

Young Researchers

At BNL Next Week

Twenty-seven science students from high schools all over the state will arrive at Brookhaven on Thursday evening, May 18, to compete in the annual New York State Science Congress.

During the two days that follow, a panel of BNL experts will be busy evaluating 27 different research projects - each designed and carried out by one of the young scientists. The judges' decisions will be announced on Saturday night at a special awards banquet attended by the students, their teachers and parents.

Most of the students are already winners of regional competitions held this spring throughout the state. At each regional congress, the top three winners became eligible to compete in the 27th annual state-wide science congress.

The high school researchers will report on projects which range from a study of the tides in Rhode Island to a comparison of hybrid colonies of bees, raised by one young scientist in his backyard. (The bees will be in residence during the congress, safely

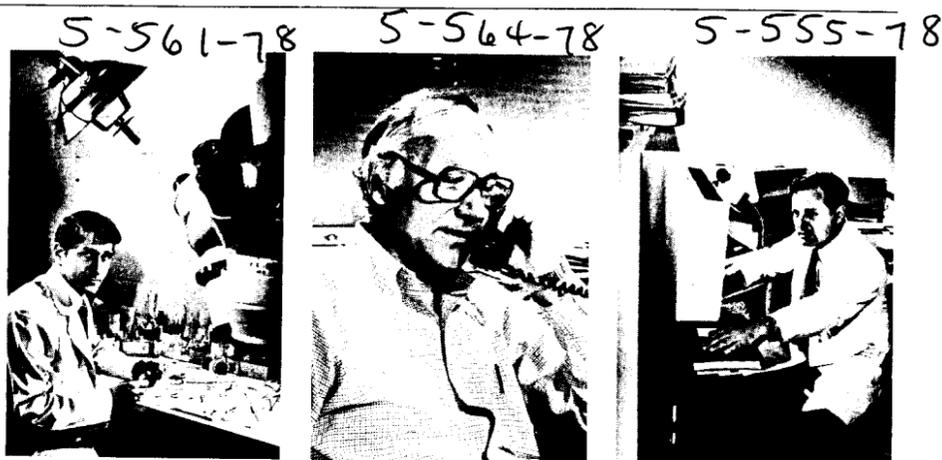
ensconced in a glass-walled observation hive.)

The judging will take place from 9 a.m. to 3:30 p.m. on Friday (with time out for lunch) and from 9 a.m. to 1 p.m. on Saturday, in the auditorium and conference room at Berkner Hall. The students will give 10-minute presentations outlining their research projects and results, and will have to answer questions from the judges for five minutes.

The panel of judges will include: Gerald Bennett (Nuclear Energy), William Graves (Energy and Environment), Glenn Price (Director's Office), Per Dahl (ISABELLE), Al Lewandowski (Energy and Environment), and R.W. Dodson (Chemistry).

Former BNL'ers Clifford Swartz, now a professor of physics at Stony Brook, will be the speaker at a dinner for the students on Friday night, and R.C. Anderson, Assistant Director of the Laboratory, will give the keynote address at the Saturday night awards banquet.

(Continued on page 3)



Samuel Packer

Alfred P. Wolf

Harold L. Atkins

Research Advances Eye Cancer Care

Research carried out at Brookhaven during the past five years has resulted in new procedures which simplify and improve the chances for success in treatment of the most common eye cancer. The new developments are used in the detection and treatment of intraocular melanoma, a cancerous tumor which grows behind the eye. They include the use of a radioactive compound to classify the growth, and the application of a plaque which dissolves the tumor.

The procedures were the result of research carried out by a three-man team made up of Samuel Packer (an ophthalmic surgeon at North Shore University Hospital and a research collaborator at BNL), Harold Atkins of the Medical Department, and Alfred Wolf of the Chemistry Department.

The radioactive compound, which has the chemical name 4(3-dimethylaminopropylamino)-7-¹²³I-iodoquinoline, is used to detect the melanoma. After it is injected intravenously, the compound concentrates in the growth area, and a nuclear scanner placed several inches away from the eye can then be used to reveal the location of the tumor.

No surgery is needed with this new detection technique. In contrast, the diagnostic test that is now most widely used, called a P-32 uptake, requires the surgical placement of a detection probe behind the eye.

The idea of using such a compound in this way, said Packer, was conceived by Atkins, Wolf and himself. Involved in the research from the beginning of the project were Carol Redvanly and Richard Lambrecht, both of the Chemistry Department. David Lloyd joined the group in 1975.

The compound is prepared here at Brookhaven, by a group headed by Wolf. The radioisotope I-123 is produced at the 60-inch cyclotron, he explained, and is then incorporated into the compound using new synthetic methods which were developed in the Chemistry Department.

To date, over a dozen patients have been diagnosed using the new technique, either at the Hospital of the Medical Research Center at Brookhaven or at North Shore University Hospital.

Extensive research on animals preceded

the use of the diagnostic technique on human patients. This work was done by Packer, using the facilities of the BNL Medical Department. The Medical Department was also the site of his research on a new therapeutic procedure: the use of a plaque which employs the radioisotope I-125 (instead of the cobalt-60 used in the past) to treat eye tumors.

The original concept of the I-125 plaque was developed by Packer and Marvin Rotman, who is head of Radiation Oncology at Flower Fifth Avenue Hospital and Professor of Radiology at New York Medical College. Tiny seeds of I-125 are enclosed in a gold plaque which is then sewn to the eye directly over the tumor. Irradiation,

(Continued on page 2)



Representatives of several government agencies convened here recently to review the first year's work of the International Safeguards Projects Office which is headquartered at Brookhaven.

Focus On Safeguards

Recently, representatives from the State Department, Department of Energy, Arms Control and Disarmament Agency, Nuclear Regulatory Commission, and the International Atomic Energy Agency came to Brookhaven for a four-day meeting to review the U.S. program on international safeguards which is managed by BNL's International Safeguards Project Office (ISPO).

Over the years, the United States has provided technical assistance in many fields in many countries. In no area is its support more crucial than in international safeguards for fast-growing nuclear power projects throughout the world.

