

Students Arrive For Summer Research

The summer months at BNL were ushered in by the appearance of tennis rackets and college students at the Monday morning check-in at Berkner Hall for the 25th annual Summer Student Program.

A record high of 640 applications were received by the Office of Academic Relations from 186 institutions all over the United States. Based on selections by staff members, 55 juniors and seniors from 41 schools joined the Laboratory for 11 weeks.

Activities for the students during their first week on site included an informal reception, the safety orientation lecture and a tour of the AGS. At the reception Glenn A. Price, head of the student program, and R. Christian Anderson, Assistant Director, described life at Brookhaven and answered student's questions.

Mary Jordan, who just graduated from Tougaloo College, is one of the students in the program. She earned academic credit this past spring in the Brookhaven Semester Program working under Dr. Claire Shellabarger, Medical Department.

Jordan, who is interested in cancer research, applied to the Summer Student Program because she wanted to continue the study of tumors, begun this past spring, on the effects of diethylstilbestrol, a chemical which was used to fatten cows, on ovaries.

Having graduated *cum laude*, Jordan will attend the University of Mississippi Medical School in the fall. She wants to enter private practice after she gets her medical degree and possibly specialize in pediatrics.

Jane Gougen, a senior from Bates College in Maine, is working in biology for the summer. Gougen has been earning academic credit in the Bates College Short Term Program this past semester by working in the laboratory of Harold Siegelman, Biology Department.

During the past six weeks Gougen has been doing high pressure liquid chromatography to separate and purify algal bile pigments for Siegelman's research project. She will be continuing this work for the summer.

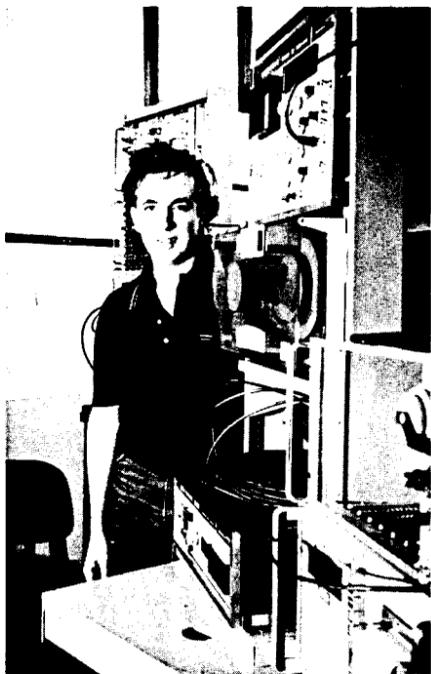


Jane Gougen, a senior from Bates College, begins the process of chemical separation using high pressure liquid chromatography apparatus. She will be working in the Summer Student Program under the direction of Harold Siegelman, Biology Department.

Gougen's primary academic interests are in English and biology. She chose to major in biology because she thinks it allows a more well-rounded education. "English majors never have a chance to do lab work, but biologists always have time to read when they leave the lab," she explains.

After graduating next year Gougen plans to take a year off and possibly go to graduate school, but she is not sure yet. This summer she hopes to get a better idea of what she wants to do. "BNL is food for thought... exposure to the research environment and a chance to apply academic learning," said Gougen. "I'm not really sure what I want to go into, and that's one reason I'm here."

Richard K. Lambrecht, Chemistry Department, will supervise the summer pro-



James Kelley, a senior from the California Institute of Technology is surrounded by some of the equipment he will be using this summer in the measurement of crystal impurity. He is working under the supervision of Richard Lambrecht, Chemistry Department.

gram work of James Kelley, a senior from the California Institute of Technology. Kelley, who majors in physics, will try to accurately measure damage done to silicon crystals by ion implantation. He plans to place crystals in the beam of positrons and then measure positron annihilation using photon detectors. "The positron, a positive particle, slows down and combines with an electron, a negative particle," he explained. "The opposite charges cancel each other and turn out two photons."

Kelley's work involves photon detectors which allow him to observe the rate, velocity, angle and ratio of photons to positrons. These factors vary with the extent of damage to the crystal and allow him to measure the purity of the crystal. This is his second trip to Brookhaven. In junior high school Kelley began doing outside science reading. When he came up with questions his teachers couldn't answer, they decided to send him to Brookhaven for the day to talk with Nicholas Samios, Physics Department.

Kelley received some research experience on a National Science Foundation project for high school seniors. Unfortunately, he was unable to complete any of the research because none of the equipment worked. This summer he expects things to be different. "If things go well and I get this equipment working in time, I'll be able to run an experiment," said Kelley. "I would like to get an experiment completed that will be publishable."

Price explained that students are assigned to specific staff members who supervise their work on a voluntary basis. "The Summer Student Program is not a training program to provide us staff, but a service to the scientific community," he said. "We try to make this experience as educational as possible." Some of the students assist on the staff members' projects. Others are asked to conduct independent research on a related topic.

Price explained that, "This is a very important activity of the Laboratory which has been going on for the last 25 years and will continue to function." He added that he would like to see the program increase to

(Continued on page 2)

Nominations Invited For Fermi Award

ERDA's General Advisory Committee has invited the public to nominate scientists for the 1976 Enrico Fermi Award. Nominations should be received by the Chairman of the General Advisory Committee by July 1.

The \$25,000 prize is given, with the approval of the President, for outstanding continued scientific and technical achievement in the development, use or control of atomic energy.

Scientists of any nation are eligible. The Award, first presented in 1954, is given only to one of international reputation. In the event that more than one individual is selected, the recipients share \$50,000.

Riding At Anchor

Almost three nautical miles off Hot Dog Beach is a free-floating, 8½-ton instrument buoy moored to a 2500-pound anchor on the ocean floor. How it got there involved the many talents of DAS staff, a skillful skipper and BNL riggers.

The buoy is on loan from M.I.T. and was trucked in three sections from Woods Hole, Mass. to BNL last January, the first time overland transport had been tried. Prior to that time, it was a long tedious haul over the water.

In the last few months under the skilled direction of Don Huszagh, chief engineer for the project, the buoy has undergone extensive repair and modifications. Among the important modifications was the insertion of a flanged joint in the lower quarter of the buoy to permit its partitioning into undamaged sections for overland transport. The central instrument well at the work platform was extended and capped with a waterproof door to simplify access and eliminate previous leakage problems which had caused serious instrument damage. As a safety measure, hand rails and foot gratings were added to the work platforms. Instrument supports were made removable or adjustable to minimize interference with future experiments using different instruments.

