

the Bulletin Board

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MEDICAL INSURANCE PLAN

In line with the new Social Security provisions for retiring at age 62, the Laboratory announces the following change in the Medical Insurance Plan.

Present Laboratory policy provides that a retiring employee may participate in the Group Medical Insurance plan for retired employees. This plan has been available to employees retiring on or after the Laboratory's mandatory retiring age of 65. Effective immediately an employee who terminates on or after his 62nd birthday will be eligible for participation in the Group Medical Insurance plan for retired employees.

For further information call Personnel Services, Ext. 2107.

— ANNOUNCING — THE BROOKHAVEN LECTURE SERIES

Most of us at Brookhaven have wondered what the next person, the next laboratory or the next department is doing. What "they" do affects all of us. We are often prevented from knowing what goes on because each specialty has its own language and the rest of us may not be conversant with it. What we need is plain English by knowledgeable persons so that we can discuss and question and profit. This is the aim of the Brookhaven lecture series. It will also give us a chance to meet each other and to explore what we have in common, where we differ and how we bear on each other.

The lectures will be given at approximately monthly intervals, by members of the staff and by visitors to the Laboratory.

NINTH LECTURE - The ninth lecture of the series and the first of this season will be on "Semiconductor Radiation Detectors" by G.L. Miller of the Instrumentation Division, Wednesday September 27th at 8:00 p.m. in the Lecture Hall. Buffet Supper at \$2.75 will be served from 6:00 p.m. on at the Brookhaven Center. Reservations should be made at least one day in advance, by calling Ext. 2302 before 5:00 p.m., or Ext. 2453 in the evenings. Refreshments will be served after the lecture.

Gossip travels faster over sour grapevines. When holding a conversation, let go of it once in a while.

GROUND BROKEN FOR NEW RESEARCH REACTOR



Clarke Williams, Nuclear Engineering Department Chairman taking the first shovelful of earth, with Joe Hendrie, Project Engineer and Thomas Sheehan, Project Manager of the HFBR.

Ground was broken Friday for the construction of the High Flux Beam Reactor (HFBR). The ceremonies were attended by staff members of the Nuclear Engineering Department, Laboratory officials, and representatives of the AEC office. The ground-breaking ceremonies were initiated by talks by Dr. Maurice Goldhaber, and Mr. Donald C. Moore, representing the Brookhaven Office of the AEC. The ground-breaking was performed by Dr. Clarke Williams, who has been Chairman of the Nuclear Engineering Department since 1952.

The new reactor will be used primarily for experiments involving neutron beams. The HFBR will feature an advanced design, for which BNL staff members are responsible, expected to produce a neutron flux (intensity) nearly 100 times greater than that of the Graphite Reactor, with only a two-fold increase in power. With this greater neutron flux, research scientists at BNL will be equipped to conduct experimental programs not presently possible.

The essential feature of the HFBR will be its compact, undermoderated core operating at high power density in heavy water. The "undermoderated" nature of the core means that more neutrons of higher energies will be available outside the core, where they can be used for experiments. In fact, the useful neutron flux will be more intense outside the core than inside. Heavy water,

(Continued on Page 3)

AGS DEDICATION



Pictured left to right: Dr. G.F. Tape, Dr. L.J. Haworth, receiving model of cross section of AGS Magnet from Dr. G.K. Green.

On September 13 Dr. Leland Haworth, former Director of BNL, spoke to a crowd of about 650 people at the formal dedication ceremonies of the Brookhaven Alternating Gradient Synchrotron. In the audience were notable people from many different walks of life, different nationalities, and different backgrounds, but with at least one common interest – progress in the field of nuclear science, and a particular machine of great importance to this progress, the AGS. Among those present was General Leslie Groves, former head of the wartime Manhattan Engineer District. Probably more than any other one man, General Groves was responsible for making Brookhaven National Laboratory possible. Also attending was Mr. Edward Reynolds, the first President of Associated Universities, Inc., and a man instrumental in setting up Brookhaven National Laboratory. Many scientists from the International Conference on High Energy Accelerators remained at Brookhaven an extra day to attend the dedication.

