BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

Three I-R 100 Awards for BNL

Last night, at the annual I-R 100 Awards banquet in Chicago, BNL was recognized with three awards for scientific devices developed here.

Winning for Brookhaven were:

- A probe to measure ion temperature and density in plasma devices such as a tokamak fusion reactor, developed by Physicist Ady Hershcovitch, Alternating Gradient Synchrotron Department.
- An electronic imaging system for studying DNA, developed by Biophysicist John Sutherland, Biology Department.
- An x-ray device for measuring lead in preschool children, developed by Scientist Lucien Wielopolski, Medical Department.

The prestigious I-R 100 competition is sponsored annually by Research and Development magazine to honor the top 100 technological achievements of the year. Typically, these are innovations that transform basic science into useful products.

Ion Probe

The ion probe developed by Hershcovitch measures the temperature and density of ions — atoms that have lost or gained one or more electrons — in magnetized plasma devices.

For example, plasma is the state in which matter exists within the sun. When hydrogen plasma reaches a critical temperature and density, fusion reactions occur. In these reactions, two light hydrogen ions form a heavier helium ion, producing more energy than the amount required to push the plasma to its critical temperature and density, and allowing the cycle to continue.

The probe is a diagnostic device that will be used in tokamak fusion reactors to determine whether this state has been reached or is being maintained. Even now, it is being used in present-day plasma devices used in basic plasma physics experiments.

The probe consists of an inner ion-collecting electrode and an outer cylindrical shield. The unique advantage of this probe is that the electrode is retractable. In previous probes, the retraction length of the electrode was fixed, requiring multiple experiments with different retraction lengths in order to find the optimum one for a particular device. That optimum length depends on the ion temperature.

Because its electrode retracts, the BNL probes can make ion measurements in one experiment, as well as measure different ion species in multi-ion plasmas. In addition, this probe is significantly faster than previous probes, making measurements in less than an hour, as compared to weeks or even months.

In developing the probe, Hershcovitch collaborated with Ivan Nascimento and Ruy da Silva of the University of Sao Paulo, Brazil. The work was supported by the National Science Foundation and the Brazilian federal agency, CNPq.

Hershcovitch came to BNL in 1980. His present special interests include cold atomic beams to be used in enhancing the production of polarized protons, and high intensity electron beams for heavy ion research.

Electronic Imaging System

The electronic imaging system, named IMAGESystem by Sutherland, improves the accuracy, sensitivity and speed of a standard method, called gel electrophoresis, for measuring damage to DNA by ultraviolet (UV) radiation and other physical and chemical carcinogens.

In collaboration with other scientists at Brookhaven and Harvard Medical School, Sutherland uses the system to study damage and repair of DNA in UV-irradiated human skin. The work is supported by the Department of Energy (DOE) and the National Institutes of Health.

Gel electrophoresis is used extensively in molecular biology and biotechnology to separate DNA and other biomolecules by size and/or shape. At present, the distribution of DNA on a gel after electrophoresis is usually determined by examining a photograph of the fluorescence of a DNA-specific dye. While adequate, the photographic method has several drawbacks, such as a nonlinear response to dye fluorescence, lot-to-lot variability of photographic film and lengthy film processing time.

In contrast, BNL's IMAGESystem makes use of recent advances in electronic imaging and computer technology to directly and rapidly quantitate and analyze fluorescence from DNA in gels.

Key components of the system are: a modified solid state TV camera, a video frame grabber (a device to digitize the image from the TV camera), a uniquely designed interface and a computer.

The TV camera responds linearly to the intensity of fluorescence and is usable over a wide range of intensities; hence, it is quite accurate and sensitive. Another advantage of the system is that the time required to record and process data is greatly reduced.

Sutherland joined the staff at BNL in 1977. In addition to his interest in DNA damage and repair, he uses UV radiation from the National Synchrotron Light Source to study the structure of DNA and other biological molecules.

Lead Device

Developed with funding from DOE, Wielopolski's x-ray device for measur-

(Continued on page 2)

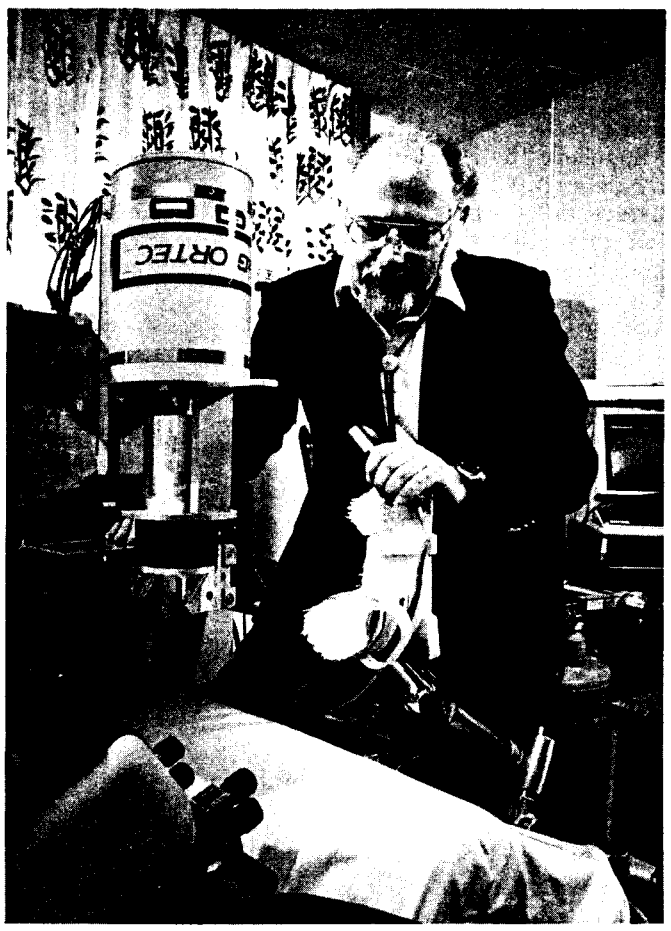
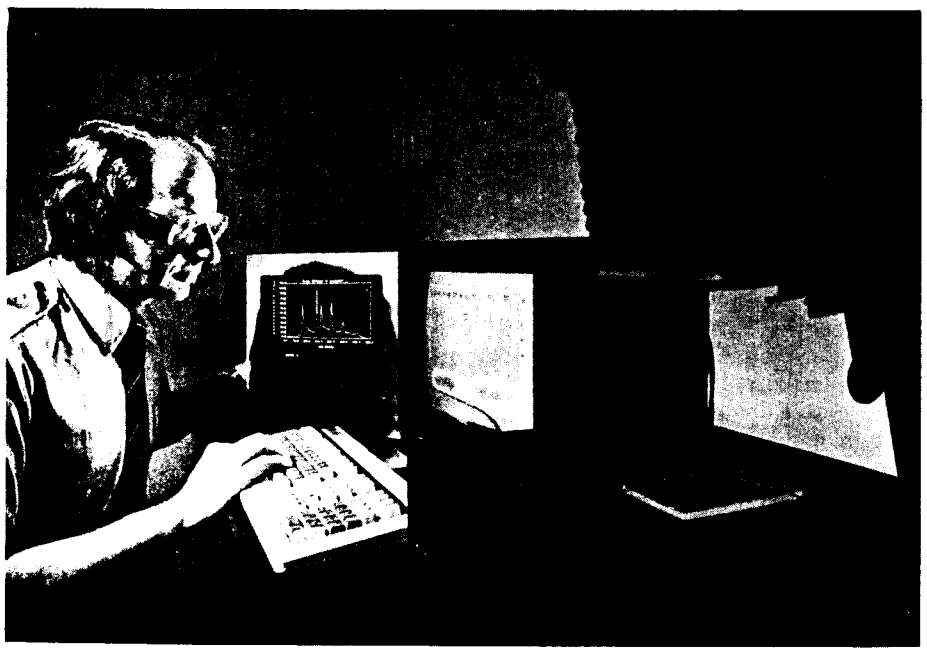