When everything was ship-shape, "Operation Transfer" began. Starting at 2:00 a.m., one chilly morning a few weeks ago the buoy was loaded in sections onto three trucks for delivery to a boat slip adjacent to the Shinnecock inlet. By dawn's early light the convoy had arrived at dockside, and it was afternoon before the buoy was assembled, inspected and pressure tests run on the buoyancy control apparatus.

By this time, the darkening sky and rough seas postponed the launching. Westhampton Town graciously gave permission to leave the buoy at dockside until the weather improved and also provided police protection.

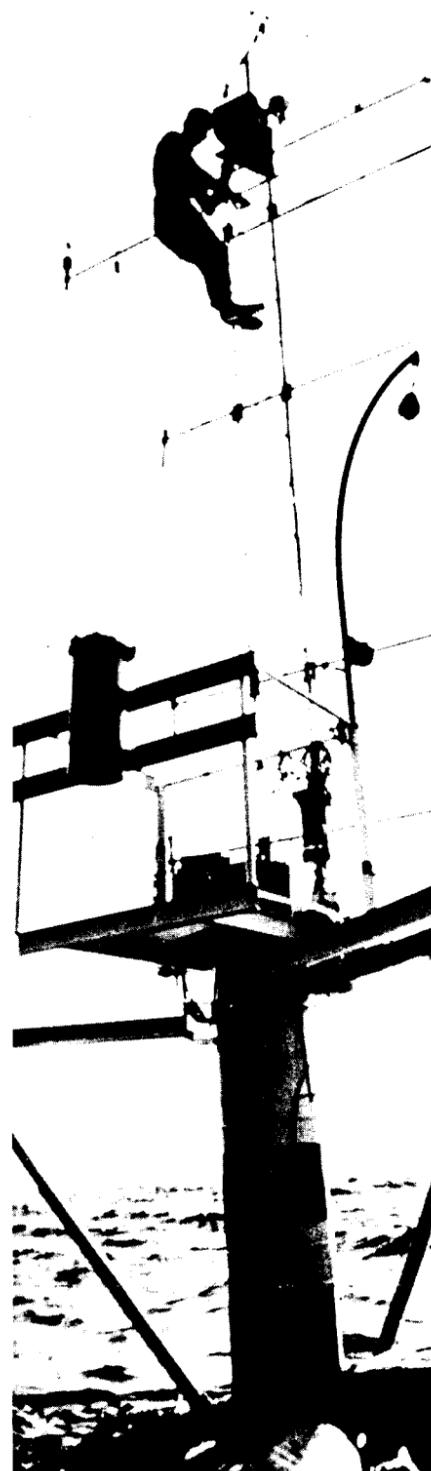
A few days later, Meteorology gave the go-ahead and the operation continued.

Launching a buoy of this size is a tricky business. An outside crew, hired for the occasion, used two motor cranes to reposition the buoy for maximum clearance in the boat slip and then lowered it into the water. The "BNL Navy" - an L.C.M. and the work skiff COBOLT - were at the ready. The heavy towing hawser on the L.C.M. was connected to the towing eye of the buoy and it was maneuvered out of the slip. The COBOLT took up a trailing position on the buoy to keep it from slewing wildly in the stiff current inside the inlet.



Don Huszagh, chief engineer for the project, checks the assembly of the buoy at Shinnecock Inlet.

— Photo by Fink



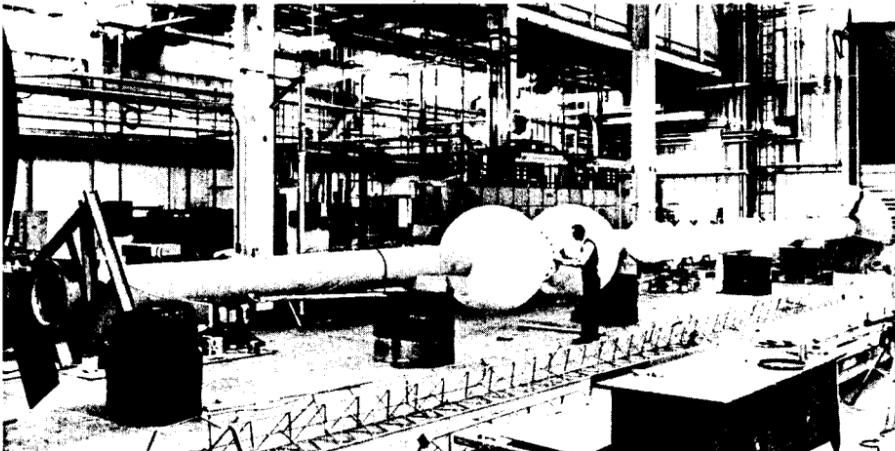
The buoy in place.

Don Huszagh lauded the expert navigation of skipper Wally Jahnig (DAS). "Using his engines and rudder with great skill," he said, "Jahnig threaded the treacherous inlet with the L.C.M. and its ungainly tow, without a single mishap."

Once the buoy cleared the inlet, everyone breathed more easily. When the anchorage site was reached, the towing rope was retrieved and the work skiff controlled the buoy. Using a hydraulic crane, the heavy mooring tackle was deposited over the starboard side of the L.C.M. Besides the 2500-pound anchor, the mooring tackle included an anchor swivel, 750 pounds of heavy chain, 110 feet of wire rope and 40 feet of light chain.

Cy Fink, who worked with Huszagh on refurbishing the buoy, and John McNeil, donned their wet suits and, working from a Zodiac rubber raft, connected the float-supported end of the mooring chain to the mooring bail on the buoy. When the floats were removed, Fink opened the sea cock of the lower buoyancy chamber and then

(Continued on page 2)



Cy Fink, operations supervisor, at work on the repair and modification of the 82-foot instrument buoy in the works area. — photo by Rosen

Buoy (Continued)
opened the air vents on the other end of the buoy.

At this point, boats and people got out of the way as the lower end of the buoy submerged, suddenly righted itself and then settled to the calculated waterline. Huszagh had made the calculations and there was general agreement in the DAS group that everything had gone exactly according to his predictions.

Rising 33 feet out of the water, the buoy can be recognized by the vermilion color bands painted on the tower structure. Down its length runs a black stripe and large numerals at one-foot intervals which depict the distance from the work platform to the bottom damper plate.

The purpose of this project is to provide a versatile offshore work platform for extensive meteorological studies in conjunction with simultaneous oceanographic studies. Now that all systems are go, meteorologists S. Sethu Raman and Robert M. Brown will analyze the air-sea data transmitted by the instrument buoy. Among other things, their findings will be important in determining the feasibility of floating nuclear power plants and will also help the National Oceanographic and Atmospheric Administration to prepare requests for environmental impact studies.



