

Dunn Wins Lawrence Award

John J. Dunn, of the Biology Department, has won a 1984 Lawrence Award. The prestigious award is given annually by the U.S. Department of Energy to American scientists who have made outstanding contributions in the field of atomic energy as it relates to each scientist's special area of research.

Dunn is one of six scientists across the nation who were announced by



John Dunn

Secretary of Energy Don Hodel as recipients of the award. Each will receive a medal, a citation and \$10,000.

Dunn was cited for fundamental contributions of great potential importance in determining modes of radiation damage, and to the understanding of the mechanisms by which DNA is transcribed and processed into functional messenger RNA.

Most recently, he has determined the sequence of the nucleotides in the DNA of T7, a virus, thereby permitting gene expression of this virus to be understood at the most fundamental level, and multiplying the usefulness of the T7 system for studying the effects of radiation on basic genetic processes.

John Dunn holds an A.B. from West Chester State College, Pennsylvania, and a Ph.D. in microbiology from Rutgers University, New Jersey. He joined the Biology staff in 1972 and is a microbiologist. He is also an adjunct professor at the State University of New York, Stony Brook.

The Lawrence Award was established in December 1959 to honor the memory of the late Dr. Ernest Orlando Lawrence, who invented the cyclotron and established the two major laboratories at Berkeley and Livermore, California, that now bear his name.

Other 1984 recipients are Dr. Robert W. Conn, UCLA, Los Angeles, California; Dr. Peter L. Hagelstein, Lawrence Livermore National Laboratory, Livermore, California; Dr. Siegfried S. Hecker, Los Alamos National Laboratory, Los Alamos, New Mexico; Dr. Robert B. Laughlin, Lawrence Livermore National Laboratory, Livermore, California; and Dr. Kenneth N. Raymond, University of California-Berkeley and Lawrence Berkeley Laboratory.

The Lawrence Awards will be presented on November 27 at a special ceremony to be held at the Department of Energy's Forrestal Building in Washington, D.C.

(See list of previous BNL winners on pg. 2).

Blume Named Deputy Director

The appointment of Martin Blume as Deputy Director was announced on Monday by Director Nicholas Samios. Since 1981, Blume has served as Associate Director for Low Energy Physics and Chemistry.

Blume will work closely with Samios in the general administration of the Laboratory and will continue to have primary responsibility in the Director's Office for DOE's program of basic energy sciences. These programs cut across virtually all departments at the Laboratory and include research in such fields as chemistry, materials, engineering, math, and geosciences.

Blume will also continue as acting chairman of the National Synchrotron Light Source (NSLS) until a permanent chairman is designated. Since 1976, he has devoted much time and attention to the NSLS. He was chairman of the working group that promoted the project, and he developed the diverse user community and scientific program at the facility.

He was given the 1981 E.O. Lawrence Award for physical research and for his role at the NSLS. Concerning the former, he was cited for his definitive contributions to the theoretical analysis of magnetic phenomena in neutron scattering and for his work on relaxation and critical phenomena.

Blume started his career at the Laboratory in 1962 as an associate physicist. He was appointed group leader of solid state theory in 1968, and head of solid state physics and deputy chairman of the Physics Department in 1975. He was named scientific program head and deputy project head of the NSLS in 1979, and associate director of the Laboratory in 1981.

Since 1972, he has held a part-time appointment as Professor of Physics at SUNY Stony Brook. He has served on many advisory boards and scientific panels, currently, the DOE Basic Energy Sciences Laboratory Program Panel, the Visiting Committee of the



Martin Blume

MIT National Magnet Laboratory and the Advisory Council of the Princeton Plasma Physics Laboratory. He is also past chairman of the Solid State Sciences Committee of the National Academy of Sciences/National Research Council.

Lambrecht Wins I-R 100 Award

Richard Lambrecht, Chemistry Department, is one of this year's winners of an I-R 100 Award, in a competition sponsored by Research and Development magazine. Lambrecht headed a research team that developed a radiopharmaceutical delivery system, which was judged to be one of the 100 most significant technological advances of 1983. The delivery system controls blood concentration of tracers used for computerized tomography in the study, diagnosis and treatment of diseases.

Yesterday, Lambrecht joined the other winners at a banquet held in their honor at the Museum of Science and Industry in Chicago.

