Harford County Astronomical Society

Happy Holidays!

Monthly Newsletter

Volume 37 Issue 12 December 2011

General Meeting
Thursday, January 5, 2012
at 7:00pm
HCAS Classroom

Public Star Party
Saturday, January 7, 2012
at 7:00pm
HCAS Observatory

Please check our website for possible schedule updates and changes:
http://www.harfordastro.org

and our new Facebook page at:
http://www.facebook.com/HarfordAstro

http://astroleague.org/ http://nightsky.jpl.nasa.gov/

In This Issue:

HCAS General Meeting

Minutes of December 8, 2011

The meeting was called to order at 7:00pm by president Tom Rusek. The minutes of the November meeting published in the November Newsletter were approved.

Treasurer's Report: Tim reports that we are up to 61 members. The cable for the hand controller is on back order and will be shipped soon. Grace reports that member Corey Dreigier is recovering from his surgery.

Newsletter Issues: Roy's photo was in the Aegis on December 2 for the Astronomical League Newsletter Award. Last newsletter included several of Gary's Lunar drawings for his AL Lunar 2 Award.

Website Issues: Peter's Asteroid photos should be uploaded to the website.

Outreach Program: Past events – Open House on December 3 brought 54 guests and 12 members to the Observatory. There was a group of 13 Boy Scouts working on the Merritt Badge. Karen, Tim B, and Paul gave presentations to the Scouts on a variety of Astronomical subjects. Paul's PowerPoint presentation was wonderful!

Parkville Middle School – Tim is awaiting final numbers, but there were at least 60 students with family at the event on December 1 (being moved from December 2). Grace did outreach to 38 kids and 5 adults through Delta Day Care. She has become known as "The Star Lady". She talked about the Sun and moon, and let the kids use eclipse glasses. Upcoming Events –

Paul Sokolowski will be doing a presentation to the Odyssey School in Stevenson, MD in February or March. STEM Night programs will be done my Mark Kregel at Elkton Middle School and North East Middle School during the month of February. STEM Night programs are tentatively scheduled for February 23 for Edgewood Middle School, and either March 29 or April

10 for Fallston Middle School. Grace also reports there is outreach for the Delta Church Caravan Group in January or February. Open House for January 7 will bring us 2 cub scout troops, we will split the group into to smaller groups, having them rotate halfway through the night.

Astrophotography: The photo of the Io transit of Jupiter is on the website.

Observatory Operations: Mark, Gary and Tim Kamel are in the process of getting the Dome Rotation project completed. The dome is very hard to turn manually. Tim K. took the donated 10" Meade telescope out to Broad Creek and put it through some paces. He says it is working well. The group is receiving a new 4.5" reflector tonight.

Observing Reports: There have been several trips to Broad Creek; please look for reports in the newsletter. Next window for observing at Broad Creek will be December 15 – 27th. Look for the email loop.

Night Sky Network: Colleen and Grace both emphasize the need to enter your hours you spent at an outreach event into the NSN website. It is easy to do. If you teach a NSN concept at 5 outreach events, you will get the Outreach pin from the NSN. If you do an outreach event alone, please email Colleen so that she can add it to the calendar.

Tim Blanchard will be moving to Virginia in January to pursue other career interests. He has become a valuable asset to HCAS, and will be missed. Tim assures us that he will be back to visit from time to time – his parents still live in the area.

The Edgewood Middle School is looking for a volunteer coach for 4 students for the Maryland Science Olympiad. Interested parties contact Grace.

The meeting was adjourned at 7:50pm.

- Karen Carey, Secretary

Treasurer's Report

December 10, 2011

Current balance as of 12/10/2011:

Main checking account:	$3134.60
Second Checking account:	$ 224.31
PayPal Account	$ 503.77
Total	$3862.68

Recent debits include website maintenance fee, purchase of carry bag for the club's tripod and a case for the mount, and the purchase of cable for the C-14 control box.

Recent credits include deposits for two memberships, the purchase of an Astronomical Calendar and donations from the Perryville Elementary School and Boy Scout Troop 564.

