

the Bulletin Board

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VISITORS TO BNL

Mr. Loren K. Olson, AEC Commissioner, and Mr. Paul McDaniel, Head of the AEC's Division of Research, visited BNL on Monday, March 27. While at the Laboratory, they talked with members of the staff and visited various BNL departments.

On Thursday, March 30, a group of graduate students in chemistry from New York University will visit Brookhaven.

LIQUID HYDROGEN SAFETY

RESEARCH MEETING

A conference was held at the Laboratory on Thursday, March 23, 1961, to review the needed areas of research in the field of liquid hydrogen safety. The conference was jointly sponsored by the AEC Health & Safety Laboratory in New York and by the BNL Special Hazards Committee.

The Chairman was A. Weintraub, HASL, and BNL speakers were I. Polk, L. Baker, Jr. and A. Schlafke. Dr. M. Zabetakis, U.S. Bureau of Mines Explosives Research Laboratory, described the liquid hydrogen safety research which the Bureau of Mines is to undertake under contract with the AEC. Dr. A. Prodel and J. Jensen of BNL were assigned to assist in coordinating this work.

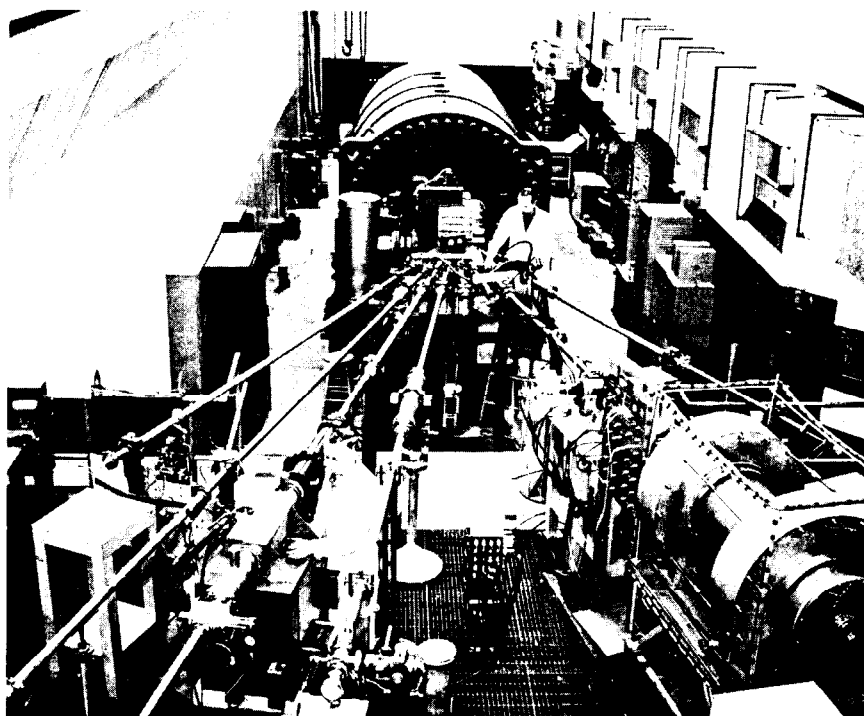
Liquid hydrogen is used extensively in high energy physics research. The interest in the safety aspects of this particular application was evidenced by the fact that sixty people, representing accelerators all over the eastern part of the country, attended this conference.

A conference summary will be prepared by the BNL Special Hazards Committee and distributed to all attendees. Additional copies will be available from the committee secretary—L. Baker, BNL Safety Office.

MEDICAL CONCLAVE

A conference of Chairmen of Departments of Pediatrics at American and Canadian Medical Schools is being held at BNL this week, March 27 and 28. The topic of the conference is "Pediatricians, The Child, and Atomic Radiation." The conclave is sponsored by the Division of Biology and Medicine of the U.S. Atomic Energy Commission and BNL's Medical Department. Approximately 80 people are attending the conference.

THE RESEARCH VAN DE GRAAFF ACCELERATOR



The Van de Graaff accelerator, located inside the pressure tank in the background, produces a charged-particle beam that may be bent into any one of the pipes and brought out to experimental set-ups in the foreground. Bob Lindgren is opening a valve near the beam-deflecting magnet and Arthur Timpe is making adjustments on a beam-pulsing oscillator in the foreground.

