

Harford County Astronomical Society



Celebrating Our 40th Anniversary!

Monthly Newsletter

Volume 36 Issue 10 October 2010

Public Star Party

Saturday, October 16, 2010

at 7:00pm

At the HCAS Observatory

General Meeting:

Thursday, October 21, 2010

at 7:00pm

In the Observatory Classroom

Please check our website for possible schedule updates and changes:

<http://www.harfordastro.org>



<http://astroleague.org/>



<http://nightsky.jpl.nasa.gov/>

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HCAS General Meeting

The meeting was held on September 23, 2010 at Aberdeen Hall on the Main Campus. This gave the group the opportunity to see the space we would be using for Astronomy Day on October 16. The meeting was called to order at 7:02pm by President Tom Rusek. The minutes of the August meeting were published in the newsletter and were approved as published.

Treasurer's Report: Tim states that we have \$3933.78 in the checking account. The insurance bill has not come yet and will need to be paid when it arrives. We are up to 51 members. There was discussion about the expenses incurred by the Club. Astronomy Magazine subscriptions are in/out, no cost incurred there. Astronomical League dues, Insurance, the post office box and website fees come out of membership dues.

Newsletter: Roy put out a wonderful newsletter for the month of September. Tom had a copy at the meeting. Larry presented a data CD with newsletters from 1970 to Roy so that they may be put in PDF form and placed on the website.

Website: Larry wanted to put the Jupiter red spot transit video on the website, however the program to add it is about \$50. It was suggested by Joe that it be posted with the help of YouTube. This has since come to pass, and is a link from the main webpage.

Outreach: Open House on September 18 was a great success with 163 guests! It was International Observe the Moon night, Tom gave a presentation about the Moon, Karen gave a crater demonstration, Grace showed off our Lunar Meteorite, Larry had the CCD on the Lunar Straight Wall and Tim K. was in the Observatory. Larry has posted some of the photos of the Straight Wall to the NSN Website. Thank you to all members who helped out with this event. We had a great night of viewing for the public. Elk Neck State Park was on August 21 was mixed. Tom gave a presentation to the public, and the Rangers said this was the largest turnout they had ever had for an event. Unfortunately, there was no viewing, as it was cloudy. Grace gave handouts, Karen and Mark talked about telescopes inside the Nature Center.

Upcoming Events: Astronomy Day is going to be on October 16. This will be a combination day and evening event. We will be at Aberdeen Hall from 11-4 with the day program, where we will have the Lunar Disc, telescopes set up, birthday stars, etc. We will need people to help out on Friday moving items to the Hall from the Observatory and then set up time Saturday morning. The evening program will be at the Observatory from 7 on. The week before the Astronomy day

and the week after are filled with schools that will have the Lunar Disc visit. If you are able to help out at any of these events, please contact Grace or Gary. There was much discussion on nailing down a date for the Staff/Faculty Open House. It was finally decided to make the invitation on a Friday, the day before our regular Open House event. Tom will get with Sal to find out which dates will be best. Mark will be holding an Outreach event on Wednesday October 13 at the Homestead Wakefield Elementary School and asks for help with 200-300 students and parents.

Observatory Operations: Gary will be spending some of the upcoming Saturdays painting at the Dome and asks for volunteers to help. Contact him if you wish to be added to the email list. Mark will contact the college to have the inside of the actual dome painted. We had a girl stumble up the steps at our last Open House, we must make sure that the stair lights are lit during events. An email went out to all members regarding what equipment and eyepiece are on loan to members. Not many responses came back. This list needs to be kept up to date. If you have a piece of Observatory equipment, please contact either Tom or Grace so that it may be accounted for. The Cat5 cable that is supposed to be run from the Dome to the classroom is (and has been) in place. Tim and Mike T. will work on getting the hardware in place so that the classroom may see what the dome is observing.

CCD Imaging class: Larry will be having a series of 3 classes on how to use the LCD/Planetary Imager, and asked which night would be best. It was decided that the most interested parties liked Friday nights. Everyone is invited to come to these basic "how to" classes at the Observatory.

Observing Reports: have been published in the newsletter. Next opportunities for Broad Creek will be the weekend of October 1-3 and 6-8, with the moon either rising late or in Full Phase. Contact Roy to be added to the email list.

Night Sky Network: We will be receiving a new tool kit, this one is about Space Rocks, and it will have actual meteorites inside. Grace held a contest about which stickers to be given to kids who have seen the Lunar Disc, and the winner was Charles' design, thank you for your submission!

Grace also reports that she can order Astronomical Calendars, they will be \$19.95, or if we order more, the price will decrease. Contact Grace.

The meeting was adjourned at 8:08pm. At that time, members of the club went to the Aberdeen Hall Lobby to see the space we would have for Astronomy Day. The lobby is a beautiful space dedicated to Science and Astronomy. We will see you on Astronomy Day!

- Karen Carey, Secretary

Treasurer's Report October 12, 2010

Current balance in checking account is: \$3236.37

Insurance premium of \$320 has been paid.
We also bought a projector for \$427.41

Membership is at 51 individuals and families, unchanged from last month.

