

The O B S E R V E R

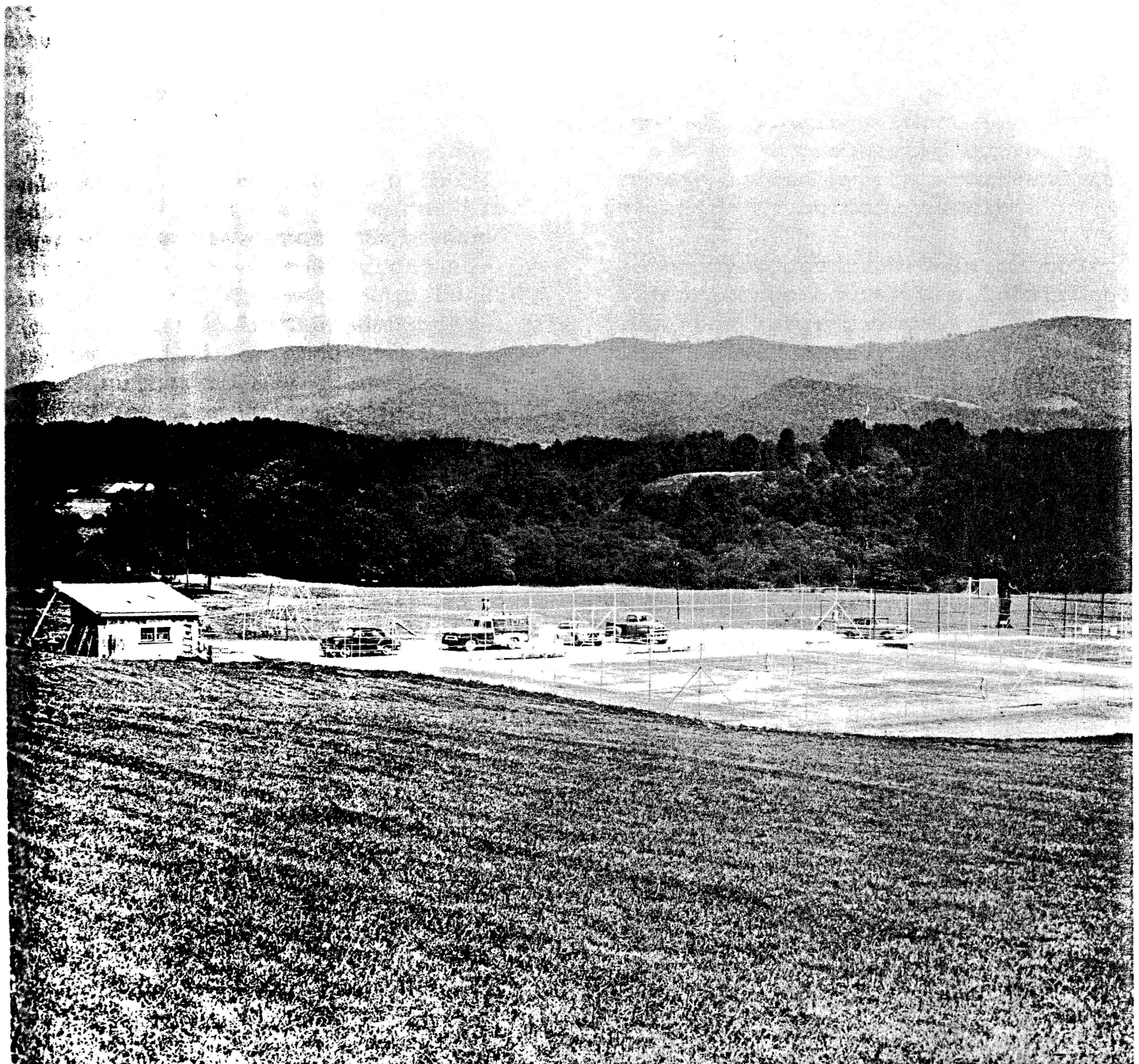
Vol. 1, No. 9

August 31, 1962

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NRAORA RECREATION AREA

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NRAORA RECREATION AREA

On the front cover of this month's Observer is the up and coming recreation area of the NRAORA.

