

IO – December 2016

The Newsletter of the Eugene Astronomical Society

PO Box 7264
Springfield, OR 97475

Next Meeting: *Thursday, December 15*

Potluck and Swap Meet

(Summary by Jerry Oltion)

The December meeting is our annual potluck and swap meet. Bring food to share and gear to sell! We'll meet in the conference room to the right side of the exhibit hall. We may set up our gear in the exhibit hall, so bring spare folding tables if you have any.

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 9th. Be sure to bring your scope—the weather will certainly be clear!*

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.

*Statements in this section may not be subject to the laws of objective reality.



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.

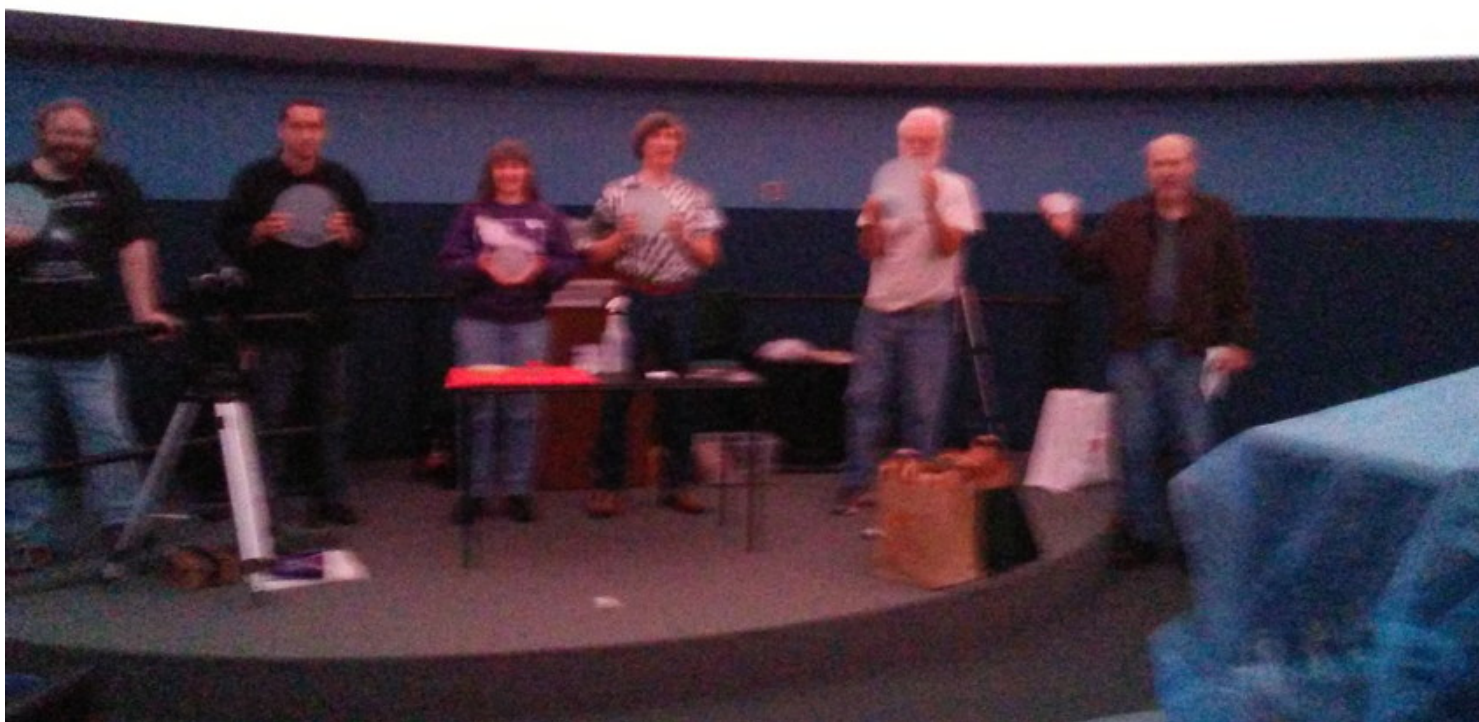
November Meeting Report

Our November 17th meeting featured a talk and demonstration on the fine art of mirror grinding, with several club members bringing the mirrors they've been working on in their Sunday workshop.

