

Hudis Assumes New Role

After 33 years at BNL, Jerome Hudis, Assistant Director for Planning and Personnel, will join AUI as Vice President for Programmatic Affairs and Secretary. His appointment was approved by the Board of Trustees at their meeting on October 24. Hudis' primary job will be to keep abreast of programmatic, construction and scientific or technical staff matters that may have policy implications or require formal corporate attention.

About Hudis' new role, Lab Director Nicholas Samios said, "We're sad and yet pleased with Jerry's appointment. Sad because his new responsibilities will lessen his contributions to BNL, but pleased because he will maintain the tradition of close cooperation between BNL and AUI. For the time being, Jerry will wear two hats, and we are working on finding the best way to reassign his BNL responsibilities."

In addition to learning his new job, Hudis also wants to help make the BNL transition smooth. "Since I will continue as a member of the AUI/BNL/NRAO family stationed at Brookhaven," says Hudis, "and since the groups reporting to me are all run by very competent people, I see no great long-term difficulties." Hudis was responsible for the Office of Scientific Personnel, Personnel and Labor Relations Division, and the Public Relations Office.

As to his new job, he is "pleased to



Jerome Hudis

Mort Rosen

be able to continue serving the Laboratory and AUI, and I look forward to my new responsibilities with the Observatory. The fact that Vice President for Programmatic Affairs is a newly defined position makes it an especially challenging opportunity."

Hudis joined the scientific staff of the Chemistry Department in 1952. He was made Assistant Department Chairman in 1968, Deputy Department Chairman in 1974 and Chairman in 1977. He was appointed to the Directorate in 1981.

Robbins Appointed Budget Officer

Today, Donald Robbins takes up his new job as Budget Officer and it is a job which fits him well. Since 1967 he has dealt with budget matters great and small at the Laboratory and, for the last six years, as Deputy Budget Officer, has been responsible for the day-to-day coordination of all the work of the Budget Office.

His experience has given him a comprehensive knowledge of the financial operation of the Laboratory, the budget process of the Department of Energy and Congressional appropriations. Fortunately, he is thoroughly familiar with the latter because, once again, Congress did not appropriate money for DOE and other government agencies by the first of October, and the Laboratory has been operating under what is called a continuing resolution. This enables the government to keep going until Congress comes up with a budget appropriation acceptable to both Congress and the President. Until the authorization bills are signed, budget officers must keep things running smoothly with limited funding.

But no matter what budgetary problems might surface in the future, Robbins has no qualms about handling them. He says, "I am very fortunate because I am working with such a technically competent, experienced and highly motivated staff." He and his staff will soon start work on the formulation of the FY 1988 budget.

Robbins' first job at the Laboratory was as a junior auditor with AUI after graduating from Adelphi University with a BBA in 1967. He received an MBA in 1971. After two years with AUI, he joined the Department of Applied Science (DAS) and moved from Staff Assistant to Department Administrator. In 1976, when DAS became the Department of Energy



Donald Robbins

Mort Rosen

and Environment (DEE) and the Department of Nuclear Energy, Robbins went with DEE as Department Administrator. He was appointed Deputy Budget Officer, in 1979, and for the next six years worked for Henry Grahn. Grahn was recently appointed Assistant Director for Financial Management, and responsibility for the operation of the Budget Office now lies solely with Robbins.

Coming Up

Robert Bari, Nuclear Energy Department, will give the next Brookhaven Lecture on November 13, at 4:30 p.m. in Berkner Hall. He will speak on "Probabilistic Risk Assessment."

News From AUI

As announced this week to all employees, Louis A. Girifalco, University Professor at the University of Pennsylvania, has been named Chairman of the Board of Trustees of Associated Universities, Inc., (AUI). Also elected were two new trustees, John A. Armstrong, Research Division Vice President, Logic and Memory, at IBM, and Steven E. Koonin, Professor of Theoretical Physics at Cal Tech. They replaced retiring trustees Robert Leighton of Cal Tech and Stanley Wojcicki of Stanford University. Jerome Hudis, BNL's Assistant Director for Planning and Personnel, will move to AUI as Vice-President for Programmatic Affairs and Secretary of the Corporation. (See accompanying story.) In the latter capacity, he will be assisted by Victor Bremenkamp who was elected Assistant Secretary. Still to be appointed is a Vice President for Corporate Affairs and Comptroller. All of these officers report to the AUI President, Robert E. Hughes.

As most employees are aware, AUI is a non-profit corporation, which was created in 1946 to found BNL; fifteen years later, AUI also founded the National Radio Astronomy Observatory (NRAO). Its major responsibilities are long-term plans and policies for BNL and NRAO and the appointment of Laboratory and Observatory directors to carry out these plans.

An active Board of Trustees meets at least nine times a year, at which meetings the two directors and their staffs report on recent developments, successes and problems. Various Board committees also have detailed administrative and budgetary oversight responsibilities. Programmatic overview is provided by visiting committees, members of which are chosen by and report to AUI.

20 Years at the Reactor

The High Flux Beam Reactor (HFBR) turned 20 yesterday. It was October 31, 1965, when the reactor first began operating, and the past two decades have seen exciting work in solid state physics, nuclear physics, chemistry and biology.

The HFBR is one of the world's most intense source of neutrons. Since their discovery in 1932, neutrons have proved to be extremely powerful tools for studying matter on the nuclear, atomic and molecular levels.

When the HFBR was built, it operated at a power level of 40 thermal megawatts, providing a neutron flux of 1.6×10^{15} neutrons per square centimeter per second ($n/cm^2 \cdot s$). In 1982, after six years of preparation, the reactor went to a power level of 60 megawatts. At the higher power, the neutron flux is 2.4×10^{15} $n/cm^2 \cdot s$, a 50% increase.

Because of such efforts taken to upgrade the machine, as well as a comprehensive maintenance program, the reactor has achieved an enviable record as a dependable source of neutrons. As a result, the HFBR draws scientists from all over the world. At any given time, an aver-

age of 15 to 20 experimental teams are scheduled to use the reactor.

