

Eugene Astronomical Society



www.eugeneastro.org

IO - September 2019

Eugene Astronomical Society
 Annual Club Dues \$25
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 Oggie Golub, Jim Murray, Ken Martin.

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EAS is a proud member of
 The Astronomical League



Next Meeting Thursday, September 19th, 7:00 p.m.

How to Use a Star Chart by Jerry Olton and Andy Edelen

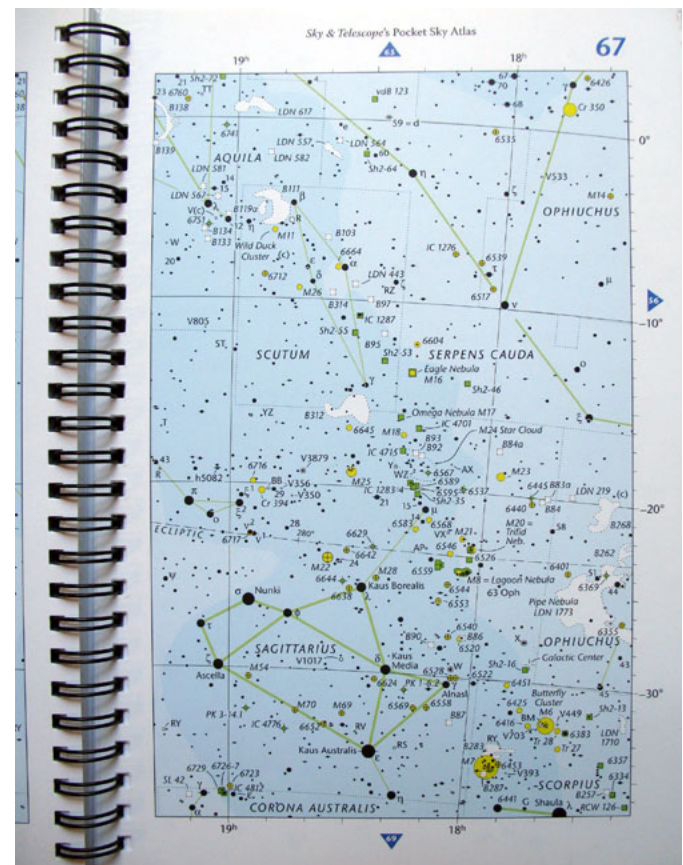
Star charts can be bewildering to both beginning and experienced astronomers alike. Often they're just pages of varying size dots, squiggles, numbers, and grid lines, with no indication of which objects might be good to look at and which are visible only with averted vision in large-aperture optics. The view seldom matches what you see in a telescope unless you turn it (the chart, not the telescope!) upside-down, and even that doesn't work if you're using a refractor or a Schmidt-Cassegrain.

So how do we use these arcane sky maps to guide us through a night of observing? How do we star-hop from a known location to a new object we've never seen before? How can we tell if that object is a galaxy, a nebula, or a star cluster? Jerry Olton and Andy Edelen will offer suggestions born of experience and will answer questions from the audience as they take us on a tour of star charts from the simplest to the most exotic.

We encourage audience participation during all our meetings, but especially this one. Bring your questions, your tips, your tricks, and yes, your charts on September 19th and let Jerry, Andy, and the rest of the club help you figure out how to navigate the night sky.

EAS meetings are traditionally times when we learn about astronomy and share our experiences and knowledge of astronomy and the night sky. If you have something of astronomical interest to share with the group, please do so.

Club meetings are held at the Eugene Science Center planetarium, 2300 Leo Harris Parkway in Eugene (behind Autzen Stadium). Meetings start at 7:00 sharp. Come early to visit and get a seat. (Speaking of seats, the new ones are supposed to be installed in time for this month's meeting!)



August 15th Meeting Report

An Exploration Through the Solar System

by TJ Jensen

At our August 15th meeting, TJ Jensen, who volunteers at the planetarium, used the new projector to give us an overview of what the planetarium is now capable of. He showed us how it can produce a very realistic view of the night sky, complete with Milky Way sweeping through, and he showed us how it can draw constellation lines and constellation figures, both traditional and modern. The new software has constellations from other cultures as well.