In his speech Dr. Haworth outlined some of the scientific and technical advances over a period of 30 years that were particularly important to the building of the AGS such as: the remarkable success of quantum mechanics in the 1920's; Cockcroft and Walton at the Cavendish Laboratory constructing a high voltage source which accelerated protons and achieving the first transmutation using accelerator particles in 1932; Van de Graaff at Princeton devising the electrostatic generator which now bears his name; Ernest Lawrence at the University of California originating the cyclotron, the forebearer of all modern magnetic machines; such discoveries as that of the neutron by Chadwick and of artificial radioactivity by Curie and Joliot; the betatron of Kerst and Serber; the theorem of phase stability brought forward independently by Veksler and McMillan at the end of World War II; the turning from studies of the complex nucleus as a whole to investigations of the nature of the fundamental particles themselves and the accelerators at the time that helped confirm or destroy early postulates; development of the proton-synchrotron; the discovery of the principle of alternating gradient focussing, by Courant, Livingston and Snyder and independently by Christophilos; and the final culmination of ideas between CERN and Brookhaven. Dr. Haworth pointed out that this progression of events has been accompanied by many drastic changes in methods of approach. High energy groups have grown from handfuls to hundreds of people. Budgets have grown a thousandfold. The efforts of enormous laboratories are en-

(Continued on Page 3)

CONCERT SERIES

Arrangements have been completed for the 1961-1962 Concert Series. As in past years, there will be five recitals, but the location is new. This year's series will be held at the BROOKHAVEN CENTER.

The series opens with the New York String Sextet, on Monday evening, Oct. 9. Subsequent concerts will feature the Albeneri Trio, Nov. 13; the flute-piano duo Jean-Pierre Rampal and Robert Veyron-Lacroix, Dec. 11; the pianist Daniel Abrams, Feb. 7; and the Drolc String Quartet, March 29.

The New York String Sextet was founded by the violist Paul Doktor, who is well-known to BNL audiences, for the express purpose of having a permanent, integrated ensemble which could present the string quintet and sextet literature. The Albeneri Trio, the Rampal/Veyron-Lacroix duo, and Daniel Abrams have played previously at BNL and are known as first-rate artists. The Drolc Quartet is making its U.S. debut this year; they have been extremely successful in Europe and, on the basis of recordings, seem to be an unusually fine group.

Series tickets will be on sale through department representatives in a week or two. The cost for the series is \$7.50 for adults, \$2.50 for children (including high school students). Single admission prices will be announced, but will be considerably higher; the savings on a series ticket will be 40-50 percent.

1961-1961 Concert Series

Oct. 9 N.Y. String Sextet
 Nov. 13 Albeneri Trio
 Dec. 11 Duo Rampal/Veyron-Lacroix
 Feb. 7 Daniel Abrams
 Mar. 29 Drolc Quartet

— At Brookhaven Center —

SALE MOTOR VEHICLES

Twenty-eight motor vehicles, located at the Security parking lot, are available for public sale. Inspection is permitted thru September 21st between the hours of 9 a.m. and 4 p.m., and on September 22nd between the hours of 9 a.m. and 1 p.m.

This sale will be a Spot Bid Sale conducted by General Services Administration. All forms and bid cards may be obtained at the time of inspection.

For further information call Ext. 2509.

STAMP COLLECTORS

At the Upton, N.Y. Post Office you can still get the following commemorative stamps: Gustav Mannerheim, Robert A. Taft, Garibaldi, U.S. Naval Aviation, and Workmen's Compensation.



BERA BOWLING

It's that time again - time for the BNL leagues to get rolling. So far forty teams have entered and will begin competition next week. Men's leagues will be bowling on Monday and Wednesday at the Patchogue Recreation Alleys and on Tuesday and Wednesday at the Port Jeff Lanes.

At this writing the ladies haven't been able to decide where or when. However we're hoping to solve that at the league's captains meetings which are scheduled this week.

— BERA Film Series — BALLAD OF A SOLDIER

September 21 - Lecture Hall - 8:30 p.m.

For those who remember the peak of the Soviet film in the classic works of Eisenstein, Pudovkin, Dovzhenko and the epic photography of Tisse, a pleasant surprise awaits in *Ballad of a Soldier*. A new director, Grigori Chukhroi has reverted to the dynamic methods of his predecessors and brought forth what might well be a milestone in the revival of Soviet cinema. Far from being the dreary, propaganda - loaded type of film that has characterized all too many of the post-war efforts, *Ballad of a Soldier* is one of the finest European films of recent years. American critics have been almost unanimous in their praise.

Weegee's New York

Weegee, the fabulous press photographer and master of the candid camera creates a vivid impression of the life and the tempo of the metropolis, combining documentary and experimental techniques.

Single admission \$1.00. Ten (10) series tickets may be bought at show time at the Lecture Hall.

