



Penobscot Valley Star Gazers

An Astronomical Society of Central Maine

<http://www.gazers.org>

October 2008

Telescope Basics

The PVSG will meet next at 6:30 p.m. in room 310 at John Bapst Memorial High School on Monday, October 13, 2008. Our speaker will be David, who will take a closer look at the Night Sky Network's outreach toolkit "Telescopes: Eyes on the Universe." He will show us the things you can learn about telescopes using the materials in the kit.

Thanks for last month's program go to Dr. Neil Comins for presenting some misconceptions people have about things astronomical.

A Universe of Misconceptions!

September 8, 2008



September 2008

Our monthly meeting was brought to order by our President, Wade at 6:30pm. With ten members present he introduced the evening's speaker. Dr. Neil F. Comins, to quote from the authors guild website, "... is an astrophysicist, astronomer, professor of physics and astronomy at the University of Maine, author of at least 10 published books on astronomy and space (many more according to the Amazon web site), and public speaker. He has "appeared" on over a hundred radio shows aired around the world, as well as numerous television shows."

This evening he would be sharing with us common astronomical misconceptions most people have.

Dues Were Due October 1st



Regular \$15.00
Family \$22.50
Junior \$7.50

Pay at the meeting or send to Bill

Dr. Comins started collecting these common misconceptions from his students. These misconceptions "... denote any deep-seated incorrect belief inconsistent with accepted scientific theory." By acknowledging these misconceptions, understanding how they are acquired and correcting them we can re-

spond more effectively to nature.

Dr. Comins went on to list the top 15 misconceptions that he has collected. They are:

- 1) Seasons depend on the distance between the Earth and the Sun.
- 2) There are twelve Zodiac Constellations.
- 3) The North Star is the brightest star in the night sky.
- 4) All stars are the same color.
- 5) Stars really twinkle.
- 6) The Asteroid Belt is densely packed, as in "Star Wars".
- 7) Comet tails point behind them.
- 8) Spring tide only occurs in the Spring.
- 9) Once the ozone is gone, it is gone forever.
- 10) Mercury is hot everywhere on its surface.
- 11) Giant planets have solid surfaces.
- 12) Saturn is the only planet with rings.
- 13) The Sun primarily emits yellow light.
- 14) The Sun is solid and shines by burning gas or from molten lava.

On the Schedule

(Items Subject to Change)

PROGRAMS

November: Alan, Australian Odyssey
December: Bill, Hubble Upgrade

STAR PARTIES

October 9(rs): Dr. Marci Delaney, Hubble Servicing Mission, Point Lookout, Northport, 7 to 9 pm, Dave
October 18(co): Night Sky Walk with Dr. Comins, Orono Bog Walk, for time check www.aronobogwalk.org/calendar.htm
November 7(rs): Girl Scout Science Day, Hampden, 6 to 7:30 pm, Shirley
December 13(rs): PVSG Christmas/Holiday Party, 5:30 pm

First date is primary, second is rain date; ? Tentative; (rs) rain or shine; (co) clear only

15) Black holes are giant vacuum cleaners in space, sucking everything in.

Dr. Comins was kind enough to provide a copy of his PowerPoint presentation to us. If anyone would like to have a copy of it, please send me an email and I will get it right out to you. In Dr. Comins' talk he answers all of the above misconceptions and goes on to explain where most come from and that some are deep seated and others superficial. By exploring these misconceptions and exploring where they come from, we can overcome them.

Dr. Comins provided us with a very entertaining and informative talk about commonly held misconceptions of space. We very much appreciated his presentation and the questions and answers period that followed. You can surf to his website at <http://www.physics.umaine.edu/ncomins/>. There you can read the growing list of collected misconceptions and if you have a new one submit it to him. His work on this topic was published in "Heavenly Errors: Misconceptions About the Real Nature of the Universe". His other collected works are listed here, <http://members.authorsguild.net/nfcomins/works.htm>.

Dr. Comins will also be conducting a Night Sky Walk along the Orono Bog Walk on the 18th of October. You can check with the Bog Walk website for times. Wade, Scott and Dave have attended this and state it is well worth the time.

Wade started the business meeting at 8pm with old business. The Club's minutes for the August meeting were accepted, with corrections. The Treasurer's report was accepted as presented. Bill also wanted to remind everyone that Dues are due at the October meeting.

The question was asked if we had gotten an insurance quote from our current insurance company yet. The answer was no. Dave was asked to contact the Astronomical League and request an insurance quote from them.

