BROOKHAVEN BULLETIN
Vol. 49 - No. 43 November 3, 1995
BROOKHAVEN NATIONAL LABORATORY

# BNL Instrument Helps Solve Mystery of Ocean Plants

In a dramatic experiment that turned a patch of ocean bright green, a group of oceanographers has confirmed a major hypothesis about the health of the world's oceans.

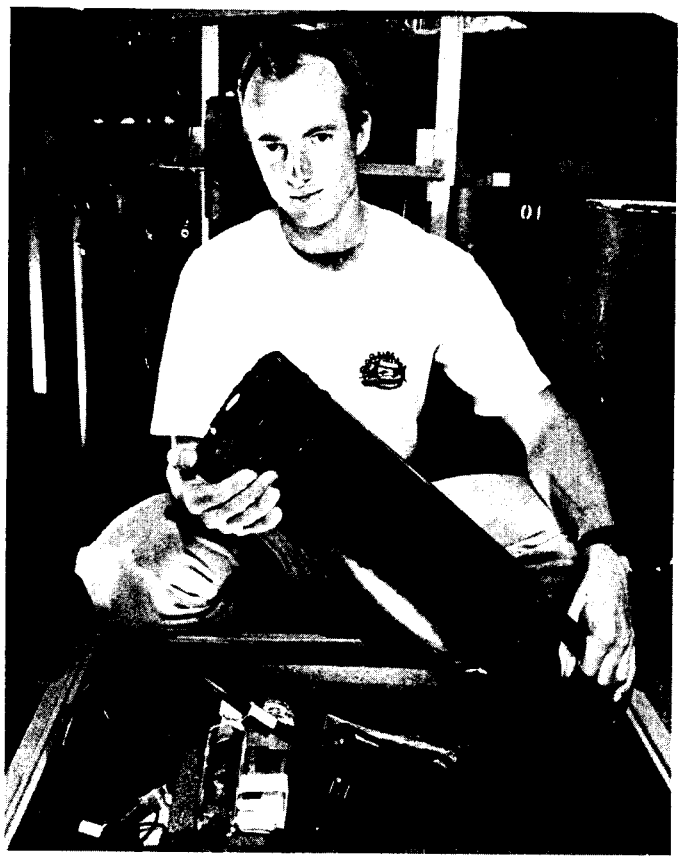
Last spring, after fertilizing an area of the Pacific Ocean near the Galapagos Islands with iron, the collaborators demonstrated definitively that a lack of iron can limit the growth of the phytoplankton, or tiny plants, that recycle much of the world's airborne carbon dioxide into oxygen and organic carbon.

And they did it with the help of a sophisticated instrument designed and built in BNL's Department of Applied Science (DAS) and operated by Michael Behrenfeld, a research associate in DAS.

### Data in a Flash

BNL's instrument, called a Fast Repetition Rate (FRR) Fluorometer, illuminates phytoplankton with precisely controlled bursts of intense light, then measures their photosynthetic response by detecting wasted photons given off in a process called fluorescence.

The FRR can precisely sense when the miniscule plants are photosynthesizing and at what rate, making it a valuable oceanographic instrument that has been used on many research cruises, including the precursor to the recent experiment.



Roger Stoutenburgh

**Mike Behrenfeld, Department of Applied Science, holds a fast repetition rate fluorometer of the type that he used on a recent cruise near the Galapagos Islands to measure phytoplankton activity before and after iron was added to the water.**

The Galapagos excursion was the first time, though, that the FRR fluorometer had been used in a submersible buggy, called an underwater oceanographic recorder, trailed in the water behind the research boat.

That improvement allowed Behrenfeld to take readings from phytoplankton in their natural habitat during the fertilization experiment, as well as make comparison measurements using a second fluorometer kept inside the boat with a constant seawater flow passing through it.

### Fertilizing the Ocean

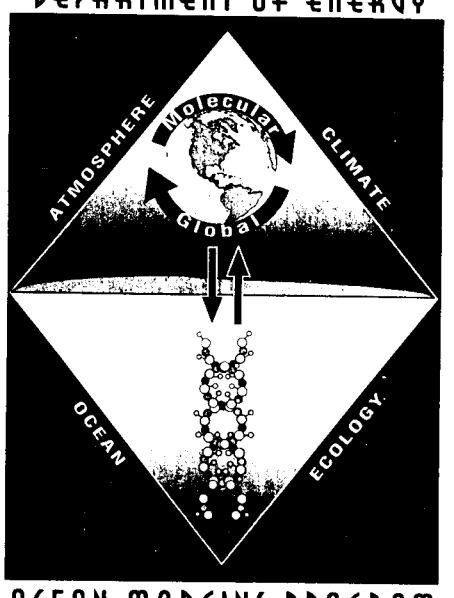
Called IRONEX II because it was the second such iron experiment to be carried out, the experiment was led by scientists from Moss Landing Marine Laboratories of California and included researchers from 13 institutions. It set out to determine whether iron is the missing rung on the ladder to phytoplankton productivity in parts of the ocean where other nutrients are abundant.

In late May and early June, two eight-square-kilometer patches of ocean were fertilized with iron, then monitored day and night by three dozen scientists and multiple instruments aboard the research vessel *R.V. Melville*. By the end of the experiment, both their recorded data and a visual inspection of the sea, which was tinted green with flourishing plankton, indicated that iron had indeed been the limiting factor.

Said Behrenfeld, "One of the impor-

(continued on page 2)

DEPARTMENT OF ENERGY




OCEAN MARGINS PROGRAM

# OASD Gears Up For 1996 Cruises

In addition to tackling phenomena such as phytoplankton productivity and brown tide (see related stories), the Oceanographic & Atmospheric Sciences Division of BNL's Department of Applied Science is getting ready for a spurt of research cruises, set to begin in early February 1996.

As part of the U.S. Department of Energy's Ocean Margins Program, BNL's oceanographers will study ecological conditions near Cape Hattaras, North Carolina, in 12 separate cruises.

A BNL-developed fluorometer will play an important role on each of those expeditions. The instrument continues to prove its worth as a real-time data-gathering device that can give snapshots of the health of populations of microscopic water plants. Already this year, BNL fluorometers have been used in cruises to study the Hudson River. — K.V.

# BNL, Suffolk Announce Joint L.I. Brown Tide Project

BNL and Suffolk County will each contribute $100,000 to kick off the Lab's major scientific investigation of brown tide, a poorly understood algae phenomenon that has plagued Long Island's waters and fishing economy for 10 years.

The project was announced by Suffolk Executive Robert Gaffney on October 20, at a Brown Tide Summit held in Ronkonkoma.

Gaffney described a three-part study in which Lab oceanographers will use BNL-designed remote sensing equipment to monitor conditions in the Peconic Bay, study the brown tide algae itself and survey the conditions surrounding past brown tides.

BNL will match Suffolk's funding through its Laboratory Directed Research & Development program. All experiments will be conducted by scientists in the Oceanographic & Atmospheric Sciences Division (OASD) of the Department of Applied Science (DAS).

