BROOKHAVEN BULLETIN
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BROOKHAVEN NATIONAL LABORATORY

Tape Day At BNL

A symposium in honor of Gerald F. Tape, retired AUI President, was held this week in Berkner Hall. The program was moderated by Robert E. Hughes, President of AUI, with final comments by Tape. Three speakers addressed the topic, "The Role of Long-Range Research in the National Energy Program."

Edward A. Frieman, Director of the Office of Energy Research, DOE, spoke of national labs as a national resource, citing their quick response capabilities to new challenges. He contemplated a variety of energy scenarios in the year 2030 and explored ways to get there from here.

Edward E. David, Jr., President of Exxon Research and Engineering, Co., described a variety of technologies that might help ease the eventual shortage of oil. David also talked about energy conservation as a long range solution, "not just doing without, but producing more from the same amount."

W. Bowman Cutter, Executive Associate Director for Budget, Office of Management and Budget, said only 10% of the federal budget is discretionary and research comes out of that portion. He called on national science institutions to help decide how to appropriate an increasingly small share of the pie.

Doug Humphrey

Robert Hughes, AUI President (far left), was the moderator at a symposium in honor of Gerald F. Tape. The panel included (from left) Edward A. Frieman (DOE), W. Bowman Cutter (OMB), Edward E. David, Jr. (EXXON), and Gerald Tape.

D'Angio Succeeds Washburne As Head of Personnel

Robert D'Angio, Jr. is the new Manager of Personnel and Labor Relations. He succeeds Joseph S. Washburne who stepped down on January 12, because of recurring health problems, after 23 years in this post.

D'Angio is young (36) and came to BNL in January 1977, following eight years with the Irving Trust Company in Manhattan. At BNL he has been primarily involved in developing training programs and participating in labor negotiations.

Doug Humphrey

Robert D'Angio, Jr.

In the course of his work he has met and talked with all levels of the workforce, an experience which he now feels will stand him in good stead. "Brookhaven is a complex place," he says, "and getting out and learning what managers and other employees are thinking was very helpful to me."

He plans to put other personnel staff in the field, i.e., into departments and divisions to hold small meetings on such subjects as supervisory training and updates on benefits. A new idea in the works is to advise employees, age 60 and over, on things they should be thinking about in planning for their retirement.

For the time being, D'Angio says, the organizational structure of his division will remain the same. Benefits and policies are in place but he notes they must be continually reappraised. Personnel's function is to assist line management in accomplishing its objects, says D'Angio, and "we will do everything in our power to be not only a service organization, but truly a support organization."

When he first came to Brookhaven, **Joseph Washburne** was 30 years old. He started as employment manager in 1947 and, during the next decade, saw the workforce grow from 0 to 1700. In January 1957 he was appointed Assistant Personnel Manager and, a year later, Personnel Manager. By 1968 the Lab's population had doubled, bringing with it changes in benefits and policies. A highlight during this period was the initiation in 1959 of long-term disability benefits.

Washburne says the 60s will be remembered for the affirmative action accomplishments which eventually affected all employees. The passage of Civil Rights laws and executive orders led to radically revised application forms omitting questions on age, race, sex, religion and other personal information. Open postings of jobs became the order of the day and employees were guaranteed preference over outsiders when it came to promotion. "These laws opened up employment procedures," says Washburne, "and they helped everyone."

The 70s started out badly with three periods of layoffs in 1970, 1971 and 1973. By 1973, 1000 employees had been dropped from the rolls. It was during this time that Washburne worked with Leland Haworth on developing a unique severance pay plan based on age and years of service. The turnaround came in 1974 and the subsequent increased hiring created a new state of affairs — 50% of the employees had worked at the Laboratory five years or less. Washburne also cites the development of apprenticeship programs and the beginning of management training, as significant in this decade.

Doug Humphrey

Joseph S. Washburne

He predicts that the 80s will be remembered, nationwide, for equal pay for equivalent jobs for women.

BNL Lecture
Eye Into Nature

Ever since the study of the structure of matter and of living organisms involved the use of interaction of charged particles and photons with matter, it was essential to observe and measure various properties of natural or induced radiation. In the early days of atomic and nuclear sciences, intensity of radiation - the number of photons or charged particles in a given time - was the first quantity to be measured by exposing photographic film to radiation, or by counting pulses from a Geiger counter. The complexity of experiments and the sophistication of radiation detectors - scientist's eyes for observing radiation - have increased immensely. Position sensitive detectors determine the point of interaction of a particle in the plane or volume of the detector and sometimes the direction of particle incidence. They also provide information about the energy and type of the particle.

Veljko Radeka, Head of the Instrumentation Division, will give the next BNL Lecture on Wednesday, January 21 at 8 p.m. in Berkner Hall. His talk is entitled "Position Sensitive Radiation Detectors - Scientist's Eye Into Nature." Radeka will describe

(Continued on page 2)

Inside Info

Ernest D. Courant, Senior Physicist, Physics Department, has been elected to the status of Fellow by the Council of the American Association for the Advancement of Science (AAAS).

A Fellow of AAAS is described as "A member whose efforts on behalf of the advancement of science or its applications are scientifically or socially distinguished."

Formed in 1848, the AAAS is the country's largest general scientific organization, with some 130,000 individual members and about 300 affiliated societies and academies of science.

Mort Rosen

Veljko Radeka

BNL Lecture (continued)

some common principles on which these detectors are based and talk about detector applications in various fields of scientific research.

In high energy physics, position sensitive detectors are used to reconstruct tracks of many particles resulting from collisions between energetic particles. In x-ray and neutron diffraction, the position of impact on the detector plane is a measure of the diffraction angle. Diffraction patterns thus obtained are used in determining crystal and molecular structures in materials science, chemistry and biology.

