

IO – June 2007

Issue 2007-06
Eugene Astronomical Society



Eugene Astronomical Society,
Annual Club Dues \$25, Board Members:
President: Sam Pitts - 688-7330
Secretary: Jerry Olton - 343-4758
Jacob Strandlien, Tommy Lightning Bolt
& Fred Domineack

www.eugeneastro.org

EAS is a Proud Member of:

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

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Io (*EYE-oh*) is nearest to Jupiter and fastest orbiting of the four Galilean moons

Monday- June 4th MEETING
EUGENE ASTRONOMICAL SOCIETY

Held at:

"Science Factory Children's Museum & Planetarium"
2300 Leo Harris Parkway, Eugene
SW of Autzen Stadium

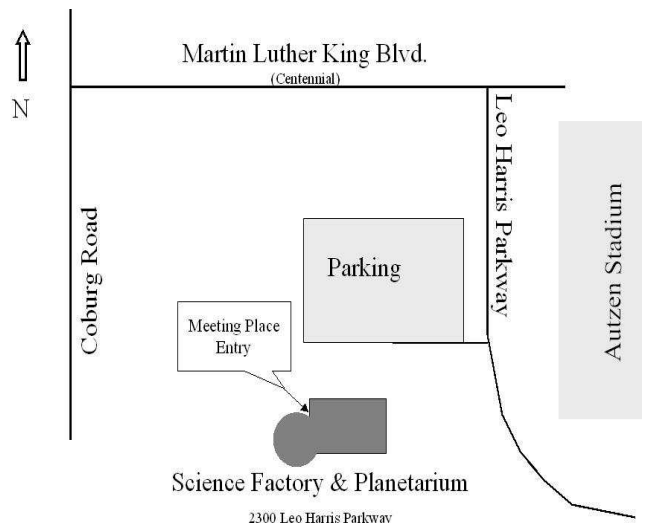
NASA Deep Impact Mission
&
Tour of the Summer Constellations

Sue Peterson presents a NASA DVD about the Deep Impact Mission that is full of information and great images. We will also review the Summer Constellations and their locations. Audience participation is strongly encouraged to locate popular deep sky objects for the summer season of observing. We will discuss and review setting up equipment, along with techniques for locating constellations and deep sky objects. This will be a fun time to share our knowledge with everyone.

Jacob Strandlien will keep you up to date with his monthly presentation on current events and news in Space & Astronomy. Jacob always has some interesting news and great images to share with the group.

Come and enjoy the wonders of the night sky with the Eugene Astronomical Society at The Science Factory's comfortable Planetarium. The meeting will begin at **7:00 PM** in the Planetarium.

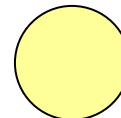
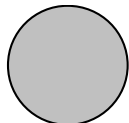
The Eugene Astronomical Society is a group of amateur astronomers dedicated to observing the night sky, learning about the Universe, and sharing that understanding and appreciation of astronomy with students and the general public. EAS has been doing astronomy education and public outreach for many years. The EAS holds club meetings on the first Monday of each month at 7 PM 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.



Observing in June



June 8	June 14	June 22	June 30
Mercury Set 10:30 PM	Mercury Set 10:05 PM	Mercury Set 9:15 PM	Mercury Set 8:19 PM
Venus Set 12:02 AM	Venus Set 11:53 PM	Venus Set 11:37 PM	Venus Set 11:17 PM
Mars Rise 2:50 AM	Mars Rise 2:36 AM	Mars Rise 2:18 AM	Mars Rise 2:00 AM
Jupiter Rise 8:42 PM	Jupiter Rise 7:57 PM	Jupiter Rise 7:21 PM	Jupiter Rise 6:45 PM
Saturn Set 12:42 AM	Saturn Set 12:20 AM	Saturn Set 11:51 PM	Saturn Set 11:21 PM
Uranus Rise 1:39 AM	Uranus Rise 1:15 AM	Uranus Rise 12:44 AM	Uranus Rise 12:13 AM
Neptune Rise 12:35 AM	Neptune Rise 12:11 AM	Neptune Rise 11:09 PM	Neptune Rise 11:07 PM
Pluto Rise 8:57 PM	Pluto Rise 8:33 PM	Pluto Rise 8:00 PM	Pluto Rise 7:28 PM

