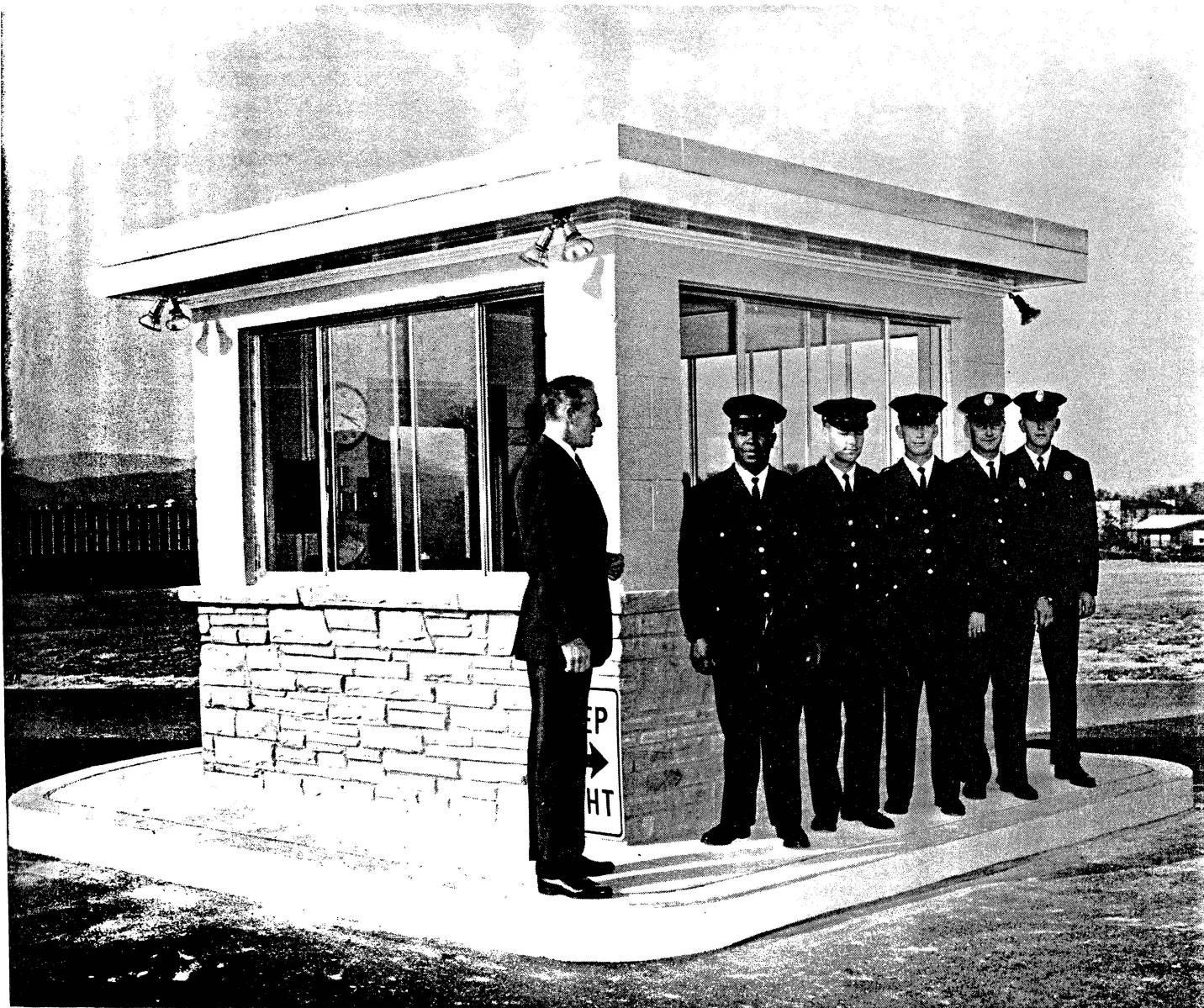


# The O B S E R V E R

Vol. 4, No. 1

October 31, 1963



## THE GUARDS

Left to right: Paul Devlin, Ether Tyson, Jim Hevener, Chester Cassell,  
Jim Ryder, Ben Gragg.

