

# IO - October 2011

Issue 2011-10  
Eugene Astronomical Society

Eugene Astronomical Society  
Annual Club Dues \$25  
President: Sam Pitts - 688-7330  
Secretary: Jerry Oltion - 343-4758  
Additional Board members:  
Jacob Strandlien, Tony Dandurand,  
John Loper.

[www.eugeneastro.org](http://www.eugeneastro.org)

EAS is a proud member of:

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



## Next Meeting: Thursday, October 27th

### 500 and Counting: The Search for Planets Beyond the Solar System by Bernard Bopp

As of September 10, 2011 there were 564 confirmed “exoplanets” – planets orbiting stars other than the Sun. And this is a *very* conservative number – the *Kepler* satellite, launched in 2009, has identified *over twelve hundred* additional exoplanet candidates which await confirmation, and is expected to discover thousands more within its operational lifetime. The discovery and investigation of exoplanets is currently one of the most active research areas in 21st century astronomy.

This talk will explore the variety of methods used to discover exoplanets, and summarize the characteristics of the worlds that have been discovered thus far. None of the exoplanets discovered is “Earthlike” – comparable in size, mass, and temperature to our world – but within the next decade (perhaps within the next two years) such worlds *will* be observed. We will then have the capability to examine the atmospheres of these new earthlike worlds for the presence of oxygen or methane. If such gasses are indeed detected, we will have answered the great question of whether life exists elsewhere in the universe.

In addition to Bernard’s talk, Jacob Strandlien will present the astronomical news of the month. 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 October 27th at EWEB’s Community Room, 500 E. 4th in Eugene.

## Next First Quarter Friday: October 7th

Our September star party was clear and well attended. So well attended, in fact, that we had more observers than could be comfortably accommodated by the five telescopes on hand. Add to that some rambunctious kids and some clueless adults and it made for a somewhat chaotic night. See p.6 for more on that. Bill says it was still a good star party, so don’t let the few negatives we encountered last month keep you away. On the contrary, the more astronomers we have on hand, the easier it goes for everyone.

First Quarter Fridays are (usually!) 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 are the dates for First Quarter Fridays through December of 2011:

October 7 (86% lit)

December 2 (57% lit)

November 4 (74% lit)

December 30 (39.7% lit)

# September Meeting Report

At our September 22nd meeting, Jerry Oltion talked about unusual telescope designs. He started with an overview of how a telescope works, then showed the progression of designs that people have come up with in their quest for better and better views of the cosmos. Many involve folding the optical path to fit a long focal ratio into a small package, while others use unusual materials or familiar materials in unusual ways. We looked at scopes made with liquid mirrors, mirrors that look like concentric stacks of pipe (x-ray mirrors), and more exotic telescopes that don't use mirrors or lenses at all. It's neat to see how much innovation goes on in astronomy, and how we're able to wring images from the most unlikely sources.

Our next meeting will be on Thursday, October 27th, at 7:00 PM in the EWEB north building's Community Room. This is the first room in the semicircular building to the north of the fountain at EWEB's main campus on the east end of 4th Avenue.

**Meeting dates for 2011:** (All meetings are at 7:00 in the Community Room)

October 27

November 10 (Note this is earlier in the month than usual!)

December 22

## Dues are Due!

EAS membership runs from October 1 through September 31, so it's time to renew if you haven't already. Dues are still just \$25/year, and include membership in the Astronomical League as well as the EAS. (That's where your *Reflector* magazine comes from, and where our observing awards come from.) Your dues help us pay our liability insurance and to keep our telescope lending program going. We have over 50 members at the moment, and it would be great to see all of us renew for another year.

If you didn't renew at the September 22nd meeting, please send your \$25 dues to the Eugene Astronomical Society, P.O. Box 7264, Eugene, OR 97401. Make checks payable to Eugene Astronomical Society.

## Laser Pointer Policy

Regarding the use of laser pointers, the EAS board has issued the following statement:

**No one should point any type of laser pointer at a human or in any direction where there is the possibility of human presence. Laser pointers should only be used judiciously when pointing at a benign target, after making 100% certain it is safe.**

The Eugene Astronomical Society does not condone or support the use of any laser type pointers at any of its events or functions. Anyone who uses a laser pointing device takes full responsibility for its use and does so at their own risk and liability.

## Thank You Castle Storage

For the last four 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.



