BROOKHAVEN BULLETIN
Volume 34 - Number 39 / October 3, 1980
BROOKHAVEN NATIONAL LABORATORY

In Celebration Of Maurice Goldhaber

Hundreds of Maurice Goldhaber's colleagues will gather at Berkner Hall today to show their high regard for this distinguished physicist and the work he has accomplished during a long and active career.

The celebration will start this afternoon at 2 p.m. with a symposium at which four prominent physicists will speak. Lab Director George Vineyard will open the meeting. The speakers and their topics are:

Nobel Laureate Sheldon L. Glashow, Harvard University, "Breakdown of Conservation Laws"

Sir Denys Wilkinson, University of Sussex, "The Changing Nucleus"

Professor Martin Deutsch, Massachusetts Institute of Technology, "Some Uses for Nuclear Physics"

Professor Robert E. Marshak, Virginia Polytechnic Institute, "Helicity of the Neutrino"

Although there is a formal invitation list, other interested staff members are invited to view the televised proceedings in Room B.

Following a reception and dinner, Dr. Vineyard and AUI President Gerald F. Tape will address the guests. The climax of the evening will be a Festschrift Presentation by Dr. Gerald Feinberg, Columbia University.

The tradition of a "Festschrift" originated in Germany. By definition, it is a body of writing published in honor of someone on a festive occasion.

To honor Dr. Goldhaber, a 247-page volume of invited articles written by a number of his colleagues, some of whom were once his students, will be presented to him. The articles deal with a broad range of physics, including nuclear, particle, and atomic physics, as well as applications of nuclear techniques to medicine. The authors are well known physicists, including such luminaries as Edward Teller, and Nobel Laureates T. D. Lee, C.N. Yang, and Rosalyn Yalow. The collection of articles, edited by Gerald Feinberg, Andrew Sunyar and Joseph Weneser, was accepted by the New York Academy of Sciences, which has prepared it for publication in its Transactions, Series II, Volume 40.

Maurice Goldhaber was appointed AUI Distinguished Scientist in 1973, after serving as BNL Director since 1961. He came to Brookhaven in 1950 as a Senior Scientist, following 12 years on the faculty of the University of Illinois. Born in Austria, he received his Ph.D. from Cambridge University, where he worked with Sir James Chadwick and R.H. Fowler at the Cavendish Laboratory. Dr. Goldhaber has been an Adjunct Professor at the Institute for Theoretical Physics, SUNY, Stony Brook, since 1965. He is currently Vice President Elect of The American Physical Society and will assume the presidency of the Society in 1982.

His main research contributions are in the fields of nuclear physics and fundamental particles, and cover experiment, systematics, technique and theory. He has participated in many discoveries, a few of which are: the nuclear photo-effect, role of spin in nuclear reactions, slow neutrons (interactions and neutron detectors), the first observations of nuclear disintegrations in photographic emulsions, classification of nuclear isomers, giant dipole resonance, and the helicity of the neutrino. Dr. Goldhaber is now engaged in a large-scale search for proton decay in collaboration with physicists at the University of California at Irvine, and the University of Michigan.

Mort Rosen

Maurice Goldhaber

Super(conducting) Heroes

In mid-July, 63 engineers and technicians in the Coil Production Group of ISABELLE's Magnet Division went into high gear, working six days a week in two shifts. Two weeks ago, they revved into overdrive, working three shifts around the clock. Their goal? Six coil assemblies before October 1.

The group proved that a lot of team work goes a long, long way – 120 feet of coil assemblies, at 20 feet apiece, almost half the length of a football field. It was touchdown a week ago.

ISABELLE will use a thousand superconducting magnets to bend and focus protons as they are accelerated to 400 GeV in each of two rings. The six coil assemblies are developmental models of what will eventually be at the heart of every ISABELLE dipole magnet.

Each coil contains 115 pounds of superconducting braid a half mile long, which is made of 97 wires of niobium titanium superconductor in a copper matrix. The coils are built as two halves and assembled in various ways to test different parameters. Two of the six are banded together over their full length with aluminum, two with fiberglass, and two with fiberglass bands covering half their surfaces.

Each coil assembly is then machined and re-machined until it is straight to 7 mils and round to 1 mil.

The next step is a critical test of workmanship. After the coil assembly is cooled to 78°K (−319°F) to reduce its size, it is pneumatically driven into an iron core to form a magnet.

So far, four out of the six assemblies have been successfully shot into cores. Considering the tight tolerances involved in this shrink fit method, the Coil Production Group is justifiably proud of its work. Al Bertsche, engineer in charge of the group, expects no problems with the remaining two. "These last ten weeks were rough on people," he said, "but everyone pulled together and we got the job done."

Mort Rosen

A lot of teamwork goes into making superconducting magnets for ISABELLE. The coil production, cryogenics and magnet assembly groups in the Magnet Division recently built six developmental magnets. Final coil assembly takes place in Building 905, where coil halves are put together to make complete dipole assemblies.

