BROOKHAVEN BULLETIN
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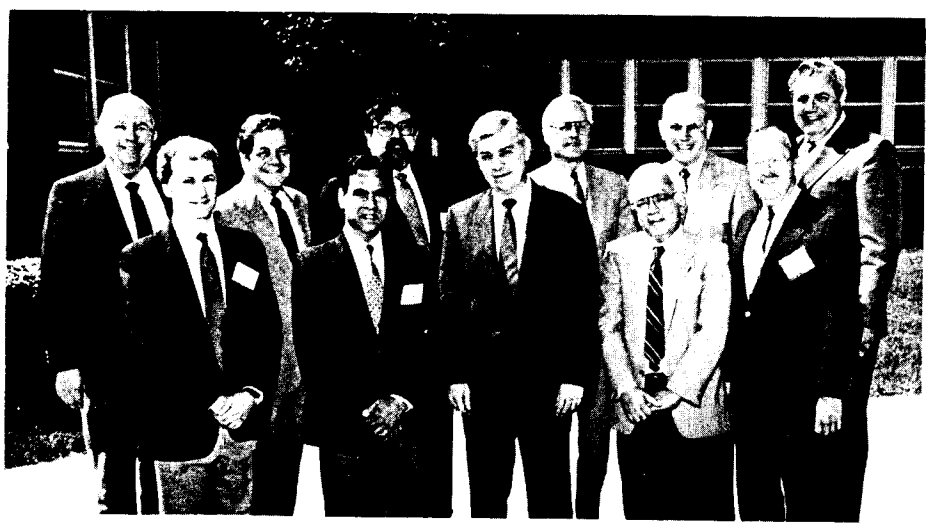
BROOKHAVEN NATIONAL LABORATORY

Users' Meetings Held for Two BNL Facilities



BLIP: A National Resource For Isotope Production

The Brookhaven Linac Isotope Producer (BLIP) is a national resource for the production and distribution of medically useful isotopes.

To ensure that this resource meets the needs of potential users, the BLIP Users' Committee of the Medical Department meets every two years in an advisory capacity to assess the facility and the isotope distribution process.

Two U.S. Department of Energy staff members attended the most recent meeting at BNL, on May 14: John Maddox (back, left) of the Office of Health and Environmental Research, and Donald Erb (back, right) of the Office of Nuclear Energy. Also present at the meeting were committee members: (back, from second left) Henry Wagner Jr., The Johns Hopkins Medical Institution, Steven Larson, Memorial Sloan Kettering Institute; Richard Reba, The George Washington University Medical Center; and Thomas Haynie III, University of Texas, M.D. Anderson Hospital; and (front, right) Henry Kramer, representing the U.S. Council for Energy Awareness. Standing in front (from left), are BNL's Leonard Mausner, who is in charge of radionuclide development and production at BLIP; Suresh Srivastava, who heads the radionuclide and radiopharmaceutical research; User Committee Chairman William Eckelman of the Squibb Institute of Medical Research; and BNL Medical Department Chairman Arjun Chanana. Not present was committee member Stanley Goldsmith, Mount Sinai Hospital.

NSLS: Source of Discussion

An overview of the present facility and its research, and a look to the future were presented at the 1990 NSLS Annual Users' Meeting, held at BNL on May 17 and 18.

Keynote speaker Donald Stevens, Associate Director of the Office of Basic Energy Sciences of the U.S. Department of Energy, reviewed the budget picture for the coming fiscal year from the Washington perspective. As he observed, while funding proposed by the President for such user facilities as the BNL's National Synchrotron Light Source (NSLS) and High Flux Beam Reactor is up, the final figures as approved by Congress could be higher or lower.

Looking farther into the future — as NSLS accelerator physicists are doing in their research at BNL's Accelerator Test Facility — NSLS users considered the possibility of a free electron laser as a fourth-generation source of more intense ultraviolet light, during talks presented by NSLS user Michael White of the Chemistry Department and NSLS accelerator physicist Li-Hua Yu.

Discussions of these and other talks spilled over into the lobby of Berkner Hall. Conversing there are: (photo right, from left) Hoydoo You, Argonne National Laboratory; and Benjamin Ocko, BNL Physics Department. Also seen are: (photo below, from left) Alex Darovsky, State University of New York (SUNY) at Stony Brook; Ben Chu, SUNY at Stony Brook; and Jerome Hastings, NSLS Department, BNL.

While the annual meeting drew over 400 NSLS users from BNL and other institutions, four workshops on specialized topics that preceeded the meeting attracted 250 participants.

The workshops focused on calculational methods in XAFS analysis; the use of electronic area detectors for protein crystallography at synchrotron sources; the use of synchrotron radiation in the study of magnetism; and materials science x-ray research at high energies.

Photos in this issue by Roger Stoutenburgh

New Uses for Polymers

Formed naturally, they are an integral part of all living systems — from human skin to the leaves of plants. Synthesized, they can be found in all plastics — from picnic utensils to vinyl seat covers.

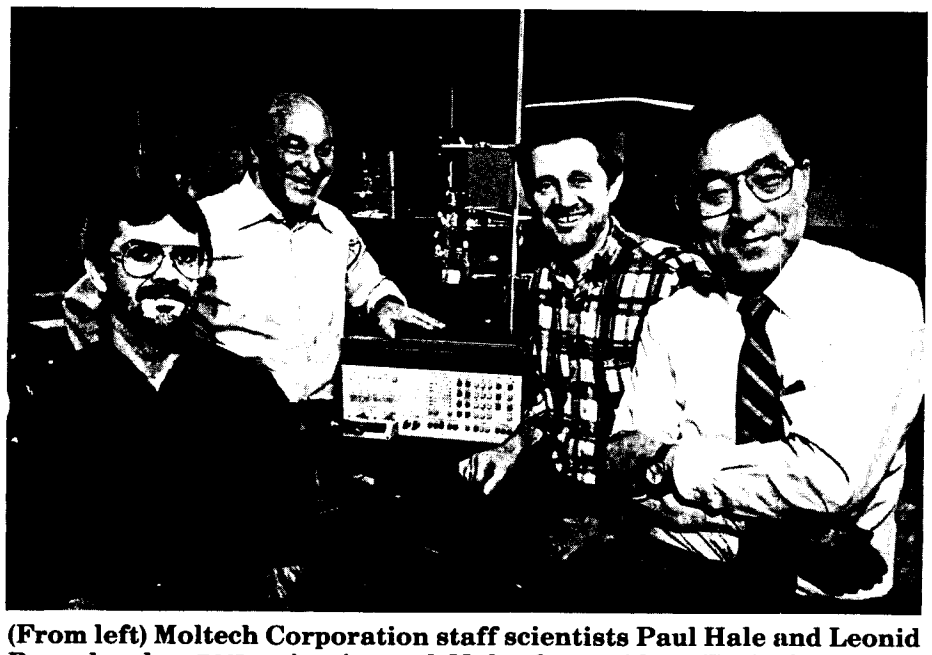
They are polymers — compounds formed by linking up as many as millions of simple molecules to form long, complex chains with unique mechanical and electrical properties.

