BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

Lawrence Award Goes to Joseph Wall

Biophysicist Joseph Wall, who has been largely responsible for developing BNL's Scanning Transmission Electron Microscope, will receive a 1988 Ernest Orlando Lawrence Memorial Award from the U.S. Department of Energy (DOE).

Wall is one of six scientists from across the country who have been chosen to receive the award for outstanding contributions in fields of science and engineering related to atomic energy. The awards were announced yesterday by Secretary of Energy John Herrington.

On September 20, at a special ceremony at DOE's Forrestal Building in Washington, Herrington will present each of the six awardees with a citation, a medal and a $10,000 prize.

Wall is being cited for "his singular contributions to the development and application of the Scanning Transmission Electron Microscope (STEM), including the extensions of cellular microscopy to the resolution of single atoms, to the measurement of mass and shape of macromolecules, and the creation of a STEM user facility that makes this technology available to a broad community of scientists."

In addition to Wall, the other recipients are: Mary Gaillard and Alexander Pines, both of the University of California, Berkeley, and Lawrence Berkeley Laboratory; Richard T. Lahey Jr., Rensselaer Polytechnic Institute; Chain T. Liu, Oak Ridge National Laboratory; and Gene McCall, Los Alamos National Laboratory.

The Lawrence Awards are given annually to U.S. citizens who are relatively early in their careers and who have made recent meritorious contributions to the development, use or control of atomic energy. Established in 1959, the award honors the memory of Ernest Orlando Lawrence, the inventor of the cyclotron and the founder of the laboratories at Berkeley and Livermore, California, that bear his name.

Joseph Wall came to BNL's Biology Department in 1973, as a result of efforts by Elliot Shaw and John Blewett to build a STEM at Brookhaven, now one of only three such instruments in the world that are capable of easily imaging single heavy atoms. One of these three is the prototype for the Brookhaven STEM, an instrument Wall and others built while he was a graduate student under Albert Crewe at the University of Chicago, where he earned his Ph.D. in 1971. As a Research Associate at the Enrico Fermi Institute at the University of Chicago from 1971-73, he continued to work on improving to the Chicago STEM.

BNL's aim in building a STEM was to provide a significant new facility for studying structural molecular biology. Wall's Chicago experience gave him insights into the requirements for a STEM to meet the particular needs of biologists.

For example, in the Chicago STEM, only a single specimen could be introduced at one time, and specimen changing was a lengthy process that could possibly degrade the sample and its image seen through the microscope.

To solve this problem, Wall incorporated separate vacuum chambers for the field emission electron gun (10^{-11} Torr vacuum) and the rest of the microscope (10^{-9} Torr). An airlock, specimen transport cartridge and freeze-drying station were developed for remote preparation of up to seven unstained specimens and their vacuum transfer into the STEM.

He also introduced a low-temperature capability, permitting freeze-dried specimens to be observed with less damage. This was achieved by anchoring the specimen stage to the objective pole piece, then cooling the entire stage-pole-piece-lens assembly to near liquid nitrogen temperature.

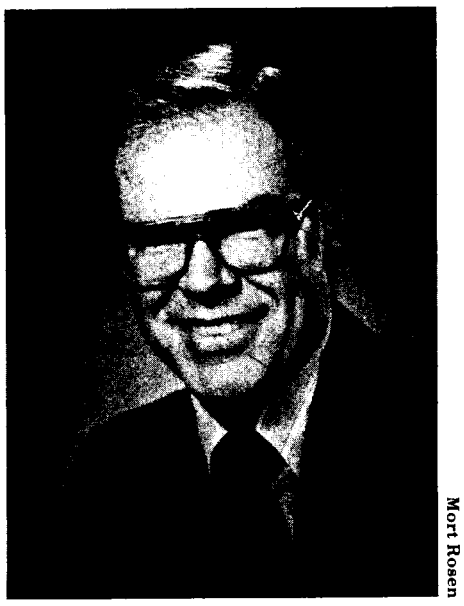
The soundness of this design is shown by the fact that this STEM can deliver images at 2.5 angstroms resolution of contamination-free specimens, with minimal damage from the electron beam — achievements that remained unduplicated for many years.

Those who have worked on STEM with Wall include, among others, John Bittner, James Hainfeld, Frank Kito and Paul Furcinetti.

STEM began operating in 1975 with funding from DOE and the National Institutes of Health. Today, it is one of the three user facilities that comprise BNL's Center for Structural Biology, along with the High Flux Beam Reactor and the National Synchrotron Light Source. As such, STEM is used by members of both BNL's Biology Department and external users, in ever increasing numbers: In 1981, there were 23 outside users; in 1987 there were 98 from universities, industry and other national laboratories working on 55 separate projects.

In addition to overseeing the continued excellent performance of this STEM as a user facility, Wall is now leading the effort to upgrade the world's third heavy-atom-imaging STEM, acquired by BNL from The Johns Hopkins University in 1984, with the intent of continuing to advance instrument design to maximize its usefulness to biologists. He is also constructing a new STEM for low-temperature studies.

Joseph Wall was born in Madison Wisconsin in 1942. He is a member of the Electron Microscopy Society of America, the Biophysical Society, the New York Academy of Sciences, the American Association for the Advancement of Science and the New York Society of Electron Microscopists. He lives in Wading River with his wife Maureen and their four children.



Mort Rosen

Joseph Wall

Past BNL Winners

1985 — **Betsy Sutherland**
1984 — **John Dunn**
1981 — **Martin Blume**
1980 — **Nicholas Samios**
1980 — **Benno Schoenborn**
1977 — **F. William Studier**
1970 — **Joseph Hendrie**
1964 — **Jacob Bigeleisen**
1963 — **Herbert Kouts**

In addition, two former employees won awards for work done in part at the Laboratory:

1974 — **Henry Honeck**
1971 — **Robert Hellens**

Surfaces and Interfaces

The fundamental physics and chemistry of solid surfaces and interfaces — that was the main theme of the 48th Physical Electronics Conference held at Brookhaven June 6-8. Sponsored by the American Physical Society and BNL, the conference attracted close to 200 attendees and provided a forum for experimental and theoretical papers emphasizing electronic, chemical and crystallographic properties of solids at their surfaces and interfaces. Also discussed were mechanisms of physical and chemical reactions, phase transitions and adsorbtion.