- Tim Kamel

Observation Reports

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

Oct. 28 to Nov. 8, 2010

Try to keep some of these dates 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

Broad Creek Friday, October 2, 2010

A small group of us arrived at BC at approx 06:30PM. Our group consisted of myself, Roy, Bill, Karen and her daughter Maggie

My observing was done with a set of 30X80 binoculars. I had not used them in a while. I like to use them to view comets. I wanted to get a view of comet Hartley 2.

I also used by 10X50's

My view of comet Hartley 2 was not meant to be. I looked and looked and looked. No comet in sight. Others looked for it, they also had no luck. I had a copy of the map from the October issue of S&T. Should have been an easy find. Not so

Anyway I took a look at Jupiter. At least I could find it. Anyway at the beginning of the evening, 2 moons could be seen on the same side. By around 10PM the other 2 moons could be seen barely on the opposite side. Those 2 moons appeared on top of each other. Over a short period of time, the 2 moons moved further out

I was able to locate M15 with the help of Karen. I had always looked just a small ways past Enif. Karen told me to look in the same direction, but a little further. I did and suddenly it appeared in my 30X80's. Very nice looking closed cluster

I viewed NGC 457 (ET cluster) On this night, he appeared upside down in my 30X80's.

I also viewed the hanger asterism. I also enjoyed views of M92, M13, M45, M31, M32, M22, Mizar and Alcor. I attempted to go for M81 and M82, they were to low for observing from the location that I had set up in. Karen was able to locate them, so I enjoyed the view that she had in her telescope.

At around 10PM, suddenly the sky did some light flickering. The flickering became fast for a few minutes then stopped as suddenly as it began. I have seen this occur several times while at BC. It is a low light flash, not bright at all. The whole sky seems to take on the same brightness all around. This time we were not sure if we could hear a very faint thunder off in the distance.

As far as Uranus viewing goes, I believe I located it with my 30x80's I was able to view 2 objects on the left side of Jupiter. Both were further away then the moons. One object was about 11 oclock. The other appeared to be around 9 oclock. I am sure that the 11 oclock object was Uranus. Due to color being somewhat dull and it had more of a disk appearance then the other object. This object also just did not appear to be a star.

A formal member had assisted me years ago in locating Uranus and Neptune at BC with my 30X80's. I did not attempt to look for Neptune. It was time for me to head up the road. I did view Neptune via Roy's telescope before leaving for the night.

- *Cathy Tingler*

Broad Creek October 1 & 2, 2010

So, I finally had a weekend that I could devote to Stargazing! Robert and Matthew were at Fort McHenry for the Boy Scout Star Spangled Camporee, leaving Maggie and I to be bachelorettes. I knew the weather would be clear, so I jumped on the chance to visit Broad Creek both nights. I spent most of the time working on the items for my HCAS40 Award, although I did view other items of interest.

Friday October 1:

The prediction was for mostly clear, but when Roy, Bill and Cathy met us at Astronomy Hill at 6:30, the sky was completely clear. There was just a bit of humidity in the air. Just before dusk, Jupiter shone bright on the eastern horizon. At first, we could only make out two moons, but shortly a third was visible just on the limb of the giant planet. Twilight began to fall and the stars came out one by one. My first stellar target was one of my favorites, Alberio. I came prepared for a night of hefty telescope work, having done my research as to what area of the sky to concentrate on first. Knowing that Scorpius would set soon, I started there. All observations were made with the Club's 10" Odyssey Dobsonian with either a 20mm or 9mm eyepiece. I've gotten quite good at using the Telrad and sky maps to find my objects.

M7 Open Cluster
M8 Lagoon Nebula
M17 Omega/Swan Nebula
M11 Wild Duck Cluster
M22 Galactic Cluster
M15 Galactic Cluster
M31 and M32 Andromeda Galaxy and Elliptical Galaxy
NGC7331
M81 and M82 Bode's Galaxy and Cigar Galaxy
NGC663
M103
Almach Double Star
Uranus
NGC752 Open Cluster
Mesarthim Double Star
NGC869/884 Double Cluster
Neptune (thank you, Roy)
M34 Open Cluster
M45 Pleiades

All of us tried for Comet Hartley, but we were unable to find it. The only other two objects I tried to find and could not were M4 and the Blue Snowball Planetary Nebula. Roy and I were the last to leave, staying out until about midnight, when the dew started to get really heavy and seeing had deteriorated.

Saturday, October 2nd

Roy, Bill, Maggie and I were set up and ready to go by time twilight fell. Phil attended as well, and Grace showed up a little later. Again, it was clear, steady seeing with some humidity in the air. I had made a list of those items I had missed, plus a list of a few more I had wanted to see. Again, Jupiter hung as the first and brightest object in the sky. At first only 3 moons were visible, then a fourth came to view during the course of the night.

M4 Globular Cluster
M3 Globular Cluster
M51 Whirlpool Galaxy
M20 Trifid Nebula
IC 4665 Open Cluster
NGC 7662 Blue Snowball Planetary Nebula
M27 Dumbbell Nebula
M2 Globular Cluster
Polaris Double Star
Epsilon Lyra (Double Double Star)
M56 Globular Cluster
M71 Globular Cluster
M13 Hercules Cluster

While trying to find Comet Hartley I kept running into NGC457, the ET Cluster. Again, we had no luck finding the Comet.

