

# IO - January 2013

Issue 2013-01  
Eugene Astronomical Society

Eugene Astronomical Society  
Annual Club Dues \$25  
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Jacob Strandlien, Tony Dandurand,  
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EAS is a proud member of:

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



## Next Meeting: Thursday, January 24th Show & Tell and Telescope Workshop

Our January meeting will be our annual telescope workshop where we help each other figure out how to use all that fancy gadgetry Santa brought us for Christmas. This is a great opportunity to bring that scope you need help with or just want to show off. We'll advertise our services to the public, so if you don't need help on a scope, bring your expertise. You might be able to help someone else.

This is a great opportunity to spread the word about our club and what we do. Tell anyone you know who might be interested in astronomy that this is the meeting to come to if they have questions about gear or about astronomy in general. The structure of this meeting will be very informal, with lots of opportunity to visit with one another and share our various areas of expertise.

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, January 24th at EWEB's Training Room, 500 E. 4th in Eugene.

## Next First Quarter Friday: January 18th

Our December 21st star party was clouded out, and our backup Saturday was no better. Typical for winter, but this is getting old! Here's hoping for better luck in January. Our next First Quarter Friday will be January 18th, with a backup date of Saturday, January 19th if the 18th is cloudy.

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 thru 2013:

January 18 (52% lit)	February 15 (34% lit)	March 15 (19% lit)
April 19 (66% lit)	May 17 (50% lit)	June 14 (35% lit)
July 12 (21% lit)	August 16 (80% lit)	September 13 (67% lit)
October 11 (53% lit)	November 8 (38% lit)	December 6 (24% lit)

## Still Happily Accepting Dues

EAS membership runs from October 1 through September 31, so it's past time to renew if you haven't already. Please send your \$25 dues to the Eugene Astronomical Society, P.O. Box 7264, Springfield, OR 97475. Make checks payable to Eugene Astronomical Society.

# December Meeting Report

## Swap Meet and Potluck Get-Together

Our December 20th meeting was a fun and laid-back evening of potluck dinner and tables full of astronomy gear. We had a great selection of food from snacks to main dishes, and a wide variety of equipment to poke through. We had several boxes of optics and mirror blanks from last year's Parker and Heart of the Valley donations, plus complete telescopes, finders, books, and as always, a selection of awesome astrophotos taken by Sam Pitts. We raffled off several of those photos, which Sam generously donated to the club.

Our next meeting will be on Thursday, January 24th, at 7:00 PM at EWEB's Training Room. This is the second room in the semicircular building to the north of the fountain at EWEB's main campus on the east end of 4th Avenue.

## Alan Gillespie's Wide-Field Winter Shot

On December 15th Alan Gillespie shot this photo of Orion, Taurus, and environs from his back yard just before the clouds rolled in. He used Deep Sky Stacker to stack four exposures of various duration (15 sec, 30 sec, & 7.5 sec.) taken at ISO 800, f/3.2, then processed the result with GIMP using Levels, Curves, Saturation, and Layers. He also removed the skyglow with a gradient layer.

The result is a great image of the winter sky, stretching from the Pleiades through Taurus all the way through Orion. Jupiter stands out boldly just above Taurus. It's a sharp image of a sky we didn't see enough of last month. This reproduction is done at high resolution so you can zoom in and get your vicarious kick on cloudy nights.



## Thank You Castle Storage

For the last five 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.