Pictured just before attending a session on Particle Scattering and Surface Structure are conference organizers: (standing, from left) Rich Cavanagh, National Bureau of Standards; Don Hamann, Bell Laboratories; Sandra Sanchez, conference registrar, BNL, Physics; Jan Hrbek, BNL, Chemistry; Michael Weinert, BNL, Physics; James Davenport, conference co-chairman, BNL, Physics; (seated, from left) Richard Watson, BNL, Physics; Jack Rowe, conference general chairman, Bell Laboratories; and Michael Knotek, conference co-chairman, BNL, National Synchrotron Light Source.

Roger Stoutenburgh

BNL on Lieutenant Governor's Itinerary

Roger Stoutenburgh

While on Long Island on Tuesday, July 14, New York State Lieutenant Governor Stanley Lundine (center) visited BNL for a quick briefing and a tour of the National Synchrotron Light Source and Building 902. The latter is the center of BNL's efforts for superconducting magnet development for the proposed national Superconducting Super Collider and the Lab's proposed Relativistic Heavy Ion Collider.

Joining Lundine in Bldg. 902 were (from left): Jerome Hudis, AUI Vice President-Programmatic Affairs; Laboratory Director Nicholas Samios; Eric Forsyth, Chairman, Accelerator Development Department (ADD); Parke Rorer, Associate Director for Management and Physical Plant; Carl Goodzeit, Deputy Head of the Magnet Division, ADD; Sheldon Sackstein, President, 110/Action; Paul Washington, Program Associate, Office of the Lieutenant Governor; and Deputy Director Martin Blume.

New View at the Observatory

Roger Stoutenburgh

Standing beside the Astronomical Society's just-installed, 16-inch telescope are (from top): Rick Jackimowicz, Society President; Keith Power, Society Secretary; and Bob Mills, past president.

Stargazers, you're in luck. Galaxies, nebulas, comets — and every planet in our solar system — will now be visible at BNL, thanks to the new, 16-inch reflector telescope that has just been installed at the Observatory of the BERA Astronomical Society.

All are invited to the telescope's Grand Opening next Wednesday, June 22 (see box).

"It's one of the ten biggest telescopes on Long Island," said Rick Jackimowicz, Society president.

"We bought the optics and the tube," Jackimowicz continued, "but the rest was a 'do-it-yourself' job on weekends and lunch hours." Jackimowicz and Bob Mills, a past president, were responsible for most of the machining needed by almost every piece of the telescope, as well as its assembly and installation. "There was some heavy machining done by Central Shops," added Jackimowicz. "We'd have had a difficult time without their help."

The new telescope has a 16-inch Cassegrain reflector, with Ritchey-Chretien optics design. It is set up for both direct viewing and for astrophotography. So, members interested in snapping stars can bring their 35mm camera bodies and get instructions, as well as borrow the necessary adapters.

Mills explained that the Astronomical Society had saved for the new telescope for some years. Their first telescope, an eight-inch Newtonian reflector with a solid equatorial mount, inspired the formation of the BERA club in 1981. The now retired model had been donated at by the Vanderbilt Museum and Planetarium in Centerport.

Now, with the extra light amplification of the new instrument — giving about 1,700 times the power of the human eye — much more can be seen.

"On our first observation, when Bob and I had barely had time to do a rough put-together, we saw about the best view of Venus I've ever had," said Jackimowicz. "Usually, you don't get so lucky at the first shot."

One unlucky break caused a delay in proceedings. "On the old instrument, the eyepiece was at the sky end," said Mills, "and you climbed a ladder to look through it. This new telescope has an opening in the primary mirror, so the eyepiece is at the back. You don't need a ladder — but instead, we found that when we aimed straight up at the zenith, the only way to look though the eyepiece was by lying on the floor!"

The problem was easily solved — by having the floor lowered. So would-be stargazers who are less supple than they might be have nothing to fear: All viewing positions are strictly conventional.

Both Jackomowicz and Mills hope that the improved facility will attract newcomers to the Astronomical Society. Members will be shown how to use the instrument, then get their own keys so that they can come to see stars with their families. Also, observation nights for the general public will be held once a month.

Because of the Astronomical Society's historic affiliation with the Vanderbilt Planetarium, Society members are automatically on the Planetarium's mailing list and invited to Planetarium functions. A field trip to the Planetarium was held last year, and another is being planned for later this year. — Liz Seubert

Grand Opening: New Telescope

Wednesday, June 22, is the Grand Opening of the Astronomical Society's new, 16-inch telescope. The celebration starts at 5:30 p.m. with wine and cheese at the Observatory. Observations will begin after sunset. The rain date will be Friday, June 24, at the same time.

To reach the Observatory, take Brookhaven Avenue past the athletic fields and follow the signs. For more information, call Rick Jackimowitz, Ext. 3803, or Keith Power, Ext. 7772.

200 More Donors Urgently Needed

Someone is dying of anemia.
Your red blood cells may save her.
Someone is dying of leukemia.
Your white blood cells may save him.
Someone is dying of burns.
Your plasma may save her.

Please fill this urgent need: Give blood at the BNL Blood Drive on June 21-23, 10 a.m. to 3 p.m., at the Brookhaven Center. At least 200 more donors are needed to reach the goal of 650 pints.

If you have questions, ask your departmental or division Blood Captain, then call Susan Foster, BNL Blood Drive Chair, on the Blood Drive hot line, Ext. 5126, to make an appointment.

Pink Cadillac?

Peter Horton

It's a Caddy all right, but it's mint green, not pink. Ron Tallon owns this 1965 Cadillac Calais, one of several well-kept cars you could see if you visit the parking lot across from Berkner Hall, any Wednesday at lunchtime. That's when the members of the BERA Antique & Classic Motoring Club gather regularly with their automobiles, and all are welcome to stop by and see them.

Women in Science

Luncheon Meeting

Sonja Haber, a scientist in the Department of Nuclear Energy, will discuss the human factors involved in nuclear safety programs, as the guest speaker at the next luncheon meeting of Brookhaven Women in Science (BWIS). Haber's talk, in which she will also evaluate data concerning human behavior in a nuclear power plant setting, is scheduled for noon, Thursday, June 23, in Room A, Berkner Hall.