Position sensitive detectors in conjunction with magnetic spectrometers are used to measure the energy of heavy ions by measuring the angle of their deflection in the magnetic field. The energy of x-rays is determined by measuring the deflection angle in a crystal spectrometer. Crystal spectrometers with position-sensitive detectors are used to determine the energy spread of x-rays in plasma confinement experiments, which is a measure of the temperature of ions in the plasma. In medicine, position sensitive detectors determine the distribution of uptake of isotopes injected into the body for diagnostic purposes.

Detectors used in these and many other applications appear to be vastly different in each application. Underlying this diversity are some common elements. The most important are the methods for extracting position information. In the quest for accuracy and position resolution, it is essential to study dispersive effects in the interactions of particles with the detector and to study electronic noise in position measuring methods. An advance in these areas is frequently applied to different detectors which are used in various areas of scientific research.

Successes in the development of better position-sensitive detectors create a new problem. Radeka says the more successful we are in achieving better position resolution and in reducing the size of the "picture element," the higher the number of picture elements in a given area or volume. "We face an information explosion," he says, "and the problem is how to handle a large amount of information in a short time."

Veljko Radeka received the Dipl. Eng. degree in Electrical Engineering in 1955 and a Doctorate of Engineering Sciences in 1961 from the University of Zagreb, Yugoslavia.

In 1955 he worked on nuclear instrumentation at the Institute Ruder Boskovic in Zagreb, and was a Docent at the University of Zagreb. He came to BNL as a visitor from 1962 to 1964, and became a staff member of the Instrumentation and Health Physics Department in 1966. He has headed the Instrumentation Division since 1972.

Radeka's major interests are in scientific instrumentation and, in particular, noise and signal processing in physical measurements. He has published about 60 papers in these areas and on position sensitive detectors, fast electronics and nonlinear circuits.

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.

In Remembrance

January 15th marked what would have been the 52nd birthday of Martin Luther King, Jr. — preacher and family man, but best remembered as a nonviolent civil rights leader who worked to bring about social, political and economic equality for blacks. Much has been written on the black man's place in America and of the paradox inherent in the prejudices and discriminations which have been displayed towards him in a land professing to believe that all men are created equal. Dr. King's goal was to achieve this equality.

He employed the philosophy of nonviolent resistance in his struggle for freedom in the 60's — a time not of love or reason, but rather of blood. He was awarded the Nobel Peace Prize in 1964 for leading the blacks' struggle for equality through peaceful demonstrations. Dr. King will always be admired, loved and respected for his great contribution to and for humanity.

—Kim Mayo

In Memoriam

James J. Connell, Stores Keeper in the Supply & Materiel Division, died on January 12 at the age of 63. He worked at the AGS and came to the Laboratory in 1947.

Connell, who lived in Riverhead, is survived by his wife, Marie, and a daughter, Barbara Martin.

Belgian Visitors at BNL

Three distinguished visitors from Belgium came to BNL on December 31, 1980, to review various aspects of nuclear safety. Sharing ideas on this subject were (from left) Baron de Vleeschauwer, Consul General of Belgium in New York City; Luc Dhoore, Minister of Public Health & Social Security, Belgium; Victor Bond, BNL Associate Director; and Ir. J.C. Moreau, Chief of Cabinet-Adjunct, Belgium. Later, the guests met with Charles Meinhold of S&EP and Walter Kato, Herbert Kouts, and Wolfgang Wulff of the Nuclear Engineering Department. —photo by Rosen

Doug Humphrey

The children listen closely as teacher Carmen Fortugno tells a fairy tale.

Kids R Happy at Kids R Us

Picture a large, sunny room filled with wonderful things: a puppet theater, a two-story playhouse, an easel with a never-ending supply of paints, a dress-up corner, books, toys, blocks, snails...and a group of children, active and secure.

You have envisioned a typical scene at the Kids R Us Learning Center. The day care/learning center, located at the Middle Island Presbyterian Church on Longwood Road, opened in September. Operated by Educational Research Consultants as a New York State-licensed learning center, it was established primarily to serve pre-school and kindergarten age children of BNL employees. AUI is providing operating subsidies during the initial stages of the Center's growth in the hope that the Center will become self-supporting as enrollment increases. This support is only available for the first six months (September-February). After that, the Center will have to be self-sufficient. At present, the Center is using about half of its total capacity, housing more than 40 tots, about 60% of whom are children of BNL employees.

Three teachers and two aides are on hand to greet the two to five year olds as their parents begin to bring them to the Center at 7:45 a.m. To meet the various work schedules of the parents, hours are flexible and the tots engage in supervised free play as their peers arrive.

At 9:45, two groups are formed and learning activities take place until lunchtime. On a recent typical day, the two-year old children gathered around a low table covered with brown paper, eagerly anticipating a fingerpainting session. Water and sand were two of the other ingredients introduced to teach a subtle lesson about texture and feel.

The older group of children sat in a circle. Their teacher asked softly, "I wonder if you are going to remember about being good listeners?" Then, she told a fairy tale to her rapt audience, moving gaily-colored cardboard figures about a stage. When she finished, she congratulated the group on its listening skills and invited them to tell a story. Erik volunteered.

He was shy at first, moving the figures but not talking. The few words he used to describe the action were enough to show his audience that his story line was different than the teacher's, but equally as interesting. When they responded to his quiet performance with giggles, Erik warmed to his task and became very verbal. Delighted squeals of laughter punctuated this lesson in speaking before a group and being a good listener.

Doug Humphrey

Erik

The day continues in this vein with lunch, more activities, quiet time, outside play, until the last child leaves at 5:30 p.m. Throughout, the pleasant mood prevails, inspired by the calm and caring manner of the teachers and aides.

