

Buy a Bond Today

Perhaps one of the most attractive points of the Payroll Deduction Plan method of purchasing U.S. Savings Bonds is that it's a systematic, painless way to become a steady saver. When you sign the authorization card, an amount of your own choosing will be regularly deducted from your pay each week or month. The chart below shows how quickly savings accumulate, and the only will power you need is enough to sign the card and forward it to Payroll.

Fiscal Officer B. J. McAlary notes that presently, a surprisingly small percent of BNL employees take advantage of the Payroll Deduction Plan as a way of buying a bond. He mentions that bonds held to maturity (5 years) earn a good return of 6% and that interest on savings bonds is exempt from state and local income taxes. Furthermore, bonds are easily converted to cash in the event of emergency so they are a safe investment.

Bonds bought in a child's name (where the parent is beneficiary rather than co-owner) can be used for an education fund. Accrued interest is reported as the child's income, and as long as the child's total income does not exceed his/her personal exemption, no tax is due. There are also two convenient ways of using Savings Bonds to supplement your retirement income.

McAlary advises that employees consider the many benefits of buying U.S. Savings Bonds through the Payroll Deduction Plan. Take a moment to read the recently circulated letter and pamphlet which explain in detail why more BNL employees should sign up to "Buy a Bond."

Weekly Savings	1 Year	5 Years	10 Years
\$ 1.25	\$ 67.37	\$ 366.47	\$ 867.10
2.50	135.10	735.29	1,741.40
3.75	202.92	1,105.14	2,617.50
5.00	270.58	1,474.46	3,489.53
6.25	338.60	1,842.95	4,366.15
7.50	406.34	2,212.40	5,240.50
12.50	677.48	3,688.94	8,738.81
18.75	1,016.59	5,536.95	13,116.22

Monthly Savings	1 Year	5 Years	10 Years
\$ 3.75	\$ 45.72	\$ 251.99	\$ 596.92
6.25	76.40	421.89	999.65
7.50	91.74	506.25	1,199.52
12.50	153.16	844.66	2,000.18
18.75	230.20	1,272.27	3,014.22
25.00	306.60	1,694.16	4,013.87
37.50	460.40	2,544.54	6,028.44
56.25	690.60	3,816.81	9,042.66
75.00	920.80	5,089.08	12,056.88
150.00	1,841.60	10,178.16	24,113.76

The interest rate on new issues of U.S. Savings Bonds is subject to continuous review by the Treasury and may be increased or decreased in accordance with changes in economic and financial conditions.



Jim Klein (left) and Eric Schwarz of the Data Systems and Operations Group, at the control console of Heat Transfer Facility I.

BNL Aids Reactor Safety Research

A new facility has been developed in DNE's Reactor Safety Program aimed at providing information to help the Nuclear Regulatory Commission improve its already stringent system of safety requirements for commercial light water reactors. Heat Transfer Facility I, which went operational last week, will provide NRC with data to aid in the analysis of a hypothetical loss of coolant accident in such reactor systems.

During the last four years, NRC has sponsored the development of advanced codes - sophisticated computer methods to analyze the effects which a LOCA would have on a reactor's cooling system. Data from the Heat Transfer Facility will be incorporated into the computer codes, allowing NRC to predict in a more realistic way how a reactor system would behave if such an accident occurred, and giving the Commission the ability to double-check the safety calculations provided by the vendors of commercial reactors.

A loss of coolant accident (which would occur if a pipe carrying cooling water were to break) is one of the main safety concerns in the building and operation of nuclear reactors, since such an accident could cause the reactor core to overheat. If backup cooling systems were not adequate, the overheating might theoretically result in failure of a fuel element.

Predicting the behavior of a nuclear reactor's cooling system during a LOCA is complicated by "non-equilibrium effects" which occur when the cooling system contains a mixture of steam and water which have differing temperatures and velocities. NRC's new computer codes will use data from the Heat Transfer Facility to account

for thermal non-equilibrium effects and their possible impact on the cooling system's operation, so that the cooling capability during an accident can be predicted more accurately.

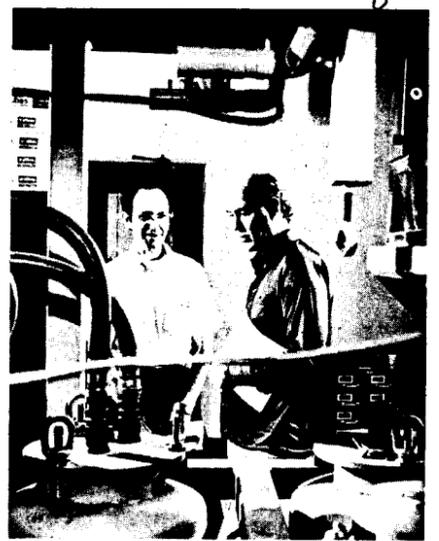
"The so-called 'non-equilibrium effects' can strongly affect the behavior of a system undergoing such an accident," said Owen Jones, head of the Thermal Hydraulic Development Division of DNE's Reactor Safety Program. In the early stages of a cooling system malfunction, the thermal non-equilibrium effects retard the formation of vapor and makes the coolant egress from the reactor system more rapidly than it would under equilibrium conditions. This means that at any later portion of the accident, there would be less coolant in the reactor system than one would calculate based on equilibrium conditions. This might result in less 'coolability' in the system, so that the temperatures that would actually exist in the reactor at various stages during a LOCA might not be adequately predicted. If the errors are sufficiently large, a plant designed on calculations of this type might experience unexpected failure, or even melting of the fuel element.

Detailed design of the Heat Transfer Facility (which is located in Building 820) was begun in January 1977, and construction began about a year ago. It is patterned roughly after a test facility in Grenoble, France, which is the only other facility in the world built to take data of this type. Although the Grenoble facility is operated at low pressures, BNL's is designed for intermediate pressures and temperatures, up to about 10 atmospheres and about 175° C.

During operation of the facility, pumps circulate purified and degassed water through heaters and into a special "test section" which was designed specifically for the NRC project. In the test section, which is a pipe-like device about six feet long and two inches in diameter, a reduction in pressure causes the water to "flash" to steam, and sophisticated monitoring equipment measures and records the resulting changes in the water and steam's pressures, temperatures, densities, and velocities.

