Issue 2020-01

IO - January 2020

Eugene Astronomical Society
Annual Club Dues $25
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EAS is a proud member of
The Astronomical League

Next Meeting Thursday, January 16th, 7:00 p.m.

Annual Telescope Workshop

Our January 16th meeting will be our annual telescope workshop, where we invite anyone with a telescope they'd like to tune up or just learn how to use to bring it to us for assistance. This invitation is open to club members as well as the general public, so if you've got a scope that needs help or you need help learning your scope, bring it to the meeting! And if you don't need help on a scope, bring your expertise. You might be able to help someone else.

This is a great opportunity to spread the word about our club and what we do. Tell anyone you know who might be interested in astronomy that this is the meeting to come to if they have questions about gear or about astronomy in general. The structure of this meeting will be very informal, with lots of opportunity to visit with one another and share our various areas of expertise. This is also a good opportunity to just hang out and visit with fellow club members in a warm and comfortable environment. Come join the fun!

The meeting is at 7:00 on Thursday, January 16th at the Science Center planetarium. 2300 Leo Harris Parkway in Eugene (behind Autzen Stadium). People with scopes are encouraged to bring them a little early. We'll be happy to help carry them in from the parking lot.

Next First Quarter Fridays: January 3rd & 31st

Our December 6th star party was rained out, as was our Saturday backup. Hopefully we'll have better luck in January.

Our next star party will be January 3rd. Note that we also have another one on January 31st. That gives us twice the chance for a clear night. Given our luck at winter star parties, we'll probably need it.

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 through 2020. Star parties start at dusk or 6:00, whichever is later. (6:00 in January.)

January 3 (59% lit)
March (none)
May 29 (50% lit)
August 28 (84% lit)
November 20 (39% lit)

January 31 (41% lit)
April 3 (79% lit)
June 26 (37% lit)
September 25 (71% lit)
December 18 (23% lit)

February 28 (25% lit)
May 1 (65% lit)
July 24 (24% lit)
October 23 (56% lit)

December Meeting Report

Annual Swap Meet

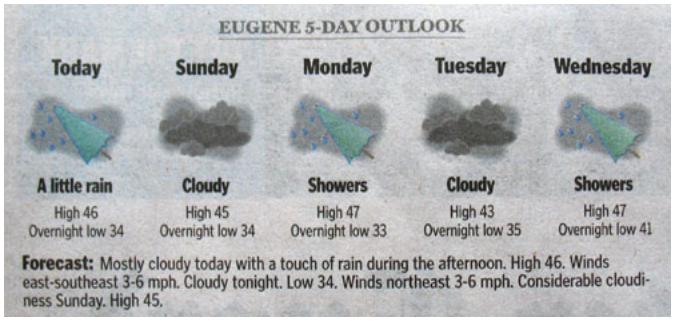
We had a ton of stuff to pore over at our annual swap meet this year. Several donations this summer plus the loss of our storage unit combined to put a lot of random equipment on half a dozen tables. There was a lot of junk, but there were a few great finds for people who were looking for just that right finder, focuser, or even whole telescope.

In the whole telescope department, Del Smith took home a nearly complete 10" Dobsonian that was build in one of John Dobson's classes taught here in Eugene in the 1990s or 2000s. And Andy Edelen took home a 4" Unitron refractor, complete with wooden case and tripod (also in a wooden case) that the Science Center put up for sale. The Science Center also put out a 90mm Questar field model scope, but none of us could afford a fair price for it. (Questars are highly collectable!)

Jerry boxed up everything that was left (except the Questar!) and drove it down to Roseburg to meet a guy from Medford who had advertised on Cloudy Nights that he wanted old telescope "junk" to rebuild into useful telescopes. He was happy to take all of our surplus gear off our hands, so that's all history now and hopefully a few decent telescopes will arise from the pile and see light again.

December Observing Report

The forecast at the right says pretty much everything. We had a rainy, cloudy month. Most of us didn't get out with a telescope at all this month. Here's hoping for better luck in January!



