BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

RHIC Workshop Focuses on Experiments and Detectors

Physicists from several countries have been meeting at BNL this week to concoct plans for smashing heavy ion beams together at the Lab's newest proposed accelerator, the Relativistic Heavy Ion Collider (RHIC).

President Bush's proposed 1991 budget includes funds for RHIC construction, so work is expected to begin this October. But before then, the 160 physicists — 40 of them from BNL — attending the Fourth Workshop on Experiments and Detectors for the Relativistic Heavy Ion Collider are sketching out the kinds of experiments that will be conducted at RHIC and determining what kinds of detectors should be built to perform the measurements.

According to Thomas Ludlam, Associate Head of the RHIC Project and chairman of the organizing committee for the workshop, the RHIC tunnel will contain two opposing rings to accelerate heavy ion beams. Those beams will collide with each other at six beam-crossing areas in the 2.5-mile circumference ring.

With a combined energy of 200 billion electron volts for each nuclear particle, these collisions are expected to create a hot, dense plasma of quarks and gluons, the primordial subatomic particles that have never been directly observed by scientists.

This workshop is just one step in the long process of determining which experiments will initially run RHIC. Physicists will submit formal experiment proposals next year; in preparation for that step, BNL has issued a call for preliminary letters of intent for RHIC experiments, due at the end of September.

So, says Ludlam, "This meeting is like the engagement party, not the wedding. The main purpose is to work on the letters of intent — the physicists can determine what kind of physics they want to do, what kind of detectors they need, and what groups of experimenters have formed."

Nine experimental working groups had formed before the week began, Ludlam says, but most of the participants started the workshop as free agents. The conference also brings theorists and experimenters together to speculate on what types of measurable indicators, or "signatures," will be created by the new nuclear phenomena occurring in RHIC.

Although RHIC is not scheduled for completion until early 1997, planning for the complex detectors must begin now. Ludlam says it will take years to design, build and test these colossal pieces of equipment — at a cost of about $96 million of the $397 million construction budget.

"This meeting also provides the opportunity for participants to look in detail at the design of the machine — the size of buildings and the space available for detectors — to see how their detector ideas mesh with the performance of the machine," Ludlam says.

The week of July 4 may seem like an inopportune time for a conference, but the nuclear physics community couldn't have it any other way. Most of the participants work either at BNL's Alternating Gradient Synchrotron (AGS) — which just completed its May-June heavy ion run last week — or at its European equivalent, the Super Proton Synchrotron at CERN — where preparations for a heavy ion run begin next week. "So this was the only free week we had before the letters of intent were due," Ludlam explains. — Lisa O'Rourke

Shoji Nagamiya, Columbia University, introduces an idea for an experiment at a workshop session on detector ideas.

John Harris, Lawrence Berkeley Laboratory, describes a concept for a RHIC experiment during a session on detector ideas.

BNL Physicist Edward Shuryak (left) and Physics Department Chairman Peter Bond discuss RHIC physics at the opening session of the RHIC workshop on Monday.

Photos for this story by Roger Stoutenburgh.

Laboratory Director Nicholas Samios (left), RHIC Project Head Satoshi Ozaki (center) and AUI Distinguished Scientist emeritus Maurice Goldhaber confer during a conference break.

AUI Distinguished Lecture

Edward Stone on the Voyager Mission

Far-off worlds with high-speed jet streams, large hurricane-like storms, unique ring systems, and fifty-seven known moons — this is not science fiction, but a real description of the distinctive and varied worlds of the giant outer planets in our solar system. Jupiter, Saturn, Uranus and Neptune have these features, as determined by the data obtained by the Voyager mission.

Edward C. Stone, project scientist for the National Aeronautics and Space Administration's (NASA) Voyager mission since 1972, will offer his insights on the mission's findings in an AUI Distinguished Lecture to be held at Berkner Hall on Monday, July 9, at 5 p.m. His talk, entitled "The Voyager Exploration of the Solar System," will provide a glimpse of the dynamic worlds of the outer planets and their many moons.

A professor of physics and vice president for astronomical facilities at the California Institute of Technology (Caltech), Stone has been a principal investigator in charge of the scientific research programs on nine NASA spacecraft and a coinvestigator on five others. Among his many distinguished awards is the NASA Medal for Exceptional Scientific Achievement.

After earning his master's degree in 1959 and his Ph.D. in 1964 from the University of Chicago, Stone joined Caltech as a research fellow in physics. Since his first cosmic ray experiments on Discoverer satellites in 1961, Dr. Stone has investigated such topics as the composition of galactic cosmic rays and solar flare particles.

Edward C. Stone

Stone's lecture will be one of three AUI Distinguished Lectures presented at BNL this summer. The second lecture, "Science and the Media," will be given by John Noble Wilford, Pulitzer Prize-winning science writer for *The New York Times*, on Thursday, July 19. The final talk, to be given by Alec Jeffreys, a professor of genetics at the University of Leicester, England, and inventor of a method for fingerprinting DNA, will offer his expertise on "Genetic Fingerprinting: Approaches and Applications," on Monday, August 6.

In 1965, Associated Universities, Inc., (AUI) adopted a plan for lectures of interest to the general public to be held at BNL. Soon, Stone's name will be added to the list of 33 AUI Distinguished Lecturers who have offered their knowledge on diverse topics to large audiences. Among them have been such notables as economist John Kenneth Galbraith, Nobel laureate Francis Crick and former U.S. Secretary of the Interior Stewart L. Udall.

Coming Up

John Noble Wilford, Pulitzer Prize-winning correspondent for *The New York Times*, will deliver an AUI Distinguished Lecture on Thursday, July 19, at 5 p.m., in Berkner Hall. His talk on "Science and the Media" will be free and open to the public.