Observer Editor:  
Peter B. Good

Cub Reporters for Month of October:

Bill Kuhlken  
Marvin Wimer  
Dick Hiner  
Beaty Sheets  
Harry Wooddell

Linda Mullenax  
Howard Lambert  
Norma Simmons  
Bob Vance  
Tony Miano

Articles and Stories Submitted by:

Bob Burns  
Marvin DeJong  
Paul Devlin

Carolyn Dunkle  
Nigel Keen  
Edward Wilson

Miss Ness

Typist: Norma Simmons

Photographer: Gene Crist

Printing and Assembly - Vincent Scott and Dept.

Published Monthly by the Employees of the NRAO

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The NRAO Guards  
by  
Paul Devlin

Paul Devlin - Supervisor of Plant Security  
Jimmie Hevener - Guard  
Jimmie Ryder - Guard  
Ben Gragg - Guard  
Ether Tyson - Guard  
Chester Cassell - Guard

The Green Bank Observatory represents a U. S. Government investment of many millions of dollars. Associated Universities, Inc., as custodian of this investment, has an obligation to protect it at all times from theft and damage. This responsibility continues 24 hours a day, and it is the purpose of the NRAO guard service to carry out this responsibility night and day, seven days a week. They must protect the Observatory from theft by trespassers, fires and other types of emergencies.

The guards will also serve to expedite delivery of materials coming in from outside sources, and also to assist the various businessmen to get in contact with the proper party at the Observatory. Another function will be to assist tourists and casual visitors with parking, and to control the flow of traffic on and around the site.

The guards will act as a communications center, receiving calls from people who are in trouble and having problems, and to contact the proper persons who can help solve them. Another substantial part of their duties will be to handle tourists during the summer and other visitors attending lectures or special tours, and to discuss intelligently any arrangements for special groups, meetings, tours, lectures, classes, etc.

After an extensive training course in fire, safety, first aid ambulance, security, the proper use and handling of the resuscitator oxygen unit, the guards were taken to Washington, D. C. for purchasing and fitting of uniforms.

#### EDITORIAL

This is my first month as the Observer's editor. As the editor, it is my responsibility to collect, scrape, assemble, pull, twist, and find the news wherever it may be, never to be heard from unless someone uncovers it from hiding. Now, after, my first edition, I realize why the Observer has had so many editors and acting editors. It's a darn rough job trying to squirm news from the different cub reporters around the site. There is news happening all of the time, not only in the world, but also here at the NRAO. Therefore, it is the responsibility of all employees, that if they should hear or see anything newsworthy, a note of it should be submitted to their sectional reporters, who in turn should hand such items over to me. Even if you have an auto, rifle, or a dishwasher to sell, I would like it to appear in each edition. Perhaps, John Smith went fishing in Canada last week and caught nothing, or Bill Jones shot a rabbit with a bow and arrow; this is news and should therefore be printed. You may have a story or a poem that you have written, then that too should be submitted. You'd be surprised how little "unimportant" news items makes for darn interesting reading.

So, you see, it's not an easy job. Once the news is gathered, it has to then be typed, printed, and finally assembled. From beginning to end, from reporter to assembly, it takes many people each contributing their free time so that your Observer can reach you each month. It's up to you, you, and yes, even you to help in any way you can.

To help expedite matters, send all news in by the 20th or 21st of each month to the 140' project mailbox in the Jansky Lab.

Peter B. Good,  
Editor

#### ABOUT TOWN, Nigel Keen

Due to a breakdown in the delivery truck, the lunchtime menu at the cafeteria reads as follows:

Monday:	Filet Mignon and French Fries
Tuesday:	Filet Mignon and French Fries
Wednesday:	Same
Thursday:	Same
Friday:	Same
Saturday:	Same
Sunday:	H E L P!!!!

The moral of this story is: variety is the spice of life, even in Green Bank.

There is no truth in the report that-----

- (a) That free wine is being served in the cafeteria.
- (b) That Elizabeth Taylor has accepted a position as the Editor's secretary.
- (c) That there will be a changing of the guard at the new sentry box.
- (d) That this columnist has given up drinking.
- (e) That the 140' telescope will be ready for use next week.

#### For Sale

One virgin interferometer (without second dish) but with numerous concrete posts and extensive stretch of road ideal for testing sports cars.

We are grateful for the new asphalt playground, but would prefer that the nets be removed, since it hampers our dancing classes.

NOW AND THEN, Carolyn Dunkle

Recently the U. S. nuclear subs have had more than their share of hardships. But our forefathers didn't have it so easy either. Here is a comparison of what Columbus and his crew had to eat on that first perilous voyage and what our sailors eat on modern nuclear subs.

