

IO - October 2010

Issue 2010-10
Eugene Astronomical Society

Eugene Astronomical Society
Annual Club Dues \$25
President: Sam Pitts - 688-7330
Secretary: Jerry Oltion - 343-4758
Additional Board members:
Jacob Strandlien, Tony Dandurand,
John Loper.

www.eugeneastro.org

EAS is a proud member of:

The Astronomical League
The World's Largest Federation of Amateur Astronomers



Next Meeting: Thursday, October 28th

Meteorites

by Mel Bartels

For our October meeting, Mel Bartels will talk about meteorites. These bits of space debris fall to Earth in spectacular fireballs, most burning up before they reach the ground but some landing with devastating impact. Their remains are often beautiful and highly prized.

What are they made of, where do they come from, and how do you find one for your very own? Mel will answer these questions and more. Come learn about these recent drop-ins to our planet at our October meeting.

In addition to Mel's talk, Jacob Strandlien will present the astronomy news of the month, and as always there will also be time for any of us to bring items for show & tell. If you've got a new scope or piece of equipment you'd like to show off, bring it! The meeting is at 7:00 in EWEB's Community Room, 500 E. 4th in Eugene.



Next First Quarter Friday: October 15th

Our September star party was rained out. We had a pretty good impromptu star party a week later, but it was mostly for our own pleasure since there was no time to publicize it beyond our email list.

October's First Quarter Friday is right before Astronomy Day (October 16th), so we're holding the star party on our regular date and also publicizing it as an Astronomy Day event. The Science Factory will also hold solar viewing on the 16th, and volunteers are encouraged to contact Sue Peterson at <Sue.Peterson@sciencefactory.org>

First Quarter Fridays are laid-back opportunities to do some observing and promote astronomy at the same time. Mark your calendar and bring your scope to the College Hill Reservoir (24th and Lawrence in Eugene) and share the view with whoever shows up.

Here are the dates for First Quarter Fridays through December of 2010:

October 15

November 12

December 10

September Meeting Report

At our September 23rd meeting, Sam Pitts gave a talk about the viewing end of the telescope. He covered eyepieces, diagonals, focusers, barlows, and filters, explaining what an amateur astronomer should know about each of these components. He explained how to figure out the field of view with various eyepiece combinations, and how different choices will affect what you see. He discussed how mirrors and lenses affect the light entering the telescope, cutting down the amount that reaches your eye with each reflection and refraction. Enhanced coatings help, but nothing can prevent some loss each time light crosses an interface.

Sam and Jerry had eyepieces on hand to illustrate the various types available. After Sam's talk, an informal discussion continued as people talked about their own choices for "back-end" telescope gear.

Jerry also collected dues. It's that time of year again! If you haven't renewed already, please do so ASAP. Annual dues are \$25 and cover the period from October 1, 2010 to October 1, 2011. Please send your dues to the Eugene Astronomical Society, PO Box 7264, Eugene, OR 97401.



Telescope Lending Library

The EAS has several telescopes available for members to borrow. Check out the telescope lending page on our website to see the many scopes in our lending program, and contact Tony Dandurand, our lending coordinator, to arrange to check out one of these excellent scopes.

Tony can be reached via email at <tdandurand@comcast.net> or by phone at 726-8147.

Our next meeting will be on Thursday, October 28th, at 7:00 PM in the EWEB north building's Community Room. This is the first room in the semicircular building to the north of the fountain at EWEB's main campus on the east end of 4th Avenue.

Meeting dates for 2010: (All meetings are at 7:00 in the Community Room)

October 28

November 24 (Wednesday)

December 23

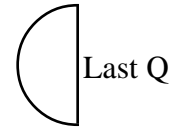
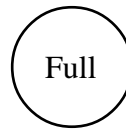
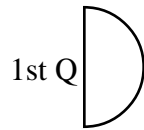


Thank You Castle Storage

For the last two years, Castle Storage has generously provided EAS a place to store its telescopes and equipment. EAS would like to thank Castle Storage for their generosity and support for our group. Please give them a call if you need a storage space, and tell your friends. They are great people and offer secure and quality storage units.



