

New Payroll Chief

One Laboratory document that receives a thorough scrutiny by every employee is his paycheck. Approximately 98,000 paychecks are issued every year and, in his new post as Payroll Supervisor which he assumed on January 3, Maurice DuBois is well aware of the need for accuracy and up-to-date information in this particular activity.

Managing the payroll is a detailed and complex operation and he says it requires the combined talents of everyone in the Payroll section. DuBois' knowledgeable staff includes Evelyn Blanck, assistant Payroll Supervisor, and five payroll clerks, Eilene O'Laughlin, Viola Malloy, Muriel Caldwell, Margaret Seuling and Cheryl Sprauve. He and his group are bracing themselves for a lot of irate inquiries when the new social security tax increase shows up in the January checks.

DuBois transferred to the Fiscal Division in March of last year to prepare for his new position. During his 14 years at Brookhaven, he was first a member of the Accounts Payable section and since 1969, a member of the AUI Internal Audit Group. He received his bachelor's degree in accounting from Hofstra University and his master's in business administration from Long Island University.

He grew up on the small island of Dominica in the British West Indies and left the island as a young man in 1959. DuBois subsequently joined the U.S. Air Force and until 1963 saw duty in such unfamiliar climates as Alaska and North Dakota. He keeps in touch with Dominica and manages to return there on the average of once every three years.



Maurice DuBois

He and his wife Ramona, who is also from the British West Indies, and their two sons, live in Mount Sinai.

Please Volunteer

Men 50 years of age or older, who are heavy smokers, are needed to participate in a clinical research study involving the measurement of levels of cadmium in kidney and liver in normal subjects. For further information, please call Medical Research Center, 345-3672.

Chemists And Archaeologists Meet



On January 3 about 30 chemists and archaeologists from the U.S. and abroad, gathered at Brookhaven for a meeting on Archaeological Chemistry Standards. They agreed to institute an international program for the sharing of analytical standards and to establish procedures for the standardization of data handling. Among those attending (seated from left) were Professor Tony Hackens, University of Louvain, Belgium; Edward V. Sayre, BNL; Professor Frederick Matson, Penn State University and previous President of the Archaeological Institute of America. Standing are Dominique Fillieres and Garman Harbottle, BNL. Sayre and Harbottle were co-chairmen of the meeting. —photo by Rosen

International Focus On Hydrogen

In the rush to find sources of fuel, other than oil, one of the areas receiving international attention is the production of hydrogen. Currently, hydrogen is produced from natural gas and as this source is fast fading, an important objective is to develop techniques which can produce hydrogen from renewable sources.

DEE's Frank Salzano, in association with Dr. S. Srinivasan, is chairman of the International Energy Agency's Working Committee on Electrolytic Procedures for Production of Hydrogen and U.S. representative on the committee. This committee is one of four groups working on the Hydrogen Project. Beginning with a meeting at Brookhaven in October 1975, the committee has been working for two years on an implementing agreement defining a cooperative program which would be acceptable to the countries participating in the areas of alkaline, solid polymer and solid oxide high temperature water electrolysis.

According to the agreement, Salzano says that each country would contribute their results of a particular task or tasks and would in turn receive information from the other countries. This would eliminate duplication of effort and speed up the flow of information.

The next meeting of the working committee is scheduled for April in Ispra, Italy, at which time it is hoped that the remaining wrinkles will be ironed out and the agreement signed. As Salzano says, there is no difficulty whatsoever with the techni-

cal aspects of the program. That is the easy part. What is troublesome to resolve is the issue known as "intellectual property." In short, "who owns what?" For instance, if one participant owns a patent which is needed for use by another participant in the cooperative effort, licensing arrangements must be worked out. The legal staff is trying to work out satisfactory arrangements. The issue is one which must probably be faced by many committees engaged in similar international agreements.

As with the IEA international systems energy project, Brookhaven and the Juelich Research Center in Germany have been designated as the focal points for the water electrolysis project. Through the Department of Energy's Division of Energy Storage, Brookhaven will be the center for the coordination of work on low temperature electrolysis, and Juelich will be responsible for the work on high temperature systems.

The Energy Storage and Conversion of DEE is carrying out a major program on the development of advanced electrolysis techniques for the production of hydrogen.

In addition to the United States, the countries expected to sign the agreement are Belgium, Canada, England, Germany, Italy, Japan, Netherlands, Sweden, and Switzerland.

After the November IEA meeting in Paris, Salzano visited the Daimler-Benz research center in Stuttgart. As a result of the work done at Brookhaven by Reilly (Continued on page 2)

Bernard Gregory 1919 - 1977

Professor Bernard Gregory, a staunch friend of Brookhaven Lab, died suddenly at age 58, on Christmas eve at his home in Elancourt, France.

A Professor at the Ecole Polytechnique and head of the high energy physics laboratory, Gregory spent a sabbatical year at Brookhaven during 1958, working with the bubble chamber group under R.P. Shutt. His enthusiasm for the then new bubble chamber technique led him to assemble a French team which built the first large hydrogen bubble chamber in Europe and then transported it to CERN where it operated for a long life of experiments. In 1965 he was appointed Director-General of CERN. During his 5-year term as head of CERN, the ISR (a 26 x 26 GeV proton-proton colliding beam machine) was constructed and the decision was taken to build the 300 GeV Super Proton Synchrotron.