To develop new applications for the electrically conducting polymers, Terje Skotheim, a physicist and material scientist in BNL's Department of Applied Science, recently founded a private company called Moltech Corporation. The company is part of the incubator for new businesses at the State University of New York (SUNY) at Stony Brook. It has seven full-time employees who are collaborating with several faculty members from SUNY at Stony Brook and Polytechnic University.

The new conducting polymer-based devices that Moltech is currently developing are: biosensors based on electrical wiring of enzymes using special conducting polymers; high storage capacity, rechargeable batteries using polymer electrolytes; and electrochromic windows, which automatically control the amount of sunlight that enters them.

Creating New Polymers

For almost a decade, Skotheim has been synthesizing and characterizing new electrically conducting polymers. Although polymers are considered efficient insulators, Skotheim and his collaborator, polymer chemist Yoshi Okamoto of Polytechnic University, have developed new classes of polymers that can conduct electricity.



(From left) Moltech Corporation staff scientists Paul Hale and Leonid Boguslavsky, BNL scientist and Moltech president Terje Skotheim, and Yoshi Okamoto, a collaborator at BNL from Polytechnic University and a Moltech consultant.

At BNL, Skotheim and his experimental team characterize polymers with the aid of the Lab's National Synchrotron Light Source (NSLS). By using x-ray absorption and x-ray diffraction techniques, the BNL scientists study the surface and structure of conducting polymers.

In addition to continuing his BNL research, which is funded by the U.S. Department of Energy and the Laboratory Director's Exploratory Research Program, Skotheim has started a second career as an entrepreneur. He may soon be marketing new uses for several polymers that he and Okamoto have synthesized at BNL and Polytechnic, and which Polytechnic plans to license to Moltech.

Enzyme Biosensors

Most enzymes manufactured by living cells are highly specific — they catalyze only one kind of reaction. For example, the enzyme glucose oxidase performs a reaction almost exclusively on glucose. A glucose-sensitive biosensor can be constructed by attaching glucose oxidase to a specially synthesized conducting polymer that is coated on an electrode.

When a drop of blood is placed on the biosensor electrode, the enzyme reaction produces a current that can be measured with the help of the conducting polymer. The magnitude of the current is proportional to the concentration of glucose in the blood sample. This technique, for example, would be useful in diagnosing and monitoring diabetes more accurately than current tests do.

(continued on page 2)

On the Tour Circuit

Throughout the year, the Tour Program run by the Public Affairs Office hosts groups of college students eager to learn about what's going on at BNL. Following a thank-you luncheon on May 15, some of the College Tour Volunteers gathered for this photo: (kneeling, from left) Gerhard Redelberger, George Taylor, Tom Dickinson, Ralph Fairchild, Gerry Van Derlaske, Mark Walker; (standing, from left) Dave Comstock, Peter Mendolia, Evelyn Ritter, Nelson Tyler, Janet Sillas, Arlene Clay, Betty Pergan, Lucy Sanchez, Richard Seebeck, Thelma Dawson, Tour Program Head Janet Tempel, Al Campbell, Mulki Bhat, Mark Culp, Michiko Tanaka, Barry Karlin, Elaine Lowenstein of the Tour Program, Peter Kohut, Vinnie LoDestro, Graham Smith, Frances Scheffel, Jackie Larrie, Violet Bezler, Sue Monteleone, Linda DiPierro and Rosemary Cohen.

Winners' Corner

Anyone who has ever hurried in to work through the main gate, only to sit fuming behind a delivery truck that needed exhaustive directions from the guard booth, has cause to thank Florence O'Brien.

She suggested that an additional sign should be placed at the Lab entrance to advise those needing information to keep right. By situating the sign far enough from the booth, the change can be made easily without disrupting traffic. Normal traffic is then waved past while a visitor gets information from the guard.

O'Brien's bright idea to prevent traffic buildup and thereby enhance safety at the Lab earned her $25 from the Employee Suggestion Program.

Arrivals & Departures

Arrivals

DeHuai Chen.....Physics
Armand M. DiFilippo.....Fiscal
Richard Maier.....Accel. Dev.
Thomas E. Stephenson.....Reactor
Raymond J. VanHouten.....Plant Eng.

Departures

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

Glenn A. Decker.....NSLS
Colleen E. Magee.....Sfgrds. & Sec.
Anna McManus.....Fiscal

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Bulletin readers will recall that **Barry Karlin,** a technical research associate in the National Synchrotron Light Source Department, earned $3,200 earlier this year from the ESP for developing a way to complete domestic travel vouchers by computer. Now Karlin has been awarded an additional $100 for developing similar software for foreign travel vouchers.

Karlin's program, which utilizes Lotus 1-2-3, has been in use Lab-wide for over a year and reduces the time required to calculate foreign travel vouchers by approximately one-half.

INVITATION

11th annual
Cocktail Party
sponsored by
Brookhaven Women in Science
Thursday, June 14
5:15 to 8 p.m.
hot & cold hors d'oeuvres
cash bar
For reservations,
at $6.50 per person,
contact Susan Hobbie,
Bldg. 902C, Ext. 7511,
before Monday, June 11.