Observing in October



October 7	October 14	October 22	October 30
Mercury Rise: 6:38 AM	Mercury behind Sun	Mercury behind Sun	Mercury Set: 6:23 PM
Venus Set: 7:09 PM	Venus Set: 6:38 PM	Venus behind Sun	Venus behind Sun
Mars Set: 7:54 PM	Mars Set: 7:40 PM	Mars Set: 7:24 PM	Mars Set: 7:10 PM
Jupiter Set: 5:49 AM	Jupiter Set: 5:17 AM	Jupiter Set: 4:42 AM	Jupiter Set: 4:07 AM
Saturn behind Sun	Saturn Rise: 6:45 AM	Saturn Rise: 6:22 AM	Saturn Rise: 5:29 AM
Uranus Set: 5:59 AM	Uranus Set: 5:30 AM	Uranus Set: 4:58 AM	Uranus Set: 4:25 AM
Neptune Set: 3:14 AM	Neptune Set: 2:46 AM	Neptune Set: 2:14 AM	Neptune Set: 1:42 AM
Pluto Set: 11:05 PM	Pluto Set: 10:38 PM	Pluto Set: 10:07 PM	Pluto Set: 9:36 PM

All times: Pacific Standard Time (Nov 7, 2010-March 12, 2011) = UT -8 hours or U.S. Pacific Daylight Time (March 14-November 6, 2010) = UT -7 hours.

Date	Moonrise	Moonset	Sunrise	Sunset	Twilight Begin	Twilight End
10/1/2010		15:16	07:10	18:53	05:34	20:29
10/2/2010	00:49	15:54	07:11	18:51	05:35	20:27
10/3/2010	02:05	16:26	07:13	18:49	05:36	20:25
10/4/2010	03:22	16:55	07:14	18:48	05:38	20:24
10/5/2010	04:41	17:23	07:15	18:46	05:39	20:22
10/6/2010	06:00	17:50	07:16	18:44	05:40	20:20
10/7/2010	07:20	18:19	07:17	18:42	05:41	20:18
10/8/2010	08:39	18:52	07:19	18:41	05:43	20:16
10/9/2010	09:57	19:30	07:20	18:39	05:44	20:14
10/10/2010	11:11	20:15	07:21	18:37	05:45	20:13
10/11/2010	12:16	21:07	07:22	18:35	05:46	20:11
10/12/2010	13:12	22:05	07:23	18:34	05:47	20:09
10/13/2010	13:59	23:07	07:25	18:32	05:49	20:08
10/14/2010	14:36		07:26	18:30	05:50	20:06
10/15/2010	15:07	00:10	07:27	18:28	05:51	20:04
10/16/2010	15:33	01:14	07:28	18:27	05:52	20:03
10/17/2010	15:56	02:16	07:30	18:25	05:54	20:01
10/18/2010	16:17	03:17	07:31	18:23	05:55	20:00
10/19/2010	16:38	04:17	07:32	18:22	05:56	19:58
10/20/2010	16:59	05:18	07:34	18:20	05:57	19:56
10/21/2010	17:21	06:20	07:35	18:19	05:58	19:55
10/22/2010	17:47	07:23	07:36	18:17	05:59	19:53
10/23/2010	18:17	08:28	07:37	18:15	06:01	19:52
10/24/2010	18:53	09:33	07:39	18:14	06:02	19:51
10/25/2010	19:37	10:37	07:40	18:12	06:03	19:49
10/26/2010	20:30	11:36	07:41	18:11	06:04	19:48
10/27/2010	21:32	12:29	07:43	18:09	06:05	19:46
10/28/2010	22:40	13:15	07:44	18:08	06:07	19:45
10/29/2010	23:52	13:53	07:45	18:06	06:08	19:44
10/30/2010		14:26	07:46	18:05	06:09	19:43
10/31/2010	01:06	14:55	07:48	18:04	06:10	19:41

All times are for Eugene, Oregon, Latitude 44° 3' Longitude 123° 06' for listed date

Items of Interest This Month

- All month: Comet Hartley visible in north
- 10/7 - 10/8 Comet Hartley near Double Cluster
- 10/8 Peak of Draconid meteors (slow burners)
- 10/9 Crescent Moon, Mars, and Venus near one another at sunset.
- 10/15 First Quarter Friday Star Party**
- 10/21 Peak or Orionid meteors
- 10/23 Europa and Ganymede shadow transits
6:40 - 8:04 PM Pacific time
- 10/25 Moon near Pleiades in early morning
- 10/30 Europa and Ganymede shadow transits
9:16 - 11:59 PM Pacific time



For Current Occultation Information

Visit Derek C. Breit's web site

"BREIT IDEAS Observatory"

<http://www.poyntsource.com/New/Regions/EAS.htm>

Go to Regional Events and click on the Eugene, Oregon section. This will take you to a current list of Lunar & asteroid events for the Eugene area. Breit continues to update and add to his site weekly if not daily. This is a site to place in your favorites list and visit often.

The View from Eagle's Rest

Despite a rainy First Quarter Friday, September gave us several good nights both in town and out. On the 29th, Bill Murray, Jim Jackson, Jerry Oltion, and Kathy Oltion went to Eagle's Rest to look at faint photons, and discovered many good ones. In particular, Bill got photos of the elusive comet 103P/Hartley 2, currently drifting through Cassiopeia on its way eastward.