Jerry led the discussion, walking the audience through the various steps needed to get a mirror from blank stage to finished, polished, and aluminized mirror. Essentially, the process involves grinding through three grits (80, 120, 220), polishing through three grits (25, 15, and 9 micron), and pitch for the final polish. Kathy gave a demonstration of the use of 220 grit with a 6" f/8 in progress (the technique for 120 grit is the same, using a handmade tile tool against the mirror). Most of the mirrors club members are making are f/4; Mike Curtin is making a long-focus Schiefspiegler off-axis refractor, though, and Kathy is making a 6" f/8 planet-killer scope.

Jerry also explained the process of making both a tile tool and a pitch lap, both essential equipment in grinding and polishing out a mirror to the requisite depth and curve.

Thanks, Jerry, Kathy, and those who brought their mirrors and participated in the discussion!

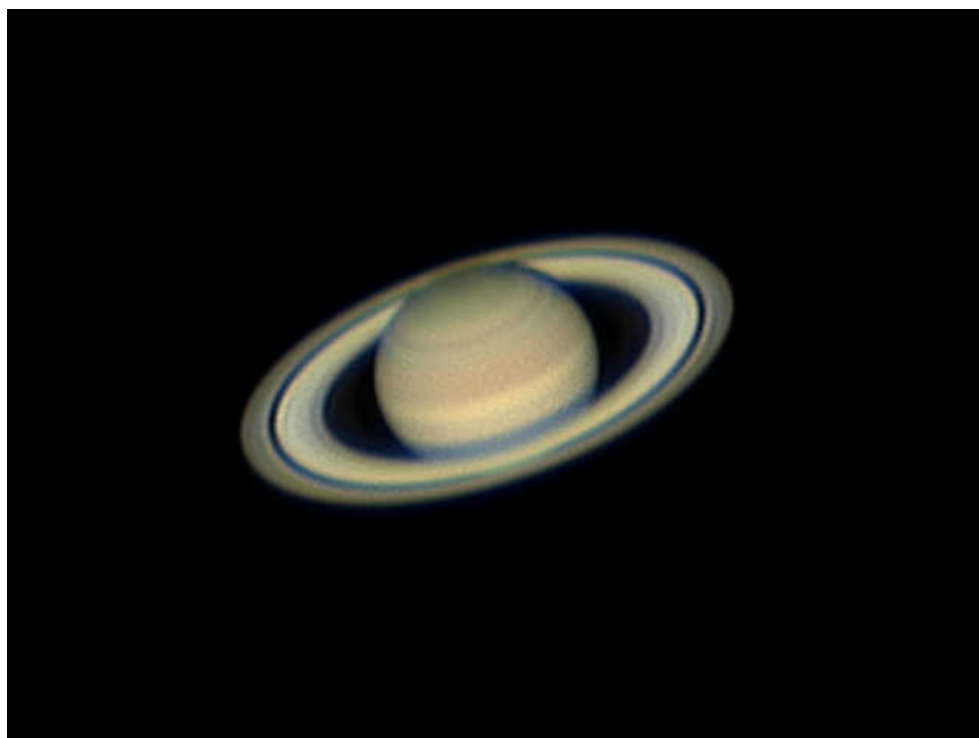


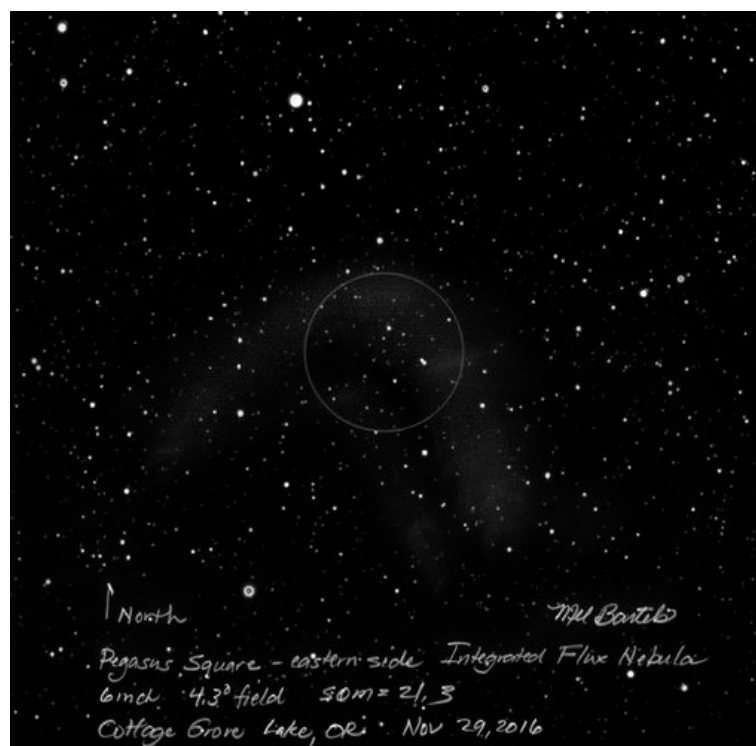
(Several) members of the mirror-making workshop and discussion. *Photo by Bruce Hindrichs.*



Above: The gibbous Moon, October 17. *Photo by Alan Gillespie.*

Below: Saturn. *Photo by Jeff Phillips.*





Sketches of Integrated Flux Nebulae: in the Great Square of Pegasus (top);
in the Circlet of Pisces (bottom). *Sketches by Mel Bartels.*

Sun & Moon rise and set for December

| Date | Moon Rise | Moon Set | Twilight Begin | Sun Rise | Sun Set | Twilight End |
|------------|-----------|----------|----------------|----------|---------|--------------|
| 12/1/2016 | 09:04 | 18:47 | 05:45 | 07:28 | 16:35 | 18:19 |
| 12/2/2016 | 09:51 | 19:40 | 05:46 | 07:29 | 16:35 | 18:18 |
| 12/3/2016 | 10:34 | 20:37 | 05:46 | 07:30 | 16:35 | 18:18 |
