

Rappahannock Astronomy Club

Minutes, April 14, 2010, Meeting

In attendance:

- Barton Billard
- Scott Busby
- Don Clark
- Brenda Conway
- Joe and Sherry Francis
- Leigh Gettier
- Mike Masters
- Frank Powell

President Mike Masters opened the meeting at 7 p.m., skipping introductions and starting with the business meeting to allow more time for people to come in to the unusual location. Eight members and a visitor attended.

Treasurer's Report

Mike read the report from Tim Plunkett for March 31, 2010. Paid membership is up to 19 as of the end of the month. Mike noted that the treasury balance is up where the Club might consider a purchase, for example, a better tripod for the Celestron donated last year.

Old business

- Club assets—Rachel and Brad Herzog have the Club Dob. Mike has the PST for the Earth Day event at Caledon April 24. Brenda has the equatorial scope but again did not connect with Tim to get the counterweight. Don Clark has the Celestron and Mike has the CCD camera and NexStar 5.
- Star party reports—The Messier Marathon backup on April 10 was finally a successful star party. Mike, Leigh, Dave Bentz, Bart and Linda, Don, and Rob made it. Mike showed the two lists available on the Club website. One has separate pages for each hour or two worth of Messier objects and a set of finder charts for those who need them.
- Next star party and other events—April 24 is Earth Day at Caledon. Mike is taking the Club PST for this daytime event. The next Caledon star party is May 8, with a May 15 backup date.
- Meeting locations—the May 12 meeting is again at Salem Church. Scott is giving his program on “Webcam Astrophotography.” The October meeting is also scheduled for Salem Church. The current plan for the November elections meeting is to have pizza in the regular meeting room at the Library on Caroline Street
- Public outreach—Myron Wasiutta and David Abbou are leading a public outreach event at Curtis Park on May 22. Volunteers are welcome to join in. The park is on Route 17 toward Warrenton.
- Green Bank Star Quest—Leigh is planning to attend the event July 7–11. He invites other members to consider joining him.

New Business

- UVA Cluster Project inquiry—Jeremy Siefker of Battlefield Middle School contacted Mike about the UVA Cluster Project. Mike has responded but has not heard back from Mr. Siefker yet.
- Broken Meade IR blocking filter—Mike discussed the broken IR blocking filter he discovered when he checked out the instrument, showing us the filter. The replacement was \$14 plus \$5 shipping; the Club officers decided via an e-mail vote to go ahead and order it. Mike placed the order and the replacement has come in. He proposed the Club accept it in lieu of his dues for next year with the \$4 balance as a donation to the Club. Leigh moved that the Club accept Mike's offer. The motion was seconded and passed.
- Donation of Celestron NextStar 5 SCT and tripod purchase—The telescope, with GOTO mount and several accessories was a donation to the Club by a lady in Stafford. It only lacked some alternatives to battery power (eight AA cells) and a tripod. Scott provided a car battery adapter cable, and Mike

found that tripods were on sale for \$79.95 plus \$11.00 shipping. With the concurrence of the Club officers, Tim took care of ordering it. The tripod has an equatorial wedge. The mount can be configured for either altitude/azimuth or equatorial orientation.

- Discount subscription Club benefit—A question came up regarding how members can obtain the magazine subscription discounts listed as benefits of Club membership. Mike did some checking and tracked down a method available through the Astronomical League. For example, five or more Club members as a group can sign up for *Sky and Telescope* subscriptions to receive the discount.
- Loaner policy—Mike reviewed the Club lending policy, which he showed us is posted on the website Library page and introduced Joe Francis as equipment coordinator.

“Loaner equipment is available only to club members, for a period of 1 month, and must be returned to the club at the next monthly meeting for use by other members. Equipment may be retained for an additional month per each request if no one else wishes to use the item (e-mail Joe 2 weeks prior to the next meeting to request retention). Borrowers are responsible for any damage to or loss of borrowed equipment. The club's equipment loan policy is summarized here, along with a list of membership benefits and club community activities.”

Joe noted that the Northern Virginia Astronomy Club requires a security deposit for loaner equipment.

- Joe and Sherry Francis' Florida trip—Joe and Sherry related their experiences when they visited Kennedy Space Center, starting out around 1:00 am, to watch the Shuttle Launch (#131). They were in the VIP slot (still 7 miles away) and had to wait two and a half hours because of the security requirement for early arrival. Shortly before the launch, they were able to see the International Space Station (ISS) go across the sky, a result of the timing of the launch to allow the Shuttle to catch up with the ISS in orbit. At the launch, the exhaust created an orange-yellow daylight effect, and the Shuttle climbed quickly into the sky. They could follow the flight to the point the boosters separated, seeing the contrail rise into the sunlight on the way. It took quite some time for the sound to travel the 7 miles to them, but it was deep and loud in spite of the distance and the sprays of water designed to dampen it. They considered the experience well worth the 10 or so hours it took to get there and back. They also recommended the Space Center tour. One of the highlights is the Saturn V “hangar queen.”