EUGENE 5-DAY OUTLOOK

Today	Sunday	Monday	Tuesday	Wednesday
A little rain	Cloudy	Showers	Cloudy	Showers
High 46 Overnight low 34	High 45 Overnight low 34	High 47 Overnight low 33	High 43 Overnight low 35	High 47 Overnight low 41

Forecast: Mostly cloudy today with a touch of rain during the afternoon. High 46. Winds east-southeast 3-6 mph. Cloudy tonight. Low 34. Winds northeast 3-6 mph. Considerable cloudiness Sunday. High 45.

Telescope Lending Library

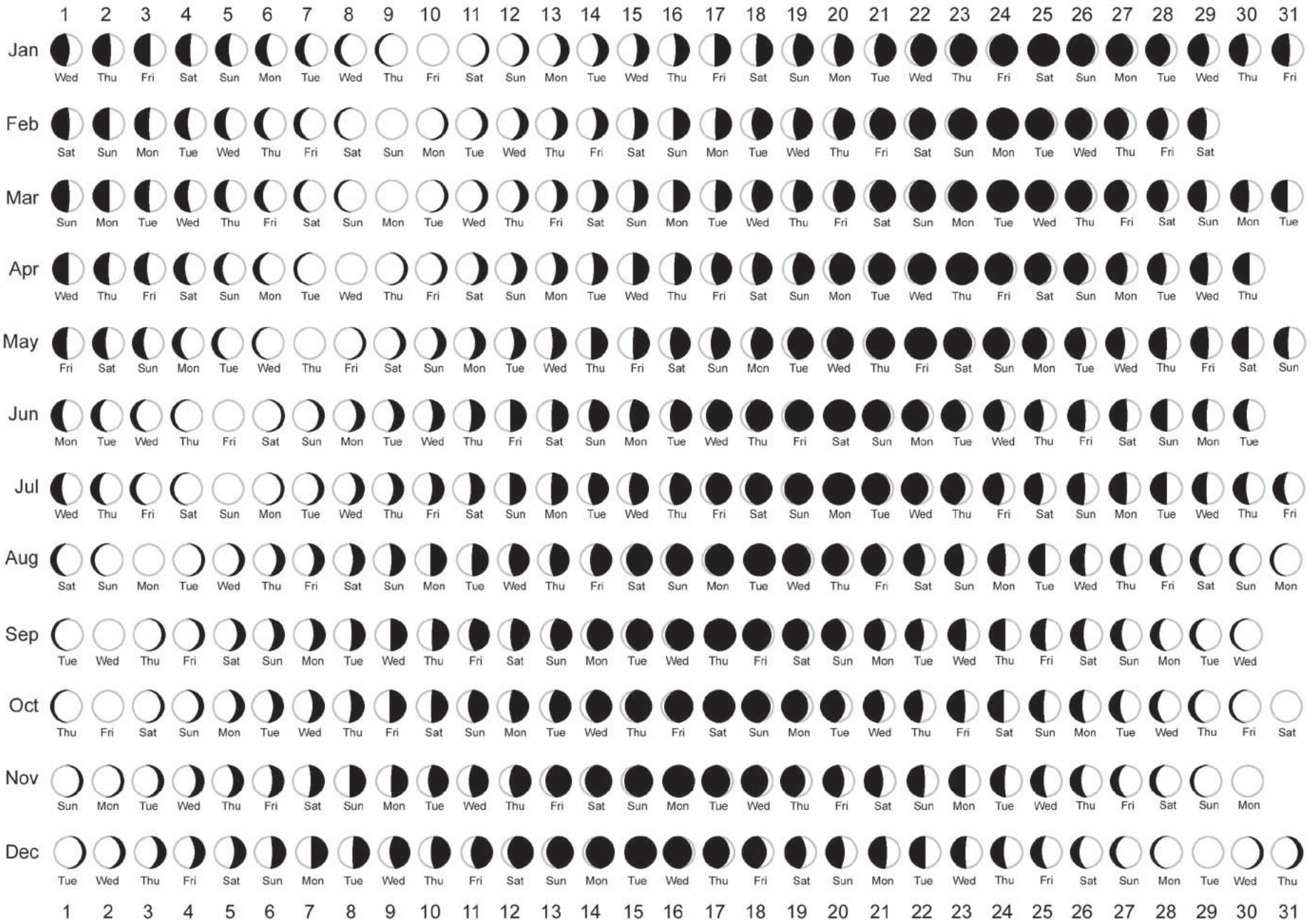
The EAS has several telescopes available for members to borrow. Check out the telescope lending page on our website to see the many scopes in our lending program, and contact Jerry Oltion, our lending coordinator, to arrange to check out one of these excellent scopes.