("Flashing," is another term for boiling, used in cases where the boiling is induced by pressure reduction rather than heat addition. Pressure affects the boiling point of liquids - water will boil at a slightly lower temperature on top of a mountain than at sea level - and this principle is used in devices such as pressurized spray cans, some of which employ the flashing of freon to expel their contents. Flashing could also occur in a reactor's cooling system if a LOCA caused a sudden drop in pressure, and its effects on the cooling system must be calculated to provide accurate predictions of the system's behavior.)

After leaving the test section, the steam enters a tank where it is condensed by spray cooling. It is recirculated by pumps after



Nesim Abuaf (left), leader of the Experimental Modeling Group, and Owen Jones, head of the Thermal Hydraulic Development Division, at the new facility. —photos by Humphrey

having cold water added to it to lower its temperature, and it is then returned to the heaters. The facility is designed for automatic operation, and the circulation loop can maintain itself for extended periods of time.

Measurement data is obtained automatically and fed directly into a computer for analysis. The resulting data is then used to confirm or improve a preliminary analysis of the effects of thermal non-equilibrium on the system's behavior. Many different test runs will be made, using different flow rates, pressures, temperatures, etc., and Jones estimates that it may take as much as a week to obtain one complete set of data for each particular set of conditions.

Over 200 engineering drawings went into the design of the facility's many parts, which include pumps, heaters, valves and pressurizers, and water purification and cooling equipment, as well as complex safety and control interlock system. Among the equipment designed for measurement-taking is a gamma densitometer - a radiation-based device used to measure the density of the fluid in the test section. (The densitometer, and the facility itself, will be used in later experiments also, although the test section was designed for only this project.)

Since a new heat transfer laboratory needed to be developed to undertake this and other new projects, and since funds for this new project were extremely limited, the developers of the Heat Transfer Facility spent a lot of time looking at government surplus, and much of the instrumentation and electronic equipment was surplus material. And some of the test facility modules, which form the framework for the facility, came from a missile complex which was a "casualty" of the SALT talks.

The Heat Transfer Facility project is funded by NRC's Systems Engineering Branch, Division of Water Reactor Safety Research. Dr. Y.Y. Hsu of this branch, the project's program monitor within NRC and a recognized expert in multiphase heat transfer, telephoned congratulations to the groups involved in this effort. Within BNL's Thermal Hydraulic Development Division, two groups are closely involved in the work: the Experimental Modeling Group (under Nesim Abuaf) and the Data Systems and Operations Group (under George Zimmer).

When NRC's advanced codes are completed, they will provide the Commission with an independent audit capability. For licensing, a vendor of a commercial reactor is required to perform certain safety calculations which are usually done on computer codes developed by the applicant. By using its own independently developed codes to check a vendor's calculations, the NRC can ensure that those calculations have been performed properly and represent an adequate assurance of the safety of the reactor system. This will provide, "a double-check in the already large system of checks and balances for nuclear reactor safety."

International Symposium Concludes Today At BNL



Pausing with Conference Chairman Robert Chrien (far left) during the Third International Symposium on Neutron Capture Gamma-ray Spectroscopy and Related Topics are: (left to right) V.A. Nazerenko of the Leningrad Nuclear Physics Institute, I. Talmi of the Weizmann Institute of Science, Israel, and F. Iachello from Yale University. Talmi discussed "Present Status of Nuclear Models" while Iachello's topic was "The Interacting Boson Model." The Symposium, held from September 18 to September 22, was co-sponsored by BNL and SUNY at Stony Brook. It was the first such meeting on this field to be held in the United States. —photo by Humphrey

9-801-78

Weekend Tour

B A team of scientists, engineers, **U**
R and technicians from the Accel- **I**
O erator Department have built a **D**
K prototype Heliostat that can **E**
H track the sun across the sky. The **S**
A Heliostat, a 16-foot reflecting **T**
V mirror, concentrates solar en- **O**
E ergy and redirects it to a target **R**
N which collects the energy. In **S**
S addition to seeing the actual **T**
Q Heliostat, weekend visitors will **O**
U view a film showing its ability **U**
E to concentrate solar energy on **R**
S targets. **T**
T **EXHIBIT CENTER**

Assertiveness At BNL

Another series of Assertiveness Workshops conducted by Francine Berger has been scheduled. The Workshop Meetings will be held on October 6, 13, and 20, from 1:00-2:30 p.m.

The employees who attended this program last spring felt it was a valuable and rewarding experience.

The objective of the workshop is to improve the participant's ability to communicate and interact with others, both on the job and in their personal lives.

This program is open to all employees, work permitting. Enrollment forms are available at the Personnel Office reception desk and must be completed by Monday, October 2. For information please call Robert D'Angio, Extension 2878.

Arrivals & Departures

Arrivals

James Florakis.....Accelerator
Timothy Haley.....Accelerator
Corinne H. Ince.....Personnel
Charles F. Majkrzak.....Physics
Robin A. Maragioglio.....Physics
Sati P. Mitra.....Nuclear Energy
Meir Rigbi.....Biology
Karen Saturnino.....Accelerator
Harold J. Wiesmann.....Physics

Departures

Teresa A. Barnett.....Supply & Materiel
Robert C. Felton.....Plant Engrg.
Gyorgy Hegyi.....Biology
Alan J. Pearmain.....Accelerator
Mark K. Williams.....Accelerator
Alan T. Winter.....Energy & Env.

Turn It Off

When you have to make a "pit stop" on site or elsewhere don't leave your car running. Generally speaking, an idling vehicle burns enough gas for a restart every 20 seconds. Prolonged idling is not only wasteful of fuel, but shortens engine life, plug life and increases sludge production in the crankcase.

If you observe the rule in SPI 5-05 in the Driver Responsibility section which states that "keys should not be left in a parked vehicle," you can hardly leave the car idling.

BERA's Big Event A Success



Couples dance to the music of the Larry Lang Trio at the Center last week after an enjoyable Dinner-Theater. The Bera committee extends special thanks to chef Bob Shiminski and the cafeteria staff for the fine arrangements each evening. —photo by Reben

BERA Concerts Begin

The special free concert by the Suffolk Symphony on October 1 opens a series that the BERA Concert Group feels will be one of the most exciting presented at Brookhaven in many years. The world renowned Beaux Arts Trio will perform first on Thursday, October 12. The Beaux Arts Trio, which for the past twenty years has been the world's premiere trio, is expected to sell out Berkner Hall as they have sold out nearly every concert they have played in recent years. Their program will include the Ravel Trio and the popular Schubert Op. 99 Trio.

