

# The O B S E R V E R

Vol. 3, No. 3

January 31, 1964

*No December issue*



1964 BASKETBALL

Peter Good  
Editor

Articles by:

Ron Kert

Dick Bird

Richard Grabe

Cub Reporters for the Month:

Sidney Smith  
Linda Ervin  
Carl Davis  
Bill Kuhlken  
Harry Wooddell

Howard Lambert  
Tom Hawkins  
Norma Brockway  
Marvin Dejong  
Tony Miano

Typist: I. Michael

Photography & Printing by:  
Vincent Scott & Company

---

A Man's Home is His Cassell?  
by  
Ronald E. Kert

Despite the fine play of three of the four NRAO Cassells, Tony Hamed's Yellow Team succumbed to Mike Waslo's Red Team by a score of 56-46, Friday, December 20, 1963, - the first game of the season. In his first appearance of the 1963-64 season, Brown Cassell scored 19 points, 9 of which were foul shots, the first six being made consecutively. Cassell No. 2 (6'-00" John) surprised everyone as he matched 6' 6" Bill Lowman's jumps on his way to 11 points. Cassell No. 3 (Del) played another fine all-around game as he earned 8 points.

Bill Lowman's favorite number must be 13. In the first game of the season he scored 13 points. In the second game (his last until he returns from Georgia Tech), he scored 13 points in each half for a total of 26 points. Because of difficulty at the foul line (4 for 13) he failed to become the first 30 point scorer of the season, although in scoring 26 points he established himself as the first 20 point man. Tom Carpenter had another great night as he scored 12 points, at least 8 of which were on field goals from more than 25 feet from the basket.

Box Score: Reds 56 - Yellows 46

In the second game, Cassell No. 4 (Chester, that is), so as not to be forgotten in the Cassell hassel, scored 18 points as his team (Green) defeated the Blue Team 55-44. Lennie Howell contributed 14 points to the victor's cause and Dick Bird was quite effective while scoring 9.

Ronnie Monk deposited 19 points through the hoops and Tony Byrd displayed fine shooting and ball control in his first showing of the season and should prove to be one of the league's better play-makers.

Box Score: Greens 55 - Blues 44

NRAORA Basketball Predictions  
by  
Ronald E. Kert

Final Standings:

1. YELLOW (Tony Hamed, Head Coach) .667 win-loss percentage  
Key Players: Brown Cassell, John Cassell, Dell Cassell, Jerry Shears.
2. RED (Mike Waslo, Head Coach) .584 win-loss percentage  
Key Players: Lowman-Leach, John Ralston, Tom Carpenter
3. BLUE (Gene Crist, Head Coach), .416 win-loss percentage  
Key Players: Ronnie Monk, Arnold Davidson, Bill Vrable
4. GREEN (Bernie Pasternak, Head Coach) .333 win-loss percentage  
Key Players: Lennie Howell, Carl Davis, Dick Bird.

If all the key players perform as well as they did last year, my predictions should be fairly accurate.

Offensive Listing:

1. Yellow (Top Man - Brown Cassell);
2. Red (Top Man - Lowman-Leach);
3. Blue (Top Man - Ronnie Monk);
4. Green (Top Man - Lennie Howell).

Defensive Listing:

1. Red (Top Men - Lowman-Leach, Tom Carpenter);
2. Yellow (Top Men - Brown Cassell, John Cassell);
3. Blue (Top Men - Ronnie Monk, Arnold Davidson);
4. Green (Top Men - Lennie Howell and Carl Davis).

Note: All the ratings appearing above were determined by a system of mathematical probability which is not shown here because it would have no real interest for basketball fans.

(Continued)

Highest Individual Scoring Averages

C. Cassell . . . . .	19.0
B. Cassell . . . . .	18.0
R. Monk . . . . .	16.8
J. Cassell . . . . .	16.6
L. Howell . . . . .	16.0

The NRAORA basketball league is progressing very well again this year. Competition is strong and the teams are evenly matched as the following standings indicate.

