

Delmarva Stargazers Meeting  
05-04-2010

Setting up was a bit tricky – connecting up to the projectors was interesting at the new Smyrna Health and Wellness Center, Christiana Care. (The air conditioning is a bit strong – bring a sweater)

Pre-meeting talk: how the moon was created and that the Earth lost its atmosphere during the impact. The water did not come from comets, but asteroids and volcanism since the deuterium (proton-neutron nucleus) and protium (proton nucleus) ratios match asteroids and not comets nor other trans-Neptunian objects). Hydrogen molecules and Helium are lost from our atmosphere since they escape the earth's gravitational field.

Equestrian Center news: They will be upgrading their facilities by upgrading an existing septic system (grandfather permit) which means real washrooms on site and so instead of planned enclosed building they'll construct a pavilion instead. Maybe it will be built by the fall. The Equestrian center hosts our star parties and dark sky site observing nights at the Tuckahoe State Park in Md.

It was suggested we put up a sign at the new meeting center as well as at the elevator and stairs to direct members to the meeting room.

Meeting is starting at 7:05:

Two new people, total 16 with introductions made.

Star Gaze wrap up:

- Two out of three nights were good - Thursday and Saturday night. Windy on Thursday night until about midnight when the wind died – very dry, no dew. Saturday was darker, but damper.
  
- Attendance: greater at night than in the morning.
  - Don was surprised by the number of people that did not stay.
  - The fee structure was seen to be part of the problem. Most Star Parties have a flat rate whether people stay one night or for the entire party. The original fee structure was designed to accommodate weekenders and single nights. It seems that some people paid for a day and stayed longer. Since we prefer the honor system to enforcing policy we'll try the flat rate system.
  - There were a lot of door prizes.
  - Registration: preliminary number: \$1,567. Food \$437, raffle \$253 in with a cost of \$254.90 for the TMB eyepiece. Potties \$307, \$360 for EQ center. Dancers \$100. \$44 for food. Hot dogs are not as popular as they used to be – we only bought one box. \$306 profits.
  - Tom Pompiono bought a wireless card for an access point so we could have internet access. This seems to have been successful. It may have been underused since it was not advertised that we had internet access.

## Obscure Astronomy Words

- Amada Observatory – The IceCube Neutrino Observatory AMANDA project.
- Analemma – equation of time based on a year. (This shouldn't be an odd word since the Analemma was on every globe until recently).
- Ansaе - The apparent ends of Saturn's rings, which, when seen obliquely, seem to project from the sides of the planet like handles.

## Meeting place and how to use it:

- Discussing what we can do with the internet at the meeting place – remote telescopes, remote presentation, like Kent Blackwell and others. Other speakers could be brought in by video. The Internet connection is very fast both the uplink and downlink.
- Download: 1.79mbs, 9.74 up, 1.69, 8.49.

## Don Surles: Presentation on the Sun – Solar Dynamic Observatory

- We were treated to recent movies from the observatory at various wavelengths in with very fine detail.

## Nominations for President Elect and Secretary.

- President Elect: We have Lylse & Tony, Tony withdrew. Michael Lecuyer for Secretary. Lyle Jones will soon be the PE and Michael is the secretary.

## Ice discovered on asteroid:

- Researchers discovered the signature of ice on the asteroid 24 Themis using the NASA infrared telescope on Mauna Kea in Hawaii.
- There is some dispute about how water arrived on our planet after the creation of the moon. The article pulled up on the web says asteroids brought some water. but most is from volcanism.
- “What we’ve found suggests that an asteroid like this one may have hit Earth and brought our planet its water,” said astronomer Humberto Campins of the University of Central Florida. The group suggested that during the Late Heavy Bombardment asteroids brought water to the Earth. Scientists say the salts and water match our oceans.

#### Don Surles: Presentation - Star atlases and the use:

- History:
  - The earliest were naked eye atlases – first were drawn from visual observations – The first by Hipparchus about 135 BC. This has not survived but did contain the positions of 850 stars.
  - Claudius Ptolemaeus (Ptolemy) who produce the earliest surviving astronomy text, the Almagest, seems to have appropriated the atlas from Hipparchus and added to it – 1,208 stars. Produced about 150AD.
  - 1603 - Uranometria, by Johann Bayer
  - 1729 Coelestis by John Flamsteed
  - 1801 Uranographia by Johann Elert Bode
  - 1843 Uranometria by Friedrich Wilhelm Argelander

- 1914 Franklin-Adams early photographic atlases.
- Now we get down to 13 or 14<sup>th</sup> magnitude with modern star atlases.
- Modern star atlases based on photographic plates with the Sky Atlas 2000 and Millennium star atlas, last two printed.
- Now we have software/online atlases like these:
  - Cartes du Ciel - free program to draw sky charts,
  - Celestia - a real-time 3D space simulation, KStars is a freeware planetarium, Sky-Map.org - online system displaying a detailed star map, MegaStar - targeted at deep-sky observing, The Sky 6 & X – general astronomy software for planning and telescope control.
- Future, smart mounts can communicate with the internet (or the local computer) databases in the hand controllers.
- Apples I-Pad has a number of astronomy applications including SkyVoyager that can connect to on-line telescopes.
- Digital is always up to date no epochs (Epochs are the moments in time when a printed astronomy atlas was printed. Since the Earth precesses star positions move but the atlas doesn't). Digital atlases can compensate. Epoch were generally 25 years apart.
- Keep you Millennium Atlas it may be the last printed star atlas.

