

# *The* O B S E R V E R



**FIGURE 18.** *The 12-foot precision paraboloid that has the same f/d ratio as the reflectors of the 85-foot and 140-foot telescopes.*

## 12-Foot Telescope

In the past history of radioastronomy different types of programs have been done on the atmosphere. In fact, radioastronomy itself was discovered by Karl G. Jansky making studies of the atmospheric effects on radio waves back in 1932. Now Dr. Torleiv Orhaug, in the first real

study, is looking for short term fluctuation in the atmosphere and what effect this will have on other observations made here at Green Bank. For his studies he is using the old 3-cm receiver that was first used to do initial observations at the 85-foot telescope. Vastly over-  
(continued on p.2)

hauled by our Electronics Department, this microwave receiver is best for his programs. He is also using the 85-foot telescope and the 10-cm receiver to further his work. First results from his studies show that approximately 20% of total observation time is lost or is made worse by atmospheric absorption. This effect decreases as frequency decreases, as was expected.

A 20-foot scope is on order and will be erected early in June near the Mary Beard House. A 6-cm receiver is being designed by Dr. Orhaug to work with the new telescope in continuing his work. The scope will be a North-South steerable type dish, with some East-West movement, similar to the 40-foot.

(OB)

#### NEW EMPLOYEES

Mr. Bob King, of Beckley, has been employed as a draftsman in the Scientific Services Department. Mr. King's wife will join him at Green Bank in June.

During the past month two telescope operators have been added to that group; Mr. Richard Bird, of Montgomery, West Virginia, who is living at Minnehaha Springs, and Mr. Leonard Howell, who is currently living at Cheat Bridge.

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An empty brain and a tattling tongue are very apt to go together; the most silly and trivial items of news or scandal fill the former and are retailed by the latter.

#### SPRING

If spring came but once in a century, instead of once a year, or burst forth with the sound of an earthquake, and not in silence, what wonder and expectation there would be in all hearts to behold the miraculous change! But now the silent succession suggests nothing but necessity. To most men only the cessation of the miracle would be miraculous, and the perpetual exercise of God's power seems less wonderful than its withdrawal would be.

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Mr. and Mrs. Ed Wilson were visiting friends in Keyser, W. Va. one day last week.

Mr. and Mrs. Bob Elliott spent a week during March in Apopka, Florida with their son Jim and family.

Dr. Findlay went to the University of South Carolina, at Columbia, on April 4 to give three lectures. Dr. Findlay is a Visiting Professor for the American Astronomical Society.

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Kindness is a language the dumb can speak, and the deaf can hear and understand

Good intentions are very mortal and perishable things; like very mellow and choice fruit they are difficult to keep.

CCIR STUDY GROUP IV VISITS NRAO

On March 16 and 17 the Observatory was host to 20 members of the CCIR Study Group IV (Consultation Committee on International Radio). On Friday evening after dinner in the cafeteria, Drs. Findlay and Drake talked to them about the Observatory and its scientific programs.

Saturday morning the group was given a tour of the facilities, and staff members acted as guides through each of their departments. At 12:30 they departed for Williamsburg, Virginia to rejoin other members of their group.

They expressed their thanks and were delighted with the congeniality of the personnel of the Observatory, and particularly emphasised the point that our Observatory was one of the finest examples of basic research they had ever seen. (WO)

DR. ORHAUG TO LECTURE

Dr. Orhaug will lecture to the Department of Electrical Engineering and Graduate School of the Ohio State University, Columbus, Ohio, on April 5. His subject will be "Some Aspects of Highly Sensitive Radiometry".

FORMER STUDENT-EMPLOYEE RECEIVES N.S.F. GRADUATE FELLOWSHIP

Lewis Detch, a Junior at William and Marys College, Williamsburg, Virginia, and whose home is at Lewisburg, has been awarded a National Science Foundation Graduate Fellowship in Physics for 1962-63 to Stanford University, Stanford, Calif. Lewis spent two summers at NRAO.