Pictured in the foreground are the tennis and basketball courts. The two tennis courts are regulation size and regulation marked. The basketball court with two baskets can be seen to the right of the tennis courts.

The golf driving range can be seen best beyond the courts and to the immediate right of the large oak tree.

.tee-off pads are separated by wood partitions. Markers down field indicate driving distances of up to 250 yards. Right and left handed golf clubs are available. The driving range is suited to novices and pros alike. Next time you're over at the recreation area, give the driving range a try. Hitting the pill a good gallop can be very challenging.

Looking beyond the left corner of the tennis courts, a parent can be seen testing the new swings. The swings are part of the recently acquired playground equipment. The kiddies swings, sliding boards and monkey bars are also visible. A part of the see-saws can be seen at the extreme left. Out of sight and to the left of the see-saws is the merry-go-round.

The playground equipment has been heralded by mothers as a major triumph. Observatory mothers can now enjoy some of the facilities without the constant badgering of the children. Mon can enjoy herself as pop goes off to play

with other pops. For pop, the playground equipment has helped ease his conscience.

If you look beyond the big swings and near the edge of the tree limbs, a close look will reveal three of five picnic sites available for cook outs. Each site has a novel drum fire place and fire wood. The picnic season is growing short--- so you better get those steaks out of the freezer and enjoy the aroma and zesty taste of outdoor cooking.

The croquet court, badminton court, and horseshoe courts are located between the large swings and first picnic site. They are not immediately recognizable in the picture.

The building in the mid-left of the picture is the equipment store room. It was once a part of the old barn that was recently torn down. Presently the equipment building is being renovated and will have a more attractive appearance.

Out of sight, but not out of mind, are the rifle range and softball field. The rifle range has three benches at 100, 200, and 300 yards. For safety purposes the range has been located in the southwestern part of the recreation area. The softball field, fully equipped, is located at the entrance to the recreation area.

Access to the recreation area is a temporary low bridge across Deer Creek. This bridge is only a temporary measure while a new steel beam bridge is being built. This bridge is expected

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Lab Gab

The Electronic Technicians will hold their monthly meeting on August 31, at the Valley Restaurant. Rumor has it that it should be very interesting.

Arthur Shalloway has joined the Electronics Division as an electronic engineer, specializing in digital systems. He is in Boston this week to begin work on the correlator receiver.

Has anyone noticed how "bright-eyed" Carl Davis and "Peck" McPherson have been this week? Janice Galford started to work on August 28 as a typist in the Electronics Division stock room.

Dr. Hvatum was visited recently by Dr. Sven Olving, of Chalmers Institute of Technology, Gothenburg, Sweden.

John Parker says you have to see the coin before you can understand. John Hensley thinks he has the answer.

John Sapp will begin work September 5 as an electronic technician.

Ruben and Emilio will be leaving soon. They will go to CalTech for about a month, and return to Green Bank in October. After a short stay, they will go to Washington, D. C. for a short visit, and then home to Argentina. (See article Emilio Filloy and Ruben Dugatkin leaving NRAO, page).

The multi-channel boys are not saying much lately. Anyone know why?????

Doug Slough left the Observatory on August 17. He will work at WSLs-TV in Roanoke, Virginia.

Wanted: Two able individuals to help Carl Wooddell keep "Turkey" tamed down while Dewey Ross is in California, and Dick Skaggs is in military summer camp.

Engineering Division

John Ralston is on vacation from August 27 through 31 -- destination unknown.

Lyndell Brooks returned to the Observatory, and is in the Engineering Division, after attending school for five weeks at West Virginia University.