# Oregon Star Party 2011 Report

## by Mel Bartels

Three cloudless days and nights were our destiny for the 2011 Oregon Star Party. The occasional smoke on the horizon was not a problem observing during the night. Thursday and Friday nights were somewhat cold and Saturday night was downright enjoyable. We managed to squeeze in a hike orienting using a map, hiking up and down the hills and ravines to find two nearby springs where water trickled despite the dry conditions.

In the evening we enjoyed many objects. Perhaps the best object of all in my 13 inch f/3.0 was the North American Nebula and the nearby Pelican Nebula using an OIII filter. The unexpected detail and great contrast was amazing — of all the views of the NAN/Pelican over the many years, the view through this scope in OSP skies came closest to photographic and digital images, showing the streakiness in the “Florida” and “Central America” areas, the jet black “Gulf of Mexico” and dark nebula in “Northern Canada” and good detail in the Pelican.

The small Sagittarius Star Cloud and the M11 Star Cloud were wonderful as were the Andromeda and Pinwheel galaxies. The most common comment was how bright the objects and stars appeared. The two-degree field of view was quite dizzying when moving the scope quickly through the Milky Way.

It was a special sight to see the Gegenshein and Zodiacal light as a beautiful band underneath the milky way band, like a double rainbow in the early morning hours.

My wife Barbara most liked Swayze’s 18" f/3.5: great optics, lots of aperture, easy to point and no ladder along with enthusiastic owner. I guess that aperture wins over marriage!

Pease 1 in Banich’s 28" was quite enjoyable — easy to see without a filter.

I hung with Jerry Oltion while he worked on the level III most difficult objects list. Shakhbazian 16 (mag 16+ galaxies) was quite interesting along with Zwicky’s Triplet (more galaxies). Jerry viewed all objects in the list and was recognized with a nifty observing pin. You definitely don’t want to run into JO in a dark alley at night — he’s a mean observer. Oh wait you do, especially if he has a scope set up because he’ll show you the sky!

I’m responsible for the Telescope Walkabout. It takes a lot of time to search the telescope fields for interesting amateur built scopes and talk to the owners. This year’s amateur telescope makers showed a variety of designs with two of the builders from the Bay Area. More on this in a separate report.

The Oregon Star Party ran seamlessly as it has every year in the past. The talks were surprisingly well presented. Attendance was about 550 registered. Many were from out of state — I saw a Wisconsin/Minnesota license plate. ★



Mel and his “ZipDob” (because of the “zippy” f/3.0 speed and the “zippy” unfolding and folding between transport and observing.) 20-second infra-red photo with 2-second red light flash. Photo by Craig Stott. Note the Big Dipper above.

# Going for Level 3 at OSP

## by Jerry Oltion

Each year at the Oregon Star Party, held in central Oregon under some of the darkest sky left in the nation, the organizers of the star party offer three observing programs. The level 1 program is for beginners and has objects like Albireo and M13 on it. The level 2 is for intermediate observers, with a lot of NGC galaxies and planetary nebulae and so forth. The level 3 list is, well, insane. Ultra-faint galaxies. Supernova remnants discovered photographically. Worse.

Jim Jackson usually goes for the level 3 list, but he wasn't there this year so I decided to uphold the honor of the EAS and try for the level 3 certificate myself. Doing the level 3 list requires advance planning. You download the list days before the star party and spend those days compiling charts and photos of the objects in question so you know where to look and what to look for when you get there. I let time get away from me, so I had only one day to prepare, but I headed out for the Ochoco Mountains with fair confidence that I had all the material I needed.

On Thursday night, with my 20" scope collimated and cooled, I started in on the list. Shakhbazian 16, a string of four faint galaxies in Draco, proved fairly easy to find, although I could only see three of the four galaxies. I spotted Pluto with ease, though it would take two nights to see if it moved. NGC 100, an edge-on spiral galaxy, was also a piece of cake. Heck, I thought, I'll have this done in no time!



NGC 100

the more general zodiacal band picked up. I finally drew it in as an oblong band between Aquarius and Capricorn and decided to try again the next night.

