

Delmarva Stagazers  
September 7<sup>th</sup> 2010

Jerry Truitt opened the meeting at 7:00

Attendance: 20

Reminder of the No Frills star party.

Treasurer's Report by Kathy Sheldon:

- As of this meeting we have \$13,698.88

No Frills Star Party:

- We would like to find new port-o-potty company since they can't get the potties in the correct places. There have been two ideas: Use the Equestrian center's vendor or find another.
- Truitt will bring chicken soup Thursday night.
- Fish Fry Saturday.
- Joe Cain is on registration.

We've decided to buy the S&T CDROM of all back issues.

We are getting requests for outreaches. We are invited to the Secretary MD Warwick Elementary School for Monday Sept 13.

Delaware AeroSpace Education Foundation :

- Solar session 10 to 4. Big Oak Road Saturday.

Skype Call to Astronomy magazine: David J. Eicher –  
Editor

- Talk about where professional astronomy sometime meets amateur astronomy.
- Revolution of the big questions. Examples understand the dynamics of what will happen to the sun it will become a planetary nebula. We know what makes single star nebula, or a bipolar nebula. There are six to twenty stages a star goes through while building a planetary nebula as it sheds layers.
- Although the first microbes on Earth are extremely old we humans are probably 80% through our time.
- The historical position of pluto should keep it as a planet regardless of the IAU for Clyde Tombaugh, its discoverer.
- There are currently 5 probes on or around Mars. Mars was once warm and wet and now is cold and dry. Will this spell the same fate for the Earth.
- The other question is what happened to Venus?
- The moon was formed about 3 billion years ago during an impact. A radical idea 15 years old.
- There are now 490 extrasolar planets and with Kepler space mission and Darwin (cancelled project) we will surely find earth analogues.
- What's out there? In 1923 it was determined that Galaxies were separate star systems. The Milky Way has been determined to be a barred spiral and is more massive than once thought due to the Glimpse survey to remap the arms of the Milky Way. There are two major arms and a number of

spurs. Independently observed with Hubble space telescope and other telescopes it collapsed into it's present form from perhaps 100 protogalaxies.

- The universe age is known in spite of the cottage industry of nay-sayers. The old methods like the age of white dwarfs and so forth were inaccurate but newer methods are in good agreement.
- How could the universe be 390 billion lightyears across – inflationary theory.
- Dark matter, dark energy discussion nobody knows what it is. Anyone who says they know today is a fake and a fraud.
- Black holes used to be hypothetical but 10 years ago they were concrete in two forms rotating and non-rotating. Galaxies started with black holes that may have been the seeds for galaxies OR stars were the seeds and so on.
- Globular clusters have been found with a black holes. Some GC's may be larger than dwarf galaxies. So where do they all fit in?
- Some asteroids are defunct comets – things are more complicated than our simplistic views.
- What will happen to the universe? Likely a cold dark end rather than the Big Rip or collapse. It could be a multi-verse. Ours will infinity expand with scattered red dwarfs until even they grow cold.
- We go out and look a DSO's and it's a lab of discovery. The distance scale escapes most people. The Universe and even our galaxy is an extremely large place. This particularly important when

considering if life exists in the universe how would we find each other?

- Tony Mullen asked if there are ways to detect earth-sized stars. Answer: that's coming in the next few years.
- Doug Norton asked: Deep sky magazine went away a long time ago but amateurs now own very large scopes so why is there no DSO magazine? Answer: it was a hobby then and Kalmbach (publisher) wouldn't want to publish it now. But someone will want to do that. There is a lot of potential for such a zine. If the Stargazers want to start such an internet thing Astronomy mag will help out.
- Dave Short asked: there was a time when amateurs and pro's worked together. Is that happening now? Answer: There is more work being done now. The equipment and expertise of amateurs has increased. Now the professionals have discovered that popularizing astronomy now is required to continue funding.
- Dave Short: amateurs pay more taxes that going into their research than their taxes pay for. Alex Filipenko was giving great praise for amateurs but taking it away in the next statement. Answer: there is so much data online from survey telescopes that amateurs may make discoveries. These also kill some amateur programs like comet discoveries and supernova.