A Fair Display of Science

On Saturday, May 19, the cafeteria tables at Berkner were laden — not with food for eating, but with food for thought, as over 330 science projects were displayed during the 1990 BNL Elementary School Science Fair.

Jessica Maier, kindergarten winner.

More than 80 Suffolk County schools were represented at the fair, which is organized annually by the Tour Program in the Public Affairs Office. The fair is open to students from kindergarten through grade 6.

Teams of Brookhaven scientists and local elementary school teachers judged the projects, and a prize was awarded at each grade level. In general, the judges found the caliber of the projects so high that numerous honorable mention ribbons were also given out.

The winners of the 1990 fair were:

Kindergarten — Jessica Maier, Brookhaven Elementary School, Brookhaven Hamlet, "Just Dyeing to Color Eggs."

Grade 1 — Matthew Pekar, Waverly Avenue School, Holtsville, "Are Seashells the Same All Around Long Island?"

Grade 2 — Drew Scordamaglia, Cherry Avenue School, West Sayville, "Temperature and Bouncing Basketballs."

Grade 3 — Dana Seyfarth, Andrew Muller Primary, Miller Place, "Colors."

Grade 4 — Courtney Moskowitz, Fort Salonga Elementary, Kings Park, "Some Original 'Litmus Test' Tests."

Grade 5 — Christopher Stahl, Coram Elementary, Coram, "How a Forest Grows Back After a Fire."

Grade 6 — Robert Franco, Saxton Street Middle School, Patchogue, "Photosynthesis: Environmental Effects."

Robert Franco, sixth-grade winner.

Polymers (cont'd)

Over 600 different enzymes can be used to construct biosensors using the conducting polymers that are now being developed at Moltech. Their applications include detecting the presence of pesticide residues in the environment, monitoring the freshness of meat and fish, and measuring the levels of alcohol and cholesterol in the blood.

Long-Lasting Lithium Batteries

In about two years, Moltech expects to complete an advanced prototype of a lithium battery that can be recharged more than 1,500 times and store several times as much energy as conventional batteries. The new batteries will contain polymer electrolytes that can transport lithium, rather than the cadmium or lead used in conventional batteries.

The polymer electrolyte, which is made by dissolving lithium salts in specially synthesized polymers, is the key component of these new batteries. Because of the unique properties of the polymer electrolyte, the lithium batteries will be lightweight and have a shelf life of a decade or more.

Electrochromic Windows

To control the amount of light, electrochromic windows can change their color by the changes in electrical potential. The concept of these windows is different from photochromic systems used in sunglasses, for example, which change their color in response to available light.

Electrochromic windows function with the help of lithium-conducting polymer electrolytes. The polymer film is sandwiched between two windowpanes that have been coated on the inside with a film. This film changes color when lithium ions move in and out. On a sunny winter day, for example, the windows can be made to stay clear, but on a sunny summer day they can be made to darken to conserve air-conditioning.

These windows can also be used in sunroofs and rearview windows of automobiles.

The potential uses for polymers are as varied as scientists' imaginations, and Skotheim plans to continue his studies of these versatile compounds. Currently holding a part-time position at BNL, Skotheim divides his time between Moltech and the Lab. About juggling his careers as scientist and entrepreneur, Skotheim said, "It's full of headaches, but it's exhilarating."

At BNL, Skotheim is studying different types of conducting polymers made into ultrathin, single-molecule thick films. These films can be analyzed using special techniques available at the NSLS. Using these single-molecule layers, a variety of model systems related to materials such as biological membranes can be fabricated and their functions studied.

This basic research is a collaborative effort with a number of university-based groups, including the City University of New York, Massachusetts Institute of Technology, SUNY at Stony Brook, and the University of Lowell, in addition to Polytechnic.

Skotheim hopes to see Moltech grow into a successful company as an example of technological spin-off from a national laboratory. "That will make everybody happy, the Department of Energy, Brookhaven, Polytechnic — and me," he said.

— Diane Greenberg

1990 Basketball Champs

Meet some of the Warriors, the team that captured the Basketball League championship this year: (front, from left) Troy Mayo, team co-captain and the league's most valuable player for the second consecutive year, and Charlie Edwards; (back, from left) Bill Gunther and Steve Springston. Warriors not pictured are: Kirk Biery, Wayne Cummings, Steve Cramer, Greg Mack (captain) and Alex Ratti.

Art Show at Berkner Next Week

Prizewinning paintings and sculpture from the South Bay Art Association Spring Show, to be exhibited in the Bellport Community Center over Memorial Day weekend, will also be shown by the BERA Art Society next week, in Room C, Berkner Hall.

This watercolor — *Green Vase*, by Susan Chrien — may be one of them. Chrien, a professional artist who regularly exhibits with the South Bay Art Association, also co-chairs the Art Society with her husband Robert Chrien, Physics Department.

The Art Show will open on Wednesday, May 30, with refreshments offered. It will extend through May 31 and June 1, from 11:30 a.m. to 1:30 p.m. daily.

Local Users Group

"Exploring RISC Workstations From the Users' Point of View" will be the topic of the next meeting of the Upton Local Users Group (LUG). It will take place on Wednesday, May 30, at 10:30 a.m., in Room B, Berkner Hall. Coffee will be available prior to the lecture.

Users are invited to share their experiences and applications using RISC stations, or to learn about them. Members of BNL's computer committees and vendor representatives have been invited to attend.

For more information, call LUG chairperson Zohreh Parsa, Ext. 4748.

Gym & Pool Closings

The gymnasium and pool will be closed for the Memorial Day weekend from Saturday, May 26, through Monday, May 28. They will reopen on Tuesday, May 29.

The gymnasium will be closed on weekends during the summer beginning Saturday, May 26. It will remain closed on weekends until Saturday, September 8, when the weekend gymnasium schedule will resume.

Radio Club

The Amateur Radio Club will meet in Berkner Hall, Room A, on Thursday, May 31, at noon. The agenda includes the current status of the club repeater, the spring session of amateur radio licensing classes, and the field day, which will be held at the Lab in conjunction with the Suffolk County Amateur Radio Club on the weekend of June 23-24.

