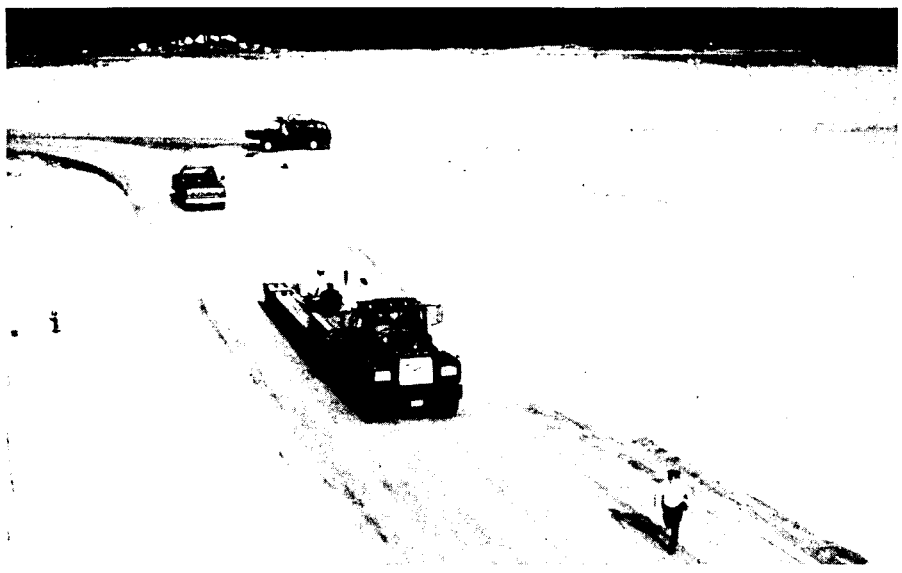
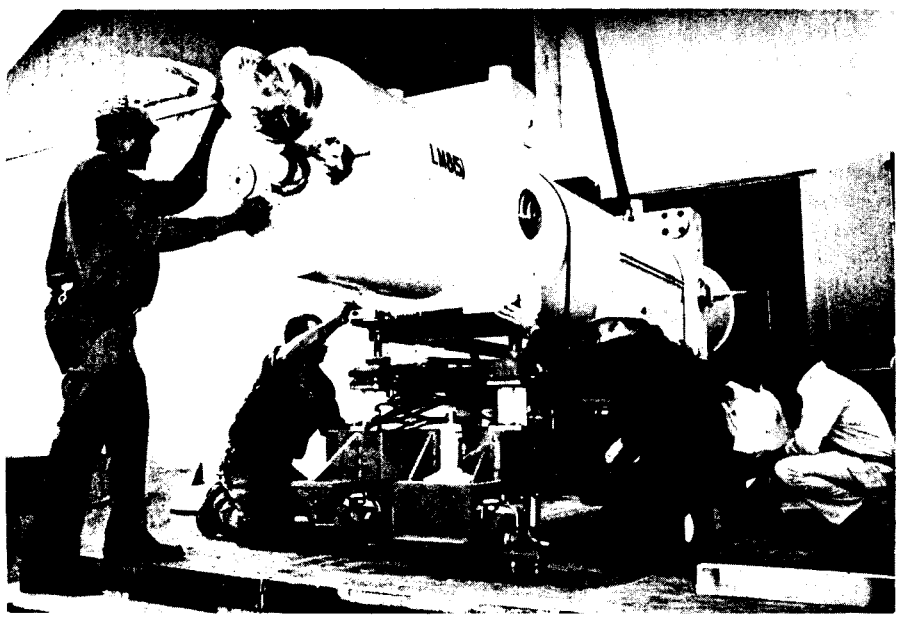
BROOKHAVEN BULLETIN

Vol. 36 - No. 41 October 15, 1982

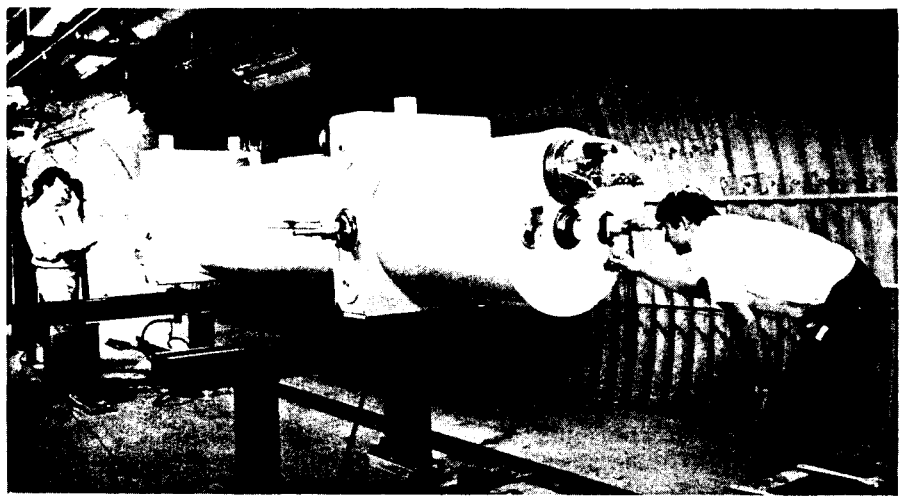
BROOKHAVEN NATIONAL LABORATORY



Coming from Bldg. 902, LM-8 moves along a road at the CBA site,...



enters the accelerator tunnel at the Open Area at 4 o'clock,...



and settles down just east of the Wide Angle Hall.

Mort Rosen

LM-8 Goes To The Tunnel

Less than one year after the first full-size cable magnet was successfully tested, LM-8 became the first dipole to be transported to the tunnel of the Colliding Beam Accelerator (CBA). The move, which took place last Friday, was coordinated by Irving Polk, head of the Magnet Division's Installation Group.

LM-8 will not be alone in the tunnel for long. Five other dipoles and two quadrupoles will soon be joining it for the Full Cell test scheduled for next spring. This test is designed to see how well the magnets work together as a prototype full cell in the actual CBA environment.