"My office contacted Brookhaven Lab and asked if they would be willing to help us in analyzing the brown tide blooms, as well as looking at ways to prevent these blooms from happening in the future," said Gaffney in opening the summit. "To make a long story short, BNL has said that they will, indeed, help us out."

Gaffney continued, "This is exciting news. Brookhaven Lab's involvement, coupled with what we learn at today's summit, will hopefully make brown tide a thing of the past."

The BNL-Suffolk County project will be coordinated with a larger Peconic Bay brown tide study to be conducted by scientists from several institutions and funded by the Sea Grant Program of the National Oceanographic & Atmospheric Administration (NOAA), said Creighton Wirick, OASD head.

Wirick and other BNLers were among the invited participants in the Brown Tide Summit, which was sponsored by the State University of New York at Stony Brook, NOAA's New York Sea Grant program, and the Peconic Estuary Program of the Suffolk County Department of Health. At the two-day meeting, representatives from scientific, governmental and commercial institutions joined to plan a course of action for predicting and combating brown tides in local waters.

The tides, made of huge blooms of the algae *Aureococcus anophagefferens* with as many as a million cells per milliliter of water, are not yet fully understood, but their effects are murky brown waters that little light can penetrate, resulting in decimated fish and shellfish populations, and decreased fishing and tourism revenues.

Brown tides have dramatically affected the harvest of bay scallops from the Peconic Bay, killing as much as 90 percent of this year's scallop population and endangering the livelihood of the baymen who usually harvest them. — Kara Villamil

# Harbottle Wins Seaborg Medal

Senior Chemist Garman Harbottle, Chemistry Department, has won the Seaborg Medal, one of the most prestigious awards given by the American Nuclear Society.

Roger Stoutenburgh

**Garman Harbottle**

Presented only nine times in the 12 years since its inception in 1984, the Seaborg Medal honors excellence in research achievements that have been especially beneficial to the development of the peaceful uses of nuclear energy.

The engraved Seaborg Medal is awarded to individual members of the international scientific community for "excellence in technical achievements worthy of international recognition that have been sustained over a period of time."

Nominees "reflect a high degree of scientific acumen, imagination and unusual talents in scientific research, . . . [and] should have made significant contributions to the scientific basis for a wide variety of peaceful applications of nuclear technology." Also, they should be "held in high esteem by peers engaged in the important task of nuclear research."

Harbottle, who was nominated for the award by the Society for Archaeological Sciences, has had a wide-ranging, distinguished career in nuclear science used for peace — mainly, dating and identifying the origin of works of art and archaeology.

Using the naturally occurring radioisotope carbon-14, he has dated such historically significant items as a lump of 12th-century nonindigenous raw iron found in 1860 in the Canadian Arctic; traced out pre-Columbian trade routes in turquoise used in Mesoamerican religious jewelry from where it had been mined in the Ameri-

(continued on page 2)

# BNL Postpones Sewage Treatment Plant Upgrade Project

In response to public concerns, BNL has postponed a construction project to upgrade the Lab's sewage treatment plant.

In a statement issued last week, Edward Murphy, Deputy Manager of the Plant Engineering Division, which is overseeing the construction project, said, "We will reexamine the project. Although we consider the original project to be the most technically sound for improving our sewage treatment plant, Brookhaven will not proceed in [the] face of so much public concern about the project's impact on the environment."

Working with the New York State Department of Environmental Conservation (DEC), the Lab will explore other options for upgrading the plant. BNL will also expand its dialogue with elected officials, civic and environmental organizations and with baymen's associations, in order to hear their concerns and address their questions.

The sewage plant project (see Brookhaven Bulletin, September 1 and 15, 1995) had been objected to for a number of reasons, particularly by East End residents. Elected officials and the public were concerned about tritium in the groundwater, brown tide in the Peconic Bay, breast cancer on Long Island, and regulations promulgated by state and federal agencies.

Said Bob Casey, Head of the Safety & Environmental Protection Division, "Existing environmental data on groundwater at the sewage treatment plant indicate that the water meets the state drinking-water standard for chemicals, radionuclides and metals, with the exception of iron, which is commonly found in high concentrations in Long Island groundwater. Specifically, tritium levels in the groundwater at the sewage plant are well below the drinking water standard. In addition, there is no detectable contribution of tritium from Brookhaven to the Peconic River at Riverhead nor to the Peconic Bay."

As to brown tide and breast cancer, said Casey, the scientific community at large has not yet determined what causes either. "Certainly, brown tide is a serious problem up and down the Eastern seaboard, and breast cancer rates here on Long Island are higher than the average in the nation," he said. "But low-level radiation has never been scientifically linked to brown tide. And even the most conservative scientific estimates of risk suggest that an increase in breast-cancer incidence would not be expected from low-level radiation. Those who claim that the Lab causes brown tide and breast cancer are not supported by any credible, peer-reviewed research."

He added that radiation has been studied for nearly 100 years now. It is not a mysterious source of disease and is, in fact, better understood than almost any other cancer-causing agent to which people are exposed. Further, all man-made sources of radiation are regulated by laws passed by Congress. These regulations are based on recommendations of international and national science organizations.

As a final note on BNL policy, Laboratory Director Nicholas Samios said that about 20 percent of BNL's 3,300 employees are East End residents. Addressing these employees, Samios said, "We are concerned about your health and the health of all of our neighbors here in Suffolk County. Brookhaven operates under federal, state and county regulations, in an environmentally responsible manner."

Samios continued, "Our scientists and engineers, working with the state DEC, researched this upgrade from every angle, and we are all confident that our original plan would have caused no harm.

"In other words," Samios concluded, "we don't see this as a Hobson's choice. We believe the plan is a sound, viable choice for everyone. Whatever route we ultimately take to upgrade the sewage treatment plant, be assured that our first consideration will continue to be protecting people and the environment."

—Mona S. Rowe

## BNL Instrument (cont'd.)

tant things about this experiment is that it eliminated a number of other hypotheses about high-nutrient, low-chlorophyll phenomena," including one hypothesis that grazing by zooplankton, the primary consumers of phytoplankton, kept populations in check.

"Our instrument played an important role," he continued, "since it measures the physiological status of the phytoplankton cells," and showed that their activity was muted before the iron was added, then increased rapidly upon introduction of the missing nutrient.

Behrenfeld measured the variable fluorescence of the tiny phytoplankton, which indicates how efficiently they're photosynthesizing. As the photosynthetic reaction centers in each plankton's chloroplasts absorb photons, they "close" photochemically, making them unable to process any more light for the time being until they "open" again. The fluorometer's sensors are able to pick up the resulting fluctuations in fluorescence.

"The really exciting thing about the FRR is that measurements of variable fluorescence are one of the first parameters that will change," he explained. "Cells immediately ramped up their ability to utilize light with the addition of iron, whereas it takes a long time to see their response to iron in the form of new biomass," a parameter measured by other instruments.