- There are finder charts as well with Telrad finder charts being the most common. (Ed, there is the Deep Sky Tools containing 5800 1-degree mini maps up to 12.5 magnitude stars plotted).
- Bottom line: find the atlas you need?
  - Depends on the aperture of your telescope – the magnitude you can see with it should determine the atlas you'll need.
  - The darkness of your site, Limiting mag. Dark sky objects if they interest you, double star atlases, variable star atlases.
  - Portable, dew resistance. Price.
  - Hardcopy or digital?

#### Jerry Truit; Presentation - Coma Berenices

- Tiny right angle of stars just behind Leo and under the curve of the dipper's handle. Dim constellation. Just above Virgo.
- Objects: M 64 (Blackeye Galaxy, Sleeping Beauty Galaxy), M 85 (a luminous lenticular galaxy), M 88 (spiral galaxy), NGC 4565 (bright, very large edge-on spiral), NCG 4559 (spiral galaxy), M 100 (face on grand design spiral galaxy), M 99 (face on spiral galaxy), M 53 (globular star cluster).
- Getting oriented is always confusing since the constellation has faint stars.

- NGC 4565 is a very slender galaxy with a dark lane.
- M 64 - Black eye galaxy has a dark lane across the core. The black band near the core of the galaxy is fairly obvious.
- M88 spiral with arms. M99 has two arms.
- Mythology Queen of Egypt wife of King Ptolemy III. She vowed to cut her golden hair as a sacrifice if her husband returned from the war. He returned and she cut her hair. Zeus placed her beautiful hair in the heavens.
- Ovid's tale of Pyramus and Thisbe. The young couple was forbidden to see each other by their parents. They went to meet and Thisbe arrived first and was frightened by a lion which caused her to drop her veil which the lion bloodied with its last kill. Then Pyramus arrived to find it and drowned himself. An old story told and retold.

#### Presentation: Summary of Jerry Truitt's email survey

- What do think is the best about our club:
  - One of the best in the country
  - Friendly members
  - Willing to share their information
  - Laid back good old boys attitude. More concerned about eating, observer than politics or power.
  - Long term friendships
  - Nice people, respect each other

- Need improvement:
  - Nothing.
  - Monthly observing is on the calendar and nobody is really taking the lead to making it happen regularly. Would be nice to form a mini-committee who will take care of planning.
  - Would be nice to form a committee of 5 members committed to outreach.
  - I would like to see more people involved in day to day activities, more volunteers, more people who know what they want and will make it happen – Don.
    - Don expanding on this: as a group we are good at doing this – we need people to start up an activity, carry it through and keep it going.
  - Is it possible those on of the stargaze parties at the original site versus the equestrian center?  
Answer: (Killens pond was the original site), but the sentiment is the for the old youth camping area and unfortunately this area is smaller than it used to be and the trees surrounding it have grown up.
  - Car pooling – Tony Mullen says they go out during the moonlight times – more than just at the new moon.
  - Don Surles: Instead of Tuckahoe we should have several spots closer to the observers. (Ed now

Blackbird forest is becoming a hot spot for observing near Smyrna)

- Mallard Lodge at the duck blind parking lot, Blackbird forest. – more local observing sites for smaller groups.
- A good start would be to get as many as possible out on the next clear new moon out at Tuckahoe State park.
- Biggest benefit:
  - Seeing good friends
- Meeting topics
  - More beginner astronomer aspects of telescopes.
  - We do not seem to get many beginners and it's because a lot of things are over their heads.
  - Not many beginners are looking for the Horsehead and NGC xxxx that can only be seen by Don or Kent (in their large telescopes)
  - I would like to explore possibilities of hooking with other organizations or vendors via the internet.
  - Current astronomical news should be brought up.
- Are two star parties and the Mirror Making Seminar enough or should we have more events?
  - Two per year is ample
  - Add a telescope making seminar
  - Just right.

- Have you helped?
  - Yes, no, a little.
  
- Is there a specific reason?
  - Should have more time to help.
  - Would like to help but living in south Sussex county and meetings are hard to make
  
- Outreach:
  - No, distance for travel.
  - Sites are too far – I consider myself a beginner and I feel that I go there is you with one or two who responded that I might not be able to do what is expected of me. (answer: just show up and find out what you might be able to do – its pretty easy to help those completely unfamiliar with the sky)
  - Yes many each year not unusual for me to travel two hours for an outreach.
  
- Specific reason you didn't help
  - Time
  - I was under the impression that you (Jerry Truitt) handled it.
  
- Did you attend meetings.
  - Long trip coming back at night.
  
- Do you check out our web site.

- Yes but not as often as I would like. But most check the web site.
- Further discussion:  
Password protected area question opt-in for hooking up with each other by zip or address. Privacy concerns are addressed by the password and an opt-in policy on the membership application.