The International Atomic Energy Agency (IAEA), an arm of the United Nations, is responsible for all safeguards of those Member States which have signed agreements to be included under the Agency program. In the United States, the agencies mentioned above joined in a program of technical assistance to IAEA safeguards. The aim of the program is to improve IAEA safeguards through support from DOE laboratories and others with expertise in safeguards technology.

The International Safeguards Projects Office was established at Brookhaven to manage and coordinate this program. Brookhaven was selected as headquarters for ISPO because of its staff experience, facilities, and accessibility to IAEA foreign visitors. Leon Green, Department of Nuclear Energy, heads the Office.

In a report just published, ISPO reviewed some of the accomplishments of its

first year of operation. Some highlights:

- In the area of measurement technology, significant progress has been made in the transfer to the IAEA of current U.S. nuclear materials measurement and verification technology and equipment. To introduce new techniques, U.S. experts, recruited by ISPO, have been sent to Vienna on cost-free contracts to IAEA.

- System studies were formulated to assess the effectiveness of safeguards methods and to provide guidance for upgrading them within the framework of present IAEA safeguards agreements with Member States.

- To expand the Agency's computer based information system, a direct financial contribution to the IAEA was made to permit the acquisition of a larger computer, and cost-free experts were provided to assist the Agency in planning and programming the upgraded system.

- Work is proceeding on the immediate and important need for reliable, tamper-indicating surveillance equipment that will give timely indication of diversion.

- Integrated exercises conducted at large U.S. nuclear facilities have proven to be highly useful in establishing precedents for inspection and reporting on a worldwide basis.

Currently, ISPO has a staff of seven and a one-man liaison office in Vienna. Given the nature of worldwide nuclear expansion and the corresponding enlarged role of IAEA safeguards, this Office is preparing to respond to further requests for support of IAEA.

American Academy Elects Vineyard

Laboratory Director George Vineyard was elected a Fellow of the American Academy of Arts and Sciences at the Academy's 198th annual meeting last week.

Headquartered in Boston, the Academy is a national honorary society founded in 1780 by John Adams and other intellectual leaders prominent in laying the philosophical foundations of the United States. Its membership of 2300 includes representatives from the mathematical, physical and biological sciences, as well as law, administration, public affairs, theology, fine arts and the humanities.

The society carries on an active program of study and publication on major national and international problems which require the expertise of several disciplines, and recognizes outstanding contributions through a series of prizes such as the Emerson-Thoreau Medal for Literature, the Amory Prize for Medicine and the Rumford Medal (America's oldest scientific prize).

Also among the 107 U.S. and foreign scholars elected were John M. Deutch, Director of DOE's Office of Energy Research, artist Saul Steinberg, historian Barbara Tuchman and astronomer Carl Sagan.

DOE Solar Photochemistry Meeting



At the Second DOE Solar Photochemistry Research Conference held at Brookhaven May 8-10, were (from left to right) Richard J. Kandel, Chief of DOE's Fundamental Interactions Branch, Joseph J. Katz, Argonne National Laboratory, and Norman Sutin, BNL. About 60 participants heard papers presented on homogeneous systems, heterogeneous systems and molecular energy storage.

A Safety Reminder

Not so long ago, the contents of an ash tray were emptied as usual in a plastic wastepaper basket. But, this time, not all the cigarettes were out. Soon the basket was afire and several people went running down the hall to get the portable fire extinguisher. The person who got the extinguisher had trouble operating it and called the safety coordinator of the department. He was able to put out the fire, but the force from the extinguisher scattered charred paper around the room. The Fire Department was notified.



The mess that Firefighter Robert Safranek is holding was once a plastic wastepaper basket which could not contain a small fire. The situation would have been different had it been a metal basket.

There are several points to be considered here. The first and obvious one is that cigarettes should be stone cold dead before they are put in the basket.

Anyone having a plastic wastepaper basket should replace it with a metal one

Upton Nursery School

Now is the time to think about enrolling your three and four year olds in BNL's cooperative nursery school for 1978-79. Classes are filling rapidly, and class size is limited. Application forms are available in the cafeteria and Recreation Building. Take one home and return it now to reserve a place for your child.

A general meeting for current and prospective parents will be held Wednesday, May 24 at 8 p.m. in the Recreation Building. Election of board members will take place and all are urged to attend. For any further information call Barbara Pringle at 728-9639.

Alexander Vucinich (1914-)

Every scientist is an agent of cultural change. He may not be a champion of change; he may even resist it, as scholars of the past resisted the new truths of historical geology, biological evolution, unitary chemistry, and non-Euclidean geometry. But to the extent that he is a true professional, the scientist is inescapably an agent of change. His tools are the instruments of change - skepticism, the challenge to established authority, criticism, rationality, and individuality.

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

How Times Have Changed

Following are a few sample questions from the examination in English given to all entering freshmen at Iowa State in 1904. It would be interesting to see how many people could answer any of them in 1978. The item appeared in the February 1978 issue of "The Iowa Stater," a paper for ISU alumni.

- Decline: I, it, lady, house, James.
- Write an example of each of the following constructions and underline the part that stands for the required construction:
 - a. object complement
 - b. attribute complement
 - c. infinitive phrase
 - d. participial phrase
 - e. adjective clause
 - f. adverbial clause
- Conjugate ride through all tenses of the indicative mood, active voice.
- In the following sentence tell what part of speech each word is: "I went to him joyfully, for I had often heard my mother mention him with esteem."
- Parse the underlined words: "These are not my books. I think they must belong to some of the boys. What boys have been here since I left?"

which is standard issue. Although this type of fire is common, it can easily be extinguished in a metal basket - just place another basket of the same size on top of the fire and it will seal off the air.

In the matter of fire extinguishers, it would be a good idea to check out your immediate area and find out where they are located. And, if you don't know how to use this device, the Safety & Environmental Protection Division will show you how. All new employees are given this training, but if you have been around for a while, you may have forgotten.

A training program is available to reacquaint employees with the use of portable fire extinguishers. Those who are interested should contact their safety coordinator and group sessions will be scheduled.

In case of any fire, of course, employees should report it by calling the emergency number, extension 2222, or by pulling the nearest fire alarm box. If circumstances permit, call the safety coordinator in your department. As many people probably don't remember who this is, a list of safety coordinators follows. Keep it handy.