MARK XVIII - Training Pays Off

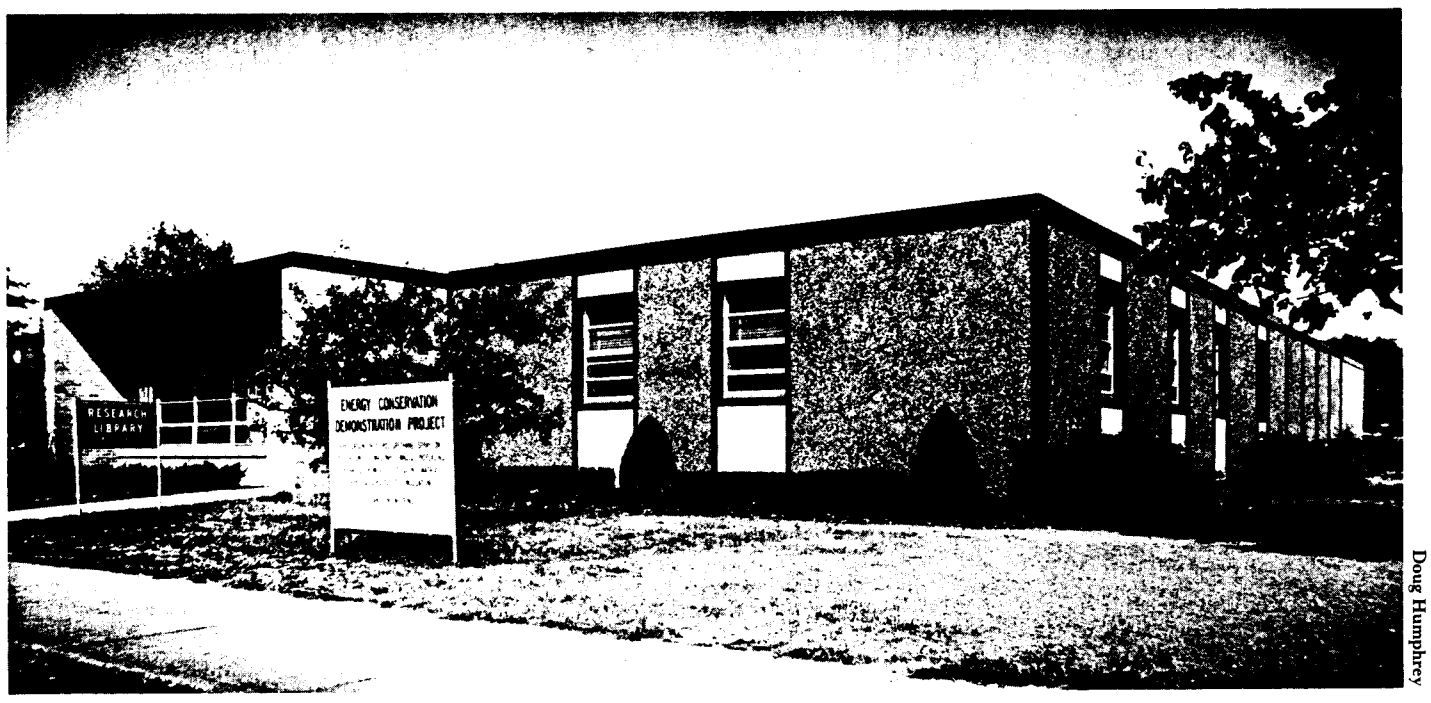
ISABELLE's Magnet Division recently celebrated another success. MARK XVIII, a developmental superconducting dipole magnet, reached 50 kilogauss during tests.

The achievement comes after several years of difficulty in getting magnets up to their design field. It has been taking several weeks to pump up a magnet. Here's what usually happens: current is put into a magnet, and its field goes up accordingly. But suddenly, the magnet quenches (loses its superconductivity) and deposits its energy in a liquid helium refrigerant. This quenching process has to be repeated many times before a magnet gets up to its design field. Luckily, however, a superconducting magnet has a remarkable ability to "train," which means that each time current is applied, the magnetic field goes higher. Edward Bleser, Head of the Magnet Division, says, "It's as though a magnet can remember where it had been. Unfortunately, training usually takes a long time."

No one really understands training. It could be affected by construction techniques, cooling methods, or perhaps something inherent in superconductors.

"What's significant about MARK XVIII," says Bleser, "is that it trained up to 50 kilogauss very quickly and in large steps."

When a magnet is brought up to field, it is under tremendous internal pressure due to magnetic forces–4,000 psi (a bicycle tire is 65 psi). One theory on why it takes so long to train is that when a magnet is under so much pressure, the conductor moves, and the movement triggers premature quenching. Mark XVIII was assembled with a lot of pre-compression, which helped reduce motion and thus reduce training.



Doug Humphrey

The new look for the Library combines eye appeal with energy conserving ideas. Recently coated with exterior insulation, the south and east walls now have an R value of 17.

New Jacket For Books

The Library had its face lifted. The operation not only improves its appearance, but, more importantly, will reduce energy costs and protect it from weather damage.

Insulating the exterior surface of the walls was the method used, and is the second phase of an insulation project begun at another building last November. At Building 356, insulation was applied to the masonry wing with the exterior walls coated in various finishes to demonstrate aesthetic potential. A subsequent thermography scan of the building indicated that the process had substantially reduced heat transfer through the old walls.

The Library is constructed of concrete block walls. The exterior surface of most walls is faced with brick. On the south and east sides of the building, the concrete block of the original Army structure was still exposed. These sections were in generally poor condition. Deteriorating mortar joints, numerous cracks and peeling paint were evident.

To start the renovation process, treated wood nailers were fastened to the walls. They were covered with painted sheet aluminum to create a modular pattern and to act as stops at the windows. Polyurethane foam insulation was sprayed on between the strips, an epoxy matrix was troweled on the insulation surface, and a stone aggregate embedded in the matrix to give it a pleasing finish. The matrix and stone also provide protection against fire and the sun's ultraviolet rays. The whole process adds up to an R value of 17, the DOE standard for exterior walls.

The announcement of the BNL process last year resulted in considerable publicity. According to John Iulo, head of the project, his office received numerous requests from around the country for more information. If sufficient funding becomes available, Iulo says that Plant Engineering will insulate the remaining World War II masonry buildings on site.

Doug Humphrey

Parts of the old Library exterior showed cracking cinder block walls.

