BROOKHAVEN BULLETIN
Vol. 42 - No. 38 September 30, 1988
BROOKHAVEN NATIONAL LABORATORY

AMD Multiplies, Then Divides

On October 1, as a result of multiplication of its functions over the past years, the Applied Mathematics Department (AMD) will divide into two parts.

Led by Ronald Peierls, who has chaired AMD since 1979, AMD's Mathematical Research Group will join the Department of Applied Science (DAS), as their Mathematical Sciences Division. AMD's Networks, Engineering & Telecommunications Division (NETD), together with its Computing & Communications Division, will regroup as the Lab's Computing and Communications Division, under Arnold Peskin, former Deputy AMD Chairman and NETD Head.

As the first Head of the new Division, Peskin is looking forward to improving and extending the already strong support provided by his group for the Lab's scientific programs.

"It's widely recognized that computing and communications are technologies that are crucial to Lab activities, and that their importance continues to grow," said Peskin. "With the inception of this new Division, we'll renew our efforts to build on our strengths and address our deficiencies. I am confident that the team composing the new Division will be equal to the task."

The new Division results from the developing role of computing. As Peierls explained, "When AMD was first formed, computers in science were rather special tools that few people knew how to work. At the Lab, the computing equipment was in a central location where people would come for help with problems, which were always very closely related to numerical computations. Research in mathematics and the computing facilities were natural partners.

"Currently," continued Peierls, "with the impact of so many computers and computer users at the Lab and elsewhere, and the immense variety of networks linking them both on and off site, AMD's technical support function has become so much broader that it makes more sense to manage it as an entity in its own right."

Peierls also felt that DAS, which

Roger Stoutenburgh

Ronald Peierls

already contains other basic science programs applied to practical problems, will be an appropriate new home for the mathematical research efforts he will lead. "We hope to establish collaborative activities with other programs, to our mutual benefit," he added.

The staff of the new research division will stay in their present location in Bldg. 515. "The natural affinity between computers and mathematics has meant that development and support people would often interact with the research side, and vice versa," said Peierls. "So it was decided that the two parts of the old AMD will remain in the same offices."

Ronald Peierls joined BNL in 1963 as a high energy theoretical physicist in the Physics Department and later headed the High Energy Theory Group for ten years. He moved to AMD as Chairman in 1979.

Peierls begins a year's sabbatical in October, but he will be continuing his research at the State University of New York (SUNY) at Stony Brook, so that he expects to be often at the Lab. His specific research interests will lie mainly in working on algorithms for asynchronous parallel computing.

"This is a unexplored field," he said. "Remarkable advances have been made in parallel computing, but by developing methods that do not depend on synchronization, we should see some completely new effects."

Arnold Peskin joined BNL in 1967, as a digital systems engineer in AMD. He served as Head of the Digital Engineering Group and of the Technical Support Division, subsequently becoming Deputy Chairman in July 1979 and Head of NETD in 1986.

At present, Peskin is especially interested in hardware-description languages for network and telecommunication systems, and in applications of optical time-domain reflectometry

Roger Stoutenburgh

Arnold Peskin

to fiber-optic security problems. He also has been an adjunct faculty member in the Electrical Engineering and Computer Science Departments of SUNY at Stony Brook.

Peskin is Vice Chairman for the Accreditation Board for Engineering and Technology, and a member of the Board of Directors of NYSERNet, Inc. (the New York State Education Research Network). Further, he has won a Lawrence Berkeley Laboratory citation for establishing U.S. Department of Energy computer-aided engineering workshops.

Peter Horton

Higinbotham Library Dedicated At TSO's 20th Anniversary Symposium

Twenty years ago, the Technical Support Organization (TSO) was formed. Now part of BNL's Department of Nuclear Energy, the group continues to advise and assist the U.S. Department of Energy and other governmental agencies on nuclear safeguards and arms control decision-making.

William Higinbotham (left) remembers the early years well, since he was one of those who saw the need for the group and helped bring it to reality. In 1968, though he was head of the Instrumentation Division, which he had been with since coming to the Lab in 1948, Higinbotham joined the TSO team at its inception and served as its head from 1973 to 1975.

Now retired and a BNL consultant, Higinbotham was honored on Monday, September 26, at the dinner held during TSO's two-day 20th Anniversary Symposium, when the library in Bldg. 197 was formally dedicated as the "Higinbotham Nuclear Safeguards Library." Here, present TSO Head Joseph Indusi shows Higinbotham the plaque that will be hung outside the library.

Haworth Distinguished Scientist

Form vs. Function — Max Perutz With a Structural Biologist's View

Ideally, in architecture and art, form follows function. But, in biology and medicine, the converse may be true.

Nobel laureate Max Perutz is one leading the investigation to prove how physiological functioning follows from biological form.

The biological form versus physiological function debate will be the theme of Perutz's two lectures next week, during his second of three visits as BNL's third Haworth Distinguished Scientist.

On Tuesday, October 4, Perutz will answer the question "Determining the Atomic Structure of Living Matter: What Use to Medicine?" in a talk of Lab-wide interest, at 4:30 p.m., in Berkner Hall. "Allostery's Many Faces" will be Perutz's topic for his Biology Department seminar on Thursday, October 6, at 3:45 p.m., in the Biology Seminar Room, Bldg. 463.

In addition to his lectures, Perutz will spend his time with the staff of the Biology Department's Center for Structural Biology.

Using x-ray diffraction to study protein crystal structure since 1937, Perutz, along with his colleague John Kendrew, solved the structure of hemoglobin in 1953. For this discovery — the first three-dimensional structure of a protein — Perutz and Kendrew, both of the British Medical Research Council's Laboratory of Molecular Biology, shared the Nobel Prize in Chemistry in 1962.

Hemoglobin is the iron-containing molecule in red bloods cells of vertebrates that transports oxygen from the lungs around the body and helps transport carbon dioxide out of the body. Several different kinds of normal hemoglobins occur in humans. However, mutations of the genes determining the structure of hemoglobin result in abnormal hemoglobin — and about 100 abnormal hemoglobins are known, but only a few are

Max Perutz

associated with genetic diseases such as sickle-cell anemia.

More is known about the structure and function of hemoglobin than any other protein — thanks to Perutz.

He has expanded his protein crystallography studies to uncover the structures of the normal and abnormal variations in hemoglobin — as well as the structures resulting from the interaction of abnormal hemoglobin with potential drugs.

