BROOKHAVEN BULLETIN
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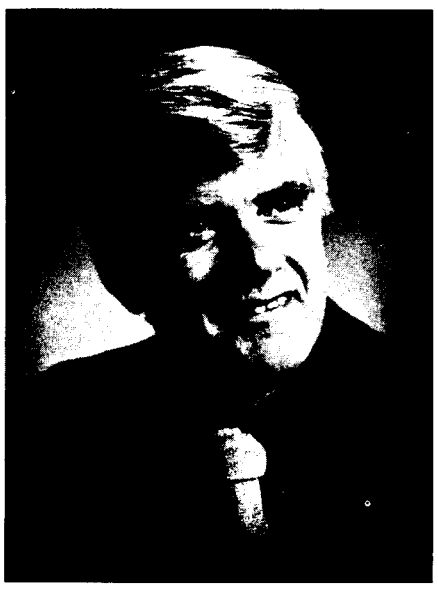
BROOKHAVEN NATIONAL LABORATORY

Johnsen Named Technical Director Of ISABELLE Project

Kjell Johnsen, Deputy Head of the ISABELLE Project since August 1979, has been appointed Technical Director of the Project in addition to his duties as Deputy Head.

As Technical Director, Johnsen will have full responsibility and authority for the research, development, design, and construction of the accelerator and its related systems. This will include specifically the responsibility for the Accelerator and Magnet Divisions.



Mort Rosen

Kjell Johnsen

James Sanford, ISABELLE Project Head, will retain direct responsibility for the Conventional Construction, Experimental Areas, and Detector Divisions, as well as overall administration of the Project.

Johnsen, who is "on loan" from CERN to work on ISABELLE, is well known and highly respected for his experience in building particle accelerators. He was one of the key people involved in the design and construction of the Proton Synchrotron, which is CERN's parallel to the AGS. The 28 GeV machine has been the mainstay of European high energy physics research since its startup in 1959.

Johnsen later promoted the idea of a colliding beam facility at CERN, and in 1965, when the Intersecting Storage Rings project was accepted by the CERN Council, he was appointed head of the ISR project and director of the ISR Construction Department. The ISR was considered a very daring project, since nothing like it had ever been built before. The project was completed in early 1971, as the world's first (and, until ISABELLE is completed, the world's only) proton-proton colliding beam accelerator.

Kjell Johnsen received his university degree in electrical engineering from the Technical University of Norway in 1948, and his doctorate from the same university in 1954. In 1952, he joined the organization which later became CERN, working with the group which designed and later constructed the Proton Synchrotron.

In 1957 he became Professor of Electrical Engineering (Electromagnetism) at the Technical University of Norway, where he created a research group in plasma physics.

He returned to CERN in 1959 to participate in the commissioning of the Proton Synchrotron. Beginning in 1961, however, he devoted his time to the study of new accelerator projects, becoming leader of his work in 1962. His group's proposal for the Intersecting Storage Rings project was accepted by the CERN Council in 1965, and he was appointed head of the project. Although the design and construction of the ISR was a rigorous test of accelerator technology, the machine was started up only five years after construction had started, and the commissioning ran so smoothly that the project could be declared finished a little ahead of shedule and at a cost a little below the estimate.

In 1973, Johnsen retired as Director of the ISR Department in order to study still more advanced facilities for high energy physics.

From 1977 to 1979 he was involved in the initial phase of the creation of the joint French-German Institute for Radio Astronomy in the Millimeter Range (IRAM) at Grenoble, and in August 1979, he arrived at Brookhaven as Deputy Head of the ISABELLE Project.

Johnsen has maintained a part-time affiliation with the University of Bergen in Norway as Professor of Physics. He has been appointed Visiting Professor of Physics at MIT for this academic year.

—Anne Baittinger

Reports Available

The following reports are now available to the Laboratory Staff and to Affiliates of the DOE, AUI, and NRC. Others may purchase the reports from the National Technical Information Service, U.S. Department of Commerce, 5285 Port Royal Road, Springfield, Virginia 22161. Staff members should call Ext. 3484.

NUREG/CR-1355
BNL-NUREG-51151
CONAN: An LMFBR Containment Response Computer Code. R.D. Gasser

BNL 51155 **$4.50**
Polyketones and Polysulfones for Conservation in the Ethylene Polymer Industry. Progress Report No. 6, July – September 1979. M.Steinberg, et al.

BNL 50904 **$5.25**
Fleet Operator Data Book (Summer 1977 Data) Volume 1: National Data. J.R. Wagner

NUREG/CR-0603
BNL-NUREG-50950
A risk Assessment of a Pressurized Water Reactor for Class 3-8 Accidents. R. E. Hall, Principal Investigator

BNL 50982 **$4.00**
Crop Residues as a Fuel for Power Generation. N. Bhagat, et al

BNL 51041 **$8.00**
Use of County Level Data in Health, Energy Demographic, Environmental, and Economic Analysis: Proceedings of a Computer-Based Conference, March 4-28, 1977. S.C. Morris, et al

BNL 51046 **$6.50**
Ranking Energy Conservation measures to Establish Research Priorities: Synopsis of a Workshop. P.D. Moskowitz, et al

BNL 51073 **$5.25**
The Iron and Steel Industry Process Model. F.T. Sparrow, et al

BNL 51084
Organic Carbon and Nitrogen in the Surface Sediments of World Oceans and Seas: Distribution and Relationship to Bottom Topography. E.T. Premuzic

BNL 51092 **$4.00**
Macroeconomic Effects of Accelerated Implementation of Renewable Energy Technologies in the U.S. W. Marcuse and P.J. Groncki

BNL 51107 **$7.25**
Flash Hydropyrolysis of Coal. Quarterly Report No. 9, April 1-June 30, 1979. M. Steinberg, Head P. Fallon, Project Leader

BNL 51126 **$4.00**
Modeling Approaches to Long-Run Integrated Technological Impact Analysis. P.J. Groncki

BNL 51138 **$10.75**
New York State Energy Analytic Information System: First Stage Implementation. J. Allentuck, et al

The Trailer Connection

"We try to make sure the place doesn't look like Trailer City," says Tom Blair, referring to experimental areas at the AGS. Trailers are a side line for Blair, a Liaison Engineer in the Accelerator Department. When he's not engineering, he keeps track of more than 100 trailers used for high energy physics experiments at the AGS.

These mobile homes are for machines, not people. They house computers and other electronic equipment used to collect data from detection devices set up in beam lines.

Permanent structures don't meet the needs of scientists using the AGS. "Many experimenters have to set up their equipment in the weirdest places," says Blair. "The beautiful thing about trailers is that they're portable."

AGS riggers transport them around, and carpenters and electricians hook them up. They are powered with heavy duty electrical cables. And they're air conditioned to control temperature and humidity for the computers.

The trailers are also completely equipped with a fire extinguishing system. "Most house hundreds of thousands of dollars worth of equipment," says Blair, "so each one has smoke detectors, heat sensors, and an automatic triggering device for the sprinklers." Water isn't the ideal extinguisher for electrical fires, so the internal system uses Halon 1301 (bromotrifluoromethane).

