Issue 2012-11

IO - November 2012

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.

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EAS is a proud member of:

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

Next Meeting: Wednesday, November 21st

Web Camera Imaging

by Jeff Phillips

For our November meeting, Jeff Phillips will show us how to use an inexpensive webcam to capture some astonishing astrophotos. The power of webcam imaging comes from the stacking software. By stacking hundreds of frames, it's possible to bring out detail with a small telescope that even professional observatories couldn't match in the days of film photography.

One of the most popular stacking programs, Registax, is free. Webcams can be found for practically nothing. Come to our November meeting and learn how to get into this inexpensive yet hugely rewarding aspect of amateur astronomy.

In addition to Jeff's talk,we also encourage people to bring any new gear or projects they would like to show the rest of the club. The meeting is at 7:00 on November 21st at EWEB's Community Meeting Room, 500 E. 4th in Eugene. **Note that this is not our regular day of the week.**

Next First Quarter Friday: November 16th

Our October 19th star party and October 20th backup were both clouded out. Here's hoping for better luck in November. Our next First Quarter Friday will be November 16th, with a backup date of Saturday, November 17th if the 16th is cloudy. The Moon will be a thin crescent those nights, so this should be a good opportunity to see some fainter objects than we usually get to see on First Quarter Fridays.

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's the schedule for the rest of 2012:

November 16 (15% lit) December 21 (69% lit)

Dues are Due!

EAS membership runs from October thru September. If you haven't renewed already, please do so by mail. Send your dues to the Eugene Astronomical Society, PO Box 7264, Springfield, OR 97475. Dues are $25. Make your checks payable to Eugene Astronomical Society.

Jerry will also be happy to accept dues at our November 16th star party.

October Meeting Report

For our October 25th meeting, we met at the Science Factory Planetarium for a demonstration of the new projector's capabilities. Planetarium Director Sue Peterson put on a great show, starting with a simple twilight sky and adding layer upon layer of detail until we felt like we were floating in space. Then she actually took us there, going to Mars and landing to show us the view from the surface of another planet, then going on to Jupiter and swooping around its moons before zooming off outside our solar system altogether. Returning to Earth, she showed us the precession of the celestial poles, the slow drift of nearby stars over time, and the huge motion of the starfield over 100,000 years. That was a real mind-bender to see the familiar constellations distort into unrecognizable shapes and to see some of the closer stars sweep all the way across the sky in so short a time (astronomically speaking). The Mediaglobe II digital projection system kept track of everything perfectly, putting it all back into place when we returned to 2012.

The only drawback to the new system is that the stars aren't as sharp and bright as they were with the old analog projector. It's a definite minus, but the system's plethora of new capabilities help make up for it. In a world where video is becoming more and more the medium of choice, planetariums need video to retain their audiences. This system provides that, and a whole lot more. Our thanks to Sue for hosting such a great indoor star party for us!

Also at our October meeting, Mel Bartels was presented with his Dark Nebula Observer's pin and certificate from the Astronomical League for observing 126 dark nebulae — 91 more than required. Mel passed around his sketches and the vintage copy of E.E. Barnard's book on dark nebula that he used to help identify his targets.

Jerry presents Mel with his Dark Nebula certificate and pin and hearty congratulations

Most of Mel's observations were done with his 13" f/3 folding dob, with a few done through the 20" f/5 dob he sold Jerry & Kathy Oltion a couple years ago. The certificate can be earned with practically any telescope, though, by concentrating on the most contrasty nebulae. Some, like the Great Rift in the Milky Way, are naked-eye objects. Mel highly recommends the Dark Nebula program for anyone who wants an interesting and somewhat different observing challenge.

This was our annual business meeting, at which we elect board members. Board members serve for 2-year terms, and we like to have three positions expire in one year and two in another, but we've gotten off kilter in recent years, with only one expiring this year and four expiring next year. Consequently, both Sam Pitts and Jerry Oltion were re-elected to two-year terms this time, re-establishing the balance of service on the board.

