

The OBSERVER

40-FOOT TELESCOPE (OBowyer)

For the past few months several employees at the Observatory have been actively engaged in the automation of the 40' telescope and associated receivers and equipment for the purpose of providing an instrument that could be used to make observations of the same radio sources day in and day out for perhaps a period of 3-5 years. These series of observations are the interest of Dr. Heeschen.

The system is designed to observe at 750 mc and 1400 mc simultaneously. Two standard NRAO receivers are used with a Jasik feed.

Most of the control equipment has been designed and built at NRAO because of the need for specific items which are not stock items in the electronics industry.

One of the chief criteria for the system is reliability, since the telescope will be unattended. Every attempt has been made to make the system as reliable as possible, but how well this has been done remains to be seen.

The control system is the brain of the operation. It does the following things:

1. Positions the telescope in the sky at appropriate times.
2. Initiates the beginning of an observation.
3. Times the complete observation to the nearest second and signals that the observation has ended.

4. Selects and identifies data to be punched and printed on tape-the day, the time, the telescope position and the receiver outputs.

5. Initiates receiver calibrations at appropriate times.

At the present time the telescope is operating automatically in order to determine necessary preliminary checks.

The writer would like to take this opportunity to thank all those people who have been instrumental in preparing this instrument for operation. We have asked for and received cooperation and help from every group on the site -- so pat yourselves on the cheek everyone, but keep in mind -- there's more to come.

Telescope Operators Dinner

Friday, February 16, 6:30 pm

The telescope operators met in the cafeteria for a very dry, stag, chicken dinner. Speakers were Billy "Rusty" Meredith - subject not worth mentioning; Omar "Bo-Coo" Bowyer - My Adventures as a Lover; Bob Viers gave everyone a haircut and manicure; George Grove demonstrated a method of viewing Channel 6 and Channel 10 commercials at the same time; Troy Henderson demonstrated his famous wing shot (chicken that is); Bob Vance explained how to get maximum enjoyment from a smelly cigar; Arnold Davidson explained how to

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go to pot (with epoxy, that is); Howard Brown demonstrated how to use a hunting bow for wife beating purposes, and Fred Crews ate his chicken, whether he liked it or not.

Lab technicians John Hensley and Frank Perry, led by Bill Kuhlken, and telescope operators Howard Brown and Bob Vance, led by Fred Crews, and Maxie Gumm and Tom Carpenter, have just finished installing the 10-cm receiver at the 85-foot scope. This receiver was built at the Ewen-Knight Corporation to AUI's specification. The 10-cm receiver has made one other grand appearance last year at the 85-foot with very pleasing and astonishing results. Now with improved modifications and greater interest, "things are looking up for the 10-cm".

A standard NRAO built 750 mc receiver will also work along side the 10-cm for probably the next year.

Sidney Smith is now working three days a week with Stone & Webster Engineering Company in Boston, Mass., and two days a week at Green Bank. His work in Boston with Stone & Webster is connected with the 140-foot telescope.

Merritt Gum and Richard Hiner will attend the Southern Conference Tournament at Richmond, Virginia March 1, 2, and 3.

Ralph Perry received word on Monday, February 26, of the death of his sister and brother-in-law of Ronceverte, W. Va.

Latest report on Dr. Struve was that he was in Fort Worth, Texas, and getting along fine.

Mr. Ed Faelten visited the Observatory on February 27. He brought with him design drawings of the surface panels for the 300-foot telescope.

New Employees

Julian M. Hamed, of Green Bank, came to work on February 5 as Designer.

Lyndell Brooks joined the Engineering Department as Junior Engineer on February 6.

John Rader, of Coca, Florida, has joined the technicians in the lab. Mr. Rader has moved his wife and daughter to Cass from Florida. He is working on the 300-foot drive and positioning systems.

John Hensley, also of Coca, Fla., came to work as a technician on February 12. He has moved his family to Green Bank, and is working with 10-cm receiver.

The Observatory now has 115 employees, both on permanent and temporary basis.

Lab Gab by D. Ross

Mr. D. Cartwright of CSIRO, Camden, Australia, visited D. Ross on February 20 to discuss a VLF experiment to be done in conjunction with the "Whistler" experiment.

Dr. Orhaug is traveling in England, France, Norway and Sweden on Observatory business. He will return to the US on March 17.

Ed Gardner spent several days the first of February inspecting surplus equipment in Illinois, Michigan, and West Virginia.

M. Waslo and T. Zatta attended a Bivens & Caldwell Seminar on Microwave Measurements at High Point, North Carolina last week. Their wives accompanied them to High Point.

Mrs. Irene Varner would like baby-sitting and general house work. Phone 456-4455.

For Sale:

Good 1953 GMC Dump Truck. See John Matheny at Works Area.

Cliff McLaughlin has some good used Christmas trees for sale and it is only 299 days until Christmas.

Dr. and Mrs. Heeschen announce the birth of a son on February 1. This is their third child and has been named Richard Mark.