Bids are now being received and evaluated on the mount for the 5-foot telescope. The drive train is on order, and engineering is essentially completed.

In the very near future, site work will begin on the 140-foot telescope.

Let us endeavor so to live that when we die even the undertaker will be sorry.

"Students Visit Cass Cave"

by Doug Hall

After an early supper on Wednesday, August 23, a party of ten of us left to challenge the waterfall in Cass Cave. We were armed with a total of 180 feet of climbing ladder and an equally long piece of nylon safety rope. The last three 30 foot sections of the cable ladder were only recently purchased by the NRAORA when they knew we had this trip in mind.

A relatively short walk and crawl brought us to the top of the waterfall. To avoid the chilling water we climbed about 50 feet above the falls itself to the "belay loft", a narrow crevice through which we lowered the ladder to the bottom of the "Big Room" 180 feet below.

The first man over, Tom Hall, had trouble fitting through the crevice and warned us, but he made it safely down to the bottom to shout back that there was only 3 feet of extra ladder lying on the bottom.

The other five who followed were Yervant Terzian, Doug Hall, Bob Haas, Bertil Hoglund, and Jim Merritt. Up above to control the safety rope, or to relay messages from the vantage point at the top of the waterfall, were Frank Palluconi, James Moran, Ronnie Barnes, and Marvin DeJong.

The actual climb down averaged only 10 to 15 minutes, and was rather easy, although tiring for some. But most of all, it was breathtaking in its magnificence. Imagine yourself hanging on a ladder 5 inches wide in the middle of a large black

room 180 feet tall, 50 feet wide, and over 300 feet long; the crevice through which you descended is already invisible in the darkness, a waterfall the height of Niagara is cascading down to one side, and far below in the mist is a red flare lit by the others.

Our own comments ranged from "Fantastic" and "Unreal", to "Boy, did that 1/8 inch cable begin to look thin".

It has been said that the more difficult a cave is to enter, the more beautiful it is. Cass Cave is no exception. In the back of the Big Room were rows and forests of stalactites more lovely than many of us have seen, even in commercial caves. Some were crystalline and white as snow; others were long and slender like soda straws, or shaped like thin curtains of stone; and many were as musical as chimes.

One by one the six below climbed up. Several problems made the ascent much more difficult and time consuming, but at no time was there ever any real danger as such. Half way up Doug found the safety rope tangled in the ladder and was forced to take the loop off his body in order to straighten it out. "It would have been hard enough if I didn't have to hold on."

In one way or another 6 of our carbide lamps were dropped during the ascent. Either the safety rope knocked them off our heads, or the narrowness of the crevice made it necessary to throw down the lamps we had hooked on our belts. There were no fatalities down below, except for the 6 lamps.

continued-"Students Visit Cass Cave"

Tom had trouble with cramps in his hands and legs. Bob got stuck in the crevice and had to be pulled through by three of us above. He was very appreciative, but was sorry his arms had to be pulled off. Jim undoubtedly wished his shirt had had thinner buttons.

With only 4 lamps working, we started out at 2:30 in the morning. Walking through a cow pasture on the way to the car, we were met by Ruben, Emilio, and Al Braun coming to look for us. "Come on children", said Ruben, "it is past your bed time."

The ladder and rope are still in excellent condition, and Cass Cave waits as a challenge to next year's students.

Party for the Students

Drs. Heeschen and Findlay gave a party for the summer students on August 18 at the Hannah House Recreation Area.

Approximately 80 people, including the scientific staff and guests of the students, enjoyed a cookout consisting of hamburgers, hotdogs, potato salad, roasting ears, drinks, etc. -- sort of a "do-it-yourself" affair.

Recreation facilities, bonfire, and guitar music by Al Braun, Bob Haas, and Sheila Hart, provided the entertainment. In the evening the energetic danced on the ballroom floor of the Hannah House.