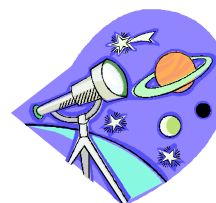
All times: U.S. Pacific Daylight Time (March 11-November 4, 2007) = UT - 7 hours. Pacific Standard Time (Nov.-March) = UT-8

Date	Moonrise	Moonset	Sunrise	Sunset	Twilight Begin	Twilight End
6/01/2007	22:13	05:28	05:33	20:48	03:15	23:07
6/02/2007	23:05	06:19	05:32	20:49	03:14	23:08
6/03/2007	23:48	07:21	05:32	20:50	03:13	23:10
6/04/2007	-----	08:30	05:31	20:51	03:12	23:11
6/05/2007	00:22	09:43	05:31	20:51	03:11	23:12
6/06/2007	00:50	10:57	05:30	20:52	03:10	23:14
6/07/2007	01:14	12:12	05:30	20:53	03:09	23:15
6/08/2007	01:35	13:27	05:30	20:53	03:08	23:16
6/09/2007	01:55	14:42	05:30	20:54	03:07	23:17
6/10/2007	02:15	16:01	05:29	20:55	03:06	23:18
6/11/2007	02:39	17:22	05:29	20:55	03:06	23:19
6/12/2007	03:08	18:45	05:29	20:56	03:05	23:20
6/13/2007	03:44	20:06	05:29	20:56	03:05	23:21
6/14/2007	04:31	21:18	05:29	20:57	03:04	23:22
6/15/2007	05:32	22:17	05:29	20:57	03:04	23:22
6/16/2007	06:41	23:02	05:29	20:58	03:04	23:23
6/17/2007	07:57	23:37	05:29	20:58	03:03	23:24
6/18/2007	09:11	-----	05:29	20:58	03:03	23:24
6/19/2007	10:22	00:02	05:29	20:58	03:03	23:24
6/20/2007	11:30	00:23	05:29	20:59	03:03	23:25
6/21/2007	12:34	00:42	05:30	20:59	03:04	23:25
6/22/2007	13:38	00:59	05:30	20:59	03:04	23:25
6/23/2007	14:40	01:16	05:30	20:59	03:04	23:25
6/24/2007	15:44	01:33	05:30	20:59	03:05	23:25
6/25/2007	16:49	01:53	05:31	21:00	03:05	23:25
6/26/2007	17:56	02:16	05:31	21:00	03:06	23:25
6/27/2007	19:02	02:46	05:31	21:00	03:06	23:25
6/28/2007	20:04	03:24	05:32	20:59	03:07	23:24
6/29/2007	21:00	04:11	05:32	20:59	03:08	23:24
6/30/2007	21:46	05:11	05:33	20:59	03:09	23:23

Current Occultations & Other Events

Visit Derek C Breit's web site
"BREIT IDEAS Observatory"
www.poyntsource.com/New/Paths.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

Events

JUNE 2007

3	Asteroid 2007 JG16 Near-Earth Flyby (0.085 AU) 7.9 million miles
4	Workshop: The Science Opportunities for the Warm Spitzer Mission, Pasadena, California; Hot-wiring the Transient Universe: A Joint VOEvent & HTN Workshop, Tucson, Arizona; Conference: In the Spirit of Bernard Lyot - The Direct Detection of Planets and Circumstellar Disks in the 21st Century, Berkeley, California
5	MESSENGER, 2nd Venus Flyby
6	Jupiter At Opposition (closest to earth-up all night); Asteroid 2004 KH17 Near-Earth Flyby (0.077 AU) 7.2 million miles
8	STS-117 Launch, Space Shuttle Atlantis, S3/S4 Truss PV Arrays, (International Space Station 13A); Cosmo Skymed 1 Delta 2 Launch
9	Venus At Its Greatest Eastern Elongation (45 Degrees)
11	Cosmology, Strings, and Phenomenology Conference, Stockholm, Sweden
12	Cassini, Atlas, Prometheus, Epimetheus & Methone Distant Flyby
13	Cassini, Titan Flyby
14	Rocky Mountain Star Stare, Pike National Forest, Colorado
18	Moon Occults Venus (Europe & Middle East) ;
19	Moon Occults Saturn (China, Iran, Japan & Taiwan); Pluto At Opposition
21	Solstice 18:06 UT (longest day of the year) Sunrise 5:30 AM Sunset 8:59 PM
22	Lecture: Phoenix - A Science and Weather Station on Mars, Pasadena, California
25	Asteroid 2005 AU3 Near-Earth Flyby (0.057 AU) 5.3 million miles; Magnetospheres of the Outer Planets Meeting, San Antonio, Texas; Workshop: The Neutron Star Crust and Surface - Observations and Models, Seattle, Washington
26	Asteroid 2003 WE Near-Earth Flyby (0.061 AU)
29	Cassini, Titan Flyby
30	Dawn Delta 2 Launch (Asteroid Orbiter)