Haber received her B.A. in science and mathematics from the State University of New York at Binghamton, and her M.A. and Ph.D. in experimental psychology from Miami University, Ohio. Her research at BNL and at the National Institutes of Health, investigates the role of behavioral traits as markers for the predisposition to certain types of disease and as markers for impending toxicity as a function of exposure to toxic substances.

The Laboratory community is invited; please bring your lunch.

Cocktail Party

BWIS will hold its ninth annual Cocktail Party on the patio at the Brookhaven Center, on Thursday, June 30, from 5-8 p.m. Hot and cold hors d'oeuvres will be served, and there will be a cash bar.

For reservations, send a check for $6.50 per person, made payable to BWIS, to Susan Eng, Bldg. 515, by Tuesday, June 28. Summer students are invited to attend at the discount price of $5 per person.

Support for Chasman Scholarship

Exxon Corporation and the Physical Sciences Department at IBM's Thomas J. Watson Research Center, Yorktown, New York, are each donating $1,000 toward the Renate W. Chasman scholarship sponsored by BWIS.

Acknowledging the IBM donation, which has already been received, and the Exxon pledge for next year's scholarship, BWIS Scholarship Committee Chair Eva Bozoki said, "These are the first donations from industrial users of the Lab's facilities. They'll be a great help toward our goal of making the Chasman Scholarship self-supporting."

The scholarship was established to encourage Long Island women to resume interrupted formal studies in the sciences, engineering or mathematics. It commemorates Renate Chasman (1932-77), a noted physicist and accelerator theorist at BNL, who co-designed the synchrotron rings at the National Synchrotron Light Source (NSLS).

Said Paul Horn, Acting Director of the IBM Physical Sciences Department and an experimenter at NSLS, "The Chasman scholarship is an extremely important program addressing a serious national need for more women in science."

David Moncton, a Senior Research Associate at Exxon Corporation, also an NSLS experimenter, said, "Synchrotron radiation is critical to Exxon's research, and the scholarship fund is a wonderful way to honor Renate's revolutionary accelerator design concepts."

Summer on Long Island
Pick a Farm and Start Picking

What are red, plump and plentiful?

Strawberries, ripe for the picking at local farms.

This weekend will be prime berry-picking time, the growers say. Go soon. The hot weather may shorten the season. The berries are selling for 75-90¢ a quart. Here is a list of local growers:

Anderson Farms: Route 58, Riverhead. 727-1129 or 727-2559. Open seven days a week from 8 a.m. to 6 p.m. Berries 90¢ a quart, containers 10¢.

Benner's Farm: 56 Gnarled Hollow Road, Setauket. 689-8172. Saturday and Sunday, 8:30 a.m. to 1 p.m.; Wednesday, 4 p.m. to 7 p.m.

John Berezny: Northville Turnpike and Sound Avenue, Riverhead. 727-4661 or 722-3308 after 6 p.m., or, 722-3823 during the day. Open seven days a week from 9 a.m. to 5:30 p.m. Berries 75¢ a quart, containers sold.

John Condzella: Route 25A, Wading River. 929-4697. Open Monday-Saturday from 8 a.m. to 5 p.m. and Sunday till 6 p.m. Berries 75¢ a pound. Bring your own containers.

Edward's Farm: N. Edwards Avenue, Calverton. 369-2043. Open seven days a week from 8 a.m. to 6 p.m. Containers sold.

Fox Hollow Farm Stand: 143 Sound Avenue, Calverton. 727-1786. 9 a.m. to 5:30 p.m. Closed Wednesdays. Berries 90¢ a quart. Containers sold.

Kenneth Glover: 633 Horse Block Road and Strawberry Lane, Brookhaven. 286-8721. Closed Mondays.

Hodun Farms: River Road, Calverton. 727-2618. Open seven days a week from 9 a.m. to 5 p.m. Berries 75¢ a quart. Containers sold.

Fritz Lewin Farm: Corner of Sound and Edwards Avenue, Calverton. 727-3346. Open seven days a week from 8 a.m. to 6 p.m. Berries 75¢ a quart, $2.75 for four quarts.

Lewin Farms: Sound Avenue, Wading River, next to Wildwood State Park. 929-4327. Open 7 a.m. to 7 p.m. Berries 75-90¢ a quart.

May's Farm: Route 25A, Wading River. Open seven days a week from 8:30 a.m. to 5 p.m. Berries 75¢ a quart. Containers sold.

Meadows Farm: Old Stump Road, Brookhaven. Open seven days a week from 9 a.m. to 5 p.m. No chemicals used.

Thomas R. Muller: 9 Orchard Neck Road, Center Moriches. 878-0621. Open seven days a week from dawn to dusk. Berries 70¢ a quart.

William J. Polak Jr.: Church Lane, Aquebogue. 722-3049. Open seven days a week from 8 a.m. to 5 p.m.

Young's Orchard: 54 Sound Avenue, Riverhead. 727-5363. Open Tuesday through Sunday from 8 a.m. to 5 p.m. Berries 75¢ a pound, containers 10¢.

These Umpires Don't Strike Out

If you read the sports pages these days, you know all about baseball fans who want to "kill the umpire" and managers who throw dirt in the umpire's face. So you might wonder what could possibly induce someone to become an umpire.

Well, how about good times among congenial people in pleasant surroundings — not to mention a stipend?

Are we really talking about umpiring?

Yes, but we're not talking about those who umpire for major league baseball — we're talking about those who umpire for their coworkers on BERA's Mixed League softball teams, a job that Gerry Van Derlaske describes as "not so much a job as an event or a night out."

Van Derlaske is coordinator of umpires for the Mixed League teams, a position he has held since the BERA Softball League began using Lab personnel as umpires two years ago. Until then, umpires were imported from the local branch of the United States Slo-Pitch Softball Association (USSSA), as they still are today for the Employees's Leagues teams.

Van Derlaske credits Softball League President George Greene with the idea of switching to BNL umpires for the Mixed Leagues. "He thought they would better understand that the Mixed League is supposed to be more for fun, less competitive than the other leagues are," Van Derlaske says.