Nina, Pinta, Santa Maria

Salt fish - 12 oz. -- Alternates were: salt pork, salt fish, salt beef.

Dried beans and peas - 4.3 oz. -- Alternate was: Cheese - 2 oz.

Biscuit - 24 oz.

Vinegar, oil, garlic

Wine - 4 cups

Rations were issued daily. Each crewman took his own food to the cook for one hot meal served each day. Balance of ration was eaten as desired. Vinegar was issued at the rate of 3.2 cups per person per week and oil was issued at the rate of 1 cup per person per week.

U.S.S. Skate

Monday Chilled fruit juice  
 Break- Chilled fresh fruit  
 fast Minced beef on toast  
 Hash brown potatoes  
 Grilled pork sausage  
 Assorted cereal  
 Fresh milk  
 Toast, jam, and coffee

Monday Barbecued pork loins  
 Dinner Barbecue sauce  
 Parsleyed potatoes  
 Buttered peas  
 Salad w/dressing  
 Chocolate cake  
 Bread, mild, and coffee

Monday Breaded veal cutlets  
 Supper Tomato gravy  
 Mashed potatoes  
 Steamed spinach w/eggs  
 Salad w/dressing  
 Fruit jello w/cookies  
 Bread, milk, and coffee

Sunday Filet mignon  
 Supper French fried onion rings  
 Stuffed baked potatoes  
 Buttered succotash  
 Salad w/dressing  
 Strawberry shortcake w/cream  
 Bread, milk, and coffee

Makes you want to join the Navy?????????????

NEW BOOKS IN LIBRARY

- "The Expanding Universe", Eddington, A.S.
- "The Nature of the Universe", Hoyle, F.
- "The Amateur Astronomer and His Telescope", Roth, G.D.
- "Annual Review of Astronomy and Astrophysics", Goldberg, L.
- "A Programming Language", Iverson, K.E.
- "Cryogenics: Research and Applications", Sittig, M.
- "The Atomic Nucleus", Korsunsky, Mr.
- "Infrared Band Handbook", Szymanski, H.A.

BIRTHDAYS - November

- 1 Dick Hiner
- 7 Bedford Taylor
- 8 Bob Elliott
- 11 Jim Oliver
- 11 I.I.K. Pauliny-Toth
- 12 Frank Perry
- 12 J. C. Bringe
- 14 John Gallagher
- 15 Tony Hamed
- 17 John Sapp
- 18 Dick Skaggs
- 23 Frank Low
- 25 C. M. Wade
- 28 Bertil Hoglund
- 30 Omar Boyer



luck would have it Edward Wilson copped both with first and the largest as well, catching both times, fish known as blow toads, a blowfish that swells up to about three times its normal size when scratched on its belly.

As a side mention with reference to a catch by Captain Abbott, he is an excellent boat captain and a fisherman of renown. Around the end of July 1961, the writer being present on the boat at the time, Captain Abbott landed the prize fish of the season, a Bonita weighing 80 lbs. and over 5 ft. 5-1/2 inches long. During the special fishing tournament season of July 16th, 17th, and 18th, he again won the prize of catching more pounds of fish, that is of Bonita, for this period.

We wound up the day's fishing around four o'clock then went in to the house and checked out. Mr. Craddock, who has an oyster house (cannery), sold us several quarts of those delicious fresh-out-of-the-water SELECT OYSTERS, that just almost melt in your mouth. Then we started on our return trip soon afterwards, having supper again at another Hot Shoppe Restaurant in Richmond. Be sure to look these Hot Shoppes up, if you want a good meal in Richmond. Then on home, arriving at 1:00 AM Monday morning.

#### RECREATION ASSOCIATION

At the general meeting of the Recreation Association held on October 2, 1963, the following members were elected to the Board of Directors for the year 1963-1964.

Dick Bird	John Hensley
Carl Davis	David Hogg
Paul Devlin	Sidney Smith
John Gallagher	Bob Vance
Tony Hamed	Harry Wooddell
	Theo Zatta

A special meeting of the newly elected board was held on October 14, 1963, for the purpose of electing officers for the year beginning November 1; appointment of various

committees by the President; and the proposal, initiation, and promotion of various activities for the coming year. The officers elected at this meeting were:

President	David Hogg
Vice-President	Sidney Smith
Secretary	John Gallagher
Treasurer	Harry Wooddell

Among the committees appointed, the following are of special interest to the members:

Women's Activities	- Chairman, Harry Wooddell
Men's Activities	- Chairman, John Gallagher
Basketball	- Dick Bird
Rifle Group	- Theo Zatta

#### MACHINE MEANDERINGS

Marvin Wimer, wife, Merle, spent one week in the backwoods of Pennsylvania bow hunting for deer. Results: Mr. Wimer, 9 point buck; Merle, one doe.