Returning to France in 1971 he resumed his Professorship at the Ecole Polytechnique. In 1973 he was appointed Director of the Centre National de la Recherche Scientifique by the French Government, a post about the equivalent of the head of our National Science Foundation. He was a member of the Physics, Accelerator, and Instrumentation Visiting Committee here at BNL from 1973 through 1975, and was an enthusiastic supporter of the ISABELLE Project.

In 1976, Gregory was again called upon



Professor Bernard Gregory at a Brookhaven press conference in 1968. He was then Director-General of CERN.

by the French Government to head the Delegation Generale à la Recherche Scientifique et Technique, which directs and plans the entire scientific and technical research budget in France.

His many friends will remember his zest for physics, his unbelievable capacity for work, his unflinching charm and friendliness.

— R. Ronald Rau

Arrivals & Departures

Arrivals

Trevor J. Aggus	Physics
Adolph R. Almasy	Physics
Warren W. Baumbach	Plant Engrg.
Edwin T. Bradbury	Accelerator
Yau Nam Chan	Energy & Env.
Dimitrios Cokinos	Nuclear Energy
Joseph E. Flynn	Physics
Vishwas S. Ganu	Biology
Suzanna Goetsch	Nuclear Energy
Phyleate Harris	Energy & Env.
Heather L. Hartmann	Accelerator
Theodore W. King	Accelerator
Kevin J. Knob	Energy & Env.
Myung-Kee Lee	Energy & Env.
John R. Lemmon	Applied Math.
Frederick Loeb	Accelerator
William R. Murray	Plant Engrg.
Robert A. Paul	Nuclear Energy
Ilse H. Perlman	Chemistry
Clifford J. Schnepf	Energy & Env.
Eileen C. Scott	Energy & Env.
Elizabeth H. Seubert	Energy & Env.
Kenneth F. Snead	Central Shops
James Z. Vance	Staff Services
John V. Warren	Instrumentation

Departures

Florence T. Cua	Safety & Env. Prot.
Anne C. Fennelly	Accelerator
Vincenzo Flaminio	Physics
Philippe J. Guidee	Accelerator
Ali Hosseini	Nuclear Energy
Frank A. Iorio	Accelerator
Gaston Schaechtlein	Medical
Hiroaki Uto	Physics

Sea Cliff Concert

The Sea Cliff Chamber Players will present the fourth in their series of Saturday night chamber music concerts in Berkner Hall on January 14 at 8 p.m. The program includes the String Trio in C minor by Beethoven played by Hamao Fujiwara, violin, Kim Kashkashian, viola and Hakuro Mori, cello in the Aaron Copland sextet. The above artists are joined by Curtis Macomber, violin, Herbert Sucoff, clarinet and Barbara Speer, piano. Mr. Fujiwara and Ms. Speer will conclude the program with the Sonata in E flat for violin and piano by Richard Strauss. Tickets are \$5 for general admission and \$3.50 for students under 21. Note the 8 p.m. starting time.

Cafeteria Menu

Week Ending January 13, 1978

Monday, January 9	
Corn chowder	
Beef chop suey on rice	1.15
Scrambled eggs, sausages & fr. fr.	1.10
Hot deli - Pastrami	
Tuesday, January 10	
Beef noodle soup	
Knockwurst & sauerkraut	1.10
Sauerbraten & potato pancake	1.35
Hot deli - Veal pattie & peppers	
Wednesday, January 11	
Beef consomme w/peas	
Braised meatballs ala mode w/buttered noodles	1.15
Special	
Cup of soup	
¼ Roast L.I. Duck w/stuffing & glazed carrots	
Choice of pie — Small beverage	
\$1.87 plus tax	
Hot deli - Corned beef	
Thursday, January 12	
Chicken vegetable soup	
Cheese ravioli w/1 veg.	1.05
Breast of lamb w/1 veg.	1.15
Hot deli - Italian sausage & peppers	
Friday, January 13	
Fish chowder	
Spaghetti w/clam sauce	1.05
Breaded pork chop & 1 veg.	1.35
Hot deli - Smoked Tongue	

Robison And Cooper To Present Concert

Although Brookhaven has been host before to both flutist Paula Robison and harpsichordist Kenneth Cooper, a combination of these two artists is a rare treat. They will appear in Berkner Hall on Wednesday, January 18 at 8:30 p.m. to present the third concert in the current series.

No solo flutist can match the "sold out" record of Paula Robison in New York, nor the wealth and variety of her appearances in North America. As founding artist-member of the Chamber Music Society of Lincoln Center, as soloist with the New York Philharmonic and other major orchestras and as a much sought-after recitalist, she has achieved a stardom unequalled by any wind player.