Membership is now up to 61 individuals and families with one new membership in the last month.

- Tim Kamel, Treasurer

New Members

December 8, 2011

Please welcome the following member:

Jerry Kaufman, who is a long-time amateur astronomer, and enjoys observing and doing outreach.

Welcome aboard!

Outreach

Outreach Program
December 1, 2011

On this night, we provided an outreach star party for the Parkville Middle School. This is a science magnet school and we were requested to provide a star party for 3 Gifted and Talented 7th grade science classes. This was our third program to this school; the last one was on 11/11/2010.

Originally, the outreach was planned for December 2nd and, being a Friday night, we were expecting a large turnout. Permission slips were sent out and returned with a projected attendance of 202 students, parents and siblings. We were also expecting 6-8 faculty members.

Watching the weather for a week, the forecast on three different sites favored our rain date, Thursday 12/1. With great regret, we made the decision on Tuesday night to go with Thursday. We could not wait any longer as notes needed to go out to the parents advising of the change and this was the latest we could wait. As expected, a week night program took its toll. Two club members could not participate due to other commitments and several students could not attend due to school and work commitments. As it turned out, Friday was clear but it was a "better safe than sorry" decision that had to be made.

As we had done in previous star parties to this school, we picked several objects to feature in the star party. These were bright objects that were readily visible in light polluted skies and were chosen to represent different classes of objects. Classroom instruction was given to the students before hand on the significance of the objects and what to look for when they got to the telescope eyepiece. Students were given viewing lists and those that saw the required number of objects received a nominal prize and were also exempted from taking an exam.

Thanks to Joe, Larry, Chris, Gary, Jerry, Bill, Doug and Mark. I was also there and set up two scopes so that we could set up 8 scopes and one 100 mm binoculars. Our targets were the Double Double, Uranus, M-15, Alberio, the Double Cluster and the Pleiades. We had two scopes on Jupiter and a scope and binoculars on the moon. It was a nice evening, and despite some floodlights on the school property, we still could still see deep enough to even see the Pleiades dimly with the naked eye.

Even with the change in the date, we still had a high level of turnover, with 157 attending including students, parents, siblings and faculty. Not quite as high as we expected but the change in date to a school night definitely put some people off.

For many, including parents, siblings and school staff, this was the first time looking through a scope or large binoculars. Reactions were good, ranging from "wow" and "this is so great" to "I have to ditch my dad. He is so annoying. He wants to look through all the scopes".
- Tim Kamel

Open House
December 3, 2011

It was a better night than it was forecast to be.

I had been watching the forecast for a week, mostly for the Parkville Middle School star party but also checking to see what we were going to get for the open house. Forecast ranged from partly to mostly cloudy. However, that did not happen. We had a thin layer of clouds that still permitted us to see the Moon and Jupiter. It did clear later on, with stars showing, but by then most of our guests had left. The thin layer of clouds came back before we left the observatory.

Saturday was our open house for December and we were scheduled to have a troop of Boy Scouts (Troop 564) who had a need for some very specific information that they needed to achieve their merit badges. Karen, Paul and Tim B. took on that challenge and made three presentations in the new classroom.

After that, it was time for some hand on observing at the telescopes. Jim and I manned the dome, alternating between Jupiter and the Moon. The thin layer of clouds steadied the views of Jupiter, and we were able to dial in 5 bands. All 4 Galilean moons were visible. The Moon, as always, was a treat. The Straight Wall was prominent and we centered that in the field of view, which also offered craters, maria and lunar highlands and some mountain ranges.

Total visitor participation was 54 people and included 13 scouts and 14 adults that accompanied them. We also had another 27 guests from the general public.

We also had scopes set up in the parking lot, courtesy of Karen and Maggie, Paul, Lucy & Liz and Chris. Also participating tonight were Colleen, Mark and Roy.

It was an early evening, and we had shut down and locked the doors to the observatory by 9:20pm.