Research at the HFBR has been fruitful. For example, in solid state physics, one area of note is in the study of critical phenomena in magnetic systems. The first observations of critical scattering associated with magnetic ordering were made over 30 years ago at the Graphite Reactor, BNL's first research reactor. Experiments done at the HFBR in the 1960's and 70's led to a detailed description of critical phenomena in one-, two- and three-dimensional systems. In the systems studied, the change from one phase to another was marked by the fact that a substance was paramagnetic, or non-magnetic, in one phase and, as the temperature was lowered, either ferromagnetic or anti-ferromagnetic in the second phase. The theoretical insight into understanding these results led to a Nobel Prize in Physics for Professor Kenneth Wilson, of Cornell University, in 1982.

Significant work has been done recently on symmetries in nuclei. Although the idea of symmetries has long played a fundamental role in

(Continued on page 2)



Looking down into the core of the High Flux Beam Reactor, the tops of the uranium fuel elements can be seen at the center. The two pipes curving down are thimbles for inserting specimens to be irradiated in the core.

Mort Rosen

Reactor

(Continued)

many branches of physics, only in the last decade have suggestions been made of their widespread applicability in nuclear physics. Specifically, it was proposed that nuclei with an even number of protons and neutrons could be described in terms of three dynamical symmetries corresponding approximately to nuclei shaped like a sphere, a football or a squashed football. Pioneering experimental work has now revealed the first examples of each of these three symmetries in nuclei, thus opening up an entirely new approach to nuclear structure and engendering a true international renaissance in the field.

Among the experiments conducted at the HFBR by chemists is one on metal hydrides. In the last 12 years, research on transition metal hydrides and other organometallic compounds has focused on a systematic investigation of the chemical bonding between hydrogen and transition metals. Besides metal hydrides, new types of compounds have been characterized, such as those with hydrocarbon (C-H) groups bonded to metals. Neutron diffraction is the only technique capable of finding the detailed geometry of these types of bonds. This basic research has applications in such areas as homogeneous and heterogeneous catalysis, hydrogen storage in metal hydrides, and hydrogen embrittlement in metals.

In early 1968, pioneering experiments by biologists at the HFBR proved that neutron diffraction could be used to do protein crystallography, for studies of protein function and structure. Essentially, these experiments showed that hydrogen molecules within proteins could be seen with neutron diffraction. The work continues today, greatly aided by new, two-dimensional detectors that result in high resolution images.

Just as the experimental program has been successful over the years, the reactor itself has aged well. Ongoing periodic inspections on the reactor vessel and piping systems have revealed no serious problems.

In recent years, the U.S. Department of Energy, which has regulatory control over the HFBR, has instituted new safeguards and security requirements at all of its facilities. What was considered adequate security in the past is no longer valid in view of growing international concern over terrorist activities. At the HFBR, tighter access controls are now required in the operation areas of the reactor, and during the current shutdown, changes are being made to enhance these access controls. Even so, free access to the experimental area is still maintained for the international community of scientists that use the reactor.

Today, the HFBR stands as one of the premier beam reactors in the world, matched only by the Institut Laue-Langevin reactor in Grenoble, France. The next decade promises to be just as successful as the last two.

— Mona S. Rowe

Ready for Action

Though the fire in Ridge that began early Sunday morning did not come anywhere near the Lab, three BNL firefighters were called out at 3:25 a.m. Under a mutual aid pact with the Ridge Fire Department, Sergeant Raymond Archbold and Firefighters Robert Mosely and William Strelecki reported to the fire and rescue staging area in Brookhaven State Park with Engine 3, a brush truck. They stood by ready to protect any homes south of Route 25 that might have been threatened by fire. At 8:10 a.m. Monday, they reported back to BNL. The fire was extinguished at 11 a.m., but reignited at 2 p.m. and was again put out by 3:30 p.m.

Energetic Management Honored

During Energy Awareness Week last week, Assistant Manager of the Engineering Division Robert Terwilliger, Plant Engineering, was presented with two individual awards in Washington, D.C., and one award was presented to the Laboratory for BNL's energy efficiency programs.

Of all the U.S. Department of Energy laboratories, BNL was selected as the winner of the DOE in-house energy management program Energy Conservation Award. As BNL's energy management coordinator, Terwilliger was named one of four outstanding in-house energy managers. As a result, DOE nominated Terwilliger and he was chosen to receive a Federal Energy Efficiency Award from the Federal Interagency Energy Policy Committee.

Terwilliger was cited on behalf of his energy management staff: Project Engineers Edward Murphy and Mark Culp, Staff Engineer Kenneth Testa and Associate Staff Engineer Michael Nugent, and as a result of three major projects they undertook. These projects, which cost \$1.22 million in fiscal year 1984 achieved a savings of 67.6 billion Btus or \$711,000 in the first year. Since 1973, BNL has invested \$17.2 million in energy conservation projects, which have resulted in energy savings worth \$67.5 million. DOE has mandated that all its laboratories reduce their demand for energy by 20% from 1975 to 1985.