Maggie took the reigns of the Odyssey for awhile and found Mizar & Alcor, the Pleiades, Albero, M31 and a few other targets. After midnight, the dew had gotten really bad, and Roy and I decided to pack up.

Maggie brought my 4" Go Scope, and did a little observing on her own. Then, Maggie and I spent some time working on the final phase of her Sky Puppies award for the Astronomical League. She had to identify the Milky Way Galaxy and 15 constellations. She seemed quite intrigued by Delphinus. She was able to read a sky wheel/map to find these constellations.

I have to say that I enjoyed visiting Broad Creek. And I promise, it won't be another two years before I return! I was able to view a total of 25 items on my HCAS40 list, and I have only 8 more targets yet to go. I need a winter sky to finish! Special thanks to Roy, Bill, Cathy, Grace and Phil who were able to verify some of the targets for me!

Karen Carey

Broad Creek Oct 1 and Oct 2, 2010

Both Friday and Saturday nights were very clear at Broad Creek this weekend. In many regions of the sky, the seeing and transparency were both 4 out 5. Those attending the two observing sessions were Cathy, Grace, Karen, Maggie, Phil, Bill, and myself. The sun set around 6:30pm on both nights, with moon rising after 11:30pm, so there was at least 3 hours of dark, clear sky for observing.

The Milky Way was bright from Cassiopeia in the Northeast, through Cygnus and Aquila, and down to Sagittarius in the southwest. The dark rifts and the Scutum star cloud were equally visible. I spent some time, off and on, with the 10x50 binoculars, surveying these regions.

On both these nights, I decided to do some hunting for galaxies in the dim southern regions of Aquarius and Cetus. Working off the Herschel 400 list, I was able to locate nine galaxies - may of them 10th, 11th and 12th magnitude. (That should give you an idea of how clear the skies were at BC. My Obsession's optics should get credit as well.)

I tried for another galaxy, NGC404, very near Beta Andromedae. This galaxy has a reputation of being hard to find, because it is supposedly overwhelmed by Beta's brightness. However, the galaxy appeared instantly in my 35mm Panoptic eyepiece, with Beta in the same field.

After the galaxy hunts, I decided to go for some the brighter objects, so I went about locating some open star clusters. With the help of the Herschel list, I managed to identify seven of them in Sagittarius, Cygnus, Cassiopeia and Lacerta. Each of these constellations lie in rich areas of the Milky Way, making it difficult to separate one open cluster from the other. (If it weren't for spectroscopy, which can be used to determine which stars are moving together, scientists would

probably be unsure if some of these stars really are in clusters.) Other bright clusters included the triangle-shaped M103 and the hourglass-shaped IC6445. I concluded with the "Blue Snowball" planetary nebula in Andromeda, NGC7662.

This weekend, Uranus and Jupiter were still within 2 degrees of each other, and we were able to obtain some excellent views of both planets. In fact, on Saturday night, I was able to use 175x on Jupiter, without a filter, and saw none of the fuzziness or atmospheric wobbling, so often seen in the southern sky at BC. The Great Red Spot appeared very distinctly in Jupiter's southern hemisphere, although it was pink this time. The thick southern cloud band was still not visible, but there were two thin bands near the equator.

The blue dot of Neptune, almost two billion miles away, also appeared sharp and distinct.

We also spent both nights searching for the very dim comet 103Hartley, then in Cassiopeia. The object couldn't be found, although if I had thought to write down its RA and Dec coordinates, I could have used my ArgoNavis push-to system to locate it. Oh well, it had still been a great weekend.

- Roy Troxel

Broad Creek
Oct. 7/8, 2010
7:30pm to 12:30am

This was the first night of what would be a four-night stretch of excellent observing conditions at Broad Creek.

I began observing around 7:30pm, with Bill Gelston. There were no clouds in the sky and the seeing was about 3 out of 5. Transparency was good, as the Milky Way was beginning to appear in the twilight sky. Individual stars in The M15 globular cluster in Pegasus could be seen distinctly, just a half-hour after sunset.

Beginning with Jupiter, low in the southeast, and then moving across the southern horizon, I viewed NGC 7293 (Helix Nebula)M16 (Eagle) , and M17 (Swan). I concluded my southern sweep with the M30 globular cluster. The stars farthest from the center of the core are in long strings that resemble the legs of a big (like the ones on my porch this summer).

Moving upward, I was able to see the Blue Snowball planetary nebula (NGC7662) and the galaxy NGC7331. I next tried for M33 a galaxy in Triangulum. Its low surface brightness makes this large galaxy appear dull in small telescopes, and I like to use it as a gauge for the quality of transparency in the night sky. It was at this time about 30 degrees in altitude, and no details on it were visible. I decided I would view this later in the night, and on successive nights, to see what would become visible.

Finally, I turned my scope directly upward (hard to do with a Dob) and found the Crescent Nebula in Cygnus. I saw it dimly, using the UltraBlock filter.