15,000 Tour BNL

It was a hot Saturday in July. Buses were shuttling between the Exhibit Center and Berkner Hall with the precision of an assembly line, and tour guides were moving at top speed. Twelve hundred visitors had come to see Darth Vader, R2D2, and Princess Leia, and to tour research facilities at BNL. Sunday was a repeat, with crowds swelling to 1,500.

An average weekend tour day at the Lab brought about 300 guests. The tour usually began with a showing of Brookhaven's "Quest." Then visitors took a bus tour of about 800 acres of the Lab site. A walking tour of the Exhibit Center included displays on the early years at BNL and current research projects in all the departments. In the mini tour, BNL staff members volunteered their time to talk about their work and show visitors experimental areas. Throughout the entire tour, professional guides accompanied visitors and gave general information about the Lab and research done here.

The tour season began on June 1, with the Second Annual Exhibit Center Kite Fly. The season came to a close two weekends ago, with the energy-efficient Brookhaven House drawing record crowds of over 4,000.

Now that the 1980 summer tour program is over (with a total count of more than 15,000 visitors), the tour guide staff will begin tours for high school students who are talented in science and math.

NYC Train Trip

The Hospitality Committee is planning a group railroad trip to the city on Wednesday, October 15. Departure will be at 7:55 a. m. from the Patchogue LIRR station. Round-trip fare for adults is **$3.25,** 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,** October 9. 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.

Stony Brook Events

Concert: Willy Nile, 8 and 11 p.m., October 3, Stony Brook Union Auditorium. Students, $4.50; others, $6.50. Information: 246-7085.

Concert: Graduate Orchestra, David Lawton conducting, 8 p.m., October 3, Recital Hall, Fine Arts Center. Students, Sr. Citizens, $1; others, $2.

Theater: "St. Mark's Gospel," featuring Michael Tolaydo, 3 p.m., October 5, Main Auditorium, Fine Arts Center. Part of the Fine Arts Center's Theatre Series. Students, Sr. Citizens, $6; others, $12, $10, $8. Series tickets, $30, $24, $18. Information: 246-5678.

Recital: Harpsichordist John Baboukis 8 p.m., October 5, Recital Hall, Fine Arts Center.

Recital: Pianist Neal Larrabee, 8 p.m., October 6, Recital Hall, Fine Arts Center.

Films: "Italian-American" and "The Quiet One," 7:30 p.m., October 8, 102 Lecture Center. Information: 246-5654.

Theater: Clifford Odets' "Awake and Sing." Wed. - Sat., Oct. 8-11 and 15-18. 8 p.m., Fine Arts Center. Students, Sr. Citizens, $2; faculty, staff, alumni, $3; others $4. Information: 246-5678.

Mime Theater: Warsaw Mime Theater, 8 p.m., October 11, Main Auditorium, Fine Arts Center. $8, $6, $4; Students, Sr. Citizen prices to be announced. Information: 246-5678. To be repeated 3 p.m., Sun., Oct. 12.

Recital: Pianist Gayle Martin, 5 p.m., October 12, Sunwood Estate, Mt. Grey Rd., Old Field. Part of the Sunwood Sundays at Five series. $6; series tickets, $25. Information; 246-5678; Friends of Sunwood, PO Box 53, Setauket, NY 11733.

Hospitality News

A morning coffee will be held Tuesday, October 7, from 9:30 to 11:30 a.m., in the Brookhaven Center.

Featured at this "coffee" will be a Japanese Tea Ceremony, performed by Satsuki Matsuzuru dressed in one of her beautiful kimonos.

All wives of Laboratory employees are welcome. Please come and bring the children. Babysitting will be provided free of charge. It is suggested that you bring along a toy or two for your child to play with.

Cooking Exchange

Join us for some good old New England cooking at the next meeting of the Cooking Exchange. Fish chowder, johnny cakes and Indian pudding are a few of the recipes that will be demonstrated on Wednesday, October 8, at 12:30 p.m. in the Recreation Building.

There is a charge of $1 per adult and babysitting is provided at 25¢ per child.

Call Robin Metz (821-1039) or Ruth Fernow (928-8465) for further information.

Theater Group

The Theater Group welcomes you to the first meeting of the season on Wednesday, October 8, at 8 p.m. in Berkner Hall.

There will be an interesting program in which you are invited to participate. Those of you with stage fright are welcome to observe.

We are actively seeking new members. Please come to our meeting or help us with our next play. For further information call Tony Fainberg, President, Ext. 2920; Sandi Lane, Veep, Ext. 7159; or Liz Russell, Sec'y Ext. 3940.

Runner's Corner

Don't forget the annual BNL Fall Race this Sunday, October 5. This years event is a 10 km run starting at 10 a.m. Registration will take place in Berkner Hall until 9:30. There will also be a free 1 mile fun-run starting at 10:05. All runners, walkers and joggers are cordially invited to participate. Contact Ted Landry Ext. 2959, Bill Thomlinson Ext. 3937, or John Beerman Ext. 4129 for further information.

Insurance Revised

The AUI Medical Insurance policy has been improved. Presently, the policy provides a lifetime maximum Major Medical benefit of $100,000. Effective October 1, 1980, the lifetime benefit will be increased to $250,000. This change covers all active and retired employees, as well as individuals currently on Long Term Disability.

Under an additional revision, also effective October 1, the Laboratory will coordinate "no-fault" automobile insurance benefits with AUI coverage. This means that if an employee or family member incurs medical bills due to an auto accident, the AUI plan will pay benefits after the "no-fault" benefits have been exhausted. Claims filed on this basis must be for expenses which are normally covered under the AUI policy.

In accordance with contractual agreements, these modifications will be offered to employees represented by the International Brotherhood of Electrical Workers, Local 2230, and the Long Island Guards Union, Local 37.