The easy atmosphere at the Center is appreciated by Erik's parents, Ron and Becky Bishop, who both work in the Chemistry Department. As a former teacher, Becky said, "I am thoroughly impressed with the way they deal with the children." Four-year old Erik is an only child, she explained, and he had a difficult time adjusting to the large group situation. But, under the guidance at the Center, "he has grown tremendously." In fact, she said, "he never wants to stay home on weekends!"

Due to the flexible hours offered by the Center, there are a number of different fee schedules, ranging from $40 per month for 2½ hours a day twice a week, to $225 per month for a full-time schedule. Anything over five hours a day is considered full-time.

Teachers from the Center will be at Berkner Hall, outside the cafeteria, on Tuesday, January 20, from 11:30 a.m. to 1:30 p.m. Those interested in taking advantage of the Center's services are invited to stop by or to call 924-8021 or 744-6015.

—Anita Cohen

Women in Science

Women in Science will meet on Monday, January 19, at noon in Room A, Berkner Hall. This business meeting will focus on discussion of the group's policies. Members should bring their own lunches.

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Give Back Giveaways

Last week, Eastern Airlines announced that travelers on its East Coast shuttle this month will receive a bonus coupon good for a one-way trip to the West Coast at half price.

If you use the shuttle on Laboratory business, remember that coupons obtained in the conduct of travel subject to reimbursement of travel costs are BNL property. Promptly forward them to the BNL Travel Office, which will return a receipt.

Other airlines may follow Eastern's lead in this latest round of coupon offers. The Standard Practice Instruction manual, Section 4-01, clearly states Laboratory policy. Travel vouchers not completed as required under the SPI with respect to the coupon policy will be returned by the Fiscal Division to the traveler.

IBEW Meeting

Local 2230, I.B.E.W. will hold its regular monthly meeting on Monday, January 26, 1981, at 6 p.m. in the Knights of Columbus Hall, Railroad Ave., Patchogue. There will also be an afternoon meeting at 2 p.m. for shift workers in the Union office at 31 Oak Street, Patchogue. On the agenda will be regular business, committee reports and the President's report. *Please note date and time.*

Reports Available

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

BNL 51251 **$5.25**
Semiannual Report for the Period October 1, 1979 to March 31, 1980 of Work on:
1) Superconducting Power Transmission System Development
2) Cable Insulation Development
Div. of Advanced Technology Applications

BNL 51253 **$5.00**
Feasibility of Utilizing a Rotation Fluidized Bed for the Removal of Sulfur from Hot Gases. Progress Report. C.H. Waide and H.P. Serry

NUREG/CR-1617
BNL-NUREG-51254
Advanced Reactor Safety Research Division. Quarterly Progress Report, April 1 — June 30, 1980. A.J. Romano, Editor

NUREG/CR-1618
BNL-NUREG-51255
Water Reactor Safety Research Division. Quarterly Progress Report, April 1 —June 30, 1980. A.J. Romano, Editor

NUREG/CR-1675
BNL-NUREG-51262
Experimental Investigation of the SCC of Inconel 600 and a Predictive Model for Evaluating Service Performance. T.S. Bulischeck and D. Van Rooyen

BNL 51264
A Method for Computing Marginal Costs Associated with On-Site Energy Technologies. R. Bright and H. Davitian

NUREG/CR-1693
BNL-NUREG-51265
Evaluation of Isotope Migration — Land Burial. Water Chemistry at Commercially Operated Low-Level Radioactive Waste Disposal Sites. Quarterly Progress Report, April —June 1980. K.S. Czyscinski and A.J. Weiss

Pool Reopening

The swimming pool will reopen on Monday, January 19, 1981.

Schedule
Monday through Friday:
11:00 a.m. to 1:30 p.m. — employees only
5:00 p.m. to 9:30 p.m. — employees, families, guests
Saturday and Sunday:
1:00 p.m. to 6:00 p.m. — employees, families, guests

Admission Fees
Daily Tickets:
Employee, Family Member $1.25
Guest $1.75
Season Tickets:
(Valid 1/19 — 5/10/81)
Individual Membership $20.00
Family Membership $30.00

Season tickets will be sold at the pool during open hours starting opening day. Season fees are not prorated.

Guest Ruling
One guest per employee is permitted at the pool. Advance arrangements for additional guests (maximum of five guests per visit) may be made at the Recreation Office in Personnel.

Note: All recreation facilities are closed on Laboratory holidays.

Arrivals & Departures

Arrivals

Gunter E. Hubner ..... Medical
Louis J. Maresca ..... Central Shops
Robert L. McGraw ..... Energy & Env.
Michael A. Meyer ..... Medical
Pandit G. Patil ..... Energy & Env.
Joseph R. Preisig ..... Safety & Env. Prot.

Departures

Richard A. Auspaker .... Safety & Env. Prot.
Gerald G. Kleinstein ..... Nuclear Energy

Reminder To Aliens

Each year immigrant and non-immigrant aliens who are in the United States on January 1, must report their addresses to the U.S. Immigration and Naturalization Service during the month of January. This regulation applies even though there may have been no change of address.

Any alien who is temporarily absent from the country must report his or her address within ten days after his or her return to the United States.

The parent or legal guardian of alien children under fourteen years of age must report for these children.

Alien address report forms are available from any U.S. Post Office through January 31. When completed, the card should be stamped and mailed to the address indicated.

Aviation Club

The monthly meeting and Christmas Party was held last month and the new officers of the Aviation Club were inducted. At the meeting, club purchases and the funding of a club airplane were discussed.