	<u>Win</u>	<u>Loss</u>	<u>Total</u>
Blue	4	1	4-1
Red	2	3	2-3
Green	2	3	2-3
Yellow	2	3	2-3

EDITORIAL

More great feature length motion pictures are on their way to the Monday night NRAORA movies. If you thought "Love in the Afternoon" or "Picnic" was entertaining, then wait until you see the list of the new features now ordered. Each, in some way, is a film masterpiece in itself. Comedy, thrills, suspense, action, romance - are just some of the different elements that comprise these film classics. You'll see Jimmy Stewart in "Anatomy of a Murder", Humphrey Bogart in "Caine Mutiny", Marx Brothers in "A Night at the Opera", and such stars as Paul Muni, Cary Grant, Van Johnson, Mel Ferrer, Kirk Douglas, Audrey Hepburn, William Holden, Raymond Massey, and Zazu Pitts in some of their greatest roles. So, as you can see, we at the NRAO are really presenting top notch stuff. Don't miss out on some of these never-before-seen motion pictures in this area.

Peter B. Good  
Editor

Weathering Heights

Low January 15 -15°  
High January 3 +58°  
January 20, 1964 winds hit up to 85 mph!

Forecast: cloudy, more snow, more below zero and on the 8th of February it will hit -20°f.

-----  
Dr. D. S. Heeschen  
Director  
NRAO

Dr. D. S. Heeschen, Director of the National Radio Astronomy Observatory, Green Bank, West Virginia, received an appointment as an astronomer at NRAO in 1956. Later he became Chairman of the Astronomy Department, NSF; Acting Director of the Observatory; and was appointed Director of the Observatory on October 19, 1962. Prior to his service with the NRAO,

Dr. Heeschen was an instructor at Wesleyan University, Middletown, Connecticut, 1954-55, and a Lecturer and Research Associate at Harvard, 1955-56.

A native of Davenport, Iowa, Dr. Heeschen was born March 12, 1926. He received his bachelor of science degree in Engineering Physics from the same institution in 1951. He was awarded his doctorate in Astronomy at Harvard in 1954.

Dr. Heeschen is a member of the American Astronomical Society, International Astronomical Union, International Scientific Radio Union and Sigma Xi. With special research interests in galactic structure, galaxies, and radio sources, he has had many articles and reviews published.

At the present time, Dr. and Mrs. Heeschen and their three children, Lisa 12, David 7, and Richard 1, reside in Green Bank, West Virginia.

Ervin - Mullenax

On Saturday, December 21, 1963, Miss Linda Catherine Mullenax, daughter of Mr. and Mrs. Stanley Mullenax, of Durbin, became the bride of Martin William Ervine, also of Durbin.

The double ring ceremony was read by the Rev. Parker Perkins, of Warm Springs, Virginia.

Mrs. Ervin is a 1960 graduate of Green Bank High School. She is now employed as a typist at the National Radio Astronomy Observatory at Green Bank.

Mr. Ervin is a 1959 graduate of Green Bank High School. He is now with the U. S. Army station at Fort Knox, Kentucky.

Barkley - Osiecki

Mr. and Mrs. Clifford Barkley, of Cass, announce the marriage of their daughter, Catherine Louise, to Anthony Andrew Osiecki, Jr., son of Mrs. Mary Ostrowski and the late Anthony Andrew Osiecki, of Erie, Pennsylvania, on November 30, 1963, in the St. Thomas More, Roman Catholic Church, in Washington, D. C.

A reception followed immediately after the ceremony at the Officer's Club, of Bolling Air Force Base in Washington.

The couple will reside in Washington, D. C.

CHILDREN'S CHRISTMAS PARTY PICTURES

Several persons have requested pictures of the Children's Christmas Party. Any one interested in securing either or both of two poses can see them displayed in the upstairs lounge of the Laboratory Building and the other in the Works Area. Pictures are 50¢ per print. Check with Harry Wooddell for further details.

BIRTHDAYS - FEBRUARY

10	Ronald Monk
14	Jim Simmons
15	Bill Horne
16	Fred Cole
19	Carl Wooddell
19	Norma Brockway
25	O. G. Barr
28	T. R. Riffe
29	John Parker

TRUTHFUL BITS OF PHILOSOPHY

Learn to "Let Go"  
If you want to be healthy morally,

and physically, just LET GO. Let go of the little annoyances of everyday life, the irritations and the petty vexations that cross your path daily. Don't take them up, nurse them, pet them, and brood over them. They are not worth while. Let them go.

That little hurt you got from your friend. Perhaps it wasn't intended, perhaps it was, but never mind, let it go. Refuse to think about it.