A BNL rigger unstraps the buoy before its removal from the truck at dockside.

— photo by Fink

Exhibit Honors Late Physicist

by Jean Burke

Recently included among famous memorabilia of the atomic age at the Smithsonian Institution in Washington, D.C. was an atomic beam apparatus, donated by the Physics Department at the request of the late Victor W. ("Bill") Cohen.

In June, 1974 the machine was dismantled at Brookhaven and sent with its blueprints to the Smithsonian. In the fall of that year, Mathew Rosso, a member of the Department of Applied Science, went down to Washington to re-assemble it. But it was not until the end of 1975 that the machine and accompanying documentation were ready to be put on formal exhibit in the Hall of Atomic and Nuclear Physics in the Smithsonian's Museum of History and Technology.

There it rest today in the company of such notables as one of the first cyclotrons, an early Van de Graaff accelerator, the first nuclear reactor used in teaching, an early approach to controlled nuclear fusion called a stellarator, and a portion of one of the most significant devices in the history of nuclear and atomic physics — the nuclear reactor which produced the first self-sustaining nuclear chain reaction in Chicago under the control of Enrico Fermi.

The documentation that accompanies Brookhaven's atomic beam apparatus was adapted from "The Nucleus as a Spinning Top," a Brookhaven Lecture delivered by Dr. Cohen. Paul Forman, a Smithsonian physicist was responsible for the adaptation and for the preparation of the whole exhibit.

The atomic beam apparatus, designed by Dr. Cohen, was in active use at Brookhaven from 1954 to 1969. It was used to explore the properties of radioactive nuclei using magnetic resonance spectroscopy. It also

enabled physicists to study the effects of an external magnetic field on the magnetic field produced by orbiting electrons within the atom.

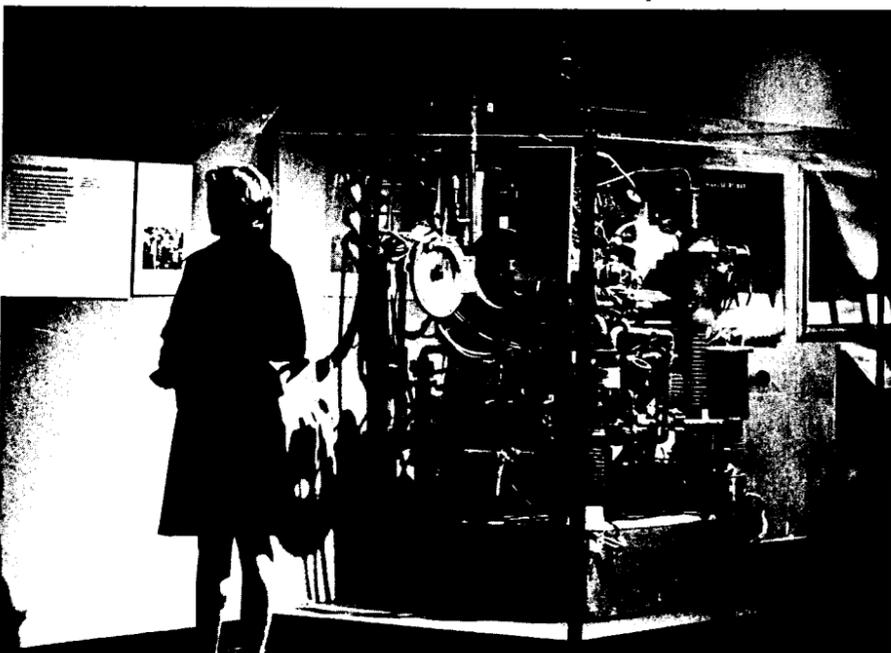
The prototypes for Dr. Cohen's machine were constructed and used at Columbia University in the 1930's by Nobel Laureate I.I. Rabbi and his students. Dr. Cohen was Rabbi's first graduate student. These prototype machines no longer exist, raising the historical significance of the atomic beam apparatus now on display at the Smithsonian.

On display, the atomic beam apparatus does not look exactly as it did when in use in the physics laboratory. The vacuum chamber wall has been cut away and replaced with glass to give the public a view of the source oven and the deflecting and precision field magnets. The end hatches of the apparatus have been melted away so people can look down the length of it. The various components are keyed by numbers and letters to the accompanying description.

When in use, radioactive nuclei were heated in the oven to produce a beam of atoms which were guided through the apparatus by the magnets. At a certain point, radio waves were introduced into the machine. By measuring the radio-frequency at which atoms passed through the machine, the spin and magnetic moment of those atoms were determined. The number of atoms emerging at a particular radio-frequency were counted by a particle detector, the third major component of the atomic beam apparatus.

Among the first persons to visit the exhibit shortly after it opened were Grace Cohen, Dr. Cohen's widow, and her son and daughter-in-law.

[Jean Burke, a former editor of the Bulletin, submitted this article from Washington, D.C. where she now lives.]



An atomic beam apparatus, designed by the late Victor W. Cohen of the Physics Department, is on formal exhibit at the Hall of Atomic and Nuclear Physics in the Smithsonian Institution.

S&M Driver Services

Effective July 1, all requests for Supply and Materiel off-site driver services should be placed through telephone Ext. 2301. This number will be used to accept all requests for pick-ups and deliveries and will be the dispatching point of S&M drivers. The use of BNL drivers and vehicles should be restricted to situations that preclude the use of normally available commercial services.

The Laboratory is a subscriber to the United Parcel Service, which provides very efficient and timely service within our tri-state area. UPS is able to effect twenty-four hour delivery in this area on many occasions and seldom exceeds a two-day turn around. Please review your requests to use BNL transportation to ensure that it is requested only when time is a critical requirement or when other methods of transportation are not readily available.

Arrivals & Departures

Arrivals

Lee Colsmann Accelerator
Alfred C. Tseung App. Science
David Vartsky Medical
Chung-Nan Wan Chemistry

Departures

Seigi Iwata Instrumentation
Masashi Iizumi Physics
Amelia Oropello App. Math.
Daniel J. Pisano, Jr. Physics

Student Arrivals (Continued)

the size of 100 students in the future if budgetary concerns permit.

The 21 female and 34 male undergraduates are mostly housed in BNL dorms. They receive a \$115 stipend per week and travel expenses. Funding for the program is provided by the Division of Physical Research, ERDA.

The Science and Engineering Opportunities Program for Minorities and Women, a similar operation which is funded by individual departments, also brought five female and six male college students to the Laboratory for the summer. Although this is the third year that the program has been sponsored by the Accelerator Department, the operation only became a formal program with a broad base of support this year. "We are trying to encourage minorities and women, who have had a harder time breaking into these fields in the past, to develop job experience and become intimately involved in the applications of their academic studies earlier in the process," explained Harvey Thomas, Assistant to the Director for Affirmative Action.

