BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

Mort Rosen

MEMBERS OF THE 1980-81 BROOKHAVEN COUNCIL: (Seated, from left) - Horst Foelsche (Accel.), Leonard Newman (DEE), Ling-Lie Wang (Phys.) - *Chairman*, Garman Harbottle (Chem.), Allen Goland (Phys). (Standing, from left) Marshall Elzinga (Bio.) - *Member at Large* Leroy Blumberg (Accel.), John Dunn (Bio.), Arjun Chanana (Med.), Joseph Weneser (Phys.), Charles Goldstein (App. Math.), James Cumming (Chem.). Other members not present for the photograph are: Darrel Joel (Med.), Jack Van't Hof (Bio.) - *Secretary*, John Walsh (DEE), and John Weeks (DNE). The Council serves as an advisory body to the Director.

Spotlight: Ling-Lie Wang

Ling-Lie Wang, a physicist on the staff of the Physics Department since 1969, has been elected chairman of the Brookhaven Council for 1980-81. She is the first woman to serve as chairman of Brookhaven's "senate" in its 18-year history.

Wang has been a Council member for the past two years and found this experience both satisfying and educational. The most important job for the Council, she feels, is to act as a bridge between the scientific staff and the Director in helping him main-

Doug Humphrey

Ling-Lie Wang

tain the high scientific standards of the Laboratory.

Besides its regular business, such as tenure recommendations, the Council currently has on its agenda such matters as fringe benefits, the Industrial Medicine Clinic, summer jobs for young people, and interaction with the Hudis committee on salary structure. In response to her request for new subjects the Council might explore, Wang has received many suggestions and, from these, she is hoping the Council will be able to generate new proposals which will make the Laboratory "scientifically even more visible and attractive." The Council will take under consideration all suggestions received at a special session early next month.

The new chairman (the term "chairman" is fine with her) has made physics her career since a teacher at the Tainan Girls School stimulated her interest in the subject. In 1957 she was the only student from this school to be admitted to Taiwan University without an entrance exam. Four years later she went to the University of California and, there, she maintained her high standards – all A's.

Wang not only obtained her Ph.D. from the University of California, but a cultural education as well. Her memories of Berkeley are beautiful ones, she says. It was there that she matured in physics under the guidance of Geoffrey Chew, and became integrated into the American culture in the rich and stimulating student atmosphere of the 1960s.

From Berkeley she went to the Institute for Advanced Study at Princeton for a stay of two years as a visiting member. Then she joined BNL's Physics Department.

In the last ten years, she has been engaged in both "blood hunt" and "olympian" physics (Maurice Goldhaber's terms). In her case, "blood hunt" physics has involved phenom-

(Continued on page 2)

Task Force Established

Laboratory Director George H. Vineyard has announced the formation of a special task force to investigate ways of increasing Brookhaven's use of minority firms and employment of minority workers, particularly in new construction projects at the Lab. The six-member group will consist of three senior managers at BNL and three prominent members of the Long Island minority community.

Warren E. Winsche, BNL's Deputy Director, will be Chairman of the Task Force on Affirmative Action in Construction and Procurement. Other Lab members will be Vincent R. O'Leary, Associate Director for Administration, and Harvey E. Thomas, Affirmative Action Assistant to the Director.

Representing the Long Island minority community on the task force will be John W. Colson, Executive Director of Long Island Affirmative Action Programs, Inc.; James Couch, Executive Director of the Long Island Sickle Cell Project; and W. Burghardt Turner of the Suffolk County Human Rights Commission.

The task force will meet three to four times a year and will submit to Vineyard their recommendations on how to increase the Lab's use of minorities in construction and in procurement.

Oxygen-21 Found At Tandem

An on-again off-again search that began in 1972 has ended with a report by the research team of David Alburger, Kim Lister, and John Olness that a new radioactive isotope, oxygen-21, has been produced at the Tandem Van de Graaff. Six previous experiments all failed to isolate this isotope. According to Alburger, "the success of the seventh recent search was not due to luck but to technological advances, some helpful theoretical guidelines provided by John Millener, and a bit of persistence."

The find is important because it completes a set of eight so-called "exotic" nuclei extending from oxygen-21 to phosphorus-35 that have a common relationship in the chart of atomic nuclei. All of these radioisotopes, six of which were discovered at the Brookhaven Tandem, are far removed from the corresponding stable isotopes, and their measured properties are sensitive tests of theoretical predictions. While the theory has correctly predicted the spectroscopic properties, including those of the new oxygen-21 isotope, the measured masses were in striking disagreement with early theories. A reformulation of the theory by scientists at the University of California at Berkeley has greatly improved the predictions compared with the measured masses.

The oxygen-21 isotope is produced by bombarding a beryllium foil with a beam of oxygen-18 ions accelerated to high energy (up to 110 million electron-volts) by the MP Tandem Van de Graaff. Radioactive products emerge from the foil into a helium gas cell from which they are swept through tubing to a remote counting area. The problem of removing certain undesirable radioactivities, that would otherwise interfere with observing the oxygen-21 radiations at the counting station, was solved with a filtering scheme developed by Cary Davids for a different application at the Argonne National Laboratory.

Even if the filtering system had been available, all of the early attempts to find oxygen-21 at Brookhaven would certainly have failed since it is now known from both theory and experiment that the accelerator voltage required to make ^{21}O in this way is much higher than could then have been reached. It takes nearly the full 14 million volts and the maximum beam intensity from the MP-7 Tandem accelerator, upgraded in voltage several years ago, to make oxygen-21 and to study its radiations.

BNL Lecture: Genes And Radiation

The possible health consequences of the exposure of human beings to low level ionizing radiation is of increasing public concern, particularly in view of the debate on nuclear power. A troublesome issue seems to be the possible genetic effect on the descendants of those exposed. The public fear is that present radiation exposures might produce an unanticipated genetic disaster in some future generation.

Michael Bender, a Senior Scientist in the Medical Department, says "the fact is that we know a great deal about radiation-induced genetic changes; certainly much more than we do about the genetic risks associated with human exposures to pollutants, drugs, pesticides and other potential hazrads." He will discuss current findings in a Brookhaven Lecture "Estimating Genetic Effects of Radiation," on April 23, at 8:00 p.m. in Berkner Hall.