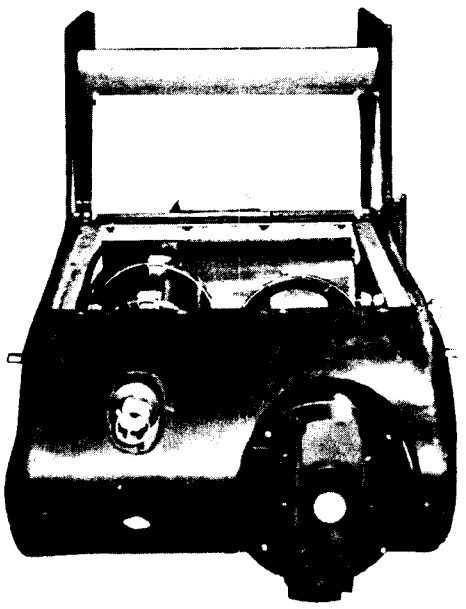
While no one involved with the project suggests that large-scale fertilization of the oceans be used to stimulate phytoplankton into increasing their carbon-dioxide-reducing activity, the results are important for understanding factors that control photosynthesis in the sea.

The FRR fluorometer's submersible housing was built in England's Plymouth Marine Laboratories, which has provided similar housings for other oceanographic instruments. BNL's was the first to combine the housing and an FRR fluorometer, designed and built in DAS's Oceanographic & Atmospheric Sciences Division.

The cylindrical fluorometer's front end was positioned so that it emerged out of the housing, allowing it to measure variable fluorescence in the water it traveled through. At depths down to more than 90 meters below the surface, the instrument provided a three-dimensional profile of changing phytoplankton activity in the iron-fertilized area.

Behrenfeld used both the submersible fluorometer and its bench-top counterpart. The latter analyzed a continuous flow of seawater pumped up from five meters down, as well as samples brought up from other depths, to determine the physiological status of phytoplankton in and out of the iron patch.

— Kara Villamil



**The fast repetition rate fluorometer in its submersible housing, which allowed it to travel dozens of meters below the surface to collect data.**

## Harbottle Wins Medal (cont'd.)

can Southwest to Central Mexico; and identified the geographical origins of celebrated sculptures created in France during the 9th through the 15th centuries.

The carbon-dating work was largely made possible by a revolutionary small-scale gas counter developed in the late 1970s by Harbottle with Edward Sayre and Raymond Stoenner, both now retired from BNL. The counter is so sensitive to carbon-14 that it measures samples hundreds of times smaller than would have been possible by conventional means.

Another important research instrument Harbottle has promoted, with BNL colleague James Cumming, was the Anti-Compton Well Spectrometer to measure gamma radiation. Used to measure natural radionuclides in soil, the spectrometer was readied for commercial production under a 1992 Cooperative Research and Development Agreement.

Also, as part of the BNL team that established definitively the half-life of silicon-32 as 172 (±4) years, Harbottle was instrumental in providing a third method of dating, making it possible to measure everything in nature containing this radioisotope of silicon, which, like carbon-14, occurs naturally in the earth and oceans.

Harbottle received his B.S. from the California Institute of Technology in 1944 and his Ph.D. from Columbi University in 1949, then joined th BNL Chemistry Department.

He was a Guggenheim Fellow at Cambridge University, England, 1957-58, and, in 1959, he taught radioisotope procedures at the American University in Beirut. Later, from 1965-67, he directed the Division of Research and Laboratories at the International Atomic Energy Agency in Vienna.

In 1983, with Edward Sayre, Harbottle was awarded the George Hevesy Medal for outstanding accomplishment in radioanalytical chemistry, and, in 1994, the Society for American Archaeology's Fryxell Medal for interdisciplinary research.

— Liz Seubert

# In Memoriam

*The following retirees passed away recently:*

**Una Randall**, who retired from the Central Shops Division (CSD) on December 31, 1980, died on July 22. She was 77 years old. She had started in the Lab's Employment Group on March 1, 1954, as a clerk B, transferring to CSD in January 1960 as a clerk A. At the time of her retirement, she was a senior secretary.

**Edward Dubaniewicz**, who retired from the Supply & Materiel Division (SMD) as a stores clerk on May 7, 1982, died on September 11. He was 78 years old. He had joined the Lab's then Plant Maintenance Division on January 22, 1962, as a janitor, but transferred to SMD on February 23, 1972, to become a warehouseman.

**George L. Turpin** died on September 17 at the age of 75. His BNL career began on January 6, 1969, when he joined the then Plant Engineering & Planning Division as a janitor. When he retired on April 15, 1983, he was a Lab custodian in the Plant Engineering Division.

**Arthur J. Gannon**, who retired from the Plant Engineering Division as a facilities office assistant on August 28, 1981, died on September 22. He was 77 years old. On July 12, 1965, he had started at the Lab in the Plant Maintenance Division as a janitor.

**Albert Schlafke**, whose 34 years at BNL ended with his retirement on January 31, 1988, died on October 12, at the age of 72. He joined the Lab on May 11, 1953, as an associate engineer with the Accelerator Project. When he retired, he was a mechanical engineer in the Accelerator Development Department. He is survived by his wife, BNL retiree Karin Karlstrom.

**Dominick Gracia**, who was a staff area supervisor in the Physics Department when he retired on October 31, 1973, died on October 15, at age 85. His BNL career began on May 4, 1955, when he joined the general shop B, which later became the Central Shops Division, as a machinist. He transferred to Physics in October 1972. He is survived by his wife; three sons, including BNL retiree Stephen Gracia; and four grandchildren.

# Arrivals & Departures

**Arrivals**

**None**

**Departures**

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

**Roger J. Kiely**.....Sfgrds. & Sec.
**Sylvia S. Springhorn**.....Biology

# New TIAA Account

On October 2, the TIAA Real Estate Account became a new investment and payout choice under both the AUI regular and supplemental retirement plans. This new account offers additional diversification, with a portfoli based on directly owned commercial real estate. Its objective is a favorable, long-term rate of return through rental income and capital appreciation.

The account will invest between 70 and 80 percent of its assets in office, industrial, retail and multifamily-residential properties. Most of the remainder will be kept in liquid investments, like money-market instruments, to provide for withdrawals, new acquisitions and other needs. The account will be managed by the experienced professionals who are also responsible for TIAA's general account, which currently holds a mortgage portfolio of over $20 billion and over $7 billion in directly owned real estate.

The Real Estate Account is a separate investment choice offered by TIAA, though it operates more like a CREF account: It is a variable annuity, with accumulations and returns that fluctuate with investment performance, and it will have the same basic transfer and withdrawal flexibilities as the CREF account. The account is subject to approval b state regulatory agencies.

For more information about the TIAA Real Estate Account, including charges and expenses, call 1 (800) 842-2733 for a prospectus. Read the prospectus carefully before investing or sending money.