They were accompanied by friends from Rainelle, West Virginia, Mr. and Mrs. Jim Christian. Mr. Christian drew a blank but Mrs. Christian killed a nice doe.

The archery equipment for the NRAORA has all arrived and anyone now interested can draw equipment and start practice.

See Jim White.

The Visiting Committee for the NRAO met at Green Bank on October 3 and 4. Members attending the meeting were: Dr. Cornell Mayer (U.S. Naval Research Lab.); Dr. Gordon J. Stanley (Calif. Institute of Technology); Dr. Bengt Stromgren (Institute for Advanced Study); Dr. John W. Firor, (High Altitude Observatory); Dr. Donald E. Osterbrock (Washburn Observatory, U. of Wisconsin); Dr. A. R. Sandage (Mount Wilson and Palomar Observatories).

The annual meeting of the AUI Trustees was held at the Observatory October 17-18. The following trustees and AUI officers attending the meeting:

Mr. James Alexander	AUI
Dr. Robert F. Bacher	Cal. Tech.
Dr. E. W. Caspari	U. of Rochester
Dr. P. T. Demos	M. I. T.
Dr. Val. L. Fitch	Princeton
Dr. Carl F. Floe	M. I. T.
Dr. Thomas Gold	Cornell
Dr. A. W. Kimball	Johns Hopkins
Dr. I. I. Rabi	AUI
Dr. R. H. Chamberlain	U. of Pennsylvania
Mr. L. B. Thompson	U. of Rochester
Dr. H. F. Weaver	U. of California
Mr. J. P. Lord	AUI
Mr. L. R. Burchill	AUI
Dr. Goldhaber	BNL
Dr. Falk	BNL
Dr. Carl Chambers	U. of Pennsylvania
Dr. Leo Goldberg	Harvard Observatory
Dr. Ralph S. Halford	Columbia U.
Dr. V. W. Hughes	Yale University
Dr. E. F. Johnson	Princeton U.
Mr. Stewart Macaulay	Johns Hopkins U.
Mr. Edward Reynolds	AUI
Mr. Hamilton Sanford	Yale University
Dr. William H. Sweet	Harvard
Mr. Gard Wiggins	Harvard
Mr. Charles F. Dunbar	AUI
Dr. C. Williams	BNL
Dr. Boyce D. McDaniel	Cornell

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DRAGNET-1963, Bob Burns and M. DeJong

This is a story of two technicians. The names have been changed to implicate the innocent. Any similarity with technicians living or dead is probably your guilty conscience.

The Julian date is 1234568. The place is Green Bank; known to some as "the Astronomy Center" and to others as "the Astroncmty".

A tip has been received that section 1620 of the NRAO Penal Code has been violated. according to section 1620, "something must be done each 8 hour day, premediated or not."

Sideral time 1905: Two technicians check in with the guard who is polishing pool balls in the guardhouse.

Sideral time 1909: The same two technicians reach the benches at which they work. The names of our two suspects can now be seen burned into their benches; Sam Solder, alias Smoke, Tom Tube, alias Test.

Sideral time 1915: Sam Solder breaks the lock on the tool kit, wipes soldering gun clean of fingerprints. Tom Tube climbs over lab partition, slips out rear door.

Sideral time 1942: Sam Solder disappears in a cloud of solder smoke. Tom Tube enters library, disappears behind stacks.

Sideral time 2001: Sam Solder leaves lab, finds unlocked Observatory vehicle, which works, departs in direction of recreation area. Tom Tube jimmeys latch on library rear window and proceeds toward the cafeteria with papers in hand.

Sideral time 2207: Sam Solder returns on road of 300', checking with guard who is now reading "The Fire Fighters Manual." Tom Tube has left the cafeteria and his whereabouts is now unknown

Sideral time 2501: Sam Solder quietly enters low noise lab. Tom Tube enters digital lab where numbers racket is suspected.

Sideral time 0001: Sam Solder leaves low noise lab and proceeds directly to front end lab where maser dewar is being converted to coffee thermos. Tom Tube puts on overcoat and enters low temperature lab.

Sideral time 0129: Both suspects at lunch.