After the initial tour, TJ ran a video to show the projector's capability with movies. On the big dome, it was fabulous! Then after the movie, TJ took us on a tour of the solar system, zooming in on each of the planets in turn and discussing the possibility of life on each one.

It was a great program, and a great demonstration of what the new planetarium is capable of. Thanks, TJ!

Next First Quarter Friday: September 6th

Our August 9th star party was cancelled due to clouds and an iffy forecast...so of course the sky cleared up just at dusk. It was too late to un-cancel, so we went to our fallback Saturday makeup party instead. That was fairly iffy, too, but a few club members with scopes showed up and a few visitors also came to have a look.

Our next star party will be September 6th. 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 the year. Star parties start at dusk or 6:00, whichever is later. (7:45 in September.)

September 6 (61% lit)
December 6 (76% lit)

October 4 (44% lit)

November 1 (28% lit)

Fire at Eureka Ridge!

by Jerry Oltion

We had some excitement on the night of August 23rd at Eureka Ridge. Some rocket scientists were shooting guns down on the knob below our observing site when Loren Riemers, Andy Edelen, Amy Baker, and I got there, which has happened before so we didn't think much of it until we noticed they had a fire going. They seemed to be shooting into the fire, and every now and then there would be a big flare of flame, as if they were shooting explosive rounds.

Then we saw one particularly big gout of flame



The fire was 15-20 feet wide by the time we started fighting it. Those logs you see are a foot across.

roar backward about ten feet and start another fire. We saw three people milling around and the second fire died down a bit, so we figured they were putting it out. The first one never quite went all the way out, though. The sky got darker, and we figured these fine specimens of human intelligence were camping out...until we watched their car leave. With the fire still burning.

We were so incredulous that we thought they must have left somebody there, and maybe one of them had driven off to get more beer or something, but the fire began to grow and eventually we saw a small tree catch fire and whoosh into flame like a torch.

That's when Loren and I decided to go see what was going on down there. We piled in his pickup and drove down to the knob, where we found a fire merrily burning in a pile of logs about fifteen to twenty feet across. The logs were up to a foot and a half in diameter and were, as they say in fire parlance, fully engaged. And of course nobody was around.

Loren quickly kicked the advancing edges into the pile and created a break between the active fire and the grass and weeds and small trees around it, while I got a GPS reading and called 911. The dispatcher promised to send a fire crew soon.

Loren discovered what the genius marksmen had been doing: shooting propane canisters. We found a number of them, each with a bullet hole all the way through. These fine proponents of the second amendment had started a fire and set up propane tanks in front of it and when they burst a propane tank they would get a huge fireball. Spectacular, I must admit. And what could possibly go wrong?

Loren drove out to the road junction to meet the fire trucks while I stayed at the fire and kept it from spreading. Andy and Amy offered to help (we were in cell phone contact all night, which was kind of surreal), but there was really not much to do but wait.

And wait. And wait some more. Occasionally I would get a phone call from the forest service crew. "We're heading for the office." "I'm in the office but the rest of the crew is still in transit." "We're about ready to start out." Finally, well over two hours after my initial 911 call, they did in fact arrive, and they put out the fire in short order. They sprayed down the flames with water, then ripped apart the log pile with axes and Pulaskis (probably the single most effective firefighting tool made) and sprayed water on the smoking remains until they had a mud pit.

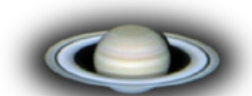
At that point we left them to it, packed up our gear, and went home. Loren and I smelled like scouts at the end of a seven-day campout, minus the marshmallows. I don't know about Loren, but I spent about twenty minutes in the shower when I got home.

And I spent the rest of the night thinking about the absolute geniuses who were shooting at propane tanks in a log pile in a remote forest in August. If you happen to know these fine specimens of humanity, grab them by the hair and give them a good strong noogie, then drag them down to the police station to be arrested, tried, and fined for general stupidity as well as the expense of fighting the fire.

And remember to bring five gallons of water, a shovel, and an axe (or Pulaski if you have one) next time you go out observing. Neither Loren nor I had enough fire retardant in our bladders to affect the fire much at all.