Next, I decided to use my binoculars to hunt for comet 103 Hartley. I found it, to the upper right of the Double Cluster. (I saw both clusters and the comet in the field of view of my 10x50 binoculars.) I thought it appeared slightly greenish, but Bill saw it as slightly bluish.

After viewing the NGC 246 planetary nebula in Cetus, I spent the rest of the night on a galaxy hunt which included NGC 7723, 7724 and 7727. This is a trio of galaxies in Aquarius, within a few degrees of each other. I could see two of them in the same field of my 35mm eyepiece (45x). Four more galaxies in Cetus including NGC 157, 584, 720 and 936.

Jupiter was just past the southern meridian around midnight, with two moons on either side. Using a variable lunar filter, I was able to see several spots on the thick band in the planet's northern hemisphere.

We stopped observing around 12:30 and began packing our equipment.

October 8th, 2010

Six of us gathered at BC at approx 6PM. The six of us included Roy, Phil, Gary, Jeremy, Dale and myself. The sky was very clear; you just knew this would be a wonderful night for observing.

As it got dark, Jupiter could be noted along with the other brighter stars for this time of yr.

The real highlight of my observing session was finding and seeing both Uranus and Neptune with my Apex 127 spotting scope. I do not remember which eye pieces I used. Several were used for each observation.

The week before I was pretty sure I had spotted Uranus with my 30X80 mega views. I wanted to view again with my 127Apex. I was able to locate a map on the internet that was a bit more detailed. When I looked at Jupiter, 3 moons could be seen on the left side. One of the moons was very close to the planet. The 4th moon was on the right hand side. To the upper right I spotted Uranus. I was also able to see the other 2 stars that were the same magnitude as Uranus. (I had previously looked for these 2 stars the night before at home with my 10x50's) I had both Roy and Phil look. Both confirmed that I had Uranus. The planet was a light green/yellow

I then went in search of Neptune. I knew it was in the area of Capricornus. Actually it is just a bit outside of it now. I located the star called Deneb algedi. Just to the upper left of it sat a small object that was blue/green in color. Again both Roy and Phil to a look. They agreed that yes I had located Neptune.

I was not able to locate Comet Hartley. I did view it though Roy's telescope and Grays 25X100 binoculars.

I also viewed a variety of general favorites that we all tend to take a few minutes to view. Items such the upside side ET cluster (457) and M103 in Cass along with the double cluster. M45 was rising above the trees when I had to begin to pack up

I packed up a little passed 11PM and headed home. As I was walking into my house I noted Orion was climbing into the sky.

Cathy Tingler

Broad Creek Observations of October 8, 2010

Observations were with 11x80 binoculars on a parallelogram tripod. The temperature was 64 degrees around sunset. Saw Jupiter and two satellites (saw the other two in Cathy's scope). Also in the same field was Uranus, a small dot in the 11x80's. Saw M31, galaxy in Andromeda Had trouble finding Comet Hartley, knew it was south of the double cluster (which was seen). Jeremy came over and said I had the comet in the field of view, he centered the comet, and I could see it. It was very faint and extremely small, but it was there. Looked through Roy's scope most of the night – the comet was excellent, very diffused and large in his scope. Saw M45, the Pleiades, in Taurus. Left around 11:15 and the temperature was 56 degrees.

- Phil Schmitz

Oct. 8, 2010 6:30pm to 1:00am

Despite a low transparency, evidenced by very long jet trails in the sky, this proved to be a productive night for observing at Broad Creek. Our group included Cathy, Phil, Jeremy, Gary, and Dale.

When the sky became dark enough, Phil, Jeremy and myself began hunting for G-1, the elusive globular cluster in the Andromeda galaxy. We located two or three objects within the vicinity of G-1's coordinates, but could make no definite identification. (Although I like to assume that we did see it at some point, I plan to keep trying to make a more certain ID.

Around 8:40pm, I was able to get comet 103 Hartley within the field of my 12.5" reflector and we used several magnifications on it, the highest being around 330x. This enabled us to see the relatively small core of the comet.

Other objects I observed included:

NGC 957 - One of many small open clusters in Cassiopeia. It is always a pleasure to use your lowest-power, widest-field eyepiece to sweep through this constellation.

M77. Galaxy in Cetus. It appeared to have a bright core, with a halo around it.

The Veil Nebula in Cygnus, using the Oxygen III filter.

M74, a large but dim galaxy in Pisces.

NGC 615, a galaxy in Cetus, appeared dimly.

NGC 253, a large galaxy in Sculptor appeared edge-on, low on the southern horizon.

Moving to the planets, Neptune was a clear distinct blue dot, using my 9mm Nagler eyepiece (175x), while Uranus was a larger yellowish disk, with darkening at the poles.

- Roy Troxel

October 9/10, 2010 6:30pm to 2:15am

The sky was clear and the air was crisp, with temperatures in the 60s. The transparency was about 4 out of 5. Even in the twilight you could see all the stars in the Teapot, which was low in the southwest. This was to be the third night in a row for observing at BC! The group of observers included Jeremy, Bill and myself. Larry and Gary dropped by for an hour or so.

The observing session began around 7:30pm, with an Iridium flare speeding across the twilight sky, from Cygnus to Altair. At that point, I decided to divide my observing between bright, familiar objects, like M11, and continuing to hunt for the dimmer galaxies.