That's how it's turned out. Each of the 21 people who have umpired to date (see photo) — 20 men and one woman — work an average of two games each month, and so far, Van Derlaske says, "There have been no protests or game postponements due to an umpire's judgment. Everything has been resolved on the field. This is great for what is basically a group of rookie umpires who have never done this before."

Roger Stoutenburgh

Was BNL Mixed League umpire Frank Gaetan successful in putting a tag on Gerry Van Derlaske? There's a divided opinion among some of the other umpires (from left): Jack Russell, Rick Greene, Bob Malachowsky, Jim Garrison, Sydell Lamb and Bob Brown. Umpires not present for the photo are: Rick Backofen, Ralph Brown, Mike Colon, Jim Desmond, George Greene, Gene Ice, Leroy James, Marty Leach, Ed Meier, Tony Mendez, Doug Paquette, Tony Salvo, Tom Sperry and Skip Thomas.

Though many may be rookie umpires, all are ball players: Ten play on Mixed League teams on Monday and Thursday afternoons, and the majority also play on Employees' League teams on Tuesdays and Wednesdays.

To bolster their working knowledge of softball rules, Van Derlaske held an umpiring clinic at the beginning of the season and plans to hold more during the season should the need arise. Each umpire is provided with a complete set of USSSA rules, as well as specific rules for the BERA Mixed Leagues. For interpretation of the finer points, the umpires can call upon BNL's resident experts who are also umpires with the USSSA: Mike Colon, Jack Russell, Tony Salvo, Tom Sperry and John Usher.

Once the game begins, however, the umpires are on their own. "The best umpires are those who have command of the game but are as unobtrusive as possible," says Van Derlaske. "You don't want to know the umpire is there. You don't want the umpire to make a decision that would produce a win or a loss, or to be involved in the outcome of the game — the teams should decide that, not the umpire's call."

The umpires' performances are graded after each game, when the team captains rate them in five categories: attitude, knowledge of rules, game control, positioning and movement, and consistency.

So far, Van Derlaske reports, the umpires are batting close to 1000, scoring at least 20 out of a possible 25 points. Comments indicate that the teams prefer the BNL umpires because it's easier to work on the field with the people you work with all day. As further indication of the teams' acceptance of the umpires, Van Derlaske observes, "Many times after the games, the umpires stick around and socialize with the teams."

Van Derlaske doesn't do much umpiring himself: He just fills in during emergencies because he's already involved with his Mixed League team, Kidz-R-Us, and Little League coaching. He's also kept busy after work taking care of the scheduling — with so many umpires also playing in the Mixed Leagues, it's quite a feat to set things up so there's no overlap.

Van Derlaske also mails reminders to the umpires before the games, and, because few ever cancel unless it's an emergency, he concludes, "These umpires have as much fun on the field as the players do. Everybody seems to like them and we're having fun. We haven't struck out with the umpires!"

— Anita Cohen

Want to Play?

Want to be an umpire in the Mixed Leagues? Backup and alternate umpires are needed. Call Gerry Van Derlaske, Ext. 3751, or Beeper 815.

Want to play softball in either the BERA Mixed or Men's Leagues? Call Sharon Smith, Ext. 3995.

Softball

League I
Ravens 13 - Cool 'n Gang 11
Six Pax 20 - Sudden Impact 8
Light Source 10 - Magnuts 7
Blue Jays 19 - Bandits 5

League II
Dirty Sox 5 - Titans 4
Bombers 15 - Moles 9
Scram 16 - Phase Out 10

League III
Kidz-R-Us 22 - Farm Team 9
Snakebites 16 - Hounds & Foxes 6

League IV
Mudville Sluggers 27 - The Far Side 19
Seventh Inning Stretch 14 - Turkeys 11
Sandboxers 23 - Who Cares 9
Spacekadets 10 - Underalls 8

Nursery School

The Upton Nursery School is now accepting enrollment of three-and four-year-old children for the 1988-89 school year. The school, a cooperative preschool held on site in the Recreation Building, is open to families of BNL employees and their relatives.

For more information, call Karen Indusi, Ext. 2975, or Marian Drumann, 924-6723 after 5 p.m.

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ANITA COHEN, Editor
MARSHA BELFORD, Assistant Editor
LIZ SEUBERT, Reporter

35 Brookhaven Ave., Upton, N.Y. 11973
(516)282-2345

Swim Club

At the U.S. Merchant Marine Academy masters swimming meet, seven members of the BNL Swim Team were awarded 22 medals for top-three, age-group finishes on January 31.

50-yard Freestyle		
Roger Klaffky	29.62	5th men 40-44
Marsha Belford	34.44*	3rd women 30-34
Paul Michael	34.51	4th men 55-59
100-yard Freestyle		
Peter Heotis	57.38	2nd men 35-39
Peter Cameron	1:01.07*	3rd men 40-44
Roger Klaffky	1:04.66*	6th men 40-44
Marsha Belford	1:14.42*	4th women 30-35
Paul Michael	1:17.36	4th men 55-59
200-yard Freestyle		
Peter Heotis	2:11.54	1st men 35-39
Peter Cameron	2:23.83	5th men 40-44
Marsha Belford	2:39.81*	2nd women 30-35
Paul Michael	3:09.56	1st men 55-59
50-yard Butterfly		
Peter Heotis	27.52*	3rd men 35-39
100-yard Butterfly		
Peter Heotis	1:02.34	1st men 35-39
50-yard Backstroke		
Ron Wittlock	34.12	2nd men 50-54
Wlodek Guryn	35.01	3rd men 35-39
Roger Klaffky	37.57*	5th men 40-44
100-yard Backstroke		
Ron Wittlock	1:16.96	1st men 50-54
Roger Klaffky	1:23.13	2nd men 40-44
200-yard Backstroke		
Ron Wittlock	2:48.81	1st men 50-54
50-yard Breaststroke		
Wlodek Guryn	34.36	1st men 35-39
100-yard Breaststroke		
Wlodek Guryn	1:15.58*	1st men 35-39
Roger Klaffky	1:21.07*	5th men 40-44
Peter Cameron	1:22.06	7th men 40-44
200-yard Breaststroke		
Peter Cameron	2:57.97*	1st men 40-44
100-yard Individual Medley		
Peter Heotis	1:07.12	3rd men 35-39
Wlodek Guryn	1:08.10	4th men 35-39
Marsha Belford	1:28.17	3rd women 30-34
Paul Michael	1:38.50	2nd men 55-59
200-yard Individual Medley		
Wlodek Guryn	2:39.82	1st men 35-39
Peter Cameron	2:47.28	3rd men 40-44
Marsha Belford	3:04.79*	2nd women 30-34

*indicates personal record

Camera Club

The Camera Club will hold its regular monthly meeting in the Recreation Building lounge, on Thursday, June 23, at 5:30 p.m.