For its journey, LM-8 was placed inside a pale yellow vacuum vessel (each vessel will be either yellow or blue, to indicate in which of the CBA's two rings a magnet belongs). The 15,000 pound load was then hoisted onto an open, flatbed truck and escorted by two BNL police vehicles to the CBA site. Along the $1^1/_2$ mile route, an accelerometer attached to the vacuum vessel measured the effect of external forces on the magnet.

When the truck arrived at the tunnel entrance, a rigging crew, led by George Oldham, used a crane to lift LM-8 off the truck and place it on a specially-designed transporter. This was pulled through the tunnel by a battery-powered lift truck until it engaged a special track. On this track, the transporter advanced to LM-8's final location where the magnet was transferred by automated equipment. Then, under the direction of Bill Patton, the magnet was secured to the support standards and Richard Rosenka made measurements of the magnet yoke position.

"All in all," said Polk, "the move of LM-8 went off without a hitch, thanks to the efforts of many people, going back as far as four years to the initial design of the transportation scheme." Not only was the magnet installed in short order and in excellent condition, but also the basic procedure for moving magnets was proved safe and reliable. With very little modification, the same steps will be followed to bring in all the magnets that will one day fill the CBA tunnel.

Reardon Named To Directorate

Paul Reardon, who has been associated with the Plasma Physics Laboratory at Princeton University since 1975, has been named Brookhaven's Associate Director for High Energy Facilities. Announcing Reardon's appointment, Laboratory Director Nicholas Samios said, "He is one of the nation's foremost experts in the design and construction of large facilities for high energy physics, and we are extremely pleased that he has accepted this position."

In this newly created post, Reardon will have full responsibility for two high energy facilities at BNL: the Alternating Gradient Synchrotron (AGS) and the Colliding Beam Accelerator (CBA). The AGS, which has offered physicists outstanding research opportunities since 1960, is in the process of being modified for two new endeavors. In 1984, polarized protons will begin to circulate through the AGS; and, before the end of this decade, this accelerator will become an injector for the CBA, the high energy, high luminosity collider now under construction in the Lab's north area. (Ed. note: The original plans for this accelerator are now under review and may be modified. Thus, the generic term CBA has been substituted for the familiar term ISABELLE, which denotes a very specific instrument.)

Reardon's career in physics began in 1954 at the Johns-Manville Research Center. Since then, his research efforts have focused on large particle accelerators and fusion research devices — their conception, design, construction, utilization, operation and management.

As head of the Synchrotron Operating Division at Princeton University from 1956-1964, Reardon worked with the Princeton-Pennsylvania 3 GeV accelerator (PPA). From 1964-1966, he was an accelerator physicist with the high energy physics section of the U.S. Atomic Energy Commission's Division of Research.

From the AEC, Reardon went to the Massachusetts Institute of Technology where, from 1966-1969, he was a research physicist in accelerator physics and project manager at the 400 MeV Bates Linear Accelerator. Then in 1968 he began a seven-year association with Fermi National

Paul Reardon

Laboratory, where he headed the booster synchrotron section from 1968-1970, was director of business administration from 1969-1972, led the energy doubler section from 1972-1974, and served as associate lab director and head of the accelerator division from 1972-1975.

Reardon left Fermilab in 1975 to become project manager of the Tokamak Fusion Test Reactor at Princeton's Plasma Physics Laboratory. In 1978, he became associate director and head of the Department of Technology at that Laboratory. Over the next few months, Reardon will commute between Princeton and BNL, wrapping up his efforts there and becoming familiar with his new responsiblities here.

Although he has not previously been involved in research here, Reardon is no stranger to Brookhaven. In addition to being a frequent consultant, he has been a member of the Visiting Committee for the Physics and Accelerator Departments for three years and was due to assume the next chairmanship of that committee.

Reardon, his wife and children expect to take up permanent residence in this area early next year.

BNL Lecture

A Magnetic State

Since the early days of civilization, man has been intrigued by the phenomenon of magnetism and its natural occurrence, but only in the last few decades have scientists achieved a significant understanding of its origin. Magnetic materials can now be tailor-made for the solid state physicist to imitate isotropic 3-dimensional systems, 2-dimensional solids, or even 1-dimensional solids. These magnetic materials are invaluable as experimental tests of the advanced many-body theories used in several areas of physics

Recently a novel magnetic state was discovered which is called spin glass. In the 193rd Brookhaven Lecture, physicist Stephen M. Shapiro will discuss the origin of the spin glass state, as well as recent experiments performed at Brookhaven using neutron scattering techniques. His lecture, "Spin Glasses: A Physicist's Frustration" will be presented on

Doug Humphrey

Stephen Shapiro

Wednesday, October 27, at 8 p.m. in Berkner Hall.

The spin glass system has the unusual property that at some low temperature, the individual spins associated with unpaired electrons freeze their orientation in such a

(Continued on page 3)

Stargazers On Site

The Astronomical Society was formed in the summer of 1981 for the sole purpose of giving its members opportunities to enjoy and study the sky. Towards this end, the members of this BERA-sponsored organization are looking forward to the day when their new telescope is installed and they can share many hours of stargazing.

Now being readied for use, the telescope was made available to the Society by the Vanderbilt Museum and Planetarium, because BNL offered a site with low levels of light pollution. The telescope, an 8-inch Newtonian with a solid equatorial mount, is expected to be installed before winter. In this cooperative venture, the Lab has provided a site, by an ecology field near the east boundary of the BNL grounds, and a structure of two rooms — one for the telescope and one for an office/laboratory. The Vanderbilt Planetarium is funding the purchase of a three-meter dome to house and protect the telescope. The facility will be used both by members of the Astronomical Society and the Planetarium, which will hold observation sessions there, on a periodic basis, as part of their regular program.

Mort Rosen

Shortly after its arrival at BNL, the new telescope was temporarily assembled and checked out by (from left) Cesar Sastre, Robert Mills and Garman Harbottle.

While the telescope is not large in comparison with similar devices used by amateurs, this installation is made particularly useful by its permanent mounting. This will result in an accuracy of tracking difficult to obtain from portable telescopes.

The Society's members provide a rich pool of technical support, represent a broad spectrum of interests and offer a wide range of astronomical experience. Some have been active amateur astronomers for years, while others have only recently developed an interest in astronomy. Membership is open to all BNL employees and participation is open to members of their families and guests.

