

IO - January 2008

Issue 2008-01
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,
Tommy Lightning Bolt.

www.eugeneastro.org

EAS is a proud member of:

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



Wednesday - January 2nd MEETING

EUGENE ASTRONOMICAL SOCIETY

Held at:

Science Factory Children's Museum & Planetarium

2300 Leo Harris Parkway, Eugene

SW of Autzen Stadium

Winter Solstice

by Sam Pitts

For our January meeting, as we begin to emerge from the long, dark days of winter, Sam Pitts will give a talk on the Winter Solstice.

Jacob Strandlien will show us what's new in astronomy and space exploration.

Jerry Oltion will reveal what's on the other side of all those clouds this month, just in case we ever get a break long enough to look through.

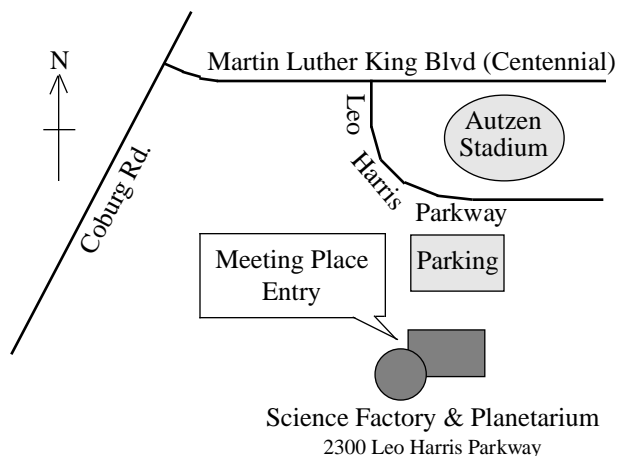
We always encourage audience participation during our meetings. EAS meetings are traditionally times when we learn about astronomy and share others' experiences and knowledge of astronomy and the night sky. If you have something to share with the group, please do so!

Come and enjoy the wonders of the night sky with the Eugene Astronomical Society at The Science Factory's comfortable Planetarium. After the meeting we can gather at The North Bank for dinner and conversation.

Remember – Meeting day has been changed to 1st Wednesday of the month

EAS general meetings will now be on the 1st Wednesday of each month at 7:00 PM except for holidays, at The Science Factory Children's Museum & Planetarium. Guests are welcome to visit; we ask for a \$1 guest contribution. Meetings feature speakers with presentations on topics of interest to club members, current viewing opportunities, telescope help, and star party planning.

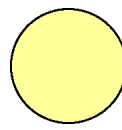
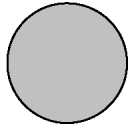
EAS thanks the Science Factory Children's Museum & Planetarium for providing the Planetarium for our monthly meetings.



Join the EAS mail list at <http://eugeneastro.org/mailman/listinfo/org.eugeneastro.general>



Observing in January



January 8	January 15	January 22	January 29
Mercury Set 5:49 PM	Mercury Set 6:22 PM	Mercury Set 6:44 PM	Mercury Set 6:35 PM
Venus Rise 5:00 AM	Venus Rise 5:14 AM	Venus Rise 5:27 AM	Venus Rise 5:37 AM
Mars Set 6:52 AM	Mars Set 6:16 AM	Mars Set 5:43 AM	Mars Set 5:13 AM
Jupiter Rise 6:57 AM	Jupiter Rise 6:36 AM	Jupiter Rise 6:15 AM	Jupiter Rise 5:53 AM
Saturn Rise 8:58 PM	Saturn Rise 8:29 PM	Saturn Rise 8:10 PM	Saturn Rise 7:30 PM
Uranus Set 9:46 PM	Uranus Set 9:20 PM	Uranus Set 8:54 PM	Uranus Set 8:28 PM
Neptune Set 7:35 PM	Neptune Set 7:09 PM	Neptune Set 6:43 PM	Neptune Set 6:17 PM
Pluto Rise 6:05 AM	Pluto Rise 5:39 PM	Pluto Rise 5:12 AM	Pluto Rise 4:45 AM

All times: Pacific Standard Time (Nov.-March) = UT-8 or U.S. Pacific Daylight Time (March 11-November 4, 2007) = UT - 7 hours.