The discussion topic for this meeting will be the "Parr Color Printing Process." Color rendition with Parr Color is comparable to or better than other processes presently available. Parr Color does not require the stringent temperature and time control other color processes do.

New members and interested visitors are encouraged to attend. For further information, contact Lew Jacobson, Ext. 5193.

Summer T-Shirts and Sweatshirts

This summer, in addition to "Summer '88" BNL T-shirts, sweatshirts will be available for all employees, students and visitors to purchase. T-shirts are $6 each, sweatshirts are $12 each, and the prices include tax.

These blue-with-white-print T-shirts are 50% cotton and 50% polyester, for minimal shrinkage. They are available in unisex adult sizes: small (34-36), medium (38-40), large (42-44), extra large (46-48); and unisex children's sizes: small (6-8), medium (10-12) and large (14-16).

T-shirts must be ordered by July 15, and each order should be accompanied by cash or a money order made payable to "Renée Flack—T-Shirts '88." No personal checks, please. Orders and payments can be mailed or brought to Renée Flack, Affirmative Action Office, Bldg. 185A, Ext. 3316. Allow two weeks after placing order for delivery.

Software Demo

On Thursday, June 23, at 2 p.m., in the Applied Math Department Seminar Room, IBM will demonstrate its Interleaf Publishing Series on the IBM RTPC computer. This package may be helpful for all who have an interest in desktop publishing and can also be run on a PS/2 model 80.

Tennis Fun Day

Don't forget: Tennis Fun Day tomorrow, June 18 (rain date is June 19) . . . 9 a.m. to noon . . . employees, family members, summer visitors . . . refreshments and prizes . . . provide your own tennis balls . . . advance registration requested, but not mandatory . . . call Nick Combatti, Ext. 3389; Om Singh, Ext. 5332; or Neal Tempel, Ext. 3418.

Arrivals & Departures

Arrivals

Brian C. Buckheit ..... S&S
Donna Jean Chiossone .... Plant Eng.
Louis A. Figueroa ..... S&S
Albert C. Langhorn ..... Plant Eng.
Christopher T. Tersigni ..... S&S
John W. VanGelder ..... Plant Eng.

Departures

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

Donald P. Price ..... Staff Svcs.

Cafeteria Menu

Week of June 20

Monday, June 20

Corn chowder	(cup)	.75
	(bowl)	.95
Fettucini carbonara w/1 veg.		2.95
Hungarian goulash over noodles		3.05
Spinach bacon & egg salad plate (lite-weight)		2.25
Hot deli: Baked ham	(bread)	2.75
	(roll)	2.85
	(hero)	2.95

Tuesday, June 21

Split pea soup	(cup)	.75
	(bowl)	.95
Pork chop Oriental w/1 veg.		3.05
Southern fried chicken w/1 veg.		2.95
Chef's salad plate (lite-weight)		2.25
Hot deli: Italian meatball hero		2.85

Wednesday, June 22

Chicken noodle soup	(cup)	.75
	(bowl)	.95
Roast turkey w/dressing & 1 veg.		3.05
Baked stuffed fish w/lemon butter & 1 veg. (lite-weight)		3.05
Hot deli: Corned beef	(bread)	2.75
	(roll)	2.85
	(hero)	2.95

Thursday, June 23

Cream of spinach soup	(cup)	.75
	(bowl)	.95
Braised fresh brisket of beef w/1 veg.		3.05
Sautéed chicken livers & 1 veg.		2.85
Baked skinless chicken w/1 veg. (lite-weight)		2.95
Hot deli: Roast turkey	(bread)	2.75
	(roll)	2.85
	(hero)	2.95

Friday, June 24

Manhattan clam chowder	(cup)	.75
	(bowl)	.95
Veal parmigiana w/1 veg.		2.90
Mexican macaroni w/1 veg.		2.85
Baked fresh fish w/lemon & 1 veg.		2.95
Hot deli: Fried fish on a bun		2.85

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.

2878. SECRETARIAL POSITION - (term appointment) Requires AAS in secretarial science or equivalent and an extensive knowledge of BNL policies and procedures. Will provide diverse secretarial and administrative support for the Office of Educational Programs. Duties will include processing appointments, arranging travel, typing and filing. Will interact with Laboratory personnel and off-site contacts. IBM PC experience highly desirable. Director's Office.

Autos & Auto Supplies

87 TOYOTA PICK-UP - extra cab, p/s, p/b, a/t, over drive, 15k mi., mint, $8,800. Joe, Ext. 5215 or 924-2805.

87 TRAVEL MASTER MOTOR HOME - 24', a/c, tv, awning, sleeps 6, rear bed, bath, excel. cond., $26,000. 929-8772.

87 DODGE SHADOW - loaded, must sell, $9,800. 226-1828 after 5:30 p.m.

86 RENAUT ALLIANCE - very low mileage, like new, mint cond., $4,000. 928-3091 or 331-3569.

86 LYNX WAGON - a/t, a/c, must sell, $5,200. 226-1828 after 5:30 p.m.

85 HONDA PRELUDE - a/c, 44k mi., good cond., $7,000. 929-8257.

84 PLYMOUTH RELIANT - new trans., tires, am/fm stereo cass., a/c, good cond., $3,200. 698-2147.

84 BUICK REGAL - p/b, p/s, a/c, tilt wheel, cruise, 4 new tires, 69k mi., $4,600. 345-5589.

84 DOLPHIN MOTOR HOME - on Toyota chassis, 25k mi., sleeps 5, excel. cond., $15,000 or best offer. Frank, 369-8452.

84 NISSAN SENTRA DLX - 4 dr., a/t, a/c, am/fm cass., alarm, 22k mi., front left end damaged, will sell for parts. Ext. 2679 or 472-6922.