One of the first major facilities to go into operation in the early days of the Laboratory was the Research Van de Graaff accelerator. Purchased from the General Electric Company, this machine was installed during 1948 in the Cyclotron-Van de Graaff building, located just south of the large Reactor. Because of considerable difficulties experienced during the first few years of operation the accelerator was redesigned and rebuilt between 1952 and 1954 by Dr. Clarence Turner of the BNL Physics Department.

The Van de Graaff accelerator is named after the scientist (still a Massachusetts Institute of Technology professor) who invented the device in the early thirties. It works according to the simple physical principle that charged particles move in an electric field, thereby gaining speed and energy. In this machine there is a large metal sphere supported on the end of an insulating column structure. When the sphere is charged up to several million volts there exists an electric field between the sphere and the grounded base of the column. Within the column structure is located an evacuated tube extending from the metal sphere out through the base of the machine. Charged particles are injected into the tube by an ion source located inside the sphere. Under the influence of the electric field the particles move through the tube and then emerge from the machine with an energy corresponding to the voltage on the sphere.

(Please turn to Page 2)

Research Van de Graaff — continued

Van de Graaff's contribution, which made his electrostatic accelerator different from the earlier design of Cockcroft and Walton, was the scheme he devised to build up and maintain the voltage on the sphere. This is done with a moving endless canvass belt, also located inside the column structure. Electric charge is sprayed onto the belt near the base of the column and it is carried at 60 miles per hour up to the sphere where it is picked off. Just as in an electrical condenser, the more charge that is pumped into the sphere, the higher the voltage goes. Because of the various paths in which the charge can drain away from the sphere, the voltage can be held steady at a chosen value by making the charging current on the belt exactly equal to the sum of the drainage currents by means of regulating devices.

If the metal sphere were in the open air huge sparks would occur to the walls of the room when the voltage was built up to about one million volts. A necessary part of the machine to prevent sparking is a large steel tank, enclosing the column structure and sphere, which is filled with nitrogen gas at a pressure of 150 pounds per square inch. If you have wondered about the silver-colored ball on top of building 901, this is a tank used for temporary storage of the nitrogen gas while the machine is open for repair.

You may also have wondered why it is necessary to have several types of low energy accelerators such as cyclotrons and Van de Graaffs. The special advantages of the Van de Graaff include: continuous and fine control of the energy of the particles, a high degree of uniformity in the energy of the particles and the concentration of the particles into a beam of small diameter. These advantages are made use of in the type of research done with our BNL Van de Graaff. Most of the research has to do with gaining information about the energy levels and structure of light-weight nuclei. The nuclear reactions studied are induced by particles accelerated in our machine at energies of up to 3 million volts. A choice of bombarding particles is available including protons, deuterons, helium-4 and helium-3. (A similar Van de Graaff accelerator is used to inject protons into the Cosmotron.)

About 10% of the Van de Graaff time is used to make service irradiations for the Medical, Nuclear Engineering and Health Physics Departments. The Medical Department project consists of the study of the biological effectiveness of high energy neutrons on mice. The neutrons are produced by bombarding a special target with the charged-particle beam from the Van de Graaff.

LAST CONCERT WEDNESDAY

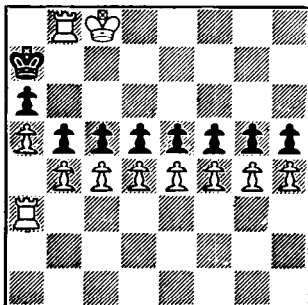
For the final concert of the 1960-61 series, the BERA concert group presents a joint recital by Paul Doktor, violist, and Yaltah Menuhin, pianist. The concert will take place Wednesday evening, March 29, at 8:30 in the Research Staff Lounge.

Paul Doktor is recognized as one of the leading violists in the world. His previous appearances at Brookhaven have been among our most successful concerts. Yaltah Menuhin has been outstandingly successful in recent years as a soloist and in ensemble. The collaboration of these two fine artists promises a rare treat for chamber music lovers. Their program will include works by Eccles, Kodaly, Mendelssohn, Hindemith, and Brahms.

Single admissions will be available at the door: \$3.00 (adults), \$.75 (children and students).