The Science and Engineering Opportunities Program is open to college students at all stages of their education. In addition to the undergraduates, there is one doctoral candidate from Rutgers.

— Clifford Cockerham

Pledge Now!

It would be pleasant if we could have a guarantee that serious illness would not strike us or a member of our family in the coming year. But life does not work that way.

One thing the BNL Blood Program does guarantee, if sufficient pledges are received, is a sufficient supply of blood when we or someone near to us is in critical need of it. Because of the fine response to the drive last year, all Brookhaven employees and their families who subsequently needed blood, received it. The "family" is extensive. It covers not only you, your spouse and dependent children, but parents, parents-in-law, brothers, sisters, nieces, nephews, grandparents, and grandparents-in-law.

The Bloodmobile will be on site this year Wednesday, July 30 and Thursday, July 1 and, so far, 570 employees have pledged to donate their blood on those days. Jerry Kinne, chairman of the drive, says that pledges will be accepted up to the last minute and indicates that we are now only two-thirds of the way home. About 850 pledges are required so that we may meet our quota. Last year 865 pledges were received.

The BNL blood drive is held before the July 4 holidays, a time of celebration and also of the greatest number of accidents when the demand for blood is at a peak.

Please return your completed pledge card to Jerry Kinne, Bldg. 460 and, if you have any questions, call him on extension 3334.



Helen Cherubini, Administrative Assistant to the Director, gives her pledge card to Jerry Kinne, chairman of the BNL blood drive which will be in operation at the gym from 10 a.m. to 3 p.m., June 30 and July 1. If you have not already done so, send in your pledge as soon as possible.

Bloodmobile Pre-Empts Gym Activities

The gymnasium will be closed for all athletic activities starting on Monday, June 28, due to the Bloodmobile visit to the Laboratory.

The regular gym schedule will resume on Wednesday, July 7, following the July 5 and 6 Lab holidays.

Cellist To Perform

The next program in the summer series presented by the BERA Concert Group will be a recital by the talented young cellist Yvonne Cable with David Alpher pianist. The program will begin at 8:30 p.m., June 29. Admission will be \$3.00 for adults and \$1.50 for students and persons over 65.

Miss Cable has appeared before in Berkner Hall and was well received. She has generally been praised by critics as a skilled and sensitive musician.

Diners Note

The Cafeteria will be open from 9 a.m. until 2 p.m. daily on Saturday, Sunday, Monday and Tuesday, July 3 through July 6.

The Center Club will be closed on Saturday, Sunday and Monday, reopening at 5 p.m. on Tuesday evening, July 6.

The Vended Food Service in Building 912 will be in operation continuously.

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Cash Withdrawal For SRA

TIAA-CREF has recently announced that effective June 1, 1976, it is now possible to have a partial cash withdrawal of SRA Annuity accounts. This new option permits you to withdraw a portion of your TIAA and/or CREF Supplemental Retirement Annuity provided that:

- 1) the amount being withdrawn from each contract or certificate is at least \$1,000, and
- 2) no other partial withdrawal has been made from the same contract or certificate during the preceding six months.

If you have any questions regarding this SRA option, please contact Personnel Services, Ext. 2881.

New Edition

General Electric *Chart of the Nuclides*, latest full-color edition with physical constants, conversion factors, and table of equivalents, is now available as a 48-page, 9x9" booklet. Price \$3.00.

Send ILR to: Betty Holland - 477A

Note: Wall charts, black and white copies, and earlier editions are no longer available.

June Service Awards

Twenty-Five Years

- Peter S. Gianombardo Supply & Materiel
- Carl J. Klamut Applied Science
- Seymour J. Lindenbaum Physics
- Stephen B. Lonski Safety & Env. Prot.
- Elinor F. Norton Chemistry
- Walter H. Tremel Applied Science
- Alfred P. Wolf Chemistry

Twenty Years

- Virginia Austen Physics
- Jack R. Hammond Plant Engineering
- Robert A. Mitchell Applied Science
- Louis K. Potter Applied Mathematics
- Rodney M. Richter Physics
- Anthony J. Romano Applied Science
- Richard Skelton Medical

Ten Years

- Richard J. Becker Chemistry
- George W. Cornish, Jr. Accelerator
- Robert W. Goodrich Applied Science
- Alfred W. Maschke Accelerator
- Ella McLean Photog. & Graphic Arts
- Michele Montecalvo, Jr. Safety & Env. Prot.
- James A. Morris Plant Engineering
- John P. Nicoletti Central Shops
- Jose Sanchez Plant Engineering
- Stanley L. Ulc Mechanical Engineering
- Rudolf Zantopp Safety & Env. Prot.

Attention — Theatre Group

The annual election meeting will be held at Stage II on Wednesday evening, June 30, at 8:00 p.m.

In addition to the election of officers, there will be a report on "The Devil's Disciple" production. The program will be readings from plays being considered for production in the upcoming season.

Soccer

John Skalyo

The N.Y. Oldtimers will meet the BNL Soccer Club at the BNL Recreation Park at 2:30 on Saturday, June 19. The game is an annual event and will serve as a tuneup for the start of summer competition in the Brookhaven Town Open Division Soccer League.

League games will be played Monday and Wednesday evenings during the month of July starting at 6:45 p.m. The first three games will be at the Tremont School grounds and the first game will be on July 5 against BELPAT.

Summer students and interested personnel are invited to contact Ralph Fairchild, extension 3649. Registration cards are required to be filled out by the first game.



Committee members of the Cooking Exchange group, who arranged a fine evening and lots of good food for over 100 people at the international dinner last week, are: (from left) Judy Mills (chairperson), Marjorie Stone and Elaine Lowenstein.



Margo Cooper sets out a ham loaf - one of her specialties.



Les Lawrence invites his wife Joan to sample a Scandinavian Rosette, his delectable contribution to the BERA-sponsored dinner on June 10.

IBEW Meeting

Local 2230, IBEW, will hold its regular monthly meeting on June 24, 1976, at 8 p.m. in the Knights of Columbus Hall, Railroad Ave, Patchogue. There will also be an afternoon meeting at 2 p.m. for shift workers in the Union Office at 31 Oak Street, Patchogue. On the agenda will be regular business, committee reports, the President's report and report of the Negotiation Committee.