Except for the initial few that were bought, the trailers are acquired through surplus from other government agencies. The only cost to the Lab is for transportation from their points of origin.

Many have had interesting histories. "After the floods in Wilkes-Barre, Pennsylvania a number of years ago, HUD provided trailers for all the homeless people," says Blair. "When people rebuilt their homes, the trailers were declared surplus, and we were able to get some. They had to be stripped out, though. We normally prefer them empty.

A number of them were artillery or radar trailers during World War II. As Blair says, they're prime examples of government recycling. Thirty years later, they're still in use at the AGS.

The trailers come in four main sizes, ranging from 8 by 21 feet to 12 by 60 feet. Two trailers are usually sufficient to house apparatus for one experiment. Most experiments take from six months to a year and a half to complete data collection. When that's done, the trailers are reassigned to a new group.

'The beautiful thing about trailers is that they're portable.'

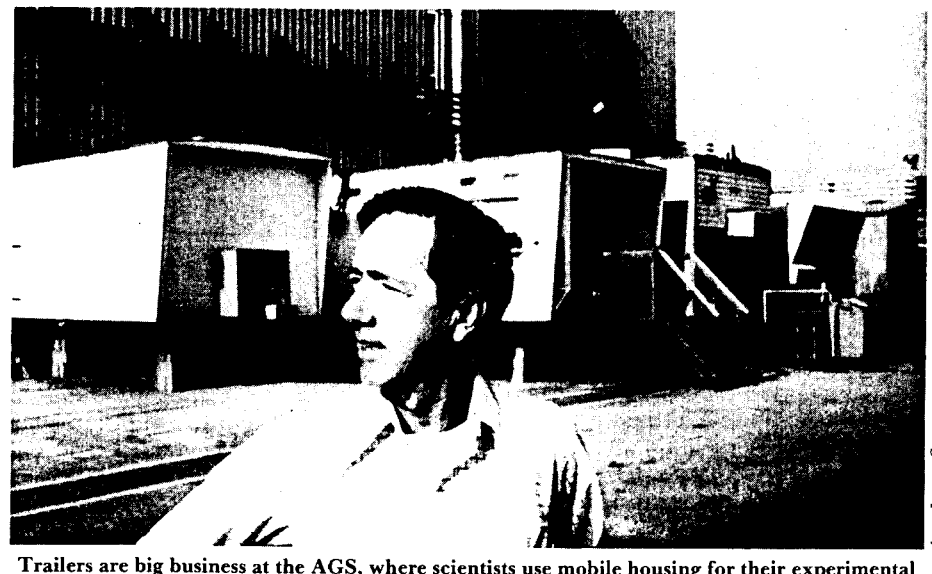
Of course, the ideal situation is when one experiment moves out and another moves right in. Then all the coils upon coils of connections don't have to be pulled and hooked up again.

Some groups have done several experiments in the same location. Experiment #735, a Yale/BNL collaboration, is in the same set of trailers used in two previous experiments. Myron Campbell, a researcher from Yale, says that the physical layout of an experiment is determined by the physics. "When this experiment was being designed, there was some question about whether these trailers would have to be moved a few meters," he said. "As it turned out, it wasn't necessary."

The logistics of an experiment can be very complex, but the experimenter is always accommodated. The beam comes out of the AGS ring at 6 feet 6 inches above ground. Depending on the magnets used, it can be shifted left or right or up and down. "We're now setting up an experiment for which we hoisted a trailer up in the air," says Blair. "Because it's now on the same level as its detection devices, the scientist saves on extra cable lengths and countless footsteps going back and forth from his detectors to his computer."

Saving energy is another consideration. Some of the trailers wear foam insulation on their roofs. The foam keeps heat out in the summer and does the reverse in the winter.

Blair has been involved with the AGS trailers for 17 years. He recalls only one casualty. In 1976, the Oceanographic Sciences Division borrowed a trailer for experiments at Shinnecock. It was washed out to sea by Hurricane Belle.



Doug Humphrey

Trailers are big business at the AGS, where scientists use mobile housing for their experimental apparatus. When he's not engineering, Tom Blair oversees more than 100 trailers.

Meet BNL's *Real* Key Personnel

Yale, Best, Russwin and Sergeant. Higher schools of learning? Flea collars? No, they are manufacturers of locks – the ones most commonly used at the Lab. By rough estimate, Brookhaven is secured with a few thousand locks. Fixing them, replacing them and installing new ones is the responsibility of three locksmiths in the Plant Engineering Division, Wesley Howell, Robert Zigrosser and Charles Watson.

They know their way inside a keyhole like they know their homes in the dark. And that's not easy. Locks come in all different shapes and sizes – cylindrical, mortese, rim, cabinet. Some have keys, some have combinations, a few even have push buttons. As Howell says, "It takes years of experience." He's been a locksmith for 25 years, and Zigrosser for 15. Watson made them a trio three years ago.

The inside of a lock is like a spring-loaded jigsaw puzzle. Remove one piece, and it's liable to fall apart into a hopeless jumble of screws, springs and pins. The locksmiths tell stories of do-it-yourselfers bringing them parts in paper bags. A broken lock calls for the services of a professional.

Given the time, they can usually fix any lock. But if they can't, they at least keep parts for future repair jobs.

