

Harford County Astronomical Society

Bel Air, Maryland
www.harfordastro.org



Volume 34 Issue 10

October 2008

**General Meeting:
Thursday, October 16, 2008
7:00pm - Business Meeting
At the Observatory**

**Public Star Party (Open House):
Saturday, November 8, At Sunset
At the Observatory**

**General Meeting:
Thursday, November 13, 2008
7:00pm - Business Meeting
At the Observatory**

**8:00pm – Presentation:
"Geologic Time, Continental Drift and Plate Tectonics"
by Tom Rusek**

Please check the website for possible schedule updates and changes:

<http://www.harfordastro.org>



<http://astroleague.org/>



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

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HCAS Business Meeting

Minutes of September 18th

1. The general business meeting was preceded by a meeting of the Board of Directors. The two new Board members are Phil Schmitz and Gary George. A new Board will be elected during the next election. The Board continued the discussion about the potential purchase of the Orion Star Shoot Pro CCD camera. The group agreed to use the next month as a club comment period, with a vote on the matter to take place at the Board meeting before the October 16th meeting. Gary George agreed to be the contact person for comments on this purchase and any other ongoing club business.
2. President Tom Rusek called the general business meeting to order at 7:18 PM. 8 members were present.
3. The minutes of the August 2008 meeting were published in the last newsletter. The group approved the minutes as published.
4. Treasurer: Tim Kamel reported that the club's bank balance was \$5589.89. There are currently 40 paid-up members. He also noted that the club's insurance policy is paid in full for this year, and the insurance is currently in effect.
5. Observatory operations:
 - a. Mark Kregel and Tim Kamel met with the Harford Community College facilities manager to discuss the dome repair and upgrade. The meeting went well. Mark will provide the facilities manager with details and estimated costs. Once these are submitted, the proposal will be sent to the school's leadership for approval.
 - b. Tim Kamel and Grace Wyatt will update the observatory access roster. There was a problem recently with people coming into the facility when the gate is unlocked and unguarded. They will also clarify the 2 person rule. Mark Kregel came to do some work on the observatory

and had to assure the guard that he had a cell phone and emergency numbers in case he had a problem.

6. Outreach:

a. The open house on Saturday, September 13th, was clouded out. Grace Wyatt reported that 4 people showed up anyway. They did some Night Sky Network activities, and Larry Hubble gave a talk about his astrophotographs. Karen Carey helped on father and daughter set up their telescope.

b. Tom Rusek spoke to the Elkton library representative. They will continue to negotiate their planned activity. Tom thinks the best solution may be to invite them to a regularly scheduled open house.

c. Swanfest takes place on October 12th at Swan Harbor Farms between Aberdeen and Havre de Grace. Grace Wyatt will be there, along with Tom Rusek and possibly Tim Kamel.

d. The club was asked to support a Cub Scout sleepover event in Forest Hill with a telescope for observing at about 8:15 PM on Saturday, September 20th. Karen Carey said that she may be able to support this.

7. Observing Reports: Larry Hubble, Grace Wyatt, and Roy Troxel came to the observatory to observe the double shadow transit on Jupiter about 2 weeks ago. They had a good night.

8. Old business: Grace Wyatt reported that Leo Heppner Jr. received about \$1000 for the sale of items from his late father. He took the unsold items back home from the classroom.

9. New business:

a. The Night Sky Network will host a teleconference on September 25th. The topic is "Our Holiday Snaps of Saturn," featuring photos from the Cassini mission.

b. Tom Rusek summarized the discussions held during the board meeting earlier this evening. He emphasized the importance of board members' votes on the proposed CCD camera purchase at the October board meeting. Any members unable to attend in person need to send Tom their votes via email or telephone call. He will also send an email to the general membership announcing this proposal and soliciting opinions and comments. These comments should be sent to Gary George at gg43920@aol.com.

10. The meeting was adjourned at 7:55 PM. Phil Schmitz gave a presentation on terrestrial impact craters after the meeting.

