Issue 2010-05
Eugene Astronomical Society

IO - May 2010

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

EAS is a proud member of:

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

Next Meeting: Thursday, May 27th

The Northeast Imaging Conference and Astronomy Forum

by Sam Pitts

On April 15-18th, Sam Pitts and Frank Casebolt went to Suffern, New York, for the NorthEast Astro Imaging Conference (NEAIC) and the NorthEast Astronomy Forum (NEAF). These are the amateur astronomy community's big annual conferences, the ones where manufacturers roll out their newest and best innovations, and where the luminaries of the field give presentations to audiences that number in the thousands. Sam and Frank went to check it out, and at our May EAS meeting Sam will tell us all about their experience.

In addition, Jacob Strandlein will present the astronomy news of the month, and as always there will also be time for others to bring items for show & tell. If you've got a new scope or piece of equipment you'd like to show off, bring it! The meeting is at 7:00 in EWEB's Community Room, 500 E. 4th in Eugene.

The NEAF display and vendor area

Next First Quarter Friday: May 21st

Our April First Quarter Friday was clouded out. Let's hope for better luck this month.

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 are the dates for First Quarter Fridays through December of 2010:

May 21	August 13	November 12
June 18	September 17	December 10
July 16	October 15	

April Meeting Report – Two New Telescopes!

Our April 22nd meeting began with Jerry Oltion presenting a new 10" Trackball telescope that he built for the club's lending program. Jerry described the design and gave a short primer on how to set up and use the telescope. The scope is now in the lending program for any club member to use. Contact Jerry or Tony Dandurand, the club's telescope lending coordinator, if you'd like to borrow this new scope.

Jerry Oltion with the club's new Trackball

At the same meeting, Tony Dandurand presented the 18" scope that he has rebuilt for the club over the last year.

This scope has an interesting provenance: Longstanding member George Towe left the EAS a bequest of over $2000 in his will, which we used about half of to purchase Frank Szczepanski's 18" scope. Tony set out to lighten the mirror box and rocker box, and one thing led to another until he wound up rebuilding the entire telescope. Other members pitched in as well: while Tony did the majority of the rebuilding, Tom Conlin made a set of custom truss connectors for it, and Jacob Strandlein and Jerry Oltion drove the mirror to Sacramento to be refigured and recoated.


Tony Dandurand with the club's rebuilt 18" Dob.

The scope is now done and ready to take to star parties as our club's flagship telescope. The workmanship is excellent, making this a joy to look at as well as through.

After the telescope presentations, Jacob Strandlein presented the astronomical news for the month.

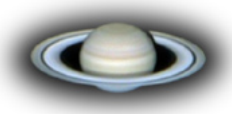
Our next meeting will be on Thursday, May 27th, at 7:00 PM in the EWEB north building's Community Room. This is the first room in the semicircular building to the north of the fountain at EWEB's main campus on the east end of 4th Avenue.

Meeting dates for 2010: (All meetings are at 7:00 in the Community Room)

May 27	August 26	November 24 (Wednesday)
June 24	September 23	December 23
July 22	October 28	

More Views of the Club's New Telescopes

Here are some more photos of the club's new scopes. They're medium-high resolution, so you can blow them up to 200% to see details.

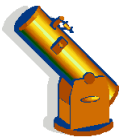


The view down inside the Trackball telescope.

Club members admire Tony's handiwork on the rebuilt 18".

Three of the four trackballs in the world, so far as Jerry has heard.From left: the original, the one he made for his wife, Kathy, and the one he made for the EAS.

Louise Dandurand with the 18" Dob. Note the wheelbarrow handles for easy transport.



Observing in May

Last Q New 1st Q Full

May 5	May 13	May 20	May 27
Mercury Rise: 5:38 AM	Mercury Rise: 5:12 AM	Mercury Rise: 4:55 AM	Mercury Rise: 4:42 AM
Venus Set: 10:47 PM	Venus Set: 11:03 PM	Venus Set 11:15 PM	Venus Set: 11:23 PM
Mars Set: 2:48 AM	Mars Set: 2:25 AM	Mars Set: 2:05 AM	Mars Set: 1:45 AM
Jupiter Rise: 4:10 AM	Jupiter Rise: 3:42 AM	Jupiter Rise: 3:18 AM	Jupiter Rise: 2:53 AM
Saturn Set: 4:32 AM	Saturn Set: 4:00 AM	Saturn Set: 3:32 AM	Saturn Set: 3:04 AM
Uranus Rise: 4:18 AM	Uranus Rise: 3:48 AM	Uranus Rise: 3:21 AM	Uranus Rise: 2:54 AM
Neptune Rise: 3:09 AM	Neptune Rise: 2:38 AM	Neptune Rise: 2:10 AM	Neptune Rise: 1:43 AM
Pluto Rise: 11:49 PM	Pluto Rise: 11:17 PM	Pluto Rise: 10:49 PM	Pluto Rise: 10:21 PM

All times: Pacific Standard Time (Nov 1, 2009-March 13, 2010) = UT -8 hours or U.S. Pacific Daylight Time (March 14-November 7, 2010) = UT -7 hours.