The nature of the effects is known, he says, and it is possible to make numerical estimates of the numbers of cases of genetic ill health that might be anticipated as a result of a particular population exposure. In his lecture, he will describe the basis for such estimates, the uncertainties involved, and will illustrate the application of genetic effects estimation to practical problems.

Michael Bender has been on the staff of the Medical Department since July 1, 1975. His research is concerned with genetic hazards of environmental mutagens, with particular emphasis on the molecular mechanisms involved in chromosome breakage and rejoining.

After receiving his Ph.D. in genetics from Johns Hopkins University in 1956, Bender spent two years as a Postdoctoral Fellow of the National Cancer Institute in the laboratory of Prof. Bently Glass at Johns Hopkins. From 1958 to 1969 he was on the staff of the Biology Division at Oak Ridge National Laboratory working on mammalian radiation cytogenetics. Subsequently, Bender was Associate Professor at the Vanderbilt School of Medicine, worked for two years in the Division of Biology and Medicine at the AEC and, before coming to Brookhaven, was Visiting Professor

Doug Humphrey

Michael Bender

of Radiology at the Johns Hopkins School of Medicine.

Currently, Bender serves on three NAS-NRC committees: the Advisory Committee on the Radiation Effects Research Foundation; Committee on Space Biology and Medicine; and Committee on Biological Effects of Ionizing Radiation.

A buffet supper is served at 6:30 p.m. at the Brookhaven Center before the lecture. Many find it convenient and it is a pleasant way to meet members of other departments. Reservations for the buffet should be made in advance by calling Ext. 3541 before 5 p.m. on the day of the lecture.

Wang (Cont'd)

enological studies which make direct comparisons between theory and experiment. Through her work and her interest in current experimental results, she was invited last year by Samuel Ting to visit the Mark J group at DESY.

Currently she is collaborating with Carl Dover Goldhaber and Larry Trueman on proton lifetime studies. She will give a summary talk "Flavor Mixing and Quark Decay" at the 6th Experimental Meson Spectroscopy conference at BNL later this month. ISABELLE studies with Ron Peierls and Trueman have also occupied her attention. This summer she will lecture on the theoretical implications of ISABELLE physics at the International School of Subnuclear Physics in Sicily.

"Olympian" physics is of a more esoteric kind. Currently, Wang is collaborating on mathematical studies of the non-Abelian gauge theory with physicists at Stony Brook which have resulted in numerous publications, including a paper co-authored with C.N. Yang.

She is a strong believer in BNL's scientific interaction with the State University at Stony Brook, and feels their joint theoretical physics seminars are of benefit to both groups.

Ling-Lie was born in China, but moved to Taiwan in 1949. She did not see the country again until 1973 when she made a personal visit. In January of this year she made another trip to China to attend the Guangzhou (Canton) Conference on Theoretical Particle Physics.

Wang admits she is totally into the American work ethic and, although she travels on business, seldom goes on vacation. But when it becomes too hectic, even for this human dynamo, she will read Chinese poetry and philosophy. "They give me a feeling of inner peace," she says.

CREF Values

September	44.60	October	41.18
November	42.56	December	43.19
January	45.37	February	44.59

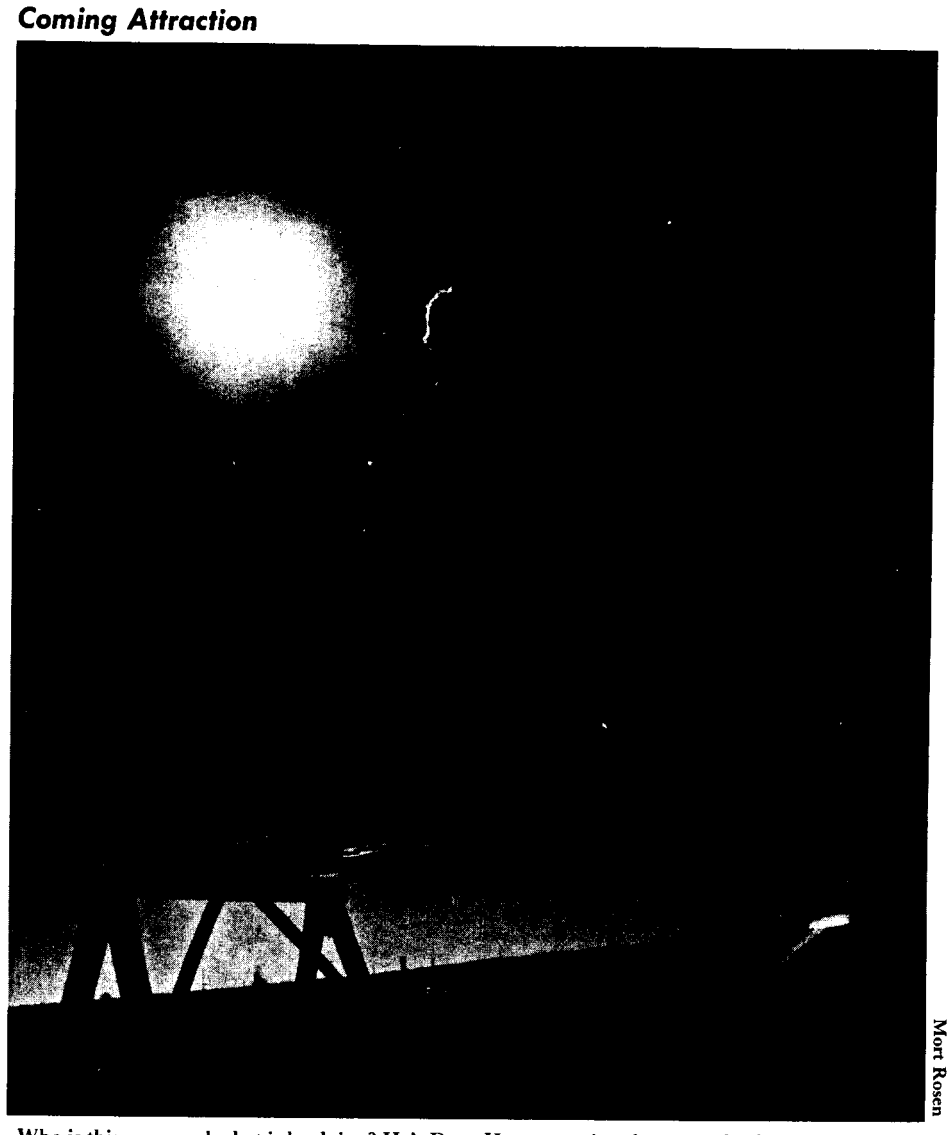
March $40.33

NYC Train Trip

The Hospitality Committee is planning a group railroad trip to the city on Wednesday, April 30. Departure will be at 7:55 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,** April 24. Make checks payable to "Brookhaven National Laboratory." Your tickets will be given to you on the train. Refunds will be made only if cancellations are received by the Friday preceding the scheduled trip.