Observing Notes

Broad Creek
November 18, 2011
6:30pm to 9:45pm

The weather prediction was for a generally clear night. Cathy Tingler and I met at the BC gate around 5:00pm. Paul Sokolowski joined us later. The sky was free of clouds, but the transparency was about 2, on a scale of 1 to 5. Consequently , the night was best for star clusters, planets and planetary nebulae. There is a good deal of nebulosity in Cassiopeia that went unobserved, even when I used the UltraBlock narrowband and Oxygen III filters. Oh, well. (The ruts were still at the entrance to the observing site, but it was easy to drive around them.)

Here is what we observed:

NGC752 – A bright open cluster in Andromeda, sometimes mistaken for M33, with unaided eyes.

M15, a globular cluster in Pegasus, near the zenith now. Nicely resolved, even in the twilight.

M33 in Triangulum - This dim, blue-star galaxy was visible in the twilight also, using the 35mm Panoptic eyepiece. I could see the bright core, with a hint of the spiral arms and the star cloud, NGC604.

NGC654, 659 and 633 - Open clusters in Cassiopeia. They appear very close together, and I could almost get all three of them together in the same field of view, using the 35mm Panoptic.

M30 - A globular cluster in Capricornus, with "legs". The legs are strands of stars extending from the cluster. They might be caused by dust clouds within the globular cluster that block out numerous stars, making the object look more like a spider than a globe.

NGC7006 - This is a globular cluster in the small constellation of Delphinus, near Cygnus and Aquila. It is one of the more distant globulars from Earth - about 185,000 light years. ("Delphinus" is Latin for dolphin.)

NGC6934 - Another globular cluster in Delphinus.

NGC559 - Open cluster in Cassiopeia. This is one of many OC's in that relatively small constellation.

NGC6885 - Open cluster in Vulpecula. It is next to a similar open cluster, NGC6882. Vulpecula is one of three small constellations between Cygnus and Aquila, and means "Little Fox" in Latin. The Dumbbell nebula , M27, is also in this constellation.

NGC6811 - Fine open cluster in Cygnus. It looks like NGC7789 in Casssiopeia, like grains of salt spilt on a black tablecloth. Fills up the entire FOV of the 35mm Panoptic eyepiece.

M33 - Viewed at 7:00pm, it appeared somewhat brighter than it did at 6:00pm. The arms' structure could be seen as slightly brighter, but otherwise not much of an improvement.

NGC7510 - Open cluster in Cepheus. Has a triangular shape.

NGC7026 - Planetary nebula, tiny in appearance, in Cygnus. Appeared as a small disk at 262x, using an UltraBlock narrowband filter.

NGC7048. Planetary nebula in Cygnus. Used an UltraBlock narrowband filter.

Collinder 463 - Open cluster in Cassiopeia, containing about 40 stars. Appears very long and horizontal. Some people see it as a crescent.

Stock 2 - Bright open cluster in Cassiopeia. It is large and bright and visible with binoculars. It fills the FOV of the 35mm Panoptic.

NGC869 and NGC884 - The "Double Cluster" in Perseus. It appeared very bright and with more stars than I had expected, after looking at objects in other regions of the sky. The northeast region is the least light-polluted at Broad Creek.

Stock 8 - Loose cluster of about 40 stars in Auriga. Also contains nebulosity which wasn't visible on this might.

NGC 1807 and 1817 in Taurus. These are two small open clusters that are very close together and make an interesting sight, if you use your widest-field eyepiece. (I used a 35mm Panoptic.). Some observers compare the two clusters to the Double Cluster in Perseus, although they are much dimmer and have fewer stars.

NGC 1514 - Interesting planetary Nebula in Taurus. It is a point of light surrounded by a white fuzzy ball. Used both OIII and UltraBlock filters.

IC 2149 - Planetary nebula in Auriga.
M33, again - Very high in the sky, around 9:00pm. The core appeared larger and brighter than before, and with some patience and averted vision, I could see more of the spiral arms than before.

NGC7662 - The Blue Snowball planetary nebula in Andromeda, now almost overhead. It looked large at 262x and with the narrowband filter, but I couldn't see any detail.