AU=Astronomical Unit (92,955,800 miles)

Star Party - June 7th (Thursday): Springfield School Star Party at Church Camp in Cottage Grove, Oregon

Star Party - June 9th (Saturday): Mary's Peak See Page #3

Star Party - June 14-16th **Prineville**, this is a FREE event sponsored by Oregon Parks and Recreation and includes all sorts of family activities including Nature Hikes, free Kayaking, OMSI High Desert Museum, John Day Fossil Beds, speakers (mostly SRNC speakers and one from NASA) as well as door prizes. Camping is free in the parking lot by your set up---priority is given for paid camping to attendees. **Location for Star party** (this is the 7th annual one) is on the side of the Prineville Reservoir at about 3500 feet and 14 miles out of Prineville all on paved roads and NO dust... Skies are just about as dark as OSP with NO light dome at all from Prineville. We have had several Eugene astronomers come in the past and they have been enthusiastic about this star party.

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

Keep up to date on opportunities to join local amateur astronomer outings to observe the night skies. This is a great opportunity to get advice in setting up your own equipment from seasoned veterans or just to look through different scopes. They always have fun and enjoy helping newcomers.

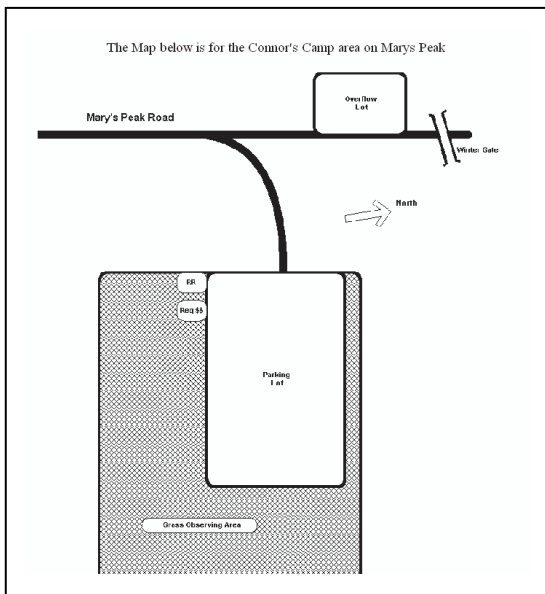
Mary's Peak Star Party June 9th

5:00-7:00	Arrival and setup
7:00-8:00	Welcome, announcements, introductions, get to know people
7:30-8:00	Equipment & book swap meet ?
8:00	Sunset
8:00-9:00	Telescope tune up and help
10:00	Twilight ends

Directions:

CONNOR'S CAMP on MARY'S PEAK

To reach Mary's Peak from I-5: Take the Route 34 exit (to Corvallis) off I-5 and turn west onto Route 34. As you're approaching Corvallis (before the bridge over the Willamette) the route turns left at a stop light. Take this turn and continue on Route 34 all the way to Philomath. After passing the downtown portion of Philomath, you'll come upon an intersection (just past the wood mill to the left) indicating a continuation of Rt. 34 by turning to the left - staying straight will put you on Rt. 20 to Newport. Take this left turn, Rt 34 to Waldport, and drive for several miles. Route 34 eventually takes you on a winding journey through the Mary's Peak foothills, then leads you to a hillcrest where the Mary's Peak access road (marked by a sign to the right) begins. Turn right onto this road and drive for just over 5 miles. After this distance, you'll encounter a brief patch of gravel road; just beyond is an intersection for a road to the left. Do NOT turn on this, just continue on the paved road for another hundred yards and the Conner's Camp turn-off (marked by signs) will be seen to the right. Take this turn and continue to the parking area, which is only a few hundred yards away.



