

the Bulletin Board

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BNL OPERA CLUB FORMED

A BNL Opera Club has been formed for the purpose of obtaining tickets for Metropolitan Opera performances under the auspices of the Metropolitan Opera Guild Educational Division. The service will operate as follows: the Opera schedule will be made available approximately one month in advance. Orders may be placed by any employee for an unlimited number of tickets of any price for any performance. Immediate payment is required once it is determined that the requested tickets are available.

A special feature of the plan is that the Club is entitled to up to 50 tickets per year at a 20% discount on tickets under \$6. Discount tickets will be available on a "first come, first served" basis, although the Club reserves the right to limit the number of such tickets available to any individual.

Personnel Services will handle the Opera Club ticket service. The price list of seats, as well as the Opera schedule through December 23, are now available at the Personnel Office.

CHRISTMAS ORDERS

Orders for Christmas candy, cookies and fruit cake, accompanied by full payment, may be placed at the Personnel Office, 58 Brookhaven Avenue. No orders will be accepted after Monday, Dec. 18.

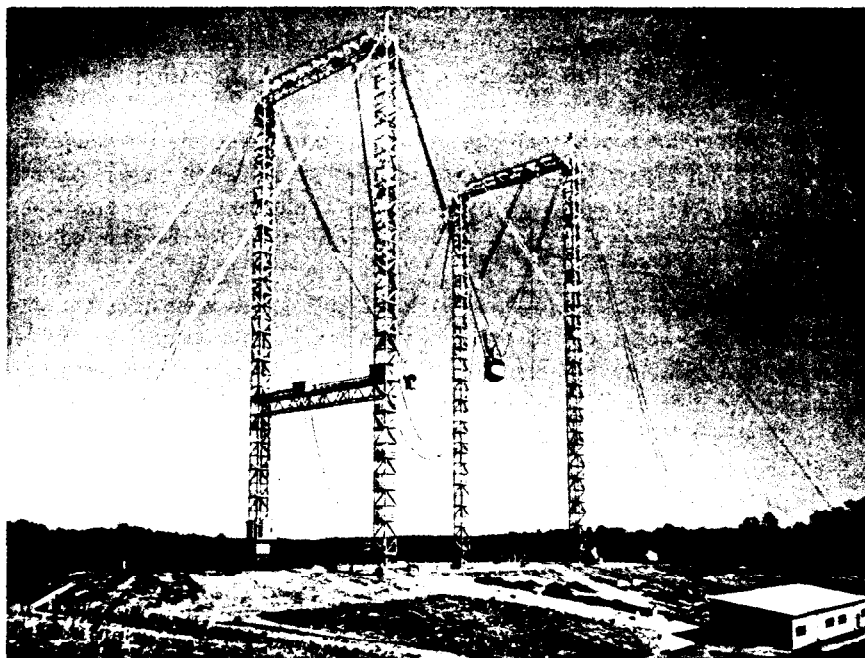
MICROMET REMINDER

The deadline for placing Micromet orders at the Personnel Office is Friday, December 8.

METALLURGICAL SYMPOSIUM

This Thursday, November 30, the Long Island Chapter of the American Society for Metals will present a technical symposium and tour at the Lab. Entitled "Recent Advances in Physical Metallurgy," the day-long symposium will include a tour of BNL facilities and a series of educational lectures by members of the staff of BNL and other institutions and universities. About 100 people are expected to attend the meeting.

OAK RIDGE NATIONAL LABORATORY



ORNL's Tower Shielding Facility: The tank high in the air contains an operating reactor.

In outlining the various AEC activities in the Oak Ridge Area, last week's BULLETIN BOARD pointed out that what we now know as Oak Ridge National Laboratory was one of the three facilities built at Oak Ridge in 1943 to initiate the country's top-secret atomic development program. Known simply as the "X-10" area during the War, the facility was supervised by a group from the University of Chicago, where, under Dr. Enrico Fermi, the world's first nuclear reactor was successfully operated in December 1942. The group established at "X-10" a much larger reactor, called the Graphite Reactor, which produced the first sufficient amounts of plutonium for testing the uranium-plutonium separation process adopted for the full-scale production plants that supplied plutonium for the A-bombs. The Graphite Reactor continues in operation today as a research device and large-scale producer of radioisotopes.

