMPTON - 2-bdrm. 1½ baths, cac, balcony, approx. 1,000 sq. ft., skylights, 20 min. to Lab, must sell $129,500. Rich, Ext. 4834.

WESTHAMPTON - 1-bdrm. condo, good cond., community pool, rent $650/mo. or sell for $95,000. Dick, Ext. 4313 or 722-4094 after 6 p.m.

YAPHANK - mint, 4-bdrm. country Cape, all renovated, full bsmt., bright interior, hardwood floors, ⅓ acre. Sheila, Ext. 3166 or 345-5625.

KISSIMEE, FL - time share, 10 min. from Disney, prime week, sacrifice at $4,800, leave message. Jenine, 399-6457.

WEST PALM BEACH, FL - Century Village, fully furn., 1 bdrm., 1 bath, screened porch, clubhouse, indoor & outdoor pools, golf, tennis, sailing, security system, $18,500. 286-8849.

Wanted

AMP - guitar, Fender Quad reverb, tube-type, for parts; projector, 8 mm, Argus Model 5500 or equiv. for parts, John or Phil, Ext. 3292 or 286-1348.

BABY-SITTER - for 2½ yr. old, prefer on-site, own trans., flex. hours, refs; swap toddler swing for child's seat for adult bicycle. Karen, Ext. 3181.

BLUE DASH LIGHT - for volunteer fireman, reasonable. Ann, Ext. 2992 or Tom, 821-1250 eves.

BOAT - 16'-19' with o/b, working condition, reasonable. 563-6680.

HOUSE TO BUY - newer 4-bdrm. Col., SWR SD, bsmt., gar., den, d/r, eik, low 200s; World Book encyc., reas. Ken, Ext. 7915, or Linda, 744-0722.

HOUSE TO RENT - 2-3 bdrm., south shore. Ext. 2073 or 472-6613 after 5 p.m.

HOUSEMATE - m/f, nonsmoker, furn./unfurn. bdrm., w/w, cable, phone, w/d, 15 min. to Lab, $350/mo. incl. all. Henry, Ext. 5110 or 399-6947.

LUGGAGE - large, firm, 29", lightweight. Khan, Ext. 3120.

MICROSCOPE - a microscope in a good working cond. Janko, Ext. 2707 or 821-6916.

OLD LIGHTING FIXTURES - outdoor type, for entryway, porches, etc. Ext. 4312 or 281-6498.

ROOMMATE - share house in Sound Beach, gar., bsmt., 15 min. from Lab, refs. 821-2875.

SKIERS - for bus trip to Windham, $40 includes lift & bus, last trip, send payment to Augie Hoffman, Bldg. 510C, Ext. 3884.

STUFFED ANIMAL - large Road Runner needed for Plymouth owner, good cond. Ann, Ext. 2992 or 821-1250.

In Appreciation

I have had a very rewarding 43-year association with BNL and the Reactor Division. The retirement party was great — I was very honored.

— Murray (Ray) Klein

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