

IO – May 2017

The Newsletter of the Eugene Astronomical Society

PO Box 7264
Springfield, OR 97475

Next Meeting: *Wednesday, May 17*

Observing Projects for the Clear-Sky Season

Clear skies but you're not sure it's worth going out observing? Bored with looking at the same few objects over and over again? At this month's meeting, Andy Edelen will talk about finding purpose and inspiration in your observing by creating goals for yourself. Obviously, not every clear night requires a purpose to "do astronomy," but if you find yourself stuck in a rut and need something to inspire you to get out under the stars, there are plenty of projects to keep you interested in our fascinating universe and motivated to explore it.

Please note that this month's meeting is on Wednesday!

EAS

President

Diane Martin (541-554-8570)

Secretary

Jerry Oltion (541-343-4758)

Additional Board members

Jim Murray

John Loper

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 May actually turned into a First Quarter Weekend, with clearish nights on both Friday and Saturday. Jerry went to the reservoir on Friday night when the sky was partly cloudy, but was joined by several others for observing the moon, Jupiter, and a few double stars. On Saturday night, Jerry, Garth Price, and Bill Basham were joined by about a dozen people to look at the same targets, despite the bright gibbous Moon.

The remainder of our First Quarter Fridays for 2017 are:

June 2 (66% lit)	June 30 (51% lit)	July 28 (35% lit)	September 1 (83% lit)
September 29 (69% lit)	October 27 (52% lit)	November 24 (34% lit)	December 29 (87% lit)

June and September have two FQFs each, while August has none; this is due to the timing of the Moon cycle.



April Meeting Report

At our April 20th meeting, Larry Deckman presented Part 2 of his popular "Deep Among the Star Groups" program, having presented Part 1 back in February to a standing-room only crowd.

Whereas Part 1 detailed the night sky by seasons, each season centered around a specific "heroic" constellation figure, Part 2 examined the stars themselves, in terms of their brightnesses as seen from Earth (their apparent magnitudes). Larry used a $\frac{1}{4}$ -inch image of a flame to represent a 6.5 magnitude star—about the faintest star an average observer will see from a dark site—with other celestial bodies cast in proportion to that flame, and pointed out that there are approximately 9500 stars of magnitude 6.5 or brighter that can be seen from Earth. Among the brighter stars are two beacons of the winter sky, Rigel and Sirius. Rigel (Orion's brighter foot) is 360 times brighter than a 6.5 magnitude star, while Sirius is 1500 times as bright as that same 6.5 magnitude star, a 10-inch flame in comparison to the $\frac{1}{4}$ -inch flame of our comparison star.

Beyond Sirius, the brightest objects in our sky are all solar-system bodies. The planets—first identified by their changing brightnesses and positions in the sky, and labeled as deities (and thereby the days of the week)—are considerably brighter still. Mercury is on average 2.5 times as bright as Sirius; Venus ranges from 9-23 times as bright as Sirius. (If our magnitude 6.5 comparison star is a $\frac{1}{4}$ -inch flame, Venus' flame at brightest would be 4 feet tall.) The Moon, at its thinnest and dimmest still brighter than Sirius, is (when Full) an astounding 300 times brighter than all celestial objects in the night sky combined, with a 150-foot flame.

Mightiest, of course, would be our Sun: an otherwise average (even below-average) star. The Sun and Moon may be comparably-sized in our sky, but the Sun dwarfs the Moon in brightness—400,000 times the Full Moon's brightness, with a proportionate flame 90,000 feet (16 miles) high! The Sun is a staggering 14 trillion times brighter than our humble magnitude 6.5 comparison star as seen from Earth.

The Science Factory was once again SRO for Larry's presentation, and it was well worth it.

Thanks, Larry!

EAS in the Community

As the weather gets warmer and more public events are scheduled, members of EAS are out and about in the community, sharing the word about astronomy. Several of these events took place in April and early May.