Robert Terwilliger

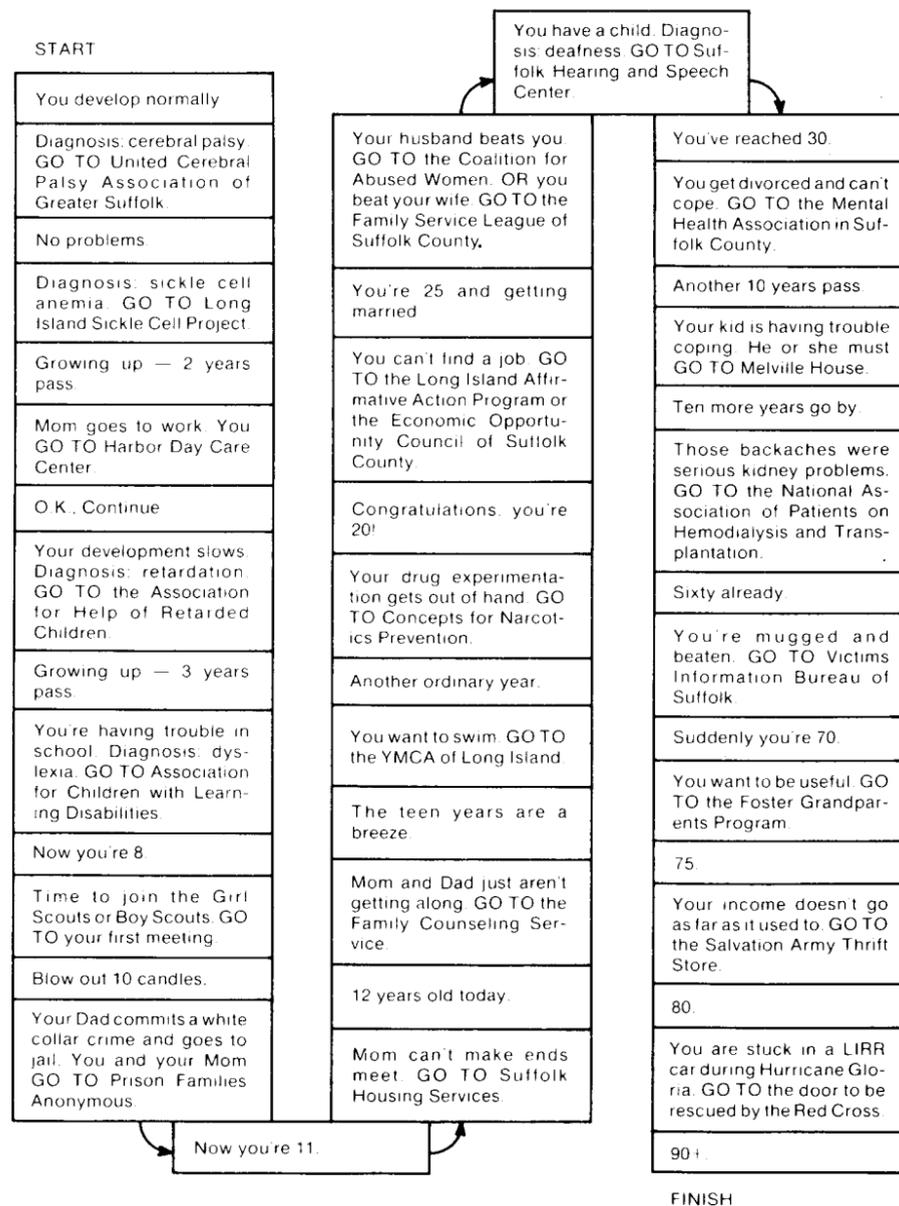
One project required the installation of ceiling fans in buildings with high bay ceilings. Instead of using the building's heating system, these fans are turned on to push down the heat that has risen to the ceiling. Another project called for the installation of reflective solar film on the windows of many buildings. By preventing the sun from heating the air inside the window, the cooling load of the building has been reduced. The third project was accomplished in collaboration with the AGS; the amplifier control system for AGS magnets was replaced, resulting in better control of the magnets for the AGS and in reduced use of electricity.

Caring Counts ... the United Way

Caring counts — that's the theme of this year's United Way campaign, which gets under way at BNL on Monday, November 4. To celebrate the 20th anniversary of the United Way of Long Island, Campaign Chairman Bob Jansson, Management Information Systems Division, has set the 1985 goal at \$70,000, which would represent a \$7,000 increase over 1984 donations. "We're sure there are a lot of people here who have been directly helped by the United Way in some way," Jansson said. "This cam-

paign gives us an opportunity to make sure that this help will continue to be there."

This little game may illustrate Jansson's point, that very few of us make it through life without needing some help along the way. The GO TO squares represent only a few of the United Way of Long Island agencies your donation supports. So fill out your pledge card promptly and be the first to hand it to your United Way representative on Monday.



Administrative Actions

For the last 15 years, Glenn Price was responsible for various educational programs and scientific staff matters in the Office of Scientific Personnel. With his retirement last month, his duties have been distributed as follows:

Donald Metz will head the Office of Educational Programs. In this capacity, he will administer the Summer Student Program, Brookhaven Semester Program and teacher education programs. A chemist, who headed the Chemical Sciences Division in DAS, Metz has been gradually relinquishing his scientific research in favor of scientific education programs, in which he has had a lifelong interest. Now, he will devote himself full time to that interest. Metz will have his office in Bldg. 185, Ext. 3054.



E. Gail Williams, who has been in the Office of Scientific Personnel (OSP) since 1975 and is a Senior Staff Specialist, will administer the guest and research collaborator programs and will also act as Foreign Scientist Advisor. As the latter, she will be responsible for assuring the lawful immigration status of all alien personnel and will handle most non-immigrant visas. These duties are in addition to her regular staff function within OSP. Williams' office is in Bldg. 460 and her extension is 3338.



Michael M. Goldman, Acting General Counsel, took over as legal counsel for BNL on the death of Peter Rathvon in August. Under this new OSP administrative plan, he will also provide legal advice to employees for whom the Laboratory is sponsoring an application for the H-1 visa, or immigrant status. Goldman has been General Attorney at the Lab since 1977. He is in Bldg. 460, on Ext. 3324.