Coming Attraction



Mort Rosen

Who is this man, and what is he doing? He's Dave Hansen testing the strength of a solar flat plate collector being developed by the Solar Technology Group at BNL. The collector may be the answer to relieving some of the strain on current energy resources. Stay tuned to next week's Bulletin for details.

CHESS CHAMPION

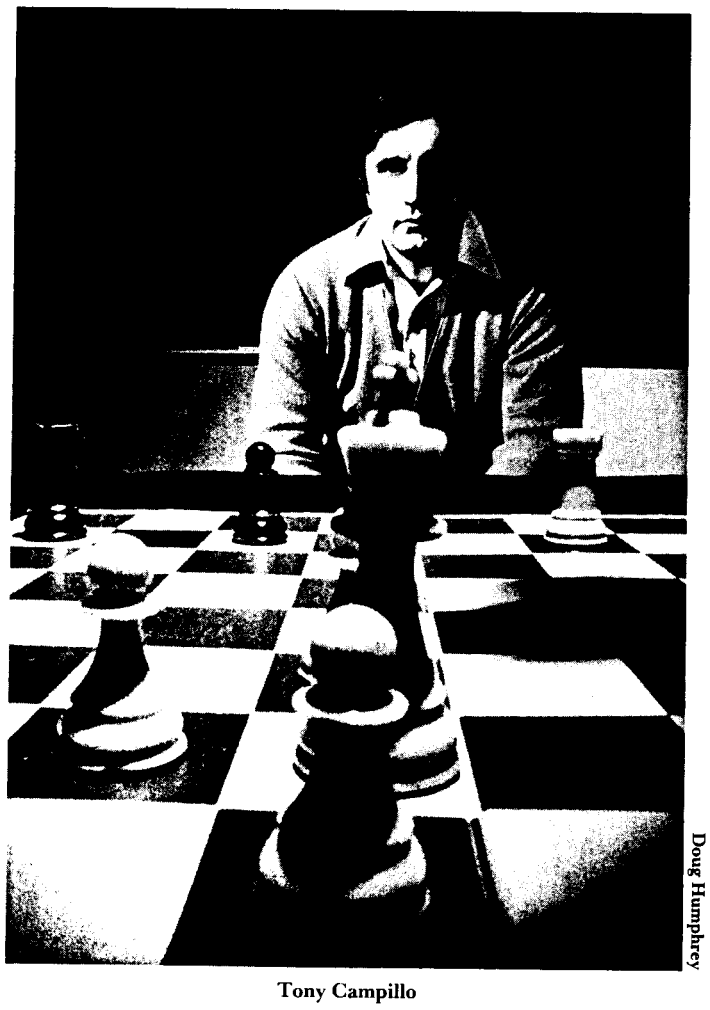
Tony Campillo is known in chess circles as a pirate, a competitor who is willing to sacrifice a piece at the opening of a game to go for the big kill — checkmate.

Although there are some risks involved in this kind of play most of them have paid off for Campillo. He was the Inter-Collegiate Champion of New Jersey, Cornell University Champion, won the First Atomic City Open, at Los Alamos, in 1976 – and in 1972 reached the finals of the U.S. Open Postal Championships, placing 70th out of a field of 7000; incidently the year Bobby Fischer brought chess into the limelight by defeating the Soviet Union's Boris Spassky.

Just about a year ago Campillo came to BNL after working at Los Alamos Scientific Laboratory for seven years. A native of Newark, New Jersey, Campillo is working in DEE developing laser technology that will be used in pollution control.

Campillo, who considers himsef a strong amateur, is rated as an expert by the United States Chess Federation – just below Master and International Grandmaster – the pinnacle of chess playing. Many of his tournaments have been diagrammed in newspapers and his quick-fluid attacks have drawn the praise of many chess critics, and the disapproval of others.

"I tend to make the game as wild as possible," said Campillo. "If I hit with a big surprise it puts more psychological pressure on my opponent and hopefully forces him into an early mistake. Some critics think I make the game unnecessarily complicated that way, but I like to create a game I'd enjoy playing again. Some players are just too mechanical for me; they win, but their games are dull."



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Tony Campillo

Eliminating mistakes is perhaps the most important factor in playing winning chess said Campillo. In high levels of competition, among players of equal talent, gaining the advantage of just one pawn can force an opponent to resign a match.

Chess, he reports, is a game you can become fanatical about and spend all your time on. After playing for up to five hours a day while in college, Campillo – who once defeated 20 opponents at the same time – decided to call it quits for awhile. (In spite of his devotion to the game, he got a Ph.D. in quantum electronics from Cornell in 1973).

He now plays chess as a hobby and is enthusiastic about correspondence chess in which players send each other moves through the mail. Right now he's in a match with a man from Poland. After two years they're still battling for position, and Campillo says he doesn't know when the match will end. In Postal Chess, Campillo is one of the few Americans ever to be rated a master in international competition.

Despite his formidable capability as a chess player Campillo believes there are probably at least three to four other players at BNL who are as good, if not better, than he.

"I was very surprised that Brookhaven didn't have a club," said Campillo. "I know in the past there was a strong industrial team here, but it just wasn't kept going."

Chess is only a pastime to Campillo now, however, he still enjoys a good challenge, and would like to have a hand in organizing a club at the Lab. Anyone interested in starting a chess club can reach Campillo at ext. 3047.

—Jerry Mikorenda

Science Store Open

The Science Shop at the Exhibit Center is now open on Fridays, from 10 a.m. to 2 p.m., through May 30.

IBEW Meeting

Local 2230, I.B.E.W. will hold its regular monthly meeting on April 24, at 8:00 p.m. in the Knights of Columbus Hall, Railroad Ave., Patchogue. There will also be an afternoon meeting at 2:00 p.m. for shift workers in the Union office at 31 Oak Street. On the agenda will be regular business, committee reports, the President's report, and a strike vote will be taken.

