Issue 2017-10

IO – October 2017

The Newsletter of the Eugene Astronomical Society

PO Box 7264
Springfield, OR 97475

Next Meeting: *Thursday, October 19th*

Operation Moonwatch

In October of 1957, the Soviet Union sent up Sputnik 1, humanity's first artificial satellite. They designed it to be seen and to be heard: it was a mirror-surfaced ball with a radio beacon inside. But everyone knew they could send up less easily spotted satellites, including nuclear bombs. We needed a way to spot them and track their orbits. Fortunately Harvard astronomer Fred Whipple had been thinking ahead, and had already organized teams of observers in "Operation Moonwatch." Amateur astronomers all over the globe were assembled into teams that watched the night sky for the telltale track of a satellite passing over, and their observations led to accurate calculations of those satellites' orbits.

EAS member Kirk Taylor was part of that organization, and participated in tracking some of the world's first artificial moons. At our October 19th meeting, he will tell us about "Operation Moonwatch" and his role in it. Don't miss this presentation! The meeting starts at 7:00.

Annual dues are also due! The rate is still just $25 for a year's membership. Write checks to Eugene Astronomical Society. We also happily accept cash.

(Summary by Jerry Oltion.)

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

First Quarter Friday on October 29th was a bust. Jerry took his 10" trackball with a new, still-uncoated mirror, and Jeff Lankston brought the 8" orange SCT that he's restoring after it was left out in the weather, but only brief glimpses of the Moon were possible. As Jerry notes, "mostly it was an opportunity for the half dozen of us who showed up to visit for an hour or so, then we all bagged it and went home."

The remainder of our First Quarter Fridays for 2017 are:

October 27 (52% lit) November 24 (34% lit) December 29 (87% lit)

September Meeting Report

At our September 21st meeting, Larry Deckman presented "The Sky's Greatest Hits," a visual spectacle celebrating the many amazing things that go on in the sky overhead. He started with the tiniest phenomena: grains of sand hitting the atmosphere and creating meteors. From there he worked his way through larger and larger scales, showing stunning photos of fireballs, aurorae, rainbows, amazing cloud formations, storm systems, etc. Then he moved out of the atmosphere into the solar system, showing progressively larger and larger comets, including one that took up nearly the entire sky. From there he moved into deeper sky, showing planetary nebulae, star clusters, and whole galaxies. For a grand finale, he showed the Hubble Deep Field image: galaxies as far as we can see.

It was a great program, given to a packed house. Larry has agreed to give another program next February, this one on "Celestial Parallels, an Exploration of Star Patterns Across Time and Space." Should be another great show.

Thanks, Larry!

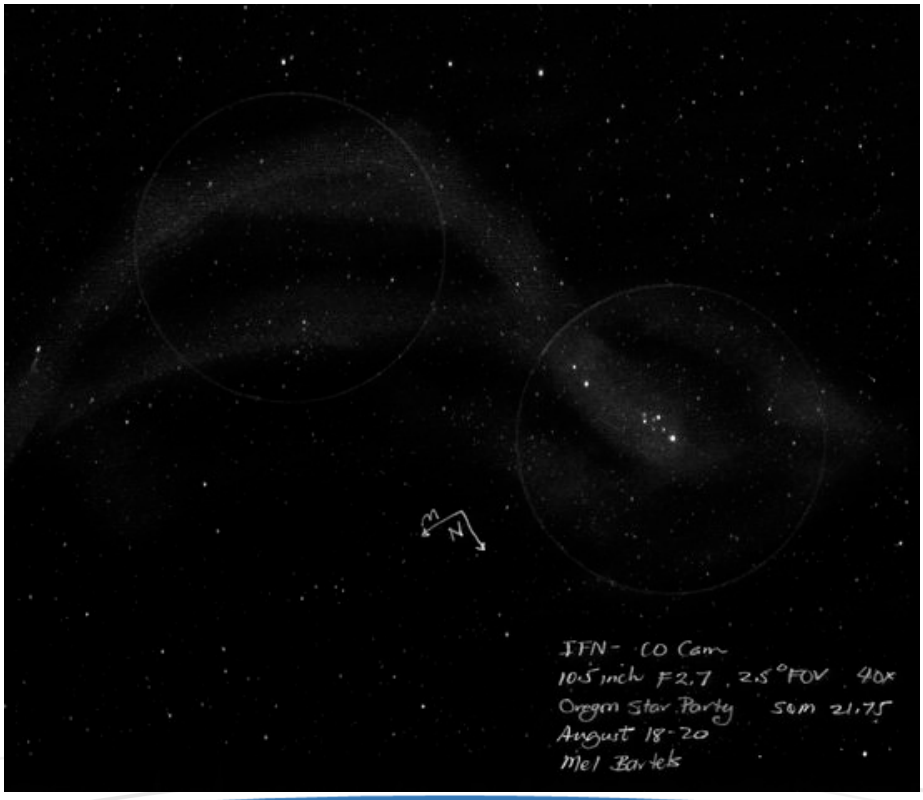
(Summary by Jerry Oltion.)