Undergraduate Research Participation Program

This year, as in the past three years, the National Science Foundation is sponsoring an Undergraduate Research Participation Program (UGRPP) at the Observatory. Dr. Findlay has been chosen Director of the Program, and notices have been mailed to over 70 colleges and universities asking for applications from students majoring in either astronomy, physics or electrical engineering. From the applications received, eight students will be selected for this program, which begins June 11 and ends August 25. The students will assist staff scientists in various projects, learn to program the IBM 1620 computer, and attend a series of lectures given by staff scientists.

Green Bank High School Basketball

At the Sectional Tournament on February 23, at Hillsboro, Green Bank won over Hillsboro with a score of 58 to 50. Being the winner of the Sectional Tournament Green Bank will play at Hinton in the Region 5 Tournament Friday, March 2, 7:00 am. The same night at Hinton, Ronceverte will play Rainelle, and the winners of these two games will play at Hinton on Saturday, March 3, in the Greenbrier Championship game.

If you see a red or white flash go by, don't be alarmed - it's either B. Nottingham or C. StClair. They have both traded cars in the last month - just call them Astronaut and Kilowatt.

(RHiner)

Better Viewing of Channel 5 TV

On Monday, February 5, Mr. McEwuen, Mr. Yerkey and Mr. Sayre, engineers of Weston Channel 5 TV visited M. Waslo at the Observatory. Mike gave them the grand tour, ending with a visit through the lab and a session with Dr. Hvatum.

Dr. Hvatum made the observation to them that the ghosts seen on channel 5 TV were not reflected signals, but true transmissions due to some mismatch or ringing effect within the transmitting equipment. Mike investigated this further, noting that ghosts exist on TV sets in Weston, Clarksburg, Sutton, and Elkins - anywhere you view channel 5.

This problem was investigated by these engineers while at Green Bank, and other areas on their return to Weston. They informed Mike that Dr. Hvatum was absolutely right in his observation, and they have started trouble-shooting their equipment to eliminate these ghosts, which means better TV viewing in the near future. (MW)

In a conversation about the NRAORA basketball games, Brown Cassell was heard to remark, "Well, when we start to play softball at least we will have a club in our hands." (These games must be getting rough.)

The telephone company is installing four key systems in the Laboratory building.

Farewell Dinner for Dr. Struve

February 11. A dinner was arranged by the scientific staff for Dr. Struve just before his departure to California.

Unfortunately at the last minute Dr. Struve was unable to attend due to illness. The dinner, prepared and served by the wives, was delicious and included many interesting dishes. During the course of the evening a letter was prepared to be sent to Dr. Struve regretting his absence at the dinner, and wishing him every success in his new post.

Guests included Dr. Robertson, of NSF, Dr. Heeschen, Dr. and Mrs. Wade, Dr. and Mrs. Drake, Dr. and Mrs. Orhaug, Dr. and Mrs. Hvatum, Dr. and Mrs. Hogg, Dr. Vinokur, Mr. Waltman, Miss Ness and Miss Crampin. (JC)

"The Searchers", the orchestra that provided music for our NRAORA Dance, signed a recording contract with the Mt. Vernon Record Company, Roanoke, Va. Carolyn StClair (Mr. Plunkett's secretary) is vocalist with this orchestra.

They have been organized since 1956, with Blair Smith as their leader on the saxophone, Rupert Howard, electric guitar, "Cork" Burnette, base, Stanley Walker, drums, Les King, electric piano, and Carolyn StClair, vocalist.

They will be delighted to provide entertainment for any social at anytime a suitable date can be fixed. You may see Carolyn for more information.

NRAORA Basketball Standings at
2/28/62

<u>Team</u>	<u>W</u>	<u>L</u>	<u>Pct</u>	<u>Pf</u>	<u>Pa</u>
Davis	5	1	833	315	235
Carpenter	3	3	500	290	294
Davidson	2	4	333	303	297
Shears	2	4	333	256	338

Scoring Leaders

	<u>GMS</u>	<u>Pts.</u>	<u>Avg.</u>
Brooks	4	118	29
Cassell	4	104	26
Carpenter	6	136	23
Ralston	5	82	16
Shears	6	81	13
Davidson	6	74	12
Oref	6	65	11
Oliver	6	63	10
Simmons	6	56	9
Crews	6	53	9

BASKETBALL GAME TONIGHT

Observatory All-Stars will play the Cass Independents at 7:30 in the Cass Gym.

This is the first time the All-Stars have gone "professional".

LAST LAUGHS

A minister phoned his city's board of health to ask that a dead mule be removed from the front of his home. The smart-aleck young clerk who answered said, "I thought you preachers took care of the dead."

"We do," said the preacher, "but first we get in touch with the relatives."

A telephone operator says she overheard the following conversation:

"Hello, that you, Bill?"

"Yes, this is Bill."

"It doesn't sound like Bill."

"Yes, this is Bill speaking."

"Are you sure this is Bill?"

"YES, this is Bill."

"Well, listen, Bill, this is George. Lend me \$50."

"All right, I'll tell Bill when he comes in."

An insurance agent made an appointment with a businesswoman to go to her home and talk policies.

"You may find me in a dilemma," she warned him.

"Oh, that's all right," he assured her, "my last prospect was in a kimono."