

BULLETIN BOARD

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BNL Biologists Present

Results of Biosatellite

Arnold H. Sparrow, Biology, presented the preliminary results of his experiment on board Biosatellite II to a symposium in Washington, jointly sponsored by the National Academy of Science and the National Aeronautics and Space Administration. The Biosatellite project is managed by the Ames Research Center of NASA near San Francisco.

Sparrow, in association with Lloyd Schairer, K.M. Marimuthu, and a team of BNL biologists, prepared specimens of *Tradescantia*, a blue flowering plant, to test the effects of space weightlessness and gamma irradiation on plant cells. The primary effects that were looked for include mutations in color from blue to pink or colorless, chromosome breakage, amount of cell division in stamen hairs, and pollen abortion. *Tradescantia* was selected because color mutations are easily observed; the plant cells have only 12 large chromosomes, which make it particularly suited for detailed cytological (cell systems) study; and flower cuttings are easily rooted and can be compactly packaged for flight.

Five identical sets of specimens were prepared. Two were put in the Biosatellite and two were maintained on the ground at Cape Kennedy as a control to provide a comparison with those in orbit. The fifth set was maintained as a spare. Each pair was further subdivided into irradiated and nonirradiated packages. Biosatellite II contained a strontium-85 source which provided uniform two-day irradiation totalling 220 roentgens to half of the plant specimens. The orbited specimens were launched from Cape Kennedy on the evening of September 7, 1967, and after 42 hours in orbit were recovered near Hawaii.

Sparrow reported that mutation rates, or changes in flower petal color from blue to pink or colorless, did not change due to the spacecraft orbital stresses. However, some additional ground control tests are necessary before final conclusions can be drawn.

The need for further ground control tests is also necessary to provide conclusive comparisons as far as chromosome breakage and cell division rates are concerned. For chromosome breakage, preliminary analysis indicates no particular space flight effect. Cell division effects, however, were noted in the form of stamen hair growth shorter than normal. Stamen hairs of *Tradescantia* grow one cell at a time and for those cells that were actively dividing while in space, there was an effect noted. However, the exact cause of the effect is still to be determined.

The biologists kept track of pollen abortion by scoring (examining and recording) the flowers as they opened every day for several weeks after the flight. Pollen grains that were in meiosis (first stage of reproductive cell development) during the space flight would normally appear in flowers at about two weeks after the flight. The meiotic pollen showed significant increase in the number of pollen grain abortions, from a normal 40 percent to more than double, resulting in less fertile pollen and less probability that the biologists would

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Ground Broken For New Meson Factory *Los Alamos*



Because of inclement weather, some Los Alamos earth was brought inside for groundbreaking ceremonies. The new \$55-million proton linear accelerator, or "meson factory" is expected to be operational by 1972. AEC Commissioner Gerald Tape and LASL Director Norris Bradbury look at the earth that was returned to the construction site when ceremonies were finished.

Former BNL Director Presents Award *Los Alamos*



After being presented the AEC Citation by Commissioner Gerald Tape (center), Dr. Norris Bradbury (right) LASL Director, is congratulated by AEC Chairman Glenn T. Seaborg (left).

Los Alamos Now A Thriving Town Was Only A Ranch School Twenty Five Years Ago

Twenty-five years ago on a secluded mesa jutting eastward from the Jemez Mountains was a ranch-type school for boys. Miles away across the valley was the summer home of a physicist named J. Robert Oppenheimer, who was a frequent visitor to the Los Alamos Ranch School.

When Oppenheimer was asked to advise the Corps of Engineers on the selection of a site for a secret laboratory, he thought of the school, and assured the engineers that it would indeed be large enough to accommodate all of the thirty scientists who it was anticipated would need to be housed there. The winding, unpaved road to Los Alamos was soon filled with trucks carrying supplies up the mountain for the construction of the World War II secret scientific laboratory.

Unlike BNL, Los Alamos Scientific Laboratory started out on a bare tract of land with a few buildings suitable only for housing. Labs, shops, and offices had to be built, as well as dormitories, stores, and roads. During this early period of rapid construction, there was a sense of urgency pervading the entire scene. The development of the atom bomb was of paramount importance, and all of the effort of the Lab was devoted to this end.

At the time the first bomb was exploded at nearby Alamogordo, the population of



Houses formerly owned by the AEC have now been sold to Lab employees. This house, built in 1947 has three bedrooms and features an open fireplace in the living room. All of the houses are heated by gas, and all are located less than a mile from a school.

Los Alamos had swelled to 3000 employees at the Lab, far exceeding the thirty scientists originally planned for, and a total of 8000 inhabitants living "on the hill." After the bomb, the AEC-owned town's population swiftly fell to a low of 6500 by January of 1946.