CHESS PROBLEM**Horizontal Conveyor**

Here is another end game study and there should be a mate in four moves. Answer elsewhere in this week's BULLETIN BOARD.

**BNL SAFETY RECORD**

25 Days since last Disabling Injury
(March 2nd - March 26th)

ADVICE TO THE LOVE-LAWN

Chemical fertilizers may be applied to existing grass about the first of April. In general, 20 pounds of 5-10-5 or 10 pounds of 10-6-4 should be applied per thousand square feet of area. Unless lawns are in relatively poor condition, the spring feeding can be eliminated. Good results will be obtained by applying an organic nitrogenous fertilizer such as: Castor pomice, Agrinite, Milorganite or Hu-actonite at about the 15 to 20 pound per thousand square foot rate in late May. Grass seed may also be sown at this time. However, we repeat that the only satisfactory time to establish a new lawn on Long Island is during early September.

NEW TELEPHONE DIRECTORY**TO BE PUBLISHED**

A new telephone directory will go to press at the beginning of April. 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 Section, 2 Center Street. Employees who have already notified Communications of a change need not submit another form.

DISCOUNT TICKETS

Discount tickets to the following shows and events are currently available at the Personnel Office, 58 Brookhaven Avenue:

THE BEST MAN
(Morosco Theatre, N.Y.C.)
CLYDE BEATTY - COLE BROS. CIRCUS
(L.I. Arena, Commack)
RINGLING BROS. BARNUM & BAILEY CIRCUS
(Madison Square Garden, N.Y.C.)
THE KING AND I (in Grandeur 70)
(Rivoli Theatre, N.Y.C.)

BROOKHAVEN DIVERS CLUB

At the monthly business meeting held on Monday, March 20, the following officers were elected for 1961:

President: BOB YOUNG
Vice-President: BILL SCEVIOUR
Secretary-Treasurer: JEAN LAUER

Seventeen new members were admitted to the club after successfully completing the Skin Diving Course given by the club this winter.

Club activities get into full swing starting on Monday, April 3 with the first Pool Session. All club members and their guests are welcome to bring their equipment and start getting into shape for the outdoor dives which will be starting about the last week in April. For further information regarding the club, contact Jean Lauer, Ext. 2390.

UPTON RIFLE AND PISTOL CLUB

Spring large bore rifle shooting will start Sunday, April 9, at the Medford Range. Time - 10:00 a.m. to 12 noon.

The Rifle Club has six M 1's available for those who do not have their own rifles. Trophies will be awarded to the winners. For details, contact A. Lukas, Ext. 769, or P. Colombo, Ext. 624.

WHAT, ME WORRY?**Picnic July 29**

I'm going to the picnic on July 29th, but why should I worry about working on the committee? Someone else will do it; I'll just go and have a good time. (Nice people call Bob Fuchs on Ext. 394.)



The date has been set, and some of the committees have been formed and are starting to roll. With the enthusiasm being shown, this year's Operation Get-Together should be bigger and better than ever. There are still a few vacancies open on the planning committee, so if you or your department would like to get into the action, come on down to the meeting Wednesday, March 29th, at noon in the Recreation Office.

Working and planning for the picnic can be very rewarding. The meetings are fun; the many and varied assignments are challenging and interesting; the committee members are an enthusiastic group; and finally, the sight of 3,500 men, women, and children having a ball on the day of the picnic can give you a pretty warm glow inside. If you would like to help out and can't make the meeting on Wednesday, call Bob Fuchs, the picnic chairman, at Ext. 394, and leave your name.

13 TEAMS SO FAR!

The first meeting was held last week to get the Slo-Ball season under way and representatives from 13 groups have come forward to enter our leagues: Potsareebies, Health Physics, Medical, Cosmotron, Gnats, Phoubars, Dirty Sox, Grounds Maintenance, Old Timers, Metallurgy, Electronics, Metalmen, and A.O.S.

Since 13 is a very unpopular number - how about your department eliminating it by joining up. Team entries are still being accepted!

Tom Prach, who has served faithfully as the Softball Chairman for the past three years, has stepped down to make room for a new man. However, he has already been appointed to the rules committee. Bob Jones (Metallurgy) was the unanimous choice of all the captains to fill the chairman's post.