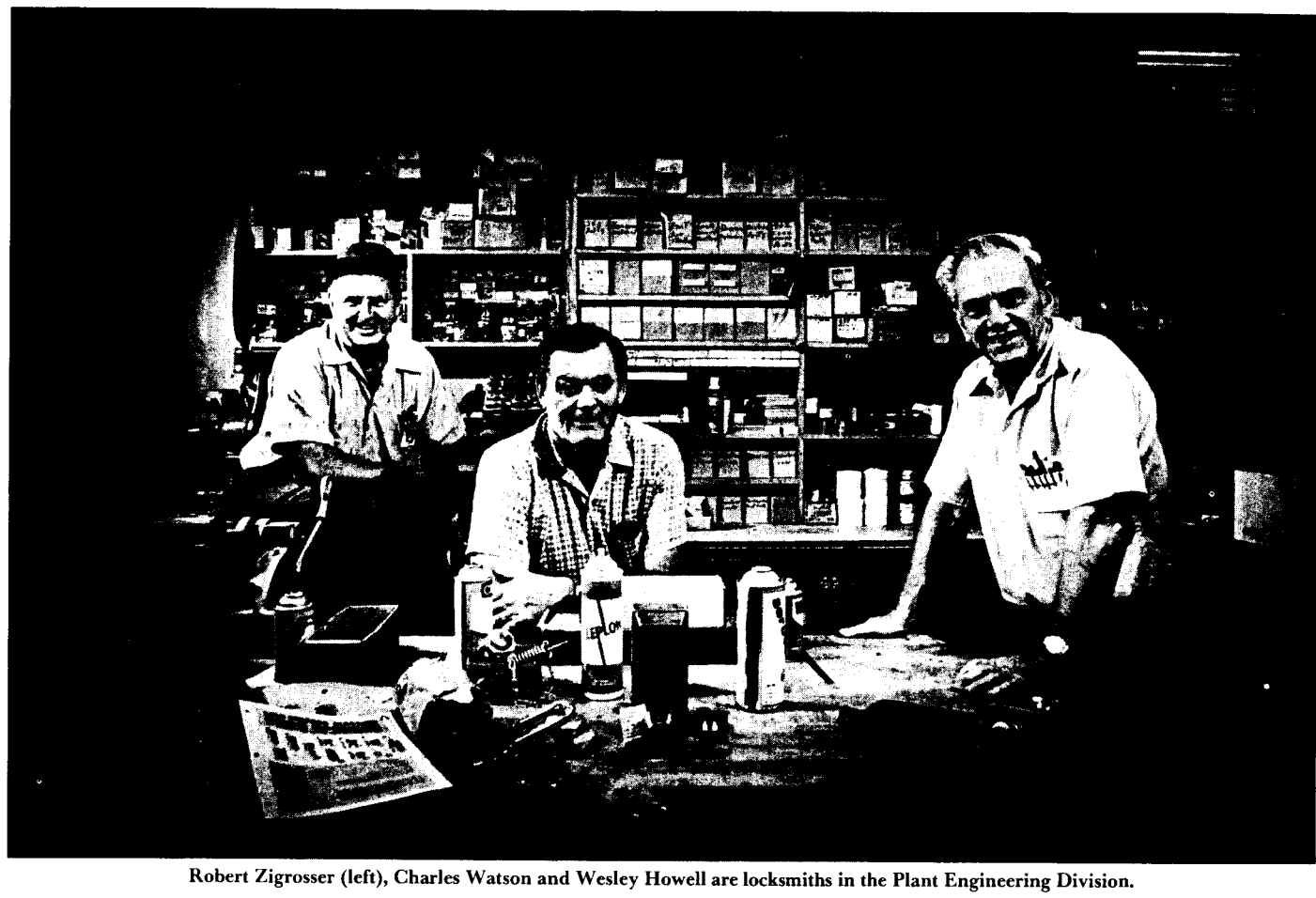
Sometimes, locks outlive their doors. Howell tells a story about Howard Goulding, the first locksmith at the Lab. Goulding was out on a repair job at Building 530. When he took hold of the faulty lock, the door fell down in a heap of rotten boards, leaving the lock behind, doorknob still in his hand.

Zigrosser and Watson are most often out in the field, repairing and installing on location. Howell usually stays back in their shop, where he repairs locks, maintains records and pores over catalogues looking for new locks and parts for old ones.

In the shop are files upon files of records. Just about every lock on site is identified – what kind, the key code, how many keys were made. That kind of recordkeeping can be tedious, but it pays off in the long run.

Choosing from a variety of locks, they install new ones with function in mind. For example, a lock can be matched with an already existing one, so someone doesn't have to carry an extra key. On the other hand, if many people use the lock, a combination or push button one is installed, so large numbers of keys don't have to be issued. "That way, if someone loses a key, we don't have to recall all of them, change the innards of the lock, and re-issue new keys," says Zigrosser.

Sometimes the three locksmiths are called upon to act as the Lab's "legal burglars," as Watson puts it. They have a special set of tools for breaking into cars or briefcases or whatever someone is accidentally locked out of. They all agree that picking a lock is not as easy as it looks in the movies. In spite of their familiarity with the inner workings of locks, it really takes a sensitive touch and a bit of luck. "And when all else fails," says Watson, "we still rely on the old coat-hanger trick."



Doug Humphrey

Robert Zigrosser (left), Charles Watson and Wesley Howell are locksmiths in the Plant Engineering Division.

Touching The Lives Of Everyone

Brookhaven's 1980 United Way Campaign begins next Monday and will continue through the middle of November. During this time, employees are asked to pledge what they can.

United Way supports human care agencies that offer health, mental health, family, youth and planning services throughout Long Island. These services are available year-round to you, your family, friends, fellow workers, and the general community. United Way touches the lives of everyone, from your local Girl Scout troop to the American Red Cross.

Department coordinators can tell you more about United Way and how your contributions will be used. You can pledge on a weekly or monthly basis, or you can make a one-time contribution. Your department coordinator will distribute pledge cards, which you can fill out and return to either the coordinator or directly to Payroll.

Giving is a personal and a voluntary decision. Keep in mind that any donation, no matter how small, is welcome.

Department	Coordinator, Ext.
Accel. & ISA	Pat Tuttle, 4602
Applied Math	Edward McFadden, 4188
ASDP	Joe Weynand, 7955
AUI	Elinor Adams, 2495
Biology	Ben Scala, 3392
Central Shops	Larry Fanella, 3499
Chemistry	Michele Henderson, 4304
DCP	Harry Klein, 4917
DEE	Betty Pergan, 2937
Director's Office	Ann Mauro, 3336
DNE	Cal Brewster, 3532
Fiscal	Josephine Gazzola, 2456
Instrumentation	Cheryl Williams, 4228
Medical	Ken Mohring, 3564
Personnel	Lenore Dudzick, 2882
Photo/Graphic Arts	Toni Rotundo, 2907
Physics & NSLS	Robin Maragioglio, 3872
Plant Engineering	Lou Jacobson, 7636
Reactor	Bob Fuchs, 4400
S&EP	Frank Marotta, 4273
Staff Services	Joan Perullo, 2525
Supply & Materiel	Louis DiCarlo, 2302
Tech. Info	Carol Beckner, 3483

Caution Pays

The State of New York has approved a 10% Defensive Driving Discount to be applied to liability insurance when the principal operator has completed an approved National Safety Council Defensive Driving Course. Call toll free number 800-962-3434 for the training center closest to you. The cost of the driving course is $25.

Switch-On Demo

The MICRO-SWITCH company will have a display and demonstration van parked at the cafeteria on Wednesday, October 29, from 10:30 a.m. to 1:00 p.m. The display and demonstration will include photo-electric controls, lighted push button and indicator displays, basic switches, both mechanical and solid state, and limit switches.

Lecture Reminder

"Small Technical Businesses" will be the subject of the next Women in Science Lecture to be held on Tuesday, October 28, at noon in Room B, at Berkner Hall. Evelyn Berezin, former president of Redactron Corporation and now consultant to The Burroughs Corporation, will be the speaker. Reservations for the luncheon following the lecture can be made by calling Gail Williams, Ext. 3338. Seating is limited.

Retiree

Mort Rosen

Quentin R. Beitel recently retired from his position as Senior Office Services Assistant in the Instrumentation Department. He came to the Lab in 1965. He and his wife are avid campers and hope to travel through the United States in their truck-camper from a home-base in Naples, Florida. Along the way, they plan to play a lot of golf.