BROOKHAVEN BULLETIN

Published weekly
for the employees of
BROOKHAVEN NATIONAL LABORATORY

BERNICE PETERSEN, Editor
MONA S. ROWE, Assistant Editor

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

CARL R. THIEN, Public Relations Officer

National Urban League Thanks Brookhaven

Doug Humphrey

For the past four years, Brookhaven has participated in the National Urban League's Faculty, Career and Curriculum Development Program. The program is designed to give college students from predominantly black colleges an opportunity to discuss careers with corporate and governmental personnel. It also helps keep educators abreast of emerging career trends. Last week, Vie Kaufmann and Darrell Clark of the National Urban League met with Laboratory staff to thank BNL for its participation and to request continued support. BNL employees Glen Mitchell and Henry Serry, DEE, and Ruth Wright, Biology, were cited for their involvement in the 1979-80 Career Awareness Conferences. Mitchell, Serry and Wright had visited colleges to speak about their own careers. Present at the meeting were (from left) Harvey Thomas, David Gurinsky, Frances Ligon, Renee Flack and Ruth Wright, BNL; Vie Kaufmann and Darrell Clark, National Urban League; and Henry Serry, Warren Winsche and Glen Mitchell, BNL.

Bowling

Pink League

Fran Nusz had the high game for the night with a 178. Other good games were bowled by Helen Keeley 166, Audrey Blake 165/466 series, Fran Briening 160, Ellie Adams 160 and Millie Connelly who converted the 7-9-10.

Red League

The 76'ers won 7-4 against Isa Team. W. Kollmer had a 253/658 gross, M. McKenna 222/646 gross, E. Sperry IV 203/607 gross, and R. Larsen a 201. The Strangers were shut out 0-11 by the Light Source. The Old Timers took 4 in a match with the Blue Jays. R. Smol bowled a 207/607 gross, R. Adams 602 gross and W. Reams a 202 game. The Designers took the Sandbaggers 7-4. E. Meier grossed 636 and R. Occhiuzzo 608.

Green League

The Trouble Shooters moved into first place as they took 7 from the Sparks. The Light Source took 11 from the Strangers. The Old Timers II took 8 from the Pinball Wizards with R. Eggert bowling a 242. The Phoubars bowled unopposed and the Blue Jays came back to take 7 from the Old Timers with L. Jacobson bowling a 215.

Purple & White League

High games were bowled by Gerrie Riker 210/523, Sue Perri 190, Pat Manzella 186, Sharon Smith 184, Bob Jones 220/566, Jim Griffin 215/586, Tom Romano 211, Joe Sheehan 204, Bob Brown 202.

Golf

The final tournament of the BGA golf season will be held on Monday, October 6 at the Riverhead, Suffolk County Golf Course. There will be a $4 greens fee and a $1 entry fee. Assigned tee off times will begin at 11:30. Send entry fee to Ron Webster, Building 526, ext. 2845 by October 1. BGA touraments are open to all employees, their spouse, and retired employees.

Please plan to arrive at lease **20 minutes before** assigned tee off times.

Arrivals & Departures

Arrivals

Suzanne T. Fino	Contr. & Procurement
Raymond W. Koscinski	Energy & Env.
Masatoshi Sato	Physics
Yoshiharu Yonekura	Medical

Departures

Patrick J. Coogan	Central Shops
Motokuni Eto	Nuclear Energy
Cora T. Feliciano	Physics
Etsuko Fujita	Energy & Env.
David F. Guenther	Energy & Env.
Raymond P. Hoey	Plant Engrg.
Tohru Inoue	Medical
Jorma J. Kukkonen	Nuclear Energy
Edward A. Kush, Jr.	Energy & Env.
Ronald E. Meyers	Energy & Env.
Gary Morgerman	Plant Engrg.
Andrew S. Noetzel	Applied Math.
Dhanwant S. Sethi	Energy & Env.
Isabel M. Slater	Medical
Italo Zanzi	Medical

Volleyball

The BNL Volleyball League is currently planning this year's activity. As in the past, the Mixed League will play on Monday nights and the Open League on Wednesday nights. All teams interested in participating should submit a roster by October 10 to Don Litcher, Bldg. 515 (Mixed League) or Dennis Weygand, Bldg. 510A (Open League). All interested individuals not on a team should contact D. Weygand.

Aviation Club

Plattsburgh is the destination for the Club's Fall Fly-in October 10 and 11. Call Ed Schwaner or Ron Dobert for further details.

The monthly meeting will be held in Berkner Hall on October 8 at noon. Anyone interested in flying is welcome to attend. If you would like to share a flight with pilots of the club, come down and meet the members at this meeting, or call Audrey Karzenski, Ext. 3962 for information. This offer is extended to all BNL employees and their families.

Diners Note

The cafeteria will be closed for dinner today, October 3. The Center Club will be serving dinner from 5:00 to 9:30 p.m.

Concert Reminder

Shalil Shankar, one of India's most popular and outstanding sitar players, will give a BERA-sponsored concert in Berkner Hall on Friday, October 10, at 8:30 p.m.

Admission is $3.00. Tickets will be available at the door and, in advance, through the following: Jagdish Dalal, Ext. 7790; Subrata Ghoshroy, Ext. 4641; or Debu Majumdar, Ext. 7103, and the BERA Sales Office at Berkner Hall.

Cricket

The Brookhaven Cricket Club scored a convincing victory in an off-site game against the Oyster Bay Club on Sunday, and closed out the 1980 season with a 3-0 winning record. Brookhaven won the toss and batted first, but were soon in trouble, with four crickets down for 23 runs, and former Pakistani international player Shahid Mahmood coming on to bowl for Oyster Bay. However, with John Millener in good batting form, the Lab team staged a mid-inning recovery and went on to score a respectable total of 113 runs, Millener scoring 52 and Dave Cox 25 not out.