All licensed radio amateurs who are employed at BNL, those wishing to obtain amateur radio licenses, and Lab guests are invited to attend. For further information, contact Andy Feldman, Ext. 3264, or Bob Bacharach, Ext. 7790.

Service Awards

The following employees celebrated their BNL service anniversaries during the month of May 1990:

35 Years

Dorothy G. Metz.....Staff Services

30 Years

Anthony R. DiPierro.....Plant Eng.

25 Years

Robert A. Brown.....Medical
Conrad M. Dabrowski.....AGS
Conrad F. Koehler Jr......Chemistry
Patricia E. Oster.....Accel. Dev.
Bruce A. Style.....Photo. & G. Arts

20 Years

Herbert J. Langenbach.....NSLS
Joan D. Perullo.....Staff Services
Sylvester C. Suda.....Nuc. Energy
Laura A. Zaharatos.....Dir. Off.

10 Years

Jean Bunselmeyer.....Staff Services
Lily Liu.....Photo. & G. Arts
Eileen G. Pinkston.....NSLS
Hugh D. Rhodus.....Plant Eng.

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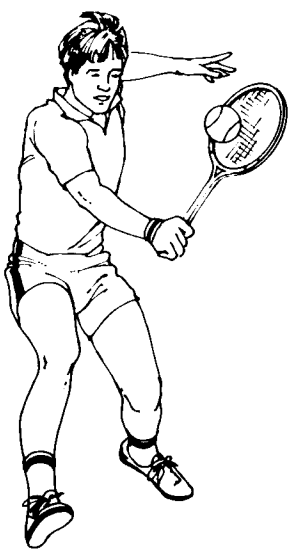
Tennis Anyone?



Court Reservation Systems

Two tennis-court reservation systems will go into effect on Monday, June 4; sign-up begins Friday, June 1. These reservation systems are effective weekdays, 11:30 a.m. to 2 p.m. and 4:30 to 7 p.m. The rules for court use are posted courtside and in the BERA Sales Office, Berkner Hall.

Under the **advance reservation system A,** three of the courts may be reserved for weekday play the day before play. If two players are not on court within ten minutes of the reserved time, the court reservation is forfeited. For this sytem, lunchtime play is limited to one hour for both singles and doubles.

For system A, reservations may be made on sign-up sheets kept at the BERA Sales Office from noon to 1:30 p.m. on the day before play; Monday play may be reserved on Friday. The person who signs up must be one of the intended players.

The **on-court scheduling system B** offers the three remaining courts on a first-come, first-served basis to players who sign the blackboard at courtside at the time of play. Under this system, lunchtime play is limited to 1½ hours for both singles and doubles.

For system B, reservation sheets will be posted courtside each morning, where players may reserve any open courts.

System A can be used only by group 1 of the priority players listed below. System B may be used only by group 1 and 2 players. Groups 3 and 4 may play during non-reservation times only:

Group 1 - Lab employees, including those with visiting and guest appointments, and BNL retirees.
Group 2 - Lab employees playing with family members or personal guests.
Group 3 - Immediate family members of Lab employees.
Group 4 - Personal guests of Lab employees.

Bus Trip to U.S. Open

Additional tickets must be sold before the August 30 trip can be finalized. Reservations, at $31 each, can be made at the BERA Sales Office.

Annual Tournament

The tournament will get under way on Saturday, July 21, and players can sign up at the BERA Sales Office beginning Friday, June 15. More details will appear in a later Bulletin issue.

Tournament play will take precedence during the weekends of the tournament. If there is enough interest, a tennis ladder will be run again this year. For more information, call Ed Gill, Ext. 7207.

Tennis Fun Day

The Tennis Fun Day is scheduled for Saturday, June 16, beginning at 9 a.m. The rain date is Sunday, June 17. For this tennis mixer open to employees, summer visitors and families, participants are asked to bring their own tennis balls. For more information, contact Neal Tempel, Ext. 3418, or Om Singh, Ext. 5332.

Tennis Committee

This year's tennis committee members are: chairperson Eena-Mai Franz, Gerry Bunce, Nick Combatti, Ed Gill, Ruth Ann Lutz, Marilyn McKeown, Ken Perkins, Carol Roberts, Steve Shapiro, Om Singh, and Neal Tempel.

Note to Diners

The Brookhaven Center will be closed on Sunday, May 27, and on the Memorial Day holiday, Monday, May 28. It will reopen the evening of Tuesday, May 29.

The Cafeteria will remain open over the holiday weekend, May 26-29, from 9 a.m. to 2 p.m. As usual, food service will be continuously available from the vending machines in Bldg. 912.

On the Menu

At the Cafeteria

Monday, May 28 Memorial Day	
Snack bar service — 9 a.m. to 2 p.m.	
Tuesday, May 29	
Soup: Vegetable	.75/.95
Entree: Veal Parmesan hero	3.10
Entree: Knockwurst & sauerkraut	3.10
Fitness: Baked scrod w/1 veg.	3.10
Carvery: Hot roast beef sandwich	2.85
Grill: BBQ burger w/fries	2.95
SPICE: Coke combo	
Wednesday, May 30	
Soup: Cream of spinach	.75/.95
Entree: Tortellini carbonara	3.10
Entree: Stuffed cabbage	3.10
Fitness: Vegetable lasagna	3.10
Carvery: Black Forest ham	3.10
Grill: Cheesesteak sandwich	2.95
SPICE: Spring chicken special	3.10
Thursday, May 31	
Soup: Chicken vegetable	.75/.95
Entree: Stuffed shells	3.10
Entree: Meat lasagna	3.10
Fitness: Vegetable platter	2.50
Carvery: Hot corned beef	2.85
Grill: Grilled cheese & bacon w/fries	2.95
SPICE: Baker's dozen sale	
Friday, June 1	
Soup: Seafood bisque	.75/.95
Entree: Prime rib special	3.50
Entree: Fried clams on a bun	3.10
Fitness: Catch of the day	3.10
Carvery: Hot turkey sandwich	2.85
Grill: Whaler's sandwich w/fries	2.95
SPICE: Soup & sandwich special	
Breakfast served w/coffee, 7:30 - 10:30 a.m.	2.65

Mon.: 2 eggs, bacon & pancakes
Tue.: Western omelet, French fries, toast
Wed.: Spanish omelet, home fries, toast
Thu.: 2 eggs, bacon, cheese on croissant, fries
Fri.: French toast, 2 eggs, bacon, home fries

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.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

4237. CABINETMAKER A - Under minimum supervision lays out, constructs, modifies and maintains furniture, laboratory equipment, and buildings and component parts. Works with wood, wood substitutes and combination materials, and flooring, roofing and wall materials. Uses hand, portable and fixed tools common to building construction and cabinet-making trade. Plant Engineering Division.