They will be followed on Wednesday, November 8 by the Tokyo String Quartet, who received a standing ovation from a near capacity crowd when they appeared here last October. Their phenomenal rise to the status of one of the great quartets of our time in a few short years speaks for itself.

On Friday, February 2, the young German pianist, Justus Frantz will appear in recital. His U.S. debut with the New York Philharmonic under Leonard Bernstein in six performances of the Dvorak Piano Concerto received such enthusiastic praise that they subsequently recorded it together.

On Friday, March 9, Richard Stoltzman, the clarinetist who recently sold out all his appearances at this year's Mostly Mozart Festival in Lincoln Center, will perform with Bill Douglas, Pianist, and Bassoonist.

The final concert on Friday, April 20, is by the Dorian Wind Quintet which has distinguished itself in the baroque, classical and romantic repertoire and has inspired many of our leading contemporary composers to write for winds.

Ticket prices are:

ADULTS - Single Admission
\$5 - Beaux Arts Trio
\$4 - All other concerts

STUDENTS and SENIOR CITIZENS
\$2 a ticket

UNDER 18
\$1 a ticket

Block tickets - good at any concert
\$16 for the first 5 tickets
\$3 for each additional ticket

Block tickets may be purchased at the door on the night of the first concert or from the following persons:

	Ext.
Don Lazarus	4643
Arnie Aronson	2606
Clemens Auerbach	3985
Steve Schwartz	3100
Geoffrey Hind	3400
Myron Ledbetter	3418
Dick Holroyd	4329
Ed Popenoe	3622
Maria Pavlova	3634
Howard Gordon	3740

Cafeteria Menu

Week Ending September 29, 1978

Monday, Sept. 25	
Rosy onion soup	(cup) .30
	(bowl) .40
Chicken a la king on rice	1.20
Western omelet and 1 veg.	1.25
Hot Deli - Pastrami	(on bread) 1.15
	(on roll) 1.25
Tuesday, Sept. 26	
Chicken mushroom supreme	(cup) .30
	(bowl) .40
Chinese pepper steak on rice	1.30
Barbequed spare ribs and black eyed peas	1.40
Hot Deli - Roast beef	(on bread) 1.25
	(on roll) 1.35
Wednesday, Sept. 27	
Split pea soup	(cup) .30
	(bowl) .40
Breaded flounder filet w/fr.fr.	1.25
Spaghetti w/Italian sausage and garlic bread	1.30
Hot Deli - Baked Virginia ham	(on bread) 1.25
	(on roll) 1.35
Thursday, Sept. 28	
Cream of chicken soup	(cup) .30
	(bowl) .40
Tacos w/refried beans	1.35
Beef hash and 1 veg.	1.20
Scalloped ham and potatoes	1.25
Hot Deli - Roasted turkey	(on bread) 1.25
	(on roll) 1.35
Friday, Sept. 29	
Manhattan clam chowder	(cup) .40
	(bowl) .50
Fish 'n chips	1.25
Beef liver and onions w/1 veg.	1.15
Hot Deli - Meatball hero	1.25

Divine Guidance

One day about 20 years ago, Frank Magnani now a surveyor in Plant Engineering, was sent out to locate a water valve underground. He was given the approximate area where it was expected to be, and a shovel. He dug and dug and couldn't find it.

Along came George Stoll, an electrician (now retired) and asked what he was doing. When Stoll heard what the problem was he said, "wait a minute" and came back with two L-shaped metal rods. He made a large circle and proceeded to pass the rods back and forth shortening the circle each time. At one point, the rods crossed in his hand, and he said, "dig there." "I thought he was nuts," said Magnani, "but I dug where he told me and there was the water valve."

Since that time, in addition to his other surveying tools, Magnani has kept the divining rods handy. "Why they work, I don't know," he says, "and they don't work for everyone." But they work for him and he takes them out when required to pinpoint such things as old electrical, water or steam lines which are known to be underground somewhere. His assistant, Paul Werler, used them for the first time recently and was delighted to find they also work for him.

Magnani is generally successful. But he says the system is not foolproof. One day in searching for an old line, the rods crossed and when he dug, all he found was an old rusty pail. On the other hand, he bested an electronic device. The device said that what they were looking for was in one location and the divining rods indicated another spot. The rods were right.



Frank Magnani of Plant Engineering with his divining rods ready for action: "All I can say is, they work for me." —photo by Humphrey

The diviners Magnani uses are brass welding rods, but he says you can make them out of coathangers. The rods are held parallel to the ground and the technique is not to hold them so tightly that they can't turn. Magnani says that when they attract metal, you can feel them starting to turn in your hands.

So the next time you see a man peering at the ground, holding two metal rods out in front of him, don't be alarmed. It's Frank Magnani going about his legitimate business.

Symphony For Free

The Brookhaven concert season will open on Sunday, October 1 when the Suffolk Symphony, under its conductor Herbert Grossman, will present a free concert of popular favorites in Berkner Hall at 8:00 p.m.

The program will feature French Horn Soloist, Robin Graham in the Mozart Horn Concerto #3. Ms. Graham will appear in Berkner Hall with the Dorian Wind Quintet in the BERA concert series next April 20.

The program will also include Rossini's Overture to the Barber of Seville, the Dance of the Hours by Ponchielli, the Overture to La Forza Del Destino by Verdi, Les Preludes by Franz Liszt, Wine, Women and Song of Johann Strauss and Finlandia by Sibelius.

IBEW Meeting

Local 2230, I.B.E.W. will hold its regular monthly meeting on Sept. 28, 1978, at 8 p.m. in the Knights of Columbus Hall, Railroad Ave., Patchogue. There will also be an afternoon meeting at 2 p.m. for shift workers in the Union office at 31 Oak Street, Patchogue. On the agenda will be regular business, committee reports and the President's report.

Wine Tasters Invited!

The BNL French Group (*Le Cercle Français de BNL*) will hold its first meeting of the fall season on Friday, October 6 when a wine tasting will be held at 8:30 p.m. in the Recreation Building (in the Apartment Area). This event will provide an opportunity for members of the group to renew friendships and for new or potential members to get acquainted with the group.