Following an unsettled period after the close of the War, the Union Carbide and Carbon Corporation contracted with the AEC in 1948 to operate the "X-10" facility. It was subsequently given its present name of Oak Ridge National Laboratory and underwent extensive reconstruction and expansion.

Today, ORNL's activities have three primary aspects: nuclear research and development; scientific education; and the production of stable and radioactive isotopes, in which it is world leader.

Basic research is carried out in the fields of biology, chemistry, physics, and metallurgy. Of all the National Laboratories, ORNL traditionally has the strongest roots in the chemical sciences; within the field of biology, the Laboratory has one of the largest bio-medical programs in the AEC complex. This program is concentrated on studies of the effects of radiation on plants and animals.

(continued on following page)

ORNL—cont'd.

In applied research, ORNL's activities are centered around reactor technology. Major reactor types now being worked on are the homogeneous, the gas-cooled, and the solid-fuel reactors. In addition to those being developed, the Laboratory has six reactors in routine operation. These include the Graphite Reactor, which has already been mentioned; the Bulk Shielding Facility (the original "swimming pool" reactor); the Tower Shielding Facility, pictured on page 1; and the Oak Ridge Research Reactor, newest of the group (1958). An important corollary of the reactor development program is the development of chemical separation processes for reactor materials. These applied chemical research programs are concerned with all phases of nuclear energy technology, from raw materials processing to reactor fuel processing and radioactive waste disposal.

Complementing reactor activities is ORNL's particle accelerator development program, in which the main achievements have been in the design and use of high current, moderate-energy cyclotrons. Under construction now is the Oak Ridge Isochronous Cyclotron (ORIC), a highly flexible, variable-energy accelerator.

As a research and development center, ORNL is also a participant in the vast Project Sherwood, aimed at harnessing the thermonuclear energy released by the fusion of light elements. ORNL's fusion research is directed towards the creation and study of a magnetically confined, high-temperature plasma, in which free electrons and energetic ions (atoms from which the electrons have torn free) are trapped.

In support of all research and development programs, extensive use is made of the famous Oak Ridge Automatic Computer and Logical Engine (ORACLE), a giant electronic digital computer.

The second aspect of ORNL activities lies in the field of education. Atomic energy education and training for both the academic and industrial worlds have been an integral part of ORNL activities ever since 1943, when one of its principal objectives was the training of personnel to operate the Hanford, Washington, plutonium-producing plants. Within its education program, the largest single activity is Oak Ridge School of Reactor Technology (ORSORT), which offers a one-year course in the theory and design of nuclear reactors to up to 120 graduate engineers and scientists each year. The Laboratory is also one of the three centers of education in the AEC's program of Special Fellowships in Radiological Physics. This is a 12-month course open to holders of bachelors' degrees, and, at Oak Ridge, it is carried out in collaboration with Vanderbilt University. A part of ORNL's education program is conducted jointly with the Oak Ridge Institute of Nuclear Studies. Under this cooperative effort, the Research Participation Program provides an opportunity for university faculty members to engage in advanced research at ORNL. The Graduate Training Program enables graduate students to complete thesis research toward masters or doctoral degrees at the Laboratory through AEC fellowships.

The third and final facet of ORNL activities is the production of isotopes for use in agriculture, industry and medicine. ORNL's reactors and accelerators are the world's foremost producers of radioisotopes. The Laboratory's preparation, purification and shipping facilities for these fission products have been in continuous use since 1946. Nearly 100 radioisotopes are routinely available, and, currently, more than 1,000 shipments a month are made throughout the U.S. and abroad.

