

IO - May 2015

Eugene Astronomical Society
Annual Club Dues \$25
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Secretary: Jerry Olton 541-343-4758
Additional Board members:
Jacob Strandlien, John Loper, Mel Bartels.

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EAS is a proud member of:

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



Next Meeting Thursday, May 21st Modern Astrophotography by Jeff Phillips

Jeff Phillips has been taking some amazing astrophotos recently. Come find out how he does it — and how you can do it, too! About his talk, Jeff says: “10 years ago amateur astronomers revolutionized planetary photography by adapting webcams like the Philips TouCam and new software like Registax to capture short videos of the planets and stack the best frames. Expert imagers like Chris Go of the Philippines were able to take pictures of Jupiter and Saturn that showed more detail than professional astronomers were able to get on film even using the biggest ground-based telescopes. Now there are faster cameras and better software. I got one of the new cameras for Christmas, and the first night out I got some of my best pictures ever. I’ll talk about new cameras and new software, and I’ll show some pictures that compare with pictures that the experts were getting just a few years ago.”



Jupiter 3/8/15 © by Jeff Phillips

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, May 21st at the Science Factory planetarium. Come early to visit before the program starts.

Next First Quarter Friday: May 22nd

Our April 24th star party was clouded out. Our Saturday backup star party had better luck. The sky opened up just about sunset, and we had four scopes and a couple dozen people to look through them. We saw Mercury, Venus, Jupiter, and the Moon, plus several star clusters and galaxies and double stars and asterisms. It was a good night after all!

Our next star party is on May 22nd. First Quarter Fridays are 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 for the rest of 2015. Star parties start at dusk or 6:00, whichever is later.

May 22 (26% lit)	June 26 (75% lit)	July 24 (60% lit)
August 21 (43% lit)	September 18 (28% lit)	October 23 (84% lit)
November 20 (70% lit)	December 18 (55% lit)	

April 16th Meeting Report: Norm Sperling

At our April 16th meeting, Norm Sperling regaled us with his account of the decisions that went into designing the Astroscan, quite possibly the most popular telescope in history. Norm designed it for the Edmund Scientific company back in the 1970s, and he estimates that over 90,000 of them were sold before the mold finally wore out just a couple years ago. He's busy designing a next-generation model to replace it, and he came to Eugene to have a look at Jerry Olton's double-scale Astroscan and his "trackball" tracking system, which he may include as part of the new scope design.

While he was here we asked him to address the club, and he put on a great show to a full house. He spoke about how he deliberately chose to sacrifice high-power planetary views in favor of portability and low setup time, and how the scope evolved in the design process to the familiar ball-and-barrel we all know and love today.

Norm talked about how he "observed observers observing," and how he quickly realized that the complicated setup requirements of the then-common equatorial mounts were frustrating to many would-be astronomers. He set out to create a scope that could be set up in three minutes or less...and succeeded beyond his wildest dreams. The Astroscan takes about 15 seconds to set up and begin observing, a time that Norm points out "can only be beat by 15 seconds."

The ball and socket design came not from frustration with "dob's hole" (which had barely been invented yet), but as a simple, effective way to allow users to hold the telescope in their laps. That gave the scope its "friendly" feel, which is partially responsible for its huge success.

After discussing the Astroscan, Norm then told us about a trip he took to Tanzania to watch a solar eclipse, and how the number of people at the observing site swelled from a few dozen to several hundred — including nearly the entire government of Tanzania — as the word spread. Norm told this story with great humor and suspense, until by the end we were helping him finish his sentences and laughing uproariously as each new dignitary (right up to the President) invited himself to the party.

The eclipse was a success, as was the Astroscan that Norm took to observe it with. As, we hope, will be his new version of this venerable design.



Norm Sperling signed Jerry's Astroscan

Thank You Castle Storage

For the last several years, Castle Storage has generously provided EAS a place to store its telescopes and equipment. EAS would like to thank Castle Storage for their generosity and support for our group. Please give them a call if you need a storage space, and tell your friends. They are great people and offer secure and quality storage units.



Rob Adams 1948 – 2015

An Appreciation by Mel Bartels

Former EAS president and long-time local amateur astronomer Rob Adams passed away on April 7th. Many of us cherish his friendship and wonderful times out observing. He was an accomplished telescope maker, building a number of scopes including the 16 inch Cassegrain that was donated to the Science Factory and later to our club, and a 14 inch personal scope that he pulled in a trailer.