The firefighters made quick work of it once they arrived.



Gallery

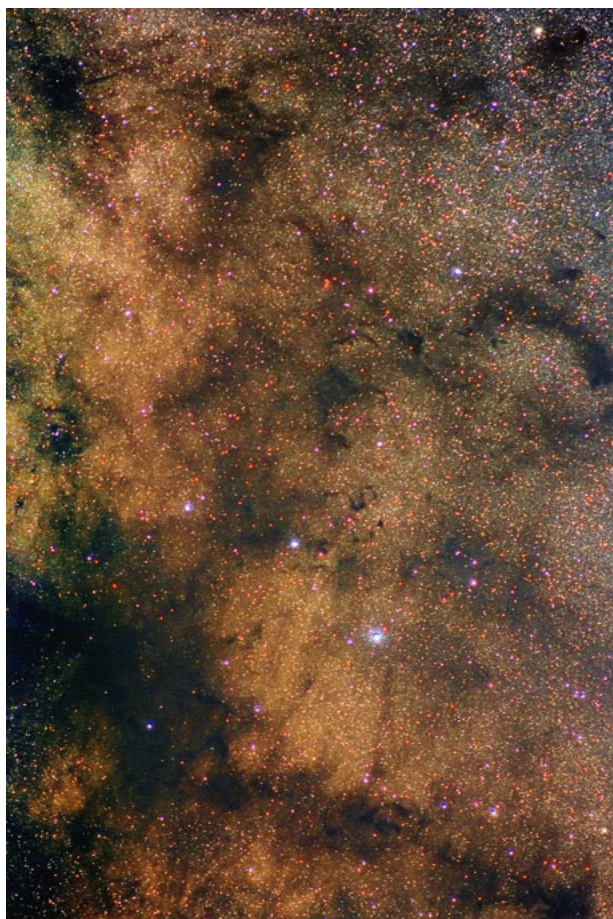
August was a great month for astrophotography. Alan Gillespie, Karmin Peterson, Jim Pelley, and Mark Wetzel all got some nice images. Zoom in a bit and enjoy!



M8, the Lagoon Nebula. Photo © by Karmin Peterson



M31, the Andromeda Galaxy, with M33 and M110. Photo © by James Pelley



The Dark Horse in Sagittarius. Photo © by Alan Gillespie.



Moonset over Fern Ridge Reservoir. Photo © by Alan Gillespie.