Inside Info

Nicholas P. Samios, Chairman of the Physics Department, has been awarded The New York Academy of Sciences Award in Physical and Mathematical Sciences, which comes with $1,500 and a certificate of citation. The official announcement and presentation will be made at the Annual Meeting of the Academy on on December 3 in New York City.

Tape Honored

Gerald F. Tape, former President of AUI, recently received two awards. Presented to him at the Very Large Array dedication in New Mexico two weeks ago was the Distinguished Public Service Award of the National Science Foundation. Tape received a medal and a certificate "for his contribution to the management of science through firm and steady leadership in the fields of radio astronomy, atomic energy and high energy physics."

Last week at the Lawrence Award ceremony in Washington, D.C., the U.S. Department of Energy's Distinguished Associate Award was "conferred upon Tape for his exceptional contributions to the development and civilian use of atomic energy; for his astute stewardship over the evolution of Brookhaven National Laboratory into one of the leading research centers of the world; and for his outstanding statesmanship on behalf of the United States in bringing about increased international understanding and cooperation in the development and control of nuclear energy."

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CARL R. THIEN, Public Relations Officer

Music From Marlboro

Music from Marlboro will present the first concert in the 1980-81 Concert Series sponsored by BERA. The performance is Monday, November 3, at 8:30 p.m. in Berkner Hall.

Marlboro is a town in Vermont where pianist Rudolf Serkin and some of his colleagues gather to share their experience and wisdom with younger professional musicians. Mr. Serkin observes and listens and makes preliminary decisions as to who shall tour and what shall be played.

The *New York Times* writes: Music from Marlboro programs are impeccably prepared. People will buy subscriptions to it, not knowing what the programs will be and which artists will play. The name is sufficient to guarantee quality.

Performers in the BNL concert are violinist Hiroko Yajima, pianist Andras Schiff and cellist Gary Hoffman. Ms. Yajima began her musical studies at age six in Tokyo, coming to the United States in 1965 as a Fulbright Fellow to study at the Juilliard School. She was a Young Concert Artist winner in 1967 and is currently on the faculty of SUNY at Stony Brook.

Andras Schiff was born in Hungary and studied at Budapest's Franz Liszt Academy. In 1977 he was awarded the Liszt Prize of Hungary, that country's highest musical honor.

Gary Hoffman is a former student of Janos Starker, Mstislav Rostropovich and Gregor Piatigorsky. He was 1979 recipient of the Piatigorsky Award, First Prize Winner in the 1978 Montreal Symphony Competition and finalist in the 1978 Moscow Tchaikovsky Competition. A native

The three artists will present the same program at Berkner as they will play this season in Alice Tully Hall: Piano Trio in E Flat Major by Haydn, Sonata No. 1 for Violin and Piano by Bartok, and Piano Trio in G Minor, Opus 15 by Smetana.

Tickets are $6 for adults, $4 for students and senior citizens, and $3 for those under 18. Perhaps the most economical way for music lovers to attend these concerts in the series is to buy block tickets, which are $5 a ticket for five or more. Block tickets can be purchased up to the night of the first concert from any of the following people.

	Ext.	Bldg.
Arnie Aronson, DNE	2606	130
Clemens Auerbach, DNE	2914	197
Howard Gordon, Physics	3740	510
Geoffrey Hind, Biology	3400	463
Richard Holroyd, Chem.	4329	555
Don Lazarus, Accel.	4643	911
Maria Pavlova, Medical	3634	490
Ed Popenoe, Medical	3622	490
Steve Schwartz, DEE	3100	426
Larry Trueman, Physics	3767	510

Micrographics Conference

Next week, Brookhaven is hosting the 8th Annual Conference of the DOE/Contractors Micrographics Association. Micrographics users from all over the country will meet to exchange information about systems and equipment at their own facilities.

Included on the agenda are talks on computer output microfilm, rules and regulations, engineering microfilming, and future trends in micrographics.

Conference dates are next Wednesday through Friday, October 29 through 31. Interested Lab employees who want to attend should register at Berkner Hall at 8:30 a.m. on Wednesday. For more information, contact Nick Parrinello, chairman of the Micrographics Association, at Ext. 4670, or Lillian Kouchinsky, conference secretary, Ext. 4776.

A Job For Engineers

An instructor is being sought to teach Professional Engineer License Review Course on site during the evenings from 5:15 to 9:15 p.m. Applicants must have a Professional Engineer License and perferably a Master degree in Engineering or a related field. Interested persons should forward resumes to Y. Renee Flack, Bldg. 460, Ext. 3316 by November 7.

Indoor Soccer

The indoor soccer league will start pickup games in the Gym on Friday, October 31, at 5:00 p.m. During the first few weeks, teams will be organized and the season's schedule set up.

Those interested please show up with playing gear or call Ken Batchelor, Ext. 4674.

Aviation Club

Members of the BNL Aviation Club flew three planes to Plattsburgh on October 10 for a weekend Fall Fly-In. Weather held them over an additional day, so they did some sightseeing around Lake Champlain, Jay and Upper Jay, and Lake Placid and Mirror Lake.

Cafeteria Menu

Week Ending October 31, 1980

Monday, October 27		
Beef barley & mushroom soup	(cup)	.55
	(bowl)	.65
Roast top round of beef & 1 veg.		1.60
Chopstick tuna with miniature egg roll		1.55
Hot Deli – Hot pastrami	(on bread)	1.65
	(on roll)	1.75
Tuesday, October 28		
Potato leek soup	(cup)	.55
	(bowl)	.65
Grilled liver & bacon w/sauteed onions		1.50
Beef chili on rice		1.50
Hot Deli – Italian sausage hero		1.55
Wednesday, October 29		
Cream of cauliflower soup	(cup)	.55
	(bowl)	.65
Roasted breast of turkey w/stuffing & 1 veg.		1.60
Veal pattie parmesan & 1 veg.		1.50
Hot Deli – Smoked tongue	(on bread)	1.70
	(on roll)	1.80
Thursday, October 30		
Hot Russian borsch soup	(cup)	.55
	(bowl)	.65
Country fried steak w/1 veg.		1.60
Scalloped ham & potatoes		1.50
Hot Deli – Meatball & pepper hero	(on bread)	1.55
	(on roll)	1.65
Friday, October 31		
New England clam chowder	(cup)	.60
	(bowl)	.70
Shrimp sukiyaki on rice		1.65
Sauerbraten & potato pancakes		1.60
Hot Deli – Smoked baked ham	(on bread)	1.60
	(on roll)	1.70

Bowling

Purple & White League

A very close race with the Good Times and the Gropers tied for 1st place. The Draftecs and Clearwater are tied for 3rd and are only 1 point behind 1st place. Charles Tomesch rolled a 255/600 series, Jim Griffin had games of 177/237/192 for a 606 series. Lynn Boyd had games of 159/243/178 for a 580 series. Other good games were Ken Riker 234, Gene Hassell 229, Bob Glasmann 214, Richard Scheidet 212, Ken Asselta 202, Joyce Pinelli 199, Pat Manzella 189/183, Gerri Riker 184.