- *Monroe Harden*

President's Message **CCD Camera Purchase**

Folks,

It has been proposed that the club purchase the "Orion Astro-Imager, CCD color imaging camera". The cost is \$1300.00. This is 25% of our current savings and is a hotly contested issue. The Board of Directors (currently 7 members) will put the purchase to a FINAL VOTE at the next scheduled BOD meeting on Thurs. October 16th at 6:30pm prior to the regular general meeting. If you have an opinion on this issue PLEASE contact myself (rusek54@yahoo.com) or

Gary George (GG43920@aol.com). Anyone is invited to the board meeting and personally give their opinion. Your opinions are VERY important. If this is still a close call, your opinion matters. Literature is available from the Orion web site.

- Tom Rusek and Gary George

Observation Reports

Clayton Lake, New Mexico

September 22 through 29, 2008

Bortle Scale = 1



If you're ever in northeast New Mexico, I would recommend spending a few nights at Clayton Lake State Park. Although the first night, Monday, was overcast, *you could still see the Milky Way shining through the cloud layer*. I have to say that my nights there provided some of my best observing sessions ever, well worth the 3400 miles round-trip (but that's another story).

Highlights of my week there included:

NGC206 – Star cloud in the Andromeda galaxy. Similar to the Scutum and Sagittarius clouds in our own Milky Way.

Stephan's Quintet (NGC7320A, B and C). Made a rough sketch of three of the galaxies. (Couldn't see the other two, but they aren't really part of that cluster anyway.) I've learned that observing galaxies is similar to observing planets in that you must have the patience to observe them over extended periods of three or four minutes at the eyepiece, then a few hours later in the night, after their positions in the sky have changed considerably.

Obtained an excellent view of the Helix Nebula (NGC7293) in Aquarius. Using the UltraBlock filter, I could easily see the helical structure. Encouraged by this view, I turned the scope

northward to see NGC6543, the Cat's Eye, in Draco. It appeared as a distinct blue oval (blue even through the filter), with a dark center.

Spent a half-hour using the 35mm TeleVue EP to sweep through the region of Cygnus, Lacerta and Cassiopeia. An amazing number of clusters and asterisms presented themselves. I didn't try to identify them, but just enjoyed the view. Then I did the same in the areas around Sagitta and the Alpha Persei Association.



Above: Rock formations near Clayton Lake.



Left: Dinosaur Tracks near the lake. These tracks are 100 million years old. At that time, this area was a beach on the edge of a vast ocean that covered most of the southwest USA. Some of the tracks are several inches deep, suggesting the large mass of these animals. Note the web-footed prints on the right.



Left: Fallen Dinosaur. This dino slipped and fell in the mud, then used his tail and hind legs to upright himself. Over the centuries, the mud hardened and petrified, leaving these odd fossils. The fossil to the upper left is the reptile's hindquarters, and to the lower right is his tail.

After midnight, when Cygnus was beginning to descend a little into the west, I aimed the scope upward toward the Veil Nebula, using the 35mm eyepiece. One section of the nebula, NGC6995, appeared bright and filamentary when I used the UltraBlock filter. The same was true for the other two sections, NGC6960 and 6992. I next turned toward the North America Nebula (NGC7000), but it is too large for even the 35mm to contain in its field. Consequently, I could see only the lower "Central America" portion of the object.

Next was NGC457 - The "E.T." cluster. Looks very bright, and it does bear a strong resemblance to the famous alien character.

NGC2237 and NGC2244 - Rosette Nebula in Monoceros, and its accompanying star cluster. The nebula appeared dimly like a large wreath in structure, with a slight reddish color, but mostly gray. Using the UltraBlock filter, I was able to see the hole in its center.

The Milky Way in Ophiuchus:

Explored regions of Rho, Xi and Theta Ophiuchi, which were close to the western horizon. This is a rich region of the Milky Way, near the galactic center, filled with nebulosity and cascading clouds of stars. Observed the "bowl" of the black Pipe Nebula (B78), also very close to the horizon. Tried to see Bernard 72, another dark nebula. Also called the "Snake" nebula, it should have appeared like the letter S, but it didn't. Maybe I was using too high a magnification, even with the 35mm TeleVue eyepiece (45x). Binoculars might have provided a better view. (Looking at the black splotches that are dark nebulae isn't too exciting until you realize they are the unlit portions of hydrogen clouds floating between us and the stars in the Milky Way.)

