

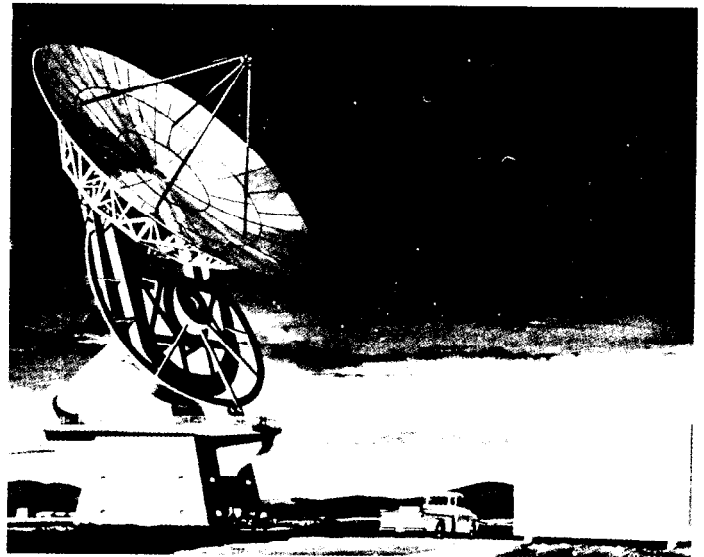
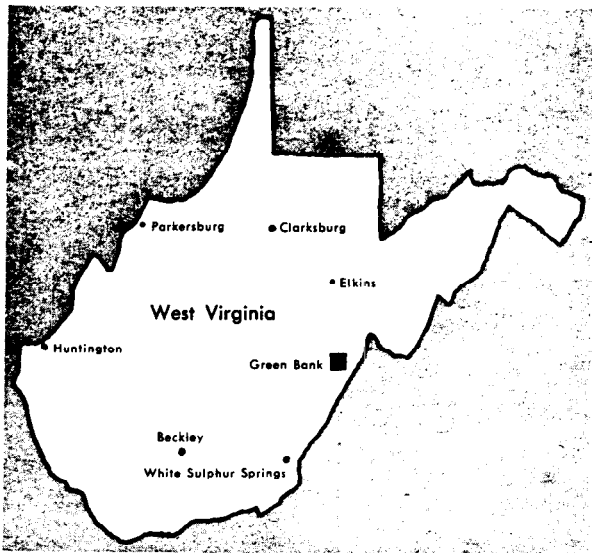
the Bulletin Board

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NATIONAL RADIO ASTRONOMY OBSERVATORY



An artist's rendering of the 140-foot telescope, now under construction.

BERA BOARD ELECTION

During the early part of February an election will be held to fill three positions on the Executive Board of the Brookhaven Employees Recreation Association.

The Board members at the present time are Alf Christoffersen, Lawrence Fuller, Mary Semerjian, Grace Siemen, John Binnington, and Edward Sayre. The terms of the latter three members expire March 1.

The following slate of candidates has been selected by the BERA nominating committee for election to the Board.

JOHN BINNINGTON	Research Library
ARLAND CARSTEN	Health Physics
DONALD DAVID	Bubble Chamber Group
ROBERT FUCHS	Reactor
WILLIAM KNAPP	Directors
BLANCHE LASKEE	Reactor
JIM STANGBY	Biology
PAT TOWEY	Physics.

WITHHOLDING STATEMENTS

The Employee's Federal and New York State Income Tax Withholding Statements will be distributed with the pay checks and earnings statements on January 27 for weekly employees and on January 31 for monthly employees. Shift employees will receive Withholding Statements with their pay checks this week.