NGC1931 - A small nebula around a small open cluster in Auriga. It is both an emission and a reflection nebula. There are some very young stars at the center of the nebula.

Jupiter was the last object we viewed this evening.

By 9:30pm, the temperature had reached 30°, so we decided it was time to pack things up and leave for home.

- Roy Troxel

Broad Creek
November 24, 2011
5:45pm to 10:00pm.

While everyone else in the county was finishing up their Thanksgiving dinner, Cathy, Paul and myself began setting up our scopes at Broad Creek, around 5:00pm. The transparency and seeing were fair and the air was unusually dry and warm for this time of year. Like the week before, galaxies and nebulae appeared dim or were invisible during the evening, so I decided not to waste too much time trying observe them, and instead concentrated on star clusters.

My observing list for the night was compiled from some of the 109 objects listed in Stephan O'Meara's book, *Hidden Treasures*.

Cathy was configuring and testing her new GoTo mount, and Paul had brought his 15" Dob.

I began the session with M52, one of many open clusters in Cassiopeia. Using a 35mm Panoptic eyepiece, at a magnification of 60x, i searched the Cassiopeia-Perseus "arm" of our galaxy, the Milky Way, which was unusually bright at this time. M52 appears as a small, tight cluster, similar to NGC7789 in the same constellation.

I then moved to M103, a triangle-shaped open cluster, and one of my favorites; within the four sides of the "triangle" are several dozen dimmer stars.

The Cassiopeia-Perseus arm was overhead, and I began searching the region for other interesting clusters, based on the observing lists I had prepared. Here's what I saw:

NGC7243 - An open cluster in Lacerta, a dim constellation between Cygnus and Cassiopeia. This cluster displays a very pretty star field in the Panoptic's field of view.

NGC7209 - Another open cluster in Lacerta, with a rich Milky Way star field around it.

M33 - The galaxy in Triangulum. The core and a hazy cloud around it was all that was visible through out the evening, due to poor sky transparency, a condition caused , in this case, by humidity becoming ice crystals in the cold night air.

NGC7814 - A galaxy in Pegasus. Appears on-edge.

M77 - Galaxy in Cetus, seen rising in the east. For some reason, this region of the sky was very transparent, and I got a good view of this generally dim galaxy. It has a very bright core, with a halo around it. There are number of other galaxies like this in the universe, in the "Seyfert" catalog.
According to Stephen O'Meara: "This object is the prototype of a peculiar class...known as Seyfert galaxies. These systems have very active nuclei, which are potent emitters of radio-wavelength energy and whose spectra show strong emission lines...Apparently, gas clouds (some with the mass of 10 million suns) are are blasting away from the nucleus of M77 with velocities up to to 360 miles per second and enough energy to power several million supernovae explosions!" (It's probably a good thing that M77 remains about 47 million light-years away from us.)

NGC6894 - A planetary nebula in Cygnus. Appeared as a small green dot, even at 262x.

NGC488 - A galaxy in Pisces. A bright round core, with a circular cloud around it.

Around 7:00pm, clouds began to develop across the entire sky, but we were able to continue observing through spaces between the clouds. Within 45 minutes, the clouds had dissipated, and the sky was once again clear, but with lower transparency. The Milky Way was gone, so I decided to concentrate on only the brighter objects in the sky, and not search for elusive DSOs or "faint fuzzies".

NGC457 - The "E.T." open cluster in Cassiopeia appeared very bright, especially since I had recently cleaned my mirror.

NGC7686 - A bright but sparse cluster in Andromeda.

M76 - The "little dumbbell" nebula in Perseus. One theory about these "dumbbell"- shaped nebulae is that they are really planetary nebulae viewed from the side, instead of from the top, like The Ring (M57).

NGC1746, 1750, and 1748 - Three open clusters in Taurus. They overlap each other and all three almost fit into the field of view of the 35mm Panoptic.

Mu Cephei - A bright orange "carbon star". This is a star that is losing its gravitation, and consequently its matter. Hydrogen and other light gases have drifted from its surface, so you are now observing burning carbon. The condition is caused when the nuclear engine at the star's core is beginning to burn out, having exhausted the star's matter. The star's next stage might be as a planetary nebula.