The Milky Way in Sagittarius:

Spent some time on the Great Sagittarius Star Cloud, just above Gamma Sagittarii, at the tip of the teapot's spout. The star cloud looks like the steam coming out of the spout, in fact, and bright enough to cast a shadow. As you go upward, there are two smaller clouds between Sagittarius and Scutum and, of course, there is the Scutum star cloud itself. The shades and shadows of this portion of the Milky Way, created by the dimmer stars, often gave the effect of rain clouds, so that the MW looked "wet".

In a sense, looking at the Milky Way through binoculars has one effect that looking at it through a telescope doesn't. You can see a greater sweep of objects, putting M8, M20, etc., all in the same field. You can see how it all fits together. You can also see how the dark clouds form the rifts in the Milky Way, and therefore get a better idea of its structure.

M24 in Sagittarius- More of a star cloud itself than a star cluster, and for that reason sometimes called the "Small" Sagittarius Star Cloud. The stars in this cloud are of varying magnitudes, giving it a shaded, three-dimensional effect.

NGC6645 - A strange-looking cluster, with a black hole in its center, where you would expect white light from a concentration of stars. This cluster looks more like a circle than a globe, with strings of stars streaming from the circumference.

NGC6822 - "Barnard's Galaxy", a large, irregular-shaped galaxy. Although it covers most of the field of view, it appears dim.

M8 - Best view of the Lagoon Nebula I've ever had. The nebula appeared to have a very bright area in the upper left quadrant. I have never noticed that before. There were a number of shaded areas in the nebula which I hadn't noticed before either, even at Cherry Springs.

M16 - Best view ever! The Eagle Nebula displayed varying shades of brightness, but alas, the Pillars weren't visible. At one point, two satellites streaked across the field of view - perpendicular to each other!

Around 5:00am Sunday morning, the Zodiacal Light finally appeared in Leo, bright enough to cast a shadow, although I didn't attempt to test that. It certainly was as bright as any star in Leo and presented a wide oval of light, almost circular. It was a nice conclusion to a week of fine observing. Even the weather had cooperated, with moderate temperatures and cool, dry breezes.

Astronomy Hill Broad Creek

September 20, 2008
6:15 PM to 11:45 PM.

The temperature was 62 degrees. When Jimi, Gary and I arrived, there was some blue sky, but not much. A while later it was completely overcast. Grace and Cathy arrived around 7 PM. All of my observations were made with my 16 inch Dobsonian using a 2 inch 12mm Nagler televue eyepiece unless otherwise noted. Seeing was around a 4 for most of the evening, and the transparency went from a zero to about a 2. The dew started early and was some of the worst dew I have had at Astronomy Hill. I had to keep using my newly acquired mini hair dryer and power tank (which I had just purchased from Chesapeake Optics) to keep the dew off the eyepiece and the finder.

We were able to eventually see Jupiter and all four of the Galilean satellites, two on each side, around 7:55 PM. Mizar was seen as the skies cleared around Ursa Major. The ISS (International Space Station) was spotted first by Cathy in the west in the constellation Bootes, around 8:25 PM. It gradually brightened as it traveled across the sky, disappearing into the Earth's shadow in the eastern sky. In Hercules, M 13, a globular cluster, was spotted along with the little spiral galaxy NGC 6207, which shines at 11th magnitude. This galaxy is just to the northwest of M13, the sky conditions were definitely improving! M92, another globular cluster, was visible as well.

In Andromeda, the spiral galaxy M31 was seen along with M32, an elliptical galaxy and M110, an elongated elliptical galaxy. Almach was spotted, but its gold and blue colors were weak. NGC

404, an 11^m magnitude elliptical galaxy was seen. This galaxy is usually difficult to see due to its proximity to Beta Andromedae, however, this night it was obvious!