The officers for 1981 are: President Ron Dobert, V-P Ed Schwaner, Secretary-Treasurer Audrey Karzenski, and Corresponding Secretary Larry Leipuner.

Selected Reading

Scientific American 224 (1) January 1981
The mind-body problem. T.A. Fodor. 114-123

The Lancet 2 (8208/9) December 20 & 27, 1980
Food allergy and intolerance. 1344-5

Long Island Forum 43 (12) December 1980
The mystery of Philip Mazzei. Edith H. Shepherd. 248-52

Saturday Review 8 (1) January 1981
Behind the Fallaci image. Lucinda Franks. 18-22

Volleyball

Standings as of 1/12/81

B Division

Leftovers	9-0
TNT	6-3
Lemufs	5-4
Semi Tough	4-5
Oh Nos	2-7
Puff & Stuff	1-8

A Division

High Society	8-1
No Names	8-1
Las Bolas	4-5
Mixed Ups	4-5
Nuts & Bolts	3-6
Kings Court	0-9

Lemufs beat Puff & Stuff, 15-1, 15-7 and 15-9. Leftovers defeated Oh No's, 15-13, 15-3, 15-4. TNT won over Semi Tough, 18-16, 7-15, 15-9.

High Society beat Mixed Ups, 11-15, 15-7, 15-5. No Names won over Nuts & Bolts, 15-5, 15-10, 15-9. Las Bolas defeated Kings Court, 15-3, 15-7, 15-13.

Bowling News

Red League
The Old Timers won 8-3 over the Freon Loaders with J. Roesler bowling a 207/630 gross, R. Smol 203, L. Schairer 200, W. Reams 602 gross. The 76'ers won 7-4 over the Designers. J. Morris rolled a 205, M. McKenna 204, R. Larsen 202, R. Occhiuzzo 610 gross, J. Connelly 601. The Strangers took 8 from the Sandbaggers with F. Griswold bowling a 215/654 gross, K. Riker 225/627, R. Jones 620 gross, and W. Vanzwienen 615. Isa Team could only manage 3 from the Trouble Shooters with R. Barberich grossing 615, W. Kollmer 215/603.

Pink League
Deb Johnson is still on a winning streak with games of 192/169/163 for a 524 series. Helen Keeley had high game with a 199. Other good games were bowled by Karen Alberico 192, Renie Rosati 172, Mary-Grace Meier 171/170, Ellie Kristiansen 171, Marie Grahn 169, Marge Stoeckel 162, Madeline Windsor 150, and Maryanne Larsen 142. Going into position night the Lickety Splits are in first place by 12 giving them the first half championship.

Green League
With one week left in the first half, the Pinball Wizards are in first place by 11 after taking all 11 points from the Light Source. The Old Timers II took 11 from the Phoubars with B. Galen rolling a 218. The Blue Jays battled the Sparks for 11 as H. Marshall rolled a 213, 585 scratch, 681 gross. The Trouble Shooters took 8 from Isa Team with B. Cahill bowling a 224 and R. Scheidet 224.

Purple & White League
The Diamonds won all 7 assuring them first place for the first half. Ted Erickson's 594 series was high for the night with games of 196/202/196. Ken Riker rolled a 215/161/204 for a 580 series. Other good games were bowled by Howie Bell 223, Caryl MacDougall 212, Joe Sheehan 201, Pat Manzella 181. Charles Tomesch converted the 6/7/10 split.

Comedy Tonight!

The curtain rises in Berkner Hall at 8:30 tonight on the opening performance of the BERA Theatre Group's presentation of Bob Randall's comedy, "6 Rms Riv Vu." Other performances are scheduled for Saturday, January 17 and Friday & Saturday, January 23 & 24. Tickets are $2 for persons under 18 or over 65 years of age, $3 for other adults. For reservations, call Ext. 3940 or 286-9584. Tickets will also be available at the door.

Table Tennis

Table tennis players are invited to participate in a tournament which is scheduled to begin on Monday, February 2, in the Recreation Building.

In this round-robin event, players will receive handicaps established by the tournament committee based on his or her level of play.

Prizes will be awarded to the three top-place finishers, with the first prize winner receiving one sheet of paddle rubber. The second place finisher will win one dozen table tennis balls, while one-half dozen will be awarded as third prize.

Anyone interested in participating should contact Sam Cheng, Ext. 2611; U.S. Rohatgi, Ext. 2475; Kelvin Li, Ext. 3828 or Paul Blacher, Ext. 2501, no later than Friday, January 23.

Cafeteria Menu

Week Ending Jan. 23, 1981

Monday, January 19
Mulligatawny soup (cup) .55
(bowl) .65
Baked ham w/ orange sauce & 1 veg. 1.55
Beef chow mein & rice 1.55
Hot Deli — Roast beef (on bread) 1.65
(on roll) 1.75

Tuesday, January 20
Old-fashioned lentil soup (cup) .55
(bowl) .65
Braised brisket of beef & 1 veg. 1.65
Poached fillet of fish & 1 veg. 1.55
Hot Deli — Knockwurst (on bread) 1.60
(on roll) 1.70

Wednesday, January 21
Pot-au-feu soup (cup) .55
(bowl) .65
Roast turkey & stuffing w/cranberry sauce 1.55
Meatloaf and gravy w/ 1 veg. 1.55
Hot Deli — N.Y.-style steak hero 1.80

Thursday, January 22
Mushroom soup (cup) .55
(bowl) .65
Veal Madeline w/ 1 veg. 1.60
Spaghetti & meatballs w/garlic bread 1.50
Hot Deli — Monte Cristo 1.70

Friday, January 23
Seafood chowder (cup) .60
(bowl) .70
Breaded fish fillet & 1 veg. 1.55
Eggplant parmesan w/meat sauce & fries 1.50
Hot Deli — Pastrami (on bread) 1.65
(on roll) 1.75

Fun On Ice

Sixteen hikers, and one dog, braved a cold north wind, and a low 20's temperature, to participate in the Mountain Club's first walk across the frozen Great South Bay. The round trip from Bellport dock to Old Inlet on Fire Island took about three hours, including a lunch break. Now they are going to camp out on the Bay tomorrow night. Those who like sleeping on ice are to meet at the Bellport Dock at 3 p.m., then hike out a short distance and set up camp. Families are welcome. For information call Don David, Ext. 4821, or 286-2267.

