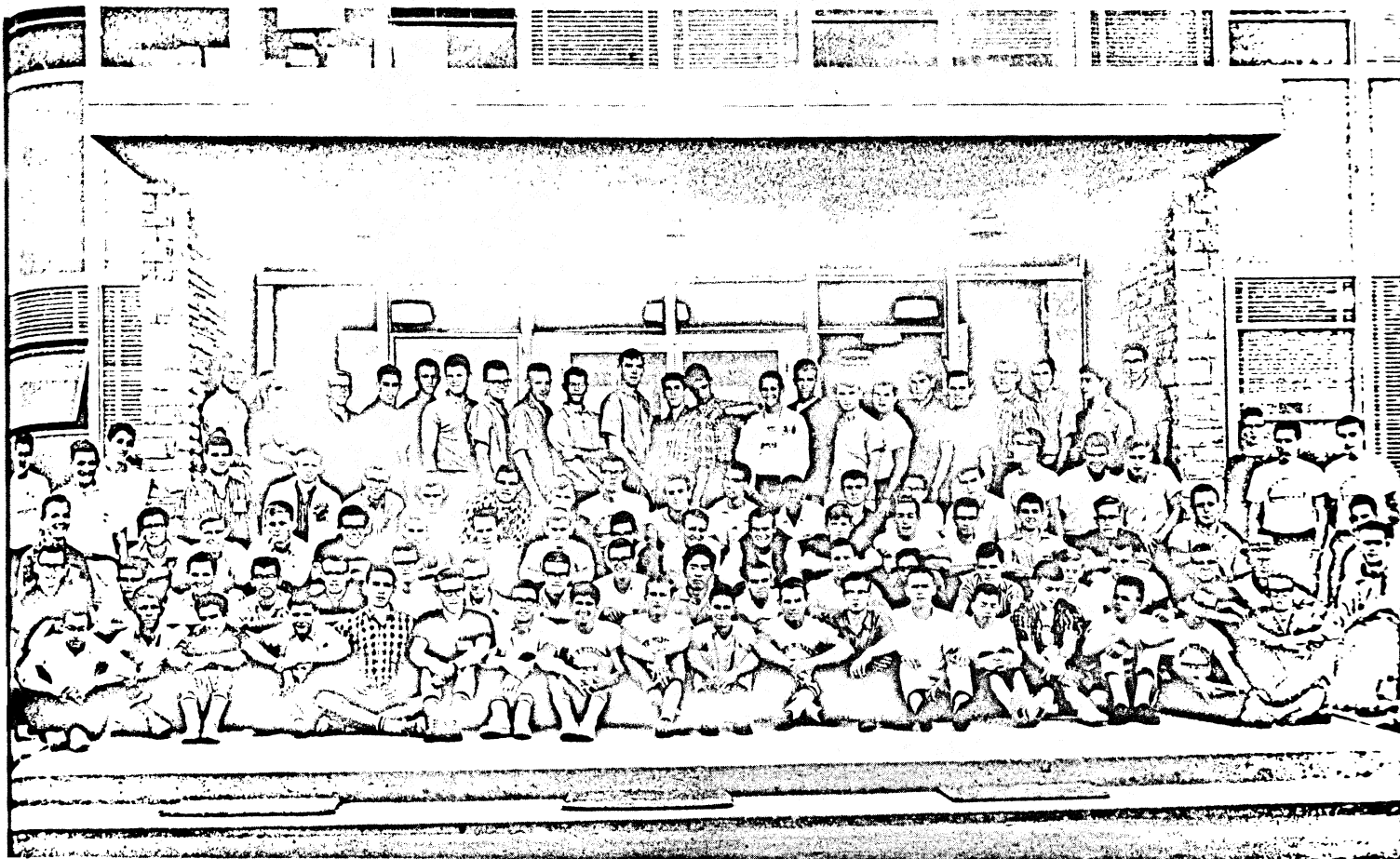


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THE NATIONAL YOUTH SCIENCE CAMP

The NYSC was established as the result of an idea by Mr. Carl Sullivan, executive director of the W. Va. Centennial Commission. Discussion of the idea with other state officials and the governors of all 50 states resulted in a unanimous approval to establish the camp. It was agreed that each state would send two boys, each chosen on the basis of academic proficiency, social maturity, and physical fitness.