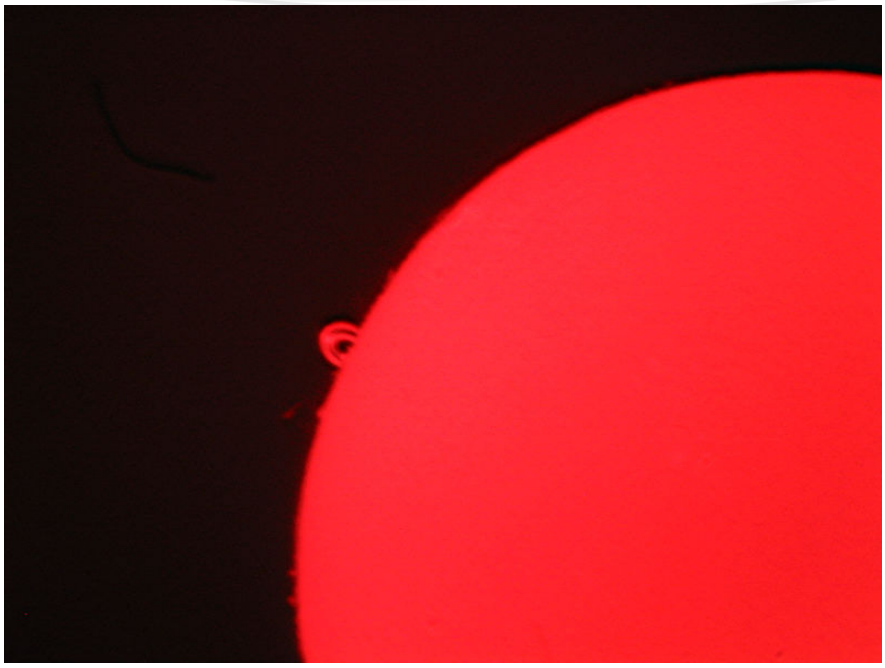
EAS Dues

Annual dues are now due. The rate is still just $25 for a year's membership. Write checks to Eugene Astronomical Society. We also happily accept cash.