We used to have a bet that I'd end up with metal on my wooden scopes before he added wood to his metal scopes. See, he was a master mechanic.

We also built the first digital encoder system around and used it to explore some 100 globular clusters in one night. The variation in distance, shape and concentration of stars was something.

Rob also put together Astronomy Days in the



Rob Adams with the 16" Cassegrain he built



Rob Adams with his 12" Rob-A-Dob

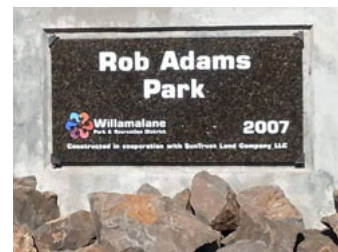
1980s that were heavily advertised and sometimes reached more than a thousand attendees.

He was club president and very active for many years. But most of all he was a great observing and telescope making bud with many wonderful times together.

He hadn't been active lately because of his health, but I know he had a special fondness for his astro buds that he spent so many nights with.

—Mel Bartels

Rob was born and raised in Springfield and was deeply involved with the Willamalane Park and Recreation District. In 2007 Willamalane dedicated a park in his honor at 890 Mountaingate Dr. in Springfield.



April 4th Eclipse Report

The April 4th total Lunar eclipse was another nail-biter, with clouds threatening and fog drifting in and out right up to the last minute, but the College Hill Reservoir cleared up and stayed clear for the duration of the eclipse. We had maybe a dozen people in all, including two women from Corvallis who had read in the online Register Guard that we'd be there and came down just to look through a telescope.

Several of us got photos of the eclipse, including a shot of it from Florida by Bill Murray, who was vacationing there at the time. Alan Gillespie saw it through trees at Willow Creek, Bill Basham got it through the top of a fog bank on Eureka Ridge, and Roseburg amateur Russell Milton caught it from Bone Mountain after enduring a snowstorm that left half an inch of snow on the ground.

The Moon was passing through a fairly rich starfield at the time, so we were treated to an occultation of a bright star during mid-eclipse. We also were able to see a distant background galaxy, NGC 4697 next to the Moon during totality. Well worth getting up early (or staying up late) for!



Eclipse from Punta Gorda FL, © by Bill Murray



Eclipse from Willow Creek, © by Alan Gillespie



Eclipse and Stars from Bone Mountain, west of Roseburg
© by Russell Milton



Eclipse and Stars from Eureka Ridge, © by Bill Basham

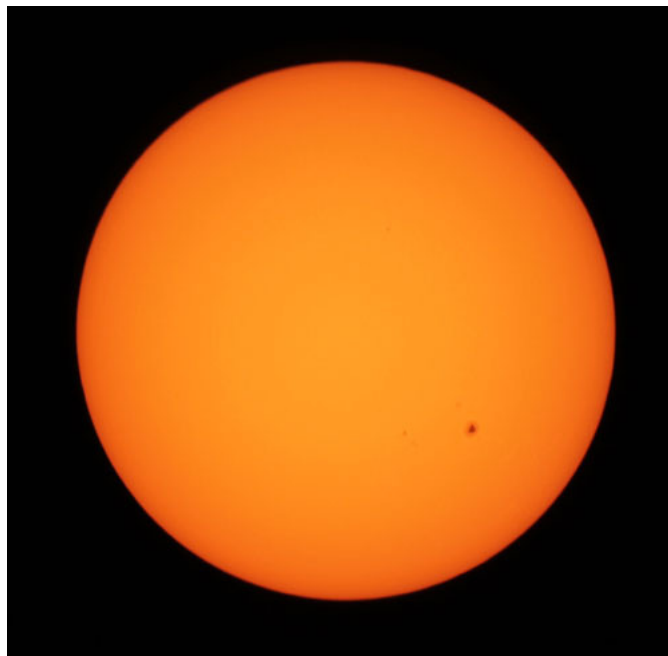
March & April Astrophotographs

March and April presented us with a surprising number of clear nights, which EAS clubmembers took advantage of by taking some excellent photographs.