Emilio Filloy and Ruben Dugatkin Leaving NRAO

With one year of training and studying at the NRAO under their belts, Emilio and Ruben will be leaving the NRAO early in September. While their future plans remain rather flexible, they have given the Observer an approximate outline of their plans after departing from Green Bank.

Their first stop upon leaving Green Bank will be the California Institute of Technology. More specifically the Owens Valley Observatory, where, for about one month, they will study CalTech's radio astronomy facilities. From there, and circumstances permitting, they will visit several other radio astronomy facilities.

After their jaunt out West, they will go to the Carnegie Institution, Washington, D. C., stopping at Green Bank enroute to Washington. At the Carnegie Institution of Washington, in the Department of Terrestrial Magnetism, they will study receivers to be used by Argentina's new National Institute of Radio Astronomy. From Washington they will travel to Buenos Aires.

In Buenos Aires, they will be affiliated with the N.I.R.A. as electronic engineers. N.I.R.A. will have a 100-foot radio telescope with a 20 channel receiver -- a joint venture between Carnegie and N.I.R.A.

Today is ours--let's live it.

We wish to express our thanks and appreciation to everyone at the Observatory. If in the rush of leaving, we miss saying goodbye, please accept our goodbye at this time.

Ruben Dugatkin
Emilio Filloy

Lyndell Catches Some Lovely Ones

Lyndell Brooks has a picture of 3 lovely black bass to back up his recent fishing success in the Greenbrier River.

All 3 are beauties. The largest of the 3 was eighteen inches long, and weighed in at little over 2 pounds. A dark nite, a special plug, some know how, a good spot, and some??? is all that it takes, according to fisherman Brooks.

NRAO Gets New Transportation Fleet

The NRAO, meeting the need for additional transportation for its on-site traveling personnel, recently acquired 12 new, blue and white bicycles. Purpose of the bikes is to provide transportation for employees who do not want to use their own vehicles when traveling on site. This arrangement has its points: it beats walking and does not contribute to radio telescope interference.

Moods are more often a menace than microbes.

NRAO Visitor Program

Approximately 1250 visitors registered for the regular Observatory tour. This month's total fell several hundred short of last month's attendance. One explanation is offered! Perhaps many would be visitors assumed that we were out of business when Sugar Grove closed. It's almost alarming to hear how many people confuse us with the defunct installation.

This month's leading question was this: "Why don't the radio waves go through the wire mesh surface of the 300-foot radio telescope?" Do our non-scientific readers know the answer?

School in Session---Watch the Kids

"Watch what that kid will do next" season is here. School doors are once more open and it is again time to be extra careful with our driving. Play safe! Don't assume that children won't dart out into the road or pull some other unpredictable maneuver. Or as Ruben once said, "A monkey dressed in silk is still a monkey."

For People Who Have Business At The 300-Foot

Wally Oref has requested that those driving to the 300-foot be on the watch for his 6 year old daughter, who will be riding her bicycle to school.

On the Road

"Sis" Michael took a trip to Charleston Monday, the 27th. This trip is better known as a "shopping spree". After all, school bells will be ringing before long.

Carolyn St.Clair is going on vacation next week. She plans to be "keeping the highway hot" most of the time. Her travels will include Waynesboro, and the highlight of the trip will be Roanoke, Virginia.

Phyllis Jackson and family spent August 3-5 sight-seeing in Washington, D. C., and points in Virginia.

On a recent Sunday afternoon, Lillian Ness drove to Helvita, a tiny German community in Randolph County. This town is known for the cheese made by the people there, Lillian brought back some of the cheese, and passed out "samples", which was very good.

Jamie Sheets and family spent several days during the past month visiting friends in Rockville, Maryland, and sightseeing in Gettysburg.

Ted Riffe, Fiscal Officer, was away for a two weeks vacation. We can't get a full report on his travels, but know he spent most of his time in Cass and visiting relatives in the southern part of West Virginia.