A Candy Special

The BERA Sales Office will be taking orders for Swersey's candy beginning on Monday, April 21, in plenty of time for Mother's Day. This is a group-buying program, giving you a superior product at wholesale cost.

A sample package of each item will be on display so that you will know what you are buying. Another plus – a Mother's Day card will be included free of charge with each order.

Orders must be made before May 1 to insure delivery to the Sales Office and pick up by the buyer on Thursday and Friday before Mother's Day (May 11).

The Sales Office is located in Berkner Hall and is open between 9:00 a.m. and 1:00 p.m. each workday.

Arrivals & Departures

Arrivals

Robert E. Barletta.....Nuclear Energy
Daniel N. Eriksen.....Nuclear Energy
Diane Geier.....Nuclear Energy
Randy K. Koleda.....Accelerator
Richard A. Occhiuzzo.....Accelerator

Departures

Jerilyn M. O'Leary.....Safety & Env. Prot.

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Bicycling

Particulars have been received about TOES, the two-day bicycling rally based at Shelter Island's Chequit Inn. Tours will be made to Montauk Point, Orient Point (including Hargraves Winery) and the Hampton area. There are several options on room and board, from a minimum of $2.50 for registration fee alone (includes maps and an arm patch) to a total of $51.30 per person for registration, 2 nights and 4 meals at the Chequit. For registration forms and information contact Gerry Morgan, Ext. 4841, Bldg. 815.

Don't forget to register for the 5-Boro Bike Tour on May 4. Send $1.00 to AYH, Room 5, 132 Spring St., N.Y., N.Y. 10012.

Also coming up is the 25 mile tour to Wildwood Park and return on April 27. Meet at 9:30 a.m. at the Berkner Parking lot, and return there for lunch.

Teacher Wanted

The Nursery School expects to hire for the 1980/81 school year a certified teacher for a class of four-year olds, which meets two mornings a week. Those wishing to apply should do so, in writing, before April 23, to: P.O. Box 324, Upton, NY 11973.

Runners Corner

Many BNL runners are getting ready for the Long Island–Newsday Marathon at Eisenhower Park on May 4. Officials expect about 4,000 runners to attempt the run to the sea and back. The BNL Club is making preparations for water stops, number pick-ups, meeting sites and car pooling. All interested runners, spectators and volunteers are encouraged to attend a planning session scheduled for Tuesday, April 22, at noon in the Conference Room of Building 318.

Following the planning session, the Spring Race committee heads will meet to update progress on the May 18th races. These races have become a traditional event for many Long Island runners. Everyone is cordially invited to participate. Applications can be found in the Runaround Newsletter, or on the gymnasium bulletin boards. As always, volunteers are needed to help with the events. If you would like to help, contact Ted Landry, Building 318. Even if you're running in one event, your assistance in the other would be appreciated.

Who's Is It?

The Library has received a reprint entitled "Spatial Averaging in the Mechanics of Heterogeneous and Dispersed Systems" by R.I. Nigmatulin, and they do not know who it goes to. If anyone is looking for it, please call Ext. 3484.

Volleyball

League Championship Tournament
Results of 1st Round Played on April 9

A:	Spikers	5-1
	Moles	4-2
	Toga	2-4
	Bumps	1-5
B:	OTHG	5-1
	Monday Terrors	3-3
	Players Pool	3-3
	E & Phoubars	1-5

Finals will be played Wednesday, April 16, 5:30 p.m.

Theater Group Presents "Harvey"

Doug Humphrey

Wendell Chu, in the role of Dr. Sandersan, and Angela Castellano, as Nurse Kelly, discuss the eccentric behavior of Elwood P. Dowd, played by John Binnington in the BERA Theater Production of Mary Chase's "Harvey." Performances will be on May 2, 9, 10 at 8:30 p.m. and also at 2:00 p.m. on May 2 in Berkner Hall. Tickets are $3.00 for adults, and $2.00 for Senior Citizens and students under 18 years old. For further information, or ticket reservations, call Liz Russell, Ext. 3940.

Golf Tournament

The first tournament of the BGA golf season will be held on Monday, May 5, at the Pine Hills Country Club. There will be a $7 green fee and a $1 entry fee. Assigned tee-off times will begin at 11:30. Send entry fee to Joe DePace, Building 515, Ext. 4120 by May 2. BGA tournaments are open to all BNL employees, their spouses, and retired employees.

Bowling

Green League

The Sparks split 6-6 with the Designers with J. Cockrane bowling a 203. The Blue Jays bowled unopposed with D. Stelmaschuk having a 203 and N. Parrinello a 207. The Old Timers II with only three men took 8. The Trouble Shooters downed the Old Timers for 11. The Light Source took 5 from the Freon Loaders with R. Wiseman bowling a 225.

Pink League

Marie Grahn slid through the night with two good games of 173/168 for a 484 series. High games were bowled by Helen Keeley 196, Joyce Nicholsen 184, Ellie Kristiansen 182, Renee Flack 167, Marge Stoeckel 167, Deb Johnson 164, Millie Connelly 161 and Mary-Grace Meier 161. The Pinsplitters are in first place by 9.

Red League

This Isa Team took 11 from the Sandbaggers. T. Iarocci (222) grossed 642, R. Barberich (222) 616 gross, C. Bohnenblusch (210) 647 gross, K. Riker (206) 631 gross, J. Sauls 601 gross. The 76'ers won 8-3 over the Strangers. R. Larsen (211) grossed 610, T. Romano 624, J. Connelly 608. The Freon Loaders split 6-5 with the Light Source. The Designers split 5-6 with the Sparks with J. Ferrero grossing 611, A. Pinelli 606, E. Sperry 604. The Old Timers lost 11 to the Trouble Shooters. R. Adams (204) grossed 605.

Blue & Gold League

The last two weeks have put the Aquanauts back in first place with Dru Hanharan rolling a 178, Marijane Gillette 170, and Larry Musso 213/200. Ruth Sheehan hit a 176, Mary Scheidet 189/172, Lil Cahill 155 and Sue Perri 151. Rick Murgatroyd changed his style and rolled a 202/591 series and the prior week he bowled a 212/244 for a 648 scratch series.

Purple & White League

The Draftecs won 5 from the Flounders closing the spread between 1st & 2nd place by 4 points. Jim Petro's 574 series (177/202/195) was high for the men with Jim Griffin close behind with a 570 series (207/170/193). Other good games were bowled by Ken Asselta 202, Al Pinelli 200, Ed Sperry 209, Sharon Smith 176/180, Helen Keeley 176, Lynn Boyd 176, Kathy Carter 190.