S&EP Coordinators

Department/Division	Coordinator
Accelerator	F. Thornhill
Applied Mathematics	S. Rideout
Adminis. Systems & Data Proc.	J. Birtle
Biology	G. Latham
Central Shops	J. McIntosh
Chemistry	N.B. Munhofen
Dept. of Energy & Environment	C. Klamut
Dept. of Nuclear Energy	L. Fuller
Director's Office	G.C. Kinne
Fiscal	B. McAlary
Information	J. Binnington
Instrumentation	G. Tiller
Medical	L.V. Hanks
Personnel	P. Paige
Photog. & Graphic Arts	R. Walton
Physics	F. VanDervoort
Plant Engineering	L. Jacobson
Contracts & Procurement	J.P. Haeg
Reactors	M. McKenna
Safety & Environ. Prot.	C. Flood
Supply & Materiel	P. Borzi
Staff Services	W. Webster

Concert Reminder

Austin Reller and Janice Button-Shafer, violin-piano duo, in concert at 9 p.m., May 15, Berkner Hall. Admission is free.

Eye Cancer Research

(Cont'd)

which dissolves the growth in most cases, occurs through an opening in the plaque. Within one to two weeks of the implant surgery, the plaque is removed during a second operation. This procedure, when successful, eliminates the necessity of removing the eye to prevent the further spread of cancer throughout the body.

Three such operations have been performed by Packer and Rotman since January, at North Shore and New York Medical College. Although the surgical technique for this procedure is similar to that used in the past with cobalt-60 plaques, there are significant differences because of the use of I-125. Since I-125 is more easily directed and less damaging to the normal structures of the eye, Packer estimates that an increased number of eye tumor patients would be candidates for this new surgical treatment.

"The radioisotope I-125 has been used in cancer therapy before," noted Atkins, "but this is the first time it has been used in this particular way for this particular kind of tumor."

A Model Craftsman

In the building of some projects, just working from drawings is not enough. It is necessary to have a three-dimensional conception of the project before the actual construction. To do this, models are made and, at Brookhaven, Herman Geist is the craftsman who makes the models.

Currently, and for some months past, he has been making a 9' x 9' model of the ISABELLE site. Working from a survey map, Geist has painstakingly applied thousands of pieces of balsa wood to show the topography of the land on which ISABELLE will be built. He even makes the tiny trees which are part of the landscape. There isn't one nail in the whole construction. Geist says the elevations in his balsa map are a little more elevated than in reality so that the land contours are clearly evident.

Also for ISABELLE, he has been making models of some of the experimental halls. Samuel Aronson, a high energy physicist who has recently joined the ISABELLE staff, will be working on the machine one day. As a future experimenter, he is keenly aware of the importance of the design of the halls and is actively involved in the details of how to build them.

He has Geist's model of the wide angle experimental hall set up in an office at Project ISABELLE. When built, this hall will be 60 feet wide along the beam line, 130 feet perpendicular to the beam line and 40 feet high. The scale of the model is 1/2 inch = 1 foot. "Seeing a model of the hall, you finally realize just what the dimensions are," he says. "A three-dimensional image also stimulates new ideas and is a great help in making the detailed final design."

Aronson praises not only Geist's craftsmanship, but his innovative ideas. "I confer with him all the time," he says. "He is good both at building and at making suggestions."

Geist is a cabinet maker. Born in Germany, he apprenticed to a cabinet maker for three years in his native Neustadt. "There are about six Neustadts in Germany," he says. "I come from Neustadt in the wine growing area." He emigrated to the United States in 1954 and for the next ten years built custom furniture for New York decorators. In 1964, seeing that the custom furniture business was on the decline, he joined the cabinet making shop at Brookhaven.

Two years ago, on the retirement of two

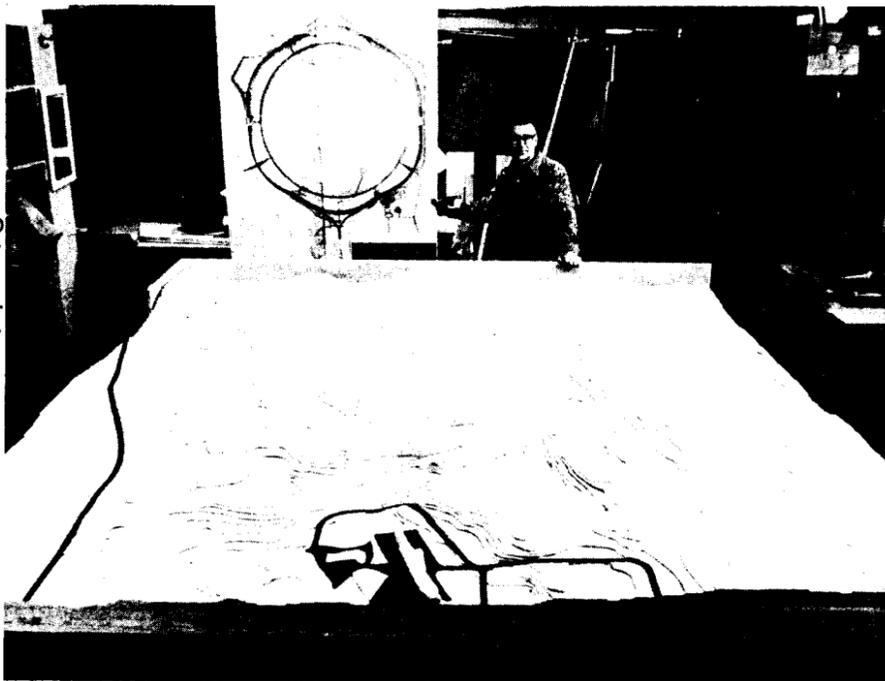


Hermann Geist with his model of the MIT buoy.

men who had been the Laboratory model makers, Geist took over the craft. He works from blueprints and sometimes from photographs, and is adept at using all materials and different kinds of machines to make the scale models.

Some other examples of his handiwork are the MPS magnet model which is now at the Smithsonian Institution, the site model of the AGS which may be seen at the Exhibit Center, and a 2 1/2 foot model of the MIT buoy which was built for the Atmospheric Sciences Division of DEE.

Model making is a craft which requires a great deal of patience and a creative hand. Hermann Geist has both.