ORNL also supplies nearly all of the enriched stable isotopes, valuable as biological tracers, used by the scientific world. Stable, or non-radioactive, isotopes have been historically difficult and expensive to separate in gram quantities. At ORNL, electromagnetic separators produce most of the stable isotopes.

BERA FILM SERIES**"Love and the Frenchwoman"**

NOVEMBER 30, 1961 — LECTURE HALL
8:30 P.M. SHARP

"Love and the Frenchwoman" is a compilation of the works of seven famous French directors. The omnibus type of film is not new, but few, if any, have achieved the continuity and variety of this provocative social study, produced with both insight and wit. Certainly none have been as ambitiously mounted or combined so many talents. The theme, as the title implies, relies on the experiences of French women in the game of love, almost literally from the cradle to the grave. Space prohibits a detailed description of each vignette, but the titles themselves aptly convey the direction and intent: "Childhood," "Adolescence," "Virginity," "Marriage," "Adultery," "Divorce," and "Woman Alone."

SKI CLUB MEETING

The next meeting of the Ski Club will be held on Monday evening, December 11 at 8:00 p.m. in the Recreation Hall. Plans for the first trip on January 9 will be made and a ski film shown.

UPTON RIFLE-PISTOL CLUB

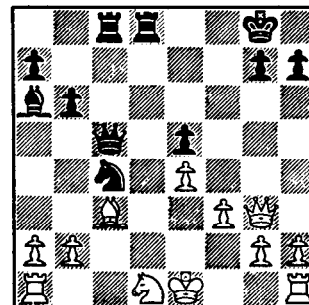
The large bore rifle tournament came to a close tie, with P. Colombo and J. Diener in a tie for first place. Each had an average score of 97 out of a possible 100 with 14 V's. Jim Rutherford was third with a 93 average.

At the annual election of officers, the following candidates were chosen:

RAY DOMISH — President
PAUL COLSMAN — Vice President
JIM RUTHERFORD — Secretary
AL LUKAS — Treasurer
PAUL HICHBORN — Ex. Officer
PETE COLOMBO — Chief Instructor

CHESS PROBLEM

In this week's problem, it is Black's move and win. There are quite a few pieces on the board, so better study it first.



CAMERA CLUB MEETING

There will a meeting of the Camera Club on November 29 at 8:00 p.m. in the small meeting room in Building 317. It is important that all members be present, since officers will be elected and important business discussed. Henceforth, dues will be collected only at Club meetings. A new membership list will be prepared and will be effective December 1 for darkroom admittance.

All members are requested to bring samples of their work - color or black-and-white - for a general showing, no competition. New members and visitors are welcome.

NIMRODS ARCHERY CLUB

There will be a return match with the Republic Archery Club this Saturday, December 2, at 10:00 a.m. in the Gym.

The course of shooting for the day will be a N.F.A.A. Flint Indoor round at 20 yards. Let's have a good turnout! We start at 10 a.m. sharp.

FULL MASTER POINT GAME

The Bridge Club will hold its monthly master point game on Thursday, November 30, at 8:00 p.m. in the Recreation Hall.

The results of the fractional master point game held this month were:

N-S

1. JACOB TILLINGER & SANDY WAGNER
2. BERTHA KUGLEMAN & VIRGINIA POND
3. MR. & MRS. STERNHEIM

E-W

1. MR. & MRS. VERDIN
2. MR. & MRS. VANDEWELDE
3. MARY KINSLEY & HARRY STEINHAUSER

SET SHOTS

In the first game of the 1961-62 basketball season, the Chuckers romped over Biology 26-19, with Captain Larry Atherton leading the way with 12 points.

The second contest saw Metallurgy smothered by a revamped Old Timers' team, 39-17. Prach and Lanyi supplied the ammunition with 11 and 14 points, respectively.

In the last game, the Untouchables weren't able to live up to their billing: they were touched for 14 by Rush and 11 each by Lawrence and Sabine, enabling the Phoubars to win their debut 39-28.