North Sky 45 Club

<http://www.nightsky45.com/>

&

Heart of the Valley Astronomers

<http://www.hvastronomy.com/>



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.

Some Great Astronomy Links:

Submitted by Bill Murray

Earth and Moon Viewer

<http://www.fourmilab.ch/earthview/>

Explore the Moon

<http://www.inconstantmoon.com/>

Universe within 12.5 Light Years/Nearest Stars

<http://www.answers.org/free/universe/12lys.html>

Windows to the Universe (looks like an education site)

<http://www.windows.ucar.edu/>

Take a Space Trip

<http://www.spacewander.com/>

Weather and Space

<http://hfradio.org/propagation.html>

Stardate Online

<http://stardate.org/>

Absolute Astronomy

<http://www.absoluteastronomy.com/Reference.htm>

Exploratorium Check the Links at the bottom. I'm much younger on Mars.
And much lighter.

http://www.exploratorium.edu/ronh/solar_system/

Dark Sky

<http://www.darksky.org/>

Cool Cosmos Educational Site

<http://coolcosmos.ipac.caltech.edu/>

Down to Earth Astronomy

<http://opposite.stsci.edu/>

The Solar System

<http://www.solarviews.com/eng/solarsys.htm>

B/W and Color Photos of the Moon

http://www.onomichi.ne.jp/~fk-astro/e/satmoon1_e.html

Telescope Review Site

<http://www.scopereviews.com/>

Astronomer Online

<http://www.theastronomer.org/>

10 Things You Didn't Know About Black Holes

<http://www.nmg-uk.com/blog/black-holes/10-things-you-didnt-know-about-black-holes.htm>

The Ions of Dawn

By Patrick L. Barry

This summer, NASA will launch a probe bound for two unexplored worlds in our solar system's asteroid belt—giant asteroids Ceres and Vesta. The probe, called Dawn, will orbit first one body and then the other in a never-before-attempted maneuver.

It has never been attempted, in part, because this mission would be virtually impossible with conventional propulsion. “Even if we were just going to go to Vesta, we would need one of the largest rockets that the U.S. has to carry all that propellant,” says Marc Rayman, Project System Engineer for Dawn at JPL. Traveling to both worlds in one mission would require an even bigger rocket.

This is a trip that calls for the *unconventional*. “We’re using ion propulsion,” says Rayman.



Artist's rendering of Dawn spacecraft, with asteroids. Largest are Vesta and Ceres. Credits: Dawn spacecraft—Orbital Sciences Corporation; background art—William K. Hartmann, courtesy UCLA

The ion engines for the Dawn spacecraft proved themselves aboard an earlier, experimental mission known as Deep Space 1 (DS1). Because ion propulsion is a relatively new technology that's very different from conventional rockets, it was a perfect candidate for DS1, a part of NASA's New Millennium Program, which flight-tests new technologies so that missions such as Dawn can use those technologies reliably. “The fact that those same engines are now making the Dawn mission possible shows that New Millennium accomplished what it set out to,” Rayman says.

Ion engines work on a principle different from conventional rockets. A normal rocket engine burns a chemical fuel to produce thrust. An ion engine doesn't burn anything; a strong electric field in the engine propels charged atoms such as

xenon to very high speed. The thrust produced is tiny—roughly equivalent to the weight of a piece of paper—but over time, it can generate as much speed as a conventional rocket while using only about 1/10 as much propellant.

And Dawn will need lots of propulsion. It must first climb into Vesta's orbit, which is tilted about 7 degrees from the plane of the solar system. After studying Vesta, it will have to escape its gravity and maneuver to insert itself in an orbit around Ceres—the first spacecraft to orbit two distant bodies. Dawn's up-close views of these worlds will help scientists understand the early solar system.

“They're remnants from the time the planets were being formed,” Rayman says. “They have preserved a record of the conditions at the dawn of the solar system.”

Find out about other New Millennium Program validated technologies and how they are being used in science missions at <http://nmp/TECHNOLOGY/infusion.html> . While you're there, you can also download “Professor Starr's Dream Trip,” a storybook for grown-ups about how ion propulsion enabled a scientist's dream of visiting the asteroids come true. A simpler children's version is available at <http://spaceplace.nasa.gov/en/kids/nmp/starr>.