Oyster Bay was soon in trouble, and Millener, helped by several excellent catches in the field, quickly broke through the top of the batting order with four wickets for 16 runs. At the end; Oyster Bay could only manage a total of 67, with Dibyendu Bandyopadhyay and guest player Clarence Modeste taking most of the remaining wickets.

Motorcycle Club

Take your wheels to the Verrazano Bridge Toll Booth on October 4th at 8:30 a.m. We will meet there and cruise to Maryland for the first annual crab cake run. The trip should prove to be fun and you can stay overnight if you wish.

For information call George Stenby, Ext. 2012.

Cafeteria Menu

Week Ending October 10, 1980

Monday, October 6		
Mulligatawny soup	(cup)	.45
	(bowl)	.55
Baked ham w/orange sauce and 1 veg.		1.45
Broiled chicken livers and onions on rice		1.45
Hot Deli – Roast beef	(on bread)	1.55
	(on roll)	1.65
Tuesday, October 7		
Old fashioned lentil soup	(cup)	.45
	(bowl)	.55
Braised fresh brisket of beef w/1 veg.		1.55
Poached fillet w/Hollandaise sauce and 1 veg.		1.45
Hot Deli – Knockwurst	(on bread)	1.45
	(on roll)	1.55
Wednesday, October 8		
Pot-au-feu	(cup)	.45
	(bowl)	.55
Roast turkey and stuffing w/cranberry sauce		1.55
Meat loaf and gravy w/1 veg.		1.45
Hot Deli – 8 foot hero	75¢ per inch	
Thursday, October 9		
Cream of mushroom	(cup)	.45
	(bowl)	.55
Veal Madeline w/1 veg.		1.55
Spaghetti and meatballs w/garlic bread		1.45
Hot Deli – Monte Cristo		1.45
Friday, October 10		
Seafood chowder	(cup)	.50
	(bowl)	.60
Baked breaded fish fillet and 1 veg.		1.50
Eggplant parmesan w/hearty meat sauce and fries		1.50
Hot Deli – Pastrami	(on bread)	1.50
	(on roll)	1.60

Accelerator Department Service Awards

Alex Reben

On September 18, Lyle Smith, Deputy Chairman of the Accelerator Department, presented the 30, 25, 20 and 10 year Service Awards for the entire year to eligible members of the department. Gathered for the presentation were (standing): Frank Dusek, Robert Gottschalk, Kurt Jellett, Robert Schmidt, Kurt Minati, Mike Zguris, Howard Vetter, Ronald Clipperton, Robert H. Browne, Fred Kuehl, Walter Hensel, Nikolais Upenieks, John Langfeldt, Kenneth Robins, John Valek, Donald David, Donald Gardner, Richard Hildenbrand, Thomas Morris, Russell Lowell, Rudolph Hodor, Chris Harbach, Robert Kehl, William A. De Vito, William Adams, Woody Glenn, Gerard Tanguay, Charles Anderson, Harry Farrell, and (seated): Ralph Giallorenzo, Patricia Tuttle, John Dioguardo, Harald Hahn, Andy Soukas, Elaine Taylor, Robert Dagradi, and Joseph Ferrante. Missing from the picture were: Robert Baker, Mark Barton, Gary Cottingham, Manuel Santos, Robert Stafford, William Stars, Thomas Wild, and Kenneth Wokosky.

Classified Advertisements

Placement Notices

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

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

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

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

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

LABORATORY RECRUITMENT: Opportunity, for present Laboratory employees.

1474. LABORATORY CUSTODIAN - Plant Engineering Division.

1475. CLERICAL POSITION - To work in the Personnel benefits section. Responsibilities will include processing medical and other benefit claims and assisting employee with related problems and questions. Candidate should have extensive office experience, ability to organize work and excellent communications skills. Familiarity with insurance claims processing desirable. This is a responsible position with growth potential. Personnel Division.

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

1476. ELECTRICAL ENGINEERING POSITION - Requires BSEE. Responsibilities will include preparation of preliminary sketches, specifications, working diagrams and estimates for the maintenance and servicing of on-site structures. (Re-posting of Job No. 1406). Plant Engineering Division.

1477. COMPUTER SCIENCE ANALYST - Requires BS or equivalent in physics, knowledge of FORTRAN and interactive computer operation, basic electromagnetic theory and elementary statistics. Will process data obtained from testing and measuring ISABELLE magnets. Accelerator Department/ISABELLE Project.

1478. BIOLOGY ASSOCIATE - Requires BS in chemistry or equivalent experience. Will do organic synthesis aimed at developing new therapeutic agents. Knowledge of uv, ir, and nmr spectroscopy techniques helpful. Biology Department.

1479. BIOLOGY ASSOCIATE - Requires BS in biology or chemistry or equivalent experience. Advanced degree and previous experience with mammalian cell cultures are preferred. Responsibilities include daily management of lab, maintenance of cell cultures, and preparation of virus stocks. Under supervision, will conduct experiments and perform basic research. Biology Department.