Games this week (Tuesday):

- 6:15 PHOUBARS VS. OLD TIMERS
7:25 BIOLOGY VS. UNTOUCHABLES
8:35 CHUCKERS VS. METALLURGY

CONCERT — MONDAY, DECEMBER 11

Jean Pierre Rampal and Robert Veyron-LaCroix, flute and keyboard.

The third concert of the 1961-62 BERA Concert Series will be held Monday evening, December 11, 8:30 p.m., at the Brookhaven Center. It will feature the Flute-Piano Duo of Jean-Pierre Rampal and Robert Veyron-LaCroix.

The Rampal/Veyron-LaCroix Duo has toured Europe since its inception in 1946 and is considered one of the connoisseur staples of European concert fare. Since 1958, the artists have toured the United States and Canada extensively and are no strangers to BNL audiences.

Following the Duo's 1958 United States debut, the Washington Evening Star carried these comments: "The magic of Rampal seems to be unique. In his hands the flute is three or four music makers; his virtuosity simply cannot be indicated in words, and Mr. Veyron-LaCroix is, in every respect, a worthy partner."

A year later, the New York Herald Tribune wrote: "These men are so skilled and so accustomed to playing together that their performances are utterly dazzling in themselves. Rampal is a veritable wizard of his golden instrument, and Veyron-LaCroix's virtuosity applies equally to harpsichord and piano."

ADMISSION — Adult \$3.00 — Children \$0.75

FISHING CONTEST

The 1961 fishing contest is rapidly drawing to a close: November 30 is the last day. However, you have a week to submit your entry for a fish caught on that date.

The award for fisherman of the month of November is still not decided.

The committee will meet in the near future with their adding machines to determine this year's prize winners. Watch the BULLETIN BOARD for the announcement of the winners.



BERA BOWLING

PURPLE LEAGUE

Scotches' Captain McCafferty won the turkey raffle given by proprietor Bob Maggio. The Scotches then went ahead and took 3 points from the Hopefuls. Leading the way for the winners were Galen, 184/475, Pontieri, 170, and Johnson, 167. High for the Hopefuls were Sundberg, 180/495, and Hanson, 153.

The Woodbutchers chopped off the Phoubar winning streak by taking the match 3-1. Chopping for the Woodbutchers were Seitz, 190, and Milian, 177/489. Best Phoubars were Caiazza, 176, and Brown, 179.

The Designers were drowned by the Toppers, 3-1. The leading Toppers were Scatton, 193/511, Reany, 192/492, and Nocar, 189/523. The Designers had Sperry, 197/553, Rocklein, 186/526, and Cuccia, 181/506.

Fiscal vs. Bowl Aids will be played at a later date.

PINK LEAGUE

The good-natured Twinkletoes dropped 3 points to the gluttonous Nightingales, thereby insuring these two teams of 1st and first places, respectively. Flying high for the Nightingales was M. Heine with 162/165/448. P. Cosier is split queen of the week after converting two (3-7-10 and 5-8-10).

The Allthumbs maintained 3rd position and helped the Question Marks stay in 2nd by losing to them 3-1.

The Dipions took 3 from the Contacts, and tied up 4th and 5th positions. Hotshot J. Reidl rolled 172/405 and R. Svendsen rolled 154/405 for the Dipions. C. Lydecker rolled a 434 series for the Contacts.

CHRISTMAS PARTY MEETING

There will be a short meeting of representatives of all departments planning Christmas parties at the Recreation Building on Thursday, November 30, at noon.

CLASSIFIED ADS

FOR SALE

1955 STUDEBAKER CHAMPION - 44,000 mi., clean. Avail. Dec. 12. \$350. Ext. 705.

1956 MERCURY - 4 dr., whitewalls, r & h, auto trans. Best offer over \$500. Browne. JU 8-8600.

1961 PONTIAC TEMPEST - Sports Coupe, maroon leather interior, bucket seats. Less than 5,000 mi. Seats five adults comf. Ex. cond. \$2100. SE 2-3296 after 6.