Let go that feeling of hatred you have for another, the jealousy, the envy, the malice, let go all such thoughts. Sweep them out of your mind, and you will be surprised what a cleansing and rejuvenating effect it will have upon you, both physically and mentally. Let them all go; you house them at deadly risk.

But the big troubles, the bitter disappointments, the deep wrongs, and the heartbreaking sorrows, tragedies of life, what about them? Why just let them go, too. Drop them, softly maybe, but surely. Put away all regret and bitterness, and let sorrow be only a softening influence. Yes, let them go, too, and make the most of the future.

Then, that little pet ailment you have been hanging on to and talking about, LET IT GO. It will be a good riddance. You have treated it royally, but abandon it; let it go. Talk about health instead, and health will come. Quit nursing that pet ailment and let it go.

It is not hard after once you get used to the habit of it--letting go of these things. You will find it such an easy way to get rid of the things that mar and embitter life that you will enjoy letting them go. You will find the world such a beautiful place. You will find it beautiful because you will be free to enjoy it--free in mind and body.

Learn to let go. As you value health of body and peace of mind, let go--just simply LET GO.

The greatest factor in helping us to "Let Go"

is to see with the eye of faith that God permits--if He does not will--these daily, nay hourly, annoyances. If we look at them in the light of eternity, we shall profit by them in this life and in the life to come.

#### POCKET BILLIARD TOURNEY

Due to the interest shown in pocket billiards, we are going to hold a tournament beginning the first week in February.

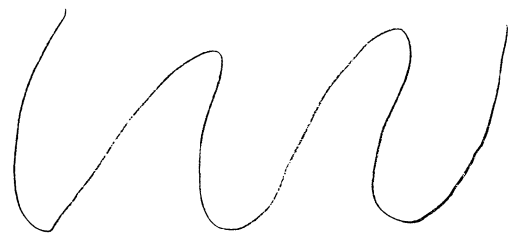
Any NRAORA member (male or female) may participate in this tournament. There will be no entry fee; all you have to do to enter is sign your name on entry blank posted on bulletin boards.

Games will be played after 4:30 PM at the convenience of the players.

Prizes will be given to the champion and runner-up.

Entry time closes January 31, 1964.

#### GRADUATE STUDENT PROGRESS REPORT



Respectfully Submitted:

Yervant  
Bob  
Marv.

## BUSINESS ADMINISTRATION

Mr. Plunkett spent January 13-16 at Brookhaven. We hear he had lovely weather. Wonder what made him think he had to go all the way to Long Island to have nice weather??!!

Mr. and Mrs. Richard Brockway honeymooned in the New England states. Norma says she was greatly impressed with the beauty of the northern country.

There have been switches made in Business Management. Jerry Shears is now in Room 114 and the mail table is in Room 115. French Beverage and Mr. Powell have been moved to the new Warehouse. They like it fine -- but it is lonesome.

Mrs. Pauline Staples is working at the new Warehouse for Mr. Powell and Mr. Beverage. Mrs. Staples is a native of Roanoke, Virginia. Her husband is employed on the 140' project.

Miss Jane Kay Michael, a junior at West Virginia University, and daughter of Mr. and Mrs. James Michael, spent Christmas vacation with her parents in Marlinton. Jane Kay has been chosen as the new Sweetheart of Sigma Chi at the University.

The new Xerox machine has been installed and is in operation in Room 115. It does a G R E A T job of copying. Feel free to use it any time. If you need assistance, ask any secretary - they will be glad to help you.

Shirley Carpenter says Santa was good to her. He brought her a new dryer. Now, she says, she won't have to go out in the bitter West Virginia cold to hang her wash.

Mrs. Virginia Irvine, Supervisor of the Cafeteria, is home from the Davis Memorial Hospital, at Elkins, much improved.

The week of January 14-18 found Mr. Small and Mr. Callender in Los Angeles. Being a

business trip, they regretted to report there was little time left for enjoying the summer-like temperature of 65°.

- - - - -

SMART PARTS FROM GRAPHIC ARTS

Where did Bob get the delicious "Bourbon Candy" that the boys of Graphic Arts have been eating this past week? HIC! HIC!

The NRAO Brochure has been revised-reprinted and now is in the process of assembling. It has been quite a large undertaking and the result is, "very good, Davy."