4238. SECRETARIAL POSITION (temporary) - Requires an AAS in secretarial science or equivalent relevant experience, and knowledge of PC-based word processing (WordPerfect preferred). Excellent secretarial, organizational and interpersonal skills are essential. Will be responsible for providing diverse secretarial support functions for the Employment Group. Personnel Division.

Motor Vehicles & Supplies

89 PLYMOUTH VOYAGER SE - p/w, p/l, ac, a/t, $10,500. Walter, Ext. 4958 or 821-9451.

88 TERRY RESORT TRAVEL TRAILER - 15', used 4 times, must sell, $7,500. 286-1008.

88 HYUNDAI EXCEL GL - h/b, 3-dr., white, 4-spd., am/fm cass., excel. cond., $3,500. Debbie, Ext. 2876.

87 DODGE 150 - 4wd, 4-spd., 318 V-8, 33x12.50 BF all-terrain radials, H.D. springs, am/fm cass., v.g. cond., $6,500. Carl, Ext. 4986.

87 WILDERNESS CAMPER TRAILER - 33', sleeps 6, 25' awning, queen bed, many extras, $12,200. 654-0810.

87 PLYMOUTH HORIZON - burgundy, a/t, ac, p/s, p/b, 4-dr., am/fm, tinted windows, 48k mi. 585-7987 after 5 p.m.

86 FORD TAURUS LX - 42k mi., 6-cyl., p/w, p/l, digital dash, excel. cond., $8,000. Scott, 331-1349.

86 DODGE 150 PICKUP 4x4 - V-8, a/t, custom paint, low mi., reg. maint., orig. owner, cap, bedliner, $9,750 or best offer. James, 289-2021.

86 SUBARU GL-10 - 4wd, turbo wagon, 5-spd., loaded, 1½-yr. unlimited mi. warranty, mint cond., $6,700. Henry, Ext. 4547 or 727-7227.

85 PONTIAC FIREBIRD - white, w/gray int., orig. owner, garaged, 43k mi., alarm, tint, T-top, am/fm cass., mint cond., $6,450. Joe, Ext. 7777.

85 VW GOLF - ac, 5-spd., 50k mi., $3,000. Courant, Ext. 4609 or 472-0510.

84 RENAULT ENCORE - 2-dr., blue, 5-spd., am/fm cass., ac, new tires, good cond., $1,000. 286-0913 after 6 p.m.

84 RENAULT ENCORE - 4-dr., 4 spd., 48k mi., runs well, best offer, $590. Wei, Ext. 4213.

84 FORD ESCORT - 50k mi., good body, interior & tires, new exhaust system, motor needs work. Frank, Ext. 2314 or 567-5131.

84 CUTLASS SUPREME BROUGHAM - 6-cyl., full power, am/fm, ac, 68k mi., excel. cond., no rust or dents. Irv, Ext. 2827 or 423-8384 eves.

84 CAMARO - V-6, 5-spd., T-top, am/fm cass., p/s, p/w, cruise, 49k mi., $3,400. 654-2617.

83 MITSUBISHI PICKUP - 4-spd., 84k mi., good trans., $800 neg. Joe, Ext. 3084 or 399-0731.

83 CHRYSLER LEBARON - 68k mi., excel. cond., $2,900. Bart, Ext. 3457 or 924-6761.

83 CHEVY S-10 PICKUP - 4-spd., long-bed, 67k mi., v.g. cond. 325-0447.

82 JEEP CJ7 - 34" tires, rear seat, console, sport top, push bar, 65k mi., excel. cond., $4,500. George, Ext. 5288 or Brian, 783-6614.

82 HONDA MAGNA MOTORCYCLE - V-45, 750cc, 1,900 mi., cover incl., just had major tune-up, must sell, moving, $1,750. 369-4129.

82 PLYMOUTH RELIANT WAGON - a/t, p/s, p/b, ac, cruise, no rust, must see, $1,200. 924-6129.

82 FORD MUSTANG GT - red, black int., T-top, orig. owner, $3,200. Ray, 878-1947.

82 HONDA ACCORD - h/b, blue, am/fm, 5-spd., 109k mi., runs well, body excel. cond., trans. changed at 75k mi., $1,500. Larry, Ext. 4295.

81 CHEVY MALIBU - 60k orig. mi., a/t, p/windows, ac, am/fm cass. radio, asking $1,950. 924-8143.

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

81 FORD ESCORT WAGON - blue, 81k mi., new tires, looks good, runs well, $1,100. Gene, Ext. 5614.

80 MERCEDES 240D - excel. cond., $10,000. Ext. 2303 or 732-3902 after 6 p.m.

79 PONTIAC FIREBIRD - 8-cyl., a/t, ac, p/s, p/b, 105k mi., sunroof, am/fm, many new parts, $800. MaryEllen, Ext. 2979 or 874-3291 ater 5:30 p.m.

79 HORIZON TC3 - new battery & exhaust, body good, runs well, needs clutch, $350. Ext. 7707 or 821-0125 eves.

78 TOYOTA COROLLA - 2-dr., 5-spd., 119k mi., am/fm, replaced trans., new brakes, runs well, $700. Yannis, Ext. 5324 or 3182 after 6 p.m.

78 DODGE HONEY RV - 23', 400 c.i.d., 46k mi., fully equipped, new radial tires, excel. cond., $11,500. Tony, Ext. 4095.

77 PONTIAC FIREBIRD - T/A package, 400 big block TH-350, alloy rims, excel. running cond., asking $3,350. Tim Jochen, Ext. 3357 eves.