Correlating the biological structure with complementary biochemical data on hemoglobin's physiological function, Perutz has been evolving an understanding of how the differences in form change hemoglobin's func-

(Continued on page 2)

Say It With Photos

They win prizes, they draw attention, they set mood. Many have been chosen as front covers for prestigious journals such as *Science*, *CERN Courier* and *Physics Today*.

They are photographs taken by Morton Rosen — and they provide a perceptive and intriguing record of the world of Brookhaven and its inhabitants.

Rosen began chronicling BNL in March 1958, when he joined the Photographic Group of the Photography and Graphic Arts Division (P&GA) as a photographer. For the next 30 years, he set up his equipment in virtually every nook and cranny of the Lab, as he produced the technical photographs needed to document BNL's scientific research and the big machines on which it's done. He also took photographs for the *Brookhaven Bulletin*, the *Brookhaven Highlights* and other Lab publications.

When Rosen became P&GA Photographic Supervisor last May, he moved from behind the camera to behind the desk, where he now uses his experience to oversee his group's photographic output.

"It's up to the photographer to provide the elements that create the aesthetics and add the impact to make the subject exciting," said Rosen. "This includes choice of camera angle and lens focal length, perhaps adding color and using lighting to heighten the drama that separates a prize-winning photograph from a run-of-the-mill shot."

Over the years, Rosen has won many photographic honors for his scientific subjects. In 1987, for example, these included four ribbons and the "Court of Honor" award from the Professional Photographic Society of New York; honors in every category of the joint Eastman Kodak, Nikon and Professional Photographers of America "Impact Through Applied Photography" competition; and four National Merit Awards at the 96th International Exhibition of Professional Photography.

In non-scientific circles, Rosen is well-known for his portraits, taken evenings and weekends in the Montage Studio in Sayville, which he owns with his wife Caryn. In this field, too, he has achieved outside recognition. For example, based partly on Rosen's portraits of her, a local six-year-old was chosen "Little Miss Photogenic of New York State."

Rosen's talent for portraiture has been a positive influence on his technical photography. Finding both kinds of camera work equally rewarding, Rosen said, "I approached every industrial and technical subject as a portrait. I analyzed the personality and treated it accordingly, with regard to lighting technique and the mood that I wished to create."

Now, as Photographic Supervisor, Rosen is using his mood-creating abilities in a new venture — providing photo decor ideas for Lab offices and reception areas. In particular, he is using photographs of BNL as dramatic decorations to convey the Lab's image. "By displaying the right photo in the right setting, we can generate an atmosphere helpful to business in a scientific environment," he said.

"We have all the ingredients," he continued. "They just need to be put together. A plain wall that says nothing is ineffective. Once you cover it with a dramatically enlarged photo mural, you add excitement, restfulness or intellectual challenge, according to your own choice."

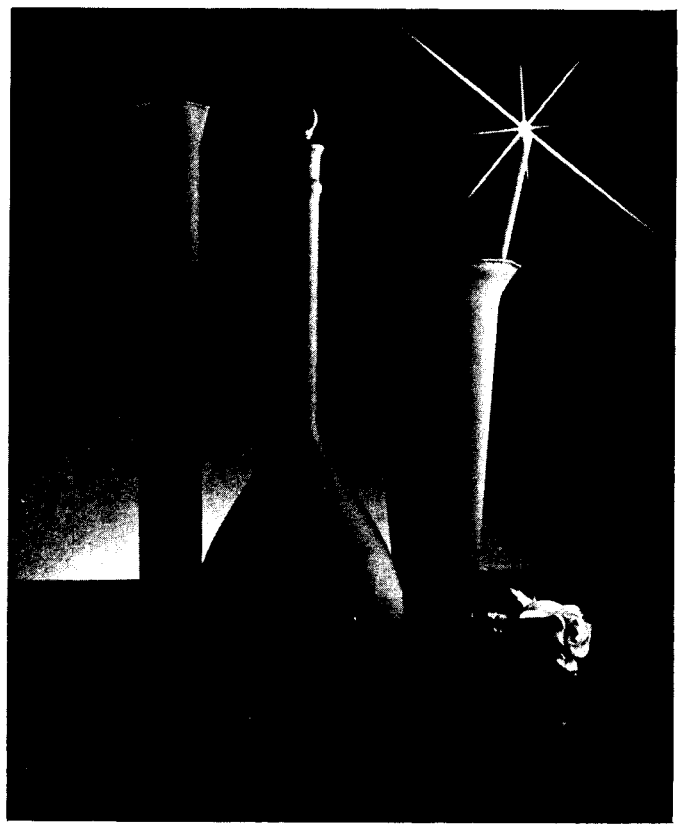
Rosen explained that a mock-up of the area to be redecorated can be made, using the proposed photographs, so that the final effect is easy to visualize. This was the method used when the Director's Office's new quarters were decorated last fall. Plans are also under way to use poster-sized photographs in other buildings. Rosen said that those wishing to explore this concept for their areas should contact him on Ext. 2388.

Photos can serve as decorations while also meeting practical needs. "For example," Rosen said, "a spectacular aerial shot of the Lab could double as a map for visitors.

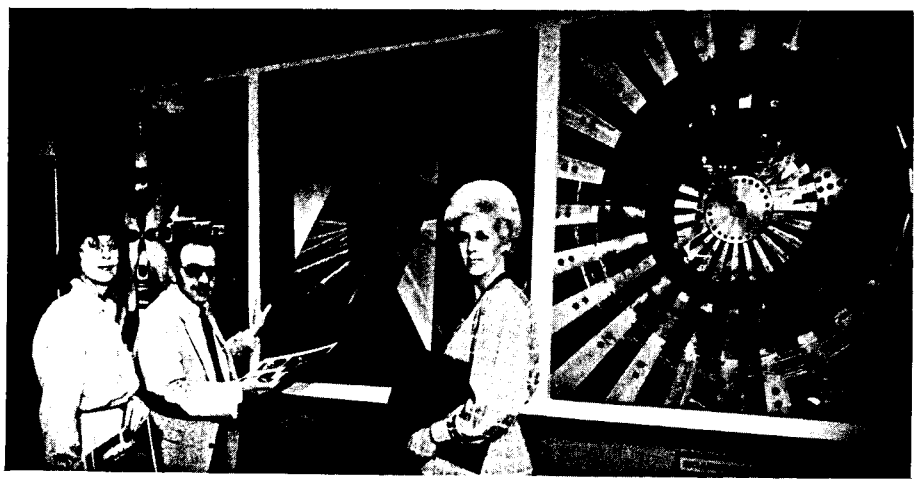
"In fact," he continued, "there are many untapped uses for both artistic and scientific photography at Brookhaven. The possibilities are as limitless as one's own imagination."