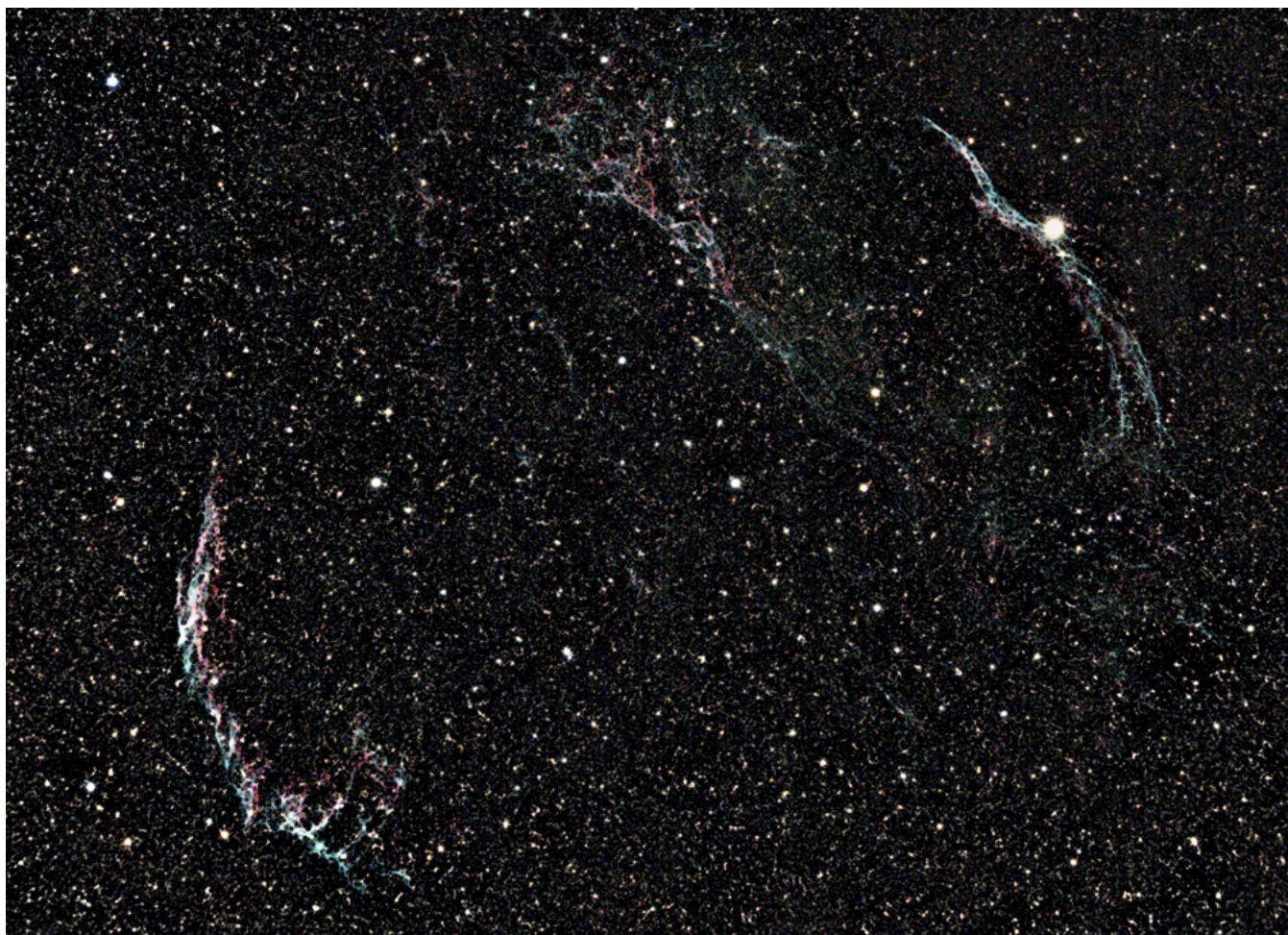
M27, the Dumbbell Nebula. Photo © by Mark Wetzel.



The North America Nebula. Photo © by Karmin Peterson



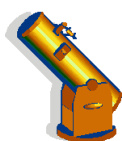
M20, the Trifid Nebula. Photo © by Mark Wetzel.



The Veil Nebula in Cygnus. This is a difficult shot to get, since the Veil covers almost 3° of sky and you need even more field of view to provide some context. Karmin Peterson managed it with a 71mm f/5.9 refractor with a focal reducer.
Photo © by Karmin Peterson



Moon and sunset over Linslaw Point, our new observing site in the Coast Range. Photo © by Alan Gillespie.



Observing in September



Sept 5, 8:10 PM	Sept 13, 9:33 PM	Sept 21, 7:41 PM	Sept 28, 11:26 AM
Mercury lost in Sun	Mercury Set: 7:49 PM	Mercury Set: 7:41 PM	Mercury Set: 7:33 PM
Venus Set: 8:01 PM	Venus Set: 7:50 PM	Venus Set: 7:39 PM	Venus Set: 7:29 PM
Mars lost in Sun	Mars lost in Sun	Mars Rise: 6:24 AM	Mars Rise: 6:20 AM
Jupiter Set: 11:39 PM	Jupiter Set: 11:10 PM	Jupiter Set: 10:42 PM	Jupiter Set: 10:18 PM
Saturn Set: 1:46 AM	Saturn Set: 1:14 AM	Saturn Set: 00:42 AM	Saturn Set: 00:15 AM
Uranus Rise: 9:34 PM	Uranus Rise: 9:02 PM	Uranus Rise: 8:30 PM	Uranus Rise: 8:02 PM
Neptune Rise: 7:48 PM	Neptune Set: 6:38 AM	Neptune Set: 6:05 AM	Neptune Set: 5:37 AM
Pluto Set: 2:16 AM	Pluto Set: 1:44 AM	Pluto Set: 1:12 AM	Pluto Set: 00:45 AM