The National Radio Astronomy Observatory is our sister installation under AUI. The Observatory, located at Green Bank, West Virginia, was founded in 1956 to further progress in radio astronomy, a modern branch of an ancient science. Radio astronomy is a study of the heavens by means of the radio waves emitted by a wide variety of celestial objects. The largest existing radio telescopes penetrate far into the universe to distances of the order of 100,000,000,000,000,000,000,000 miles. The radio signals from the most distant observed cosmic sources have been traveling at the rate of 186,000 miles per second for approximately 10^{10} years, and what is recorded on these instruments actually occurred ten billion years ago. The purpose of the National Radio Astronomy Observatory is to provide the large and precise radio telescopes, receivers, and other equipment needed for the detection and analysis of these signals from outer space.

The size and cost of such specialized facilities, prohibitive for private institutions, are the reasons for Federal Government support of NRAO. The National Science Foundation, through its contractor, AUI, sponsors NRAO for the use of all astronomers and for the advancement of knowledge.

The NRAO helps to broaden the scope of astronomy teaching and research in the United States, for it provides the means for advanced experiment and observation to visiting scientists from universities that lack large facilities of their own for research in radio astronomy.

At NRAO, AUI has adapted and applied to the field of radio astronomy the plans and ideas developed and employed at Brookhaven. The radio telescopes are analogous in character and in the needs they are meant to serve, to the reactors, accelerators, and other nuclear tools at BNL.

The site at Green Bank, West Virginia, in Deer Creek Valley, was chosen because it met most of the conditions desirable for the successful operation of radio telescopes, huge but extremely delicate instruments. The Observatory

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OBSERVATORY - Cont'd.

site has 2700 acres, rolling country which was formerly farmland and woods. The valley is sparsely populated, thus reducing the amount of man-made radio interference. The Observatory is rimmed in on all sides by mountain ridges which rise 1000 feet or more above the valley level, shielding the site from the nearer cities. Green Bank is at the same latitude as Washington, D.C. but is 200 miles inland and at an elevation of 2700 feet. The climate is therefore quite different with relatively cool summers, mild winds, and infrequent icing conditions; all of these factors are important in maintaining the unprotected telescopes.

Compared to Brookhaven, the Observatory is a small institution with only about 100 employees in all categories. Because of its isolation, however, it must be self sufficient and many, particularly those in the administrative and management department, "wear several hats"; that is, they have multiple duties and responsibilities.

The principal operating facility at the Observatory at the present time is the Howard E. Tatel 85-foot Radio Telescope, completed in 1959. A 140-foot telescope is now under construction.

Green Bank is about 30 air miles west and slightly south of the Navy's station at Sugar Grove, where a 600-foot telescope is being constructed. Although the basic missions of the two institutions are quite different, the technical problems are similar and there has developed a pattern of informal, friendly cooperation, even to sharing some of the members on the respective Visiting Committees.

Perhaps the research activity which has received the widest public attention is Project Ozma, which was initiated in the Spring of 1960. In this project, the 85-foot telescope was aimed at two nearby stars, in man's first calculated search for messages from other worlds. These stars were selected because they have characteristics similar to our own sun and thus there is a greater chance of their having similar planetary systems, on one of which might be intelligent life. No positive results were obtained from the initial observations and Project Ozma has been temporarily displaced by other research programs requiring observing time on the telescope.

It is planned to feature articles on various scientific projects at the NRAO in THE BULLETIN BOARD from time to time. The present article will be followed by an article on radio colors, written by a member of the staff at the Observatory.

RECORD COLD IN BNL ANNALS

In the wee hours of last Sunday morning, the mercury dipped to -22.8°F , the lowest temperature ever recorded since the BNL Meteorology Group began keeping weather records in 1947. The previous low temperature was -14°F recorded December 1950.

During Thursday night and Friday morning's storm, a total of 13 inches of snow was dumped on BNL. Extremely strong winds with gusts up to 48 miles per hour occurred during the storm and produced snowdrifts of 5 feet in some areas of the Laboratory site. A snowfall of this magnitude is rather unusual for January, as this is only the second snowfall of over 10 inches to occur in any January during the past 14 years at Brookhaven.