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 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 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, 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: Opportunities for present Laboratory employees.

1542. GENERAL CLERK — Supply and Materiel Division.

1543. STOCK CLERK — Supply and Material Division.

1544. MATERIAL HANDLER — Supply and Materiel Division.

1545. STORESKEEPER (three positions) — Supply and Materiel Division.

1546. SECRETARIAL POSITION — Requires AAS in secretarial science or equivalent experience performing diverse administrative duties. Will function as a secretary for several administrative personnel. Medical Department.

1547. CLERICAL POSITION — To work in the Medical Records section of the Hospital of the Medical Research Center. Candidate should have extensive medical records experience, the ability to organize work, and transcription typing experience. An accreditation as a Medical Records Technician is desirable. Medical Department.

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

1548. PLUMBER A — Under minimum supervision lays out, constructs or installs, repairs and maintains water, sewage and gas distribution systems, related facilities and auxilary equipment. Proficiency in working with glass, aluminum and monel, stainless PVC piping or tubing systems is required. Applicant must have seven — ten years commercial/industrial plant experience. Plant Engineering Division.

1549. ELECTRICIAN A — Under minimum supervision lays out, constructs, installs, maintains, repairs and operates electrical systems, equipment, controls and related devices. Requires minimum of five years industrial electrician experience. Plant Engineering Division.

1550. PATROL OFFICER — Requires AAS in criminal justice or equivalent experience performing diverse security duties for a large organization. Excellent communication skills are necessary as well as ability to work shifts. Will participate in comprehensive training program in order to become knowledgeable of site and police procedures. Safety and Environmental Protection Division.

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.

POSTDOCTORAL RESEARCH ASSOCIATE - Seek recent PH.D. in Chemistry for research in gas-phase energy transfer and photochemistry induced by laser or synchrotron radiation. Contact: Dr. Ralph E. Weston, Chemistry Department.

EXPERIMENTAL PHYSICISTS - Seek candidates holding recent PH.D. in Physics for two positions in (1) accelerator-based atomic physics research, and (2) development and application of atomic and nuclear analytical methods. Contact: Dr. Keith W. Jones, Physics Department.

Autos & Auto Supplies

71 VW BUS - Z-bed cabinets, excel MPG, runs well, needs some work. $800. Ext. 4921 or 929-6177.

VAN SEAT - stock front seat from '78 Dodge Van, green, excel cond. $25. Andy, Ext. 2948 (Bldg. 318).

SNOW CHAINS - for VW. $5. Ext. 2831.

73 DUSTER 340 - rebuilt engine & trans, all new wiring, air shocks, mags, good looks. $1,700. 924-8309 eves.

76 CHEVETTE - a/t, excel MPG, 4 cyl, runs well, no dents, no rust, w/snows, 100% American. $1,850. Ext. 7669 or 744-7679.

SNOW TIRES - (4) L78-15 Firestone on Jeep CT5-7 wheels, $100. 363-6121 after 6 p.m.

72 FORD - Sta. wgn, p/s, p/b, excel mech. but some body dents. Arnie, Ext. 2606.

SNOW TIRES - (2) new G78-14, $20. ea. 727-1588 after 5 p.m.

TIRES - for VW Bug, w/w, hardly used, (1) Allstate (1) Continental, $10. ea. Ext. 2416 or 265-5218.

WHEELS - (4) Factory T-Bird wheels & spoke hub caps 15", fit from '77 to '80. Asking $200. 289-6785.

BUY/SELL/TRADE - '67 to '69 Camaro parts, specializing in '69. Ask for Ken, 475-1469 eves.

WHEELS -(2) 16" Ford, fit '32 to '35, good cond. w/trim rings, $40. for pair. Ken, Ext. 7317.

73 MERCURY - MONTEGO (mech. special), runs but needs some work. $400. firm. John, Ext. 3531 or 289-7998.

SNOW TIRES - (2) new Dunlop 6.00-12 Honda CVCC, $50. Ext. 4039.

70 RENAULT - Mech. Special, has not been run in one yr., needs some work. $50. Firm. John, Ext. 3531 or 289-7998.

75 VW RABBIT - 4 spd, radials Koni's, new upholstery, $1,500. Ask for Chris, 643-3062.

UTILITY TRAILER - light weight 4×6, excel for small car, good cond. Kevin, 281-8031.

74 PINTO WAGON - 4 spd, snows, best offer over $700. 751-2407.

72 PLYMOUTH - Fury, 2 dr, r/h, p/b, p/s, good cond. Asking $600. Ext. 2914 or 286-3742 eves/wkends.

69 PLYMOUTH - 4 dr, 6 cyl, a/t, needs work. $150. Reid, 369-2851.

74 VEGA - 4 cyl, 55,000 mi, red, 2 dr. 399-5547.

73 BUICK REGAL - 2 dr, blue w/sunroof, 350 eng, good cond. Asking $800; 1973 GMC Pick up, 1 ton, 350 eng, good cond. Asking $1,000. 727-1667 eves.

AUDIOVOX - am/fm in dash radio, $20. John, Ext. 2005.