NGC 7331, M33, M15, and M11 appeared brighter and more detailed than usual, in my 12.5" reflector. Comet 103 Hartley was easy to observe as well, using a variety of eyepieces. Its bright core stood out especially well in the 5mm EP (315x).

M57, the Ring Nebula, appeared unusually clear at 175x. I could even see some of its reddish color. The 14th magnitude star at its center could be seen intermittently for a few seconds at a time. Jeremy Kirkendall saw it as well.

After the sky had darkened (after astronomical twilight had ended), I spent some time with M72 in Aquarius, it's a globular cluster, 55,000 light years away, but it did have a mottled appearance, suggested individual stars along its periphery. The stars themselves couldn't be seen, but that was still the clearest view of that glob I have been able to obtain at BC.

Jupiter displayed a white spot on the thick dark band in its northern hemisphere.

Proceeding to the dimmer and more distant objects, I saw:

NGC 925, 688, and 598, galaxies in Triangulum.

NGC 663 - globular cluster in Cassiopeia.

M77 Galaxy in Pisces, displaying a bright core, with what looks like a halo around it. The halo is formed by the arms of the galaxy.

Other galaxies observed were NGC 720, 615 and 925. All of these became brighter as the night progressed and they rose higher in the sky.

When M33 was very high in the sky, about 80 degrees altitude, its spiral structure was visible and the galaxy filled the entire field of my 35mm eyepiece (45x).

NGC 40, a planetary nebula in Cepheus.

Three sections of the Veil Nebula in Cygnus: NGC 6992, 6995 and 6960. The Oxygen III filter put this objects in sharp contrast, and I was able to detect some of the thin filaments of clouds that make up their structure.

Dipping the scope low toward the southern horizon, I viewed the galaxy NGC 253 in Sculptor. It appears edge-on and almost filled the field of view of my 12mm EP (121x). I also caught the globular cluster NGC 288, just a degree lower from the galaxy.

Moving to two dim constellations, Lacerta and Camelopardalis, which were then high in the sky, I saw the bright open clusters NGC 7243 and NGC 1502. One of my favorite galaxies, NGC 2403, is also in that region. It has bright knots of star clouds that twinkle. (I'm serious.) Finally, there was NGC 1501, a planetary nebula in Camelopardalis.

After midnight, Auriga, Gemini and Orion had risen. Even though these constellations were low on the horizon, their brighter objects could be seen clearly, especially the open clusters M37, M35 and NGC 2158. Even the planetary nebula NGC 2392 was bright and distinct. Andromeda was at the zenith and Cygnus was beginning its decline into the west, both clearly displaying two galaxies, NGC 891 and NGC 6946.

At 1:48am, we began thinking about packing up, although if I hadn't become so drowsy, I would have made it an all-nighter. The Milky Way was clearly visible from Cygnus, through Cassiopeia, Auriga and the right side of Orion.

The time had gone faster than we had thought! The temperature had remained in the 50s and the air had been dry, causing only minimal dew on the equipment. For me, it had been the darkest, clearest night ever at BC, although if you were observing there ten or twenty years ago, I'm sure it was even darker then.

**Oct. 10/11, 2010
6:00pm to 2:00am**

Yet another clear night at Broad Creek! phil schmitz and i arrived there around 6:00pm and began to set up our scopes. The temperature was in the sixties and the sky was clearing rapidly. Seeing was about 3 out of 5.

Among the objects I observed were:

IC1369, a very small open cluster in Cygnus. There are many such clusters in Cygnus, as well as in Cassiopeia. Much of the night was spent tracking these down. They included NGC 366, 609, 433, 743, IC 166 and Trumpler 1.

The Cocoon Nebula (IC 5146) in Cygnus, using my 24mm Meade eyepiece (66x), with an UltraBlock filter. This round nebula consists of various sections, the brightest of which appeared

in my scope when using the UltraBlock. The others appeared periodically, when I used averted vision and nudged the scope slightly. I also viewed the Cocoon with the OIII filter.

NGC 812, a galaxy in Andromeda.

NGC 1022, a galaxy in Cetus.

Galaxies NGC 7332 and 7739, in Pegasus. These two can be seen, edge-on and perpendicular to each other, in the same field of view.

NGC 7320, galaxy in Pegasus. I could also see several galaxies along its sides. This group is sometimes called Stephan's Quintet.

NGC 7331 and 7335, galaxies in Pegasus.

With my 10x50 binoculars, I surveyed the Hyades, Pleiades, Alpha Persei Association, the Double Cluster and Comet 103 Hartley. I was able to get open clusters M36 and M37 in the same field of view. I concluded with viewing the various star clouds and nebulae in Cassiopeia.

Back with the telescope, I obtained a very clear view of M76, the "little dumbbell" nebula in Perseus, and then went on to more open clusters: NGC 1647 in Taurus, NGC 2158 and 2129 in Gemini, and M38 in Auriga.

This night's session concluded around 2:00pm, with the planet Jupiter, where I observed the dark thick band in the north, along with several thinner bands in the southern and equatorial regions. No sign of the southern thick band, which might already be covered with new clouds.