Photo by Mort Rosen

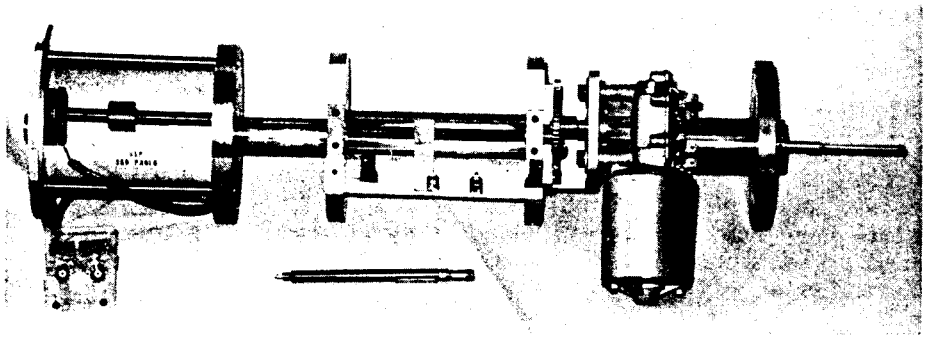
Lucien Wielopolski and the x-ray device for measuring lead.



Mort Rosen

John Sutherland with the electronic imaging system, IMAGESystem.

Ady Hershcovitch (right) and the ion probe he developed (below).



Mort Rosen

Coming Up

The dedication of the Phase II construction project at the National Synchrotron Light Source (NSLS) will be held on Monday, September 21, at 3:30 p.m., on the experimental x-ray floor of Bldg. 725. Phase II has added 57,600-square-feet of experimental, support and office space to the existing building.

Following the dedication, posters displaying the work done by NSLS participating research teams, insertion device teams and general users can be viewed on the experimental floors of the NSLS x-ray and vacuum ultraviolet rings.

The ceremony and poster session are being held in conjunction with the 1987 Annual NSLS Users Meeting, which runs from Sunday, September 20, through Tuesday, September 22. For more information about the Users Meeting, call Eileen Pinkston, Ext. 4194.

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Rosalyn Yalow, who won the 1977 Nobel Prize in physiology or medicine for the development of radioimmunoassay methodology and its application to biomedical investigation, will present the 33rd AUI Distinguished Lecture. Her talk on "Radiation and Society" will begin at 8 p.m. on Monday, September 28, in Berkner Hall, and it is open to the public.

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A new lecture series has been endowed in memory of Donald D. Van Slyke, former BNL Associate Director for Life Sciences and internationally renowned biological chemist. The first lecturer will be Ludwig Feinendegen, Director of the Institute of Medicine at the Nuclear Research Center at Kernforschungsanlage Jülich GmbH and Professor of Medicine at the University of Dusseldorf, West Germany. He will speak on "Non-Invasive Study of Human Cerebral and Cardiac Metabolism by Nuclear Medicine Technology" on Wednesday, September 30, at 8 p.m., in Berkner Hall. The public is invited to attend.

Colloquium and Dinner To Honor Scharff-Goldhaber

A Nuclear Structure Colloquium and testimonial dinner will be held on October 19 to honor Gertrude Scharff-Goldhaber, Physics, for her contributions to nuclear physics and to advancing the cause of women in science.

Sponsored by Brookhaven Women in Science (BWIS), the colloquium will feature talks by Scharff-Goldhaber and two other nuclear physicists: John Schiffer, Senior Physicist at Argonne National Laboratory; and Richard Casten, Senior Physicist and Nuclear Structure Group Leader of BNL's Physics Department.

The colloquium will be held on Monday, October 19, from 3-5 p.m. in the Seminar Room of the Physics Department, Bldg. 510. Following the three talks, hor d'oeuvres and cocktails will be served from 5:30-6:30 p.m. in Berkner Lobby. The testimonial dinner will be held from 6:30-9 p.m. in Berkner Hall, Room B.

At the colloquium in her honor, Scharff-Goldhaber, whose scientific career has spanned 52 years, will deliver the talk "Historical Perspective of the Variable Moment of Inertia and the Interacting Boson Approximation Models, Including Pseudo-magic Nuclei." She was a pioneer of the variable moment of inertia model, which describes the shapes of rotating nuclei over a wide range.

John Schiffer, an experimental nuclear physicist whose research interests include heavy ion reactions and pion reactions in nuclei, will speak first. His topic is the history of nuclear structure research.

Schiffer has served as Director of the Physics Division at Argonne, 1964-82, and as Associate Director since 1982. In addition, he has been Professor of physics at the University of Chicago since 1969, and, since 1978, an editor of Physics Letters. He won the Senior U.S. Scientist Prize from the Alexander von Humboldt Foundation, West Germany, 1973; the Tom W. Bonner Prize of the American Physical Society (APS), 1976; and the Wilber Cross Medal of Yale University, 1985. Schiffer is a Member of the National Academy of Sciences, and a fellow of APS and the American Association for the Advancement of Science (AAAS).

