

RECORD DANCE SEPTEMBER 24

BERA's record dances held during the summer months at our Recreation Building proved to be a tremendous success with anywhere from 60 to 120

employees, family and friends attending. They were popular enough to schedule one each week.

At this time we have requests to continue having these dances throughout the fall and winter.

So - here's your first one!

CLASSIFIED ADS**FOR SALE**

HENRY "J" - Good condition. Make offer. Call Andrew 5-3371 or Ext. 330.

PLYMOUTH - Going abroad. Have to sell excellent Plymouth Savoy with Powerflite, radio, heater. Asking \$950. Ext. 301.

VW - 1959 VW convertible. Fully equipped. Ext. 2316.

RAMBLER - 1956, 4 door custom, automatic transmission. Good condition. White top, black body, radio and heater. 30 miles to gal. - 30,000 miles. Leaving this country on the 30th of this month. \$600. Call Dr. Akira Tsuya at Ext. 301-91.

CHEVROLET - 1950 in good condition. \$75. Call Atlantic 1-8344 after 5 or Ext. 301-57.

FIBERGLASS RUNABOUT - 15 ft., 1958 35 h.p. Johnson Electric starting, steering wheel controls and lights. Original cost \$1800. Price \$1000. Call Atlantic 6-8744.

CHRIS-CRAFT - 18 ft. speed boat, mahogany hull. 95 h.p. Chris-Craft Marine engine, with extras in good condition. \$1350. Call PORT Jefferson 8-2699-R after 6 p.m.

EVINRUDE - 14 h.p. outboard motor with remote 6 gal. gas tank. \$50. Good shape. Call Jim Klein, Ext. 2278.

TRAILERETTE - 2 wheels with double hookup, canvas top. Size 48x48. Will carry 1000 lbs. Original price \$240. Asking \$75. Call Tony Russo, Ext. 639.

REFRIGERATOR - 7 cu. ft. in new condition. 6 yrs. old but in storage 3 yrs. Sacrifice \$40. G.Rover 5-9030.

REFRIGERATOR - 8 cu. ft. Kelvinator. Excellent running condition. Best offer. Call Debons at Ext. 301-26.

REFRIGERATOR - 6.6 cu. ft. G.E. Still in fine condition. \$25. Call Kiesling at Ext. 451 or Atlantic 4-0717.

BENDIX AUTOMATIC WASHER - Clean and in running condition. Call R. Skelton, Ext. 2248 or PORT Jefferson 8-1794-J after 5:30.

STORM & SCREEN WINDOWS - Complete set. Aluminum combination, flush type mounting. Call R. Skelton, Ext. 2248 or PORT Jefferson 8-1794-J after 5:30.

POWER AMPLIFIER - 50 watt leak. Call Irvin Meyer, Ext. 2222.

ROTARY LAWN MOWER - 25 inch in excellent condition. 13 months old. Sacrifice \$22. Call G.Rover 5-8392.

STRATO-LOUNGER CHAIR - Done in green nargahyde, \$75. Also maple gossip bench, \$15. Call E. Miller, Ext. 2347.

35 MM. CAMERA - New. Kodak Retinette. Made in Germany. \$50. (List price, \$100.) Call Atlantic 1-8253 or Ext. 635.

BOTTLED GAS STOVE - Hardwick, 36x24, 4 burners, oven, broiler, storage on both sides. Good condition. \$25. Call Atlantic 1-8253 or Ext. 635.

GIRLS' BICYCLES - Two. 26 inch. One in good condition. One in poor condition. Both for \$10. Ext. 511.

BICYCLE - Girl's English racer. Dynamo, 3 speed gear and kick stand. Condition like new. Cost \$65. Will accept \$35. Call Ext. 2411 or Atlantic 9-0243.

BABY CARRIAGE - Atlas Deluxe. Collapsible, perfect condition. Original price \$90. Asking \$30. Call Ext. 2222, O. Schneider.