This session ended four nights in a row of observing - kind of a mini-star party. My best wishes to all of you who participated. Now to catch up on some sleep...

- Roy Troxel

Broad Creek October 10-11, 2010

Scope used was a 16 inch dobsonian, temperature was 65 degrees, sky conditions had a transparency of three and a seeing of four, however as the night progressed, the transparency diminished. All observations were with a 12mm 2-inch eyepiece unless otherwise noted.

Jupiter, with only one major belt visible, several lesser belts with three satellites on one side and a lone satellite on the other side at 7:30 PM.

As it started to get dark, the summer triangle were some of the first stars seen; Vega in Lyra, Altair in Aquila, and Deneb in Cygnus. In Lyra, the double double, or Epsilon Lyrae, both pair barely split, Zeta Lyrae, Beta Lyrae. M57, the Ring Nebula, was rather bright, distinctive, and slightly oval. M56, a nice bright compact globular cluster, showed no individual stars. Albireo, in Cygnus was also seen.

The only object in Ursa Major observed tonight was Mizar, a bright double star. In Andromeda, the gold and blue double star Almach, M31, a giant spiral galaxy with its two companions, M32, a round elliptical galaxy and M110, a rather faint and large elliptical galaxy. NGC 404, a bright 11th magnitude galaxy that is difficult to see due to its proximity to Mirach (Beta Andromedae). The double cluster in Perseus, NGC 869 and 884, were seen.

I decided that I would try to locate some open clusters in Cassiopeia that I have never seen. I made a list of 15 the day before, searched for eight of them and found five. NGC 366, a small, diffuse open cluster with several bright stars surrounded by some fainter stars. It stood out fairly well from background stars, it was not concentrated, and seen at 9:52. Stock 24 is a loose open cluster, even brightness throughout the cluster, about 8th mag at 10:13. NGC 433, a faint, small, tight cluster of about a dozen stars, stood out well against the background stars, nice overall

cluster, stars of 12th mag seen at 10:23 PM. At this time I took a break from these clusters and looked at other open clusters in Cassiopeia, M103, a bright triangular open cluster, NGC 457, a bright and easily seen cluster, also known as the ET cluster. NGC 436, NGC 659, NGC 663, NGC 654 and Stock 5. Back to the "new" clusters. The fourth one seen was Trumpler 1, somewhat bright, very small, and tight, compact cluster, easily distinguished from the background stars, it was seen at 12:21 AM. The fifth and last was NGC 743, a real treat and the best of the five. This open cluster is a bright, loose, not concentrated, triangular in shape, and somewhat detached from the background stars, it was seen at 12:40 AM. At this time the sky conditions started to deteriorate, so I decided not to look for any of the other clusters that I haven't seen.

In Taurus, M1 was obvious in the telescope, a bright, large, supernova remnant. The Pleiades look much better in the 9x60 finder since it is so large. The Hyades and the bright wide double star Theta Tauri were only seen in the finder. Even though M42 and M43 in Orion were still fairly low on the eastern horizon they were still rather nice and four stars of the Trapezium were seen. The quadruple star Sigma Orionis (some reports have this as ten stars) and Struve 761 (in the field with Sigma), were seen. Mintaka easily split. Castor, Alpha Gemini, was the last object seen in the 16 inch due to the deteriorating sky conditions.

As I was closing up, I noticed Betelgeuse (Orion) and Procyon (Canis Minor), two of the three winter triangle stars, and finally there was Sirius (Canis Major), just slightly above the tree line, rounding out the winter triangle. We left at 2:30 and the temperature was 55 degrees.

Phil Schmitz

Outreach Programs

Open House September 18, 2010

What a spectacular event. This was probably one of the best open house functions that we have had in quite a bit of time.

First, the weather cooperated perfectly. It was a beautiful day and the weather held into the night. There were no clouds and the seeing was also good. Temperatures were mild and there was no wind. The session was scheduled to start at 7 AM and guests were already waiting when most members arrived. We started with a presentation on the formation of the moon by Tom to a packed classroom. Karen then did a presentation on lunar craters. You may recall that this was observe the moon month. After that, it was dark enough to start viewing the moon and guests started going up into the dome in droves. I showcased the moon till all guests had seen it and then switched to Jupiter, followed by Uranus and then Neptune. After that, it was a handful of diehard guests and members left and we looked at some deep sky objects, as was available.

Larry had his scope set up and was demonstrating video imaging. Instead of using the club's CCD camera, which was available for this function, Larry used the new autoguider and its video feature. He spent the session showing live video of the moon (Straight Wall and other features) and Jupiter. This was the hit of the open house and we got many rave reviews.

Also setting up scopes were Paul, Bill, Irv Koplovitz, and Karen and Maggie. Each featured an object for the guests to look at. Several other members ran the other programs including Jim and Colleen, Ricky, Sara and Beverly, Angela, the Almes Family, the Blanchard Family, Roy and Grace.

Participation by the general public was the most I have seen at an open house, 163 people including 64 children, many of them very young. We were quite busy and were stretched quite thin running the various functions at the open house. Lines at the scopes were long. The handout table was swamped and there weren't enough people available to move the dome properly.