Green League

The Sparks still hold a lead on first as they split with the Light Source 6-5. The The Pinball Wizards, in second, took 7 from the Trouble Shooters. The Blue Jays battled the Strangers taking 7. C. Bachsmith had games of 204/209 for a 576 scratch, 714 gross, and N. Parrinello a 225. The Old Timers II took 8 from Isa Team with L. Musso rolling a 208. The Phoubars could only manage 4 from the 76'ers.

Pink League

High game and the first of our season, a 200 by Renie Rosati. High series, a 498 scratch, 660 gross was rolled by Carol Beckner. Other good games were Mary-Grace Meier 189/166, Deb Johnson 182, Helen Keeley 174/172, April Donegain 166/162-648 gross, Audrey Blake 165, Karen Albericо 161, Christine Moore 153. Congrats to Maria Apelskog for converting the 4-7-9-10 split.

Red League

The Sandbaggers took 11 from the Old Timers. R. Meier had a 233/660 gross, R. Adams 615 gross. The Designers won 8-3 against the Freon Loaders. Gross wood scores were R. Occhiuzzo 634, N. Baker 632, J. Ferrero 615, T. Rudolf 607, A. Pinelli 606. This Isa Team only managed 3 from the Old Timers II. The 76'ers won 7-4 over the Phoubars. J. Morris had a 211, R. Larsen 200/602 gross, J. Petro 609 gross. The Strangers took 4 from the Blue Jays. S. Mai grossed 620, R. Taylor 616 and V. Scotto 600.

Arrivals & Departures

Arrivals

John D. Dunn	Physics
Francisco L. Gaetan	Plant Engrg.
Pushpito K. Ghosh	Chemistry
Edward W. Grohse	Energy & Env.
Keven M. Higgins	Instrumentation
Kathleen A. Melton	Energy & Env.
Robert C. Murphy	Safety & Env. Prot.
Roger C. Newman	Nuclear Energy
Thomas P. O'Rourke	Plant Engrg.
Ioannis A. Papazoglou	Nuclear Energy
Ronald W. Squire	Central Shops

Departures

Beverly L. King	Safety & Env. Prot.
Patrick J. Ryan	Safety & Env. Prot.
Alfonso Sanchez	Central Shops

Selected Reading

New Sci. 88 (1223), October 16, 1980
Nobel recognition for transplant pioneers. L. Wingerson. 148-9

Science 210 (4467), October 17, 1980
Poland: A visitor's snapshot. E. Marshall. 292

Sci. Am. 243 (5), November 1980
The peopling of the Pacific. P.S. Bellwood. 174-85

Newsweek XCVI (160), October 20, 1980
Marshal Tito: Now it can be told. M. Djilas. 57-9

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.

LABORATORY RECRUITMENT: Opportunity, for present Laboratory employees.

1485. S&M CLERK - Supply and Materiel Division.

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

1486. PATROL OFFICER (two positions) - Requires AAS in criminal justice or equivalent experience performing diverse security duties for a large organization. Excellent communication skills are necessary as well as ability to work shifts. Will participate in comprehensive training program in order to become knowledgeable of site and police procedures. Safety and Environmental Protection Division.

1487. INDUSTRIAL HYGIENE ASSOCIATE - Requires BS in physical or biological sciences and significant work experience in industrial hygiene. Will work with team of professionals in developing a national advisory program as well as delivering a comprehensive industrial hygiene program to Laboratory employees. Safety and Environmental Protection Division.

1488. TECHNICAL POSITION - Requires AAS in electronic technology or equivalent background. Knowledge of analog and digital electronics and programming helpful. Will build, operate, maintain and assist in design of instrumentation and auxiliary structures. Re-posting of Job No. 1298. Biology Department.

1489. NUCLEAR REACTOR OPERATOR TRAINEE - Requires AAS degree in physical sciences or in a technical field or equivalent background. Reactor experience desirable. Experience maintaining and operating electrical and mechanical equipment also desirable. Will operate and maintain HFBR and auxiliary equipment. Must be willing to work rotating shift and able to maintain reactor qualifications. Reactor Division.

1490. OFFICE SERVICES ASSISTANT - Requires excellent computational skills or aptitude. Solid payroll experience with organization highly desirable. Fiscal Division.

Autos & Auto Supplies

HOLLEY - 4 BBL carb model 4160. $50. Ext. 2022 or 727-9058.

VAN SEAT - stock front seat from '78 Dodge Van, green, excell cond. $25. Andy, Ext. 2948 or 722-3168.

76 DATSUN - B210, 39 mpg, clean, 4 new tires. $2,650. 744-3509 after 4 pm.

CARB - fits Ford 289 V8, like new. $50. Dave, Ext. 4173 or 281-6248.

WHEELS - (2) chrome slotted wheels (Typhoon) 14", fits Ford or Chevy, excel cond. $45. Bob, 289-0413.

75 GRAND PRIX - landau top, buckets, new sport radials, full power, a/c, am/fm stereo. $2,200. 472-0739.

77 CORVETTE - 4 spd, fully equipped, T-roof, new tires, 37,000 mi. Price negotiable. Ext. 4905 or 654-2617 after 5.

79 FORD VAN - E150, 26,000 mi, mags, custom windows, many extras, excel cond. 924-7677.

73 CHEVY - C20 pickup, rebuilt 350 c.i., 4 spd, w/cap, very good mechanical cond. Tom, Ext. 2959.

SNOW TIRES - Cooper "SST" 6 ply H78-15 mounted on Chevy 6 lug rims (4x4) machine balanced, like new. $200. Ext. 3354.

TIRE - new F70-15 polyglass raised letters. Sell or trade. Joe, Ext. 2012 or 2005.

CIBIE QUARTZ HEADLAMPS - 7", needs bulb. $20. Rick, Ext. 7102.

71 HONDA - 175 cc, 11,000 mi, excel cond, must see. 588-0424.

65 T-BIRD - p/s, p/b, p/w, pwr seats, pwr doorlocks, 65,000 mi. Les, Ext. 4074.

66 CADDY - very good cond. $400. Ext. 3131.

66 CHEVY - wgn, famous 283 cu in. engine, great for hauling. Only $200. 271-5774.

72 DODGE - Dart, 6 cyl, p/s, a/t, a/c, 66,000 orig mi, good running cond. Best offer. 883-2751.

71 TORINO WAGON - good cond, low mi, new battrey. $800. Colleen, Ext. 2295 or 698-4810 after 6 pm.

74 CHEVY - Caprice, a/c, p/b, p/s, reg gas, 95,000 mi. $875. Ext. 3106.

73 DUSTER - slant 6, running excel, good tires, good on gas, low mi, orig owner. 231-4228.

75 BUICK - LeSabre, custom landau, am/fm 8 trk, low mi, showroom cond, must see. Leroy, Ext. 4581.

76 PONTIAC - Astre, 4 cyl, very good cond, good mpg. $1,800. Bob, 2546.

69 VW BUS - running cond, needs some work. $600. Stacey, Ext. 3397 or 283-6836 eves.

75 DODGE - swinger 6, new trans, a/t, a/c, p/s, p/b, runs well, clean. $1,700. Tom. Ext. 3273 or 924-9143.

74 JEEP - CJ5, 3 spd, 304 eng, yellow w/brown soft top, 11-15 tires, Levi seats, some rust. Asking $3,300. Pete, Ext. 7513.