1956 CHEVROLET - 2 dr. Station Wagon. Recently recond. motor & new tires. Best offer over \$450. Mrs. H. Koch, Ext. 702.

1950 DODGE - FLUID dr., r&h, good cond. Tires nearly new. Ext. 614.

1952 CONSUL (ENGLISH FORD) - New tires, r&h, gd. gas mileage. Make offer. Braddon, Ext. 2375.

HOUSE - 7 room split, dead end st. in Huntington, on 1/2 acre with trees. liv. rm. with fire-pl., dining rm., rec. rm., patio, laundry rm., basemt., 3 bedrms., 2 1/2 baths, garage, all appliances, oil/h w heat, storms and screens, extras. Ext. 2102 or HA 7-6066.

HOUSE - 7 rm. ranch, Bellport. 95 x 175, 2 or 3 bedrms., liv. rm., dining rm., den, patio, 2 baths. Oil/hot water heat. Compl. landscaped. Owner leaving Lab., must sell. Ext. 2109 or AT 6-0789.

HOUSE - 3 bedrm. custom ranch. 3/4 acre with view of Sound. Comp. for \$22,500. SH 4-3401.

PIANO - Older upright, Wuertz, mahogany finish. In acceptable playroom cond. \$25. Ext. 2102 or HA 7-6066.

SIMMONS HIDE-A-BED - Black with silver thread upholstery. Mattress. Gd. cond. Also Whirlpool auto. washer, 2 yrs. old, ex. cond.; and Zenith Console 17 in. TV, 10 yrs. old, needs repair. Owner leaving Lab. HR 3-2568.

DeVRY 16 mm. movie sound projector. Fully equipped. Sacrifice. \$250. W. Fedrich. Ext. 672.

2 BURNER MARINE BOTTLED GAS STOVE - Suburban Galley Chef. New cond. \$25. Ext. 2381.

CRIB & CHEST SET - Beaut. cond., lime oak, mattress not incl. Both \$50. Ext. 301-110.

SET OF BABY FURNITURE - Crib, mattress, matching chest, feeding table, playpen. All good cond. Best offer. AT 9-1125.

FOR RENT

HOUSE - 2 bedrm. ranch, lg. kitchen, oil heat. Middle Country Road, Ridge, 6 mi. from Lab. Occup. within 10 days. 2 yrs. old. YA 4-6638.

HOUSE - Lg. liv. rm., 2 lg. bedrms., dining rm., hall, kitchen, utility rm. and attached garage. Occup. Dec. 1. \$120. mo. JU 8-9598.

HOUSE - Brookhaven. 2 bedrms., garage, lg. plot, water view. Purchase or option to purchase considered. AT 6-1307.

WANTED

USED STEAMER TRUNK, E. Schackow. Ext. 301-30.

HOUSE TO RENT - 2 bedrms., unfurnished but with appliances. Couple with no children. North or south shore. Dr. L. Lax, Ext. 523.

HOUSEHOLD HELP - Once a week. Mrs. Koch, Ext. 702.

TARPAULIN - For boat. About 15 by 30 ft. Braddon, Ext. 2375.

CAR POOLS

TWO DRIVERS WANTED to complete existing carpool from Holtsville area. Ext. 2180.

PAYING RIDER (Med. Dept.) would like transportation from Bayport, south of Middle Rd. Ext. 301-107.

WANTED - Ride from vicinity of Danes Ave., Patchogue, which is off So. Ocean. Ext. 330.

SOLUTION TO CHESS PROBLEM

WHITE

- 1
- 2 R x R
- 3 K-B1

2 K-R Then

BLACK

- 1 R x N Check
- 2 Q-K6 Check
- 3 N-Q7 Mate

Or if

3 N x P Check, etc.

NOTICE

A refund check from L. & C. Mayers Co. for an order placed by a Mrs. Barbara Naumann is at the Personnel Office. Please claim by calling Ext. 396.