—photos by Rosen

United Way Representatives

Dept./Div.	Representative	Ext.	Bldg.
AUI	Monique Toler	5174	134A
AGS	Bill Fritz	3278	911A
HEF	Jim Briggs	7518	902A
AMD	Ed McFadden	4188	515
DAS	Jean Petterson	4224	475
Bio.	Sydell Lamb	3389	463
Cent.			
Shops	Deidre Seymore	5037	462
Chem.	Lucy Sanchez	4399	555A
C&P	D.J. Greco	7643	355
DO	Rita Kito	3320	460
Fisc.	Marge Stoeckel	2459	134A
Inst.	Barbara Kponou	4231	535B
MIS	Helen Jones	7791	459
Med.	Betty Heldman	3699	490
NSLS	Kim Holschuh	2839	510E
DNE	Jean Ramirez	2119	197C
Pers.	Frances Scesny	7516	185
P&GA	Carol Sokolow	2907	197B
Phys.	Sherry Reeve	2414	510A
PE	Arnold Benson	3256	422
	Tony Calligeros	2462	134C
Reactor	Lisa Seymore	4432	750
S&S	Linda Hanlon	2439	50
Staff	Garfield		
Serv.	Hawthorne	2340	97
S&M	Lou DiCarlo	2302	211
S&EP	Jim Gilmartin	4215	535A
TID	Mary DaCosta	7692	477B

BROOKHAVEN BULLETIN

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New Service From TIAA-CREF

About one month ago, employees received notification from TIAA-CREF of a new Allocation Change Service (ACS), available as of October 1, 1985. The new service permits participants to change the allocation of future premiums between TIAA and CREF annuities with one toll-free phone call. Before this, such changes were made by submitting a request to Payroll. Though Payroll is still receiving such requests, the procedure is being phased out, so everyone is asked to take advantage of the ACS by calling a dedicated, toll-free number, 1-800-842-2252, from anywhere in the U.S. Your first contact with the ACS will be with a recording; if you wait on the line, a representative will answer.

Equipment Demo

Dionex Corporation will present a seminar on recent developments in Dionex IC technology on Wednesday, November 6, at Berkner Hall from 9:30 a.m. until noon. An instrument will be available for demonstration. Samples are welcome. If you would like additional information, please call Wayne Heacock, (914) 485-4212.

Arrivals & Departures

Arrivals

Steven Divine Central Shops
Doug E. Canning AGS

Departures

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

John M. Doorhy Jr. Reactor
Charles Formosa Plant Eng.

On Site

Q: What's the nature of the work on Bell Avenue. And what's going on near Rochester Street?

A: Though the areas are separate, there's a connection — steam lines. Beneath BNL's streets, buildings, fields and parking lots lies an intricate system of steam lines that provide most of the Lab with heat and air conditioning. Work has begun on a project that will continue until early next summer, in which some of those steam lines will be replaced and some more added. Those being replaced date from World War II; those being added will allow the retirement of old boilers now providing heat in some outlying buildings.

The work will be centered in four major areas: the shortest, behind Bldg. 134; the longest, branching from Brookhaven Avenue, along Rochester Street to feed Bldg. 452 and Bldg. 479. Another steam line will go down Bell Avenue, past the Medical Building, then go north on Johns Hopkins Street to Brookhaven Avenue. The fourth will replace old steam lines in the core of the site, serving Bldgs. 179, 185, 194, 355, 426 and 464. In the first phase of this project manholes are being installed on Bell Avenue and Rochester Street.

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

AMD Course

Introduction to VAX DECcalc will be offered in two 1-1/2 hour sessions, Monday, November 4, and Wednesday, November 6, from 1:30 to 3:00 p.m. in the AMD Seminar Room, Building 515. The lecturer is Daniel Clemente.

VAX DECcalc is an interactive applications package for creating, editing and manipulating the electronic equivalent of an accountant's spreadsheet. VAX DECcalc executes under the control of the VAX/VMS Operating System and drives a VT100 or VT200 series or other similar terminals. It is easy to use and requires little computer experience.

For more information or to register for the course, call Ronald Wittlock at Ext. 4112.

Hospitality News

Various knitting techniques, which include basic stitches and pattern abbreviation, will be demonstrated by Rosie Antillon and Susan Sears at the Hospitality Committee's next morning get-together on Tuesday, November 5, at 9:30 a.m. at the Brookhaven Center.

We would like to have you join us for this interesting presentation. Wives of Lab employees, guests and visitors are welcome. Coffee, tea and danish will be served. Please come and bring the children. Babysitting will be provided free of charge.

Public Sale Of Motor Vehicles

Forty-three vehicles will be available for public sale. They may be inspected at Warehouse T-87 on weekdays, between 9 a.m. to 4 p.m., from October 28 through November 1.

Informal competitive bidding will open on November 12. Bid forms may be obtained at Building T-87. For further details, call Ext. 2302.

Cafeteria Menu

Week of November 4

Monday, November 4	
Cream of chicken noodle soup	(cup) .65 (bowl) .85
Swedish meatballs over yellow rice	2.40
Fried chicken finger basket	2.40
Hot Deli: Barbecue ham & cheese	(on bread) 2.25 (on roll) 2.40
Tuesday, November 5	
Turkey noodle soup	(cup) .65 (bowl) .85
Veal cordon bleu over rice	2.45
Chicken burrito w/hot sauce	2.40
Hot Deli: Grilled Canadian cheese sandwich	2.35
Wednesday, November 6	
Tomato beef soup	(cup) .65 (bowl) .85
Fettucini carbonara	2.45
Turkey pot pie	2.40
Hot Deli: Corned beef	(on bread) 2.25 (on roll) 2.40
Thursday, November 7	
Navy bean soup	(cup) .65 (bowl) .85
Beef Burgundy over noodles	2.45
Veal Parmesan w/spaghetti	2.45
Hot Deli: French bread pizza	1.65
Friday, November 8	
Cream of cauliflower soup	(cup) .65 (bowl) .85
Sweet & sour fish over rice	2.40
Baked macaroni & cheese	2.35
Hot Deli: Baked fish sandwich	(on bread) 2.35 (on roll) 2.50



Roger Stoutenburg

Valerie Miller, Medical, explained chromosome analysis to participants in the Career Day of Brookhaven Women in Science last Saturday. About 100 female junior and senior high school students participated, according to Victoria McLane, who organized the event. The students were very enthusiastic, and about three-quarters of them were convinced they were going to pursue a scientific career. The future scientists were able to speak to BNL women in science about their scientific work and career paths. Those BNL women who spoke with the students included: Frances Brown, Biology; Angela Boccio, Medical; Susan Eng, AMD; Sonja Haber, Medical; Louise Hanson, DAS; Elizabeth Jellett, Medical; Victoria McLane, DNE; Valerie Miller, Medical; and Eva Schwarting, DAS.