84 CAVALIER - 4 dr., a/t, a/c, p/s, p/b, excel. cond. 265-4715 after 6 p.m.

84 RX7-SE - new tires, brakes, shocks, leather int., spoilers, rust proofed, 1 yr. warranty, $9,400. Ext. 4719 or 751-8240 eves.

84 NISSAN SENTRA - 5 speed, 40k mi., good cond., $4,800 neg. 331-0985.

83 AMC EAGLE - 4x4, low miles, a/t, asking $3,500. 286-8938.

83 SKYHAWK - beige, a/t, p/b, 70k mi., new brakes & exhaust, cass. deck, excel. cond., must sell, $2,800. Patti, 928-5297 or 265-6600.

83 HONDA NIGHTHAWK - 650 cc, burgundy, low mileage, runs well, looks good, must sell, $2,000; slide-on camper, $1,900. Ext. 4142 or 345-3915.

82 PLYMOUTH CHAMP - 50k mi., sunroof, stereo, 4 speed, $1,500 neg. 363-7032.

81 LINCOLN MARK VI - Signature series, black/gray, 2 dr., all options incl. moonroof & cb radio, $6,250. Fred, Ext. 3259 or 473-8622.

81 FIREBIRD - p/s, p/b, p/w, a/c, rear defrost, 61k mi., excel. cond., $3,700. 472-2224.

81 KAWASAKI 650 CSR - very good cond., 7k mi., new battery. Phil, Ext. 4867 or 473-9357 after 6 p.m.

81 DATSUN 210 - 4 dr., asking $1,550; 76 Ford Torino wagon, 8 cyl., asking $500. 472-1409.

80 HONDA CB900 - custom, excel. cond., must see. Vinny, 395-1228 after 8 p.m.

80 TURBO T.A. - silver, w/chrome rims, new trans., exhaust, ignition, needs paint, $3,000. Nelson, Ext. 5211.

80 CAMARO BERLINETTA - charcoal/gray, V8 engine, a/t, a/c, am/fm cass., new tires, p/w, excel. cond., $2,800. Ext. 7784 or 399-1823.

79 OLDS DELTA - 2 dr., a/c, p/s, am/fm stereo, $2,200. 924-2726.

79 COUGAR XR-7 - fully loaded, am/fm cass., a/c, leather, wire wheel, $800. Tony, 698-9274.

78 SUZUKI GS750 - many good parts, $120. Bob. Ext. 5010 or 289-2986.

78 MERCURY WAGON - or 75 Dodge Colt $300 each or best offer. Mike, Ext. 4605 or 395-5991 eves.

78 HONDA NC50 MOPED - easy rider, good cond., new battery, extras, $150. Frank, Ext. 4584 or 277-0464.

77 PEUGEOT 604 - needs some work, many extras, must sell, $1,500 neg. Dave, 878-8541.

76 SUZUKI 250GT - 10k mi., excel., $275, 2 extra wheels/tires, $40. Ext. 7699 or 821-1435.

76 VOLVO 264DL - 70k mi., new Pirelli P77's, muffler, brakes, runs well, a/c, asking $2,500. Ext. 4396 or 288-6507.

76 DATSUN 280Z ENGINE - runs, must take the whole car. Ext. 2871 or 588-7092 after 10:30 p.m.

71 CHEVY MINI MOTOR HOME - 20', 350 V8, a/t, cruise, sleeps 6, excel. in/out, runs well, asking $5,000. Ron, Ext. 2467 or 924-8644.

71 PLYMOUTH - slant 6 cyl. 225, all new parts, good mileage, $800. 744-9429.

70 CHEVY C50 BOX TRUCK - lift gate, 36k orig. mi., must see. 589-9103.

TIRES - Goodrich all terrain, 31", 10.5x16.5, B.F. 6 ply radials; hitch, class III, w/adjustable receiver, $150. 924-3855.

MANIFOLD & HOLLEY CARB - Chevy small block, 4 barrel Eltbrock, never used, $150. Dick, Ext. 3499 or 589-9103.

TIRES - 4, P235, all terrain, on 15" Ford rims, like new, $275. Ken, Ext. 2350 or 588-2350.

TIRE - Goodyear Wrangler P195-75R15, new, $35. 929-4326.

TIRES - 4, Yokahama, 185/70-HR14, low mileage, traction 'A', $75/all. Ext. 7977 or 744-2461 after 6 p.m.

TIRES - mounted on 15" Ford truck rims, 2 snows & 2 reg., $85. Duke, Ext. 2957.

TRUCK CAP - fits 8' GMC bed, glass tight, fiberglass, w/windows, $250. Scott, Ext. 7578.

FRAME HITCHES - 1 for car, 1 for truck, $35/each; running boards, $25. Artie, Ext. 4987 or 325-0743.

SNOW TIRES - 2, 195-14, $15/each. 924-3082.

Boats & Marine Supplies

27' TARTAN - 9 sails, VHF-fm, d.f./rdf, autohelm, compass, refinished topside, many extras. 669-9202 after 6 p.m.

25' GRAN BATEAU CRUISER - 1980, mint cond., I/O, sleeps 4, 225 h.p., many extras, $14,250. 286-0072 weekends after 6 p.m.

21' SUNRUNNER CUDDY CABIN - 1984, 140 h.p. Mercruiser, 1984 H/D EZ load trailer w/power winch, many extras, $10,000 neg. 399-6729.

19'6" CENTURY 3000 CUDDY - 1984, 170 h.p. I/O, low hours, w/trailer, $10,500. Walter, Ext. 4028.

SKI-MASTER 57 - fiberglass & metal water skis; O'Brian water vest, small, used once, orig. $140, sell for $65. Ext. 2981 or 744-1440.

SAILFISH - good cond., $250. Jim, Ext. 3372 or 821-0250.

BOAT OR UTILITY TRAILER - large tires, large frame fenders, $100. 744-9429.

Miscellaneous

STRAWBERRIES - U-pick, no chemicals, used, Meadows Farm, Old Stump Road, Brookhaven, 7 days, 9 a.m.-5 p.m.

SWEET POTATO PLANTS - Northern varieties, $1/dozen. Ed, Ext. 2700 or 286-7539.

POOL LADDER - stainless steel, for in-ground pool, excel. cond., $30. Ext. 2957.

