

Eugene Astronomical Society



IO - August 2020

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, August 20th, 7:00 p.m. (via Zoom) Unusual Telescope Designs by Jerry Olton

This presentation was originally scheduled for March, but a viral epidemic intervened. We're bringing it to you now via Zoom, the video meeting app that has replaced live meetings for the time being.

Ever since Hans Lippershey held up two lenses and looked through them, people have been trying to improve the design of telescopes. We experiment with new theories, optimize the optics for various uses, and push the boundaries of what's possible. Not all of those innovations have been successful, but there have been some interesting developments on the path to the Hubble Space Telescope and beyond.

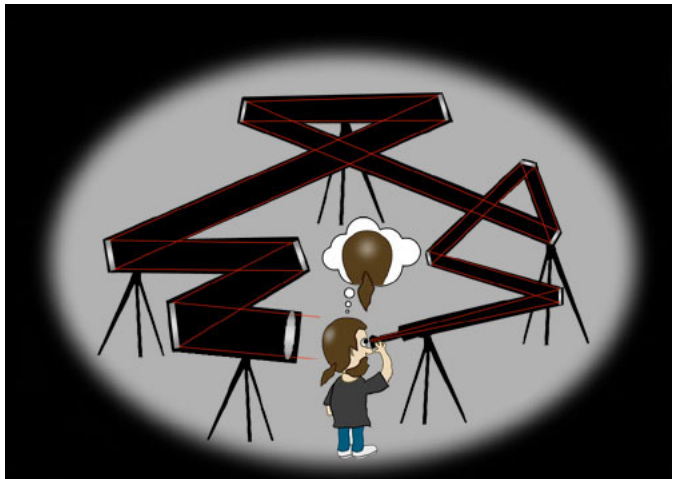
As the amateur telescope making editor for *Sky & Telescope* magazine, Jerry Olton has seen some strange ones. He has also done some digging into the past to see what has come before. At our August meeting he will take us on a tour of telescope design, starting at the beginning and working forward to what we consider the cutting edge and what the future might bring.

The meeting is at 7:00 on Thursday, August 20th and in keeping with Oregon's Covid virus restrictions it will be held virtually on the Zoom platform. A few days before the meeting you will receive a Zoom invitation via our club email list, so if you want to attend the meeting but haven't joined the mailing list, do so now. Go to our website at www.eugeneastro.org and click on the "Mailing List" link at the top of the page.

Zoom is easy to use with either its dedicated (free) app or your browser. See you there!

Star Parties Cancelled Until Further Notice

We had hoped to be able to put on a star party with cameras in place of eyepieces and projecting images onto screens, but the logistics of that proved too difficult to comply with current Covid-19 social distancing requirements. We discussed doing virtual star parties over Zoom, but the long wait for images to build up robs the immediacy from the event. Our annual Dark Sky Star Party in Dexter Satee Park was also



impossible to put on safely, and the same goes for our Solar Sundays. So the board of directors has decided that the best course of action is simply to cancel all star parties until further notice. Once we've gotten through this virus quarantine, we can start up again. Hopefully that will happen by spring. Stay tuned.

June Meeting Report

Forgotten Gems of Summer

by Andy Edelen

On July 16th, Andy Edelen gave an excellent Zoom presentation on some of the lesser-known objects in the summer sky. It was a fascinating talk that presented seventeen objects including double stars, planetary nebulae, dark nebulae, open clusters, and globular clusters. Andy showed us what they looked like, where to find them, and why they were interesting.

Andy provided the objects as a SkySafari observing list, so many of us went out on subsequent nights and sought them out. It made for an excellent night's tour of some of the lesser-known but still quite interesting summer objects. If you haven't looked at these objects yet, you should definitely do so! Thanks, Andy, for a great program and a great observing list.

New Telescope Lending Coordinator

Dan Beacham has volunteered to take on the position of telescope lending coordinator for the club. We have over two dozen telescopes in our lending library, plus astro cameras, filters, a sky quality meter, and various other accessories. Check with Dan if you want to borrow any equipment. He can be reached at: beachamd@yahoo.com.

Persons who wish to borrow a telescope must be members in good standing (dues paid up). Loans are for three months, renewable at the lending coordinator's discretion. Thanks, Dan, for taking on this important job.

Gallery

July was the month of the Great Comet C/2020 F3 NEOWISE. Discovered on March 27th, Neowise took us all by surprise, making a dive to within 0.3 AU of the Sun and then sweeping past within 0.36 AU (33 million miles) of the Earth on its way back out. Best of all, its orbit took it through the northern hemisphere, giving us a great view of it as it zipped past.

