

Rappahannock Astronomy Club

Minutes, March 10, 2010, Meeting

In attendance:

- Jim Baker
- Barton Billard
- Scott Busby
- Joe and Sherry Francis
- Rob Friedel
- Leigh Gettier
- Rachel and Brad Herzog
- Glenn Holiday
- Scott and Kimberly Lansdale
- Dan Lien
- Mike Masters
- Tim Plunkett
- Robert and Shayla Taylor
- Javier and Ruby Valverde

President Mike Masters opened the meeting at 6:45 p.m. with introductions around the room. Thirteen members and six visitors were present.

For the program portion of the meeting, Robert Taylor presented reminiscences about radio astronomy and the Search for Extraterrestrial Intelligence (SETI). His talk covered a career that included work for the British on the Apollo program, for NASA on spectrum management, and for SETI as network operation project engineer.

When the Voyager missions were under way, along with Mariner and some others, there was much demand for access to antennas. Radio astronomers did not have the funding that the space programs had. The astronomers started as more of a "hobby shop" operation. When they obtained time, they had to set up equipment, observe, and take down their equipment, which meant that the time actually devoted to observing was significantly less than the time allotted on the antenna. Robert Taylor was made responsible for improving the process to use time more efficiently and avoid mistakes in reconfiguration. The astronomers were then able to develop more professional procedures and gained respect as well as more effective use of their observing time.

SETI started in the 1970s, although initial funding was minimal. Nevertheless, Senator Proxmire awarded SETI "golden fleeces" in 1977 and 1981 for spending of about \$100,000. In 1983, Carl Sagan managed to change Senator Proxmire's mind and funding went up, along with respect. Funding reached \$12 million, allowing SETI to begin to mount an all-sky survey and to develop multichannel analyzers (the first was 64,000 channels), a useful contribution to technology. SETI also developed a way to use spare antenna time via software and avoid the overhead of equipment setup and reconfiguration. Although no extraterrestrial intelligence signal has been found, the project found some manmade things they did not expect to find. For a short time, some attempts to broadcast signals took place, but they ended after some had second thoughts about possibly letting a hostile alien civilization know of our presence. Efforts were under way to come up with the "SETI at Home" idea when, in 1993, funding was cut completely and NASA was out of the SETI business.

Mr. Taylor told us a little about some of the leaders of the effort, including Barney Oliver, John Billingham, Jill Tarter, and Carl Sagan. Frank Drake led Project Ozma. Jill Tarter was the basis for Jodie Foster's character in Contact. Another character was based on Kent Cullers.

Bob Taylor discussed future directions at the end of his talk and during questions afterward. He suggested that parallel technologies from other areas could lead to advances that reinvigorate the field. One example may be the new technologies for finding planets in other star systems. Combined with what SETI developed, they could lead to much more rigorous searches. An example of parallel technologies in another field is the combination of radar mapping of planets with very-long baseline interferometry at two frequencies, which has led to the determination that raindrops on Venus are sulfuric acid. SETI could also be advanced by development of miniaturized multichannel analyzers that could be sent into deep

space. SETI at Home analysis allows bandwidth to be parceled out in 1 Hz or even 0.1 Hz bits for analysis and permits better characterization of manmade interference to improve filters.

Treasurer's Report

Tim Plunkett gave the report for February 28, 2010. The Club has 14 paid members as of the end of February. Because the February meeting was snowed out, Tim did not collect any dues for the month. He said he got some in the mail dated in March, so they will appear in the next report.

Old business

- Club assets—Rachel and Brad Herzog have the Club Dob. Mike got the PST from Rob in preparation for the Earth Day event at Caledon April 24 and brought it to the meeting. Brenda has the equatorial scope but Tim still needs to get the counterweights to her. Don Clark has the Celestron and James has the CCD camera [picked up by Mike a few days later]. Leigh has one of the "Universe" DVDs and Chris Reed has a couple more. Mike brought the DVD on the "Evolution of the Telescope" that he is donating to the Club library. Joe brought in some stacks of Astronomy and Sky and Telescope magazines. Most are fairly recent issues to supplement the older ones in the library. He suggested we need to think about a process for inventory and checkout.
- Star party reports—Again, both primary and backup star party dates were no-go in February, as was the January 16 backup date. In addition, the Fredericksburg Academy outreach event was cancelled because of bad weather.
- Meeting dates and locations—The April 14 Club meeting will be at Salem Church Library. Directions will be provided on the Club website. We have the small meeting room at the main library reserved for May, but are still looking for a location with more room. We may need a site for the November election meeting, but having pizza delivered could allow us to use the room we are in most months.
- Next star parties—March 13 is the planned date of the Messier Marathon. March 20 is the star party backup date. If the weather scrubs the Messier Marathon, the backup date would be a regular star party, with the Messier Marathon backup on the April 10 star party date. Mike explained that a Messier Marathon involves trying to see as many of the objects in the Messier catalog as possible in one night of viewing. He directed those interested to look for Messier Marathon data sheets available on the night sky page of the Club website.
- Other events—April 24 is Earth Day at Caledon. Mike is taking the Club PST for this daytime event. Bart expressed interest in trying to find a few bright objects in the daytime sky, which Mike thought would provide visitors with an interesting experience. Myron is looking for more volunteers to support an outreach event at Curtis Park on May 22. Mike reported on his Westmoreland site visit to scout locations for astronomy events in the summer. He recommended one to Ryan Evers, the Westmoreland contact, who is going to look into Mike's recommendations.
- Alternate star party site—Scott is looking into the Bealton air show site. A Scouting group camps there and could be an avenue for getting us considered. Glenn knows the Scout leader and says that they have permission year round for camping there.
- Green Bank Star Quest—Leigh is planning to attend the event July 7–11. He reports the cost is \$85 for camping and a little more for space in the bunkhouses.
- Meeting programs—Myron has withdrawn from providing programs for a while. Mike's program for the cancelled February meeting is rescheduled as substitute for April, and Joe will give a program in July.
- Telephone list—The list was assembled and Mike sent e-mail requests for permission. The resulting list was sent out. Calls were made to past members and e-mails sent to Scott's list of contacts.
- Governor's proposal to close Caledon and other State Parks—So far, key Delegates have said no. Friends of Caledon is actively involved.

New Business and Astronomy News

- Mike reported that David Abbou suggested making files available on Yahoo accessible on Club website as well.

- Glenn said that “Globe at Night,” a project to measure the darkness of the night sky is going on this month and recommended checking into it on the Internet.

Next Meeting

The next meeting is scheduled for April 14, 2010, 7:00 p.m., at the Salem Church Branch of the Central Rappahannock Regional Library system, 2607 Salem Church Road in Spotsylvania County. Introductions will begin at 6:45 p.m.

Submitted by Bart Billard, Secretary