RIMS - H78×14 Ford & Chevrolet, $5. ea. Ext. 3027.

WHEELS & SNOW TIRES - (2) mounted Uniroyal studded snow tires, A78×13, $40. Rich, Ext. 4396 or 654-3609.

76 LINCOLN - Town car, 4 dr, p/b, p/s, a/c, am/fm cassette C.B., high mileage. $3,000. Haeg, Ext. 4863.

TIRES - 15" GR78 radial white walls, good cond. $20. ea. Sandy, Ext. 4207 or 727-0560 after 5 p.m.

76 COYOTE TRAVEL TRAILER - excel cond, sleeps 6. Cheryll, Ext. 7716 or 654-2041 eves.

79 PONTIAC SUNBIRD - excel cond, beige w/black int, 4 spd, 4 cyl, excel gas mileage. $4,000. Firm. 751-5539.

78 HONDA - Accord, 5 spd, excel cond. $4,900. 878-2615.

76 CHEVY - Malibu Classic, excel cond, good MPG, a/c, p/s, p/b, stereo, extras. Asking $2,795. Ext. 2256.

79 CHEVY - ¾ ton Pick up w/cap, 4 WD, p/s, p/b, am/fm & CB radio, (2) 20 gal. tanks. 363-6745 after 5 p.m.

67 MUSTANG - 289 V8 eng. complete out of running car. $100. Ken, Ext. 7317.

69 BMW - rebuilt eng., body needs work, best offer. 363-6290.

79 TRIUMPH - 750 Bonne, 5 spd, 5,000 mi, European style, $2,200. Mark, Ext. 3354 or 698-5748.

80 DODGE - Omni 024 Sport, sunroof, am/fm stereo, 8 trk, rust proof, many extras, 30 plus MPG, mint, reasonable. 878-1731.

72 CHEVY - Nova, 6 cyl, 2 dr, clean, good 2nd car. $700. Ext. 2456.

SNOW TIRES - (2) A78×13, mounted 4 stnd wheels, Pinto, Vega, etc., excel cond. $70. Jim, Ext. 3501 or 751-0476.

PARTS - 66 Mercury Comet, John, Ext. 4976 or 744-4386.

AM RADIO - for 71 Buick Lasabre, good cond. $20. John, Ext. 3292.

74 DODGE DART - a/c, a/t, p/s, p/b, high mi., some body damage, orig. owner, reg. gas. $500. Bob, Ext. 3370.

77 BUICK SKYLARK - V6, am/fm, immaculate, a/t, p/s, cream, 60,000 mi. $2,000 firm. 654-4777 anytime.

Boats & Marine Supplies

16' WORK BOAT - w/40 HP Evinrude plus accessories, also clam equipment. Asking $600. 281- 1364.

MOTORS - (2) 1970 18 HP Evinrude motors, good cond. Asking $350. Scotty, Ext. 3499 or 698-5701.

17' 1970 MFG - Bow Rider, Tri hull w/115 Johnson, like new trailer, excel cond, ready to go, extras $2,400. Firm. Ext. 3531 or 289-7998 eves & wkends.

1978 30' CATALINA - wheel Dodgeit VHF Depth finder, holding tank, mint cond. Dinos, Ext. 4666.

GARVEY - 18', 40 hp Johnson (good cond.), 3 clam rakes, tongs, crab dredge, misc. $900. John, Ext. 3292 or Jeff, 286-1348.

Miscellaneous

KEROSUN HEATER - Radiant 10 w/5 gal. can, 55 gal. drum, extra wick, like new. 473-7667.

BED FRAME - good cond, pull-out (high rise) type, $5; about 12 old casement windows 32"×48", bad cond. free if you take them all. Ed. Ext. 2362/2562.

KNOTTY PINE DESK - w/chair & home entertainment unit; maple twin bed w/mattress & boxspring; also metal clothes closet. Mary, 727-0552 after 6 p.m.

SNOW PLOW - 6' blade, complete w/piston, pump, etc., good cond. $375. 289-0413.

TWO TICKETS - Boston Symphony Orchestra front of Parquet Carnegie Hall March 5, 1981. Ext. 3922.

SLIDE PROJECTOR - Sawyer's rotamatic w/one tray & stack loader. $75. Andy, Ext. 2948 (Bldg. 318).

ROCK CLIMBERS - Summit Magazine, July 63 - June 72; Pillows - patchwork by Un-Hee. Dennis, Ext. 4259 or 736-2534 after 6 p.m.

SOLAR PANELS - (4) Copper piping, double glazed, high efficiency, 17 sq. ft. John, Ext. 4129.

FLUTE - Bundy, excel cond. $100; recliner, vinyl, lt. brown, very good cond, $50. Bob, Ext. 2517.

WASHER - G.E. hardly used, 5 yrs. old, brown. $95. or offer. 331-9771.

FREEZER - Admiral 15.8 cu. ft. white w/no scuff door, brand new. $200. 654-4895.

MAHOGANY - cocktail table; end tables; Credenza & formal hi-back chair, $75. ea. 369-2504.

MEN'S SKI BOOTS - Munari, orange, sz. 11, like new, $35. Shu, Ext. 3499.

WASHER & DRYER - mech. special, $25. John, Ext. 3531 wkends 289-7998.

GAS DRYER - 7 cu. ft. Kenmore, used 2 yrs. $75. Ext. 3741 or 928-8465.

BICYCLE - 26" 10 spd, $40; heater; burgermaker; skateboard. Ext. 3027.

MEAT SLICER - ½ HP elec, Commercial quality, like new. $125. 289-0413.

FIGURE SKATES - woman's size 7, trade for size 6 or sell for $10. Ray, 924-0569 eves.