Cafeteria Menu

Week Ending June 25, 1976

Monday, June 21	
Cream of Mushroom Soup	
Chicken a la King on Rice	1.10
Cheese Omelet & 1 veg.	1.00
Tuesday, June 22	
French Onion Soup	
Chinese Pepper Steak on Rice	1.25
Roast Fresh Ham & 1 veg.	1.30
Wednesday, June 23	
Split Pea Soup	
Breaded Flounder Filet & fr. fr.	1.15
Special	
Spaghetti w/Meat Sauce & Garlic Bread	
All You Can Eat	\$1.10 plus tax
Thursday, June 24	
Cream of Chicken Soup	
Beef Hash & 1 veg.	1.15
Veal Pattie Parmigiana & 1 veg.	1.20
Friday, June 25	
Manhattan Clam Chowder	
Broiled Filet & 1 veg.	1.10
Meat Loaf & 1 veg.	1.15

Tennis Team

The BNL tennis team is off to a fine start and currently holds first place in the Long Island Industrial Recreation Association B Division Tournament.

On June 8, BNL defeated Doubleday by a score of 44-17. Results of individual matches were:

Takagi and Rosenberg led	6-1, 6-7, 4-5
Kevey and Luhman won	6-0, 6-0, 6-2
Gibbs and Bhagat won	6-1, 6-1, 6-0
	— T. Koetzle

Summer Rec Reminder

The deadline date for program registrations is Wednesday, June 30.

The program will consist of two parts:
On-Site Play Sessions - Limited to children of on-site residents. Participants must be at least five years of age and teenagers are encouraged to register.

Swimming Classes - Instructions will be given to children of all Laboratory employees. Each child will be scheduled for one lesson each week for a total of eight lessons. The major objective of the program is to help the children improve their swimming skills as much as possible in the time allotted. American Red Cross certificates will be awarded to those who qualify. Children who attend classes regularly will receive a card recognizing their participation.

Information sheets and registration forms may be picked up at the Personnel Office in Building 185.

Softball News

Ed Taylor

League I

Ravens 10 (1-1) — Old Timers 9 (1-1)

The Ravens featured a well balanced hitting attack as they defeated the Old Timers. Bob Barone (3 for 3) and Jim Garrison (3 for 4) led the Ravens offensively.

Blue Jays 9 (1-1) — Hawks 7 (1-1)

Charlie Johnson had a 2-run homer for the Hawks in a losing cause. Mike Iarocci was the hero for the Blue Jays as he drove in what proved to be the winning runs.

League II

Six Pax 5 — Metallurgy 0

Six Pax 18 (3-1) — Metallurgy 8 (1-3)

The Six Pax swept a doubleheader from Metallurgy to remain tied for first place with the Dirty Sox. Vinnie LoDestro went 4 for 6 with a homerun for the winners. Chuck Carlson also had a homer and went 4 for 7 for the Pax. Lou Snead had a homer for Metallurgy.

Dirty Sox 6 — Bubble Boys 5

Dirty Sox 9 (3-1) — Bubble Boys 5 (1-3)

No highlights available.

League III

Circuits 26 — Sweathogs 2

Circuits 12 (4-0) — Sweathogs 6 (1-3)

John Schmidt had two triples, George Hughes had two doubles and "Woody" had a triple to lead the Circuits in their first game victory.

In the second game George Hughes and Mike Zepmeisel hit back to back homeruns and Art Lippman had a triple for the Circuits. Jeff Gaffney threw a runner out at the plate in each game for the winners.

Medical 9 — Phoubars 7

Medical 5 (2-2) — Phoubars 4 (1-3)

Tom Weldon had a homerun and played good third base for Medical.

League IV

Power Packers 12 (1-0) — Streakers 11 (1-1)

The Streakers scored five times in the top of the 7th inning to temporarily take the lead only to have the Power Packers score 3 runs in their half of the same inning to win the game. Sean Glynn and John Usher hit homeruns for the winners.

Charlie Browns 12 (1-0)

Nuke Powers 9 (0-2)

Mel Bonanno hit two homers (one was a grand slam) and had 8 R.B.I.'s for the Charlie Browns. Fred Hohmann also had a homerun for the winners. The Nuke Powers showed some improvement as they scored nine runs in this game.

League V

Diamonds 24 (3-1) — Odd 15 3 (1-2)

The Diamonds got homeruns from Ted Erickson, Gary Goldstein, Vito Manzella and Ken Asselta. They also got some hitting support from the ladies. Sue Munsterman, Pat Manzell and Nancy Erickson combined for 10 hits among them. Linda Asselta made three good catches in the field for the Diamonds.

Balls & Strikes 24 (2-1) — T.N.T. 11 (0-4)

The Balls & Strikes got all-around good hitting and good fielding to wrap up this win.

Oh Kays 13 (4-0) — Turkeys 8 (1-3)

The Oh Kays scored eight runs in the sixth inning to put the game out of reach. The victory was a full team effort.

Riverhead Run — Cycle Tour

The Riverhead Run is a standard circular route passing through Riverhead, North Fork, Shelter Island, and South Fork, for a total of 65 miles. On July 18, the BNL cyclists will join other L.I. clubs on this all-day tour.

This is not a tour for someone without previous experience. Only people who have cycled 20 or 30 miles or more should try it. For the real pros there may be a second, fast group, depending on attendance. Advance registration with Gerry Morgan Ext. 4841, Bldg. 815, is necessary.

— Gus Prince

Classified Advertisements

Placement Notices

Each week the Personnel Office lists personnel placement requisitions, currently being processed. The purpose of these listings is, first, to give notice of all non-scientific staff positions being filled and, second, to give employees an opportunity to request consideration for themselves through the Personnel Office. In filling vacancies, the Laboratory's objective is to give first consideration to present employees, as follows: employees within the immediate group having the vacancy, employees within the department or division, employees within the Laboratory as a whole.

For further information regarding a placement notice, or to request consideration for an available position, contact Supervisor, Personnel Placement & Development, extension 2874 or 2882.

131. SECRETARY - Temporary position. Director's Office.

132. WATER & SEWERAGE OPERATING ENGINEER - Under minimum supervision lays out, constructs or installs, repairs, maintains and operates water and sewerage systems, related facilities and auxiliary equipment. Application deadline: June 30, 1976. Plant Engineering Division.

133. OFFICE SERVICES ASSISTANT - Temporary position. Fiscal Division.

134. MATHEMATICS ASSOCIATE - Minimum BS degree or equivalent in mathematics/statistics and experience in the application of statistical methods for the review and assessment of nuclear safeguards research and development. Department of Applied Science.

135. HEAVY EQUIPMENT MECHANIC-OPERATOR - Under minimum supervision maintains, operates, and repairs all material handling, earth moving, road and ground maintenance, and similar equipment, including complete repair and maintenance of gasoline and diesel engines and the use of required machine tools. Temporary position. Application deadline: June 30, 1976. Plant Engineering Division.

