



Dr. Yoshikazu Miyahara of Fermilab discusses beam instability through interactions with kicker magnets, at one of the many small, informal sessions of the Workshop on Beam Current Limitations in Storage Rings held here during the last two weeks. —photo by Reben

Limits of Storage Rings Explored

While no one likes to dwell on limitations, sometimes it is necessary to examine them closely to see if they can be extended. This is the purpose of the Workshop on Beam Current Limitations in Storage Rings, which began meeting here at Brookhaven on July 16, and concludes today.

The two-week workshop attracted participants from all over the world. Its main purpose was "to examine and study the limitations in existing storage rings, to see if we can push these limitations farther in the next generation of storage rings," according to Claudio Pellegrini, a physicist working on the Isabelle Project, who organized the conference.

Although many people at the Lab have been referring to the workshop as "the Isabelle Conference," the limitations which are being studied are relevant to other storage systems, explained Pellegrini. "Storage rings are being used for many different applications, and we have two cases here at Brookhaven. One is Isabelle, a colliding beam storage ring for high-energy physics. Then there are electron storage rings for synchrotron light production." Both of these different types of storage ring systems are subject to limitations defined by different parameters, explained Pellegrini. "In the case of Isabelle," he said, "there are two beams; the interaction between them and the forces they produce on each other are an important factor in limiting the performance of the machine. Of course, one also wants to obtain high current in each one of the two beams, and this will introduce problems."

But in Isabelle's case, the current itself is not the dominant problem, as it is in the Synchrotron Light Source where, Pellegrini says, "there is only one beam in the machine; the beam-beam interaction which is limiting the performance in Isabelle is not there. One is confronted with different

limitations, such as current and current density." Pellegrini went on to explain that improving the performance of synchrotron light source rings is not just a matter of increasing the current; this is what is meant by the term "current density." As the current in the ring is increased, it may become more difficult to keep the beam small, and one of the principal goals in a synchrotron radiation source is "to obtain a beam with as small a radius as possible," says Pellegrini. If performances of these machines can be improved, he says, they can not only be used more effectively, but "new applications for them may also be found."

Following introductory lectures, the workshop split up into six working groups. It's a very informal kind of organization," said Pellegrini, "There is enough time so that one doesn't need a really strong organization. The idea is to have people free so they can talk and find out the problems which are most important and work on them." —Bradley Stolzer

DEE Appointments

The following appointments have been announced by Bernard Manowitz, Chairman of the Department of Energy and Environment: Thomas E. O'Hare as Associate Chairman for Energy Technology Programs, Walter D. Tucker as Assistant to the Chairman, and Richard C. Melucci as Department Administrator.

Get Your Sunday Paper

Beginning this Sunday at 9 a.m., the Sunday editions of the New York Times, the Daily News and Newsday will be available at the cafeteria on a first-come, first-served, trial basis.

The Philosopher Prince

Gus Prince is by profession, a nuclear scientist, and by avocation, a runner, and what he feels has been most important to him in both is discipline. "The discipline necessary to do a good job in science, or in running, is the same," he says. "I've learned to be steady, consistent, to find my limit and to go beyond it." Prince has applied his philosophy throughout his scientific career and in establishing his considerable reputation as a runner.

Prince returned to BNL recently from Paris where he served four months as a consultant on a nuclear physics program which carried out theoretical nuclear investigation for France's Atomic Energy Commission. At the Centre D'Etudes de Bruyeres-Le-Chatel, Prince directed a group of nuclear data evaluators. In addition, he directed the research of a French student at Ecole Technique Feminine, whose paper on "The Numerical Treatment of Nuclear Reactions" was considered one of the best ever presented at the school. Prince said they had worked very hard and he was proud of her accomplishment.

Prince's work with the Data Evaluation Management Group at the National Nuclear Data Center at BNL involves various projects. One of these is the work of the Cross Section Working Evaluation Group (CSWEG). This team of researchers supplies nuclear data and data regarding fusion reactors and particle interaction (to 100 MeV) to laboratories in the U.S. and in Canada. Data evaluation consists of looking at reactions, substantiating existing data and predicting reactions where little or no experimental data exists. "We've got a good group here," Prince commented, and attributed the quality evaluations produced by the group to thoroughness and discipline.

Experience and intuition help, Prince agreed, but "other than persistence, I can think of no way to produce good work." And, he went on, "if I'm not satisfied with something I've done, I hope no one else is either."

While in Europe, Prince also managed to compete in four marathons and a 15.5 kilometre road race. He entered two qualifying marathons for the championship of France, held outside Paris, and placed 2nd and 3rd, respectively, in his class. In the Paris Marathon, he ran through the 21 sections of Paris to place second in his class. To place second was an honor, Prince said, because the man who came in first was Mimoun, a former French champion and an internationally known runner. In the overall standings, Prince was 140th in a field of 7,000. In the French road race, he placed 130th out of 3,000. But perhaps the race that gave him the greatest satisfaction was crossing the finish line of the Greek marathon in the original Olympic stadium. "I had tears in my eyes," Prince recalled.

Born in Philadelphia, and the middle child in a family of three sons, Gus Prince completed course requirements for his PhD from the University of Cincinnati and has been at BNL since 1966. With intentions of becoming an engineer, he entered the Navy after high school and served as a ra-

dar operator. Prince enrolled in the University of Pennsylvania upon discharge from the service and began coursework in engineering. However, he found that engineering didn't "answer my questions about what makes things go around. I went to the other extreme," he recalled, "and became a philosophy major." That field still didn't answer his pragmatic questions. For Prince, philosophy's rational versus empirical approach produced as many questions as it did answers.

It was later, as a student of physics, that Prince began to find satisfactory answers. But today, even in physics, Prince finds the more advanced one becomes, the more philosophical one becomes. In fact, there's a philosophy to be extracted from physics, he says. He acknowledges that while scientists haven't answered some basic questions in nuclear physics, an extract can be made and a picture painted of what is thought to happen. It's exactly this blend of empirical philosophy and theoretical physics that Prince hopes to see work in combination in ISABELLE experiments: "that will be a beautiful picture," he said.



Gus Prince

Reflecting on highlights of his career, he considered one to be the paper on the Analysis of High Energy Neutron Cross-Sections for Fissile and Fertile Isotopes, which he delivered at an international conference in Helsinki in 1970. It has since become the accepted method for analyzing deformed nuclei. Other high points were at the International Centre for Theoretical Physics, Trieste, where he gave an invited paper at a meeting on "The Use of Nuclear Theory in Neutron Nuclear Data Evaluation" in 1975, and served as invited lecturer for the "Course on Nuclear Theory for Applications" in 1978.