Date	Moonrise	Moonset	Sunrise	Sunset	Twilight Begin	Twilight End
1/1/2008	01:36	12:05	07:48	16:44	06:03	18:29
1/2/2008	02:40	12:26	07:48	16:45	06:03	18:30
1/3/2008	03:45	12:53	07:48	16:46	06:03	18:30
1/4/2008	04:50	13:26	07:48	16:47	06:03	18:31
1/5/2008	05:53	14:07	07:47	16:48	06:03	18:32
1/6/2008	06:49	14:58	07:47	16:49	06:03	18:33
1/7/2008	07:39	15:59	07:47	16:50	06:03	18:34
1/8/2008	08:19	17:06	07:47	16:51	06:03	18:35
1/9/2008	08:52	18:17	07:47	16:52	06:03	18:36
1/10/2008	09:20	19:29	07:46	16:54	06:03	18:37
1/11/2008	09:43	20:41	07:46	16:55	06:03	18:38
1/12/2008	10:03	21:53	07:46	16:56	06:03	18:39
1/13/2008	10:22	23:05	07:45	16:57	06:02	18:40
1/14/2008	10:43	-----	07:45	16:58	06:02	18:41
1/15/2008	11:05	00:19	07:44	17:00	06:02	18:42
1/16/2008	11:32	01:37	07:44	17:01	06:01	18:43
1/17/2008	12:06	02:56	07:43	17:02	06:01	18:44
1/18/2008	12:50	04:16	07:43	17:03	06:01	18:45
1/19/2008	13:47	05:30	07:42	17:05	06:00	18:46
1/20/2008	14:56	06:33	07:41	17:06	06:00	18:47
1/21/2008	16:13	07:23	07:41	17:07	05:59	18:48
1/22/2008	17:32	08:00	07:40	17:09	05:59	18:50
1/23/2008	18:48	08:29	07:39	17:10	05:58	18:51
1/24/2008	20:01	08:53	07:38	17:11	05:57	18:52
1/25/2008	21:10	09:13	07:38	17:13	05:57	18:53
1/26/2008	22:16	09:31	07:37	17:14	05:56	18:54
1/27/2008	23:22	09:49	07:36	17:15	05:55	18:55
1/28/2008	-----	10:08	07:35	17:17	05:55	18:57
1/29/2008	00:26	10:28	07:34	17:18	05:54	18:58
1/30/2008	01:32	10:53	07:33	17:19	05:53	18:59
1/31/2008	02:37	11:23	07:32	17:21	05:52	19:00

Other Items of Interest This Month

- Dwarf planet Ceres is mag 8.3 in Cetus
- Comet 8P/Tuttle predicted mag 5.5 south of M33, moving south quickly throughout the month
- Jupiter and Venus approach one another at dawn throughout the month
- Saturn is visible in late evening, 7 - 8 ° from Regulus in Leo
- Moon near Pleiades Jan 17-18 (around midnight)
- Moon near Mars on Jan 19 (occultation visible from NW Canada and Alaska)

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' 8" Longitude 123° 5' 8" for listed date

