

Harford County Astronomical Society

Bel Air, Maryland
www.harfordastro.org



Volume 33 Issue 11

November 2007

Note:
General Meetings Have Been Changed to
THURSDAY NIGHTS

Public Star Party (Open House):
Saturday, Nov 17, 2007
At the Observatory

General Meeting:
Thursday, Nov 29, 2007, 7:00pm
At the Observatory

Club Calendar for 2007:

Open House/Public Star Party

Dec 15, 2007

Meeting Night

Dec 27, 2007

Please check the website for possible schedule updates and changes:

<http://www.harfordastro.org>

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HCAS Business Meeting

Minutes of October 25th, 2007

1. President Tom Rusek opened the meeting at 7:02 PM. We had three guests at the meeting: Gary George, Carol Sherman, and Marcus Sherman.
2. The minutes of the September meeting were published in the last newsletter. They were approved by a voice vote.
3. Treasurer: Tim Kamel reported that the club has \$5034.42 in the bank. There are currently 41 paid-up members, which is an increase of 2 from last month. The new members are Patty Brazier and Anthony Murphy.
4. Observatory operations:
 - a. Tim Kamel ordered the upgraded chip for the observatory telescope mount. This chip will be version E1. It cost \$45.00. He also ordered the keypad protector, which cost \$33.00, and a manual for the mount, which cost \$13.00.
 - b. Another visitor slipped on the observatory stairs during the last open house. The guest was not injured. The rheostats for the dome lighting are not working properly- they only switch the lights on and off. This will be reported to Sal Rodano so that the school maintenance people can check it out.
 - c. Tim Kamel reported that Sal told him that in the event of an injury at the observatory, we should call HCC security. They will be able to contact emergency services if required, and can properly document the event so that any problems can be resolved to prevent further occurrences.
5. Outreach:
 - a. The last open house took place on October 20th. 35 people attended. The security guard we asked for did not show up. Mike Talbard, Roy Troxel, and Mark Kregel had their telescopes set up for our guests to look through. Tom Rusek and Grace Wyatt are encouraging people and groups who call to ask about setting up private presentations for their groups to bring them to our monthly open houses. 2 Girl Scout groups are coming to the next one.
 - b. SwanFest also took place this month. We only had 170 visitors to our booth. Tim Kamel had his telescope set up for solar observing. He also showed the moon and Venus. Grace Wyatt used the Night Sky Network tool kit to demonstrate the moon phases. Tim Kamel, Grace Wyatt, Mike Talbard, and Millie McCoy manned the booth. The club received a thank you

letter from the SwanFest organization. Grace will forward a copy to Sal Rodano for the school's records.

c. Tom Rusek will conduct a presentation at a senior citizens' home in Edgewood on November 20th.

d. Gunpowder State Park asked us to conduct presentations and observing sessions on February 8th and March 7th from 6:30 PM until 8:30 PM each night.

e. Grace Wyatt reported that we have 6 outreach events credited to our Night Sky Network account.

f. George Thompson's astronomy class has observing sessions on Monday nights at the observatory. There is no session on November 26th due to the full moon.

6. Observing Reports: None

7. Old business:

a. The Open House sign is in the storage room. We need a tripod and a way to secure it before we use it again. Mike Talbard will bring a spare tripod from home for use with this sign.

b. Tim Kamel said that we have 5 members without email addresses. We still need to come up with a way to get them copies of the monthly newsletters. Roy Troxel said he thought that Sal Rodano volunteered to send these out, but he is not sure if that happened. He did send Sal the list of people who needed copies through the mail. The group agreed that we need a consistent way of sending the hard copy newsletters out. Roy and Mike Talbard agreed to identify and implement a process for doing this.

c. Tim Kamel has the contact information for the HCC chief of security. He will contact her and submit an updated observatory access roster. He will also explain the club's 2-person rule for use of the observatory.

8. New business:

a. Roy Troxel said that his school alumni club is conducting an IMAX Hubble Space Telescope show at the Maryland Science Center on November 3rd.

b. Tim Kamel mentioned the recent dramatic outburst of Comet 17P/Holmes. It is now a naked eye object and he recommended that everyone take look at it once the clouds and rain clear up.