As a nuclear physicist, he'd like to see nuclear power utilized more for peaceful purposes. He also thinks that scientists might more closely analyze existing data regarding nuclear research instead of generating a glut of increased information. Not one to

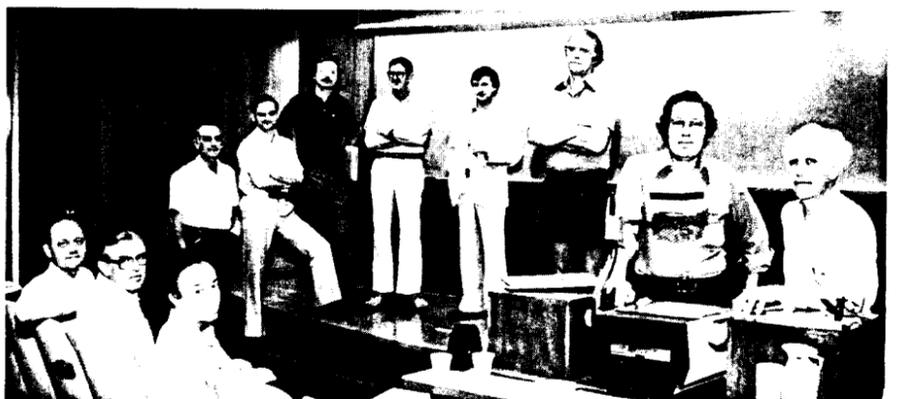
(Continued on page 2)

Symposium Discusses Heavy Ion Beams

Last week Brookhaven was host to a Symposium on Heavy Ion Physics from 10 to 200 MeV/AMU. Over 120 physicists and nuclear chemists from 37 institutions in the U.S., Canada, England, West Germany, France, and Denmark participated in the week-long meeting. Lectures were presented describing recent experiments using heavy ion beams on the periphery of the energy region discussed, on new accelerators under construction and on theoretical speculation regarding the physics to be studied with these new machines. The lectures were presented by a group of outstanding, young and enthusiastic scientists giving a broad view of the recent experimental results, many of which are still poorly understood.

The conference summary speaker, David Scott, pointed to the beginning of an understanding of the evolution of high energy ion reactions which only began to become evident at this meeting. This area of nuclear physics is young, and Scott pointed out that this was the first conference he attended on the subject where people sensed a semblance of order developing in our understanding of the field.

The Brookhaven Heavy Ion Group organized this meeting partly to gain a clearer understanding of the research opportunities for the cyclotron post-accelerator to be proposed for construction at BNL in the next years. The conference served to point out the rich variety of nuclear phenomena that we may expect to study in this range.



The Organizing Committee and Advisory Committee for the Symposium on Heavy Ion Physics included (seated from left) Peter Bond (BNL), Linwood Lee (SUNY, Stony Brook), Chellis Chasman (BNL); (standing from left) Lee Grodzins (MIT), Jean Barrette (BNL), Denis Kovar (Argonne), Harry Gove (U. of Rochester), David Scott (LBL), Henry Blosser (Michigan State), Jim Ball (ORNL), and Arthur Schwarzschild (BNL). Not present when the photo was taken were Sidney Kahana (BNL) and Peter Parker (Yale). —photo by Humphrey

Cited for Contributions to RAP Effort at Three Mile Island



Certificates of appreciation from the Department of Energy were presented last week to Laboratory and DOE Brookhaven Area Office personnel who helped in dealing with events arising from the crisis at Three Mile Island, as part of the Radiological Assistance Plan (RAP) effort. Not all of those who received certificates could be present for the above photograph, and the following is a complete list of personnel cited. **Actually assisting at the site near Harrisburg** were (from S&EP), Nathaniel Greenhouse, Jr., Joseph Klemish, Jr., Thomas Malinowski, Alan Kuehner, Robert Miltenberger, Edward Lessard, Andrew Hull, William Casey, Leigh Phillips, Alfred Lukas, Elbert Carter, Carl Distenfeld, Gerald

Levine, Joseph Balsamo, Jr., Rudolf Zantopp; and (from DOE), Robert Friess. **Working from the Laboratory site**, were, (from S&EP), Charles Meinhold, Charles Flood, Jr., Robert Young, Lynn Kalbach, Leonard Emma, Joseph Steimers, Louisa Morrison, Sandra Green, Jodi Earle; (from Public Relations) Carl Thien, Anne Baittinger; (from Plant Engineering) Jack Hillenbrand, James Oster, Charles Botts, Edward Miezianka, Charles Johnson, Lawrence Johnson, Nick Cipolla, Ben Belligan; (from ISABELLE) Anthony DiPierro; and (from DOE), David Schweller, Antoinette Carollo, Yolanda Caban, Barbara Fitzgerald.

—photo by Humphrey

Gus Prince

(Cont'd)

advocate a slowdown in research, Prince feels nonetheless that consistent, proper analysis could prevent much duplication of effort. In this area, too, Prince maintains a philosophical approach. "I wish scientists could pause, look around and think awhile." He added, "I'd be willing to do that."

While in France, Prince re-read some of the philosophers he first studied in college. He also re-read the writings of some early physicists, including the works of Einstein (whom he considers his hero) and Fermi. In fact, visiting Einstein's home in Switzerland was one of the best memories of his trip; that, and crossing the finish line of the Greek marathon in the original Olympic stadium. "I had tears in my eyes," Prince recalled. During his stay, he managed to complete three other European marathons. He can also remember a time at the Lab (less than 10 years ago) when only a half dozen employees ran on-site. Prince and friends would go by car to a remote area on-site and run for from two to four miles. "Imagine being embarrassed to run at the Lab!" he said, "but we were..."

In France, Prince re-read some of the philosophers he first studied in college. He also re-read the writings of some early physicists, including the works of Einstein (whom he considers his hero) and Fermi. In fact, visiting Einstein's home in Switzerland was one of the best memories of his trip.

Finally, Prince has taken for his own the philosophy of the 17th century French mathematician Descartes: "I don't accept anything until I accept it for myself," concluded Prince, "in science or in life, the authority is yourself."

Tour Features Environmental Monitoring

This weekend's mini tour will feature the Environmental Monitoring Section of BNL's Safety and Environmental Protection Division. The Environmental Monitoring group evaluates the impact of Laboratory operations on the local environment. Responsibilities include detection of any pollutants, and demonstration that releases not only comply with applicable laws and regulations, but are kept as low as is reasonably achievable. Visitors will see the areas and apparatus used for chemical analysis of samples and will be taken through the surveillance van which collects soil, air and water samples from the Lab site and surrounding areas for pollution evaluation studies.