Sideral time 0341: Both suspects still at lunch.

Sideral time 0342: Guards surround cafeteria and, armed only with their badges, pull suspects in for internogation.

Sideral time 0651: After hours of inter-nogation, recorded on punched tape and taken to the computer room for processing,

Sam Solder is arrested for violation of Penal Code 1620.

Sideral time 0952: After more hours of internogation Sam Solder confesses to said violation but pleads for mercy on the grounds that he didn't take a coffee break all morning.

On Julian Day 1234569 in Printed Circuit Court, in and for the electronics area of the Astronomy Center, Samuel Solder was found guilty on one count. Violation of Penal Code 1620 is punishable by hard labor for not less than 1 nor less than 10 years.

He is now serving a two year term at the 140'.

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LAB GAB

Gay Wooddell has moved into his new home down on Browns Crik road near Huntersville.

Carl Wooddell is fixing up and settling down in his own home. Cass has lost two good?? citizens.

Belatedly announced, the Carl Coopers had a 6 lb 12 oz baby boy, August 22. Now it weighs 12 lbs 6 oz.

Peck McPherson's wife had an emergency operation here recently. Seems operations must be the latest. She is feeling better, much to Peck's relief.

Dick Skaggs, known locally as "Ole Sarge" sez, "I godt too zoon oldt and too ladt schmart." Seems he's been associating with old Hoiman and is learning to speken ze deutsch.

-----

IT'S THE "WORKS"

After three years Route 28 at Boyer opened Friday October 18th. Don't you think it's about time?????????????

The warehouse was turned over to the Administrative Department October 22.

There will be a party when the new warehouse opens - Refreshments will be furnished by John Matheny Jr. This should take place about the first week in November. YOU-ALL COME!!!

Neil Horner wishes to get back on day shift - seems as though he has something else to do in the evenings. Neil, will you tell us what it is????

The lucky winner of the shotgun given away by the Rifle Club was Glen Grandon. CONGRATULATIONS GLEN!!

Bedford Taylor's son, Rusty, on October 5th won first place in the Punt, Pass, and Kick Football Contest in his age group in the county, which was held at Marlinton. This makes Rusty's second year of entering the contest and he won first place last year also. Rusty was presented with a Baltimore Colts warm-up jacket for being the first place winner.

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ENGINEERING ESSENSE

Power and telephone lines on Route 28, in front of the air strip, is being buried to remove hazard from air strip approach.

Three loads of steel have arrived for interferometer 85' telescope. Erection will begin shortly on station one.

Jim Elliott and party, during hunting season, shot 3-10 lb. turkeys with only one shot.

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PERSONNEL REPORTS

Everyone will be sad to hear that Phyllis Rader has left work at the Observatory to devote all of her time to her lovely daughter and loving husband. I'm sure everyone will agree that her smiling face and outstanding personality will be missed.

We are glad to welcome back the familiar face of Shirley Carpenter who has taken her old seat at the switchboard. WE ARE GLAD TO SEE YOU BACK SHIRLEY!!!!

Mr. Williams' family is expected to arrive in Green Bank around the 1st of November. They will occupy House #19.

We would like to welcome Mrs. Small to the community. She and Mr. Small are living in the Hardy House. Mr. Grabe and Mr. Good have helped put up a new TV antenna. Pretty fair picture at that.

We would like to give a hardy welcome to the following new employees:

William Powell  
Eugene Marcum  
Leroy Webb  
Glenville R. Walker  
John Hungerbuhler  
Ben A. Gragg  
Jimmie Ryder  
Tony Byrd

-----  
25' TELESCOPE

For month of October: "No Comment"

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140' PROJECT

The contractor's forces continue working a six day week in efforts to complete welding of the superstructure prior to bad winter weather. In order that the members which will form the outer perimeter of the superstructure could be fit-up and welded, and to enable the contractor to start work on a tent to enclose the yoke hub and some counterweight sections during winter months, the superstructure was moved back to its original assembly location. Scaffolds and equipment mounted on the structure were removed. Temporary steel "A" supports,

mounted on railroad trucks to form a large dolly, were completed. The superstructure was elevated 20' by the two derricks; the dolly was moved under the structure, which was then lowered onto the "A" supports and secured. During the movement of the superstructure, several interested persons from the Lab were present to offer moral support. Several "Sidewalk" Superintendents were also observed around the job site.

Our motion picture photographer appeared to be almost completely "rattled" during the move and may never completely recover from the shock of finding out that the structure might be moved after dark - he didn't have his flashlight attached to the camera.