We plan to have three red and three white wines, all from France. Bread and cheese, traditional accompaniments to red wine, will also be served. Like most of the good things in life, French wines have become more expensive as a result of inflation, and due to the greatly increased interest in wines within the past few years. For example, a Beaujolais that sold for \$3.69 a bottle in 1972 is now retailing for \$4.99. In our tasting, the average price will be about \$5 a bottle, and all the wines will be readily available in the New York area. So, if you discover something that you like, you can add a case to your cellar without having to float a loan.

Because our previous wine-tastings have been very popular events, advance reservations are requested, and the number of participants will be limited to 60. If you wish to attend, please notify either Paulette Goodman (744-8449) or Ralph Weston (Ext. 4373 or 286-1353) by September 29. Non-members of the French Group will be asked for a donation of \$4.

Ten Tough Tongue Twisters

1. The sixth sick sheik's sixth sheep's sick.
2. Rubber baby buggy bumpers.
3. She sells seashells by the seashore.
4. The sinking steamer sunk.
5. Toy boat or troy boat. (Repeat six times.)
6. If a three-month truce is a truce in truth, Is the truth of a truce in truth a three-month truce? (Willard Espy, author of an *An Almanac of Words at Play*.)
7. If you stick a stock of liquor in your locker, It is slick to stick a lock upon your stock, Or some joker who is slicker's going to trick you of your liquor, If you fail to lock your liquor with a lock.
8. The skunk sat on a stump; the skunk thunk the stump stunk, but the stump thunk the skunk stunk.
9. How much wood would a woodchuck chuck, if a woodchuck would chuck wood?
10. Iqaqa laziqikaqika kwaze kwaqhawaka uqhoqhoqha. (Xhosa - from Transkei, South Africa - for "The skunk rolled down and ruptured its larynx.")

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BROOKHAVEN BULLETIN

Published weekly
for the employees of
BROOKHAVEN NATIONAL LABORATORY

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Letters To The Editor

To the Editor

I would like to express my most sincere thanks for the many get well cards which I received both in the hospital during my rather lengthy stay and at home since my return there.

The good wishes of all my friends at BNL have meant a great deal to me. I hope to see you all soon.

With many thanks,
Alfred W. Delph

Cref Values

January	\$35.72	February	\$34.96
March	36.15	April	39.28
May	39.62	June	38.94
July	41.03	August	42.17

New York Train Trip

The Hospitality Committee is planning a group railroad trip to the City on Wednesday, October 4. Departure will be at 8:32 a.m. from the Patchogue LIRR station. Round-trip fare for adults is \$2.45, children under six years ride free.

Reserve a ticket by sending your fare through the U.S. mail to P.O. Box 322, Upton, New York 11973, no later than **Thursday, September 28**. Make checks payable to "Brookhaven National Laboratory." Your tickets will be given to you at the train station. Refunds will be made only if the cancellations are received by the **Friday** preceding the scheduled trip.

Cooking Exchange

Now is the time of year one starts thinking of cheery fireplaces, warm sweaters and home made breads. The International Cooking Exchange can't show you how to build a fire or knit a sweater, but this Wednesday, September 27, at 12:30 p.m. we would love to show you our way with yeast. Recipes from rolls to breads to cakes will be producing their mouth watering aromas from our kitchen in the Recreation Building. Admission: 75¢ and 25¢ per child for babysitting.

Come and break bread with us!

Tennis Awards Party

The BERA Tennis Committee cordially invites you to attend a Wine and Cheese Awards and Get-Together Party to be held on Wednesday, September 27, 1978 at 5:15 p.m. in the Courtyard of the Physics Building 510, (in case of rain, in the Physics Lounge). There will be a \$1.50 per person charge, payable by September 22nd to the Chairlady, Marge Stoeckel, Bldg. 134A.

Table Tennis Club

The BNL Table Tennis Club will soon begin a new playing season. We plan to start off with a ladder tournament. A meeting will be held in the Recreation Building (in the Apartment Area) at noon on Tuesday, September 26. Matters related to the tournament arrangement, and future club activities will be discussed. All members, old, new and future, are encouraged to attend.

For further information please contact Charles Zein at Ext. 3950.

Semester Students '78



Making themselves at home for their three month stay as BNL's 1978 Fall Semester Students are (left to right) Eric Fleming, Dorothy Hatten, Dianne Hamilton, Dolores Brown and Mamie Walker. The women represent Norfolk, Alcorn and Jarvis Christian Colleges and are all mathematics majors. Eric, also from Alcorn College, is a physics major. In addition to working in various Lab departments, the students will attend classes in math, computers, and electricity and magnetism.

—photo by Humphrey

Hospitality Committee

A morning coffee will be held in the Brookhaven Center on Monday, October 2, from 9:30 to 11:30 a.m.

All wives of Laboratory employees are welcome. Please come and bring the children. It is suggested that you bring along a toy for your child to play with.

Exercise Classes

Get fit and stay fit - it's more fun exercising in a group!

The following schedule of classes will be held in the Recreation Building each Tuesday starting on September 26: nursery school children - 4 to 5 pm; Kindergarten children - 5 to 6 pm; elementary school children - 6 to 7 pm; women - 7:30 to 8:30 pm; couples - 8:30 to 9:30 pm.

Call Instructor Claudia Meyer, Extension 3134, for more information and registration.

Flying Club

Thirty pilots and perspective pilots attended an information meeting last Monday. A second meeting will be held in Room B in Berkner Hall on Monday, October 2, at 12 noon to continue organizational planning of the BNL Flying Club.

If you are interested but did not attend the first meeting (by all means, women included), call Rod di Girolamo, Ext. 4805, or Ron Dobert, Ext. 4082.

Football

Quarks 6 Sweathogs 0

A good Quarks' defense, led by Don Litcher, Walter Mason Jr., Stanley Gilbert and Gary Mosley, held the Sweathogs scoreless. Fletcher Johnson caught a touchdown pass in overtime for the Quarks to win the game.

T.D.'s 19 Chickens 0
Players Pool 41 Roga 20

Bowling

Pink League

We may be small in number, but judging by the high volume of enthusiasm we are going to have a great year. Despite all the first night cliches, all teams bowled well and seem to be evenly matched. It should be a very competitive season.

