

the Bulletin Board

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PEGRAM LECTURE TICKETS "SOLD OUT"

Although the second Pegram Lectureship series does not begin until October 10, the Lectureship Committee announces that the stocks of tickets for all four of Dr. Dubos' lectures are already exhausted. The great majority of tickets have been taken by BNL employees, who received the announcement of the lectures before they were announced to the general public. Now that this program has been released to the local papers, however, the Committee anticipates a considerable demand from our neighbors on Long Island. Due to the limitations of the seating accommodations in the Laboratory Theater, these later requests must be refused regretfully, unless unwanted tickets already held by staff members can be made available.

The Committee therefore urges all persons who find that, due to change of plans, they have more tickets than they can use, to return such tickets as soon as possible to the Pegram Lectureship Committee, 40 Brookhaven Avenue. These tickets will be greatly appreciated by those who would otherwise be unable to attend.

GYMNASIUM CLOSED

The gym will be closed for physical activities during the month of October because of the preparations for Visitors' Days.

DANCE TIME

All we need is you to get the plans rolling for our semi-annual B.E.R.A. Dance to be held sometime in late October or early November. A dance committee is now being formed to pick the date and theme, plan the decorations and carry out the organization of the affair. We'd like to see a few members from each department get into the act. Show your enthusiasm by calling George Sabine at Ext. 391 and signing up to make the dance a reality.

BNL SAFETY RECORD

11 DISABLING INJURIES at BNL thus far in 1960 (for a rate of 3.05 injuries per 1,000,000 manhours - compared to the All AEC Research Contractor rate of 1.58).

PERSONNEL MONITORING



Part of the Personnel Monitoring Group processing film badge data.
In the insert is a photo of a visitor's film badge.

The Personnel Monitoring Group of the Health Physics Division, which includes nine people, is responsible for measuring and recording the radiation exposure of all persons at Brookhaven. The major part of the work involves the film badge service. Film badges are assigned, collected and processed, and records are kept for every person entering into or working in a radiation area. This operation is necessary in order to provide records for the control of radiation exposures of all individuals.

The film badge contains two packets of dental-size film, one sensitive to beta and gamma radiation, the other sensitive to neutrons. The beta-gamma films darken when exposed to radiation, just as photographic film darkens when exposed to light. The amount of darkening, which is determined by an optical densitometer, is a measure of the amount of radiation the badge has received. Films are calibrated by exposing them to known amounts of radiation, and all films are compared to these.

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MONITORING—Cont'd

Also included in the film badge are an aluminum and a cadmium filter. The penetrating effect is different for different types and energies of radiation, and thus the relative darkening under the filters can be used to determine the quality of the radiation. The two commonly encountered types of radiation are beta rays and gamma rays. One portion of the film badge has an "open window" (with no filter), which admits the beta rays, but the filters covering the other portion of the badge stop the beta rays and have only a small effect on the gamma rays. In this way, the amount of radiation, or dose from the beta rays and gamma rays, can be determined independently.

Neutron doses are determined by counting the number of tracks produced by the neutron-proton collisions in the emulsion of a special type film. These tracks are very short and are observed using a high powered microscope.

The story of a BNL film badge starts with a request to the Personnel Monitoring Group from the health physicist in the area. A badge number is assigned to the person, and two film badges are made up for him. Cadmium sheets perforated with the badge number, and labels with the person's name are inserted into the badges. An operational file is made in which all exposure records are kept, and also a folder is begun which will contain all the exposure records of the person while working at Brookhaven. One of the badges is then loaded with film and hung on the badge rack in the area in which the person works.

Each badge is collected every two weeks after 5:00 p.m., replaced by the second badge and returned to the Personnel Monitoring headquarters in T-145 for processing. The badge is first x-rayed for identification. The perforated cadmium sheet is used as an x-ray shield, and the film is marked permanently with the badge number. The film is also dated with x-rays. Then the film is carefully developed and read with the densitometer. If the badge has been exposed to radiation, the doses are calculated and recorded. If the exposure is greater than an arbitrarily chosen limit of 300 mrem, (1/10 the limit for a three-month period), an exposure investigation form is made out and sent to the health physicist in the area. It is his duty to investigate and evaluate the exposure and return the information to Personnel Monitoring for recording. All films are stored indefinitely for future reference. The badge is then stored until the next change day for that area, at which time the process is repeated. At the end of the year, the exposure data is transferred to punched cards and the accumulated exposure for the time of BNL employment is computed for each person.