It was getting late and Hercules was setting, so I jumped to the bottom of the list for Zwicky's Triplet, a trio of galaxies near M92. I found M92 easily enough and star-hopped across the sky to the right spot for the triplet, but couldn't see any galaxies. And here's where my lack of preparation killed me: I had no intermediate chart showing the search field in good detail. All I had was a gross finder chart and a photo of the galaxies with three or four background stars. I couldn't tell where in the one-degree field of view of my eyepiece I should be searching for the galaxies! After an hour or so of frustration, I gave it up and went to

### OSP 2011 Level 3 Observing List

**Shakhbazian 16**, Nominated for most difficult pronunciation.

**NGC 100**, Nominated for most unexpectedly difficult object.

**Abell 71** – The planetary nebula, Nominated for roundest object.

**Pluto**, Nominated for best known object.

**The Gegenschein**, Two nominations, best title and largest object.

**Cassiopeia A**, Nominated for least attempted object.

**Einstein's Cross** (at least the lensing galaxy), Nominated for most distant object.

**Zwicky's Triplet**, Two nominations, most interesting name and last object alphabetically.

bed. I had picked up five of the eight objects on the list in one night, but I slept poorly, knowing that I had a real challenge ahead of me.

The next day (Friday), I told Mel Bartels my tale of woe. He said he had seen a better chart for Zwicky's Triplet in the information tent, and he would bring it around that night. Steve Frankel came by later that day and said he'd like to have a go at the Einstein Cross with me. Cool! I was stoked again.

Night fell. Mel and Barbara came around and armed with a good chart, we proceeded to find...nothing. None of us could find the right star field. Thinking the chart might be be mislabeled, I tried holding it every which way, but no luck recognizing any star patterns. I handed the chart over to Mel and trudged off to get myself something to eat, only to hear him say calmly, "Oh, there it is."

Once Mel found the right star field, he was able to talk me through it as well, and once we knew we were looking in the right spot we were able to tease out the galaxies.

Mel and Barbara went back to their own scope, leaving me to find Cassiopeia A, a supernova remnant that proved challenging but not all that difficult.

That left just the Einstein Cross! And that one would be a piece of cake compared to Zwicky's Triplet, because the Einstein Cross was right in the middle of an easy asterism of 8th- and 9th-magnitude stars. Steve had arrived by then, so he and I dug into that with gusto...and got skunked. No matter how we held the chart, no matter what field of view we tried, we couldn't find anything that matched what we were supposed to be seeing. We spent maybe an hour at it, scanning back and forth over the star field between Pisces and Aquarius. In a 20" scope in really dark sky you find faint fuzzies everywhere you look, so there was no way we could just pick one and call it the Einstein Cross. We had to confirm that star field!

I got so tired of standing on the ladder that my legs started to cramp, so I sat down in front of my scaled-up Astroscan and aimed it at the right portion of sky. And there it was. The asterism we'd been looking for was right there, properly oriented and shining out like a neon light. I did not say calmly, "Oh, there it is." I think people in the camps around us thought I'd dropped a counterweight on my toe.

From there it was a piece of cake. We found the lensing galaxy within seconds, and with much staring and averting of eyes and staring again we could occasionally see more than a single point of light at the core. We never saw all four lensed images of the



Zwicky's Triplet

Object	<u>Einstein's Cross</u>		
	Field shown without Barlow		
Date / Time:	<u>9/3/11 2:00am</u>	Location:	<u>OSP</u>
Seeing:	<u>6" \ 10</u>	Transparency:	<u>7" \ 10</u>
Scope:	<u>20" Dob</u>	Eyepiece:	<u>22mm Nagler with 2x Barlow (227x)</u>
Notes:	Took forever (2 nights!) to find the star field. Finally realized it was a scale problem, and found it immediately in a wide-field scope (Big Astroscan). From there I star-hopped in the 20" right to the galaxy. Couldn't see 4 Quasar images, but occasionally galaxy seemed to have 2 stellar cores.		

A page from Jerry's observing log

background quasar at once, but we got little glimmers of it on all sides.

Done! In the morning Matt Vartanian, the evil genius behind the list, checked my observation log and pronounced it good. I got a nifty pin to show for it, one of only three level-3 pins awarded this year. And I brought home a sense of accomplishment that I'll carry with me forever. I can't wait for next year. Maybe there'll be a level 4 list to try!



The level 3 pin

## Some Notes on First Quarter Friday

### by Bill Murray and Pigg Green

Bill writes: We had only 5 scopes: Tom, Pigg, Gordon, me and someone I've never seen before who had a small Celestron refractor. Probably had 100 people and a troop or two of well-behaved Cub Scouts. Seems like I spent most of my time showing the comet to many people. It did exhibit noticeable movement in just 2 hours. We had one -1 Iridium, which being dim, lasted for quite a while.