Collinder 21 - A small open cluster in Triangulum. Looks a little like the constellation Delphinus.

NGC6543 - Planetary nebula in Draco, sometimes called the "Cat's Eye". At 262x, with an Oxygen III filter, I couldn't see any detail on the nebula.

M37 - A bright, well-populated, open cluster in Auriga. Can be seen with binoculars as a cloud.

I decided to use my binoculars at this point, and got some nice views of the Double Cluster,the Alpha Perseus Association (a loose collection of stars, moving with the same speed in the same direction), the Pleiades, the Hyades, and the Perseus Arm area of the Milky way in general.

Stock 23 - An open cluster in Camelopardalis, a dim constellation in the region inside Polaris, Perseus and Cassiopeia. This is another cluster that looks like Delphinus.

NGC 1502 - A bright open cluster in Camelopardalis.

M35 and NGC 2158 - Two open clusters in Gemini. NGC2158 is 16,000 light years away, on the edge of the galaxy.

NGC 2129 - A sparse open cluster in Gemini, with what looks like two double stars.

Collinder 89 - Sparse but bright cluster in Gemini.

NGC 2163 (or Cederblad 62) - This nebula is part of a strange area of the sky, near the top of Orion. What makes it strange is that no one can decide what is there! About 100 years ago, a small nebula there was listed as NGC2163 in that catalog. Over the years however, the object has appeared to change its shape and position, and has been mistaken for other nebulae as well. The most reasonable solution to this mystery is that the region is so filled with nebulosity that it is alternately darkened and brightened by moving dust clouds, variable stars and other areas of radiation emissions. This is also part of a "stellar nursery", and perhaps as new stars are born,

their growing brightness changes the illumination on the nebulae. I plan to spend a few minutes on this area each night I observe Orion, just to see if anything new happens. It might be an interesting area for photography as well.

Collinder 70 - This is a large open cluster, located around the belt of Orion. Collinder 70 includes all three belt stars: Mintaka (the Girdle), Alnilam (The string of Pearls) and Alnitak (the Belt). The cluster has a diameter of almost 3 degrees and consists of 100 stars or more. Most of them are of the 10th magnitude or brighter. This is an excellent object for binocular viewing.

M78 - This is a distinct nebula in the very nebulous region near the top of Orion. It is both the reflection and emission type. It surrounds two stars that appear as eyes looking back at you.

We stopped observing around 10:00pm, when the temperature began to drop sharply. It had been a productive night, despite the annoying clouds.

- Roy Troxel

Observation Report
Friday, 11/25/2011

It is the day after Thanksgiving and this is a night to give thanks for. The sky is clear, the weather is mild and the seeing is pretty good. This is a good night to go observing. There were 8 of us at Broad Creek this night – me, Joe, Larry, Gary, Jerry, Keith and Jeremy and his Mom.

This was my first time at Broad Creek since July. Opportunities have been few, what with the weather and the moon, but this was a good chance to try out the club's new 10" SCT. You may recall we got this as a donation before the construction work started. It took the better part of an hour and a half but we were able to get it set it up and look through it at Jupiter. The view was pretty darn good, but without a decent visual back, I was hurting my back and decided to pack it up. Look for an equipment report for the same night in this newsletter.

I had also brought along my ETX-125 Mak, just in case I could not get the 10" to work, so I set it up. Being an f/15, and having a small central obstruction, this scope is a planet killer. It proved it again when I set it on Jupiter and cranked up the magnification. What an incredible view at 160 power with several belts on the planets as well as subtle features and dark spots.

I then spent some time hitting some Messier objects including M 1 (Crab Nebula, fairly faint but visible with direct vision), M 2 (a globular cluster), and M 35 (would not fit it all in my field of view).

Next was Auriga with M 36, M37 and M 38. These are neat clusters, each a little different than the others.

By now, Orion was rising and I could grab a view of the Great Orion Nebula. It was still fairly low so the view was soft but I was still able to resolve the Trapezium.