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

Learn About Science On Sunday Summer Tours

When you tire of the beaches this summer, you can exercise your brain with a visit to BNL during the summer tour season. On Sundays from July 8 to August 26, visitors are welcome to stop by the Lab anytime between 10 a.m. and 3 p.m. to view the science show and museum.

New on the summer tour this year is a special exhibit acknowledging the increasing role that environmental concerns play in our everyday lives. In conjunction with the Suffolk County Recycling Unit and the County's Cornell University Cooperative Extension, the Lab will display a recycling exhibit in Berkner Hall on weekdays as well as on the summer Sunday tours. The exhibit will feature samples of common household recyclable items and of products made from these recyclables.

In addition, on two Sundays, July 22 and August 12, Suffolk County Recycling Coordinator David Newton will spread the gospel of recycling in three lectures on different recycling topics. The half-hour talks are scheduled for 11:30 a.m., 1 p.m. and 2:30 p.m.

Last year's tour favorite, "The Whiz Bang Science Show," returns for a second season of command performances.

This lively demonstrations of basic science principles by local teachers will appeal to both adults and children. The show takes 45 minutes and is held in Berkner Hall every tour Sunday at 10:30 a.m., noon, 1:30 p.m. and 3:00 p.m. Before leaving Berkner Hall, visitors may want to watch the 10-minute audiovisual overview of research done at BNL.

Visitors who appreciate interactive exhibits will also want to take a shuttle bus to BNL's Exhibit Center/Science Museum to see displays of the Lab's contributions to science.

For example, one chemistry exhibit allows visitors to compare reproductions of famous paintings and forgeries while learning how a technique called neutron activation is used to discover such forgeries, as well as the origins of ancient artifacts.

In the medical section, visitors can shake hands with a skeleton and learn about osteoporosis, a loss of natural calcium from the bones that diminishes skeletal strength. Tour participants can work their own bones a little by pedaling a special tandem bicycle that generates enough electricity to run a TV.

Also at the museum, children can explore the world of the invisible through microscopes or "capture" their shadows on a phosphorescent wall where shadow images are frozen in place by a strobe light. Visitors of all ages can express their creativity with the Plasmasphere, a glass globe full of charged gases that form unique patterns when touched.

History buffs will be interested to know that they are literally surrounded by relics from the past: The museum is housed in the building that was once the Brookhaven Graphite Research Reactor. The first nuclear reactor in the world built for peacetime research, the BGRR was shut down 20 years ago.

Many of the other buildings on site date back to World War II, when the Lab site was the U.S. Army's Camp Upton. Visitors can also view photos and memorabilia from that era in the Camp Upton Historical Collection at the museum. A video, "From Basic Training to Research," describes the evolution of the site from Army camp to research center. — Lisa O'Rourke

Matt Terry, a student at Old Field Middle School in Greenlawn, creates his own pattern with the Plasmasphere, a glass globe full of charged gases. This plasma sculpture is one of many hands-on exhibits about science that the fifth grader enjoyed during a recent tour of BNL's Exhibit Center/Science Museum with Cub Scout pack 213 from Centerport.

Photo by Stoutenburg

DAS Service Recognized

Roger Stoutenburgh

Department of Applied Science (DAS) staff who celebrated major BNL service anniversaries in this year were guests at a reception hosted by DAS Chairman Leon Petrakis in June. Gathered here are: (from left) James Wegrzyn, 10 years; Trudi Neuhoff, 35; Petrakis; and Peter Fallon, 30. Missing is Peter Daum, 10 years.

In Memoriam

Theodore (Ted) Erickson, a research engineer in the Physics Department, died of cancer on June 28. He was 52 years old.

Erickson came to BNL in 1962, as an intermediate technician in Physics. Though he remained in that department throughout his 28 years at the Lab, his position changed often as he rose to senior technician, then technical specialist, technical associate, and development engineer. He was named a research engineer in 1980.

After work, Erickson was involved in BERA sports. Since coming to BNL, he had participated in the Bowling, Softball, and Volleyball Leagues, and he joined the Golf Association in 1988.

He was a resident of Shoreham and is survived by his wife Nancy; three children, Kenneth, Theodore and Kim; and his mother Ruth Erickson of Knox, Indiana.

ID for Car Rental

Budget car rental company has assigned a new identification number to BNL. Employees and official guests may obtain the new Budget card at the Travel Office by presenting their BNL identification cards.

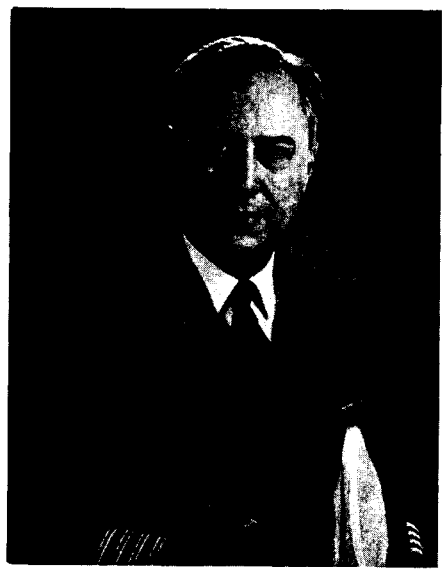
Lee Farr Returns to Lecture On Neutron Capture Therapy

Lee E. Farr, first chairman of BNL's Medical Department, returns to the Lab on Wednesday, July 11, to deliver a lecture entitled "Neutron Capture Therapy — Years of Experimentation, Years of Reflection." His talk, which will begin at 2 p.m. in the large seminar room of the Medical Department, Bldg. 490, is free and open to the public.