In addition to frequent appearances with the Tokyo Quartet, she has appeared with the Vermeer, Fine Arts and Juilliard Quartets, the latter at the Library of Congress, where she has also appeared in recital.

Nashville born, and named for her godfather Paul Robeson, Paula Robison grew up in Los Angeles and began her flute studies in junior high. Following two years at the University of Southern California, she traveled to New York for study with Julius Baker at the Juilliard School. She was also greatly influenced by Marcel Moyse, with whom she studied for five years, and by Rudolf Serkin at Marlboro.

She has recorded for Columbia, Marlboro Recording Society, Connoisseur and Musical Heritage, and now records exclusively for Vanguard.

Kenneth Cooper's "extraordinary, dazzling, contagious and ingratiatingly bouncy" harpsichord playing have won over music lovers in many different countries. He has made a specialty of the music of the 18th century and is now known for his prowess at improvisation. More recently he has emerged as one of the innovators of the current ragtime revival.

A graduate of the High School of Music and Art, and of Columbia College, Cooper has studied piano with David Labovitz and the late Lucy Brown, and harpsichord with Fernando Valenti and Sylvia Marlowe. He is on the faculties of the Mannes College of Music and Brooklyn College, and he holds a Ph.D. in musicology from Columbia University.

As solo harpsichordist with the Clarion Concerts Orchestra, he has traveled in the Soviet Union and Rumania on a tour sponsored by the U.S. Department of State. He has been the conductor of the Cantata Singers and has directed some stage pre-



Paula Robison



Kenneth Cooper

mieres, including Handel's Susanna.

Among Kenneth Cooper's recordings are Couperin's Duets for Two Harpsichords (with Sylvia Marlowe, Decca) and Vivaldi's Sonata in A Op. 2 No. 2 (with Ruggiero Ricci, Decca).

The Robison-Cooper recital will feature both duets and solo works, including music by Bach, Handel and Telemann.

General Admission	\$4.00
Persons over 65 and students with ID	\$2.00
Persons under 18	\$1.00

Technology Transfer Position Available

The National Science Foundation is seeking a senior scientist or engineer for a two year assignment as Federal Laboratory Liaison. The position will be with the Research Applied to National Needs (RANN) Program in Washington, D.C. and is to begin on March 15, 1978.

The person assigned to this position is responsible for a continuing liaison function between Federal R&D Centers and Laboratories (particularly those involved in the Federal Laboratory Consortium) and the associated user/sponsor community. The goals of this function are to facilitate transfer of technology generated by Federal R&D Laboratories and Centers to the public and private sector, and integrate the activities of the Consortium into the Federal Laboratories Program.

Applicants should have at least a bachelor's degree in one of the physical sciences

or fields of engineering, a minimum of five year's experience in R&D and three years in supervisory R&D or program management.

Applications should be sent to the following address no later than January 20, 1978:
Nick Montanarelli
Program Manager
National Science Foundation
Room 1150
1800 G Street, N.W.
Washington, D.C. 20550

Further details are available at the Office of Scientific Personnel, 40 Brookhaven Ave.

James Thurber 1894-1961

Progress was all right; it only went on too long.

—from *The Harvest of a Quiet Eye*, by Alan L. MacKay

Service Awards

January

Thirty Years

Benjamin C. Ackert	Central Shops
Arthur C. Dick	Accelerator
Gerhart Friedlander	Chemistry

Twenty-Five Years

Donald W. Huszagh	Energy & Env.
Alfred E. Lukas	Safety & Env. Prot.
Barbara I. Still	Physics
John R. Weeks	Nuclear Energy

Twenty Years

Alfred W. Delph	Medical
Adolph E. Densieski	Accelerator
Seymour Fink	Energy & Env.
Frank A. Humphry	Accelerator
Eugene S. Kaplan	Accelerator
Philip J. Reany	Central Shops
Stanley Seltzer	Chemistry

Ten Years

D. Gerd Dimmler	Instrumentation
Garfield Langhorn	Plant Engrg.
Arnold J. Losi	Energy & Env.
Daniel N. Michael	Physics
Naomi R. Pappas	Medical
John J. Pastore	Safety & Env. Prot.

Hydrogen (Cont'd.)

and Wiswall on metal hydrides, Daimler-Benz has developed an extensive program on hydrogen-fueled vehicles. So far they have built three vehicles: a bus using iron-titanium hydride; a bus using a hybrid system of iron-titanium and magnesium hydrides; and a car fueled by the hybrid iron-titanium-magnesium system. Salzano, who was shown and driven about on the Daimler-Benz test track in the buses, said that both vehicles appeared to perform like gasoline fueled systems and that had he not known hydrogen was the fuel, he could not have discerned the difference.

French Group Meeting

The next meeting of *Le Cercle Francais du BNL* will take place at 8 p.m. on Tuesday, January 17, in the Recreation Hall (Apartment Area). The evening will be spent in listening to a tape recording of songs by Anne Sylvestre, contemporary singer-composer who creates ballads for both adults and children.