EAS Members' Gallery

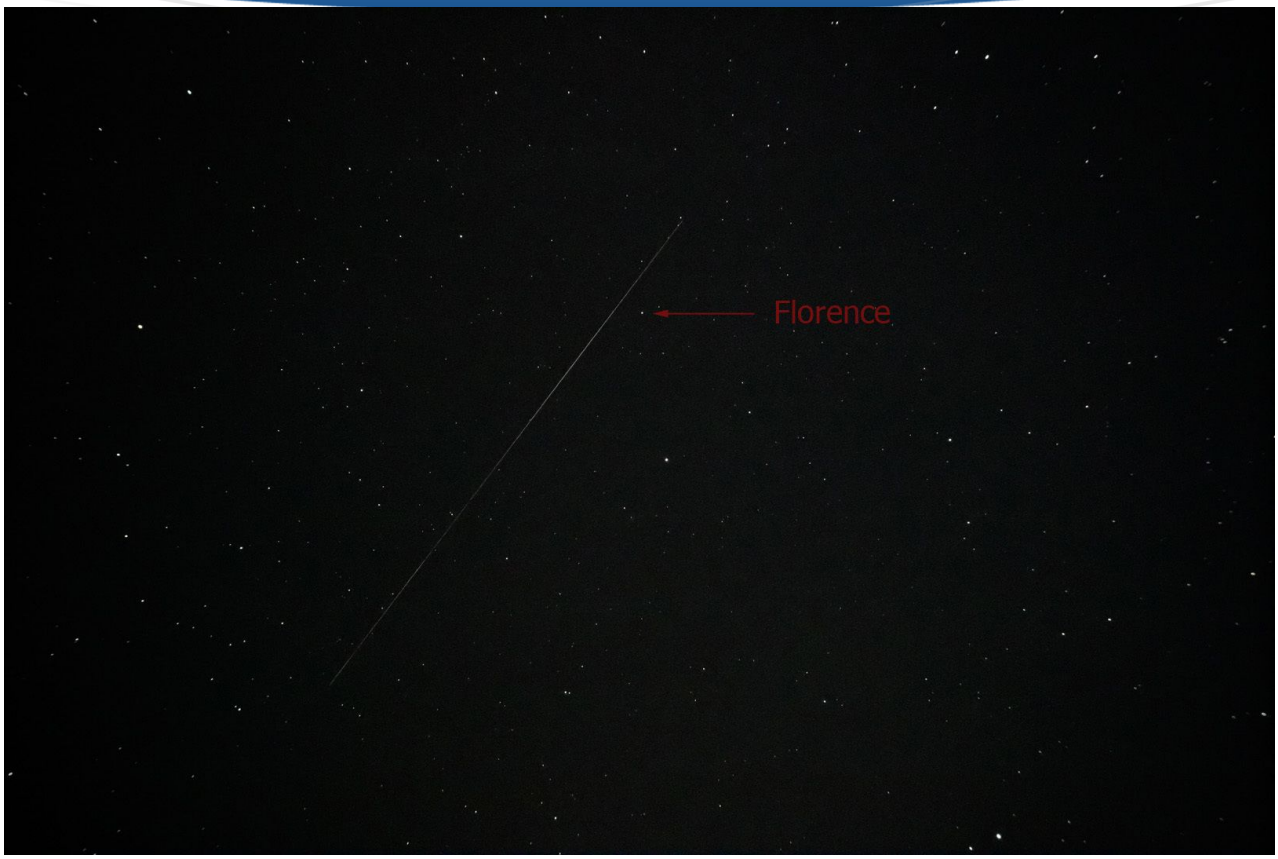
Above: Integrated Flux Nebula ("The Dagger") with Barnard's Galaxy, NGC 6822.
Below: Integrated Flux Nebula near CO Camelopardalis. *Sketches by Mel Bartels.*





Above: Double loop prominence on the Sun's limb. *Photo by Jerry Oltion*.