Neutron capture therapy is a technique that uses radiation to treat a highly malignant form of brain tumor. The first clinical trials of the technique were performed in the mid-1950s at BNL and at the Massachusetts Institute of Technology. Since then, advances made at BNL, in collaboration with the Idaho National Engineering Laboratory and other institutions, have made the method a much more promising therapy.

After earning both his B.S. in chemistry and his M.D. from Yale University, Farr performed postgraduate medical research studies at the Hospital of the Rockefeller Center for Medical Research.

Farr came to BNL in 1949 to assume the first Medical Department chair, a post he held until he left the Lab in 1962. Under his leadership, the Brookhaven Medical Research Reactor and the medical facility at the Brookhaven Graphite Research Reactor were designed and commissioned, and the first clinical trials for neutron capture therapy were carried out at these facilities.



Lee E. Farr

Benefits Update

Connecticut General Forms

Since April, employees enrolled in the AUI Medical Plan have been submitting medical bills directly to Connecticut General. At that time, employees were provided with long forms to accompany their bills.

Short, supplemental forms, approved by Connecticut General, are now available. As in the past, the long forms must be filled out the first time each year that a bill is submitted for each family member. The supplemental forms may be used for submitting additional claims for the remainder of the year.

Both forms may be obtained from department or division secretaries, or from Personnel Services, Bldg. 185, Ext. 2877, where any questions should be directed.

Also available are pre-addressed Connecticut General envelopes. Order them from the BNL Stockroom as #S32111.

Report Status Changes

Whenever there's a change that could affect your medical or dental plan coverage and/or costs, Personnel Services needs to know. If you've been married or divorced, if a dependent's eligibility changes due to age or graduation from college, or if you experience any other significant status change, call Personnel Services at Ext. 2877, or stop by Bldg. 185.

Public Sale Of Motor Vehicles

Forty-seven vehicles, now located at Warehouse T-87, will soon be available for public sale.

Inspection will be permitted on Wednesday and Thursday, July 18-19, from 9:30 a.m. to 3 p.m. Bid opening will be on July 20.

This will be an informal, competitive bidding. For more information, call Ext. 2302.

AA Meetings

Throughout the summer, Alcoholics Anonymous (AA) meetings will continue being held at the Lab every Monday at 5:30 p.m.

All employees, others with current BNL identification cards and their spouses are invited to participate. To find out the meeting location, call the Employee Assistance Program, Ext. 2733.

Participation in AA is confidential, so you will not be asked to identify yourself when placing the call.

Winners' Circle

Technical writing courses have been offered to the scientific and professional staff for several years now, but in the end, "It's the secretary who is responsibile for the final manuscript," says Ginny Diebel Waterman, formerly with the Department of Nuclear Energy and now with the RHIC project.

The Employee Suggestion Program agreed that she had a good point and awarded Waterman $50 for suggesting that the Personnel Division offer a technical writing and editing course for nonscientific staff.

The first course was held last January, and Waterman was one of the attendees. She says the instructor stressed that while it is not the support person's job to rewrite the paper, that person should be able to point out weak areas, grammatical errors and inconsistencies in format. "It's technical editing," says Waterman.

According to Mary White, Manager of training and development in Personnel, the course is focused on the role of the support person in the technical writing process. She intends to offer it once a year to secretarial and administrative personnel who assist scientific and professional staff in the production of technical and scientific papers and reports. The course consists of three half-days of classroom instruction, followed by individual counseling sessions with the instructor. For more information call White at Ext. 7994.

Roger Stoutenburgh

Ginny Diebel Waterman

Thanks to Kenneth Robins, Physics Associate in the Accelerator Development Department, each employee who retires from the Lab will receive a commemorative plaque like the one he's displaying here on the right. Robins was awarded $25 and a certificate of appreciation from the Employee Suggestion Program because his idea should enhance employee morale.

"In the past, whether a retiree received a plaque or not was left to departments or divisions to handle," Robins said. "I felt a more uniform policy would be good public relations."

Robins celebrated his thirtieth anniversary at BNL in March, and he has no plans to retire. But when he does, he said he will certainly look forward to receiving his commemorative plaque.

Roger Stoutenburgh

Equipment Demo

Members of the technical staff of Keithley's Instrument and Metrabyte/Asyst/DAC divisions will be at Berkner Hall from 9 a.m. to 4 p.m. on Thursday, July 12.

Camera Club

The Camera Club will change the pictures on the photo exhibit in Berkner Hall at 5 p.m., on Thursday, July 12. Photos to be displayed must be mounted and ready to hang. Photographers may submit prints for the exhibit even if they are not able to attend the July 12 session.

Contributors may be either Camera Club members or nonmembers who have photos that meet the exhibit's display criteria. For information, contact Lew Jacobson, Bldg. 134C, Ext. 5193; Ripp Bowman, Bldg. 911B, Ext. 4672; or Anne Baittinger, Bldg. 134, Ext. 5055.

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Inside Info

Paul Kemp, Department of Applied Science, has been recognized by the U.S. Environmental Protection Agency (EPA) with an award for outstanding research through its annual Scientific and Technological Achievement Awards Program. Kemp is coauthor of a research publication that was cited for excellence by the EPA. The publication describes Kemp's research on a technique for assessing the effects of multiple contaminants on marine animal life.

"Effects of Mixtures of Sediment Contaiminants on the Marine Infaunal Amphipod, *Rhepoxynius Abronius*," was coauthored by Kemp with three EPA researchers, and it was published in *Environmental Toxicology and Chemistry* (Vol. 7, 1988). This new research will aid the EPA in developing regulations for sediment quality.

In Addition

As described in last week's story, "In Today's New World of Superpower Arms Negotiations, TSO Provides Fresh Approach to Treaty Verification," members of the Department of Nuclear Energy's Technical Service Organization (TSO) are working on a project funded by the U.S. Department of Energy's Office of Arms Control to develop new tools and methods to verify the superpowers' compliance with arms-control treaty provisions. In addition to those TSO members whose picture accompanied the story, Jack Allentuck and Judith Colman have also worked on the project.

