

IO April 2018

The Newsletter of the
Eugene Astronomical Society

PO Box 7264
Springfield, OR 97475

Next Meeting: *Thursday, April 19*

Galactic Morphology

The night skies of Spring are filled with galaxies—ellipticals, spirals, and many galaxies beyond standard classification. But what constitutes a particular type of galaxy? How are the galaxies classified? At this month's meeting, Andy Edelen will give a general overview of galactic morphology—the shapes of the galaxies and how they are classified by astronomers.

EAS

President

Diane Martin (541-554-8570)

Secretary

Jerry Oltion (541-343-4758)

Additional Board members

Jim Murray

Oggie Golub

Andy Edelen

Annual Club Dues \$25

Meetings at 7:00 at the
Science Factory, Eugene



EAS is a proud member of the
Astronomical League

First Quarter Friday Report

Our First Quarter Friday for March 23rd was clouded and rained out, as was our Saturday backup date. (This is a repeat from the last two months.) Our next First Quarter Friday will be on April 20th.

First Quarter Fridays have been scheduled for 2018. The chosen dates are:

April 20 (27% lit)	May 18 (15% lit)	June 15 (6% lit)	July 20 (60% lit)
August 17 (45% lit)	September 14 (29% lit)	October 12 (15% lit)	November 9 (5% lit)
December 14 (44% lit)			

March Meeting Report

At the March meeting, Jerry Oltion gave an overview of the Messier Marathon, a once-per-year attempt to view all 110 of Charles Messier's catalogue entries in a single night.

The Messier catalogue consists of 110 of the sky's brightest and most obvious galaxies, star clusters, and nebulae, with a couple of "mistakes" thrown in. These were catalogued by the 18th-Century French astronomer Charles Messier (or his assistants), and were largely discovered while hunting for comets, as comets were of great interest at the time and brought glory to both their discoverers and their discoverers' (usually royal) patrons. As these objects often looked like comets but didn't move night-by-night as comets do, Messier recorded them as objects to be ignored—ironic, then, that he's better known for these deep-sky objects than for any of the comets he discovered.



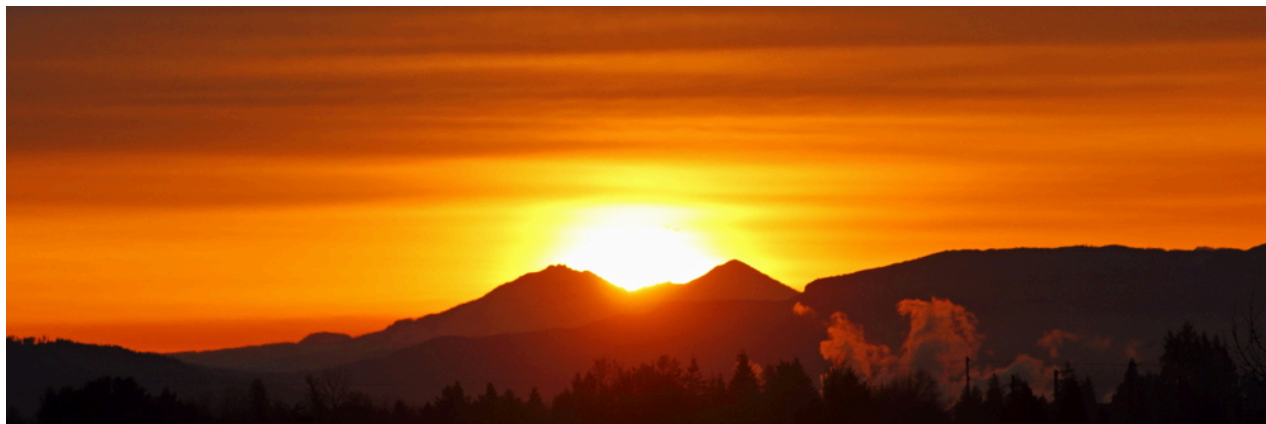
Due to the length of March nights and the brief positioning of the Sun in a "gap" between M30 (in Capricornus) and M74 (in Pisces), there is only a brief window each year when it's possible to run a Messier Marathon; the ideal time is mid-March, but this may have to shift slightly to coincide with March's New Moon. Attempting the Marathon too early in the month makes it very difficult to catch M30 before the dawn, while M74 and M77 have already faded into evening twilight for the year by the first week of April.