John Gallagher spent the weekend in Goldsboro, N. C. His mission was to bring his wife and family home from visiting relatives there.

Troy Lusk and family spent their vacation in Wyoming County.

Nomads End Visit at NRAO

Fred, Arlene, Butchy, and Suzy Hohmann returned to their home on Long Island, August 29. Fred, auditor from AUI, wrapped up his business at the Observatory on August 28. The Hohmanns are best remembered for their recently established record: They occupied more different Observatory residences in a four month period than any previous visitor to the NRAO.

Organizational Changes

A Fiscal Division has been established with T. R. Riffe as Division Head and Fiscal Officer.

Scientific Services and Telescope Operations have merged into one division with F. D. Drake as Division Head.

New Employee

Don Hovatter will join the staff of the Fiscal Office, September 1, as an accountant. Don has recently been employed as a Systems Analyst with Burroughs Corporation. Previous to his employment with Burroughs, Don was employed by Price Waterhouse, CRA, and as Auditor General, U.S. Air Force, Cape Canaveral.

Don and his family will move into one of the Cass houses.

An old timer is one who remembers when being shot from a cannon was considered fast travel.

New Journal in the Library

Science Week

Ceramics

The Ceramics Classes started off with a bang. BANG! Who broke that greenware? Approximately 35 persons attended the series of classes. It has been a success so far, even though several items were accidentally broken. Several of the members have finished lovely articles. All in all, everyone who attended the classes had a grand time.

Jim Ellis, talented artist of Jim Ellis Art Shop, Roanoke, Va., taught a series of six lessons. Mr. Ellis covered such techniques as brush strokes, glaze mixtures and original painting ideas. It may be possible that sometime in the future we can have him back for further instructions. If so, a special notice will be sent out.

He had his lovely wife "Becky" and son "Kale" with him one night as special assistants.

Some remarks quite familiar around the ceramic classes were: "Will all the things look like THAT?" "Isn't that beautiful." "I wish I could paint like that." "What awful colors." "Do you want to sell that?" "That makes the second piece I have broken."

The Ceramics Workshop is scheduled to be open twice a week: Wednesdays 7 p.m. to 10:30 p.m. and Saturdays 2 p.m. to 5 p.m. A variety of greenware, paints and glazes will be kept in stock for sale. The NRAORA has ordered a kiln which will

be used for all the "firing". As soon as the classes are more organized, a schedule will be set for regular "firing" dates. Only one or two persons will handle the firing since it is a tedious job and the kiln is a sensitive piece of equipment. The person who does the firing will not be responsible for any items broken by him while loading the kiln or during the firing. Until our kiln is delivered, Jim Ellis is letting the Club use his.

If Wednesday or Saturday does not suit all interested in ceramics, the Club is looking for volunteers who will work other afternoons or nights and be responsible for the sales and cash receipts. The stock room will be open only for the first hour of any workshop. In this period all purchases and handling of monies must take place, so that the clerk may also have a chance to work on items.

People who would like to attend future ceramics classes, but missed past workshops, can still join in and learn from the "new" pros.

WHO? WHO? WHO?

We hear a certain fellow is taking another trip to New York. Oh Boy!-- How About That.

John Hensley, Test Equipment Technician, recently received his new Concord Mobile Home, a beautiful 60' X 10' trailer with an Early American interior. Congratulations, Mr. and Mrs. Hensley!

Scientific Services Division

Drs. Frank Drake, David Hogg, and Joan Crampin attended the American Astronomical Society meeting which was held at Yale University Observatory in New Haven, Connecticut, on August 27, 28 and 29.

Dr. C. M. Wade and family spent a few days camping at Sherwood Lake last week.

Dr. Gerald F. Tape, Vice President of AUI, spent two days at the Observatory last week. Dr. Geoffrey Keller, Dr. Randall Robertson, Dr. Gerry Mulders, Mr. Gilbert Friend, Mr. Gerry Greenwood and Mr. Paul Scherer from the National Science Foundation were also here at that time.