Here are just a few:



Jeff Phillips caught Jupiter with its Great Red Spot, plus Io and Callisto showing disks and revealing their vastly different surface brightness. © by Jeff Phillips



Garth Price shot this image of the Sun with a prominent sunspot using his new camera. © by Garth Price



Moon and Venus March 22, 2015. © by Alan Gillespie



Comet Lovejoy. © by Bill Basham



Alan Gillespie continues to get great wide-field shots, like this one of Orion, with a simple camera and equatorial mount.
© by Alan Gillespie

Bill Basham got a new 8" Ritchey-Chrétien scope and spent every clear night he could taking photos with it. Here are just a few of his results:



Bill Basham shooting M51 with his new 8" Ritchey-Chrétien scope. © by Jerry Oltion

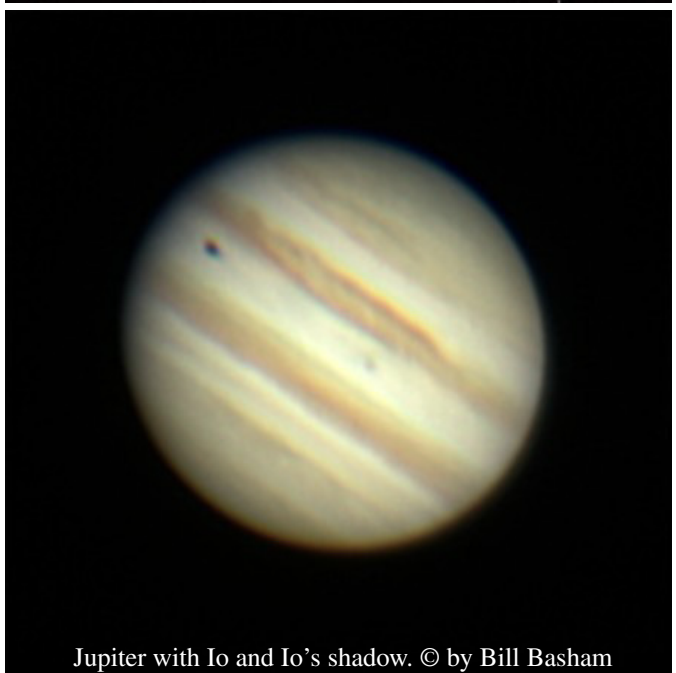


M51 (above) and the Sombrero Galaxy (below) looking surprisingly like they do through the eyepiece.

© by Bill Basham



High-resolution stack of the Moon. © by Bill Basham



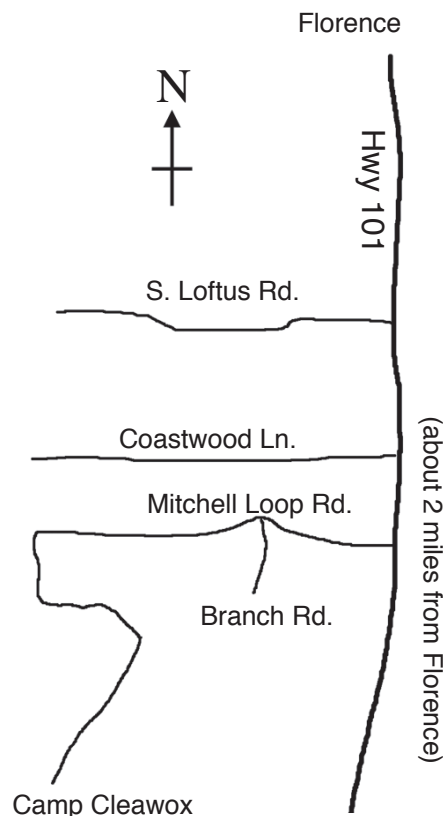
Jupiter with Io and Io's shadow. © by Bill Basham

Star Party at Camp Cleawox May 2nd

On Saturday, May 2nd, the EAS will put on a star party at Camp Cleawox in Florence for a group of about 30 Girl Scouts in grades 4-10. Bruce Hindrichs will put on an indoor presentation on general astronomy, then the rest of us will show the kids the Moon, Jupiter, and whatever else we can find in the sky for them. There's a nice grassy meadow for scopes right in front of the clubhouse, so it should be a comfortable setup. Camp Cleawox is at 4595 Mitchell Loop, Florence OR. That's about two miles south of Florence on Hwy 101, then right on Mitchell Loop Road and all the way to the end.