9. The meeting was adjourned at 7:52 PM. After the formal business meeting ended, Grace Wyatt explained the contents of the latest Night Sky Network kit. The subject of this kit is "Exploring the Solar System." It includes materials to make models of planets and shows several methods to explain the size of the solar system. She may use these items at an upcoming open house.

New Members – October 2007

Please welcome three new members this month:

Patti Brazier from Fallston.

Anthony Murphy and family from Baltimore.

Gary George and family from Abingdon.

All have had a lifetime interest in the universe around us and hope to learn more about it.

-Tim Kamel

Recent Open House and Outreach Presentations

Open House October 20, 2007

Again, we had an incredible night for our open house this month. Though the day was partially cloudy to varying degrees, the evening and night were very clear. Temperature was fairly mild. Transparency was very good and seeing was average to good. Turnout was modest, with a count of 35 guests. This was, however, one of our longest open houses that we have had in the last three years. We started shortly after sunset, about 6:30 and the four last guests left at about 11:00 PM.

On hand from the club were Grace Wyatt, Mark Kregel with his 14" Dob, Roy Troxel with his 5" refractor, Mike Talbard with the 11" SCT and me running the C-14 in the dome. Also joining us this night was Phil Schmitz, who did not bring a scope but who brought along an intimate knowledge of the night sky that sustained the dome for almost 4 hours. After spending some time with Jupiter before it moved behind the trees, Phil assumed control of the C-14 and showed those present some 40-50 objects (to be honest, I lost track) during the session. We saw both Uranus and Neptune. We also saw bright and dim Messier and NGC objects that ranged from the Andromeda Galaxy, The Pleiades and the Double Cluster (all of which were hopeless in the C-14, being too wide and extended for the scope) to M 74 and M 76, the dimmest objects on the messier list. We saw the Rag Doll, the E T Cluster, the Wild Duck cluster, the Dumbbell, the Ring Nebula, M 52, M 36, M 37 and M 38. I do not recall the numbers of the NGC objects we looked at. We also hit several doubles including Almach and the Headlight Double, among others. We even looked at Algol and took a peek at Mars, too low to be decently seen.

Mostly, our viewing was to the east and northeast, which allowed the dome to shelter us from the light of the almost-full moon and allowed us to get our eyes acclimated.

The C-14 again performed flawlessly. The alignment was easy (using Jupiter) and subsequent GOTOs were dead-on, using a 40 mm eyepiece. Tracking was very good, even when using a 9.7 mm (400 power) to observe Neptune. Dome movement remains good since we did our repairs. Moving the dome also delighted several of the guests who did not know we could do that. Several others commented on the acoustics.

-Tim Kamel

**Swan Fest, Second Day
Sunday, October 14, 2007**

For the second day in the event, we had beautiful weather. Weather was very mild and we had a steady breeze. Earlier in the day we had some thin clouds that dissipated by 1 PM. The sun was bright and we ended up setting up under a tree for the shade. It was a big help but I still got sunburned. Turnout this day was quite good and we had about 170 guests come to our table.

Participating from the club was Grace Wyatt, who manned the table, handed out posters and supervised the solar eclipse glasses. Mille McCoy also worked the table. Mike Talbard brought 20X80 binoculars. I brought my ETX 70 with suitable sun filter for looking at the sun as well as my 10X50 binoculars. One of our members, Jeff Schluederberg, who was attending the Fest, joined us for a time.

I was able to set the scope to view the sun and it attracted a fair amount of viewers. Unfortunately there was not much to see. There were no sunspots and the sun was a plain ball, quite boring.

Subsequently, Mike and I must have spent close to 2 hours trying to find the Moon (difficult as it was a slim crescent) and Venus without any success before Mike was able to locate the crescent moon around 1:30 PM right over the tree that was shading us. I then used my scope to synchronize on the moon and then slewed to Venus, which is still not quite 50% full and is about as bright as it gets, -4.5 magnitude. Between the moon and Venus, we became very busy with people stopping to take a look.