Some of the problems encountered in the badge service include: rigid process control in the darkroom, lost badges, badges worn home by mistake, and false exposures caused by tampering with the badge.

A large part of the workload of the group concerns the visitors' badges. These must be available at entrances to all radiation areas. These badges are not identified with any individual until the card is filled out. Visitors' exposure data provide records for the visitor's benefit, for the protection of the Laboratory and also for the control of radiation hazards.

Another service supplied by this group is the pocket chamber service. These are radiation detectors which are collected and read on an electronic reader, and give a day-to-day check on personnel exposures. Pocket chambers are used only in a few areas where exposure values are desired daily.

About 4000 badges and pairs of pocket chambers are processed each month. Since each badge contains three pieces of film, about 600 films must be developed and read each day. The exposure records from each of these films must be accurately kept both for the protection of the individual and the Laboratory.

BNL CONCERT SERIES

Tickets for the 1960-61 concert series will go on sale next week. Volunteer ticket sellers will circulate in each department, but those not contacted may obtain series tickets from Rudy Sher (Ext. 453), Harold Schwartz (Ext. 628), or Clemens Auerbach (Ext. 2149). The price for adults is \$7.50, children \$2.50. Because of rising costs, single admissions will be higher than in past years; the savings on a series ticket will now be almost 50 per cent.

We have an unusually interesting group of artists this year, so for a rich and rewarding musical experience get your series tickets early.

		single admission
Julliard Quartet	Nov. 9, 1960	\$3.00
Rey de la Torre	Dec. 8, 1960	2.50
Grete Sultan	Jan. 18, 1961	2.50
Tichman Trio	Feb. 21, 1961	2.50
Doktor - Menuhin	Mar. 29, 1961	3.00

The Julliard Quartet needs no introduction to BNL audiences; it is one of the outstanding string quartets in the world and has played at BNL several times in the past. Rey de la Torre is a well-known classical guitarist whom the NEW YORK TIMES has called "... one of the outstanding technicians in his field, with absolute mastery of his instrument. . . ." Grete Sultan is a distinguished pianist who has played extensively in the United States and Europe. The Tichman Trio is an ensemble of piano, clarinet, and cello which has given successful recitals throughout the country. Paul Doktor, one of the world's great violists, also is familiar to BNL audiences; this year his collaborator will be the pianist Yaltah Menuhin, Yehudi Menuhin's sister, who drew rave reviews in New York last winter.

In addition, we are trying to arrange a children's concert - watch for an announcement.

UPTON RIFLE AND PISTOL CLUB

The second round of the large bore matches was held Sunday at the Medford Range with a reshuffling of standings. Pete Colombo, with his new formula for successful shooting, fired a sizzling 182 out of a possible 200. Paul Colsmann followed with a 177 and Judd Diener with a 172. There is still time to enter the competition for the trophies.

The next monthly meeting will take place this Thursday, October 6th, at 8 p.m. Topics of discussion will deal with refunds of that portion of the annual dues which was intended to go towards an indoor range and also next years membership dues. All members are urged to attend.

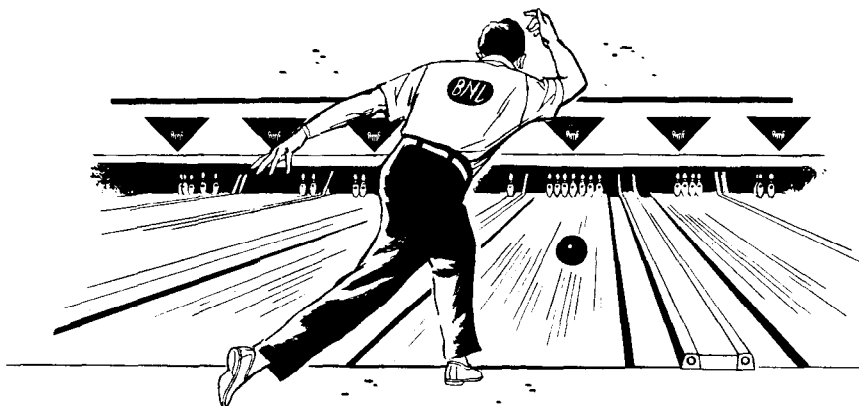
THEATRE GROUP NOTES

Joe Jach announces that the last half-hour of each rehearsal period on "Detective Story" will be devoted to elementary instruction on acting technique. Participation in this tutoring session is purely voluntary, and invitation is extended to all theatre group members, or to anyone on site who is interested, to come and take part, or to observe, as he wishes.