In his shop, Hermann Geist has been working for many months on a nine-foot square model of the ISABELLE site. It is made from thousands of pieces of balsa wood.

Spring Get-Together

On Thursday, May 18, the Hospitality Committee will sponsor a Tea and Sherry Party at the Brookhaven Center, from 3 to 5:30 p.m. Women who are employees and wives of employees are cordially invited. (Employee attendance is subject to supervisory approval.)

Please come and share an enjoyable afternoon.

Babysitting will be available at the Gym, free of charge.

Arrivals & Departures

Arrivals

Julio C. Acevedo Medical
Gerald P. Hoffman Contr. & Proc.
Raymond Jones Plant Engrg.
Arthur L.Y. Lau Biology

Departures

Maureen A. Devereux Reactor
George W. Holmes Reactor
Benjamin M. Turner Plant Engrg.
William K. Tuthill Safety & Env. Prot.

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CARL R. THIEN, Public Relations Officer

Service Awards April

The following employees will receive service awards during the month of May:

Thirty Years

- Ralph Boardman Plant Engineering
- Julius J. Diener Physics
- Robert F. Gaffga, Jr. Biology
- Bernard Lattanzio Plant Engineering
- George W. Lilja Accelerator
- Irvin A. Meyer Chemistry
- Roland Sick Energy & Environment
- Charles N. Sponheimer, Jr. Accelerator
- James G. Stangby Nuclear Energy

Twenty-Five Years

- Marion Czaja Accelerator
- Albert P. Schlafke Accelerator

Twenty Years

- Kenneth H. Johnson Plant Engineering
- Eugene W. Rogers Accelerator

Ten Years

- Dominick G. Bartolomeo Physics
- Ollie J. Booker, Jr. Plant Engineering
- Vincent E. Chiampou, Jr. Accelerator
- Ernest J. Kutschera Plant Engineering
- Michael J. LeVine Physics
- William L. Overton Supply & Materiel
- Richard C. Sautkulis Biology
- Sylvester C. Suda Nuclear Energy
- Kenneth A. Sutter Nuclear Energy

Kenneth P. Thomson of the Central Shops Division celebrated his thirtieth anniversary with the Laboratory on April 5, 1978.

Science Students (Cont'd)

In addition to scholarship and cash awards, a special BNL prize will be given to one of the students: a summer appointment at the Lab, to be taken after the winner's junior year of college.

While at Brookhaven, the young researchers and their teachers will be housed in the dormitories. A variety of special events have been planned for them, including guided tours of the Lab's facilities and an off-site excursion.

The science congress program is an annual activity of the Science Teachers Association of New York State (STANYS). In addition to BNL's sponsorship, the 1978 state congress has received financial support from Ciba-Geigy Corporation.

Softball

The BNL Softball League will start play the week of May 15. The employees' league will play on Tuesdays and Wednesdays while the mixed league will play on Thursdays. The schedule calls for fourteen regular season games plus playoffs. If you are interested in playing on a team, contact one of the following roster representatives:

- Employees' League - Tuesdays - Charlie Bohnenblusch - 4758
- Employees' League - Wednesdays - Jim Guppy - 2698
- Mixed League - Thursdays - Gail Thompson - 2902
- Ken Sutter - 4514

Show Time

The Playcrafters will present the musical "Once Upon A Mattress" on May 19, 20 and May 26, 27, at the Bellport High School, Brookhaven. All performances are at 8:30 p.m. Tickets for the general public are \$3.75, and for senior citizens and students, \$2.50. All seats are reserved and for reservations call 286-3521, or 286-0129.

Medical Service Awards



Medical Department employees who recently received service awards are Louis B. Stang, Jr., (30 years) in foreground, from left to right, Thomas F. Prach, (25 years), Robert B. Aronson (Deputy Chairman, who made the presentations) and Michael S. Makar (10 years).

LIIRA Tennis League

Once again it's time to begin the Long Island Industrial Recreation Association. Tennis season. BNL first entered the league in 1976 in the middle division of the three league levels. Our team finished first in that division and was promoted to the top division for 1977. We finished fifth in a field of 8 last year and hope to improve on that record this year. The competition in this division is quite advanced. The first matches are in the week of May 22, so we must have a team roster by May 19. Anyone interested in playing on the BNL team should contact Ed Platner, 3922 or Andy Kevey, 2424.

Women Golfers

The response to a women's golf division has been good. About 18 women have signed up. There will be a meeting for this group next Wednesday, May 17, Berkner Hall, Room D, at noon.

Arrangements have been made with an instructor at Flag Country Club, Sound Avenue, Riverhead, for golf instructions. If you are interested the fee is \$15.00 for four one-hour lessons at Flag on an afternoon yet to be determined. Golf balls will be provided. Bring your own clubs. Additional information will be given at the meeting.

Stony Brook Events

Theatre: Tom Stoppard's "Rosencrantz and Guildenstern are Dead" presented at 8 p.m., May 12 and 13, Theatre II, Fine Arts Center. Tickets \$3.50 for general public, \$1.50 for students and senior citizens.

Children's Theatre: "The Magical Pied Piper," 2 p.m., May 13 and 20, Stony Brook Union Auditorium. Tickets \$2.

Concert: Arioso Trio: Richard Simon, violin; Judith Davidoff, cello, and Harold Lewin, piano, 5 p.m., May 14, Sunwood Estate, Old Field. Contribution \$5.

Concert: The 20th Century Chamber Orchestra, conducted by Arthur Weisberg, 8:30 p.m., May 16, Lecture Center 105.

Haitian Day: L'Ouverture Club presents a Haitian Day, 8 a.m. - 5 p.m., Stony Brook Union Ballroom. Admission \$4 general public, \$2 students. Info call 246-4986.

Bicycling Report

On Sunday April 30th Bob Monaghan and his daughter Kathleen joined over 3,000 other cyclists on the 2nd Annual N.Y. City Five Boro Bike Tour. Although it was only a 30 mile ride, it took 12 hours to complete because of the logistics of handling this crowd on the Brooklyn and Triborough Bridges, the Brooklyn-Queens Expressway, Grand Central Parkway, Harlem River and F.D.R. Drives, and the Staten Island Ferry.