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In addition to the information provided last week about the Fun Olympics planned for the BERA 1990 Fun & Food Picnic on August 25, there's one more thing you should know before you sign up to participate in these crazy team sports: You must be 16 or older. For more information, contact Liz Mogavero, Bldg. 510A, Ext. 3940; or Betty Pergan, Bldg. 179A, Ext. 2937.

Get in the Swimarathon '90 For the American Cancer Society

On Saturday, August 4, see how far you can swim and how much money you can raise for the American Cancer Society (ACS) during the first BNL Swimarathon, sponsored by the Brookhaven Employees Recreation Association (BERA).

From 9 a.m. to 9 p.m. that day, swimmers may put in as many laps as they can — and take breaks between sets of laps. Since Swimarathon '90 is not a race or an endurance test, all participants may go a good distance to raise money for a worthy cause by swimming discontinuously as much as they wish over 12 hours.

The BNL Swimarathon is open to BERA members 18 years of age and older, both individual and team swimmers. If enough swimmers from one department, division or group wish to sign up as a team, they may do so.

In turn, each swimmer or team will be asked to sign up sponsors who will pledge money per lap. The total donation each sponsor makes based on the number of laps swum is a tax-deductible ACS contribution. Flat donations are also welcome.

In addition to swimmers and sponsors, Swimarathon '90 needs volunteers to check in swimmers, to count laps, to serve the food and refreshments, and to keep the music playing.

For their in-the-water or on-land efforts, all participants will be awarded commemorative T-shirts, donated by the ACS.

To sign up to swim or help during the BNL Swimarathon, use the coupon below, or use the forms available at the pool, Bldg. 478; the BERA Sales Office, Berkner Hall; or the Recreation Office, Bldg. 185. Send completed registrations to M. Kay Dellimore, Recreation Supervisor, Bldg. 185. Sponsor sheets will then be sent to each registered swimmer.

BNL Swimarathon '90

Sponsored by the Brookhaven Employees Recreation Association to benefit the American Cancer Society

Name _____ Life No. _____

Department/Division _____ Bldg. _____

Ext. _____ Fax _____ Home tel. (optional) _____

T-shirt size (circle one): small medium large extra large

Swimmers — I am signing up to swim laps as a(n)

[ ] individual [ ] team member _____
name of team

Helpers — I volunteer to help with

[ ] check-in [ ] lap counting [ ] refreshments/entertainment

Return form to: M. Kay Dellimore, Recreation Supervisor, Bldg. 185.

Peconic Canoe Trip

The Mountain & Canoe Club will canoe the Peconic River on Saturday, July 14, starting at 10 a.m. Meet at the Peconic River at Connecticut Avenue, Calverton, and bring lunch. Call Nancy Keuhner, 281-4673, for details.

Arrivals & Departures

Arrivals

Patrick W. Kelso.....Reactor
Edmund Killian.....Accel. Dev.
Melvin Linder.....Accel. Dev.
Gene-Jack Wang.....Medical

Departures

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

Jean-Paul Blaizot.....Physics
Michael Curley.....Plant Eng.
Per F. Dahl.....Accel. Dev.
James T. Gilmartin.....S&EP
Arnold Kreisberg.....Accel. Dev.
Bernard Lattanzio.....Plant Eng.
Richard S. Sapienza.....DAS
Sharad K. Saraf.....Medical
Shawn C. Smalls.....Reactor
William Stars.....Accel. Dev.
Chi-Yeung Suen.....DNE
Leishing Wu.....DAS

On the Menu

At the Cafeteria

Monday, July 9
Soup: Chicken noodle .75/.95
Entree: Tarragon lime-baked chicken w/1 veg. 3.10
Entree: Beef fajitas w/1 veg. 3.10
Fitness: Cheese ravioli in marinara sauce w/1 veg. 3.10
Carvery: Hot pastrami sandwich 2.85

Tuesday, July 10
Soup: Old-fashioned lentil .75/.95
Entree: Italian sausage w/peppers & onions 3.10
Entree: Fried catch of the day w/1 veg. 3.10
Fitness: Stir-fried beef & broccoli over fine noodles 3.10
Carvery: Hot roast beef sandwich 2.85

Wednesday, July 11
Soup: Beef barley .75/.95
Entree: Roast beef w/gravy & 1 veg. 3.10
Entree: Quiche Lorraine w/1 veg. 3.10
Fitness: Eggplant Parmesan w/1 veg. 3.10
Carvery: Hot corned beef sandwich 2.85

Thursday, July 12
Soup: Cream of broccoli .75/.95
Entree: Southern-fried chicken w/1 veg. 3.10
Entree: Macaroni, beef & tomatoes w/1 veg. 3.10
Fitness: Veal Marsala w/1 veg. 3.10
Carvery: Hot Black Forest ham sandwich 2.85

Friday, July 13
Soup: Maryland crab .75/.95
Entree: Lemon-baked fish w/1 veg. 3.10
Entree: Sweet & sour pork over rice w/1 veg. 3.10
Fitness: Beef & bean burritos 3.10
Carvery: Hot turkey sandwich 2.85

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position, with consideration given to candidates in the following order of priority: (1) present employees within the department and/or appropriate bargaining unit, with preference to those within the immediate work group; (2) present employees within the Laboratory as a whole; and (3) outside applicants. In keeping with the Affirmative Action plan, selection decisions are made without regard to age, race, color, religion, national origin, sex, handicap or veteran status.