The first rehearsal for "Detective Story" is scheduled for 5 p.m. to 7 p.m. at the theatre, on Tuesday, October 4. This will involve only those people who appear in pages 5 through 18 in the script.

The second rehearsal is scheduled for 7:45 p.m. on Thursday, October 6 and will involve the personae dramatis who appear in pages 19 through 35.

SET 'EM UP!



B.N.L.'s "300" bowlers start their season this week competing against each other during the Fall - Winter season in an effort to capture their league title and the B.N.L. Championship plaque. Our 38 teams are lined up as follows:

1960 - 1961

PT. JEFF. WED.	MAGGIO'S MON.	MAGGIO'S WED.	PAT. BOWL. WED.	P.B.C. WEDNESDAY
1. Pacers	1. Old Timers No. 1	1. Bowlkids	1. Skins	1. A.P.C.'s
2. Techs	2. Old Timers No. 2	2. Scotches	2. Biology	2. Twinkle Toes
3. Nuclides	3. Old Timers No. 3	3. Woodbutchers	3. Gnats	3. All Thumbs
4. Splitters	4. Reefers	4. Hopefulls	4. Down Unders	4. Nightingales
5. Snafus	5. Electrons	5. Phoubars	5. Bismuth Kings	5. Medical
6. Meteors	6. Blackbirds	6. Designers	6. Bugs	6. BooBoos
7. Powermites	7. Fire Dept	7. Dirtybirds		7. Odds & Ends
8. Bubble Boys	8. Molestars	8. Fiscal		8. Alleycats
SEC. D. Stelmaschuk	SEC. J. Scandizzo	SEC. J. Nocar	SEC. E. Fales	SEC. G. Siemen
REP. L. Baker	REP. G. Hardman	REP. W. Milian	REP. R. Watson	REP. N. Podlaski



Ed Sayre (right), B.E.R.A. president, congratulates and presents award to R. Jones, captain of Metallurgy team, BNL Softball Champions.

SQUARE DANCE

We know you've been waiting for it and here it is - Thursday, October 20th at 8:30 p.m. in the Recreation building. Again, the volunteer services of the "Fearsome Foursome" will be available to provide the calling and music. No admission charge! Cold liquid refreshments will be available. So - grab your partner!

WEEKLY SAFETY HINT



John Chester, Safety Representative to the Instrumentation/Health Physics Department, comments, "BNL regulations require approved safety cans for storage of one gallon or more of flammable liquids. (flash point $< 110^{\circ}\text{F.}$ - GS-5 BNL Safety Manual). Safety cans are stock items in T-100."

SWIMMING POOL

The pool will be re-opened on its winter schedule beginning Tuesday, October 18th. The following schedule of rates and hours will be in effect:

TUESDAY - WEDNESDAY - FRIDAY

7:00 P.M. TO 10:00 P.M.

THURSDAY

5:00 P.M. TO 10:00 P.M.

NEW RECREATION BUILDING SCHEDULE

The Recreation Building, in the Apartment area will open Monday, Tuesday, Wednesday and Thursday evenings from 5:00 p.m. to 11:00 p.m. For information on activities or reservations call George Sabine, Ext. 391.



B.E.R.A. President, E. Sayre, presents singles tennis championship trophy to J. Brandon as A. Kevy and W. Merkle - doubles champions - already in possession of their awards, look on.

CLASSIFIED ADS

FOR SALE

1952 CHEVROLET - 4 dr. hard top. Body good, motor excellent condition. \$200. Ext. 2187.

1959 CHEVROLET IMPALA - 4 dr. hard top. Radio, heater, power steering, auto. trans., power brakes, V-8. Original owner babied car for only 18,000 mi. Ext. 2205 or ATLantic 9-0915.