At about 9:00, we decided to pack up and head for home. Jeremy and his Mom as well as Keith and Larry had already left. The rest of us were packed up and gone by 9:15. - *Tim Kamel*

The best times to observe at Broad Creek are between the last quarter and first quarter of the lunar cycle. The next period is :

December 15th to December 27th, 2011

Try to keep some of these nights open on your schedule!

Because of the unpredictable weather conditions, we cannot set a specific date and time to observe. Sometimes the decision to go to BC is made within a few hours before sunset. In any case, all club members will be notified by email.

For any questions, contact Roy Troxel at: rtroxel@comcast.net

Observatory and Equipment

Equipment Report
Friday, 11/25/2011

About eight months ago, the club received a donation of a significant aperture scope, a 10" SCT. The scope sat in the storage room for several months during the construction at the dome. I then borrowed it to check it out and see what it could do, and hopefully use it to shoot some photos.

Well, between the weather, the moon and other commitments, my first chance to take this scope out was on Friday, 11/25, two months after taking it from the dome. A group from the club was heading to Broad Creek to do some observing and I tagged along, bringing this scope with me.

I had already done some research on this scope on the internet and through a Yahoo Users Group called Meade-LX5-LX6. The group was able to provide me with an instruction manual, which is basically the same as for the 8" SCT that the club owns. The 8" is an LX3 2080. The 10" is an LX3 2120. Both date back to 1983, according to the copy write date on the instruction manual. This makes it about 30 years old or a little older than me. ☹

I did get a ton of help from Gary and Larry. Without their help and insight on the workings of this scope, the darn thing would have never left the trunk of my car.

Well, there is good news and bad news. I'll start with the bad:

First, this sucker is HEAVY. It came to us with the OTA attached to the wedge, and a counter weight attached to the scope. But even with those removed it is still heavy.
Second, it is missing some bolts that are needed to attach the wedge securely to the tripod so that it doesn't wobble. And, boy, does it wobble. I should be able to replace those bolts at Lowe's with little trouble.

Third, it is missing certain accessories and we could tell that the original owner used it mostly for astrophotography. It does not have a 2" visual back and a scope of this size should have one, the 90 degree kind, if we are to preserve our backs. The scope does have a 1.25" visual back, but it is a straight through kind. There is a 90 degree 1.25" diagonal, but we did not find it at the observing session, and had to crouch down to look through the scope.

Fourth, either the original owner did not know what he was doing or the scope was tampered with before we got it. The screw that adjusts the altitude of the wedge was not properly placed and the wing nut was stripped. However, Larry was able to fix that and we were able to set the altitude correctly. The Dec setting circle is out of alignment and Larry instructed me on how to set them, but I have to wait till I get the courage to dare lift the darn thing again.

Fifth, it does not have its own free standing power source.

Now the good news:

The scope does work and we got some pretty darn good views of Jupiter. I was able to align the finder and also replace the batteries on the lit reticle. The finder is also in good condition and I got it focused with no problem. The scope does come with an extension cord with a lighter plug for plugging into a car lighter or a power source. Using a battery pack from my LXD mount, I was able to power up the "Quartz" drive and got the scope moving in two axes, so that part works too.

There is a set of Allen wrenches that, so far, seem complete and have addressed all the needs of the mount.

The scope came with a box full of stuff. There is a manual guider that seems complete and does fit on the scope with provided Allen wrench. I did not get a chance to try it this night.

It also came with an electric focuser. After adding a 9-volt battery when I got home, the focuser zoomed in and out. However, I have not as yet tried it on the scope.

The third major item is a 2", 90 degree diagonal that seems to only attach to the electric focuser. This is also not tested as yet.
The rest of the stuff, aside from some wood screws that do not seem to have any use includes several different sized extension tubes; some hardware (a spare knob and a bracket of unknown purpose); a white screen for solar projection (incomplete); a set of two red lights and controller for illuminating the setting circles (basically a nuisance because the wires get in the way and I removed it); and a bunch of filters. There is an Orion set of four primary color filters and also a set of four secondary color filters.