During the extended lunch break they joined a group of a dozen cyclists for an impromptu tour of lower Manhattan which included Chinatown, the Bowery, Canal and Delancy Streets and the financial district.

It was an unusual but pleasant overview of the Big Apple.

Cafeteria Menu

Week Ending May 19, 1978

Monday, May 15		
Tomato vegetable soup	(cup)	.30
	(bowl)	.40
Kielbasa w/sauerkraut		1.15
Knickerbocker sandwich w/cole-slaw & chips		1.25
Hot Deli - pastrami	(on bread)	1.15
	(on roll)	1.25
Tuesday, May 16		
Cream of potato soup	(cup)	.30
	(bowl)	.40
Meatloaf & 1 veg.		1.20
Macaroni & cheese & 1 veg.		1.10
Hot Deli - corned beef	(on bread)	1.25
	(on roll)	1.35
Wednesday, May 17		
Consommé	(cup)	.30
	(bowl)	.40
Tuna noodle casserole		1.20
Lemon baked chicken & 1 veg.		1.20
Hot Deli - veal & peppers hero.		1.25
Thursday, May 18		
Chicken noodle soup	(cup)	.30
	(bowl)	.40
Sweet & sour pork on rice		1.30
Salisbury steak w/1 veg.		1.25
Hot Deli - baked Virginia ham	(on bread)	1.25
	(on roll)	1.35
Friday, May 19		
New England clam chowder	(cup)	.40
	(bowl)	.50
Broiled filet w/1 veg.		1.20
Roast sirloin of beef & 1 veg.		1.40
Hot Deli - meatball & pepper hero		1.25

French Club Movie

The French Club of BNL will sponsor a showing of the film "The Cow and I" at 8 p.m. on Tuesday, May 16 at Berkner Hall. A contribution of \$1.50 (75¢ for students) will be asked from non-members to help pay for the cost of the film and refreshments, which will be served following the program.

Bowling

Pink League

Congratulations to the Lickety Splits for having won the second half. They now meet the Odd Balls in the playoff for the Pink League championship. Good luck to both teams.

Cathy Van Noy bowled up a storm with 191/188/174 giving her a terrific series of 553. Pat Oster also had a good night bowling 199/169 for a 513 series. Brief flashes of brilliance were displayed by: Judy McNamara 177, Kay Sherry 169, Helen Keeley 169, Lindora Boyd 164/161, Helen Kelly 161 and Marie Brenner 160. Honorable mention goes to Joyce Wund who not only bowled a nice 159 but picked up the 3-7.

Red League

Congrats to the Sandbaggers for winning the second half. They only managed 4 points from the Sparks, but go into Position Night 14 points up. E. Meier had a good night 225/547 and C. Bohnenblusch a 211/550. The best bowling of the night was done by a 4-man Bubble Boys team. They had 3088 pins (a 1074 game) to take the Trouble Shooters 11-0. J. Sauls had a 206-539/671 series and was 107 over average. R. Barberich was rolling; 215-208-592/670 series and was 91 pins over average.

The Anachems took the Pick-Ups 8-3. E. Gill had a 206-553/652 series (79 over average). The 76'ers took the Freon Loaders 8-3. J. Connelly rolled 205/568 and F. Stahman had a 550. The Old Timers had steady team bowling and won over the Cosmos 7-4. H. Frei had a 202. In this match, C. Neuls had his best night of the year 228/545/650 and W. Rasmussen was 52 over average. The final match-up saw the Designers skunked by the Dynamites 11-0.

Purple & White League

The Pen Mac's took all 7 to win the second half of the season. Glenn Snape, bowling for the Pen Mac's, had a 582 series with a 224/178/180.

Sharon Smith rolled a 204 and Pat Manzella had a 507 series with a 170/176.

Other good names were bowled by Ed Sperry 212, Ben Belligan 203, Nancy Erickson 198, Jeanne Penoyer 183, Ellie Murgatroyd 173, Grace Kyhl 172.

Reserved For The Handicapped



The above sign has recently appeared at various locations on site and indicates that the particular space is strictly reserved for the use of handicapped persons. At present, parking areas for the handicapped have been designated in front of the Cafeteria, the Brookhaven Center, buildings 515, 179, 510 and 463. In addition, ramps have been constructed at the Cafeteria, the Brookhaven Center and the Library, as well as at buildings 460, 463, 490, 510 and 555.

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. 2882.

LABORATORY RECRUITMENT: Opportunity for present Laboratory employees.

629. **ADMINISTRATIVE ASSISTANT** - Should be familiar with procedures of and services offered by BNL's support groups, especially the C&P and S&M Divisions. Accelerator Department.

630. **SECRETARY** - AAS or equivalent, excellent secretarial and communications skills (including steno). Group secretary position. Department of Energy and Environment.

631. **OFFICE SERVICES ASSISTANT** - AAS or equivalent. Requires excellent office and communications skills. Personnel Division.

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

632. **ELECTRONICS ENGINEER** - Requires BSEE or equivalent with analog systems background including design of heavy electronics equipment. Accelerator Department.

633. **DEVELOPMENT ENGINEER** - BS in EE or equivalent with extensive background in the development of performance specifications for electro-mechanical equipment. Knowledge of budget control procedures would be helpful. May involve heavy travel. Accelerator Department.

634. **COMPUTER SCIENCE ANALYSTS (2 POSITIONS)** - BS in mathematics/computer science or equivalent and experience in medium and large scale computer program development. Department of Nuclear Energy.

635. **SENIOR DESIGNER OR DESIGN ENGINEER** - Requires significant experience in design of precision components, preferably with background in vacuum and optical devices. NSLS Project, Physics Department.

636. **DESIGN ENGINEER** - AAS degree or equivalent in mechanical technology with extensive background in design and fabrication techniques. Working background in vacuum systems and structures desirable. Accelerator Department.

637. **TECHNICIAN (WEEKLY OR MONTHLY)** - AAS or equivalent in electromechanical technology. Knowledge of survey equipment desirable. NSLS Project, Physics Department.

638. **TECHNICIAN (WEEKLY OR MONTHLY) 2 POSITIONS** - AAS or equivalent in electronics with competence in instrumentation circuitry and peripheral interfacing of processor systems. NSLS Project, Physics Department.