The project was given to Dr. Joseph Marsh, president of Concord College and chairman of the Centennial Youth Organization Committee. Dr. Marsh, with the assistance of a representative from each of the universities and colleges in the state, industrial organizations, and astronomy groups, began the detailed planning of camp activities.

Camp Pocahontas, located at Thornwood, was selected because it is close to NRAO, which has a staff of scientists from all over the free world and the largest moveable radio telescope in the world.

Mr. Charles N. Cochran and Mr. Joseph Hutchinson, both of the West Virginia University staff, were named director and assistant director, respectively. They were assisted by ten counselors, all graduate students.

Activities at the camp included sports, arts and crafts, lectures on science and astronomy, a trip to the Washington area and Goddard Space Flight Center, as well as several trips

Continued next page --

Youth Science Camp, Continued

to NRAO where they could observe the various phases of radio astronomy and discuss the techniques involved. The only co-ed event was a chicken bar-b-cue and dance sponsored by the Pocahontas County 4-H Clubs.

Celebrities at the camp included astronaut Scott Carpenter, who lectured on space travel, and Dave Tork, who demonstrated his pole vaulting ability.

The camp opened on June 30 and closed on July 20. It was a memorable three weeks' experience for those who attended as well as for those who contributed their time and effort to make the camp a success. Plans are being made to make such a program an annual event.

The W. Va. Centennial Commission and all those who made the NYSC possible are to be congratulated for a job well done.

We wish to thank Mrs. Eleanor Jean Guthrie, camp coordinator, for her cooperation with the Observer staff.

STAFF IMPRESSIONS OF THE MEMBERS AT THE NATIONAL YOUTH SCIENCE CAMP

Eleven staff members gave science talks at the camp and about 20 summer students and other personnel of the Observatory assisted in tour visits here. We were impressed with the acumen and maturity (average height!) exhibited by the 100 boys. They were obviously selected in each state by legitimate criteria. If these boys are typical of those who become scientists, it would appear that the pattern includes a general high intelligence which is particularly exercised on some specialty by age 18. All of the scientific staff had occasion to be surprised at the unusual knowledge which one or another boy had tucked away. The boys may have been retarded in only one way: 18-year-olds are usually quite jaded in their appreciation of learning as compared with 12-year-olds. The Science Camp boys had all the receptivity of 12-year-olds.

The high school graduates and under graduates at the National Youth Science Camp were impressive in their ability to absorb knowledge. Considering the group as one, talking to it was analogous to throwing rocks in a bottomless pit. Aside from this, the boys seemed to be very normal teenage youths, interested in sports, girls and other matters usually deemed important in this age bracket.

The most striking thing about these "future scientists" was the variations of intelligence and imagination from state to state. The North-Eastern boys were more pushing, apparently better educated technically and otherwise. The South-Eastern contingent (including W. Va.) -- with the exception of a very bright boy from Florida -- appeared to be slower in responding, in questioning and (I would venture) thinking generally. Although I had no contact with Californians or Texans, the West and Mid-West appeared to provide an educational background of the calibre of the N. E. U. S. , but without the general cultural background.

I should stress that these are personal opinions, from the point of view of an ex-teacher, and that the sample was really too small to entitle me to make such generalizations -- but this is only a private communication, so this does not matter.

I was quite impressed by their enthusiasm and interest. During and after my lecture at the camp they asked many good questions (some of them pretty difficult to answer). It was a very nice group of boys and I really enjoyed the discussions I had with them, both at the camp and at the Observatory.

GREEN BANK PUBLIC LIBRARY
for Upper Pocahontas County

All residents of Pocahontas County are invited to an OPEN HOUSE at the newly-opened Green Bank Public Library on Sunday, August 4th from 2:00 to 4:00 PM. The Library is located next to Matheny's store in Green Bank. Refreshments will be served.