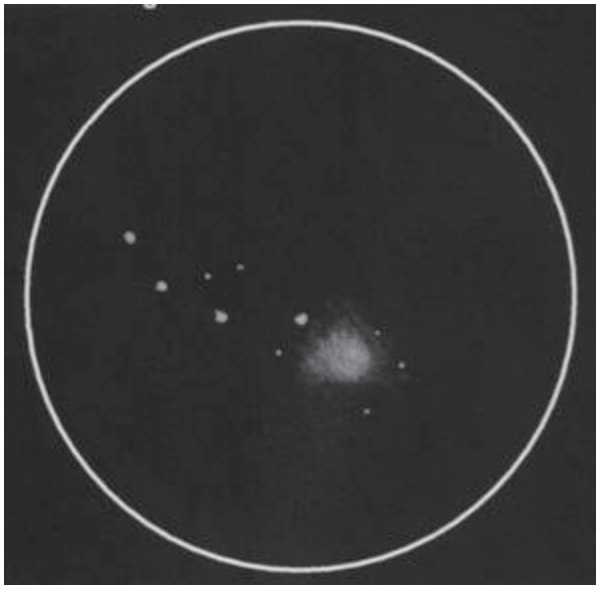
Our next meeting will be on Wednesday, November 21st, at 7:00 PM at EWEB's Community Meeting Room. This is the first room in the semicircular building to the north of the fountain at EWEB's main campus on the east end of 4th Avenue.

Here's our meeting schedule for the rest of 2012. We're back at EWEB for the last two. Note that we don't get regular Thursdays anymore, nor are we in the same room every time. EWEB has had trouble scheduling its meeting space to meet all the demand, so we've had to take what we can get.

November 21 (Wednesday, Community Room) December 20 (Thursday, Training Room)

Comet 168P/Hergenrother Puts On a Show

On October 1st, the 15th-magnitude comet 168P/Hergenrother suddenly brightened 500-fold to 8th magnitude, which put it well within reach of amateur telescopes. At the time, the comet was making its closest approach to the sun (1.4 AU), as well as its closest approach to us (0.4 AU, about as distant as Mars at its closest), so we got a ringside seat. Even better: it was high in Pegasus at the time, and we were in the middle of Indian Summer, so we had good weather to observe it for several days. We watched it drift northward through the Great Square of Pegasus, moving so quickly that we could easily see its motion in just an hour's time.



Sketch © by Mel Bartels

Mel Bartels made this sketch of it on the evening of October 7th. Several other EAS members were watching it that same night, and were able to correctly guess the time when Mel made his drawing (10:00 pm) based on the comet's position relative to the background stars.

The comet kept putting on a show until the clouds rolled in later in the month. Photos taken on October 27th by astronomers with clearer skies show that the nucleus has split in two, giving more life to the comet even as it recedes from the Sun and from us. It will be passing by the Andromeda Galaxy just before Christmas. Who knows what it will look like then? Perhaps a whole string of festive holiday lights!

The Pleiades from Eagle's Ridge, photo © by Bill Murray

Pleiades Rising

On October 17, Bill Murray and several others went to Eagle's Ridge for a great night of observing. Bill had a new camera with him that night, a Canon EOS Rebel T4i. This camera provides live view on its LCD screen, which makes focusing much easier than with Bill's previous camera.

He did several piggyback shots with it mounted on his Meade LX90, including this beautiful shot of the Pleiades rising through the trees. If you zoom in on it you'll see he even began to pick up some of the blue nebulosity around the upper stars. This was a 13-second exposure at f/2.8 and ISO of 3200 with a 50mm lens.

Great shooting, Bill! We look forward to seeing what you get next.