**BNL Historian Robert Crease will give the 310th Brookhaven Lecture on Wednesday, November 15. His talk, "History of the Laboratory, Part III: The Goldhaber Years," will begin at 4 p.m. in Berkner Hall.**

## Festival of Light Tickets Available

Tickets are still available for Diwali, the festival of light, which will be celebrated by the BERA Indo-American Association (IAA) on Saturday, November 11, from 3 p.m. to 9 p.m. in Berkner Hall. The function will include dancing and instrumental and vocal music by local performers, followed by an authentic Indian dinner.

Advance tickets for this event cost $10 for adults and $5 for children, and may be purchased before November 7 from: Anand Saxena, Ext. 4844 or 689-9771; Piyush Joshi, Ext. 3847 or 281-1077; or Animesh Jain, Ext. 7329 or 474-0056. There is a 20 percent discount for IAA members. If available, tickets bought at the door will cost an additional $1 per person.

## Enjoy Radio City's Christmas Show

On Saturday, November 25, BERA will return to Radio City Music Hall, New York City, for the annual Christmas show.

The city agenda includes: arrival on or about 12:30 p.m.; three hours of free time on 5th Avenue for shopping, browsing, sightseeing and viewing the Christmas tree at Rockefeller Center; a 4:30 p.m., full-course dinner at La Veranda restaurant; and the 6:30 p.m. Christmas show.

The $99 per-person cost includes an orchestra seat for the show, as well as the dinner, round-trip motorcoach transportation to and from the Brookhaven Center, and all taxes and tips.

To reserve tickets, go to the BERA Sales Office, Berkner Hall, weekdays, 9 a.m.-1:30 p.m. Full payment is due immediately. For more information, call Andrea Dehler, Ext. 3347, or M. Kay Dellimore, Ext. 2873.

## Atlantic City Trip

The next BERA-sponsored, one-day trip to Atlantic City will be to Trump Castle Hotel and Casino on the marina, on Saturday, December 9. The initial cost will be $22, but the hotel-casino will give a $15 coin return.

The bus will leave the Brookhaven Center at 8 a.m., with an extra pickup at LIE Exit 63, if requested. After a seven-hour stay in Atlantic City, return will be about 11 p.m.

Buy tickets now at the BERA Sales Office in Berkner Hall, weekdays, 9 a.m. to 1:30 p.m. For more information, call Andrea Dehler, Ext. 3347, or Kay Dellimore, Ext. 2873.

BROOKHAVEN BULLETIN

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

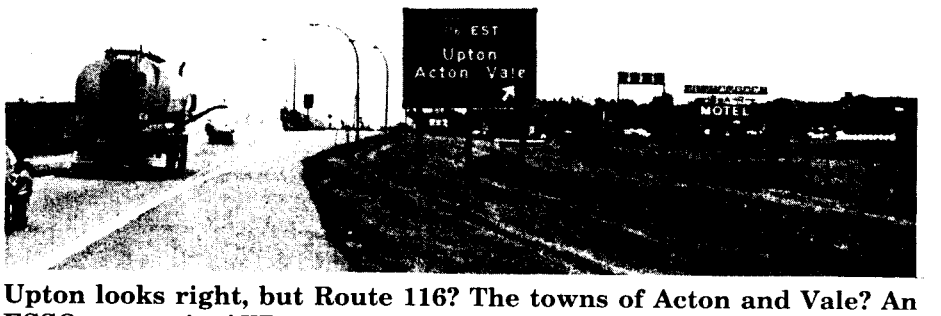
## Attn: Young Artists

If you're a child age 6 to 12 whose parent is a Lab employee, get out your crayons: The Bulletin wants your help. We're looking for original drawings of holiday scenes for possible publication in our issue of December 22.

Whether your drawing is about the winter season or about a special holiday, such as Christmas, Hanukkah or Kwanzaa, it should be no larger than 9 inches by 12 inches. Submit your artwork to the Brookhaven Bulletin, Bldg. 134 by Friday, December 1. Don't forget to put your name, your parent's name and your age on the back of the drawing.

Those whose work is published will receive a chocolate surprise.

## Things Were Looking Upton




**Upton looks right, but Route 116? The towns of Acton and Vale? An ESSO gas station! Where are we? We are on Route 20 in Canada, about two-thirds of the the way between Montreal and Quebec City. That's where Ady Hershcovitch, Alternating Gradient Synchrotron Department, was vacationing with his wife Kathy in July, when he saw this sign of home and snapped this photo.**

## Leading Indian Singer Here Tomorrow

Light-classical Indian vocal music will be featured at a concert sponsored by the BERA Indo-American Association tomorrow, November 4, at 7 p.m. Shrimati Shanti Hiranand, a leading singer from India, will give a recital in the Physics Department auditorium.

Taught by India's legendary vocalist Begum Akhtar, Hiranand is a premier artist who sings light-classical pieces known as *Ghazals, Thumri* and *Dadra*. She has given widely acclaimed concerts in Canada, Great Britain, Pakistan, Switzerland and the U.S., as well as in India.

Hiranand has been heard on All India Radio for 46 years, and she has also provided background music for the Indian movie, *Siddhartha*.

Tickets may be purchased at the door on the evening of the performance. The cost is $10 for adults and $5 for children age 12 and under.

For more information, call Vinod Mubayi, Ext. 2056, or Anand Saxena, Ext. 4844.

## Cut Medical, Day-Care Costs With Reimbursement Accounts

Although BNL offers comprehensive health plans, not all expenses are covered in full, such as eyeglasses, physical exams, deductibles, coinsurance and expenses above reasonable and customary limits. And, although on-site child care is available at the Lab, the cost of child care, as well as elder care, can quickly add up.

The Health Care and Dependent Day Care Reimbursement Accounts can help pay for these expenses through salary reduction. Employees can set aside before-tax dollars to pay for out-of-pocket health and dependent day-care expenses, so actual costs are lower because of the tax savings.

Enrollment in these accounts is going on through November 30. Eligible employees — those who work at least 20 hours a week — may set aside from $300 to $2,500 in the Health Care Account and/or $300 to $5,000 in the Dependent Day Care Account.

All employees who want to sign up for 1996 must complete new forms, even if currently enrolled for 1995. For enrollment forms or more information, contact Muriel Pfeiffer, Ext. 2877. Forms must be returned to the Human Resources Division, Bldg. 185, by November 30, for coverage effective January 1, 1996.

## Pick a Student

Applications for the spring 1996 Science and Engineering Research Semester (SERS) program will be available for review November 6-15, from 9 a.m. to 4:30 p.m., in the Science Education Center, Bldg. 438.

The SERS program is a national educational program sponsored by the U.S. Department of Energy (DOE) with seven participating national laboratories, including Brookhaven. Juniors and seniors from colleges and universities throughout the nation spend a 16-week semester, January 15 to May 3, doing scientific research. The students are supported by DOE, so individual host departments incur no cost.

A special effort is made to offer minority students research opportunities at BNL, so if your student choice is a minority, you will substantively contribute to this effort. Submit requests for students to Departmental Coordinators by Wednesday, November 15. For information, call the Office of Educational Programs, Ext. 4503.