—BERA News— Swim Club

R/C Model Aircraft Club

The regular meeting of the R/C Model Aircraft Club will be on Tuesday, November 5, at noon in the cafeteria lobby. All interested are invited to attend.

Exercise Club

Membership is now open for the newly reorganized Exercise Club. Dues are \$10 per year. For more information, contact John Rubino, Ext. 3397; Mel Bonanno, Ext. 3082; or Rich Scheidet, Ext. 5284. Elections will be held Wednesday, November 13, at noon, in the gymnasium weight room.

Bowling News

Red/Green League

K. Riker bowled a 236, E. Sperry 224, N. Combatti 223, C. Bohnenblusch 208/205, H. Marshall 205, E. Sperry IV 201.

White League

High games were bowled by Jim Roesler 202, Rich Biscardi 197, Jean Stelmaschuk 177, Kay Conkling 171, Walter Gubler converted the 3-7 split.

Purple League

Rich Larsen had games of 217/210/629 scratch series, Mary Grace Meier 208, Pat Oster 207, Sharon Smith 207, Lee Barberich 196.

Swim Club

The BNL Swim Club will hold a clinic on the breaststroke on Thursday, November 7, at 5:15 p.m. at the pool. Toshi Sugama will demonstrate his medal-winning style and coach the session. The swim team will meet for a practice on Thursday, November 14, at 5:30 p.m. at the pool. For more information, call Marsha Belford, Ext. 3327, or Mark Catan, Ext. 5060.

BNL Singles Club

The monthly meeting of the BNL Singles Club will be held Tuesday, November 12, from 12:20 to 12:40 p.m. in the lobby of Berkner Hall. Two ski trips have been scheduled: January 24 to 26 at Lake Placid and February 21 to 23 at Mount Snow. See future Bulletins and your office bulletin board for more information, or contact Doris Terry, Ext. 2228.

Runners Corner

Two BNL runners entered and finished the New York Marathon last Sunday. Peter Boni, Physics, finished in 2 hours 48.40 minutes in 376th place out of 15,752 runners. Wen-Shi Yu, DNE, completed the marathon course in 3 hours 24.08 minutes, the 2,488th runner across the finish line. Both qualified for the Boston Marathon as a result of their times.



AACC HALLOWEEN COSTUME PARTY
SATURDAY, NOV. 2, 1985

be there!

D.J. "E.T."

ADVANCE TICKETS \$2.00 - AT THE DOOR \$3.00
 LOCATION: RECREATION HALL
 TIME: 9:00 P.M.
 19 AND OVER
 PRIZE FOR MOST ORIGINAL COSTUME

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.

LABORATORY RECRUITMENT - Opportunities for Laboratory employees.

2353 SECRETARY POSITION - Requires good typing and communication skills to provide secretarial support for the Fire Protection group and, on an as-needed basis, to other areas within the Division. Will be responsible for technical typing, word processing, phones and filing. Safety & Environmental Protection Division.

2354 FACILITIES OFFICE ASSISTANT - Responsibilities will include preparing and maintaining records, reports, work orders and files, performing computations, typing correspondence and reports. Typing skills and previous office experience required. Plant Engineering Division.

2355 TOOL CRIB ATTENDANT - Will be responsible for receiving and issuing supplies, material, tools, and equipment. Maintains necessary records and paperwork, assists in inventory and checks condition of items in tool crib. Knowledge of tools and equipment is desirable. Plant Engineering Division.

2356 SECRETARIAL POSITION - Requires excellent and extremely accurate typing skills. Previous experience in technical, tabular and statistical typing on a word processor is highly desirable. With general supervision, will type correspondence, reports and tabular material and maintain files. Department of Applied Science.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

2357 LAMP CLEANER (2 positions) - Plant Engineering, Division.

2358 CHEMISTRY ASSOCIATE - Requires BS/MS in organic chemistry or equivalent, and familiarity with modern synthetic and analytical methods. Will be responsible for the synthesis of precursors and labeled compounds as required for use in positron emission tomographic studies. Chemistry Department.

2359 MIS PROGRAMMER - Requires a BS or equivalent in computer science, or business administration plus a knowledge of Cobol language and 1-2 years related experience. HP3000 experience highly desirable. Responsibilities will include coding programs, testing of program logic, and preparation of programs for computer operation. Management Information Systems Division.

2360 MEDICAL ASSOCIATE - Requires BS in biology or equivalent experience. Will be responsible for the organization and analysis of data, preparation of reagents, operation of common laboratory equipment, and working with laboratory animals including maintenance and autopsy. Experience with a light microscope is essential. Work will include weekend and night duties when necessary. Laboratory course including cytogenetics and computer experience is desirable. Medical Department.

Autos & Auto Supplies

TRAILER - "Gloria sale," sleeps 6, little damage, inside immaculate, \$1,500. Ext. 2964.