LIQUID HYDROGEN EXPERIMENTS

The Bureau of Mines is resuming their test explosions of liquid hydrogen at the South Gate this week.

For information concerning these tests, contact A. Coppola, Special Hazards Engineer, Ext. 2137.

DISCOUNT TICKETS

World Championship Six Day Bike Race
Madison Square Garden,
September 22, 25, 26, 27
Available at Personnel Services

GROUND BROKEN—Cont'd

which will absorb only a few of the neutrons which pass through it, will be pumped through the reactor core at the rate of 18,000 gallons per minute to remove the heat generated by the fissioning of the uranium fuel. The intensity of the chain reaction in the hottest part of the HFBR core will be so great that a quart of core volume will produce as much heat as the furnaces of 40 eight-room houses.

The HFBR will be housed in a three-level tank-type building similar to the Medical Research Reactor building, but about three times as large. The neutron beam experiments at the HFBR will occupy the whole main floor of the building. The auxiliary machinery for the reactor complex and a canal for spent fuel elements will be in the basement. The reactor will be operated from the upper, or Operations, floor. The estimated cost of the HFBR complex, including equipment, is \$12,500,000. Construction is expected to take about two years. (See THE BULLETIN BOARD, June 13, 1961).

AGS—Cont'd

gaged within this single field. But the bigness of the programs, though presenting problems, has also brought rewards. Phenomenal progress has been made toward ultimate understanding in the most fundamental science of them all. Many of our greatest minds have been given maximum opportunity to exercise their fullest scope.

What about the future? Dr. Haworth remarked that physicists are talking of machines of many hundred billion volts. The injector would be an AGS or linear accelerator itself delivering 10 Bev or more. These machines will require such huge outlays of money and manpower as to require concerted, all-out efforts on a national or even international scale. Effective resolution of the many problems raised is an important task for all of us.

Dr. Haworth concluded by saying, "We are here to honor the group of imaginative, skilled and devoted men and women who brought about this triumph. Theirs is a fine achievement. In their honor I dedicate this Alternating Gradient Synchrotron to the World Community of Science."

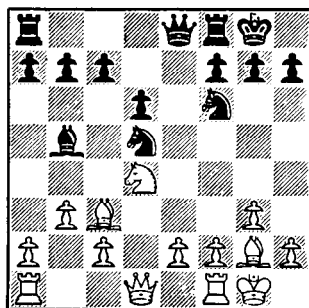
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Dr. M. Goldhaber, Director of BNL, served as master of ceremonies at the Dedication. Remarks were delivered by Mr. E.L. Van Horn, Manager, U.S. AEC Brookhaven Office, and Dr. I.I. Rabi, President of Associated Universities, Inc. Closing remarks were made by Dr. G.K. Green, Chairman of the Accelerator Department.

Following the ceremonies tours of the AGS were conducted and an informal reception was held at Brookhaven Center.

CHESS PROBLEM

The game has just started but there is a win in sight for White. Do you see it? Answer elsewhere in this week's BULLETIN BOARD.



During the past 12 months, AEC exhibits were presented in every state except Alaska and were viewed by more than 9,000,000 persons.

NEW TELEPHONE DIRECTORY TO BE PUBLISHED

A new telephone directory will go to press on September 29, 1961. Any employee who is incorrectly listed in the present directory should submit a Report of Change - Telephone Book Listings (Form 241 B) to the Communications Group, 2 Center Street before this date. Employees who have already notified Communications of a change need not submit another form.

BUSINESS MACHINE SHOW

Here is your opportunity to see the latest office machines and equipment in action.

Supply and Materiel Division has arranged for you to see these at the Gymnasium on Thursday, September 28th, 1961, from 10 a.m. to 12 noon, and 1:00 p.m. to 4 p.m.

CLASSIFIED ADS

FOR SALE

1953 CADILLAC CONV. - Lt. green, immaculate, pr. steering, seat and antenna, autronic eye headlight controls. \$550. Ext. 2107.

1951 OLDSMOBILE - 4 dr., automatic trans., h&r., gd. tires, excell. cond. \$195 firm. Ext. 634.

1957 HARDTOP CHRYSLER - Power extras, blue & white, new tires, excell. cond., bargain at \$825. F. Maslan, Ext. 2546 or HR 3-1754.

1955 GREEN CHEV. - 2 dr., two new front tires, does not burn oil, good gas mileage. Asking \$495. 1961 Jeep (good for beach buggy) asking \$2000. G. Hambley, Ext. 481.