— Liz Seubert

As striking in black and white as it is in color, this Rosen photo of the cross-section of a superconducting magnetic field won the coveted "Court of Honor" award at the 1987 annual convention of the Professional Photographic Society of New York.



"Natural Science" is the title of this award-winning photograph by Rosen, displayed at the 96th International Exhibition of Professional Photography, 1987. To achieve this effect, Rosen sprayed lab glassware black and grouped it with a rose to represent life sciences. The lines converging toward infinity suggest the endless possibilities of scientific research.



Roger Stoutenburgh

Morton Rosen, Photography and Graphic Arts Division, and Jane Schwaner (left) and Lillian Kouchinsky, both of the Director's Office (DO), compare the mock-up designs for the DO's new decor to the completed project. On the wall behind them are three of Rosen's most colorful scientific photos: (left) a view of the radio-frequency quadrupole used in the AGS to preaccelerate polarized protons; (center) an interpretation of a holographic sculpture by Peter Nicholson; and (right) the end view of a magnet for a high-precision study of charged kaon decays.

Max Perutz (cont'd)

tion. His form-function studies have increased understanding about how hemoglobin carries oxygen —and how its oxygen-carrying ability is compromised in sickle-cell anemia and other genetic diseases involving hemoglobin.

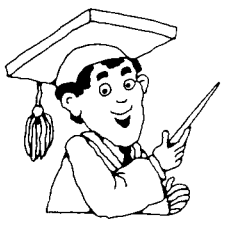
Knowing the structure of abnormal hemoglobin or any other biological molecule, Perutz is better able to predict which potential drugs will interact with the molecule's structure. After examining structural interactions and functional changes, he is better able to judge the drugs' effects and how the drugs should be modified to be more effective.

It is Perutz's hope that this understanding will lead to cures for such genetic diseases as sickle-cell anemia. If the form of an abnormal biological molecule can be changed — either by binding drugs to the structure or genetically engineering the gene responsible for its making — then the molecule's normal, physiological function can be restored.

Perutz came to BNL in April 1986 for his first visit as Haworth Distinguished Scientist. The Haworth appointment was established by Associated Universities, Inc., in 1983, to honor the late Laboratory Director Leland J. Haworth, who headed the BNL from 1948 to 1961, and who died in 1979.

Scientists of international repute in fields related to BNL programs are invited to spend from one to three weeks a year for three years in residence at BNL. During that time, they hold discussions with scientific staff and present lectures, including one of general interest.

AUI Scholarship Alert



Application forms for the 1989 AUI Trustee Scholarship are now obtainable from the Office of Scientific Personnel. Children of regular employees of BNL are eligible to compete for up to twelve AUI scholarships, each for $2,000 per year, renewable for up to four years of study toward an academic degree.

In addition, up to three scholarships may be awarded to BNL and National Radio Astronomy Observatory (NRAO) employees' children who are Black, Hispanic or Native American. One such scholarship is open to qualified children of employees at BNL and another for children of NRAO employees. One may be awarded to an additional applicant from either institution on a competitive basis.

Qualified applicants are the children of BNL employees who began regular, full-time or regular, eligible part-time employment no later than November 1, 1988, and who are employed by BNL at the time the award is announced; or children of retired employees or employees who died while in regular service at the Laboratory. Stepchildren are eligible if the employee regularly claims the child as a dependent for income tax purposes.

Applicants must also be secondary school seniors who will be graduating during the current academic year and entering college by fall 1989.

In addition to filing applications by November 1, 1988, eligible candidates are required to take the Scholastic Aptitude Test, requesting release of their scores to "AUI Trustee Scholarships, Code Number 0442." Scholarship winners will be selected by an independent committee reporting to Sponsored Scholarship Programs, an organization within the Educational Testing Service.

For further information, contact the Office of Scientific Personnel, Building 185A.

team safety

The Lab's Team Safety program has six new winners, whose pictures will appear in next week's Bulletin.

After week ten, the Central Shops' Support team and Welding/Metal/Cutting Shop team, two teams of Custodial/Hot Laundry personnel from Plant Engineering, and the Central Receiving and Central Stores teams from Supply & Materiel are all waving pennants.

Award lunches are being held as a reward for their reaching their time goals without incurring any lost-time injuries.

Six more teams have found that it pays to play safe. Keep up the safe work!

HFBR: A Nuclear Historic Landmark

The American Nuclear Society (ANS) has designated BNL's High Flux Beam Reactor (HFBR) a Nuclear Historic Landmark. ANS President Gail de Planque will formally present the award at a ceremony and luncheon on Monday, October 17, at noon, in the Brookhaven Center. To make reservations, at $14 per person, call Pat Durcan, Ext. 2380, by October 10.

Tickets to Islanders On Sale Next Week

Tickets for the Islanders' 1988-89 regular hockey season will go on sale at the BERA Sales Office in Berkner Hall on Thursday, October 6, at 8 a.m.

BERA's four seats for the 40 home games at Nassau Coliseum are located in Section 321A. Tickets are priced at a special, reduced rate.

Copies of the home-game schedule are now available at the BERA Sales Office.

Purchase limitations:

- Tickets will be sold only in pairs.
- During the initial sale, tickets for Islanders/Rangers games will be limited to two tickets per employee, per Ranger Game.
- The BERA Sales Office will not give any refunds or make any ticket exchanges after a sale is completed.

In the event that Islanders move into the NHL playoff and championship games next spring, only those employees who supported the BERA Ticket Service Program during the season will be eligible for entry in drawing for home game tickets.

Hospitality News

Artist Sona Hoffman will discuss "Painting With Water Colors," at the next Hospitality Committee get-together, on Tuesday, October 4, at 9:30 a.m., in the Brookhaven Center.

Spouses of Laboratory employees and guests are invited to attend. Bring the children; babysitting will be provided free of charge. Coffee, tea and danish will be served, and juice and cookies will be provided for the children.

