

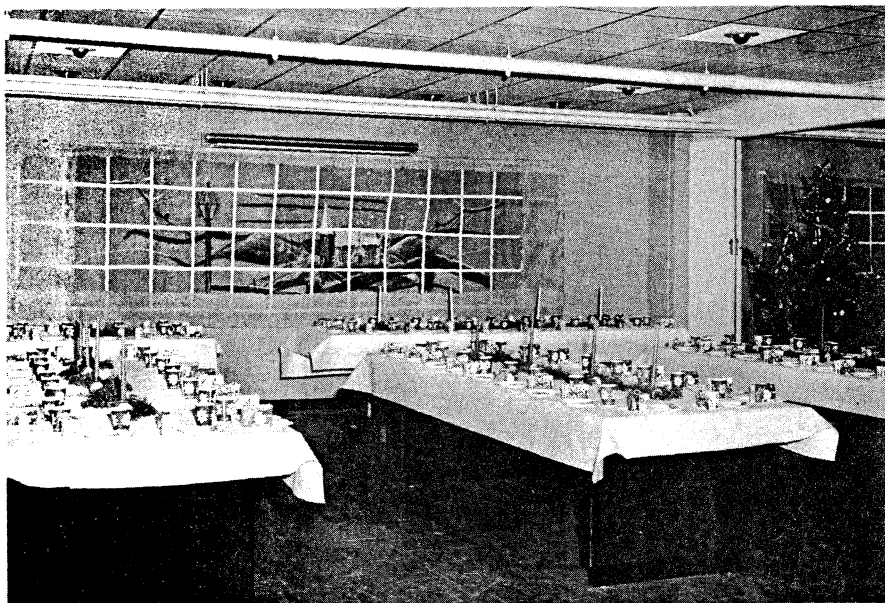
The O B S E R V E R

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CHILDRENS' CHRISTMAS PARTY

Kiddies' Christmas Party

The Observatory children were delighted with gifts, treats, film, and the visit of Santa Claus on Friday evening, Dec. 21, at the annual Children's Christmas Party held in the beautifully decorated conference room.

The film "The Spirit of Christmas" presented the world's two most beautiful Christmas stories -- "The Nativity" from the Holy Bible and "The Night Before Christmas" by Clement Clark Moore. This film features the Mabel Beaton Marionettes.

Santa's entrance was greeted with cheers, tears, and glistening eyes for this is the jolly gentleman the kiddies had waited anxiously to see, hear his huskey ho! ho! ho's!, and await the gift he had for them. Upon his lap these kiddies sat placing their orders for toys and other gifts they wished to have on Christmas Day.

The children's thanks to --

- Santa, who did a wonderful job in his bright red fur-trimmed suit.
- Russell Clarkson for a job well done.
- The chalk drawings on the two large boards which were drawn by Bill Warner.
- Everyone who helped in their small way decorating, assisting, supplying cookies, etc., and the task of cleaning up.
- Odell Johnson for the beautiful tree.

This party is sponsored by the NRACRA for the children of all NRAC employees.

NRACRA New Year's Dance

Saturday, Dec. 19, the NRAC Recreation Association held its annual dance in the basement conference room.

The room was decorated Friday night and Saturday afternoon by a group of volunteers who learned that there is work involved when you have a party. I think they will all agree it was worth it.

The crowd began arriving before 9 PM and despite the adverse weather conditions the attendance was better than we expected. Approximately 145 were present.

Due to the hazardous road conditions, 8 members of the orchestra were unable to be here. One member, who played an electric piano, and Carolyn St. Clair, vocalist, furnished the entertainment, along with Neil Horner and his guitar.

It appeared that everyone enjoyed the party even though we were a little short on music.

There is a possibility that we might be able to form a dance band by NRAC employees. If there is a drummer and accordian or piano player around we might have the problem solved. Anyone who might be interested should call or see Teo. Satta.

Should you see a strange hat wandering around the premises, call John Gallagher; his friend misplaced one.

A HAPPY NEW YEAR TO YOU FROM
NRACRA AND THE OBSERVER STAFF.

Controversial Subject

The controversial subject last month, NRACRA - Asset or Liability, brought various remarks from NRACRA members. These remarks ranged from words that were unprintable to "very good," "well written," and "true." Even though it was discussed and "cussed" a great deal we did not receive a written reply to the article.

I feel that the article had several good points; however, in reference to the basketball situation, I feel that one very important point was omitted.

A poll was taken of participating members and a majority voted to accept the present method of choosing teams. This method was also approved by the Men's Activities Committee. Is it not the duty of this committee and NRACRA Board of Directors to conform to the majority as it has done in this case??