Born in Lyons, Mlle. Sylvestre, like many other French balladeers, began her career in small Parisian cabarets before appearing in music halls and on tour. She now has a number of records to her credit, also. Her songs are characterized by a poetic literary quality and melodic originality. Printed texts of the songs to be heard will be available to help listeners follow the lyrics, or to sing along with Anne, if they would like to.

To add to the general *ambiance* of the evening, refreshments will be served. All members of the BNL community and their friends are cordially invited to attend. Those who are not members of the French Group will be asked for a donation of \$1.

Cooking Exchange

The Cooking Exchange Committee wishes everyone a very happy New Year and hopes to see old and new friends at the next Cooking Exchange meeting scheduled for Wednesday, January 11.

The theme of the demonstration program will be "the harried housewife's helper." Judy Mills is in charge and will welcome any contributions of recipes. Call her at 281-4472.

Meetings are held at the Recreation Building from 12:30 to 2:30. There is an admission charge of 75¢ and babysitting is provided at 25¢ for each child.

BROOKHAVEN BULLETIN

Published weekly
for the employees of
BROOKHAVEN NATIONAL LABORATORY

BERNICE PETERSEN, Editor
DOUG HUMPHREY, Photo-Journalist
CAROL PETRAITIS, Editorial Assistant

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

CARL R. THIEN, Public Relations Officer

1978 BERA Registration

The BERA Nominating Committee has selected the following slate of candidates for the BERA election:

- Carol Beckner** - Assistant Librarian,
Technical Information;
- Marie Brenner** - Office Services
Assistant, Fiscal;
- Robert Jones** - Technical Associate,
Energy and Environment;
- Gerald Levine** - Electrical Engineer,
Safety and Environmental
Protection.

All BERA members will be invited to cast their votes during the week of January 16 through January 20 to elect two of the four candidates to serve on the BERA Executive Board for a three year period.

A schedule of voting times and designated polling areas will be published in next week's *Bulletin*.

Absentee votes, for those employees who will not be on-site during voting week because of business trips or other reasons, will be accepted by sending a signed memo with candidate selections to BERA President Ken Batchelor, Building 911. However, these memos must be received no later than noon on Friday, January 20.

New York City Trip

The Hospitality Committee is planning a group railroad trip to the city **Tuesday, January 17**. Departure will be at 8:32 a.m. from the Patchogue LIRR station. Round-trip fare for adults is \$2.45, children under six years ride free.

Reserve a ticket by sending your fare through the U.S. mail to P.O. Box 322, Upton, New York 11973, no later than Friday, January 13. Make checks payable to "Brookhaven National Laboratory." Your tickets will be given to you at the train station. Refunds will be made only if cancellation are received at least two days prior to the trip.

Hospitality Committee

A morning coffee will be held in the Brookhaven Center on Tuesday, January 10, from 9:30 to 11:30 a.m.

Please come and bring the children. It is suggested that you bring along a toy or two for your children to play with.

Rifle and Pistol Club

A meeting of the BNL Rifle and Pistol Club will be held at the Recreation Building on Wednesday, January 11 at 5:15 p.m.



KEN KENNEDY decorated five blackboards at the AGS over the holidays, much to the delight of his fellow employees. With chalk in hand, he quickly drew various scenes of Christmas, including the Madonna and Child. Kennedy is an electronics technician who has been at Brookhaven since 1960. Art is his hobby and, although he has no formal training, he has been drawing as long as he can remember. As a child, he says, he drew aeroplane dog fights on his schoolbooks and when he grew older, he drew girls. He has come across some old notebooks he had in the Navy and they, too, are covered with sketches. Some years ago, he also did scrimshaw which was sold at Abercrombie & Fitch, and at Tiffany's. However, the embargo on whalebone put an end to his scrimshaw career. Now he does some occasional painting in oils - animals and birds - but he doesn't have the time to do as much as he would like.

N.Y. Poly Registration

Final registration for the Polytechnic Institute of New York/BNL extension courses in nuclear engineering will be held from 6:00 to 8:00 p.m. Wednesday, January 18 in the DEE-Oceanographic Sciences Division conference room (bldg. 318, opposite the bank). Professor John Lamarsh, Head of the PINY Nuclear Engineering Department, will be present to enroll and counsel students.

Courses to be offered at BNL in the spring term are: NU 602 (Introduction to Nuclear Engineering II), Monday, D. Diamond; NU 606 (Radiation Protection), Wednesday, D. Rorer; NU 726 (Metallurgy of Nuclear Reactor Materials), Thursday, J. Weeks; NU 928 (Energy Conversion Technology), Tuesday, K. Chung. Class schedules are subject to change upon consensus of class and instructor.

These courses are available to BNL employees, guests and collaborators, and to a limited number of persons not affiliated with the Laboratory.