Lambrecht credits researchers from the Chemistry and Applied Math Departments and from the Proton Biomedical Facility, who worked with

him to develop the radiopharmaceutical delivery system, which was needed to carry out basic research in the kinetics and modeling of physiological processes. The instrument, which has been patented, may have important applications in computerized tomography, especially positron emission tomography (PET) being done at Brookhaven and at several medical research centers world-wide. It may also apply to xenon-enhanced CAT scans and NMR tomography.

The instrument consists of a computer-controlled syringe used to inject radiotracers into a patient for blood flow measurement by computerized tomography. The system compensates for radioactive decay of short-lived radiotracers in the syringe and in the subject, and for physiological differ-

(Continued on page 2)



Richard Lambrecht

Public Lectures on Aging

Between 1900 and 1978, the percentage of the U.S. population aged 65 + more than doubled — 4.1% in 1900 to 11.0% in 1978 — while the number increased about eight times — from 3 million to 24 million.

With improved medical care, more and more people are living longer, but many may be just "existing" rather than living happy, active lives. The need to know more about aging is pressing, and it is no longer considered a secondary interest of experimenters working in other areas. And there are many aspects of what is considered "the aging problem."

One of these aspects, "The Molecular Basis of Aging," is the theme of the 33rd Brookhaven Symposia in Biology which will start on September 30 in Berkner Hall. During the four-day conference, speakers from around the world will explore such topics as wear and tear, aging in cellular proteins, changes in DNA with age, and diseases featuring altered rates of aging.

Dealing with aging from other perspectives, three noted scientists will address the conference on three different evenings. This series of lectures, under the heading "Aging:

Everybody's Doing It," will be open to the public.

Opening the series on Sunday, September 30, is Edward L. Schneider, Associate Director for Biomedical Research and Clinical Medicine at the National Institute of Aging. Schneider will discuss "Aging Research: Challenge of the 21st Century." Since receiving his M.D. degree from Boston University School of Medicine in 1966, Schneider has devoted most of his career to gerontology research. Currently, he is also an Adjunct Professor of Biochemistry at George Washington University.

On Monday, October 1, Alex Comfort, who is probably best known to the general public for his book "The Joy of Sex," will speak about "Living All of Your Life." Comfort is an Associate Professor in the Neuropsychiatric Insti-



Edward Schneider



Alex Comfort

tute at the University of California in Los Angeles. Concurrently, he is a Senior Fellow at the Institute of Higher Studies, Santa Barbara, California, and a lecturer at Stanford University. Before coming to the U.S. in 1974 from England, he was head of the Medical Research Council Group on Aging and director of research.

Lewis Thomas, University Professor at SUNY at Stony Brook and President Emeritus of Memorial Sloan-Kettering Cancer Center, will present the final address of this series on Tuesday, October 2. Thomas will talk about "The Odds on Normal Aging." Famed as a physician, scientist and author, Thomas has received 20 honorary degrees in science, law and letters, and music. He has served on the faculties of five schools of medicine, and published over 200 scientific papers. Thomas has been acclaimed for his books "The Lives of a Cell," and "The Medusa and the Snail."



Lewis Thomas

The three lectures are free and begin at 8 p.m. in Berkner Hall.



Mike Zguris (left) and Ed Leitgeb talk over the new paint job at the AGS.

AGS Gets New Coat

When the AGS tunnel was built more than 25 years ago, it was given a coat of paint. Over the years that coat became shabby. To spruce up the tunnel, accelerator maintenance coordinator Michael Zguris requested, and Associate Director Vincent O'Leary approved, special maintenance funds for the paint job. Under the watchful eye of paint shop supervisor Edward Leitgeb, the painting began August 13, thirteen days after the AGS was shut down for its annual maintenance.

Five painters under contract from the FCD Construction Corporation of Port Jefferson are using 700 gallons of an industrial-strength latex enamel to change 100,000 square feet of walls and ceiling from dirty ivory to satin white. The painters are using rollers

and nylon brushes, and they apply the paint to the concrete and steel walls and shielding blocks directly from the five gallon buckets in which the paint comes. A specially constructed rolling scaffold is being used during the ceiling painting, and the AGS magnets are being covered with polyethylene drop cloths while the ceiling above them is being painted. One coat covers the years of accumulated dirt, and the paint dries in one hour.