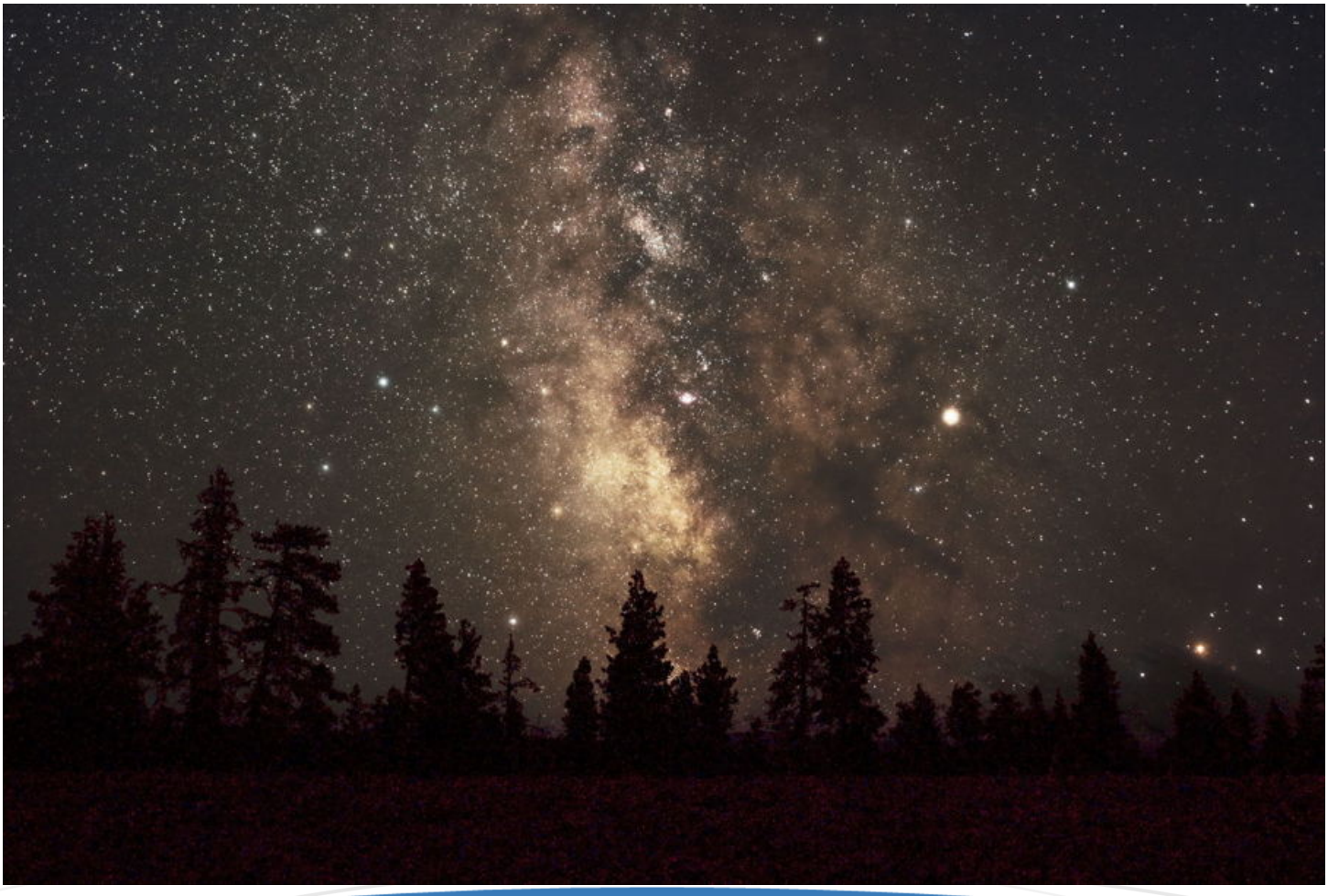
Below: Smoke-reddened Moon. *Photo by Frank Szczepanski*.