There was some criticism to the suggestion that we hope to publish articles of the controversial nature, such as the one referred to above. Those who opposed such articles feel this isn't the purpose of the Observer. I agree that this is not the primary purpose for our paper; however, I feel that it can be beneficial in a number of ways. Or, to quote a member of the Electronics Division, "It will allow us to see ourselves as others see us."

One useful function of such articles is to give NRACRA members and NRAC employees a chance to express their views and feelings on various problems and subjects. This does not mean that you're confined to

subjects pertaining only to NRACRA. There is a possibility that you might encounter problems while performing your normal duties, which if brought out and corrected might save NRAC not only time and money but would build morale, thus increasing the amount and quality of your work. Maybe we will never achieve the state of "one big happy family," but there is a possibility for improvement.

We would like to hear your verbal, or preferably your written, comments on this matter. THIS IS YOUR PAPER, so please give us some indication as to what you like to see in print.

Permission has been granted to install a news and suggestion box in the vicinity of the vending machines. We hope to have it installed by January 15.

The Editor.

This card came addressed to no one in particular and was unsigned with no return address. Postmark, Phoenix, Arizona, December 18, 1962.

"The study of the rotation of the Earth is the main big draw back in astronomy. In all books rotation is supposed to be right.

"Now rotation could be a milestone to Science. It means that stars, the sun and moon orbit the Earth. Star trails on the poles caused by the rotation of the sky.

"Hipparchus an ancient Greek Astronomer was near right.

"The Earth can not possibly rotate or orbit over size and tonnage alone and is a still, non rotating, natural Earth."

NRAC Hosts American Astronomical Society Meeting

The NRAC was host to the American Astronomical Society which held its regular meeting at the Greenbrier Hotel, White Sulphur Springs, and the National Radio Astronomy Observatory on December 27, 28 and 29. This is the first visit of the Society to Green Bank.

Most of the scientists who attended the meeting were from Canada, Mexico and the USA.

Many NRAC staff members delivered papers at the meeting. Their papers dealt mainly with results obtained from 300-foot observations.

A part of the regular meeting was a complete tour of the facilities and radio telescopes at Green Bank on Friday, Dec. 28. Approximately one hundred fifty members made the tour.

85-foot Telescope

After an unsuccessful deer season all are busily back at work. Oh well next year.

Dick E. still has been unable to test his skill with the bow. Keep trying, Dick, we are still looking forward to a deer steak.

Just in passing we know now why the Japanese lost the war.

The TC groups wish to welcome Bill Terrell to the fold and hope he and family enjoy living at Cass.

A front-end unit designed and built by Joe Carter is now in use on the 85' and

we understand is giving very good results. Congratulations, Joe, for a job well done. This unit is being used with the standard NRAC receiver at 1400 mc to measure polarization effects of Jupiter by Bruce Gary of the Naval Research Lab. Bruce will be with us until about January 1st.

The Instrument Corporation of Florida is making a survey of the 85' and 300' telescope reflector surfaces for the purposes of determining variations of the surfaces from a true paraboloid when the scopes are positioned at various positions. The method used is based on analytical stereophotogrammetry and will require both ground and aerial photographs made from a helicopter. A sizeable number of targets were fabricated in the machine shop and installed on the telescopes by NRAC people. About one week, depending on the weather, will be required for the completion of the on site work.

DTM is once again using the 300-foot scope with their very unique tracking feed and will remain at the Observatory until January 14, 1963.

Mr. Lanty Watson, formerly employed at the 140' telescope, won the Channel Master transistor radio which Carl Davis raffled off. Carl is selling chances on a J. C. Higgins, Model 20, 12 gauge shotgun. The proceeds from both items will be applied to the purchase of uniforms for the basketball teams. Your support will be greatly appreciated.

From M. T. Waslo, Interference Therapist

During the past few months you may have noticed a Navy truck in the vicinity of the Reber Dish and at other points on the Observatory grounds. It is equipped with electronic and communications equipment and other associated gear making it in a sense a portable electronics laboratory. This vehicle under the supervision of Mr. Archer L. Graves and Virgil R. Homan (civilians employed by the Navy at Sugar Grove) participated in a Path Loss Measurement Program for Dr. Findlay.

This program consisted of the transmission of signals in the 300 mc - 1 Kmc spectrum from points near the Reber Dish and 140' site beamed towards Sugar Grove where the 66' dish was used as the receiving antenna. Part of this program found the Reber Dish being used as the transmitting antenna.

During these transmissions from NRAC-NERS, Gay Wooddell in an Observatory vehicle equipped as a portable receiving station monitored and made measurements from points on the Allegheny Mountain.