The event ended at 4:00 PM, and we left at about that time.

Overall, it was a very enjoyable event.

-Tim Kamel



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

*The Night Sky Network is sponsored and supported by
the NASA Jet Propulsion Lab's PlanetQuest public engagement program.*

We have received our second Night Sky Network Toolkit. To receive this kit we had to use our first kit on at least two occasions. We have logged six approved events since August so we were eligible for this kit. The Night Sky Network has star ratings for clubs. Each club that has completed at least four to nine outreach activities using Night Sky materials are considered white stars. When we reach ten events, we will be moved to a red star.

Our second toolkit is called Exploring the Solar System. Materials covered include: Exploring new worlds, solar system models demonstrating size and distance in our solar system and exploring our solar system. I am in the process of forming a Night Sky Network team of club members interested in learning the lessons and participating in presentations. The activities are very easy. There is a DVD that explains and demonstrates all the lessons and there are scripts

to follow for each activity. We could get together for meetings sometimes, but you can actually learn the material in your own home on your own time. We can make copies of the DVDs and CDs that come with the kit for each person to use at their leisure at home.

This is an opportunity to easily learn astronomy and help teach astronomy.

If you are interested in being an instructor or helper with the Night Sky Outreach, please let me know. If you have the capability to copy DVDs, please let me know. I am looking for someone who can make the copies for us.

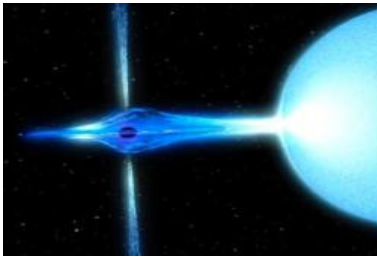
- Grace Wyatt
dgracew@comcast.net

News Links

<http://www.jpl.nasa.gov/news/>

*The Night Sky Network provides links to many NASA and JPL news stories.
Here are few recent ones:*

Heavyweight black hole is a record breaker



A black hole as heavy as almost 16 Suns has set a new weight record for black holes that form from collapsing stars. Its discovery suggests that there may be even heavier ones lurking out there, spawned in the death throes of the universe's most massive stars.

At 15.7 times the Sun's mass, the newly measured object, called M33 X-7, has smashed through that tentative limit. It is also the first black hole to be discovered in an eclipsing binary: that is, it is orbiting a companion star in such a way

that when seen from Earth it sometimes passes in front of the black hole, and vice versa.

<http://space.newscientist.com/channel/astronomy/mg19626264.200-heavyweight-black-hole-is-a-record-breaker.html>

Cassini voyager still returning spectacular images

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



Nov. 19, 2007: Titan flyby (T37) -- INMS will be sampling the upper atmosphere of Titan at closest approach, but the optical remote sensing instruments are also taking observations of Titan's atmosphere and surface near closest approach.

Dec. 5, 2007: Titan flyby (T38) -- this is the final of four coordinated Radio Science flybys that explore the interior of Titan, looking for evidence of an internal ocean. T11, T22, and T33 are the others.

Dec. 20, 2007: Titan flyby (T39) -- for the final flyby of the year, RADAR will be passing over a

region known as Ontario Lacus in Titan's southern hemisphere, imaging geographical features in this area including possible lakes.



NASA Photo Montage: The size of Holmes compared with Jupiter

Comet Holmes in Perseus

http://www.spaceweather.com/comets/gallery_holmes_page2.htm

This has been a very “active” comet, as these news snippets suggest:

On Oct. 24, 2007, in less than 24 hours, the 17th magnitude comet brightened by a factor of nearly a million becoming a naked-eye object in the evening sky.

On Nov. 8th and 9th, part of the comet's blue tail broke away in view of many backyard telescopes.

