



The Beacon

A monthly newsletter of the Albemarle Amateur Radio Club serving Central Virginia

Celebrating our 50th Anniversary

August

2013

Club Meeting Set for Tuesday, August 13, 7:30 pm

The Albemarle Amateur Radio Club will meet in the National Radio Astronomy Observatory, 520 Edgemont Road, Charlottesville, VA on August 13 at 7:30 pm. Jim Wilson K4BAV will give a presentation on his trip to Green Bank and his discovery of radio astronomy.

The president has called a board meeting for 7 pm. prior to the 7:30 General Membership Meeting.

President's Remarks

By Bob Pattison - K4DU

No Picnic - In August

Let me begin first with the news. Our summer picnic will be in September and it will be at the Elks Club. **So do not go to Darden Towe Park on August 13th.** Our August meeting will be at NRAO and Jim Wilson K4BAV will regale us with tales of his journey to Greenbank, WV and his discovery of Radio Astronomy.

Mentors

Alan Swinger K9MBQ sent me an email a few days ago about the mentor program at the Naval Academy. Alan suggested that it would be a good idea for the AARC to emulate this program for new hams that go through our classes and pass exams at the sessions that we offer. I agree. Amateur radio has always had a spirit of "Elmering". Creating a mentor program within the AARC makes it more intentional. It is sad to note that more than one person has passed the exam, but never gotten on the air. The goal of this program should be not just to get these folks on the air, but to be a resource in an experience that shows the many facets of amateur radio.

Preparing for Winter

While it is still warm and before winter is upon us I suggest now is the time to do the planning and the work to prepare your station for winter. Do the antennas need work? How about those ropes holding up the G5RV or the Carolina Windom, will they make it through another winter, or should they be replaced. And while I am at it, how are you set for the loss of power? What kind of shape are your batteries or the generator in? Is your shack ready for a visit this fall from a Scout Troop for Jamboree on the Air? Now is the time to make those adjustments and get things the way you want them to be. Judging from the size of some of the caterpillars I have seen in the garden we may have a hard winter coming. Be prepared!

What is your Elevator Speech?

In recent days I have been thinking about the "Face" of Amateur Radio. Who is the face of our hobby and how are we promoting it. In the business world you are either growing or dying. Amateur Radio is growing, but not intentionally. I would bet if you stopped people on the street or went into schools and asked people what amateur radio is or if they knew someone who was a ham the response would be underwhelming. It is time for some guerilla marketing. We are each the "face" of ham radio. We each need to be prepared in three minutes or less to answer the questions: Why are you a ham radio operator? Why is ham radio important to you?

Are you prepared to tell about the joy this hobby brings you or are we keeping it a secret?

Think about it. Imagine that you are alone in an elevator with someone that you know of and highly respect. He or she turns to you and says, "I see you are a ham radio operator. Why is ham radio important to you, and what do you do as a ham? The elevator door has just closed. The elevator has just departed from the lobby and your friend is getting off at the fifth floor. You have two minutes. What is your answer? By the way unlike the FCC exams, there is no right or wrong answer. The only failure is to have no answer at all.

73 de K4DU

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The Beacon is the official newsletter of the Albemarle Amateur Radio Club, Inc. It will strive to communicate with, enlighten, and entertain the members of the club in strict compliance with the official word of the club as set forth in the Articles of Incorporation and Bylaws. The newsletter shall be published monthly on or before the 1st day of the month of issue. The deadline for submissions shall be the 25th of the month preceding the month of publication. The primary role of the publication shall be to promote upcoming activities, report past activities and accomplishments of the club and its members, carry the minutes of the preceding month's meetings, as well as, become a recorded history of the club by the archival of all past issues.

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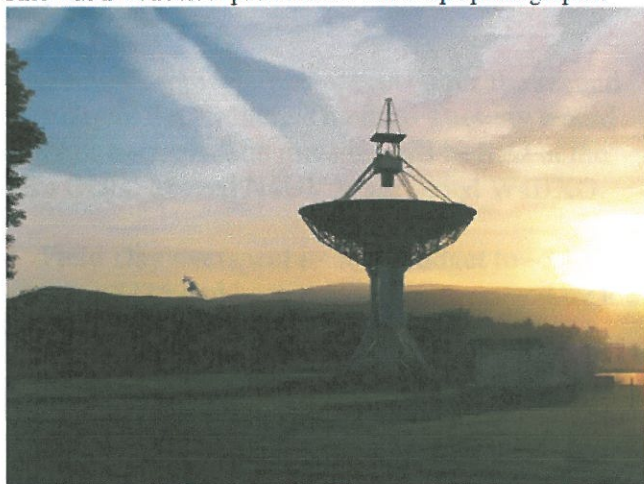
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Amateur Radio Astronomy Conference

By Jim Wilson, K4BAV

It seemed like Field Day all over again on July 14-17th. This was my first experience attending the annual SARA conference, the Society of Amateur Radio Astronomers. This conference included three days of fascinating lectures with hands on experiences at operating a radio telescope 40 foot dish antenna, and seeing first hand cutting edge designs of electronic communications equipment at the futuristic Jansky Radio Laboratory. We even got to ascend 370 feet near the top of GBT, the world's largest steerable radio telescope. This was a wonderful platform for landscape photographs!



