

# IO - April 2016

Issue 2016-04  
Eugene Astronomical Society

Eugene Astronomical Society  
Annual Club Dues \$25  
President: Diane Martin 541-554-8570  
Secretary: Jerry Oltion 541-343-4758  
Additional Board members:  
Jacob Strandlien, John Loper, Mel Bartels.

PO Box 7264  
Springfield, OR 97475  
[www.eugeneastro.org](http://www.eugeneastro.org)  
EAS is a proud member of:

**The Astronomical League**  
The World's Largest Federation of Amateur Astronomers



## Next Meeting Thursday, April 21st “A Week in Arizona” by Jerry Oltion and “Forgotten Gems of Spring” by Andy Edelen



At our April 21st meeting Jerry Oltion will tell us about his trip to Arizona to observe from 32 degrees latitude. The sky looks different from down there, and so does the landscape. Avoid the 3,400-mile drive and live it vicariously through Jerry’s slide show.

Also at this meeting Andy Edelen will talk about “Forgotten Gems of Spring.” There are way more cool objects to look at in the spring than just the Virgo Cluster, and Andy knows a bunch of them. Come learn some of the more exotic yet still spectacular sights to look for when Leo stands overhead and Lyra is rising in the east.



At our meetings we also encourage people to bring any new gear or projects they would like to show the rest of the club. The meeting is at 7:00 on Thursday,

April 21st at the Science Factory. Come a little early to visit and get a seat before the program starts.

## Next First Quarter Friday: April 15th

Our March 11th First Quarter Friday Star Party was cancelled due to rain, as was our Saturday backup. We tried again on Friday the 18th but that fizzled (or should we say “drizzled”?) too. This has been a rotten fall and winter for star parties.

Our next attempt will be on April 15th. Tax Day! Come unwind from your last-minute panic with a look at something that’s still tax-free: the cosmos! Provided we’ve all paid our clear-sky bill.

First Quarter Fridays are (theoretically, anyway) 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 2016. Star parties start at dusk or 6:00, whichever is later.

April 15 (70% lit)  
July 8 (23% lit)  
October 7 (39% lit)

May 13 (54% lit)  
August 12 (72% lit)  
November 4 (24% lit)

June 10 (38% lit)  
September 9 (56% lit)  
December 9 (79% lit)

## March 17th Meeting Report

Our March 17th meeting began with the telescope-building crew presenting their work in progress to the club (see article on p.5).

Mel talked about the 25" f/2.2 mirror that he's grinding. This project is pushing the boundaries of what's possible in mirror-making, with a sagitta (depth of the curve) that's deeper than the glass is thick. The only way to do that is by slumping the mirror to a meniscus shape before fine-grinding, polishing, and figuring it. Mel is at the figuring stage now, very close to completion! It'll be exciting to watch yet another of Mel's innovative new scopes redefine what amateur telescope makers can do.

Mike Smith talked about the March 8th total solar eclipse, which he flew halfway around the world to see from a cruise ship in the Makassar Strait in Indonesia. It was Mike's sixteenth eclipse! This one lasted 2 minutes and 45 seconds and had an odd corona and a naked eye prominence as well. Mike says it was well worth the trip, even though all eclipses seem to last only 8 seconds while you're watching them.



Mel shows his 25" f/2.4 meniscus mirror in progress.



Some of the telescope builders present their work in progress at our March meeting.

Some of the telescope builders present their work in progress at our March meeting.



Randy Beiderwell talked about his homemade Denver observing chair and urged people to consider building their own rather than buying an expensive commercial chair.

Lastly, our main event: Larry Deckman presented "A Journey to the Outskirts of the Universe," a beautiful slide show in which we start on Earth and

then move outward into low orbit for spectacular views of our home planet, then onward to the Moon, Mars, and beyond. Slipping the bounds of the solar system, we head into the depths of the Milky Way galaxy and the many nebulae and star clusters there, then on into intergalactic space where we see the billions of island universes just like ours. By the end of the show, no one seriously doubted that out there somewhere was another group of amateur astronomers watching a slide show very similar to the one Larry was showing us.