All times Pacific Daylight Time (March 10 - Nov. 2, 2019 = UT -7 hours) or Pacific Standard Time (November 3, 2019 - March 8, 2020 = UT -8 hours)

Date	Moon Rise	Moon Set	Twilight Begin	Sun Rise	Sun Set	Twilight End
9/1/2019	09:17	21:33	04:52	06:35	19:49	21:31
9/2/2019	10:33	22:03	04:54	06:37	19:47	21:29
9/3/2019	11:47	22:34	04:55	06:38	19:45	21:27
9/4/2019	12:59	23:08	04:57	06:39	19:43	21:25
9/5/2019	14:07	23:46	04:58	06:40	19:41	21:23
9/6/2019	15:11		05:00	06:41	19:40	21:21
9/7/2019	16:09	00:29	05:01	06:42	19:38	21:18
9/8/2019	16:59	01:17	05:03	06:43	19:36	21:16
9/9/2019	17:43	02:11	05:04	06:45	19:34	21:14
9/10/2019	18:20	03:08	05:05	06:46	19:32	21:12
9/11/2019	18:52	04:07	05:07	06:47	19:30	21:10
9/12/2019	19:19	05:07	05:08	06:48	19:29	21:08
9/13/2019	19:44	06:08	05:10	06:49	19:27	21:06
9/14/2019	20:08	07:08	05:11	06:50	19:25	21:04
9/15/2019	20:31	08:08	05:12	06:51	19:23	21:01
9/16/2019	20:54	09:08	05:14	06:53	19:21	20:59
9/17/2019	21:18	10:09	05:15	06:54	19:19	20:57
9/18/2019	21:46	11:12	05:17	06:55	19:17	20:55
9/19/2019	22:17	12:15	05:18	06:56	19:16	20:53
9/20/2019	22:55	13:20	05:19	06:57	19:14	20:51
9/21/2019	23:41	14:23	05:21	06:58	19:12	20:49
9/22/2019		15:23	05:22	06:59	19:10	20:47
9/23/2019	00:36	16:19	05:23	07:01	19:08	20:45
9/24/2019	01:40	17:07	05:25	07:02	19:06	20:43
9/25/2019	02:53	17:50	05:26	07:03	19:04	20:41
9/26/2019	04:09	18:26	05:27	07:04	19:03	20:39
9/27/2019	05:29	18:59	05:29	07:05	19:01	20:37
9/28/2019	06:48	19:29	05:30	07:06	18:59	20:35
9/29/2019	08:07	19:59	05:31	07:08	18:57	20:33
9/30/2019	09:24	20:30	05:32	07:09	18:55	20:31

Items of Interest This Month

- 9/2 Mars in conjunction with Sun.
- 9/2 Io shadow transit 11:53 PM – 2:05 AM.
- 9/3 Mercury in conjunction with Sun. Red Spot transits 11:51 PM.
- 9/5 Ganymede shadow transit 8:22 – 10:56 PM.
- 9/6 First Quarter Friday star party.** Red Spot transits 9:22 PM.
- 9/8 Moon very close to Saturn at sunrise. Io and Ganymede above/below one another all night. Red Spot transits 11:01 PM.
- 9/10 Neptune at opposition.
- 9/11 Io shadow transit 8:16 – 10:29 PM.
- 9/13 Red Spot transits 10:10 PM.
- 9/15 Red Spot transits 11:49 PM.
- 9/16 Europa exits occultation 11:19 PM, then enters eclipse 11:22 PM (3 minutes later).
- 9/18 Io shadow transit 10:11 PM – 00:24 AM.
- 9/20 Red Spot transits 10:59 PM.
- 9/23 Autumn equinox 00:50 AM.
- 9/25 Europa shadow transit 8:18 – 10:53 PM.
- 9/27 Io shadow transit sunset – 8:48 PM. Red Spot transits 11:48 PM.
- 9/30 Red Spot transits 9:18 PM.
- 10/2 Europa shadow transit 10:56 PM – 1:31 AM.

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