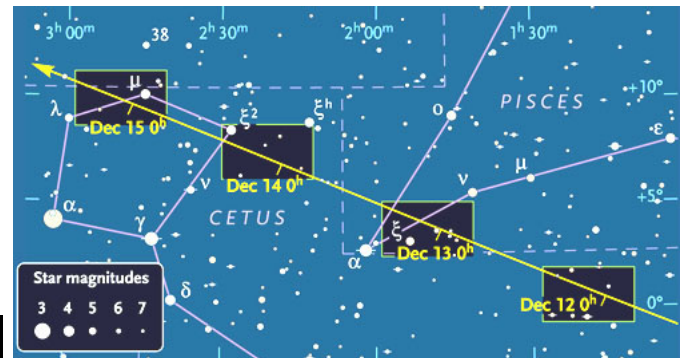


# A Near Miss

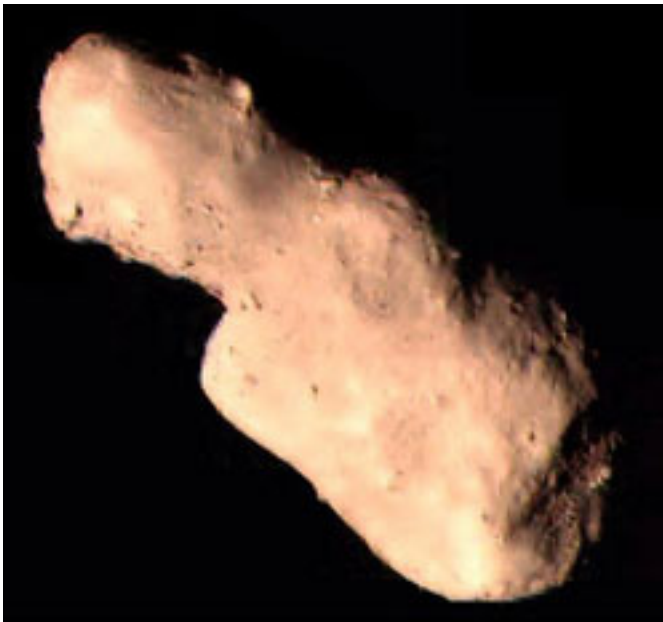
## by Jerry Olton

In mid-December the asteroid 4179 Toutatis made a close pass by Earth: only 4 million miles away. We were in the midst of our usual December clouds, but the Infallible Clear Sky Chart predicted a sucker hole after midnight on the night of the 12th, so Bill Murray, Dan Rinnan and I ran up to Eagle's Ridge to see if it would pan out. We got into snow about a mile from the top, and there was about 2" on the ground at the observing site. There were still quite a few clouds, too, but they dissipated within minutes of our arrival and left us with beautiful sky.

And we found the asteroid! It was in Pisces, which was low in the west by midnight, but still high enough to give us a clear shot at it. The asteroid was about 10.7 magnitude, so easy to spot once we star-hopped to the right field, and its motion was readily apparent over the course of just a few minutes. We watched it go from being the peak of an equilateral



Toutatis's path on four successive nights.



4179 Toutatis, taken by China's Chang'e 2 probe on Dec. 13



Dan Rinnan with Jerry's scope.

triangle to a right triangle to an obtuse triangle over the course of an hour or so. It was way cool to think that we were watching a 3-mile-wide asteroid swing past our planet only 18 times farther away than the Moon.

It was way cool in the more conventional sense, too: 26 degrees, and the snow sucked the heat out of our feet. We looked at a dozen or so other things (the Orion Nebula was beautiful, as high in the south as it ever gets, and we finished, fittingly, with the Eskimo Nebula) then packed up and came home. I was in bed by 3:00, happy as I'd been in a month. We didn't get skunked during this lunar cycle!

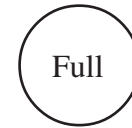
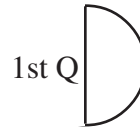
The next night, Kathy and I went to the College Hill Reservoir and got another look at the asteroid. In just 20 hours it was 7 degrees away, halfway between Pisces and Cetus. Even though it was closest on the night of the 12th, it was brighter on the 13th due to a more direct Sun angle.

December was a pretty rotten month for stargazing, but at least the two nights it gave us were the right two. It's not every day we get to watch a piece of the solar system fly by at 8 miles per second.





# Observing in January



January 4	January 11	January 18	January 26
Mercury 7:23 AM	Mercury Rise: 7:42 AM	Mercury Behind Sun	Mercury Set: 5:39 PM
Venus Rise: 6:22 AM	Venus Rise: 6:35 AM	Venus Rise: 6:44 AM	Venus Rise: 6:51 AM
Mars Set: 6:39 PM	Mars Set: 6:41 PM	Mars Set: 6:43 PM	Mars Set: 6:45 PM
Jupiter Set: 5:09 AM	Jupiter Set: 4:39 AM	Jupiter Set: 4:09 AM	Jupiter Set: 3:37 AM
Saturn Rise: 2:35 AM	Saturn Rise: 2:09 AM	Saturn Rise: 1:44 AM	Saturn Rise: 1:14 AM
Uranus Set: 23:39 PM	Uranus Set: 23:12 PM	Uranus Set: 22:46 PM	Uranus Set: 22:16 PM
Neptune Set: 8:44 PM	Neptune Set: 8:17 PM	Neptune Set: 7:51 PM	Neptune Set: 7:21 PM
Pluto Rise: 7:13 AM	Pluto Rise: 6:46 AM	Pluto Rise: 6:20 AM	Pluto Rise: 5:49 AM