Why did all this happen? According to [Spaceweather.com](http://www.Spaceweather.com): “There is growing evidence that some comets and asteroids may have a porous internal structure akin to, say, Swiss cheese or a honeycomb. Suppose one of the chambers of the honeycomb suddenly collapsed, exposing many square kilometers of fresh cometary ice to sunlight for the first time. A flurry of sublimation would ensue with mega-jets of dusty gas emerging from the sinkhole to create a cloud around the comet much as we see now.

Centauri Dreams

<http://www.centauri-dreams.org/>

Plans for Probes to the Nearest Star - *in our lifetime!*

Here is a web site that is dedicated to discussions and plans for interstellar flight. This site's owner, Paul

Gilster, has already published a book on the subject, and his site has a daily blog that covers this subject and other related topics.

Mr. Gilster writes:” Building a star-faring craft is something like building a cathedral: it will take the combined efforts of scientists and engineers through several generations to make it happen. The most optimistic mission scenarios take almost fifty years to reach Alpha Centauri, and many concepts take centuries to get there, meaning each generation of scientists will be handing the probe off to the next.”

Surprisingly, NASA and other government agencies are beginning research on a robotic space probe to Proxima Centauri, the nearest star to our sun. It is even possible the probe would be launched during our lifetime, although it might take up to fifty years to reach its destination. Advanced technologies, such as antimatter drives or “sails” pushed by solar winds, as well as research into longer human life-spans could make interstellar travel possible.

Observation Reports

Comet 17P/Holmes

I first picked up on this comet on Wednesday, 10/24, when I logged onto Astromart and saw the headline article announcing that the comet, normally a magnitude 17-18 comet that does its thing between Mars and Jupiter, had brightened to magnitude 3 and is easily naked eye visible as a star like object. To me, a 15-magnitude increase in brightness would be a million fold. Was that possible or was my math screwy? I logged onto the websites for Astronomy and Sky and Telescope. Sure enough, a million-fold increase and no hint of what caused the change. The astronomy Yahoo Groups that I belong to were abuzz with the news.

And here I am, in Maryland, where the Mercury Transit, the March Lunar Eclipse and one of the meteor showers (I don't remember which one) were clouded over. Here we go again. It had started raining in Maryland the day before and the sky was not predicted to clear till Saturday. On Thursday, there was more news on the Yahoo Groups. The comet is continuing to brighten and to also get bigger.

Saturday night came along and I could not get out. The best I could do was to grab an old Celestron 9 X 50 finder scope that was left over from a project as I went out to walk the dog. I looked at Perseus and could see 4 fairly bright stars in Northeast, right where the moon was washing out the sky. I was not really expecting to see anything in the finder scope but the first star I looked at looked fuzzy. I went to focus the scope and realized that the other stars in the field were already in focus. I had found it and it was huge at 9 power. It was also quite bright with a bright center and a dimmer outer envelope.

On Sunday, I was able to get out and set up a scope. I used my Criterion RV-6, 6" f/8, on my LXD-75 mount. I used 40 mm, 30 mm, 18 mm and 16.3 mm eyepieces. This gave me a range of power from 30 to 73. At about 7:45, the moon was not up yet, or was still behind the tree line, and I could easily see the comet naked eye. I did an alignment so that the scope would track and synchronized on Mirfak (Alpha Perseus) and then slewed over to the comet. At 30-power, I had a great view of the comet with stars in the field of view and wished that I had a camera. The stars were pinpoint and the comet was quite bright and showed the bright central core and the surrounding dimmer envelope. I switched to the 30 mm eyepiece and the comet was larger but the details remained essentially the same. The 18 mm eyepiece showed that there were two field stars in the bright core and a little offset from center. Both seemed to me to be equal in brightness, like two headlights. Using the 16.3 mm Erfle, the comet filled half the field of view.

And the two nuclei were readily seen though I was having a tougher time bringing the eyepiece to focus.

I went back and revisited the 40 and 30 mm eyepieces and found that the two nuclei were also there but I had missed them in the glare of the central brightness of the comet.

I then tried to do some other observing and was able to bring in the Double Cluster and M31. M27 was very faint and I could not see the Ring Nebula. By then, the moon was well above the tree line and I packed it in. - Tim Kamel

Broad Creek

Note: Grace Wyatt is now the Broad Creek site coordinator. If you have questions about using the site, please contact her at 410-836-7285 or dgracew@comcast.net.