Extremely cold weather followed the snowstorm with a minimum temperature

of -7.2°F in the early morning of the 21st, followed by the record breaking reading on Sunday, the 22nd.

AFTER THEATRE PARTY**On Stage, EVERYBODY**

Members of the cast, their friends, guests, and all Theatre Group Members are invited to our event at the conclusion of the run of the play. Help us burn the candle and celebrate months of tedious work - mixed with some fun. Buffet and refreshments will be served. Nominal cost of \$2.00 per person is the tab. Please notify Geo. Sabine, Ext. 391; Al Schlafke, Ext. 751; or Pat Towey, Ext. 602 whether you intend to join us. Please have all money to one of the committee by Thursday, January 26.

Remember - party night, Saturday, January 28, 1961 - at the Theatre.

BROOKHAVEN LECTURE SERIES

The Third Brookhaven Lecture was given on Wednesday, January 11, by Dr. C.H.W. Hirs of the Biology Department. Dr. Hirs' talk, entitled "Inside the Protein Molecule," described the structure of these molecules which are of importance in the dynamic processes of our body and in its structure. An example of a protein in the former category is hemoglobin which transports oxygen to and from the lungs; an example of the latter is hair which is composed of the protein, keratin.

A combination of physical and chemical studies has led to a fairly good picture of the protein molecule. These structure studies are beginning to allow biochemists to understand how nature can produce these different properties. Dr. Hirs also discussed many other types of protein.

The next Brookhaven lecture will be given by Dr. Gerhart Friedlander on February 15 at 8 p.m. in the Lecture Hall. His title will be "Nuclear Chemistry Research with the Cosmotron."

TUITION REFUND REQUESTS

Employees who intend to take courses for which tuition reimbursement will be requested should file a Tuition Refund Request at the Personnel Office prior to starting the course or as soon after as possible. The request forms may be obtained at the Personnel Office, 58 Brookhaven Avenue.

SKI CLUB NOTES

THE BROOKHAVEN SKI CLUB is off again on its second trip of the season. **WHEN:** the weekend of February 4th and 5th. **WHERE:** The Rutland Region of Vermont to ski Killington Basin, Pico or Okemo, all large areas with a variety of lifts, trails and slopes. **HOW:** by bus, of course, through Ski Bird Tours. **HOW MUCH:** \$37.00 per person which includes a \$10.00 deposit due immediately. This amount covers everything but tow fees and rental of equipment.

Don't delay, call Ginger Moore, Ext. 301-40 for further information.

ALSO - anyone interested in a ski week at Stowe, starting March 6, please call E. Raka, Ext. 310.

NEXT MEETING - Monday, January 30, 8:00 p.m. in the Recreation Building in the Apartment Area. A ski film will be shown after the meeting. Everybody welcome!

BNL SAFETY RECORD

There have been no disabling injuries at BNL thus far in 1961.



BERA BOWLING

RED LEAGUE

Well, the Downunders and Gnats rolled it off and the Downunders came out with 3 points to their credit. There were some good games rolled by the Downunders: Perry 206, to give him a 481 series, Fales 190-486 and Iarocci 464. The Gnats rolled some good games too: Fox 471, Backsmith 479 and their power VanNorman, 521.

The Bugs gave it to the Bismuth Kings taking 3 points from the B.K.'s. The Bug's heavy bowler was Cross who bowled his weight-472 and their Thunder-bowler, Laurine, with a 480. The only help for the B.K.'s was Zinna with a 497. It seems the B.K.'s like their position in the League.

Biology is still taking points, this time 2½ from the Skins. The power for Biology was Smiling McGovern with a 190 to give him a 532 which should give him a free crew-cut. Although the Skins bowled some good scores (Borzi 472, Lento 474 and Weinmann 476) it still was not good enough to take more than 1½ points.

BLUE LEAGUE

The Techs took 3 from the Nuclides as Hildenbrand bowled a 209, 198-599 series. Wessel had a 173-514 series. For the Nuclides, Isler bowled the high series of 442.