The Society's program of activities includes monthly meetings which consist of an informal talk about astronomy by a member or an invited guest, followed by a discussion. On group observation nights, some bring telescopes for all to use. Of course, when the telescope installation is finished, the members — either individually or in spontaneously formed groups — will pursue their own observations. Open house observation nights are also planned.

Those interested in participating in the Astronomical Society, may contact Cesar Sastre, Ext. 4077.

On The Making Of Public Policy

Professor Eula Bingham will lecture on "The Role of Science and Politics in Public Policy Decisions" at 11 a.m. on Friday, October 22 in the Hamilton Seminar Room of the Chemistry Building. The lecture is sponsored by BNL Women In Science and all interested Laboratory staff are invited to attend

Dr. Bingham is currently Research Professor of Environmental Health

Eula Bingham

as well as Vice President and University Dean for Graduate Studies at the University of Cincinnati. She is also president of the American College of Toxicology. From 1977-1981, she was Assistant Secretary of Labor for Occupational Safety and Health and directed the activities of OSHA to deal more effectively with potential chemical hazards to American workers.

Dr. Bingham's research in environmental health includes investigation of the carcinogenic properties of complex mixtures such as petroleum, coal tar, and shale oil, and the role of modifying factors in toxic reponses to environmental chemicals.

The lecture will be followed by a luncheon at noon in Room B of Berkner Hall. The cost is $7.50, and reservations should be made by calling extension 3541.

Metal Toxicology Focus of Workshop

On October 11 and 12, a workshop was held at BNL on the uses of nuclear analytical methods in metal toxicology. The first of its kind, the workshop brought biological and medical scientists, who are working on problems in metal toxicology, together with physical scientists working on developing and applying nuclear analytical methods.

Three broad areas were surveyed: nuclear analytical methods, sources of metals and their pathways to the body, and metal toxicology. Special mention was made of BNL's National Synchrotron Light Source, which promises to revolutionize the whole field because of its very sensitive, multi-element detection capabilities.

During the formal sessions, fourteen speakers presented the results of their research. One of the speakers was Dr. Kathryn Mahaffey of the Food and Drug Administration, who reported on the association between nutritional status and absorption and metabolic response to metals. Mahaffey has found that the metabolic effects resulting from environmental exposure to metals are modified by both nutritional status of the subject and by concurrent exposures to other metals recognized as toxic. For example, reducing dietary intakes of iron and/or calcium increases the percent absorption of ingested lead and cadmium in both experimental animals and human subjects. On the other hand, the administration of cadmium decreases gastrointestinal absorption of iron, calcium and lead. Pointing out the complexity of metal interactions, Mahaffey emphasized the importance of developing safe techniques to estimate multi-element exposure in epidemiology investigations with human subjects, as well as in animal experiments in toxicology or nutrition research.

Also on the program was Dr. Herbert Needleman, from the Children's Hospital in Pittsburgh, who spoke on the neurodevelopmental effects of low level lead exposure. To measure the neuropsychologic effects of unidentified childhood exposure to lead, Needleman and his colleagues did a ten-year study of children living in the Boston area. They collected and analyzed for lead content some 3,000 teeth, compared the performance of children with high dentine lead levels with the performance of children with low levels, and also evaluated, by a teachers' questionnaire, classroom behavior of all children whose teeth were analyzed. Children with high lead levels performed significantly less well on the Weschler Intelligence Scale (particularly the verbal items), on three measures of auditory and verbal processing, on attentional performance as measured by reaction time under conditions of varying delay, and on most items of the teachers' behavioral rating. Needleman said that the defined "no-effect" levels for children exposed to lead have undergone a steady downward revision over the past three decades as new data have shown effects at lower doses. He concluded that permissible exposure levels of lead for children deserve re-examination in light of these data.

The workshop summary was presented by Dr. John Rosen of the Albert Einstein College of Medicine at Montefiore Hospital and Medical Center. A professor of pediatrics at the college, Rosen briefly described his collaboration with BNL scientists Keith Jones and Hobart Kraner. Since 1974, Rosen has been using BNL's 3.5 MV Van de Graaff accelerator to study trace element content of fetal rat bones in organ cultures. Using a nuclear analytical technique called proton induced x-ray emission, he found that calcium disodium EDTA, the drug most commonly used to treat lead poisoning, removed not only the lead in the organ cultures, but also all essential trace metals except copper. Although his results have implications for the treatment protocol of lead poisoning, Rosen says before any changes in treatment are considered, the study must be extended to humans.

Doug Humphrey

Gathered outside Berkner Hall are some of the participants at the recent Workshop on Uses of Nuclear Analytical Methods in Metal Toxicology, held October 11 and 12. Pictured from left are: Gardy Cadet, Brooklyn College; Mattie Ray Spivey Fox, FDA, Washington; Paul Lioy, New York University; Harold Sandstead, USDA, Grand Forks Human Nutrition Research Center; Lee Grodzins, MIT; Keith Jones, BNL; Max Peisach, Southern Universities Nuclear Institute, Republic of South Africa; Stanton Cohn, BNL; Bob Goyer, National Institutes of Health; Jack Winchester, Florida State University; Barry Gordon, BNL; Ted Kneip, New York University; Ian Campbell, University of Guelph, Canada; Kathryn Mahaffey, FDA, Cincinnati; Eric Clayton, Australian Atomic Energy Commission Research Establishment; John Yocum, TRC Environmental Consultants; Richard Wedeen, Veterans Administration Medical Center, New Jersey; John Rosen, Albert Einstein College of Medicine; John Osborne, SUNY at Stony Brook; and Al Hanson, BNL.

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BERNICE PETERSEN, Editor
MONA S. ROWE, Assistant Editor
ANITA COHEN, Reporter

35 BROOKHAVEN AVE., UPTON, N.Y. 11973
Telephone (516)282-2345

Opening Tonight!