While 500 West Virginia Library Commission books have been available to the public since March 1963, the location of the collection was inconvenient. During the past five months, much thought and effort have gone into attempts to locate the Library in a building of its own. When a small cottage became available in Green Bank, a campaign was launched to raise the money necessary for rental and general operating expenses.

Citizens of Upper Pocahontas County have responded with enthusiasm, making flat donations or pledges of \$1 per month for the first year of operation. The Public Library staff attempted to reach as many members of the community as possible and would welcome support from any others willing to contribute. Community organizations will be asked to donate basic library furnishings and reference books (to be acknowledged by dedication plates) or maintenance services.

During the past month, the building was insulated, painted, and shelving was installed. Basic work has been completed and the Library will open in its new location on Wednesday, July 31, with its initial collection of 1000 books available through the auspices of the West Virginia Library Commission. The Library will act as a part of the "Traveling Library Schedule" serving rural communities. In addition to the basic collection of books, 75 new books are added every 3 months with an equal number then returned to the Commission offices. Specific books may be ordered from the Commission for a period of 3 weeks. Also at our disposal is a collection of LP records sent at

our request; these must also be returned within 3 weeks.

As yet, our own collection of books is minute. Any persons willing to donate books to the Library should contact the Library staff. We are pleased that a set of World Book Encyclopedias has already been contributed; other reference books are greatly needed.

The services of the Library staff are on a voluntary basis. Any volunteers willing to contribute time on a regular basis or as emergency replacements should contact: Mrs. R. L. Uphoff, 456-4210 or Mrs. C. M. Wade, 456-4877. Under the present staff, the Green Bank Public Library will be open every Wednesday, 10:00 AM to 12:00 Noon and 1:00 PM to 6:00 PM. With additional help, the Library hours could be extended.

THE OBSERVATORY PICNIC

Since the details of the successful Observatory picnic are still fresh in our minds, it will not be necessary to review them in this article. Instead, let us take this space to thank the many people who made our picnic possible.

In fear that someone's name might be omitted, no attempt will be made to list the names of the many people who helped out in various capacities before, during, and after the picnic. To those people the NRAO-RA members extend their sincerest thanks and appreciation. However, it would be amiss not to single out and mention the names and thank the members of the picnic committee.

The originator of the picnic idea was Bill Meredith. To him must go the credit for pushing the idea through the Board of Directors and seeing the project through to its successful end. As chairman of the picnic committee he was ably assisted on this committee by

PICNIC, Continued

Beaty Sheets, John Gallagher, Bill Horne and Mike Waslo. The results of their efforts speak for themselves. Congratulations for a job well done.

TOURIST TELESCOPE

"Science marches on!" That is the battle cry of this year's summer students as they vigorously attack the project Tour-Tel. Under the (in)competent direction of Wally Oref, great strides are being taken toward completion of Green Bank's answer to the Cass scenic train. Wally strides out of the shack behind Jansky Laboratory, looks around and strides off again. Inspired by this type of positive leadership the students connected receiver and antenna and made several measurements of the sun. Results - about three hundred degrees negative. Needless to say, these results were received with equal coldness by the observers.

Undaunted by this initial failure the students set about rectifying the inconsistencies in their equipment. The solution to the problem seems to have come as the result of the discovery of a discrete radio source. This source will pass through the beam of the antenna anytime the operator discretely pushes a concealed button activating the built-in source. This method is recommended for the larger telescopes since it gives results which are consistent and easily modified to satisfy any explanatory theories.

Another problem the students have encountered is that of interference. In addition to the normal radio interference which abounds at 220 and 30 Mc, there is another breed which emanates from the Electronics Lab. This usually comes in the form of assistance from Jim Dolan, John Hensley, Dewey Ross and a few higher order harmonics. (Just kidding, fellas.)

An additional boost to the project was given by John Plunkett. He had the Tour-Tel trailer painted because it ruined the view from his office window. Your desk doesn't face the window, Jack.

In order to spur the students on to completion of this task Wally has promised to allow them to rebuild Jansky's original telescope for their next project. The majority of student opinion seems to feel that it would be a better idea and far more beneficial to all to rebuild Mr. Oref.