74 FORD - pickup, ½ ton, 302 V8 automatic, p/s, insulated cap, high mi. $1,300. 288-3535.

73 PLYMOUTH - Fury, p/s, p/b, a/c, complete trailer package. Asking $900. Ask for Mike, 878-1640.

69 AMX - 2 seat Classic, mint, 78,500 mi, rust proofed, mag wheels, 390 Hearst shift, 4 spd, 15 mpg. A. Losi, Ext. 2502.

SPEAKERS - (2) Jensen surface or recess mount stereo spkrs, $25; (4) hubcaps for Chev truck, C-10 series 16" wheel, $15. Mike, 269-9175.

79 FORD - pickup, 351 CID, standard with O/D, 8,000 mi, am/fm 8 trk, duals, mags, roll-bar extras. $4,800. Ext. 4095 or 727-4925.

65 PONTIAC - Tempest 4 dr sedan, 326 cu. $200. Bill Stars, Ext. 4278 or 298-9648 eves.

70 COUGAR - a/t, p/s, 14-19 mpg, hi-mi, runs well, good tires, clean int. $500. Avail Nov 7. Kim, Ext. 4581.

STUDDED SNOW TIRES - H70x15 on GM rims, w/w, bias- belted. Best offer. Alyce, Ext. 2902.

59 MERCURY - Montclair, 48,000 orig mi, 2nd owner, black, excel in/out. $1,700 or best offer. 981-6078 after 6.

69 ECONOLINE - "Open road style" Camper; folding table-bed, potti, gas stove, and heat, ice box, 2 batt, auto 6 cyl, many new parts. $1,500. 281-0360.

74 OLDS - Cutlass 65,000 mi, am/fm stereo, orig owner, excel cond, p/s, p/b, a/c. $1,500 firm. Ext. 3284 or 744-4625.

BUICK SKYLARK - wagon, 396 Chevy powered, blueprinted, Muncie, 12 bolt posi, sunroof, L60 radials, much more, mech perfect, good mi, sacrifice. $2,200. Randy, Ext. 4636 or 277-3451.

71 FORD - Pinto, 4 spd, green, 78,000 mi, good cond, radials. $800. 924-7920 after 6.

72 CHEVY - Nova, 2 dr, V6, 20 mpg, runs good, 69,000 mi. 212-886-2511.

74 JEEP - pickup, 4 w/d, auto, V8, p/s, camper model. $1,950. 585-8809 eves.

78 HONDA - XL125, low mi, excel cond. $600. Ext. 2926 or 281-0268.

78 MERCURY - Marquis sta wgn, a/c, loaded, 27,500 mi. $3,200. Betty, Ext. 3699 or 422-2850.

60 JAGUAR - MK9, 45,000 orig mi. Best reasonable offer, must sell. 473-2664.

76 TOYOTA - Carolla, 49,000 mi, good cond. $1,500. Hideo, Ext. 3237.

HUBCAPS - (4) for Chevy truck C-10 series, 16" wheel. $15. Mike, 269-9175.

Boats & Marine Supplies

LONE STAR 16' - fiberglass runabout, heavy duty tilt trailer, both good cond. $500. Jim, Ext. 4502.

SLOOP 17' - S.S. Class Circa 1935 #117, orig cond, all sails. Jack, 878-4241.

1972 SEARAY - 24' Weekender loaded, ST. UP. head, swim platform, electronic, mint cond, 225 OMC, Tabs. $7,000. Ext. 3397 or 628-1338.

DANFORTH ANCHOR - #13-5 with 200' nylon line for boats up to 32'. $50. John, Ext. 4312.

Yard Sale

YARD SALE - Oct 25 and 26. 57 Champlain St near Old Town Rd, Terryville. Washer, dryer, kitchen cabinets, furniture. 473-5834.

YARD SALE - Oct 24 and 25. 369 Washington Ave, Patchogue. Rain or Shine. 10 to 4 pm. Misc trains D.G.

GARAGE SALE - Oct 25 and 26. 10 to 5 pm. 55 Highland Down, Shoreham.

MOVING - selling 8 pc dining rm, snow blower, wrought iron 5 pc set, (2) recliners, other household items. 744-2332.

Miscellaneous

SLIDE RULE - Pickett 10", never used. $15. Dave, Ext. 4173 or 281-6248.

BED - "Loftcraft" king-size platform bed w/headboard and mattress, disassembles, excel cond, $350; maple butcher block table by "Workbench" 36x60 w/trestle base, $200. 744-5161 eves.

WALL SHELVES - (3) w/an armored statue on ea, $40/lot; Spanish painting 34x42, $10; Mr. Quarterback football passer, $8; twin bedspread, beige linen, $8; pr chandeliers, wrought iron, $25/pr. 281-8557.

BABY ITEMS - nice wooden crib w/mattress, $20; bed, Hollywood/boxspring, frame, mattress, twin size (38x72), $20. Andy, Ext. 2948 or 722-3168.

HIGH CHAIR - convertible w/rocker and stroller frames, $25; bicycles: mens and womens 3 spd, $80; boy's and girl's single spd, $20; crib, very good cond, no mattress, $15. Carl, 281-7627 after 6 pm.

AIR COND - 5000 BTU Coldspot, $45; refrig, Kelvinator, $40. Ext. 7679.

2M - FM handheld XCVR, standard SRC146 w/touch-tone pad, 6 pr. XTALS. $100. Alan, Ext. 2928 or 821-0761.

FIREPLACE MANTLE - colonial, screen and andirons; 8 trk car tape player, electronic parts. Walt, Ext. 7154.

BEDSPREAD - king size white chenille, $20; white traverse w/sheer rods xtend 30" to 50", 3/$10, orig $10 ea. 744-1917.

WOOD STOVE - 1979 Pillsbury, hard coal also, heats to 13,000 cu ft. $395. 286-3736 after 6 pm.

JUKE BOX - AMI plays manually, needs fixing to play auto, 38" w by 64" high. Make offer. Ext. 2352.

CELLOFOAM - wall panel insulation, 6 in pkg, $3 – 20 to 30 pkgs available. 475-1494 after 6 pm.

DISHWASHER - Kenmore, single level wash, heavy-duty, cycle, old but reliable. $25. 286-1688 or Ext. 3521.

DANISH MODERN - walnut sideboard 80" long, excel cond. $75. Wes, Ext. 3254.

OAK DRESSER - refinishers special, orig handles, lock drawers, no mirror. Best offer. 281-7302 after 7 pm.