Date	Moonrise	Moonset	Sunrise	Sunset	Twilight Begin	Twilight End
5/1/2010		08:02	06:04	20:16	04:10	22:11
5/2/2010	00:12	09:00	06:02	20:17	04:08	22:13
5/3/2010	00:56	10:02	06:01	20:18	04:05	22:14
5/4/2010	01:31	11:05	06:00	20:19	04:03	22:16
5/5/2010	02:00	12:08	05:58	20:21	04:01	22:18
5/6/2010	02:25	13:10	05:57	20:22	03:59	22:20
5/7/2010	02:47	14:12	05:56	20:23	03:57	22:22
5/8/2010	03:07	15:13	05:54	20:24	03:55	22:24
5/9/2010	03:28	16:16	05:53	20:25	03:53	22:26
5/10/2010	03:49	17:20	05:52	20:26	03:51	22:28
5/11/2010	04:12	18:27	05:51	20:28	03:49	22:30
5/12/2010	04:39	19:35	05:50	20:29	03:47	22:32
5/13/2010	05:12	20:45	05:48	20:30	03:45	22:34
5/14/2010	05:52	21:52	05:47	20:31	03:44	22:35
5/15/2010	06:42	22:53	05:46	20:32	03:42	22:37
5/16/2010	07:43	23:45	05:45	20:33	03:40	22:39
5/17/2010	08:52		05:44	20:34	03:38	22:41
5/18/2010	10:07	00:29	05:43	20:35	03:36	22:43
5/19/2010	11:23	01:04	05:42	20:36	03:34	22:45
5/20/2010	12:38	01:34	05:41	20:37	03:33	22:47
5/21/2010	13:53	02:01	05:40	20:38	03:31	22:49
5/22/2010	15:07	02:26	05:39	20:39	03:29	22:50
5/23/2010	16:21	02:50	05:38	20:40	03:28	22:52
5/24/2010	17:35	03:17	05:38	20:41	03:26	22:54
5/25/2010	18:48	03:46	05:37	20:42	03:24	22:56
5/26/2010	19:59	04:20	05:36	20:43	03:23	22:57
5/27/2010	21:05	05:02	05:35	20:44	03:21	22:59
5/28/2010	22:02	05:50	05:35	20:45	03:20	23:01
5/29/2010	22:49	06:46	05:34	20:46	03:19	23:02
5/30/2010	23:28	07:47	05:33	20:47	03:17	23:04
5/31/2010		08:51	05:33	20:48	03:16	23:05

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

Items of Interest This Month

5/5-6 Eta Aquarid meteor shower peaks
5/6 Iapetus at greatest western elongation (most visible on this side of Saturn)
5/7 midnight: Rhea near Titan, Tethys near Enceladus
5/15 Moon near Venus at Sunset
5/21 First Quarter Friday Star Party

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.

Bill and Jerry's Repair Service

Bill Murray's Meade LX90 sprang a leak a year or so ago. Bill accidentally put it away without the rear cap in place, and after bouncing around in the case on the way home, styrofoam bits from the padding wound up inside the tube. There was a regular drift of them up against the corrector plate, and the secondary mirror was peppered with little white specks, too.

Bill finally decided it was time to do something about it. He and Jerry tried vacuuming the foam out, using a small vacuum hose snaked in from the back, but they couldn't angle it right to reach all the nooks and crannies inside the scope. So after a couple of deep breaths, they took off the corrector plate.

Every Schmidt-Cassegrain owner knows that the corrector plate is sacrosanct; you remove it at the peril of disrupting the balance of the cosmos itself. Indeed, as Jerry removed the screws holding it in place, he heard a distant scream that he assumes was a Meade technical support specialist in India anticipating the phone call that was sure to come. However, nothing dire transpired. The retaining ring came off and the corrector plate — already marked at the factory for proper orientation — only required a little nudge to break it free of the cork pads holding it in position. Once the tube was open, it was a simple matter to vacuum out the styrofoam. And even though the opportunity was nearly irresistible, Bill and Jerry refrained from taking Windex to the primary or to the corrector plate.

Jerry and Bill remove the corrector plate from Bill's Meade LX90

Reassembly was just as easy as disassembly. Nothing broke, and there were no screws left over. The sky was overcast so the scope couldn't be star tested immediately, but a few days later Bill tested it on Polaris and found that the collimation was nearly perfect.

After such unbridled success on their first try, Bill and Jerry are ready to hang out their shingle as Schmidt-Cassegrain repair gurus. Next time your scope fills up with fluff, bring it around for a quick disassembly and cleaning!