Each week, the Personnel Office lists new personnel placement requisitions. The purpose of these listings is, first, to provide open placement information on all non-scientific staff positions; second, to give employees an opportunity to request consideration for themselves through Personnel; and, finally, for general recruiting purposes. Because of the priority preference policy stated above, each listing does not necessarily represent an opportunity for all candidates. As a guide to readers, the listings are grouped according to the anticipated area of recruitment.

Except when operational needs require otherwise, positions will remain open for one week following publication date.

For further information regarding a placement listing, contact the Employment Manager, Ext. 2882.

The vacancies listed below have been exempted by the Director's Office from the current freeze on open requisitions.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees only.

4269. MASTER WELDER, GROUP LEADER - Central Shops Division.

4270. SECRETARIAL POSITION - Requires AAS in secretarial science or equivalent and a thorough knowledge of Laboratory policies and procedures. Must have excellent secretarial and communication skills, and demonstrated interpersonal skills. IBM PC and word processing experience essential; familiarity with IPAP/JCARS helpful. Will provide varied secretarial support to the Operations and Maintenance Division Manager. Plant Engineering Division.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

4271. ENGINEERING POSITION - Requires BS/MS with an emphasis on radiological protection and several years' experience which includes emergency planning and preparedness. Familiarity with computer-assisted dose calculation desirable. Will be responsible for development of emergency plans and procedures, development of scenarios and participation in on-site exercises, and oversight of the Laboratory's participation in the DOE Radiological Assistance Program. Safety & Environmental Protection Division.

4272. ENGINEERING POSITION - Requires BS in civil or structural engineering and minimum of ten years' structural design experience. Responsibilities include the design of structural steel and reinforced concrete structures and preparation of related specifications for bidding purposes. Drafting skills and knowledge of AISC, ACI, Life Safety and model building codes are essential. AUTOCAD experience desirable. Plant Engineering Division.

4273. ENGINEERING POSITION - Requires BSME and minimum of ten years' design experience. Requires knowledge of advanced HVAC and hazardous exhaust systems for laboratory and industrial applications. Design experience in steam, chilled water, fire protection, hot water and general utility services required. PE license desirable. Plant Engineering Division.

4274. ENGINEERING POSITION - Requires BS in civil engineering and minimum of five years' experience. Knowledge of federal, state and county environmental codes and regulations essential. PE license desirable. Responsibilities include planning, designing and implementing environmental projects in the areas of groundwater monitoring, storm and sanitary sewer improvements, potable water-well installations, and solid and hazardous waste disposal. Plant Engineering Division.

4275. ENGINEERING POSITION - Requires BS in civil engineering, and substantial engineering and project management experience. Responsibilities include the management of major projects including environmental, scientific, utility and building systems. Will coordinate work of engineers, technicians and others in the planning, costing, designing, and constructing of civil construction projects of considerable scope and complexity. PE license highly desirable. Plant Engineering Division.

4276. ACCOUNTING POSITION - Requires BA or equivalent in accounting or related field, a minimum of two years' financial accounting experience and a knowledge of generally accepted accounting principles. Under general supervision, will be responsible for preparation, control and maintenance of records and reports. Additional duties will include preparation of financial statements, reviewing vouchers, balance-sheet accounts, computer runs and control records. Knowledge of PC spreadsheet programs desirable. Fiscal Division.

4277. OFFICE SERVICES POSITION (part time) Requires previous travel office experience, specifically SABRE computer experience. Will assist BNL staff in all aspects of travel, such as airline, railroad, bus and ferry reservations, limousine or car rentals, and accommodations. Staff Services Division.

Motor Vehicles & Supplies

89 CAMARO - black, a/t, mag wheels, 40k mi., excel. cond., asking $8,900. Ext. 4173.

88 CHEVY CORSICA - a/t, p/s, p/b, am/fm radio, 19k mi., excel. cond., $6,500 or best offer. Ext. 5471 or 924-9466 after 6 p.m.

88 PONTIAC TRANS AM - silver, black, T-tops, digital dash, all power, $11,800 neg. Ext. 5146 or 543-3451.

86 CHEVY CAVALIER - 5-spd., p/s, p/b, 63k mi., ask. $1,900; 86 Plymouth Horizon, 5-spd., p/s, p/b, 46k mi., moving, $2,600. Ext. 3731 or 331-7299.

85 MERCURY LYNX - 2-dr., 52k mi., good cond., $2,000. Ext. 3285.

84 FORD ESCORT - a/t, am/fm cass., 60k mi., $1,000. Sheu, Ext. 3770.

84 PONTIAC TRANS AM - V8 305, a/t w/overdrive, all power, a/c, am/fm cass., asking $4,900. Todd, Ext. 4407 or 298-9135.

84 RENAULT ALLIANCE - grey, 4-dr., a/t, a/c, valve job at 85k, 2 new Michelin tires, excel. in/out, $900 neg. Jen, 345-3379 or 929-4522.

83 HORIZON - s/t, 4-dr., white, sunroof, dependable, 30-37 mpg, $2,200 neg. Audrey, 727-0499.

83 BUICK REGAL - 6-cyl., 4-dr., a/c, p/b, p/s, am/fm, 100k mi., new brakes & battery, good cond., asking $2,150. Dov, Ext. 4389 or 3129.

82 BUICK REGAL - 6-cyl., 4-dr., ac, 75k mi., new brakes, exhaust, battery, runs well, body perfect, asking $3,100. Steve, Ext. 5567 or 821-9048.

82 BUICK REGAL SOMERSET - 67k mi., 2-dr., all power, a/c, fm cass., $1,900. 363-6940 after 5 p.m.

82 TOYOTA COROLLA - h/b, excel. cond. 758-5452.

81 VW RABBIT LS - 2-dr., 5-spd., am/fm, runs well, some work needed, $850 or best offer. Ext. 2914 or 286-3742 eves./wknds., after July 2.