In the mid-1970s, a group of California amateur astronomers, led by Don Machholz, first posited the idea of seeing the entire Messier Marathon in one long session. They didn't succeed, however, until 1985. Since then, astronomy clubs around the world have set aside time and observing sites to hosting Messier Marathons (which prompted heated arguments about the "usefulness" of the endeavor in the pages of astronomy magazines as the Marathon caught on!).

Jerry went through the conditions and equipment most useful for completing the Messier Marathon. An observing site with flat east, west, and south horizons (such as Eureka Ridge) is a must, as is a clear moonless night. The Messier objects can all be found in a small telescope, although even a pair of binoculars will reveal most of them. (Messier's telescopes were fairly small and of relatively poor quality.) As the Marathon takes all night, food and drinks (i.e. CAFFEINE) and warm clothes are also important. It also helps to run the Marathon as a group, for encouragement and assistance during the more-difficult parts of the Marathon. Most important is a good set of finder charts and a sequential list of Messier objects optimized for finding the objects in the least amount of time. One of the most popular sequences can be found at <https://drive.google.com/open?id=10rMb1x5aGH10ecmIZBPQMJyeK4bulYAV>; this also includes a blank space to record the time each object was observed.

Using Sky Safari, Jerry took us through a simulation of most of the Marathon. The most difficult sections are the early evening (where it's necessary to observe a number of objects before the sky is fully dark but before they set in the west), the Virgo cluster of galaxies (where it's necessary to make sure that you have the correct galaxy among dozens that might be visible in the area), and the homestretch in Sagittarius and Ophiuchus (where a large number of globular clusters and nebulae gather in the direction of the Galactic Center). Fewer objects lie between these three regions, allowing Marathon runners to relax a bit before heading into more hectic territory. Throughout, though, it's important to "stay ahead" of the sky, so that objects don't set before they can be observed.