For the final lecture, Richard Casten will talk about recent research in nuclear structure. He is an experimental nuclear physicist, whose work has centered on the study of collectivity in atomic nuclei, emphasizing both experimental and theoretical studies of the interacting boson approximation model. Casten has been studying symmetries and phase transitions in nuclei, with emphasis on the role of proton-neutron interaction. He performs his work at the High Flux Beam Reactor, using both the isotope separator TRISTAN and the neutron capture technique.

Casten came to BNL in 1971, becoming Senior Physicist in 1982. In 1983, he was awarded the Alexander von Humboldt Senior U.S. Scientist Prize. He is a Fellow of APS and AAAS.

Gertrude Scharff-Goldhaber began her nuclear physics career in 1935, when she earned a Ph.D. from Munich University in her native Germany. From 1935-39, she held a post-doctoral position at Imperial College, London, England.

As a research physicist at the University of Illinois in 1942, Scharff-Goldhaber discovered that spontaneous fission is associated with the emission of neutrons, a discovery classified top secret and not published in the open literature until 1946. In 1948, she, together with her husband, former Laboratory Director Maurice Goldhaber, established the identity of beta particles with atomic electrons.

After first coming to the Lab as a visiting associate physicist from June 1949 to February 1950, Scharff-Goldhaber joined the BNL staff in June 1950. She moved up the ranks, from Associate Physicist, to Physicist in 1958 and to Senior Physicist in 1962. She retired in 1977, but continues her association with the Laboratory as a research collaborator.

Scharff-Goldhaber has specialized in studying the systematics and characteristics of nuclear excitations in a wide range of nuclei, and has synthesized her understanding of these static and dynamic nuclear properties into far-ranging models.

Gertrude Scharff-Goldhaber

In the early 1960's, Scharff-Goldhaber began studying the spherical-deformed phase transition in the isotopes of osmium. She began her study of the variable moment of inertia model in the late 60's and experimentally examined the high and low spin states in palladium.

In 1960, Scharff-Goldhaber started the Brookhaven Lecture series, which continues today to introduce Laboratory scientists and others to research by their BNL colleagues, who are not necessarily in the same fields. On March 17, 1971, she presented the 100th BNL Lecture, "Collective Motions in Atomic Nuclei," and has remained the founding member on the committee that oversees the series.

Her interest in fostering a general understanding of physics also has been demonstrated by her introducing a physical sciences training course at the Lab in 1958, for Suffolk County science teachers, and by her serving as a councillor-at-large of APS, 1978-82, in which position she promoted pre-college physics education.

As well, Scharff-Goldhaber has been a member of the education advisory committee of the New York Academy of Sciences since 1982, and she lectured at 13 colleges and universities during the 1984-85 academic year as a Phi Beta Kappa visiting scholar. During her campus visits, Scharff-Goldhaber discussed the problems of attracting women to the sciences, as well as nuclear physics topics.

She has worked to advance the cause of women in science by serving on APS's committee on the problems of women in physics, 1971-72, and on the National Research Council's Commission on Human Resources committee on the education and employment of women in science and engineering, 1978-83.

A founding member of Brookhaven BWIS in 1979, Scharff-Goldhaber has lent her advice, encouragement and support to the group and its endeavors. For example, she has been a participant in BWIS career days, held to encourage school girls to consider careers in science, and to inform science teachers and guidance counselors about education options and employment trends for women in science.

Scharff-Goldhaber is a Member of the National Academy of Sciences and Sigmi Xi, and a Fellow of APS and AAAS. She was a member of the Board of Trustees of Universities Research Association, which governs Fermi National Accelerator Laboratory, 1972-77.

To register for the colloquium, contact Rae Greenberg, Ext. 3743, by September 25. To register for the dinner, send a check for $20 payable to Brookhaven Women in Science and a note indicating your dinner choice (prime rib or chicken Kiev) to Greenberg, Physics, Bldg. 510A, also by September 25.

First Brookhaven Office Manager, Emery Van Horn, Dies

Emery L. Van Horn, who managed the Atomic Energy Commission's (AEC) Brookhaven Office from the time it opened in 1946 until his retirement in June 1970, died of cancer last Saturday, September 12. He was 80 years old.

In all, Van Horn had 39 years of service with the federal government. He began his career in 1931, with the U.S. Army Corps of Engineers, on public works programs in New York and Vermont. In 1942, he was commissioned a First Lieutenant in the Corps of Engineers and assigned to the Manhattan District in Buffalo and Niagara Falls.

After the war, when the AEC took over from the Manhattan District, Van Horn was assigned as liaison officer with the Initiatory Advisory Group, the predecessor to Associated Universities, Inc. Upon discharge from the Army as a Major in 1946, he was appointed to the AEC's Brookhaven Office, where he was responsible for the administration of the AEC's contract with AUI for the operation of Brookhaven National Laboratory.

Born in Granville Township, Pennsylvania, Van Horn graduated from Lehigh University with a degree in civil engineering. He was a Fellow and life member of the American Society of Civil Engineers and was awarded the Medal of Merit for his service in World War II and the Outstanding Service Award of the AEC.

Emery L. Van Horn

Van Horn and his wife Pauline lived in East Patchogue until almost five years after his retirement, when they moved to Severna Park, Maryland. In addition to his wife Pauline, Van Horn is survived by a son, Robert E. Van Horn, of Estes Park, Colorado; two sisters, Genevieve Roberts, of Hammondsport, New York, and Louise Cook, of Camp Hill, Pennsylvania; and three grandchildren.

Donations in Van Horn's memory may be sent to the Anne Arundel General Hospital Hospice, Cathedral & Franklin Street, Annapolis, Maryland 21401.

I-R 100 Awards (cont'd)

ing lead has great significance for public health. Lead toxicity in preschool children impairs the development of the central nervous system and results in learning and behavioral disabilities. In the U.S., it is estimated that two to four million preschool children have lead poisoning.

Removing the lead requires a procedure called chelation. At present, the diagnostic test for these children involves a full day of hospitalization that includes collection of total urine and a test dose of a painful chelator. This lead-chelation test is not feasible for screening a large population of children because of the discomfort and expense involved.

The x-ray device, which measures lead in bone, can screen a child in about 15 minutes, easily and painlessly. With anticipated improvements, that time will be reduced to 5-10 minutes. Already, nearly 100 children have been tested with a prototype of this device in a clinical program being carried out in collaboration with the Pediatric Metabolism Clinic at the Albert Einstein College of Medicine.