## CCD Seminar

Visual Numerics representatives will put on a special pre-release demonstration of their graphical user interface PV-WAVE version 6.0, on Monday, November 6, 1-3 p.m., in the CCD seminar room, Bldg. 515. This will be of interest to those using IDL MatLab, in-house software or other COTS for visual data analysis (VDA) because they may compare their present software's ability with PV-WAVE's power, flexibility and ease of use.

For more information, contact Richard Horwitz, Ext. 4134, or e-mail horwitz@bnl.gov.

## Bowling

**Red and Green League**

A. Warkentien 256/223/655 scratch, J. Cuccia Jr. 254, E. Larsen 251/605 scratch, K. Koebel 246/635 scratch, K. Riker 246, J. Griffin 235/214/634 scratch, J. Mayeski 225, G. Weresnick 224/214/213/651 scratch, W. Powell 224, H. Dawson 222, J. LaBounty 220/212/606 scratch, E. Sperry III 217, B. Geib 211/203/600 scratch, K. Asselta 209/202/600 scratch, R. Eggert 203, J. Goode 203, R. Mulderig 202, A. Arnesen 201/201, R. Raynis 201.

**Purple & White League**

R. Wiseman 246/234/638 scratch, S. DiMaiuta 244, R. Raynis 235/185, A. Pinelli 221, R. Picinich, 213, E. Sperry IV 213, M. Guacci 211/205, A. Almasy 206, J. McCarthy 204, S. Logan 198, K. Riker 196, K. Botts 194/190, M. Musso 192/182/171, P. Manzella 191, J. Meier 180, K. Batchelor 181, J. Meier 180, M. Picinich 171.

## Retirement Counseling

A TIAA-CREF representative will visit the Lab on Tuesday and Wednesday, November 28 & 29, to answer BNL employees' questions regarding the TIAA-CREF retirement plan in one-on-one counseling sessions. Questions employees might have include:

- What are the differences between TIAA and CREF?
- How should I allocate my money between TIAA and CREF?
- What options and flexibilities do I have for my existing dollars with TIAA-CREF?
- What are my options for retirement?

A limited number of 45-minute appointments are available; to arrange one, call Joyce Wund, Human Resources Division, Ext. 7516.

## Let's Dance

### Care to Mambo & Tango?

Beginners are invited to learn to mambo and tango, in eight, one-hour lessons on Wednesday at 6:30 p.m., November 15 through January 10, excluding the Wednesday before Thanksgiving. Advanced beginners may continue with the cha-cha and fox trot at 7:30 p.m., and advanced waltz will be taught at 5:30 p.m.

Sponsored by the BNL Ballroom, Latin & Swing Dance Club and held in the North Ballroom of the Brookhaven Center, the classes are open to all BNL employees, retirees and on-site contractors, and their families and friends. If 40 people sign up for the class, then the cost is $25 per person for each eight-week class.

To register or for more information, contact: Marsha Belford, club president, Ext. 5053; Ron Ondrovic, vice president, Ext. 4553; or Rudy Alforque, vice president, Ext. 4733.

### Be Social Soon

The next Saturday Social sponsored by the BNL Dance Club will be held Saturday, November 18, from 8 p.m. to midnight in the North Ballroom, Brookhaven Center. All are invited to mambo, tango, waltz, etc. the night away to the music of club DJ Ralph Izzo. The suggested contribution of $1 per person goes into the club's music fund. For more information, contact Madeline Windsor, Ext. 5069.

## Volleyball

**Standings as of October 31**

| Open League | | League I | |
|---|---|---|---|
| Pass, Set & Crush | 9-0 | Bikers 'n Spikers | 8-1 |
| Monday Maulers | 9-3 | Rude Dogs | 5-1 |
| Far Side | 5-7 | Scared Hitless | 3-3 |
| Spikers | 2-7 | No Names | 1-5 |
| Bud Hitters | 2-10 | Underdogs | 1-8 |
| **League II** | | **League III** | |
| Spiked Jello | 7-2 | Silver Bullets | 5-1 |
| Jolly Vollies | 6-3 | Joy of Sets | 5-1 |
| Monday Nite Live | 6-3 | Upton Ups | 4-2 |
| Safe Sets | 6-3 | Harlem Knights | 3-3 |
| Fossils | 4-5 | High Volley'em | 2-4 |
| Nuts & Bolts | 4-5 | Just 4 Fun | 2-4 |
| Volley Folly | 2-7 | DO-DAT | 1-2 |
| Night Court | 1-8 | OER | 1-2 |
| | | New Comers | 1-5 |

# 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 Human Resources Division lists new placement notices. The purpose of these listings is, first, to give employees an opportunity to request consideration for themselves through Human Resources, 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.

Current job openings can also be accessed via the BNL Home Page on the World Wide Web. Outside users should open "http://www.bnl.gov/bnl.html", then select "Scientific Personnel Office" for scientific staff openings or "Employment Opportunities" or "BNL Human Resources Division" for all other vacancies.

**LABORATORY RECRUITMENT** - Opportunities for Laboratory employees.

MK 0683. SPECIAL ASSISTANT TO THE ASSOCIATE DIRECTOR - Reports to the Associate Director for Administration (ADA). Responsibilities include, but will not be limited to, the development and implementation of those policies and procedures under the jurisdiction of the ADA, and functioning as a key assistant to the ADA in carrying out specific assigned responsibilities. Will act as liaison between the ADA and organizational units reporting to the ADA. Performs studies, acts as liaison on special studies/projects, and provides or responds to requests for information from all levels within the Laboratory, as well as the DOE and other outside organizations. Will be given considerable latitude and responsibility in carrying out assigned functions, and, therefore, must be highly motivated, possess a high degree of initiative, professional judgement and independent thought. Requires a bachelor's/master's degree in an appropriate discipline, excellent analytical and communication skills, and technical competence in administrative functions. Extensive knowledge of Laboratory operations and BNL and DOE policies, procedures and practices highly desirable. Director's Office.

DD 9046. ADMINISTRATIVE POSITION - Requires a BS in business and/or significant BNL administrative experience. Will assist the Deputy Department Administrative Manager in a wide range of activities. Must be experienced and able to assume independent responsibilities in areas of budgeting, procurement, systems development and ad hoc reporting. Must be familiar with the IPAP and JCARS systems and proficient in the use of personal computers, with an advanced knowledge of Lotus 1-2-3. Extensive understanding of Laboratory policies and procedures is important, as well as excellent communications skills. Experience with grants and the labor cost-distribution system helpful. Chemistry Department.

DD 3981. SECRETARIAL POSITION - (term appointment) Requires an AAS in secretarial science or equivalent experience, excellent communication skills, a knowledge of Laboratory policies and procedures, and WordPerfect 6.1 proficiency. Will provide varied secretarial support to the Chair's Office and department administration, including IPAP travel, correspondence and maintaining records and department database. National Synchrotron Light Source Department.

