

IO – June 2017

The Newsletter of the Eugene Astronomical Society

PO Box 7264
Springfield, OR 97475

Next Meeting: *Thursday, June 15*

Scott Fisher: Galaxy evolution and Pine Mountain Observatory

At our June 15th meeting, Dr. Scott Fisher (University of Oregon/Pine Mountain Observatory) will be talking about the work of his undergraduate research group regarding galaxy evolution, and will conduct an informal Q&A session about Pine Mountain Observatory (among other subjects). Dr. Fisher would also like to ask the club a few questions about small telescopes. He says, "We are looking to purchase a new 14" or 16" and it would be great to hear what the club thinks. On one end, we are looking at a 14" Planewave CDK, on the other end, maybe a Celestron EdgeHD." He would be interested in any thoughts we have on the subject.

Dr. Fisher has given several talks with us before and they have all been fascinating, full of fun anecdotes about his time as a professional astronomer working with the Gemini telescopes on Mauna Kea and in Chile. Be sure to be early to the meeting to get a seat!

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) First Quarter Friday for June went ahead despite some clouds that interfered with observing. Between clouds, the half-dozen scopes present were pointed at the Moon and Jupiter, Albireo and Mizar, and even M13 when conditions and clouds allowed it. About 20 members of the public joined EAS at the reservoir; Jerry notes that the club sold 48 pairs of eclipse glasses at the event!

The remainder of our First Quarter Fridays for 2017 are:

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.

NOTE: EWEB will be closing the reservoir from June 23 through July 5th to prevent people from setting off fireworks there. We have a First Quarter Friday star party scheduled for June 30th, so we'll have to set up on the north reservoir rather than the main reservoir. We've done this before and it works relatively well.



May Meeting Report

At our May 17th meeting, Andy Edelen gave a talk on observing programs, primarily those offered by the Astronomical League. As members of EAS, we are also members of the AL, which is an umbrella organization that consists of astronomy clubs across North America.

The AL's observing programs offer something for every astronomical interest (full list: <https://www.astroleague.org/al/obsclubs/AlphabeticObservingClubs.html>). There are solar programs, planetary programs, deep-sky programs, historical programs that reproduce the observations of Galileo, and even a radio-astronomy program that teaches the participant how to build and use a radio telescope. Many of the programs allow for both visual observers and imagers to participate.

But why do a set observing program, which may require taking notes and/or making sketches at the eyepiece? For one, it may give an amateur astronomer the interest in observing objects that he or she hasn't seen before; while the brightest objects are always beautiful and easy to see in less-than-perfect conditions, there are countless objects in the universe within the grasp of small telescopes. It may take some time to hunt these down, but along the way, an observer will learn how to find fainter or overlooked objects, many of which are as striking to observe as the best-known showpieces of the sky.

Second, while taking notes or making sketches may sound too much like work (and we do this because we enjoy it, right?), notes don't need to be extensive and sketches don't need to be works of art. Most of the AL programs require information like date/time, place of observation, sky conditions, equipment used, and a short (a sentence or two) description of the object, e.g. "bright, small, oval-shaped, in the middle of a small triangle of dim stars." And taking some brief notes on objects actually encourages your eyes to see more at the eyepiece. (Be sure to consult the rules for each program, as each has its own variations on the necessary information.)

Third, it's easy to talk oneself out of going observing on a night that's clear and free from other obligations. There's no time limit on completing the AL programs, but simply beginning one may be encouragement to use the clear nights that we do get here in Oregon. The pin and certificate awarded upon completion of an observing program aren't even the biggest reward in finishing a program—the biggest reward is having gone out and observed the skies, learning a little bit more about the Universe we live in.

EAS in the Community

The EAS summer outreach schedule hurtles onward, with two events in recent weeks and many more to follow!

John Walley gave an astronomy presentation at the Fall Creek Sky Camp on May 31st. This event was for Dos Rios Elementary School. Although the clouds didn't cooperate, John was able to talk about the 2017 solar eclipse, and his slideshow featured the last such eclipse in Oregon (in 1979).

Mike Smith also discussed the upcoming eclipse with a group of interested kids, this time at Houston Elementary School. The students belonged to 5th-grade classes at Houston; Mike taught them about the eclipse and solar safety and gave them looks at the Sun with eclipse glasses and filtered binoculars.

Thanks, John and Mike!

Two other events are new to the outreach schedule for July. The annual STEAM Festival at the Lane County Fairgrounds is set to take place on July 22nd from 11AM-8PM (this has in the past been a multi-day event). EAS has traditionally provided a solar telescope (or three) and had several members in the Auditorium answering questions and manning some small exhibits.