76 FORD ECONOLINE VAN - raised roof, refrig., stove, bunk beds, sink, extras, old but runs well, make offer. Ext. 7699 or 821-1435.

76 SUZUKI MOTORCYCLE 250 - twin engine, 2 stroke, low mileage, runs well, $250. Ext. 7699.

75 BUICK SKYLARK - 6-cyl., a/t, good eng. & trans., needs some work, $300. Mary, Ext. 2926 or 281-0268.

75 DODGE - ac, runs well, asking $250. 281-7230.

74 GMC PICKUP - ¾-ton, a/t, good tires & trans., needs engine work, $200. Tony, 698-9274.

74 HONDA CB 360 MOTORCYCLE - 200 mi. on rebuilt engine, crash bar, sissy bar, new brakes & front tire, $450. Pete, Ext. 4100.

68 PONTIAC FIREBIRD - metallic jade green, steel tilt front nose, 400 cid, TH400, car show winner, $7,500 neg. Scott, 289-6892.

65 DODGE DART - slant-6 motor, good for parts, best offer. Frank, Ext. 2314 or 567-5131.

31 CHRYSLER - all original, 77k mi., rumble seat, excel. cond., must see. Ext. 3160 or 289-5704.

TIRES - 4, Yokohama, steel belted, tubeless, P-145-80R13, like new, $30 for 2. Tom, Ext. 2957.

VIKING POP-UP CAMPER - 21', queen-size beds, sleeps 8, good cond., $800. Dan, Ext. 4987 or 698-7322.

Boats & Marine Supplies

31' CORVETTE SLOOP - classic shoal draft, fiberglass, Atomic 4, wheel, 7 sails, fully equipped, reduced to $14,000. McGeary, 363-2796.

31' EGG HARBOR - twin screw Palmer engines, sleeps 4, flying bridge, complete new canvas & bimini, $2,000. Dennis, Ext. 4028 or 765-3012.

24½' THOMPSON EXPRESS CRUISER - 1979, 230-h.p. '89 O.M.C., outdrive, prop., manifolds, battery, VHF, loaded, more. $9,450. 567-1358.

24' SEARAY SUNDANCER - 1976, repowered 1989, new int., H.W., dockside power, frig., stove, Merc Cruiser o.d., very clean, $10,000. 654-2617.

22' RHODES - 1974, furling 150 Genoa, pop-top, 1986 Evinrude, 8 h.p., $3,500 neg. Ext. 3969 or 878-6580.

22' S&S SLOOP - shoal draft cruiser, fiberglass, teak trim, 9.9-h.p. Evinrude, electric, 4 sails, alum. spars, VHF, dodger, $4,200. Ext. 4266 or 286-0854.

21' MANATEE - I/O, c/c, perfect cond., 80 hrs., moving, must sell, $10,900. 567-6480 after 6 p.m.

19' O'DAY - 1986, all factory options, many extras, asking $6,500. 732-9091.

19' BOWRIDER CRUISER - 1972, w/ 1976 115-h.p. Johnson, Coast Guard pkg., trailer w/electric winch, $3,000. Frank, Ext. 2314 or 567-5131.

18' CHECKMATE - 1983, 170-h.p. I/O, full canvas, low hrs., great for skiing, $4,200. 754-0189, leave message.

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

17' FOLDING KAYAK - incl. paddles, spray skirt, rudders, good cond., $375. Bill, 286-7583.

17' SUNRUNNER - 1987, 131-h.p. Volvo i.o., V.H.F., cass., E-Z trailer, only 30 hrs. use., serviced, mint cond., $7,900 firm. 924-4276.

14' SUNFISH SAILBOAT - fiberglass, $275. Mike, Ext. 2500.

SUNFISH - 1974 hull, 1986 sail mast, booms, rudder, daggerboard, used 1 season, dagger-board dolly, $850. 286-1097.

KAYAK - touring, folding, 2 person w/accessories, $700 or trade for Hobie Cat. Jim, Ext. 4584.

OUTBOARD MOTOR - 1980, 7½-h.p. Evinrude, w/tank & cart, good cond., $175. Tony, Ext. 3194.

MERC PROP - new, 13x15, $55; OMC prop, recond., 13¼x17, $30; windshield, walk through, $125. Bart, Ext. 3457 or 924-6761.

OUTBOARD MOTOR - electric, Minn Kota, 28 lb. thrust, 5-spd., $100. Ext. 7235.

KAWASAKI 650 - 1987, w/trailer, mint cond., $2,500. 874-8646.

Furnishings & Appliances

AIR CONDITIONER - GE Supertheust model AD910FT, 9,750 Btu an hour, 115V, 10.9 EER, $350. Scott, 289-6892.

CRYSTAL BEDROOM LAMP - $35; bookcase, $20; Colonial rocker, $65; tamborine, $10; Hess truck, $20; Tiffany lamp, $20. Kathy, 744-2203.

REFRIGERATOR - Whirlpool, 18 cu. ft., almond, excel. cond. Ext. 4103 or 345-3923 eves.

PRINCESS DRESSER - antique, oak, oval mirror, $475; shower doors, never used, 1 silver, 1 gold, 30", Coral brand, $55/ea. Ext. 4547 or 727-7227.

SECTIONAL SOFA - Kroehler, 3-piece, turquoise, always covered, excel. cond., $300 firm. 744-2805.

MICROWAVE - Sharp 1.5, new, mint cond., ESP sensor, turntable & probe, $200. Lillian, Ext. 2772.

DRAPES - 3 pairs, formal fabric, ivory w/gold pattern, lined, 81" long, best offer. Gail, 298-5744.

AIR CONDITIONER - Panasonic, 6,000 Btu, 1988, EER 9.0. Cliff, Ext. 4713 or 874-9018.

FURNITURE - living room, dining room & bedroom sets, desks, chairs, lamps, bicycles, tools, misc., moving, reasonable. 475-1017.

DINING ROOM SET - light wood, good cond., asking $200; bedroom set, w/lamps, 2 night tables, 2 dressers w/mirror, asking $200. 281-7230.

DRYER - Westinghouse, electric, good working order, $50 or best offer. Ron, Ext. 2527.