## Motor Vehicles & Supplies

93 TOYOTA TERCEL - 2-dr., white, ac, am/fm, 13k mi., excel. cond., moving,l, $6,700. Brigita, Ext. 3426.

93 CHEVY S-10 PICKUP - Tahoe pkg., 5-spd., 2.8 liter V-6, 7k mi., $8,500. Joe, Ext. 2898.

91 MERCURY CAPRI - conv., p/s, p/b, am/fm Benzi, silver, 77k mi., well maint., $5,000. Rob, 476-1410.

90 FORD TAURUS - V-6, 3.0, 4-dr., a/t, ac, am/fm cass., 88k mi., $4,600. Ching Yang, Ext. 3663 or 474-3845.

89 CHEVY CORSICA - 4-dr., 4-cyl., ac, a/t, cruise, tilt, $2,300 reduced. Gabriel, Ext. 2707 or 341-1087.

89 FORD MARK III VAN - customized, seats 7, fully loaded, 46k mi., one owner, mint in/out, $10,000 neg. Joe, Ext. 2314.

89 HONDA CRX - 5-spd., silver, ac, 2-seater, excel., $4,200. John, Ext. 7671 or 765-1299.

88 MAZDA 2200 TRUCK - needs work, $500. Tina, 395-4521.

88 HYUNDAI EXCEL - 4-dr., new timing belt, no rust or dents, runs well, $900 neg. Chris, 399-7493.

88 QUAD - needs work, won't start, best offer over $125. Joann, 928-1089.

88 ISUZU PICKUP - 4wd, new 31"x11.5" tires & batt., some rust, needs minor work, asking $3,500. 737-0751 eves.

87 AUDI GT COUPE - ac, a/t, am/fm cass., cruise, excel. cond., Ext. 3053 or 286-0612.

87 TOYOTA COROLLA SR5 - 5-spd., ac, am/fm cass., 98k mi., good cond., avail Nov. 9, $2,800 neg. Alison, Ext. 4410.

87 TOYOTA CAMRY - ac, a/t, am/fm cass., cruise, 144k mi., 31 mpg, gar., excel., $3,700. Bill, 878-4356.

86 MUSTANG LX - 6-cyl., a/t, all power, ac, T-top, 733k mi., excel. in/out, $2,900. 395-5809 after 5 p.m.

86 TOYOTA CAMRY LE - orig. owner, ac, p/s, p/b, p/w, p/dl, alarm, good cond., 130k mi., $1,800. Rich, Ext. 7760 or 924-3307.

86 VW JETTA GLI - red, sunroof, ac, low mi., $2,200 neg. John, Ext. 5599 or 878-8514.

86 FIREBIRD - a/t, V-6, a/c, T-top, hwy. mi., runs well, $1,600. 878-1617 after 5:30 p.m.

85 SUBARU GL - 4-dr. sedan, 103k mi., 5-spd., radio, p/s, $1,300. Yang, 395-5604.

85 CHEVY BLAZER K-5 4x4 - many extras, runs well, $4,200 neg. Dennis, Ext. 4482.

84 BUICK SKYHAWK - a/t, am/fm cass., ac, runs like new, $1,950. Peter, Ext. 3099.

84 PONTIAC TRANS AM - black w/gold trim, 5-spd., 5.0 liter eng., $1,900 neg. Rich, 744-4816.

83 BUICK SKYHAWK - needs headgasket, good for parts, $100. Rich, Ext. 3354 or 589-9103.

82 TOYOTA PICKUP - plastic liner, camper top, $450; '81 Honda motorcycle, dual sport, 185cc, 3k mi., excel. cond., $750. Dave, Ext. 4978.

TRANSMISSION - Ford C-4, low mi., $50. John, Ext. 4028.

AIR FILTERS - AFL-52 Sears & Lee brand for Chrysler cars, $9/4; brakes, new, rear bonded for Chrysler, $5. Susan, Ext. 7647.

TIRES - Eagle GT+4(89H), P205/R55/16, good cond., $25 ea. Ext. 5873.

CARGO CARRIER - Sears Xcargo for car roof, 20 cu. ft. cap., $40. Ralph, Ext. 4171 or 878-1280 after 6 p.m.

PARTS - Ford, 302 alum. intake manifolds, headers, Mallory electronic distributor, '88 stock 5.0 roller motor, fuel inj., low mi. Wayne, Ext. 7238.

TIRES - 2 Goodyear P225/75R14, like new, $40 ea.; 1 Firestone P215/70R14, $20. 698-9274.

## Boats & Marine Supplies

28' CARVER MARINER - twin 305 Crusaders, 180 hrs., encl. bridge, sleeps 8, electronics, elec. anchor, swim platform, mint cond., $42,000. John, Ext. 7039.

16' STAR CRAFT - alum., new navy top, 50-h.p. Evinrude w/elec. start, trailer w/new elec. winch, asking $1,600. 924-6751.

14' BOAT - alum., 25-h.p. Johnson, trailer. Wayne, Ext. 2284.

## Furnishings & Appliances

AIR CONDITIONERS - Hotpoint, 1989, 5,000 Btu, $200; Friedrich, $200; both work well. Jason, Ext. 2417.

BED - twin, white Formica, platform w/1 drawer, $50. 286-9389.

BEDROOM - modern, dresser, glass mirror, 2 nightstands; family room wall unit, solid pine w/door bar, $200. Vasili, Ext. 2830.

BEDROOM - 7-pieces, needs repainting, $60; night tables, $10/ea; white triple dresser, $25; white chest, $20. mirror. 751-7023.

CABINETS - 2-drawer file, $10; 2 Steelmaster, 7-drawer, 52"x26"x21", microfiche files, $50/ea.; Nikon dissecting microscope, $60. Mott, Ext. 7108.

COUCH - Ethan Allen, good cond. 325-0447 after 6 p.m.

DINING ROOM - beautiful, maple, lighted hutch, large oval table w/matching chairs, leaves, pads. Bob, Ext. 3509 or 289-9533.

DINING TABLE - w/leaf, white, 4 chairs, $60. 924-5816.

DRESSER - dark pine, good cond., $5. Ext. 7225.

FOOD PROCESSOR - Cuisinart, excel. cond., $150. Alison, Ext. 4410.

FREEZER - upright, 5.h.p.; shredder, chipper; incubator; clam rake. 363-7032.

HUMIDIFIER - Kenmore Quiet Comfort, console, like new, excel. Tom, 736-6993 after 5:30 p.m.

PLANT STAND - TV table; stroller; redwood love seat, $10; kitchen table, 4 chairs, $125. Kathy, Ext. 744-2203.

REFRIGERATOR - Gibson, 16.4 cu. ft., frost-free, works well, $100. Steve, Ext. 7862.

REFRIGERATOR - GE, 19.8 cu. ft., ice through door, white, 4 yrs. old, 1 yr. contract, slight odor, $300. Cindy, 331-4487.

SOFA - oversized chair, ottoman, light blue, custom-made slipcovers in sapphire blue plaid, $300. Jeanie, 447-3935.

SOFA BED - full size, $60; table, 4'x3', $30; 2 chairs, $20; bookshelf, $25; coffee table, $15; you pick up. 924-1564.