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BWIS Meeting

Elections will be held at the October business meeting of Brookhaven Women in Science (BWIS), on Thursday, October 6, at noon, in Room A, Berkner Hall. The following candidates have been nominated:

Group Coordinators: Stephanie Lamontagne & Joyce Tichler
Secretary: Pat Carr
Treasurer: Pat Webster
Program Chair: Eena-Mai Franz
Publicity Chair: Betty McBreen
Scholarship Chair: Eva Bozoki
Seminar-Lecture Chair: Carmen Benkowitz

After the elections, Marsha Belford, chair of BNL's Child-Care Initiative Committee and a BWIS representative on the Committee along with Louise Hanson, will report on the results of the Lab's child-care survey, completed this spring, and discuss the Committee's conclusions.

In attendance at the meeting will be Linda Feddersen, director of Children's Playground in Mastic Beach, the newest, licensed, day-care center near BNL. She will have information about her center for interested parents of children 18 months to five years.

Safety Shoes

The on-site safety shoe representative will be on vacation the week of October 3. Normal hours will resume October 10.

Bowling

Red/Green League
T. Prach bowled a 214, W. Powell 213, K. Riker 208, C. Flood 204, P. Ouvrard 202.

White League
Kay Conkling converted the 6/7 split.

Purple League
Marsha Kipperman had a 197, Gene Hassell 204, Ed Beadle 229/246 for a 664 scratch series.

Pink League
Sandy Asselta bowled a 186, Maryann Reynolds 181, Donna McCambridge 172, Renie Rosati 170. Rosati also converted the 5/7 split.

Service Awards

The following employees received service awards during the month of September:

Forty Years
Seymour Katcoff ..... Chemistry
Edward D. Sperry ..... Physics

Thirty-Five Years
James J. Egan ..... App. Science
Eugene C. Raka ..... AGS

Thirty Years
James R. Miles ..... Plant Eng.
Max A. Schmaeler ..... Medical
John M. Sullivan ..... AGS

Twenty-Five Years
Edward Byrne ..... Plant Eng.
Arjun D. Chanana ..... Medical
Helen M. Kalbach ..... S&EP
Mary A. Kelley ..... Instrumentation
Said F. Mughabghab ..... Nuc. Energy
Jeanne A. Penoyar ..... Nuc. Energy
Erich H. Willen ..... Accel. Dev.
Madeline P. Windsor ..... Tech. Info.

Twenty Years
Gary E. Jayne ..... Reactor
Lance L. Junker ..... Reactor
Wenzel J. Rowan ..... Sup. & Mat'l.
Richard B. Schonberg ..... Personnel

Ten Years
Donald S. Barton ..... AGS
James W. Davenport ..... Physics
Michael A. Delph ..... Sfgrds. & Sec.
Thomas F. Dilgen ..... Accel. Dev.
Frank DiMaggio ..... Accel. Dev.
Richard C. Fernow ..... Physics
Joseph L. Funoro ..... AGS
George H. Grigg Jr. ..... Nuc. Energy
Barry A. Karlin ..... Light Source
Barbara T. Langhorne ... Sup. & Mat'l.
Thomas W. Ludlam ..... Physics
Daniel R. McCafferty ..... AGS
Paul J. Ribaudo ..... Accel. Dev.
Robin A. Scarola ..... Physics
Daniel V. Wilson ..... Accel. Dev.

If Your Science Is a Work of Art . . .

Science and art do mix — often in the same object.

It's just a matter of recognizing that the object is not only scientifically beautiful, but also aesthetically pleasing. And these traits might be recognizable in anything from glassware to data generated from experiments or theory, from printed circuit boards to architectural drawings.

If you recognize that an object de science is also an object d'art, consider entering it in the BERA Art Committee's Data Show, to be held October 24-26 and featuring employees' science artworks.

If yours is one of the first 20 entries submitted by September 30, it could be chosen to illustrate the poster for the exhibit. Or, perhaps your entry will capture the "Best in Show" award!

According to Clare Sheppard, who chairs the Committee, plans for the Data Show have been in the works for almost a year. "As evidenced by the enthusiastic response to the recent Chaos exhibit, there is much interest in this sort of subject," she said. "The Committee has received many inquiries about it." The Data show will be the eleventh art exhibition of works by BNL employees and the first with a scientific theme.

To exhibit a work in the Data Show, you must fill out a Data Sheet. These forms are available at the BERA Sales Office in Berkner Hall and should be submitted by Tuesday, October 18, for inclusion in the exhibit program.

Works will be arranged for exhibit in Room B, Berkner Hall, on Monday, October 24, between 8:30 a.m. and 12:30 p.m. For more information, call Clare Sheppard, Ext. 3946.

Motoring Club

BERA's Antique & Classic Motoring Club has planned a club cruise to the Bayard Cutting Arboretum in Oakdale on Sunday, October 2. Members should meet at the Brookhaven Center at 11 a.m., for departure at 11:15 sharp.

Cooking Exchange

From paté to mini-cheesecakes, appetizers and baked goods will be on hand for sampling at the Cooking Exchange's first meeting of the new season. All employees and their immediate family members are invited to attend the meeting, which will be held on Wednesday, October 5, from 12:30 to 2:30 p.m., in the Recreation Building in the apartment area.

There is a $2 charge per adult and 50¢ per child to cover the cost of ingredients and babysitting services. For more information, contact committee member Barbara DiMauro, 744-1645; Kay Larson, Ext. 3072; Susan Sears, 331-5642; or Tina Sferlazzo, 286-1016.

On Site

Over the next few months, the ongoing work to supply cooling water from the Chilled Water Facility under construction on Rochester Street to other Laboratory buildings will necessitate some road closings. Next week, the following roads may be affected:

- those south of Biology, Bldg. 463, behind the greenhouse, and east of Medical, Bldg. 490.
- Brookhaven Avenue, at the Rochester Street intersection.

Also, over the next month, consultants working with the Facilities Planning Group in Plant Engineering will be using video equipment to examine the Lab's sanitary piping for damage or blockage. Expect to see their vans and equipment as they check lines beginning at the apartment area, then around the site.

Arrivals & Departures

Arrivals

Madeline Batsche ..... P&GA
Patrick Dwyer ..... AGS

Departures

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

Assa Auerbach ..... Physics
Theodore J. Dahne ..... Plant Eng.
Alastair A. MacDowell ..... NSLS
Sergiu Sanielevici ..... Physics

Volleyball Meeting

Volleyball League captains will meet for a second time on Wednesday, October 5, at noon, in Room B, Berkner Hall, to discuss and vote on the local rules and constitution. Each team captain or a representative must attend.