On Saturday, September 8, half of the AGS tunnel floor was coated with grey oil-based enamel by eight painters, and this Saturday, they will complete the other half. The 24,000-square-foot concrete floor will be covered with 120 gallons of floor paint, and it should be dry by Monday morning.

Lambrecht (Continued)

ences among subjects. What is unique about this system is that the arterial blood concentration of the tracer follows a preselected mathematical function. Developing an understanding of the relationship of blood flow and metabolism under normal and pathological or altered physiological conditions is a long-term goal.

Richard Lambrecht joined the Chemistry Department at Brookhaven in 1969. He is in the radiopharmaceutical chemistry program, which develops new radiotracers for long-range medical application.

Lambrecht is Brookhaven's second recipient of the coveted I-R100 Award. In 1969 Meyer Steinberg, now head of the Process Sciences Division of DAS, won for the development of concrete polymer composite material.

The I-R100 competition is now in its 23rd year. The competition has a two-fold purpose: to identify significant technological advances and to recognize innovators and organizations for outstanding practical technical developments. The winning products, only 100 each year, are selected on the basis of their importance, uniqueness and usefulness.

Arrivals & Departures

Arrivals

John A. Benjamin Physics
Kevin A. Brown Accelerator
Mary A. Castrogivanni S&EP
Mikhael Pritsker Accelerator
Harvey M. Rarback NSLS
Mary E. White Personnel
Charles F. Wimpee Biology
Francisco Zaera NSLS
Alexander Zaltsman Accelerator

Departures

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

Nikhiles Bandyopadhyay DAS
Dwight A. Dieterle DAS
Kevin M. Higgins Instr.
Graham J. Hook Medical
Nira Noy DAS
Sue A. Oakley DAS
Joseph Shpungin Biology
H. Pekka Suortti Chemistry

Lawrence Award Winners At BNL

Herbert J.C. Kouts (1963)

For the development of new experimental techniques in reactor physics and their application to a better understanding of theoretical models of chain-reacting systems.

Jacob Bigeleisen (1964)

For outstanding theoretical contributions and experimental advances in the separation of isotopes.

Joseph M. Hendrie (1970)

For outstanding contributions to the physics and engineering of versatile research reactors and for important contributions and recognized leadership in promoting the safety of large power reactors.

F. William Studier (1977)

For fundamental contributions to DNA and gene structure and function essential to understanding radiation and chemical induced genetic damage and repair.

Nicholas P. Samios (1980)

For his leadership in the study of elementary particles, in particular for the discovery of the Omega minus particle and the first charmed baryon.

Benno Schoenborn (1980)

For his innovative development and creative application of neutron scattering and diffraction techniques to the analysis of macromolecular structure and biological organization and function.

Martin Blume (1981)

For definitive contributions to the theoretical analysis of magnetic phenomena in neutron scattering; for work on relaxation and critical phenomena; and for scientific leadership in solid state physics especially for the emerging program based on the National Synchrotron Light Source.

In addition, two former BNL employees won awards for work done in part at the Laboratory:

Robert L. Hellens (1971)

For numerous pioneering contributions to the field of light water reactor physics.

Henry O. Honeck (1974)

For his diverse and widely used contributions to reactor physics.

Scholarship Alert

Up to twelve AUI Trustee Scholarships will be awarded to children of regular employees of Brookhaven National Laboratory in 1985. Awarded competitively, the scholarships are renewable for up to four years of study toward an academic degree. In addition, up to three scholarships may be awarded to minority group children of employees of BNL and NRAO, who are Black, Hispanic, or Native American. Eligibility will be determined by applicable federal criteria.

To qualify for a scholarship, the applicant must be a son or daughter of a BNL employee who began regular full-time, or regular eligible part-time employment no later than November 1, 1984, and who is employed by BNL at the time the award is announced. Also eligible are the sons and daughters of retired employees, or employees who died when in regular service at the Laboratory. In the case of stepchildren, eligibility will be established if the employee regularly claims the child as a dependent for income tax purposes.

Eligible applicants must be secondary school seniors who will graduate during the current academic year and enter college by the fall of 1985.

Each scholarship will be in the amount of \$1,700 per year and is paid directly to the college.

Applications are due November 1, 1984. For more information, application forms and critical date schedules, contact the Office of Scientific Personnel (OSP), 40 Brookhaven Ave., Ext. 3338.