Many people commented on how much they enjoyed this meeting. This was one of our best ones yet, with a nearly full house and many interested visitors as well as regular attendees. We've been having a lot of good programs and well-attended meetings lately, largely due to the networking of enthusiastic club members. Many thanks to everyone who participates in our club activities! You're part of why we're doing so well.

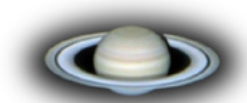


## Dave Krumlauf Passes

We've lost another of our long-time club members. David A. Krumlauf, of Cottage Grove, passed away at the age of 78 from complications related to cancer on March 9, 2016. Dave was an active member of our club in the early years, then dropped out for a while to pursue other interests before returning just a few years ago. He was a fun guy with a big laugh and lots of stories to tell.

Dave was born on May 6, 1937 in Portland, OR to David E. and Blanche (Boyd) Krumlauf. He joined the United States Marine Corp. in 1955, and was on active duty until 1959. He was stationed in both Okinawa and mainland Japan. While in the Marines David received his GED, then after completing military service he attended Lane Community College. David worked as a log scaler in the timber industry, retiring from Weyerhaeuser after 39 years. He married Jeraldine Hughes in 1960 and later divorced. He then married Elizabeth "Betty" Bohach on September 4, 1971 in Eugene, OR. David enjoyed astronomy, playing the guitar, hunting, fishing and anything mechanical. He liked woodworking and just tinkering, fixing things for anyone. He had a black belt in Karate.

In lieu of flowers, his family asks that donations be made to the Eugene Astronomical Society, P.O. Box 7264, Springfield, OR 97475. The EAS thanks the Krumlauf family for their thoughtfulness, and will use any donations to further our public outreach so more people can enjoy astronomy as Dave did.



## 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



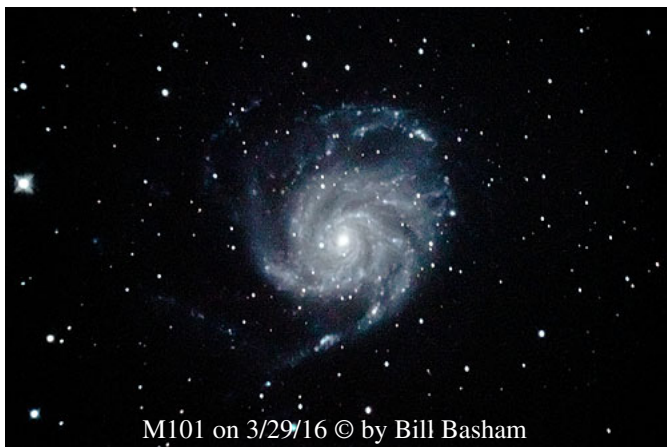
# March Observing Report

This seemed destined to be an April Fools column, but the last few days of March proved the old adage of “in like a lion, out like a lamb.” We had four superb nights in a row starting March 29th, and various combinations of us made it out each night for some much-needed dark sky. Here’s a shot of our setup on March 31st at Eagle’s Ridge, with one more vehicle and telescope out of the frame to the right.

Bill Basham has been getting great results with his new camera. Here are three shots he took on the night of the 29th.