In those hectic days housing was a constant problem for residents of Los Alamos. Quonset huts, trailers, pre-fabs, and barracks were soon scattered all over the site. The buildings of the ranch school were used only by the upper echelon, and soon got to be called "Bathtub Row" because of their sophisticated plumbing. The Lodge, the main building of the school, was used for VIP's, housing such people as Gen. Groves, head of the Manhattan District, and many others including I.I. Rabi. Room 237, on the balcony overlooking the main hall, was occupied by Groves. Many conferences were held in the "Throne Room," a facility adjacent to the General's bedroom where plumbing appliances were raised from the floor a foot or so and centered in the middle of a twelve-foot square room.

In the barracks area, a young private named Meyer Steinberg with a degree in chemical engineering had just been promoted to PFC. Anna Kissel, a T/Sgt. WAC secretary, would stand in the "Chowline" at the mess hall with T/4 Honor Wells. Occasionally they would be joined by

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Los Alamos (Continued)

Edward Dexter, who was just ready to present an engagement ring to Honor, whom he later married.

Meyer Steinberg is now head of the Radiation Processing section of the Nuclear Engineering Department at BNL. Anna Kissel is the Executive Secretary for BNL's Director, Maurice Goldhaber. Honor Wells is now Mrs. Edward Dexter, wife of Ed Dexter of the Accelerator Department.

Today, Los Alamos is a thriving town with a population of 16,500. The barracks and the trailers have all but disappeared; the once muddy roads have all been paved and curbed. The highway from Santa Fe is broad and straight, and the old narrow wooden bridge over the Rio Grande has been replaced by a modern concrete and steel structure.

The former guard gate on the road from Santa Fe is now doing service as a drive-in Mexican restaurant. Many of the Lab employees claim that the enchiladas here are the best in New Mexico. Although the Lodge is still used for official luncheons, the rooms around the balcony are now empty except for a few cardboard boxes in storage.

After the disappearance of the temporary housing, the residential area is now hard to distinguish from a development on Long Island. Only on Barranca Mesa, a new area recently opened for home building, are unique homes being built. Near the Lodge, Ashley Pond, a favorite swimming hole for the ranch school, has been the center of some controversy because it has not been properly maintained. All of the many churches in Los Alamos are well cared for, and the school situation is so good that an elementary school has just been shut down for a lack of pupils.

At the Laboratory, although there is still a preoccupation with weapons technology, pure research is making great gains. The new "Meson Factory" dedicated this February will be used by the entire scientific community of the United States for pure research on the atomic nucleus. This half-mile long accelerator will be built on one of the "finger" mesas, where excavations are being carved out of the living rock, doing away with need for retaining walls or piling. When the LAMPF is finished in 1972, the \$55-million facility will be used for experiments that have little to do with weapons technology.

At the Ceremonies for the twenty-fifth anniversary of Los Alamos, Dr. Norris Bradbury, Director of the Laboratory, was honored by the AEC for his work in bringing the Lab and the community to their present flourishing state. Bradbury became director at the low point in the Lab's history, and sparked a change now reflected everywhere in both the Lab and the town as a vital, growing enterprise.

Arrivals & Departures

Arrivals

Heinrich Heesch.....Appl. Math.
Robert C. Leiz.....Accel.
Edward J. Woessner.....Pl. Eng. & Plan.
Kenneth J. Buchan.....Nuclear Engr'g.
James J. O'Donnell Jr.....Accel.

Departures

Emmet G. McKeever.....Pl. Eng. & Plan.
Robert H. Quick, II.....Medical
Nancy L. Roettinger.....Biology
Marco A. Jamini.....Instr. & H.P.
Patricia A. Mitlehner.....Accel.
Edward R. Wagner.....Physics

Twenty Year Award



Dennis Puleston, Information Officer, helps Bronislas Orłowski with the clasp of a charm bracelet and medallion presented to "Bronnie" on her twentieth year at BNL. Photo by Rosen

Tuition Loan Plan Forms, Info, Ready

Those of you who are attending college part-time or have children of college age may not be aware of a student loan plan administered by the New York Higher Education Assistance Corporation (NYHEAC), and available at many financial organizations, including the Peoples National Bank on site.

NYHEAC is an independent, non-profit organization and was created by the New York State Legislature in 1957 to operate a loan plan. Though created by the State, it is administered by private citizens and operated like any other business. Loans are made by commercial and savings banks, savings and loan associations, credit unions, and pension and welfare funds which have signed an agreement to participate in the Student Loan Program and have the guarantee of NYHEAC.

Students should apply for a loan from a Lender in the area in which they reside and where their parents do their banking. Under the Plan, the qualified student borrows from the Lender on promissory notes as needed for each school year. The student pays no interest while in school. After graduation or termination of study, the student pays only 3% interest. While the student may repay the loan at any time, arrangements for monthly repayment of the loan must be made after graduation or termination of study.

To qualify for a loan, the student must be a resident of New York State, and already be in attendance or accepted for admittance as a full-time or part-time student at a college which is approved under this program. Students attending or accepted for admittance at a vocational school approved under this program must be full-time students to qualify for assistance. The student must be able to furnish proof of scholastic ability, and provide the Lender and New York Higher Education Assistance Corporation with information concerning the costs of the educational program and the financial aid available to the student.