639. **TECHNICIAN** - AAS or equivalent in electronics with competence in pulse and analog circuits. Familiarity with high voltage and high power rf desirable. NSLS Project, Physics Department.

640. **TECHNICIAN** - AAS or equivalent in mechanical/electrical technology. Familiarity with vacuum techniques and HVDC desirable. Accelerator Department.

641. **PROGRAMMING ASSISTANT** - Temporary position (approximately 4 months). Department of Energy and Environment.

642. **SECRETARY** - Temporary position (approximately 2 months). Contracts and Procurement Division.

643. **ELECTRICIAN A** - Temporary position (May 15 - August 18, 1978). Plant Engineering Division.

Autos & Auto Supplies

71 **PONTIAC** - Lemans, sport, auto, V8, ps/pb, a/c, am/fm, \$900., Frank, Ext. 2011.

76 **MAZDA** - RX-3, Lt. blue, white interior, auto, am/fm, great shape, Ext. 2888 or 924-7527 after 5:30.

TIRE - (1) Steel Radial, ww, GR-70-14, 5000 mi, \$30., Jack, Ext. 3658.

75 **FIAT** - 128 SL, low mi am/fm, excel cond, \$1700., John Schuller, Ext. 3082 or 727-9197, after 5:00.

73 **FIAT** - 4 Dr Sedan, auto, 4 steel belted radials, 67,000 mi, very good cond, \$1200., Jack, 744-6514.

72 **CHEVY** - Blazer, 4 wh dr, custom interior, must be seen, many extras, 473-5304 or Ext. 2022.

MOTORCYCLE PARTS - For Allstate/Puch, J. Olson, Ext. 3382.

77 **HONDA ACCORD** - Silver w/black interior, extremely clean, Craig power plays, 924-0374 after 5.

71 **YAMAHA** - 350 cc, body is great, needs some mechanical work, Ext. 3688.

NEW & USED TIRES - Rims, repairs, snow, reg, radials, Dunlop-Michelin, FREE installation, balance avail. Fred Usack, Ext. 4597 lunchtime or 475-4935 eves.

73 **CHEVY** - Pickup, ¾ ton rad/hr, heavy duty springs & shocks, 36" cap, \$3,000., 924-6733, after 3:15.

69 **PLYMOUTH** - Valliant, good running cond for second car, \$200., Ext. 3806 or 286-8370 after 6.

72 **CHEVY** - Nova, a/c, p/s, A.T., tint glass, 350 V-8, \$1,000., 878-4809.

66 **CHEVY VAN** - Paneled & carpeted, excel running cond, \$500., Larry Arnold, Ext. 4764, 281-2136.

75 **OLDS** - Cutlass Salon, mint cond, all power, am/fm, console, buckets, tilt wh, landau roof, sport mirrors & wh, 30,000 mi, Jeanne Weber, Ext. 2003 or 472-0086 after 6.

70 **FORD** - Wagon, ps/pb, 55,000 mi, \$600., Don, Ext. 2026, 281-1396 eves.

73 **HONDA** - CB 350 G, 7,500 mi, \$600., Harry, Ext. 3516 or 3513, 878-4304 after 5.

MOTORCYCLE Indian MX, 74 cc, excel cond, \$300., helmet \$15., Fred, Ext. 4407.

69 **VOLVO** - 144S, as is or for parts, 924-3170.

72 **PLYMOUTH FURY** - Station wagon, deluxe int, rf rk, good running cond, \$1,200., Frank, 281-9269.

HELPER SPRINGS - For sagging rear ends, car or light truck, \$10., air cond recharge kit w/fittings \$3., new, Frank, 281-9269.

66 **DODGE DART** - GT, 2 dr, auto ps/pb, console, many new parts, \$350., Steve, Ext. 3822 or 929-6527.

MINICYCLE - Chaparral 100 cc, '76, grey, dirt bike w/4 speed trans, excel cond, \$350., firm, Ronnie, 732-6712.

73 **YAMAHA** - RD 350, custom paint, new pistons, excel cond, \$475., Fred, 924-3556 eves.

78 **COUGAR** - XR7, fully equipped, \$6,700., Ext. 4207 or 727-0560 after 6.

WHEEL RIMS - From '71 Ford Torino \$10. for (2); VW tune-up kit, 64-67, \$2., Ext. 3609.

MOTORHOME - '22' Winnebago, '67 Dodge V-8, 58,000 mi, sleeps 8, stove, gas/elect, refrig/freezer, furnace, water heater, monomatic, \$6,000., M. Heine, 286-0478.

70 **FORD** - Fairlane, good running cond, \$400., 281-6130 eves.

72 **OPEL** - Station wagon, new tires, overhauled eng, CB radio, 90,000 mi, \$900., 281-6130 eves.

69 **MUSTANG** - Fastback w/hood scoop, 6 cyl, auto, p/s, 80,000 mi, orig owner, needs work, 585-4038.

72 **TOYOTA** - Corona Mark II, 4 dr, auto, 2 new tires, 2 studded snow tires, good cond, \$1,300., Vivian, Ext. 3429.

68 **VOLKSWAGEN** - Bug for parts, Andy, Ext. 3514 or 286-8814

65 **BUICK** - Special, V-6, std., 2 dr, buckets, runs good, \$150., H. Rhodus, Ext. 3284 or 924-3522.

75 **CHEVY** - Vega, hatchback, auto trans, 16,000 mi, well maintained, \$1,800., 929-4540.

HEADERS - For small block Chevy, \$35., Ext. 4742 or 744-2688.

1976 **HONDA 360** - Blue, excel cond, luggage rack, safety bars, 2 helmets, 6,000 mi. Asking \$950. 589-3086.

1971 **VEGA HOOD** - excel cond, \$25., Norton 2913 or 475-5834 after 6.

72 **VOLKSWAGEN** - Type III fastback, 2 dr, auto trans, fuel injit, disc brks, 50,000 mi, \$1300., Ext. 4504 or 744-8546 after 6.

72 **PINTO** - Runabout, 4 spd, high mi, excel cond in & out, \$650., Charlie, Ext. 3354.

60 **T-BIRD** - Collectors, sedan, new trans-clutch & brakes, can be seen 301 Montauk Hwy, Hampton Bays, 661-1676 or after May 17th, 728-2959.