OBSERVATORY WIVES MEETING

The next meeting will be held August 12, 1:30 - 3:30 PM, upstairs lounge of the Residence Hall. Hostesses: Mrs. Bertil Hoglund and Mrs. Bert Hansson.

FISCAL

Much to our surprise we have a long time employee with a new name. Their last name somehow was changed to Purchases. Could Harry clear this matter - huh?

Ed Wilson was surprised by his co-workers on his birthday, July 23, by a cake complete with the inscription "Happy Birthday, Mr. Ed" which was served with Hi-C (not spiked).

Would like to rent semi-tractor trailer. To be used for driver training. Also would like instruction on backing into small spaces.

Apply to anyone in Electronics Division.

LAB GAB

How about that picnic? On the whole from all reports it was an unqualified success. Too bad some of you missed it. The food was very good, cooked to a tee and there was more than enough.

The games and things that go with a Fourth of July picnic were good and all participants agree they had fun. Personally, I haven't enjoyed myself like that for a long time.

It was very nice to formally or informally meet our work-a-day neighbors. People in our company who hardly knew each other finally got to meet, and found out that there are "regular" people all around us.

By the way, at the golfing match the amateurs did well for themselves. Nuff said.

Still lost -- one station wagon mattress and a Sencore tube tester.

Mr. James (Turkey) Oliver is now ably assisting in the Receiver Development Lab. Carl Wooddell says he has never seen a man work like ole Turk (when he can find him).

All in all, it has taken Turkey, Alan Roth and Hermann von Hoerner to replace ole Sarge who has gone on vacation. We hope he is enjoying it basking in the sun and lolling about the shores of the Greenbrier River down there in Marlinton. Oh to belong to the leisure class.

Tis said around in places where gentlemen pass the time of day that Jim Dolan and John Parker are going to use a new secret weapon to go hunting this year. Has JD a M-14 auto rifle - and JP a 5 shot repeater bow?

What I need is a repeater fishing rod. All I've caught this year is one 4-inch blue-gill. I'm inclined to agree with the fisherman who came from afar off, as he carried his wash tub of trout back to his car that night,

"Gee, you people don't have any fish in the streams anymore."

So far not to forget it, I was down talking to Mrs. Edna Kelley (Edna to all her friends) the day of the picnic and found out the low down on the preparations. For a nominal fee Edna did a marvelous job on the chicken and ham. They put in a lot of time and effort, which certainly was not wasted and very much appreciated. Notwithstanding, Edna's Eating Emporium is not only a good place to eat, but reasonable. (Commercial, my own.)

A new motorist has been added to the highway -- Janice Galford "talked" the policeman into giving her an operator's license. Good going, or talking, Janice.

Peck McPherson is still on the sick list. Since his operation he has been recuperating at his home in Cass. Carl Davis has been busy holding down the fort.

Those on the go --

Bert Hansson and Peter Mezger visited Airborne Instruments Lab and Jasik Labs July 15-16 to discuss the Jasik feed, etc.

Arthur Shalloway visited Ortho Industries in Newark, N. J. in connection with the autocorrelation receiver.

Hein Hvatum, Nigel Keen, Bob Burns and Cam Wade visited ITT Labs, Nutley, N. J. in connection with the 85-foot interferometer.

CONGRATULATIONS! Bill and Rose Kuhlken reached the 20-year mark. If she could stand him, there must have been some good in him.

Welcome to Hermann von Hoerner, who has been dubbed "Old German" by the Lab Initiation Committee. Hermann says he likes the USA o.k.

NRAORA - LIABILITY OR ASSET

The following article was contributed by a member of the NRAORA Board of Directors.

In the November issue of The Observer of last year, we will recall an article entitled "NRAORA - Asset or Liability" from which I quote:

"Getting down to a problem on hand - team selection. Are the values for winning regarded so high that enjoyable participation is impossible for the mediocre ball players? The spirit of competition seems to stem from the competitive attitudes of the team captains, players who have competed for blood during their youthful careers, and much emphasis being placed on team standings and individual honors. Grudges, according to Webster, are cherished ill wills and envy or maliced feelings. How can we present these feelings by having the same team year in and year out? Recruiting practices, accompanied with this attitude, are impossible to believe or allow."