Mountain Club

The first spring meeting of the Mountain Club will be held April 22 at 5:30 p.m. in the North Room of the Brookhaven Center. On the agenda will be the election of a new president, the planning of upcoming events such as fishing, canoeing, hiking, camping and backpacking, and Harold Udseth will show slides on paddle surfing. Everyone interested in these activities should attend.

Cooking Exchange

Join us for a brunch at the next Cooking Exchange meeting on Wednesday, April 23, at 12:30 p.m. in the Recreation Building. Sample some crepes, omelette Margarita, stuffed bread, "straw and hay" (a delicious concoction of white and green linguine with cream and lots of other good ingredients), and a refreshing cool beverage.

All BERA members and their families are welcome. There is a cover charge of $1.00 for each adult, and babysitting is provided at 25¢ per child.

For more information contact Sharon Galayda at 821-0644, or Wendy Green at 878-8952.

Cafeteria Menu

Week Ending April 25, 1980

Monday, April 21		
Potato leek soup	(cup)	.45
	(bowl)	.55
Fish Creole w/rice		1.40
Apple pancakes & sausage		1.35
Hot Deli – Sloppy Joe	(bread)	1.40
	(roll)	1.50
Tuesday, April 22		
Split pea soup	(cup)	.40
	(bowl)	.50
Chinese pepper steak on rice		1.45
Eggs benedict		1.35
Hot Deli – Pastrami	(bread)	1.45
	(roll)	1.55
Wednesday, April 23		
Cream of spinach soup	(cup)	.45
	(bowl)	.55
Stuffed pepper w/spaghetti		1.50
Poached filet & 1 veg.		1.45
Special: 8 foot hero	70¢ per inch	
Thursday, April 24		
Beef barley soup	(cup)	.40
	(bowl)	.50
Meat cakes & peach fritters		1.45
Chicken pot pie		1.40
Hot Deli – Roast beef	(bread)	1.45
	(roll)	1.55
Friday, April 25		
Fish chowder	(cup)	.45
	(bowl)	.55
Barbequed spare ribs & 1 veg.		1.50
Breaded flounder filet & fries		1.45
Hot Deli – Italian meatball & cheese wrap		1.45

Down On The Bayous

"Louisiana Cajuns," an exhibition of 50 photographs by Turner Browne will be on view at Berkner Hall from April 21 through May 2. The Cajuns are ethnically French people who left Nova Scotia for Louisiana after France lost the province to the British in 1713. Their settlements, many of which are even inaccessible today, have been captured by Browne as a tribute to a disappearing way of life. An opening reception, featuring a showing of the short documentary film "River Boy," will be held at 8:00 p.m. on Monday, April 21, in Room C. The exhibit will be open for viewing between 11:00 a.m. and 2:00 p.m. on weekdays.

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position, with consideration given to candidates in the following order of priority:(1) present employees within the department, with preference to those within the immediate work group; (2) present employees within the Laboratory as a whole; and (3) outside applicants.

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

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

Each week, the Personnel Office lists new personnel placement requisitions. The purpose of these listings is, first, to provide open placement information on all nonscientific staff positions; second, to give employees an opportunity to request consideration for themselves through Personnel; and, finally, for general recruiting purposes. Because of the priority preference policy stated above, each listing does not necessarily represent an opportunity for all candidates. As a guide to readers, the listings are grouped according to the anticipated area of recruitment, as indicated below. Except when operational needs require otherwise, positions will remain open for one week following publication date.

For further information regarding a placement listing, contact the Personnel Placement Supervisor, Ext. 2882.

POSITIONS OPEN: Scientific. The following staff positions are open. Candidates may apply directly to the department representative named, or through the Office of Scientific Personnel, Ext. 3338.

CORROSION/METALLURGICAL RESEARCH ENGINEERS. Basic and applied problems in materials performance. Contact: A.J. Romano, Department of Nuclear Energy, Bldg. 130.

POSTDOCTORAL RESEARCH ASSOCIATE. To investigate the mechanism of action of the purple membrane proton pump. Seek individuals with experience in organic synthesis, enzyme mechanisms, and/or protein modification. Contact: Dr. S. Seltzer, Chemistry Department.

PHYSICIAN. Occupational Medicine. Board eligibility or certification in Family Practice or Occupational Medicine desirable. Contact: Dr. D.C. Borg, Chairman, Medical Department.

LABORATORY RECRUITMENT: Opportunity, for present Laboratory employees.

1312. MATERIAL HANDLER - Supply and Materiel Division.

1313. SECRETARIAL POSITION - Requires AAS in secretarial science or equivalent experience performing diverse secretarial duties including typing of technical reports. Good communication and language skills are essential. Will primarily be responsible for processing scientific papers using AM-TEXT word processing equipment. Will also be expected to carry out routine functions i.e., completing travel arrangements and vouchers and preparing a variety of BNL forms. Department of Nuclear Energy.

1314. CLERICAL POSITION - Requires AAS in accounting or business administration or equivalent experience with routine accounting procedures. Familiarity with data processing systems is desirable. Will assist division administrator with maintaining cost accounting records, inventory, job cost system, and various management information reports. Plant Engineering Division.

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

1315. SENIOR STANDARDS INSPECTOR - Requires significant experience in all phases of mechanical inspection, especially optical tooling. Proficiency with use of inspection equipment and non-destructive testing equipment and a basic knowledge of metals, machining, welding and sheet metal fabrication is essential. Will perform all phases of in-process and Laboratory fabricated parts and equipment. Central Shops Division.

1316. HEALTH PHYSICS ASSOCIATE - MS or equivalent in health physics with several years experience in radiation exposure control for research facilities i.e., reactors and accelerators. Strong mathematical background with some familiarity with the use of mini-computers for data analysis and reduction tasks is desirable. Will join small group of professionals who handle variety of routine and non-routine health physics projects on site i.e., the design of new protection devices, evaluation of radiation exposure monitoring system, and development of data base systems for dosimetry. Safety and Environmental Protection Division.