Fairview Peak – Helena Saddle and Bohemia Saddle Observing Sites

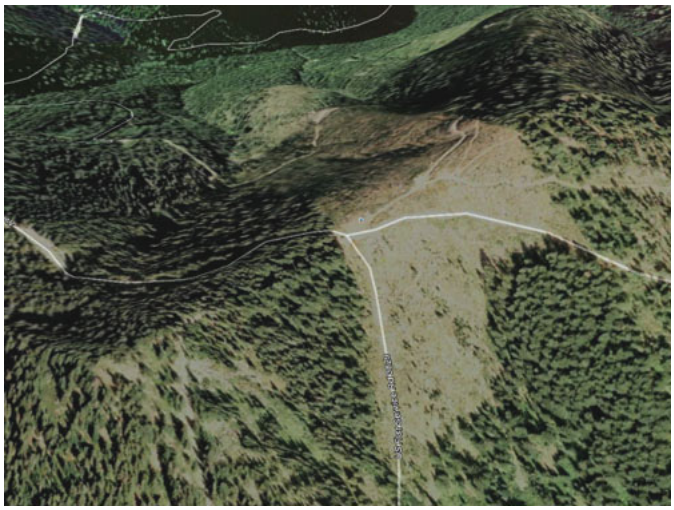
by Mel Bartels

Attempt number two found us driving east from Cottage Grove on Row River Road, staying on the main paved two lane road, #22. Thirty one miles from town we turned up #2212, a smooth graveled road in good condition that makes no apologies heading up to the top albeit a number of switchbacks. 7.4 miles later we found ourselves on top of the world amidst breathtaking scenery far from any lights.

The first site with the most room is on the Helena Saddle at 5200' elevation. The road is roughly east-west with steep drop offs on the north and south sides. This portends well for good seeing and

Site #1, Helena Saddle, looking southeast

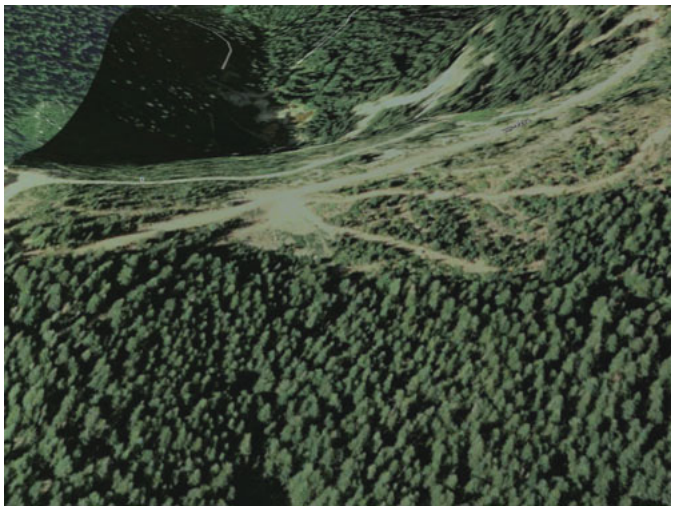
Site #1, Helena Saddle, looking southwest



Site #1, Helena Saddle: Google Earth projection

Barb at Site #1, Helena Saddle, and the view to the northeast

transparency because the site sticks up into the air flow. There is a very large area on the north side of the road. The second site on the Bohemia Saddle 0.7 miles on down the road at 5000' elevation just before the Champion Creek Road cutoff has a smaller area on the side of the road. The first site has some trees in the distance to the southwest and the second has a scattering of trees in the far distance.



Site #2, Bohemia Saddle: Google Earth projection

Site #2, Bohemia Saddle, looking south

There are few clear cut areas left due to the new practice of thinning on public lands. Private clear cuts are behind locked gates and not accessible. So we are left with the rare clear cut that is adjacent to the road.

Barb asked me if there were bears. I answered, "Of course not." We traveled another 1.2 miles on a steep somewhat rough road to Bohemia Park (5400'), a large clearing and parking area where several roads and trails meet. Viewing here is problematic because Bohemia Mtn (6000') is directly to the south. The road to Fairview Peak (6000' high) sat behind a closed gate. The gate is open during daytime hours in mid to late summer but we missed the forester who had left a few minutes earlier. It's a 1.2 mile road in good shape but with loose gravel, very steep and narrow near the end. You probably will feel more comfortable driving the road in a 4-wheel

The narrow steep switchback with forbidding drop-off to the lookout tower

The south view from Fairview Peak and the lookout tower to the west (the only obstruction in any direction)

drive vehicle as long as you are fine with the spectacular drop-offs from the narrow one lane road. We walked up the road past the closed gate and were rewarded with grand sights that stretched for a hundred miles in all directions.