Fight Cancer — Join Walk-Jog-Bike-a-Thon

The American Cancer Society is asking BERA members, families and friends to join them on Sunday, October 16, for their annual Walk-Jog-Bike-a-Thon to raise money for the fight against cancer.

Information and applications are available at the BERA Sales Office in Berkner Hall, Monday through Friday, 9 a.m. to 2 p.m. For more information, call the American Cancer Society at 385-9100, Ext. 328.

Cafeteria Menu

Week of October 3

Monday, October 3

Beef barley soup	(cup)	.75
	(bowl)	.95
London broil w/sherry mushroom sauce & 1 veg.		3.10
Fettuccine Alfredo w/1 veg.		3.10
London broil au jus w/1 veg. (lite-line)		3.10
Hot deli: Grilled cheese & tomato		1.40

Tuesday October 4

Split pea soup	(cup)	.75
	(bowl)	.95
Beef & bean burrito w/1 veg.		2.50
Manicotti w/tomato sauce & 1 veg.		3.10
Baked fish w/1 veg. (lite-line)		3.10
Hot deli: Pastrami	(bread or roll)	2.85
	(hero)	2.95

Wednesday October 5

Chunky tomato soup	(cup)	.75
	(bowl)	.95
Fried chicken w/potato		3.00
Eggplant Parmesan		2.95
Baked chicken w/1 veg. (lite-line)		3.00
Hot deli: Corned beef	(bread or roll)	2.85
	(hero)	2.95

Thursday, October 6

French onion soup	(cup)	.75
	(bowl)	.95
BBQ beef over rice		3.10
Seafood cakes & spaghetti w/tomato sauce		3.10
Chef's salad plate (lite-line)		2.25
Hot deli: Turkey breast	(bread or roll)	2.85
	(hero)	2.95

Thursday, October 6

Fish chowder	(cup)	.75
	(bowl)	.95
Assorted wild pizza	(slice)	1.25
Seafood platter & french fries		3.10
Sliced turkey breast w/1 veg. (lite-line)		3.10
Hot deli: Roast beef	(bread or roll)	2.85
	(hero)	2.95

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.

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

2956. ENGINEERING POSITION - Requires BS degree in electrical engineering or equivalent and experience with electronic test instruments, control circuits, power supplies, and computer operations. Will work on problems relating to the building, testing and analysis of superconducting magnets. Accelerator Development Department.

2957. SCIENTIFIC ASSOCIATE POSITION - Requires BS in physics or equivalent and familiarity with instrumentation and computers. Must have good communication skills and ability to work with other technical staff. Will assist in testing conventional and superconducting magnets for the SSC, RHIC and Booster projects. Will assist in work organization and scheduling, and have responsibility for preliminary analysis of measurement data. Experience with VAX, PC, FORTRAN, and BASIC is desirable. Accelerator Development Department.

2958. PROGRAMMING/ANALYST POSITION - Requires a BS or MS with at least 5 years' experience in a scientific programming environment. Work will include the organization, analysis and dissemination of magnet measurement data, as well as assisting in the organization of database data storage and its use through a LAN and ETHERNET/DECNET system. Will be expected to develop some application programs, including displays and reports that reveal magnet performance. Experience required in FORTRAN and BASIC, as well as use of PCs, VAX, etc. Accelerator Development Department.

2959. TECHNICAL POSITIONS (3) - Requires an AAS degree with an emphasis on engineering or physical sciences or the equivalent. AAS in health physics is desirable. Responsibilities include routine radiation and contamination surveys. Requires participation in respirator, industrial hygiene and general safety training programs. Safety & Environmental Protection Division.

