

IO - August 2014

Issue 2014-08
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.

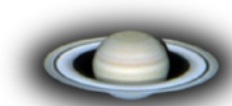
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EAS is a proud member of:

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

Next Meeting Thursday, August 21st Building an Observatory – Adventures in Central Oregon by Sam Pitts

For the past year, Sam Pitts has been building an observatory out in central Oregon. At our August 21st meeting he will explain and show all the thought process and actual planning that went into building an observatory at a remote location. From concept to construction there's a lot to consider and a lot of hard work involved. Come hear about Sam's experience and learn what it takes to build and operate an observatory at a dark-sky site halfway across the state.

At our meetings 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 Thursday, August 21st at the Science Factory planetarium. Come early to visit before the program starts.



Next First Quarter Friday: August 1st

Our July 4 First Quarter Friday was an oddity: The College Hill Reservoir was closed to prevent fireworks damage, so we had to set up on the grass next to the street. The sky was cloudy right up to showtime, too, so Jerry and Kathy were the only astronomers there (expecting to put up "Cancelled" signs). The sky cleared just after dark, though, so they stayed and showed people the view through their big red 2x-scale Astroscan, figuring its cherry-bomb shape would appeal to people there for fireworks. It seemed to have worked; probably fifty people stopped by for a look at Saturn, the Moon, Mars, and various bright clusters. For a cloud-threatened, fireworks-filled night with only one telescope, it turned into an okay star party.

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 2014. Note that we've scheduled some of the star parties a week earlier than the calendar would normally dictate in order to have less moon in the sky.

August 1 (32% lit)	August 29 (18% lit)*	September 26 (8% lit)*
October 31 (61% lit)	November 28 (46% lit)	December 26 (31% lit)

*These star parties are a week earlier than normal to provide less moon glare.

July Meeting Report: Solar Observing

At our July 17th meeting, Jerry Oltion talked about solar observing. Before the meeting started, Jerry and Ken Martin set up solar scopes outside so people could have a look at the Sun. Unfortunately there was only one tiny sunspot group visible in regular light, but Ken's hydrogen-alpha solar scope made up for the poor regular-light view. In Ken's scope we could see prominences stretching out from the solar limb, granulation on the surface, and magnetic filaments all around the sunspot group.

At 7:00 everyone moved inside and Jerry described the various ways, safe and unsafe, that people have devised to look at the Sun. He displayed an eyepiece filter (a no-no), a commercial glass full-aperture filter, and an inexpensive yet effective homemade filter made with solar safety film from the Baader planetarium. He showed how to project an image through binoculars and warned not to use a pair you care about, since the focused sunlight will melt the eyepiece field stops if your aim is a little off.

Eclipses provide a rare opportunity to look at the Sun and see something interesting without the aid of a telescope. A simple pair of solar shades (not regular sunglasses, but special eye shades designed for looking directly at the Sun) will suffice to watch the Moon slip across the face of the Sun. We get an opportunity to do just that on the afternoon of October 23 this year, when we get a partial eclipse from 1:40 to 4:45 p.m. Put it on your calendar!



Discounted Magazine Subscriptions

One of the benefits of EAS membership is a club discount on subscriptions to *Sky & Telescope* and *Astronomy* magazines. The clubmember rate for *Sky & Telescope* Magazine is \$32.95 for one year or \$65.90 for two years. The clubmember rate for *Astronomy* magazine is \$34 for one year or \$60 for two years. This is the rate for new subscriptions or renewals. New subscriptions have to go through the club secretary (Jerry Oltion) to qualify for the discounted rate, so contact Jerry if you want to start a new subscription. *Sky & Telescope* allows you to renew at the club rate on your own, but *Astronomy* requires renewals to go through the club secretary as well. For more information, contact Jerry at j.oltion at sff.net or 541-343-4758.



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 at comcast.net or by phone at 541-726-8147.