80 MOPED - Puch, good cond., class B, \$350. 589-5980 after 6 p.m.

78 TOYOTA SR5 - new batt., brakes, high mi., body needs work, runs well, \$1,150. Ext. 2027.

76 OLDS - 4 dr., white, 350, low mi. Kevin, 589-8475.

75 FORD LTD - sta. wgn., good work car, \$500 or best offer. 924-7262 after 6 p.m.

71 BUICK LESABRE - a/t, p/s, p/b, a/c, \$400. 584-7750 after 6 p.m.

75 PLYMOUTH VALIANT - 6 cyl., rebuilt a/t, a/c, p b, p s, good cond., \$950. Ext. 2733 or 475-5448.

73 CHEVY - p/s, a/c, \$400. Jim, Ext. 3372.

81 CAMARO - excel. cond., T-top, very low mi. Ext. 4962.

78 CADILLAC - Fleetwood Brougham, like new, (4) tires, 195-75R14, \$10 ea., '82 Chevy Malibu Classic sta. wgn., \$4,900. 475-4596.

79 CHEVROLET CAMARO - white, p/s, p/b, cruise, spoiler, low mi., mint cond. Ext. 4432 or 727-1367 eves.

MOPED - Suzuki FA-50, runs, good cond., \$140. Xue, Ext. 4859.

74 WINNEBAGO - 40k mi., 22 ft., 318 cu. in. eng., sleeps 6, new tires, \$7,500. Ext. 4098 or 732-5696.

80 OLDSSTARFIRE SX - 2 dr., white, hatchback, 4 cyl., needs minor work, neg. 289-9238.

84 PLYMOUTH RELIANT K - a t, 4 cyl., p/b, am/fm stereo, 49k mi., excel. cond., \$4,600. Barry, Ext. 5624 or 727-5956.

74 FORD COUNTRY SQUIRE - sta. wgn., a/t, a/c, new exhaust & brakes, good cond., \$1,150. Don, Ext. 2050 or 289-7813.

73 PINTO - 4 spd., 50k, (5) new tires, 25 mpg., excel. mach., \$650; '72 Chevy Van, needs trans., eng. runs, make offer. Jack, Ext. 7527.

71 IMPALA - good eng. 475-3625, 7:00-8:00 p.m.

TIRES - (2) 165SR14 snows, \$20; BR78-14 on Ford Fairmont wheel, \$15. Ext. 2668.

75 TRIUMPH SPITFIRE - convert. sports car, excel. cond., 33k mi., best offer over \$2,000. 744-2169.

TIRE - steel-belted radial on rim, 75R14, good cond., \$10. Victor, Ext. 2395.

83 CHEVY PICKUP - p/s, p/b, a/t, 34k mi., orig. owner. 475-0532 or 736-7352.

76 FORD VAN - 351 V8 eng., a/t, Flares spoiler, sunroof, refrig., sink, toilet, bed, excel. cond. Ray, Ext. 3536 or 289-7615.

DUNE BUGGY - rebuilt eng., new clutch, shocks, brakes, top with side curtains; '72 Jeep Com-mando, 6 cyl., fwd. 399-3598.

82 MAZDA 626 - sport coupe, excel. cond., a/c, am/fm, alum. wheels, 40k mi., \$6,200. Ext. 3322 or 473-6027.

75 FORD LTD - 2 dr., a/t, p/s, p/b, \$975. 475-4394.

76 YAMAHA 750 - \$750. 363-7032.

83 HONDA 650CC NIGHTHAWK - like new, very fast, must sell, best offer. Bob, Ext. 3145.

74 NOVA - rebuilt 6 cyl. eng., a/t, runs well, body clean, dependable, \$900. Mike, Ext. 3464 or 737-1458.

82 OLDS OMEGA - a/c, p/s, p/b, p/w, am/fm, mint cond. inside and out, \$3,500. Gerry, Ext. 7544.

70 PONTIAC LE MANS - convert., 400, 4 spd., runs well, needs body restoration, best offer. Ext. 7562 or 744-0225.

78 CHEVY MONZA - hatchback, sunroof, am/fm stereo cassette, rebuilt trans., new tires, brakes, excel. cond. 751-7140.

77 DATSUN B210 - 4 spd., 4 dr., \$250. Ext. 2184 or 269-9836 after 5 p.m.

TRUCK CAP - for 6' bed, good cond., \$75. Steve, Ext. 2314 or 929-6877.

80 DELTA 88 - diesel, cruise cont., power seats, mint cond., needs motor, \$2,900. 286-0904 after 5 p.m.

77 HONDA CIVIC - rebuilt trans., good mech., hatchback, am/fm tape, \$690. Jack, Ext. 3164.

73 NOVA SS - very good cond., Edlebrook Manifold Holley 850, dbl. pumper, accel. ignit/super coil, headers, rebt. trans., Jetzon tires, sunroof, \$1,800. John, 286-8904.

75 280Z - 4 spd. trans., pressure plate and friction disc, \$100. Charlie, Ext. 4547.

TIRES - (2) snows, new, with rims, balanced for VW Superbeetle. \$70. Ext. 3701 or 7771.

80 RENAULT LE CAR - 46 K mi., clean, needs work, \$490. Ext. 4119 or 751-6342.

79 MAZDA RX7 - red, like new, \$4,500. 289-9152 after 7 p.m.

75 VW RABBIT - 4 spd., am/fm cassette, new exhaust, needs body work, \$350. 289-0494 after 6 p.m.

76 AUDI FOX - good for parts, \$250. 878-1178 eves.

80 OMEGA - 6 cyl., yellow/tan, 2 dr., hard top, 47k mi., excel. cond.; '60 Pontiac Ventura, antique white, good shape, runs well, 4 dr., 8 cyl. Ext. 2050 or 473-6432.

74 CHEVY NOVA - rebuilt, 6 cyl., good trans. 589-4327.

79 MERCURY COUGAR XR-7 - a/t, p/s, p/w, am/fm, leather int., tilt wheel; '67 Chrysler conv., new top, p/s, p/b, p/w, a/t, 383 V8. Tony, 698-9274.

76 CHEVY LUV - 4 cyl., am/fm cassette, tool boxes, \$1,800. 563-2751 after 5 p.m.

CAR RADIOS - (1) Ford, (1) VW, am, \$10 each, Mike, Ext. 2705.