69 **MUSTANG** - 6 cyl, std trans, 2 dr, hardtop, runs but needs some work, has new water pump and ball jts, \$275., Bob, Ext. 4782.

65 **BUICK** - La Sabre 400 V8, auto trans, pb/ps, 4 dr, runs well, good rubber, new universals & starter, need new front seat, \$150., 821-0695 after 3.

68 **PLYMOUTH** - Wagon, \$200.; Rims, new (2) 6. ea fit Dodge, Bill, Ext. 4636, 981-7905 eves.

75 **DATSUN** - B-210, 30,000 mi, like new, very good tires, \$2,100, Licalzi, Ext. 3354 or 473-3328.

67 **FORD** - Cortina Wagon, \$295; 68 SAAB, 3 cyc, 2 stroke, \$295; 69 Rover 2000 automatic \$495., David, Ext. 3501 or 286-8097.

64 **CHEVELLE** - Station wagon, runs, 283, good for parts, \$100., Murdock, Ext. 4731.

69 **LINCOLN** - Mark III, all power, a/c, tape deck, steel radials, good cond, \$1,400., 588-0677.

ROOF CARRIER - 65-68 Chevy type \$10., Rino, Ext. 2012.

BUCKET SEATS - (2) blue, from '69 Mustang, excel cond, \$50., Steve, Ext. 2011.

69 **CATALINA** - 8 cyl, ps/pb, radials, rebuilt motor, \$595., 473-2664.

70 **GRAND PRIX** - 455 cu in, all power, bucket seats, new exhaust, shocks, 473-7032.

Boats & Marine Supplies

23' **COLUMBIA** - Fiberglass, sleeps 4, head, galley, fabric cushions, bow, stern pulpit w/life lines, 4.5 Merc, 2 sails, main cover. 286-1076.

19' **BAYLINER** - Fiberglass, 135hp Volvo I/O, Shoreline Trailer w/elec winch, navy top, DF, excel cond, \$4,500., Ext. 2611 or 751-3702.

31' **BALTZER** - Ideal family or fishing boat. Camper back head, galley & dinette, sleeps 4, twin 125 Chrysler engines w/60 hrs., \$2,200., 331-1718.

15' **WOLVERNE** - 18hp Evinrude & break-away trailer, \$500., Steve Gracia, 325-1805.

15' **CROSBY** - Fiberglass trihull (like Boston Whaler) steering console, full controls, plus 50hp Mercury, both very good cond, \$895., Scott, Ext. 4334 or 878-1777.

25' **GRAN BATEAU** - '75 Cruiser Inc., 188 Merc I/O, galley, swim platform, full canvas & camper top, dockside pwr, many extras, \$10,000., 281-6932.

12' **ALUMINUM MOTORBOAT** - Great for car toping, \$75., Ext. 3992 or 298-4172.

CRUISER, INC. - '71 fiberglass, all C.G. equipment, D.F., C.B. Camper top, 115hp Johnson, in water, will demo, excel cond, \$4,000., 281-2186.

18' **GARVEY** - Self bailing, fiberglass over wood, 5 layers bottom, 3 top, center console, extras, \$975., Leo, 289-5914.

23' **MORGAN SEA SKIFF** - 109hp Grey marine in-board, only 600 hrs, cabin, cushions, \$500 firm. Ext. 3639 or 724-0387 after 5.

16' **GARVEY** - Boat, perfect for clamming, \$100., 475-4394.

Miscellaneous

YARD SALE - Friday, May 12 & Sat, May 13, 10 am - 3 pm, 286-3404, 8 Maplewood Dr., Bellport, N.Y.

YARD SALE - 129 Union Ave (near Shoreline Fishing Sta), Center Moriches, 3 fam, Sat - Sun, May 13-14, 10:00 - 4:00, Rain date, May 20-21.

BLACK & DECKER - New circular saw, 7¼" blade, w/2 blades, rough cut & fine cut, tilt guides, adj depth, only used once. \$35. 286-0716 after 6.

CAMERA - Canon AE-1 w/50mm 1.8 lens, power winder, speedlite, camera case, 135mm 2.8 telo, warranty, \$450., John, 265-2320.

RECORD PLAYER - Dual 1225, base & cartridge, hardly used. \$75. Ext. 3688.

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

N. **PATCHOGUE** - 7 rm ranch, sunken liv rm, formal din rm, eik, 16x32 in-ground pool, appl, extras, \$38,000. negotiable, 289-3914.

MASTIC - Tudor style, 3 bd rm, 1½ bath, full bsmt, w/w fireplace w/hydrohearth, fenced, hardwood floors, thermopane windows, extras, \$39,000., 399-0398.

MASTIC BEACH - 4 yr old, 6 rm, full bsmt, fenced 80x125, 281-5498.

BELLPORT VILLAGE - ½ acre, 3 bd rm, 2 baths, 2 car garage, screened porch, att greenhouse, many extras, \$49,500., 286-2724.

E. **PATCHOGUE** - 10 rm Colonial, beautifully landscaped, rock garden gazebo, 1.4 acres, 4 bd rm, 30' liv rm, fp, formal din rm, laundry rm off kitchen, 2 garages, full bsmt, low \$60's, 475-0168.

BRENTWOOD - 3 bd rm ranch, 1½ car garage, finished bsmt, encl patio, new cesspool, washer/dryer, carpeting, relocating, orig owner, will negotiate, \$35,000., 273-6634.

MIDDLE ISLAND - Near Rocky Point, 3 bd rm ranch, ½ acre cul de sac, garage, w/w, appliances, bsmt, 4½ yr old, \$38,000., 744-9724.

SOUND BEACH - Cape Cod, 3 bd rm, eik, d/r, fp, rec room, reinsulated, low taxes, 100x100 lot w/small pool, \$39,000., 744-5479.

EAST MORICHES - 3 bd rm ranch, dinette, heated sunporch, bsmt, w/w, s/s, 2 car garage, appli includ elec range w/self cleaning oven, 12x14 storage bldg, entire backyard fenced, ½ acre, low taxes, will hold mtg. \$43,500., 878-1471 after 5:30.

