

Rappahannock Astronomy Club (RAC) Report

Westmoreland Public Astronomy Program June 19, 2010

By Joe Francis, Scott Busby, Bart Billard and Ranny Heflin

OVERVIEW

The Public Astronomy Program, [Westmoreland State Park](#) was held beginning at 9:00 PM on 19 June 2010 at the **new Visitor Center** overlooking the Potomac River. A map and directions are provided on the RAC [Star Parties](#) page and on the [Westmoreland State Park](#) web site. RAC presented early evening viewing of the first quarter Moon, Venus, Mars and Saturn for Park guests only. The RAC event coordinator was Joe Francis. The Park points of contact were Shanna Minarik, Nature Interpreter and Brad Ramsey, Park Ranger.

The RAC members present were Scott Busby, past RAC President; Debbie Sandler, Joe Francis, RAC Vice President; Sherry Francis; Bart Billard, RAC Secretary; Linda Billard; and Ranny Heflin, new RAC member. The telescopes included Scott's large 140mm Takahashi Refractor, Joe's Obsession 18-inch Dobsonian, the RAC loaner NexStar 5 Schmidt-Cassegrain Telescope (SCT), which Bart setup, Bart's Orion 10-inch Dobsonian, the RAC loaner Orion 6-inch Dobsonian and Ranny's Parallelogram tripod mount for his binoculars. The sky was relatively clear except for some haze low on the horizon. The temperature was perfect for a short-sleeve shirt all evening. An occasional slight breeze blew over the field. About 35 adults and children, who were camping at the park, attended the Program along with several park rangers. The park representatives were exceptionally nice to us and appreciative of our program. The attendees were also very polite, interested and appreciative of the opportunity. We demonstrated sharp views of the Moon at the end of first quarter, Venus in the west, and Mars in the west during the early and late evening. We could use 365 magnification on the Moon for very clear and sharp views. All of us except Scott and Debbie left before midnight. The weather deteriorated gradually after 1 AM and clouds began to take over. Scott was able to get a few Jupiter photographs before complete overcast. Scott and Debbie were the last to leave; they packed up at first light.

SETUP

Joe and Sherry Francis and past President, Scott Busby and Debbie Sandler arrived at about 07:15 PM. Scott talked to the Park Ranger about the location and traffic requirements. We were directed to the south bank of the Potomac River in a large open field next to the new Visitors Center. The site was level with close-cut grass and a clear, broad view north over the river. The clear field was large enough for 10-degree elevation views or better in all directions. We were allowed to drive our vehicles to the river edge of the field and park next to our telescope setups. Scott made some photographs of the

area, which are included in this report. Bart and Linda Billard arrived soon thereafter with their Orion 10-inch Dobsonian telescope and the RAC Loaner NexStar 5 with Az-El mount. Joe and Sherry set-up their 18-inch Obsession f/4.2 Ultra Compact telescope with manual tracking (ServoCat and Argo Navis were not connected). Joe also brought the RAC Loaner 6-inch Orion Dobsonian telescope to Ranny Heflin who arrived next. Scott setup his Takahashi 140mm Refractor on a heavy German Equatorial Mount (GEM) with finder and guide scopes, camera and computer control. Bart set up his Orion 10-inch Dobsonian with precision elevation and azimuth setting circles, which enabled him to find targets too dim to see with the unaided eye. Ranny and Joe collimated the Orion 6-inch Dob and aligned its finder. The optics proved to be superb on this telescope—you could see one or two moons of Saturn with it—very sharp. Ranny also setup his Parallelogram mount, which he designed and constructed for his binoculars. It worked especially well and was a great asset in demonstrating views to children and adults of varying height.



Telescope Setups in Progress



Joe and Ranny using a Laser Collimator to align the primary mirror



Scott's Takahashi Refractor, looking north over the river



Young visitor asking about the moon as viewed on the Obsession 18-inch Reflector

Obsession 18" UC f4.2 Viewing

Joe and Sherry first demonstrated views of the Moon to many visitors before the sky was dark. The visitors were impressed with the views through the PanOptic 27mm and the three Ethos eyepieces (13, 8 and 6mm). At higher magnification, the visitors noticed the motion of the Moon in the eyepiece. This setup also included the required Paracorr to control coma for the f/4.2 telescope. An unsuccessful attempt was made to use the 2x Powermate with the 6mm Ethos late in the night. This was the first use of the 6mm Ethos eyepiece—you could see crystal clear Moon features with it at 365 magnification.

Next, Venus was viewed with the Obsession in manual finder mode. The Ethos 13mm and 8mm eyepieces were used, but it was difficult to keep the planet in the viewfinder long enough for more than one visitor to see it. Often, the telescope had to be readjusted to correct for the Earth's rotation. Next time Joe and Sherry will have the ServoCat and Argo Navis installed to track the targets and provide quick go-to capability. Joe also forgot to bring both his observing chair and the short ladder that children need to reach the eyepiece. Thanks to Scott for sharing his small ladder for the children.