AIR CONDITIONER - GE, 5,000 Btu, window size, excel. cond., asking $100. Peter, Ext. 4094.

PC MONITOR - Monochrome Tandy VA-2 model, RCA connector, excel. cond., orig. $140, asking $75. 286-1348.

LOUNGE CHAIR - & ottoman, $75; Eureka upright vacuum, $40; 19" Zenith b&w tv, $35; punch bowl, $25. Ellie, Ext. 3395 or 325-1537.

LAWN MOWER - 3 h.p. tech. engine, 20" cut, new blade, good cond., $60. Dan, Ext. 4987 or 698-7322.

NINTENDO TAPES - Spy Hunter, $30; Excitebike, $25; Karate Champ, $25; Kung Fu, $25. Dave, 796-3416.

PHOTO BOOKS - Bigger and Better Enlarging by Kodak, $7; Filter Book, $5. Susan, Ext. 7716.

DINETTE TABLE - w/2 chairs, good cond., $50. 369-2716 after 6 p.m.

MICROWAVE OVEN - w/full size storage cart, 1.5 cu. ft., digital display, auto & manual modes, like new, $350. Jim, Ext. 7669.

DESK - wood grain, finished steel, w/cabinet, 30"dx60"l, good cond., $25. Ellen, 399-2813 after 6 p.m.

COMPUTER - MacIntosh SE, hardly used, lots of software, w/Image Writer II printer. Ext. 4142 or 345-3915 eves.

SCREENS & STORM WINDOWS - wood, 9 each, good cond., $35. Cliff, Ext. 3794.

BLINDS - 3, 30" wide, pecan wood, excel. cond., $20/each. 345-3170 after 6 p.m.

CAMPING EQUIPMENT - 4-burner stove, eye level oven, $100; 2 sets of dual rear-view mirrors, $25/each; more. Tallon, Ext. 4847 or 473-3987.

CAPTAIN'S BED - twin, birch, excel. cond., $75. Sue, Ext. 5156 or 289-6844 after 7 p.m.

3-SECTION SCREEN - amber, plastic bottle-glass pattern, oak frame, 78"x77", $20. Ext. 2981 or 744-1440.

SPEARGUN & FLIPPERS - $20; crib w/mattress, $30; pipe threading tool & vice, $35. Artie, Ext. 4987 or 325-0743.

WICKER FURNITURE - 1920's, couch, rocker & chair, $495; woman's Schwinn 3-speed bike, $95; MLU hutch, oak, $400. 924-3082.

COMPUTER - S-100, oldies but goodies, best offer; 12x15 Florida room, 7 louvered windows, 2 doors, insulated. Erik, Ext. 4603.

DISHWASHER - Sears Kenmore, undercounter, works fine, $25; solid wood table, maple, w/1 leaf, good cond., $25. Ext. 2679 or 472-6922.

COMPUTER - Radio Shack Model II, Veritas CPM board, external drive, cables, lots of software, $750 or best offer. Jim, Ext. 7669.

BICYCLES - & parts, Schwinn, $15/all; 5-hole automobile rims, $7.50/each. Ext. 4475 or 5114.

REAL ESTATE COURSE - Dotto cash flow & Lowry Foreclosure & investment, orig $1,350, now $550. 473-5343 after 5:30 p.m.

PIANO - upright, good cond., $325. Peter, Ext. 7687 or 744-1112.

LAWN MOWER - Simplicity ride-on, excel. cond., $250. Ext. 4120 or 689-7963.

POOL SUPPLIES - diving board, ladder, pump, etc. Ext. 4727.

SEWING MACHINE - never used, w/carrying case, must sell, $250. 226-1828 after 5:30 p.m.

FREEZER - GE, upright, 20 cu. ft., white, very good cond., $100. Tony, Ext. 2462.

OFFICE FURNITURE - secretary's desk, executive chairs, 3-drawer file cabinet, excel. cond., best offer. Ext. 7108.

MOTORCYCLE HELMET - like new, red, small-medium, $25. Jim, Ext. 3372 or 821-0250.

WATER BED - king size, like new. 732-0494.

TRAINING BAG - Everlast, hanging chain, excel., $40; nylon backpack w/frame, brand-new, $15. 473-6546.

PICNIC TABLE - redwood, 43"x45", w/4 benches, $50. 924-2726.

SHINGLES - new, natural wood; pulleys, large-small, any offer. 475-1254.

DINNER WARE - service for 8, $25; Cuisinant, new, $75; Oriental rug, 6'x8', make offer. 821-0840.

BRASS BED - queen size, must sell, $325. 226-1828 after 5:30 p.m.

TV - Sony Trinitron, 19", good cond., $100. Ted, Ext. 7992 or 821-2569.

PORTABLE TV - 5", black & white deluxe, still in box, $45. 878-2239.

KITCHEN TABLE - round, w/4 country style armchairs, $100. 472-4228.

BIKES - Raleigh, 3-speed, man's & woman's, $40/each. Richie, Ext. 2175 or 734-7342.

FURNITURE - Art Deco chifforobe & bureau set, $125; 10" black & white portable tv, $20; rock maple coffee table, $25. 878-6637.

Yard Sales

MASTIC BEACH - 731 Riviera Dr., June 25. Pete, 399-2813 for directions.

PORT JEFFERSON - 2 Harborview Dr., June 18, 10 a.m.-5 p.m. & June 19, 9:30 a.m.-4 p.m., rain dates June 25 & 26. 928-0242.

SHOREHAM - Highland Down, June 18, 10 a.m.-4 p.m. Ext. 5202.

STONY BROOK - 15 Lubber St., off Quaker Path, benefit Animal Rescue, variety of items. 751-0023.

Free

USED BRICKS - 100, you pick up. 689-9234.

SOFA - dark pine, w/6 green cushions. Eric, Ext. 4603.

70 DODGE DART - broken timing chain, could become reliable. Ext. 2420.

SHEETROCK - 2 sheets, 4x12x½. 751-8240.

Car Pools

BELLPORT/EAST PATCHOGUE - vacancy in 4-person car pool, on-time. Fritz, Ext. 2348 or 286-8521 after 5 p.m.

BELLPORT - 5th member for established car pool. Liz, Ext. 2346 or Ed, 286-7539 after 6 p.m.

BOHEMIA/OAKDALE - 2 drivers needed. Frank, Ext. 2314.