Program

Mike presented the program, “Outfitting the Compleat Astronomer: everything you need to observe in style and comfort.” It covers lessons learned over his years of observing and nature photography. The inspiration for the topic is Isaac Walton's *Compleat Angler* published in 1653. Topics included: setting up, getting power to the mount, what to look for, finding objects, getting a good view, and “What about glasses?” He showed pictures of a variety of equipment and tools, describing why you might need them, the advantages of what he found works, and disadvantages of what he found less useful. A copy of his presentation is available on the Club website's “Document Archive” page under the heading, “Science & Technical.”

Some examples for setting up include a compass with declination adjustment to help align the mount to true North, a carpenter's pitch level to adjust the polar axis of an equatorial mount to the local latitude, and a horse tackle box. The latter come in a robust heavy-duty plastic and are good for holding counterweights and electronics. He showed us sleeve potholders, pointing out that they are useful for cushioning counterweights when you are transporting them. He recommended Coleman Dynasty or Tailgater folding tables for charts and other accessories and Shake Enders vibration absorbers that can go under the tripod feet cutting the settling time of the mount. Mike described going through a few different adjustable-height chairs seeking a better way to get to the right height for the eyepiece. The first was a Drum Throne stool, which he then replaced with a Starbound chair. That was easier to adjust but tricky to use. Then he found the Stardust chair was more secure because hooks hold the seat in place instead of friction.

One slide showed various types of finders and a great blue heron. The point turned out to be that straight-through finders might be a problem for people who do not have necks like the heron. Mike also noted that green lasers can be convenient as finders but they do not work in all conditions. Cold weather

can be a problem, and the air can be too clear to see the beam. For powering equipment, Mike talked about assuring enough capacity to last the night. He recommended 33 ampere-hour sealed lead-acid, absorbed glass mat (SLA AGM) batteries available at Batteries Plus. He also suggested using 1.5-volt AA lithium batteries, which last longer than alkaline cells.

Mike described available varieties of dew heaters and controls and mentioned Kendrick laptop heaters are good for eyepieces, too. For preserving vision while using a laptop, a red Plexiglas filter that hooks over the screen and a program called Darkadapted work together or independently. Under the heading "Tools You Didn't Know You Needed Until It Was Too Late," he had recommendations for two-color flashlights, tools and spare parts, magnifying glasses, eyeglass cords, and eyeglass repair kits. An eye patch helps you keep one eye dark adapted while looking at charts or using the computer. Someone mentioned Special Forces used red goggles to start to adapt their eyes before nightfall.

The discussion moved to notes for eyeglass wearers and covered eyeglass accessories such as focal reducers, field flatteners, diopter correctors, Binoviewers, and TeleVue Paracorrs for reducing the coma of fast Newtonian telescopes. For filters, he directed us to reviews by David Knisely on the Cloudy Nights website, <http://www.cloudynights.com> and mentioned what some can and cannot do. For example, white light solar filters will show sunspots but little else.

Mike mentioned a number of charts and atlases, starting with Wil Tirion's *Bright Star Atlas 2000.0*. The *Pocket Sky Atlas* from *Sky and Telescope* was one, although it does not include lists of objects like you get with Tirion's. Mike recommended *Sky and Telescope's Field Map of the Moon* for lunar observing. Perhaps the strongest recommendation was for *Night Sky Observer's Guide* by George Kepple and Glen Sanner. It was originally a bimonthly magazine covering the sky constellation by constellation. The magazine ended when all of the constellations were covered, but it is now available as a compilation. Mike summed up the recommendation simply: "Myron has one." He talked about three astronomy software options, The Sky Six, Starry Night, and MegaStar 5. The last does not have as fine graphics as The Sky or Starry Night, but he finds it very useful, with the best database and ability to build lists. It can control telescopes.

He showed a number of options for keeping warm. One of his preferences is rag wool: for example, rag wool fingerless mittens or glove mitts (that have a mitten part that can be slipped off your fingers when needed for dexterity) or rag wool or fleece balaklavas. Other recommendations included Woolpower foundational garments and a number for feet, from socks in layers (polypropylene, then wool) to boot blankets over everything, along with foot warmers. Mike's tip for insects is to avoid sprays near optics: towelettes with insect repellent are available instead.

Mike showed a number of optics cleaning supplies. Some examples are Eclipse Optics Cleaning System, Optical Wonder, and Sensor Swabs. He avoids dusters that use propellants instead of compressed air because they can leave a residue on optics.

The next-to-last topic was checklists for the forgetful astronomer (by this time the necessity of checklists was clear to us). The final was "Michael's rules for choosing astronomy gear." The first is not to buy something larger than you can transport, heavier than you can lift, or that requires a mortgage to finance. One of his observations about the apparent tendency of telescope purchases to bring bad weather was, "A really big Dob should come with an ark! (Or, in winter, a snow plow!)." On the need for checklists, he also noted, "Murphy's Law of Forgotten Gear: Whatever you leave at home will be needed that very night for the first time ever!"

Next Meeting

The next meeting is scheduled for May 12, 2010, 7:00 p.m., in Meeting room B of 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