In addition to this weekend's mini tour, visitors will view the 15-minute slide show entitled "Brookhaven's Quest" at Berkner Hall, take a guided bus tour of the Lab, and visit the Exhibit Center.

Arrivals & Departures

Arrivals

- Richard A. Auspaker.....Safety & Env. Prot.
- Horn-Bond Lin.....Energy & Env.
- Lev Neymotin.....Nuclear Energy
- Narinder K. Tutu.....Energy & Env.
- Alcide L. Viotto.....Accelerator

Departures

- Chi K. Chang.....Energy & Env.
- Rosanne V. Pagano.....Director's Ofc.

Tennis

The annual Laboratory Tennis Tournament is to commence the weekend of August 18. Employees and their spouses are eligible to enter. There will be five events: Men's and women's singles, men's and women's doubles and mixed doubles. The entry fee in singles events will be \$2 per player, in doubles \$2 per team. Sign-up sheets will be available at the BERA Sales Office in Berkner Hall, July 30 through August 3 (9:00 a.m. to 1:00 p.m. each day). The draw will be posted at courtside and in the BERA Sales Office by Monday, August 6.

Retiring Today



Mort Rosen

Martin Sautter, a Nuclear Reactor Operator in the Reactor Division, will retire today. He has been with the Laboratory since December 17, 1951. Sautter is moving to Dundee, New York, in the Finger Lakes region, where he has a small farm. He plans to restore cars, work on antiques and "do all the other things I like to do."

Exhibit Center - Not A Playground

Employees who bring their offspring on site for a day, and parents of children who live in Laboratory housing, may not be aware that children aren't allowed to roam around the Exhibit Center. Apparently, some are using it as a playground, charging up and down the stairs, playing with the computer and other equipment. They could not only damage the exhibits, but hurt themselves. The Exhibit Center is open to the public only on weekends and, at that time, children must be under the supervision of their parents.

Payroll Has Moved

If (heaven forbid) your check is missing, or for some other reason you need to see somebody in Payroll, don't panic if you don't find them where they used to be. The Fiscal wing of building 134 is being restructured and Payroll has moved to its new quarters at the north side of the building (opposite Chemistry). Entrance can still be made from Brookhaven Avenue, but the entrance on the Lewis Rd. side of the building will put you right on Payroll's doorstep.

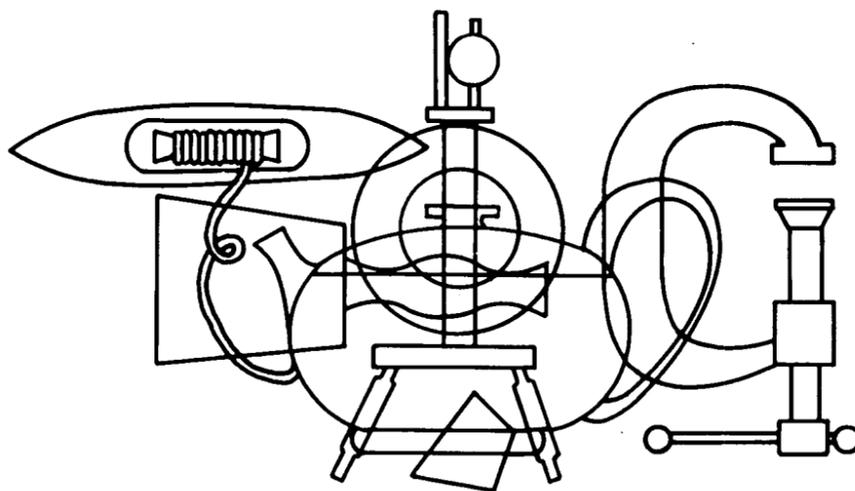
Misery Loves Company

If you're feeling victimized by soaring gasoline prices, you may be encouraged by the fact that the U.S. is virtually the bargain basement of the western world when it comes to petroleum. According to the DOE, the Japanese motorist pays an average of \$2.49 a gallon, the Israelis \$2.32, the Italians \$2.22. In Switzerland, the price is \$2.09, in Denmark \$2.07, and in France \$2.03.

Now for the bad news. Motorists in the U.S.S.R. pay only 65 cents a gallon, in Iran the price is 48 cents, in Egypt 38 cents, in Ecuador 20 cents and in Saudi Arabia, they're practically giving it away at 15 cents a gallon.

Road Closing

The Brookhaven Town Highway Department advises that Longwood Rd. will be closed all day Friday and all day Monday. It will be open those evenings and on the weekend.



Crafts Show Opens Next Week

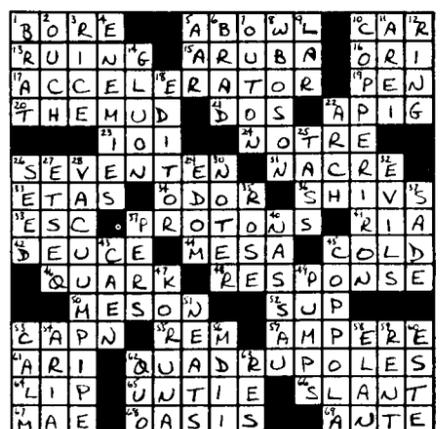
The first Employees' Crafts Exhibit will open at Berkner Hall on Thursday, August 2. Everyone is invited to attend the opening, to be held from 5 to 8:30 p.m., to meet with many of the exhibitors who will be there to discuss their work.

On opening night, several of the craftspeople will demonstrate their skill: Phil Miller (wood carving); Linda Paquette (pottery); Gail Bird (punch needle - Igo-

lochkoj - embroidery); Debbie Rothman (calligraphy); and Stephanie O'Grady (leaded stained glass).

The show will run through August 13 and may be viewed in Room B from 9 a.m. to 5 p.m. weekdays. As a special feature, daily crafts demonstrations will be given between noon and 1 p.m. in Room C. Announcement of the craft to be demonstrated will be posted each day at the Cafeteria.

Answers to last week's puzzle



Rambling Around

The Lab's ISABELLE Project has generated lots of interest especially from those in fields not related to science and for whom the project's name is particularly intriguing. One caller, for instance, recently inquired about our "Jezebel Project," while another asked for information about our "new machine, Big Bertha."