We did have one incident and I'll copy and paste Pigg's message to me: "I was next to my Dob but had my back to it answering a question. I turned back to my scope and a young woman (age 18-22?) had seen-sawed the tube 'upside down,' was grabbing the finder and the telrad and looking into the finder and the tube. I said 'please don't do that.' She was still handling it...I said 'please don't touch the scopes.' She said 'sorry...I wanted to look through it.' Waving a cigarette in my face, she said... 'Can I see a star?' I told her to take the cigarette away and she could come back when she was finished with it. Of course, I never saw her again. Nothing was damaged...I just had to realign the finder and the telrad.

"But the 'best' one was an adult male who arrived about 10:30 with another adult male friend and a few kids. We kept hearing loud throat clearing and spitting. I thought Oh, no, not on the deck. When he got close to us, the unmistakable aroma of a heavy smoker was more than evident. Sorta like the odorous equivalent of Pig Pen in the Peanuts comic strip. Every 30 seconds or so, there was the clearing of phlegm and spitting or as it is known, Hocking a Lugie. He carried a plastic container and was, fortunately, spitting into it. I found out when he was looking through my scope that he had a 6" Dob but was looking at buying an 11" Celestron GoTo. He and his group cruised between the scopes. Some of us were getting a little bit perturbed at the sound!"

Pigg also had a few other good observations: "There seems to be quite a few more young kids (not the scouts) whose adults were letting them zip around very close to equipment. A few of these younger kids were not monitored well. I found myself saying 'please don't touch the scopes' and/or 'please step back a bit.' Seemed like a lot more of this unmonitored behavior than usual.

"Another instance (and this has happened many time before)...I had a very young child...probably 3ish...even with the 'hands behind back and don't touch the scope'...of course she grabs the eyepiece and sticks her eye completely on it and practically falls into the whole setup. She's 3 and I understand that...but is there a point where we can say 'perhaps she's too young for this?' I'm curious as to what is cool with the club or not in regards to these very young children and/or other odd instances... I want to be welcoming and I know I'm representing the club at these parties — so I feel like I should put up with perhaps more than I should?

"On the flipside...there were some really cool and appreciative folks there asking great questions and really getting 'wowed.'"

(Bill) I also had a more than a few young kids who had to be lifted to look in the eyepiece (and I didn't set the scope up high). I greatly doubt they knew what they were looking at. I know: get them interested when they are young.

A couple came up to me and asked if I had a Meade Scope — which, of course I do! They thought their scope looked similar to mine but much smaller. They got it as a wedding present 10 years ago and never figured out how to use it. I tried to weasel out of helping because of the people at a star party (have to

watch my scope) and several other things. Seeing I was fighting a losing battle, I relented and they hurried to their car and brought back an ETX-60. We got it assembled. He knew how to operate the basic autostar. Fortunately, I knew how to get it set up (pointing North and level) for alignment. Success. They got to look at Jupiter but things like Alberio were a bit hard to ascertain although Mizar I think we split.

Also from about 10 onwards there was some sort of a group sitting against the fence at the North end. There were many bright flashlights and I thought it was a meeting (a youth gathering) of some type. Every now and then, the bright flashlights would shine towards us. I even yelled to them to not shine their lights at us. Later we saw that it was the EPD who had juveniles detained. I looked in the blotter today and saw that it was described as Illegal Parking at 23rd and Lawrence. Don't think they were any of our patrons.

All in all, it was good night. I have to go spit now.

– Bill

Pigg adds: Just wanted to add a positive note regarding kids. Since early August, I've had a wonderful rash of kids come into the Library and ask for books "about the stars"...far more than usual asking for astronomy books — odd.

Each time. I tell the parents about the Star Parties...the parents take note and seem pleased. Some have actually come to the First Quarter (and Dexter) events over the past year!

Just thought that was cool...

– Pigg

## Iridium Flare by Bill Murray

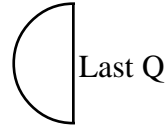
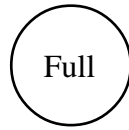
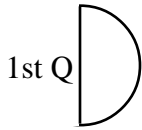
Bill captured this Iridium Flare crossing right over Delphinus on September 23rd from Eagle's Ridge.