The lead project has been the main focus of Wielopolski's research since he came to BNL in 1979.

Note to Diners

The Cafeteria will be closed on Saturday, September 19. On that day, snack bar service will be available from 9 a.m. to 2 p.m. at the Brookhaven Center.

Special Issue Next Week

BNL and AUI celebrated their 40th anniversary last week, from September 9-11. The Anniversary Celebration included a two-day scientific symposium, the dedication of the Alternating Gradient Synchrotron (AGS) Complex to Leland J. Haworth, and the ground breaking for the AGS Accumulator-Booster. These events will be the subject of a special issue of the Bulletin next week.

Arrivals & Departures

Arrivals

Lonny E. Berman	NSLS
Vincent Bonafede	Appl. Math
Dominic J. Ciardullo	Accel. Devel.
Kengo Itoh	Chemistry
Lin Geng	DAS
Kathleen M. Nasta	DNE
Young Ji Park	DNE
Cynthia A. Salwen	AGS
Arthur M. Scholtz	Medical
David L. Weller	DNE

Departures

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

Thomas J. Arabia Jr.	Plant Eng.
Stephen M. Barr	Physics
Robert A. Dohrenwend	S&SD

Need More Copies?

For additional copies of *The First Forty Years*, call the Technical Information Division, Ext. 5068.

Picnic Tomorrow!

The BNL 40th Anniversary Picnic is upon us at last. Preparations are in top gear — everything is set for a wonderful day tomorrow, as follows:

9:30 a.m. Arrival: Beginning at that time, tickets will be exchanged for wristbands. Programs and maps with all picnic information will also be given out.

11 a.m. Festivities will begin when the parade steps out to the music of the North Patchogue Fire Department Band. The three BNL'ers in the band will be celebrating a double 40 years, as this year is the Band's 40th anniversary also.

Noon - 5 p.m. Food, soda and beer will be available only to people wearing wristbands or those under three years old.

3:30 p.m. Tennis competition will start at the tennis courts. Just bring a racket at 3:30 p.m. to join in.

Other Activities throughout the day: Fun Olympics for adults — dancing — strolling musicians — moon bounce — games for children — face painting — magic show — science film "Quest" — Exhibit Center — volleyball — and lots more.

Poster Display: The winning posters advertising the picnic will be on display. Winners will be contacted about their prizes next week.

Remember:

- The celebration will be held rain or shine.
- Bring blankets and chairs.
- Bring your tickets and **enjoy.**

BNL's Fabulous Forty

Do Yourself a Favor This Fall!

Join the Aerobic Dance Club for after-work classes in:

- **Stretch,** on Mondays.
- **Aerobic Dance,** on Tuesdays & Thursdays.

For more information, call Bill Leonhardt, Ext. 2378; Elinor Norton, Ext. 3455; or Janet Sillas, Ext. 2345.

Cooking Exchange

Vegetarian cookery will be featured at the International Cooking Exchange meeting on Wednesday, September 23. If you would like to learn some interesting new ways to prepare vegetables, come to the Recreation Bldg. in the apartment area at 12:30 p.m. to watch a demonstration and to sample some delicious food. A charge of $2 will cover the cost of the ingredients; babysitting will be provided at 50¢ per child.

Bowling

Pink League

Ann Parrinello started the season with a 203, Maryann Reynolds 182, Sandy Asselta 178/161.

Red/Green League

F. Griswold bowled a 224, E. Sperry IV 218, G. Meinken 215, L. Schairer 215, N. Combatti 212, R. Jones 211, J. Connelly 208, H. Arnesen 205, J. Muller 202.

Note: Two female bowlers are still needed for the Pink League. Contact Louise Chinn, Ext. 3397, if you are interested.

NY Islanders Pre-Season Tickets

Tickets for the NY Islanders preseason home games are now being sold at the BERA Sales Office in Berkner Hall. Eight tickets for each of four home games (see schedule below) are being offered to employees at a special reduced cost of two for $34, a savings of $12.

Schedule

Tuesday, September 22	Rangers
Saturday, September 26	Philadelphia
Tuesday, September 29	Montreal
Thursday, October 1	Boston

Watch the Bulletin for an announcement of the opening sale date for regular season tickets.

Softball

End-of-Season Standings

League I

Team	Won	Lost
Blue Jays	14	0
Ravens	9	5
Cool 'n Gang	8	6
Phoubars	7	7*
Six Pax	7	7*
Sudden Impact	6	8
Magnuts	5	9
BNL Bandits	5	9
SMF	2	12

*Tie broken in a playoff game: Phoubars 10 - Six Pax 9

League II

Cutting Edge	11	3
Titans	10	4
Scram	10	4
AMD	9	5
Dirty Sox	8	6
Scrambled Legs	8	6
Lights Out	5	9
Medical	4	10
Binary Bombers	4	10
Phase II	1	13

League III

Farm Team	12	2
Snakebites	12	2
Survivors	9	4
Foul Ups	7	6
Kidz-R-Us	6	8
Septembers	3	11
Source	3	10
Mole-esters	2	11

League IV

Simply Awesome	13	1
Sandboxers	12	1
Spacekadets	8	5
Underalls	7	6
Mudville Sluggers	6	7
Hit 'n Run	4	9
Turkeys	4	9
Who Cares	3	10
No Feedback	2	11

League I

Semifinals

Ravens 6 - Cool 'n Gang 4
Blue Jays 14 - Phoubars 5

League II

Semifinals

Scram 10 - Titans 6
Cutting Edge 5 - AMD 3

Final Playoff Game

Cutting Edge 11 - Scram 9 (8 innings)

League III

Semifinals

Snakebites 14 - Survivors 5
Farm Team 10 - Foul-Ups 8

Final Playoff Game

Snakebites 18 - Farm Team 10

League IV

Semifinals

Simply Awesome 26 - Underalls 4
Sandboxers 8 - Spacekadets 4

Final Playoff Game

Simply Awesome 29 - Sandboxers 3

Equipment Demos

The new System 100 PC-Based MCA from Canberra Industries Inc. will be demonstrated next Thursday, September 24, in Berkner Hall, from 10 a.m. to 3 p.m.

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Computervision Corporation (CV) will present their "Roadshow Seminar" in Berkner Hall, Room B, on Wednesday, September 23, from 10 a.m. to 3 p.m. CAD/CAM mechanical, plant engineering and manufacturing applications will be demonstrated on networked CV/SUN 32 bit UNIX and "386" based workstations. Representatives will be on hand to answer questions and show how these tools can increase productivity.