BROOKHAVEN BULLETIN

Published weekly for the employees of
BROOKHAVEN NATIONAL LABORATORY

BERNICE PETERSEN, Editor
ANNE BAITTINGER, Staff Writer

40 Brookhaven Ave., Upton, N.Y. 11973
Telephone (516) 345-2345

CARL R. THIEN, Public Relations Officer

Don't Believe Everything You See



About a week ago, the people in the Cabinet Shop were asked to move their cars as Grounds personnel were coming in to stripe the parking lot. Everyone obliged and lined up their vehicles in the field across the street. Later in the afternoon Walt Chornoma was making his rounds and noticed that the cars bore signs, and he wondered what on earth was going on. "Perhaps the police had given them all tickets?" On closer inspection, he found that some enterprising prankster had identified the field as a used car lot, and had labeled the cars with appropriate signs. Chornoma noted with a grin that his car, a 1978 model, was labeled "Sacrifice, \$900." Everyone involved got a big kick out of the incident, but were quick to explain to interested passersby that, no, their cars were not for sale. The prankster is still at large.

—photos by Humphrey

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, with preference to those within the immediate work group; (2) present employees within the Laboratory as a whole; and (3) outside applicants.

The determination of the best-qualified candidate for available positions will be based upon education, experience and other job-related criteria. Such factors will be evaluated and measured against the demonstrable requirements of the available vacancy, as well as the Laboratory's Affirmative Action objectives.

The Laboratory is committed to a policy of Equal Opportunity in its selection and placement of personnel. Its objective is equality of opportunity in employment, training, and promotion without regard to race, color, religion, national origin, sex, age or handicap.

Each week, the Personnel Office lists new personnel placement requisitions. The purpose of these listings is, first, to provide open placement information on all nonscientific 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, as indicated below. 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 Personnel Placement Supervisor, Ext. 2882.

POSITIONS OPEN:

POSTDOCTORAL RESEARCH ASSOCIATE - *In vivo* measurement of elemental composition in humans. Seeking PhD in nuclear physics or nuclear engineering. Contact: D.C. Borg, Medical Department.

LABORATORY RECRUITMENT: Opportunity for present Laboratory employees.

1050. TECHNICIAN - Requires AAS in electronics or mechanical technology or equivalent capabilities to perform a wide variety of duties related to electromechanical fabrication and experimental testing. Will provide technical support for thermal hydraulic research group. Department of Nuclear Energy.

1051. SECRETARY - Requires excellent secretarial, organizational, and communications skills. Previous BNL experience is highly desirable. Will perform all executive and general secretarial duties for department chairman, and serve as a liaison between that office and department staff. Department of Energy and Environment.

1052. DATA SERVICES ASSISTANT - Requires AAS in processing or equivalent experience preparing and processing scientific data into a mini-computer system. Will work with Fortran IV to organize and code data for scientific and professional staff. Department of Nuclear Energy.

1053. TOOL AND INSTRUMENT MAKER GROUP LEADER - Central Shops Division.

OPEN RECRUITMENT: Opportunity for present Laboratory employees and outside applicants.

1054. MECHANICAL TECHNICIAN - Requires AAS or equivalent in mechanical technology with ability to learn new skills in ultra-high vacuum and electrical areas. Work involves the development of special magnets in the Injection/Ejection group. Accelerator Department, ISABELLE Project.

Autos & Auto Supplies

76 DODGE VAN - 6 cyl, std, p/s, FM stereo cassette, pkwy windows, mags, fully carpeted, sleeping bunk, good gas mi, excel. \$3990. Betty, Ext. 2208, 289-5688.

64 JEEP WAGONEER - 4 w/d, 283 Chev eng, good cond. K.W., Ext. 4810, 281-8031.

FIBERGLASS CAP - for Ford pickup truck, sliding front glass windows, good cond. Phillips, Ext. 4235.

VW RIMS - 4 & 5 hole, \$4 ea; roofrack for VW squareback, \$5; toilet - 1 pc tank & bowl, \$16. Bill, Ext. 2378, 286-0243.

70 VW BUG - 132,000 orig mi, good tires & brakes. \$700. J. Olson, 289-8629 after 7.

69 OLDS 88 - a/c, ps/pb, etc. \$300. Ext. 2041, 473-5376.

77 CAMARO - ps/pb, a/c, AM/FM, sm V8. 698-3591 after 6.

70 FORD COUNTRY SEDAN WGN - ps/pb, good running cond. Asking \$500. Al, Ext. 3941, 744-9866.

76 FORD GRANADA - 4 dr, 302-V8, ps/pb, AM/FM, new tires. \$3295. Neal, Ext. 4019.

69 FORD CLUB VAN - V8, a/t, 308, a/c, AM radio, 8-trk stereo, rebuilt trans, rebuilt eng, new paint job. Fred, 289-1085.

68 FORD LTD WGN - 9 psgr, good runner, \$300 or best offer; Ford rims, \$1 ea. 924-6977.

73 FORD STA WGN - ps/pdb, a/t, 400 ci V8. \$900. Ext. 4060, 653-4924.

60 CHEVY SUBURBAN - K-20, 4 w/d, ps/pb, 350 ci, beach tires & mags, AM/FM 8-trk stereo. \$2700. John, 744-4386.

68 OLDS CUTLASS - ps/pb, good tires, runs well. \$300. Irene, 589-6468 after 5.

67 PLYMOUTH FURY III - 4 dr, a/t, very good running cond. \$250. 281-9497.

72 GREMLIN - a/c, sunroof, p/s, 70,000 mi. \$350. Bruce, Ext. 4772.

74 FORD MAVERICK - 6 cyl, 2 dr, p/s, a/t. Ext. 2463.

Cycle Safety

As gasoline supplies decrease, the number of bicycles on the roads increase, and both motorists and cyclists are urged to be careful. As a safety measure, it has been suggested that all cyclists equip their bikes with a flag on a pole, thus making them more visible to automobile drivers.

Also, with the summer season in full swing at the Laboratory, housing is filled to capacity and there are more children on site. Lab motorists have expressed their concern about children on bicycles (some of them none too steady) during late afternoon rush hours. Parents are asked to see to it that young cyclists stay off the main thoroughfares, particularly during the hours of 4:45 and 5:15 p.m.