Autos & Auto Supplies

70 PLYMOUTH - Baracuda convertible, runs well, stick shift, ps. \$700. P. Michael, Ext. 2264, 941-9055.

RIMS - (2) 13", \$3; (2) 15" VW rims, \$5. O. Booker, Ext. 4719.

73 PINTO - Good cond, 42,000 mi. \$1500. Nan, 665-5242.

69 DATSUN - 510 automatic, 4-dr sedan, economical, clean, good cond, original owner. 281-5532 after 6.

75 MGB - Red w/am-fm, tonneau cover, pirellies, twin SU's, excel cond, 20,000 mi. \$4500 firm. O.C. Jones, Ext. 2599.

67 CHEVY - Station wagon, good for parts, eng very good. \$90. Bob, Ext. 4652, 289-0357.

61 INTERNATIONAL SCOUT - 4-wheel drive, good eng, transmission & rear body bad, for parts only. \$200. M. Sautter, Ext. 4417, 924-3338.

75 HONDA - GL 1000, 4000 mi, mint cond w/extras, garaged. Asking \$2400. R. Weiss, 281-6627.

68 VW BUG - for parts, almost new tires, muffler system, fuel pump, front brakes, other useable items. \$200 or best offer. Sharon, Ext. 3995.

TIRES - (2) H78-15 4-ply polyester whitewall tires mounted on Mercury rims, under 1000 mi. \$50 for pair. Ed, Ext. 4636.

66 PONTIAC - GTO, green, black vinyl top, ps, pw, radio, good tires, excel cond. \$825. Lou, Ext. 4605.

69 PLYMOUTH - Fury II, V8, auto transmission, low mi, excel cond. \$625. Meyers, Ext. 4357 or 286-8379.

74 KAWASAKI - F250, street/trail, immaculate, 1900 mi. Asking \$675. Bob, Ext. 4411, 727-2346 eves.

GO-CART - W/o motor. 289-3114.

SNOW TIRE - Firestone, 650-13. \$20. 744-5871.

68 VW - Needs engine. Ext. 4379, 751-1209 weekends.

2 SNOW TIRES - D78-14, w/rims, will fit Dodge Dart, Gremlin & similar wheels, good cond. \$8 each or \$15 pair. John, Ext. 2242, 286-1348.

CADILLAC MANUAL - Manufacturer's 1968 shop manual, complete info plus AC. Orig \$5, asking \$3. Herb, Ext. 2488 during noontime.

14" RIMS - From Mercury model car, excel cond. \$4 each or \$7 for pair. John, Ext. 2242, 286-1348.

71 GREMLIN - 6 cyl, excel running cond, avail end of June. Make offer. M. Arik, Ext. 3034 after 6 & weekends.

71 PONTIAC - Grand Prix, all power accessories, am/fm stereo, excel cond. Asking \$2000. M. Kinney, Ext. 4316, 924-4536.

72 SUZUKI - 125 cc motorcycle. \$300. 653-5989.

TIRES - Used & recaps, most sizes, extra rims avail. Ken, 289-8212 eves.

65 OLDSMOBILE - 2-dr, V8, auto, ps/pb. Asking \$125. Ext. 2434.

TRAVEL TRAILER - 16', completely self-contained w/extras, clean. \$2195. Jim, 669-6687 weekdays after 6.

74 DATSUN - 610, 4-dr sedan, a/c, am/fm, reclining bucket seats, 110 hp, new steel radials, excel cond, must sell. \$2950. 744-2404.

66 CHECKER MARATHON - New tires. \$300. Ext. 3688, 363-7032.

71 GREMLIN - 44,000 mi, ps/pb, a/c. \$925. Ext. 3688, 363-7032.

BOOKS-BODY - And chassis parts, 1950 olds. \$5 each. 981-1195 after 5.

72 HONDA 70 - Road & trail bike, low mileage, good cond. Ext. 4132, 924-4328.

Boats & Marine Supplies

PROPELLER - PJ-19, 9"x9" for Johnson & Evinrude engines, 15-25 hp, good cond. \$7.50. Bill Espensen, Ext. 3992.

28' LUHRS 75 - All glas, FB duel control, VHG, CB-DF, electric compass, trim tabs, sleeps 4, FWC, twin diesel, 120 hrs. 727-7515.

13 1/2' BLUE J - Sailboat, fully equipped, w/Cox tilt trailer, read to sail. \$525. Richard, Ext. 4396, 288-2457.

24' RAVEN - Sloop, centerboard, ss rigging, dacron sails. Asking \$1000. Ron, Ext. 4592, 928-1899.

16' WHITE LAPSTREAK - 40 hp Evinrude, used only 30 hrs, Tee-Nee tilt trailer, navy top, lights, anchor, extra gas tank. \$800. Michalovski, 929-4655 eves.

17' SAILBOAT - Fiberglass, Mobjack class, high performance planing hull, completely equipped for racing, sails, spinnaker & trapeze, w/trailer. Asking \$1100. Joe, Ext. 4069 or Ray, Ext. 3649.

17' TIGER CAT - Fiberglass catamaran. \$500. John Evans, Ext. 4321, 286-2247 eves.

SAILBOAT - H-15 fiberglass, aluminum mast, dacron sails, all good cond. \$900. Ext. 4703.

BOSTON WHALER SQUALL - 9 1/2' sailing dingy, complete w/sail, excel cond. \$300. Ext. 4739, 475-1494.

SUNFISH - Fiberglass, in good cond. \$400. Ext. 3765, 744-5079.

FLYING DUTCHMAN - Beautiful, ready to sail, reasonable. Elliot, 363-6596.

Miscellaneous

HELMET - Motorcycle safety helmet, green, \$9; Philips stereo record player, 13 yrs old, ideal for child, any reasonable offer. Bob, 744-7170.

MEN'S BICYCLE - 25" Raleigh grand prix, 10 speed. \$125. 473-0178.

SKATES - Roller rink, ladies Arrow, all leather, size 8, like new w/metal case. \$20. Steve, Ext. 3469.

BICYCLE - Girl's Raleigh chopper, 3-spd, banana seat, used very little, excel cond. \$81. Bob, Ext. 4637, 692-8659.

DRUM SET - 4 piece blue sparkle w/cymbal & foot pedal, snare, bass, small tom tom. \$90. Ext. 4758.

BICYCLE - 20", 3-spd Columbia girl's bike, foot & hand brakes, baby blue, excel cond. \$55. Ext. 4758.