PLAINVIEW - 4th driver needed, 8:30 a.m.-5 p.m. Elliot, Ext. 2495.

STONY BROOK - start or join a car pool. Jag, Ext. 5080.

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, in walking distance of bay and village. 286-0269 eves.

BROOKHAVEN HAMLET - room, share house, 4 bdrm., 2 bath, w/two other professionals, ¾ acre. wooded, $350. Sidney Stafford, 286-4028, or Randy, Ext. 3835.

CALVERTON - 2 bdrm. townhouse, 5 appliances, fp, cac, w/w, fenced patio, upper deck. 878-0874 after 5 p.m.

HOLBROOK - 1 bdrm. apt., l/r, eik, full bath, private yard, close to LIE, $450/mo. + electric. 737-0508.

MASTIC - 3 bdrm. house to share, l/r, d/r, eik, den, 1 bath, laundry rm., fenced yard, clean, alarmed, 10 min to Lab, non-smoker preferred, avail. 7/31, $400/mo. Ext. 5110 or 399-3087.

SOUND BEACH - 1 bdrm. apt., brand-new, priv. ent., parking, full bath, eik, new appliances, cable, 10 min to Lab, single, non-smoker, no pets, 1 mo. sec., $600/mo. incl. util. Ext. 7918 or 744-3068.

STONY BROOK - 3 bdrm. Cape, 1½ bath, large l/r w/fp, eik, screened porch, bsmt., 1-car gar., walk to RR & SUNY, avail. July 1 or Aug. 1, one-yr. lease, $1,100. 751-0453.

HILTON HEAD, SC - 2 bdrm. condo, sleeps 6, beach, pool, tennis, golf, June-Sept., $420/wk. 585-9149.

For Sale

EASTPORT - 2 bdrms., l/r, kit., bath, full bsmt., 100x120 property, good loc., close to school & shopping, beautifully landscaped, $115,000, firm. Ext. 2232 or 325-0835.

HEAD OF THE HARBOR - 300-year-old restored tavern, 3 bdrms., 2½ baths, l/r w/fp, d/r, eik, brick patio, $240,000. 862-7998 eves.

HOLBROOK - mint Timberidge cent. hall ranch w/brick front, 3 bdrms., 2 baths, oversized 2-car gar., d/r, f/r, den w/brk. fp, new w/w, prof. lndscp., Sachem schools, $169,000. Ext. 2679 or 472-6922.

MEDFORD - 4 bdrm. Colonial, fenced ½ acre, 2½ baths, Florida rm., oversized garage, in-ground sprinkler, prof. landscaped, w/1 bdrm. apt., many extras, must see, mint cond., $182,000. Anne, Ext. 7814 or 475-8456.

MIDDLE ISLAND - 3 bdrm. A-frame house, eik, l/r, den, 2 fp's, attached 1 bdrm. apt., redwood deck w/outdoor year-round hot tub, 1½ miles west of Lab's main gate. 924-3855.

MILLER PLACE - 3 bdrm. ranch, l/r, d/r, fin. bsmt., in-ground pool, low taxes, $155,000. Fran, Ext. 4835 or 744-4061.

MILLER PLACE - Scotts Beach, 4 bdrm. ranch, ½ acre plus, private beach community, sunroom, spa, pool, city water, $190,000. Judy, 473-6631 after 5 p.m.

RIDGE - Strathmore 2 bdrm. townhouse, 1½ baths, storage shed, low maintenance, close to Lab, $98,500. Ext. 3346 or 345-3584.

RIVERHEAD - 4 bdrm. 2-level ranch, 2 baths, possible M/D, ⅔ acre, large l/r, den, deeded beach rights, quiet neighborhood, 5 appliances, $150,000. 727-0499.

WADING RIVER - 3 bdrm. ranch, foyer, l/r w/fp, d/r, eik, 2 baths, 2-car oversized garage, 10'x24' deck w/screen rm., 1 acre, SWR schools, $192,000. 929-3251 after 6 p.m.

YAPHANK - 3 bdrm. townhouse condo, priv. end-unit, brick front, full bsmt., attached garage, central a/c, w/w, 5-appliances, many extras, $129,900. 924-0612.

HOLLYWOOD, FL - 10 min. S. of Ft. Lauderdale, 3 bdrms., screened porch, fenced, shed, fruit trees, many extras, taxes $327, $67,000. 289-3586.

ROCKLEDGE, FL - block & stucco, 2 bdrms., 2 baths, fam. rm. 11x25 porch, carpet, shades, some drapes, extras, good loc., $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

HOUSE - for family of 4, Aug/Sept. for 1 year, pref. SWR school dist., Per Spanne, Rad. Phys. Dept., Faculty of Health Sciences, Linköping Univ. S-581-85, Linköping, Sweden.

HOUSE TO SIT - free, caring, reliable, experienced, any duration, June to Sept. Jack Allentuck, Ext. 2412.

HOUSE/APT - to rent, 3 or 4 bdrms., 1½ baths, l/r, d/r, kitchen, washer/dryer, family neighborhood, end of June. (914) 245-0907.

STEVE WINWOOD TICKETS - Jones Beach. Ext. 7192.

HOUSE TO SIT - June, July & Aug. Ext. 4144.

DEHUMIDIFIER - Ext. 5202.

AMERICAN FAMILY - to host 16-year-old French girl, August, will pay room & board. 821-1435.

INFANTS - 3-months-old, for Ph.D. study of infant learning. Maureen Wall, 929-6495.

CHILD CARE - 30 hours a week, for two children, our home in Stony Brook or at Lab. Ben, Ext. 4299 or 689-7326.

APARTMENT - in Pt. Jefferson/Mt. Sinai area, ground floor. Janet, Ext. 2345 or 929-3910.

MEMBERS - to form or join biathlon or triathlon team. Anh, Ext. 2022/2024 or 744-8386.

ROW BOAT - old. Plunkett, Bldg. 535A.

BASEBALL CARDS - any cond., young boy wants to start collection. 924-4070.

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

HOUSE/APT. - professional couple, to rent or sit for months of Aug., Sept. & oct. 821-0840.

ACCESSORIES - for Pentax K-1000 camera, lenses & flash. Sharon, Ext. 3359.

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