Autos & Auto Supplies

78 HONDA XL125 - on/off road, low mileage, excel cond. $600. Ext. 2926 or 281-0268.

73 CHEVY - pickup, rebuilt V8, 4 spd, w/cap, very good mechanical cond. $1,600. Tom, Ext. 2959.

70 PLYMOUTH - Fury, excel running cond. $375. Irene, Ext. 3656.

74 AVENGER TRAILER - 18' completely self contained. $2,500. 475-3632.

79 YAMAHA - 650 Special, excel cond, new Mark II seat, hwy bars. $1,800. 286-0744 after 6.

78 SUZUKI - DS100 dirt bike, excel cond. $500. 744-3764.

67 TRIUMPH - 650cc complete bike, good for parts or restoration, new Dunlops. $275. 289-8479.

79 HONDA - Hawk Type II, 400cc, excel cond. $1,200. Keith, 399-3227.

74 DODGE - Pickup Club Cab, am/fm/, a/t, p/b, p/s, cap. $1,800. Walter, Ext. 3358 or 732-1913.

71 CADDY - Coupe DeVille, all power, runs good. $400. Charlie, Ext. 4351.

69 MUSTANG NOSE - complete. Best offer. Call Saturday 369-2242, ask for Henry.

77 FORD TRUCK - 250 Super Cab, am/fm radio stereo, cap, 3 gas tanks. $4,000. 475-3632.

67 CHEVY - Belair wgn, 327, Holley 4 Barrel, 4 spd, L-60-15 tires, good cond. $800. Pete, Ext. 7513 or 878-4618.

68 BUICK - Special, 4 dr, sedan, a/t, p/s, radio, very good running cond, orig owner. 698-3856.

RADIO - from 1977 Cutlass. $10. Ext. 3218.

SNOW TIRES - (2) H78-15, 4 ply polyester/fiberglass belted, white/w, w/rims, excel tread. $50/pr. Ext. 2522 or 286-0810 eves.

66 FORD - Mustang, 200 ci, 6 cyl, auto, new brakes, exhaust system, starter, carb, solenoid, voltage regulator. Interior restored, exterior good. $1,200. 929-8105 or 929-4701.

75 PINTO - 4 spd, excel cond, 50,000 mi, am/fm stereo. $1,800. Dave, Ext. 4597 or 286-1074.

75 AMC PACER - am/fm stereo, p/s, low mi. $1,200. 363-7147.

75 BUICK - custom landau, am/fm 8 trk, spokes, showroom cond, must see. Leroy, Ext. 4581 or 286-1615.

73 DUSTER - slant 6, low mi, running excel, good body, extras. $1,100. Ext. 4304.

HUBCAP - Camaro Rallye hubcap. Frank, Ext. 3898.

77 SUZUKI - 750cc motorcycle, 3,000 mi, excel cond, many extras. $2,200. 475-0037.

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

70 BUICK - Skylark, clean, good running cond, high mi. $600. Dan, Ext. 7516.

78 KAWASAKI - 650 KZ, immac stock. $1,700. 728-9038.

74 MAVERICK - excel cond, good gas mi, must sell. Weekdays at Ext. 2840 or 3243.

69 CHRYSLER - New Yorker, good running cond, reliable second car. $500. 585-3004 after 6 pm.

75 CHEVROLET - Malibu, 4 dr, a/c, a/t, 91,000 mi, good car. $1,950. 286-8517 after 5:45 pm.

Boats & Marine Supplies

VESTS - (2) Stern life vests, $30; water skiis w/life belt and lines, $30; one Hocslaw trailer, needs work, $20; or $75 takes all. Nancy, Ext. 4226 or 261-2719.

18' WOOD BOAT - sturdy, good work boat, needs work but is worth it. $75. Tim, 281-7873.

LARGE OUTBOARD MOTOR - Dolley alum rubber wheels, great for storage or maint. $25. Nick, Ext. 4701.

23' SLOOP - 1975 Kells, sailaway w/3 sails, 5½ hp outboard, galv trailer, sleeps 5. $6,000. Rich, Ext. 2501 or 924-4237.

17' SEARS CANOE - alum. $350. Walter, Ext. 3358 or 732-1913.

18' DORSETT - cuddy cabin 1977, 115 hp merc eng, Tandom trailer, fully equipped, many extras, must see. $2,650. 289-0405 after 5 pm.

1976 V-BOTTOM SHARPIE - 22'x8', heavily glassed in and out. $1,000. Harry Maile, 289-7598 after 6 pm.

1978 MERCURY - 50 hp, blown cyl, lower and mid housing, excel. $200. Harry Maile, 289-7598 after 6 pm.

Yard Sales

YARD SALE - Oct. 4 and 5, 10 Charter Rd, Selden. Many household items. 473-5890.

CRAFT SALE - Oct 4 and 5, 10 am to 4 pm, Lower Cross, Shoreham. Handmade articles.

Miscellaneous

YANKEE PLAYOFF TICKETS - best offer. 369-2151 after 6 pm.

HOBBY WINE-MAKING - materials and equipment; bottles, jugs, carboys, concentrates, dried fruits, books. Must sell, moving. Herb, 878-2827.

CRIB - full size w/mattress, $30; high chair, $5; student desk, painted maple, $20. 744-3744.

PROF DRAWING BOARD - w/drafting machine, $125; lawn sweeper, $20. Paul, Ext. 4156.

WELL PUMPS - (2) one Rapidayton jet and one Gould w/tanks. $50 ea set. Doug, Ext. 4095.

TV - b&w 19". $35. Ext. 2840 or 3243 weekdays.

SURFBOARD - Hobie 7'6" Silver Bullet, excel cond, $50; sewing machine, Brothers, zig-zag, excel cond, $45. Ted, Ext. 4163 or 281-9497.

GE WASHER - and dryer, excel cond. $275 for both. 744-9498 after 6.

DRIFTWOOD LAMPS - (4) $15 ea; automatic dishwasher, stainless int, $75; modern couch and chair, $50; dining rm buffet, china closet, table w/two leaves, four chairs. Ext. 2423.

TRAVERSE - and curtain rods, bike lock, 25 lb sidewalk salt, broiler oven; electric knife. John, Ext. 7995.

PEANUT MACHINES - 10¢ and 25¢ dispenser w/ heater and stand, like new. Barry, Ext. 4533 or 727-5956.

TABLE - "Workbench" maple butcher block 36x60 w/trestle base. $200. 744-5161 eves.

HOUSE CONTENTS - clothes, books, wood packing boxes, Castro convertible sofa. 732-5166.