Buying a New Telescope & Mount

Here are some definitions behind the phrases used by manufactures to lure prospective amateur astronomers to buy their products. (Culled off the newsgroup sci.astro.amateur (Author Unknown)

NEW → It now comes in a different color

ALL NEW → Software, power supply, connectors, even the screw threads are not compatible with previous versions.

SATISFACTION GUARANTEED → We'll send another manual if this one doesn't work

ADVANCED DESIGN → Sales people don't understand it.

MEETS OR EXCEEDS OPTICAL STANDARDS → We haven't the foggiest idea about the total wave front accuracy.

YEARS OF DEVELOPMENT → We finally got one to work.



OSP 2007 PRE-REGISTRATION

Pre-Registration Prices BEFORE July 20th

Registrations	Clothing	Misc
Adult \$45	T-shirts \$14	8x10 Group Photo \$8 10x14 Group Photo \$14
Ages 12-17 \$15	Sweatshirts \$20	Shower \$9 each
Ages 6-11 \$5	Hooded Sweatshirts \$40	Star Dinners \$10 each Thursday - Baked Ham Dinner Friday - Meatball Dinner Saturday - BBQ Chicken Dinner
Ages 0-5 Free		



[HOME](#)

[Vendor Registration Information Here](#)

[First Aid Volunteers Registration Here](#)

If you have questions or problems contact the [ospdirector](#)

PRE-REGISTRATION BY MAIL

Fill out the form on-screen and print it.

PRE-REGISTRATION BY CREDIT CARD USING PAYPAL

isn't quite ready yet - please check back next week
There will be a \$3 charge for using Paypal.

The Deadline for Pre-Registration is July 20th

On-Site Prices AFTER July 20th

Registrations	Clothing	Misc
Adult \$55	Available only by Pre-Registration	Group Photo 8x10 \$8 Group Photo 10x14 \$14
Ages 12-17 \$25	T-shirts, Sweatshirts and Hooded Sweatshirts might be available at the Information Tent after 10am on Saturday	Showers \$9
Ages 6-11 \$15		Star Dinners might available
Ages 0-5 Free		

Cash or Check only at OSP - No Credit or Debit Cards

Oregon Star Party 2007

<http://www.oregonstarparty.org/>

A) From western Oregon, western Washington & California:

Travel east out of Prineville on State Highway #26. Zero your trip meter at the Forest Service Headquarters at the east end of town. Stay on Hwy 26 for approximately 14 miles, then turn right onto the Ochoco Ranger Station Road. It is not marked, but there should be an OSP sign placed shortly after you turn.

Zero your trip meter again and travel 8.4 miles, until you come to a Y in the road just past the Big Summit Ranger Station. At this Y, zero trip meter again, stay right on NFS 42 and go 19 miles to NFS 4240. Turn right onto NFS 4240 and proceed for 2.7 miles, turn right onto NFS 800. Go 1.5 miles west on NFS 800 and you will arrive at Indian Trail Spring.

B) From eastern Oregon, eastern Washington, & other states:

Coming from places east of Indian Trail Spring, there are several options. From the north and east several good paved roads lead eventually to the town of Mitchell along Hwy 26. It is recommended that those coming in from this direction continue west on Hwy 26 to the turnoff for the Ochoco Ranger Station Road.

There are several gravel Forest Service roads that can be taken if one has an Ochoco National Forest map and feels comfortable with navigating back roads. But it is always a good idea to contact the Forest Service right before OSP to make sure these roads are open. From the southeast, the main roads will take you through Bend and then to Prineville. Hwy 27 is a shortcut available off of Hwy 20 to Prineville, it is graveled from Hwy 20 until the Prineville Reservoir where it becomes paved.

Please check the Oregon Department of Transportation web page www.tripcheck.com for up to date road information. The link for Incident Maps will take you to a 9 section grid. The Indian Trail Spring site is in Central Oregon. The site is east of Prineville along Highway 26.

[Contact us](#) if you need additional directions. A good idea is to pick up either a Pittmon's map for Crook County, or a National Forest Service map of the Ochocos for detailed information about the area.

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