Dr. Robert Fleischer and family visited the Observatory two weeks ago. Dr. Fleischer, who teaches at Rensselaer Polytechnic Institute, Troy, New York, organized the Public Education program at the Observatory during the summer of 1960.

NRAO Facilities Photographed for Time Magazine

Mr. Wally Bennett, a photographer for Time Magazine, photographed facilities at the Observatory on August 20 and 21. Mr. Bennett's work will appear as a part of a feature article on radio telescopes in Time. Mr. Bennett said that the article will appear in Time about one month from now.

Engagement Announced

The engagement of Miss Carolyn St. Clair to James Summers Mason, Marlinton, West Virginia, has been announced by her parents, Mr. and Mrs. Claude W. St. Clair, of Green Bank.

Wedding plans have not been completed.

It seems that several from the Observatory attended the West Virginia State Fair at Lewisburg last week. I just wonder who it is that can't seem to manage riding all those crazy rides for turning green. If you see anyone walking around the Observatory looking a little green, I don't think any questions will be necessary. Especially downstairs in the Lab..., and for further information contact some gal by the name of "Dorothy".

September Birthdays

3 - Virginia Irvine
 4 - Leonard Howell
 6 - Neil Horner
 14 - Basil Gum
 16 - James Merritt
 16 - Harry Wooddell
 16 - "Peck" McPherson
 18 - W. Waltman
 18 - V. Venugopal
 21 - Carolyn Dunkle
 22 - Arnold Davidson
 24 - A. Gallispie
 27 - A.G. Ware
 28 - T. Zatta

Project Tour-Tel

Project Tour-Tel is gradually working its way off paper and into respectable existence. Project Tour-Tel is the design and construction of a radio telescope for tourist demonstration purposes. The project is directed by Robert Haas, assisted by Jim Moran, Frank Palluconi, Marvin DeJong, Al Braun, Ellen Gundermann, John Kirkham, Yervant Terzian, Jim Hudnall, Doug Hall, and John MacLeod. It will be situated at the southwest corner of the Lab, and will be capable of observing the sun and a few other strong sources.

Design began in mid-July, but progress was slowed by difficulties in securing parts. Although the instrument will work in a conventional manner, it will look different from other telescopes at the Observatory. The original hope was to secure a 10 foot dish for esthetic appeal, but this proved impractical economically and timewise. A system of yagis, similar to TV antennas, was finally decided upon.

An old radiometer, originally built by Bill Waltman, was modified by Haas and Moran, and is working satisfactorily. Haas reported that all parts have now been received, and said that by mid-September the telescope should be answering major cosmological questions by extending the frontiers of the known universe.

The footers have been poured for the new bridge to the Hannah House. Completion is expected in a couple of weeks.

The first day of school is always something to remember! The following is a list of the children who attended the first grade, and whose parents are employed by AUI.