Peter Good recently travelled to Brookhaven where his motion picture footage was reviewed by Brookhaven personnel. They liked the film very much.

The NRAO Visiting Committee was at the Observatory on October 3. Included in their tour to the 140' was a preview of motion picture footage taken of our operations over the past four months. This film was also shown to the AUI Trustees on their visit to the Observatory in Mid-October.

We are glad to see Odell Johnston back to work after his slight accident at the 300'. We understand that he fell at the 300' for a distance of 6 or 8 feet but had no serious injuries, only bruised. HANG IN THERE ODELL!!

-----

300' TELESCOPE

Observations by Dr. Roberts at the 300' telescope with the NRAO multichannel receiver were concluded September 30, 1963.

The multichannel equipment was then removed from the telescope and returned to the Low Noise Lab.

No observations were made at the telescope for the first two weeks of October. During this period, needed maintenance of various types were performed.

The operating console was moved from downstairs to the first floor. Now the operators can watch the telescope, weather, etc., without the aid of the closed circuit television. The necessary switches for operating the equipment have been located at the console while the equipment has been located downstairs. This eliminates the additional noises such as fans and motors with which the operators had to contend. Everyone appears satisfied with this change.

The Engineering Department added an equipment hut on the south side of the telescope structure below the surface of the dish.

Bristol Steel replaced bad support members of the dish and a crew of painters painted the structure where needed. This requirement was caused by either rust or repair to the structure.

The NRAO 750mc and 1400mc receivers are now back in operation. At present, the observations are being programmed by Ivan Pauliny-Toth.

Troy Henderson and family recently purchased a Magnola "Leisurama" home. Anyone interested in seeing this is welcome to stop by.

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THE LITTLE ELECTRON, Thomas R. Hawkins, Jr.

Once upon a time there lived a little Electron.

(Note from the author) "Now that I have you so deeply engrossed in my story that you can't lay it down, let me give you a short resume of what you are in for. It's fiction, dear reader, pure simple fiction. If you don't like fiction, now is the time to get out.

Now that my readers are separated from the men, we can proceed with the adventures of our friend, The Little Electron.

Once upon a time there lived a little Electron, who in his much younger days resided at a place called Atom, deep in the heart of Copper Matter Land. Here he spent all of his growing years spinning merrily around his Pappa, who was called Father Proton; and his Mommy, who was called Mother Neutron.

Little Electron was very happy with his rotating existence. He had everything that a well to do middle class atom family of that time could possibly give to their young. In addition he had many little friends who passed very close to his own orbit; although he had no time to play or chat with them. After all, who in their right mind wanted to pass the time of day with other electrons, when he could be gaily circling, at tremendous speeds, around Pappa and Mommy. Joy was our heros lot, but not for long.

(Note from the author: "Now is a most appropriate time to change the scene. The plot must thicken, melodrama must prevail. We are going to dwell very briefly on the political situation of an electron's world, so that my readers can get the big picture.")

Near the edge of Copper Matter Land a great foreign country called B-Plus existed. This great power was very jealous of the tranquil life in Copper Matter Land. B-Plus being a rather riotous place, coexistence could not endure. An attack by B-Plus upon its neighbor was soon in the making.

All the great powers in B-Plus gathered a mighty Electromotive army composed of Ampere upon Ampere, augmented by hard hitting volts. It was a formidable army indeed that threatened defenseless Copper Matter Land.

When the first of the invaders touched the shores of our heroes home land very little change was felt by Electron and his family. Their daily life went on as usual; but as the Electromotive force pushed on, and occupied atom after atom, a change took place.

Refugees, whole families, countless hundreds of thousands of them fleeing their homes. The younger, faster electrons managing to escape the grinding army; but the older, slower father Protons, and the mother Neutrons were captured. The charging Amperes, and lightning like volts were doing their work well.

As electron upon electron fled the heel of the oppressor, they continually jammed, and shoved to get farther into Copper Matter Land. Soon the churning, speeding hord of refugee electrons reached little Electron's Atom. Our friend was swept up in the tide. He was uprooted from his home, torn from his mommy and daddy, forced away from his friends.

Naturally he resisted with all the braveness of the hero he was, but it was all to no avail. Little Electron became a product of the society he lived in; a wandering, refugee electron, doomed to race for all eternity just ahead of the terrifying Electromotive Force, from the land of B-Plus. His only hope; infinity.