Starting things off in style, Marge Stoeckel rolled a 203/490 series, Helen Keely had three good games, 169/164/164 for a 497 series. Proving we're going to have a lot of names in the news this year, Barbara Pfeiffer had a 182 and Barbara Cochrane, Marie Grahn and Pat Lebitski each had a 165.

Red League

The Sandbaggers took 11 from the Pinball Wizards with E. Meier bowling 229 and R. Jones 201. The Old Timers took the Anachems 8-3 with J. Fontana averaging 177 for the first night.

The Designers took 8 from This Is a Team. A. Pinelli had a 211, W. Kollmer 200. The 76'ers won over the Freon Loaders 7-4. J. Connelly had a 201 and J. Morris averaged 184.

Purple & White League

After some confusion with the automatic scoring (which gave some individuals a 228 handicap), there was some good bowling the first night.

Gene Hassell rolled an all spare game and went on to roll another good game, 202. Ted Erickson had a high game for the men with a 212 and a high series 569. Joyce Pinelli had a high game for the ladies with a 199 and Lillian Cahill high series with a 457.

Other good games were Ove Kyhl 205, Ed Meier 204, Wilma Ericksen and Kathy Griffin 180, Gail Thompson 179, Lillian Cahill 169, Sharon Smith 166.

Gold League

The Personnelities are in first place after the first night of bowling. High scores for the evening were M. Kipperman 183, K. Conkling 176, B. McGonigle 150. M. Kipperman had high series with a 473 and K. Conkling with a 460. Congrats to our secretary B. Pyatt for a 5-7-10 split.

Islanders Tickets

Tickets are now being sold at the BERA Film Service Office in Berkner Hall for the Islanders four pre-season hockey games. There is no limit to the number of tickets an employee may buy for these games.

Regular Season Games

Tickets will go on sale at the Film Service Office starting at 8:00 a.m. on Tuesday, October 3. There are eight tickets for each game, priced at \$9.50 (service charge included).

During the initial sale, only, the following buying limitation will be enforced:

An employee may buy 2 tickets to 4 games or 4 tickets to 2 games. After his first purchase is completed, the employee may go to the end of the line and await his turn to buy another set of 8 tickets, if he so desires.

Islanders Schedule

Pre-Season Games

September	
Sat. 23	Philadelphia
Tues. 26	Atlanta
Sat. 30	Buffalo
October	
Tues. 3	Toronto

Regular Season Games

October	
Tues. 17	Montreal
Sat. 21	Rangers
Tues. 24	Philadelphia
Sat. 28	Vancouver
Tues. 31	Colorado
November	
Sat. 4	Washington
Tues. 7	Minnesota
Sat. 11	Atlanta
Tues. 14	Colorado
Sat. 18	Philadelphia
December	
Tues. 5	Pittsburgh
Thurs. 7	St. Louis
Tues. 12	Los Angeles
Thurs. 14	Detroit
Thurs. 21	St. Louis
Sat. 23	Rangers
Tues. 26	Toronto
Sat. 30	Atlanta
January	
Tues. 2	Vancouver
Sat. 6	Philadelphia
Tues. 9	Los Angeles
Tues. 16	Washington
Sat. 20	Chicago
Sat. 27	Rangers
Tues. 30	Minnesota
February	
Sat. 3	Boston
Tues. 13	Colorado
Thurs. 22	St. Louis
Sat. 24	Detroit
Tues. 27	Montreal
March	
Sat. 3	Atlanta
Tues. 6	Buffalo
Sat. 10	Chicago
Tues. 13	Boston
Thurs. 15	Toronto
Sat. 17	Rangers
Sat. 24	Pittsburgh
Sat. 31	Buffalo
April	
Tues. 3	Atlanta
Sat. 7	Philadelphia

Runners Corner

The BNL Roadrunners Annual Fall Race will take place on October 8 starting in front of Berkner Hall. These races will be Fun-Runs with no registration fee, certificates or prizes. Times will be available to runners hopefully employing the club's new timing device. The featured race will be a 30 Km pace-race starting at 9:30 a.m. In addition, a 10 Km and 5 Km race will start off at 10:00 a.m. Watch the Runaround for further details or call Dave Judkins (Ext. 2906) or Dick Fuller (Ext. 2934).

The charter bus for the New York City Marathon is quickly filling. Seats are \$5.00 and can be reserved by sending a check made out to BNL Roadrunners to Dave Judkins (Building 318) or Dick Fuller (Building 197C).

The club is also reserving a hotel room for runners to shower, change and relax in after the race. Tickets are \$4.00 and can be purchased from Ted Landry (Building 318, Ext. 2959). There will be no charge to family or friends.

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.

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.

779. CLERK TYPIST - Supply and Materiel Division.

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

780. PHYSICIAN'S ASSISTANT - State certification required. Will assist the physicians on the Medical staff of the hospital of the Medical Research Center as directed. Medical Department.

Autos & Auto Supplies

66 GTO - needs muffler, brakes, fair cond. \$350 or best offer. Bill S., Ext. 4434 or 286-0331.

73 FIAT - 850 Spyder Conv, excel gas mileage. \$1195. Ext. 2525 or 286-3647.

71 MERCURY - Cougar XR7, V8, auto, all power, a/c, radial tires w/snows, 58,000 orig mi. \$1600. Serious minded only. 698-7661.

69 FORD CHATEAU - 8 pass window van, 302 V8, standard shift, high mileage but good running cond. \$900 or best offer. P. Hichborn, 929-4133

74 FIAT - 124 sport coupe, 1800 cc, 5 spd, am/fm 8 trk stereo. \$1800. Sawang, Ext. 2115.

76 KAWASAKI - KZ400D, crash bar, windshield, luggage carrier. \$775. Emil Pluss, Ext. 3280 or AN5-5347.

72 VOLVO - 145 wagon, fuel inj radial tires, am radio, good mech cond, orig owner. \$2000. Ext. 2058 or 246-4059.

PEUGEOT - Moped Model No. 103, like new, must sell. \$325. R. Mele, Ext. 2491 or 757-3178.