The function ended at about 10:30 or so as the last guests left and we finished cleaning up.

**Parkville Middle School Outreach
Thursday, November 11th**

We have set dates for the outreach at Parkville Middle School for this year.

We are looking to do this on Thursday, November 11th from 6:30 PM to 8:30 PM. Rain date is Monday, November 15th. The school is located inside the beltway, just north of Baltimore City at 8711 Avondale Road, Parkville, MD 21234. There is a large field to the northeast of the building that is drivable, allowing equipment to be driven to the set up site.

The program is for the three 7th grade G&T science classes at this county science magnet school. Not all students will come, but those that do will likely bring parents and siblings. We are estimating 100 guests, give or take.

We are looking for volunteers to provide telescopes to feature the objects available that night (the moon, Jupiter, the Andromeda Galaxy, etc). There will also be three binoculars at the program and we could use someone who would use a pointer to guide binocular users on what to see.

Please let me know if you can participate at hkamel32@comcast.net

I will provide directions and a site plan as we get closer to the date.

- Tim

Astrophotography



Comet 103P Hartley and NGC 281

Photographed by Tom Rusek, Mike Talbert, Gary George, Larry Hubble on Oct. 2, 2010

The image, for the short sub frames, turned out much better than I expected. This left us with the comet not streaking and the stars as well. I had a call from a couple members that wanted to go to the observatory. I was interested in going to Broad Creek, but sometimes “the needs of the few out way the needs of the many” (OK, not really the Star Trek pun I intended.)

We used the new Celestron 80mm EDF Refractor atop the C14 and Astro-Physics mount and my Canon 50D DSLR. I am still learning how to process digital images but have come a long way. I used MaxIm DL and Photo Shop CS5. Due to the learning curve, it took me a couple of days to get the results I wanted. Not all day of course.

This was a once-in-a-lifetime opportunity to get the comet as it passed by NGC-281. I have taken other rare shots like this in the past, like the transit of Venus across the Sun and they are my favorites, when you get timely shots like this.

I want to thank my fellow members Tom Rusek, Gary George, and Mike Talbert for their efforts in taking this shot with me. It was truly a joint effort. I would also like to add that it was a fun time for all. We all joked around with each other while we were working on getting the image. It makes the work much easier when you're having fun.

Oh, we also saw a UFO. Ask Gary and Mike for the details.

- Larry Hubble

Note: To see high-resolution versions of these photographs, please visit our web site at: <http://www.harfordastro.org>.

Imaging Classes Begin This Month

I will be holding two imaging classes in October:

Full Moon weekend Friday the 22nd
and waning gibbous Friday the 29 at 7:00 PM.

I know this is close to other events this month, but I feel if we have back-to-back Fridays everyone will retain what they have learned. This will be BASIC: How to use the club's CCD imager and planetary imager. No processing, just hooking up the camera and taking images.

We need help for members to be able to use the two new cameras at open houses and outreach events! I am looking for volunteers to help with this. We have at least one club telescope that can be used and any telescope that can be polar-aligned and has a drive will do.

I have decided with the help of others not to hold classes with the observatory telescope at this time. Why? Because if you just come while members are using the cameras at the observatory you will learn plenty about astrophotography.

Thanks in advance!

- Larry Hubble

Please respond to Larry at lkhubble@verizon.net if you have any questions or would like to attend this class.

Photo Stacking and Processing Class in November

On Friday, November 19th I will host a Stack and Processing Astrophotos Workshop at the observatory classroom. I plan on bringing my own desktop and 22" monitor, so we can hook up the computer to the projector to show you the steps but on my monitor it'll be easy to see the actual look of the final image and have a better idea of what each step does.

This workshop will focus on the basics of how to stack images and the basics of processing. The workshop will involve minor processing in MaximDL and most of the work will be using Photoshop and Noel Carboni's Photoshop Actions software.

No prior knowledge of stacking or processing is required!

If you have ANY astrophotos you would like help with stacking, processing, or would like a second opinion of your processed images, please bring copies of the images on a thumb drive or DVD. Try to bring the largest uncompressed version of your image(s) possible, I can explain this at the workshop but to keep it short, processing a .tif will yield much better results than a .jpg.

Don't forget, if you don't have any images right now, you can attend Larry's workshops and try to capture several frames of an object, bring them to this workshop, and I will show you what to do with them. You do not have to own ANY equipment if you attend all of the workshops and have clear skies to shoot. ANYONE CAN DO THIS!

Please email me at zeldaboy101@hotmail.com to let me know if you plan to attend.

- Jeremy Kirkendall

Note: To see high-resolution versions of these photographs, please visit our web site at: <http://www.harfordastro.org>.



Crescent Nebula (NGC6888) in Cygnus

Taken with Canon 40D, ISO 1600, 34x5 minute subs for a total of around 2 hours and 40 minutes total exposure time. Photo by Jeremy Kirkendall, September, 2010.



Eagle Nebula (M16) in Serpens

Taken with Canon 40D, ISO 1600, 22x5 minute subs for a total of 1 hour and 50 minutes total exposure time. Photo by Jeremy Kirkendall, September, 2010.