SORRENTO - auto blanket, dbl bed single control, brand new in orig box; GE deluxe no frost refrig, 19 cu ft, 2 yrs old, avocado, perfect, price negotiable. Ext. 4959.

ANTENNA - electric am/fm CB. $25. E. Bihn, Ext. 3840.

FLUTE - buffet. $45. 744-3744.

STEREO - hi/fi, maple cabinet, Olympic am/fm radio. $50. 929-8642.

SECURITY GATE - for kids and pets, mesh, 32" high. $10. Ellie, Ext. 2347.

MOTORCYCLE JACKET - blk leather, like new, size 48, must sell. $100 firm. Sheldon, Ext. 3354.

DIRECTOR'S CHAIRS - (2) $12 ea; rocking chair, armless, very old, needs caning. $15. 744-3744.

FIREPLACE SCREEN - and andirons black and brass. $25. Pat, Ext. 2939.

JALOUSIE - storm door and screen 80"x36", good cond. $30. Daniel, 744-9632.

BICYCLE - girl's 3 spd yellow Schwinn, 19" frame, excel cond. $75 or best offer. Ext. 3060 or 744-4787.

ANTIQUE SATIN - drapes, dark blue triple width 95" long; child games-assorted, photography books (technical). Ext. 7772.

TURNTABLE - Garrard Zero 100 w/shure V-15 type III cartridge. $60. Rick, Ext. 7102.

SEARS - 230 amp arc welder w/face shield, $75; oxyacetylene welding rig, dual stage plus two oxygen and one acetylene tanks, cort. $175. Ext. 2614.

ROUTER - jig saw table, 40 piece tap and die set, brand new. $14 ea. Bill, Ext. 2378 or 286-0243.

TABLE - tennis, table ¾ particle board, top folds 108"x60". $50. Ext. 4278.

SCANNER - new 10 chan portable hi/lo w/charger, batteries, antenna. $169.95. 727-4859 or 727-4406.

BABY'S CRIB - high chair, table, bath, etc; lady's bike w/baby seat. Maryanne, 698-8104.

STEREO - am/fm radio phono, blond wood, lovely tone, Grundig, oldie but goodie. 475-5052.

FENCING - galv, gen purpose, 4'x50', $25; hand vacuum, 110 v, $5; bathroom sink, white, $5. Walter, Ext. 3397 or 567-9025.

METAL DETECTOR - white's coinmaster 1-DB, $75; head phones, $10. Howard, Ext. 2043.

STEREO - turntable, BIC 940, unused M91ED needle, excl cond, $70; Sony Dolby cassette deck TC 186 SD, $150. Jim, Ext. 3501 or 751-0476.

MOVERS MATS - 2 quilted, reversible red/blue, make great furniture throw, spread, rug, wall hanging. Brand new. $25 ea. 473-2473.

MATTRESS PAD - sheets for full size bed, brand new; used bed frame, full. S. Spark, Ext. 4111.

TV - b&w 19" w/table, $50; camera, pocket instamatic, $40. Ext. 2914 or 286-3742 eves/wkends.

AIRTIGHT - woodburning stove, heats 1500 sq ft firebrick lined, viewing glass, brass decorations. $325. Bob, Ext. 4551 or 289-2159.

DISHWASHER - Kitchen Aid, excel cond, under counter model, $45. Roy, Ext. 4664 or 744-8779.

22 CAL - Crossman pellet rifle, gas, pellets. $20. C. Nielson, Ext. 3935 or 325-0968.

HEATER - roller skate; skateboard; travel iron; hamburger maker; misc games. Ext. 3027.

SKI BOOTS - men's 8½, brand new, Le Trappeur, black plastic. $45. Ext. 4727.

BASEBOARD HEATER - 8' electric, sealed fluid, thermostat. Ext. 3688 or 363-7032.

BEEHIVES - (2) incl occupants, surplus honey, suit, veil, smoker, etc. $200. Ext. 3400.

MUST SELL - upright freezer; color TV 23"; air cond; cassette recorder w/radio. Ext. 3192.

SAVE ENERGY - radiant quartz heater, new w/ guarantee, heats fast, top controls, wattage selector. Ext. 3192.

WASHER - refrig (no freezer); dishwasher; all work. $10 ea or $25 for all; convert sofa, $20. 581-6432 after 6.

CLOTHES DRYER - Norge, in good running cond. $30. 286-9260 eves or wkends.

DOG HOUSE - good cond. Priced right. John, 929-6341 after 5 pm.

WOOD STOVE - efficiency Huntsman, brick lined, approx 450 lbs, excel cond. $200. Jim, Ext. 4959.

SNOW BLOWER - Jacobson 3½ hp, 2 cycle, 20" plus chains, used 2 seasons. $110. Bob, Ext. 2050 or 878-1192.

FREE PUPPIES - black, lab/german shepherd mix, six wks old. Charlie, Ext. 4758.

DRUM SET - Royal Blue Sparkle, 3 pieces. Asking $175. 475-4270.

FRANKLYN STOVE - American made, Washington Foundry, $250. Jack, Ext. 4447 or Joan, Ext. 4112.

Wanted

TENDER LOVING CARE - for kittens, 6 wks old, males and females, pan trained. Ext. 2959 or 941-4131.

HANDBALL PLAYERS - wanted, single or double, clean and official court. Ext. 2311.

TYPEWRITER - table model, good cond, inexpensive. 286-1192 after 6 pm.

TABLE SAW - 10". Ken, Ext. 3574.

CALLIGRAPHER - reasonable. 369-2151 after 6 pm.

HOUSE - Bayport/Blue Point/Sayville/Patchogue to buy, must have 3 bdrms. 475-3981 or 654-1731.

HOME - for 2 yr old irish setter, male, abandoned. 744-9423 after 6 pm. Ext. 4700.

GUITAR AMP - for beginning player, to 30 watts. Reasonable, please. Bill Sanchez, Ext. 3848 or 698-3145.

HOME - for 1 yr old husky shepherd, good w/children and good watch dog. Al Minn, Ext. 3992 or 665-1218.

HOUSEMATE - share 4 bdrm, 3 bathrm house in Coram. $155/mo + ⅓ util. Ext. 2521 or 928-8379 eves.

MOTORCYCLES - bent or broken, any age or cond. Kevin, 281-8031.

BABYSITTER - mature, responsible woman, 2½ yr and 4 mo old boys, 8:30 - 5:30, Mon thru Thurs, own transp Shoreham, light housekeeping. Ext. 3064 or 821-0890 after 6.

JAPANESE TUTOR/BABYSITTER - for one 3 yr old, near Lab, two ½ weekdays. Yako, Ext. 2592 or 2294.

MINI BIKE - used, in good to excel cond. $150 to $200. Ext. 3329 or 878-0480.

MOTORCYCLE SEAT - for early CB350 or SL350 Honda. Brian, Ext. 4990.

GIRL SCOUT UNIFORM - pants, blouse, sash, etc, size 12-14. 581-7656.

HOMES - for 2 male kittens, 16 wks old, adorable dark grey-white, striped. Tony, Ext. 7502 or 427-2544.