It seems to me that the mediocre player as was stated in this article was capable of enjoying the spirit of competition to the extent of having enough players to participate in regular league games. During the softball season of last year, each team consisting of the same members, only two games were forfeited as a result of nonparticipating members.

In starting the new basketball season each captain was allowed to retain five players from his team of the previous year. From this point, a list of persons wishing to participate in this basketball season was obtained and the team captains continued to draw players from this list. As a result of this shuffle, several basketball games were played starting with five players and ending with less than a full team. The season ended with the four teams very even in their standings, a very competitive spirit, and no "cherished ill wills, envy, or maliced feelings" as was suggested would exist in the November article.

At the beginning of the softball season of this year, objections of the previous "recruiting practices" were taken into consideration, and a list was obtained of all members of the Recreation Club wishing to participate in this season's games. Four new captains and, in my estimation, very capable ones, were chosen and teams composed from this list. To date, however, a regular game has not been played with each team having a total of nine players each, out of an approximate sixty players. What has happened to our spirit of competition, when it is impossible to engage 18 players to compete in the game of softball? ~~It is~~ possible that our new system of recruiting players has given our softball league a better cooperative and competitive spirit when on July 25 two teams were scheduled to play and not one person was interested enough to rally to the meet? Our softball league has apparently gone down the drain, so to speak. Again I quote: "recruiting practices, accompanied with this attitude, are impossible to believe or allow."

A French family from Paris, France, friends of M. Waslo, after an exciting tour of the Observatory were taken to the cafeteria for rest and refreshments. Of course, the cafeteria restroom was used by the French mother and daughter and upon returning to the table area the fragrance surrounding them drove others in the group, including M. Waslo, to the open windows and doors.

In the restroom their thinking was that the American custom is perfume provided, so the mother and daughter sprayed each others hair well. The perfume provided was "bathroom deoderant".

In last month's Observer Yervant Terzian, graduate student, was stated to be working on thesis for M. S. He is working on his Ph. D.

140-FOOT TELESCOPE

The declination gear girder was assembled on the ground and raised to position on the superstructure.

The declination shaft was loaded at Sun Shipbuilding and Dry Dock Co. in Chester, Penna. last week and was shipped from the plant on Sunday, July 21st. Arrival of the shaft is expected within the next few days at Bartow. This shaft is 67 feet long and weighs approximately 45 tons. It will be trucked from Bartow to the Project by Burns Motor Freight. When this shaft is placed into position in the superstructure, Pacific Crane and Rigging Co. will have all the remainder of work on the superstructure opened up for them.

Peter Good allowed project personnel to have a sneak preview of preliminary film footage he has made for the 140'. The film was very good except that some of the personalities will have to be limited in the time of their performances.

Mr. Ralston and Mr. Good of AUI, Mr. Ponsford and Mr. Warren of S&W and Mr. Martin, Mr. Shannahan and Mr. White of PC&R were at Sun Shipbuilding & Dry Dock Co. on the 23rd inspecting the assembled yoke and counterweight sections.

The project was visited during the month by personnel of the Naval Research Laboratory including Mr. James H. Trexler (the first individual to have his voice transmitted through space, reflected from the surface of the moon and received back on earth), Mr. Austin Youmans and others. Mr. Trexler is one of the founding fathers of the ill-fated 600-foot telescope at Sugar Grove.

Incidentally, during the viewing of Mr. Good's film, some personnel were viewed in a strange but rapid fashion of descending the ladder at the 300-foot telescope.

DR. DRAKE will go on leave of absence in early September to take up the position of Chief, Lunar and Planetary Sciences Section at the Jet Propulsion Laboratory of the California Institute of Technology in Pasadena. The Lunar and Planetary Sciences Section consists of about 45 scientists, including geologists and astronomers, who study the solar system by means of laboratory experiments, and through use of the radio telescopes at Goldstone, California, and the optical and millimeter wave telescopes at Table Mountain, near Wrightwood, California.