ICE SKATES - boy's size 4, excel cond, $10. or best offer. Ext. 2914 or 286-3742 eve/wkends.

WASHER & DRYER - GE, white, $100. ea; Refrig, GE 17 cu. ft., white, $125; (1) pr. Hart skis length 210, look bindings, $20. 732-3350.

ICE SKATES - hockey sz. 4, $6; boy's figure sz. 3, $8; girl's sz. 2, $8; fireplace screen, lg. $10. Jim, Ext. 3372.

SKI BOOTS - Ladies sz. 7, Nordica, Navy blue. $30. Louise, Ext. 3397.

JACKET/CLARINET/SUIT - Jacket sz. 5-6 genuine leather, never worn. $25.00; Bundy clarinet w/case. $25.; Boy's tailored suit, sz. 7-8, blue, worn once. $20.00. Irene, 821-0692 after 6 p.m.

SOUND GUITAR AMP - Bass + Treble channels, Jensens speakers, 45 watts R.M.S., cover, $100. Steve, 286-0534.

WOODSTOVE - Lange airtight #6303A, top flue, red enamel, used two seasons. $350. Phil, Ext. 7934.

SKI BOOTS - Lange sz. 9, $15. Ext. 4011.

WASHER - Sears heavy duty Kenmore, gold tone, 4 water levels, 3 temp, 4 cycles, $250; Sears Kenmore, white apt. sz. washer, $65. 585-7662.

TENNIS RACQUET - Prince Classic Vantage I strings, 4½ grip, $45. Ext. 4846 or 363-6940.

CONTEMPORARY SOFA - chair; end tables; cocktail table; table lamps; Mediterranean wall plaques, picture. $200. 543-8153.

ICE HOCKEY SKATES - boy's size 6. Ext. 2620 or 751-6765.

QUARTZ HEATER - heats fast, saves money & energy, 600/900/1500 watt, selector top control. 924-4991.

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

ICE SKATES - girl's size 6, like new. Mike, Ext. 4533.

HI-RISE BEDS - (2) very good, $20./set; portable washing machine, apt. sz., $20. 281-7844.

BICYCLE - Fuji boy's 24" 10 spd, excel cond. w/pump, $85; ice skates, boy's size 2, $6; sz. 4, $4. Ron, Ext. 3887 or 286-0353 after 6 p.m.

BICYCLE - ladies Columbia 3 spd, very good cond, $50; Antique Western electric sewing machine. $50. 589-5126.

TYPEWRITER - IBM Executive, excel cond. Ext. 4853 after 1 p.m. or 473-4948 after 6 p.m.

COAL STOVE - Sears Radiant, $125. Frank Rumph, Ext. 4581 or 588-3565.

DINNERWARE - Mikasa service for 8, includes oserving pieces, $30. Peter, Ext. 2824 or 878-8332.

YARDMAN SNOWBLOWER - 5 HP, 22" blade, self-propelled, electric starter (spotless), used only 6 times. Jones, Ext. 2599 or 473-8188.

STROLEE - jumper walker, $12; Terego bye-bye stroller, $15; Strolee wee care car seat, $25; baby carrier & high chair. 924-3975.

REFRIG - Gibson, side by side, Coppertone, 1½ yr. old. $200. 289-1665.

STEREO - Motorola, lovely 40" mahogany cabinet w/5 speakers. $80. Ext. 3635 or 734-5343.

SKI BOOTS - men's Caber competition sz 10, blue, used once, $50. Joe, Ext. 4069 or 261-7825.

TAPES - 8 track tapes, oldies but goodies. Stones, Beatles, Bread, etc. Ext. 2528 or 399-4636 Mike.

SOFA - 66" Contemp. design, color: brick red, excel cond. $375. Ext. 4493 or 283-6409.

FIREPLACE ITEMS - Glass doors, $40; brass screen, $15 (fireplace opening 36"×27"); shovel, tongs & stand, $15; wood holders, $4 & $6. Also, pink shag rug, 6×8, $20, air cond, old but works, $25; push-type lawnmower, $10. John, Ext. 3292.

GOLF CLUBS - Ladies beginner set, 6 pieces. $35. 289-0413.

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

BELLPORT VILLAGE - 3 bdrm split, fin. bsmt, in-ground pool, fenced yard, walk to school, stores, church, $49,500. 286-9390.

ISLIP TERRACE - legal M/D, 2 bdrm apt; 1 bdrm apt, side by side, fenced, fp, full bsmt, 8 car prof. parking, 2 zone heat, assume 7¼% mortgage, desirable location, extras. $45,000. Ext. 2077 or 581-3913 eves.

STONYBROOK - B-Section, Devon Ranch: 3 bdrm, l/r, d/r, eik, den, garage, 2 baths, fenced, 3 Village School, treed l/3 acre, assume 8½% mortgage. $60,000. 751-3885 after 6 p.m.

MEDFORD - Hi Ranch, 1.2 acres, 2-3 bdrms, 1½ baths, playroom, laundry rm, 2 car garage, central a/c, in the ground sprinkler system, eik, patio deck. $55,500. Owner will hold mortg. at lower than current rates. 286-1709.

BELLPORT VILLAGE - 3 bdrm Hi-Ranch, l/r, f/r, den, large eik, att. gar., deck, 1½ baths, short walk to Kreamer St. Schools. $42,000. Financing available. 286-8166.

For Rent

PATCHOGUE VILLAGE - 2 bdrm unfurnished apt., garage eik, near shopping, etc. 289-0012.

SETAUKET - share house w/2 others. Large master bdrm w/priv. bath, washer/dryer, garage, attic, bsmt, fp. $210/mo. plus 1/3 utilities. Available Jan. 1981. 689-9289.