INTERESTED PERSONS - for shopping spree to Reading, Pa via bus on Nov 8. Call Bea, Ext. 3571.

SHOTGUNS - used, either 12 ga or 410. Reasonable. Jim, Ext. 4095.

HEATER - for 1966 Falcon. Reasonable. John, 929-6341 after 5 pm.

TUTOR - beginning calculus, some one with experience preferred, Patchogue Area. 475-1844.

CHASSIS MANUAL - for 1970 Cadillac. Ext. 3084 or 929-4818 after 6 pm.

PILOT AND PLANE - to fly me to Boston on late Friday nights, and possibly pick me up. Eric, Ext. 2973 after 5.

AUTOMATIC SHOTGUN - 12 ga, AM-FM radio, tire pump with gauge. Roger, Ext. 2384.

BLACK TOP HAT & CANE - Janet Ext. 2345 or 929-8152.

Real Estate

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

For Sale

MEDFORD - ⅓ acre, cape, 4-5 bdrm, 2 bath, den w/fp, l/r w/wood stove, large eik, formal d/r, 18x36 in ground pool. $43,900. Jack, Ext. 4255 or 289-6708.

MASTIC BEACH - 3 bdrm ranch, corner lot, roofed patio, pleasant location near water. Low 30's. 281-7531.

ROCKY POINT - 100x100, 9 mi from Lab, custom built M/D, practically maintenance free, storms and screens, oil baseboard heat, excel cond, many extras. 744-2332.

WESTHAMPTON AREA - mobile home, 12'x60', 2 bdrms, eik, stove, refrig, washer/dryer, laundry rm, 2 tool sheds, porch, patio, wooded landscaped area. $11,500. 325-1112 after 5 pm.

SHOREHAM - large 4 bdrms, 2½ bath colonial, wooded ⅓ acre lot on quiet street, 2 car garage, eik, fam rm w/fp, excel school district, low taxes, north of 25A. $62,900. 744-4787.

BELLPORT VILLAGE - 3 bdrm high ranch, l/r, f/r, den, large eik, att gar, deck, 1½ baths, short walk to Kreamer St schools. $42,000. 286-8166.

BROOKHAVEN HAMLET - charming older home, So Country Rd, 3 bdrms, window seats, 29' l/r, d/r, eik, 2 fp, screened porch, fin bsmt w/bar, new hot water system, 2 car garage, 0.6 acres, very low taxes. 8.5% mtg. 286-1056.

MEDFORD - custom built 7 rm ranch with finished basement, 20x40 inground pool and sprinklers set on lovely landscaped acre. Asking $64,500 with 25% down, owners may hold mortgage at 12%. 475-6707.

For Rent

E SETAUKET - studio apt in priv home, priv entr, fp, full bath, unfurn, carpeted. $275/mo. 751-7491 after 5 pm.

REMSENBURG - privacy, secluded newly renovated barn – old beams, new baths, kitchen, etc, not suitable for small children, 2 bdrms, 2 baths, laundry. 516-288-1151.

PT JEFF VILLAGE - 3 bdrm ranch, l/r, d/r, fam rm, eik, fin bsmt, completely furn, two yr lease desired. $675/mo. Ext. 4074 or 928-0829 after 6 pm.

BELLPORT VILLAGE - unfurn 2 bdrm apt, large l/r, large eik, breezeway, garage, full bsmt. $430/mo incl util. 286-8850.

POCONO'S CHALET - in priv community, tennis, riding, golf, ski all nearby, rent by week or weekend. Ext. 4551 or 289-2159.

HAMPTON BAYS - cozy yr round, 1 bdrm house, fp, w/w, redecorated, no pets. Ext. 2802 or 728-2104 after 6 pm.

MIDDLE ISLAND - house, furn, spacious, clean, l/r, eik, 2 bdrms, bsmt and garage, 6 mi to BNL. $425/mo. 924-5192 eves.

PORT JEFF - single rm to rent in lovely priv home; use of all facilities incl porch, fp. Close to shopping, harbor, charming area. Toni, Ext. 7742.

E SETAUKET - 4 bdrm colonial, l/r, d/r, eik, fam. rm., full bsmt, 2-car gar., walk to SUSB. $650/mo + util, 1 or 2 yr lease desired. Ext. 4494 or 751-0812 after 6 pm.

BELLPORT - furnished 3 bdrm house in residential area, avail now through May. $500/mo, util not included. 286-9725 after 6 pm.

E PATCHOGUE - furnished 3 bdrm house with male student, Feb 1 – June 30 1981. $100/mo + util. J. Olson Ext. 3382 or 289-8629.

Car Pools

BAYPORT - two person car pool looking for additional members. Drivers only. Ken, Ext. 3574 or Bob, Ext. 2800.

BAYVILLE/ GLEN COVE - Oyster Bay area, drivers needed for car pool. Jim, Ext. 3397.

BELLPORT - 2 man car pool looking to expand. Beislin and Country Greens Dr Area. 8:30-5:00. George, Ext. 7654.

ISLIP/E ISLIP - driver wanted. Tom, Ext. 2043.

NASSAU/NYC - from Exit 36 LIE. 8:30-5:00, for existing car pool. Don, Ext. 7611.

PATCHOGUE - via Bellport, opening for paying rider in on-time car pool. Alyce, Ext. 2902.

Services

CARPETS INSTALLED - repaired, quick dependable service. Free estimates. Jim, 821-0187.

AUTO REFINISHING - all areas of body work performed, small car discounts. Bob, Ext. 2546 or 744-4047.

FIREWOOD - split, seasoned oak 4'x16'x18". $110 delivered. 924-4284 or 924-3919.

CHILDCARE - my children in school full time. I have lots of love and attention to give your 3-5 yr old in my home in Shoreham. 821-9547.

HAND CANE/FIBER RUSH WORK - Professional work at a reasonable price. Prompt service. Jim, Ext. 3307, lunchtime.

PHOTOGRAPHER - weddings, portraits, full line of albums, invitations. Reasonable rates. Ronnie, 399-1857 or Ext. 4173.

CANVAS WORK - all types, all work guaranteed. Ken, 654-1650.

AUTO BODY - old car will look like new, remove rust, remetal and paint. 698-6706.

FIRESIDE - chimney sweeps, fireplaces, wood coal and oil flues, dustless removal. Insured. Lab discount. Mike, 584-6425.

HOUSE CLEANING - reasonable rates, professional results, references. 821-9508 eves.

LIMO SERVICE - luxury chauffeur driven, for proms, weddings, all occasions. 698-2266, 698-2268.

TIRES - new, used, repairs, radials, all season. Fred Usack, Ext. 4798 lunchtime.

JACKETS - boy's, girl's, men's, quilted and pile lined. John, Ext. 2485.

PIANO TUNING and repair. Reasonable rates and conscientious service. 751-4985.

SOLAR CO-OP - save ⅓ of solar system cost. Make your own professional solar collectors. 931-3200.

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