BEDROOM SET - good cond, ideal for girl's room; sewing machine w/cabinet; couch; table. Ext. 3596.

LADY NORELCO - nail beauty salon, like new, $10; Proctor-Silex steam iron, $5. Ext. 4692.

BROILER OVEN - electric knife, drink mixer; louver doors: (2) 79½x18, (2) 79½x20, Othello game. John, Ext. 7995.

SOFA - loveseat, brick red upholstered, 60", $225; dining table 56x36, pecan, plus 4 chairs, $100. Ext. 4493 or 726-5908.

CHANDELIERS - several beautiful crystal, GE trash compactor, desk and chair, dresser, kitchen or dinette set. Ext. 4532 or 277-4091.

MEAT SLICER - ½ hp elec, commercial quality, like new. $200. 289-0413.

ROYAL TYPEWRITER - 18" carriage, excel cond. $35. Ext. 4058 or 286-0436.

FREEZER - 24 cu ft United, very good cond. $150. Don, Ext. 3394 or 588-1367.

SEWING MACHINE - Brothers zig-zag, excel cond. $45. Ted, Ext. 4163, or 281-9497.

SEIKO WATCH - men's thin line quartz. Lists for $215 will sell for $100; Hammond organ, C-3 with Leslie, showroom perfect, $3,000. 473-2059.

BABY ITEMS - baby carriage, good cond, $15; nice wooden crib w/mattress, $20. Andy, Ext. 2948 or 722-3168.

KEROSENE LANTERN - and extra red globe, barn style, $10. Dennis, Ext. 4259 or 736-2534 after 6 pm.

30" STOVE - white, good cond, $30; round maple table, $25. 281-5565.

WOOD STOVE - American made, heats up to 1500 sq ft, viewing glass, firebrick lined, excel cond. $349. Bob, Ext. 4551 or 289-2159.

COUCH - convertible, queen size, brown/gold stripes, matching chair, excel cond. $350. 698-6437 eves.

ANTIQUE - elec sewing machine in treadle cabinet, excel cond, working. $70 firm. I. Merritt, 589-5126.

GUN CABINET - pine, holds six rifles, added drawer for accessories. $300. 981-4257 after 6 pm.

FREEZER - upright, air cond, 23" color TV, vaporizer, hair dryer, baby carriage, etc. 345-3192.

INDIAN HEAD PENNIES - many dates. $25 and up per roll. Les, Ext. 4074.

RAW HONEY - organic unheated, 1 qt $4.65 and 35¢ deposit on jar; 2 qt $9, no deposit. Hugh, Ext. 4660 or 924-3293.

TWIN SIZE - therapedic mattress, x-firm, excel cond, $40; kids games, some never used, $2 ea. Ext. 3218.

POOL - 12'x18' oval, all alum siding and rail, ampro filter. $300. 475-2735.

270 WINCHESTER - ammo 2 boxes 150 gr soft point. $10 for both. Joe Bush, Ext. 3284.

TELESCOPE - fine German Nikol, 20-60 variable power as new. $200. Ed, 473-5585.

WELL PUMP - 1 hp B&W and 42 gal glass lined tank. $75. 475-9398 after 5 pm.

FORMICA DINING TABLES - (2) $50; dresser, $50; coffee table, $50. Ext. 2437, 924-7909.

BOY'S CLOTHING - soccer shoes, size 5; two slacks, size 14, two blazers. $25 will buy the lot. Ext. 2914, weekends and eves 286-3742.

ARMSTRONG - student flute, $115; chest of drawers, $30; baby chifferobe, $45. Skalyo, 878-4882.

TYPEWRITER - IBM model C, good cond. $250. Lois, Ext. 4303.

RANGE - GE, 40" white, 2 ovens, works fine, (replacement self-cleans). $85. F. Bernstein, Ext. 4382 or 286-1339.

ACCORDION - Excelsior, 3 bass, excel cond. $150. 929-6172.

BICYCLE - girl's 3 spd yellow Schwinn, 21" frame, excel cond. $75 or best offer. Ext. 3060 or 744-4787.

CHANDELIER - 12 candle lite. Was $150, selling for $50. 325-0763.

UNIFORM - Junior Girl Scout uniform, size 12. $5. Frank, Ext. 2311.

HI RISER - 2 good mattresses, almost new. $100. Ext. 3430.

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

EAST ISLIP - Colonial, 11½ lg. rms S. of Montauk; secluded treed corner, ⅓ acre, eik, D/R, den w/fp, beamed L/R, 5 bdrms, 2½ baths, gunite pool, circular driveway, appliances. $64,000. Marisa, Ext. 2077 or 581-3913.

PATCHOGUE VILLAGE - house w/3 apts., Bay, Park and Tennis courts; heat is city gas H.W., full storms & screens, lg. lot, low taxes. $44,000. R. Smith, 475-3632.

SHOREHAM - Lg. 4 bdrms, 2½ baths colonial, wooded ⅓ acre lot on quiet street, 2 car garage, eik, fam. rm. w/fp, excel school dist, low taxes, no. of 25A. $62,900. 744-4787.

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

For Rent

PORT JEFFERSON - single rm to rent in attractive, priv. home, use of all facil, fp. Close to shopping, harbor. Charming area. Mrs. Oaks at 473-4383.

UPSTATE, N.Y. - 58 acre farm w/14 rm house & bungalow on Rt. 23, 2 mi from Scotch Valley Ski area. 698-5701 eves.

POCONO'S - Chalet in priv. community, near lake Wallenpaupack. Tennis, hiking, rent week/weekend. 289-2159 after 6.

E. PATCHOGUE - 2 bdrm ranch, w/w, hot air oil heat, lg. kit, treed property, close to the Bay. $300./mo. plus util. 286-9440.

