



Penobscot Valley Star Gazers

An Astronomical Society of Central Maine

<http://www.gazers.org>

August 2008

Tell Less the Show

The next meeting of the PVSG will be at 6:30 p.m. in room 310 at John Bapst Memorial High School on Monday, August 11, 2008. Lacking a scheduled August program, the group at the July meeting pulled out the reliable show-and-tell for this month, but with a twist - bring nothing to show, but rather something to tell. Pick some topic of interest from the Web or a magazine or wherever and briefly tell us about it. Wade is looking forward to many interesting items of astronomical information.

Thanks for last month's program go to Dale for making us think twice about all those Near Earth Objects.

The Sky is Falling!

July 14, 2008



July 2008

The meeting was brought to order at 6:45pm by Wade with 12 members present. The guest speaker this evening was our very own Dale. His topic was called "The Sky is Falling". His topic was hot from the pages of the June 2008 issue of "The Atlantic" written by Gregg Easterbrook (you can

hear an interview of Mr. Easterbrook at <http://www.theatlantic.com/rocks>). Dale opened his presentation with the statement that there is a one in ten chance that a space rock, big enough to be devastating, will strike the earth in this century. The more troubling statement was that NASA has other, what it considers higher priorities, than dealing with finding and defending against such strikes.

Using a PowerPoint presentation, Dale led us

through the article concerning the possibility of the Earth being struck by a space rock large enough to cause extinction. At one time contemporary logic was that the solar system was pretty static and that the Earth was possibly struck no more than once every million years or so. With the discovery of many impact craters on the Earth and more being discovered under water, the chances quickly were reduced. One Asteroid Specialist, when posed the question in the article, answered that there was "...a one in ten chance per century of a dangerous space-object strike."

Surveys are being conducted to inventory ancient craters from space rock strikes on the Earth. Estimates are that at least one hundred impact craters lie beneath the oceans. Even these craters don't answer some of the recent extinctions that have happened on Earth. Another type of space rock threat is from it exploding with the force of thousands of Atom bombs miles above the Earth's surface. This is what happened in

On the Schedule

(Items Subject to Change)

PROGRAMS

September: Dr. Neil Comins, Astronomy Misconceptions
October: David, Night Sky Telescope Toolkit
?Bill, Hubble Upgrade
?Dave, *Just Six Numbers*
?Alan, Australian Odyssey
?Doug, Night Sky Supernova Toolkit

STAR PARTIES

August 23: Maine State Star Party, Cobscook Bay State Park, Edmunds, Maine
September 12(co) or 13(co): Garland Days

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

Deep Space Mysteries 2009 Calendar



Enjoy a stunning image of a different celestial event each month with the 2009 *Astronomy* calendar. Marvel at Comet McNaught, the Antennae Galaxies, the

Bubble Nebula, and more! The treasurer is about to order a batch of these beauties at only \$6.50 each; Reserve yours now.

1908 in Tunguska, Siberia.

NASA estimates that there are 20,000 potentially hazardous asteroids and comets in the general vicinity of the Earth. So if estimates have shown that impacts are far more common than we believed and that our little Solar System isn't as stable as we once felt, is there anything to be done about it? One such space rock discovered in 2004 will come close enough in the years 2029 and 2036 (sometime around Easter) to present a 1 in 45,000 chance of striking the Earth. It goes by the rather ominous name Apophis - after the Destroyer of Egyptian mythology. NASA doesn't have any plans for actively searching out defenses to such a world wide catastrophe.

Dale pointed out that NASA is aiming for a permanent Moon colony and eventually manned missions to Mars and beyond. Dale and the article go into depth on each of these projects, their costs and many alternatives that could be done. The bottom line is that there isn't a lot of political pressure (and NASA is a government entity) to take monies away from very expensive projects for what may amount to, in some eyes, as an expensive insurance policy.

We all want to thank you, Dale, for a very sobering view of a very real danger. I am sure Dale would encourage all to read the article in "The Atlantic." The August issue of "National Geographic" also has an article entitled "Target Earth."

The business meeting started at 7:15pm: The Club's June minutes and the Treasurer's report were voted on and accepted as given.

OLD BUSINESS - Wade stated that he sent an email to the Astronomical League. As it stands with the league we should all be members of the League starting at the end of July. The monthly magazine should start coming to the addresses provided by the Club Treasurer.

On the 26th of July the club's Sunfest will be held at Wade and Dana's home. We can start arriving around 1pm and the meal will be pot luck. If the weather permits, those interested in some star gazing have been invited to hang around for an ad hoc star party.

The Bangor Land Trust is sponsoring a Star Party on the 1st of August (the 2nd is rain day). It will be located at the Fox Run Cul-de-Sac. Bangor Hydro will be turning off the street light there to facilitate the viewing. If anyone is interested, please contact Scott to volunteer.

Stellafane is the first weekend in August. Anyone interested in going, contact Wade for information.

The Downeast Amateur Astronomers are sponsoring the "Maine State Star Party" at Cobscook State

Unusual Craters?