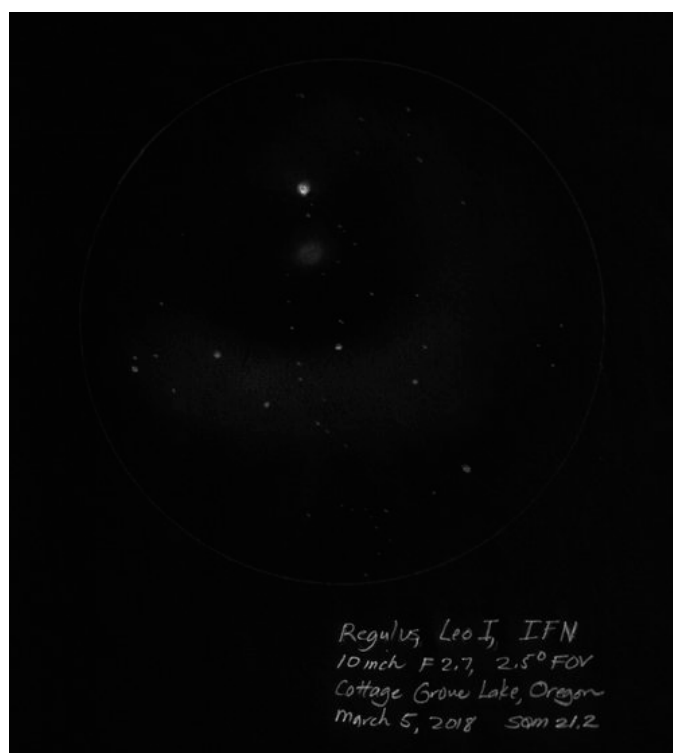
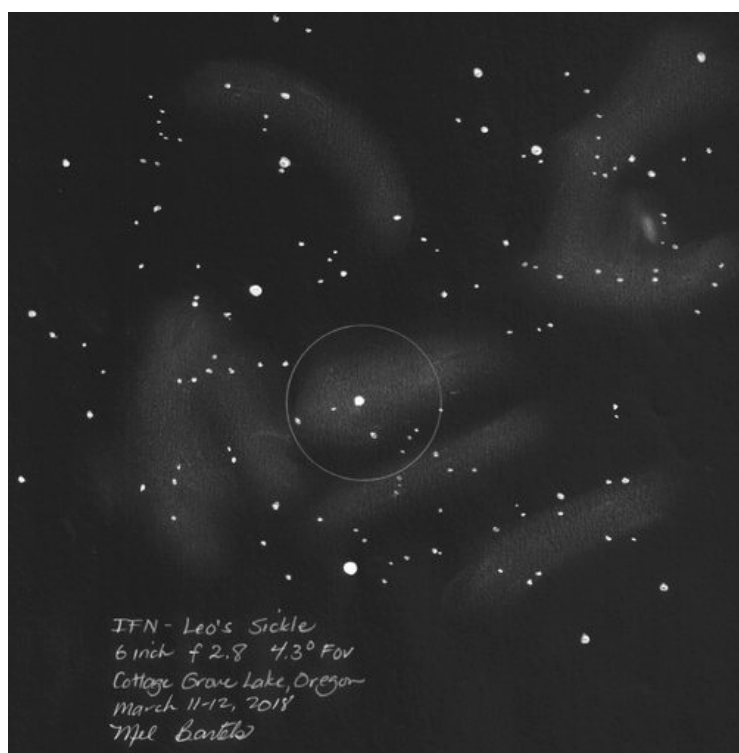
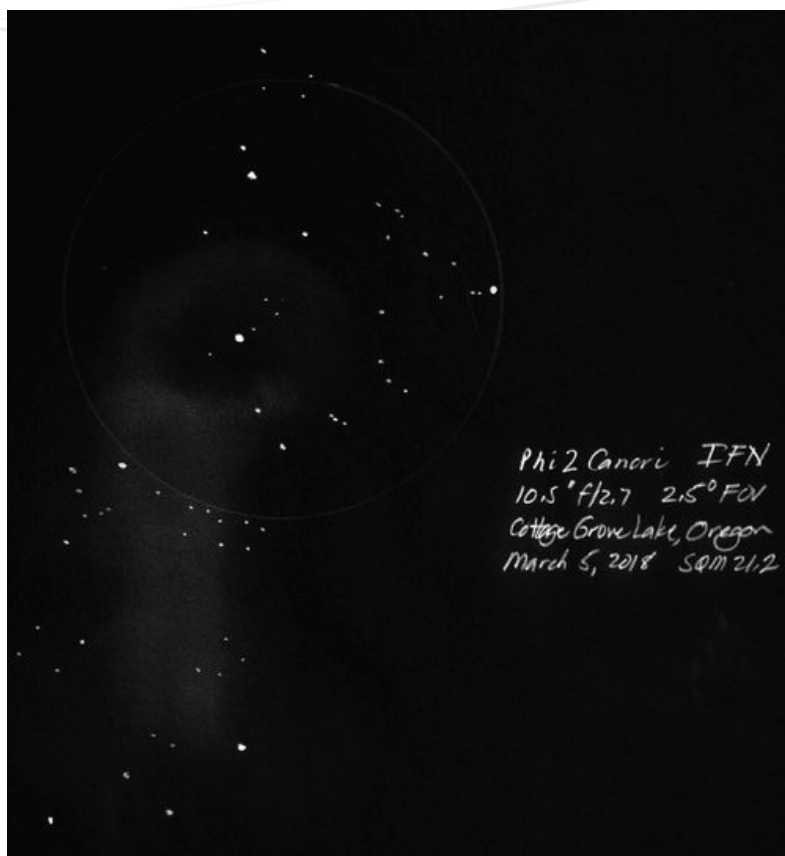
Thanks, Jerry!



Above: Sunrise over Three Sisters. Below: The Full Moon, March 31st.

Photos by Alan Gillespie.





Integrated Flux Nebulae, clockwise from upper left: near Castor and Pollux in Gemini; near Φ^2 Cancri; in the Sickle of Leo; with dwarf galaxy Leo I. *Sketches by Mel Bartels.*



Mars (center) between the Trifid and Lagoon Nebulae; Saturn (left) above M22; M16 and M17 (upper left); M23 (top center); M6 (lower right). *Photo by Alan Gillespie.*