| 12/4/2016 | 11:14 | 21:37 | 05:47 | 07:31 | 16:35 | 18:18 |
| 12/5/2016 | 11:50 | 22:40 | 05:48 | 07:32 | 16:34 | 18:18 |
| 12/6/2016 | 12:23 | 23:46 | 05:49 | 07:33 | 16:34 | 18:18 |
| 12/7/2016 | 12:56 | | 05:50 | 07:34 | 16:34 | 18:18 |
| 12/8/2016 | 13:28 | 00:54 | 05:51 | 07:35 | 16:34 | 18:18 |
| 12/9/2016 | 14:01 | 02:04 | 05:52 | 07:36 | 16:34 | 18:18 |
| 12/10/2016 | 14:37 | 03:16 | 05:52 | 07:37 | 16:34 | 18:19 |
| 12/11/2016 | 15:17 | 04:30 | 05:53 | 07:38 | 16:34 | 18:19 |
| 12/12/2016 | 16:03 | 05:45 | 05:54 | 07:39 | 16:34 | 18:19 |
| 12/13/2016 | 16:56 | 06:57 | 05:55 | 07:39 | 16:34 | 18:19 |
| 12/14/2016 | 17:56 | 08:04 | 05:55 | 07:40 | 16:35 | 18:19 |
| 12/15/2016 | 19:00 | 09:03 | 05:56 | 07:41 | 16:35 | 18:20 |
| 12/16/2016 | 20:07 | 09:54 | 05:57 | 07:41 | 16:35 | 18:20 |
| 12/17/2016 | 21:13 | 10:37 | 05:57 | 07:42 | 16:36 | 18:20 |
| 12/18/2016 | 22:18 | 11:13 | 05:58 | 07:43 | 16:36 | 18:21 |
| 12/19/2016 | 23:21 | 11:46 | 05:58 | 07:43 | 16:36 | 18:21 |
| 12/20/2016 | | 12:15 | 05:59 | 07:44 | 16:37 | 18:22 |
| 12/21/2016 | 00:22 | 12:42 | 05:59 | 07:44 | 16:37 | 18:22 |
| 12/22/2016 | 01:22 | 13:10 | 06:00 | 07:45 | 16:38 | 18:23 |
| 12/23/2016 | 02:20 | 13:38 | 06:00 | 07:45 | 16:38 | 18:23 |
| 12/24/2016 | 03:18 | 14:07 | 06:01 | 07:46 | 16:39 | 18:24 |
| 12/25/2016 | 04:15 | 14:40 | 06:01 | 07:46 | 16:40 | 18:25 |
| 12/26/2016 | 05:12 | 15:16 | 06:02 | 07:46 | 16:40 | 18:25 |
| 12/27/2016 | 06:07 | 15:57 | 06:02 | 07:47 | 16:41 | 18:26 |
| 12/28/2016 | 07:00 | 16:43 | 06:02 | 07:47 | 16:42 | 18:27 |
| 12/29/2016 | 07:49 | 17:34 | 06:02 | 07:47 | 16:43 | 18:27 |
| 12/30/2016 | 08:34 | 18:30 | 06:03 | 07:47 | 16:44 | 18:28 |
| 12/31/2016 | 09:16 | 19:30 | 06:03 | 07:47 | 16:44 | 18:29 |