Quiet, Please

If you wonder why you're becoming increasingly jittery around the house, it may be that your appliances are the source of the trouble. According to Dr. Jack C. Westman, a University of Wisconsin-Madison psychiatrist and expert on noise pollution, the American home has become a dangerously noisy place. He says that "the sound levels produced by a range vent fan, a garbage disposal, an electric mixer, or a blender cause dilation of the pupils, drying of the mouth, loss of skin color, muscular contraction, reduction in gastric juice flow, and an increase in heart rate. And the tension and nervousness which noisy environments cause also can produce a friction and conflict between family members." According to Westman, noise pollution should be recognized as a health problem because it's the only kind of pollution people learn to accommodate. "We can't turn our hearing off," he says. He suggests greater public awareness of the problem acoustical conditioning in dwellings and tough noise pollution laws.

Kayaking, Anyone!

Lab staff and Lab family members wishing to try kayaking are invited to two get-acquainted sessions, sponsored by the BNL Mountain Club, at the Lab pool from 11 a.m. to 1 p.m. on January 14 and 21. Just bring a bathing suit and the pool entrance fee. Lessons will be available under a qualified instructor during February and March. The lessons will be organized at the get-acquainted sessions. Dick Watson, on extension 3788, will be happy to answer any questions.

Bowling

Green League

Congratulations to Captain H. Marshall and the Blue Jays team, victors of the first half. Although losing to the mighty Old Timers, they maintain a 12 point lead in their division with only position night ahead. The other teams did not gain any ground. The second place Old Timers II could only take 3 points from the Cosmos. B. Galen had a 221 game. The Dyno-Mites could only muster up four points from the Sparks, who are now tied for second place with the Old Timers II. For the Sparks, B. Brehm had a 202. The Got-A-Hit Ums won 8 from the Trouble Shooters. N. Parinello had a nifty 225. The Pinball Wizards got zapped for 11 by the Anachems. R. Eggert had a 200. The Pick-Ups could only salvage 4 points from the Designers.

Red League

A great night of bowling for the Old Timers topping the Blue Jays 11-0. They had a 3137 series including a 1091 game. J. Fontana (208) had a 571 scratch/688 gross. J. Roesler (212) had a 585 scratch/672 gross. R. Adams had a 569 scratch/650 gross and W. Reams had a 210 game. The Anachems also took 11 points and jumped into third place for position night. The 76'ers won over the Bubble Boys 8-3 and took over first place by 3 points. J. Petro (200-208) had a 581 scratch/662 gross pins. R. Larsen bowled 202/202 and T. Holmquist a 214. J. Sauls had 652 gross pins for the Bubble Boys.

The Freon Loaders knocked the Sandbaggers into second place 8-3. F. Stahman had a 213. F. Powers and G. Schuette had a good night. R. Jones (223) had 593 scratch and 659 gross pins. E. Meier had a 210.

The Cosmos won 8-3 over the Old Timers II. K. Batchelor had a 638 gross. The Designers won their match with the Pick-Ups 7-4.

Pink League

Pat Oster again led the Odd Balls to victory over the Fiscal Assets by bowling a fantastic 161/199/183, giving them seven points and putting them into first place by three points. The Pinsplitters had their own powerhouse in Marge Stoeckel who helped them take seven from the Lickety Splits by bowling 165/175/184. Good games also were bowled by Renie Rosati 172, Lindora Boyd 166/168, Noel Netusil 164, Alice Trubisz 161.

Selected Reading

Am. Sci. 65, November-December 1977
How artificial is intelligence? W.R. Bennett, Jr. 694-702

New Sci. 76, December 15, 1977
Time flies like an arrow. Y. Wilks. 696-8

Science 198, December 1977
Science in Europe/Attack on Marxists stirs controversy. N. Hawkes. 1230-1

Classified Advertisements

Placement Notices

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

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

For further information regarding a placement listing, contact the Personnel Placement Supervisor, Ext. 2874 or 2882.

LABORATORY RECRUITMENT: Opportunity for present Laboratory employees.

457. SECRETARY - Requires good secretarial and communications skills. Will perform general secretarial duties, technical typing. Department of Nuclear Energy.

458. OFFICE SERVICES ASSISTANT - To be trained to carry out all phases of an Engineering Microfile Aperture Card System, Diazo machine and associated drawing files. Accelerator Department.

459. OFFICE SERVICES ASSISTANT - Must have knowledge of and background in the processing of accounts payable. Fiscal Division.

460. LABORATORY CUSTODIAN - Plant Engineering Division.

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

461. ADMINISTRATIVE ENGINEER - Requires bachelor's degree in either engineering science or business administration. Must have experience or background in research program support, including all budget and financial functions and coordination of procurement activities. Good communications skills and knowledge of computer terminal operations essential. Department of Nuclear Energy.

462. ELECTRON MICROSCOPE ENGINEER - Requires BS in engineering or physics with background in the design, building and maintenance of digital and analog equipment. Experience with scanning transmission electron microscope is desirable. Biology Department.

463. ENGINEER OR PHYSICIST - Ph.D. or equivalent with experience in accelerator rf systems, specifically beam cavity interactions, low-level rf beam control and beam dynamics. ISABELLE, Accelerator Dept.

464. DEVELOPMENT ENGINEERS (two positions) - BSME or equivalent with background in general machine design and high precision manufacturing processes. Knowledge of cryogenic or vacuum technology desirable. ISABELLE, Accelerator Department.