66 MUSTANG - 8 cyl, auto, am radio, good tires, good body. Alberi, Ext. 4213.

66 PONTIAC - Bonneville, good mechanically, 75,000 mi. \$350. Ext. 4514.

TIRES - (5) Bridgestone Skyway 6.00-12; (1) 155SR12, hardly ever used. \$5 ea. Ext. 4560 or 473-2297.

77 VW RABBIT - 2 dr, radial tires, hatch cover, 35 mi/gal, mi 40,000. \$3,000. Cora, Ext. 3908.

72 PLYMOUTH FURY - custom suburban station wagon, 9 pass, roof rack, am/fm radio, very good cond. \$1250. Ext. 3228 or 345-2520 ask for person in room 27.

72 BUICK - Sportwagon, good cond, new tires. \$1650. J. Pontieri, 475-9131 after 5:30 p.m.

TIRES - snow A78-13 Sears Dynaglass studded. Pair \$20. Rau, Ext. 3830.

REPAIR MANUAL - for Toyota Corolla/Carina/Celica, '70-'74, from Dealer, T&T engines, cooling and elec systems, 1400/1600 cc. \$3. Ext. 4798 or 928-6965.

60 FORD - Thunderbird, Classic, dependable rebuilt trans, body and int excel. \$750. Ben, 473-7681.

68 CHEVY IMPALA - 307 eng, auto, p/s, conv, good running cond. \$375. 298-4475 after 5:30.

17' TROTWOOD - travel trailer, sleeps 6, hot and cold water, head, refrig, stove, clean. \$1900 firm. Dominic, 732-2668.

71 PLYMOUTH - Cricket, 68,000 mi, good overall cond, runs well, good tires, orig owner. \$475. 286-8234.

FUEL PUMP - Ford 351 V8. \$2.50. Frank, 799-4896.

67 CAMARO - Drag car, best of everything, sell complete or will separate any parts. Bill S., Ext. 4434 or 286-0331.

68 OLDS CLASSIC - 442, vinyl top, factory mags, fm 8 trk stereo, low mileage, mint cond. \$1250. Don, Ext. 3397 or 289-0265.

70 REBEL WAGON - 6 cyl, auto, perfect body and paint, inside and out, excel eng and trans. Al Campbell, Ext. 3354.

67 FORD VAN - '68 rebuilt eng, mags, sunroof, stereo, all new parts. \$1400. 266-1320.

SNOW TIRES - (2) Firestone Town & Country, white walls, F78-14's, used one season, shop manual for Dodge Dart 1976. Jim, Ext. 2973 or 924-5422.

66 DODGE DART - runs, needs work, good for parts or cheap transportation. Best offer over \$75. Ext. 3766 or 286-0123.

64 VW - Beetle, sunroof, new battery, trans axel noisy, needs clutch work. \$200. Ext. 2046.

TIRES - (4) G78x15 mounted on Ford rims. \$60. Ext. 3284 or 273-7931 after 6.

HOLSCLOW - motorcycle trailer, brand new, never used, 2 bike. \$200. Nick, 286-9249 after 6.

78 HARLEY DAVIDSON - 250 cc, on/off road, excel cond, low mileage. \$900. Nick, 286-9249.

67 MERCEDES BENZ - 250S, 4 spd, 78,000 mi, excel mech/body/gas mileage, must sell, make offer. Gail, 878-4664 after 5.

77 PLYMOUTH - Fury Sport, p/s, p/b, a/c, 18 mpg w/air on, am/fm 8 trk, buckets, wire wheels. \$4300 firm. 588-4703.

68 OLDS CUTLASS - auto, air, radio, 55,000 mi. \$375. 924-8651 after 5.

TIRES - (2) 9.00x15 truck or van snows, good cond. \$4 ea. Chuck, Ext. 4331.

Boats & Marine Supplies

14' SAILBOAT - fiberglass Saybrook Blue Jay and trailer, fully equipped for racing, dry sailed only. Bob, Ext. 4637 or 692-8659.

14' FLYING FISH - 120 sq ft full battened sail, fiberglass bendy mast, 5'9" beam will seat 4, fast boat for \$925 with trailer. Hichborn, 929-4133.

33' CRIS SEDAN - 50 hrs on completely rebuilt Chev V8's (twins), sound, able, fast, documented vessel, in water ready to go. \$4500. Jack, Ext. 4087 or 475-7067 after 6.

1974 C&C - 25' yellow sailboat, 6 Ulmer sails, 9.9 hp '74 Evinrude, 6 Merriman winches. Eve, 589-9206.

MERC TACH - brand new, \$30; Lovett auto, bilge pump 12 V, \$30; Ray Jeff R.D.F. am/fm, like new. \$45. EM3-2941 after 5.

73 BAYLINER - 19' fiberglass, 135 hp Volvo I/O, w/75 shoreline trailer/elect winch, full canvas, excel cond. Sam, Ext. 2611 or 751-3702.

OMC OUTDRIVE - needed, complete or just parts. Richie, Ext. 4254 or 734-7342.

1953 ULRICHSEN - 26' good cond, fresh water cooler, 382 Chrysler engine, V8. \$1500 or best offer. A. Di Dio, 286-0372.

1968 PACEMAKER - 30', 210 Chry, sleeps 6. Joe, 363-6583.

30' WHEELER - fly bridge, sedan, sleeps 4, sound boat, in water. 286-9619.

12' ALUMINUM - boat w/5 1/2 hp Johnson motor. \$300. Barnett, Ext. 4581 or 281-5296.

Miscellaneous

YARD SALE - Sat. Sept. 23rd, 9 to 4 p.m., 443 So. Country Rd, Brookhaven (next to R.R. overpass).

GROUP YARD & GARAGE SALE - (Large) Sept. 29th & 30th, Rain or shine. No. Halsey Manor Rd., Manorville. Spruce & fir trees, U-dig.

GARAGE SALE - Sept. 23 & 24, 10 to 4 pm, 8 Byre Place, Commack. Sofa, chairs, dressers, carpeting, toys, etc.

HUGE YARD SALE - 6 families, Sat. Sept. 23 & 24th, 47 Vernon St., North Patchogue, 10 to 4 pm.

YARD SALE - Sept. 23 from 10 to 4 pm, Country Club Rd, Bellport, furniture, 2 cars, skis, boots, skates, etc. No previews. 286-8234.

ROSSIGNOL SKIS - 175 cm w/bindings. \$65. Sam, Ext. 2675.