Wade and Dave stated that the Garland Days star party was "a wash" with our state's mostly wet last part of summer. But they managed to have a "constructive" time at Wade's home.

Astronomy 2009 Calendars are in, in limited numbers, for \$6.50 apiece. Bill also wanted to remind everyone that the cut off for taking advantage of Astronomy Magazine's subscription renewals were the end of October. The cost for a single year renewal was \$34.00 and \$60.00 for two years.

The subject was brought up concerning club garments. Carolyn stated that a complete list of club products can be gotten from LogoMotion on State Street in Bangor. Carolyn also stated that for \$4.00

Reminder

Astronomy magazine is offering a 2-year subscription for \$60. A 1-year subscription is \$34. This offer expires at the end of October.

PVSG-branded items can be purchased at Logo Motion, 189 State St., Bangor. For example, you can bring in an article of clothing and have the club logo embroidered on it for as little as \$4.

you could have the club logo embroidered on any article of clothing you own by taking it there.

Wade now asked for any new business to be brought before the club. There was a letter received from a James Lake looking to promote his new book on "The Big Bang" to our club members. The letter, with more specifics, will be brought in for October's meeting.

October's speaker will be David presenting the Night Sky's Telescope kit. November's speaker will be on Alan's trip to Australia and the southern sky. Bill will be presenting an overview of the maintenance performed by the Space Shuttle astronauts on the Hubble Space Telescope in December.

There was some discussion about reporting requirements for the use of the Night Sky kits back to the Night Sky organization. Apparently only the Club Coordinators that were initially set are the ones that can enter this information into the website. This needs to be done so the club can receive credit for using them. A suggestion was made to have copies of the form made available (either electronic or paper form) so when a club member uses a kit, the form can be filled out making it easier for the Club Coordinator to enter the information into the Night Sky's website.

Bill reported an experience at an observatory (Bill please forgive me but I didn't write down which observatory you were attending) where he got to observe the reaction of a group of young people to what might have been their first real look through a telescope. Bill also informed us that he will be back in time from the OkiTex star party to give some observing reports from it.

Dwight gave an observing report from the Downeast Star Party held at the Cobscook Bay State Park campground. The usual weather problems were present but with patience the group assembled, to in-

clude a troop of scouts, got in some good observing.

Wade and Dave related some stories surrounding their recent attendance at the Highland Games. Carolyn spoke of enjoying some observing time with her family. Looking for meteorites using magnets in the driveway was very interesting. The photographs she took of views from Trumble Mountain Observatory Deck were outstanding. What a wonderful place to appreciate the beauty of the Maine and Canadian border's skyline at sunset. I am sure that the description and photographs of the sky from that location will make it a must visit location for members.

The Christmas party is still tentatively set for 6th or 13th of December at Carolyn and Stephen's residence.

These minutes respectively submitted by David.

E-mail Excerpts

Club notes sent by e-mail since the last meeting
Simply for the record and for those for whom we have no e-mail addresses

Girl Scout Party

Hi all, I have had a request from the Girl Scouts for their Science Day on Fri. Nov. 14 from 6-8 p.m. They would like a star party and any other astronomy items to show the girls so this would be a rain/shine event. If anyone can help, please let me know. Thanks and clear skies to all. Shirley

Hi all, I just got an e-mail from the organizer of the Girl Scout Science Day and the date had to be changed to Fri. Nov. 7 from 6:00 to 7:30 in the community room of the Hampden town office. Sorry for the inconvenience, but I hope some of you will still be about to help. Thanks. Shirley

Library Lectures

Hi All, My BPL newsletter was waiting for me when I got home tonight. The library is hosting a 3 part series on Mars and the Hubble 'scope. The lectures are by Donald Aucoin, "this region's Solar System Ambassador," as appointed by JPL & NASA. The first one is this Thursday (Sept 11) at 6:30pm, titled "Mars:The Search for Life". The second lecture is on Oct 9, titled, "Beyond Mars: The Search for Life." The third is on Nov 6, titled "Hubble's Secrets Revealed and What's Next." Julie

NSN Stuff

Hello Club Members, LCROSS Downloads Avail-

A Changing Cepheid

Mr. Astronomy



Classic 7/04

In 1912 Henrietta Leavitt of Harvard announced the results of her observations of variable stars in the Small Magellanic Cloud and showed a relationship between the periods of variability and the actual luminosity. Then in 1912 Harlow Shapley was able to devise a useful formula showing

stars of longer period have greater actual luminosity. Cepheid variables are divided into two basic divisions classified Population I and Population II. Population I Cepheids are found in the spiral arms and star clouds of galaxies while Population II Cepheids are found in globular clusters. When the relationship between period and luminosity had been established it became apparent this relationship could be used to determine star distances both within our galaxy and other galaxies if Cepheid variables can be observed.