KITTENS - In need of home. Two long haired gray and white, one yellow. 7 weeks old. Call L. Davis, Ext. 2133.

THURS., SEPT. 24 - 8 P.M. TO 1 A.M.**RECREATION BLDG. - ADMISSION FREE**

Cold beer, soda, and ice available. If you enjoy the record dances, and would like to see more of them, be SURE to attend so that we are aware of your interest.

FOR RENT

BUNGALOW - 3 rooms, furnished. Near water. 1 year lease only. Call Atlantic 4-8456 or Ext. 575.

LOST & FOUND

LOST - Ladies gloves. Shortie style, rust-colored nylon pigskin fabric. If found call Ext. 2106.

FOUND - Key, near T-100. Call Personnel Services, Ext. 2107.

CAR POOLS

Want two more drivers to join a 3-man car pool from Centereach-Selden area. Call V. Allen, Ext. 2208.

Would like to join or start car pool from Jamesport and area. Call Stan, Ext. 2229.

Want a ride from North Bellport. Meade Avenue and Louise Avenue. Call Atlantic 6-9112.

Want to join or form a car pool from Bay Shore. Call Rod, Ext. 604.

Want to form or join car pool from North Bellport, several blocks west of Station Road. Hours approximately 9-5:20. Call Ext. 626.

WANTED

BOTTLE GAS STOVE - 4 burners. Also gas hot water heater and gas refrigerator. All in good condition. Call BA 8-1138-R after 6 p.m.

OLD RECORDS - The Cub Scouts of Central District are putting on a Pow Wow and need old records for the workshop. Anyone wishing to donate some please contact V. Allen, Ext. 2208. Arrangements will be made to pick them up.

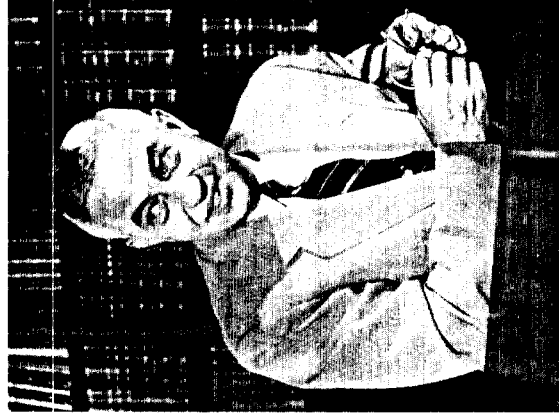
TV SET - Not willing to pay much. Call Ext. 330.

the Bulletin Board

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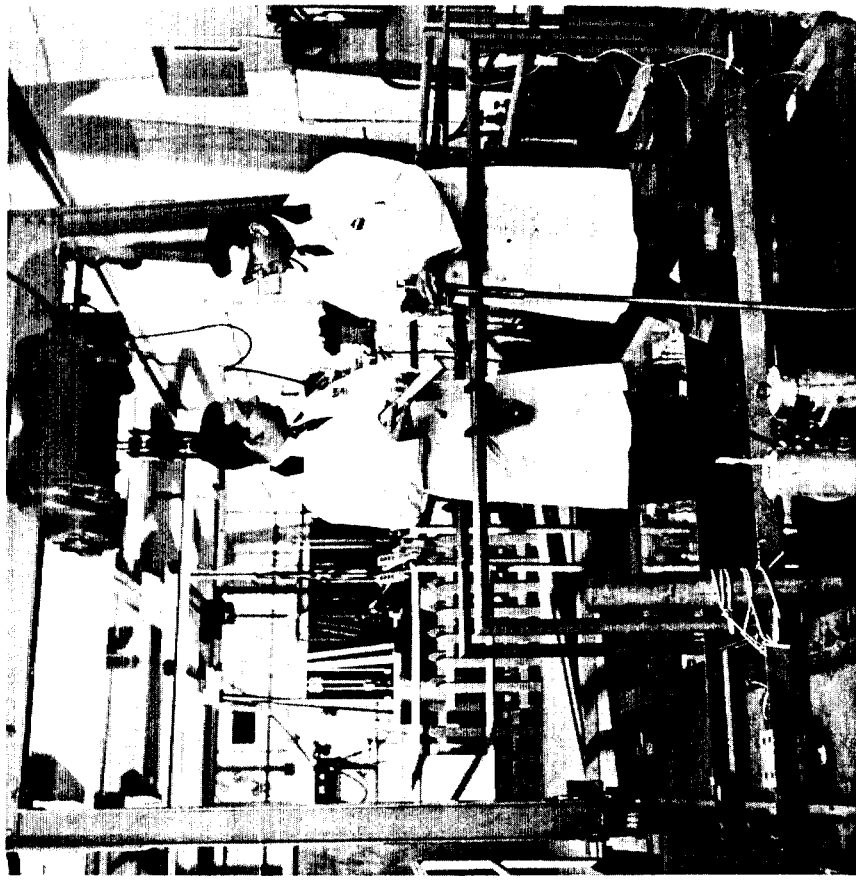
PEGRAM LECTURES CONCLUDED**Dr. Lee A. DuBridge**