EAS At the County Fair

by Rick Kang

EAS had a successful display and public interface at the Lane County Fair, staffed by Richard Boyd, Steve Frankel, Bruce Hindrichs, Rick Kang, Jim Kiely, Jerry and Kathy Oltion, Shade Rose, and John Walley.

Steve, Jerry, and John supplied mirrors and demonstrated mirror grinding.



Jim Kiely and Bruce Hendrichs at the indoor exhibit space

Jerry supplied an 8-inch Dob for inspection and to view posters across the building. Bruce supplied sky posters, a great overview Powerpoint presentation, and a picture book. Rick brought a solar filtered telescope. Jim brought several table display items, and Shade did a great job remounting our Solar System lithographed posters. Richard, Steve, Rick, Jim, Jerry, and Kathy conducted solar viewing outside the Pavilion. Over the three days of the fair we had around 200 people safely view sunspots outside, and talked with about 100 people inside, including several budding young astronomers.

Thanks to everyone for helping out! Next stop, First Quarter Friday on August 1st, then Dorris Ranch on August 16th.



Rick Kang explains solar viewing



Jerry Oltion shows curious onlookers some sunspots

Thank You Castle Storage

For the last six 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.



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Dark-Sky Star Party Report

Our sixth annual Dark Sky Star Party on July 19th at Dexter State Park was a great success. Despite road construction on the last mile of Hwy 58 before the turnoff, we had a crowd of about 120 - 150 people and well over a dozen telescopes to show them the sky through. As with last year, Saturn was the first object visible, drawing appreciative gasps from people who eagerly lined up to look at it and came around again and again. As the sky darkened and we were able to show off more and more of what's up there, people grew even more appreciative. We kept it up from about 9:00 until well after midnight.

Rick Kang, Tim Lanz, Wes Reynolds, Tanja Petal and others helped staff the welcome table, explaining how star parties worked, handing out star maps, putting red filter material over flashlights, and handing out whole flashlights to those who needed them.



Tim Lanz and Rick Kang show John Elliott (who drove all the way from Wilsonville for the star party) which way is up.

Our telescope giveaway is definitely becoming a popular draw. Last year we had 26 kids in the drawing; this year we had 42. The 4.5" scope (a refurbished Orion removed from its shaky equatorial mount and put on a dob mount built by Jerry Oltion) went to Greyson Miyaguchi of Eugene, and the 8" scope (a brand new Orion SkyQuest XT8) went to Myles Wolfram, also of Eugene. Steve Frankel, Wes Reynolds, and Mike Curtin helped the happy