Payroll Note

Employees who have not yet filed their 1987 Forms W-4 or W-4A are reminded that they must do so by October 1, 1987. If they do not, payroll will withhold taxes, in compliance with IRS regulations, based on one allowance for single employees. For married employees, withholding will be based on two allowances.

PSI News

Mary Aretakis, Certified Professional Secretary and New York State Division Vice President for Professional Secretaries International (PSI), will speak at the next monthly meeting of the Upton Chapter of PSI, on Monday, September 21, at 6 p.m., in the conference room of Bldg. 535A. Aretakis's talk, "We Asked You, and You Told Us," will be based on the results of a recent survey by PSI's Northeast District. Visitors are welcome.

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Hospitality News

The Hospitality Committee is sponsoring a trip to the Long Island Game Farm in Manorville on Thursday, September 24. To travel by carpool to the Game Farm, the group will leave the Recreation Bldg. in the apartment area at 1 p.m. and return there around 4:30 p.m.

Families of Laboratory employees and guests are welcome. Cost of the tickets for entrance to the Game Farm is $2 per person, payable on the date of the trip. The money will be collected at the Recreation Bldg. by members of the Hospitality Committee.

To reserve tickets, call Milicia Stevanovic, Ext. 3009, no later than Tuesday, September 22.

Reports Available

The following reports are now available to the Laboratory staff and to affiliates of the DOE, AUI and NRC. Others may purchase the reports from the National Technical Information Service, U.S. Dept. of Commerce, 5285 Port Royal Rd., Springfield, VA 22161. Staff members should call the designated contact at the extension listed.

NUREG/CR-4400
BNL-NUREG-51928
Contact: J. Danko, Ext. 7125
The Impact of Mechanical- and Maintenance-Induced Failures of Main Reactor Coolant Pump Seals on Plant Safety. M.A. Azarm, et al.

BNL-52009
Contact: M. McKenna, Ext. 2956
Yields of Field-Grown Soybeans Exposed to Simulated Acidic Rainfalls. L.S. Evans, et al.

BNL-52013
Contact: J. Bonaduce, Ext. 4538
Computer-Assisted Study of the Kinetics of H_2O_2-S(IV) Reaction in Precipitation Samples. J. Shen, et al.

NUREG/CR-4756
BNL-NUREG-52026
Contact: A. Spira, Ext. 2352
Leaching Studies of Cement-Based Low-Level Radioactive Waste Forms. Topical Report. H. Arora, et al.

NUREG/CR-3444
BNL-NUREG-51699
Vol. 4
Contact: A. Costantini, Ext. 2274
The Impact of LWR Decontaminations on Solidification, Waste Disposal and Associated Occupational Exposure. Annual Report, Fiscal Year 1986. P.L. Piciulo et al.

BNL-52033
Contact: B. Orlowski, Ext. 3481
The Chernobyl Accident. Brookhaven Lecture Series No. 227. H. Kouts.

Three Join the Ranks

Peter Horton

After completing a seven-week training course, (center, from left) Barry Magee, Daniel Wilkins, and Timothy Yates graduated into the ranks of the BNL Police Group as Security Inspectors. The graduation ceremony was held at Berkner Hall on Thursday, September 3. Among those attending were: (from left) Captain Robert Munoz, Training Administrator; Harold Justice, Chief of the Police Group; Magee, Wilkins and Yates; John Hunt, Deputy Manager, Safeguards and Security Division; Inspector Alfred Berretta; and Kathleen Walker, Training Specialist.

Cafeteria Menu

Week of September 21

Monday, September 21

Beef barley soup	(cup)	.75
	(bowl)	.95
Beef stroganoff over noodles		2.85
BBQ spare ribs w/1 veg.		2.95
Julienne salad plate (lite-weight)		2.25
Hot deli: Chicken pattie	(bread)	2.55
	(roll)	2.65
	(hero)	2.75

Tuesday, September 22

Corn chowder	(cup)	.75
	(bowl)	.95
Salisbury steak w/1 veg.		2.95
Turkey noodle casserole		2.75
Chicken salad Oriental (lite-weight)		2.25
Hot deli: Roast beef	(bread)	2.55
	(roll)	2.65
	(hero)	2.75

Wednesday, September 23

Cream of mushroom soup	(cup)	.75
	(bowl)	.95
Roast turkey w/dressing & 1 veg.		2.95
Seafood platter		2.85
Roast beef cold plate (lite-weight)		2.25
Hot deli: Sausage & pepper hero		2.65

Thursday, September 24

U.S. Senate bean soup	(cup)	.75
	(bowl)	.95
Calves' liver w/onions & 1 veg.		2.85
Italian lasagna w/garlic bread		2.95
Spinach, bacon and egg chef's platter (lite-weight)		2.25
Hot deli: Sloppy Joes		2.55

Friday, September 25

Fish chowder	(cup)	.75
	(bowl)	.95
Baked fresh fish filet w/1 veg.		2.95
Baked macaroni & cheese		2.65
Seafood salad platter (lite-weight)		2.25
Hot deli: Veal parmigiana hero		2.65

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 only.

2678. INSULATION WORKER (3 positions) - Under general supervision, performs installation and removal of insulation and protective coverings about piping, ductwork, fixtures, and devices as required. Performs limited removal, clean-up, and disposal of asbestos insulation in accordance with applicable environmental control standards pursuant to law and regulations governing BNL. Will be trained and must be certified as asbestos abatement worker according to standards as adopted for such work by NY State. Plant Engineering Division.

2679. SECRETARIAL POSITION - Requires AAS in secretarial science or equivalent and a broad knowledge of Laboratory operations, procedures and policies. Must have a high level of competence in secretarial, organizational and communication skills. Ability to take shorthand desirable. Will perform secretarial and office management functions in Department Administrative Office. Physics Department.

2680. SECRETARIAL POSITION - Requires excellent secretarial and communication skills as well as a good knowledge of Laboratory policies and procedures. Will perform diverse secretarial duties for Beam Sensing and Diagnostic Group. IBM PC word processing experience desired. Department of Nuclear Energy.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

2681. TECHNICAL POSITION - Requires AAS in electronic technology or equivalent and experience with the fabrication and testing of integrated and discrete semiconductor circuits. Will work from electronic schematics, verbal instructions and rough sketches. Light mechanical skills, CAD and/or other design skills desirable. Physics Department.

2682. TECHNICAL POSITION - Requies AAS in mechanical technology or equivalent experience. Must have ability to read complex blueprints and assemble precision components. Knowledge of UHV procedures and practices desirable. National Synchrotron Light Source Department.