Jerry had been trying without success to see the comet from Eugene on several previous nights, but the skyglow proved too bright for him to make it out. Jim found it fairly easily on the 29th in his 18" Starmaster, and each of us in turn found it afterward in our own scopes. It was even visible in binoculars with averted vision.

The comet will be growing brighter as it drops below Cassiopeia, through Perseus, and into Auriga. On October 7th and 8th it will be just below the Double Cluster, providing a great low-power view. The Moon won't interfere until mid-month, so there should be plenty of opportunity to find the comet in the first half of the month.

For a finder chart, see p.56 of the October *Sky & Telescope* Magazine or go online to:
<http://media.skyandtelescope.com/images/CometHartley2-bw.jpg>



Comet 103P/Hartley 2 in Cassiopeia. Photo © by Bill Murray



The Pleiades rising above Eagle's Rest. Photo © by Bill Murray

Also on the 29th, Bill snapped a picture of the Pleiades rising just as we were getting ready to pack up. Bill notes that the image would have been crisper if half the water in the atmosphere hadn't been condensing on his camera lens at the time. (The other half was on Kathy's telescope.)

He captured a beautiful silhouette all the same, and proof that winter's bright constellations are poised to show us their stuff in another month or two. Good observing nights are few this time of year, but Eagle's Rest and the Ridge beyond are there for anyone willing to brave the dew on an otherwise clear evening. Come join us next time!



EPOXI Heads for Hartley 2

from Science@nasa.gov

On September 29th, navigators and mission controllers for NASA's EPOXI mission watched their computer screens as 23.6 million kilometers (14.7 million miles) away, their spacecraft successfully performed its 20th trajectory correction maneuver. The maneuver refined the spacecraft's orbit, setting the stage for its flyby of comet Hartley 2 on Nov. 4. Time of closest approach to the comet was expected to be about 10:02 a.m. EDT (7:02 a.m. PDT).

The spacecraft fired its engines for 60 seconds, changing the spacecraft's velocity by 1.53 meters per second (3.4 mph).

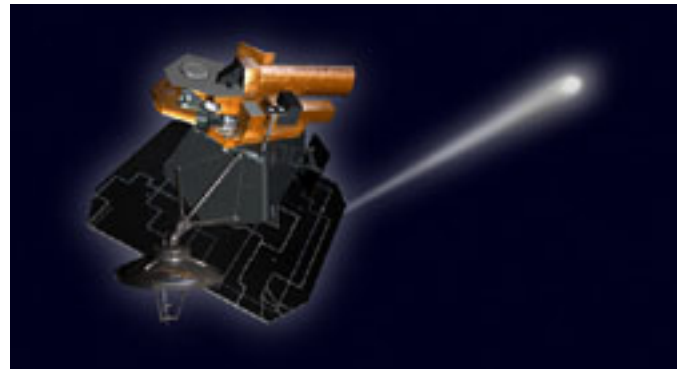
"We are about 23 million miles and 36 days away from our comet," said EPOXI project manager Tim Larson of NASA's Jet Propulsion Laboratory in Pasadena, Calif. "I can't wait to see what Hartley 2 looks like."

On Nov. 4, the spacecraft will fly past the comet at a distance of about 700 kilometers (435 miles). It will be only the fifth time in history that a spacecraft has been close enough to image a comet's nucleus, and the first time in history that two comets have been imaged with the same instruments and same spatial resolution.

"We are imaging the comet every day, and Hartley 2 is proving to be a worthy target for exploration," said Mike A'Hearn, EPOXI principal investigator from the University of Maryland, College Park.

EPOXI is an extended mission that utilizes the already "in flight" Deep Impact spacecraft to explore distinct celestial targets of opportunity. The name EPOXI itself is a combination of the names for the two extended mission components: the extrasolar planet observations, called Extrasolar Planet Observations and Characterization (EPOCh), and the flyby of comet Hartley 2, called the Deep Impact Extended Investigation (DIXI). The spacecraft will continue to be referred to as "Deep Impact."

There is no second "bullet" to smash into the comet nucleus as was done with Comet 9P/Tempel 1 in July of 2005, so this time the spacecraft will just take photos and other measurements on the way past.



The EPOXI/Deep Impact spacecraft



Dues are Due!

EAS membership runs from October thru September. If you haven't renewed already, please mail your dues to the Eugene Astronomical Society, PO Box 7264, Eugene, OR 97401. Dues are \$25. Make your checks payable to Eugene Astronomical Society, or just EAS if your pen is low on ink.

For ongoing discussion of astronomical topics and impromptu planning of telescope outings, join the EAS mail list at <http://eugeneastro.org/mailman/listinfo/org.eugeneastro.general>