

IO - September 2012

Eugene Astronomical Society
Annual Club Dues \$25
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EAS is a proud member of:

The Astronomical League
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Eugene Astronomical Society



Next Meeting: Wednesday, September 19th

What Equipment Should I Get?

by Sam Pitts and All of Us

At our meetings and star parties and on our email discussion list we've been getting a lot of questions lately about astronomy equipment, specifically "What should I get?" The answer of course varies depending on what kind of observing or photography a person wants to do. Personal preference also counts for a lot. So we've decided to have a symposium on equipment. Sam Pitts will lead the discussion, but we're counting on everyone — old timers and newcomers alike — to participate with their thoughts, questions, experiences, and opinions. What's a good range of eyepieces? What's the ideal scope for a beginner? For an intermediate observer? For photography? Equatorial mount or alt-azimuth mount or go-to mount? Tracking or non? Come to our September meeting and share your experience and your questions with the rest of us. Together we can shed some light on this perpetual question: What equipment should I get?

In addition to our discussion, 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 September 19th at EWEB's Community Room, 500 E. 4th in Eugene. Note that this is a Wednesday, not our usual Thursday.

Next First Quarter Friday: September 21st

Our August 24th star party was a great success. Despite the Eugene Celebration going full tilt downtown, we had a dozen or so telescopes and a great crowd. The sky was clear nearly to the horizon, giving us what was probably our last star party view of Saturn for half a year.

We had several newcomers to star parties, some with scopes and others just eager to have a look through someone else's scope. The word is definitely getting out there about our regular star parties.

Our next First Quarter Friday will be September 21st, with a backup date of Saturday, September 22nd if the 21st is cloudy. 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:

September 21 (43% lit)
December 21 (69% lit)

October 19 (28% lit)

November 16 (15% lit)

August Meeting Report

At our August 23rd meeting, Jerry Oltion talked about finders. He had many examples of various types on hand, and a slide show illustrating how each type works. He had homemade finders as well as commercial ones, and a giant demo version of his favorite design: the split-pupil finder. He even had a scaled-up demo eyeball to match.

Finders are some of the most subjective pieces of equipment in amateur astronomy. One person's favorite is another's nemesis. There are constant tradeoffs between precision, magnification, weight, dew resistance, ease of use, and comfort. Some designs are harder on your back than others. Some are harder on your brain. (*Wait...it reverses left-right but not up-down?*) Jerry went through the advantages and disadvantages of many different styles, touched on the history of some, and answered a lot of questions from a room-filling audience.

After the meeting, several of us went out in the parking lot to help a newcomer and her grandfather learn how to set up and use their new Meade go-to refractor. (Thanks to Bill Murray, our Meade guru, they were up and running in no time.) Frank and Jerry also set up scopes to look at Saturn and the Moon. We had a pretty good little star party right there in the parking lot for an hour or so.

Our next meeting will be on Wednesday, September 19th, 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. **Note that this is not our usual day of the week.**

Here's our meeting schedule for 2012. 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.

September 19 (Wednesday, Community Room) October 17 (Possibly cancelled due to unavailability of a meeting room. Keep an eye on our email list and the October *Io* for updates.)

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

Cottage Grove Library Star Party Report

On Monday, August 6th, we held a star party at the Cottage Grove Library in celebration of their 100th anniversary and the landing of the Curiosity rover on Mars. It was quite a party, with cake and ice cream, music, and after it got dark, fire dancing in the parking lot. Our telescopes were no competition for the fire dancing; we all abandoned the sky in favor of the spectacle on the ground, which included a fire dancer who looked to be about six or seven. Apparently the director of the library learned about her and her compatriots when he stopped at a street-corner lemonade stand on a hot afternoon and the little girl running the stand casually said, "If you ever need fire dancers, here's my card."

Before the fire dancing, however, we were able to show people Mars ("I can see Curiosity!" one youngster exclaimed), Saturn, several double stars, the Ring Nebula, M13, and a host of other favorites. The sky from downtown Cottage Grove is surprisingly good. We could see the Milky Way clearly overhead and objects that look washed out from Eugene are sharp and contrasty down there. Having 150,000 fewer people pouring light into the sky is no doubt a major factor.

Bill Murray brought his 8" SCT, Jerry Oltion brought his 10" trackball, Nelson Farrier brought his 13" Coulter telescope, and Rick Kang brought his "Cradle Cam," a small telescope with a webcam attached so people can see the image on a screen and take photographs of it. The crowd probably numbered over 100 altogether, but we were never so mobbed that we felt overwhelmed. It was a great night for astronomy outreach, and a nice chance to celebrate a long-lived library and a brand new robot explorer on Mars.