465. DEVELOPMENT ENGINEERS (two positions) - BS/ME in mechanical engineering or equivalent with background in stress analysis, heat transfer, and computer analysis. Knowledge of cryogenic technology desirable. ISABELLE, Accelerator Department.

466. DEVELOPMENT ENGINEERS (two positions) - BSEE or equivalent with experience in design of sophisticated digital and analog instrumentation. Requires demonstrated ability in independent development and implementation of complex electronic systems. ISABELLE, Accelerator Department.

467. DEVELOPMENT ENGINEER - BS or equivalent in electrical engineering or physics. Will be involved in a broad spectrum of analog and digital problems associated with accelerators. ISABELLE, Accelerator Department.

468. BIOLOGY ASSOCIATE - Requires a BS in microbiology, biology or chemistry. Would consider an AAS in biology with equivalent experience in growing microorganisms and preparing media and solutions. Biology Department.

469. METALLURGY ASSOCIATE - Requires a BS/MS degree in metallurgy, material science or chemistry. Position requires experience and basic knowledge of x-ray diffraction, scanning electron microscopes, metallography and microprobe. Department of Energy and Environment.

470. ELECTRO/MECHANICAL TECHNICIAN - Requires AAS or equivalent and background in the construction of a variety of technical electronic equipment. Instrumentation Division.

471. EXPERIMENTAL MACHINIST - Central Shops Division.

Autos & Auto Supplies

71 CADILLAC - Sedan de Ville, white, blue leather int, very gd cond. \$1,250. Claire, 732-6712.

70 MGB - Real clean, gd runner. \$1300. 924-3338.

70 CHEVY WAGON - Body gd, running cond. \$125. Jay, Ext. 2022, 727-6582.

NEW & USED TIRES - Rims, repairs, snow, reg, radial, free installation, balance avail, lunchtime only. Fred Usack, Ext. 4597 or 475-4935 eves.

SNOW TIRES - 2 Firestone 4-ply polyester, C78-14, gd cond. \$25. Ext. 2959, 751-0023 eves.

TIRE - 7-00-14, 4-ply Continental, used only as spare, VW camper. \$12. Ralph, Ext. 2485.

14" FORD WHEELS - \$5 pr, gd cond. Joan, Ext. 2262, 289-0357.

72 PLYMOUTH FURY - Excellent, lots of new things, a steal at \$925. Ext. 2032.

SNOW TIRES - 2 E78x15 on 5 hole rims, like new. Harvey, 878-9312.

74 CHEV - Pickup with 8' cap, auto trans, power brakes, 8 cyl. 924-8547.

70 CHRYSLER - Ac/pb/ps/pw, gd cond in and out. \$850. 751-7140, Ext. 3319.

HEADERS - Appliance for small black Chev. \$40. M. Kinney, Ext. 4316, 924-3783.

72 PINTO - Gd for parts, engine, trans. \$150 takes all. Larry, 751-2149.

73 PONTIAC - Omega, 2 dr, low mi. \$1,000 firm. 821-1575 after 6 p.m.

2 RIMS - Fits Pontiac. \$2.50 ea. Bill, Ext. 4526.

SNOW TIRE - 1-L78-15 Sup-R Belt. \$8. Ext. 3084.

76 PICKUP - 6 MC, 3/4 ton, 4 wheel drive, auto, ps/pb/ac/cb, low mi, plus beach equip. Herman Haller, Ext. 3085.

SNOW TIRES - 2-14" E-78, only used last winter from Shirley to Lab, \$35 for both; 2-15" E-78 in gd cond, asking \$30 for both. Annette, Ext. 4144, 281-4178 after 6 p.m.

IGNITION - Delta electronic, never used, reasonable. Ext. 3688.

76 CAMARO - Type LT-350 4 Brl, 4 spd, exc, lots of extras, 29,000 mi, best offer over \$4,200. 589-0643 after 6 p.m.

SNOWS - HR-78-14 Radial, like new. \$50. 589-0643 after 6 p.m.

68 CHEVELLE - Malibu, very gd cond, many extras. 878-2545 after 6 p.m.

68 WAGON - Plymouth Fury, ps/ac/auto, block heater, runs well. Morris, 744-5096.

69 VW - Station Wagon, ex gas mi, gd second car. Ext. 2949, 924-8523 after 6 p.m.

74 PONTIAC - Catalina, 2 dr, V8, ps/pb/ac/am/fm. \$2200. Lew, Ext. 2462.

75 & 76 PONTIAC - Service manuals. \$10. Gordon, Ext. 4095.

69 FORD - Galaxie, 4 dr, ps/pb/ac, 2 new tires, must sell, 70,000 mi, asking \$300. Steve, Ext. 3822, 929-6527.

C-4 AUTO TRANS - B&M built, 1000 mi, like new, \$100; Holeshot converter, like new, \$30 firm. Chris, Ext. 4612.

Miscellaneous

BATH TUB - 5', white, L.H. drain, almost new. \$35. 585-7094 after 6 p.m.