Gene Crist and family visited and shopped in Roanoke, Virginia, during the Christmas shopping days. Gene did not care too much about his first trip to the big City. The trouble of it all - his wife made him wear his shoes and Sunday-go-to-meetin' clothes.

SPORTS - SHORTS

Our basketball team's list  
Coached by Gene Crist  
Captain Ronald Monk  
Makes the opponents flunk  
Co-Captain Arnold Davidson  
Doubtlessly adds to the fun  
Guards, Simmons, Vrable & Bird  
Are the bulls of the herd  
Forwards, Oliver, Barkley & Terzian  
Glide over the floor doing the  
"Can-Can"

While Gallagher & Zatta  
Give them this 'a & that 'a  
And if we keep up the pace  
All other teams will "loose face."  
So, without question, we 'uns is  
the best-uns.

LAB GAE

The occultation front ends have arrived from AIL and testing is about to begin. The backends have been provided right on time by J. Dolan's Lab., and all systems to be assembled and tested by D. Ross's front end division, after which the 3 systems will be installed on the free wheeling 85' dish now being completed.

After a little space swapping - the Low Noise Lab and Test Equipment "Reraip" & Calibration Center have settled down to business as usual. Part of this movement ably supported by our just arrived winter students. Yes, and by the way, we like those light green pants that Pensinger is wearing. Also along with Pensinger has come good old Chris. This has given Dewey a good pair of left hands?

Teo Zatta has taken the ailing dewar flask from the Maser System to Hillside, New Jersey, to see about possible repairs, or replacement. Hope is high that with a better dewar and the late changes made to the system that results will be as magnificent as had been hoped for previously.

It has been noted that parametrics have been holding their own on the various systems being used. Which of the systems, - Maser, or paramp, will triumph?

Traveling wave tubes?-----Phooey on 'em!!

Two new technicians have been added to our Lab. Their names are William Shank and Andy Rogers. A third is in the process of being called for an interview.

Ole Sarge sez - that some day in the post-atomic war era, there will be two ants talking. One is a grandpapa ant and the other is a little boy ant. The little ant asks his grandpapa to tell a story. The wise old ant begins, "Once upon a time there were some men\_\_\_\_\_".

ENGINEERING ESSENSE

All component parts to complete the erection of the Jansky Antenna is now on hand. Four 30" x 3-1/2" clencher type tires as used on the Model T Ford auto make up some of the hard to come by items. The antenna was first built in 1932.

Work is progressing on the 85' Interferometer Project. The only remaining major job left on the scope itself is placing and setting the polar gears. The cable tray is up and most of the control wiring is in the tray. Also for the record, the clearances under the tray at the Hosterman road (High School) crossing is 14'-9-1/4".

For those few not familiar with the magnitude and complexity of the 85' Interferometer Project, the following is a bird's eye view. At one end is the H. Tatel 85' Radio Telescope, 1200 meters to the Southwest on an azimuth bearing of 242 is the new 85' Radio Telescope. The new scope is the same as the Tatel 85' scope in that it is an 85' diameter polar mounted instrument. The one big difference is that the new scope is movable. It will ride on 80 14 ply rubber tires. The new scope is being erected at Station No. 1. Further along the 242 azimuth from the Tatel scope 300 meters is a second set of three massive concrete foundations which will be Station No. 2, 300 meters more Station No. 3, 300 meters more through a three foot earth cut Station No. 4, 300 meters more across a 20' deep and 150' wide ravine Station No. 5, and 300 meters more the last Station No. 6. Three 10' wide roadways connect the stations together. At each station, the new telescope must have three things. First, it must have



electric power for its drive motors and etc. This will provide from the site 4160 volt underground power system. Second, it must be controlled. As it is to be controlled from the control building of the Tatel 85' scope, control wiring from this building to the movable scope must be provided. This is the reason for the long 6" wide and 3" deep cable tray. The control wires number over 200 wires. Third, there must be a way to get the signal pick up from the heavens back to the control building. This will be done by several coaxial cables up to 1-7/8" in diameter buried 4' underground.

Ronald Kert and Charles Buhrman, our co-op students, have returned to school. Robert Johnson, a co-op student from Drexel, will be working in the division for the next six months.