Full-time students pursuing a degree course may borrow up to a maximum of \$1500 per year.

The Peoples National Bank has a supply of applications for student NYHEAC loans. They or your local Lender should be contacted for further information.

Here and There

Dolores del Castillo

Dr. Lewis K. Dahl (Medical) attended the USAEC Bio-Medical Program Director's Meeting at the Argonne Cancer Research Hospital, University of Chicago, February 11-13, 1968.

Robert J. Hart, presently Deputy Director of the Division of Contracts, AEC Headquarters, has been appointed Deputy Director for the Richlands Operations Office of the AEC. He is expected to assume his new duties on May 1.

O.E. Dwyer (NED) lectured at Lehigh University on the subject of "Liquid Metal Heat Transfer - Problems and Progress" on February 22.

Walter Milian (Plant E & P) is at home recuperating after his recent operation. He expects to return to work in about two weeks.

Maynard Smith (Meteorology) conferred with the Israeli government in Tel Aviv, February 19-20, on the air pollution problems associated with a new power plant.

Dale W. Lick (Applied Math) lectured at the University of Missouri, Rolla, Missouri, February 22. The subject of his lecture was "Some Non-Linear Dirichlet Problems."

Jack Chernick (NED) has just recently returned from Puerto Rico where he presented an invited seminar at the Puerto Rico Nuclear Center. The seminar was entitled "Reactor Physics at Brookhaven National Laboratory."

Sol Pearlstein (NED) has recently returned from Saclay. He attended a joint meeting, held at Saclay, February 19-21, of the ENEA Nuclear Data Center of Saclay, the IAEA Vienna Nuclear Data Center, the Nuclear Center of Obninsk, USSR, and the BNL National Neutron Cross Section Center. The purpose of the meeting was to foster communications between the Centers.

J. Robb Grover (Chemistry) became an Associate Editor of Annual Review of Nuclear Science, effective January 1, 1968.

Lars Bertil Wallin of the Institute of Swedish National Defense, Stockholm, will visit the Laboratory on March 1 for discussions on evaluated neutron cross sections.

Alois Tavcar of the University of Zagreb will visit the Laboratory the 5th through the 8th of March to discuss genetics and plant breeding.

On March 8 the Messrs. A. Barraud, A. Friant, and J. Messier of Saclay will visit the Laboratory.

W.S. Hillman (Biology) presented a seminar at the Torrey Botanical Club at Columbia University on February 20. The seminar was entitled "Some Approaches to the Phytochrome Problem."

On February 15, George M. Woodwell (Biology) accepted membership on the Radiation Research Society Committee on Education.

Sanford A. Lacks (Biology) presented a seminar at the Cold Spring Harbor Laboratory of Quantitative Biology. The subject of the seminar was "Molecular Fate of DNA in Pneumococcal Transformation."

Charles Knierim, a Tool and Instrument Maker with the Central Shops, died on Sunday, February 25. He had been with the Laboratory since January 1957.

Karl E. MacVean, a Senior Buyer in Purchasing, died on Tuesday, February 20. He had been with the Laboratory since May 1947.

BULLETIN BOARD

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NORBERT J. DERNBACH
Public Relations Officer

Letters To The Editor

Dear Sir:

It is incredible that food of the lowest quality in portions of unbelievably minuscule size is being served in the Brookhaven Cafeteria at the prices charged by the ARA. It is time for a serious re-appraisal of the contract given to ARA by the laboratory.

M. Dorin
Medical

Updating Due For BNL Phone Book

The new issue of the Laboratory Telephone Directory will be published in early June. To insure the accuracy of your listing, you are asked to review the present listing consisting of street address, mail drop number, telephone extension, name, and life number.

If any information is incorrect or lacking, make the necessary changes and return this memorandum to the Staff Services Division, mail drop 179-B. If the information is correct, no action is necessary. Corrections should be returned as soon as possible. All corrections received by April 1 will be reflected in the new directory.

Nimrod Meeting Set

The BERA Rifle and Pistol Club will meet in the Recreation Building at 8 p.m. on Friday, March 1.

BNL Biologists (continued)

get good seed sets from the flowers in successive generations. The pollen abortion results indicate that there was an interaction between radiation and some flight factors that accounted for the increase in those cells that were in the actively dividing stage while in the space flight environment.

Secondary effects of bud blasting (loss of moisture which causes plant to brown and die), microspore (early development of pollen) death, and other cytological (cell system) aberrations were observed more often in the flight samples than in the ground samples. Weightlessness and/or other spacecraft environmental factors could be the cause of these effects, but additional ground based experiments are planned to check out these factors and their influence on the plants.

Dr. Sparrow summarized the Brookhaven experiment by stating that in general those cells that were undergoing division in flight showed significant changes due to weightlessness and other spacecraft factors, while those cells that were in essentially a dormant stage during the flight showed no significant changes from the ground control specimens. Final evaluation must await further ground control tests, particularly to determine the effects of vibration experienced during launch and recovery.