October 21, 2007

4:45am – 6:30am

It was a cold, clear morning and while setting up my refractor, I saw no clouds in the sky. The stars were unusually bright, with traces of the Milky Way to be seen in Cassiopeia, Perseus, Taurus and the setting Cygnus. There were no light domes in the south, probably because most of the town lights were now off. As it was, these early-morning atmospheric conditions were great for stars and clusters, but not too good for seeing fine detail on planets or nebulae.

I first turned my scope to the planets, three of which were now visible.

Saturn was about 20 degrees from the eastern horizon, and looked best through the 125x eyepiece, with a deep yellow #15 filter. The rings appeared very thin, approaching the “edge-on” position. I could barely see the Cassini Division, but the satellite Titan appeared brighter than usual.

Venus, high in the east, was approaching quarter phase. Using the yellow filter, I saw faint shadings on the terminator of its crescent.

Mars was (and still is) near the zenith in Gemini. Through the yellow filter (again), it also appeared in gibbous phase, with some hints of markings. (As the planet approaches closer to earth in December, the surface features should become more apparent.)

Deep Sky Objects:

The star clusters were the objects that appeared clearest during the whole session. I used a 22mm Lanthanum eyepiece, which provided a magnification of about 45x and a field of view of 3.7 degrees.

I started with the clusters in Puppis, just south of Canis Major: M46, M47 and M48. With a narrowband filter, I could see the tiny planetary nebula in M46.

Next were the objects in Monoceros, including M50 and numerous minor but distinctly unique NGC clusters. The refractor saw each one of these as collections of fine points of light, making this constellation a real pleasure to behold. (The Puppis/Monoceros area appears mostly blank to naked eyes, but, as I saw, it holds many interesting objects through the telescope.)

The next area of interest was the Hyades, and other clusters in “the face of the bull.” The Crab

Nebula, however, was disappointing. Although it was near the zenith, it appeared dimmer than usual, even when using the narrowband filter.

Finally, there was the Orion Nebula. I first tried to see all six stars of the Trapezium, but couldn't – even when using a variety of eyepieces and magnifications. This was surprising, since most other stars appeared very bright, and the constellation itself was high in the southern sky.

By this time, the sky had become brighter and bluer as Virgo rose in the east, so I packed up the scope and drove toward Starbuck's, to get a *venti* size of their bold coffee.

During the course of the observing session, I also saw three bright meteors (Orionids?) in the north and east.

Nov. 8, 2007
4am to 6am

I arrived at BC around 4am, and it was cold! Nonetheless, the stars appeared very bright, so I began setting up the refractor and was soon observing Mars. Near the zenith at 4am, the planet is beginning to show more detail than it did last month. I used the deep yellow filter again.

Cathy Tinger arrived about this time, with her 30x80 binoculars. These provided some good wide-angle views of various clusters near Sirius, plus the Hyades, Pleiades and the Orion Nebula area.

We also observed the Holmes comet, which seemed to be getting larger and less translucent.

There was visible detail on Saturn, despite the narrowing rings, and Venus appeared sharp through the #58 green filter. However, I still couldn't see all 6 stars in Orion's Trapezium! Last December I was able to do this on at least one evening. Couldn't locate the Crab Nebula, either, even though it was near the zenith and I was using the push-to controller. Possibly, there was some haze in that area.

By 5:30am, dew and frost were forming on the equipment so we decided to pack up. Mercury, along with a slim crescent moon, was rising in the east.

Miscellaneous

Community College of Baltimore County Star Parties

<http://www.cbcmd.edu/catonsvilleplanetarium/starparties.html>

Above is the link for the schedule to the Star Parties at CCBC - Dundalk. There is definitely a lack of telescopes there, any help I'm sure would be appreciated.

-Karen Carey

This newsletter is the official publication of:

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*Items for the newsletter are due to the editor by the 13th of the month
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