Dr. Lee A. DuBridge's lecture series came to a highly successful close on Monday, September 21. Throughout the series, he has spoken to an audience filling the capacity of the 950-seat Theatre. The general public, including many high school science students and their teachers, together with families of Laboratory employees, have accounted for over half the audiences. Question and answer periods following the lectures have resulted in lively discussions. Dr. DuBridge's lectures will be published as a monograph by Columbia University Press.

These four lectures have been the first in the Pegrum Lectureship series, a program of annual lectures established in the name of the late Dean George B. Pegrum of Columbia University, the eminent nuclear physicist who played a key role in the foundation of Brookhaven National Laboratory. The general theme of the lectures was "An Introduction to Space." The talks were delivered in layman's language for the non-specialist.

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GAMMA IRRADIATION LABORATORY POOL



The Brookhaven Gamma Irradiation Laboratory is a facility in which the intense gamma radiation from a Cobalt 60 source is used as a tool in basic investigations in the chemical, physical, biological, and nuclear engineering fields.

Radiations in the gamma laboratory, situated in Building 801, are performed either in a water tank or in specially designed lead containers on the operating floor. The water tank, which measures 6x15x10-feet deep, is a relatively inexpensive, flexible, and versatile facility which permits the radiation of samples of various sizes, and provides a transparent shield against the lethal gamma rays. The water tank also permits one to safely handle sources by means of long tools and to transfer sources to or from lead containers. The lead containers are used to irradiate samples in air inside a standard Cobalt 60 source, and provide means for shipping sources to various laboratories. These containers weigh approximately two to three tons, and measure approximately 2 feet in diameter by 32 inches in length.

The Cobalt 60 sources are made by encasing cobalt metal in either stainless steel or aluminum, after which they are irradiated in the BNL reactor for

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PEGRAM LECTURES (Continued)

The first lecture, entitled "Attaining a Space Orbit," dealt with the technological problems faced by man in getting an object free of the earth's gravitational pull. Dr. DuBridge gave major credit to the engineers, saying, "It is inaccurate to describe the attainment of space vehicles as an achievement of science. It was an achievement of engineering."

To point up one of the problems confronting the space engineer, Dr. DuBridge reminded his audience that in order to obtain the proper final velocity, a typical present day rocket must carry 1000 pounds of fuel for every pound of payload.

Some of the phenomena that the scientist hopes to study by means of space satellites were discussed in the second lecture, entitled "The Space Laboratory." "A satellite is first and last primarily an observation post," said Dr. DuBridge. The lecturer divided the phenomena awaiting study from space into three categories: those related to the earth, to space itself, and to other objects in space.

Solar energy is the most promising source of power for transmittal of information from satellites back to earth. Yet, as the instruments for recording space data become more sophisticated, the scientific desirability of sending a man aloft in a space vehicle will become more apparent.