COLOR TV - 1974 Sears 12", needs new picture tube. \$25. Tom, Ext. 2902.

COAT - Misty Harbor, women's size 10, never worn, cream, tie belt, dacron poly and cotton, rain/stain repellent. 821-1148 eves.

SKIS - Hexcel Sundance 195 cm w/Salomon 444 bindings, excel cond, \$125; Caber boots, size 10 1/2, \$25. 821-1148 eves.

CHESTS - (2) 42"x27" four drawer and 32"x24" three drawers. \$40. 744-5867 after 6.

LAFAYETTE - quad receiver and amp, 4 spkr, TT, 8 trk, HIP, mic., some quad tapes and albums. \$450. Joe, Ext. 4547 or 399-2018.

SCANNER - SBE programming, no crystals needed, \$225; rocking horse, \$15. Carl, Ext. 4680 or 281-7627 after 6.

DRAPES - 4 prs crushed velvet and sheers w/gold traverse rods, like new, \$75; coffee table, double pedestal, \$35. 928-0297 after 6.

FRENCH HORN - by Conn, like new, used 8 months. \$275. 722-4625.

SCREEN DOOR - aluminum w/storm windows, 3 ft wide, excel cond, best offer. S. Katcoff, Ext. 4341 or 475-4005.

1968 COX - pop up, good cond, sleeps 4. 286-3508 after 6.

GAS DRYER - Sears large capacity, excel cond, 6 yrs old, wrinkle guard, buzzer. \$65. Bill, Ext. 3848 or 698-3145.

BICYCLE - 10 spd, Raleigh record, 27" wheels, 19" frame, dual hand brakes, chrome fenders, stand, yellow. \$95. 473-7049 after 5.

ALUMINUM - (4) double hung sash and frames for masonry walls, 37 1/4"wx41" h, can be adapted to wood frame structure. \$15 ea or 4/\$55. Pat, Ext. 4519.

RUG - red 9'x12' w/pad, beautiful cond. \$40. 475-5150.

PLAYPEN - \$8; Walker (cost \$17, 1 yr old) \$5; corner table, \$10; table lamp (3 way) \$8. 744-9498.

ROTOTILLER - 6 hp Troy Bilt, excel cond. 724-8897.

BOY'S BICYCLE - Ross 20" blue, excel cond. \$20. Pande, 751-3885 after 6.

FRANZUS - foreign travel voltage converter, used twice. \$12. Ext. 3486.

WORLD BOOK ENCYCLOPEDIA - 22 volumes, good cond. \$25. Ext. 3477 or 744-0986 after 6.

BATHROOM SINK - cast iron, white, American Standard 22"x19", slightly worn. Ext. 2113.

OLD THINGS - tobacco tin, \$18; cabbage slicer, \$35; funnel-like clothes washer, \$15; galvanized zinc wash tub, \$7; hi-intensity lamp, \$5; mirror w/wooden back, \$15. Dorothy, Ext. 3327.

25" HEATH - Solid State Color TV kit w/11 Volume electronic course, all components and equip, reasonable offers considered. Fred, Ext. 4823 or 475-4541.

POOL TABLE - 2 1/2'x3 1/2', \$10; bdrm set, Traditional, 3 pc, \$100; traveling sprinkler, \$10; elec warming tray, \$3; rowing exerciser, \$5. Palais, Ext. 2907 or 698-0576.

COUCH - and chair, from the 1940's, no reasonable offer refused, original upholstery. Nancy, 281-4673.

MAPLE BDRM SET - dbl bed, mattress, box spring, 2 dressers, 1 mirror and end table, excel cond. \$100. 981-2480.

21' FAN TRAILER - sleeps 8, fully equipped, awning, jacks, excel cond, 2 tanks. Ernie, 727-2861.

WASHING MACHINE - Norge heavy duty, 18 lbs capacity, excel cond. \$100. Rae Brenner, Ext. 2387 or 929-8846.

DINING RM SET - 36"x52 1/2" table w/2 10" leaves, 4 chairs, China closet w/beveled glass doors, and buffet, very good cond. \$395. Ext. 4532 or 581-9199.

RADIO - am/fm w/8 trk, Panasonic w/2 speakers, 3 yrs. old, excel cond. \$100. 981-1709.

COFFEE TABLE - and 2 end tables, blond, \$30; bed & spring combo, single, \$10. 744-5867.

FULL SIZE CRIB - excel cond, \$30, other baby items; aluminum storm door w/screens, 32"x80". 289-0532 after 6.

DOBERMAN PUPPIES - AKC, males. 727-2477 after 5.

FIREWOOD - cut and carry. \$10. 286-8521.

SIMMONS - Hide-a-bed, sleeps 2, reasonable. Ann, 286-2280.

DISHWASHER - GE, portable, excel cond. Ext. 3351.

MODERN GLASS TOP TABLES - 2 square ends, 1 cocktail, good cond, all 3 for \$80. 878-2847.

BICYCLE - girl's 3 spd Columbia, racing handle bars and brakes, 18" frame, very good cond. \$30. Ext. 4230 or 472-0299.

TRUMPET - Buscher Aristocrat w/mutes, brushes, valve protector, etc. excel cond. Bill, 878-0797.

TENNIS RACQUETS - Bancroft super winner 4 5/8L; Slazenger Blue Knight 4 1/2M; good cond, reasonable. Joe, Ext. 4477.

WALL PLAQUES - Mediterranean, matador & bull, wood tone. \$10. E. Adams, Ext. 2495.

BICYCLE - men's Vista Touring, 10 spd, good cond. \$55. 751-8158.

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

SHOREHAM VILLAGE - lg Clarendon custom Colonial, 4 bdrms, 2 1/2 baths, den w/fp, eik, formal d/r, 1 1/4 wooded acre, deck, walk to tennis, beach, country clubs. \$80,000 (reduced). 744-1935.

OAKDALE - Idlehour, charming 3 bdrm country ranch, treed 1/2 acre. \$40,000. 589-9103.

BELLPORT - 3 bdrms, 1/r, 12'x28' fam rm, eik, carpet throughout, 3 1/2 yrs old, wooded lot. 286-8789.

SHIRLEY - 2 bdrms, near Smith Point Bridge, artesian well, secluded, owner must sell. Price negotiable. 924-7044.