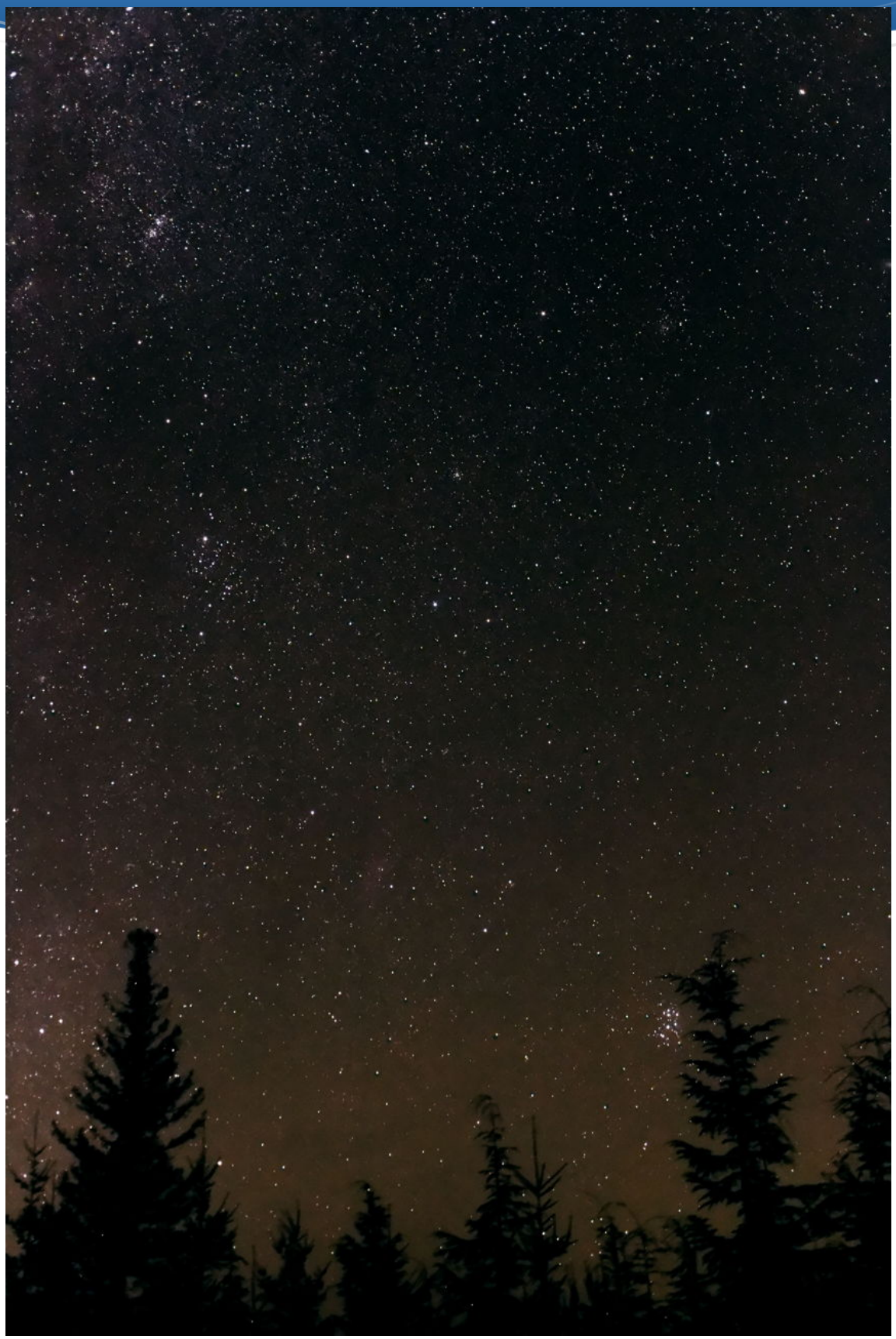


Above: Asteroid Florence and meteor. *Photo by Bill Basham.*

Below: Oregon Star Party sunset. *Photo by Alan Gillespie.*

Above: M31, the Andromeda Galaxy. *Below:* Saturn and the Sagittarius Milky Way. *Photos by Alan Gillespie.*





The autumn Milky Way, from Taurus through Perseus. *Photo by Alan Gillespie*.

Sun & Moon rise and set for October

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

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

Observing In October

Full | Last Q | New | 1st Q

Oct 5, 11:40 AM	Oct 12, 5:25 AM	Oct 19, 12:12 PM	Oct 27, 3:22 PM
Mercury lost in Sun	Mercury lost in Sun	Mercury Set: 6:37 PM	Mercury Set: 6:34 PM
Venus Rise: 5:11 AM	Venus Rise: 5:29 AM	Venus Rise: 5:47 AM	Venus Rise: 6:07 AM
Mars Rise: 5:13 AM	Mars Rise: 5:08 AM	Mars Rise: 5:04 AM	Mars Rise: 4:58 AM
Jupiter Set: 7:25 PM	Jupiter Set: 7:01 PM	Jupiter lost in Sun	Jupiter lost in Sun
Saturn Set: 10:11 PM	Saturn Set: 9:45 PM	Saturn Set: 9:20 PM	Saturn Set: 8:51 PM
Uranus Rise: 7:12 PM	Uranus Rise: 6:44 PM	Uranus Set: 7:40 AM	Uranus Set: 7:07 AM
Neptune Set: 4:43 AM	Neptune Set: 4:14 AM	Neptune Set: 3:46 AM	Neptune Set: 3:14 AM
Pluto Set: 11:57 PM	Pluto Set: 11:30 PM	Pluto Set: 11:03 PM	Pluto Set: 10:32 PM

Items of Interest This Month

OCTOBER

Last good month for Saturn

Also good month for Uranus and Neptune

10/5 Venus and Mars within 0.2° in early morning

10/8-9 Draconid meteor shower

10/15 Regulus very near Moon as moon rises (2:56 AM). Grazing occultation visible farther east

10/20-22 Orionid meteor shower

10/27 First Quarter Friday star party

11/5 Daylight savings time ends

11/11 Moon occults Regulus in daytime (8:36 AM. Reappearance 9:31 AM)