In addition, Camp Lutherwood (in Cheshire) has requested an astronomy presentation for July 13th, involving 12-20 5th and 6th graders. Camp Lutherwood has a 44-acre property with a new stargazing platform and a telescope of unknown condition and type.

Other upcoming events for EAS include 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; <bhighlander123@yahoo.com>) to volunteer.



Mike Smith gets the kids at Howard Elementary School to look at the Sun safely. *Photos by Mike Smith.*

Incoming and Outgoing Telescopes

by Jerry Olton

The EAS has received two telescope donations in the last week: a 4.25" f/10 Edmund Scientific Newtonian reflector and an 8" f/10 orange-tube Celestron Schmidt-Cassegrain. Both telescopes arrived in good condition and tested out well.

The SCT will join another nearly identical SCT in our lending library. These are both excellent telescopes, providing tack-sharp images at high magnification. Both have equatorial wedges and tracking motors, so they will stay locked on target pretty much indefinitely. With good polar alignment they can even be used for photography. They will run off house current or 12 volts, so you can run them from the wall if you observe in your back yard or from your car if you take them out into the field. If you haven't used a Schmidt-Cassegrain scope before, you should check one of these out. They're phenomenal scopes, the very model whose high quality made SCTs as popular as they are today.

The 4.25" reflector is also a very good telescope. Jon Schwartz used to do a lot of observing with one just like it, regularly finding objects that others were observing in their 8" and 10" and larger scopes. At f/10 it gives crisp images of anything within its light grasp, and it's surprising how many objects are within the grasp of a 4.25" scope.

Of course it came on the shaky equatorial mount that was typical for its day (the mid 1970s), so Jerry Olton is building a Dobsonian base for it. That will make the scope much easier to use.

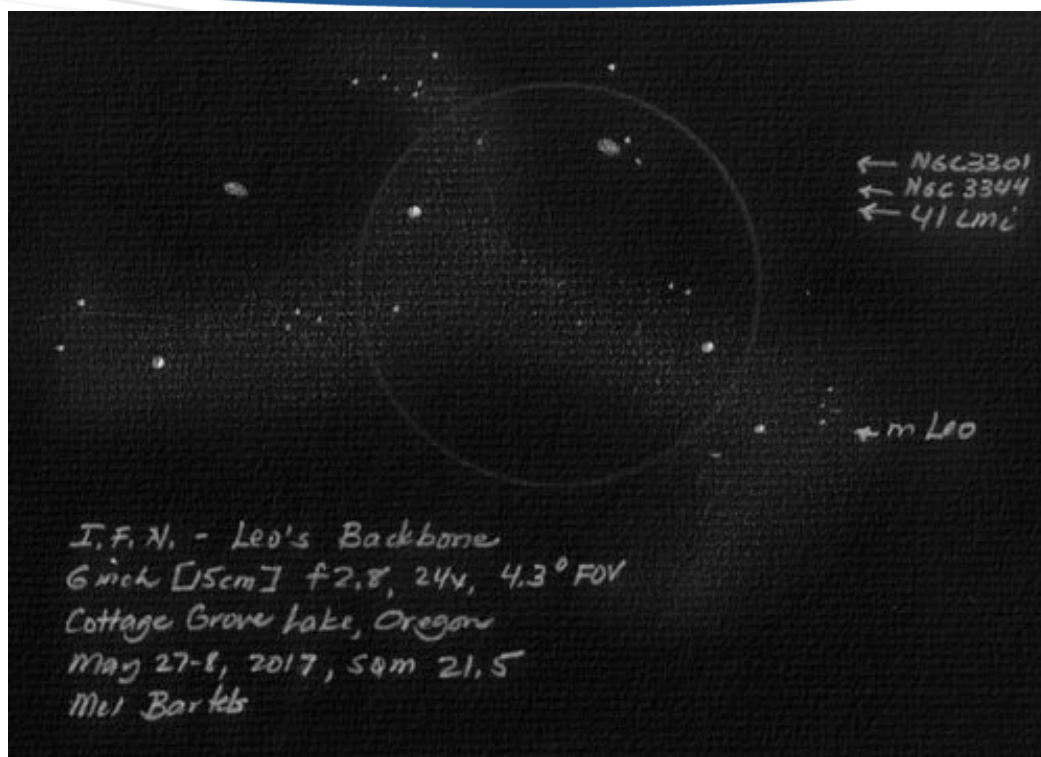
The club already has two 4.5" scopes in our lending library, so this scope will be given away at the Dark Sky Star Party in Dexter on July 22nd. It should make an excellent introductory scope for some lucky youngster.