HALL RUNNER - Colonial, varigated colors, 17'7", good cond. \$110. Ann, Ext. 3143.

SONY RECORDER - Stereo, reel to reel, model TC-530, excel cond. \$75. Ann, Ext. 3143.

POTTER EVERGREENS - About 16" tall, \$1.75 each; potted lily of the valley plants, 20 for \$1. 727-1617.

LAWN SWEEPER - \$8; lawn fertilizer & lime spreader, \$3; plumbers folding pipe vise, \$20. 727-1617.

OLD FASHIONED - Built-in iron board & sleeve board, \$8; Sparton radio, 1940, mahogany, s.w., police & automatic 78 record player, \$25. 727-1617.

TAPE DECK - Grand, 8-track, almost new. \$40. Gus, Ext. 4810.

GE WASHER - Gas dryer. \$125. Gerry, 399-1703.

HEADPHONES - Royal sound, hardly used, similar to Koss HV-4A's. \$25. 286-0384.

TENNIS RACQUET - Head Competition w/Wilson Vantage II strings. \$30. 286-0384.

MEDICINE CABINET - Oval gold framed, 19x27, requires approx 14x18 recessed wall opening, new in carton. Was \$59, asking \$30. Ext. 3488, 924-4143 after 6.

TRAVEL TRAILER - 1970 Shasta 18', sleeps 6, tandem wheels, fully self-cont, extras. Asking \$2000. Pete, Ext. 3254, 281-0889 after 5.

ADOPT GANDOLPH - 2 yr old male dog, tan & white, good w/children, sweet tempered, housebroken. 473-7379.

BEDSPREADS - 2 kingsize, 1 wash & wear, \$20 & \$15; elec fans, (2) 20", 2 spd, \$10 & \$7. Ext. 4362.

DRAPES & BEDSPREAD - Soldier boy spring, double bed spread, 40"x60", drapes, \$10; 2 matched single spreads. Ext. 4362.

CB RADIO - Midland, 6 channel w/crystals, excel cond. \$50. Hank, Ext. 3935.

DANISH SECTIONAL - 2 piece, 2 chairs, table, excel cond. 744-7399.

DINETTE SET - Table & 4 chairs. \$10. 475-1844.

TAPPAN RANGE - Built in type, oven needs some minor work, best offer. 475-1844.

PLANTS - Shasta daisy, fresh dug large plants. 754 ea. Fred, Ext. 4613.

VIKING II - W/122 VFO Hammarlund HZ 140 & speaker, 2 Dewald CB sets & other ham gear. Fred, 698-0373.

RIDING LAWN MOWER - 6 hp, new grass catcher, colonial couch; old TV; wooden storm windows, free. 286-0376.

FREE KITTENS - Ext. 3034, after 6 or weekends.

POOL PUMP & MOTOR - \$10. Tesla, Ext. 3284.

PING PONG TABLE - Includes, net, 4 paddles, balls. Asking \$30. Bruce, Ext. 4022, 744-1786.

MARBLE DECOR STONES - Large, 50 lbs for \$1. 500 lbs to sell. Bruce, Ext. 4022, 744-1786.

POLISHER SHAMPOOER - For floor or rugs, Sears model 1200, 2 spds. \$12. Ext. 4240.

OFFICE TYPEWRITER - Table, by Nat Cash Register, 24x43", fully enclosed, 2 tone, new cond. \$35. Ext. 4240, 286-0295.

MISC FURN - Large old pedestal ext dining table, occasional tables, chairs, chest of drawers, etc. Osgood, 286-2561, Ext. 3978.

HI FI COMPONENTS - Dyna mono, fm tuner, pre amp, 40 watt amp, Bozak speaker. Osgood, Ext. 3978, 286-2561.

ROTOTILLER - Sears 4 hp, motor needs work, cheap. Osgood, Ext. 3978, 286-2561.

SHREDDER - Sears 6 hp, little used, \$100. Osgood, Ext. 3978, 286-2561.

SEARS HUMIDIFIER - 30 gallon, automatic humidistat. \$25. Osgood, 286-2561.

ARMSTRONG FLUTE - \$125 w/case. Oscar Sanchez, Ext. 3084, 878-4513.

BASS GUITAR - Gibson EB-2, elec w/case. \$150. Oscar Sanchez, Ext. 3084, 878-4513.

PACHYSANDRA - Good ground cover. 50 plants for \$5. Peter, Ext. 2540.

HOOVER DRYER - 110 V, apt size. good cond. Roger, Ext. 3817, 929-6044.

SLIDING GLASS DOORS - 6 ft wide, complete w/2 drs, frame, screen, lock & key, excel cond. \$65. Dick, Ext. 3860.

CORNER DESK - 5' baseboard heater; dining rm set. Ext. 3688.

LEICA LENSES - Screw mount, Summaron, 35mm, f3.5, wide angle; Summitar 50mm, f2. \$60 each. Frank, Ext. 2410, 281-7113 eves.

BOY'S BICYCLE - 1972, Raleigh Record, 10-spd, 27" wheels, 19 1/2" frame, white. L. Phillips, Ext. 4235.

LAWN MOWER - 24", power, good cond. \$25. Frank, 475-8187.

Ads left out of this issue because of lack of space need not be re-submitted in order to run in next week's issue

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 Sale

SHOREHAM - Cape Cod, 3 bedrms, den, living rm w/fireplace, dining rm, 2 baths, w/w carpeting, s/s, 2 car garage, 1/2 acre, beach rights. \$60,000. 744-8949.

FARMINGVILLE - 3 bedrm, split-level, in ground swimming pool, w/w carpet, finished basement w/many extras. Also willing to rent. Occupancy August, flexible. 698-9564.

YAPHANK-MIDDLE ISLAND RD - Large custom built home, 2 1/4 acres, 3-4 bedrms, den w/fireplace, basement, screened porch, many extras. Asking \$75,000. Ext. 4054, 924-3014 eves & weekends.

MANORVILLE - 5 acres, country style 4 bedrm Cape Cod, living rm, eat-in kitchen, full basement, enclosed back porch, 2 car garage, separate cottage, 2 storage bldgs, beautiful landscaping, 10 mi from Lab. 654-0863, 475-9480.

E. PATCHOGUE - Victorian 10-room colonial, 1 + acre, 2-car garage, formal dining, fireplace, rock garden, gazebo, full basement. 475-0168.

CLEARWATER BEACH - 100'x150' bldg plot near Gardiner's Bay, East Hampton Township, walk to private beach, marina rights. \$13,200. Ext. 3469, 281-4371 after 6.