We saw fresh bear scat on the road — hmm. The bears are out checking viewing vistas too! We encountered an owl, an eagle and native bees. The forest service rents out the lookout tower as well as nearby Musick Guard station. You have to sign up in January for the coming season.

Bear scat on the road

An eagle also admiring the view

Coming down is fine — I put the truck in 2nd gear and coasted down the entire way, continuing to coast in drive once I reached #22 for a few more miles. It took an hour and twenty minutes to reach I-5 from the observing sites. I strongly recommend that you reconnoiter in the daytime before attempting to drive at night.

Noonday wagon road, used to haul supplies in the late 1800's to early 1900's to the area's miners

Musick guard station between site #2, Bohemia Saddle and Fairview Peak

Thank You Castle Storage

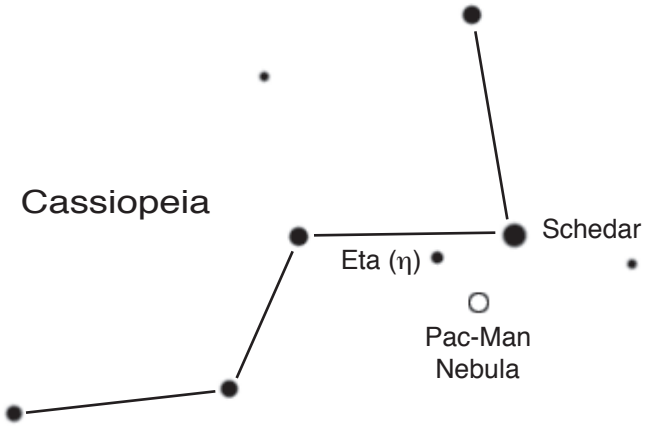
For the last five years, Castle Storage has generously provided EAS a place to store its telescopes and equipment. EAS would like to thank Castle Storage for their generosity and support for our group. Please give them a call if you need a storage space, and tell your friends. They are great people and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

Observing Highlight: The Pac-Man Nebula

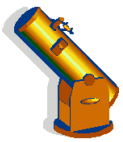
On Sunday, October 7th, Brandt Schram took this fabulous image of NGC 281, also known as the Pac Man Nebula. This was shot through SII, Ha, and OIII narrowband filters, with a total exposure time of just under 9 hours. (Brandt says "In one night; I love this time of year!").

This is the perfect time of year to find the Pac-Man Nebula in your telescope, too. It lives right next to Schedar, the brightest star in Cassiopeia (the bottom-right point of the "W"). It's bright enough (7.4 magnitude) to see in most telescopes under a dark sky, and with a nebula filter it really pops out.

To find it, make an outward equilateral triangle with Shedar and Eta Cassiopeia. The Pac-Man nebula will be near the point of that triangle. At 30 arc-minutes in diameter, it's hard to miss. A narrowband or OIII filter will help it stand out against the skyglow.



If you're in for a bigger challenge, have a close look at the bright star in the middle. That's HD 5005, also known as Barnard 1, and it's a quadruple that consists of a mag. 8 primary star along with three dimmer companions. At 150x it can just be seen as a triple star, but it takes much more than that (and respectable aperture as well) to see the fourth. High-definition photos show a fifth, but that's probably impossible to see in an amateur telescope.



Observing in November

Last Q | New | 1st Q | Full

November 6	November 13	November 20	November 28
Mercury Set: 5:38 PM	Mercury Set: 5:06 PM	Mercury Lost in Sun	Mercury Rise: 5:44 AM
Venus Rise: 3:58 AM	Venus Rise: 4:15 AM	Venus Rise: 4:32 AM	Venus Rise: 4:52 AM
Mars Set: 6:53 PM	Mars Set: 6:47 PM	Mars Set: 6:43 PM	Mars Set: 6:39 PM
Jupiter Rise: 6:25 PM	Jupiter Rise: 5:54 PM	Jupiter Rise: 5:23 PM	Jupiter Rise: 4:58 PM
Saturn Rise: 5:56 AM	Saturn Rise: 5:33 AM	Saturn Rise: 5:09 AM	Saturn Rise: 4:42 AM
Uranus Set: 3:37 AM	Uranus Set: 3:08 AM	Uranus Set: 2:40 AM	Uranus Set: 2:08 AM
Neptune Set: 00:35 AM	Neptune Set: 00:08 AM	Neptune Set: 11:36 PM	Neptune Set: 11:05 PM
Pluto Set: 8:20 PM	Pluto Set: 7:53 PM	Pluto Set: 7:26 PM	Pluto Set: 6:56 PM