Autos & Auto Supplies

71 BUICK ESTATE WGN - good cond, new trans/tires/radiator, a/c, ps/pb, after May 1. $800. Ext. 3701.

75 VEGA - good, 56,000 mi, manual trans, new clutch/shocks. $850. Sandro, Ext. 4382/3111.

70 MUSTANG - good eng. $695. Ext. 4395, 653-4195.

2 MOTORCYCLE FRAMES - Harley Davidson, 1 custom, 1 stock, both for sportster. 924-8264 after 6.

70 DODGE VAN - fin int, bed, roof vents, AM/FM stereo tape deck, runs well. 277-2671 after 6.

76 VAN CHATEAU WGN - a/t, a/c, stereo, capt chairs, 3 seats, 44,000 mi, must sell. 924-0317.

74 BUICK CONV - a/t, a/c, ps/pb, p/w, AM/FM, rear defrost. Asking $2555. Ext. 4113, 289-0753.

77 CAMARO - ps/pb, p/w, a/c, excel inside & out, 305-V8. Pat, Ext. 4173, 281-1795.

REAR WINDOW - 1970-73 Maverick, $20; wheels, Chevy & Pontiac, 14" & 15", $2 ea. Bob, Ext. 2819, 289-0357.

71 PLYMOUTH DUSTER - slant 6, good cheap transp. $600. Chris, Ext. 2913.

71 PLYMOUTH DUSTER - a/t, p/b, good running cond, only 79,000 mi. Asking $550. 744-9498 after 7.

TIRES - (2) 5.60-15 for VW labels, intact, mounted on rims. $50. Fred, Ext. 3259.

78 YAMAHA 1100 - 5000 mi, mint, winning performance pipes, air caps, moholeden shocks. Larry, 567-0603 after 6.

71 MERC MARQUIS - body & eng good, clashes w/foliage, will sacrifice. $200. RuthAnn, 929-6235 after 6.

70 VALIANT ENG - slant 6, 48,000 mi, mech well maintained, good for parts, eng & trans, $250. $200 for eng only. John, 884-4136.

75 INTERNATIONAL SCOUT - 4 w/d, many extras, very good cond. $3150. Steve, 929-4925.

73 FORD GALAXIE - 4 dr, a/t, ps/pb, Stereo AM/FM, a/c, good tires/paint, 57,000 mi. $1350. Ext. 4532.

78 YAMAHA YZ-205E - mint cond, never raced, hardly used. $875. 928-7769 after 5.

73 GMC - 4 w/d sub, ps/pb, 350 c.i.d., a/c. $2600. Tom L. 744-5910.

72 CHEVY STA WGN - ps/pb, good cond, new brakes/batt/tires (2). Price negotiable. Len, Ext. 4487.

TRAILER HITCHES - (2) Class 1, for Ford Maverick, 1 for AMC sta wgns. Best offer. Fred, Ext. 2057, 261-5735.

8' PICKUP BED - 72 Chevy, lt blue, Fleetside. $200. John, 884-4136.

73 MOTOR HOME - 22' mobile traveler, 318 Dodge, 19,000 mi, ps/pb, a/t, a/c, self cont, sleeps 6, excel cond. $6500 firm. Charlie, Ext. 4201, 234-8530.

VAN SEAT - excel cond. $15. Ext. 4058, 286-0436.

73 PINTO WGN - a/t, high mi, snows, new batt & exhaust, reliable. $500. Ext. 3576, 331-2988.

74 TOYOTA - good cond, 4 spd, must sell. Best offer over $1400. 924-3481.

72 YAMAHA 650SX - excel cond, low mi. $800. Ext. 2316, 924-4536.

74 TOYOTA PICKUP - 4 spd, good cond, avg 26 mpg, AM/FM, good tires, clean. John, 727-7741.

72 CHEVY STA WGN - very good cond, all pwr, roof rack. $995 firm. 234-7225.

68 CHRYSLER NEWPORT - ps/pb, a/c, a/t, perf running cond, batt/tires OK, avail Apr 25. $290. Ext. 3223 eves.

68 T-BIRD - must sell, good cond, white/blk roof. Asking $450. Pat, 588-8492.

73 OLDS VISTA CRUISER WGN - a/t, a/c, ps/pb, 78,000 mi, very clean, excel running. $1150. 289-7383.

MUSTANG PARTS - 64-½ - 66, 6 cyl motor, 3 spd trans, windows, doors, etc. Ray, 727-3608.

MOTORCYCLE HELMETS - $20 ea. Rick G., Ext. 4100, 589-8691.

75 FORD TORINO - 39,000 mi, ps/pb, new tires, 351-V8, 17 mpg, excel cond. $1450. Pete, 281-8945 after 6:30.

TRADE - 72 AC Cobra 289 c. i. manifold (2-4 bbls) w/carbs, for a single 4 bbl manifold (Cobra); rebuilt 350 c.i. Chevy 4-bolt main motor (stock), less heads & manifold, $250. Hunt, Ext. 4289.

77 CHEVY IMPALA - a/c, ps/pb, 4 dr. John, Ext. 2485.

HONDA - 250cc Elsinore dirt bike. $350. Sherman, 288-9086 after 7.

67 DODGE DART - $350. Kale, Ext. 4224.

77 KZ-400 - crash & sissy bars, luggage rack, blue, 2 helmets, very well maintained. $1250. Bill, Ext. 7611.

Boats & Marine Supplies

PORTABLE MARINE TOILET - compact, lg wgt, can be hooked up permanently or as portable. $50. Nick, Ext. 3169.

19' BOW RIDER - Volvo Penta I/O fwc eng, galv trailer, many extras. 286-0626.

20' WOOD LAPSTRAKE - camper equipped, 80 hp Johnson rebuilt 1978, solid hull. 286-0880 eves.

22' SEARAY 1976 - cuddy cabin, hdtp, 233 hp Merc cruiser I/O, may extras. $7300. 585-1840.

EVINRUDE MOTOR - 30 hp, fully rebuilt, new gearcase, pwr head & water pump, mint cond, $225; Evinrude 7.5 hp, never used in salt water, just tuned, mint cond, $175. 265-5218.

19' BAYLINER 1973 - Volvo I/O low hrs, 1975 Tandem galv trailer, pwr winch, excel. $3200. Ext. 2611, 751-3702.

20' TONG BOAT - sturdy, stable boat for bay clamming. $575. Frazer, 286-0851.

14' STARCRAFT - fiberglass, 28 hp Evinrude, w/trailer. $600. Gary, Ext. 3484, 399-6414 after 6.