All times: Pacific Standard Time (Nov 4, 2012-March 9, 2013) = UT -8 hours or U.S. Pacific Daylight Time (March 10-November 2, 2013) = UT -7 hours.

Date	Moonrise	Moonset	Sunrise	Sunset	Twilight Begin	Twilight End
1/1/2013	21:32	09:53	07:47	16:45	06:03	18:30
1/2/2013	22:37	10:20	07:47	16:46	06:03	18:30
1/3/2013	23:44	10:48	07:47	16:47	06:03	18:31
1/4/2013		11:16	07:47	16:48	06:03	18:32
1/5/2013	00:52	11:48	07:47	16:49	06:03	18:33
1/6/2013	02:02	12:24	07:47	16:50	06:03	18:34
1/7/2013	03:14	13:07	07:47	16:51	06:03	18:35
1/8/2013	04:25	13:59	07:47	16:52	06:03	18:36
1/9/2013	05:31	15:00	07:46	16:53	06:03	18:37
1/10/2013	06:31	16:09	07:46	16:55	06:03	18:38
1/11/2013	07:21	17:23	07:46	16:56	06:03	18:39
1/12/2013	08:04	18:37	07:45	16:57	06:02	18:40
1/13/2013	08:41	19:50	07:45	16:58	06:02	18:41
1/14/2013	09:12	21:01	07:44	16:59	06:02	18:42
1/15/2013	09:41	22:09	07:44	17:01	06:02	18:43
1/16/2013	10:09	23:14	07:43	17:02	06:01	18:44
1/17/2013	10:37		07:43	17:03	06:01	18:45
1/18/2013	11:06	00:17	07:42	17:04	06:00	18:46
1/19/2013	11:37	01:18	07:41	17:06	06:00	18:47
1/20/2013	12:12	02:17	07:41	17:07	05:59	18:48
1/21/2013	12:51	03:14	07:40	17:08	05:59	18:49
1/22/2013	13:35	04:07	07:39	17:10	05:58	18:51
1/23/2013	14:24	04:56	07:38	17:11	05:58	18:52
1/24/2013	15:19	05:41	07:37	17:12	05:57	18:53
1/25/2013	16:17	06:20	07:37	17:14	05:56	18:54
1/26/2013	17:18	06:56	07:36	17:15	05:55	18:55
1/27/2013	18:20	07:28	07:35	17:16	05:55	18:56
1/28/2013	19:24	07:57	07:34	17:18	05:54	18:58
1/29/2013	20:29	08:25	07:33	17:19	05:53	18:59
1/30/2013	21:36	08:53	07:32	17:20	05:52	19:00
1/31/2013	22:43	09:21	07:31	17:22	05:51	19:01

## Items of Interest This Month

- First week: SAO 76571 (HR 1370) masquerades as extra moon of Jupiter
- 1/3 Peak of Quadrantid meteor shower
- 1/5 Moon close to Spica in morning
- 1/8 Io shadow transit 5:55 – 8:06 pm
- 1/12 Thin crescent Moon near Mars at sunset
- 1/14 Europa shadow and Great Red Spot visible together 4:46 – 7:11 pm
- 1/15 Io shadow transit 7:50 – 10:02 pm
- 1/18 First Quarter Friday Star Party**
- 1/21 Moon within 1/2 degree of Jupiter
- 1/21 Europa shadow transit 7:22 – 9:47 pm
- 1/22 Io shadow transit 9:46 – 11:58 pm
- 1/24 Io shadow transit 4:15 – 6:27 pm, plus Ganymede shadow transit 10:40 pm – 12:55 am
- 1/28 Europs shadow transit 9:57 pm – 12:23 am
- 1/31 Io shadow transit 6:10 – 8:22 pm

## For Current Occultation Information

Visit Derek C. Breit's web site: <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.

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