We're also giving away another 8" Dobsonian scope at the same star party. This is an Orion Deep Space Explorer, the model that preceded Orion's current Skyquest dobs. We have had this scope in our lending library for several years and it has served us well, but we now have a brand new 8" Skyquest for the lending library so we're passing along the Deep Space Explorer to another lucky youngster at the star party.

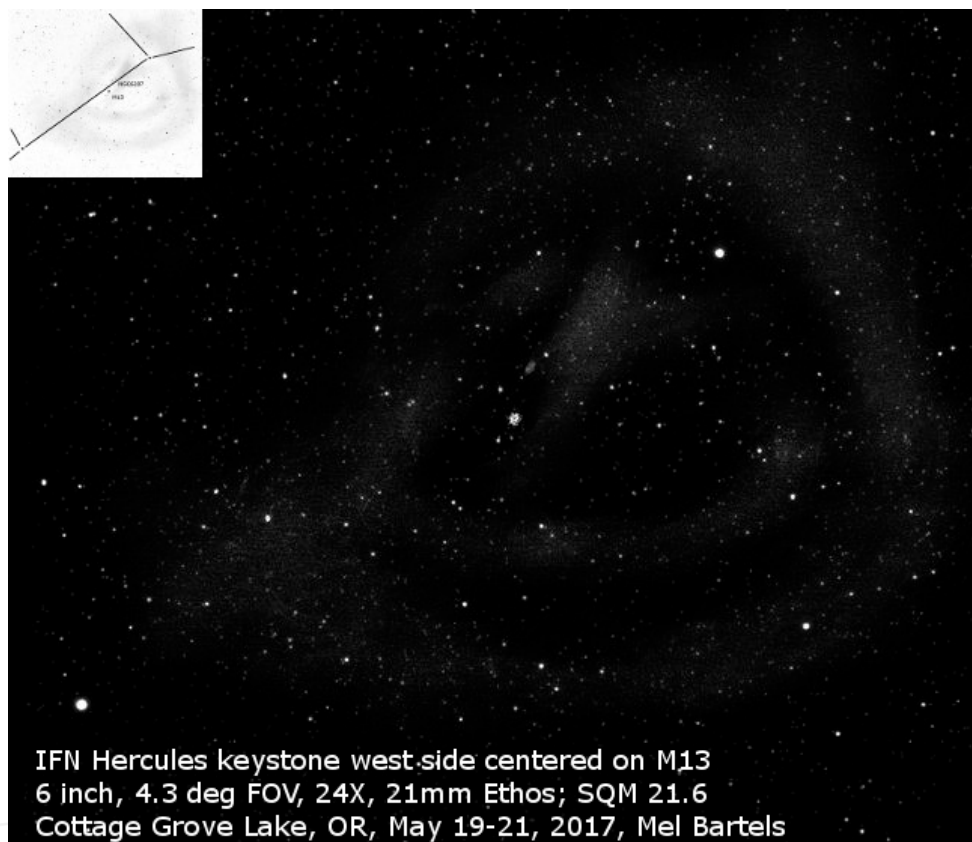
The summer observing season is here, and the EAS has scopes to lend to club members. If you'd like to borrow a telescope, have a look at what we have to offer on our website (www.eugeneastro.org) and contact Jerry Olton at [j.olton \(at\) gmail.com](mailto:j.olton@gmail.com) to find out which ones are available.



Clockwise from top left: EAS' new donated 8" Celestron SCT; the 4-1/4" Edmund reflector (Dobsonian base by Jerry Oltion); the 8" Orion Dobsonian. The latter two scopes will be giveaways at the Dexter Star Party in July. *Photos by Jerry Oltion.*



Above: Integrated Flux Nebula in Leo (Leo's Backbone). Below: Integrated Flux Nebula near M13. *Sketches by Mel Bartels.*





Vidcam images of spring galaxies. *Top*: M101 in Ursa Major. *Below*: M64 in Coma Berenices. *Photos by Jon Schwartz.*



Above: Globular cluster M5 in Serpens. Photo by Bill Basham.