Greyson Miyaguchi with his new 4.5" Orion dob



Myles Wolfram with his new 8" Orion dob

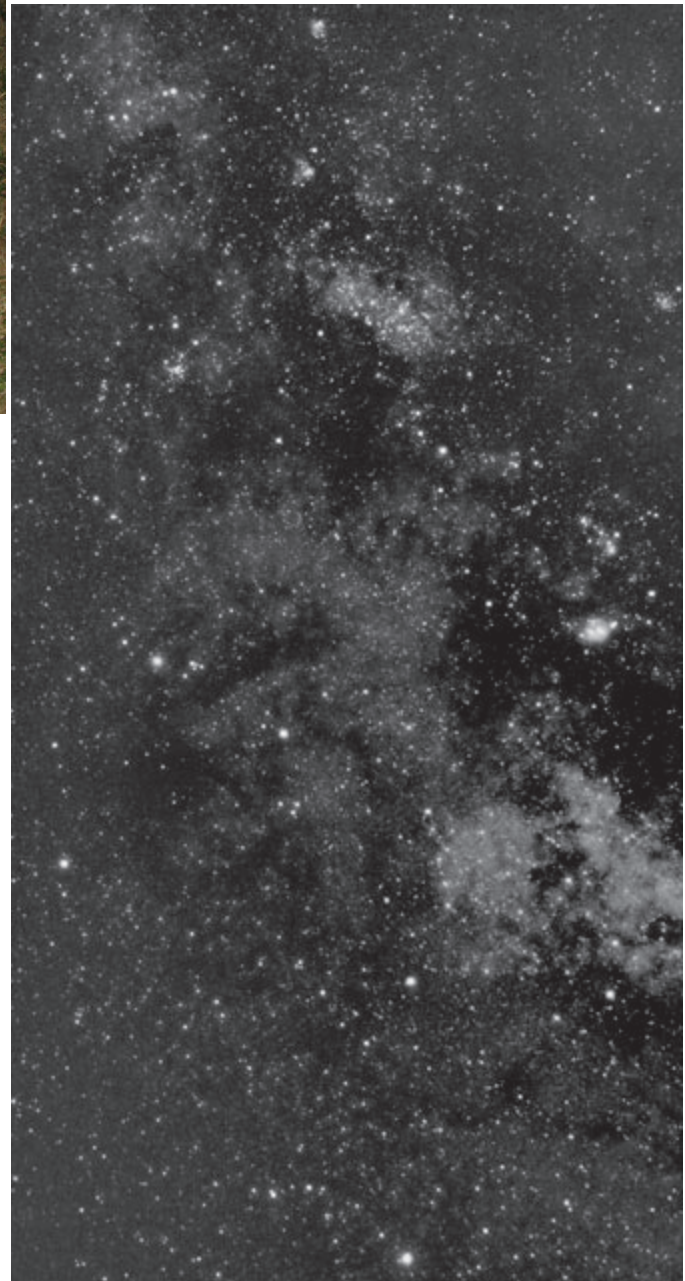
We had a little trouble with a yard light that we normally can talk the owners into turning off for the star party, but this year they forgot, despite a reminder call that afternoon. We didn't have their phone number with us and the star party was too busy to leave to go knock on their door, so we just endured the glare bomb. The next day Jerry secured permission to shield the light, but within an hour the owners called back and rescinded that permission. Nothing Jerry could say would get them to understand the situation; they were adamant that they needed the light "for protection" and they didn't want to change anything. They agreed to turn it off next year, but we should remember to take some poles and a big tarp in case they "forget" again.

Despite the light, we had a very successful star party. Many thanks to everyone who helped make this star party so much fun for everyone. We're six for six now, and already looking forward to next year's.



winners learn how to use their scopes. Here's hoping that these two kids will have a lifetime of enjoyment with amateur — and maybe even professional — astronomy.

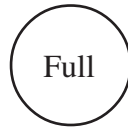
Alan Gillespie took a series of photos of the Milky Way during the star party, starting at 10:48 and going until his camera battery died at 12:42 a.m. He took 227 frames of 13 seconds each for a total exposure time of 45 minutes and 36 seconds at $f/3.2$, iso 1375. He stacked them the next day and got the photo below, an excellent illustration of why we hold this star party at Dexter State Park every summer.



The Milky Way in Sagittarius from Dexter State Park.
Copyright © 2014 by Alan Gillespie



Observing in August



August 3, 5:50 PM	August 10, 11:09 AM	August 17, 5:25 AM	August 25, 7:13 AM
Mercury lost in Sun	Mercury lost in Sun	Mercury Set: 8:42 PM	Mercury Set: 8:39 PM
Venus Rise: 4:12 AM	Venus Rise: 4:26 AM	Venus Rise: 4:42 AM	Venus Rise: 5:02 AM
Mars Set: 11:37 PM	Mars Set: 11:19 PM	Mars Set: 11:02 PM	Mars Set: 10:43 PM
Jupiter Rise: 5:26 AM	Jupiter Rise: 5:06 AM	Jupiter Rise: 4:47 AM	Jupiter Rise: 4:24 AM
Saturn Set: 12:30 AM	Saturn Set: 11:59 PM	Saturn Set: 11:32 PM	Saturn Set: 11:01 PM
Uranus Rise: 10:57 PM	Uranus Rise: 10:30 PM	Uranus Rise: 10:02 PM	Uranus Rise: 9:30 PM
Neptune Rise: 9:32 PM	Neptune Rise: 9:04 PM	Neptune Rise: 8:36 PM	Neptune Rise: 8:04 PM
Pluto Set: 3:53 AM	Pluto Set: 3:25 AM	Pluto Set: 2:57 AM	Pluto Set: 2:25 AM