Did you know that MRI medical imaging and cell phone technology are direct spinoffs of radio astronomy research? These innovations came from the Jansky radio laboratory at Green Bank. We were privileged to see the newest technology at the Jansky Lab, amplifiers that magnify current rather than voltage. These are called "squid amplifiers." These new receivers detect and amplify currents as low as 10

to the minus 24th amps (.000000000000000000000001 amperes).

Fifty-five amateur radio operators attended this event, held at the National Radio Astronomy Observatory in Greenbank, West Virginia. Wives and lady friends had the option of separate daily tours to nearby interesting places such as the luxurious Greenbrier Hotel, Luray Caverns, and the home of author Pearl S. Buck.



One couple came from Germany and another from England, but most attendees came from closer places such as Iowa, Wisconsin, New Mexico, North Carolina or Virginia. In talking with these hams, I found that many were electronics engineers, some were scientists, and a few were university professors. All appeared to be intelligent and curious people who were willing to share their enthusiasm and knowledge with me.

In the historical beginning, Grote Reber, an avid amateur radio enthusiast, was inspired by an accidental discovery made a decade earlier by Karl Jansky in 1932. Jansky discovered microwave radio background, transmitted by nature from sources beyond earth.

Reber continued Jansky's work by designing and building a large home brew radio telescope in his back yard. This was the beginning of radio astronomy. A replica of the Jansky antenna is on display at NRAO as is the actual antenna built by Grote Reber. The original ham station operated by Reber is also preserved behind glass at the Green Bank NRAO museum.



What is it that amateur radio astronomers enjoy or seek to accomplish? Obviously, calling CQ into space produces no response. Thus, these folks concentrate their attention on receivers, not transmitters. These people are good listeners. These hams design and build radio receivers to monitor Jupiter, the Sun, and our Milkyway galaxy. For more details, Google radiojove.gsfc.nasa.gov. These hams also explore very low frequency natural radio emissions and space weather. For additional details, Google image.gsfc.nasa.gov/poetry/inspire and solar-centered.Stanford.edu/SID.

To allow us more detailed study, a written summary of each lecture was included for each person attending the conference, so I have more reading to finish.

These amateur radio enthusiasts inspired me to come home and build a simple radio receiver. The next time you see me, ask how long the magic lasts.

For additional information on SARA, Google radio-astronomy.org.

Minutes of the July Meetings

Board of Directors Meeting

1. Meeting was called to order by K4DU at 7:03 PM
2. It was noted that Board Minutes required approval specifically by the Board, and the minutes of the June Board Meeting were approved by acclamation.
3. The spring picnic was approved for the second Tuesday in September. The third Tuesday would serve as backup. The meeting will be held at the Elks Club. Moved N4UVA, seconded W4BXG.
4. Field Day overspent its food budget to ~\$400, whereas \$225 had been previously approved by the Board. N4UVA suggested that approval for the total amount would need to be presented to the general membership (see General Meeting minutes per KI5LLB).
5. KA4JJD requested approval for the purchase of a new roll of raffle tickets. This was approved by K4DU.
6. K4DU presented his plan for a Central Virginia Repeater Century Club Award (I assume you can

get a copy of the proposal from Bob). Discussion centered on whether to include regional non-club repeaters (approved) and whether to include contacts through the 146.730 IRLP node.

Approval of the plan was moved by W4BXG and seconded by N0WP. Approved.

7. A budget of \$250 for food for the September picnic was moved by N4UVA and seconded by W4BXG. Discussion indicated that this would likely be far more than we would spend.

Approved.

8. The meeting was adjourned at 7:25 PM

Respectfully submitted
KA4JJD

General Membership Meeting

The meeting was called to order around 7:35 by K4DU. Introductions of all those in attendance came next. K4DU asked all those who organized and participated in the "Best Field Day Yet" to stand and be recognized. An ovation followed.

A program titled "Smart Meters and WIFI" by Charles Battig, K4TY followed the introductions. K4TY gave a very thought provoking talk about Smart Meters and getting off the local smart meter grid. He referred to books and articles to prove his points. He gave evidence that power meters are collecting private personal information. He believes the possibility exists for some of that information to be broadcast into the hands of robbers or others collecting personal information for reasons that might prove harmful to the persons using these meters.

He gave compelling evidence that local power companies control these meters from neighborhood offices. Some reasons the power company gives for collecting personal information about how much power is used at certain times of the day or night is: this shows the power company when the demand for power usage is the highest, this information shows where abnormal demands for power usage are being made, and this information aids power conservation plans. This in turn, cuts down on power bills to the users of the power meters, but K4TY led us to question the truthfulness of their statement.