81 KAWASAKI 440 LTD - new battery, tires, chain, sprockets, 12k mi., sissy bar, v.g. cond., must sell, asking $700. 474-5715.

80 DODGE ASPEN - 66k mi., a/t, p/b, p/s, recently tuned, excel. cond., $960. Lee, Ext. 5790 or 3130 after 6 p.m.

80 DATSUN 510 - h/b, 140k mi., new brakes, good tires, runs, $400 neg. Mark, Ext. 3812.

80 DODGE COLT RS - 2-dr., h/b, 4-spd., am/fm, a/c, 120k mi., needs work, asking $250. 928-0297.

79 PUCH JAWA MOPED - 1k mi., excel. cond., baskets, $175. Keith, 474-3863.

79 ACCORD - as is, no reasonable offer refused. Joe, Ext. 5192.

78 FORD LTD - good body, needs engine, make offer. Kirk, 924-6723.

77 CAMARO - 305 V8, runs well, new battery, brakes, good tires, am/fm stereo, asking $700. Ext. 7766 or 757-2645 eves.

77 BMW 320i - excel. cond., new paint, 160k mi., must see, $2,500. 666-5610 eves.

74 GMC PICKUP - ¾-ton, a/t, good tires & trans., needs engine work, make offer. Tony, 698-9274.

73 TRAILSTAR POP-UP CAMPER - very good cond., sleeps 6, ice box, heater, removable stove, more, $850. 821-0354 after 6 p.m.

69 DODGE CORONET - 4-dr., 135k mi., runs, restorable, $400 or best offer. Ext. 3823.

31 CHRYSLER - all orig., low mi., excel., runs well, $7,000. Ext. 3160 or 289-5704 after 5 p.m.

TIRES - 6, P215/75R15, Goodyear radials on Chevy rims, good cond., $25 ea. Aron, Ext. 2434.

CAR RADIO - Nippon, new, never used, am/fm, $10. Pete, Ext. 2498.

STANDARD TRANSMISSION - 3-spd., General Motors, w/Hurst shifter, $25. Jim, Ext. 5400 or 878-6098.

Boats & Marine Supplies

29' ULRICHSON - wood, FWC, flying bridge, full galley w/oven, elec. head, many extras, must see, excel. cond., asking $3,500. 732-2754.

27' ALBINS CRUISER - 1984, fg, cabins fore & aft, center cockpit, Lehman diesel, under 60 hr., ask., $27,500. 369-2110 or 288-3277 eves.

24' PENN YAN - 1979, fg, sleeps 3, full head, swim platform, trim-tabs, 330 h.p., OMC inboard, dual batt., excel. cond., asking $7,200. Greg, Ext. 3263.

19' RINKER - 1986, cuddy, i/o 120, w/trailer, Coast Guard pkg., $8,500 neg. Ext. 2223 or 929-6421.

18' GLASSPORT BOWRIDER - 1983, 90-h.p. Evinrude, trailer, mooring cover, approx. 110 hrs., asking $2,800. Chris, Ext. 2022 or 395-6112.

17' O'DAY DAY SAILER - good cond., w/4 h.p. Evinrude, trailer, asking $2,000. Dick, Ext. 2881 or 286-3372.

8' DINGHY - 1990, fg. Dawn, 758-3830.

OUTBOARD ENGINE - Evinrude Sportster, 25 h.p., $400. John, Ext. 3612.

INFLATABLE BOAT - w/oars, carrying case, 2-men or 3-children, $25. Ext. 4447.

Furnishings & Appliances

QUEEN BED - $50; glass-top end tables & coffee table, $200; rattan wall unit, $200. Greg, 475-2509.

SOFA BED - double, good cond., $100. Rick, Ext. 3932.

MICROWAVE - Sanyo, v.g. cond., $60. Ching, Ext. 3663 or 474-3845.

FURNITURE - living room, dining room, bedroom, desks, chairs, lamps, bicycle, tools, misc., moving, reasonable. Sampson, 475-1017.

REFRIGERATOR - GE, 18 cu. ft., 4 years old, like new, $250. Dave, Ext. 2109 or 472-9199 eves.

HOPE CHEST - $150; china cabinet, $150, both in good cond. Walter, Ext. 4958 or 821-9451.

DESK - walnut, L-shape, high-back leather swivel chair, excel. cond., $450. Herman, Ext. 7333.

DESK/COUNTERTOP - commercial size, L-shape, 4'x6', Formica, pink & white, best offer, orig. $1,500. A. Romand, Ext. 4024.

BAR - dark mahogany, 2 chairs, fair cond., $50. 281-7873 eves.

FURNITURE - Ethan Allan, maple chairs, maple coffee table & end tables. Dave, Ext. 5460.

CHAIR - Barcolounger, wine color, vinyl, like new, $75. 475-5743.

DESK - & chair, Lea, like new, Formica top, maple, $200. Rose Ann, Ext. 5843.

LOVESEATS - 3, 4 chairs, 4 tables, extra cushions, Naugahyde, $475. 475-8658.

BEDROOM SET - 7-piece, fruitwood, fair cond. $125. Ernie, Ext. 3357 or 281-7873.

BEDROOM SET - full-size boxspring & mattress w/headboard, 2 night stands, 2 triple dressers w/mirrors, you pick up, $175. Tirre, Ext. 3288.

ROLL-AWAY BED - twin, $65; bookshelves, cane, $25 & wood, $40; queen size bedroom set, asking $195; office desk, $40. Ext. 3731 or 331-7299.

FREEZER - large, upright, old but good c $75 or best offer. Larry, 473-1456.

WASHING MACHINE - Sanyo, small, 3-c 3 years old, good cond., $100 or best offer. Brenda, Ext. 3191.