Sunset will be about 8:17 (you knew that because you're reading the *Io* and it's right there on the next page, right?) so the star party will probably kick off about 8:30. Arrive early to set up.

Jerry Olton is coordinating this event. If you can attend, please contact Jerry to let him know. (j.olton at sff.net or 541-343-4758)



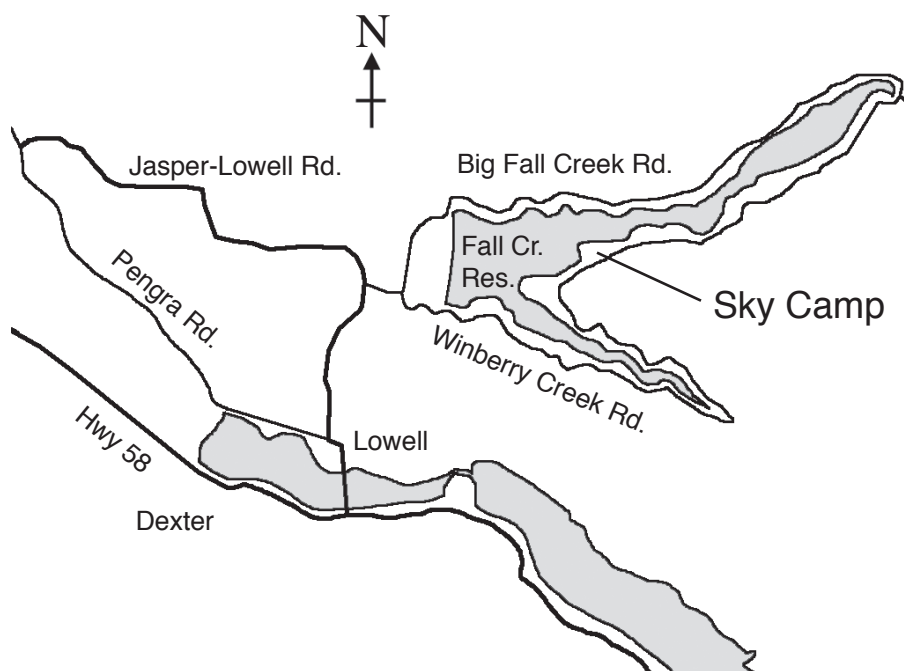
Star Party at Sky Camp May 27th

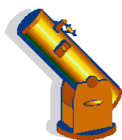
The EAS has been putting on star parties at Sky Camp on Fall Creek Reservoir for several years. This year Springfield's Two Rivers/ Dos Rios School has asked us to do it again on May 27th, with a backup date of May 28th. Last year there were 60-70 kids of various ages, many of whom had never looked through a telescope before, and we expect about the same turnout this year.

Sky Camp is aptly named. On the central peninsula of Fall Creek Reservoir, it's surrounded by a lot of forest and water and not much else. The sky is dark there, and they have a nice grassy field to set up in.

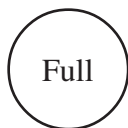
To get there, you can take Winberry Creek Road around the south side of Fall Creek Reservoir, or Big Fall Creek Road around the north side. The latter is longer, but paved most of the way. Winberry Creek Road is pretty good, though.

John Walley is coordinating this event. If you can go, please contact John to let him know. (jmwalley1 at comcast.net)





Observing in May



May 3, 8:42 PM	May 11, 3:36 AM	May 17, 9:13 PM	May 25, 10:19 AM
Mercury Set: 10:15 PM	Mercury Set: 10:19 PM	Mercury Set: 10:00 PM	Mercury lost in Sun
Venus Set: 12:01 AM	Venus Set: 12:11 AM	Venus Set: 12:14 AM	Venus Set: 12:15 AM
Mars Set: 9:15 PM	Mars Set: 9:13 PM	Mars Set: 9:12 PM	Mars Set: 9:09 PM
Jupiter Set: 2:49 AM	Jupiter Set: 2:19 AM	Jupiter Set: 1:57 AM	Jupiter Set 1:28 AM
Saturn Rise: 9:44 PM	Saturn Rise: 9:09 PM	Saturn Rise: 8:43 PM	Saturn Rise: 8:09 PM
Uranus Rise: 5:07 AM	Uranus Rise: 4:36 AM	Uranus Rise: 4:13 AM	Uranus Rise: 3:43 AM
Neptune Rise: 3:44 AM	Neptune Rise 3:13 AM	Neptune Rise: 2:50 AM	Neptune Rise: 2:19 AM
Pluto Rise: 12:56 AM	Pluto Rise: 12:24 AM	Pluto Rise: 11:57 PM	Pluto Rise: 11:25 PM