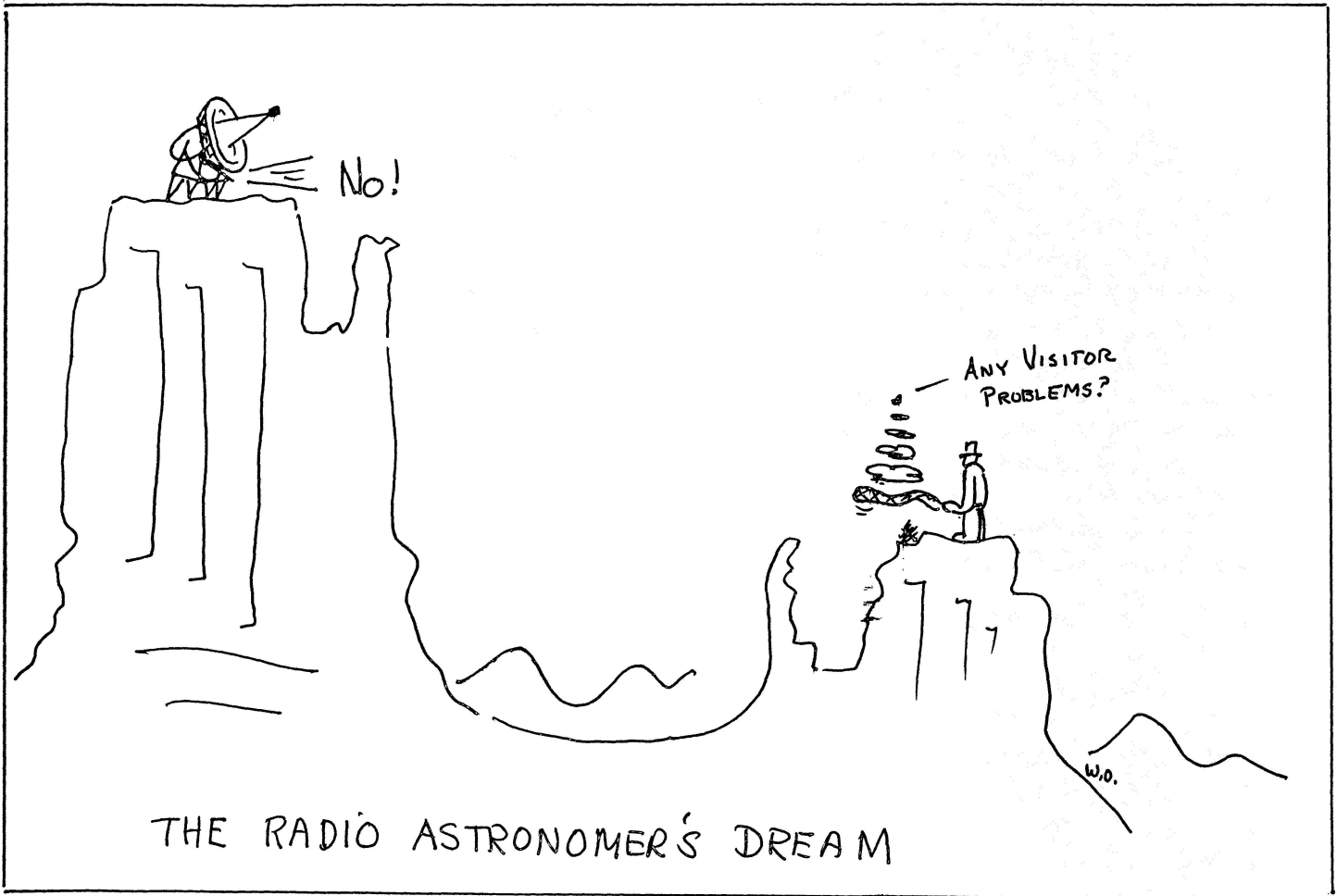
Jeffrey Callender	Sheila Simmons
Maureen Gallagher	Allen Crist
Jenny Riffe	Joe Hamed
Cheryl Oref	Paul Kuhlken
Marlene Bowyer	Joyce Ann Gumm
Charlotte Beverage	Stewart Findlay
Elaine Gardner	

The parking lots have been marked for individual parking. This is a great improvement since someone always parked in the middle and no one else could get around. Please be a courteous driver, and stay inside your line.

If, by any chance, you have been looking for the postage meter machine, it has been moved to Room 222.

New Books in the Library

Fourier Transforms and Convolutions for the Experimentalist, Jennison, R.C.
 Handbook of Semiconductor Electronics, Hunter
 Statistical Abstracts of the United States, 1962
 Statistical Tables and Formulas, Hald, A.
 Statistical Theory with Engineering Applications, Hald, A.
 American Ephemeris and Nautical Almanac, 1963 and 1964



Two Martians stopped while strolling in the park near a bubbling drinking fountain.