March 31st star party at Eagle's Ridge. © by Jerry Olftion



M101 on 3/29/16 © by Bill Basham



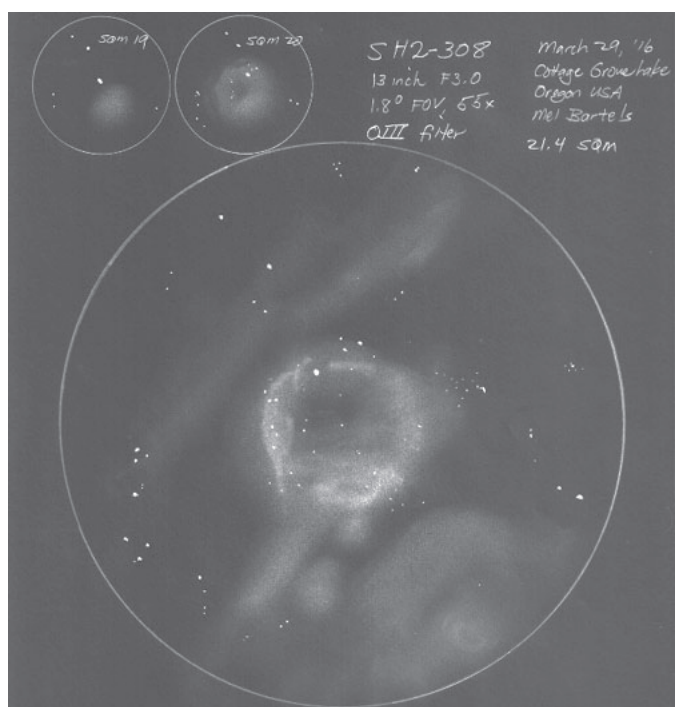
M51 on 3/29/16 © by Bill Basham



Sombrero Galaxy on 3/29/16 © by Bill Basham

That same night, Mel Bartels sketched SH2-308, a shell surrounding the Wolf-Rayet star EZ Canis Majoris. About this observation, Mel writes: “While deep digital images are full of exquisite colorful detail, either the imagers are processing out the fainter stuff or cannot pick it up with their narrowband filters. The result is that visual observations go deeper, show unexpected nebulae, and are something to get excited over. Dark skies are a must, as well as a wide field and a good OIII filter.”

March came through with the dark sky. Let's hope April does as well!



SH2-308 on 3/29/16 © by Mel Bartels

# Telescope Building Project Proceeds

The telescope-building group skipped two weekends while Jerry was in Arizona, but they had two more in March after he got back and made great progress on those two Sundays. They cut the trusses to length and installed everything that would go on the scope when it's in use, then found the balance point and designed the altitude bearings and the rocker box to fit. Andy Edelen had some Ebony Star formica, the material of choice for bearing surfaces, so we used that on the altitude and azimuth bearings.

At our March 20th session, Steve Frankel brought his violin and Mike Curtin borrowed Jerry's guitar to serenade the rest of us while we installed the trusses and found the balance point. At our March 27th session, held on Easter Sunday, we had a table full of goodies, including a tray of Peep sushi provided by Andy and Cheryl. Marshmallow peeps wrapped in Rice Krispie treats with fruit leather for nori: they're deadly delicious and kept us going like sugar-charged children for hours.

Our next work session is on Sunday, April 3, where we hope to finish the rocker box and install the altitude bearings. Join us if you're so inclined!



Peep Sushi brought by Andy and Cheryl



Randy and Andy install trusses while Mike and Steve serenade



Andy and Galen hold the pieces while Randy trims the formica on the azimuth bearing

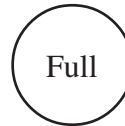


Andy and Galen hold the router while Jerry trims the formica on the altitude bearing





# Observing in April



April 7, 4:24 AM	April 13, 8:59 PM	April 21, 10:24 PM	April 29, 8:29 PM
Mercury Set: 9:10 PM	Mercury Set: 9:40 PM	Mercury Set: 9:54 PM	Mercury Set: 9:30 PM
Venus Rise: 6:17 AM	Venus Rise: 6:09 AM	Venus Rise: 5:59 AM	Venus Rise: 5:49 AM
Mars Rise: 11:55 PM	Mars Rise: 11:35 PM	Mars Rise: 11:04 PM	Mars Rise: 10:29 PM
Jupiter Set: 5:46 AM	Jupiter Set: 5:21 AM	Jupiter Set: 4:48 AM	Jupiter Set: 4:16 AM
Saturn Rise: 00:33 AM	Saturn Rise: 00:08 AM	Saturn Rise: 11:31 PM	Saturn Rise: 10:58 PM
Uranus lost in Sun	Uranus lost in Sun	Uranus Rise: 5:58 AM	Uranus Rise: 5:28 AM
Neptune Rise: 5:27 AM	Neptune Rise: 5:04 AM	Neptune Rise: 4:33 AM	Neptune Rise: 4:02 AM
Pluto Rise: 2:46 AM	Pluto Rise: 2:22 AM	Pluto Rise: 1:51 AM	Pluto Rise: 1:19 AM