2683. TECHNICAL POSITION - Requires AAS in electro-mechanical technology. Must be able to do wiring and soldering and be capable of building and testing digital and analog circuits. Must have ability to set up and use function generators, oscilloscopes and hi-pot testers, as well as read schematics. Will assist with assembly of electrical components on superconducting magnets. Accelerator Development Department.

2684. TECHNICAL POSITION (10 positions) - Requires AAS in mechanical technology or equivalent with one to five years' experience in one or more of the following areas: machine shop fabrication, mechanical assembly, precision inspection, maintanance of mechanical equipment. Will perform technical functions related to fabrication and assembly of superconducting particle accelerator magnets. Accelerator Development Department.

2685. DESIGN POSITION - Requires AAS or equivalent with experience in general machine design and shop practices to perform layout and detail work in precision components, mechanical structures, vacuum systems, electromagnets, rf systems, and high voltage components and their packaging. National Synchrotron Light Source Department.

2686. ENGINEERING POSITION - Requires BS or equivalent and a minimum of five years' experience in the design of HVAC systems and their ancillary equipment. Duties include field investigation, specification writing, equipment selection and estimating. Drafting experience and preparation of construction working drawings is essential. (Reposting of Job #2435.) Plant Engineering Division.

2687. ENGINEERING POSITION (2 positions) -Requires BS/MS in mechanical or electrical engineering or related field and five to ten years' experience in design, test and operation of nuclear power plants. Knowledge of plant systems and equipment test and maintenance necessary. Duties include research and technical assistance in the areas of equipment aging, manufacturing, systems design and operation. Knowledge of probabilistic risk assessment and reliability practices desired. Department of Nuclear Energy.

2688. STEAMFITTER (2 positions) - Requires successful completion of four-year apprenticeship program or its equivalent and at least five to ten years' commercial/industrial plant experience. Incidental welding experience is necessary. Plant Engineering Division.

Autos & Auto Supplies

78 MERCURY COUGAR - p/s, p/b, a/t, am/fm/cass., runs well, must sell, $1,150. Ext. 4393 or 4563, Antoni.

84 CHRYSLER LASER - a/t, a/c, p/s, p/b, am/fm, new tires, excel. cond., $5,200. Ext 2446 or 924-1911 eves.

APACHE TENT TRAILER - $400. 588-3565.

71 VW - a/t, new engine, paint, tires, brakes, battery, upholstery, am/fm. Jim, Ext. 2765 or 981-7369.

80 OLDS CUTLASS - 4 dr., diesel, 75k mi., excel. cond., good tires, no rust, $1,750. Peter, Ext. 4004 or 286-0934.

76 CHEVY - 4wd, pickup, big, put together well. 698-5256.

75 CHEVY IMPALA - 350 engine, low mileage, $800. Ed, 331-9572 after 3:30.

85 CHEVY BLAZER - full size, 4wd, m/t, p/s, p/b, a/c, 23k mi, $11,500. Ext. 3917 or 727-2876.

63 GRAN TURISMO HAWK STUDEBAKER - V8, a/t, p/s, p/b, needs work. $1,000. Joe, Ext. 3464 or 281-7683.

81 FIREBIRD - mint cond., p/s, p/b, a/c, a/t, new tires, must see. Andy, 878-4177.

73 SUZUKI GT550 - 3 cyl., two-stroke, mechanically excel., 36k mi., extras, $500. Jory, Ext. 5508 or 929-6941.

86 CAMARO - sport coupe, V-6, 4-yr. transferrable guarantee, asking $9,500. Ext. 4672, 4904 or 929-4753.

66 CHEVY - excel. cond., no rust, 8 cyl., 4 dr., new tires, new exhaust system, $900 firm. 744-7017 after 6 p.m.

75 DUSTER - a/t, 6 cyl., p/s, p/b, a/c, trailer hitch, runs well, $325. Ray, Ext. 3536 or 289-7615.

78 FORD LTD WAGON - good running cond., 78k mi., asking $1,000. Ext. 4054 or 289-1989 eves.

77 PONTIAC SUNBIRD - am radio, a/t, p/w, new brakes & tires, $900 or best offer. 584-6730.

79 CHRYSLER LE BARON - 318 eng., a/c, p/s, p/b, a/t, 4 dr. sedan, 82k mi., good body, engine, $1,750. 277-4091.

86 TOYOTA MR2 - a/t, white, fully loaded, 23k mi., still new cond., asking $13,000. Donna, 473-6294.

79 DODGE OMNI - good cond., moving sale, $550. Ext. 3855 or 3106 eves.

WIRE WHEEL COVERS - 4, for 15" wheels, like new. 325-0447 after 6 p.m.

74 VOLVO - high mi., engine rebuilt, good running cond., reliable, $950. Torsten, Ext. 3817 or 878-1210.

82 RELIANT WAGON - 4 cyl., a/t, fm/cass., 57k mi., good cond., asking $2,400. I.H. Chiang, Ext. 7903 or 751-3055.

77 OLDS CUTLASS SUPREME - good body, needs motor, $125. Ext. 4006.

84 DAYTONA - black, a/t, a/c, p/b, p/s, am/-fm/cass., tinted windows, sunroof, excel. cond., 36k mi., $6,400. Rick, Ext. 2907.

86 FORD F-150 - 8.5k mi., excel. shape, silver gray, 8 ft. bed. Ext. 4715 or 324-2058.

74 DATSUN 260Z - 4 spd., body good, on road but needs work, $1,000 neg. Brian, 234-9487.

76 JEEP CHEROKEE - 2 door, 6 cyl., 4wd, 2 new tires, hi miles, $1,000. 744-8790 after 6 p.m.

84 DODGE AIRES - 4 dr., p/s, p/b, a/t, a/c, am/fm, runs very well, reliable, 43k mi., $3,500 neg. 981-7715.

81 DATSUN 310 - 4 spd., 4 dr., excel., body/interior, runs well, motor smokes, $650. Brian, 234-9487.

83 CHEVY CELEBRITY - and 18 ft. trihull glass runabout, 150 h.p. merc & trailer, $6,000, will sell separately. 472-4228.

72 CHEVY NOVA - 135k mi., $400. Paul, Ext. 4156.

75 DATSUN 280Z - recently rebuilt motor, silver imron paint, must see, clean, $3,100 neg. Ext. 5222.

79 THUNDERBIRD - black, all power, a/t, p/s, am/fm, excel. cond. Keith 475-5591, eves.

76 PONTIAC FIREBIRD - red, 350, p/s, p/b, am/fm cass., good cond. Robin, 581-7733 days or 475-5591 eves.

81 EL CAMINO - V-6, a/c, p/s, cruise, tonneau cover, $3,800. 924-7866.

81 HONDA ACCORD - loaded, 97k mi., asking $2,900. Walter, Ext. 3499 or 757-6392.

79 PLYMOUTH VOLARE - good cond.; 77 Toyota Celica GT. Turg, Ext. 3423 or 821-3243.

86 CHEVY S10 PICKUP - s/s, 22k mi., $5,700; 24' travel trailer, sleeps 6, self-contained, stereo, new refrig., 3-way power, $3,950. 744-5069.