MIDDLE ISLAND - Custom Cape, 6 min to Lab, shake shingles, garage, full basement, 5 rms and bath, 1/2 acre, back fenced. 924-8813.

STRATHMORE RIDGE - Unusual 4 rm ranch, w/w carpet, cent a/c, all appl, priv sunny location. \$28,000. 924-8274.

CORAM - 4 bedrm colonial, 1 1/2 baths, lg eat-in kitchen dining, s/s, full basement, garage, patio, 1/2 acre, treed/landscaped, neat and clean. 698-2030.

1 ACRE POCONOS - Water, ele, horseback riding, skiing, swimming, tennis, priv community, gate guard. Ext. 3870, 732-3003.

HEMPSTEAD - English tudor/colonial, near Southern State Pkwy, 3 bdrm, 2 baths, eat-in kitchen, all appliances, full basement, rear patio, garage. \$46,000 firm. Ext. 2886, 538-4916 after 6.

NORTH MASSAPEQUA - 9 rm raised ranch, mother-daughter, living rm, dining rm, 3 bedrms up, 3 rms down, garage, deck, professional landscaping, on Cul-de-sac. Low 50's. 694-6053.

For Rent

VERMONT CHALET - Sleeps 12, all conveniences, lake swimming, fishing, hiking, located on 500 acres woodland, nearby theatre, Marlboro music, horseback riding, golf, tennis, rented weekly, monthly, seasonal. 757-5599.

EAST HAMPTON - Furnished room for rent weekends. John, Ext. 4666, 324-0220.

PINE HILLS COUNTRY CLUB - 1 bedrm apt, present tenant will refund 1 mo security, avail Jul 1. 878-0194.

SHIRLEY - 2 bdrm house, secluded, 1/2 block from public beach, references required. Occupancy from about mid-July. 281-1546.

PATCHOGUE - Furnished house for summer rental starting June 27. Ext. 4339, 475-4005.

PATCHOGUE - Furnished rm, private home, off-street parking, village conveniences, suitable congenial mature woman. 475-2627 after 6.

E. PATCHOGUE - Furnished, 3 bdrm house for 1 year rental starting Sept 1. 289-3023.

WADING RIVER - 3 bedrm house, basement & garage, near beach, 15 min from lab. \$280/mo. Bak, 929-8199.

WADING RIVER - 3 bdrm hi ranch, new, 3 blocks from water, private beach, avail Aug 1, yearly rental. \$350/mo. Ext. 3121, 744-5261 after 6.

Wanted

HOME - For pedigreed, spayed, 14-month old collie. 744-5804.

PIANO - Reasonably priced for beginning student. Ext. 3554, Ext. 3079 eves and weekends.

HOME - For beautiful Irish setter, 15 mo. old, house trained, excel disposition, good w/children. 924-3170.

SAIL & MAST - For Sunfish. Bob, Ext. 3512, 929-4270.

GROUP FOR POCONO PACKAGE - 8/13-15, bus Centereach to hotel, breakfast, dinner daily, swimming, tennis, golf, many extras. Approx \$105 per person. Louise or Marie, 981-9666 before 5, 878-4864 after 5.

ARTICLES - For church auction sale. Izzy, Ext. 3696, 727-1494.

POTTERY WHEEL - Small, electrically operated but not on batteries. Frank, Ext. 2410, 281-7113 eves.

USED TRUCK - For college freshman. G. Kinne, Ext. 3334.

CAMPER - Pop-top tent trailer to rent, week of July 11. Ext. 2604, 473-2473.

ROOMS FOR RENT - Newlyweds seeking furnished rooms, small apartment or will care for and baby-sit house, references avail, needed for July & August. 286-8119.

HENS - Laying, 1 yr or younger. 298-4345.

STAMPS - Foreign & domestic cancelled stamps for handicapped collector. Send to C. Hull, Bldg 490.

HOME - For 1 yr old shepard, gold mixed breed, good dog & smart. Steve, Ext. 3082, 669-5838.

AIR CONDITIONER - Small, 5000-7000 BTU, suitable for mounting, in wall, good running cond. John, Ext. 4076.

Carpools

COMMACK - Summer student would like to join carpool. Barbara, 864-5043.

Services

HOUSEWORK - College student desires light housework in Three Village area. 751-2713.

CHARTER BOATS - Deep sea and offshore fishing. Half-day, full-day, week. For info call 878-0840.

AUTO REPAIRS - Tune-ups, brakes, all repairs at good rates. Ray, 878-2486.

PAINTING - Interior and exterior, low prices. Steve, 924-8011.

VW MECHANIC - Guaranteed work at reasonable rates. Pete, 281-0268.

BLACKTOP - Driveway sealing. Bob, 475-4382.

HOUSE CLEANING - Hard worker seeks house cleaning job 1 or 2 days per wk. 928-5610 after 6.

PAINTING - Interior & exterior, 2 college seniors, 5 yrs experience, references avail. 751-6431.

CRUISES - Couples or groups to 4, eve or weekend cruises out of East Hampton, charter fishing out of Gardiners Bay, East Hampton. John, Ext. 4666, 324-0220.

CONCRETE SPECIALISTS - Patios, walks, driveways, masonry work. Pat, 744-8425.

BABYSITTING - Reliable, during the day in the summer or night in Port Jeff area. 473-3987.

HEMS - Reasonable rates. Sharon Hoeffner, 878-2591 after 6:30 and weekends 10-6.

HAULING - Limos for hire, cadillacs and rolls. Bob, 473-3987.

Classified Ad Policy

Deadline is 12 noon Monday for publication Friday of the same week.

- The Brookhaven Bulletin's classified section may be used only by active and retired Laboratory employees.
- All items for sale or rent must be the advertiser's property.
- Ads for material acquired for resale in association with a full or part-time business cannot be accepted.
- Firearms offered for sale or trade may not be brought on site.

- Ads not carried because of space restrictions will be held for publication in the next issue.
- Ads are run only once and must be resubmitted if they are to be repeated.
- Ads should be restricted to 20 words or less and typed or printed on the form provided, and must bear the employees signature.

<input type="checkbox"/> For Sale: Auto & Auto Supplies	<input type="checkbox"/> Wanted	Check <input type="checkbox"/> the heading applying to your ad. Print or type your ad in 20 words or less.
<input type="checkbox"/> For Sale: Boats & Marine Supplies	<input type="checkbox"/> Carpools	
<input type="checkbox"/> For Sale: Miscellaneous	<input type="checkbox"/> Lost & Found Services	

Ads concerning property for sale or rent cannot be accepted on this form. Special Real Estate Ad forms are available at the Office of the Brookhaven Bulletin, Room 111, 40 Brookhaven Avenue.