The Brookhaven Story

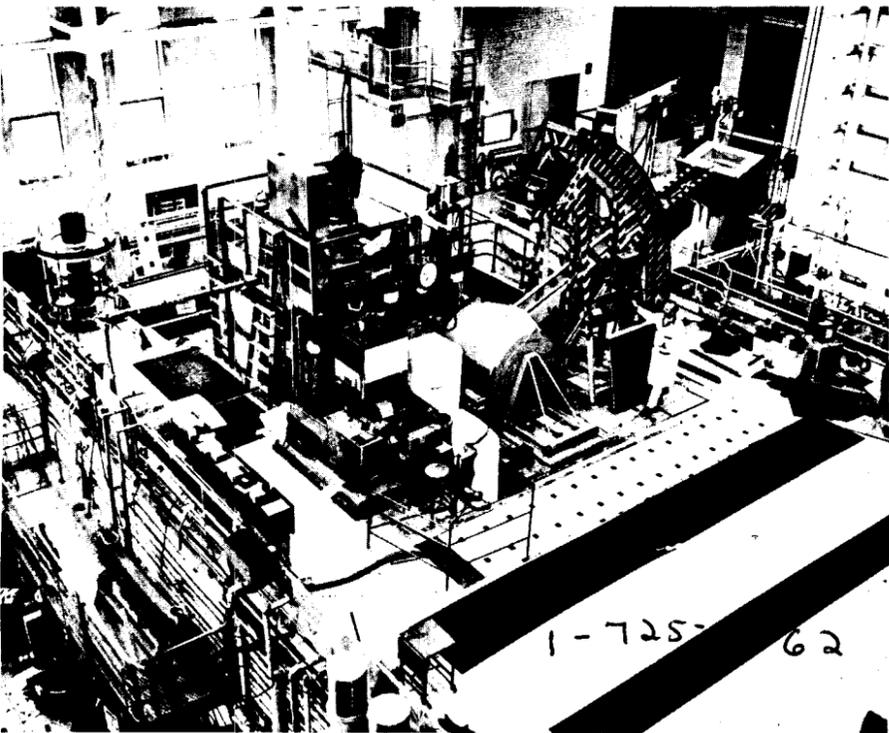
This is the second part of the AEC-released story about BNL. The first part was devoted to the life sciences, and this part is concerned with the physical sciences.

The Physical Sciences

The Brookhaven Graphite Research Reactor was built in 1950 as the first reactor in the world designed for peacetime research. It is still in operation. Elementary particles called neutrons are emitted through holes in the reactor shielding to serve as tools in many kinds of research. Sometimes the neutrons are allowed to strike other materials outside the reactor. The way in which the neutrons are scattered, observed or otherwise seen to interact with the materials provides data on solid state structure and its properties.

the atomic nucleus than had ever been done before – the \$31 million Alternating Gradient Synchrotron, or AGS. Every two and one-half seconds, protons are accelerated to almost the speed of light, traveling the half-mile circumference 330,000 times, and are then sent crashing into target atoms of copper or some other material with an energy up to 33 billion electron volts. The collision shatters the nuclei of the target atoms, breaking them down into even smaller component parts. Today, more than 100 subnuclear pieces of matter have been discovered and identified as a result of such experiments on the AGS and other Brookhaven machines and on “atom smashers” elsewhere in the U.S. and abroad.

Scientists still aren't satisfied that they have learned the ultimate answer to the question: “What is matter?” But they are confident they are on the right track and



Experimental area on top of Graphite Reactor.

Materials exposed to intense radiation within the reactor are used to observe physical, chemical, and biological changes induced by radiation. Radioisotopes – or radioactive elements – gathered from the reactor are used for studies by Brookhaven scientists or shipped elsewhere for research by others or for use in hospitals.

The BGRR, one of the most versatile facilities at the Laboratory, has been in almost continuous use since 1950 by Brookhaven and visiting scientists and engineers. A new reactor called the High Flux Beam Research Reactor was placed in operation in 1965 to provide an even more powerful tool for experimental research.

Alternating Gradient Synchrotron

The Greeks decided that all matter is composed of non-divisible things called atoms. Scientists in the 19th century decided that the Greeks were right and that matter was composed of fewer than 100 different kinds of atoms. Scientists know now, however, that the atom itself has parts – a small but very dense core, or nucleus, surrounded by a shell of elementary particles called electrons.

Further, the nucleus itself has parts called neutrons and protons and, in turn, can be divided into still smaller particles. To explore deeper into this inner space, however, requires even greater amounts of energy since it becomes increasingly difficult to break progressively smaller pieces of matter apart.

In 1960 Brookhaven scientists designed and built a machine to peer deeper into

that someday the solution to this problem will be known. A 200 billion electron volt accelerator to be built for the AEC near Chicago, Illinois, by the mid-1970's, is expected to help answer this question.