DRIVE PACKAGE FOR THE 300-FOOT TELESCOPE COMPLETED AND SHIPPED

Mr. Greenwood and Mr. Faelten were at the Link-Belt Company in Philadelphia on March 28 for inspection of the drive package before shipment to Green Bank. The drive is being shipped by truck, and will arrive at the Observatory the latter part of this week.

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Quote from Algebra for Beginners by I. Todhamter, published 1863.

"The student will find the only difficulty in solving a problem consists in translating statements expressed in ordinary language into Algebraical language; and he should not be discouraged if he is sometimes a little preplexed since nothing but practice can give him readiness and certainty in this process."

(This book was bought secondhand by Joan Crampin's grandfather for a cost of about 3-cents.)

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Mr. Ellis Remsberg, a freshman at VPI, came to the Observatory on March 26 for his first quarter with us under the Observatory's Co-operative Student Program with Virginia Polytechnic Institute, Blacksburg, and is under Dr. Wade's supervision.

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Birthdays this Month:

April 8 - Bobby Vance  
17 - Isabelle Michael  
17 - Hein Hvatum

LOCAL VOLUNTEER FIRE COMPANY'S  
ANNUAL SUPPER

The annual oyster and ham supper sponsored by the Bartow-Frank-Durbin Volunteer Fire Company will be held on Saturday, April 7, from 5:00 to 7:00 P.M. in the Durbin Graded School. Price is \$1.00 for adults and 50¢ for children under 12 years of age.

In addition to giving free fire protection to this area, the Fire Company also has free ambulance service for the Towns of Green Bank, Arbovale, Dunmore, Cass, Bartow, Frank and Durbin.

If you would like to make a donation to the Volunteer Fire Company, see Virginia Irvine.

DR. DENISSE VISITS

Dr. J. F. Denisse, of the Meudon Observatory, Meudon, France, visited the Observatory with the CCIR Study Group IV on March 16-17, and remained here until March 19 visiting Marc Vinokur and other staff members.

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INCOME TAX DEADLINE -- MIDNIGHT,  
MONDAY, APRIL 16.

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Jerry Shears bought a "Trailester" motor-scooter, manufactured by the Cushman Motor Company, to ride to and from work. Jerry estimates that he saves 363 steps each trip he makes to the cafeteria on his "scooter", and he can travel 20 mph, top speed.

STYLE SHOW IN MARLINTON

The Marlinton Junior Homemakers Club is sponsoring a fashion and style show at 7:30 p.m. April 9, in the Marlinton High School Auditorium.

Coats and suits made by the Advanced Sewing Classes at Green Bank, Hillsboro, and Marlinton will be modeled. These classes are being taught by the Pocahontas County Home Demonstration Agent. Ready-to-wear clothing for the whole family will also be modeled.

Drawings for prizes and gifts donated by Marlinton merchants will be made during the show.

----- Admission 50¢ -----

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I REMEMBER MAMA

Junior Class Play, April 6,  
Marlinton High School Auditorium 8:00

Price 50¢

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The Recreation Club now has 91 members.

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Mr. Plunkett and family visited in Buchannon, West Virginia, over the weekend.

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Virginia Irvine and Lillian Ness visited Margaret Irvine in Lewisburg on Saturday, March 31, and had lunch at the Greenbrier in White Sulphur Springs.

Joan Crampin went to New York on March 30 for a few days. While there she will attend a meeting of the Astronomical Society and do some sight-seeing in the City.

#### LAB GAB (DRoss)

Those attending the IRE Convention in New York from the Lab were Bill Kuhlken, Warren Wooddell, Carl Davis, Ruben Dugatkin, Amelio Filloy, Marc Vinokur and Hein Hvatum.

John Parker and George Grove attended a Teletype School in Chicago recently. A "Board of Inquiry" is being set up to investigate the reason they refused to take Hein Hvatum's key to the "Playboy Club".