81 RABBIT - diesel, 5 spd., am/fm stereo, a/c, good cond., \$2,800. 475-7445.

74 PLYMOUTH SATELLITE - p/s, p/b, a/c, 6 pas-senger, V8, 150k mi., runs well, \$750. Steve, Ext. 3100 or 878-4880.

76 BUICK SKYLARK - a/c, (2) new tires, new battery, V6, good cond., \$1,100. 567-3655 eves.

80 CHEVY MONZA 2+2 - hatch, new 4 spd., tires, brakes, reliable, 25 mpg., excel., \$1,395. 751-4822.

67 DODGE DART - 225 slant 6 eng., runs well, \$300. Ext. 7531 or 929-3550.

78 SUZUKI GS1000E - black, 23k mi., excel. cond., \$800. Ext. 4027 or 286-1121.

77 DATSUN B210 - good trans., must sell, new tires, best offer. Andy, 957-7742.

73 FORD PINTO - good cond., clean, 4 spd., am/fm stereo, must sell, all new parts. 226-1828 after 5 p.m.

81 ARIES K - excel. cond., new carb., \$4,500. Mrs. Grimes, 724-7800 days or 698-7471 eves.

73 NOVA 350 - 300 HP, built for racing, many extras; \$3,500. William, 744-2204.

81 PLYMOUTH HORIZON - 4 dr., 4 spd., \$2,000; '73 MG, runs well, needs some body work, best offer. 325-1298.

Boats & Marine Supplies

21' PRIVATEER - 1985, with 1985 150 HP Johnson, used very little, \$15,000. Ext. 4312.

22' O'DAY - 1982, 3 sails, VHF, elec. start, 7.5 Mercury, many extras, \$15,000. 698-8158.

26' CHRIS CRAFT - twin engine, sleeps 4, standup head, kitchen, dinette, good cond., \$5,800. Bill, 281-3624.

SUNFISH - 1980, galv. trailer, \$975. Ed, Ext. 4188.

16' 4 WINNS - 1983, V-Hull Bowrider, 120 HP Merc. cruiser, 15 hrs., full canvases, galv. trailer, power winch, garaged, \$7,800 firm. 286-8797.

19' SEEBREEZE - 60 HP Johnson, 1982 High-lander trailer, \$1,700. 732-8768.

30' ALUM. MAST - Hobbie Cat type, best offer over \$100, 1972 55 HP motor, doesn't run, best offer. Slim, Ext. 3084 or 472-0706.

MOTOR - 1978, Mercury, 115 HP, rings, seals, gaskets, rebuilt. Dave, Ext. 7921.

25' CRUISERS HOLIDAY - 1983, 260 Mercury, 110 hrs., full camper, options, sleeps 6, excel. cond., \$24,500. 585-8904 eves.

16' HOBIE CAT - trailer, double traps, race equip., excel. cond., \$2,100. 369-0432.

20' GARVEY - glass, clam boat, \$300. 589-4327.

21' CRESTLINER - 1977, 305 I/O, cuddy cabin, sink, head, stereo, VHF, radio, mint, \$16,900. 588-9278.

Miscellaneous

CRIB - complete, \$55; adj. walker, \$5; brass fire-place screen, \$10; bird cage, stand, reasonable. 286-0259.

FIREPLACE HOOD - matte black, easily installed, value \$600, sell for \$150. Frank Muller, Ext. 2747 or 563-3840.

REFRIGERATOR - Philco, apt. size, 1-1/2 yrs. old, \$100; chandeliers, many to choose from. Jake, Ext. 4532.

GE FREEZER - 16 cu. ft., upright, white, 3 yrs. old, excel. cond., \$200. Katherine, 281-8021.

BOY'S BIKE - Hi-Rise, Shimano, 3 spd., hub, excel. cond., make offer. 821-0354 after 6 p.m.

PING PONG TABLE - good cond. Dorothy, 744-9027.

ELEC. PORTABLE TYPEWRITER - Smith Corona, like new, cost \$218, sell for \$130. Annamarie, Ext. 2352 or 473-9016.

REFRIGERATOR/FREEZER - avocado, 18 cu. ft., side-by-side, \$200. 286-1214.

PORCH/FLOORING ROOM - alum., 30 ft. total length, no roof, \$225. Ed, Ext. 4188.

CANOPY BED - \$65, trumpet, \$50; ski boots, children's & adult's, assorted sizes, \$15-20. Jim, Ext. 3372.

PLASTIC POOL COVER - light, 20'x40', suitable for boat cover, \$10. Ext. 4680 or 286-1331 after 5:30.

DOUBLE BED - maple, with spring & mattress, \$200. brass pot rack, copper pots & bowls, \$100. Ext. 7225.

MEXICAN HAND CRAFTS - & blankets, Ext. 3755 until 5 p.m. or Ext. 3222.

WASHER/DRYER - piggyback-style, for house or apt. 924-3109.

ANTIQUE TABLE - oak claw foot, \$290. Ron, 289-1003.

STEREO CASSETTE DECK - Sansui, 4-band tuner, detachable speakers, full logic control, \$150. Rajiv, Ext. 5161 or 924-1460.

BMX BIKE - Supergoose, chrome frame, many extras. Ext. 4695 or 744-1917 eves.

BABY CHANGER - with folding drawers, like new, \$30. 751-1884.

FIREWOOD - split, cured, oak and cherry, over 1/3 cord, \$40. Tom, Ext. 4084 or 878-1060.

OAK BEDROOM SET - queen size, end tables, triple dresser, hutch, armoire, excel. cond. 281-5753.

VACUUM - Hoover, canister, 2 spd., attachments, 3.7 HP, good cond., \$90. 744-9677.

COMPUTER - Radio Shack model TRS80-MC10, micro-color, like new, \$45. Tony, Ext. 7772.

KITCHEN SINK - s/s w/Sears faucet, \$20; 4' movie screen, \$5; table saw, 7" Amer. mach. tool w/motor, \$50; heavy-duty hand truck w/hydraulic lift pan, lifts 300 lbs., 4 ft., \$75. Victor, Ext. 2395.