Jerry can be reached via email at j.oltion (at) gmail.com or by phone at 541-343-4758.

Moon Phase Chart for 2020

It's easy enough to look up the phase of the Moon on a calendar, but it's nice to have a visual representation of the entire year's lunar cycles. When you see the whole year at a glance, you can readily see how the phases of the Moon drift ever so slowly earlier and earlier in sucesssive months. It's also easy to see when the sky will be darkest and when the full Moon will blow out the faint objects. On the next page you'll find just such a chart, formatted to be easily printed and posted on the wall next to that fabulous Astronomy Magazine calendar you bought with your club discount.

2020 Moon Phases



Gallery

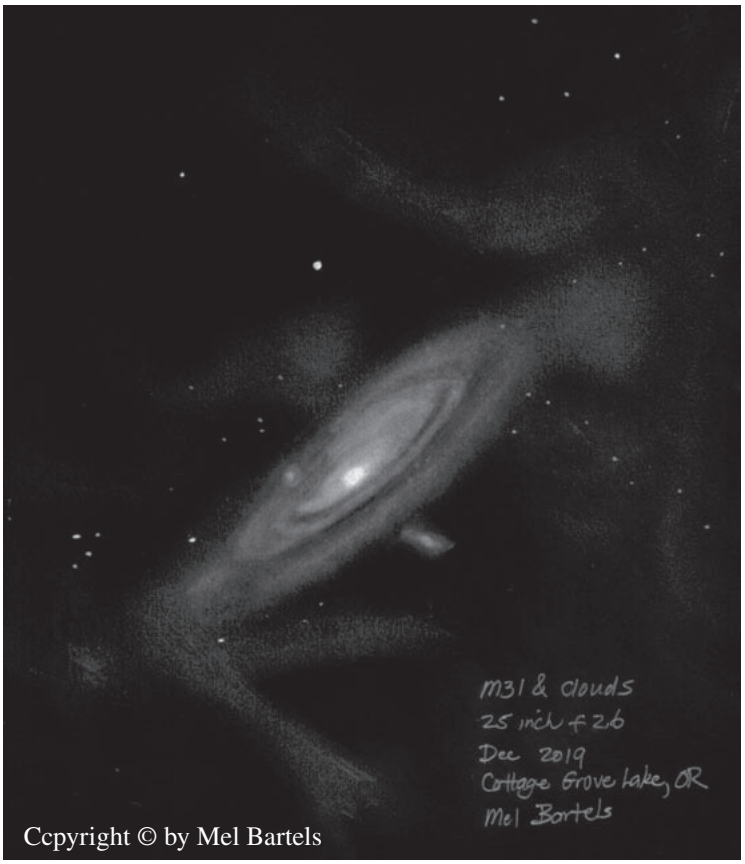
December was a rotten month for astrophotography and sketching as well as for general astronomy, but even so we got a few good images from late November and a couple of sucker holes in December.