Cafeteria Menu

Week Ending August 3, 1979

| | |
|--|-----------------------------------|
| Monday, July 30 | |
| Potato leek soup | (cup) .30 (bowl) .40 |
| Turkey tetrazzini | 1.30 |
| Western Omelet and 1 veg. | 1.30 |
| Hot Deli - Sloppy Joe | (on bread) 1.20 (on roll) 1.30 |
| Tuesday, July 31 | |
| Split pea soup | (cup) .30 (bowl) .40 |
| Chinese pepper steak on rice | 1.40 |
| Poached filet and 1 veg. | 1.40 |
| Hot Deli - Pastrami | (on bread) 1.30 (on roll) 1.40 |
| Wednesday, August 1 | |
| Cream of spinach soup | (cup) .30 (bowl) .40 |
| Breaded flounder filet w/fries | 1.40 |
| Stuffed pepper w/spaghetti | 1.45 |
| Special: Eight foot hero, includes: salami/ham/provolone/bologna/ tomatoes/onions/lettuce/peppers | (per inch) .70 |
| Thursday, August 2 | |
| Beef barley soup | (cup) .30 (bowl) .40 |
| Tacos w/refried beans | 1.35 |
| Scalloped ham and potatoes | 1.35 |
| Hot Deli - Roast turkey | (on bread) 1.30 (on roll) 1.40 |
| Friday, August 3 | |
| Fish Chowder | (cup) .40 (bowl) .50 |
| Filet of fish Parisiene | 1.40 |
| Barbequed spare ribs w/1 veg. | 1.45 |
| Hot Deli - Fried clam roll w/cole slaw and chips | 1.40 |

Summer Rec Program

Pool Special

More cheering was heard from the swimming pool last Friday as the children kicked and paddled their way to victory in the kickboard races. The winners were:

Four to six year olds

- 1st - Melissa Isaacson
- 2nd - Tizah Netzel
- 3rd - Tzachi Sharfman

Seven to nine year olds

- 1st - Einat Arbel
- 2nd - Tiny Murphy
- 3rd - Lisa Kantor

Ten year olds and over

- 1st - Kristen Holden
- 2nd - Ronan Arbel
- 3rd - George Kantor

Coming Events

- This week - diving contest and plate races
- Next week - relay races

On-Site Program

Last Friday was "circus day" at the recreation building. The children rehearsed all week to come up with some spectacular circus acts. There were fat men, clowns, magicians, lions, strong men, and even a fortune teller. After much hard work and thunderous applause, all the children were rewarded with badly needed ice cold fruit juice.

Coming Events:

- This week - treasure hunt
- Next week - olympics day

Sports Clinic Reminder

Informal games are held in the gym Monday through Thursday from 3:00 to 4:00 p.m.

Tennis lessons are given on the courts Monday through Thursday from 3:00 to 4:00 p.m.

A tennis tournament will be held the week of August 6 - 9. Watch for signs in the pool and gym.

Practical Training For High School Students



These students are some of this year's 26 participants in Brookhaven's Youth on Campus program. The program, currently in its fifteenth year, provides summer employment opportunities for local high school students who are "vocationally-oriented and not college-bound," according to Susan Foster, Program Coordinator. The students are employed in virtually every department of the Lab. Many work in clerical positions; others work as technical assistants. Besides the training they receive at their jobs, clerical workers have the opportunity to attend Office Practice classes twice weekly, where they may improve their office skills. Additionally, all the YOC students will be able to attend classes on useful topics not normally covered by a conventional high school curriculum, such as Managing Money and Civil Service Opportunities

—photo by Humphrey

Softball

League I

- Phoubars 11 - Old Timers 4
- Six Pax 13 - Strikers 7
- Ravens 14 - Source I 6
- Blue Jays 15 - Sweathogs 7

League II

- Titans 11 - Dirty Sox 6
- Titans 8 - Dirty Sox 5
- AMD Bombers 16 - Roga 12
- AMD Bombers 6 - Roga 5
- Charlie Browns 11 - Source II 6
- DEEgenerates 16 - Cardinals 9
- DEEgenerates 4 - Cardinals 2

League III

- Moles 12 - Nuke Powers 4
- Moles 6 - Nuke Powers 4
- Ice Pops 14 - Binary Bombers 9
- Big Sticks 18 - Medical 8

Mixed League

- E-Z Riders 6 - Diamonds 4
- Turkeys 9 - Confoozed 7
- TNT 12 - Random Sample 9
- Oh Kays 15 - Thrids 8

TIRES - (2) F78-14 Goodyear b/w, mounted on Pontiac rims, used 2 mos. Both/\$40. 281-8612 after 6.

70 PONTIAC LEMANS - 2 dr, good eng, p/s, a/t, disc brakes, fair cond. \$500. Linda, 732-3073.

PEUGEOT 304 STA WGN - good cond, front w/d, excel gas mi. \$500 or best offer. Joe, 286-0139.

73 FORD CUSTOM - 4 dr, ps/pb, 1 owner, 20,000 mi, top cond, 2 snows on wheels. \$2000 or best offer. Fran, Ext. 3379.

69 FORD STA WGN - 68 Chevy. George, Ext. 3783, 732-6678.

68 FURY III - excel eng, needs body & trans work. Best offer. Charlie, Ext. 3832.

69 FORD FAIRLANE - good transp. \$300. Mark, Ext. 3291.

72 CHEVY IMPALA - 4 dr, a/c, ps/pb, AM radio, new batt, trans, tires, 120,000 mi. \$850. John, 286-8756 afternoons.

69 BMW 2500 - 4 dr sedan, 4 spd, radials, mounted snows, 70,000 mi. \$2000. 751-3062.

69 FORD F-250 - h/d p/u 4x4, new tires, excel cond. \$2650. Dave, Ext. 7500, 924-6575.

72 BUICK RIVIERA - 2 dr, blue/white, a/c, all pwr, excel cond. \$1700. Ext. 2301.

73 CHEVY IMPALA - clean, sm V8, loaded. 924-3359.

77 CAMARO - ps/pb, a/c, AM/FM, excel cond. Ext. 4217, 928-7619 after 5.

69 FORD FAIRLANE - 6 cyl, a/t, good cond. \$425. Ext. 4731.

TIRES - new, used, rims, repairs, Gillette, BF Goodrich, mag wheel service. F. Usack, Ext. 4798 lunchtime, 475-4935 eves.

76 CB550 HONDA - 4 cyl, king-queen seat, low mi, showrm cond. \$1650. 744-5508.

66 NOVA - race-ready, narrowed frame, Dana rear, extra fiberglass hood. Negotiable. 929-6034 eves.

55 CHEVY - 2 dr, 46,000 orig mi, no rot, new paint, 6 cyl, M/T all orig. \$2200. 234-8229 after 6.

64 PONTIAC SHOP MANUAL - \$10. Palais, 698-0576.

72 FORD TORINO WGN - good running cond, 4 dr, p/s. \$700. Bob, Ext. 3497.

UPDATE YOUR VW - high back, reclining front seats, white, good cond; add-on a/c, compressor dryer, condenser, controls, \$75. Ext. 4058, 286-0436.

74 MERC MONTEGO - 63,000 mi, ps/pdb, excel cond. \$1500. Murdock, Ext. 4731, 399-2754.

78 FORD CLUB CAB 150 - PU, 4 w/d, 4 spd, 2 sets tires, w/78 Marco camper. Make offer. 654-4631 after 4.

67 FORD MUSTANG - 6 cyl, a/t, s/belted radials, excel cond. \$900. Tallon, Ext. 4547, 473-3987.

SNOW TIRES - w/rims, 6.50x14, fit VW bug or similar. \$20/pr. Bill, Ext. 4100.