All times Pacific Daylight Time (March 9 – November 1, 2014 = UT -7 hours) or Pacific Standard Time (November 2, 2014 – March 7, 2015 = UT -8 hours)

Date	Moonrise	Moonset	Sunrise	Sunset	Twilight Begin	Twilight End
8/1/2014	11:43	23:09	06:01	20:36	03:59	22:37
8/2/2014	12:44	23:40	06:02	20:35	04:01	22:35
8/3/2014	13:46		06:03	20:34	04:03	22:33
8/4/2014	14:49	00:16	06:04	20:32	04:04	22:31
8/5/2014	15:52	00:57	06:05	20:31	04:06	22:29
8/6/2014	16:54	01:45	06:06	20:30	04:08	22:27
8/7/2014	17:51	02:41	06:07	20:28	04:10	22:25
8/8/2014	18:44	03:46	06:08	20:27	04:12	22:23
8/9/2014	19:30	04:57	06:09	20:25	04:14	22:21
8/10/2014	20:12	06:12	06:11	20:24	04:15	22:19
8/11/2014	20:49	07:29	06:12	20:23	04:17	22:16
8/12/2014	21:24	08:45	06:13	20:21	04:19	22:14
8/13/2014	21:58	09:59	06:14	20:20	04:21	22:12
8/14/2014	22:33	11:11	06:15	20:18	04:22	22:10
8/15/2014	23:09	12:20	06:16	20:17	04:24	22:08
8/16/2014	23:47	13:25	06:17	20:15	04:26	22:06
8/17/2014		14:27	06:19	20:13	04:28	22:04
8/18/2014	00:29	15:24	06:20	20:12	04:29	22:01
8/19/2014	01:14	16:15	06:21	20:10	04:31	21:59
8/20/2014	02:03	17:02	06:22	20:09	04:33	21:57
8/21/2014	02:55	17:43	06:23	20:07	04:35	21:55
8/22/2014	03:50	18:19	06:24	20:05	04:36	21:53
8/23/2014	04:46	18:52	06:25	20:04	04:38	21:51
8/24/2014	05:43	19:22	06:27	20:02	04:40	21:48
8/25/2014	06:41	19:51	06:28	20:00	04:41	21:46
8/26/2014	07:39	20:18	06:29	19:59	04:43	21:44
8/27/2014	08:37	20:45	06:30	19:57	04:45	21:42
8/28/2014	09:37	21:13	06:31	19:55	04:46	21:40
8/29/2014	10:37	21:44	06:32	19:53	04:48	21:38
8/30/2014	11:38	22:17	06:33	19:52	04:49	21:35
8/31/2014	12:39	22:55	06:35	19:50	04:51	21:33

Items of Interest This Month

- Last good month for Saturn this year.
- 8/1 First Quarter Friday Star Party.**
- 8/3 Moon approaching Saturn at Sunset.
- 8/11 Perseid meteor shower peaks late tonight, early morning on the 12th. Alas, nearly full Moon.
- 8/18 Venus and Jupiter close before dawn, within 1° of Beehive Cluster.
- 8/20 – 29 Mars and Saturn within 4°
- 8/29 Neptune at opposition
- 8/31 afternoon: Moon very near Saturn and Mars; may be good chance to see both planets in daylight.
- 8/31 Moon still close to Saturn and Mars after sunset.



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

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