1958 PLYMOUTH WAGON - 9 pass., 4 dr., excell cond. \$1300. L. Green, Ext. 2456.

1958 AUSTIN HEALY 100-6 - Red & white, r&h., seat belts, good tires, excell. cond. \$1775. A. Fichtner, Ext. 2334.

1955 PLYMOUTH - 6 cyl. stick shift, four dr. Nice running automobile. \$325. SE 2-3338 after 6 p.m. A. Russo.

1954 FORD - 4 dr. sedan, V-8, st. shift, new tires. Ext. 2432.

1956 RAMBLER - r&h, new tires. \$550. Very good cond., owner leaving lab. Available Sept. 28. E. Crevecoeur, Ext. 607.

1960 OLDSMOBILE - 88 Dynamic, pr. brakes and steering, 19,000 miles, excell. cond. \$2200. C.F. Walsh, Ext. 2164 or 2184.

1958 RAMBLER - 4 dr., light blue, r&h., excell. cond., good buy. Ext. 607.

HOUSE - 3 bedroom ranch, two yrs. old, with formal dining room, 1½ baths, finished rec. room, att. garage, aluminum storms and screens, bath enclosure, w/w carpeting, shades, G.E. Ref. & washing mach., completely landscaped, large corner plot, city water & gas. Located in West Islip. G. Munoz, Ext. 393 or JU 7-0711.

CAPE COD HOUSE - Shoreham, 4 bedrms, 2 full baths, finished attic, full rear dormer, 95x125 ft. fenced plot, 1½ car garage, finished basement with outside entrance to 16x30 ft. concrete patio, many extras. 4½% G.I. mortgage. Sacrifice \$15,900. Ralph, Ext. 481, or SH 4-9921.

HOUSE - Small, two bedroom, all electric house 15 minutes from Lab. Call M. Gross, Ext. 2172 or AT 1-8708.

HOUSE - Large 2 story in Bayport, 45 yrs. old, landscaped lot 75x287. Living rm. with fireplace, large dining rm., kitchen and foyer, 3 bedrooms, & bath on 2nd floor. Full basement and attic, gas hot air heat. Excell. residential sec. near schools, village and all conveniences. \$12,500. Ext. 2179 or HR 2-0408.

SAILBOAT - 3 yr. old 15 ft. gaff rigged catboat with dacron sail. All in excell. cond. \$950. Madge Green, Ext. 779 or AT 6-0237, after 5:30.

PENGUIN SAILBOAT - 11 ft., two suits of sails, \$200. Darrah Thomas, Ext. 2125 or AT 4-6289.

POLAROID LAND CAMERA - Model 95 with compact speed flash. \$40. M. Kason, Ext. 323.

TRAILER - Two-wheel utility trailer, all metal body construction, size of body 4x6 ft. Price \$50. Ext. 2151, D. Stelmaschuk.

WESTINGHOUSE REFRIGERATOR - not new, but in good cond. A bargain for \$25. AT 6-0630. after 5:30, or Ext. 301-39.

STEREO ARM - Lafayette PK - 280 knife-edge balanced. G.E. Cartridge, 4 speed Lafayette turntable with wooden base and extra plug in head. Very good cond. \$25. I. Winter, Ext. 540 or LT 9-5741.

PORTABLE TYPEWRITER - Skywriter, like new \$45. 2 new table lamps, \$10. pr. G.E. 17 in. portable TV new. \$35. Ext. 464, Hal.

RANCH HOUSE - custom-built, 3 bedrm, brick, 2 car gar., basement. Many extras. Sacrifice. Will rent if no sale by Sept. 25. Ext. 2188 or AT 6-8712.

34 FT. CABIN CRUISER - 95 h.p., FW cooled. \$1,000 takes it. F. Walsh, Ext. 2184 or 2164.

24 FT. SAILBOAT - double set of sails, spinaker stormsail, 7½ hp outboard. Very clean cond. See at Carmans River in Brookhaven. Best offer. Ext. 2430, or GR 5-0732.

18 FT. SAILBOAT - well cared for, Rocket (A.R. True). Steel centerbd. Complete with good sails and 5 hp outboard aux. Asking \$500. Ames, Ext. 2349 or MO 9-8231.