"Come on, let's get out of here," choked one. "I can't stand to see a woman cry."

The wife of a serious drinker in Detroit performed the quickest operation yet known for paralysis. The husband lying in bed screamed that he was paralyzed below the waist. The wife quickly threw back the covers and discovered that the spouse had both legs in one leg of his pajamas.

One businessman to another: "I wanted my son to share in the business. But the Government beat him to it."

How Times Have Changed

If a builder build a house for a man and do not make it construction fair, and the house which he has built collapses and causes the death of the owner of the house, that builder shall be put to death.

(The Code of Hammurabi, 2130-2088 B.C.)

NRAO Colored Slides for Sale

8-mm color slides of NRAO radio telescopes and buildings are available through the Public Education office. Slides may be purchased as a set of seven, or may be bought individually. This set includes pictures of the following radio telescopes and buildings: 300-foot, 85-foot, 40-foot, calibration horn, Reber Dish, Residence Hall and Jansky Laboratory.

A set of seven color slides sells for \$1.95. Individual slides sell for 50¢ each.

For Sale

Tennis Shoes, size 8, new. Sell cheap. See Jerry Shears.

Floor length formal dress. Sell cheap. See Carolyn St. Clair.

One "twisted" planter made in ceramics class. Original and guaranteed to be the only one of its kind. contact Naomi Daniels.

1960 Corvette, 230 hp, 4 speed transmission. See D. S. Heeschen.

Wanted to Buy

A used 26 inch boy's bicycle frame with handle bars, seat and pedals, only. Wheels are not needed. Call Wally Oref at Ext. 215.

Fuel oil stove, small size, with tank on back. Call Gene Crist, Ext. 206.

NRAORA RECREATION AREA (Continued from page 2)

to be completed in two weeks.

Many thanks are in order for the officers and president of the NRAORA and to the workers who have done a good job in providing employees, their families and guests with these recreational facilities. With such a good start in its first summer, the Hannah House Recreation Area will improve with time and become a recreation area that all employees will point to with pride and satisfaction.

A T T E N T I O N

LABOR DAY DANCE, August 31, Hot Springs, Va., Veteran's Hall.... 8:00 p.m. (DST). Music by - "The Searchers" from Covington, Va.

A little boy came home bawling. "What's the matter", cried pop, "That kid down the street keeps picking on me," he wailed. "Son, it's time for me to teach you the manly art of self defense"--and he did.

Several days later Junior came home beaming. "Did that kid pick on you today?" asked pop. "Yes, sir." "Did you take care of him like I showed you?" "I sure did, pop, I punched her right in the eye."
(Contributed by the new Fiscal Officer)

S P O R T SNRAORA Softball League Standings

	<u>Won</u>	<u>Lost</u>	<u>Tie</u>
RED RAIDERS	6	2	1
BLUE DEVILS	6	2	1
GREEN HORNETS	5	4	
BROWN BOMBERS	0	9	

The tie ball game between the Red Raiders and the Blue Devils will probably be played next Thursday, September 6, 1962.

We would like to congratulate the Brown Bombers (Arnold Davidson's team) for their enthusiasm, though they were plagued with many of their team being away on business trips and this led to two forfeits.

Ball players, wives and children would appreciate drivers using caution when passing the softball field during game time. Help keep the dust down and watch for children.

Dewey Ross returned today from a two week trip to California. He visited Stanford University at Palo Alto and Wescon at Los Angles.

He was accompanied by his wife Kay. They toured the Grand Canyon of Arizona and also the Petrified Forrest. Dewey reports he especially enjoyed the "night life" in San Francisco, but was also very anxious to return home to see their son, Randy.

UGRPP

The Undergraduate Research Participation Program officially ended August 24th. The eight undergraduate students apparently enjoyed their work in the various departments of the Observatory. All have returned to their homes with the exception of Carl Heiles. He will remain for a couple more weeks to complete the project he has been working on.