Charming new neighbors and long-time poker buddies help Oscar introduce newly-single Felix to the pleasures of "bachelor" life, in the BNL Theater Groups's hilarious production of Neil Simon's comedy "The Odd Couple." The cast consists of: (back row) Bob Kinsey as Felix, Bob Cordaro, Roseanne Melucci, Joe Skelly; (front row) Bill Love as Oscar, Sandi Lane; and (not shown) Karl Swyler and Wes Springhorn.

Curtain time is 8:30 p.m. on Friday and Saturday, October 15, 16, 22 and 23 at Berkner Hall. Tickets will be available at the door: $4 for general admission, $3 for those over 65 or under 18. Discount rates of $3 and $2.50, respectively, are available for blocks of 25 or more tickets purchased in advance. Tickets are good for any one of the four performances. For information call 286-8407, or 282-5096.

Doug Humphrey

BNL Lecture (Cont'd)

manner that the average magnetization of all the atoms is zero. This is a result of the simultaneous presence of interactions favoring different and incompatible kinds of ordering. The spins thus feel "frustrated" in their attempt to order. If the higher temperature state is a ferromagnet, i.e., a state where most of the spins are aligned, decreasing the temperature creates a more disordered state. The structural analogue would be that of a solid which melts upon cooling.

Shapiro will also describe the High Flux Beam Reactor (HFBR) and the manner in which the neutrons are used in the study of magnetism. The HFBR supplies large quantities of thermal neutrons which are useful in probing microscopic interactions in solids.

Stephen Shapiro is a solid state physicist with the Neutron Scattering Group. He received his B. S. in physics from Union College, and his Ph.D. degree from The Johns Hopkins University. He joined the Physics Department in 1971 after a postdoctoral year at the University of Paris. Besides his research in phase transitions and magnetic phenomena, Shapiro has been responsible for assisting visiting scientists in the use of the HFBR.

On the evening of the lecture, a buffet supper will be served at the Brookhaven Center at 6:30 p.m. The price is $7.50 and reservations should be made by calling Ext. 3541 before 5 p.m. that day.

Table Tennis

A meeting to elect new officers for the Table Tennis Club will be held on Thursday, October 21 in the club's playing room at the Recreation Building. All members are urged to attend.

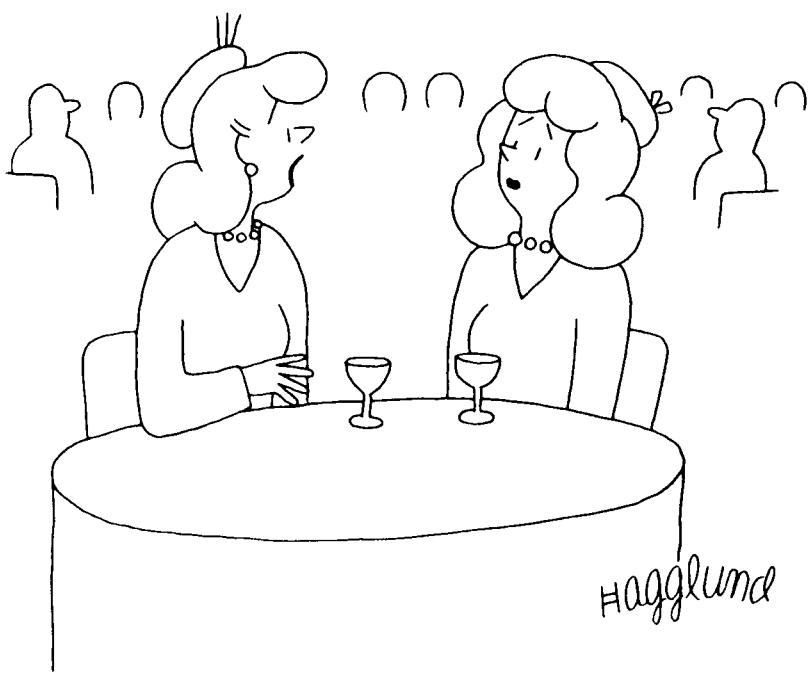
Stony Brook Events

Concert — Full Symphony Orchestra of SUNY at Stony Brook under the direction of Arthur Weisberg, Sunday, October 17 at 3 p.m., Fine Arts Center. Tickets $5 and $3. Reservations 246-5678.

Alumni College Day — Seminars, 9:30 a.m. - 4 p.m., Saturday, October 23, luncheon. Information 246-7771.

Dance — Hartford Ballet, with pianist Ruth Laredo, will open 1982-83 dance series, Saturday, October 23 at 8 p.m. Tickets $8, $10, $12. Reservations 246-5678.

Jazz Concert — The Phil Woods Quartet, Monday, October 25, at 8 p.m. Tickets $5 and $3. Reservations 246-5678.



"HE SPOKE IN MILLIONS...THEN I FOUND OUT HE WAS A BACTERIOLOGIST."

Camera Club

A meeting will be held on Thursday, October 28, at 6 p.m. in the Recreation Building. Have you been avoiding printing your own color prints because it was difficult? The demonstration at this meeting will show you how easy and enjoyable it can be to enlarge your color prints. Non-members are also encouraged to attend.

Halloween Party

On Friday, October 29 at 9 p.m. in the Rec Hall, the Afro-American Culture Club will give their second annual fall party. This year they are having a Halloween costume party and all BNL employees, their families and friends are invited. Prizes will be awarded for the best costumes. There will be a free buffet, cash bar, some surprises and music by "E.T.". Your costume is your admission.

Quilting Club

The BERA Quilting Club will meet on Tuesday, October 19 to see a demonstration of a quilt being put into a frame and hand quilted. The technique of hand quilting will be explained and attendees will be given an opportunity to try quilting on the frame. Call Beth Pile, 475-8099, or Bernie Benz, 928-1068 for the time and location. This will be a morning meeting.

Arrivals & Departures

Arrivals

Earl M. Blanton ..... Director's Ofc.
Alfred J. Della Penna, Jr. ..... Accel.
Christopher G. Hoogendyk ..... DEE
Kathleen A. Tuohy ..... Physics
Li-Hua Yu ..... NSLS

Departures

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

None

Bowling

Purple League

High games were bowled by B. Barberich 205, J. Connelly 216, E. Meier 201, A. Pinelli 209/203, D. Hall 206, L. Musso converted the 4/6/10 split.