Photo © 2011 by Mill Murray



# Observing in October



October 3	October 11	October 19	October 26
Mercury Set: 7:02 PM	Mercury Set: 6:56 PM	Mercury Set: 6:50 PM	Mercury Set: 6:46 PM
Venus Set: 7:22 PM	Venus Set: 7:12 PM	Venus Set: 7:05 PM	Venus Set: 7:00 PM
Mars Rise: 1:49 AM	Mars Rise: 1:41 AM	Mars Rise: 1:34 AM	Mars Rise: 1:27 AM
Jupiter Rise: 7:54 PM	Jupiter Rise: 7:20 PM	Jupiter Rise: 6:46 PM	Jupiter Rise: 6:17 PM
Saturn Set: 7:19 PM	Saturn Behind Sun	Saturn Behind Sun	Saturn Rise: 6:39 AM
Uranus Set: 6:38 AM	Uranus Set: 6:05 AM	Uranus Set: 5:32 AM	Uranus Set: 5:03 AM
Neptune Set: 3:42 AM	Neptune Set: 3:10 AM	Neptune Set: 2:38 AM	Neptune Set: 2:10 AM
Pluto Set: 11:28 PM	Pluto Set: 10:57 PM	Pluto Set: 10:26 PM	Pluto Set: 9:59 PM

All times: Pacific Standard Time (Nov 6, 2011-March 10, 2012) = UT -8 hours or U.S. Pacific Daylight Time (March 13-November 5, 2011) = UT -7 hours.

Date	Moonrise	Moonset	Sunrise	Sunset	Twilight Begin	Twilight End
10/1/2011	12:35	21:45	07:10	18:54	05:34	20:29
10/2/2011	13:35	22:45	07:11	18:52	05:35	20:27
10/3/2011	14:25	23:49	07:12	18:50	05:36	20:25
10/4/2011	15:06		07:13	18:48	05:38	20:24
10/5/2011	15:40	00:55	07:15	18:46	05:39	20:22
10/6/2011	16:09	02:00	07:16	18:44	05:40	20:20
10/7/2011	16:34	03:03	07:17	18:43	05:41	20:18
10/8/2011	16:58	04:05	07:18	18:41	05:43	20:16
10/9/2011	17:21	05:06	07:19	18:39	05:44	20:14
10/10/2011	17:44	06:07	07:21	18:37	05:45	20:13
10/11/2011	18:08	07:07	07:22	18:36	05:46	20:11
10/12/2011	18:35	08:07	07:23	18:34	05:47	20:09
10/13/2011	19:05	09:08	07:24	18:32	05:49	20:08
10/14/2011	19:40	10:07	07:26	18:31	05:50	20:06
10/15/2011	20:21	11:05	07:27	18:29	05:51	20:04
10/16/2011	21:09	11:59	07:28	18:27	05:52	20:03
10/17/2011	22:03	12:49	07:29	18:25	05:54	20:01
10/18/2011	23:04	13:33	07:31	18:24	05:55	20:00
10/19/2011		14:12	07:32	18:22	05:56	19:58
10/20/2011	00:10	14:46	07:33	18:21	05:57	19:56
10/21/2011	01:19	15:17	07:34	18:19	05:58	19:55
10/22/2011	02:30	15:46	07:36	18:17	05:59	19:53
10/23/2011	03:44	16:15	07:37	18:16	06:01	19:52
10/24/2011	05:01	16:45	07:38	18:14	06:02	19:51
10/25/2011	06:19	17:18	07:40	18:13	06:03	19:49
10/26/2011	07:39	17:55	07:41	18:11	06:04	19:48
10/27/2011	08:59	18:39	07:42	18:10	06:05	19:46
10/28/2011	10:14	19:31	07:44	18:08	06:07	19:45
10/29/2011	11:20	20:31	07:45	18:07	06:08	19:44
10/30/2011	12:17	21:36	07:46	18:05	06:09	19:43
10/31/2011	13:03	22:43	07:47	18:04	06:10	19:41

## Items of Interest This Month

- 10/1 Mars in Beehive Cluster before dawn
- 10/4 Io shadow transit 8:07 - 10:17 PM
- 10/7 First Quarter Friday Star Party**
- 10/09 Ganymede shadow transit 10:42 PM - 12:41 AM
- 10/11 Io shadow transit 10:01 PM - 12:11 AM
- 10/12-14 Moon near Jupiter
- 10/21-22 Orionid meteor shower peaks
- 10/24 Io shadow transit 9:26 - 11:54 PM
- 10/27 Mercury, Venus, and Moon close together in southwest at dusk.
- 10/27 Io shadow transit 8:19 - 10:30 PM
- 10/28-29 Jupiter at opposition

## For Current Occultation Information

Visit Derek C. Breit's web site  
**"BREIT IDEAS Observatory"**

<http://www.poyntsource.com/New/Regions/EAS.htm>

Go to Regional Events and click on the Eugene, Oregon section. This will take you to a current list of Lunar & asteroid events for the Eugene area. Breit continues to update and add to his site weekly if not daily. This is a site to place in your favorites list and visit often.

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