All times: Pacific Standard Time (Nov 4, 2012-March 10, 2013) = UT -8 hours or U.S. Pacific Daylight Time (March 11-November 3, 2012) = UT -7 hours.

Begin Standard Time

Date	Moonrise	Moonset	Sunrise	Sunset	Twilight Begin	Twilight End
11/1/2012	19:59	10:32	07:50	18:02	06:12	19:39
11/2/2012	20:48	11:20	07:51	18:00	06:13	19:38
11/3/2012	21:42	12:04	07:52	17:59	06:14	19:37
11/4/2012	21:40	11:43	06:54	16:58	05:15	18:36
11/5/2012	22:41	12:18	06:55	16:56	05:16	18:35
11/6/2012	23:44	12:49	06:56	16:55	05:18	18:34
11/7/2012		13:18	06:58	16:54	05:19	18:33
11/8/2012	00:49	13:47	06:59	16:53	05:20	18:32
11/9/2012	01:56	14:15	07:00	16:52	05:21	18:31
11/10/2012	03:06	14:46	07:02	16:51	05:22	18:30
11/11/2012	04:20	15:19	07:03	16:50	05:23	18:29
11/12/2012	05:35	15:58	07:04	16:48	05:25	18:28
11/13/2012	06:52	16:44	07:06	16:47	05:26	18:27
11/14/2012	08:06	17:39	07:07	16:46	05:27	18:27
11/15/2012	09:13	18:42	07:08	16:46	05:28	18:26
11/16/2012	10:11	19:51	07:10	16:45	05:29	18:25
11/17/2012	11:00	21:02	07:11	16:44	05:30	18:24
11/18/2012	11:40	22:13	07:12	16:43	05:31	18:24
11/19/2012	12:14	23:21	07:13	16:42	05:32	18:23
11/20/2012	12:43		07:15	16:41	05:33	18:23
11/21/2012	13:11	00:28	07:16	16:41	05:34	18:22
11/22/2012	13:37	01:32	07:17	16:40	05:36	18:22
11/23/2012	14:03	02:34	07:19	16:39	05:37	18:21
11/24/2012	14:31	03:35	07:20	16:39	05:38	18:21
11/25/2012	15:01	04:36	07:21	16:38	05:39	18:20
11/26/2012	15:35	05:35	07:22	16:37	05:40	18:20
11/27/2012	16:12	06:32	07:23	16:37	05:41	18:20
11/28/2012	16:55	07:27	07:25	16:36	05:42	18:19
11/29/2012	17:44	08:17	07:26	16:36	05:43	18:19
11/30/2012	18:36	09:03	07:27	16:36	05:44	18:19

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

Items of Interest This Month

Comet 168P/Hergenrother moving into Andromeda this month
First week of month: Ceres swings past eta Geminorum
11/1 Moon near Jupiter
11/3 Daylight Savings time ends tonight
11/7 Io shadow transit 7:11 – 9:21 pm
11/14 Io shadow transit 9:05 – 11:15 pm
11/16-17 Peak of Leonid Meteor shower early morning of 17th.
11/16 First Quarter Friday Star Party
11/18 Europa shadow transit 7:57 – 10:21 pm
11/20-25 Ceres passes below M35
11/21 Io shadow transit 10:59 pm – 1:10 am
11/23 Io shadow transit 5:28 – 7:38 pm
11/25 Europa shadow transit 10:33 pm – 12:57 am
11/28 Moon even closer to Jupiter than on 11/1
11/30 Io shadow transit 7:22 – 9:32 pm

For Current Occultation Information

Visit Derek C. Breit's web site: 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.