69 SKYLARK - 8 cyl, a/c, excel cond, avail Aug 9. Otto, 744-6482.

Boats & Marine Supplies

8' WOOD DINGHY - w/oars, good cond, can be seen at Northport. \$75. Ext. 2057, 261-5735 after 6.

16' FIBERGLASS CANOE - w/paddles, life jackets, cushions, used 3 times. \$350. 751-1588.

16' ALUM BOAT - 40 hp elec start Evinrude eng, alum trailer, fishermen's rig. \$1300. 585-7094.

11' MOTH CLASS SAILBOAT - wood covered fiberglass, 1 main. Asking \$275. 289-0925.

19' MARQUIS BOW RIDER - 1978, V-hull, 85 hp Johnson, full canvas, CB, compass, pwr wench, Cox galvanized trailer. \$6000. 981-5993.

25' CHRIS CRAFT - 1976 Catalina, 225 hp, low hrs, fully equipped, CB, DF, full canvas, sleeps 4, many spare parts. \$10,000 firm. Chuck, Ext. 3910, 363-9519 after 6.

18' SLICKCRAFT RUNABOUT - w/50 hp Mercury eng, \$1300; EZ Load trailer, \$400; good cond. Les, Ext. 4074.

16' SKIFF - 25 hp Evinrude, wood, glassed seams, little used, good boat. \$650. 286-8542.

32' CHRIS CRAFT - 1937 classic, 1970 Chrysler diesel, galley, head, in water. \$5500. 929-4556 eves.

MARINE IGNITION SWITCH - brand new. \$20. Bob, Ext. 3309.

19' O'DAY MARINER - 4 hp Evinrude, head, running lights, cover, etc. Asking \$3900 or rent at PJ Marina, 473-2473.

Yard Sales

WADING RIVER - 400 ft north 25A, Manor Rd, July 28-29, 9 a.m.-5 p.m., antique/yard sale, 50 yr coll. Ext. 3303.

YAPHANK - Garden Ln, July 28-29, 9 a.m.-5 p.m., moving sale - clothes, 68 & 73 Ford sta wgn, hide-a-bed, chairs, chests, misc. Ext. 3300, 924-6977.

ROCKY POINT - Noah's Path, July 27-28, 9-2. Ext. 3935.

BELLPORT - July 27 & 28, 10-5, furn, rugs, clothes, collectibles, sporting goods, 7 General McLean Dr.

Miscellaneous

BICYCLES - 1 man's, 1 lady's good cond, man's almost new, lady's reconditioned. Ext. 4291.

HEADBOARDS - 1 dbl wrought iron, \$5; 1 single wicker, \$18; high school desk, \$25. Bill, Ext. 3355.

CELLO - w/bow, \$75; plate blocks, 50 different 1959 - 1967, face + 10%. Connie, 475-0465.

FRENCH KEYBOARD TYPEWRITER - Hermes Swiss made manual portable w/case, almost new cond. \$50. Arthur, Ext. 4015.

POOL TABLE - coin operated, slate top, great for sm rm. \$200. John, Ext. 3533.

GOLF CLUBS - 2 woods, 4 irons, golf bag, practice balls, elec practice putter. \$55. 744-2549.

ALTO SAX - clarinet, music & sax stand. \$150 for everything. J. Savino, Ext. 4019, 363-6673.

BICYCLE - Dawes Galaxy, 23" frame, excel cond, very clean. \$135. Jeff, 286-3509.

SOFA - down, 8', must go, needs slipcovers, sacrifice \$50 neg; GE washing machine, white, \$50 neg. 369-2151 after 6.

BABY ITEMS - 3 drawer white wicker changing table, like new, \$20; high chair, \$15; walkers, potties, etc. Judi, 928-5714.

PATIO ROOF - 10'x30', sturdy alum "H" beam structure w/fiberglass covering. \$450. 475-1494 eves.

MAYTAG DISHWASHER - used only 1 yr, excel cond, \$300; upright freezer, excel working cond, \$250; Carrier a/c, late model, used only 1 summer, \$300. 399-5429.

A/C - 10,000 BTU window unit, 110V-7.5A, GE Custom Super Thrust, high economy, used few hours, perf. \$175. Jack, 475-7067.

MICROSCOPE - Tasco 1200 X2, zoom kit, extra prepared slides. \$20. G. Latham, 289-1883.

WHITE YOUTH BED - w/vinyl covered Simmons matt & guard rails, sm white chest of drawers, very good cond. \$50. 581-7656.

ELEC WALL/MANTLE CLOCK - \$15; alum folding table (\$45 value), new, \$25; new upholstered chair, \$100. 325-1961.

HOOVER PORTABLE WASHER - like new. \$50. 928-5031 eves.

STORM WINDOWS - (3) 31"x55", good cond, \$15 ea; (3) wooden screens, 28"x37", excel cond, \$14 ea. Andy, Ext. 2424.

REFRIG - Sears 6 cu ft, used only 6 mos, excel. \$70. Le, Ext. 2060, 821-1296.

KIRBY VACUUM - many attachments, 6 yrs old, good cond. \$35. Connie, 924-9171 after 6.

CORNER FIREPLACE - free standing, blk, brass trim, pull screen, 3 yrs old. \$175. John, Ext. 4089.

PHILCO ELEC STOVE - works well, white, 40". \$75. 473-6210.

BIKE - 10 spd Mossberg, med wgt, good cond. \$100. P. Oster, 286-1248.

CANON FT CAMERA - w/f1.4 lens, \$160; Soligor 135mm f2.8 lens for Canon AE-1, \$75. Don, Ext. 7611.

HOLIDAY SPA - VIP membership cards (2). \$12 renewal fee; both for \$800. Ext. 2546 or 744-4047.

A/C - Welbuilt, 15,000 BTU, 220 v, \$35; 20 gal aquarium & stand. \$20; stereo, Morse AM/FM tuner, amp & spkrs, Garrard table, excel cond, \$50. J. Lynch, Ext. 4510, 744-0843.

SOFA - colonial 90", beige & green plaid, excel cond, best offer; bedrm set, headboard, dresser, chest, mirrors, tables, light mod, best offer. Ext. 2443, 751-0637.

REFRIGERATOR COMPRESSOR - new, Copeland Mod SSC4-0100-CAA. \$15. Ext. 4058, 286-0436.