REFRIGERATOR - works well, good for garage or basement, can deliver locally. 289-8212 eves.

LIVING ROOM FURNITURE - modern, beige & brown, mint cond., sofa, loveseat, 2 end tables, coffee table, 2 lamps, $550. Ext. 3083.

WALL OVEN - Hotpoint, s/s, $25; countertop stove, s/s, $25; portable dishwasher, 18"w, Sears, $75. 878-9369 after 6 p.m.

WASHER - GE, heavy-duty, lg. capacity, 2 yrs. old, excel. cond., $100. Ext. 2981 or 744-1440.

Tools, House & Garden

RED MAPLE TREES - Japanese, $15-$50. 265-6542.

GENERATOR - 1,800 watt, two 110 Vac outputs, one 220 Vac output, good cond., $200. Tom, Ext. 2372 or 281-8250 after 6 p.m.

LAWN MOWER - hand push, $8; tote tank, 15 gal., for travel trailer, $25; radio rec. console Grundig, $25; lawn sweeper, large, $35. 878-6637.

CHAIN SAW - Stihl, 14" bar, good cond., $85. Charles, 728-1931.

Sports, Hobbies & Pets

TREADMILL - variable speed, like new, incline adjustment, $250 neg. 727-2471 after 5 p.m.

PEKINGESE PUPPIES - male & female, AKC. Dan, 654-1731.

BOOKS - radio handbook, model airplane, handyman, public works, $5/each. Kathy, 744-2203.

BICYCLE - girl's, 24", 10-spd., excel. cond., $50. Maria, Ext. 3228 or 924-3756.

GOLF CLUBS - woman's, Mizuno, quads, full set of irons & metal woods, $175. Neal, Ext. 2254.

MOUNTAIN BIKE - Index, shifting, 3 yrs. old, $150. 473-3151.

Audio, Video & Computers

STEREO RACK SYSTEM - Soundesign, dual cass., turntable, more, good cond., asking $135. Ext. 3731 or 331-7299.

SPEAKERS - 2, hi-fi, $40; nylon rug, ivory, 6'x9', $30. Ext. 3699.

RADIO - w/8-track player, $10; car radio, $10; clock radio, $10. Kathy, 744-2203.

CORDLESS PHONE - Southwestern Bell, $40; 42" oval patio table, $45. 689-9234.

TELEVISION - Sharp Linytron, color, 19", excel. cond., $80. Ext. 3102.

Miscellaneous

JEWELRY - rings, watches, genuine lizard watch band, 17" pearl necklace, all $5/each; other pieces, $6; perfumes. Warren, Ext. 4939.

HERBS - whole food regenerative products. Margaret, 727-3863 after 5 p.m.

COLLECTIBLES - mini sea captain, $5; pewter/brass money clip, $10; drafting light, $5; Chinese porcelain lamp, $35. Kathy, 744-2203.

TICKETS - two, for Crosby, Stills, Nash concert at Jones Beach, Fri., July 13, 8 p.m., Carla, 821-6252, leave message.

FOOT BATH - Thermo-Jet whirlpool, $8; bake-broiler oven, $8; hand-push lawn mower, $8; desk or vanity, maple, 2 drawers, $20. 878-6637.

Free

MAGAZINES - about 50, back issues of *Country Living*. Maria, Ext. 3228.

Car Pools

PLAINVIEW - Exit 43, LIE, 4th driver needed. Elliott, Ext. 2495.

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

EAST PATCHOGUE - waterfront, very private, picturesque spot, avail. Aug 1, $850/mo. + util., refs. & sec. 475-4199.

GORDON HEIGHTS - 4-bdrm. Cape, new appl., new carpet, new interior paint, 10 min. from BNL, $800/mo. + util. R. Wilson, Ext. 3900 or 696-6718.

MASTIC - 1-bdrm. apt., kitchen-l/r combo, bath and priv. ent., $475/mo. + elec. 281-1659 eves. & wknds.

MEDFORD - 1-bdrm. apt., eik, l/r, w/w, pvt. ent., deck, 15 min. to Lab, no pets, no children, $575/mo. + elec. & sec. Bobbie, Ext. 2456 or 654-1993 after 5:15.

NORTH SHIRLEY - 1-bdrm. furn. apt., l/r, kit., w/w, priv. ent., 1 person, nonsmoker, no pets, 5 min. from Lab, $500/mo. pays all. 281-8044.

SOUND BEACH - 2-bdrm. ranch, 1 bath, l/r, d/r, eik, bsmnt., w/d, Miller Place Schools, $900/mo. + util. & sec. avail. 9/10/90. Ext. 3790 or 821-4553.

BAR HARBOR, ME - on Echo Lake, Acadia National Park, 1-room cottage w/sleep loft, kitchenette, bath, fully furn., w/deck, $375/wk., July, August & September. Bob, Ext. 2514.

HILTON HEAD, SC - 2-bdrm. condo, sleeps 6, 2 baths, tennis, golf, pool, beach, July, Aug. & Sept., $425/wk. 689-5378.

For Sale

CALVERTON - 2-bdrm. townhouse, 1½ baths, 5 new appl., Andersen windows, w/w, 2 decks, fence, assum. mort., $87,000. Steve, 369-9884.

CORAM - Tanglewood Hills, 4-bdrm. ranch, 2 baths, 2-car gar., huge attic, gas heat, fenced, sewers, new carpet & paint, $130,000. Ext. 3791 or 928-7154 after 7 p.m.

EAST MARION - beautiful 1 acre building lot, adjacent to Greenbelt. 325-0447.

JAMESPORT - ¾ acre, walk to Sound, on cul-de-sac, beautiful area, price neg., terms avail. Ext. 5312 or 929-8467.