On Monday, April 24th, the Eugene Public Library unveiled their new loaner telescopes. EAS members Jerry and Kathy Olton gave a demonstration of the two 4.5" Orion Starblasts to a group of about two dozen eager children and their parents, teaching them how to aim the scope at distant signs in the library and how to use the zoom eyepiece to change the magnification and field of view. The kids asked a lot of questions, showing a good grasp of the concepts in most cases, and they were very excited at the prospect of taking the telescopes home.

Each interested family was asked to put their name on a slip of paper and put it in a raffle box, and at the end of the presentation children's librarian Michelle "Pigge" Green drew two winners, who became the telescopes' first borrowers. The scopes left the building in the company of two very happy families and a bunch more families eager for their chance after the first ones have had their turn.

Judging from the turnout at the unveiling, these telescopes won't spend much time on the shelf at the library. And if the weather cooperates, they don't seem destined to spend much time in their cases at their borrowers' houses, either. The program is off to a great start, and so is another generation of amateur astronomers.

Thanks to Jerry, Kathy, and Michelle for their time and effort!



Above: Jerry Olition shows kids and parents how to use the loaner telescopes. Photos by Kristin Thorp.

Our second event was the annual Earth Day Fair at Veneta Elementary School, on April 28th. It was, as always, a tremendous amount of fun, and the kids once again astonished with their interest, enthusiasm, and great questions.

The kids were offered a prize for asking a space-related question. (Most common question: "What is that thing on the table?" The answer was, "A telescope." The object in question was one of the club's Trackball scopes.) One boy asked Bruce if there was life on Mars a long time ago. Bruce responded that "No one knows for sure." The boy said, "I do. There was." and then gave Bruce all the reasons why he knew there had indeed been life on Mars.

Thanks to Bruce, Annette, Randy, and Andy for volunteering. EAS' booth was by far, hands down, beyond a doubt, absolutely, positively the coolest booth at the fair (opinion does not necessarily reflect the views of management).

EAS' Mike Smith was interviewed on KEZI on May 1st regarding the August 21st total eclipse. Mike's interview can be found at < <http://www.kezi.com/story/35324831/special-report-astronomy-enthusiast-prepare-for-total-solar-eclipse> >. Great job, Mike!

The next event for EAS was STEMfest at the Science Factory on May 6th. EAS members Mike Smith, Ken and Diane Martin, Jerry and Kathy Oltion, and Bruce Hindrichs hosted well over a hundred visitors at EAS' tent. Mike had solar-filtered binoculars and information about the August total eclipse, and Ken, Diane, Jerry, and Kathy had Lunt H-alpha solar telescopes for observing prominences. The Sun was quiet (with only a couple of prominences and a pair of sunspots), but those who stopped by to visit were intrigued and impressed by their looks at our local star.

Thanks to Mike, Ken, Diane, Jerry, Kathy, and Bruce for volunteering!

Upcoming events for EAS include Sky Camp at Fall Creek (for Dos Rios Elementary School; May 31); our annual Dexter Star Party at Dexter State Park (July 22); Star Walk at Dorris Ranch (July 23); and solar eclipse presentations at Willamalane (July 28) and the Eugene Hotel (August 17). Volunteers are always needed and appreciated! Contact Bruce Hindrichs (EAS Outreach Coordinator) to volunteer.

(Event write-ups by Jerry Oltion, Bruce Hindrichs, and Andy Edelen.)