The Splitters lost three to the Snafus - for the Splitters' Carter, Sparacino, Gallagher and Sick all bowled a better than 180 game. The Snafus, using a six man roster, had only 2 better than 180 games, Sucher and Klotz. They were enough, however, to take the three points from the Splits.

The Pacers and Meteors split 2 and 2 - even your impartial reporter has little to say about the team effort of Jarring George Jackson's boys - the Meteors were hardly better except for Lambeck who "broke away" for the big (450) series of the contest.

The Bubble Boys are on the move again, this time taking four from the Powermites. Ferrante rolled a 203-572 series and Scheliga a 179-508. No comment from the Powermites.

Blue Ball without doubt to the Bubble Boys', Joe Ferrante, with a gross series of 605.

GREEN LEAGUE

The Old Timers II took over the lead again, winning over the Mole-Stars 4-0. The Old Timers III split with the Black Birds, dropping 2 points behind the leaders. The Fire Dept. picked up four on a forfeit by the Reefers. The Electrons certainly didn't like the cellar, so they got together and gave back the Old Timers their lease back by beating them 3-1.

PURPLE LEAGUE

The Designers increased their lead to five points by taking four points from the Dirty Birds, who just could not get the pins to fall for them. Designer J. Roecklein had 205-570, E. Sperry 197-548, and J. Cuccia 174. The Dirty Bird's G. Kuzmack had 188-513, and A. Dick had 161.

THE SHOW WILL GO ON

JANUARY 26, 27, AND 28



Scenes from DETECTIVE STORY

Snow or no snow, DETECTIVE STORY will hit the boards Thursday night, January 26, as scheduled. The intrepid cast and make-up artists spent from 5-to 11 p.m. last Sunday night doing the technical rehearsal. Two dress rehearsals on Monday and Tuesday nights will polish things up in readiness for the public.

Space does not permit acknowledgement of all the people who have generously given whatever time and effort they could spare to help ready this production. Thanks to all who have given a push in the right direction from the director, Joe Jach, the stage manager-performer-assistant director, Pat Towey, production manager John Gorr, wardrobe-make-up-sound effects mistress Bert Kugleman, and twenty eight cast members.

This is an exciting play. Don't miss it. Give your family and friends a chance to see it on any of three nights, January 26, 27, and 28.

Tickets cost \$1.00 each. There are ticket-sellers in all departments, or buy yours at the door.

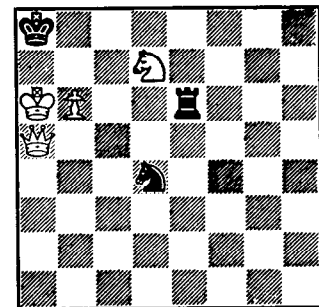
Fiscal, with only 3 men, lost 3 points to the Bowl Aids, who were quick to jump on it. Jumping for the Bowl Aids were V. Celentano 186-428, E. Walsh 192-468. Fiscal had H. Bohn with 194-501.

The Woodbutchers, after spotting the Hopefuls 107 pins per game, went right out and turned up the boards to take 4 points. The hot Woodbutchers were F. Lewis 179, J. Seitz 171, W. Ruppert 169-491, A. Benson 206-529, W. Milian 189-518. The best Hopeful was K. Thomson 180.

The Phoubars finally got out of their slump to take 3 points from the slipping Scotches. Leading the way for the Phoubars were R. Caiazza 203-500, D. Vogt 190-502, R. Brown 188-504. For the Scotches P. Reamy had 200-500, J. Nocar 177, and B. Galen 159.

CHESS PROBLEM

White to play and mate in two moves. Answer elsewhere in this week's BULLETIN BOARD.



DISCOUNT TICKETS

Discount tickets to the Marine Recreation Show, February 4-13, at the Island Garden in West Hempstead are available at the Personnel Office, 58 Brookhaven Avenue.