(Note from the author: "It is often said that electrons have a negative perspective on life. After reading this short story of their existence, it is understandable why this is true.")

#### SMART PARTS FROM GRAPHIC ARTS

Mr. and Mrs. Vincent C. Scott celebrated their twenty-first wedding anniversary, October 15, 1963. Our congratulations to Mrs. Scott (and Scotty too) for bravery above and beyond the call of duty.

Astronomy ----- you see,  
Now, does interest me;  
When perchance in a book  
I got a good look  
At the sexy chassie  
Of the Celestial-lassie,  
Miss M-31, you Snook!

(Her picture will appear  
right here \*\*\*\*\*  
next issue.  
Can you name this gal  
Whose name ain't Sal?????)

#### FLASH NEWS DEPT.

Mr. and Mrs. Maurice Simmons of Bartow, West Virginia have announced the engagement of their daughter, Miss Norma Simmons, secretary at NRAO, to Mr. Richard D. Brockway of Southbridge, Massachusetts.

Wedding plans to be announced at later date.

Congratulations!!!



SELL, TRADE, LOST & FOUND DEPARTMENT

TO SELL:

One oil stove, 4 gal. tank capacity, manual control, automatic damper control. Priced to sell at \$25.00.

Contact Gene Crist.

-----

One 16 gauge shotgun.

See Basil Gumm, Works Area

-----

One check-writing machine - make offer.

See W. D. Terrell, 300' Telescope

-----

One 1957 Plymouth (V-8) - Very good condition.

If interested, see Jerry Shears, Personnel Department.

-----

One 1958 Mercury, 2 door, standard, V-8, with air conditioning.

See Theo Zatta, Lab.

-----

One 1946 Harley Davidson Motorcycle "74".

See Theo Zatta, Lab.

-----

4-10 shotgun single shot-bolt action.

Contact Sis Michael

-----

TO TRADE:

One 22 Remington Model 572 Pump rifle equal valued for one hunting bow and accessories.

See John Ralston, 140' Telescope

-----

FOUND:

One small hand held optical telescope.

See W. D. Terrell, 300' Telescope

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## CHRISTMAS PARTY FOR OBSERVATORY CHILDREN BEING PLANNED

Again the NRAORA is planning a Christmas party for all Observatory children. It will be held Friday, December 20th, in the basement of the Laboratory Building. The time will be published in the Observer at a later date as all plans are indefinite.

So that we may make complete arrangements, please return the lower portion of this sheet to Harry Wooddell, Fiscal Division, no later than November 11th.

*The Greatest lineup of the Finest  
Motion Pictures  
ever made...*

*The International Cinema Classics from  
Hollywood and Europe...*

*presented  
by*

*The National Radio Astronomy Observatory Rec'r. Assoc.  
to be held semi-monthly in the Jansky Lab  
beginning Monday, November 18, 1963, 7:15 P.M.*

*Admission: Absolutely FREE to members and  
families of the NRAORA*

Here is what you are in store for in the way of the Cinema Greats . . . . .

"LOVE IN THE AFTERNOON"  
starring  
Gary Cooper  
Audrey Hepburn

"SEVEN SAMURAI"  
(Magnificent Seven)  
... A MASTERPIECE

HUMPHREY BOGART  
IN  
"THE CAINE MUTINY"

"HAND IN HAND"  
great British film classic

"The GRAPES OF WRATH"  
with Henry Fonda

"PICNIC"  
with William Holden  
and Kim Novak

JIMMY STEWARD  
IN  
"IT'S A WONDERFUL LIFE"

"ANATOMY OF A MURDER"  
with JIMMY STEWARD

"The BRIDGE"  
A GERMAN MASTERPIECE

"1984"  
Edmond O' Brien

"APARAJITO"  
CLASSIC INDIAN FILM

"MACARIO"  
"BEST MEXICAN FILM EVER MADE"