Then, and this is the first time I have seen something like this, there is strange set of filters that are stamped Series 6 that have no threads and are a non-standard size, neither 1.25" nor 2". I checked the Internet and found that there is such a type of filter that was used for photography back in the day. The instruction manual for the scope showed these to fit directly into the scope, right into the light path at the rear opening for the scope where the focuser goes. These were an accessory that Meade provided and apparently date to back then. They are in sad shape. Along with these filters were several pieces of hardware that hold these filters and would apparently then attach to a camera.

Similarly, there is also a set of filters marked Series 6A that I can not identify a purpose for.

The last item in the box is a Dwell Tachometer Tester! I have not a clue why this was here.

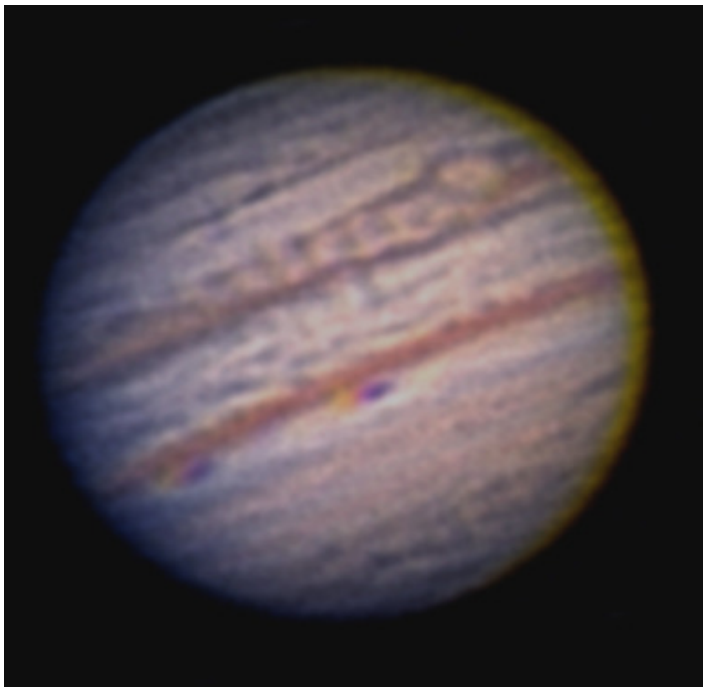
I have inventoried the stuff that came with the scope and will provide it to those that are going to do the inventory.

I still need to do some more checking to see that everything works correctly and some tinkering to get to hold together well, but so far I feel that this is an incredible gift for the club. The scope is a large aperture and is complete with a wedge and solid tripod. The drive works. The accessories are pretty slick and are interchangeable with Meade 8" and the C-14. I am looking forward to doing some nice field astrophotography with it.

- Tim Kamel

Astrophotography

Galaxies M31, M32 and M110 in Andromeda
Photographed Nov. 25, 2011 with a Celestron 80 mm EDF refractor, CGEM Mount, Canon 50D camera, Astronomik CLS LP filter. 1 hr. total exposure. *By Larry Hubble, lkhubble@verizon.net*



Jupiter
December 11. 2011 at 12:27 AM EST. by Peter Nerbun.
Utilizing both color and infrared pass filters.

I recorded this image of Jupiter at a focal length of 7891 mm . An atmospheric disturbance in the SEB appears to the left of the GRS (note that south is up in my image). I recorded the usual red, green and blue channel images and added an additional infrared pass channel image to extract more detail from the Jovian atmosphere; infrared pass filter images are less susceptible to seeing conditions thereby adding more features to the image. I processed this image from 4 component images; 3 of those images were derived from Astronomik red, green, and blue filters working together with a monochrome CCD camera; the 4th image was made using an infrared pass filter utilized in conjunction with the camera.