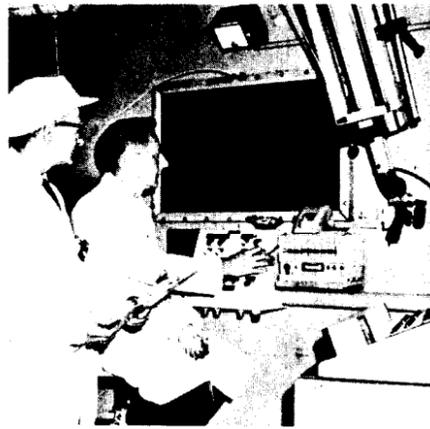
Radioisotopes

Located near the Brookhaven reactors is the Hot Laboratory, designed for the handling and processing of highly radioactive materials. Here, for example, was developed the method for preparing radioactive technetium-99 now used as a kidney scanner. Low-energy gamma rays emitted from the radioactive technetium, concentrated in a patient's kidney after intravenous injection, are detected by a scintillation scanner that is moved back and forth over the patient's body in a precise pattern.

A moving stylus that is activated by pulses from the detector draws a “picture” of the organ that can be of immense value to a physician treating a person for kidney trouble.

While medical scanning with other radioisotopes has been in use for a number of years, the development of technetium-99 for the purpose marks a significant advance in the art. The gamma rays of this radioisotope are easily detectable outside the body. Moreover, principally because the isotope is short-lived, a comparatively high dosage of this isotope can be administered, sharpening up the scanning “picture.”

Technetium-99 has proved ideal for spleen and liver scanning as well as for kidneys. It has also been applied in thyroid



Food irradiation being supervised in a hot cell at HIRD.

studies and gives promise in helping to locate brain tumors.

Brookhaven's High Intensity Radiation Development Laboratory is designed to develop engineering data on extremely high levels of radiation and to devise more efficient techniques for handling large-scale radiation sources.

Last year, the high intensity laboratory was used to sterilize 15 tons of bacon that was lowered into one of its hot cells for controlled exposure to 850,000 curies of cobalt-60 radiation – an amount equal to that from 1870 pounds of radium. Sterilization of the bacon was the first large-scale test of gamma radiation for the preservation of perishable foods for the U.S. Army. Packed in one-pound tins, the bacon is expected to last for an extended period of time without refrigeration because the high-level radiation killed the microorganisms that ordinarily cause food spoilage.

A wide program for the sterilization and pasteurization of foods by radiation is under development in the U.S.

Some 3450 people, nearly 800 of whom are scientists and engineers, comprise the permanent staff of Brookhaven.

It is a dedicated staff whose individual members work in many areas of the life and physical sciences. Lines of approach may shift rapidly as new discoveries are made in the rapidly developing field of nuclear science and technology.

Brookhaven is united with the AEC's other laboratories in a common goal – that results achieved there shall be used principally for the benefit of mankind. It is a goal that is the chief objective of more than half the AEC's total program.

As other articles in the series describing national laboratories are received from the AEC, they will be run in future issues of the *Bulletin Board*. 6-638-67



Beam floor of the High Flux Beam Reactor.

We've Got a Secret

The BERA Special Events Committee has made its selection for the annual spectacular at the Theater. One of the world's top musicians has been chosen. A recent poll listed has listed this man as Number One on the trumpet.

Sorry – but his identity cannot be announced yet, as contract formalities have not been finalized. The Committee should be able to tell you, though, in the near future.

Dance Class Registration

Arrangements have been made with the Arthur Murray Dance Studios to have two of their experts demonstrate the latest dance techniques at the Recreation Building, Wednesday, March 6 at 8:30 p.m.

Registrations will be accepted at that time for a proposed 10-week course of instruction. If there is sufficient interest, the instructions will be held on Wednesday evenings from 8:30 p.m. to 10 p.m. A fee of \$15 per person will be charged for the complete course and must accompany each registration. In the event of insufficient registrants, fees will be refunded.

You may bring your wife, husband, girl or boyfriend, or, if you prefer, come alone. The class will be organized on March 6 based on your interest. So come out and voice your opinion. Do you want to learn to dance, to dance better, to learn the Latin American dances, the Waltz, the Fox Trot, the Swim? If your answer is yes to any of these, stop in on the 6th and meet the expert – Delicia Kanetis, MRAD, ISTD.

If you can't possibly make it next Wednesday, but would like to join the class, call the Recreation Office, Ext. 391, to indicate your interest.

Hawkins Day Rally

A BLAST Success

BLAST's “Sadie Hawkins Day” Rally went off without a HITCH. Co-Rallymasters Dave Thomas and Bill Kemna picked a beautiful day. The course instructions were very explicit and clear. The many speed changes and the Monte Carlo leg were the deciding factors.

First place went to Ken and Lynda Brust in a 1967 Opel Rallye, second to Stan and Jackie Anderson in a 1968 Volvo 144S, third to Nola Jackson and Ann Almond in a 1961 Alfa-Romeo Sprint.