The BNL Chess Club meets every Tuesday at the Recreation Building on site at 7:30 p.m. All are welcome.

JANUARY PICNIC

First Hurricane Brenda, and then last Thursday's snow storm tried to extinguish the spirit of the committee of Operation Get-Together. Both met with failure as our diehard group went right ahead with their plans to get an early start this year. Seventeen braved the weather to attend this meeting which highlighted an outdoor barbeque and appointments of two preliminary committees.

BERA DANCE

Music, entertainment, refreshments, decorations, give-aways, dancing, and fun for all is guaranteed at our semi-annual BERA Dance, Friday, February 10, from 9 p.m. to 1:30 a.m. in the Gymnasium.

Work will begin the week of the 6th to transform the Gym into a Valentine Ballroom. Committee leaders D. David, G. Moore, C. Spirio, G. Friedman, and M. Clasen will be on hand to direct the proceedings. If you'd like to lend a hand call G. Sabine on Ext. 391.

Get your date now for an evening of music by the "Starlighters"!

"PEPE" DISCOUNT EXTENDED

The discount coupons for Pepe, available at the Personnel Office, 58 Brookhaven Avenue, have been extended and will be honored for any Sunday through Thursday evening performance for the remainder of January and all of February except February 12 and 21.

ANSWER TO CHESS PROBLEM

WHITE

Queen to King 5

DO YOU HAVE A MEDICAL INSURANCE CLAIM?

To expedite the handling of your claim, before submitting bills to Personnel Services, please be sure that all bills state the date the expense was incurred, and the treatment received. All bills for drug prescriptions must show the date, prescription number as well as the amount. Unless we have the above information, bills cannot be accepted for payment.

THEATRE GROUP NOTICE

There will be a reading of J.B. (again) at the home of Cliff and Barbara Swartz in Old Field on Wednesday, January 25 at 8:30 p.m. for directions call Cliff, Ext. 600.

CLASSIFIED ADS**FOR SALE**

1951 OLDS 88 - 2 good tires. \$50. Moose Milau, Ext. 2205.

1952 DODGE PICKUP TRUCK - ½ ton. Good running condition. \$200. F. Rumph, Ext. 2221.

1955 CHEVROLET 210 - 4 door sedan, 2 tone, heater and new radio, snow tires, new brakes, new seat covers. Quick starting, uses no oil, owner leaving the country; asking \$500. Call Ext. 634 or 749.

1954 OLDSMOBILE SUPER 88 - 4 door black, new carburetor, new hydromatic, r&h, white-walls, wall to wall broadloom, very clean. \$300. Bill Walsh, Ext. 322.

1960 FORD FAIRLANE 500 - Town Sedan, 4 dr., r&h, 6cyl. std. trans. \$1,760. J. Jost, Ext. 363.

RANCH HOUSE - Oakdale, 6 room, 3 bedrooms, full basement, storm doors, screens, Venetian blinds, other extras. \$13,990. Take over existing \$11,500 F.H.A. 27 year 5¼% mortgage. Call Ext. 2259 or SA 4-4497.

RANCH HOUSE - 3 bedrooms, jalousy windows in front, storm windows, breezeway. 1½ car garage, 95X100 ft. plot fully landscaped, two blocks off new Sunrise Highway, Bellport. Call after 6:00 AT 6-9112.

SPLIT LEVEL HOUSE - On beautiful wooded ½ acre lot. 3 bedrooms, 1½ baths, large living room, 26 foot playroom, fireplace, private beach rights, dishwasher, storms and screens. \$18,500. Ext. 465 or SH 4-9877 evenings.

MARINE RADIOTELEPHONE - Used, Ensign, 30 watt, 4 channel, FCC type approved, with 18 foot antenna \$80. J. Jost, Ext. 363.

LIVINGROOM SET - 3 pc. includes 2 sectional couches and platform rocker, all with new slipcovers \$70. Youth Maple desk with chair-like new \$10. Call evenings after 5:30 BE 7-0256J.