SMART PARTS FROM GRAPHIC ARTS

Frank Wilkins from the "Gazette" and Roy Wheeler from the "Daily Mail" out of Charleston were guests of the department on July 16 and 17, while covering the Scott Carpenter visit to the Youth Science Camp. Pictures taken by them were processed with our facilities and relayed to their home papers by the AP wire photo machine, which is a process of sending a picture via the telephone -- and it actually works.

Gene Crist's wife and baby returned from Akron, Ohio Children's Hospital on July 4 after a successful minor operation to baby Lorie Ann. Glad all is well again.

Ronnie Monk is progressing slowly but surely with his new house. If you are looking for a way to spend your free time -- all help will be appreciated.

There was an old woman who lived in a shoe Pheww!

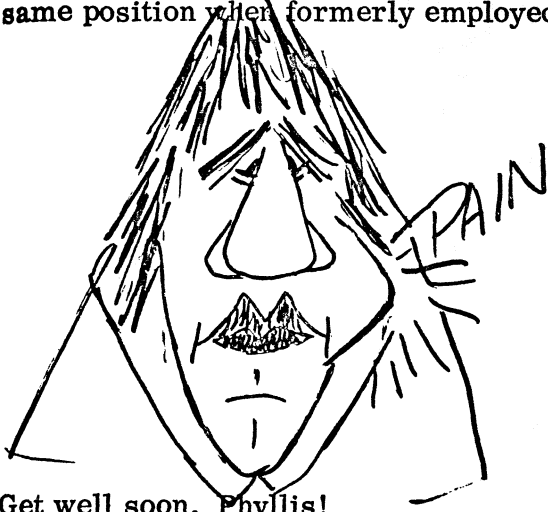
IMPROVEMENT TO THE BATS CONTRIBUTION

The "Haystack" space surveillance radar now near the test status -- experts claim they can detect an object the size of a dime, 1,000 miles in space with this system.

BUSINESS MANAGEMENT

In case you have been wondering who the good looking young man is down in "Sis" Michael's office - well, here is the dope. His name is Carl Kuehnert. His fair lady goes by the name of Elizabeth Jean. Mr. and Mrs. Kuehnert are the parents of two children, namely, David, age 4 months (and by the way weighs 18 pounds and his Dad says, 'Boy, he is a bouncer!'), and Elizabeth Ann, age 2 1/2 years. The Kuehnerts are natives of Ravenswood and are now residing in the Raymond Gibson property at Huntersville.

Who is the new switchboard operator? She is Mrs. Tom (Shirley) Carpenter. Shirley is really just "back home", she having held the same position when formerly employed.



Get well soon, Phyllis!

BIRTHDAYS -- AUGUST

1	John Matheny
3	Dick Bird
3	Verna Tracey
5	Dewey Ross
9	Jim Elliott
13	Rebecca Cassell
17	Charles Puffenbarger
19	Henry Taylor
21	Lake Sipe
21	William Terrell
23	Phyllis Jackson
24	Phyllis Rader
30	Wally Oref

WORKS AREA

Neil Horner is going on a fishing vacation the first part of August??

Mrs. Connie Phillips is now working at the Works Area Building.

Summer Students employed at the Works Area: Larry Sutton, WVU; Bill Sheet, WVU; Hugh Jackson, Glenville; Eugene Davis, Glenville; Mike Coleman, W. Va. Tech; and James Galford, WVU.

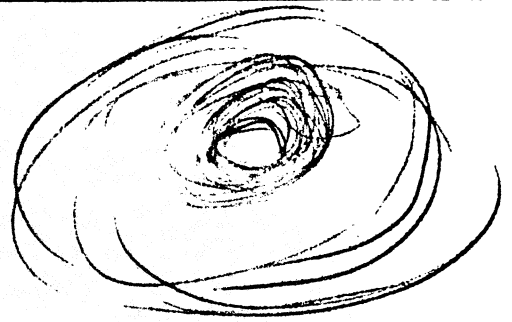
FOR SALE --

A breakfast set. See or call Basil Gum.

Norge refrigerator in excellent condition. Pushbutton defrost. \$85.

Kenmore washer, noisy, but washes. \$35.

Both available about September 6.
See F. D. Drake



...Where do you listen to it?