Another phase of this Path Loss Measurement Program consisted of measurements of transmissions from points north, south, and west of the Observatory, received and recorded by the Reber Dish and its associated equipment. Gay Wooddell, who has the knowledge of accessibility to some of the remotest points (he can place you in Siberia and in the same breath say this is Cheat) directed and placed the Navy Mobile Truck at points selected. Measurements were made from Frost, Cass, Wanless,

Bald Knob on Cheat, Glaty Fork, Valley Head, and Durbin.

This program will continue with weather permitting, etc., with an attempt to put 10 cm across from NERS-NRAC, says Waslo who is supervising this and other projects at the Reber Dish.

From the 140' Howard Lambert reports that the local bird stuffer is still in the process of stuffing a bird for him. Howard gave him this bird in very early November and says he didn't realize it took so long to stuff a bird. He's particularly interested in getting the bird back since it was, and still is, the only Ring Neck Pheasant that he has ever seen in the wilds of Pendleton County, W. Va.

Killing this bird was just one of a few interesting things that have happened to Howard since coming to work at NRAC. On Wednesday, December 12, he discovered, quite unexpectedly and to his surprise, that a 60 Falcon can be adapted to hedge trimming. Another car ahead of him also trimmed a part of the hedge. Howard regrets that he was unable to positively identify the car and driver. Forgetful Cuss, ain't he?

Have you seen the basement conference room since the decorations have been put up? Congratulations to Bill Warner who did the scene with chalk.

Lab Gab

The partitions for the north side of the lab are being installed. The rumor which circulated last month that there would be a contest for best window display turned out to be only a rumor. The group from the Low Noise Lab were the only ones to make a display.

Jim Dolan was hopeful, as he left home the first day of deer season, that he would see the largest buck in Pocahontas County. What Jim didn't know was that before 8 a.m. he would be "charged" by one of the most ferocious deer anywhere in the world. As he sat in wait, there came a crushing sound from the brush. As the brush parted he was face to face (well, almost) with what looked like a deer but traveled like a bullet. Four rounds from his 308 failed to slow him down. At this point he became quite disgusted because he had fired his last round. We hear that next year he plans to take a case of ammo and stay all week.

Carl Davis was the only one to bag a buck. Someone said Santa brought him a new electric fry pan to cook it in.

Have you seen the new supply room layout? I think congratulations are in order for Peck and John Hensley for a job well done.

Joe Carter and Bill Lowman have returned to Georgia Tech. Their alternates, Alan Roth and James Fensinger, will arrive Jan. 2.

WANTED -- One good carburetor mechanic. See Bob Aldridge.

National Rifle Association

There has been some interest expressed in forming a National Rifle Association club. If 5 or more people want to join the NRA, we can organize such a club. This will cost each NRA member \$4 per year, instead of the \$5 per year for an individual membership. This membership fee entitles the member to a subscription to the American Rifleman magazine which, if purchased monthly, would cost \$6 per year. The American Rifleman is generally recognized as an authority in the science of ballistics and anything related to guns and ammunition.

Further benefits are guaranteed, answers to any questions about guns, ammunition, shooting matches, etc., and the privilege of purchasing military surplus weapons from the Department of Civilian Marksmanship. These weapons include the 1903 A3 Springfield and the Cal. 45 automatic pistol.

Interested people may see T. F. Zatta.

FOR SALE -- One slightly used fiddle.
See Basil Gumn.

FOR RENT -- a 60 x 10 house trailer, three bedrooms, one and one-half bath, located in Green Bank. See or call Ed Gardner.

Reloading

Why reload your own ammunition? This is a question which many people may be asking themselves. One answer at the top of the list is economy. A reload costs from 1/2 to 1/3 of a "store bought" cartridge. Another good reason is quality. A carefully and properly reloaded cartridge is far superior to commercially manufactured ammunition. The best answer, perhaps, is the enjoyment one gets from shooting an exceptionally good group with "home made" ammunition.

The process of reloading is basically quite simple. The empty case is decapped (fired primer removed), resized, primed (new primer inserted), charged (loaded with powder), and topped with a bullet. The subtleties, however, are varied and extensive. Each small arm is unique, and even rifles of the same manufacture with consecutive serial numbers may be diverse in their handling of a particular load.

For the utmost in accuracy it is, therefore, necessary to tailor-make a load for each individual gun. There are many reloading manuals available, giving all the pertinent information required. The two things most important to the reloader are velocity and breech pressure. It is necessary to know the expected muzzle velocity in order to calculate trajectory and energy, and the pressure is needed for reasons of safety. There is a maximum allowable for a particular kind of action which should never be exceeded.

Excessive pressure is manifest in several ways, the most serious being an exploded gun with possible injury to the shooter.

An examination of the fired case may also show whether pressure is too high.