Mr. Astronomy



Classic 10/00

Recently square craters were noticed on Asteroid 433 Eros. At first thought a square crater might be considered unusual, but is it? There are other examples on the Moon, and even on the Earth there is more than one example. The most famous is the Barringer Crater in Arizona,

also known as simply Meteor Crater. It has a decidedly square shape which is quite noticeable in aerial views. Do these craters have anything in common which might account for the square shapes?

As it turns out, they do all have at least one thing in common, and that is the fact they are all located in areas of fractures or faults. On 433 Eros the large pictures taken of the asteroid by the NEAR Shoemaker spacecraft revealed an asteroid riddled with cracks and ridges. The close-up pictures also show ridges and grooves though they are more difficult to discern. Our Moon also has some squarish craters located in or near rills and other fractured areas. Not far from the Barringer Crater is a fault called Canyon Diablo and about 30 miles SE of the crater is a series of sink holes in a limestone formation all indicative of a fractured area. Many of the meteorites found near the Barringer Crater are known as Canyon Diablo meteorites and the same limestone formation is where the crater is located. There is even evidence many of the sink holes were formed by the shaking of the Earth caused by the impact of the meteor. All this helps to illustrate the fact 433 Eros is full of cracks and ridges. It is also known 433 Eros is not a pile of rubble but rather a very consolidated body. This and other information being discovered about 433 Eros will help scientists gain a better knowledge of the formation of our solar system.

Mr. Astronomy

Park. Bring your telescope and tent and observe with the Downeast Amateur Astronomers. \$3 per person to help cover group camping cost. Pay upon arrival at Park. You can also make arrangements through Wade.

There is also an open invitation from Steve and Carolyn to stay with them.

Garland Days is requesting a PVSG Star Party for the 12th of September. Contact Wade if you are interested in helping.

The Christmas party will be held at Steve and Carolyn's home on the 6th of December.

The question was raised concerning the status of our website and domain name. The Treasurer reported that he had paid the website for the year. Ralph determined that our domain name was good for another year.

NEW BUSINESS - Upcoming Speakers: August - It was decided that this month's presentation would be a group effort. Each member present would present a short talk on some Astronomical bit of news collected over the month. So read your magazines, newspapers and scan the web for topics. Good Luck.

September - Dr. Neil Comins speaking on "Astronomical Misconceptions."

October - David will present the Night Sky Telescope outreach toolkit. New to some, a review for others. Just preparing for the events for next year's 400th anniversary of the telescope.

TBA Topics and speaker - Alan's "Australian Odyssey"; Doug presenting the Night Sky Supernova Toolkit; Update on NASA's plans for the Hubble Space Telescope Upgrade by Bill.

Bill reported that the Astronomy Calendar is being published shortly for 2009. This is a very attractive calendar for only \$6.50. There was also a reminder that Dues will be do in September.

OBSERVATION REPORTS - Shirley presented photographs from the June 2008 issue of "Physics Today." These included beautiful pictures of Dwarf Stars and Galaxies Colliding.

Bill suggested that subscribing to the free NASA and JPL project newsletters (eg, Phoenix, Cassini, etc.) are very beneficial to keeping up to date on the latest space news.

Dave

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

Bandana of the Night

Hey Folks, This product is a bandana printed as a star chart. Later, Wade Hello-My company Imports Unlimited makes a unique, hands on product designed to teach kids and adults to

read the night sky in a fun, different way. The product is called Star Quest Fundanas and it is printed on a 100% cotton high thread count bandanas for longer durability which is easy to carry, washable and reusable. The Star Quest Fundana glows in the dark and contains 33 of the most commonly known constellations which makes it the perfect tool to introduce the wonders of astronomy. The Star Quest Fundanas are \$3.50 wholesale and we don't have a minimum order. We can also customize the Star Quest constellation bandana with your logo for a minimum of 144 bandanas and a one time screen set-up charge of \$35.00. I would be glad to send detailed information if you are interested. Thank you, Caryl S. Fox csfox@importsunltd.com Imports Unlimited 800-593-7076 www.importsunltd.com

Network News

Hello Night Sky Network, Here are the latest headlines:

The Quarterly Prize Winners are:

Astronomical Society of Northern New England, Amateur Astronomers Association of Pittsburgh, San Antonio Astronomical Association, Space Science for Schools, Stonebelt Stargazers. The randomly drawn lucky Clubs above received five beautiful 10 inch David Chandler "The Night Sky" planispheres tailored for their latitude along with two durable Rigel System Mini Red Lights with the Night Sky Network logo on the handle. Congratulations to our winners.

You too can be winners; just log your events. It's that simple. By logging events, our sponsors see that our outreach materials are going to good and effective use in the community. This is how we are funded, so we encourage you to take a few moments and share your passion. By doing so, you are more likely to win quarterly and annual prizes, so we all win.

LCROSS Podcast on August 28th. Stay tuned for more information regarding the LCROSS Podcast coming August 28th being held live at NASA/Ames Research Facility in California.

Ramping Up for IYA 2009. The ASP is ramping up and formulating our part in the Signature Programs at the Astronomical Society of the Pacific for the International Year of Astronomy 2009 (IYA2009). Find out more here: <http://www.astrosociety.org/iya/index.html> See you in the dark, 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/>