Clear, Relaxing Sky Views at Camp Wilani Star Party

By Rick Kang

On Wednesday, August 15th, several EAS members brought instruments to the Campfire USA local Camp Wilani site southwest of Veneta, about 10 miles west of Eugene. This is an annual event organized by EAS member John Loper, whose family has been involved with the camp for many years. The site is a beautiful meadow in the woods with a large flat grassy area for the telescopes. Surrounding trees do block all horizons 20-30 degrees up, but the trees also block the skyglow from Veneta and a lot of the glow from Eugene, although Eugene's light dome is evident after twilight. The Milky Way shows fairly well, and constellations are easy to pick out in all parts of the sky.

The following EAS people and associates attended:

Rocky Hayes - telescope

Rick Kang – wide field camera

Gordon Landers - telescope

John Loper – organized the event

Bob Moser - telescope

Frank Szczepanski - telescope

Tina Volpe and her son, Dallas (Tina and Dallas are new astronomers to Eugene, having just moved here from Flagstaff, Arizona. Hope our skies will be as clear and dark.)

Skies at Wilani were very clear and steady. We had several waves of various ages of campers/students move through our field of telescopes for the first two hours after dark. We showed the classic summertime repertoire: M13, Ring Nebula, Albireo, and later on, of course M31. Several students imaged the Milky Way star clouds and nebulas with the camera. Telescope owners selected many of their favorite objects to show to the young viewers.

After the crowd dissipated most of us stuck around until midnight to enjoy the dark sky from the peaceful location.

Thanks to John for organizing this event and providing such a good local site for sky viewing.



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.



“Blue Moon” Coined in Eugene

August 31st was the second full moon for the month. That phenomenon has come to be called a “Blue Moon,” but there’s considerable argument over the true meaning of the term. A recent article on the *Sky & Telescope* website revealed a surprising connection with Eugene: the astronomer who’s responsible for the current usage of the term was a Eugenician.

From: <http://www.skyandtelescope.com/observing/objects/moon/3304131.html> we find:

In March 1946, an article entitled “Once in a Blue Moon” appeared in *Sky & Telescope* (page 3). Its author, James Hugh Pruett (1886-1955), was an amateur astronomer living in Eugene, Oregon, and a frequent contributor to *S&T*. Pruett wrote on a variety of topics, especially fireball meteors. In his article on Blue Moons, he mentioned the 1937 Maine almanac [in which a blue moon was considered the third full moon in a season with four]. Then, unfortunately, he went on to say, “Seven times in 19 years there were — and still are — 13 full moons in a year. This gives 11 months with one full moon each and one with two. This second in a month, so I interpret it, was called Blue Moon.”

That interpretation “went viral,” as we call such runaway ideas nowadays. *Sky & Telescope* embraced the interpretation, and thousands of amateur astronomers and other astronomy enthusiasts did so as well. A 1980 radio program called *StarDate* also helped cement the term into our popular culture, to the point where it’s useless to argue that “Blue Moon” doesn’t mean “the second full moon in a month.” It does mean that now. And it’s all because of an amateur astronomer from Eugene.

The Ghost Nebula

EAS member Brandt Schram spent several nights in August photographing Sharpless 2-136, also known as the Ghost Nebula in Cepheus. It lies about 1200 light-years away and spans about 2 light-years. It’s a star-forming region, with a distinct new star forming in the dark knot to the left.

This image goes deep enough to show parts of the nebula illuminated by the general glow of the Milky Way. Total exposure time was 20 hours, with 8 hrs Luminosity and 4 hours each of RGB. The Luminosity was shot unbinned at .63" per pixel and RGB at 1.26" per pixel with a CDK 17 scope and Apogee U16M CCD camera with Astrodon filters.



Moon Occults Venus

On August 13th the Moon slid across Venus in an occultation lasting from 1:14 to 2:30 pm. Despite being in broad daylight, the event was easy to spot, since the Moon was showing a pretty good crescent and Venus was blazing away at -4.5 magnitude as well. Several EAS members watched the event from various places around town, and some of us took photos of the event. It was great fun to watch Venus slip behind the Moon and reappear an hour and a quarter later. It really showed the dynamics of the solar system in action, with the Moon orbiting eastward across a much more distant Venus. Venus seemed to accelerate just



Approach, 12:51 pm. Photo © by Jerry Oltion



Contact, 1:14 pm. Photo © by Brandt Shram

before contact, fairly leaping behind the Moon in the last few seconds.

These photos show the view through the eyepiece. Venus was actually to the left (east) of the Moon, and the Moon was moving eastward in its orbit to cover it. Both were well ahead of the Sun, which was about 45° to the east of both of them.

This month the Moon passes 4° south of Venus on the late morning of the 12th. That's 8 Moon diameters away, so it won't be nearly as impressive as in August, but it still provides a good opportunity to find Venus by day and watch a little solar system dynamics in action. They'll be quite high in the sky: at 10:00 in the morning you can find the Moon at 59° altitude and 171° azimuth, just 9° east from straight south. (It will be straight south at 10:19 a.m.) Venus will be 4° (about one binocular field) above that.