Pictures from STEMfest. *Photos by Jerry Oltion (top) and Diane Martin.*



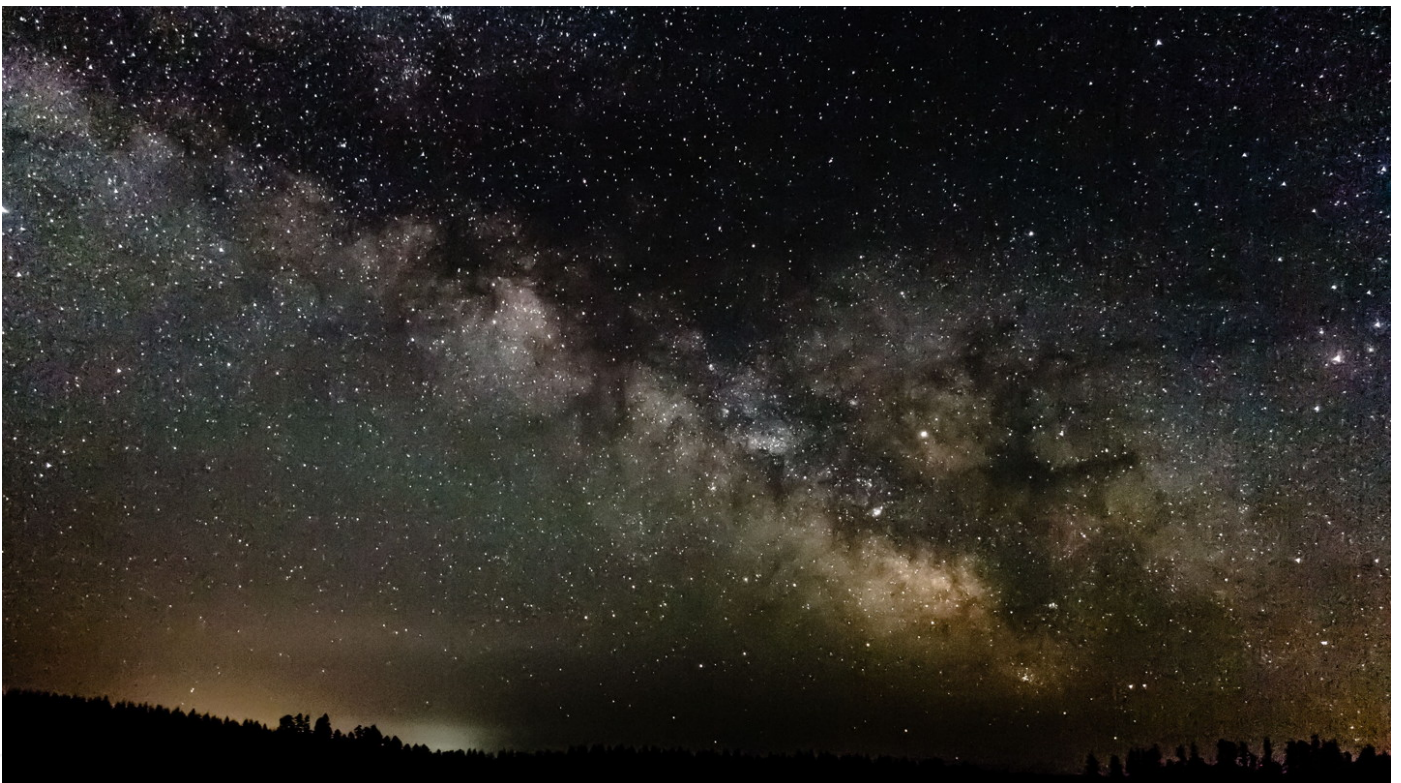
Above: Twilight, April 28th. *Photo by Alan Gillespie.*

Below: A 22° halo from Coburg Hill. *Photo by Bill Basham.*





Above: Mars, the Pleiades, and the Hyades, April 15th. Photo by Alan Gillespie.
Below: The rising Milky Way from Eureka Ridge, April 30th. Photo by Bill Basham.





Above: The Moon, May 3rd. Photo by Gary Lech.

Below: An Iridium satellite flare from Eagle's Ridge, April 22nd. Photo by Bill Basham.