A second meeting is scheduled for Friday, March 31, at noon in the Recreation Office in the Gymnasium, to fill out the necessary committees, talk about league construction, umpiring, and scheduling.

Players Pool - If you are not on a team now, and would like to be, call the Recreation Office, Ext. 391, and you will be assigned to a team.

Entry blanks and information are at the Recreation Office, 3 Center Street.

HOME PHONE BEING CHANGED?

Many telephone numbers in the vicinity have been changed recently or will be changed in the near future. Be sure to report all changes in home phone number to Personnel Records, 58 Brookhaven Avenue.

ANSWER TO CHESS PROBLEM**WHITE****BLACK**

1. R to R 1. Wherever the pawn breaks through, the rook will rush as follows:
Q B P x N P
2. Q B P x Q P P - N 6
3. R - Q B 1 P - N 7
4. P - B 7 mate. The same method for any other pawn captures.

LADY KEGLERS COLUMN:

Twinkle Toes remain well out in front, with no chance of losing first place, after claiming a forfeit from the APC's last week and the Medigals this week. Alley Kats and All Thumbs, however, remain tied for 2nd, both teams losing all 4 points this week. Nightingales in 4th spot and Odds & Ends in 5th have a slim chance of challenging 2nd place. Kay Conkling of the Boo Boo's set a new high for league individual game of 204 (nice shooting). Other high games were: Grace Siemen 192-503, R. McCann 172-480, Kay Conkling 193, Elaine Daniels 178, Tillie Penney 183, Barbara Garnier 169-479, Elinor Norton 167, Cathy O'Neil 161, Connie Brown 161, Joyce Sims 168-161.

FILM STUDY GROUP

The screen at the Lecture Hall is not adaptable to Cinemascope, and since THE 400 BLOWS is only available in this form, it cannot be shown.



Fortunately, we have been able to obtain as a replacement an excellent, prize-winning Mexican production entitled THE ROOTS, which will be shown on April 3. As an extra added attraction, a Cinema 16 short, THE PET DOG, will also be shown.

In THE ROOTS, a quartet of short stories has been combined by producer Manuel Barbachano into an earthy drama. The first story, "The Cows," tells with biting irony of a young father and mother who cannot afford to buy enough food for themselves and their own baby. "Our Lady" is the story of a young female anthropologist visiting a remote Indian village to collect material for a thesis on the "savages" and the grim lesson she learns. "The One-Eyed Boy" is the account of a youngster with a cast eye who is cruelly mistreated by other children, and who gains happiness only when he becomes totally blind. In "The Filly" a middle-aged archeologist attempts to buy the young daughter of a farmer and is countered in a surprisingly unexpected way.

In its review of the film, the New York Times wrote, "... a sharply-etched, four-paneled view of Mexican Indians whose striking faces and native virtues and faults are as forcefully projected as their truly picturesque surroundings."

Archer Winsten of the New York Post said, "THE ROOTS won prizes and acclaim in Venice, Cannes, Mexico, Cuba and Venezuela. It surely deserves them." **LECTURE HALL - MONDAY, APRIL 3 8:30 P.M. - ADMISSION 90¢**

BOWLING BALL

The 1961 Bowling Party and Awards plans are being formulated. Each league has two representatives. All bowlers are welcome and it costs NIL. Suggestions are most welcome - check with representatives.

Remember - Saturday, April 29.



BERA BOWLING

BLUE LEAGUE

The Techs with two nights left have clinched at least a tie for first place with the Splitters who are 8 points behind. If the Techs win one point or if the Split lose one, it's all over.

Last week the Techs took four from the Nucleides. Hildenbrand led the way with a 233, 191-573 series. Bauerfiend a 182 game, Wessel a 196 and Larsen a 195, 189-562 series. For the losers Milau a 176, Majeski and Weiss a 173 each.

The Splitters in a close contest took 3 away from the Snafus as Sparacino rolled the high game of 179 for the Splits. Sucher rolled the high game for the Snafus - a 201 - Touche, Sucher!

In the second division where a hot fight for third exists between 3 teams separated by 2½ points, the Pacers split with the Meteors. Neither team had outstanding games. High for Pacers - Baker 175, Meteors high - Marr 155.