EAS astrophotographers came through with a flurry of photographs, often from multiple sources each night. Here are just a few showing the comet's progression as it grew and faded.

July was also a great month for astrophotography in general, and we have several good non-comet images to show for that, too. Zoom in and enjoy!



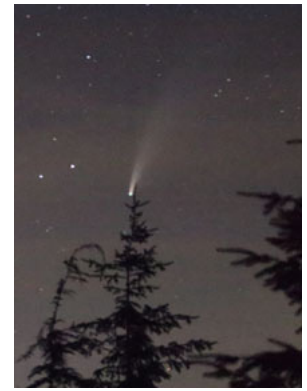
Comet Neowise on the morning of 7/9/20. Photo © by Alan Gillespie



7/11/20. Photo © by Alan Gillespie.



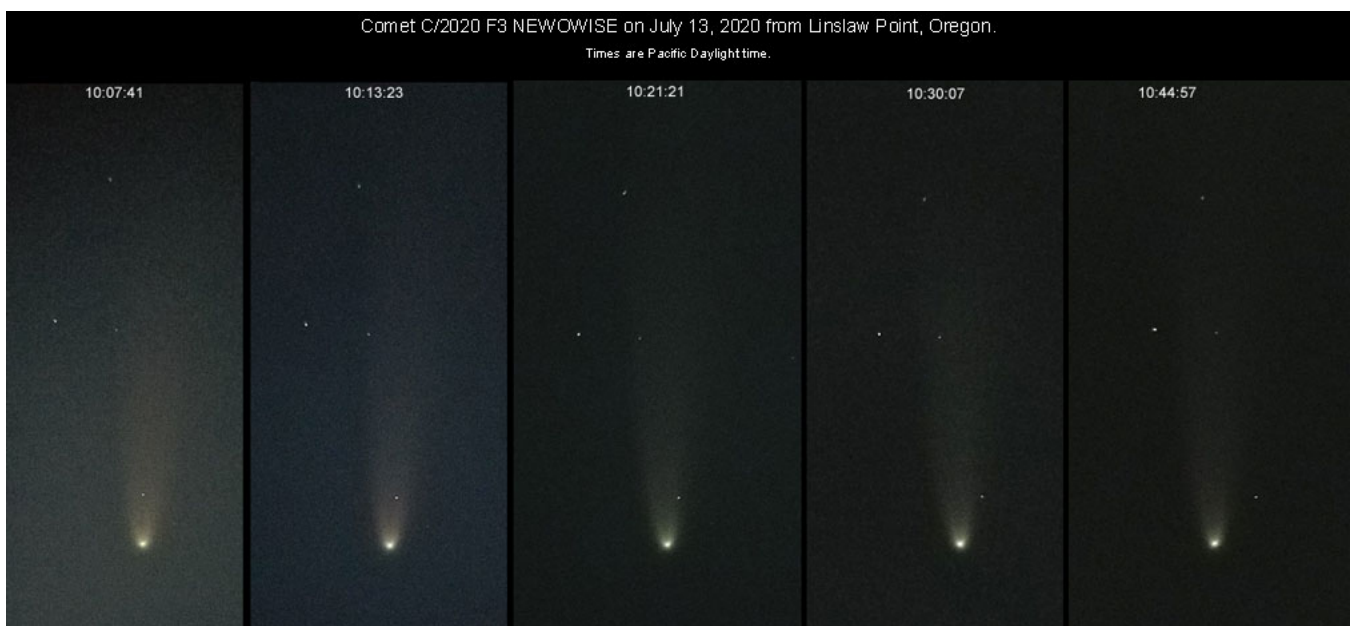
7/14/20. Photo © by Dave Horton



7/17/20. Photo © by Bill Murray



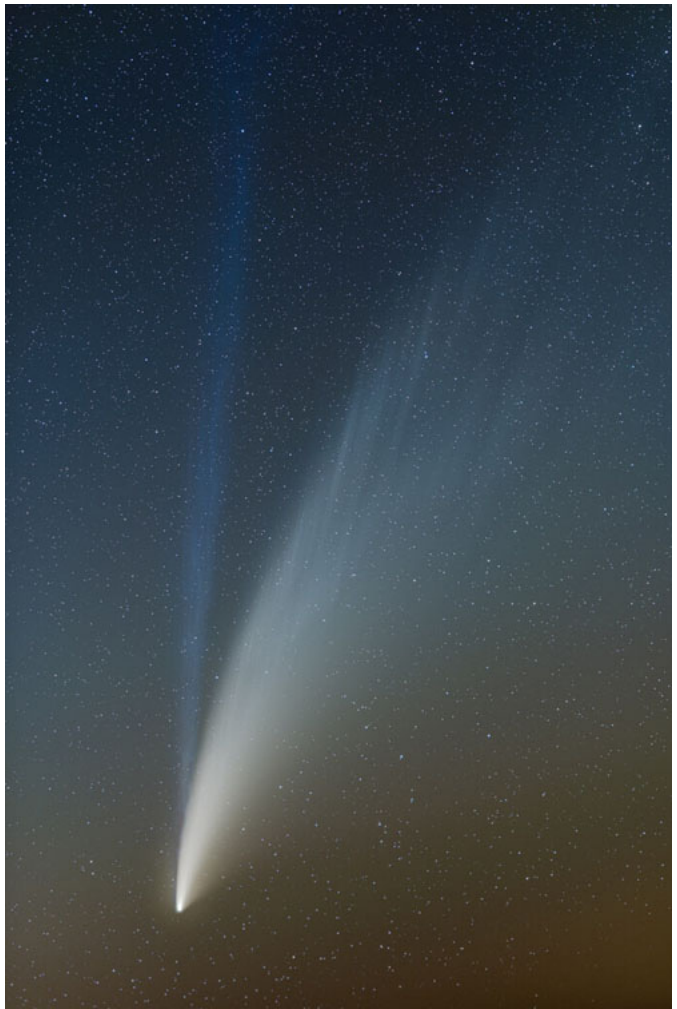
Comet Neowise over Waldo Lake and the Sisters on the morning of 7/12/20. Photo © by Nathan Campbell



A 37-minute sequence showing the comet's motion against the background stars on 7/13/20. Photos © by Jerry Olton



Neowise reflected in the water early 7/14/20.
Photo © by Alan Gillespie.



Neowise's ion tail (left) and dust tail (right) on 7/14/20.
Photo © by Nathan Campbell.



Neowise & telescope at Dee Wright Observatory.
Photo © by Ronald Perez.



Neowise's ion and dust tails on 7/14/20.
Photo © by Mark Wetzel.



Neowise above the Amphitheater site on the evening of 7/15/20. Photo © by Bill Murray.



The ISS photobombs Comet Neowise.
Photo © by Nathan Campbell.