All times Pacific Daylight Time (March 8 – October 31, 2015 = UT -7 hours) or Pacific Standard Time (November 1, 2015 – March 12, 2016 = UT -8 hours)

Date	Moonrise	Moonset	Twilight Begin	Sunrise	Sunset	Twilight End
5/1/2015	18:04	04:59	04:10	06:04	20:16	22:10
5/2/2015	19:04	05:28	04:08	06:03	20:17	22:12
5/3/2015	20:04	06:00	04:06	06:01	20:18	22:14
5/4/2015	21:04	06:35	04:04	06:00	20:19	22:16
5/5/2015	22:03	07:14	04:02	05:59	20:20	22:18
5/6/2015	23:00	07:59	04:00	05:57	20:22	22:20
5/7/2015	23:53	08:50	03:58	05:56	20:23	22:22
5/8/2015		09:48	03:56	05:55	20:24	22:24
5/9/2015	00:42	10:50	03:54	05:53	20:25	22:25
5/10/2015	01:25	11:56	03:52	05:52	20:26	22:27
5/11/2015	02:05	13:05	03:50	05:51	20:27	22:29
5/12/2015	02:41	14:16	03:48	05:50	20:28	22:31
5/13/2015	03:16	15:27	03:46	05:49	20:30	22:33
5/14/2015	03:50	16:39	03:44	05:47	20:31	22:35
5/15/2015	04:25	17:52	03:42	05:46	20:32	22:37
5/16/2015	05:02	19:03	03:40	05:45	20:33	22:39
5/17/2015	05:43	20:12	03:38	05:44	20:34	22:41
5/18/2015	06:27	21:17	03:37	05:43	20:35	22:43
5/19/2015	07:16	22:16	03:35	05:42	20:36	22:44
5/20/2015	08:09	23:08	03:33	05:41	20:37	22:46
5/21/2015	09:06	23:53	03:31	05:40	20:38	22:48
5/22/2015	10:04		03:30	05:40	20:39	22:50
5/23/2015	11:02	00:33	03:28	05:39	20:40	22:52
5/24/2015	12:01	01:07	03:26	05:38	20:41	22:54
5/25/2015	12:59	01:38	03:25	05:37	20:42	22:55
5/26/2015	13:57	02:07	03:23	05:36	20:43	22:57
5/27/2015	14:54	02:34	03:22	05:36	20:44	22:59
5/28/2015	15:53	03:01	03:20	05:35	20:45	23:00
5/29/2015	16:52	03:29	03:19	05:34	20:46	23:02
5/30/2015	17:52	04:00	03:18	05:34	20:47	23:04
5/31/2015	18:53	04:33	03:16	05:33	20:48	23:05

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

Items of Interest This Month

- Saturn returns to evening sky this month
 Mercury high (relatively speaking) in evening sky during first couple of weeks of May
 5/7 Mercury at greatest eastern elongation
 5/9 Venus near M35 at feet of Gemini
 5/11 Io shadow transit 8:42 – 11:00
 5/12 Jupiter's moons in evenly spaced line and Red Spot visible 9:45 – 10:00
 5/17 Io and Europa cross paths 9:00 – 9:20
 Red spot centered 9:20
 5/19 Three of Jupiter's moons pile up 9:00 – 11:00
5/22 First Quarter Friday Star Party Saturn at opposition. Seeliger effect makes it even brighter than usual. (Brightest it's been in 8 years) Venus is in the middle of Gemini.
 5/27 Double shadow transit 7:01 – 9:19, single shadow until 9:34. Shadows merge 8:45 – 8:55, with Red Spot directly below.
 Ganymede eclipses Io from 8:38 – 9:00 (Io dims by 40%) Some of this happens before sunset (8:44), but might still be visible if you can find Jupiter.
 5/31 Europa shadow transit 10:21 – 1:14
 6/1 Venus in straight line with Castor and Pollux