NYC Train Trips

The Hospitality Committee is planning two group railroad trips to the city in the next two weeks. One is a special on Saturday, September 29, leaving at 8:31 a.m., and the round-trip fare is \$6.50. The second is a regularly scheduled trip on Wednesday, October 3, leaving at 7:55 a.m. The cost of a round-trip ticket is \$5.00. Children under five ride free on both trips. All departures are made from the Patchogue LIRR station.

To reserve a ticket, send your fare through the U.S. mail to BNL, P.O. Box 322, Upton, New York 11973. Checks or money orders should be made payable to BNL, and write the date of the trip, your telephone number and BNL life number on the check. Do not send cash. Tickets will be given to you on the train.

Fares for both trips must be received no later than Thursday, September 27. Refunds will be made only if cancellations are received by the Monday morning preceding the trip.

Phys Rev Opening

Assistant to the Editors: Under direction of the editors, supervise editorial aspects of production. Monitor copyediting to assure preservation of scientific meaning and grammatical correctness. Proofread and proof pages. Handle communication with authors regarding editorial problems arising during production. Baccalaureate degree in physics preferred, but persons with equivalent experience and acquaintance with physics will be considered. Apply to Personnel, Physical Review, Box 1000, Ridge, N.Y. 11961.

Speaking Out

Sally Sargent, Reporter
 Alex Reben, Photographer

Is there anything you would like to see changed at the Lab?

Dollie Turpin (Plant Engineering) — I wish they'd let the hours for custodians stay the way they are in the summer, from 7:00 to 3:30. As far as cleaning goes, it's much more convenient.



Gil Rowe (Applied Science) — No, I love the Lab. I only wish it was moved to Colorado!



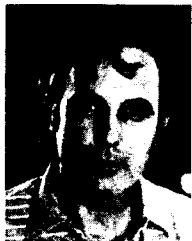
Al Campbell (Central Shops) — There is a need for parking adjacent to the cafeteria. It's very hard to park there, especially if there is inclement weather or seminars are being held. The people who don't have over 30 minutes for lunch and who work quite a distance from the cafeteria hardly have time to eat after finally finding a parking place. The road in front of the cafeteria should be made one-way, with diagonal instead of parallel parking, and with parking on only one side of the street.



Felicia Staub (Nuclear Energy) — Maybe if they had some kind of a plan that we could pay a set price for food at the cafeteria, like a meal plan for on-site residents. I'm a student, and this costs me a fortune.



Richard Wiseman (NSLS) — Maybe the Lab could change the way they do salary reviews. Lots of people would like a chance to discuss their salary during the salary review period, rather than waiting till October to find out what kind of raise they got.



Yonathan Shapir (Physics) — There are no T.V. antennas for the summer houses or the mobile homes. Only the apartments have the antennas connected. I would also like more cultural activities. Concerts, plays, movies, hobbies... more gathering together for fun.



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Adrienne Usher keeps things running smoothly as she accompanies another group to New York City on the reserved BNL railroad car.

Alex Reben

CREF Values

September	67.02	October	65.95
November	67.06	December	66.84
January	66.50	February	64.21
March	65.37	April	65.34
May	60.81	June	61.71
July	60.35		
August \$66.91			

IBEW Meeting

Local 2230, IBEW, will hold its regular monthly meeting on Thursday, September 27, at 6 p.m. in the Knights of Columbus Hall, Railroad Avenue, Patchogue. There will also be an afternoon meeting at 2 p.m. for shift workers in the Union office at 31 Oak Street, Patchogue. The agenda includes regular business, committee reports and the president's report.

—BERA News—

Tennis Tourney Tomorrow

Singles tournaments, round-robin style, for men and women, will take place tomorrow, starting at 9 a.m. Players who have not yet signed up may play if they show up at the courts by 9 a.m. Call Ext. 3338 for information.

Other employees should note that the courts will be out of play most of the day (or Sunday, the rain date).

Volleyball

All volleyball captains will meet on Tuesday, September 25, at noon in Room D, Berkner Hall to complete team scheduling. Volleyball captains or their representatives should attend.