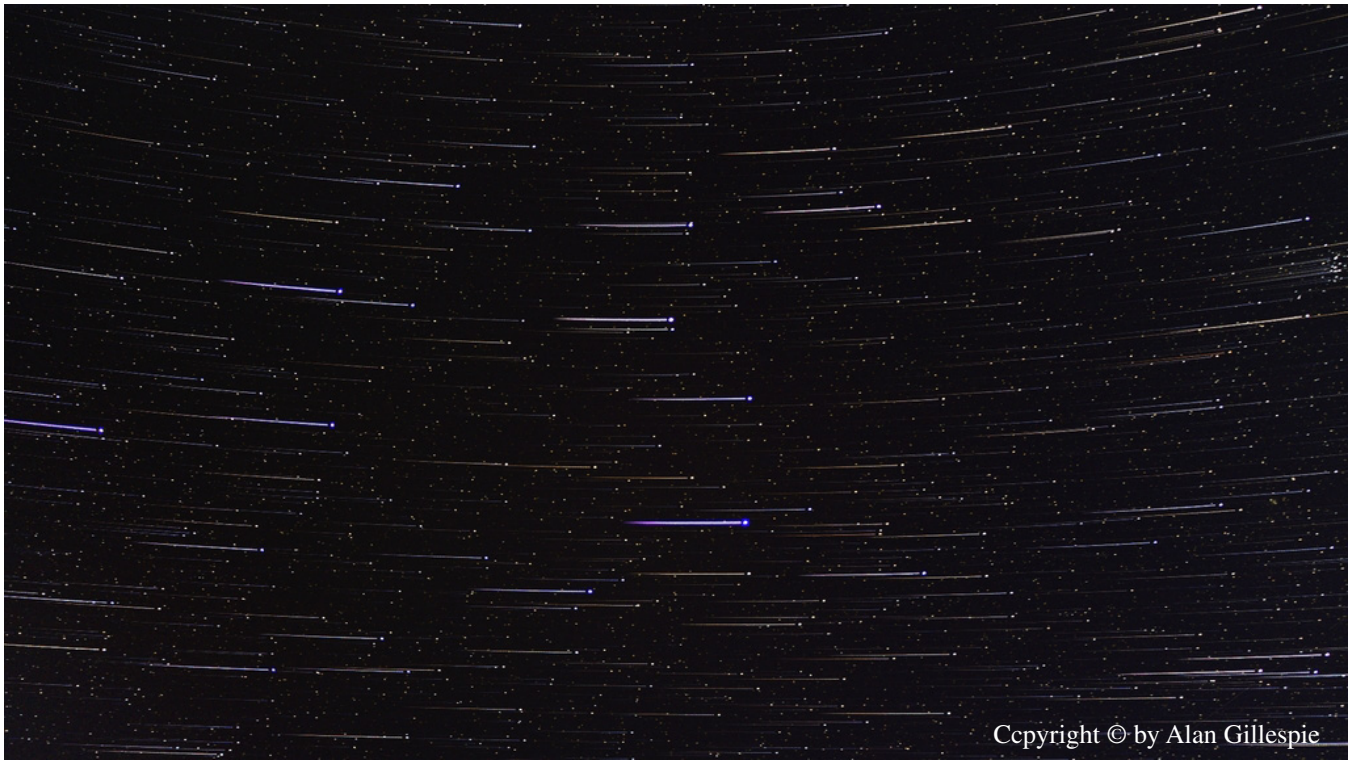
Mel Bartels drew this impressively detailed sketch of M31, the Andromeda Galaxy, with clouds of galactic cirrus (gas and dust in our own galaxy lit up by the general glow of starlight) extending off several degrees in all directions.

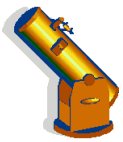
Alan Gillespie got creative with a shot of Leo rising, using a program that let him adjust the intensity of the star trails and put the stars at the ends of the trails. That's the sickle of Leo's head in the center of the frame.

New club member Nathan Campbell got these wonderful images of the Heart and Soul nebulae (IC 1805 & 1848) in northern Perseus. He used a camera and telephoto lens rather than a telescope for this shot, but as you can see in the detail blown up below, the image goes deep and is sharp, sharp, sharp. We look forward to many more great astrophotos from Nathan when the weather improves.

Upper right: Mel Bartels's sketch of M31. Below, Leo with star trails by Alan Gillespie. Next page, the Heart and Soul Nebulae by Nathan Campbell.







Observing in January

1st Q | Full | Last Q | New

Jan 2, 8:45 PM	Jan 10, 11:21 AM	Jan 17, 4:58 AM	Jan 24, 1:42 PM
Mercury lost in Sun	Mercury lost in Sun	Mercury Set: 5:17 PM	Mercury Set: 5:54 PM
Venus Set:7:36 PM	Venus Set: 7:57 PM	Venus Set: 8:15 PM	Venus Set: 8:33 PM
Mars Rise: 4:33 AM	Mars Rise: 4:29 AM	Mars Rise: 4:25 AM	Mars Rise: 4:21 AM
Jupiter lost in Sun	Jupiter Rise: 7:06 AM	Jupiter Rise: 6:45 AM	Jupiter Rise: 6:24 AM
Saturn lost in Sun	Saturn lost in Sun	Saturn lost in Sun	Saturn Rise: 7:08 AM
Uranus Set: 2:19 AM	Uranus Set: 1:48 AM	Uranus Set: 1:20 AM	Uranus Set: 00:53 AM
Neptune Set: 10:13 PM	Neptune Set: 9:42 PM	Neptune Set: 9:16 PM	Neptune Set: 8:49 PM
Pluto lost in Sun	Pluto lost in Sun	Pluto lost in Sun	Pluto Rise: 7:08 AM