KITCHEN SINK - cabinets & fittings, 5' long, $350 neg.; portable dishwasher, $73. Bill, Ext. 2378 or 758-3284.

Tools, House & Garden

ARC WELDER - Sears Craftsman, 130 amp, dual range w/helmet & cables. Scott, 289-6892.,

ROTARY LAWN MOWER - $50; hammock, new, $10; 2 white patio tables, $6; 2 yellow patio tables, $6; 2 chaise lounges, $6. Kathy, 744-2203.

LAWN MOWER - 20", push, good cond., $45. 654-2617.

CYCLONE FENCE GATE - w/2 poles, $20; cyclone fence hardware caps, connectors, orig. $80, sell for $30. Dan, Ext. 4987 or 698-7322.

LAWN MOWERS - Jacobsen, self-drive, $125; Wheeler, 3½ h.p., $75; Mastercut, 3½ h.p., $75; all 21" cut & rear-bag. Dan, Ext. 4987 or 698-7322.

CIRCULATOR PUMP - Grandfos UPS25-64F, $25. Joe, pager 0925 or 728-1859 eves.

WOOD LATHE - w/all accessories, excel. cond., $125. Bart, Ext. 3457 or 924-6761.

Sports, Hobbies & Pets

UPRIGHT PIANO - Miller, w/bench, good cond., needs tuning, asking $150. 929-3620, leave message.

CAMERA - Olympus Infinity, 35mm, new, $90. Jim, Ext. 4584.

GOLF CLUBS - Wilson, woman's, full set w/golf bag, $70. Kate, 727-8631.

DOLLHOUSE - wooden, 6-room, carpeted, painted, curtains, glass windown w/molding, $200. Kathy, 744-2203.

RABBIT CAGE - w/removable drip pan, good cond. Johanna, Ext. 5799.

SNOW SKI PACKAGE - man's size 11, woman's size 7/8, complete, $50/each. 654-2617.

RABBIT HUTCH - new, sturdy, $40. Sue, Ext. 7235.

BICYCLES - 2 men's, 5-spd., Royce Union, woman's 10-spd., Ross, cheap. Pat, Ext. 3807.

TANNING BED - 6', extra high bulbs, adjustable for easy storage, orig. $800, sell for $300. 289-7902.

MINIBIKE - runs well, good tires, new clutch, 5 h.p. engine, asking $125. Ext. 3848 or 281-9299 after 5 p.m.

PEKINGESE PUPS - male & female, AKC. Ext. 4597 or 878-1255.

Audio, Video & Computers

COLOR TV & VCR - VCR needs repair, $200; computer, C64 monitor, 1531 disk drive, printer, needs repair, $150. Walter, Ext. 4958 or 821-9451.

PLOTTER - HP multicolor, brand-new, $850. Ext. 7699.

WALKMAN - Sharp, w/am/fm & graphic equalizer, w/o headphone, 1 year old, excel. cond., $30. Manami, Ext. 3190.

Miscellaneous

CRUISE CREDIT - "Windjammer," $430 worth for $375, good till January 1992. Bill, Ext. 2377 or 698-1971.

BRASS/COPPER POT - $35; blue drapes, 45", $5; hanging lamp, $20; antique sewing basket, $10; woman's spring coat, $10. Kathy, 744-2203.

NECKLACE - 14k gold, 16", double heart w/wings, 3 diamonds, was ankle bracelet, $75. Ext. 2733 or 878-8491.

BABY STROLLER - $15; air conditioner, $50 or best offer. Li, Ext. 7604.

Free

CINDER BLOCKS - about 2 doz., used, flat, you pick up from Rocky Point. Jim, Ext. 2432.

KITTENS - adorable, eight weeks old, litter-box trained, white and gray female, bronze tiger male, black male. George, Ext. 4346.

COAL BIN - approx. one ton pea coal w/without bin, you pick up, must clear yard for landscaping. Joe, Ext. 5139.

PUMP - for well, new condition, ½ hp. 298-5744.

STEREO - 8-track player, am/fm w/2 speakers in 6' cabinet. 281-7230.

BABY CARRIAGE - Biltrite, needs cleaning. Bart, Ext. 3457 or 924-6761.

FIREWOOD - oak, you pick up. Frank, Ext. 3499.

KITTENS - 2 black, 2 gray, one tan. Carol, 472-8044.

Yard & Garage Sales

MASTIC - Sat. & Sun., May 26-27, 9-4 p.m., treasures of 3 families, 22 Kilroy Drive, 399-3048.

RIVERHEAD - Sat., May 26, 10-4 p.m., rain date 5/27, antiques, tools, kids' items, 7 Sebastian Drive, N. of Roanoke, no early birds.

Lost & Found

FOUND - gold earring, clip-on, in parking lot of Bldg. 510-515. Ext. 4103.

LOST - pinky ring, thin gold band, engraved w/ "B", during NSLS conference 5/17-18, in Berkner or dorm. Lorraine Krebs, (301) 467-7987.

Car Pools

BOHEMIA-OAKDALE-SAYVILLE - need 2 more drivers for car pool, also can meet at Exit 59 LI Expressway. Frank, Ext. 2314.

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

CALVERTON - 2-bdrm. townhouse, 2½ baths, w/w, appl., patio, deck, $750. 878-0874 after 5 p.m.

CORAM - 4-bdrm. ranch, 2 baths, 5 appl., patio, fenced yard, 17 min. from Lab., $935/mo. + util., Ext. 3791 or 928-7154 after 7 p.m.

BELLPORT VILLAGE - 1-bdrm. apt., upstairs, kitchen-l/r combo, full bath, w/w carpeting, $675/mo. all. + 1 mo. sec., single, nonsmoker, no pets. Jim, 758-0393 after 6 p.m.

MANOR PARK - 1-bdrm. apt., 7 min. to Lab., $600/mo. includes all. Frank, 399-1581.

MASTIC BEACH - 2-bdrm. cottage, screened porch, fenced yard, nice neighborhood, $700/mo. + util. 360-3803 eves.

MASTIC BEACH - 3-bdrm. house to share, 15 min. to Lab., $390/mo. all. Jonathan, 395-5221.