The next rally will be on March 23, 1968 – a Saturday night. Watch the *Bulletin Board* for further information.

Spectrum Now Ready In Foreign Language

According to the AEC Division of Public Information, the Brookhaven Spectrum sound track has been translated into several foreign languages, including Spanish, Japanese, French, German, Mandarin, Portuguese and Arabic. The Japanese and the Spanish versions will soon be available from the Film Library at BNL.

Most of the translations were done by the United States Information Agency, in order to have prints of the film ready for distribution all over the world.

Film Service

This service, which offers employees a substantial discount on the sale of film and film processing, is located in the Gymnasium Building opposite the Recreation Office. The office is open daily from 9:00 a.m. to 3:00 p.m. A receptacle is available for the deposit of film for processing at hours other than those normally scheduled. Stop by and look around. Ext. 7221.

Volleyball

by John Sears

The Net Losses have taken over first place with victories over the Replacements and Bubble Boys I. They still face battle with Atom Spikers I and II in the next two weeks however. Bubble Boys II fell before the Spikers 21-11, 21-14, 21-18 and the Atom Spikers II 21-10, 21-11, 21-16. The Atom Spikers II also took three from the Barbaryons 21-13, 21-8, 21-16 to pull into second place. Tied for third are the Atom Spikers I and Spikers. Atom Spikers I took three from the Replacements, then were beaten in two out of three by the Spikers 21-10, 21-15, 17-21. The Barbaryons won three on forfeit to move into fifth.

Net Losses	8	1
Atom Spikers II	7	2
Atom Spikers I	6	3
Spikers	6	3
Barbaryons	3	3
Bubble Boys II	3	6
Replacements	0	6
Bubble Boys I	0	9

Bowling News

by Pat Towey

Winners of special event bowling night held during the week of Feb. 12th. Red league, M. Milau, 647 gross; Pink league, V. Diebel, 698 gross; Green league, R. Hambley, 625 gross; Purple league, R. Watson, 650 gross; Rose league, J. Odwazny, 628 gross. The Bowling Board will present each contest winner with a handsome Revere serving bowl.

League representatives will be contacting all bowlers at their respective alleys during the week. Please sign up to help make this Awards Night the best yet. Remember only YOU can help us make it a success. See you at the Dance? You'll enjoy it more if you can take part in the preparations - honest, I guarantee it.

NY Mets Tickets

Ticket sales are booming for the 1968 NY Mets season at the Recreation Office. There are still many choice dates and seats left however - hurry on down to the Recreation Office for yours!

BERA Film Series

Thurs., March 7 - 8 p.m. - Lecture Hall

Le Bonheur

This beautiful and controversial film unabashedly celebrates the joy and pathos of love. A young man happily married takes a mistress to share his expansive love and tenderness. The mistress understands, but the wife's effort is less successful.

Agnes Varda has created an unusual and strikingly beautiful film in lush Renoir colors with a memorable view of the male and female - awash in familiar togetherness, sacred sex, and frank adultery. Rarely has the lyricism of love been so exquisitely portrayed. One critic warned his male readers not to take their wives and mistresses together to see the film, but this reviewer feels that such a threesome would derive the most from this picture.

Short: The Wind and the River

The great Swedish director, Sucksdorff, has made a film of extraordinary beauty of the Vale of Kashmir Floating gardens, distant mountains sparkling in the sun, and gleaming blue lakes highlight this poetic journey to this fabled land.

No Movie Tonight.

Recreation Building Gets a New Look

The Recreation Building located in the apartment area on York Lane has recently been spruced up and furnished by BERA. It is open Monday through Thursday evenings, from 5:15 to 11:00 p.m. Lounges are available for meetings, or you can just drop in and read a magazine, watch TV, play ping pong, have a game of pocket billiards, or listen to music. Projectors (16, 35, and 8mm) are available for employee use in the building.

The building also features kitchen facilities, a dance floor, and club rooms on the second floor. Group or Department parties are encouraged, and special arrangements can be made for the exclusive use of the building by calling the Recreation Office, Ext. 391.

The facility is used in the evening primarily for adult scheduled activities, and so on occasion some incidental equipment may not be available for general use. Children must be accompanied by an adult in the evening.

Softball Soon

It's not too early to start organizing your 1968 Softball team. The Softball Executive Board is presently finalizing their organizational plans for the coming season.

Announcements outlining dates, fees and roster requirements will be mailed to all last year's Captains within the next few weeks. As always, new teams are welcome. Detailed information will be on hand at the Recreation Office soon. Watch the *Bulletin Board* for further information.

Classified Advertisements

Autos & Auto Supplies

VW BUS PARTS - Rims, seats, mats, etc. P. Ettari, Ext. 2407, 273-6436.