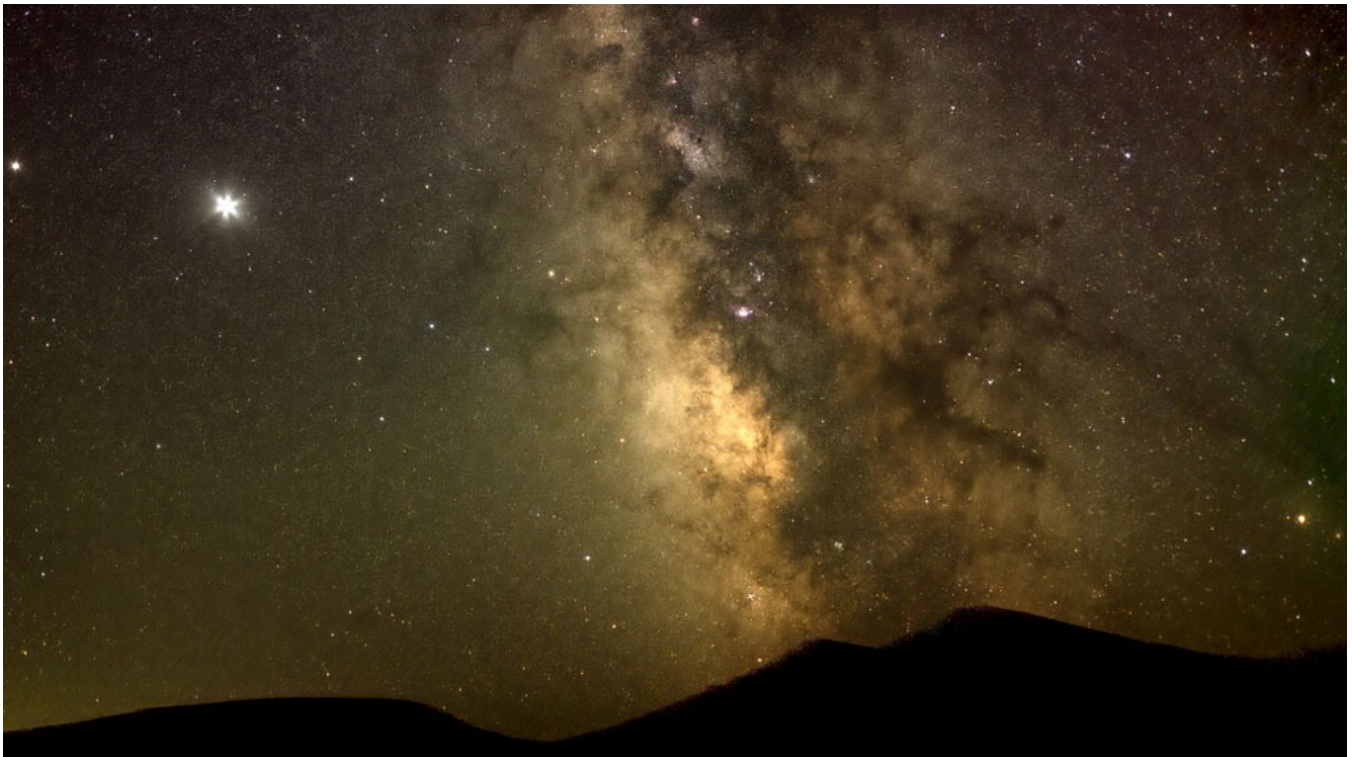
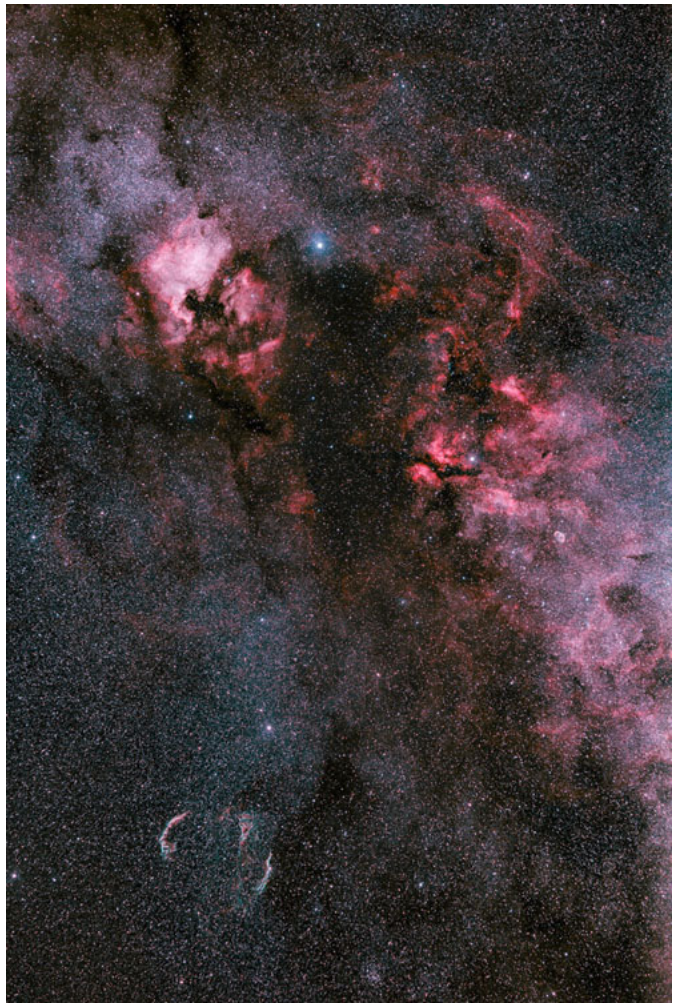
Neowise above the trees on 7/25/20. Note how the dust tail
has widened over time. Photo © by Alan Gillespie.





Above: The Moon on 7/11/20 in H-alpha light. Photo © by Mark Wetzel.

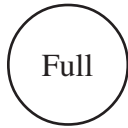
Right: Cygnus wide-field with the North America, Pelican, and Veil Nebulae prominent. Photo © by Nathan Campbell.



The Milky Way on 7/26/20 makes an interesting volcano from our Oxbow site, with Jupiter and Saturn to the upper left. Photo © by Alan Gillespie.