Astronomical Events – January 2008

- 01 - Comet 8P/Tuttle Near-Earth Flyby (0.253 AU) - predicted mag 5.5, visible just south of M33
 - 02 - Asteroid 1862 Apollo Closest Approach To Earth (1.038 AU), Earth at perihelion (closest approach to Sun)
 - 03 - Earth At Perihelion (0.983 AU From Sun), Quadrantids Meteor Shower Peak, Comet C/2007 U1 (LINEAR) Closest Approach To Earth (2.975 AU)
 - 04 - Asteroid 2007 VN243 Near-Earth Flyby (0.086 AU), Isaac Newton's 365th Birthday (1643)
 - 05 - Cassini, Titan Flyby, Comet 194P/LINEAR Closest Approach To Earth (0.865 AU)
 - 06 - 40th Anniversary (1968), Surveyor 7 Launch (Moon Lander)
 - 08 - 35th Anniversary (1973), Luna 21 Launch (USSR Moon Lander/Rover)
 - 09 - Thin crescent Moon near Mercury just after sunset
 - 10 - STS-122 Launch, Space Shuttle Atlantis, ESA's Columbus Laboratory (International Space Station 1E), Asteroid 15 Eunomia At Opposition (8.2 Magnitude), Asteroid 2005 WJ56 Near-Earth Flyby (0.028 AU)
 - 11 - Comet C/2006 S5 (Hill) Closest Approach To Earth (1.673 AU)
 - 13 - Comet 108P/Ciffreo Closest Approach To Earth (1.484 AU)
 - 14 - MESSENGER, 1st Mercury Flyby, Ulysses, Maximum North Solar Latitude (79.8 Degrees)
 - 15 - Cassini, Distant Flyby of Methone & Pandora, Comet C/2005 L3 (McNaught) Perihelion (5.593 AU)
 - 16 - Comet C/2007 T6 (Catalina) Closest Approach To Earth (1.598 AU), Comet Mueller 5 Closest Approach To Earth (3.267 AU)
 - 19 - Asteroid 10792 Ecuador Closest Approach To Earth (2.278 AU)
 - 20 - Asteroid 5231 Verne Closest Approach To Earth (1.492 AU)
 - 21 - Asteroid 7336 Saunders Closest Approach To Earth (1.760 AU)
 - 22 - Cassini, Distant Flyby of Titan
 - 22 - Mercury At Its Greatest Eastern Elongation (19 Degrees)
 - 22 - 40th Anniversary (1968), Apollo 5 Launch
 - 24 - Asteroid 2007 PS9 Near-Earth Flyby (0.091 AU)
 - 25 - Comet C/2007 T5 (Gibbs) Closest Approach To Earth (3.206 AU), Asteroid 63163 Jerusalem Closest Approach To Earth (0.848 AU)
 - 26 - Comet C/2007 D3 (LINEAR) Closest Approach To Earth (4.590 AU)
 - 27 - Cassini, Distant Flyby of Titan, Atlas, Epimetheus, Prometheus & Pandora, 100th Anniversary (1908), Philibert Melotte's Discovery of Jupiter Moon Pasiphae
 - 29 - Asteroid 2007 TU24 Near-Earth Flyby (0.004 AU)
 - 30 - Asteroid 2007 WD5 Near-Mars Flyby
 - 31 - 50th Anniversary (1958), Explorer 1 Launch (1st US Satellite)
- AU=Astronomical Unit (92,955,800 miles)

Scheduled EAS activities:

January 28; Cambell Center 155 High St, Eugene, 12:45 PM-Astronomy Talk by EAS



Thank You Castle Storage

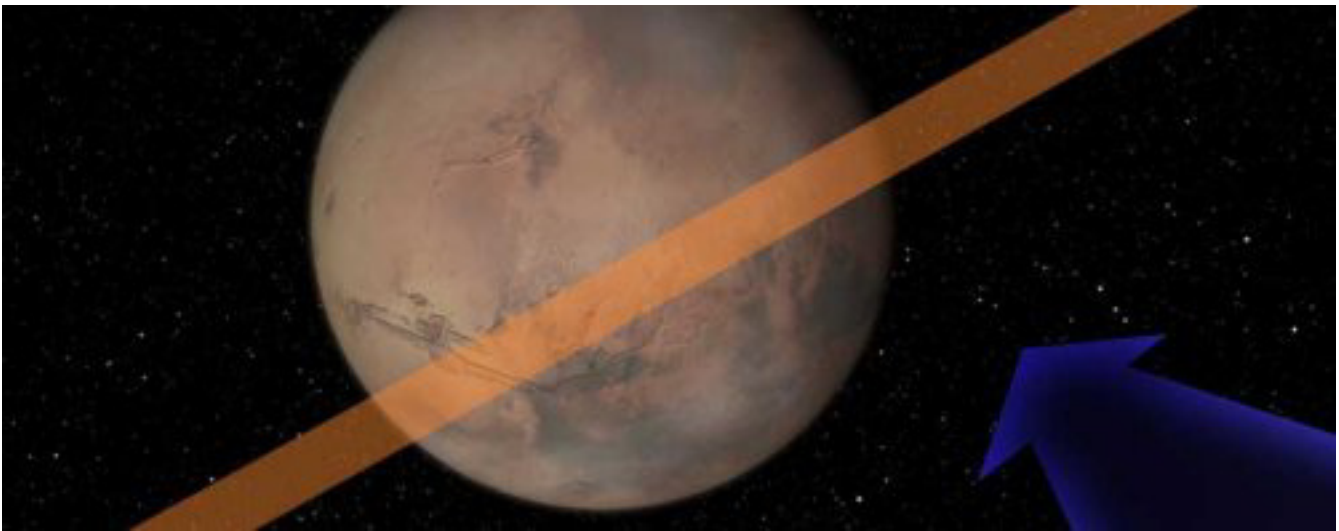
Board member Tommy Lightning Bolt was instrumental in getting a storage unit from the owners of Castle Storage for EAS to store its telescopes and equipment. EAS would like to thank Castle Storage for their generosity and support for our group. Please give them a call if you need a storage space and tell your friends. They are great people and offer secure and quality units.

Asteroid May Strike Mars

From Science@NASA (<http://science.nasa.gov>)

Dec. 21, 2007: Astronomers funded by NASA are monitoring the trajectory of an asteroid named 2007 WD5 that is expected to cross the orbital path of Mars early next year. Calculations by NASA's Near-Earth Object Office at the Jet Propulsion Laboratory indicate that the 164-ft wide asteroid may pass within 30,000 miles of Mars at about 6 a.m. EST on Jan. 30, 2008.

"Right now asteroid 2007 WD5 is about half-way between the Earth and Mars and closing the distance [to Mars] at a speed of about 27,900 miles per hour," said Don Yeomans, manager of the Near Earth Object Office at JPL.



Above: This artist rendering uses an arrow to show the predicted path of the asteroid on Jan. 30, 2008. The orange swath indicates the area it is expected to pass through. Mars may or may not be in the asteroid's path. Image credit: NASA/JPL.

There is a 1-in-75 chance of 2007 WD5 hitting Mars; researchers can't be more confident than that because of uncertainties in the asteroid's orbit. If this unlikely event were to occur, however, the strike would happen somewhere within a broad swath across the planet north of where the Opportunity rover is.