HAMPTON BAYS - Shinnecock Hills, furn 3 bdrm ranch, very private in pine tree setting, 30 min to Lab. \$38,000 or will rent for \$195/mo. Sue, Ext. 2670 or 728-9408.

YAPHANK - Townhouse, 2 mi from Lab, 3 bdrms, 1 1/2 baths, all appl, garage, bsmt, tennis and pool. For sale or for rent. 924-5259 after 6 or 765-2102.

MANORVILLE - Cape, 1/2 acre, dead end street, 3 bdrms, eik, stove, refrig, washer, dryer. Priced right for quick sale. \$27500. 878-4334.

RIVERHEAD - Mobie Home, 12x65, w/w, 2, bdrms, 2 baths, 5 appl, shed, patio, double parking space, used only 2 yrs, family park. \$12,500. 369-2236 after 5:30.

MORICHES - property, 1/2 acre, wooded homesite, beach and marina. 878-1912 after 6.

CAPE CORAL, FLORIDA - west coast, 80x125, developed area, hospital, school, stores, etc. Frank, Ext. 2311 or 567-5131.

ROCKY POINT - "The Tides," 70' ranch on 1/2 acre, 3 bdrms, 1/r, d/r, den w/fp, eik, full bsmt, patio, garage, 2 car pkg area, priv beach. \$45,000. 744-6482.

ROCKY POINT - "Tides North," beautiful custom decorated Colonial, 4 bdrms, den, fp, w/w, appl, fenced, gorgeous 18 ft Florida rm, walk to priv beach club. \$42,900. 744-1927.

ROCKY POINT - moving out of state, many extras, 4 bdrm Colonial, eik, 2 1/2 bath, fp, w/w carpeting, wood deck, 1/2 acre, priv beach. 744-1156.

SETAUKET - (Strong's Neck), 3 bdrm ranch, fin bsmt, central a/c, appl, w/w carpeting, draperies, storms, low taxes, beautifully landscaped, 3/4 acre, winter water view, priv beach, moorings. \$75,000, 25% cash. Ext. 3918.

For Rent

YAPHANK - lg 6 rm apt semi-furn, ideal for 2 or 3 singles. \$300/mo. 475-3918.

WADING RIVER - 3 bdrm house, kit, d/r, 1/r, fp, full bsmt, furn or unfurn, all appl, quiet wooded area, close to beach. Maria, 727-4031 after 5:30.

VERMONT CHALET - beautifully furnished, stone fp, near Stratton, Bromley, other ski areas, XC skiing on woodland trails, antiques, fall foliage and winter rentals available, weekend, weekly, seasonal. 757-5599 after 5.

STRATHMORE RIDGE - 2 bdrm, 1 1/2 baths, 5 appl, central a/c, no maint, prime location, 5 min to Lab, available immediately. \$295/mo + util. 878-8532.

NO. SHIRLEY - 3 bdrm apt, full kit, full bath, d/r, 1/r, all util incl, 5 min from Lab. 924-8264 or 475-4930 eves.

MT. SINAI - 3 bdrm house, fully furn, all appl, full fin bsmt, pool table, built in bar, fp, 2 baths, Oct. 1st to Jan. 31st. Ext. 4260 or 928-5737.

HAMPTON BAYS - spacious 3 1/2 rm apt on the Bay, ac, cable TV, all util, Sept. to May, no lease required. \$195/mo or \$65/weekly. 728-4161.

ROCKY POINT - 3 bdrm cedar ranch, full bsmt, oil heater, storm windows, metal fence. \$350/mo plus util, option to buy. 798-4063 after 6.

BROOKHAVEN - furn studio apt w/fp. \$235/mo, avail Oct. 1. 286-0608.

Wanted

MOTORCYCLE - Motocross or Enduro, 75-125 cc, Honda, Yamaha, Suzuki or Kawasaki. Reasonable. Mike, 929-6177.

BABYSITTER - 7:30 to 5:00, Monday thru Friday, C. Islip area near Motor Pkwy. Ext. 3438.

PIANO - Spinet or Console, in good cond. 744-5801.

AUTOHARP - (Oscar Schmitt), 21 chord Autoharp. Eunice Reilly, Ext. 3602 or 286-1192 after 6.

PERSON - to share large house in Rocky Point, 15 min from Lab. \$92/mo + util. Ext. 2255 or 821-1296 after 6.

HOUSE TO RENT - prefer Shoreham and Three Village areas. Y. Park, Ext. 4410 or 924-0581 eves.

SMALL CHAIN SAW - Reasonable. 744-1942.

BERLITZ - basic French on cassettes. 473-2473.

SHOP MANUAL - for 1972 Plymouth. Fred, Ext. 2351.

ROOM - to rent in private house for quiet, non-smoking Lab employee. Tim, 345-2060.

STORM WINDOW - wood frame or storm door which could be cut down to 36 1/4x80 1/2. Ext. 2238.

HOUSE SITTER - position for married couple, no children, no pets. Bellport area preferable. 286-0599.

APARTMENT - mature, responsible working person seeking one bdrm, unfurn apt in Riverhead area. Noreen, Ext. 2815.

RACQUET BALL - members wanted, 20% discount ABC Racquet-Ball Courts. 475-3758.

MUSICIANS - for fifth season of established chamber orchestra. Violin, viola, cello, contrabass, woodwind and brass payers invited. 475-9294.

GAS STOVE - good cond. Ext. 2290.

Car Pools

NEW YORK CITY - want to join or form car pool from NYC to Lab. Tony, Ext. 3749.

ROCKY POINT - drivers wanted, Pickwick or Tides areas. Phil, Ext. 3596.

MASTIC - want to join, near Mastic Rd. Ed, Ext. 2477.

NESCONSET - start or join existing car pool. Mike, Ext. 7941.

ROCKY POINT - want to join or form a car pool. Ext. 2967.

Lost & Found

FOUND - man's wedding ring in parking lot of Bldg. 925. Ext. 4613.

Services

DRYWELLS INSTALLED - cesspool lines repaired, reasonable. Mike, 289-5407 after 5:30.

SEWING - hems and alterations. Sharon, Ext. 3312 or 878-2591 eves.

BABYSITTING - will babysit my home, playmate, lunch. Sue, 289-0161.

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