ENLARGER - Federal, Model 311 w/timer. \$30. M. Kinney, Ext. 4316, 924-3783.

PHONO/AM RADIO - Portable, good for outdoors, make by Juliette, works on batt/ac. \$15. 924-7025.

HARMON-KARDON - Citation models, 11 preamp, 12 delux amp, 14 tuner w/dolby, all w/walnut cabinets. Ext. 3515, 698-1035 after 5:30.

76 HARLEY DAVIDSON - Motorcycle, gd cond., 125 motor, w/helmet. \$475. Angelo, 286-0372.

MAGNUS - Chord organ, \$25. 589-0643 after 6 p.m.

ROCKING CHAIR - Child's Teddy Bear, red & white, like new. \$5. 732-8066.

DEN FURN - sofa, loveseat, chair & ottoman, black vinyl, good. \$295. Bob, Ext. 4592, 928-9359 eves.

MICROWAVE OVEN - Large commercial type, ex. \$400. 281-6130 eves.

ALUM STORM - 36 1/2 x 81; 32 x 80% custom made bathroom shower doors; range hood, 21" x 30". Vinnie, Ext. 2951.

KIT SET - Formica top table & 4 chrs, gd cond. \$35. 289-0413.

ICE SKATES - Ladies, size 7. \$5; also size 9. Bill Taylor, Ext. 4662, 298-4089.

CRAFTSMAN - Lawn-vac & leaf blower, complete, all attachments, gas powered. Mike, 281-6070.

SLIDING DOOR - Glass, double pane insul, white alum, screen new, compl in box, 6' x 6' 8". \$170. 331-2779.

GAF SIDING - Weatherboard, new in box, red, \$8; Judo uniform, new, \$20; Typro Photo type composer w/desk, best offer. 281-6130.

GIUITAR - Accoustic, Gibson, J50. \$250. Jon Sandberg, 981-4509.

SKI BOOTS - Buckle type, size 5, \$5. Jack, Ext. 2485.

WOOD STORMS - (15) 33 3/4" x 54 3/4", (3) 27 1/2" x 30 3/4", (2) 41 1/4" x 23 3/4"; (1) storm door, 81 3/4" x 36 3/4". Vinnie, 473-4471.

MAGIC HEAT - waste heat circular, 8" flue, manual or auto, never used. \$75. Ext. 4289.

BICYCLE - Man's 26", 3 spd, gd cond. \$25. 732-5829.

FIGURE SKATES - Franklin, size 9, \$12; Men's hockey skates, size 8. Asking \$8. Howie, Ext. 2043.

CAMPERS MIRRORS - Fender mount, \$10 pr; Brownie uniform complete w/ring, size 8, \$7.50; G.S. uniform, size 12, complete, pants, dress, jumper, \$15. 727-1617.

FULL SIZE BED - incl frame, matt, box spring. \$70. Joe Ash, Ext. 2983.

MAGNAVOX - Stereo theater, 25" B&W TV, am/fm radio, micromatic record player; folding doors, best offer, you pick up. Nancy, Ext. 2211 or Tom, Ext. 3297.

GAS RANGE - Caloric 30", bot gas, cost \$300, asking \$150. 585-7094 after 6 p.m.

SKI BOOTS - Rieker, size 6 1/2, buckle, w/carrier. \$8. Ron, Ext. 4449.

AMATEUR RCVR - Lafayette HA-350, gd cond, best offer. 931-0340 after 6 p.m.

PHONE ANSWERING MACHINE - 1 yr old, remote message play back over any phone. \$160 (list \$250). Bob, Ext. 4509.

SKI BOOTS - plastic buckle, women's size 9. \$15; Gertsch bindings, \$10. Morris, 744-5096.

MAYTAG - Portable washing machine, \$40; baby items. Theresa, 345-3136.

SPEAKER SYSTEMS - (2) UBL 100, hardly used, in orig carton, unbelievable sound. \$375. Ext. 4701, 271-2877.

CHAIR - Office, swivel w/vinyl foam armrests, gray steel & green vinyl, \$30; kerosene lantern & extra red globe, \$10. Dennis Kirson, Ext. 4259 or 4267.

SKI BOOTS - Women's size 7. \$15. Ext. 2066, 924-0270.

BICYCLES - Ladies 26", child's 16", \$10 ea; 2 burner bottle gas stove, \$15; sleeping bags, \$10 ea. Christine Kenny, Ext. 3070.

RECLINER - Charcoal black tweed, ex cond. \$60. 286-3791 after 6 p.m.

AMPLIFIER - Peavey 212 Vintage, (2) 12" speakers, 100 watts, like new, ex cond. Asking \$350. Dan, 281-8343.

OIL BURNER GUN - Used, gd cond. \$25. Frank, Ext. 4581, 588-3565.

WHITE UNIFORM - Dress, size 9/10, \$5; Polaroid "swinger" camera, \$5; white majorette boots, size 6, \$5. Ext. 4095.

BICYCLE - Man's 26", 3 spd, gd cond. \$25. 732-5829.

FINS - Jantzen, floating quality, size 10-11. \$6.50, Ext. 4395.