MIDDLE ISLAND - Coventry Manor, 3-bdrm. townhouse, 2 baths, kit., l/r, d/r, laundry rm., cac, 5 appl., patio, pool, tennis, carpet, ask. $102,000. Rosalie, Ext. 3160 or 289-5704 after 5 p.m.

to Lab, price reduced to $93,000. Mary, 924-4328.

SETAUKET - custom house, 3-4 bdrm., deeded beach rights, 3VSD. 473-4666.

SOUND BEACH - 2-bdrm. house, kitchen, l/r, d/r, full bath, bsmt., ¼ acre, $114,000. 821-3729.

WADING RIVER - 5-bdrm. multilevel contemp., wooded acre, skylights, cathedral ceilings, sunroom, decks, pool, gourmet kitchen, jacuzzi fp, 3-rm. rental apt., red. to $196,000. 283-0155.

BOICEVILLE, NY - in Catskills, 2-bdrm. house, English wood/coal stove in fieldstone enclosure, 4+ acres, woods and meadow, year-round brook, mountain views, many extras. 821-0469.

Wanted

O+BLOOD/PLATELETS DONORS - for 5-yr. old Alisha, leukemia victim, daughter of Mitchell Sussman, S&EP, need is ongoing. For more information, call Sussman, Ext. 4212.

HOUSE TO SIT - free, reliable, caring, exp., any period after July 19, enjoy peace of mind while vacationing. J. Allentuck, Ext. 2412.

VAN - old, big, must seat at least 6, must run decently. Kirk, 924-6723.

DOVE - white, female. 475-4199.

SURFBOARD - 6'5" to 7'8", good to excel. cond., reasonable. Ryan, 878-1178.

"HURRICANE GLORIA" GENERATOR - Bill, Ext. 2807, pager 0923 or 281-0557.

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.*

SCUBA LESSONS — learn to dive in a few short weeks, international certification, private or group, reasonable rates. 474-5715.

PLUMBING/HEATING - all phases, large or small repairs, remodeling, free estimates for Lab employees. Joseph, 345-3923 eves.

ELECTRICIAN - all size wiring jobs, neat, dependable service, licensed. Steve, 586-1440.

AUTOMATIC LAWN SPRINKLERS - free est., prof. layouts, repairs, alterations, additions, prompt service, BNL discount. Lou, 928-7042.

PARTY TENTS - we set up & take down. Fred, 588-2268.

PERMS - haircuts, nails, etc., very reasonable, evening and weekend appt. 878-6378.

GENERAL CONTRACTOR - carpenter, extensions, dormers, gar. conversions, bsmnts., decks, kitchens, licensed, free estimate. 698-2501.

POWER WASHING - vinyl siding & decks, patios, brickwork, boats, etc., satisfaction guaranteed, reasonable. John, 475-9597.

BALLOON DECORATING - hearts, centerpieces, limousine releases, weddings, showers, engagements, all parties. Linda, 821-3009.

CARPET & UPHOLSTERY CLEANING - Dupont protected, dry foam extraction method, free estimates. 471-3846.

LANDSCAPING - tree trimming & removal, clean ups, mulching, weekly maintenance, Ridge-M.I. area, free estimates, lic. & insured. Jack, 345-5695.

LAWNS - Center Moriches area, young man will cut & rake lawns, reliable. Ryan, 878-1178.

BABY-SITTER - responsible, reliable 12-yr.-old baby-sitter, w/exp., Wading River area. 929-5945.

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

PHOTOGRAPHER — weddings and freelance, exp., reasonable rates. Rick, 874-4017.

HOUSE PAINTING - minor repairs, preparation, exp., quality work, reasonable. Peter, 475-8406.

BACKHOE SERVICE - town water lines, installed inside & out, dry wells and trenching w/small machine, low rates, free est. 929-8876.

TREE STUMP GRINDING - Bob, 727-2346.

VIDEO - Flair Video, get 1990 prices for 1991 weddings. Ray, 878-1947.

BABY-SITTING OR MOTHER'S HELPER — day or evening during summer, exp. 12-yr.-old, Jamesport area or can travel. Jessica, 722-4932.

CARPET/UPHOLSTERY CLEANING - spot, pet stains, odor removal, auto interior, fabric protector, free est., Lab discount. Jerry, 924-6019, days.

SEAMSTRESS — clothes made or altered, reasonable prices. Donna, 924-1684.

PARTIES - make all your parties special events, every detail covered, all size parties, any occasion. Rosalie, 289-5704.

LAND CLEARING - using excel. rake on 450 loader, $70/hr. w/operator. Tom, 878-1060.

SHEETROCKING & SPACKLING - free estimate. Kevin, 563-9855.

TYPING - complete desktop publishing, 20 yrs. exp., Lab discount. 281-0268 until 9 p.m. daily.

WORD PROCESSING - professional, fast results, 9 yrs. secretarial exp., IBM PC, Wordstar, letter quality, reasonable rates. 928-7571 after 6 p.m.

PAINTING - exterior, reasonable rates, BNL refs. Pat, 924-2298, eves.

SKYLIGHTS - complete, professional service, cleaning, preventive maint., installations. Joseph, 924-6019.

WINDOW CLEANING - all work squeaky clean. 928-3189 after 4 p.m.

KAYAK LESSONS - seakayak, river playboats, $70, 5 hr. + free practice, intro to kayaking, 2 hr., $25, equip. supplied. Ernie, 281-7873.

BRICKWORK - patios, walks, swimming pools, retaining walls, landscaping ties, Belgian block, 20 yrs. exp., Lab discount. Tony, 698-9274.

ROTOTILLING - Troybilt rototilling, custom service, lawns and gardens. Bob, 732-9517.

In Appreciation

The family of Ted Erickson wishes to send our sincere appreciation to all of our wonderful friends at Brookhaven. —Nancy Erickson