PT. JEFFERSON VILLAGE - 3 bdrm ranch, L/R, D/R, fam. rm, eik, fin. bsmt, furnished beautifully. Two yr. lease desired. Ext. 4074 or 928-0829 after 6 p.m.

MIDDLE ISLAND - 5 mi. from BNL, lg nice 1 bdrm. apt. to sublet, w/w, central a/c & heat, pool, tennis, club. $300/ mo. 345-2437 or 924-7909.

BAY SHORE - 3 bdrm house, L/R, D/R, eik, garage, bsmt, carpeting, fenced in yard, near mall. $400/mo. Ext. 3800 or 467-1763.

MIDDLE ISLAND - room to rent/house to share, on on quiet river, fish, swim, boating, golf across road, non smokers only. 924-3755.

MASTIC BEACH - 2 bdrm furnished economical house, neat, clean. $275./mo. Joe or Susan, 399-0132 after 7.

MIDDLE ISLAND - sublet furnished condominium for 2 months. 10/31 to 12/30/80. 924-7025.

BAITING HOLLOW - Contemp. 2 bdrm house overlooking L.I. Sound, secluded area, private. Ext. 3421.

MIDDLE ISLAND - spacious furn. rm. in quiet home & neighborhood, some priviliges. 698-4622.

EAST BRENTWOOD - 2½ rm furn. apt, freshly painted, priv. driveway, patio & entrance, full kitchen. $275/mo. incl. utilities. 231-3762.

RIDGE - Gentleman to share house, 15 min to Lab. $225/mo. pays all. Ext. 4622 or 929-4840.

E. PATCHOGUE - 2 bdrms, eik, kitchen, L/R, bath, priv. ent. $285/mo. (w/heat). Walter, Ext. 2913/2907 or 698-0576.

MIDDLE ISLAND - Furn. rms, 12 min from Lab, 1 block from Spring Lake Golf Course, priv lab. Include: util, refrig, washer/dryer, cooking facilities can be arranged. 333-2640, Ext. 225 days; 924-7444 after 7 p.m.

Car Pools

CORAM/SELDEN - near Rt. 25 between Rt. 112 & 83. Jay, Ext. 4994.

E. SETAUKET/PT. JEFFERSON - 5th member for existing car pool. Ext. 3327.

VANPOOL - from Miller Pl., Sound Beach, Rky Pt. to BNL. Don, Ext. 3284.

CORAM - Driver wanted to join established car pool from La Bonne Vie Apts. Dennis, Ext. 4259 or 736-2534 after 6 p.m.

SMITHTOWN WEST - driver wanted. Ext. 3268.

Lost & Found

LOST - Gold chain necklace, Brookhaven Center, sentimental value, first anniversary present. Reward. K. Schaich, Ext. 3626 or 286-0428.

FOUND - 20 copies of "Nuclear Power, Issues & Choices. "G. Price, Ext. 3336.

LOST - report " Energy Transmission & Transportation: 1975-2000", tan cover, black spine, by A.S. Hendrick, please return to A.S. Hendrick, Bldg. 120.

Wanted

HOME - for adorable seven yr. old begal. Spayed, female, excel w/children. Gary, 924-7480 eves.

ROTO TILLER - small second hand. 475-9406.

CAMERA - 35mm, good cond. for a beginner, reasonable. Ken, Ext. 2819.

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

HOME - for 10 mos. old English Sheepdog, male, well trained, very affectionate, needs space. Ext. 4157 or 929-3579.

OUTBOARD MOTOR - something you can carry. Free or very cheap for a student in B.O.C.E. 727-3608.

GUITAR - ¾ size for child, beginner, reasonable. Ralph, Ext. 4171.

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

1967 to 1969 FORD FALCON - 4 dr. car or sta. wgn. for parts. 727-0721 after 5 p.m.

BICYCLE 13", good cond, reasonable., prefer blue. Ext. 2372 or 744-9498 after 6.

INTERESTED PERSONS - for Shopping Spree to Reading, PA. via Bus on Nov. 8th. Bea, Ext. 3571.

VIOLIN - half size in good cond. Ken, Ext. 2147 or 929-6634.

COMPETENT SQUASH PLAYERS - to play at Stony Brook Univ. Edward, Ext. 3403 or 751-1826 after 6.

ELECTRIC BROOM - good cond for college student. 363-1952.

BABYSITTER - mature, responsible woman, 2½ yrs & 4 mo. boys. 8:30-5:30 M-Th. Light housekeeping; references. Ext. 3064, 821-0890 after 6 p.m.

SNOWTIRE - (1) E-78-14 for 72 Dodge. Donna, Ext. 2926 eves, 744-8063 days.

Services

MOVING - pickups and/or deliveries. Bob, 516-764-7453 after 6 pm.

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

CHIMNEY SWEEPS - f/p, stove, oil flues. Protect your homes. Insured. Lab employee discount. Bill, 584-6425.

CUSTOM CABINETS - and furniture, at reasonable prices, made by experienced craftsman. John, Ext. 2070 or 283-0223.

HAND CROCHETED - hat and scarf sets. Order now for Christmas. Cheryl, Ext. 4228.

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

TV REPAIR - carry in service, b&w, color. Ken Asselta, Ext. 4580 or Terry Wesley, 981-0464.

ENGLISH GIRL - age 25, will babysit in your home while you work. Donna, 821-9537.

HOUSEKEEPING - from Eastport to Bellport – South Shore. Reasonable rates, dependable. Daily or weekly. Debbie, 281-2673.

PRECISION SURVEY EQUIPMENT - for rent, transite, levels, tapes, rods, compasses, planimeter. Ext. 4058 or 286-0436.

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

BABYSITTING - 3 yrs and older, Mon thru Fri at my home, Artist Lake. 924-6835.

HEMS - alterations and pillows. Sharon, 878-2591.

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.