The minimum, average, and maximum weights of a particular type of powder for a particular bullet weight are usually given in a good reloading manual. The reloader is cautioned to approach the maximum load slowly and judiciously.

As a general rule, the best accuracy is realized at lower breech pressures and therefore lower velocities than the maximum allowed. However, flatness of trajectory is sacrificed

At present, the reloading equipment is located in an upstairs room of the Arbogast house. The NRACRA is equipped to reload most of the popular calibers and many off-beam sizes. For a key to the room see John Hensley.

Men's Activities - Basketball

Basketball season is now under way with a couple of games played already. Team standing and player points will be posted soon.

Basketball uniforms have been ordered and will be delivered in a couple weeks. Team captions will issue uniforms at the gym, before each game.

First games played Dec. 13 looked very good, with one minor exception -- more players are needed. For example, the Red Raiders had only four players, the Brown Bombers had five players. It may be possible to make five teams, but

Continued --

Men's Activities (continued)

the four teams will have to drag out more players before they can play a good game.

Starting Dec. 18 a small charge of approximately 10 cents will be charged to players and visitors. This charge will be strictly voluntary and will go to pay for uniforms and custodian services at the school.

This season we are playing non-competitive basketball one night a week, and competitive basketball one night a week.

Tuesday night is set aside for fun night, and Thursday night is blood night. Every member having any desire to play basketball this season can do so. This plan, and all basketball planning, is being done by the Men's Activities. These five men were selected or approved by the President of the Board of Directors of NEACRA.

Employee Birthdates -- January

4	Dale Cassell
13	Jamie Chests
14	Russell Clarkson
17	Bob Aldridge
18	David Hogg
24	Sidney Smith
28	Bill Meredith
28	Mike Waslo
30	John Rafer

New Employees

Higel Keen, Basic Research Group; Frank Eash, Norma Simmons, and Donald Crum, Scientific Services Division; Thomas

Williams, Engineering Division; and Melvin Groves, Plant Maintenance. Ellis Remsburg has returned to VIF and Al Braun, alternate, has arrived.

Introduction to Archery by The Old Bow Hunter

The king of sports today is archery, according to the National Association of Sporting Goods Dealers; it is also the fastest growing sport in the nation. Those of you who've already had the thrill of releasing an arrow to watch it speed with terrific force deep into the target will understand the reason for such popularity. Others among you who have not yet had this experience, will also get the "bug" the moment you lift your first bow for sighting. Archery not only get you out into the woods and fields, but it is in the great American tradition of Clean Competition. It is a perfect family sport, since it is inexpensive and equipment can be bought or made that will suit the strength of each person, from Dad and Mom down to the small fry. And for hunting, a bow is more sporting than any other weapon. It also requires more skill, kills cleaner and gives the hunter a greater sense of achievement. Conservation authorities widely acclaim bow-hunting during the past four years has been a 400 percent increase in the issuance of bow-hunting licenses. The steps are simple; first, learn to use a bow on plain targets; then try field archery to acquire woodsmanship; finally with your acquired skill, go bow-hunting for the thrill of your life.

WHAT WILL IT BE IN SIXTY-THREE?

For twenty centuries in line,
The Christians have recorded time;
But long before, man must have viewed
In each year's dawn, a chance renewed.

Depressed by some year's give and take,
Man must have glimpsed that in her wake;
A better day, a brighter way
Would start for him on New Years Day.

It's not naive, just common sense,
To take encouragement, and hence;
No matter what the old year gave
You're now its master, not its slave.

Now that old year is gone for keeps,
And no one mourns and no one weeps;
The new one has so much in store,
We'll think of Sixty-two no more.

'Cause good or bad, as years can be,
You've got a chance in Sixty-three;
To dream more nobly, try anew,
With twelve bright months to see you through.

So put aside psychotic fears,
Discard them with the bygone years;
We're starting out a brand new race,
And you perchance may take first place.

Who knows, save you, the dreams inside,
Which never blossomed, though you've tried;
Here's now your chance, pass not it by,
'Cause win you can't, unless you try.

Enough of rhyming, let's get out,
To make this year the best one yet;
If this sounds hopeful, almost too;
It's only said because it's true.

HAPPY NEW YEAR !

A. H. Cynous

IRAC Holidays for 1963

The following is a list of the holidays which will be observed by IRAC employees during the calendar year 1963:

Tuesday	January 1	New Year's Day
Friday	February 22	Washington's Birthday
Thursday	May 30	Memorial Day
Thursday	July 4	Independence Day
Friday	July 5	* Holiday
Monday	September 2	Labor Day
Thursday	November 28	Thanksgiving Day
Friday	November 29	* Holiday
Tuesday	December 24	Half Holiday
Wednesday	December 25	Christmas

* Additional Holidays.