3 HP OUTBOARD - lower unit folds & motor stores in fiberglass case, excel shape. $125. GR5-4199.

AIR ROLLERS - heavy duty, used twice, $30/pr; Tempo flushette for Merc motors to 50 hp, new, $5. B. Espensen, Ext. 3992, 298-4172.

Miscellaneous

COMPOUND BOW - Ben Pearson Mirage, 50 lb, 50% reduction, like new. Asking $50. Dennis, Ext. 3050, 654-2076.

AIR COND - Emerson Quiet Kool 1800 BTU, 220 volt at 12 amps, a lg window unit. Make an offer we can't refuse. 744-5801.

SKATE - $10; skateboard, $10; misc toys, all good cond. Ext. 3027.

LAWN EDGER - Sears elec, $15 or best offer; oil burner unit, ready to install, 7 yrs old, best offer. Joe, Ext. 2005.

10 SPD BICYCLE - Schwin LeTour, all alloy components, 22" frame, excel cond. $150. Frank, Ext. 3898.

METAL SLIDE TRAYS - (50) Airequipt, perf cond. $2 ea. 271-1720 after 6.

GOLF SHOES - ladies' 7-½N Hush Puppies, like new. $10. 286-0615.

CHAMPION ST. BERNARD - male, 3 yrs old, aggressive but gentle, free to good home, papers avail. Ext. 4346.

LAWN EDGER - push type, half mower w/edging blade, light wgt. $15. Ext. 4606.

BICYCLE - 10 spd men's Schwinn, good cond. $50. Sandy, Ext. 3369, 286-1022.

POOL - 4'x18', w/pump, filter, fence sections, wooden basket-weave, cheap; alum s/s door; child's carrier seat. Ronnie, Ext. 2980, 289-0532.

WOOD SCREENS - (2) 28"x43", (3) 36"x43", $5 ea. Bill, Ext. 3355, 472-4684 after 6.

DRUMS - full drum set w/brass cymbal, excel cond. $125. Alice, 751-6815.

KITCHEN RANGE - oil burner/elec, as is, $100; Reese hitch, $30; broiler/oven, self cleaning, $20. 325-1961.

CHILDRENS BOOKS - new & old, most ages; humor, adventure, animals, horses, folk tales, mysteries, non-fiction. 286-8724.

COMPARTMENT CASE - Nikon FB - cost $190.50, asking $90; Nikkor 50mm f3.5 w/M-2, $130. P. Warner, Ext. 7934.

COSCA FOLDING TABLE - 32" square w/3 matching chairs. $45/all or $12/ea piece. Ext. 4087, 475-7067.

YELLOW LABRADOR PUPPIEES - AKC. $150. Pete, 751-4985.

GE WASHER - 18 lb cap, still under warranty, like new. Best offer. Ann, Ext. 4959.

TAPE RECORDER - needs repairs of 1 spkr. Orig $350, best offer. Ext. 4333.

ARTIST CANVASES- 7"x9", 3 packs/60¢ or 5/50¢; batt pwrd dice game, $3.50; GE wrinkle remover, $2. Susan, Ext. 4207.

CHAIN SAW - heavy duty, Remington PL-4, 2x17" bars, 3 chains. $60. 473-6570 after 6.

CB - 40 channel Midland (mobile), w/mike, antenna, coax, cable, 2 yrs old. $50 compl. Judy, Ext. 2064.

SOFABED - grn Herculon, inner spring matt, plus matching 6 drapes & lamp, must sell. 698-7428.

CHAISE LOUNGE - green webbing, $4.50; hair dryer, $5; 7.50-14 tire w/rim, $10. Sue, Ext. 4267.

EXTERIOR DOOR - 36"x6'8", solid wood w/frame & louver insert, screen, $20; scanner antenna, new Avanti mod AV-801 multi band, $20. Ron, Ext. 4082.

TIMING LIGHT - Sears Penske. $20. Ext. 2437.

ZENIT SLR CAMERA - 55mm f/2.0 lens, good cond. $35. Ext. 2605.

CRIB & CHIFFEROBE - $50. 286-1097.

MEN'S JACKETS & SUITS - size 42, perf cond. 744-9822.

BABY ITEMS - coach carriage, miniature maple crib, wood potty, car bed. $30. E. Kelly, 744-3069.

MACKISSICK SHERDDER CHIPPER - 5 hp Briggs eng, excel cond. $300. 286-3377 after 6.

SLIDE PROJECTOR - uses metal tray or 100 slide circular tray, 35mm w/remote focus & slide advance. Jim, Ext. 2485.

AUTO REVERSE CASSETTE - Panasonic car model CX-141EVA. $70. Norman, Ext. 4415.

POOL VACUUM - s/s filter, ¾ hp motor, pump, lounge, skimmer, all perf. $80. Norman, Ext. 2043.

BIKE - 10 spd Gitane, 24" wheel, good working cond, $40; Radio Shack TV game, 4 games, 2 players, like new, $15. 286-3679.

BEDDING - twin size foam mattress & box spring, good cond. $35. Ext. 3469.

DIN RM - ash fruitwood, 6 chairs, breakfront, $600; bedrm, 6' Mr & Mrs, Armoir, twin beds, 2 mirrors, $250. Ext. 2462, 727-7515.

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

PATCHOGUE NORTH - 3 bedrm hi ranch, eik, lg L/R, lg paneled fam rm, excel cond, addl insulation, assume 6% mtg. High 30's. Ext. 4333, 929-6984.

CORAM/MT SINAI - assume low 8-¼% mtg, $4000 cash over, 2 bedrms, 1-½ baths, 4 appl, central a/c, w/w, clubhouse, pool, tennis, mint, move-in cond. Low 30's. 928-1450. eves.

1 ACRE PLOT - over 100'x400', located north of Lab, minutes away. Asking low 10's, a buy for the future. 924-3236.

MT. SINAI - 3 bedrm ranch, cathedral ceiling L/R w/fp, w/w, 5 appl, 2 baths, gar. $39,000. 929-6442.

SOUTH SHIRLEY - 3 bedrms (possible 4th), 1 full + 2 half baths, L/R, D/R, eik, den w/fp & woodburning stove, bsmt, 2-car gar, many extras, 9 mi from BNL. $37,000. 281-0804. eves.