CANVASES - Artists, new, 6x8; men's slacks, ex cond, some wool, mostly cotton, 34-30, \$2-5. Ext. 3609.

FURNITURE - gold color chair, ex cond, \$20; Med end table w/coffee table, \$50; Danish modern sofa, best offer; modern wall clocks & sconces, \$10. Richie, Ext. 4254 or 734-7342.

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 - 1/2 acre, 3 bdrms, 2 baths, 2 car garage, screened porch, att greenhouse, many extras. \$49,500. 286-2724.

VT - 1.2 acres w/14'x70' mobil home, scenic view, brook, 2 mi to ski area. Bob, 473-8186.

MANORVILLE - Cape Cod, four bdrms, 2 baths, livrm w/fp, 3 appli, w/w, s/s, above ground pool, fenced garage, two outer bldgs, 2 acres. 878-1895.

SHIRLEY - Fully furnished, 3 bdrm, heated finished basement, w/w, hot water heat, must sell, will hold mortgage. \$25,000. 281-5328.

MILLER PLACE - 4 bedrm Colonial, fp, formal dining, fam rm, 1 1/2 baths, 2 car garage, landscaped, 1/2 wooded acre. \$58,500. 331-1798.

MASTIC BEACH - 6 rms, 4 yr old house, full basement, fence, 80x125. \$28,500. 281-5498.

GREENWOOD, N.Y. - 28 level wooded acres, 1300' frontage, 10x50, furn, m.h., utilities, taxes \$160/yr. \$15,000. 878-2847.

UPSTATE FARM - 160 acres, will sell all or part, reasonable, bldgs, utilities, water. Ext. 3688, 363-7032.

BLUE POINT - 1 acre wooded Cul-de-Sac. \$14,500, Ext. 3688, 363-7032.

S. SETAUKET - 3 bdrm ranch, finished bsmt, 5 appli, 3 Village Sch Dist, 1/2 acre, greenhouse. \$34,000. 331-1798.

NORTH SHIRLEY - 1/2 acre, 3 bdrm, w/w, s/s with large inground swimming pool. Dick, Ext. 4313, 929-4551.

CENTER MORICHES - 4 bdrm, heated porch, hdwood floors, nr schools, shops, water, quiet st, very low taxes, appliances. \$36,000. Call Vis, Ext. 3513, 3512, 878-4889.

BAYPORT - Near water, 3 bdrm ranch, 2 f/p, fin bsmt, 1/2 acre. \$40,000. Ext. 3483.

For Rent

SHIRLEY - 3 1/2 rms, priv ent, \$300/mo plus security, includes gas, elec., heat. No pets. 281-2945 after 6:30 p.m.

VT CAPE - 3 bdrm, fp, gar, ski x-country or downhill. 732-6499 after 6 p.m.

BROOKHAVEN HAMLET - 3 bedrm, 2 air cond, fin bsmt, att gar, screened porch, fp, new appli, recently insulated, beautiful landscape, near marina, Beaver Dam Rd. Ext. 3338.

PATCHOGUE AREA - 2 bedrms, kit, lvgrm, priv, no pets. \$235/mo. Walt, Ext. 2907, 698-0576.

Wanted

SKIERS - Interested in ski trip to Whiteface Mt, Lake Placid, Jan 20-21-23. Ext. 2065.

WOOD STORMS - (9) 55 1/2" x 33 1/4"; (6) 59" x 30"; (6) 59 x 23 3/4"; (1) 28" x 37 1/2". Vinny, 473-4471.

VIOLIN - Adult w/bow and one children's violin & case. 924-6582.

WOODEN TABLE - & chairs for 3 yr old child. 286-0284 eves.

TO BORROW - Copy of "Gamma-rays of radionuclides in order of increasing energy" by D.N. Slater. Gail, Ext. 3565.

BABYSITTER - Exper. woman to care for 2 yr old girl, Mastic Beach. Must have refer, reliable, every M & F, 8 a.m. to 5:30 p.m. \$10/day. Prefer in my home. 281-7763.

67 OLDS VISTA CRUISER - or Cutlass - hood, bumper, left front fender. Jerry, Ext. 2518.

Carpools

WADING RIVER - Will share exp. Call Fil-Ame, Ext. 2540 or 2544.

BELLPORT - Driver. Bookless, Ext. 4510.

STONY BROOK - Quaker Path area. Call Les, Ext. 2282 or 345-3118 eves.

Lost & Found

LOST - Christmas week. Stainless steel Cross mechanical pencil, sentimental value. George, Ext. 2540 or 2544.

Services

FURNITURE STRIPPING - Varnish & paint removed, chairs caned. 924-8547.

WOOD - F/p & stove. Glenn, 281-7873.

SELL & SERVICE - All CB & TV equip. Bob, 698-1487.

SEWING - Tailoring or alterations. 281-6617 after 3.

HANDYMAN - All home repair jobs. 286-8758 after 5 p.m.

BABYSITTING - At my home. 727-5912.

CARPENTRY - Any job, none too small, excel workmanship. 654-3303.