TABLE - trestle, 2 leaves, 4 side chairs, 2 armchairs, all wood, $50. Fran, Ext. 3309.

TABLES - 2 end, 1 cocktail, oak w/smoky glass beveled tops, contemp., $275. Gisella, Ext. 2541.

WASHER - portable, attaches to sink, many cycles, $100. Cathy, Ext. 3484.

BEDROOM SET - dresser w/ mirror, chest, 2 nightstands, headboard, 1 yr. old, like new, orig $2,100, sell for $700. Mac, 924-2348.

BUNK BED - Sears, wooden, w/mattresses, dresser, must sell, Ext. 7520.

DINETTE - white china closet, $75; table top w/pedestal, 3" thick, medium oak, w/captain's chairs, $150. Mott, Ext. 7108.

DINNERWARE - Sango-Domino pattern, Avanti collection, service for 6, $10. Theresa, Ext. 2907.

END TABLES - 2, walnut, open w/non-mar imitation slate black top, $25 ea. Pete, Ext. 3297 or 821-9547.

FAN - Sears, 52", ceiling fan w/4 frosted-glass light kit incl., good cond., works fine, $20. Lloyd, Ext. 5225.

FREEZER - G.E. upright, 18 cu. ft., w/built-in lock, white, excel. cond., must sell, $300 neg. Ext. 5740 or 744-8386.

ENTERTAINMENT CENTER - oak, mint cond., purchased 3/93, $550 firm. Ext. 4938.

LOVE SEAT - & hide-a-bed couch set, light colored, good cond., $100. Bryce, Ext. 3668.

MATTRESS - twin, boxspring, bed frame, wooden bookshelf headboard, $75/all; dining table, Col., wood, w/2 leaves, hutch, excel., must sell. Ext. 7520.

REFRIGERATOR - $100; Kirby vacuum w/attachments, $500 firm; G.E. electric dryer, 1½ yr. old, $225; rowing machine, orig. $150, now $30. Tina, 395-4521.

SECTIONAL - 3-pc., brown velour, $600; love seat & chair, Danish w/teak, $300; Carrera marble-top table, $35; fp tools, $25. 727-7227.

SOFA - love seat, light blue, good cond., $300. 821-7879 eves.

SOFA - love seat, chair, l/r set, light brown, large & comfortable, good cond., $400/set. Sam, Ext. 5376.

WATER BED - queen, excel., $125 neg. Ed, Ext. 4080.

## Tools, House & Garden

PATIO - table, 90"x42", 6 chairs, umbrella, cushions, forest green, PVC, orig. $2,000, best offer. John, Ext. 7313 or 395-5922.

POOL PUMP - 1 h.p., 115V, excel,. cond., $25. Bart, Ext. 2005 or 924-6761.

SINK - kitchen, w/faucet, fits 32"x30" opening, excel. cond., $35. Bob, 821-0695.

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

SPREADER - Spyker, s/s, $20; maple couch, needs cushions, $15; manual typewriters, Corona, Smith, Olympa, $20/ea.; IBM PC Jrs., $25/ea. 261-2719.

TABLE SAW - Craftsman, 10' blade, old model, works well, many extras, must see, asking $250. John, Ext. 7313 or 395-5922.

TREES - Japanese maples, $10-$45+. 265-6542.

## Sports, Hobbies & Pets

DIRT BIKE BOOTS - AXO, used 3 times, size 10; dirt bike gloves; Scott goggles, all new, $125. Joe, Ext. 5340.

EXERCISE BIKE - good cond., $15. 924-3236.

EXERCISE BIKE - ProSport, good cond., $25. Joe, Ext. 7762.

EXERCISE BIKE - AMF Trim Ride, you pick up, $30. Susan, Ext. 7647.

EXERCYCLE - $50 neg., 2-burner elec. stove, $5; adult bike helmet, new, $15. Joe, Ext. 2898.

PIANO - Kranich & Bach, conso e, excel. cond., well maintained, $1,150; upright, vintage Extener, antique condition, $750. 751-7023.

ROWING MACHINE - Tunturi Executive 202, $50. Ext. 2707 or 341-1087.

STAR TREK COLLECTION - Mark, 727-3673.

SURFCASTING LURES - hand-crafted, wood, for stripers & blues. Larry, Ext. 2012.

## Audio, Video & Computer

COMPUTER - Amiga 500, good cond., great for games, $200. Joe, 924-4070.

COMPUTER GAME - Nintendo, w/delux joystick & Nas advantage controller, 18 games, like new, used 1 yr., orig. $600+, best offer. John, 395-5922.

COMPUTER GAME - Sega Genesis, sports, action games, 2 joysticks, power add-on adapter, $225. Chris, 399-7493.

MODEM - Zoom, 14.4, new, w/Winfax, $50. Cheryl, Ext. 2272.

PRINTER - Epson 570, single sheet feeder, carton tractor, feed paper, 24 pin, changeable fonts, $235. Albert, 727-4884.

PRINTER - Okidata Laser OL400, emulates HP2, w/extra toner cartridge, $200. Alan, Ext. 7432.

TV - console, 21", Zenith, color, asking $100. 924-6751.

TV - RCA, color, 19", remote, good cond., asking $90, stereo cabinet, wheeled, glass door, black, $25. Joe, 7762.

TV - Sanyo, color, 19", $45; monochrome monitor, cheap, make offer. Tom, Ext. 7899.

TV - Magnavox, 12", b&w, like new, $25; 13" color TV, w/remote, $50. Bart, Ext. 2005 or 924-6761.

VIDEO ACCELERATORS - Trident, 2 MB, instantly change to any resolution w/o rebooting, VL-36, $75; VL-46, $100. Cheryl, Ext. 2272 or 732-7634.

CAMERA - Canon F-1, Kalimar 28-35 F3.5, Rokinon 80-200 F4.5, 2x teleconverter, Vivitar 285 zoom, Thyristor flash + assorted filters. Lloyd, Ext. 5225.

CHIPS - Simm, 1 MB RAM, 1X32, 60ns, $120 for 4. Tom, Ext. 5258.

COMPUTER - Mac IIsi 5/80 + math coprocessor, B&W HP deskwriter inkjet printer, $599, Apple LaserWriter I, $149. Ballard, Ext. 2695/7906.

COMPUTER - Apple II GS, 1 MB RAM 3½" & 5½" drives, 11" color monitor, ImageWriter 2-color printer & software, $500. Fred, Ext. 5032.

RECORDS - LP collection of about 25, make offer. V. Mott, Ext. 7108.

SPEAKERS - E.P.I., 9"x11"x21", pair, $25. Ext. 4609 or 472-0510.

STEREO - JVC receiver w/EQ & remote, JVC surround amplifier, Fisher dual cassette, cost $600, $300 takes all. Chuck, 821-1525.

TV - color, Emerson 13", $30. Alison , Ext. 4410.

TV - Panasonic 20" RC, stereo, cc, $150; VCR, Goldstar RC, $80; portable dual cassette CD player, $50, 1 year. Yang, 395-5604.