Motor Vehicles & Supplies

88 SUZUKI SAMURAI - hard & soft top, 2k mi., am/fm stereo, extras, asking $8,500. Andy, Ext. 2907 or 289-1755.

87 TOYOTA PICKUP - long bed, extra cab, a/t, p/s, p/b, mint, $9,000 neg. Joe, Ext. 5213.

86 GMC PICKUP - 350, ¾ ton, 4-spd., 33k, gray, w/matching cap, a/c, am/fm stereo. 399-4996 after 6 p.m.

86 CAMARO - 26k mi., full loaded, custom woodgrain dash, T-top, red w/gray int., alarm, $8,900. Ext. 4962.

86 BUICK SOMERSET - digital dash, am/fm cass., a/c, clean, must sell, new car on order. Ginger, 472-6613.

86 PONTIAC GRAND AM - 2.5LF1, 5-spd., 2-dr., a/c, p/s, p/b, sunroof, excel. cond., $6,500. Joe, Ext. 3464 or 281-7683.

86 CORVETTE - leaded, 4-yr. warranty, 4-spd., best offer. 567-8320 days.

85 MITSUBISHI CORDIA TURBO - 5-spd., fully equipped, 4 new tires, garaged, excel. cond. Ext. 4470.

85 BUICK SUMMERSET REGAL - 29k mi., p/s, a/t, a/c, am/fm cass., mint cond., must sell, asking $5,995. 874-2441.

84 BLAZER S-10 - Tahoe package, 50k mi., excel. cond., $8,200. 286-8112.

84 PONTIAC TRANS AM - 305 H.O., 5-spd., tinted widows, T-top, excel. cond., $7,800. 928—9109.

84 DODGE CONQUEST - same as Starion, 5-spd., leather seats, black & gray, make offer. 878-0842.

84 KAWASAKI ATV - 250 Tecate, good cond., very fast, $900 neg. Ext. 5319 or 395-3320 after 5 p.m.

84 DODGE 600 CONVERTIBLE - all options, 45k mi., excel. cond., $6,000 neg. 473-6116 or 212-285-0041.

83 CHEVY S-10 - 4-spd., very good cond. 325-0447 after 6 p.m.

83 TOYOTA COROLLA WAGON - 5-spd., 105k mi., roof rack, hitch, am/fm cass., mint cond. Sheryl, Ext. 5384 or 929-8741.

83 VOLVO 760 GLE - turbo, diesel, 5-spd., 86k mi., loaded, leather, moonroof, silver, excel. cond., $7,900. 475-5430.

82 TOYOTA - 4-dr. sedan, 5-spd., $2,000. Bob, Ext. 4749.

82 VW RABBIT - diesel, cracked block, body good, new radiator & exhaust, asking $450. Ext. 2521 or 286-1765 eves.

81 CHEVY CAMARO - V-6, a/t, a/c, stereo, orig. owner, excel. cond. 331-2473 after 6 p.m.

81 CITATION - 4-dr., V-6, handyman special, price neg. Ext. 4070 or 475-7272 after 6 p.m.

81 YAMAHA - 1100 Midnight Special, 12k mi., excel. cond., $1,500. Bob, Ext. 2957 or 878-4556 after 5 p.m.

81 PLYMOUTH CHAMP - 4-cyl., 4-spd., new paint, tires, clutch, economical, clean, $1,050. Glenn, 737-3327.

81 FORD MUSTANG - 4-spd., 4-cyl., gauges, good cond., $2,100. 744-9812 after 5 p.m.

81 SKYLARK - 4-dr., V-6, runs well, looks ok. Ext. 5286.

80 CHEVROLET CAPRICE ESTATE WAGON - a/c, p/w, am/fm, $700. Ext. 3082.

80 YAMAHA XS-650G - 18k mi., performance modifications, extras, maintained, perfect cond., $1,000. Greg, Ext. 2575.

80 TOYOTA CELICA ST COUPE - 5-spd., a/c, high mi., runs, needs work, $800. 368-8018.

80 VW RABBIT - new engine & parts, runs well, $475 or best offer. 581-5462.

79 TOYOTA CELICA GT - 5-spd., a/c, sunroof, am/fm stereo cass., high mi., excel. gas mileage, $2,000. 277-2067 after 6 p.m.

79 HONDA CIVIC 1200 - good cond. , no engine, $200. Don, Ext. 3511.

79 CHEVY NOVA - 6-cyl., a/t, p/s, p/b, sunroof, am/fm tape, good cond., $875. Ext. 5235 or 821-6821.

79 DODGE OMNI - '72 International carry-all. 732-7695.

78 DODGE CHALLENGER - 5-spd., a/c, good cond. 286-3875.

78 TOYOTA COROLLA - $300. 744-5069.

78 DATSUN 280Z - 2+2, 82 eng., a/t, a/c, am/fm cass., looks good, runs well. 744-7947.

78 AMC - cruise con., p/s, p/b, a/c, am/fm radio, new tires, no rust, good running cond, $975. 874-8646.

78 OLDS CUTLASS SUPREME - 8-cyl., fully equipped, new trans., excel. cond., orig. owner. Ext. 4449 or 751-8403 after 6 p.m.

78 DATSUN 280Z - 5-spd., am/fm, like new in & out, runs well, $3,400. Ext. 4615.

76 KAWASAKI F-11B ENDRO - 250cc, low mi., runs well, needs battery, make offer. 878-0842.

73 DODGE DART - 6-cyl., 2-dr., a/t, p/s, body good, $400. 363-6753 after 6 p.m.

73 HONDA MOTORCYCLES - 350cc, 5k mi., elec. start, $400; '73 350cc, 2-cyl., needs battery, low mi., $200. Bill, Ext. 4312 or 281-5988.

71 CAMARO - 6-cyl., white w/black int., $325 neg. Mark, 727-3673.

70 PONTIAC FIREBIRD - 350 engine, worked on, 4-barrel carb., redone in & out, like new, $3,500 neg. Steve, 744-8087.

70 PONTIAC FIREBIRD - a/t, p/s, good body, 6-cyl. Tom, 589-4836 after 6 p.m.

27 BUGATTI REPLI-CAR - on '67 VW chassis & engine, 95% complete, running, driveable. 395-5158.

VAN SEAT - Ford, 2 pass., green w/belts, very good cond., $60. Don, Ext. 5105.

UTILITY TRAILER - flat bed, $25. John, Ext. 3675 or 924-3528.

SUZUKI QUADRUNNER - low mi., many extras, perfect cond.; Suzuki RM250 dirt bike, many extras, excel cond. 878-6074 eves.

HURST SHIFTER ASSEMBLY - floor-type, make offer. Bill, Ext. 4312 or 281-5988.

WIRE WHEELS - 4, fit 15" rims, like new. 325-0447 after 6 p.m.

HONDA ATC 3 WHEELER - 125cc, good shape, asking $400. Dave, 929-3620.

Boats & Marine Supplies

29' ULRICHSON - wood, excel cond., f.b., fwc, 327, runs well, sleeps 5, range/oven, elec. head, many extras, must see. 732-2754.

25' CHRIS CRAFT - 1975, sleeps 4, Loran, VHF, D.F. swim; platform, in water. 475-8162 eves.

23' COLUMBIA SAILBOAT - 1976, w/1986 Yamaha, 6 h.p., very clean, must see. 924-2016 after 6 p.m.

21' RENKEN - 1981, no motor, $750; 18' 1977 Regal Bowrider, $2,800; Evinrude, 40 h.p., $350; Merc, 65 h.p., for parts, $50. Ext. 3457 or 924-6761.

12' ALUMINUM BOAT - needs work, as is, $100. 289-8212 eves.

MACH I BOWRIDER - 1986, I/O, 140 h.p., seats 9, mint cond., $7,000. 399-0969 or 281-4906.

BROWNING BOWRIDER - 1976, w/1985 Cox trailer, very good cond., $3,000. George, 744-9732.

STARCRAFT BOWRIDER - 1972, 50 h.p., elec. start, Evinrude; 1985, glav. trailer, $1,100. John, Ext. 3675 or 924-3528.

Miscellaneous

DINING ROOM SET - $125. Paul, Ext. 4156.

BEDROOM SET - complete magic motion, 9 positions, 2 dressers, double mirrors, 2 end tables. 399-0969 or 281-4906.

BEDROOM SET - Colonial pine, incl. hutch & wooden free-standing mirror, excel. cond, $325. 331-3569.

END TABLES - cherry wood, 24"x27", excel. cond. Ext. 2537.

ROCKING CHAIR - maple, w/cushions, good cond. 325-0447 after 6 p.m.

TABLE LAMPS - $5 ea. John, 924-3528.

MICROWAVE - Sharp, full size, w/microwave cart, $150. 277-6610.

WASHER & DRYER - Whirlpool, portable & stackable, 110 v., good cond., $350. Pete, Ext. 4100.

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

WASHER & DRYER - Whirlpool, portable, well maintained, $300. Janene, Ext. 4660 or 722-4842.