AMPLIFIER - Guild model, (2) 10" speakers, 70 watts, \$100, amplifier, Head Lab series L11, 200 watts, \$400. 475-7664.

SKIS - Lange boots, men's size 9, bindings, \$50. Bob, Ext. 7197 or 399-1679 eves.

TABLE SAW - 9" Craftsman with carbide saw-blade, excel. cond., \$160. Ed, Ext. 4768.

SEARS MATTRESS - queen size, 6", hi-dens. foam, good cond., \$90. 878-0898.

FUJICA CAMERA - 75-200 mm Vivitar Zoom lens, filters, \$175. 589-4589 after 6 p.m.

GREENHOUSE - poly-type, 22'x100' galv. pipe, boiler, fan and sprinkling system, \$3,000. Jim, Ext. 4040 or 289-0876.

SPACE HEATER - new, reasonable. 363-7032.

ELECTRIC TYPEWRITER - Smith Corona, new, 363-7032.

IBM-COMPATIBLE MONOCHROME CARD - and TTL monitor, \$75 each or best offer for both. Ext. 3388.

ELECTRIC WASHER/DRYER - Sears Kenmore, brown, works very well, Pierrick, Ext. 7591 or 736-0073.

DINING ROOM SET - 1925, mahogany, large table, (5) chairs, china cabinet, \$350. 744-3792.

FIR TREES - 2' to 5', need trimming, you dig, 3 for \$10; (7) golf clubs, \$12; Presto pressure cooker, \$10. 878-6637.

SOMMA WATER MATTRESS - full size, like new, uses reg. bed linen; no heater necessary. Bob, 722-3263.

DINNERWARE - Jyoto, fine china, serv. for 12, \$100; (2) lamps, marble column, 27" high, \$25 pair. Ext. 2827 or 423-8384.

SNOW THROWER ATTACHMENT - 32", Craftsman, for Sears tractor, \$25. Frank, 722-3887.

RANGE - double oven combo, coppertone, self-cleaning, GE Americana, \$60. Alice, 286-9483.

POWER TOOLS - assort. types of drills, sanders, scroll saw, mostly Sears. Mark, Ext. 5350.

ELECTRIC BASS - Lotus, 700B, black, long scale, \$175. Jeff, 654-1185 eves.

COLONIAL FURNITURE - sofa, rocker, chair, ottoman, pine frames, three side coffee tables, excel., \$1,500. 588-7989.

SOUND MOVIE CAMERA - Kodak Ektasound 160 movie outfit w/zoom lens and range finder, never used. Ext. 2091 or 422-2416.

SOUND SYSTEM - DJ use, speakers, mixers, power amplifier, microphone. Frank, Ext. 3120.

LUV BUGGY STROLLER - excel. cond., \$45. Jeanne, Ext. 7742.

TIME-LIFE BOOKS - (8) volumes on Vietnam war, \$80; (4) volumes on WW II, \$200. Wait, Ext. 5316.

IRISH-KNIT SWEATERS - hand-knit shipped from Ireland, \$100, order by Nov. 8 for delivery by Christmas. Dory, Ext. 3389.

Free

STEEL GAS TANK - 80 gal., good cond., you pick up. Slim, Ext. 3084 or 472-0706.

DOG - Shepherd, small, friendly, good watch dog, needs good home. Leroy, Ext. 5105 or 286-1615.

LARGE TWIN BED - and mattress, old but service-able. 751-3062.

Car Pools

MATTITUCK - 3 drivers want 4th. Ext. 3140.

SOUTHOLD AREA - or vicinity, needs rider. Ed, Ext. 3293 or 477-2880.

STONY BROOK/STRATHMORE - estab. carpool needs rider/driver. Ext. 4192.

Lost & Found

FOUND - eyeglasses, in Med. Dept. parking lot, John Weitz printed on eyeglasses with white Davis case. Ext. 3604.

Real Estate

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

For Rent

FARMINGVILLE - 1 bdrm. apt., 20 min. from BNL, \$450 mo. incl. util. & cable. 732-2141, 8 a.m.-2:30 p.m.

N. SHIRLEY - large studio, furn., kit., priv. ent., single non-smoker person only, no pets, security, 5 min. from Lab & stores, \$400 mo. incl. all, 281-8044.

SETAUKET - studio apt., priv. ent., walk to Stony Brook Univ., \$400 mo., incl. all, avail. Nov. 15. Lynn Maelia, Ext. 3372.

N. SHIRLEY - 4 mi. to Lab., immaculate, recently renovated small house, fully furn., \$500 mo., plus util. and sec., sm. family, no pets, Lab. employee, preferred. Ext. 4743 or 212-289-0386 eves.

E. MORICHES - sm. house, 3 bdrms., 2 baths, wood stove, garage, 1/2 block to bay, 1 yr. lease, \$680 mo. + util. Michael, Ext. 2081 or 878-9384 after 6 p.m.

YAPHANK - share house, washer/dryer, 1/p, 5 min. to Lab, \$250 incl. all. George, Ext. 4584 or Jack, 926-3661.

For Sale

S. JAMESPORT - 1/2 acre, private, short walk to beach, wooded, \$38,500. 727-7741 after 6 p.m.

BROOKHAVEN HAMLET - 12 acres, trees and shrubs, 14" top soil, large barn, (2) 4" wells, estate surroundings, terms. Jim, Ext. 4040 or 289-0876.

WADING RIVER - 3/4 acre, wooded, S. Wading River School Dist., terms avail., \$80,000. Ext. 7187.

ROCKY POINT - Custom Tides Country Cape, 4 bdrms., 1/2 with f/p, large eik., oak floors, natural woodwork, full bsmt., 1 car garage, treed 0.4 acres, covered patio, beach rights, \$129,900. Ext. 7644 or 744-27