Thank You Castle Storage

For the last two 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.

Source of Zodiacal Light Identified

From NASA and the Southwest Research Institute

The eerie glow that straddles the night time zodiac in the eastern and western sky is no longer a mystery. First explained by Joshua Childrey in 1661 as sunlight scattered in our direction by dust particles in the solar system, the source of that dust was long debated. In a paper that appeared in the April 20 issue of The Astrophysical Journal, David Nesvorny and Peter Jenniskens put the stake in asteroids. More than 85 percent of the dust, they conclude, originated from Jupiter Family comets, not asteroids.

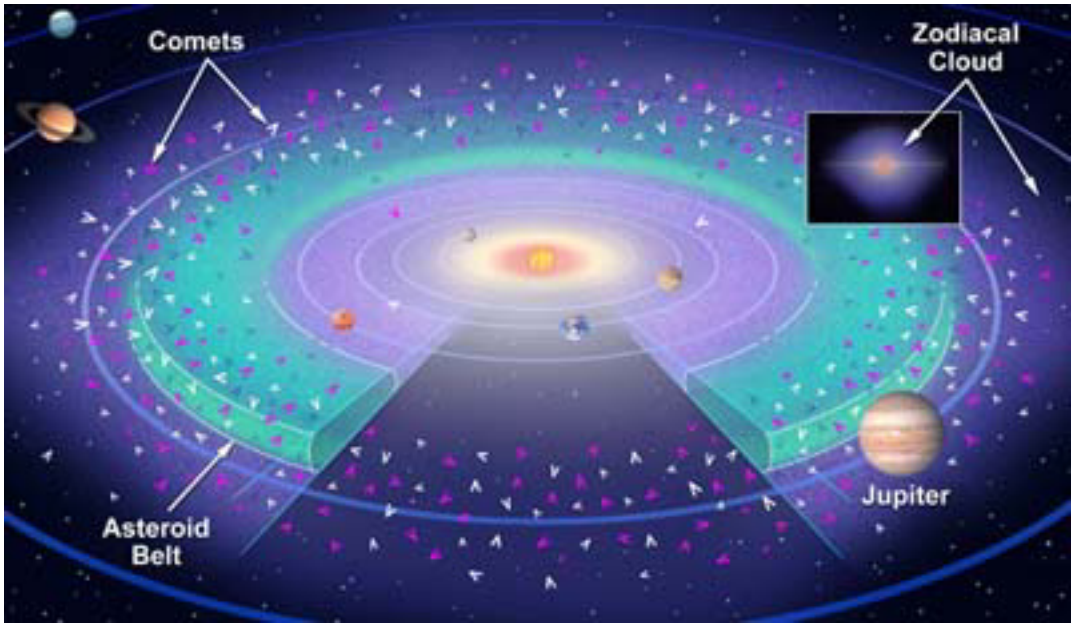
"This is the first fully dynamical model of the zodiacal cloud," says planetary scientist Nesvorny of the Southwest Research Institute in Boulder, Colo. "We find that the dust of asteroids is not stirred up enough over its lifetime to make the zodiacal dust cloud as thick as observed. Only the dust of short-period comets is scattered enough by Jupiter to do so."

This result confirms what meteor astronomer Jenniskens of the SETI Institute in Mountain View, Calif., had long suspected. An expert on meteor showers, he had noticed that most consist of dust moving in orbits similar to those of Jupiter Family comets, but without having active dust-oozing comets associated with them.

Instead, Jenniskens discovered a dormant comet in the Quadrantid meteor shower in 2003 and has since identified a number of other such parent bodies. While most are inactive in their present orbit around the Sun, all have in common that they broke apart violently at some point in time in the past few thousand years, creating dust streams that now have migrated into Earth's path.

Nesvorny and Jenniskens, with the help of Harold Levison and William Bottke of the Southwest Research Institute, David Vokrouhlicky of the Institute of Astronomy at Charles University in Prague, and Matthieu Gounelle of the Natural History Museum in Paris, demonstrated that these comet disruptions can account for the observed thickness of the dust layer in the zodiacal cloud.

In doing so, they solved another mystery. It was long known that snow in Antarctica is laced with micro-meteorites, some 80 to 90 percent of which have a peculiar primitive composition, rare among the larger meteorites that we know originated from asteroids. Instead, Nesvorny and Jenniskens suggest that most antarctic micro-meteorites are pieces of comets. According to their calculations, cometary grains dive into Earth's atmosphere at entry speeds low enough for them to survive, reach the ground, and be picked up later by curious micro-meteorite hunters.



The dust between the planets, that scatters sunlight our way, is not from the asteroid belt (depicted here in green), but from periodically disrupting comets that spend much of their time near the orbit of Jupiter, according to calculations by Nesvorny and Jenniskens. Courtesy Southwest Research Institute.