Bowling

Red/Green League

J. Morris rolled a 243, J. Medaris 224, K. Riker 204, N. Combatti 204, J. Connelly 201.

Purple League

E. Sperry IV had games of 213/212 for a 608 series, G. Fales 208/203, R. Eggert 207, J. Roesler 201, S. Moore 200, B. Glasmann 196, T. Natoli 194, R. Jones 192.

Runners Corner

The Roadrunners will hold a meeting at noon on Thursday, October 4, in Room C of Berkner Hall to discuss the upcoming fall races. The races will consist of a 5 & 10 kilometer run along with the annual 30 km Pace Race which traditionally serves as a tune-up for the New York Marathon. New members and volunteers are urgently requested to attend.

The results of the BNL Roadrunners' recent achievements in various races, including overall and corporate challenge victories and the excellent showing in the Cow Harbor 10 km, will be discussed. The present BNL running team is the strongest ever to be fielded by the Lab, and the Roadrunners look forward to recruiting beginners and veterans.

For further information, call Jean Penoyar, Ext. 2614, or Bernie Silverstein, Ext. 4934.

Hotlines

Many Suffolk County residents will be preserving the harvest of their gardens or the produce bought at local farm stands. But you may not know how to best preserve a particular fruit or vegetable; you may not know safe home canning procedures; or you may wonder why pickles are flat or jelly didn't jell. Then again, sometimes you may need an answer to specific questions on horticulture or home economics.

For information on these topics the Cooperative Extension suggests you call them at 727-7850 from 8:30 a.m. to 1 p.m., Monday through Friday.

Take the 'B' Train

For all those interested in "beating the system", there is an hour-and-a-half ride to New York City that not only deposits you near the heart of the city, but does so at less than half the normal train fare and leaves you without the driving and parking worries. Nearly 50 times a year, BNL employees and friends can take advantage of the Long Island Railroad cars reserved on many Wednesday and Saturday mornings by the BNL Hospitality Committee and travel to New York City at reduced group rates.

The train trips were first sponsored by the Hospitality Committee in April of 1974 and are now coordinated by committee member Adrienne Usher, a tour guide at BNL. "The truth is, people do realize how much more convenient it is to take the train," explains Usher, and one such convenience is the price. A round trip fare leaving Patchogue station that would normally cost \$15.40 or \$11.60 is reduced to \$6.50 or \$5.00 by travelling in the reserved Lab car.

Ken Ryan of the Research Library and his wife Evelyn Barnett, who have been taking the Lab sponsored trips almost as often as the trips have been offered, since moving to Long Island two years ago, agree. "This is the cheapest way to get into the city, considering the wear and tear on the car, the danger of having your car ripped off, the parking prices and all of that," says Ryan.

It is an assorted crowd that assembles early in the morning at the Patchogue station. Long Island residents and visitors from all over the world, employees and friends of employees, all mingle in the sociable atmosphere. Since her retirement three years ago, Una Randall has been taking the train trips almost every other month. "I usually go to visit my sister in Manhattan and often meet people on the train whom I have dealt with at the Lab," says Randall, "and the people are always very friendly, so it is enjoyable to sit and talk with them." Martine O'Connor of the Medical Department, who has been taking the Lab car to the city since the program began ten years ago, also finds the atmosphere "extremely friendly... the people get to know each other on the trips and look forward to catching up with acquaintances that they don't get to see much except on the train."

What does everyone do after arriving in New York City? "There is a saying that there are eight million stories in the naked city... there are probably eight million reasons that people go there!" replies Evelyn Barnett. Many riders go to the theater, often using the ticket discounts available from Adrienne Usher on the train, or maybe capitalizing on the half price tickets available for same

day shows at the 42nd Street TKTS booth. As trip coordinator, Usher also informs the BNL car riders of special attractions being held in the city that day, many of which are inexpensive or free. Others are interested in shopping or have medical or business appointments to keep.

Edith Katcoff, whose husband works in the BNL Chemistry Department, and Dorothy Bamberger, whose husband was formerly employed at the Lab, have been using the BNL cars to go to the city for the past ten years and believe that New York City is "incomparable. What you do there really depends on your interests, there is such a variety that it suits anybody's needs." — Sally Sargent

WIS Meeting

There will be an important WIS membership meeting on Tuesday, September 25, in Berkner Hall, Room A, at noon. Topics to be discussed are the WIS charter and elections. All are welcome to attend.