BROADLOOM RUG - Blue-gray, with underpad, 9X12. Reasonable. Ext. 637 or BA 8-2974.

DINING ROOM SET - 3 piece Walnut, large table with leaves, 6 chairs, upholstered seats. Buffet and server, fair condition \$25. 2 piece Modern Gray Lined Oak dining room set. China closet, table with leaves and 6 chairs, good condition. Cost \$167, will sell for \$90. Ext. 2255.

REFRIGERATOR - Hotpoint 6 cu. ft. excellent cond. Atlantic 6-8206.

ENCYCLOPEDIA - 21 Volume "The Illustrated Encyclopedia of Knowledge" for older children and adults. 1955-57 deluxe edition plus '57 and '58 year books. \$25. Borg, Ext. 301-7.

18 FOOT CAPE COD KNOCKABOUT - Damaged in hurricane Donna. Fine chance for someone handy with tools to get a good boat cheap. H. Kuper, Ext. 428.

LAWN ROLLER - Large size in very good condition. \$10. Call JUniper 1-3319.

MATTRESS - for Roll-Away-Bed. Cost \$19. Used twice, asking \$10. One folding bridge chair, plastic covered gold-beige, practically new, asking \$4. Atlantic 6-9357 after 5 p.m.

GOLF CLUBS - "Wilson," 6 irons, 3 woods, 1 bag. H. Vanderloef, Ext. 392 or Wading River 9-4151. \$30.

RCA RECORD PLAYER - 3-speed automatic. Purohit, Ext. 710 evenings, or Ext. 581 during day.

PING PONG TABLE - ¾-in. plywood top. \$10. R. Chase, Ext. 542.

STERO AMPLIFIER - Acro Sound Dual 20 Watt. Ext. 423.

MEN'S HOCKEY SKATES - Size 12, used one season \$8. R. Ince, Ext. 2295.

FREEZER - 17 cu. ft. Revco chest type freezer, like new, \$285. Also 7 cu. ft. Gibson Refrigerator, excellent mech. cond. Needs refinishing on outside. \$20. GRover 5-3632.

12 FT. RUNABOUT WITH CENTER DECK - 1956 7½ h.p. Evinrude motor, reconditioned last spring. Trailer for 12 to 14 ft. boat. All for \$250. GRover 5-3632.

IGNITION ANALYZER - Check faulty ignition systems with ignition analyzer. Model 1A-1. Will sacrifice below kit price. Call R. Perry, Ext. 2212.

CORNER CABINET and Altex 15-in. co-axial speaker. Cost \$300. Make offer. Buescher corner with mouthpiece and case. \$18. Ext. 301-45.

CAR POOLS

Driver wanted for existing all driver car pool from Sayville-West Sayville area. Call J. Daane, Ext. 779.

WANTED

3 H.P. JOHNSON OR EVINRUDE - 2 or 3 years old. Ext. 2381.

USED TV SET - 17 in. or larger. Ext. 2460, evenings Ext. 703.

FOR RENT

3 ROOM BUNGALOW - Hot water heated, location Mastic Beach, near stores. AT 1-8344.

DUPLEX APARTMENT - split ranch (built 1959), Patchogue vill., 2 bedrms with 1g. closets, 1g. family rm., 2 baths, util. rm., liv. rm. adjoining modern kitchen and dinette; zone heating; entrances front and rear; priv. car parking area, large rear rec. area; close to stores. AT 1-9418.

APARTMENT - 3½ rms., in Patchogue, available from early March - early July. Ext. 616 or AT 9-0714.

LOST AND FOUND

FOUND - leather eye glass case.

FOUND - navy blue wool scarf.

FOUND - brown wallet in parking lot of Research Staff Building, January 10, 1961.

LOST - gloves. Pair white, fur-lined gloves in Cafeteria. June Fowler, Ext. 2293.

LOST - stainless steel penknife. E. J. Tuthill, Ext. 2387.