VACUUM CLEANER - $25; baby swing, like new, $40; baby bed, $40. Aoki, Ext. 3748.

HUMIDIFIER - large, 5 gal., Sears model, good cond., $10. Jim, Ext. 2432.

WALL STOVE - G.E., excel. cond., best offer; refrigerator, Admiral, auto defrost, good cond., $250. 973-5349.

SILVERWARE - 8 place setting, sterling silver, Damask Rose, 6 pieces, inc. box & serving pieces, $800 firm. 821-0695.

PITCHER & BOWL - Ironstone, 12"x15", white/blue, ducks, $20; pine spinning wheel planter, $15; gas stove, old, $30; Jody, 698-4882 after 6 p.m.

FIREPLACE - free standing, glass enclosed, complete, red, $150. Mike, 281-6070.

STOVEPIPE - 8", flexible stainless steel, for woodstove, into fireplace installation, $40. Pete, Ext. 7627 or 929-3847.

WINDING STAIRCASE - 90° left turn, 5 steps, total height 40", oak, new, $100. 475-1844.

AIRLESS PAINT SPRAYER - professional model, never used, in box, $350. 473-5349.

STOVEPIPE - off-set, 2 pcs., brand new, triple wall, galv., 10" o.d., s.s. steel, 6" i.d., $75. Gary, Ext. 4095 or 758-5592.

HOT WATER HEATERS - elec., Rheem, 15 gal., like new, $40; O.A. Smith, 30 gal., tall, like new, $60. Tom, Ext. 4084 or 878-1060.

WOOD LATHE - 11" swing, Delta/Rockwell motor, stand, cabinet, excel. cond., $325. 286-8794.

LAWN MOWER - Craftsman, 22" s.p., excel., $75; lawn tractor, 11 h.p., 36" mower, 42" snow blade, mint, $800. Ext. 3457 or 924-6761.

LAWN MOWER - Rickels, 3½ h.p., Briggs, 21" cut, $50; lawn mower, 3½ h.p., 21" cut, $50. Dan, Ext. 4987 or 698-7322.

TOPSOIL - fine screened, delivered, $18/yd., also peat moss, sand, gravel, blend. 924-9427.

SHALLOW WELL PUMP - Goulds, ½ h.p., new, $180. 399-3401 after 5 p.m.

BUBBLE SYSTEM - Toro, $350. 399-0969 or 281-4906.

DEADBOLT - Segal, key/knob type, $35; screw-mount lenses, 135 mm telephoto, 28 mm wide angle, $35/ea. Rick, Ext. 3932.

SNOW PLOW - Meyers, 7½', power angle, complete w/hardware, $800. Bob, 878-4556 after 5 p.m.

TOOL CHEST - rolling, brand-new, 3 drawer, $75. 929-3620.

JALOUSIE WINDOWS - 3, new, 27"wx51"h, $60. 286-9510.

HIBISCUS PLANT - growing in plastic pot; 2' tall, yellow flowers, $5. Joe, beeper 925 or 728-1859 after 6 p.m.

TELEPHONE ANSWERING MACHINE - Panasonic KX-T1410D Easa-phone, microprocessor controlled, $40. Brian, Ext. 5265 or 234-9487.

TV & RADIO TUBES - & parts. Duke, Ext. 2957.

COLOR TV - 12", $60. Ext. 3098 or 4516.

PIANO - Sohmer upright, dark mahogany, 52"hx59"wx27"d, $400 firm. Bill, Ext. 2869 after 12:30 p.m.

ORGAN - Kawai electronic, hardly used, $2,500 neg. 281-7510 after 5 p.m.

VIOLIN - 6 yrs. old, very good cond., cost $290, best offer over $150. Dave, Ext. 3093.

BICYCLE - Vista, touring, 18-spd., 1 yr. old, $150; bed, twin, captains w/drawers, $60. Sue, Ext. 5156.

BICYCLE - girl's, 16" tires, semi-pneumatic, clean, no training wheels. Ext. 4475.

EXERCISE MACHINE - Soloflex, extra weight straps, excel. cond., $500 firm. 277-3805 eves.

ENLARGER - for darkroom, Durst B30, $40. 929-6313.

PING PONG TABLE - large, $50; 10-spd. men's bike, $60; bench press & weights, $75; all like new. 878-6637.

POOL TABLE - 6', slate, good cond., $200. 399-3401 after 5 p.m.

BIRDS - 2, blue/gold, Military McCaws, young, w/cages & playpens. Linda, 289-3586.

GOLF CLUBS - man's 9 irons & woods, excel. cond., $125. Bert, Ext. 5156.

U-PICK PUMPKINS - Fri., Sat., Sun., 9 a.m.-6 p.m., Beaver Dam Road, Brookhaven Hamlet.

COATS - 3, w/natural lamb, mink, silver fox collars, 1 blue leather, appliances, typewriter, color TV and more, moving south. 427-8254.

TICKETS - 2, Oct. 3, Sinatra, Minnelli & Davis, Nassau Coliseum, Up Gate 9, sec. 340, seats G3 & G4, $50 ea. Cheryl, Ext. 2272 or 732-7634.

TICKETS - 2, Peter, Paul & Mary, 8 p.m., Oct. 15, $24.50 ea. George, Ext. 4453 or 4460.

FOX JACKET - Norweigan Blue, 28" long, like new, size medium, paid $650, sell $400 neg. Ext. 2276.

Yard Sales

CENTER MORICHES - 49 Fied Bridge Rd., 9/1, rain date 9/2, 10 a.m.-4 p.m. Ext. 2021.

OAKDALE - 25 Berard Blvd., 9/30-10/2, 10 a.m.-4 p.m., 3-family, rain date, 10/7-10/9. Ext. 3848.

HOLBROOK - 269 Thunder Rd., off Greenbelt Pkwy, 10/1, 10 a.m.-4 p.m., toys, household items, books. Ext. 2815.

Free

HIMALAYAN CAT - beautiful & lovable, 1-yr.-old, male. Ext. 2707 or 821-6916.

COUCH - classic Italian Provincial, w/handcarved fruitwood frame, excel. cond. 757-5338.

SHIP TABLE - 2'4"x8', w/lip, iron fold legs, heavy. 399-0537 after 5 p.m.