1 PR SPKRS - ESS Heil air motion performance series mod 5, guaranteed mint cond. \$250. Ext. 4701, 757-5991.

COLONIAL 5' COUCH - needs reupholstering, \$30; din rm buffet, china closet, table & 6 chairs, contemporary, \$100. Connie, 924-9171.

HEAD MASTER - unstrung, \$10; focal telescope (refracting), 20-60x zoom, \$30. Chris, Ext. 4227.

STEREO CONSOLE - custom mahog early Am, Harmon-Kardon receiver, Garrard turntable, excel cond. 929-6765.

RECORDER - Roberts 778X reel-to-reel, 8-trk, cross-head bias, speeds: 1 7/8-15 ips, remote/built-in spkrs, auto shutoff. \$250. 369-2199.

HALF-FARE COUPONS - United Airlines. Best offer. Ext. 2057, 261-5735 after 6.

BEDRM SET - 5 pc, walnut, bookcase headboard, full, w/wo boxspring & matt. \$200. 281-9411.

MARIGOLDS - mixed colors. 12 plants/\$1. W. Stars, Ext. 4278, 298-9648 eves.

TRICYCLE - for 3-4 yr olds, excel cond. Ext. 3009.

FRANKLIN STOVE - cast iron. \$75. 728-3315 after 6.

UPRIGHT FREEZER - 16 cu ft, white, lock, excel cond. \$175. 744-8011 after 6.

2 TICKETS - opera, NY State Theatre, Sept 1, mat, Naughty Marietta, orchestra seats C131-2. \$15 ea. Paul, Ext. 2407.

8" CIRCULAR SAW - Sears, case, blades, \$20; white uniform pantsuit, size 14, \$5; Knitking mod. 4000 knitting machine, instructions & access, used once. Pete, Ext. 3868, 878-1225.

LG ATTIC FAN - 24" diam, 1/2 hp motor, in housing. \$40. Ext. 4238, 286-3509.

MAGNAVOX STEREO - Ital Prov console, AM/FM, record player, 23" color TV, excel cond. Best offer. 654-0713, 654-4008.

HIDE-A-BED - queen size Simmons, \$75; chest, 4 dr, oak, \$15; cabinets, \$10 ea unit. 924-6977.

CAMERA - Canon FT 35mm, w/f1.4 lens, \$160; Soligor 135mm f2.8 lens for Canon AE-1, \$75. Don, Ext. 7611.

SPINNING WHEEL - excel cond, no missing parts, suitable for spinning flax. \$225. 473-5585.

A/C - Philco AS9K1, 9000 BTU/hr, good working cond. \$250 or best offer. 286-3742.

ROUND TABLE - 42" Bennington pine, w/12" leaf, excel cond, \$175; 4 alum dbl hung sash & frames for masonry walls, 37 1/4"wx41" h, \$15 ea, 4/\$55. Pat, Ext. 4519.

SPKRS & TURNTABLE - Advent/1, 6 mos old, \$150/pr; Dual 1215S, \$80; 10-spd bike, Schwinn Varsity, well broken-in, \$40. Mark, Ext. 4254.

HEXAGONAL COFFEE TABLE - \$10; wooden library chair, \$10; vinyl swivel rocker, \$25; single bed, new matt, \$60; conv couch, queen size, \$80. Ext. 3593.

GOLF BALLS - any make, in excel cond. 25¢ ea. Ext. 3765, 744-5079, 929-6235.

TRAVEL TRAILER - 12' compl equipped. \$750. 727-1423.

POOL LADDER - stainless, \$40; pool skimmer, thru-the-wall, \$20. Jim, Ext. 4040, 289-0876.

GOLF CLUBS - bag & cart, \$85; golf shoes, size 9, \$10; attic trunk, \$15; trailer awning, \$30. Ext. 4597.

AIR CONDITIONER - 9000 BTU lin. Ext. 4597.

MOVING - MUST SELL - refrig, furn, stereo console, tables, chairs, A/C, cabinets, odds & ends, best offer. Ext. 2065, 821-9631.

OLD REFRIG - \$5; baby jump seat, \$1; auto tripod jack, \$3; rims, \$1. Ext. 3300.

A/C - Westinghouse 6000 BTU, very good, \$35; 2 combo alum s/s windows w/frames, 1-28x64, 1-26x52, \$5 ea. 281-7844.

GAS STOVE - Dutch oven, 40", white, old but excel cond, Maytag. Ext. 2301.

NIKON - DW-1 waist level finder, \$20; right angle viewing attachment; \$15. Phil, Ext. 7934.

SOFA & CHAIR - hand carved frame, custom upholstered, great buy. 289-6574.

SEARS WASHER - \$50; Sears dryer, \$50; 2 Gerry child carriers, \$5 & \$3. Tom, Ext. 4674, 286-2505.

STEREO - Kenwood amp, BSR turntable, 2 AR spkrs, 1 1/2 yrs old, excel cond, \$250; baby grand piano, Ludwig 1942, action fine & even, excel tone, asking \$750. Ian, Ext. 3785, 331-1292.

GOWNS - eve/bride's maid, velvet & satin, chiffon, worn once, size 10, best offers; dbl bed, matt & box spring, firm support, \$150. Maria, 331-3116.

A/C - 7 1/2 amp, 6000 BTU rm size, good cond. \$50. 751-0637.

1978 VIKING POPUP - little gasser, can be pulled by 4 cyl car, 18', sleeps 6, full kitchen, heater. \$1700. 928-0730.

Real Estate

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

For Rent

VT CHALET - beautiful furn, stone fp, woodland hiking trails, swimming pond, lake, canoeing, fishing, near golf, tennis, antiques, alpine slide, rent weekly. Ext. 3448, 757-5599.

E. PATCHOGUE - 3 1/2 rm apt, prvt ent, all util pd, cable TV. Smol, Ext. 4496, 475-1583.

PT JEFF VILLAGE - furn home for family or individual to share, avail Sept to Mar 1, 1980, well insulated, gas hot water heat. Ext. 2412, 928-2954 after 5.

SOUTHAMPTON - studio apt overlooks ocean & bay on 10 acres adjacent to golf course, 1 mi from Southampton College, 35 min to BNL, w/car pool potential. \$220/mo unfurn incl util. John, Ext. 2070, 283-2526.

WADING RIVER - cliff house w/spectacular view of Sound, sleeping loft, cathedral ceiling, stone fp, furn. \$325/mo for 10 mo rental, Sept 79-June 80. Ext. 2440, 929-8165.

CENTER MORICHES - part furn 1 1/2 bedrm house, 2 fp, Oct thru Mar - maybe longer. \$250/mo. Ext. 3710, 878-4304.