- Peter Nerbun

Albireo

November 25, 2011 at 7:50 PM EST

Here's the double star Albireo imaged at a focal length of 7108mm. Albireo consists of a gold color star known as Beta1 Cygni (Albireo A) and a sapphire star known as Beta2 Cygni (Albireo B); the two stars are separated by an angular distance of 35 arc seconds which is about the width of Jupiter in March of next year. Albireo A has an angular width of 6.5 arc seconds, nearly the same angular size as Mars when I recorded this image on Nov 25. While Albireo A and Mars were of similar size it takes light only 11 minutes to travel from Mars, a tiny fraction of the 380 years that light requires to travel from Albireo A. I imaged Albireo with a C11 SCT, a 2.5X barlow lens, and a monochrome CCD camera recording at 60 frames per second.

- Peter Nerbun

Miscellaneous

The International Astronomical Union (IAU)

http://www.iau.org/

The International Astronomical Union (IAU) was founded in 1919. Its mission is to promote and safeguard the science of astronomy in all its aspects through international cooperation.

The organization has traditionally fostered collaboration between amateur and professional astronomers in terms of observing, astrophotography and educating the public through the media.

The IAU's public outreach programs are managed by the Office of Astronomy for Development (OAD). This is an effort by the Union meant to sustain the amazing momentum built during the International Year of Astronomy 2009. The simple vision is "Astronomy for a better world!" with a focus on 3 areas: school level education; university level education and research; and the public understanding of astronomy.

Please have a look at the website **www.astronomyfordevelopment.org** for more information.

There is a space on the website where you can register as a volunteer for astronomy-for-development projects **http://www.astro4dev.org/index.php/volunteers**

There's also a space where you can submit your project ideas and proposals relevant to the goals of the OAD: **http://www.astro4dev.org/index.php/oadprojects**

The objective is to set up regional nodes across the world which will coordinate activities locally, as well as 3 global Task Forces for the respective focus areas (school level education; university level education and research; and the public understanding of astronomy).

The contact at OAD is:

Kevin Govender
Director, IAU Office of Astronomy for Development
kg@astro4dev.org

Letter from Dr. Keith Strong, Solar Physicist

http://www.youtube.com/user/drkstrong

Dear Ms. Wyatt,

I found the Harford County Astronomical Society website while browsing the web and thought I should contact you. I am a retired solar physicist who lives in Bowie and work part time at NASA Goddard (emeritus). As a hobby I am trying to promote interest in the Sun and Space Weather. I thought that your members might be interested in finding out more about what is happening on the Sun at the moment as we are steadily rising towards a new solar maximum and solar events, such as flares and coronal mass ejections, will be increasingly in the news.

Solar Cycle 24 may be very different than the ones we have experience over the last 4 decades, starting with the unusually extended solar minimum of 2006 – 2009. Similarly there is no consensus as yet about how big this next cycle will be. Also we have unprecedented amounts of data from missions like the Solar Dynamic Observatory available to all to study this phenomenon. This makes the Sun a particularly fascinating subject for astronomers to study; amateurs and professionals alike.

Some of your members might be interested in following my channel on YouTube and I would appreciate you passing on the URL to them:

http://www.youtube.com/user/drkstrong

I produce a “daily” summary of what is happening on the Sun – THE SUN TODAY. “Daily” refers to the goal, not the reality. I also issue space weather alerts (BREAKING NEWS). In the last year I have produced over 300 such videos and have nearly 3500 subscribers with a total viewership of about 500,000. There I also describe links to other on-line sources of space weather data that may be of interest to the members of your society.

Yours Sincerely,

Dr. Keith T. Strong

Two Cub Scouts Win HCAS Awards

Two of our door prizes were won by Cub Scouts from Pack 131 in North East, MD. Duncan Cameron won a game called Cosmic Decoders and Adam Pearson won the Ohio Starwatch book. The other two door prizes were won by a father and son from Towson, MD. Bill Smith won Tours of the Night Sky and his son, Alexander Smith, won the Stargazer kit. Cosmic Decoders and Tours of the Night Sky came from the Night Sky Network. Tom Rusek donated Ohio Starwatch and Stargazer.

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http://www.harfordastro.org
Webmaster: Larry Hubble

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