Allen Roth has returned to Georgia Tech and Joe Carter has arrived here for their alternate periods at the Observatory.

Everyone at NRAO had the pleasure (?) of seeing Alan Roth's mongoose. While Marvin Wimer worried about how to catch it, everyone else worried about how to get away from it. Candid Camera was never like this.

The big Q U E S T I O N around the Lab is why "Turkey" has such a sheepish grin?????????

To buy sporting goods wholesale through the NRAORA, see Ted Riffe for catalogs.

Mike Waslo was in Washington, D. C. March 18-23 visiting with R. L. Haskins on F.C.C. matters.

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An Income Tax Form is like a laundry list -- either way you lose your shirt. (Fred Allen)

#### OBSERVATORY WIVES (Rose Bowyer)

The last get-together of the Observatory Wives was on March 14. As usual everything was very informal, except for the table, which was set very appropriately for Saint Patrick's Day. Hostesses were Mrs. Fred Crews and Mrs. Delbert Cassell.

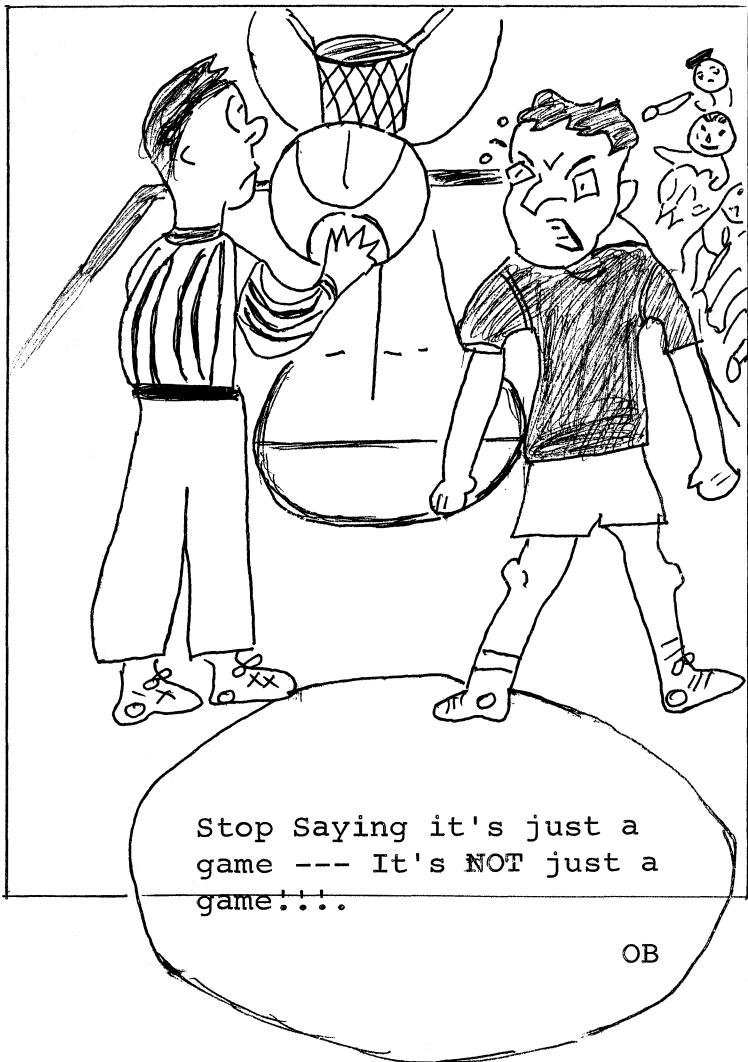
The next meeting will be Wednesday, April 11. Hostesses will be Mrs. Carl Davis and Mrs. Arnold Davidson. This meeting will be at night, 7:30, so that all working women of the Observatory may attend.