83 HONDA CIVIC - 4 dr., 5 spd., am/fm/cass., good cond., silver, $3,300. Ext. 5515 or 473-7952.

70 VOLKS CAMPER - pop-top, refrig., sink, swell for young family, rebuilt engine, clutch. Ted. Ext. 2243.

73 MERCEDES BENZ 280 - 4 dr., white, dark green interior, $3,900. Ext. 4099 or 689-9214.

65 MUSTANG - hardtop, a/t, excel. in and out, snows, extras, low mileage, $4,500. 929-4701.

78 VW RABBIT - m/t, 91k mi., excel. cond., orig. owner. John, Ext. 3821 or 473-6624 after 6 p.m.

78 FORD VAN E150 - 6 cyl., 4 spd. od., runs well, $1,150. Ext. 2109 or 472-9199 after 6 p.m.

78 HONDA CIVIC - 5 spd., red, runs well, high miles, good tires. Frank, Ext. 3531.

72 TRIUMPH TR-6 - and 74 car parts, make offer. Bill, Ext 2036 or 2697 or 286-9413.

77 FORD MUSTANG II - s/t, very good cond., runs very well, must see, $1,000. 758-5592, eves.

CHRYSLER LE BARON - 2 dr., a/t, gunmetal leather, a/c, am/fm st., wire wheels, 42k mi., excel. cond., $6,400. 265-5218.

85 FORD ESCORT - 4 dr., hatchback, a/t, p/s, p/b, am/fm/tape, 27k mi., $4,000. Ext. 4846 or 363-6940.

CAR TOP CARRIERS - one 3' x 3', $10; one 3' x 4', $18, good cond. Ext. 2492.

MIRRORS - $25; roof vent, $10; interior lights, $5 ea. for truck, van, RV's, all new. Bill, Ext. 4986 or 563-1940.

Boats & Marine Supplies

18' SANNIBEL - 1984 centerboard sloop, 3 sails, sleeps 4, extras, asking $4,000. 473-1761.

34' SILVERTON - 1972, 225 h.p., fwc Chryslers, 2.5kW generator, electric heat, many extras, $21,500. 666-7935 eves.

VIP SEASQUIRT - 16' w/center console, 50 h.p. Johnson and trailer, $2,500. 889-0315.

27' SILVERTON - 225 fwc Chrysler, flying bridge, trim tabs, very clean, in water, $8,500. 325-0681.

21' BAYLINER - 1986, 2150 Ciera, I/O, sleeps 5, swim platform, radios, canvas & more, in water. 878-0480, eves.

65 H.P. MERCURY - controls, prop, power head, needs repair, $175. Charlie, Ext. 2317 or 754-2417 eves.

22' SEARAY - 1974, hardtop, new canvas, trailer, extras, excel. cond., $7,000. 369-2833 after 4:30 p.m.

19' BAYLINER CAPRI BOWRIDER - 1984, Volvo I/O, fully equipped, must see, not in water in '87, a real buy at $7,000. Ext. 2981 or 473-7809 eves.

Miscellaneous

MOVING SALE - apt. contents for sale, mainly furniture. Call Angela for an appointment, 758-4684 eves.

OPERA TICKETS - Sun., Sept. 20 & Nov. 8, two seats, second row, center orchestra. Bob, Ext. 7785.

PORTABLE TELEVISION - 5" b&w, brand-new still in box, 82 channel w/electronic tuner, $75. Ext. 4843.

GE AIR CONDITIONER - $60. 588-3565.

MAGNAVOX COLOR TV - 21", $100. Ext. 4393 or 4563.

HARDY BOYS BOOKS - also, super 8mm movie projector. Duke, Ext. 2957 or 289-3586.

CALORIC ELECTRIC RANGE - classic, new, double timer broiler pan, almond, $325. 472-1473.

86 SUZUKI SCOOTER - excel. cond., $300. 821-0250.

WICKER CHAIRS - two, round, good cond., $50. Ext. 3309.

SOFAS - two, identical, blue velour, like new, $300 ea. neg. Sue, Ext. 7235 or 395-3529 after 6 p.m.

KNEE-HOLE DESK - $20; maple chest of drawers, $15; homemade large blanket chest, $10; 3 doz. canning jars, $7.50 all. 878-6637.

DESKS - $50-$75; 2 yellow vinyl couches, $75; blue swivel chair, $100; coffee table, $25; sewing machine, $65, headboards, $20. 277-4091.

GE COLOR TV - 25", good cond., $50. Ext. 2611 or 751-4098 after 5 p.m.

COFFEE TABLE - large, teak, solid, marble top, matching lamp table, excel. cond., $50 ea. 475-1254.

COLOR TV - 13", one year old, moving sale, $100. Ext. 3855 or 3106 eves.

GARAGE DOOR - 6' 6" h x 8' w, wood w/one row glass, low profile double channel w/all hardware, $50. Tom, Ext. 4084 or 878-1060.

ROTARY MOWER - 5' cut, for 3-point hitch. 325-0193 after 5 p.m.

KEROSENE BURNER - $50; man's bicycle, $25; antique vise, $50; anchor & oars, $25; juice extractor, $125; antique telephone, $250. 698-0654.

COLONIAL COUCH - wood arms, good cond., needs cleaning, 84", gold & brown, $120. 821-0695 after 2 p.m.

ATARI 800XL COMPUTER - 1050 disc drive, 1027 printer, Sakata monitor, programs, table, $650. 878-8144.

STORM WINDOWS - 2 alum, 33 ⅞ x 54 ¾, $10, ea.; light fixture recess, 2 minis, one regular, $15. Bill, Ext. 2047.

RCA COLOR TV - 19", electrical tuning, $125. John, Ext. 5152 or 654-0924.