Sun & Moon rise and set for April

Date	MoonRise	Moon Set	Twilight Begin	Sunrise	Sun Set	Twilight End
4/1/2018	21:11	07:53	05:14	06:54	19:40	21:20
4/2/2018	22:16	08:23	05:12	06:52	19:41	21:21
4/3/2018	23:19	08:55	05:09	06:50	19:42	21:23
4/4/2018		09:29	05:07	06:48	19:43	21:24
4/5/2018	00:19	10:07	05:05	06:46	19:45	21:26
4/6/2018	01:15	10:49	05:03	06:45	19:46	21:28
4/7/2018	02:06	11:36	05:01	06:43	19:47	21:29
4/8/2018	02:53	12:27	04:59	06:41	19:48	21:31
4/9/2018	03:35	13:22	04:57	06:39	19:49	21:32
4/10/2018	04:12	14:20	04:55	06:38	19:51	21:34
4/11/2018	04:46	15:20	04:52	06:36	19:52	21:36
4/12/2018	05:17	16:23	04:50	06:34	19:53	21:37
4/13/2018	05:46	17:28	04:48	06:32	19:54	21:39
4/14/2018	06:15	18:34	04:46	06:31	19:55	21:41
4/15/2018	06:44	19:42	04:44	06:29	19:57	21:42
4/16/2018	07:14	20:52	04:42	06:27	19:58	21:44
4/17/2018	07:48	22:03	04:39	06:26	19:59	21:46
4/18/2018	08:26	23:14	04:37	06:24	20:00	21:47
4/19/2018	09:10		04:35	06:22	20:01	21:49
4/20/2018	10:02	00:22	04:33	06:21	20:03	21:51
4/21/2018	11:00	01:24	04:31	06:19	20:04	21:53
4/22/2018	12:05	02:19	04:29	06:17	20:05	21:54
4/23/2018	13:13	03:07	04:27	06:16	20:06	21:56
4/24/2018	14:23	03:48	04:24	06:14	20:08	21:58
4/25/2018	15:33	04:23	04:22	06:13	20:09	22:00
4/26/2018	16:42	04:55	04:20	06:11	20:10	22:02
4/27/2018	17:49	05:25	04:18	06:10	20:11	22:03
4/28/2018	18:56	05:53	04:16	06:08	20:12	22:05
4/29/2018	20:01	06:22	04:14	06:07	20:14	22:07
4/30/2018	21:05	06:53	04:12	06:05	20:15	22:09

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



Thank you, Storage Junction

Storage Junction has donated the use of a storage unit for us to hold our loaner telescopes when they're not in use. EAS would like to thank Storage Junction for their generosity and support for our group. Please



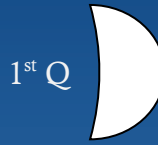
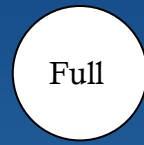
Observing In April



Last Q



New

1st Q

Full

Apr 8, 00:18 AM	Apr 15, 6:57 PM	Apr 22, 2:46 PM	Apr 29, 5:58 PM
Mercury lost in sun	Mercury Rise: 5:48 AM	Mercury Rise: 5:32 AM	Mercury Rise: 5:20 AM
Venus Set: 9:41 PM	Venus Set: 10:00 PM	Venus Set: 10:18 PM	Venus Set: 10:36 PM
Mars Rise: 2:34 AM	Mars Rise: 2:22 AM	Mars Rise: 2:08 AM	Mars Rise: 1:54 AM
Jupiter Rise: 10:27 PM	Jupiter Rise: 9:56 PM	Jupiter Rise: 9:24 PM	Jupiter Rise: 8:52 PM
Saturn Rise: 2:15 AM	Saturn Rise: 1:48 AM	Saturn Rise: 1:20 AM	Saturn Rise: 00:52 AM
Uranus Set: 8:31 PM	Uranus lost in Sun	Uranus lost in Sun	Uranus Rise: 5:46 AM
Neptune Rise: 5:35 AM	Neptune Rise: 5:08 AM	Neptune Rise: 4:41 AM	Neptune Rise: 4:14 AM
Pluto Rise: 3:03 AM	Pluto Rise: 2:36 AM	Pluto Rise: 2:08 AM	Pluto Rise: 1:41 AM

All times Pacific Standard Time (November 4, 2018 - March 9, 2019 = UT -8 hours) or Pacific Daylight Time (March 11 - Nov. 3, 2018 = UT -7 hours)

Items of Interest This Month

Venus is rising higher in evenings

4/2 Mars 1.3° south of Saturn in early morning

4/7 Mars, Saturn, and Moon close together

4/7 Ganymede shadow transit 10:17– midnight

4/15 Ganymede shadow transit 2:14–3:59 AM

4/17 Saturn at aphelion, the farthest it has been from the Sun since 1959

4/17 Europa shadow transit 8:35–10:51 PM

4/20 First Quarter Friday star party

4/21 Io shadow transit 9:40–11:50 PM

4/21-22 peak of Lyrid meteor shower

4/22-24 Venus near Pleiades

4/24 Europa shadow transit 11:10 PM–1:26 AM

4/28 Io shadow transit 11:34 PM–1:44 AM

4/29 Mercury at greatest western elongation (visible in morning sky before sunrise)