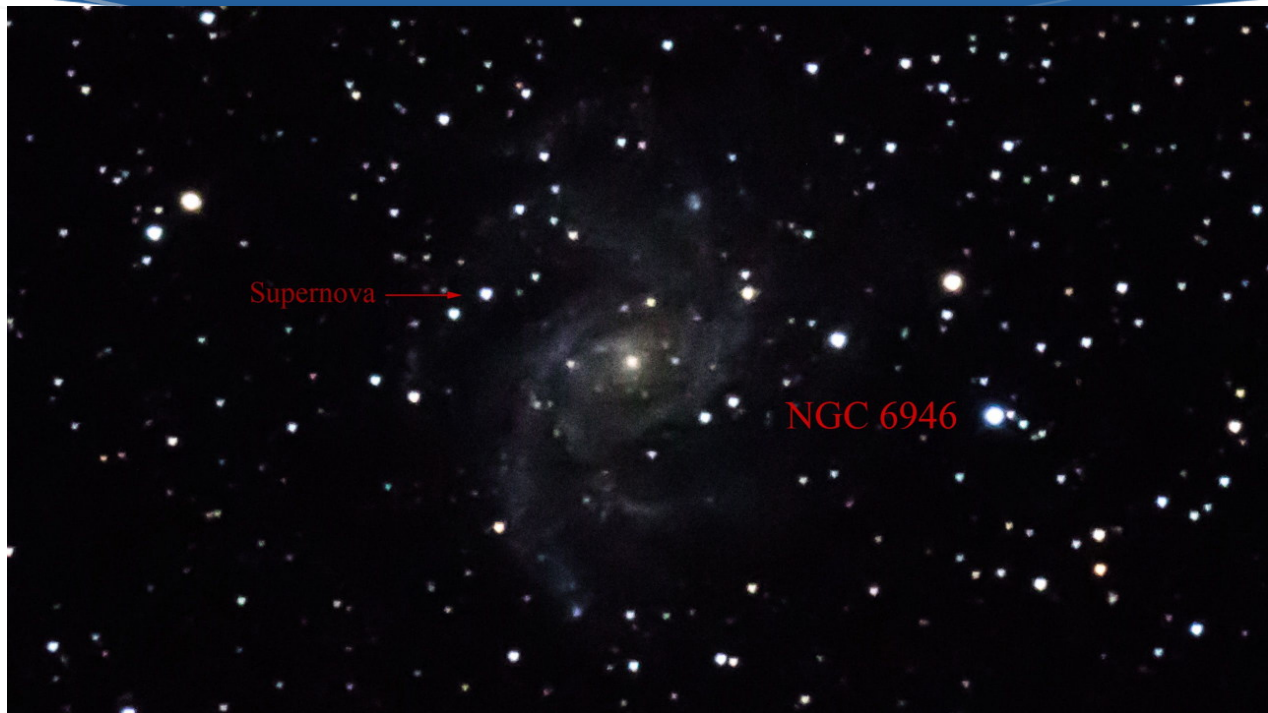
Below: The North America and Pelican Nebulae. Photo by Alan Gillespie.





*Above: The western Veil Nebula in Cygnus. Photo by Bill Basham.
Below: M51 (top left) and M101 (bottom right). Photo by Alan Gillespie.*





Above: The supernova in NGC 6946. Photo by Bill Basham.

