

# IO – November 2016

## The Newsletter of the Eugene Astronomical Society

PO Box 7264  
Springfield, OR 97475

Next Meeting: *Thursday, November 17*

### **Making Telescope Mirrors**

*By Jerry Oltion (and company)*

(Summary by Jerry Oltion)

For our November 17th meeting, the group of mirror makers who have been meeting on Sundays to grind mirrors together will give a presentation on the process of mirror making. They will bring their project mirrors for demonstration and will talk about the stages each mirror must pass through as it goes from a flat glass disk to a parabolic curved mirror. It's a long, involved process, but when taken a step at a time it's not only doable, but quite easy. Our intrepid group of mirror makers will show you how it's done from beginning to end.

## 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 November First Quarter Friday was held at the College Hill Reservoir on November 4. The skies only cooperated long enough to observe a few objects (mostly the Moon, Mars, Albireo, Almach [Gamma Andromedae], M15, and M31), but 75 people stopped by to observe through five telescopes. (Many of the visitors were from UO's American English Institute.)

Our next First Quarter Friday is scheduled for December 9<sup>th</sup>.

First Quarter Fridays have been scheduled for 2017. The chosen dates are:

January 6 (64% lit)	February 3 (49% lit)	March 3 (34% lit)	March 31 (21% lit)
May 5 (80% lit)	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)		

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



## Membership Dues are Due!

EAS membership runs from *October* thru *September*. If you haven't renewed already, please bring your payment to the meeting or mail your dues to the Eugene Astronomical Society, PO Box 7264, Springfield, OR 97475. Dues are still the same low \$25 they've been for years. Make your checks payable to Eugene Astronomical Society.

## October Meeting Report

Our October 20th meeting featured a talk on astrophotography and image stacking, given by Jeff Phillips of EAS.

Jeff discussed the use of a video camera for planetary astrophotography; even a \$300 camera can yield excellent images, as demonstrated by the many superb photos Jeff showed us. These were taken through various telescopes, with individual frames culled from the video and then stacked to eliminate noise. Jeff's fine image of Saturn was taken from 6000 frames imaged through his C11, while Mars was taken from 20,000 frames through a C5 (Jeff estimated that only 10% of the frames were usable). As he noted, even a 90mm scope can image the polar caps of Mars and Jupiter's Great Red Spot.

Other elements of planetary astrophotography involved pre-imaging preparation (cooling the telescope via bags of ice, to bring it to thermal equilibrium with the outside air) and post-imaging processing (using Registax to stack and sharpen the final images); Jeff gave a walk-through of some of Registax's basic functions. He also discussed the use of an atmospheric dispersion corrector, which helps to eliminate color fringing on the planets (and even works for visual use). He concluded with a short Mars movie he had captured, and a lively discussion of astrophotography technique and equipment followed.

Thanks, Jeff!

The October meeting opened with the election of officers for 2017. Diane Martin and Jerry Oltion will remain as President and Secretary, respectively. Jacob Strandlein and Mel Bartels have stepped down from the EAS Board of Directors, with their positions filled by Andy Edelen and Jim Murray. John Loper will also remain on the Board of Directors.

A number of EAS members have been working diligently on grinding their own telescope mirrors; here is a sampling of photos from their November 6<sup>th</sup> workshop. All photos by Jerry and Kathy Olton.



Top: (left to right) Bob Andersen, Kathy Olton, Jim Murray, Annette Brieske, and Mercedes Rathswohl. Bob and Annette are "hogging out" their mirrors with ring tools.

Bottom: chiseling the hydrostone out from between the tiles on Randy's tile tool. (Amazingly, nobody got stabbed.)





Above: Mike Curtin grinding the secondary and tertiary mirrors together to make a matched pair for his Schiefspiegler telescope.

Right: Jim Murray beginning the fine-grinding process on his mirror with 120 grit and a tile tool.