E. PATCHOGUE/BELLPORT - 3 bedrm brick ranch in nice neighborhood, study or 4th bedrm, fam rm, bsmt, gar, fp, built-in bkcases, house on 0.3 acre of exceptionally well-landscaped grounds, 8-½% mtg. 286-8370.

WESTHAMPTON/REMSENBURG - cape cod, cedar shingles, 3 bedrms, 2 baths, lg eik, fam rm, deck & fp, low taxes. $65,000. Richard, Ext. 4396, 325-8158.

BELLPORT VILLAGE - 3 bedrm ranch, lg eik, att gar, patio, stockade fenced rear yard. $36,500. 286-0795.

BROOKHAVEN HAMLET - 3 bedrm cedar shake ranch, ½ acre, bsmt, a/c, w/w, low oil use, 8-½% mtg. $52,000. 286-2690.

PORT JEFFERSON - Harbor Hills, 3-4 bedrm ranch, possible mother/daughter, wooded ½ + acre, fp, dead end st, financing possible, immed occupancy. $69,000. Ext. 4504, 473-1523, 928-0483.

TOWN OF EAST HAMPTON - near Gardiner's Bay, 100'x150' building lot, prvt beach & marina rights. $13,500. 281-4371.

MASTIC BEACH - 4 bedrms, D/R, L/R w/Franklin, low taxes, Farmer's Home 8% mtg, shed, encl porch, 160x100, near stores, schools & water. $28,000. 281-0360.

MANORVILLE - 3 bedrm ranch, 1 acre, 32' country kit, cathedral ceiling, 1-½ baths, appl, bsmt, gar, assumable mtg at negotiable rate. $45,000. Pete, Ext. 3868/4574, 878-1225.

BELLPORT SOUTH - walk to shops, beach, ferry, golf, beautifully landscaped 1 acre, garden & fruit trees, play house, excel cond, 4 bedrms, 1-½ baths, gas heat, city water. 286-2320.

For Rent

LAKE GROVE- studio apt, prvt ent, cooking facil, all util, single only. $175/mo. Ext. 3800, 467-1763.

BELLPORT - 2nd floor of prvt home, 2 bedrms & bathrm, kitchen priv if wanted. $200/mo. Ext. 3565.

WADING RIVER - lonely 1 bedrm apt, furn, kit, close to beach. $240/mo, all util free, no lease. 249-7136 eves.

RIDGE/STRATHMORE - 3 bedrms, 1-½ baths, 5 appl, a/c, carpet, drapery, avail June 1. $350 + elec. Ext. 4410, 924-0581.

MANORVILLE - 1 bedrm apt w/view, a/c, dishwasher, fp, 2 yr lease, free heat. $330/mo + security w/club membership free. Pat, Ext. 2360, 878-8935.

Wanted

HOUSESITTING - young working couple will housesit 1 mo in late spring while home is being renovated. Ext. 7646.

RIFLE - Winchester M-88. Bill, Ext. 3066.

BOOKCASES - table for drafting & file cabinets. Martin, 878-4695 eves.

HOUSEMATE - 3 bedrm house, Center Moriches, on water, has sundeck, boatslip, avail June 1. $200/mo + ½ util. Diane, Ext. 3369, 878-2658 eves.

ELECTRONIC IGNITION - for Chevy 6 cyl. Steve, Ext. 4212, 399-3002.

HOUSESITTING - or reasonable apt, married couple home from graduate school June-July-Aug. Ext. 2423.

HOUSEHOLD TECHNICIAN - reliable, thorough, regular 1 day/wk, request references. Ext. 3626, 286-0428.

DARKROOM EQUIPMENT - enlarger, pans, easels, contact printer, Steve, Ext. 4613.

DEPENDABLE CLEANING WOMAN - twice a wk for ½ day, Stony Brook area. Ext. 3701, 751-8128.

EXPERIENCED CARPENTER(S) - to help install cedar shingles on new house under construction. John, Ext. 2070, 728-1201 eves.

LAWNMOWER BODY - 20-22", no motor, must be aluminum or cast alloy - not tin. Claire, 281-8306.

LABELS - all Campbell's, Swanson soups, V-8 juice, Chef Boy-A-Dee. Send to Mike, Bldg. 459.

HOUSE - mother/daughter, 3 bedrm main house, apt attached or sep. 286-8166 after 5 & weekends.

HOUSEMATE - share lg 4 bedrm, 3 bath house in Coram. $155/mo + share util. 928-8379 eves.

HOUSESITTER - 1 wk late April, 2 wks late July, East Setauket. Ext. 2051, 689-8685.

MATURE YOUNG WOMAN - to share house with mother & daughter, prvt rm. Fran, 929-6700 Ext. 368.

OUTBOARD ENG - short shaft, 25-40 hp, reasonable. Bob, Ext. 3309.

SCALE - 0-20 lbs, old baby scale OK. Diane, Ext. 3236.

PERSON TO SHARE HOUSE - $175/mo includes all. Al, Ext. 3992, 665-1218.

APARTMENT TO RENT - 1 bedrm, Rocky Point, Sound Beach, Miller Place area. Donna, Ext. 2907. 751-6383, eves.

TRAINS - Lionel, any "0" gauge or "027" gauge cars, track & equip. Frank, Ext. 3120.

BONSAI POT - any size, reasonable. Ext. 2616.

WANTED - someone to teach me Italian - eves or weekends. Hellen, Ext. 3335.

Car Pools

MT. SINAI - off Shore Rd. Join or form 8:30-5. Otto, Ext. 4248/4267.

HOLBROOK - need 1 or 2 more riders, Patchogue-Holbrook Rd area. Norman, Ext. 2043.

VALLEY STREAM - or along So. State, car pool wanted. Marvin, Ext. 7155.

CORAM - La Bonne Vie, occasional driver/paying rider. Berthel, Ext. 3709.

SAYVILLE/BAYPORT/OAKDALE - 4 to midnight shift. Debbie, Ext. 4173, 589-0643.

SYOSSET/HUNTINGTON - Duncan, Ext. 7913.

Lost & Found

Lost - Will person knowing whereabouts of package addressed to A. Losi, please call Ext. 2505 (Bldg 701).

FOUND - in Public Relations Office, pair of sunglasses. Ext. 2345.

Ads left out of this issue due to lack of space need not be re-submitted to appear in next week's issue. Please note that ads may not be more than 15 words long and must be received in the Bulletin office by 4:30 p.m. Friday, for inclusion in the following week's Bulletin.

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