62 FORD - Galaxie 500, std trans, 4 dr, excel cond, 8 cyl, good tires, leaving country. \$450. P. Thieberger, Ext. 7670.

61 FORD - Fairlane, std trans, 2 dr, rebuilt 65 eng, good tires, radio. Must sell, \$250. P. Thieberger, Ext. 7670.

60 MGA - Conv, white, wire wheels. \$400. Bob, Ext. 2212.

65 CHEVROLET - Impala conv, V-8, auto trans, ps, tint windshield, r/h, excel cond. \$1600. Gary, 732-3135.

65 PONTIAC - 4 dr ht, auto trans, air, power extras, new rubber, low mileage, good cond. Ext. 7239.

64 T-BIRD - White, bucket seats & vinyl top, ps/pb, radio, Goodyear ww blue streaks on mag wheels. \$1800. AT6-9697 after 6.

65 COMET - Std trans, 6 cyl, 4 dr, good cond, 30,000 mi. \$1000. 277-3297 after 5 or Sat./Sun.

SNOW TIRES - 8.25x14, Atlas, 2000 mi old, just bought 4 radials. \$20/ea. R. Majestic, Ext. 7395 or 286-0025.

61 OLDSMOBILE - 2 dr hdt, auto trans, ps, pb, new tires, uses regular gas, a good looking, good running car. \$550. 472-0455.

64 T-BIRD - P/s, p/b, auto trans, good cond, \$1650. Bob, Ext. 2167, 585-4973.

HARD TOP - For Triumph TR-4, white fiberglass w/ cloth lining & wrap-around rear window, excel cond. S. Spark, Ext. 2442.

60 TRIUMPH - TR-3, eng recently overhauled, TR-4 trans. D. Michael, Ext. 7615, 751-8776.

63 BUICK - Skylark, V-8, p/s, p/b, p/w, w/w tires, auto trans, vinyl top. 289-4734.

59 FORD - New battery, plugs, points, body fair to good, 60 eng. \$75. J. Brown, Ext. 2152.

61 FORD - Station wagon, 8 cyl, eng very good, extra tires & wheels, excel for hauling & transportation. P. Walser, Ext. 2968, HR3-2507.

60 CHEVROLET - Station wagon, 4 dr, p/s, auto trans. Best offer over \$200. Ext. 351, AT6-9385.

Boats & Marine Supplies

21' OWENS - Cabin cruiser, fine family boat, good cond, galley, head, sleeps 3, 66 hp inboard, navy top, as is. \$600. Ext. 2488.

SCUBA REGULATOR - U.S. Divers, Mistral single stage regulator, like new. Asking price \$25. F. Stapel, Ext. 2428.

Miscellaneous

AQUARIUM - 3 1/2 gal, incl filter & pump. \$2. R. Evans, Ext. 2198.

AQUARIUM - 10 gal, compl w/filter, pump, heater, thermometer, scenery & tinted back glass. \$6. R. Evans, Ext. 2198.

RACING CAR KIT - Compl w/car & tracks, like new. \$10. R. Evans, Ext. 2198.

SLIDING PATIO DOORS - Each 80"x36", incl screen, track missing. \$35. R. Evans, Ext. 2198.

BUILDING PARCELS - Two 100' front by 150', one or both. Ext. 639 till 5., PA7-1267 after 6.

LAND - 120'x100', on dead end street, Mastic area. Frank, Ext. 451, 2394.

ELEC SLICING KNIFE - Used very few times, P. Ettari, Ext. 2407, 273-6436.

CHILDREN'S CORNER - Ballet slippers, size 3, \$2; child's lamp, \$2; plastic bowling set, \$2. Petruk, Ext. 2142.

REFRIGERATOR - Hotpoint, 12 cu ft, w/top freezer, about 10 yrs old. \$50. Ext. 7618, AT6-1358 after 6.

BATHROOM TILES - Ceramic, pink w/blue trim, enough for a small bathrm. \$5. Ext. 7618.

MUSCOVY DUCKS - Corn fed. \$1/ea. M. Simack, Ext. 2245, PA7-1368 after 6.

HAMS - Collins VFO, 1 to 1.5 megahertz, w/schematic. \$10. Sanders, Ext. 7465.

AFGHANS - Brighten up your home with beautiful hand crocheted afghans in shell, ripple or flower stitch. \$45. Ann, Ext. 562.

GE APPLIANCES - Less than 2 yrs old, auto washer, \$125; dryer, \$85; portable dishwasher, \$75; all in excel cond. J. Van't Hof, AT6-0534.

BRIDLE - Compl w/Never Rust bits, cavesson set, reins, fine grade butt stock leather, excel cond. \$17.50. Lomonosoff, Ext. 2488.

SADDLE - All purpose, English made, average size, will fit most horses, excel cond, incl felt pad, girth, & stirrups. \$80. Lomonosoff, Ext. 2488.

CHAIRS - Tables, lamps, outdoor furniture, snowblower, garden equip, etc., etc. Must be sold by Feb. 25. Spinrad, AT6-8644.

MEDICINE CHESTS - Two 17"x20", antique gold, wood-framed mirror door, 2 shelves, almost new. \$15/ea. Marty, Ext. 366.