The Bubble Boys continued their drive to leave the cellar far behind when they took 3 from the Powermites. Ferrante put two 178's together for a 521 series while Scheliga rolled a 186-515 series. Loper came up with a 199 game along with Nerenberg's 177 game for the Powermites 1 point.

Blue Ball of the week to the Tech's Dick Hildenbrand with a gross 581 series.

GREEN LEAGUE

The Old Timers II have clinched a tie at least, needing one point to pick up the marbles. Old Timers III lost 4-0 to the Old Timers II. The Reefers split with the Old Timers I. The Electrons took 4 from the Fire Dept. and the Black Birds also beat the Mole-Stars 4-0. High games and series were: Reams 223-555, Keating 197, 193-570, Lowe 197-521, Holmquist 190-514, Dvorak 219-521, Kinney 196, Stonebridge 212, Adams 170-501, Ratyca 189-527, Green 214-551, and Zelenka 190.

PURPLE LEAGUE

The Designers took 4 points from the Dirty Birds with Tex Texiera rolling a new high league game of 242-578 to lead the way for J. Roeklein 180-513, L. Chirco 177. The Dirty Birds were A. Dick 170-485, V. Buchanan 166. The Bowl Aids got together and took 3 points from Fiscal. The Bowl Aids in there were Ed Walsh 187-505, R. Shulz 198-474, J. McIver 159, Bud Sawyer 152. Fiscal men trying to stop them were R. Brouwer 196-499, Bob Eberbach 186-500, Ben Rutkowski 171.

The Woodbutchers had an easy night with the Hopefuls, who gave them 4 points. They moved into second place over the Scotchies. The Woodbutchers had W. Milian 176-487, W. Ruppert 178, A. Benson 164. For the Hopefuls it was J. Booker 159, C. Zavesky 147, H. Hansen 137.

The Phoubars had the whole team in there pouring in strikes to stop the Scotchies 3-1. Phoubars with the strikes were G. Gardenier 200-522, R. Brown 189-492, D. Vogt 185-514, G. Cox 149. The Scotchies were P. Reamy 200-522, B. Galen 169-496, J. Nocar 158.

CLASSIFIED ADS

FOR SALE

1959 BUICK Le Sabre - 4 dr. sedan, light blue, r&h, back-up lights, twin turbine Dynaflo; E-Z-I glass in windshield. 28,000 miles. \$1,595. Warren. Ext. 445.

1956 BUICK ROADMASTER CONVERTIBLE. White, full power, new top (white), immaculate. Call Ext. 782 or KI 2-4375.

1956 PLYMOUTH - 2 dr. sedan, V-8 motor, standard shift, low mileage, r&h, new paint and tires. Agnes Smith, Ext. 2148 or 2351.

1954 PLYMOUTH STATION WAGON - 2 dr., one year old clutch, 4 good tires, (2 brand new), new battery. D. Ballantine, Ext. 2211.

1950 CHEVROLET - Power Glide, r&h. Good running cond., new tires, good gas mileage. \$125. Call L. Chirco, Ext. 451 or SE 2-3378.

1948 SUPER BUICK - R&H, good running cond. 2 new tires in front, new battery, orig. owner, 79,000 miles. Must be seen to be appreciated. AT 6-8944 after 5.

HOUSE - 7 rooms, split level, wooded half acre lot, 3 bedrooms, 1½ baths, large living room, 26 ft. recreation room, fireplace, private beach, dishwasher, laundry room, storms and screens. Call SH 4-9877 evenings.

HOUSE - Yaphank, on well-landscaped wooded corner lot, 125x200 ft., two bedrooms plus extra finished room in cellar, large living room, modern kitchen, dishwasher, full basement. Ten minutes from Lab. \$10,800. SH 4-5096.

COLONIAL HOUSE - Located in Huntington Station, 75x100 ft., fireplace, immediate occupancy, any reasonable offer considered. ANDrew 5-1965 or Ext. 462.

HOUSE - 2 bedrooms, 2 baths, living room, den, dining room, kitchen & enclosed patio with heat. ¾ basement, oil forced hot air heat. Near stores and schools. BE 7-1789 after 6.