PATCHOGUE N. - 2 bedrm house, D/R, full bsmt, fenced yard, quiet dead end st, appl. \$330/mo + util. Ext. 4015, 475-1964.

SHOREHAM - furn 3 bedrm contemporary ranch, prvt beach rights, walk to beach. \$450/mo for Aug. Ext. 2440, 929-8165.

For Sale

CORAM - Tanglewood Hills, 4 bedrms, 15x20 den w/ fp, L/R-D/R w/w all, eik, 2 baths, 2-car gar, fenced, 4 appl, 1/10 acre, gas heat, SD # 12. Asking \$38,000. Ext. 3404, 698-4966.

MILLER PLACE - immac 4 bedrm colonial, L/R w/ fp, formal D/R, fam rm, 1 1/2 baths, full bsmt, 2-car gar, flagstone patio, wooded area. \$51,900. Ext. 3305, 734-5527.

SHOREHAM - 4 bedrm colonial, 2 1/2 baths, fp, fenced 1/2 wooded acre, low taxes, S-WR school dist, north of 25A. Ext. 2627, 744-3443 eves or weekends.

ROCKY POINT -Tide area, 3 bedrm ranch, fin bsmt, 1/2 acre, prvt beach, near shopping center, many extras. Sam, 3911, 821-1810.

BABYLON - 3 bedrm L-shaped ranch, newly decorated, new kit cabinets, att gar, prvt beach, low taxes, south of Montauk Hwy. \$34,500. Ext. 3933, 878-4287, 661-2700.

HOLTSVILLE - condo, transferred, must sell, 2 bedrm Townhouse, a/c, DW, W&D, new w/w, economical gas heat, mint cond. \$26,990. Ext. 2876, 654-3175.

ST. JAMES - Head-of-the-Harbor, 5 bedrm, 2-story older home, 2 1/2 baths, 3 fp, formal D/R, 1 3/4 secluded acres, lg flr & veg gardens. \$62,000. Anne, Ext. 3404, 584-5685.

RIDGE - 3 bedrm ranch, 2 baths, L/R, D/R, eik, full bsmt, 2-car gar, 1.3 acres. \$48,500. Ext. 3372, 924-7637.

SHOREHAM - 3 bedrms, 2 baths, 2-car gar, full bsmt, fp, gas heat, a/c, L/R, fam rm, hall w/w, fenced-in yard, 1/2 acre. \$42,900. Ext. 4829/3707, 744-0007.

BROOKHAVEN HAMLET - charming older home, S. Country Rd, 3 bedrms, window seats, 29' L/R, D/R, eik, 2 fp, scr pch, fin bsmt w/bar, 2-car gar w/extra rm, chicken coop, 0.6 acre, lg veg & flr gdn, very low taxes, 8.5% mtg. Ext. 2633, 286-1056.

MASTIC BEACH - long-line ranch, 2 over-size bedrms, cabinet-lined kit, formal D/R, den, full bsmt, baseboard heat, 1/4 acre. \$27,000. Ext. 2547, 281-5498.

PORT JEFF STA - 4 bedrms, den, fam rm w/ fp, 2 1/2 baths, detached gar & 1/2 w/workshop, lg eik, re-insulated, partially fin bsmt, new stockade fence. \$35,000. Ron, Ext. 3162, 473-6862.

CORAM - 4 bedrm cape, eik, D/R, lg L/R, 2-car gar, fenced-in prop, 1/2 acre. \$38,900. Ext. 2951, 473-1585 after 6.

BELLPORT - S/S. Country Rd, 9 rms, 4-5 bedrms, den, 3 baths, lg eik, fp, gas heat, 2-car gar, lg breezy front porch, huge trees. Anne, Ext. 3404, 286-3764.

CENTEREACH - SD # 11, 3 bedrms, L/R, D/R, eik, bsmt, 1/10 acre, new roof, OHW, gar, w/w, \$1200 taxes, high assumable 8 1/2% VA mtg. \$32,900. Ext. 3404, 981-1195.

MASTIC ACRES - 6 rms, full bsmt, baseboard heat, usable attic, 1/4 acre. Ext. 2547, 281-5498.

CALVERTON - mother/daughter 3 bedrm ranch, oil fired heat & water, s/s, fin bsmt, assumable mtg 7 1/2%, 1 acre prop. \$31,000. Ext. 2022, 727-9058.

N. SHIRLEY - 3 mi from BNL, L/R, D/R, cabinet-lined kit, 3 bedrms, w/w, s/s, 4 appl, only 2 1/2 yrs old. \$3500 cash over assumes 8 1/2% mtg, terms negotiable. Ext. 3835, 399-4128.

FT MYERS, FLA - The Villas, 2 bedrms, 1 bath, Florida rm, din area, patio, close to beaches, shopping & churches. 654-2972.

Wanted

HOUSE OR APT - for Sept 1 yr/round, in Wading River School Dist, mother & son, excel references. 345-2970.

GARAGE JACK - on wheels. Ext. 4240, 286-0295.

COMIC BOOKS - old Dc & Marvel, good prices pd. F. Lane, 744-0485.

RIDE - to Bklyn or lower Manhattan & back to Brookhaven, needed by weekend traveler to & from Bklyn. Karen, Ext. 4410.

STEP LADDER - 6' wooden or aluminum. Rich, Ext. 3381.

HOME - for female puppy, 8 wks, must give away - husband allergic. Linda, 732-3073.

CAMPING EQUIPMENT - stove, matts, lamp. Yosepha, Ext. 3403, 345-3079 eves.

WET SUIT - in good cond, male 5'11", 150 lbs. Ext. 3765, 744-5079.

MEN'S BIKE - prefer 10-spd. Dave, Ext. 3403, 286-0703.

RIDE - to & from Lab from S. Ocean Ave, Patchogue, will share expenses. Ext. 3832.

AUTO RELATED LITERATURE - owners & repair manuals, bought & sold. Frank, Ext. 2022.

APT - studio or 1 bedrm, Port Jeff/Stony Brook area. Ext. 4528.

FREEZER - chest or upright. Doug, Ext. 3388.

OSCILLOSCOPE - d.c., in good cond. Jim, Ext. 3372.

ELEC GUITAR - any brand, reasonable to cheap. Ed, 331-3805 eves.

TRANSFORMER - for American appliance to run on European voltage. 473-2473.

USED BRICKS - any cond, cheap. Dan, Ext. 3145.

SCUBA DIVING BUDDY - for diving in LI area. Sam, Ext. 2437.

Car Pools

E. SETAUKET - Pt Jeff, Harbor Hills area, need 4-5 drivers in 8:30-5:00 pool. Dalal, Ext. 7790.