Cafeteria Menu Week Ending September 28

Monday, September 24		
French onion soup w/croutons	(cup)	.65
	(bowl)	.85
Veal scallopini on egg noodles		2.00
Western omelet w/French fries		1.90
Hot Deli: Pastrami	(bread)	1.95
	(roll)	2.10
Tuesday, September 25		
Cream of broccoli	(cup)	.65
	(bowl)	.85
Ham steaks Hawaiian & 1 veg.		2.05
Hungarian beef noodle bake & 1 veg		1.95
Hot Deli: Roast turkey breast on pita	(bread)	1.95
	(roll)	2.10
Wednesday, September 26		
Vegetable beef soup	(cup)	.65
	(bowl)	.85
Baked meatloaf w/choice of barbecue or marinara sauce & 1 veg.		2.10
Turkey à la king & 1 veg.		1.95
Hot Deli: Barbecued chicken on onion roll		1.95
Thursday, September 27		
Split pea soup	(cup)	.65
	(bowl)	.85
Chicken cordon bleu & 1 veg.		2.30
Breaded turbot fillet & 1 veg.		1.95
Hot Deli: Philadelphia sandwich steaks	(bread)	1.95
	(roll)	2.10
Cheese fondue w/assorted dippers		1.85
Friday, September 28		
Manhattan clam chowder	(cup)	.65
	(bowl)	.85
Old-fashioned beef stew w/baking powder biscuit		2.05
Ham & potato au gratin		1.95
Hot Deli: Barbecued fresh ham	(bread)	1.95
	(roll)	2.10

Classified Advertisements

Placement Notices

The Laboratory's placement policy is to select the best-qualified candidate for an available position, with consideration given to candidates in the following order of priority: (1) present employees within the department, with preference to those within the immediate work group; (2) present employees within the Laboratory as a whole; and (3) outside applicants. In keeping with the Affirmative Action plan, selection decisions are made without regard to age, race, color, religion, national origin, sex, handicap or veteran status.

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

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

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

OPEN RECRUITMENT - Opportunities for Laboratory employees and outside applicants.

2114. **COMPUTER ANALYST** - Requires advanced degree in computer science or physics or equivalent with at least three years' experience on mini or mainframe computers in scientific or control applications. Must be familiar with system calls in some modern mini OS (VMS, UNIX, AOS) and multitask applications which use task-to-task communications. A knowledge of at least two of the following languages is also required: Pascal, C, Fortran, and Forth. Experience in one or more of the following areas is helpful: database management systems, graphics, control systems and work stations. Accelerator Department.

2115. **PROGRAMMER/ANALYST** - Requires BS in computer science or equivalent with extensive experience with the INTEL family of microprocessors or MS in computer science or equivalent and 2 or more years' experience. A knowledge of one of the following languages is also required: Pascal, C, Fortran. Experience in one or more of the following areas is helpful: INTEL development systems, RMX 88 or RMX 86, real time applications and communications hardware. Accelerator Department.

2116. **PROJECT ENGINEER** - Requires a BS in electrical engineering or equivalent and experience in heavy electronics, power supplies and solid state conversion techniques. Experience in multikilowatt range power supplies, power filter techniques and/or fast pulsed power techniques and controls is also desirable. Accelerator Department.

2117. **RESEARCH ENGINEER** - Requires an advanced degree in electrical engineering with at least five years' experience in several of the following technical areas: logic design, microprocessor design applications, realtime software for control and communications applications, analog interface electronics, broad band local area networking, and rf modem design. A record of successful project completion is imperative, as well as effective leadership ability. Accelerator Department.

2118. **SENIOR LIBRARIAN** - Requires an MLS degree (bachelors degree in science highly desirable), previous supervisory experience and 5 years' cataloging experience, 3 of which should be in AACR2/OCLC environment. Responsibilities will include directing the technical services, cataloging and acquisitions sections for Research Library and departmental libraries. Substantial experience in OCLC, AACR2, LCSH, LCCS and national cataloging standards is required. Technical Information Division.

2119. **TECHNICAL POSITION** - Requires AAS degree in electronics technology or equivalent experience in performing a variety of skilled technical functions involved with fabrication and assembly of electronic circuits and equipment. Applicant should be proficient in soldering and mechanical assembly techniques associated with printed circuit boards and components and have some experience in printed circuit board layout technique and standards. Instrumentation Division.