HOUSE - 7 rooms, 4 bedrooms, 1½ baths, washer-dryer, fully landscaped, fruit trees, many extras. Bellport Beach Estates. Fred Bartlett, Ext. 456 or AT 6-8813.

LOTS - Center Moriches, one landscaped, large trees, on Beach Fern Road, \$1900; one on Neville St., \$1800. Good residential section, walking distance stores, etc. Ext. 689 or BE 7-0147.

SAILBOAT - Narrasketuck One Design No. 62 (20'3" x 6'4"). Three suits of sails. Repainted only last September. \$600. Bob Wayte, BE 7-0795.

14' LAPSTRAKE OLDTOWN SAILING CAT BOAT - Mounting for outboard. New canvass deck. Sound but needs some work. Asking \$150. MO 9-2883 after 6 p.m. Can be seen at 179 Fire Island Ave., Babylon.

7.5 H.P. OUTBOARD - 1958 Elgin, used very little, excellent cond., separate pressure gas tank, forward, neutral, full swivel reverse. Don't wait. The rowboat half of this bargain was snapped up last week. Asking \$99. SA 4-3269. (LT 9-3269 after April 2.)

GUITAR - good tone & cond. \$25. Dolmetsch Recorder (English made) \$7.50. Ext. 354, J. Kelsch.

ELECTRIC SHAVER - Norelco Sportsman Model can be used with flashlight batteries or auto cigarette lighter. Call Ext. 354.

PIANO - baby grand. Excell. cond. Burnished mahogany finish. \$400. SH 4-3356.

WELSH "PLAYMATE" BOUNCING CHAIR - \$6. Welsh Walker with pony head, \$3.50. Baby bottle sterilizer with rack and nipple container, \$3. Contact B. Fox, Ext. 784.

JR. DINING ROOM SET - Nine piece; table, six chairs, china cabinet and buffet. Limed Oak, excell. cond. \$100. Bob Doering, Ext. 779.

RIFLE - Savage Mod. 340 30-30 Cal. NRA. Excell. or better cond. Rebuilt Singer Sewing Head, Electrified. Portable base. No controls, includes accessories, \$10.00. 3 gun pistol case, with drawer, felt lined, \$15. P. Buhl, Ext. 354.

WEBCOR TAPE RECORDER - Royal Coronet, Monaural, 2-speed, 3-speaker, dual directional Record and Play-back. Excellent working cond. Lowell, Ext. 406.

ELECTRIC RANGE - 20" apartment size. Mfg. - Gibson. Excell. cond. \$40. C. Klamut, Ext. 549.

PORTABLE RCA VICTROLA - 3 speed auto changer, good cond. H. Purohit, Ext. 2369.

SKIS - 1 pair of 200 cm (6'6") skis with Marker-Flex bindings \$25. E. Raka, Ext. 310.

ZORRO'S BOWLING CONTRACT - Sold to "Twinkle Toes" Price (?) We're not telling.

WANTED

TYPING JOB - "Typewriter keys fly" - evenings. Need typing done? HR3-9355.

TV SET - In good cond. Ext. 524.

TECHNICAL BOOKS - For the students of South America. Why keep those textbooks you don't need? Send them to "Books for South America" Bldg. 137. Your help may educate a good neighbor.

HOUSE - To buy. 2-3 bedrooms, prefer Bay Ave. School district, Patchogue. GR 5-4318 after 6.

PIANO - in reasonably good cond. L.K. Dahl, Ext. 301.

ARMY FATIGUES - Several pair, size 34-36. call G. Levine, Ext. 464.

BABY SITTING WORK - woman with own car, flexible hours. Call AT 1-8740.

FOR RENT

HOUSE - 5 rooms; 2 bedrooms, den with fireplace, modern kitchen & bath, large living room. Unfurnished, located in Patchogue. GR 5-4627 after 6.

BUNGALOW - Pleasant 6 room bungalow, oil burner, garage, unfurnished. Adults. 57 Rose Ave., Patchogue. GR 5-4312.

CARPOOL

Would like to join or form car pool from Bayshore. Rod, Ext. 604.

Would like to join carpool or obtain rider from Hampton Bays. Bea Kohler, Ext. 301-6.

Want to join or form carpool from Deer Park, Dix Hills area, D. Sisson, Ext. 773.