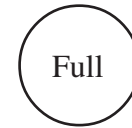
Have a look! Binoculars or a telescope will make it easier, but the Moon and Venus can both be seen with naked eye if you know right where to look.



Egress, 2:33 pm. Photo © by Jerry Oltion



Observing in September



September 8	September 15	September 22	September 29
Mercury lost in Sun	Mercury Set: 7:37 PM	Mercury Set: 7:32 PM	Mercury Set: 7:25 PM
Venus Rise: 2:58 AM	Venus Rise: 3:09 AM	Venus Rise: 3:21 AM	Venus Rise: 3:34 AM
Mars Set: 9:31 PM	Mars Set: 9:16 PM	Mars Set: 9:01 PM	Mars Set: 8:47 PM
Jupiter Rise: 11:19 PM	Jupiter Rise: 10:54 PM	Jupiter Rise: 10:27 PM	Jupiter Rise: 10:01 PM
Saturn Set: 9:13 PM	Saturn Set: 8:47 PM	Saturn Set: 8:21 PM	Saturn Set 7:55 PM
Uranus Rise: 8:14 PM	Uranus Rise: 7:46 PM	Uranus Rise: 7:18 PM	Uranus Set: 7:13 AM
Neptune Set: 5:32 AM	Neptune Set: 5:04 AM	Neptune Set: 4:36 AM	Neptune Set: 4:07 AM
Pluto Set: 1:14 AM	Pluto Set: 12:46 AM	Pluto Set: 12:18 AM	Pluto Set: 11:47 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.

Date	Moonrise	Moonset	Sunrise	Sunset	Twilight	
					Begin	End
9/1/2012	20:01	01:40	06:36	19:47	04:53	21:30
9/2/2012	20:27	02:25	06:37	19:45	04:55	21:28
9/3/2012	20:55	03:10	06:39	19:44	04:56	21:26
9/4/2012	21:26	03:55	06:40	19:42	04:58	21:23
9/5/2012	21:59	04:41	06:41	19:40	04:59	21:21
9/6/2012	22:37	05:27	06:42	19:38	05:01	21:19
9/7/2012	23:21	06:15	06:43	19:36	05:02	21:17
9/8/2012		07:03	06:44	19:35	05:03	21:15
9/9/2012	00:10	07:52	06:45	19:33	05:05	21:13
9/10/2012	01:04	08:41	06:47	19:31	05:06	21:11
9/11/2012	02:03	09:30	06:48	19:29	05:08	21:08
9/12/2012	03:06	10:19	06:49	19:27	05:09	21:06
9/13/2012	04:12	11:08	06:50	19:25	05:11	21:04
9/14/2012	05:21	11:57	06:51	19:24	05:12	21:02
9/15/2012	06:31	12:47	06:52	19:22	05:13	21:00
9/16/2012	07:43	13:38	06:53	19:20	05:15	20:58
9/17/2012	08:57	14:31	06:55	19:18	05:16	20:56
9/18/2012	10:12	15:26	06:56	19:16	05:18	20:54
9/19/2012	11:25	16:24	06:57	19:14	05:19	20:52
9/20/2012	12:35	17:23	06:58	19:12	05:20	20:50
9/21/2012	13:40	18:22	06:59	19:11	05:22	20:48
9/22/2012	14:36	19:20	07:00	19:09	05:23	20:46
9/23/2012	15:23	20:17	07:01	19:07	05:24	20:44
9/24/2012	16:04	21:10	07:03	19:05	05:26	20:42
9/25/2012	16:38	22:01	07:04	19:03	05:27	20:40
9/26/2012	17:09	22:49	07:05	19:01	05:28	20:38
9/27/2012	17:36	23:35	07:06	18:59	05:29	20:36
9/28/2012	18:03		07:07	18:58	05:31	20:34
9/29/2012	18:29	00:20	07:08	18:56	05:32	20:32
9/30/2012	18:57	01:05	07:10	18:54	05:33	20:30

Items of Interest This Month

9/5 Star party at Grove Camp, Dorena Lake

9/12 Moon passes 4° S. of Venus. Good chance to find Venus by day.

9/13 Io shadow transit 11:31 pm – 1:39 am

9/17 Ganymede shadow transit 11:43 pm – 1:38 am

9/19 Moon within 0.2° of Mars at sunset.

9/21 First Quarter Friday Star Party

9/22 Autumn begins 7:49 am Pacific time

9/22 International Observe the Moon Night

9/22 – 9/23 Uranus passes very close to 44 Piscium (1 arc-minute on night of 22nd)

9/22 (early morning on 23rd) Io shadow transit 12:06 am – 2:29 am

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.

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