NORTH SHIRLEY - 2½-rm. furn. apt., bdrm., l/r, kit., w/w, priv. ent., 1 person, nonsmoker, no pets, 5 min. from Lab., $500/mo. pays all. 281-8044.

PATCHOGUE VILLAGE - 1-bdrm. apt., full kit., bath, priv. ent., cable, furn. or unfurn., $600/mo. + sec. 289-7902.

PORT JEFFERSON - bright, 1-bdrm. apt., large kitchen w/deck, l/r, hardwood floors, gar., walk to Village, trains. Steve, Ext. 5567, or Vinnie, 473-7474.

PORT JEFFERSON STATION - 3-bdrm. house, gar., a/c, w/d, avail. June 1, $850/mo. + util. Peter, Ext. 4094.

SOUND BEACH - 2-bdrm. house, wooded lot, close to Sound, MP SD, $875/mo. + util., avail. June 1. Erik, Ext. 4603 or 929-6945.

MANHATTAN - sunny studio on Upper East Side, sep. renov. kit., a/c, $750/mo. incl. heat. 331-3785.

For Sale

CENTERPORT - 200' waterfront on Northport Harbor, dock, 4-5 bdrm., 4 baths, 0.6 acre, $625,000. Bob, Ext. 4044 or 261-3890.

CENTEREACH — 4-bdrm. high ranch, l/r, d/r, eik, 2 full baths, fam. rm. w/fp, deck, pool, fenced yard, $143,900. 698-8514.

EAST PATCHOGUE - 3 bdrm., 1 bath, l/r, eik, appl., full bsmt., ag pool, deck, excel. location, P-M school district, $127,000, neg. 654-5609.

FLANDERS - 1-bdrm. cottage, vinyl siding, cac, cedar bathroom, all appl., lp heat, $79,000. Henry, Ext. 7828.

MASTIC BEACH - 3-bdrm. ranch, alum. siding, detached gar. & Florida rm. w/fp, 80'x100', low taxes, city water, walk to bay, rent while in contract. Sue, 395-3529, leave message.

MASTIC BEACH - 3-bdrm. tri-level contemp. on marina, deck overlooking Fire Island, lr w/ cath. ceil., fp, jacuzzi, Eur. kitchen, skylights, oak floors, Andersens, 100'x100', $159,000. Mike, Ext. 2500.

MATTITUCK - 3-bdrm. house, 1½ baths, fin. bsmt. w/fp & bar, ¾ acre, low taxes, $139,000. 298-8537.

MEDFORD PINES - 2-bdrm. ranch, new kit., all cedar Florida rm. w/skylights, woodstove, shop, solar HW, gar., Andersen windows, 9 miles to Lab., annual fuel bill $300, $125,000. 654-2617.

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.

MIDDLE ISLAND - Lake Pointe, 2 bdrm., cac, all appl., w/d, l/r-d/r area, gas heat, wood deck off master bdrm., pool, tennis, clubhouse, main. fee 85% tax ded., ask. $77,500, neg. Bob, 924-7316.

MIDDLE ISLAND - Fairview, 1-2 bdrm. condo, 1½ baths, upper unit, ac, balcony, pool, tennis, five min. to Lab, mint cond., extras, ask. $107,000. 345-5365 eves.

RIDGE - 2-bdrm. duplex, 1½ baths, eik, cac, w/w, all appl., 5 min. to Lab, $79,900. Erik, Ext. 2437 or 924-2898.

RIDGE - 3-bdrm. townhouse, 1½ baths, cac, w/w, all appl., upstairs newly carpeted, encl. redwood patio, storage room, low monthly main., 5 min. to Lab, price reduced to $93,000. Mary, 924-4328.

RIDGE/SCENIC HILL - 4-bdrm. Colonial, eik, d/r, l/r, w/w, gar., deck, ½ acre, min. to Lab, $148,000. 924-7520.

MANHATTAN - two 1-bdrm. coops, 400 sq. ft., 2 Ave., East 73 St., and East 84 St., $406 and $360 maint., avail. immed., $90,000; also will rent. Kamal, Ext. 2032 or 718-204-4772 eves.

MASTHOPE, PA - ½ acre property in Pocono community, suitable for building, lake and ski slope on site, + many extras, below developer's price, $21,000 neg. Pete, Ext. 4819.

PALM BAY, FL - 2-bdrm. condo near Melbourne, 2 full baths, l/r, d/r, kitchen, w/d, pvt. screened patio, completely furn., heated pool, near beach, malls, ask. $65,000. 698-8514 after 5 p.m.

TAMPA, FL - Paradise Village Mobile Home Park, 1982 Liberty mobile home 14'x56', 2 bdrms., 1 bath, fam. park, all appl., cac & heat, awning & shed, excel. cond. Glenn, 477-8699.

Wanted

LAWN MOWERS - gas engine, old, depending on cond., etc. Dan, Ext. 4987 or 698-7322.

HOUSE TO SIT - free, experienced, reliable, any period after July 20, enjoy peace of mind while on vacation. J. Allentuck, Ext. 2412.

GROCERY RECEIPTS - Finast & King Kullen for BNL food drive, ask others to save them. Send to Carole Kerr, Bldg. 460.

TUBED AUDIO COMPONENTS - working or not, by Marantz, Macintosh, Futterman, W.E., Brochiner, Acoustic Research or Altec. Jim, Ext. 4584.

PEOPLE TO JOIN - non-denominational Christian fellowship group, every Thurs. at noon in the Rec. Bldg. in the apt. area. Pete, Ext. 3297.

HOUSE TO SIT - July to Aug. 31. Xuan, Rm. #21, Ext. 3004, eves.

OUTBOARD MOTOR - Johnson/Evinrude, 9.9-15 hp., must be in good cond., Ext. 7697 or 689-2829 eves.

CARGO VAN - w/driver to move bed/mattress from Shoreham to Manhattan. 744-6874.

TRAILER - for 12' raft, Cliff, Ext. 4713 or 874-9018.

PLAYPEN - and car seat to rent or borrow, from June 10 to July 20. Harriet or Dave, 941-9022.

DRIVER - to drive 84 Ford Escort to Los Alamos after August 29. Xuan, Ext. 3004, eves.

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