SHOREHAM - Close to Lab, contemporary 3 bd rm ranch, wooded ½ acre, garage, carpet, a/c, appl. & more, plus low taxes, \$33,750., call 744-6772.

SOUTH SETAUKET - Strathmore "Framingham," 5 bd rm, 3 full bath, central a/c, underground sprinkling system, w/w carpet throughout entire house, many extras, \$49,000., 698-1785 after 5 and weekends.

ROCKY POINT - 3 bd rm, secluded wooded ½ acre, garage, bsmt, appl, OHW., low taxes, Walt, 821-9223.

ST. JAMES - 5 rm house, 2 car garage w/workshop area, walking distance to stores, rr, school, landscaped, fenced ¼ acre. \$32,000. Seen by appt, 473-2038 after 6.

NORTH SHIRLEY - Beautiful colonial, (9) lrg rms, 2 full baths, lrg entrance hall, fp, 2 car garage, raised brick patio, ½ acre park-like grounds on corner, can convert mother/daughter, low \$60's, by appt, 924-6877.

SHOREHAM - Custom built, 4 bd rm colonial, white cedar shakes, 2½ baths, eik, laundry rm, 1 acre, full fenced, 2 car garage, \$56,500., 744-2821.

BROOKHAVEN - 3 bd rm, custom ranch, new 20x20 barn on 1½ acres, very desirable area, lux landscaping, extras too numerous to list, 286-0246.

CORAM - Dutch colonial, 3 bd rm, 2½ baths, liv rm, fp, din rm, eik, one car garage, ½ acre beautifully landscaped, school district #11. Call 331-1640.

ROCKY POINT - 4 bd rm, colonial, eik, 2½ baths, fp, w/w carpeting, all appli, garage, wood deck, ½ acre, private beach, 744-1156.

ROCKY POINT - The Tides, 70' ranch on a beautiful treed ½ acre, 3 bd rm, etc., oak floors, fp, full bsmt, patio, priv beach, golf, fully furn or not \$45,000., Ext. 4605 or 774-6482.

SETAUKET - 2½ yr old, Mother/Daughter, hi-ranch, ½ acre, 4 bd rm, 2 baths, eik, furnished downstairs apt, 3 Village School, 3 mi to SUNY, 16 mi to BNL, mid 40's. Martha, Ext. 3307 or 751-8649.

MIDDLE ISLAND - 4 bd rm expanded Cape Cod, 24' liv rm, din rm, eik, screened patio, fin bsmt w/bar, 2 car garage, 3 zone oil heat, low 40's. Ext. 3635 or 732-5338 after 6.

For Rent

SOUND BEACH - 2 bd rm, 2 bath, fp, wooden floors, lrg garage, 744-1733.

BELLPORT VILLAGE - Aptmt, 2 lrg rm, plus bath & private garage, priv entrance, \$210 incl util, lease, avail June 1st, 286-8850.

POCONO'S - Chalet w/sundeck, sleeps 6, private community nr lake Wallenpaupack, tennis, riding, swimming, hiking wk/wk ends, 289-2159.

BELLPORT - Studio apt, priv entrance, bath, walk to ferry, stores, 20 min from BNL, all utilities \$175/mo, Kay, Ext. 4539 or 286-8957.

PATCHOGUE - Studio apt, overlooking garden, a/c, furnished, separate entrance, \$200/mo, Ext. 4786.

SHIRLEY - Studio apt, lrg dn/rm, sleeping area, mod shower, all utilities, 210/mo, 281-6961.

FARMINGVILLE - Studio apt, private entrance, \$225/mo, util incl, must see, Ben, 698-6436.

MIDDLE ISLAND - 2 bd rm apt, tennis courts, 10 min from BNL, available 6/1 - 3/31, \$300/mo, incl gas, 924-6463.

Wanted

GOOD BUDDIES - To establish BNL CB net on Channel 14, near to 10 & 12 - far from 19. Red Robbin.

ROOMS TO RENT - Bellport area, for July and/or Aug. Need kitchen, bd rm, and bathrm. Reasonably priced. Kathy, Ext. 3146.

WEIGHT BELT - Scuba diving belt w/any amount of weight up to 30 lbs. Ext. 4132 or 924-4328.

DOG HOUSE - For large dog. Paula Newhouse, Ext. 2067 or 698-8950 after 5:30.

TWIN BEDS - (3) box springs/mattresses. Sue, Ext. 2670 or 728-9408 eves.

REFRIGERATOR - Full size, good cond. Ext. 2290.

DESK - Large wooden. Twai, Ext. 3619.

FILING CABINET - 2 or 3 drawers. Anne, Ext. 2345 or 981-3415 after 6.

CEMENT MIXER - Used, reasonable. Frank, Ext. 4581 or 588-3565.

OLDER HOME - (15 yrs) with personality for ambitious young couple. 878-4261 after 7.

TENNIS PLAYER - Advanced beginner, male or female, to play once or twice a week. Fred Usack, Ext. 4597, or 475-4935.

BIKE - Used 27" 10 spd, in good cond. 878-4089 after 5.

WOMAN - To babysit 18 mo old boy from 8:30 to 5:30 preferably on site. My home or yours, also for sitter for weekend eves. Ext. 3480. Mt. Sinai/Pt Jeff area. 473-8717.

OUTBOARD - Motor, 5 to 10 hp, 1962 or later, Ext. 2113.

PONY SADDLE - Western style, reasonable. Jay, Ext. 2024 or 727-6582.

WANTED - Well-bred virile male of medium stature for sweet young female, only Brittany spaniels need apply. Papers please. Mitchell, Ext. 2544.

APARTMENT - For independent elderly lady on Social Security. Unfurnished, inexpensive. Patchogue area. I have no pets. 475-3415 eves.

HOUSE OR APARTMENT - Furnished or unfurnished in Setauket Area, Aug occupancy desired. Bill, 941-4820.

TIDE - 165 15" Michelin steel belted radial, fair to good cond. 475-0144 after 6.

TABLE - Round solid oak, approx 48" diam, pedestal bottom. Pat, Ext. 4519.

INFANT CAR SEAT - In good cond, prefer GM Love seat or similar. Roger, Ext. 4480.

MOVIE CAMERA - Regular 8, camera