In the third lecture, entitled "The Astronomer Looks at Space," Dr. DuBridge reviewed our present knowledge of the planets in the solar system, and how the astronomer hopes to expand this knowledge in the future.

Development work is under way to land on the moon, within ten years, instruments that will study the moon's terrain, analyze its composition, photograph parts of its surface, test its radioactivity, and hunt for signs of rudimentary life.

Although Venus is the closest planet, approaching us within 26 million miles, we have never seen it, since its surface is hidden by a dense atmosphere of unknown composition. The soft landing of instruments on Venus presents major problems, but its atmosphere could be

GAMMA IRRADIATION (Continued)

various periods of time, depending upon the specific activity desired. After irradiation the sources are discharged into the pile canal and from there are moved in a lead container to the gamma laboratory for use either in the underwater facility or on the operating floor. Sources of two different physical shapes are manufactured - tubular and flat. The tubular sources are approximately 1.9 inches I.D. by 13½ inches long. The flat sources are approximately 2 inches by 13½ inches by ½ inch thick. At the present time the laboratory houses approximately 32,000 curies of Cobalt 60, 25,000 curies in use in the underwater facility, and about 7000 curies on the operating floor.

The underwater facility consists of hollow steel boxes containing many holes and slots in various positions. Sources are placed in the slots which are located around the holes. Long tubes of different diameters which have been sealed at the bottom are inserted in the holes. Irradiations are performed by lowering a sample into one of the tubes. Since the tube is sealed, the radiation takes place in air, and the sample is kept dry. This is especially important in the irradiation of electronic circuits or components where moisture would affect the results. It is possible to obtain various dose rate levels in this facility by proper arrangement of the cobalt sources around the long tubes. It is also possible to irradiate samples in the underwater facility over a range of temperatures from the boiling point of liquid nitrogen to 300 degrees C.

Irradiations are performed on the operating floor by placing a sample inside a canister and attaching the canister to the removable lead plug of the cask. An air hoist permits the operator to easily raise the plug which is then moved to a safe location for attachment of the canister, thus minimizing the operator's exposure to radiation.

The gamma radiation laboratory can perform a wide variety of irradiation services. In the past, experiments have been performed to study the effects of gamma radiation on plastics, rubber, explosives, seeds, bacteria, electronic circuits, transistors, crystals, and food, to name just a few. Research programs are continuously being carried out for members of the staff at BNL. Radiations are also performed for government-sponsored research either by private organizations or by government laboratories.

of help in parachuting the missile in its final descent stages.

In the last of his series of lectures on space, Dr. DuBridge described some of the questions for which astronomers and astrophysicists are seeking answers, with the aid of space satellites. These questions concern the size, structure, origin and evolutionary history of the universe.

Great advances of cosmology and cosmogony have been made in the past fifty years. From their findings, astronomers have deduced the staggering fact that the universe is expanding. In other words, that the distant galaxies are all receding from us and from each other, at velocities which increase in proportion to their distance.

If we had more powerful telescopes, which could see further into space, we could perhaps see galaxies that are receding at 1/2, or 3/4 or even 9/10 of the speed of light. The New York production of "THE WORLD OF SUZIE WONG," affording employees a considerable discount are now available at Personnel Services, Building 185.

NAVAL SEMINAR A SUCCESS

The Seventh Annual Naval Reserve Seminar, which started on September 14, will conclude on Friday, September 25. In addition to the 40 reservists assigned to Brookhaven for the two week period, the subject, "The Management of Radiation Accidents," has attracted people in the field from all over the country.

In addition to the papers given, the reserve officers attending the seminar have been assigned fictitious radiation problems and will present their solutions on the last day to a panel of experts.

The seminar is jointly sponsored by BNL and the Office of Naval Research, and has been arranged by members of Naval Reserve Research Company 3-9, which meets on site.

ITALIAN RADIATION TEAM TO VISIT BNL

Several Italian Radiation Safety Committee members will be visiting the Laboratory beginning September 28, sponsored by the National Association for Combustion Control.