Sun & Moon rise and set for May

Date	Moon Rise	Moon Set	Twilight Begin	Sun Rise	Sun Set	Twilight End
5/1/2017	11:01	01:08	04:09	06:03	20:16	22:11
5/2/2017	12:06	01:57	04:07	06:02	20:17	22:13
5/3/2017	13:11	02:40	04:05	06:01	20:19	22:15
5/4/2017	14:16	03:16	04:03	05:59	20:20	22:17
5/5/2017	15:19	03:48	04:01	05:58	20:21	22:19
5/6/2017	16:21	04:17	03:59	05:57	20:22	22:21
5/7/2017	17:22	04:45	03:57	05:55	20:23	22:23
5/8/2017	18:22	05:13	03:55	05:54	20:24	22:25
5/9/2017	19:21	05:41	03:53	05:53	20:26	22:26
5/10/2017	20:20	06:11	03:51	05:52	20:27	22:28
5/11/2017	21:17	06:43	03:49	05:50	20:28	22:30
5/12/2017	22:12	07:19	03:47	05:49	20:29	22:32
5/13/2017	23:04	07:59	03:45	05:48	20:30	22:34
5/14/2017	23:52	08:44	03:43	05:47	20:31	22:36
5/15/2017		09:33	03:41	05:46	20:32	22:38
5/16/2017	00:36	10:27	03:39	05:45	20:33	22:40
5/17/2017	01:16	11:24	03:37	05:44	20:35	22:42
5/18/2017	01:53	12:25	03:36	05:43	20:36	22:44
5/19/2017	02:27	13:29	03:34	05:42	20:37	22:45
5/20/2017	02:59	14:35	03:32	05:41	20:38	22:47
5/21/2017	03:30	15:44	03:30	05:40	20:39	22:49
5/22/2017	04:02	16:56	03:29	05:39	20:40	22:51
5/23/2017	04:36	18:10	03:27	05:38	20:41	22:53
5/24/2017	05:13	19:26	03:26	05:37	20:42	22:54
5/25/2017	05:56	20:41	03:24	05:37	20:43	22:56
5/26/2017	06:45	21:52	03:22	05:36	20:44	22:58
5/27/2017	07:42	22:56	03:21	05:35	20:45	23:00
5/28/2017	08:44	23:51	03:20	05:35	20:45	23:01
5/29/2017	09:51		03:18	05:34	20:46	23:03
5/30/2017	10:59	00:38	03:17	05:33	20:47	23:04
5/31/2017	12:06	01:17	03:16	05:33	20:48	23:06



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 give them a call if you need a storage space, and tell your friends. Storage Junction is located at 93257 Prairie Road (at the intersection of Hwy 99 and Hwy 36, 3 miles south of Junction City) Phone: 541-998-5177



Observing In May

1st Q

Full



Last Q



New



May 2, 7:47 PM	May 10, 2:42 PM	May 18, 5:33 PM	May 25, 12:44 PM
Mercury Rise: 5:28 AM	Mercury Rise: 5:08 AM	Mercury Rise: 4:53 AM	Mercury Rise: 4:44 AM
Venus Rise: 4:26 AM	Venus Rise: 4:11 AM	Venus Rise: 3:57 AM	Venus Rise: 3:46 AM
Mars Set: 10:29 PM	Mars Set: 10:25 PM	Mars Set: 10:21 PM	Mars Set: 10:15 PM
Jupiter Set: 5:14 AM	Jupiter Set: 4:41 AM	Jupiter Set: 4:08 AM	Jupiter Set: 3:39 AM
Saturn Rise: 11:43 PM	Saturn Rise: 11:10 PM	Saturn Rise: 10:37 PM	Saturn Rise: 10:07 PM
Uranus Rise: 5:25 AM	Uranus Rise: 4:55 AM	Uranus 4:25 AM	Uranus Rise: 3:58 AM
Neptune Rise: 3:56 AM	Neptune Rise: 3:25 AM	Neptune Rise: 2:54 AM	Neptune Rise: 2:27 AM
Pluto Rise: 1:18 AM	Pluto Rise: 00:47 AM	Pluto Rise: 00:15 AM	Pluto Rise: 11:43 PM

Items of Interest This Month

MAY

Venus bright in morning sky all month

Comet 41P well placed in Hercules all month

Comet C/2015 V2 Johnson also good this month in Hercules and Bootes

5/12 Io and Ganymede pass one another 9:00 - 10:00 PM

5/17 Mercury at greatest western elongation, visible before dawn

5/18 Double shadow transit 8:53 - 9:42

5/21 Io and Europa pass one another 10:00 - 11:00 PM

5/25 Double shadow transit 10:47 PM - 12:20 AM

6/1 - 6/2 Double shadow transit 12:42 - 2:53 AM