KITTEN - pure black, gray eyes, 8-wks.-old, housebroken. W. Doyle, Ext. 2050

Car Pool

PORT JEFFERSON - need 4th member for on-time, established car pool. Tom, Ext. 4423.

Real Estate

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

For Rent

BELLPORT - 4 bdrm., 3½ baths, Jacuzzi, walking distance of schools, bay & village, avail. unfurnished Oct. 1. 363-8936 eves.

E. PATCHOGUE - s. of S. Country Rd., 1st fl. apt., 2 bdrm., l/r, eik, priv. ent., no pets, avail., Oct. 1, $500/mo. + util. Walt, Ext. 2907 or 698-0576.

FIRE ISLAND PINES - 4 bdrm., 2 baths, wk. or wknd. this fall. Ext. 4715 or 289-1003 eves.

GORDON HEIGHTS - 1 bdrm., priv. ent., many extras, mint, no pets, util. incl., $550/mo. Ext. 3316 or 698-1362.

MATTITUCK - waterfront, 2 bdrm. + den contemp., furn. or unfurn. Ext. 4715 or 289-1003.

MIDDLE ISLAND - apt. sublet, 1½ bdrm., 10 min. to Lab, across from TSS, avail. mid-Oct., $685/mo. Ext. 2211 or 345-5428.

MT. SINAI - 3 bdrm. house, fully furn., avail. Jan.-June 1989, visiting family preferred, terms neg. 473-1761.

RIDGE - 3 bdrm. ranch, eik, l/r, den, 2½ baths, pantry, new carpeting, fenced yd., family neighborhood, 5 min. from Lab, possible M/D, $1,200/mo. 744-8632 after 5 p.m.

SHIRLEY - 2 bdrm. apt., $550 + elec.; 2 bdrm. apt., $675 incl. all, ref. + 2 mos. security. 744-2821, leave message.

SHOREHAM - 1 bdrm. apt., full kitchen, large l/r, full bath, glass sliding doors to large patio, w/w carpet, cablevision, $600 for all. 821-2874.

For Sale

MASTIC BEACH - 3 bdrm. contemp. ranch, new kitchen & bath, w/w carpet, new Andersons & heating system, bsmt., cedar siding & deck, 60x200, asking $145,000. 281-5652.

MASTIC BEACH - 3 master bdrms., l/r, full bsmt., cabinet-lined eik, stove, refrig., carpeting, 3 blocks from marina, low taxes, $120,000 neg. 281-8685.

MIDDLE ISLAND - wooded & leveled 2 acres, 200' road frontage, town zoned, ⅓ acre residential, walk to Spring Lake golf course, $74,000. P.O. Box 558, Upton, NY 11973.

PORT JEFFERSON - Harbor Hills, 4 bdrm. split ranch, d/r, eik, family rm. w/fp, brick patio, oak floors throughout, 24'x44' bsmt., $189,000. Ext. 4483 or 929-5699.

PORT JEFFERSON STATION - 5 bdrm. contemporary hi-ranch, M/D, 3 baths, 2 kitchens, gar., vinyl siding, fenced yard, ¼ acre, mint, $174,990. 331-1523 eves.

RIDGE - 2 bdrm. townhouse, central a/c, appl., 5 min. from Lab, $97,000. Ext. 4676.

SHOREHAM - 3 bdrm. ranch, carpeted, pool, eik, wood/coal stove, priv. fenced backyd., 2½-car gar., low taxes, SWR schools, clean, move-in cond., $135,000 negotiable. 744-9677.

SOUND BEACH - 2 bdrm., loft, eik, cathedral ceiling, 3 skylights, bsmt., 2-car gar., Miller Place schools, $129,000. 821-6263.

WADING RIVER - 3 bdrm. ranch, excel. cond., 2 baths, l/r, d/r, eik, 2-car gar., bsmt., screened rm., 1 acre, fenced, SWR schools, $178,000. 929-3251.

PALM COAST, FL - ¼ acre lot, Greenbelt backyd., 5 mi. to ocean, 24 mi. n. of Daytona Beach, water drainage & sewage util., $1,995 down & take over loan, $141/mo. over 7½ yrs. Thomas Nolan, Ext. 5265.

ROCKLEDGE, FL - 2 bdrm., 2 baths, 2-car garage, fam. rm., porch, w/w carpet, shades, some drapes, appliances, $64,500. 407-631-2840.

HILTON HEAD, SC - 3 bdrm. condo, sleeps 8, 2 baths, washer/dryer, wet bar, 6 tennis courts, 3 pools, whirlpool, golf, ocean view, asking $89,000, will rent. 929-8912.

Wanted

TWO TICKETS - to any performance of "Waiting for Godot." Sheryl, Ext. 4400 or 689-7725.

COUNTRY-STYLE DINING TABLE - with or without chairs, oak or similar color. Paul, Ext. 7697 or 689-2829.

LAWN MOWERS - old, complete. Dan, Ext. 4987 or 698-7322.

TRAINS - Lionel, American Flyer, accessories, any cond., brings good price. Carole, Ext. 7100 or 924-4097 eves.

ROOMMATE - share 8-rm. Colonial in S-section Stony Brook, single or couple, avail immed. $350-500/mo. + ⅓ util. Jim, Ext. 2183 or 689-8284.

SMALL DRESSER - and vacuum cleaner, canister-type preferred. Ext. 3828 or 751-7250.

POOL TABLE - Diana, Ext. 4173 or 399-3910.

IBM PC/XT - or comp., need not work. Scott, Ext. 4167.

78-80 MALIBU - 2-dr., w/body in good cond., not concerned w/mechanical cond. Scott, Ext. 4988 or 727-1429 after 5 p.m.

VENDORS - for baseball card show, Nov. 12, Middle Island Fire Dept. Jeff, 924-3655 eves.

BABYSITTER - for 6-yr.-old girl, 2-3 nights incl. wknds., Holbrook area, near Sun Vet Mall. 567-7752.

HOUSE TO SIT - young couple w/child will house sit from now thru spring. Ext. 4615.

CREW FOR RACING SAILBOAT - experience preferred. George, 744-2384 between 6 & 9 p.m.

CRAFTSPERSON - demonstrate your craft at the 4th annual Pumpkin Festival, Sun., Oct 16. Suffolk County Farm, 282-1506.

In Appreciation

Thanks to all my BNL friends for a super farewell party & beautiful gift. With love. — Anne Mauro

A very special thank you to all of you who made my retirement day so very memorable.

— Henry Smith