The double cluster in Perseus was viewed with a 40mm wide field eyepiece in order to see both clusters in the same field of view. M11, in Scutum, a tight open star cluster was impressive as usual. M57, the Ring Nebula, a planetary nebula in Lyra, and the double double (Epsilon Lyrae) were seen. Albireo in Cygnus and M27, a planetary nebula in Vulpecula were also seen. Jimi actually spotted M71 in my telescope, which is either a loose globular or a tight open cluster. We ended the session looking at M29, a rather sparse open cluster in Cygnus, near the star Sadr. Jimi and I were the last two to leave and the temperature was 53 degrees.

- Phil Schmitz

Astronomy Hill

October 4, 2008

7:30 PM to 11:30 PM at

Seeing was around a 3 and transparency was going from a 1 to a 2 and back to a 1 again. The temperature was 60 degrees upon arrival. Scope used was a 16 inch Dobsonian, all observations were with a 12mm 2 inch eyepiece unless otherwise noted. Participants were Cathy, Jimi, Gary and his wife Darlene, and myself.

The Moon and Venus were seen naked eye. M57, the Ring Nebula, in Lyra was seen as was the double double (Epsilon Lyrae) in Lyra. Jupiter was seen with all four satellites. One of them, probably Io was just off the edge of Jupiter. The double cluster in Perseus was seen with the 40mm eyepiece. NGC 404, a small elliptical galaxy near the star Mirach in Andromeda was seen. M31, the Andromeda galaxy, along with M32 and M110, two satellite elliptical galaxies of M31 were all seen.

Two hours passed by, then the sky started to clear up. M39 in Cygnus was seen through the 9x60 finder. That satellite of Jupiter had gone behind or in front of the planet. While looking for the Blinking Planetary Nebula, NGC 6826, the clouds came back. Jimi and I were the only two left and we waited. Around 11 PM, we heard a loud noise several times from the trees to the west. It sounded more cat like than dog. It wasn't that far from where we set up the scopes, probably a bobcat. As it was still cloudy around 11:30, we decided to pack it in. There was very little dew throughout the session. The temperature was 55 degrees.

- Phil Schmitz

Outreach Programs

Dundalk Community College Fall 2008 Star Parties

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

Location: Dundalk Campus, 7200 Sollers Point Road

Directions: Upon entering the campus, turn immediately to the right and park in the parking lot.

Telescope: Celestron 14 inch CGE 1400 XLT telescope

Friday evenings:

November 7, 2008 7 - 9 p.m.

November 21, 2008 7 - 9 p.m.

December 5, 2008 7 - 9 p.m.

Weather Related Cancellations: Call 410-282-3092 approximately 45 minutes before the session if you are uncertain as to whether the sky is clear enough for the session to be held.

- *Karen Carey*

*****HCAS Astronomy Quiz*****

A Monthly Feature
by Phil Schmitz

How Well Do You Know the Constellations?

- 1** How many official constellations are there?
 12 110 88 45
- 2** How many constellations are on the ecliptic?
 13 12 24 8
- 3** The constellations of Carina, Puppis, Vela & Pyxis were originally named what?
 Nautical Magellan Felix Argo
- 4** How many official constellations are multi-named; i.e. Ursa Major is one?
 15 10 12 9
- 5** The center of the galaxy appears to be in what constellation?
 Scorpius Orion Sagittarius Capricornus

The answers will appear in the newsletter with a new set of questions.

Answers to Last Month's Quiz:

- 1** The double double is located in which constellation?
 Perseus **Lyra** Andromeda Lynx
All four components of Epsilon Lyrae are white.
- 2** The gold and blue stars called Almach is located in which constellation?
 Cygnus Delphinus Orion **Andromeda**
Almach is actually four stars in the constellation of Andromeda.
- 3** The north star, Polaris, is located in which constellation?
 Ursa Major Canes Venatici Draco **Ursa Minor**
Polaris is in the constellation of Ursa Minor, its visible companion is a 9th magnitude star.
- 4** Zuben Elgenubi is located in which constellation?
Libra Capricornus Aquarius Scorpius
Zuben Elgenubi is a wide optical double star in the constellation of Libra.
- 5** Cor Caroli is located in which constellation?
 Ursa Major **Canes Venatici** Coma Berenices Sagitta
The brilliant white components of Cor Caroli are in the constellation of Canes Venatici.

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