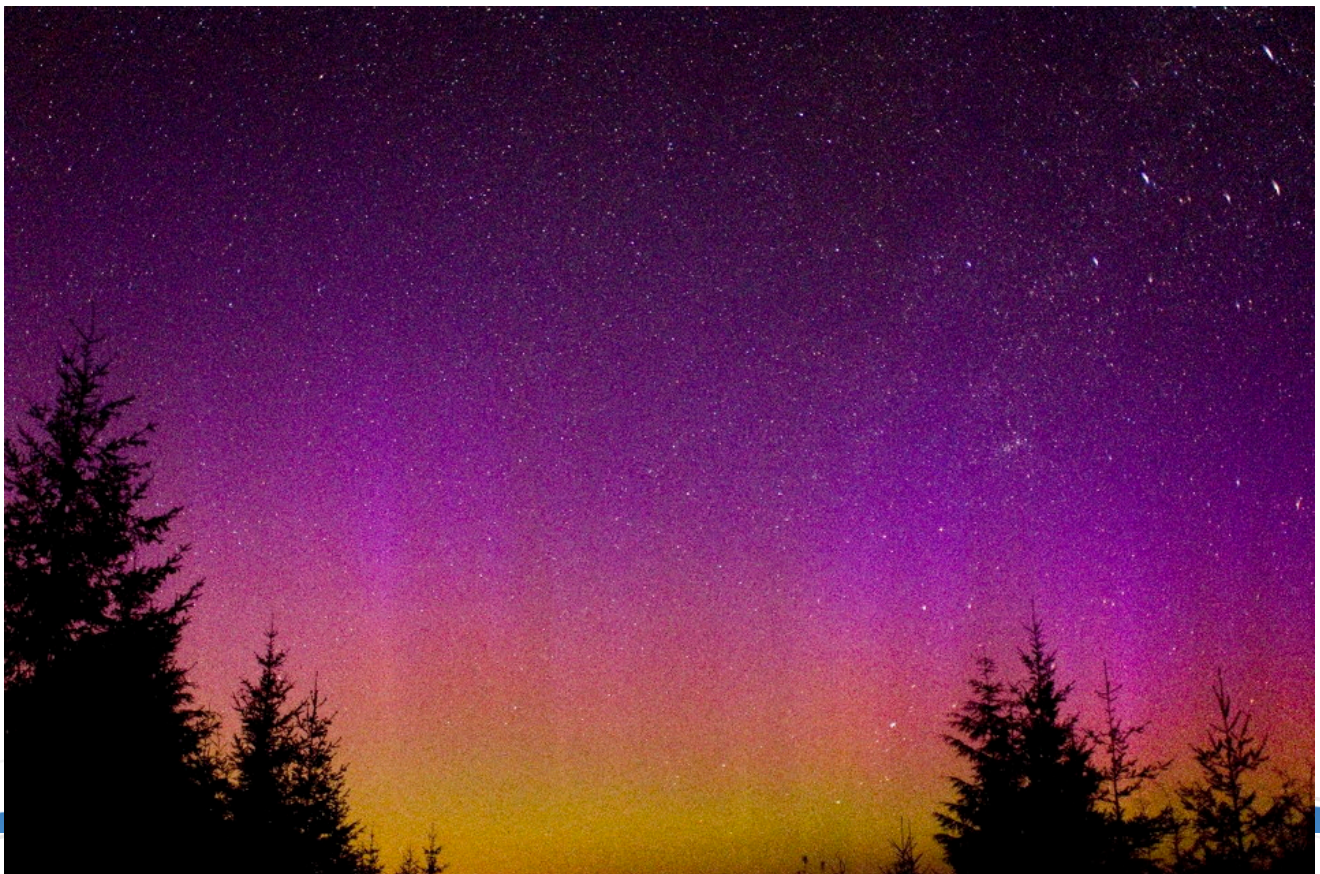
Below: Saturn and the Milky Way from Eagle's Ridge, May 21st. Photo by Alan Gillespie.





Above: Iridium Flare and Milky Way from Eagle's Ridge, May 19th. Photo by Bill Basham.

Below: The Aurora Borealis from Eagle's Ridge, May 28th. Photo by Alan Gillespie.



Sun & Moon rise and set for June

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

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 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 June

1st Q

Full



Last Q



New



June 1, 5:42 AM	June 9, 6:10 AM	June 17, 4:33 AM	June 23, 7:31 PM
Mercury Rise: 4:41 AM	Mercury Rise: 4:46 AM	Mercury lost in Sun	Mercury Set: 9:19 PM
Venus Rise: 3:35 AM	Venus Rise: 3:24 AM	Venus Rise: 3:14 AM	Venus Rise: 3:08 AM
Mars Set: 10:09 PM	Mars Set: 10:01 PM	Mars Set: 9:52 PM	Mars Set: 9:44 PM
Jupiter Set: 3:11 AM	Jupiter Set: 2:39 AM	Jupiter Set: 2:08 AM	Jupiter Set: 1:45 AM
Saturn Rise: 9:38 PM	Saturn Rise: 9:04 PM	Saturn Set: 5:36 AM	Saturn Set: 5:11 AM
Uranus Rise: 3:31 AM	Uranus Rise: 3:00 AM	Uranus Rise: 2:30 AM	Uranus Rise: 2:07 AM
Neptune Rise: 2:00 AM	Neptune Rise: 1:28 AM	Neptune Rise: 00:57 AM	Neptune Rise: 00:33 AM
Pluto Rise: 11:15 PM	Pluto Rise: 10:43 PM	Pluto Rise: 10:11 PM	Pluto Rise: 9:47 PM

Items of Interest This Month

JUNE

6/10 Io shadow transit right below red spot 9:05 – 11:16 PM. Ganymede shadow transit from 11:20 PM – 1:35 AM.

6/15 Saturn at opposition – up all night

6/16 Neptune within 1.5° of moon in early morning.

6/17 Io shadow transit 11:00 PM – 1:1 AM.

6/20 Moon and Venus within 3° all day. Good chance to find both in daylight.

(Good thing, because this is the shortest night of the year. Summer solstice is at 9:24 PM today.)

6/27 Tiny crescent Moon just misses Regulus 5:30 PM (in daylight)

6/30 First Quarter Friday star party