Above: The Moon and Jupiter rising. *Photo by Alan Gillespie.*

Below: The Moon and Jupiter. *Photo by Jeff Phillips.*







Southern Orion. *Photo by Alan Gillespie.*

## Sun & Moon rise and set for November

Date	Moon Rise	Moon Set	Twilight Begin	Sun Rise	Sun Set	Twilight End
-----	-----	-----	-----	-----	-----	-----
11/1/2016	09:29	19:39	06:12	-----	18:02	19:39
11/2/2016	10:24	20:18	06:13	07:50	18:00	19:38
11/3/2016	11:16	21:02	06:14	07:51	17:59	19:37
11/4/2016	12:06	21:51	06:15	07:52	17:58	19:36
11/5/2016	12:51	22:46	06:17	07:54	17:56	19:35
11/6/2016	12:34	22:44	05:18	07:55	16:55	18:34
11/7/2016	13:12	23:47	05:19	06:56	16:54	18:33
11/8/2016	13:48		05:20	06:58	16:53	18:32
11/9/2016	14:22	00:52	05:21	06:59	16:52	18:31
11/10/2016	14:56	02:01	05:22	07:00	16:51	18:30
11/11/2016	15:30	03:13	05:23	07:02	16:49	18:29
11/12/2016	16:06	04:27	05:25	07:03	16:48	18:28
11/13/2016	16:45	05:43	05:26	07:04	16:47	18:27
11/14/2016	17:30	06:59	05:27	07:06	16:46	18:27
11/15/2016	18:20	08:13	05:28	07:07	16:45	18:26
11/16/2016	19:16	09:22	05:29	07:08	16:45	18:25
11/17/2016	20:17	10:24	05:30	07:10	16:44	18:24
11/18/2016	21:21	11:17	05:31	07:11	16:43	18:24
11/19/2016	22:26	12:02	05:32	07:12	16:42	18:23
11/20/2016	23:30	12:40	05:33	07:13	16:41	18:23
11/21/2016		13:13	05:34	07:15	16:41	18:22
11/22/2016	00:32	13:43	05:36	07:16	16:40	18:22
11/23/2016	01:32	14:11	05:37	07:17	16:39	18:21
11/24/2016	02:32	14:38	05:38	07:19	16:39	18:21
11/25/2016	03:30	15:06	05:39	07:20	16:38	18:20
11/26/2016	04:28	15:34	05:40	07:21	16:37	18:20
11/27/2016	05:26	16:05	05:41	07:22	16:37	18:20
11/28/2016	06:23	16:39	05:42	07:23	16:36	18:19
11/29/2016	07:19	17:17	05:43	07:25	16:36	18:19
11/30/2016	08:13	18:00	05:44	07:26	16:36	18:19
				07:27		



### 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 November

1<sup>st</sup> Q



Full



Last Q



New



Nov 7, 11:51 AM	Nov 14, 5:52 AM	Nov 21, 12:33 AM	Nov 29, 4:18 AM
Mercury Set: 5:08 PM	Mercury Set: 5:10 PM	Mercury Set: 5:17 PM	Mercury Set: 5:30 PM
Venus Set: 6:55 PM	Venus Set: 7:03 PM	Venus Set: 7:14 PM	Venus Set: 7:29 PM
Mars Set: 9:40 PM	Mars Set: 9:40 PM	Mars Set: 9:40 PM	Mars Set: 9:41 PM
Jupiter Rise: 4:04 AM	Jupiter Rise: 3:43 AM	Jupiter Rise: 3:22 AM	Jupiter Rise: 2:58 AM
Saturn Set: 6:33 PM	Saturn Set: 6:08 PM	Saturn Set: 5:44 PM	Saturn Set: 5:16 PM
Uranus Set: 4:58 AM	Uranus Set: 4:30 AM	Uranus Set: 4:01 AM	Uranus Set: 3:28 AM
Neptune Set: 1:18 AM	Neptune Set: 00:50 AM	Neptune Set: 00:22 AM	Neptune Set: 11:47 PM
Pluto Set: 8:42 PM	Pluto Set: 8:15 PM	Pluto Set: 7:48 PM	Pluto Set: 7:18 PM

## Items of Interest This Month

**11/4: First Quarter Friday star party**

11/5 -6: Daylight Savings Time ends

11/11-12: Taurid meteor shower peaks

11/16-18 Leonid meteor shower peaks

**11/17: EAS meeting, 7:00 @ The Science Factory**