MASTIC - 1 bdrm apt, completely separate. $240 pays all, security, references. 281-7844.

PATCHOGUE - 4 apt. $350/mo. fully furnished, heat and hot water incl., private entr, 475-0201.

SHIRLEY - attractive apt, furnished, priv. entr, util. incl, excel location, 5 min. from Lab and stores, mature gentleman, security. $285 pays all. 281-8044.

E. PATCHOGUE - 3 bdrm furn. house, gas heat, Feb. 1 to May/June 30, 1981. $250/mo. plus util. J. Olson, Ext. 3382 or 289-8629 after 7 p.m.

RIDGE - 3 bdrm ranch on 1/3 acre, unfurn., oil h/w heat, air cond., fenced yard, full basement, appliances, excel. cond. Don, Ext. 2022 or 878-2215 after 6 p.m.

NORTH SHIRLEY - housemate to share large house 4 miles from Lab, all appl., furn., female, non-smoker preferred. $150/mo. plus 1/3 utilities. Paula, 924-4685.

Wanted

BABYSITTER - who lives on site. Mon.to Fri. 8:30 to 5:00 for 10 mo. old. Mona, Ext. 2347.

CAT SITTER - Two friendly cats need surrogate family for three weeks. Anne, Ext. 2345.

APARTMENT - 1 bdrm. in Stony Brook, for quiet person. Please call S. Ghoshroy at 345-4641 (wkdays) 212-499-1304 (wkends).

TO RENT - cabin in New England Mountains part of summer or early fall. Les, Ext. 2942.

LUGGAGE CARRIER - moulded plastic for auto roof, reasonable. Dennis, Ext. 4259 or 736-2534 after 6 p.m.

PORT-A-CRIB - Call Ext. 2115 or 293-7368 eves.

WITNESS - to auto accident, Medical parking lot 1/5, damage to blue VW convertible. Dr. Brand, Ext. 3669.

PARTS - for Nova, any year car, any shape. Charley, Ext. 7317 p.m. 475-8632.

CORVETTE RALLY WHEEL - (1) 15x8, cap and ring not important, need just wheel. Ken, Ext. 7317.

FIREPROOF SAFE - good, used, 300-1000 lbs. Ray Ceruti, Ext. 2012.

RIMS - (2) 15" for '74 Ford sta. wgn. 281-8306.

CEDAR CHEST - Ext. 3690 or 744-5278.

CAB - for '66 or newer Ford pick up truck. Ext. 2005 or 727-3894 after 6 p.m.

HOUSEKEEPER - meet schoolbus, feed children, make supper, must be reliable. Own transp. required. Shoreham area. 744-4611 after 7 p.m.

ICE SKATES - men's figure size 11, reasonable. Ext. 4215 or 878-8012.

PISTON - 2 stage piston needed w/pump. 281-8274.

ROOMMATE - share 2 bdrm house, Mastic Beach, fp, washer and dryer. $225/mo. 399-1401 after 6 p.m.

GO CART - any cond, reasonable. 751-2117 after 4 p.m.

CAB AND BED - for '69 to '72 Chevy or GMC pick up. Dick, Ext. 3499 or 589-9103.

REGULAR TIRES - in good cond, size F78-14. Jean, Ext. 7169 or 286-9121 after 5.

OLD DOLLS - (China, Bisque) or anything unusual. 475-4199.

BOY'S BIKE - strong, good cond; girl's skates, size 4. Liz, Ext. 2082.

Car Pools

WEST BABYLON - wish to join car pool from Muncie Ave. to Lab. 8:30 to 5:00 p.m. Tom, Ext. 3320.

SOUTH HAMPTON - wish to car pool from 8:30 to 5:00 p.m. wkdays. Ganu, Ext. 3379 or 283-9571 after 7 p.m.

HAUPPAUGE - one additional person desired, alternate driver or paying rider. 8:30 to 5:00 p.m. Gene, Ext. 2416.

FARMINGVILLE - daily or occasional 8:30 to 5:00 p.m. shift. Walt, Ext. 2913 or 2907 or 698-0576 eves.

BELLPORT VILLAGE - want to form or join preferred arrival 8:30-8:45 a.m., preferred departure 5:30 p.m. Ext. 2914 or 286-3742 eves/wkends.

BROOKHAVEN HAMLET - driver needed to fill up Ext. 4 man car pool, 8:30-5:15 p.m. John, Ext. 3292 or Ron, 3887.

Services

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

TYPING & SEWING - Sharon, 878-4426.

INTERIOR PAINTING - custom workmanship, top quality materials, insured. Bob, 289-7657 after 6 p.m.

AUTO CLEANING - and minor paint and body work, reasonable, 10 yrs. experience. 475-1469 eves.

FRENCH & GERMAN CLASSES - new start. Beginner, intermediate, conversation. Session $3.00 group of 8. Ext., 4253 or 928-4926.

FIRWOOD - split seasoned oak 4'x16'x18". $110. Delivered. 924-4284 or 924-3919.

HELEN'S HATS - $7. 878-4979.

BABYSITTER - want to babysit child 2-5 yrs. Will give lots of TLC. Dawn, 924-8297.

LOG SPLITTING - by machine, no job too big or small, very reasonable. HR-2-1875 after 5:30 p.m.

PROFESSIONAL TYPING - $2 pg. Ext. 2484 or 289-9560.

VW REPAIR - work guaranteed, reasonable rates. Bruce, 234-9087.

FIRESIDE CHIMNEY SWEEP - fireplaces, wood coal and oil flues, dustless removal, insured, Lab discount. Bill, 584-6425.

TILE WORK - cement, terrazzo, tile; reasonable rates. Don, 281-8848 or John, Ext. 3292.