Miscellaneous

BINOCULARS FOR SALE

Two pairs of Orion Giant Binoculars:

1. 16X80mm, Excellent Condition
Fully Multi coated/ Field of view 3.5/ Eye Relief 16MM
Weight 5lbs 9oz
BAK 4 glass prisms, tripod adaptability
Binoculars also come with hard case/ neck strap /4 end caps and an L bracket
Asking \$200 cash
2. 20X80mm, Excellent Condition
Fully Mulit coated/Field of View 3.5/ Eye Relief 15MM
Weight 5lbs and 9 oz
BAK 4 glass prisms, tripod adaptability
Binoculars also come with hard case/neck strap/4 end caps and an L bracket
Asking \$200 cash

If interested please call Cathy 410-671-9403

Lunar Sticker Contest

Once again HCAS is borrowing lunar samples to show at Astronomy Day and at local schools. We wanted to give each person who came by something to remember the day. Since there is the possibility of 3,000 to 5,000 visitors seeing the lunar samples, it had to be something

inexpensive and easy. A sticker seemed a good idea. A sticker contest was announced asking club members to submit entries for the sticker design to be given to each visitor. Four club members got busy and sent in ideas. Now, how to choose the design for use? I contacted teachers at a local school to ask if their students could be judges. All four designs were sent to each teacher for the students to vote. It was tricky. All but one class had voted and the votes were very close. I received emails from the teachers who had already submitted their tallies asking which design won. Their students were “on the edge of their seats” waiting to hear the “winner”. Finally the last class sent their tallies and a winner was announced. Here are the submissions.

	
Larry Hubble's entry	Bob Kesler's entry
	
Barbara Rusek's entry	Charles Jones' entry

Thanks to each of the members who submitted ideas. **Congratulations to Charles Jones** whose design will be given to all visitors who see the lunar samples. Charles won a 40-year anniversary Apollo pin for his efforts.

NASA has announced “The Year of the Solar System” (YSS)

Solar system exploration will triple during this 23 month period of time (a Martian year).

October 2010: NASA's Deep Impact/EPOXI will fly within 435 miles of Comet Hartley 2 mapping the comet's nucleus.

November 2010: NASA will launch O/OREOS, a shoebox-sized satellite designed to test the durability of life in space. Short for "Organism/ORganic Exposure to Orbital Stresses," O/OREOS will expose a collection of organic molecules and microbes to solar and cosmic radiation.

December 7, 2010, Japan's Akatsuki (Venus Climate Orbiter) spacecraft will enter orbit around Venus.

February 14, 2011 Stardust NExT encounters comet Tempel 1

March 18 2011 MESSENGER enters orbit around Mercury

May 2011 Spacecraft Dawn begins its approach to asteroid Vesta

August 2011 The Juno spacecraft to Jupiter will launch

September 2011 GRAIL will be launched to map the gravitational field of the Moon

November 2011 The launch of a roving science lab named "Curiosity" to Mars

2012 opens with Mars rover Opportunity running the first-ever Martian marathon.

2012 Dawn will prepare to leave Vesta and travel to dwarf planet Ceres.

The Year of the Solar System concludes in August 2012 when Curiosity lands on Mars.

To read the full story, please visit:

science.nasa.gov/science-news/science-at-nasa/2010/07oct_yss/

Meteorite Of The Month



The Nanjemoy, Maryland meteorite

This is a new monthly feature. I will discuss a different meteorite and try to have a photo or two of each meteorite except this first article. I thought it appropriate to discuss the four authenticated Maryland meteorites first, but I only have a photo of the Nanjemoy, Md meteorite.

NANJEMOY – The Nanjemoy, Maryland meteorite is only one of four authenticated Maryland meteorites. This meteorite was a witnessed fall at noon on Thursday, February 10, 1825 in Charles County, Maryland. It was reportedly to have embedded itself about 18 inches under the surface of the ground. The GPS coordinates were given as 38 degrees 28 minutes north and 77 degrees 16 minutes west, located near the Potomac River. The total known weight was 7444 grams or about 16.5 pounds (28.35 grams equals 1 ounce). It is an H6 olivine-bronzite chondrite, a stone meteorite. Of the 7444 grams, only about 2600 grams can be accounted for, the rest is probably scattered in collections all over the world. I have two specimens totaling 10 grams (9.2

and .8). Yale University in New Haven has the largest amount at 897 grams, or about two pounds.

The photo is of a 9.2 gram part slice specimen. It is encased in epoxy and was scheduled to be cut into thin sections, but wasn't.

The Emmitsburg, Maryland iron meteorite (Frederick Co) has a total known weight of only 177 grams scattered in about 10 collections, including 27 grams in the Smithsonian Museum. The Lonaconing iron meteorite (Garrett Co – near the border with Allegany Co) has a total known weight of 1035 grams, most of it in five museums, the majority of this meteorite is in Paris, France (750 grams), the Smithsonian has none. The last meteorite, St. Mary's, near the town of Ridge, St. Mary's County, is a stone meteorite, but only 25 grams is known, the rest has been lost. There are probably other Maryland meteorites, but no others have been authenticated that I know of.

Phil Schmitz

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