All times Pacific Standard Time (November 3, 2019 - March 7, 2020 = 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
1/1/2020	11:47	23:25	06:03	07:47	16:45	18:29
1/2/2018	12:09		06:03	07:47	16:46	18:30
1/3/2020	12:31	00:25	06:03	07:47	16:46	18:31
1/4/2020	12:54	01:25	06:03	07:47	16:47	18:32
1/5/2020	13:20	02:28	06:03	07:47	16:48	18:32
1/6/2020	13:49	03:32	06:03	07:47	16:49	18:33
1/7/2020	14:23	04:38	06:03	07:47	16:50	18:34
1/8/2020	15:06	05:44	06:03	07:47	16:52	18:35
1/9/2020	15:58	06:49	06:03	07:47	16:53	18:36
1/10/2020	16:59	07:49	06:03	07:46	16:54	18:37
1/11/2020	18:09	08:41	06:03	07:46	16:55	18:38
1/12/2020	19:24	09:25	06:03	07:46	16:56	18:39
1/13/2020	20:40	10:03	06:02	07:45	16:57	18:40
1/14/2020	21:56	10:35	06:02	07:45	16:58	18:41
1/15/2020	23:10	11:04	06:02	07:44	17:00	18:42
1/16/2020		11:31	06:01	07:44	17:01	18:43
1/17/2020	00:23	11:59	06:01	07:43	17:02	18:44
1/18/2020	01:36	12:28	06:01	07:43	17:03	18:45
1/19/2020	02:47	13:00	06:00	07:42	17:05	18:46
1/20/2020	03:58	13:37	06:00	07:41	17:06	18:48
1/21/2020	05:05	14:19	05:59	07:40	17:07	18:49
1/22/2020	06:06	15:09	05:59	07:40	17:09	18:50
1/23/2020	07:00	16:05	05:58	07:39	17:10	18:51
1/24/2020	07:47	17:05	05:57	07:38	17:11	18:52
1/25/2020	08:25	18:08	05:57	07:37	17:13	18:53
1/26/2020	08:58	19:10	05:56	07:36	17:14	18:54
1/27/2020	09:25	20:12	05:55	07:35	17:15	18:56
1/28/2020	09:50	21:13	05:54	07:34	17:17	18:57
1/29/2020	10:12	22:13	05:54	07:33	17:18	18:58
1/30/2020	10:34	23:13	05:53	07:32	17:19	18:59
1/31/2020	10:56		05:52	07:31	17:21	19:00

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

Items of Interest This Month

1/1 Moon occults mag 4.4 star (30 Piscium) at 4:32 PM. Reappearance at 5:38 PM. Moon then occults mag 4.6 mag star (33 Piscium) at 6:53 PM. Reappearance at 8:12 PM. Moon will be high in south to start, 29° up in west at finish.

1/3 First Quarter Friday star party.

1/3 Peak of Quadrantid meteor shower.

1/5 Earth is at perihelion (closest to Sun).

1/5 Moon occults mag 6.1 star (HR952) ~10:30 PM. This is very close to being a grazing occultation. Somewhere between Eugene and Roseburg it will be a graze. Bonus: this star is double with a north-south split of 0.5", so we might see a two-step disappearance.

1/13 Ceres, Saturn, and Pluto are all in conjunction with the Sun, plus the Moon is at perigee. World panic ensues.

1/26 and 1/27 Venus within 1° of Neptune. If we lived on the other side of the Earth we could see them only 4 arc-minutes apart, but it happens at noon our time on 1/27. The Moon is 6° below them on the 27th.

1/31 First Quarter Friday star party.