MERCHANDISE CERTIFICATE - For compl set of wedding invitations, from Bridal Suite in Patchogue. Will sell to highest bidder. Janet, Ext. 2929.

CONV SOFA - Sleeps 2; tape recorder; playpen; misc baby furnishings & appliances. AT9-2382.

LOGS - 1/2 cord, \$25; 1/2 cord all split, \$30; full cord, \$40; full cord all split, \$50. 325-0567, 727-0271.

TROLLING ROD - Roddy, w/roller top & Penn leveline reel w/leaded line, excel cond. \$20. Hank, Ext. 7395.

CAMERA - Perkeo II Voigtlander w/flash attachment, good cond. \$20. Hank, Ext. 7395.

ANTIQUÉ COUCH - Victorian, glass ware & tables. HR2-0509 after 5:30 p.m.

Houses

BROOKHAVEN VILLAGE - 8 rm colonial on bulk-headed canal, private dock in back, Bellport Bay at front, lg double garage. \$30,000. 286-0322.

OAKDALE - Idle Hour, 4 bedrm split colonial, cathedral liv rm, fam rm, foyer, 1 1/2 baths, garage, landscaped patio, extras. \$19,500. R. Strand, LT9-1889.

ABC MOBILE HOME - Show model, early American decor, fully modern kitchen, wall oven, counter top range, must see to appreciate. 727-5219.

BLUE POINT - Water front prop, high & dry old house on 141'x118' corner lot, walking distance to stores, beach & churches. P. Ettari, Ext. 2407, 273-6436.

RIDGE - 3 bedrm ranch, eat-in kitchen, din rm, s/s, full basement. 924-6860.

YAPHANK - 3 bedrm ranch, fam rm, basement, baseboard oil heat, 1 1/2 garage, fenced, wooded 1/2 acre. \$16,000. 924-3062.

For Rent

WADING RIVER - 3 bedrm house. Jamini, Ext. 618, 929-8132.

FURN ROOM - Clean well kept house, 10 min to Lab, kitchen privileges. \$65/mo. Ken, Ext. 2442; Alan, Ext. 2726.

TO SUBLET - 2 bedrm apt, 98 Maple Ave, Patchogue, convenient to shopping, all new kitchen appliances, avail April 1. \$160/mo incl heated garage. Ext. 2797, 475-0269.

HOUSE - Furn, 2 bedrm, 5 min to Lab, close to shopping, good for 2 people. \$110/mo. 281-8044.

COTTAGE - Secluded in Manorville, suitable for 1 or 2 persons, 8 min from Lab. \$75/mo. 334-1162 after 6 p.m.

Wanted

ELEC MOTOR - 110-220 volt 3/4 to 1 hp. A. Beckwith, Ext. 2349.

HOUSE - Unfurn to rent, 4 bedrm, Pt Jeff area, start July or Aug for 1 yr min, cond unimportant. Metzner, Ext. 2341, 924-8577 after 7.

To express my appreciation for blood given by BNL donors in answer to my ad of 2/15/68.

JIB - Used, for Narrasketuck sailboat, cotton or dacron. Dugan, Ext. 644.

PORT-A-CRIB - Lg size, or lg size playpen. Ext. 2447.

CHEVROLET - 1/2 ton 6 lug rim, 15", also good used 7.00x15, 6 ply tire. Leo, Ext. 566.

SOMEONE - Who can make good use of an old 27" Magnavox TV which needs a new picture tube. Beckes, Ext. 383.

OWNER - Of a small kitten found outside 17 Cornell on Feb. 20. Gunnar, Ext. 670.

Carpools

MASSAPEQUA - & points west, 1 or 2 additional drivers wanted to make up 5 man carpool. M. Plotkin, Ext. 7103.

PAYING RIDER - Needs ride from Maple Ave. Medford, off Southaven Ave. R. Caprera, Ext. 448.

Classified Ad Policy

Deadline is 12 noon Friday for publication the following Thursday.

- The *Bulletin Board's* classified section may be used only by active and retired Laboratory employees.
- All items for sale or rent must be the advertiser's property.
- Persons listing houses, apartments, or rooms for sale or rent, do so with the understanding that these must be available without regard to race, creed, color, or national origin.
- Ads for material acquired for resale in association with a full or part-time business cannot be accepted.
- Ads should be restricted to 20 words or less and typed

or printed on the form provided, and must bear the employees signature.

6. Ads not carried because of space restrictions will be held for publication in the next issue.

7. Ads are run only once and must be resubmitted if they are to be repeated.

8. Firearms offered for sale or trade may not be brought on site.

- For Sale: Auto & Auto Supplies
 For Sale: Boats & Marine Supplies
 For Sale: Miscellaneous

- For Sale: Houses
 For Rent
 Wanted

Carpools

Check the heading applying to your ad. Print or type your ad in 20 words or less.

If this ad concerns housing for sale or rent, such housing is available without regard to race, creed, color, or national origin.
 Employee's Signature..... Life No..... Ext.....
 Send to: BULLETIN BOARD, 40 Brookhaven Avenue