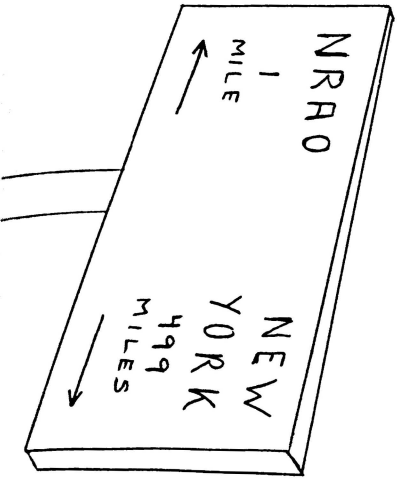
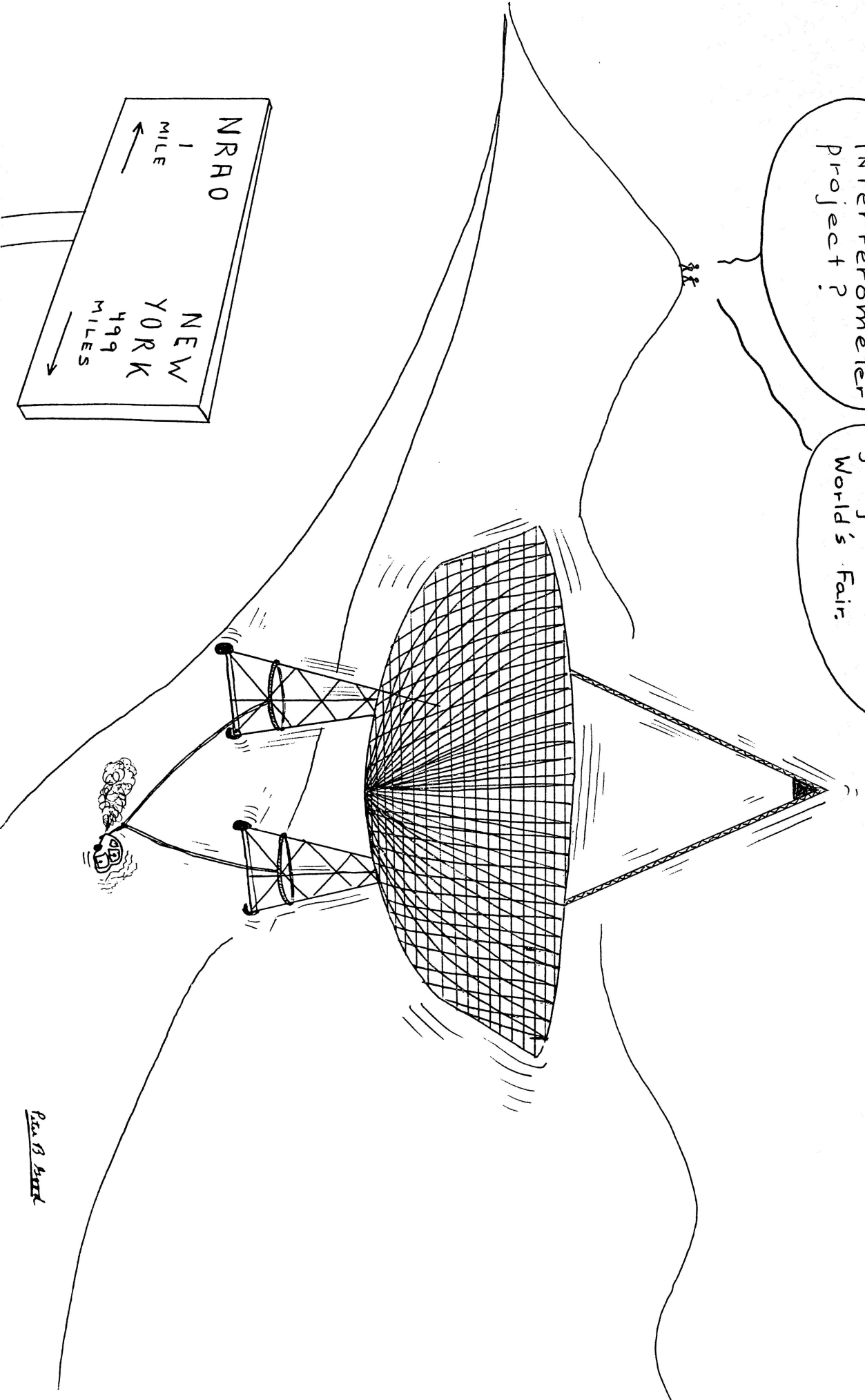
"The GREAT IMPOSTER" - Tony Curtis

These are just some of the really great movies to be shown by our NRAORA. The only way to see all of these film is to make each attendance meaningful. Support this project and the NRAORA will support you. Keep a lookout for more information on films and dates on the bulletin boards and in the "Observer".

Is that the Interferometer Project?

No. That's the 300 ft. Telescope going to the 1964 World's Fair.

Good Grief



Pat B. Smith