FUR JACKET - Persian lamb w/mink collar, current style, $150; mink hat & scarf, excel., $100. Ext. 2906.

TOPSOIL - $15 per yd., delivered 5 yds min., 924-7746 or 924-9427 after 7:00 p.m.

REMOTE CONTROL CAR - Frog Hopper, car charger, control, nicad bat., $175. 585-2084.

COLONIAL DINING SET - trestle table, 4 ladderback chairs, hutch & server, $1,000; Colonial captain's desk, $300. 584-5197.

HOT WATER HEATER - electric, 52 gal., very good cond., $75. Ext. 7148 or 286-9390.

ZENITH COLOR TV - console, remote, working. Mike 736-3949.

WICKER CHAIRS - 2, ball-style, excel., $20 ea. Ext. 2109 or 472-9199 after 6 p.m.

BEDS - 2 twin Colonial, excel. w/39" mattresses, reasonable. Ext. 4341 or 475-4005.

WASHER & DRYER - apt. size, w/rack, 110 V, portable water, $450. Tom, Ext. 5350.

HIGH RISER CONVERTIBLE - becomes two beds, excel. cond., w/cover and bolsters, $75. 281-2186.

WOOD BURNING STOVE - cast iron, free standing w/flue pipe, wood carriers, $250. 758-5592, eves.

SEARS ELECTRIC TYPEWRITER - portable, like new, $100. 929-4701.

ROYAL TYPEWRITER - deluxe office model, very good cond., $40. Ext. 2492.

Yard Sale

CENTER MORICHES - Yard & bake sale, Sat. Sept. 19, corner Main St. & Railroad Ave., old & new items, 10 a.m.-4 p.m., rain date, Sept. 26.

Free

HAMSTER CAGE - feeding dish and water container. 821-2515.

LOVELY KITTENS - 6 wks old. Ext. 2611 or 751-4098 after 5 p.m.

BED FRAMES - 2, also one high rise w/head & footboard, no mattress. Jerry, Ext. 7427 or 475-5591 eves.

PIANO - blue, upright, tuned, good practice piano, you move. Biays, Ext. 2946 or 924-0284.

Lost & Found

LOST - operating software disk, CADIC, STM4100, Vers. 1.0, outside Bldg. 910A. Sandy, Ext. 4550.

MONEY ORDER - if you bought a money order at the Upton P.O. on Sept. 8, please contact the postmaster. Janeen Fornfel, Ext. 2539.

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 Sale

SHIRLEY - Tangiers section, 4 bdrm. ranch, l/r, kit, d/r, 1 ½ bath, fin. basement, deck, new appliances, $139,000. Jim, Ext. 7669 or 399-1790.

EASTPORT - 1 acre w/approvals on dead end, very private, located off Eastport Manor Rd. in the vineyards. $80,000 neg. Ray 884-7879.

EAST ISLIP - south of Montauk, m/d, Colonial, 2 kit., 2 l/rs, 4 bdrm, 2 ½ baths, on one-third acre treed property, many extras. 277-4091.

SHOREHAM - North 25A, 4 bdrms., 2 baths, family rm., on private 1 acre, beach rights. $190,000. 744-5801.

ROCKY POINT TIDES - 9 rm. hi-ranch, in-ground pool, many extras, $156,865. Carmine Della Rocca, Ext. 3848.

PORT JEFFERSON - Sawasa Park, 4 bdrm., m/d possible, 2 ½ baths, quiet neighborhood, 1/3 acre. 928-0281.

PATCHOGUE - 2 bdrm., 1 ½ bath, 1/2 acre, walk to village, quiet neighborhood, move-in condition, $110,000. Ext. 3964 or 475-2811.

EASTPORT - 2 bdrm., 1 bth, lg. l/r, full bsmt., 100 x 120 property, nicely landscaped, close to schools and shopping, $115,000. Terry, Ext. 2232 or 325-0835 after 5:30 p.m.

For Rent

SPRING HILL, FL - West Coast, 2 bdrm. house, furnished, Deltona community, seasonal or weekly. Ext 4530 or 261-2719.

GORDON HEIGHTS - beautiful ranch, fully fenced, ½ acre, 2 car garage w/elec. doors, l/r, eik, 3 bdrm., 2 bath, bsmt finished w/den and bath. Ext. 2487.

NORTH SHIRLEY - 2 rm apt., furn. bdrm. w/skylight, kit, w/w, priv. ent., 5 min. from Lab & stores, one non-smoker, no pets, security, $475 pays all. 281-8044.

BELLPORT BEACH ESTATES - contemporary, 3 bdrms, 2 bath, l/r, d/r, eik, den, f/p, w/w, garage, bike to village, golf, tennis, Great S. Bay, no pets, nonsmokers. 286-2005 or 698-0576 after 12 p.m.

CATSKILLS - 2 bdrm. chalet, furn., eik, l/r, w/w, wood stove, elect. heat, deck, TV-vcr, top of mountain, near Windam, Deer Run, and Hunter, 4wd needed in winter, wknd or mo. Ted, 928-1445, eves.

MIDDLE ISLAND - 1 bdrm. Artist Lake condo, incl. gas, heat, swimming pool, club house, etc., avail. Sept 1. $650/month. 331-2025.

HILTON HEAD, SC - 2 bdrm condo, sleeps 6, tennis, golf, pool, beach, Sept. through March, $300/wk. 585-9149.

Wanted

CHILD CARE - for infant, on site, 8:30-5, non-smoker. Mona, Ext. 5056 or 878-9384 eves.

DRIVER WANTED - drive m/t, BNL to LA. Ext. 7176 or 360-8649 eves.

HOUSEKEEPER - in Bellport and NYC, $200/wk. plus free apt. George, Ext. 4406.

HOME FOR GOLDEN RETRIEVER - male, 3 yrs. w/papers, needs home w/fenced yard. 472-4578 after 6 p.m.

HOUSE SITTER - for 3 weeks beginning Oct. 1, waterfront house. 727-8631.

THREE TICKETS - for "Ariadne auf Naxos" eve. perf. Met Opera, Sat., Oct. 10. Prefer forward Balcony or Family Circle. Ext. 5301 or 4619.

APPLE THREE USERS - to swap stories, software, hardware. Jerry Cadwell, Ext. 2934 or 744-2816.

LOVING HOME FOR KITTENS - 6 weeks old, healthy, litter-trained. Ext. 2959 or 744-0673.

HOUSEMATE - female to share furn. two-bedroom apt. in Patchogue, $350 all. 758-9376.

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