- Karen Jennings: Do you know Filipenko? Answer: Yes (friend of Sagan's and the smartest guy in California). Witty and funny.
- Karen; Relationship with Carl Sagan? Answer: Yes, he started a column on DSOs in a local newspaper. Then he started a newsletter. He was encouraging on how to get into an astronomy career. In the 80's and 90's he got to know him better – off camera he was careful with words but funny and warm and nice and a joker. He would be able to think up questions for presenters outside his discipline that they had difficulty answering.
- Jerry Truit: What is the future of paper magazines? Answer: there is still a strong interest in the paper magazine but there is an interest in applications. Most astronomer subscribers are over 50 and still want paper. A second edition of the star atlas will be available for sale.
- Jerry Truitt: How to excite people about science? They're thrilled for the moment and then go into service jobs instead of engineering. Answer: This is a bigger problem in the US than other countries. They'll look at an aurora for a few minutes but have to get back to their games. The magazine will try to get Gen X and Y into astronomy. For the first time ever is coming together an astronomy outreach program by major telescope manufacturers. Sidewalk star parties and other outreaches. It's not an easy question to answer.

- Don Surles: We call ourselves Stargazers because we are observers.
- Don Surles: Explain that the star is a variable star. Answer: The sun is increasing it's output over time.
- Don Surles: When I read your magazine and your cutting edge and products being offered, new ways of doing things. We are observers and we like to go out to night sky. When I look at Astronomy Magazine he doesn't see much about people that observe under dark stars. Answer: S&T has more hobby coverage of the kind we do like are astro-imaging, and the Sky This Month. Our formula of covering in a way that other magazines don't – our readers want more science coverage.
- Question: mw is a barred spiral. Answer: Can't see it from within but we can in the infrared and until 2000 we thought it was a spiral  $2/3^{\text{rd}}$  to  $3/4$  the size of andromeda. Spitzer and Glimpse (Galactic Legacy Infrared Mid-Plane Survey Extraordinaire) will show the bar in the spiral.
- Chuck Jennings: Deep sky – what objects outside the normal do you like? Answer: Stephans Quintet, Pegasus, Aquarius, and that chain. Galaxies beyond 247,300 in the Fornax galaxy clusters. Weird planetaries in Orion and Gemini for their shapes.
- Keep an observation log; looking at them years later and teaches you to be a better observer and improve what you see each time drawing objects is also a great help.

- Question: Recommendations for astronomy.  
Answer: Astronomy Magazine! Hang out with these guys for a while and learn what you want to look—are you a planet person, build telescopes, imaging, visual, and so on.
- Karen Jennings: need more estrogen in this hobby.  
Answer: maybe 20 percent subscribers, but professionally it's about 50%.
- Karen Jennings: Tell us about Granite Gap New Mexico. Answer: Like the Winter Star Party. Successfully developed for astronomy communities. Now working on a Dark Sky Paradise with small parcels making the land available cheaply for dark sky sites. There will be a year long star party there. Has electricity, water, internet. Could be on site or park a robotic scope out there. Summit of Mauna Kea is the only place better. Cabins or RV's. Land cost \$2,500.
- Thank you so much. This has been amazing. Great to have personal contact with people over the internet.

#### Commitments for next month:

- Ed Reznec for the Hubble Space Telescope.
- Doug for star hopping
- Don will do a constellation: Pisces Aries, or Triangulum

Jerry Truitt: presentation on the Clear Sky Clock.

- Two on our web site, Tuckahoe and Blackbird. The web page will let you request a clock for your area.
- What is it: Astronomers forecast for the next two days.
- Created by the cool guys at the Canadian Meteorological center.
- Based on numerical weather forecast. Numerical data is overlaid on a map. There are over 4,000 charts available.
- May miss low clouds (they have almost the same heat signature as land).
- Transparency: total transparency from the water vapor in the column. DSO nebulae require good transparency but clusters don't need it. Seeing is an experimental forecast.
- Only nightly forecasts are useful. Bocks are in three hour intervals. Seeing can be localized by other heat sources.
- Does predict wind to give you more information (like seeing) Pro's have a scale from 1 to 10. Excellent is .5 to .2 arc sec and 5-8 is really bad. Amateurs use a scale of I to V.
- Darkness is based Ben Sugerman Limiting Magnitude page:  
<http://cleardarksky.com/others/BenSugerman/star.htm>
- Wind, Humidity, and Temperature. A sudden spike in humidity forecast an hour or so after a cloud forecast a sudden transition to fog.

End of meeting.



Done at 8:58.