

# Rappahannock Astronomy Club

## Minutes, July 19, 2017, Meeting

In attendance:

Jean Benson  
Bart & Linda Billard  
Don Clark  
Rupert Farley  
Gary Forjan  
David Hiles  
Glenn Holliday

Scott Lansdale  
Tom Mukumenkeril  
Keith Ofsowitz  
Payal Patel  
Tim Plunkett  
Matt Scott  
Tom Watson

Scott Lansdale began the meeting about 7:10 p.m. with introductions and an explanation from Linda Billard of the need to find a new meeting location. The Heritage Center will be using the room for additional storage of its expanding collection beginning in September. Ten members and 5 visitors were present, 2 of them joining during the meeting.

## Program

The program for the evening was astronomy in the news, starting with discussion of the solar eclipse coming to the United States in August. Scott said apart from one eclipse that crossed a corner of the United States in 1991, the last eclipse crossing a significant part of the country was in 1979. Linda passed around a set of stamps issued by the Postal Service for the eclipse. They feature a photograph of a total eclipse and are the first use of thermochromic ink for stamps. When warmed by a thumb, an image of the Moon appears where its silhouette blocks the solar disk. One member said he was going to Greenville, SC, for the eclipse. He said he had considered a hike on the Appalachian Trail into the path of totality but decided on something less strenuous out of consideration for his wife. A visitor recommended an overlook near Huckleberry Knob in Nantahala National Forest as a high location from which to see the approaching shadow. Tom Watson said he would be at home to do spectroscopy of secondary x-rays and gamma rays produced as protons from the Sun strike the upper atmosphere. He was interested in what effects he might find from the Moon possibly intercepting protons headed for the atmosphere around him, and he said he did not have enough portable power to operate his instruments. Scott mentioned learning about Eclipse Mob from Linda. It is a citizen science project to monitor ionospheric effects on radio propagation and what changes might occur because of the eclipse. Scott said it was a similar approach to his Sudden Ionospheric Disturbance (SID) radio astronomy project but was using different frequencies. He said he was interested in running his SID recorder, and Tom proposed comparing their data afterward. Don Clark emphasized the advice to be aware of what is going on around you during totality (and not be glued to an instrument). A visitor said he had found a discussion comparing sunlight at various stages before totality with what the sunlight is like on Mars, saying there should be a certain time before totality when the sunlight intensity is like that on Mars. At other times closer to totality, it would be like sunlight on more distant planets. Don passed around glasses provided by the Night Sky Network for viewing the eclipse. He also passed around some cards with a pinhole that could be used to project an image during the partial phase. Some people present were interested in how to get pictures. One was thinking of using one camera with a filter during the partial phase, then during totality taking the lens cap off the other to get pictures. Bart Billard wondered whether he might be able to mount the camera to the same tripod so the one with the lens cap would be reasonably well aimed when he was ready to use it. The visitor who spoke earlier about Huckleberry Knob also asked whether the club had arrangements for a regular observing location members could use. He said he belonged to NOVAC, which has a number of such sites where members have permission to go after hours for observing and suggested it would be worthwhile for the club to approach one of the counties to look into getting such an arrangement. Glenn asked whether some members would consider going to Caledon for the partial eclipse. Two members expressed interest in going. As we turned to other astronomy news, Scott ran a simulation on the projector screen showing the Moon's shadow following the path of the eclipse across the United States.

Glenn offered a news item on the red dwarf star Ross 128. He said astronomers detected a signal they had never seen before and could not immediately explain. The report indicated more data had been

obtained from further observing, and it suggested a press release would come out on Friday and might have an explanation of the signal. Glenn also said he saw news indicating the Mars Orbiters are both getting up in age and may not be able to support communication with Mars rovers much longer. (If the Mars 2020 mission arrives in 2020, Mars Odyssey will be 19 years old. The Mars Reconnaissance Orbiter will be 14, and NASA does not currently have plans for the next communications orbiter.)

## Old Business

- MSRO—Bart and Scott mentioned some highlights from the MSRO Commission meeting on the previous Friday. The equipment was in working condition, and Jerry Hubbell had tried the planetary imager for a while before putting the monochrome ST2000 imager back on the refractor. Jerry had also produced a YouTube video covering steps to get the observatory started up. Myron Wasiuta had suggested setting up an observing project for club members who could take turns making observations. A variable star would be a good example where the team's observations could be combined to produce a light curve characterizing the star's variability. Linda described the MSRO page on the club website for attendees who had not seen it. Scott projected the page and images while she talked. Payal suggested looking at the SciStarter website for citizen science as something that could be helpful for MSRO.
- Communications—Don said he had done a little updating on the website. Also, he and Terry Barker had attended a meeting related to developing web pages. Payal had set up a Meetup for the club and was asking whether to add information about future meetings (beyond the next club meeting date). A visitor who said he had come to the meeting as a result of the Meetup information was in favor of at least including information on planned dates. Payal asked whether RAC should be a group or page on Facebook. Don thought being a group would make it inaccessible to the public. Tom said he thought he could tie Twitter in. Payal also suggested designing a card with pictures, a sort of mini-brochure, to put up in libraries, etc.
- Events—Scott reported David Abbou, Mark Burns, and Don Clark were at the Embrey Mill outreach. Don said it was a busy evening with good attendance. Because of clouds, only about an hour was available for viewing the Moon and Jupiter.
- Treasurer's Report for June 30, 2017—Tim Plunkett's report showed \$67.50 received in dues payments for the club and an Astronomical League membership. With two additions the evening of this meeting, the number of members for 2017 reached 34.

## New Business

- Star Party for July 22—Glenn said the weather forecast was not promising so far. He said he would be able to present "How to Blow up a Star" even if it is too cloudy, but that Caledon would cancel in the event of a thunderstorm.
- Additional Program Ideas for 2017—Linda suggested making eclipse experiences the topic for September. August 12 would be the picnic meeting for club members. Bart was listed for a talk about his interferometer project in October, which would also be the meeting for officer election nominations. November would be the election meeting, with no presentation. Bart and Jerry were scheduled to talk about exoplanets in December.
- Meeting Location Possibilities—We talked more about possibilities for replacing the Maury School location the club is losing. University of Mary Washington was suggested. Members who recalled earlier attempts to find a UMW meeting location were not optimistic. Tom thought his father might have contacts for some of the meeting locations available in the area. Don said he had a form for requesting meeting space from the libraries. He asked whether he should enquire about all three (Headquarters, England Run, and Salem Church). The conclusion was to keep all three in mind but start with Salem Church.
- Stargazer Update—Linda said she had everything except for items from people going someplace in the next week, and from Ron Henke on astronomy possibilities in Arizona. Tom thought he might still be able to do something about his spectroscopy work.
- Upcoming Events—Scott briefly showed the schedule, noting that the topic for September was changed during the evening. Glenn said Jon Bachman was now asking about our 2018 schedule and another Stratford Hall outreach. Glenn said he mentioned an interest in a fall event, to which Jon responded with a preference for November or December. Scott said he thought a season

with an earlier start time was preferable, and that he would prefer a weekend when the Moon would not be bright.

## **Next Meeting**

The next meeting is the club picnic on Saturday, August 12, 2017, at Belmont.