White League

N. Tyler had games of 219/206, P. Manzella 171/181, N. Erickson 196, T. Erickson 209, J. Sells 178, J. Petro 246, L. Petro 179, S. Smith 172/183/188/543, M. Stoeckel converted the 5/10 twice.

Red & Green League

R. Jones rolled games of 247/226, G. Meinken 212/210, R. Wiseman 235, R. Larsen 212, J. Ferrante 211, J. Medaris 211, L. Jacobson 205, J. Morris 204, J. Petro 202, N. Fewell 201.

Pink League

E. Jacobson bowled a 164, R. Rosati 168, D. Johnson 163, H. Keeley 208.

Volleyball

Rosters for both Mixed and Open League teams are due by Friday, October 15, to Bob Marascia, Bldg. 911B, Mixed League; Don Litcher, Bldg. 515, Open League. Anyone needing a roster form or minutes of the first volleyball meeting, please call Lois Marascia, Ext. 4904.

The volleyball season will begin on November 1. Anyone looking for a team, or team captains looking for players, should call Bob Marascia on Ext. 4672.

Concert Reminder

The Quartetto Beethoven di Roma will present a concert on Monday, October 18 at 8:30 p.m. in Berkner Hall. General admission is $7; students and senior citizens, $4; and those under 18, $3. Tickets are available at the door.

Cafeteria Menu

Week Ending October 22, 1982

Monday, October 18		
Cream of chicken soup	(cup)	.65
	(bowl)	.75
Salisbury steak w/mushroom gravy & 1 veg.		1.85
Ham & noodle au gratin & 1 veg.		1.85
Hot Deli: Turkey breast	(bread)	1.85
	(roll)	1.95
Tuesday, October 19		
Beef barley with vegetables	(cup)	.65
	(bowl)	.75
London broil & 1 veg.		2.05
Chile Relenos casserole		1.80
Hot Deli: Grilled Reuben		1.90
Wednesday, October 20		
Split pea soup	(cup)	.65
	(bowl)	.75
Chicken quarter w/mushrooms in wine sauce & 1 veg.		1.90
Old fashioned beef stew on egg noodles		1.95
Hot Deli: Corned beef	(bread)	1.85
	(roll)	1.95
Thursday, October 21		
French onion soup w/croutons	(cup)	.65
	(bowl)	.75
Batter-fried steak & 1 veg.		1.95
Fettucine w/clam sauce		1.85
Hot Deli: Ham cheddar melt	(bread)	1.85
	(roll)	1.95
Friday, October 22		
Boston clam chowder	(cup)	.65
	(bowl)	.76
Breaded fish fillet & 1 veg.		1.85
Meatballs stroganoff on white rice		1.85
Hot Deli: Hot beef w/peppers and onions	(bread)	1.85
	(roll)	1.95

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. In keeping with the Affirmative Action plan, selection decisions are made without regard to age, race, color, religion, national origin, sex, handicap or veteran status.

Each week, the Personnel Office lists new personnel placement requisitions. The purpose of these listings is, first, to provide open placement information on all non-scientific staff positions; second, to give employees an opportunity to request consideration for themselves through Personnel; and, finally, for general recruiting purposes. Because of the priority preference policy stated above, each listing does not necessarily represent an opportunity for all candidates. As a guide to readers, the listings are grouped according to the anticipated area of recruitment.

Except when operational needs require otherwise, positions will remain open for one week following publication date.

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

The vacancies listed below have been exempted by the Director's Office from the current freeze on open requisitions.

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

1774. TECHNICAL POSITION - (4 E/M positions) - Requires AAS in electrical or mechanical technology or equivalent experience. Will be involved in installing magnets in the CBA tunnel, as well as modifying and using the magnet test system. Shift work required. Colliding Beam Accelerator Project/Accelerator Department.

1775. TECHNICAL POSITION - Requires previous electromechanical skills, knowledge of hand tools and an eagerness to learn vacuum techniques and instrumentation. Basic electronics knowledge and previous vacuum experience very desirable. Some shift work. Colliding Beam Accelerator Project/Accelerator Department.

1776. TECHNICAL POSITION - Requires AAS degree in mechanical technology or equivalent and ability to assemble small components from exotic materials with close tolerances. Knowledge of precision measuring equipment, machine tools, cleaning equipment and vacuum techniques very desirable. Accelerator Department.

LABORATORY RECRUITMENT: Opportunities for present Laboratory employees.

1778. ENVIRONMENTAL ASSOCIATE - Requires MS in environmental sciences or equivalent. Experience in the area of environmental monitoring and assessment with a knowledge of environmental regulations is required. Demonstrated ability to prepare technical reports and to deal effectively with management and regulatory authorities is essential. Ability and interest in assisting in ecological studies concerning the effects of Laboratory operations on aquatic, terrestrial and groundwater environments is desirable. Safety and Environmental Protection Division. (Reposting of Job No. 1681).

Autos & Auto Supplies

79 HONDA - CM400T, 2,000 mi., garaged, must sell, $1,000. Ext. 7125.

72 VOLVO - 145, blue, a/t, radio, good cond., $1,800. Bob, Ext. 4965 or 289-1834.

RIMS - (2), 13", for Plymouth Valiant, $10. Ext. 2041.

SNOW TIRES - (2), H-78-15, good cond., both for $30. Ext. 2964.

74 VEGA - must see, 4 cyl., p/s, a/t, good cond. Glenn, 732-3350 days or 758-7353 eves.

77 BUICK LeSABRE - 4 dr. custom, a/c, new tires and shocks, excel. in & out, with spare snow tires, $3,150. Fujiki, Ext. 2338.

74 GREMLIN - stick shift, a/m radio, good cond., excel. mpg, a real bargain. 728-2223.

79 HONDA HAWK - motorcycle, 400cc, better than new, asking $995. 588-0805 eves.

79 HONDA DIRT BIKE - model Z50R, 50cc, excel. cond., hardly used. 878-0516 after 6 p.m.

73 OLDS DELTA 88 - a/c, a/t, p/b, p/s, am/fm stereo, new battery, trans., alternator, muffler, good tech. cond. Schauer, Ext. 7757.