1951 CHEVROLET - 4 dr. sedan. R&H, two new tires and new battery. Outstanding over-all condition. Available Nov. 1. W. Oosterheert, Ext. 727.

1960 RAMBLER - American station wagon. Standard trans. Heater \$1680. Ext. 531 after 1 p.m.

TRIUMPH - 1960, black. White wall tires. Heater. Tonnou cover. 2000 mi. \$2300. Ext. 542.

HOUSE - 4 bedrooms, 2 baths, living room, dining room, kitchen and glassed in porch all on one floor. 2 bedroom and storage room on second floor. 3 room basement. New roof. Copper plumbing throughout. Recently re-decorated and in top notch condition. Magnificent landscaping (40 ft. holly tree, rhododendrons, azalias, laurel, etc.) Village of Shoreham. \$23,500. Owner leaving Lab. R. Fuller, Ext. 315 or Shoreham 4-3691

SPLIT LEVEL HOUSE - Beautiful 7 rm. on wooded ½ acre lot. Fireplace, large living room, 26 ft. recreation room, 3 bedrooms, 1½ baths, laundry. Private beach. E. Rogers, Ext. 600 or SHoreham 4-9877 after 6 p.m.

19 FT. EXPRESS CRUISER - 35 h.p. Evinrude (10 hrs on engine). Pulls skis, 8 foot fishing cockpit, 2 bunks, stove, ice chest, life preservers, curtains and cover, anchor, lines, compass, etc. Dock on Patchogue River paid. Best offer over \$1,125. Ext. 2165 or GRover 5-2888.

ROWBOAT - 14 ft. Oars, mushroom anchor, newly painted, excellent cond. \$65. 1959 Elgin 7.5 h.p. Little used, like new. \$100. All for \$150. SAyville 4-3269.

FOUR GOODYEAR TIRES - new. 600 x 16. 4 ply, rayon cord, new tubes. \$50. Tires are on a '41 Pontiac which has a '49 Plymouth motor and trans. Car runs and being given away with tires. Less than 300 miles on tires. B. Walsh, Ext. 481.

THREE PIECE LIVING ROOM SUITE - maple, with slipcovers. \$25. Also, hot water heater 30 gal. No offer refused. G. Kapner, Ext. 2231 or ATLantic 1-7464

COCKTAIL TABLE - Mahogany, oval, Duncan Phyfe. Glass top to fit. Excellent cond. \$15. SAyville 4-3269.

MATTRESS - and matching box spring. Full size. Three years old. Excellent condition \$20. POrt Jefferson 8-2820.

STOVE AND REFRIGERATOR - in good working condition. \$40. for both. Ext. 398 or BELLport 7-0595-J.

COLEMAN FLOOR FURNACE - and 275 gal. heavy gauge oil tank. \$75. Good condition. B. Kropp. ATLantic 6-8946.

FOR RENT

FURNISHED APARTMENT - all utilities. Centrally located in Patchogue. GRover 5-1880.

TWO ROOMS - and bath in Bellport. BELLport 7-1068.

WANTED

BOAT TRAILER - for 14 ft. boat. Tee Nee, Etc. Ext. 2316.

TRICYCLE - Call Crevecoeur, Ext. 707.

CAR POOLS

Driver wishes to join car pool from Bay Shore area, J. Smith, Ext. 578.

Ride wanted to Adelphi, Sayville from South Country Road in Bellport. Thursday nights 7-9:30. M. Darden, Ext. 555 or ATLantic 6-8205 after 5:00 p.m.

Anyone coming back from Patchogue to, or through, Bellport Tuesday and Thursday night after 11:30 p.m. and Wednesday and Friday night after 10 p.m., please call BELLport 7-1213 after 5:30 p.m. Rides for those times desperately needed and would be much appreciated.

Would like to enlarge two-man car pool from Northport area. P. Tichler, Ext. 593.

Want to form or join car pool to Adelphi College Monday evening. K. Fuchel, Ext. 415.

**He wrecked his car, he lost his job,
And yet throughout his life,
He took his troubles like a man:
He blamed them on his wife.**