Observing in August



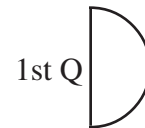
Full



Last Q



New



1st Q

Aug 3, 8:59 AM	Aug 11, 9:45 AM	Aug 18, 7:42 PM	Aug 25, 10:58 AM
Mercury Rise: 4:47 AM	Mercury Rise: 5:34 AM	Mercury lost in Sun	Mercury lost in Sun
Venus Rise: 2:43 AM	Venus Rise: 2:40 AM	Venus Rise: 2:41 AM	Venus Rise: 2:44 AM
Mars Rise: 11:19 PM	Mars Rise: 10:55 PM	Mars Rise: 10:33 PM	Mars Rise: 10:10 PM
Jupiter Set: 4:19 AM	Jupiter Set: 3:43 AM	Jupiter Set: 3:13 AM	Jupiter Set: 2:43 AM
Saturn Set: 4:58 AM	Saturn Set: 4:24 AM	Saturn Set: 3:54 AM	Saturn Set: 3:23 AM
Uranus Rise: 11:51 PM	Uranus Rise: 11:20 PM	Uranus Rise: 10:52 PM	Uranus Rise: 10:25 PM
Neptune Rise: 10:02 PM	Neptune Rise: 9:30 PM	Neptune Rise: 9:02 PM	Neptune Rise: 8:34 PM
Pluto Set: 4:33 AM	Pluto Set: 4:01 AM	Pluto Set: 3:33 AM	Pluto Set: 3:04 AM

All times Pacific Standard Time (November 1, 2020 - March 14, 2021 = UT -8 hours) or Pacific Daylight Time (March 8 - Oct 31, 2020 = UT -7 hours)

Date	Moon Rise	Moon Set	Twilight Begin	Sun Rise	Sun Set	Twilight End
8/1/2020	19:44	03:43	04:00	06:01	20:36	22:36
8/2/2018	20:29	04:43	04:02	06:02	20:34	22:34
8/3/2020	21:06	05:48	04:04	06:03	20:33	22:32
8/4/2020	21:37	06:54	04:05	06:04	20:32	22:30
8/5/2020	22:03	08:00	04:07	06:06	20:30	22:28
8/6/2020	22:26	09:04	04:09	06:07	20:29	22:26
8/7/2020	22:48	10:06	04:11	06:08	20:28	22:24
8/8/2020	23:09	11:07	04:13	06:09	20:26	22:22
8/9/2020	23:30	12:07	04:14	06:10	20:25	22:20
8/10/2020	23:54	13:08	04:16	06:11	20:23	22:17
8/11/2020		14:10	04:18	06:12	20:22	22:15
8/12/2020	00:20	15:13	04:20	06:13	20:20	22:13
8/13/2020	00:52	16:16	04:22	06:15	20:19	22:11
8/14/2020	01:30	17:18	04:23	06:16	20:17	22:09
8/15/2020	02:17	18:16	04:25	06:17	20:16	22:07
8/16/2020	03:14	19:08	04:27	06:18	20:14	22:05
8/17/2020	04:20	19:52	04:29	06:19	20:13	22:02
8/18/2020	05:33	20:30	04:30	06:20	20:11	22:00
8/19/2020	06:49	21:03	04:32	06:21	20:09	21:58
8/20/2020	08:07	21:32	04:34	06:23	20:08	21:56
8/21/2020	09:25	21:59	04:36	06:24	20:06	21:54
8/22/2020	10:41	22:26	04:37	06:25	20:04	21:52
8/23/2020	11:58	22:54	04:39	06:26	20:03	21:49
8/24/2020	13:13	23:26	04:41	06:27	20:01	21:47
8/25/2020	14:28		04:42	06:28	19:59	21:45
8/26/2020	15:39	00:03	04:44	06:30	19:58	21:43
8/27/2020	16:43	00:46	04:45	06:31	19:56	21:41
8/28/2020	17:40	01:37	04:47	06:32	19:54	21:39
8/29/2020	18:27	02:35	04:49	06:33	19:52	21:36
8/30/2020	19:07	03:38	04:50	06:34	19:51	21:34
8/31/2020	19:39	04:43	04:52	06:35	19:49	21:32

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

Items of Interest This Month

- Ceres in Aquarius, easy to spot this month.
- 8/9 Moon 1.5° below Mars in early AM.
- 8/10-12 Perseid meteor shower peaks.
- 8/10 Ganymede and Europa pass one another at 10:00 PM.
- 8/12 Venus at greatest eastern elongation (46°)
- 8/14 Multiple shadow transit (Ganymede and Io) from dusk to 10:54 PM. Io shadow transit continues until 11:23 PM.
- 8/17 Europa shadow transit dusk to 10:10 PM.
- 8/19 Europa and Io pass one another (very close pass) 9:53 PM. Callisto eclipse 10:31 PM to 2:47 AM.
- 8/21 Multiple shadow transit (Ganymede and Io). Io shadow transit 11:04 PM – 1:21 AM. Ganymede shadow transit 11:31 PM – 2:56 AM.
- 8/24 Europa shadow transit 9:56 PM – 12:46 AM.
- 8/28 Moon near Jupiter.
- 8/29 (night of 28th) Io shadow transit 12:59 AM – 3:16 AM
- 9/1 (night of 8/31) Europa shadow transit 12:32 AM – 3:22 AM.