We viewed Saturn next with 3 moons visible. The 13mm and 8mm eyepieces were used for these views. All the visitors were especially impressed with Saturn and the visible moons. Mars was visible as the sky darkened. Observers could see the slight orange color with the unaided eye. We viewed it with the 13mm and 8 mm Ethos eyepieces

also, but the views were not impressive, which is typical for Mars. We enjoyed the interaction with RAC members and shared the visitors' enjoyment of the views. This was the most perfect weather and location for a star party that we have attended so far. The Park representatives invited us back soon. Joe and Sherry packed up and left just before midnight. Scott, Debbie, and two rangers were still present.

Takahashi 140mm Refractor Viewing and Photography



Photograph of Jupiter and moons by Scott Busby

Orion 10" Reflector Viewing

Bart and Linda Billard arrived about 7:00 pm with a picnic supper. The weather was fine, with fair weather cumulus clouds. There were typical thermal clouds that hopefully would dissipate as the sun went down, which proved to be the case.

Scott came by their picnic table and explained the route to the setup area near the bluff. After setting up, Bart found Venus with the 10-inch Dob while the sky was still light enough to make it hard to pick up with the naked eye. The Park interpreter looked at it through the telescope and they ended up talking about Venus's phases.

As it got darker and visitors arrived, Bart showed the Moon and Saturn with the Dob and aligned the NexStar. There were plenty of questions and conversations about astronomy topics, and it became evident that the experiment of setting up two telescopes was hard to keep up with. Fortunately, one of the visitors, a 10- or 12-year-old boy named Justin, proved adept at keeping the Dob pointed at objects and even found a few on his own. He

wound up helping people get views through the Dob when Bart was busy with the Nextstar or answering questions. The moonlight limited the viewable objects, but the event was as much about interesting questions and astronomy conversations as viewing. Bart and Linda talked quite a lot with Justin and his father, and they might come to a star party again, even though they are from Richmond.

Linda and some others saw a meteor, and there were occasional glimpses of fireworks across the river. Some heat lightning crackled in Northwest after dark. Linda and Bart left around 11:00 pm and soon saw the setting Moon obscured by clouds in the West, as well as continued distant lightning.

Orion 6" Reflector Viewing - Newbie's First Star Party

What's it like to attend your first star party?

First, it was a beautiful night to gaze at the heavens. You can't ask for much more than that.

Second, although I didn't bring a telescope, I left with one and knew how to use it. Pretty good deal in my book. That's a great thing about an astronomy club. They have loaner telescopes for their members to borrow. Joe brought a perfect loaner telescope for beginners like me: an Orion 6" Dobsonian. Somehow, he found the time to help me set it up, collimate it. Then he showed me how to use it. Soon the moon was filling up the eyepiece with incredible detail I'd never seen before in my life.

I set up my parallelogram binocular mount for my Celestron 20x80 binoculars, because they're great for observing the moon. The mount makes them very steady and easy to adjust for people of different heights, while still staying on the target.

Before I knew it people were swarming all around us and coming up to me asking questions. I'm thinking to myself "Look, I'm a newbie. I'm really not qualified to speak or represent the club." However, I soon got over my timidity.

I realized I knew enough to help people enjoy the views. A nice lady named Molly came up to me and we talked for a while. She said that someone at the other end said Saturn would be able to be seen at around 10 PM (it was about 9 PM at the time). I looked up and Saturn was already out, so I slewed the 6" Orion over to it and there it was, rings and all! I said to Molly "Look at this." I got my first astronomy "Wow!" and she called about five kids over to look. That's a pretty good feeling... having someone say "wow!" because you showed them something in the sky they'd never seen before. I think the kids really enjoyed the 6" Orion because the eyepiece is just about the perfect height for someone standing about four feet tall.

The time flew by and the people kept coming. I'd thought I would spend a lot of time looking through other people's telescopes, but I didn't get much time for that because there were so many people that wanted to look through the equipment I was manning.

After about 10:30, I got a chance to go around and look through Scott's, Joe's and Bart's scopes. Each revealed ever more detail than the little 6" Dob. After that I spent a lot of time just looking at the sky with my naked eyes. Living in suburbia, most of the sky in my backyard is obstructed by trees and my house. What isn't obstructed is affected by light pollution. The view high above the Potomac was awe inspiring. I'd been studying the constellations with Starry Nights planetarium software and I was happy that I recognized so much up there

Before long it was getting late and reluctantly, I had to go.

Looking back, I've confirmed a lot of things that I've read about amateur astronomy:

- a. Amateur astronomers are nice people.
- b. Amateur astronomers are justifiably proud of their equipment and enjoy letting other people look through their investments.
- c. Amateur astronomers are natural teachers. They enjoy sharing the wonders they've explored with others.

What's it like to attend your first star party? Awesome!