The committee is interested in the regulations on safety of working personnel in connection with the installation and operation of nuclear plants in Italy.

Visits to various research laboratories in the United States, including BNL, will give the committee a chance to complete their technical information through examination of U.S. nuclear plants under construction or in operation.

CRACK - SNAP - POP

On Sunday, September 13, the Upton Rifle and Pistol Club Pistol shooters met and were defeated by the Brookhaven Pistol Club in a close match. The final score was 1449 to 1427.

The five top scorers were: Paul Colmann, 291; R. Smith, 286; W. Riel, 285; C. Goodzeit, 285; H. Leftwich, 280.

A rematch is scheduled for October 4. Trap shooting is conducted every Wednesday evening at 5 p.m. at the BNL range. Come out and enjoy an evening of shooting. The D.C.M. Shoot has been cancelled and will not be held until October 11.

Beginning October 12th, folk dancing lessons will be given every Monday night from 8 to 10 in the Recreation Building in the apartment area. The kind of dances we'll be teaching are the simple, unsophisticated dances of the peasants and villagers of many other countries, the counterparts of our American square dances. They are meant to be danced and enjoyed and require only enthusiasm and a grin rather than the skill and stamina necessary for the type of dancing which is performed for an audience's entertainment.

The first 6 or 8 weeks will be strictly for beginners, an introduction to some of the simplest group dances, couple dances, and line and circle dances.

After the beginners have mastered some of the fundamentals, we'll invite all dancers who have had a little previous experience to join the group. At that time we'll review all that the beginners have learned and adopt a program to fit the level of the group as a whole.

It's not necessary to bring a partner. Comfortable shoes are a must. For any other information call Ext. 625.

THEATRE GROUP NOTES

Shall we produce a night club revue? This will be one of the projects for the immediate future which will be discussed on Thursday evening, September 24th starting at 8:15, in the Theatre Building. There is a body of opinion which favors doing it, and, if it is done, BNL employees will have an opportunity to attend something which has never been attempted here up to now. A full scale night club revue, with ring-side tables, champagne, music, lighting effects, girls, songs, skits, more girls, food, and dancing!

Shall we produce some one-act Christmas plays for young people, (8 to 18) to be given on a Saturday afternoon just before Christmas? Several plays are now being considered. It is conceivable that two or three plays (modern ones) could be produced at a cost which will permit tickets to be priced as low as 25¢ each. This is another possibility.

Please, remember, if you like theatre activity, previous experience is NOT required. Come and get your theatre experience here! Remember, too, everyone is welcome to attend this session, at which a prepared reading of "END-GAME" by Samuel Beckett will be done by a cast directed by Walter Hamilton. Get curious, and join us Thursday, 8:15 p.m. September 24th.

BOWLING

Five laboratory leagues are nearing completion in their preparations to get the season underway. Meetings of the captains are being held this week and the plan is for all leagues to get rolling the week of September 28.

There are still a few openings for new teams or individual bowlers. For information call G. Sabine, Ext. 391, at the Recreation Office.

MIXED LEAGUE

During the past season several employees have requested a BNL mixed league (A league consisting of teams composed of 2 men and 2 women).

Now is the time to form such a league. Entries are also open to **Husbands and Wives** of employees. Here's a chance to have a night out with your better half.

DIVING CLUB MEETING

An organizational meeting of the Brookhaven Diving Club will be held in the Recreation Building in the apartment area on Wednesday, September 23 at 12 noon. The club is open to all diving enthusiasts, whether your interest is in learning to dive or in more advanced skills. Interested persons who cannot come to the meeting should contact Max Hilgemeier, Ext. 571 or Bob Young, Ext. 590 before Wednesday.

DUPLICATE BRIDGE

The next duplicate bridge game will not be held until October 8, 1959. At that time it is hoped that all members of the club, and any new players interested in bridge, will come out in force to start our winter season off with a bang. The more players on hand, the more interesting the competition.