Observing Polaris, the nearest and brightest member of the Cepheid variables, professor David Turner of Saint Mary's University in Halifax, Nova Scotia was able to track the four-day cycle of variability. Unfortunately it has been shown Polaris has less variability than other Cepheids and the range of brightness in just the last 50 years has gone from 10 percent to 2 percent. At the same time the cycle of variability has been rising at a rate of eight seconds per year. These changes can be best explained by stellar evolution according to Turner. Cepheids are in the process of changing from hot, blue, main-sequence stars to cooler, red supergiant stars and during this process they pass through a portion of the Hertzsprung-Russell diagram of stellar evolution called the "instability strip." Turner believes Polaris is passing through the instability strip for the first time and could become a stable star in as little as the next few years or as long as 10,000 years. No matter how long it takes for the transition, stars such as Polaris need to be understood to better utilize Cepheid variables as indicators of cosmological distances.

Mr. Astronomy

able. The Night Sky Network held an LCROSS web-cast on August 28th from NASA/Ames Research Facility in California. Watch the archive on the web at: <http://quest.nasa.gov/lunar/ASP>. Download the Activity Guide here: http://nightsky.jpl.nasa.gov/download-view.cfm?Doc_ID=3D291.

Get Ready for IYA 2009 The Night Sky Network has a treat in store for you for 2009! Keep an eye out for updates on our International Year of Astronomy (IYA) plans. This includes easy access to free materials from NASA, a searchable database of activities for you to use with the public, and IYA packets for each month that will support your outreach efforts and connect them to worldwide programs. The kickoff begins this fall just in time to plan your events for IYA 2009. It looks like a spectacular year ahead.

Marni Berendsen, Kenneth Frank and Vivian White
Night Sky Network Administrators
Astronomical Society of the Pacific
(415) 337-1100

Dr. Marci Delaney at Northport

Hi all, Apparently the mailserver is down or we don't have it anymore. I am sending this to all who are on Wade's email list. If I have left someone off the list (no email), please contact them if you think that they may be interested. I received the following email.
Dave:

I just heard about the program described below which is coming up next week at Point Lookout in Northport.....on October 9 in the evening. [For those who may not know, Northport is a little south of Belfast on Route 1.] Len

We have a unique opportunity next Thursday evening October 9th, Dr Marci Delaney with Goddard Earth Science and Technology Center will be here at Point Lookout in Ginley Hall talking about the mission to repair the Hubble Telescope. She is part of the NASA Learning Technologies team at the University of Maryland Baltimore County. Marci plans to talk about the work of the Hubble Telescope as well as the bigger picture of NASA. Additionally, her father from Northport is an astrophysicist and plans to lead a group in star gazing. We are still finalizing details but we expect to start at 7pm and go until 9pm. We are working together to offer this to local teachers and their students at no charge. I realize this may be short notice but let me know if there is interest on the part of faculty or students. Neal

I contacted Neal to get more info about the event and asked if we could be of assistance. Dr. Marci Delaney (the speaker from NASA) sent me the following reply. Dave:

I am the one leading the education effort for next Thursday night at Point Lookout. I am a scientist turned educator at NASA's Goddard Space Flight Center. I offered to Neal to host an informal NASA education workshop with a telescope viewing at Point Lookout since I am going to be at the Maine Science Teachers Association conference on the 10th. I thought I would spend an hour or so on some hands-on demonstrations/activities for the local educators (and anyone else interested in coming) on some products related to the Hubble Servicing Mission as well as a way to access resources for the classroom. Thought we would end the night with a telescope viewing.

My father, Dr. Roger Ptak (retired astronomer), offered to volunteer to bring his telescope and lead the session, but the more telescopes we have, the better! We would love to have you and if you can recruit more participants, that would be fantastic! Marci Delaney

So, if anyone is interested, let me know. I will contact Marci on Monday. As far as Point Lookout goes, it is on Ducktrap Mountain. It is the name of the conference center that MBNA built. If anyone wishes, you can meet at my house and I will be happy to drive you down. Contact me this weekend if you are interested.
Clear skies, Dave