-----

HIGH LIFE AT THE 85

The most significant event of this - all observing secondary - was that the Famous Television Star, Leroy Webb, was scheduled for a "Spot" on a television program produced by C.B.S. Although his "spot" was small, he received national recognition. It has been said that on his next break he went for a screen test. More research will have to be accomplished in this area to verify the facts. One question is presented and is unanswered at this time. "Will success spoil Leroy "TV" Webb?"

Another late question - is it true that Howard Brown purchased that VW bus as an office for his "mobile desk"?

-----

140'

Peter Good, our staff photographer, vacationed for the holidays in his homeland, Los Angeles,

California.

Work was completed on the tent which covers the yoke hub and counter-weight sections. Production welding is being performed on a two-shift operation, each shift covering ten hours. Much of the welding has been completed and technicians from Pittsburgh Testing Laboratory have been engaged in radiographing welds.

The 208 ton polar shaft was moved from Bartow to the job site on December 5th and 6th. It was unloaded at the site on the morning of the 6th after Observatory forces and equipment assisted in moving the load from the sharp curve in Arbovale to the job site.

Conferences were held on December 3, 4, and 5 with Pacific Crane & Rigging Company prior to solicitation of their proposal to complete the telescope. Messrs. Small and Callender met with Pacific Crane & Rigging Company personnel in Paramount, California, on January 15 and 16 for the purpose of reviewing their schedule and price for completion of the telescope. They also visited Electronic Specialty Company offices in Glendale, California, on January 17.

Mr. Small has visited other vendors recently which included Westinghouse, Philadelphia Gear and Bethlehem Steel Company. Mr. Greenwood inspected work in progress at Bethlehem Steel Company on January 15 and 16.

Mr. L. E. Strong, Stone & Webster Inspector, was assigned to the 140' to cover one of the two-shift operations. Shortly after his arrival Duncan Warren was injured in an automobile accident. Mr. A. L. Hollid is now assigned to assist Mr. Strong until Mr. Warren recovers.

Messrs. Greenwood, Ralston, and Crews will travel to Akron, Ohio, to The Goodyear Tire & Rubber Company plant, in January, to witness the test of the first brake completed.

Some work schedule changes have been made moving operators between the 300' and 85' for short periods of time. This is purely for training purposes, and has worked out very well.

-----

#### EDUCATIONAL MATERIAL FOR CHILDREN AND ADULTS

If you are interested in World Book Encyclopedia and/or World Book Childcraft for your young children who are now at or approaching school age, or yourself, contact Howard Lambert at the 140' Telescope.

Bob Viers is on 3 week vacation and is sorely missed by his comrades. Bob Vance has left us for the computer room. Seems we lose more men that way. Dick Spurlock and Bill Terrell have joined the operator rolls at the 300'.

-----

#### 300' TELESCOPE

Peter Mezger's 10 cm front-end was dropped during the last days of December. Mezger measured the efficiency of the dish at 21 cm, and 10 cm, respectively. 21 cm proved to be 44%, the same as last year. 10 cm efficiency is approximately 14%, somewhat better than expected at this high frequency.

Odell Johnson claims a new world record for dropping a front end. Unofficial time is less than one hour. Seems it was cold that morning.

Multifeed installation was completed on January 1, giving observers four receivers of 750, 1400, 1400 East, and 1400 West positions, and final focusing was accomplished on January 9 with no more than ordinary difficulties.

Bertil Hoglund's mapping program, of the northern sky, was put on the scope, and is running at this time. The mapping program entails a scope position change of five minutes every 24 hours. A complete survey of this type could go on for several years. I might further add that a program of this kind is a real boon to the operators.

OO Watch for these

two forthcoming James Stewart film Greats...

Mr. SMITH GOES TO WASHINGTON

FEB. 3<sup>RD</sup>, 1964

ANATOMY OF A MURDER

FEB. 17<sup>TH</sup>, 1964

remember... motion pictures are your best forms of entertainment; especially in this miserable weather.

SUPPORT  
This NORAAKRP<sub>idea</sub> activity!!!

GOOD GRIEF...

SOMEHOW FELLAS,  
THIS SEEMS ALL  
WRONG.....



TOBACCO AN  
CEMETERY

A A A A  
U U U U  
U U U U

WATERMELON

WATERMELON

END OF THE  
ROAD TURNS  
DEC. 1, 1953

WATERMELON

RAIN BLOOD