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 December

1st Q



Full



Last Q



New



| Dec 7, 1:03 AM | Dec 13, 4:06 PM | Dec 20, 5:56 PM | Dec 28, 10:53 PM |
|-----------------------|-----------------------|-----------------------|-----------------------|
| Mercury Set: 5:47 PM | Mercury Set: 5:56 PM | Mercury Set: 5:46 PM | Mercury lost in Sun |
| Venus Set: 7:47 PM | Venus Set: 8:00 PM | Venus Set: 8:16 PM | Venus Set: 8:33 PM |
| Mars Set: 9:41 PM | Mars Set: 9:42 PM | Mars Set: 9:43 PM | Mars Set: 9:43 PM |
| Jupiter Rise: 2:33 AM | Jupiter Rise: 2:15 AM | Jupiter Rise: 1:52 AM | Jupiter Rise: 1:26 AM |
| Saturn lost in Sun | Saturn lost in Sun | Saturn Rise: 6:58 AM | Saturn Rise: 6:31 AM |
| Uranus Set: 2:56 AM | Uranus Set: 2:32 AM | Uranus Set: 2:04 AM | Uranus Set: 1:32 AM |
| Neptune Set: 11:16 PM | Neptune Set: 10:53 PM | Neptune Set: 10:26 PM | Neptune Set: 9:55 PM |
| Pluto Set: 6:47 PM | Pluto Set: 6:25 PM | Pluto Set: 5:58 PM | Pluto Set: 5:28 PM |

Items of Interest This Month

DECEMBER

Venus showing distinct phase, going from 68% to 56% lit this month.

12/7 Earliest sunset (4:34 pm)

12/9 First Quarter Friday star party

12/10 Mercury at greatest eastern elongation, 21° from Sun (visible in evening)

12/13 Moon occults Aldebaran 7:20 - 8:08 pm. High in eastern sky (33 - 40° alt.)

12/13-14 Geminid meteor shower (alas, full Moon will wash it out)

12/21 Winter solstice 2:44 am. Longest night of the year

12/31 Mars within 0.1° of Neptune (best conjunction in 700 years)