TIRES - (1), C-78-14, $3; (2), H-78-14, $7; (2), studded snows, all on Ford rims. Pete, Ext. 4028.

RIMS - Ford, (1) 14" pair, (1) 15" pair, $5 pair; aluminum mags, Ford, 7"x15", set of four, $75. 878-9534.

79 YAMAHA - 650 Special 2, 10,000 mi., excel., $1,350. Henry, 281-3120.

74 DATSUN B210 - hatch, runs, $500. Steve, 924-4826.

MOTORCYCLE WINDSHIELD - $30. 581-7656.

VW CHASSIS - off road, complete less motor, $150. 924-9292 Tues.-Sat.

TRUCK CAMPER - Sun Line, 9-½ ft., fully self-contained, excel. cond., $2,500. Bob Johnson, Ext. 3354.

73 VOLVO - 164, 4 dr., green leather int., sheepskin covers, a/c, am/fm, auto, good cond., Ext. 2888 or 286-0422 eves.

68 AMC - Rebel, auto, 6 cyl., new battery, (2) tires, brakes, 60,000 orig. mi., $450. Ext. 4695 or 744-1917.

MERCEDES - slant 6 cyl., head complete except for valve cover, $275; Buick, straight 8 cyl., 3-¼ in. dia. head, ser #1640827-2, $100. 878-0201.

BUICK TRANSMISSIONS - 1956-1957 Dynaflow, ser #1342992-6, $175; late 1930 or early 1940 Short Tail, standard, ser #317853-1, $100. 878-0201.

71 FORD LTD - excel. cond., a/c, $500; 1967 Dodge Dart, good for parts, $60. Ext. 3606.

73 PLYMOUTH - 4 dr. sedan, auto, a/c, new tires. Ext. 3036 or 427-0768 after 6 p.m.

67 PLYMOUTH BARRACUDA - very good cond., best offer, must sell. Tony, Ext. 3850.

70 RIVIERA CLASSIC - excel. cond. in & out, rebuilt eng., new exhaust, brakes all around, front end parts, p/b, p/s, p/w, a/c, tilt steering, power seats, new plush carpet, very good tires, new shocks, $2,200. 878-1688 eves.

81 TOYOTA TERCEL - 4 dr., auto., a/c, rear defogger, p/b, safety door locks, 11,000 mi., $4,500. 475-1887.

72 CHEVY STATION WAGON - reliable transportation, excel. mech. cond., $600 firm. Pat, Ext. 2939.

SNOW TIRES - (2) Sears Tractionex radials, 78B-13, like new, $25 ea. Frank Rumph, Ext. 4581 or 588-3565.

79 SUZUKI - 550E, 12,300 mi., extras, mint cond., $825. Leave message at 821-9296.

75 TRIUMPH - TR6, good cond., $3,000. Ext. 5053 or 472-1735 after 6 p.m.

Boats & Marine Supplies

GAS TANK - for Mercury outboard engine, $15. Ext. 4237.

17' COLEMAN - canoe, paddles, 2 yrs. old, good cond., $275. 499-5932.

KAYAK - fiberglass, with airbags & paddle, $180. Ext. 2521 or 928-8379 eves.

27' MOTOR - rebuilt Lewis, 40% completed, $150. 924-9292 Tues.-Sat.

OUTBOARD MOTORS - (2), 115 HP Evinrudes, good cond., $750 ea. 286-1618 eves.

Free

KITTENS - adorable, playful, 4 males, 1 female. 289-0532 after 5:30 p.m.

Yard Sales

MASTIC - must see, 231 Patchogue Ave., off Mastic Rd., Fri.-Sun., exercise bike, clothes, etc. 399-0864.

PORT JEFFERSON STATION - multi-family, Oct. 16, rain date Oct. 17, 68 Central, between 112 & Canal, furniture, & household. 473-5864.

MANORVILLE - Oct. 16, 90 Dayton Ave., 5 mi. from Lab, assorted household goods. 878-2655.

Miscellaneous

GIRL'S BIKE - 18" Ross, very good cond., $25; twin size mattress & box spring, $15; all wood dresser, $30; baby buggie, $15. Ext. 2611 or 751-4098.

BEDROOM SET - 5 drawer dresser; 2 night stands with draws; two lamps, $100. Rick, Ext. 4100.

TENNIS SHOES - Pony, women's size 8, nylon & leather, worn once, $20. Gail, Ext. 3338.

BOWL & PITCHER - cream color, very pretty, $40; Mexican pitcher and plate, $15; electrophonic am/fm radio/record player/8-track tape player, walnut, needs needle, size listed, $30; 9" silverplate Revere bowl, $20; hanging wood planter, unusual macrame rope, $15; paintings; plates; woman's fur hat, $5; antique anniversary clock, running, German made, lovely, $100, firm. 589-5126.

BLIZZARD SKIS - 185, $70; solomon bindings, 444, $55; Volk skis, $25; Caber boots, 10/10-1/2, $25. Bob, 929-6360.

BELT MASSAGER - $10. Ext. 3319 or 751-7140.

MEN'S BOWLING SHOES - like new, size 8-½, $10. 286-8116.

PAINT - Sears Weatherbeater, exterior, flat white, 1 gal., $10. Pete, Ext. 7627.

ALPINE MILKING GOAT - registered, 1-½ yrs., also kid (female), 7 mos. 363-2736.

CASSETTE TAPES - C-90, BASF Pro II, CrO_2, $2.75 ea. Ext. 2521 or 928-8379.

HART SKIS - 170cc, with Soloman bindings, $60. John, Ext. 4312.

TABLES - (3), Lane, fruitwood, good cond., coffee/step/square, $150. Jerry, Ext. 7427.

MOUTON LAMB JACKET - fits sizes 14-16, good cond., $75. 475-0144.

ADIRONDACK CHAIRS - $25 ea.; picnic table & benches, $25. Ext. 2145.

TYPEWRITER - office type, Model C, good cond. Ext. 2268 or 727-5194.

WEDDING GOWN - and veil, custom made, off-white, size 8, new $450, asking $225. 289-7658.

