



# Penobscot Valley Star Gazers

An Astronomical Society of Central Maine

<http://www.gazers.org>

January 2009

## The Stars Are Upside Down

The January 2009 meeting of the PVSG will be on Monday the 12th at 6:30 p.m. in room 310 at John Bapst Memorial High School. This month we will go observatory hopping with the roos Down Under as Alan recounts his Australian astronomical tour. He has pictures that most people never get of radio and optical telescopes from Sydney to Tidbinbilla and a couple of amazing seaquariums. Plus a platypus!

Thanks for last month's program go to David for showing us the Night Sky Network's outreach toolkit "Telescopes: Eyes on the Universe."

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### Understanding Telescopes

December 8, 2008



December 2008

Wade called the last meeting of 2008 to order, with 11 members in attendance, at 6:40 pm. The speaker of the evening was David. David offered a brief peek at the Night Sky Network's outreach toolkit called "Telescopes: Eyes on the Universe". The toolkit has many activities designed for answering the most common questions encountered at the telescope by visitors during star parties or other events. There are a lot of activities that can be done with simple props. I went over the three questions; 1) why can't I see colors through the scope? 2) how much of the sky do I see through the telescope? And 3) why is everything upside down when I am looking through the telescope? Each question has a provided script, supporting props and even a demonstration on its DVD. The kit has a great "on disk" website, the history of the telescope. The only way to get to know one of these great kits is to take one home. I highly recommend it.

**OLD BUSINESS:** The Secretary's report and the Treasurer's report were accepted by the members.

**NEW BUSINESS:** Most of the rest of the meeting was spent discussing the club's participation in the International Year of Astronomy 2009 (IYA2009). Wade introduced us to an IYA2009 mp3 called "On the Shoulders of Giants". Initial discussions centered on the IYA2009's cornerstone project, the 100 Hours of Astronomy. Alan, Carolyn, and David will provide for the group at the January 2009 meeting a framework for an event set up at the University of Maine. This event will be on Saturday April 4th.

The Christmas party was held at Stephen and Carolyn's. Everyone had a great time, the food and drink was wonderful, and the Yankee Swap was good fun. Thank you both for being great hosts.

We had a notice inviting any of us to the following event: Astro League Convention between 2 August and 8 August on Long Island, NY. Long Island Amateur Observers Society hosting.

Wade passed around some photos of the conjunctions he took. Very nice Wade!

David

### On the Schedule

(Items Subject to Change)

#### PROGRAMS

May: Bill, Hubble Upgrade

#### STAR PARTIES

January 17(rs): Jordan Planetarium IYA event

April 4(rs): Club IYA big event / telescope clinic, UM

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

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### 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

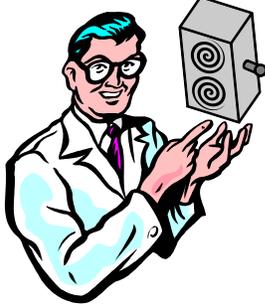
#### NSN News

Dear Night Sky Network members: Get ready for the Telecon

January 15th is just around the corner. Get ready for the Telecon. We want you to enjoy our exciting IYA 2009 telecon series given by Dr. Mark Showalter a SETI Institute planetary astronomer. Dr. Showalter

## The World's First Computer?

Mr. Astronomy



About 2150 years ago an unknown bronze worker crafted a device using a series of intermeshing gears, dials, and balls all housed in a small wooden box. On one side the device had a large dial and several revolving pointers showing the interrelationship of the sun, moon, and the five known planets, with the appropriate date. Around the dial were engravings of various stars showing their rising and setting for various times of the year. There was also a rotating black and white ball displaying the phases of the moon. On the reverse side were two spiral dials each with an extendable pointer set into a groove. The pointer could be lifted up and reset to the beginning of the groove when it reached the end. The top five-turn spiral shows a repeating 19 year calendar tracking the motions of the sun and moon. This calendar was chosen because 235 lunar months fit almost exactly into 19 solar years. The bottom four-turn spiral was set to what we now call the Saros cycle and was used to predict eclipses. Inscriptions showed the month, time, and duration of both solar and lunar eclipses. There was also a subsidiary dial showing the years of the Olympic and Panhellenic games. All this was driven by turning a dial on the side of the box.

Some years after this mechanical device was crafted, a Roman ship loaded with bronze and marble statues sailed by the small Greek island of Antikythera and for some reason sank.

Skip forward about 2,000 years to the year 1900 AD when the remains of this ship were found. The marble statues were worse for wear from the long exposure to sea water but the bronzes were in great shape and soon went on display as some of the few intact Greek bronzes from ancient times. At the same time a diver noticed a largely intact wooden box in the wreckage and removed it with the statues. The box went unnoticed until the box dried and strange bronze gears began to appear in the disintegrating box. It was identified as some type of astronomical calculator and put on display in the National Archaeological Museum in Athens. It contained over 30 gear wheels and dials plus numerous astronomical inscriptions. The device came to be known as the Antikythera Mechanism.

In 2005 the mechanism and all the associated pieces were examined by the X-Tek Systems Ltd, UK Computed Tomography System and the true nature of the Antikythera Mechanism has largely been determined. This included the unique way the mechanism compensated for the elliptical orbits of the planets when it was not known the planets moved in elliptical orbits. For much more information about the Antikythera Mechanism and a book by Jo Marchand called "Decoding the Heavens: Solving the Mystery of the World's First Computer" plus a video of a working recreation, go to [www.decodingtheheavens.com](http://www.decodingtheheavens.com).

Mr. Astronomy

will speak about our Solar System. Join the Teleconference on Thursday, January 15th at 6:00 pm PT (9:00 pm Eastern).

Dr. Showalter is a specialist in the moons and rings of our Solar System and has even discovered a few moons himself.

To log into the Telecon on Thursday, January 15th, between 5:45 - 6:00pm (Pacific Time): Use the toll-free conference call line: 1-888-455-9236

An operator will answer and: You will be asked for the passcode: NIGHT SKY NETWORK You will be asked to give your NAME and the CLUB you belong to, and number of people listening with you. The PowerPoint will be available a few days before the telecon here: [http://nightsky.jpl.nasa.gov/download-view.cfm?Doc\\_ID=359](http://nightsky.jpl.nasa.gov/download-view.cfm?Doc_ID=359) If you have any questions,

please contact the Night Sky Network Administrators at: [nightskyinfo@astrosociety.org](mailto:nightskyinfo@astrosociety.org)

Mark your calendars for Thursday, February 19th for the February telecon with Dr. Connie Walker on Dark Sky Awareness: <http://www.darks skiesawareness.org/>

Marni Berendsen, Kenneth Frank and Vivian White Night Sky Network Administrators Astronomical Society of the Pacific (415) 337-1100 Night Sky Network: <http://nightsky.jpl.nasa.gov/>