20 FT. CABIN CRUISER - Trojan outboard, 1959, 50 hp Evinrude elec. start. w. gen. and batt. Built-in sink, ice box, toilet, bilge pump, 20 gal. fr. water tank, navy top, 23 mph. Excell. family boat. Purchased in Oct. 1959, \$3400 - now asking \$2295. Must see to apprec. Will demonst. Ross Meyer, Ext. 481 or LT 9-5757.

35 MM CAMERA - Bolexy, F2.8 lens, leather case, and flashgun. \$22. Frank Rumph, Ext. 2221.

CAR RADIO - MoPar 6 volt, complete with antenna, \$20. One 670-15 tire and rim, and one set of hupcaps for 1954 Plymouth, \$8. J. O'Donnell, Ext. 593 or 2128.

RECORDER - Dolmetsch, treble, \$10. J. Kelsch, Ext. 354.

SEWING MACHINE - Pfaff zig-zag, almost brand new cond. Modern mahog. cabinet. Cost \$200. T.I. Van Dervoort, Ext. 301-29, or YA 4-3815 after 6.

DINING SET - China closet, server, square table (pull out), 4 chairs. Light mahog., excell. cond. Asking \$60. AT 1-8253.

STOVE - Kenmore, coal and wood stove, so large that logs may be used. Ext. 2170, or AT 4-8325.

TV SET - Dumont 17", excell. cond., \$35. Alum. gdn. chair, \$2.50. Peterson stroller, with attachable car seat for 2nd child, \$11. G.E. flat iron, \$5. H.J. Evans, Ext. 2148, or AT 6-0171.

REFLEX CAMERA - Kodak Retina, F2., plus 2 close-up lenses, 1 #2 yellow filter, and camera case. Like new. C. Porter, Ext. 2373.

HALLOCK GUNNING SCOOTER - Attention, duck hunters! Painted grassed, ready to go. Plus decoys. \$300. Ext. 2169, or GR 5-3195, eve.

CHILDS CRIB and Mattress and plaid stroller (2 position), good cond. Ext. 2273.

16 GAUGE SHELL HOLDING HUNTING VEST - Remington hand trap thrower, both for \$4. Ext. 353.

1958 35 H.P. EVINRUDE - manual starting, purchased 1959, good cond. asking \$240. 7.65 MM Spanish automatic pistol 7 shot, brand new, asking \$22, or will trade for double or single action 22 cal. revolver. Permit required. 25 cal. Jap. Army rifle, excell. cond. Bayonet goes with it, asking \$15. 22 cal. Harrington & Richardson, single shot bolt action, good cond., asking \$13. 22 cal. Mossberg single shot, 15 shot tablar magazine, peep sight in rear, choice of 4 popup sights in front, expensive gun case goes with it, asking \$23. 18 inch Craftsman Rotary Lawn mower, it runs, asking \$9. Boat trailer, will take 8 to 14 ft. boat made from piper cub landing gear, good for hand pulling across beach asking, \$37. Call Ross Meyer, Ext. 481 or LT 9-5757 after 6:00 p.m.

FOR RENT

HOUSE for rent, 7 room house, 3 bedrooms, 2 baths. Unfurnished or partly furnished. Garage, 20 miles from Lab. in Smithtown area. Available October 1. Call Ext. 2244.

WANTED

Portocrib, in good condition. Bill, Ext. 684. Boat Trailer for 17 ft. boat. D.H. Gurinsky, Ext. 349 or AT 4-1013.

Model No. 73 or 92 Winchester rifle. Condition of bore unimportant. Must be reasonable in price. Need action for conversion. P. Buhl, Ext. 354.

Metronome, used or even broken, call Ext. 5971.

CAR POOLS

Two drivers to complete existing car pool from Holtsville area. Ext. 2180.

One rider-driver wanted to join small car pool from Suassa Park area or other Port Jefferson vicinity. Ext. 2294.

Ride wanted from vicinity of village of Sayville. John Palmer, Ext. 639.

Ride wanted from Kings Park area starting mid-October. E. Janes, Ext. 455.

Ride wanted from Lindenhurst, Roy, Ext. 580.

Fifth driver wanted to complete existing car pool from Sayville-West Sayville area. J. Daane, Ext. 779.

Ride wanted from Laboratory Monday and Wednesday nights to general area of Suffolk County Community College beginning Monday, September 25. Call Ann on Ext. 660.

ANSWER TO CHESS PROBLEM

WHITE

1. B x N

2. N x B

3. B x P winning a Pawn at least because . . .

if Black would K x B, White would answer with 4P - QB4.

BLACK

N x B

Q x N