ATARI GAME - like new, hardly used, asking $110. 878-0516 after 6 p.m.

CORNER SINK - approx. 13"x13", great for small bathroom, also medicine chest. Bill, Ext. 2378 or 286-0243.

NECKLACE - 14 kt. gold S chain with 3 diamonds, $95; 14 kt. gold braided S chain bracelet, $25. Linda, Ext. 7745.

FIREWOOD - split, seasoned oak, 4'x16'x18', delivered, $110. 732-2849 after 6 p.m.

FIREWOOD - $95 per cord. Kevin, 744-9356 after 6.

BASEBALL GLOVE - small, good cond. Ext. 3651.

REFRIGERATOR - 2 dr. side-by-side, green, asking $250; Magic Chef elec. stove, 42", white, asking $75. 399-2149.

MEN'S GOLF CLUBS - custom made, Persimmon Woods, set of four, almost new, $160. 588-8604 eves.

POOL TABLE - full size; Hoover floor waxer; exercise bike; asst. H.O. equipment. 331-4768.

UNIFORM - Girl Scout, blouse, pants, shorts, jumper, tie, $10. 581-7656.

CONSOLE TV - and VTR, Sony LV1901, TV fine, recorder needs work. Mike, 281-6070.

PUPPIES - German short haired pointers, AKC reg., parents on premises, excel. hunters, must be seen, reasonably priced. 924-9164 5 p.m. to 8 p.m.

PUPPIES - Dobie, males & female, black & rust. 924-5871 5 p.m. to 8 p.m.

BUTCHER BLOCK TABLE - authentic, $75; ornate oak sideboard; beveled mirror, brass hardware, excel., $350. 475-2090 eves.

DOUBLE BED - bookcase, headboard; dinette set; couch; tiffany style lamp; Garrard record player; upholstered chair. 744-6874.

ATARI CARTRIDGES - hardly used, reasonable. 744-8063 days.

FREEZER - Whirpool, upright, 20 cu. ft., 5-½ yrs. ld, asking $250. 751-6418.

TABLE - modern chrome, $15; flexing exerciser, $10; kitchen fixture, $20; small wrought iron fixture, $10; air purifier, $5; snack table set, $5; air conditioner, $5. Ed, 585-2088.

CHEST - mahogany; queen mattress; large braided rug; all good cond. Ext. 3631 or 689-8040.

FIRE WOOD - 4'x4'x8', 100% hard wood, split and delivered, $115 cord. Harold, 467-8976.

COAL STOVE - Hans & Sohn 121.12, 38,000 BTU, used 3 weeks, sells for $725, asking $575; speakers, Acid 105, 3-way acoustic suspension ½ side firing tweeter, list $750/pair, asking $500. Al, Ext. 2072.

LAMPS - (1) black with brass, $25; (1) dark purple with wood stand, $20; wooden carved chairs, with upholstered sat and back, $20 ea.; coal stove, tan and cocoa enamel, used 1 season, heats 1200 sq. ft., $950, new, asking $500. Ext. 2888 or 286-0422.

DINING ROOM - Haywood Wakefield Blone de Oak, table, 4 chairs, china, buffet, $275. 281-8044.

CAPTAINS BED - (4) large draws underneath, mattress incl., dark pine, $75. 751-8158 after 2:30 p.m.

EXERCISER RECLINER - $5. Ext. 3319 or 751-7140.

TELESCOPE - 6" reflector, equatorial mount, eyepieces, setting circles. Rick, Ext. 3803.

ELECTRIC BLANKET - quuen size, $45; 20 and 6 gal aquaria, with acess, $45; Shure V15-Type 3 cartridge, good cond., $40. Rick, Ext. 3932.

PROJECTOR - Airquipt remote 35mm, 12-100 slide reels screen, all for $45. Jack, Ext. 4411 or 929-8287.

BOWLING BALL - 14 lbs., case, shoes (women's size 8). Ellie, Ext. 4355.

SKIS - head 190cm, bindings, straps, carrying case, poles, boots, (women's size 8). Carol, Ext. 4398.

COMPUTER - TRS-80, Model #1, level 2, 4K RAM, good cond., dust covers, Backgammon/Black Jack cassette incl., new $699, asking $400. Jo, Ext. 2502.

COMPUTER - TRS-80, Model #1, 2 drive, disk system, line printer and matching tables, 48K documentation, dust covers, incl. Mark, Ext. 2504.

WATER TANK - and pump with 1.5 HP motor, best offer. Ron, Ext. 4449 or 751-8403 after 6 p.m.

CARRIAGE/STROLLER - navt blue, excel. cond., $25. 399-0864.

DART BOARD - and wood cabinet, excel. cond., professional. $60. Bud, 281-2289.

LADIE'S BIKE - Ross Gran Tour II, lightweight, 10 spd., new, asking $160, Penn coal stove, 60,000 BTU, also burns wood, 1 season old, must sell, best offer. Ext. 3890 or 924-4250.

DAZEY SEAL-A-MEAL - brand new, large size, ample supply of plastic bags. Walt, Ext. 2907 or 698-0576.

FREEZER - G.R., upright, 14.8 cu. ft., manual defrost., exel. running. cond. Dave, Ext. 7922 or 369-1792 before 8 p.m.

SKI PANTS - men's stretch, dark blue, 34R, brand new, $85. Ext. 4727.

ELECTRONIC KEYBOARD - Casiotone MT-10, 22 preset sounds, includes case and outlet adapter. Stacy, Ext. 3296.

FIREPLACE GLASS DOORS - 28'Hx36'W, $20. Frank Rumph, Ext. 4581 or 588-3565.

BRICK PIECES - decorative, 25-30, covers 6 sq. ft., new $5; yellow pleated gown, worn once, size 11, paid $75, now $45. 744-9677.

DINING ROOM SET - table and 6 cane chairs, contemporary design, beige material on seats, walnut hutch ncluded, excel. cond., 2 yrs. old, $650 or best offer; kitchen set, oval woodtone top, 4 bucket seats, haugahyde tan, asking $250 or best offer, must sell, relocating. Ext. 3139 or 585-5256 Mon.-Fri. after 6 p.m.