There has been a rumor that all women are expected to make and model an Easter hat. So, ladies get out those pots and pans, dishtowels, etc. and start designing. There may be a prize for the "loveliest" hat.

#### TAXES

The taxes are indeed very heavy, and if those laid by the government were the only ones we had to pay, we might more easily discharge them; but we have many others, and much more grievous to some of us. We are taxed twice as much by our idleness, three times as much by our pride, and four times as much by our folly; and from these taxes the commissioners cannot ease or deliver us by allowing an abatement. (Franklin)

As the general rule in constitutional states liberty is a compensation for the heaviness of taxation, and in despotic states the equivalent for liberty is the lightness of taxation. (Montesquieu)



title. The game was well played, well called and enjoyed by fans and players.

The consolation playoff for third and fourth place standings in the tournament was the Red Raiders and the Blue Devils. The Blue Devils failed in a primitive attempt and were washed out by the Red Raiders 56? 40 .

Better than average sportsmanship was shown throughout the season by all players and referees, with exceptional sportsmanship shown, to mention a few, by Fred Crews, Arnold Davidson, Jim Oliver, Wally Oerf, Troy Henderson and Odell Johnston, players.

The gross profit from ticket sales of \$40.00 will be given to the Cass School General Fund in appreciation of their cooperation and the use of the gym and facilities. Special thanks to Mr. Ruckman and Ben Jackson of the Cass School for their courtesies and cooperation during the season are given by the NRAORA members.

Tournament Standings

- #1 - Brown Bombers - A. Davidson
- #2 - Green Hornets - J. Shears
- #3 - Red Raiders - C. Davis
- #4 - Blue Devils - T. Carpenter

Season Standings

Team	W	L	Pct.	Pt.	Pa
Davis	6	3	666	480	410
Davidson	5	4	555	511	416
Shears	4	5	444	405	528
Carpenter	3	6	333	437	479

BASKETBALL SEASON ENDS  
BROWN BOMBERS VICTORIOUS

The 1962 NRAORA Basketball Season came to an exciting end Saturday night, March 31 with the Brown Bombers winning in an overtime game, over the Green Hornets 53-48. The Green Hornets picked up the lead for the first time in the 4th quarter and held this until Brooks tied the score 48-48, with two foul shots off Shears and only ten seconds left to play. In the overtime play, Davidson scored 4 points, Gumm scored 1 point to capture the NRAORA Triple-A

NRAORA Report

On Monday, April 2 the budget for the NRAORA recreational facilities was presented to the Director of the Observatory for his approval. The following items were approved to be constructed or developed as soon as possible;

2 tennis courts, outdoor basketball and volleyball court, children's playground and equipment, 3 pool tables, golf driving range and equipment, softball and touch football field and miscellaneous equipment for the above activities.

The funds for the above facilities have been provided by the NRAO as a part of the overall employees' recreation program. Funds for the operation of the activities will be provided by the NRAORA membership dues.

Dr. J. W. Findlay has been named by the Director to co-ordinate and approve the design layout and engineering for the facilities. Plans for the tennis courts, ball courts and golf range have been submitted to Dr. Findlay and he has approved the detail plans for the golf range, and the equipment and material for its operation have been ordered.

The development of all the NRAORA outdoor activities will be on the old Hannah farm. With the vast amount of level acreage in this area the NRAORA should be able to develop many diversified activities in the future.

Two additional pool tables have been purchased and are being set up in the basement of the Residence Hall. These tables are in excellent shape and all the "Hustlers" at the NRAO should enjoy a fast game of eight balls on them. Likewise, all the "eight-balls" at NRAO should enjoy a good game of hustler on them.

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We need items of interest for this paper -- especially at the Works Area. Please let Phyllis have anything you believe to be of interest to your fellow-employees.

If you have anything to sell, or rent we will be glad to put it in. Or if there is any community activities that you would like publicize, we will be glad to do it also.

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Mr. Gene Halik, of the New York office, is visiting the Observatory this week.

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