All times Pacific Daylight Time (March 13 – Nov. 5, 2016 = UT -7 hours) or Pacific Standard Time (November 6, 2016 – March 12, 2017 = UT -8 hours)

Date	Moonrise	Moonset	Twilight Begin	Sunrise	Sunset	Twilight End
4/1/2016	03:12	13:15	05:13	06:53	19:40	21:21
4/2/2016	03:56	14:19	05:11	06:51	19:41	21:22
4/3/2016	04:37	15:27	05:08	06:49	19:43	21:24
4/4/2016	05:15	16:38	05:06	06:47	19:44	21:25
4/5/2016	05:51	17:52	05:04	06:45	19:45	21:27
4/6/2016	06:27	19:08	05:02	06:44	19:46	21:28
4/7/2016	07:04	20:25	05:00	06:42	19:48	21:30
4/8/2016	07:43	21:40	04:58	06:40	19:49	21:32
4/9/2016	08:25	22:53	04:56	06:38	19:50	21:33
4/10/2016	09:11		04:54	06:37	19:51	21:35
4/11/2016	10:02	00:01	04:51	06:35	19:52	21:37
4/12/2016	10:57	01:02	04:49	06:33	19:54	21:38
4/13/2016	11:55	01:56	04:47	06:31	19:55	21:40
4/14/2016	12:55	02:42	04:45	06:30	19:56	21:42
4/15/2016	13:55	03:22	04:43	06:28	19:57	21:43
4/16/2016	14:55	03:57	04:41	06:26	19:58	21:45
4/17/2016	15:54	04:28	04:38	06:25	20:00	21:47
4/18/2016	16:53	04:57	04:36	06:23	20:01	21:48
4/19/2016	17:51	05:25	04:34	06:21	20:02	21:50
4/20/2016	18:48	05:52	04:32	06:20	20:03	21:52
4/21/2016	19:46	06:20	04:30	06:18	20:04	21:54
4/22/2016	20:43	06:50	04:28	06:17	20:06	21:55
4/23/2016	21:40	07:21	04:25	06:15	20:07	21:57
4/24/2016	22:36	07:57	04:23	06:13	20:08	21:59
4/25/2016	23:30	08:36	04:21	06:12	20:09	22:01
4/26/2016		09:21	04:19	06:10	20:11	22:03
4/27/2016	00:21	10:10	04:17	06:09	20:12	22:04
4/28/2016	01:09	11:06	04:15	06:07	20:13	22:06
4/29/2016	01:53	12:06	04:13	06:06	20:14	22:08
4/30/2016	02:34	13:10	04:11	06:04	20:15	22:10

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

## Items of Interest This Month

- Good month to see Mercury after sunset.  
Mars starts to look good this month, too.  
4/1 Io & Europa pass one another 10:45 PM  
4/2 Europa & Ganymede close all night. Red spot centered 10:34 PM  
4/4 Europa & Io close all night. Double shadow transit 2:37 – 3:19 AM on 4/5  
4/6 Io shadow transit 7:32 – 9:48 PM  
4/10 Moon occults Aldebaran 2:32 in the afternoon. Reappearance 3:33. Good chance to see a star in daytime (and then not see it for an hour).  
4/11 Io & Europa pass Callisto 9:00 – 11:00 PM  
4/13 Io shadow transit 9:27 – 11:42 PM  
4/14 Red spot centered 10:28 PM  
**4/15 First Quarter Friday Star Party.**  
4/17 Moon near Jupiter tonight.  
4/18 Mercury at greatest eastern elongation (visible in the west after sunset).  
4/20 Io shadow transit 11:21 PM – 1:36 AM  
4/22 Europs shadow transit 9:09 – 11:56 PM  
4/24 Ganymede eclipse 10:52 PM  
4/25 Moon near Saturn and Mars  
4/26 Red Spot centered 10:22 PM  
4/27 All four moons converge on Jupiter. Io and shadow transit early AM on 28th.  
4/29 Europa shadow transit 11:46 PM–2:32 AM