REFRIGERATOR/FREEZER - G.E. 14', $175; Tappan gas range, 30", $150; both white, excellent. Chris, Ext. 4572/163 or 265-0163 after 5:30 p.m.

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

GREENPORT - mobile home (12'x56'), on land (50'x120'), 2 bdrms., 2 baths, screened-in porch (11'x17'), ¼ basement, large metal storage shed, nice area. Sharon, Ext. 3513 or 727-0578 after 6.

STORY BOOK RANCH - L-shape, 3 bdrms., 2 baths, finished basement, beautiful treed property, $88,900. 751-2229 eves or 360-1600 days.

N. CORAM - colonial, supermint, new w/w throughout, new paint, excel. school dist., profess. landscaped, 3 bdrms., 2-½ baths, l/r, d/r, eik, den, laundry room, 2 car garage. 928-5732 eves.

WEST ISLIP - waterfront, private community with beach, 4 bdrms., 2-½ baths, rec. room and fireplace, grat room with cathedral ceiling and fireplace, woodburning stove, dining area, view of bay, quiet neighborhood. 669-4216.

SMITHTOWN/ST. JAMES - 3 bdrm cedar ranch, full basement, mint, assumable mort. $22,000 at 8-½%, $62,000. 584-7206.

BELLPORT VILLAGE - 3 bdrm. ranch, 1-½ baths, study, full basement, lots storage, walk to schools and shopping, assumable mort., owner assisted financing, $60,000. 286-0925.

MEDFORD - Birchwood at Blue Ridge, condominium, 3 bdrms., many extras, facing golf course, 15 min. from Lab, $50's. 698-7213.

For Rent

SETAUKET - 4 bdrm. colonial, 2-½ bath, 2 car garage, prime area, walk to SUNY, beautiful landscape, rent with option to buy, 8-½% assumable mortgage. Ext. 2611 or 751-4098.

REMSENBURG - passive solar, 6 rms., furnished, available now through May 1983, $385/mo. 325-0582 after 6 p.m.

SHIRLEY - 3 bdrm. home, fireplace, very comfortable, to share. 399-3910 eves.

PORT JEFFERSON - spacious 1 bdrm apartment, partly furnished, beautiful area, very special, $450 for all. 473-8470.

BAYPORT - 1-½ acres, 3 bdrms., bath, l/r, kitchen, 2 car garage, partially furnished, oil hot water, Nov.-May, $600/mo. or for sale, $150,000. 472-2633 after 6 p.m.

ROCKY POINT - 2 bdrm. log cabin, kitchen, bath, l/r, f/p, $260/mo. Tom, Ext. 4819.

MANORVILLE - 3 bdrm. house, fenced yard, $500/mo. 878-0201.

CORAM - 1 bdrm cottage, $285/mo. plus util. 698-0744 eves.

N. SHIRLEY - 3 bdrm. house, $400/mo. 281-3105 after 5 p.m.

Carpools

ROCKVILLE CENTER - or vicinity. R. Rever, Ext. 4852.

BABYLON/WEST ISLIP - driver needed for 4-person pool. Ext. 2500.

PLAINVIEW - 3 person carpool looking for 4th. Ben, Ext. 5291 or Bob, Ext. 5145.

Lost & Found

LOST - initial ring, L.S., great sentimental value. 584-6154.

Wanted

BOWLER - female, for Shirley mixed league on Thursdays, 6:30 p.m. Ext. 2459.

OLD AIR GUNS - 1978 and older. 286-8116 after 6 p.m.

ROUTER TABLE - and circular saw table; boy's bike, good cond. Liz, Ext. 2082. 286-8563.

MANUAL - for 1963 Buick repair. Fred, Ext. 4823 or 7947 or 588-2268 after 5.

CAR - good cond., 4-6 cyl. only, under $1,000. Ext. 4501.

BRAKE DRUM - large size, any make. George Hrabak, Ext. 3536.

HOUSEMATE - mature woman wishes to share home with same, $50 week. Patchogue Shores, E. Patchogue. 475-2989.

REFRIGERATOR - reasonable, also vacuum cleaner. Ext. 4303 or 878-1688 eves.

TOY KNITTING MACHINE - Mattel brand "Knit Magic," or craft machine, will pay $5. 928-1068.

Services

Services are listed as a courtesy to BNL employees. They are neither screened nor recommended by the Bulletin.

CLEANING SERVICE - office/home /apartment, work by owners, free estimates, refs. Ray, 732-4885 eves.

HOUSE PAINTING - interiors, winter time discount, professional, insured, many BNL refs. Bob, 289-7657 after 6 p.m.

SHEETROCKING - & spackling, free estimates. Kevin, 567-6651.

CHILD CARE - my home in Bellport, lots of TLC, any age, infants welcome. 286-2435.

BABYSITTING - days/nights/weekends, reliable 18 yr. old, refs. upon request. Jodi, 924-7832.

PAINTING - wallpapering, panelling, carpentry, free estimate. John, 924-5012.

ASPHALT PAVING - & sealer. Bob, 475-4382.

CHILD CARE - in my home, child safety proof environment with activities and love. Kathy, 929-8809.

ELECTRICIAN - licensed, reasonable rates, insured, specializing in service changes, no job too small. 744-0722.

PLUMBING AND HEATING - Lab discount. John, 654-8189.

OIL BURNER SERVICE - 15 yrs. exp., compl. vacuun of fire box, new nozzle, new filter, 24 hr. service. 286-8862.

DISC JOCKEY - available for weddings, school dances, private parties, fire depts., etc., all styles, continuous music, fantastic light show. 286-8862.

PAINTING - wallpapering, panelling, refs., free estimates, reasonable. John, 924-5012.

BABYSITTER - exper. mother, Mon.-Fri., full or part time, my home in Middle Island. 924-0565.

EXTERMINATING - licensed men, all phases of pest control and termite specialists, no job too small, free setimates, Lab discount. 281-5445.

TRUCK FOR HIRE - moving, clearing, cleaning, and other misc. jobs, Lab discount. 281-5445.

WATERPROOFING - 15 yrs. in the business, we guarantee all of our work in writing, free estimates, Lab discount. 281-5445.

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