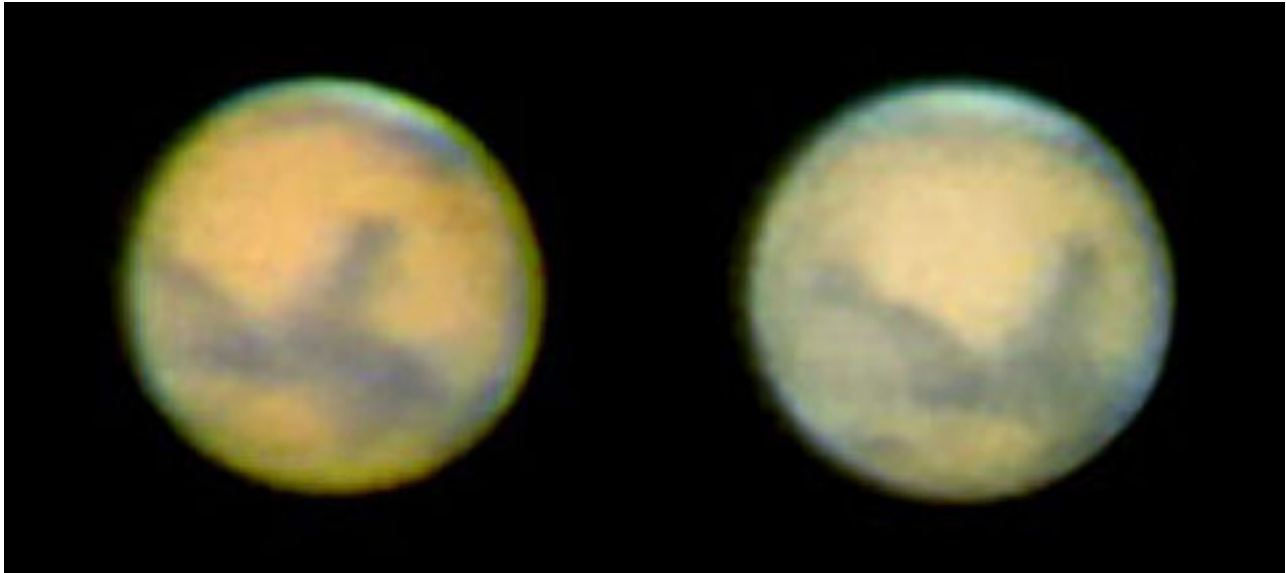
"We estimate such impacts occur on Mars every thousand years or so," said Steve Chesley, a scientist at JPL. "If 2007 WD5 were to thump Mars on Jan. 30, we calculate it would hit at about 30,000 miles per hour and might create a crater more than half-a-mile wide." The Mars Rover Opportunity is currently exploring a crater approximately this size.

Such a collision could release about three megatons of energy. Scientists believe an event of comparable magnitude occurred here on Earth in 1908 in Tunguska, Siberia, but no crater was created. The object was disintegrated by Earth's atmosphere before it hit the ground, although the air blast devastated a large area of unpopulated forest. The Martian atmosphere is much thinner than Earth's so a similar sized impactor would be more likely to reach the ground.

Asteroid 2007 WD5 was first discovered on Nov. 20, 2007, by the NASA-funded Catalina Sky Survey and put on a "watch list" because its orbit passes near the Earth. Further observations from both the NASA-funded Spacewatch at Kitt Peak, Ariz., and the Magdalena Ridge Observatory in New Mexico gave scientists enough data to determine

that the asteroid was not a danger to Earth, but could potentially impact Mars.

Because the asteroid has been tracked for little more than a month, there is still some uncertainty about the path it will take. "Over the next five weeks, we hope to gather more information from observatories so we can further refine the asteroid's trajectory," says Yeomans. More data could eliminate or confirm the possibility of an impact.



Mars on Christmas Eve, showing rotation of the planet – Photos by Jeff Phillips

Io Under New Editorship

Sam Pitts has been putting together the Io every month for several years now, and doing a great job of it. He recently decided to take a break from it, and has passed the mantle of newsletter editor on to our club secretary, Jerry Oltion.

Many thanks to Sam for keeping the Io going through thick and thin, and for the many interesting articles and photos and observation data he has supplied us with over the years. Yours will be hard shoes to fill!

With that in mind, your new editor would love to see more articles and news reports from the membership. If you've done or learned or seen something that would interest the group, write it up for the Io! Photos are always welcome, too, and not just of astronomical objects. If you've got a good photo of a star party or a group get-together or even just a nifty pattern of frost on your corrector plate, send it in. Jerry's email address is <j.oltion@sff.net>.

We're always looking for interesting programs for our monthly meetings, too. If you have an area of interest you could talk about to the group, or if you know of someone who could put on a good program, please contact Sam or Jerry. We've got a lot of expertise in our club; let's share it around!