VIDEO CARD - SVGA, 1 MB RAM, Tseng 4000 chip set, ISA buss, $40. Rich, Ext. 2216 or 734-7342.

WORD PROCESSOR - Adler, model SE1035/C w/manual, $125. 727-7227.

## Miscellaneous

BABY'S ITEMS - large wooden port-a-crib; wicker bassinet; baby's swing; waste basket; baby's bath. Ext. 3509 or 289-9533.

GIRL'S DRESSES - dress, some lace, velvet, satin, size 14 to junior medium, $12/ea.; girl's boots, $7. 751-7023.

BABY MONITOR - Mattel, Disney nursery monitor, never opened, portable, ac/dc, 100' range, $25. Vinny, Ext. 4706.

## Free

AIR CONDITIONER - works. Tina, 395-4521.

INSULATION - Styrofoam, 2" thick, 2'x8' ridged sheets for foundation or crawl space, 26 pcs., white, leftover. Joe, 281-7683.

KITTENS - 4 friendly, healthy, feral, lg. kittens/young cats, need homes, 3 tiger, 1 black. Alison, Ext. 4410, Kathy, Ext. 3514.

## Yard & Garage Sales

CENTER MORICHES - 11/4-5, 9 a.m.-4 p.m., kit., electronics, furn., more, 21 Laura Lee Dr.

## Car Pools

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

## Wanted

ANTIQUE PRINCESS DRESSER - Lorraine, Ext. 5491.

BLOWER - gas-powered, for yard. 286-5403.

BRIDGE PLAYERS - for on-site, after-hours game, send e-mail to mms@bnl.gov or call. Morris, Ext. 4192.

HOUSEMATE - share 4-bdrm., 3-bath waterfront home, 10 mi. from Lab, $360/mo. + util. Sigi, Ext. 2175.

JAZZ - musicians & students for Mon. night jams on the north fork. Peter, Ext. 7657 or 298-9560.

LIGHT BOX - Wick Case, Ext. 7527.

OLD WRISTWATCHES - pocket watches, diamonds & jewelry. Bill, Ext.. 4034.

PICCOLO - for 12-yr.-old student, reasonable. Linda, Ext. 2466.

RABBIT HUTCH - good cond. Ext. 4299.

ROTOTILLER - gas-powered, mini-size. Harriet, Ext. 2800.

SCOOTER - Elite 80 needed for parts, nonrunning okay, reasonable. Karen, Ext. 2265.

TOOLS - old Stanley, woodworking, planes, levels, etc. Rich, Ext. 3354 or 589-9103.

WINDHAM SKI RENTAL - 12/27-1/1, please call again, we lost the numbers. 689-1877.

## 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.*

AUTO CUSTOMIZE - vinyl tops, headliners, convert. tops, sunroof installation, elec. sunroof repair, rugs, some mech. work, brakes. Rob, 395-4521.

AUTOMATIC LAWN SPRINKLERS - free est., prof. layouts, repairs, alterations, additions, spring turn-ons, winterizations, prompt, courteous service. 928-7042.

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

BUSINESS CARDS - raised lettering, many colors, BNL cards avail., flyers, letterheads & envelops. Mike, 878-3480.

CAKES - custom-designed, cookies, pies, and much more, for any occasion. Johanna, 924-7922.

CARPENTER - decks, siding, trim, repairs of all kind within trade, punch list welcomed, disc. for Lab employees. Chris, 399-7493.

CARPENTRY - quality work at reasonable cost, doors, trim, closets, siding, decks, etc., neat, reliable & professional. Gerry, 981-4518.

CHILD CARE - in my Center Moriches home, follow Lab calendar/hours, fenced yard/playmates. Lydia, 878-4297.

GUTTERS CLEANED - gutter-protection system installed, keeps gutters clean and flowing, guaranteed, free estimates, Lab disc. Henry, 727-7227.

HOME CARE - certified nurse's aid, practical nurse, priv. duty, flexible hours, refs. Dawn, 473-6432.

HOME IMPROVEMENTS - extensions, dormers, decks, kitchens, baths, roofing, siding, painted finishes, lic. & ins., refs. Chris, 286-1348.

HOME IMPROVEMENTS - carpentry, drywall, spackling, painting, plumbing, ceramic tile, electrical, free est., Lab disc. Don, 929-6571 after 5:30 p.m.

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

KARATE - character devel., self defense, var. martial arts styles, children's classes, boxing program, BNL disc., rape-awareness program. Richard, 289-2939.

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

LANDSCAPING - free est., grass cut, cleanups, lawn services, etc. Jesus, 286-5403.

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

PAINTING - paper hanging; ext., int., free est., quality work, license & insured. Bob, 331-4336.

PAINTING - int./ext., tape, spackle, wallpaper, powerwash, stain, natural wood finishes, Sheetrock, ins., refs. James, 399-4912.

PHOTOGRAPHER - weddings, now booking for 1996. Rick, 874-4017 eves.

PIANO LESSONS - all levels, SWR area, great Christmas present. Patti, 929-8277.

PIANO LESSONS - beginners welcome, all ages, patiently taught, near Lab. 924-5549.

PIANO TUNING - and repair, reasonable. 298-9560.

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

POWER WASHING - decks, houses, driveways, cedar shake restorations, free est., lic. & ins. Bob, 331-4336.

SHEETROCKING & SPACKLING - free est. Kevin, 567-6621.

SKINCARE & BEAUTY CONSULTANT - nail care, facials, men's line, body care, free first-time facials. Barbara Jean, 929-3235.

TOURS - personalized tours of Washington, DC, and places nearby (Baltimore, Annapolis, etc.) by knowledgeable, licensed tour guide. Tom, (202) 686-6214.

TRAINING - Windows 95, 3-hr. introductory session. Gina, 929-3649.

TREE WORK - 281-2746.

TUTOR - exp. math/physics tutor for high school & undergraduate, 2-yr. teaching assistant exp. Michelle, 632-2319.

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

WISHING WELL - for rent, bridal showers, engagements, baby showers, delivered, professionally built, 4' high, 30" long, 24" wide. Ora, 696-3436.

WOODEN TOYS - custom-made, decorations, ornaments & name, trains, shop for holidays now, Lab delivery. Pat, 924-3307.

## Lost & Found

LOST - terrier mix, female, in Shoreham area, had choker collar & leash on. Doreen, Ext. 2457.

LOST - black Lab, brown leather collar w/name, tags, Trooper, on Lab site. Fran, 744-2662 or 924-4770.

## In Appreciation

I thank all my friends who joined me for over 25 years of good times. I'll remember. — Pat Gilleeny

## Farewell Gatherings

RETIREMENT PARTY - for Ray Archbold, Randy Philips, Bob Mosley, Thurs., Nov. 9, 6:00 p.m., $20 per person, Bldg. 599, Firehouse. RSVP, Ext. 2351.

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Ads left out of this issue due to lack of space need not be resubmitted to appear in the next issue.