

IO – January 2006

Issue # 2006-01

www.eugeneastro.org

Eugene Astronomical Society, Annual Club Dues \$25, Board Members: President: Richard Boyd- checkerkit@comcast.net, Stephen Caruana, Fred Domineack, Jacob Stranlien Sam Pitts- IO editor- sampitts@comcast.net 688-7330 Io (*EYE-oh*) is nearest to Jupiter and fastest orbiting of the four Galilean moons

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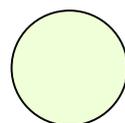
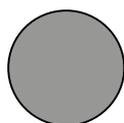


Monday- January 9th MEETING EUGENE ASTRONOMICAL SOCIETY At The Science Factory Planetarium

The meeting will begin at **7:00 PM** in the Planetarium. This meeting is the second Monday in January due to New Years Weekend. The agenda is to help with & answer questions regarding new telescopes & equipment. Sam Pitts will put on a short presentation regarding astronomical equipment for the beginner and answer questions. This will be a fun, hands on meeting, aimed at sharing ideas and information you may have regarding our hobby. Come on out.

Come early and help others learn about their scopes. Those of you, who are new or not sure about your equipment, show up early and some of our members will assist you in understanding your equipment better. If you are planning on getting a scope please come out and ask questions, we're glad to assist you in making a good solid choice to maximize your viewing pleasure.

The Science Factory is at 2300 Leo Harris Parkway, behind Autzen Stadium.



January 29	January 6	January 14	January 22
New Moon	First Quarter	Full Moon	Last Quarter
Sunset: 5:18 PM	Sunset: 4:49 PM	Sunset: 4:58 PM	Sunset: 5:09 PM
Sunrise 7:32 AM	Sunrise 7:47 AM	Sunrise 7:44 AM	Sunrise 7:39 AM
Mercury Rise	Mercury Rise 7:05 AM	Mercury Rise 7:27 AM	Mercury Rise 7:43 AM
Venus	Venus	Venus	Venus
Mars Set 2:14 AM	Mars Set 3:00 AM	Mars Set 2:42 AM	Mars Set 2:27 AM
Jupiter Rise 1:38 AM	Jupiter Rise 2:54 AM	Jupiter Rise 2:28 AM	Jupiter Rise 2:02 AM
Saturn Rise 4:55 PM	Saturn Rise 6:35 PM	Saturn Rise 6:00 PM	Saturn Rise 5:26 PM
Uranus Set 7:47 PM	Uranus Set 9:12 PM	Uranus Set 8:42 PM	Uranus Set 8:13 PM
Neptune	Neptune	Neptune Set 6:49 PM	Neptune

All times are for Eugene, Oregon Latitude 44° 3' 8" Longitude 123° 5' 8" for listed Date

Magazine subscriptions go to Richard Boyd: checkerkit@comcast.net

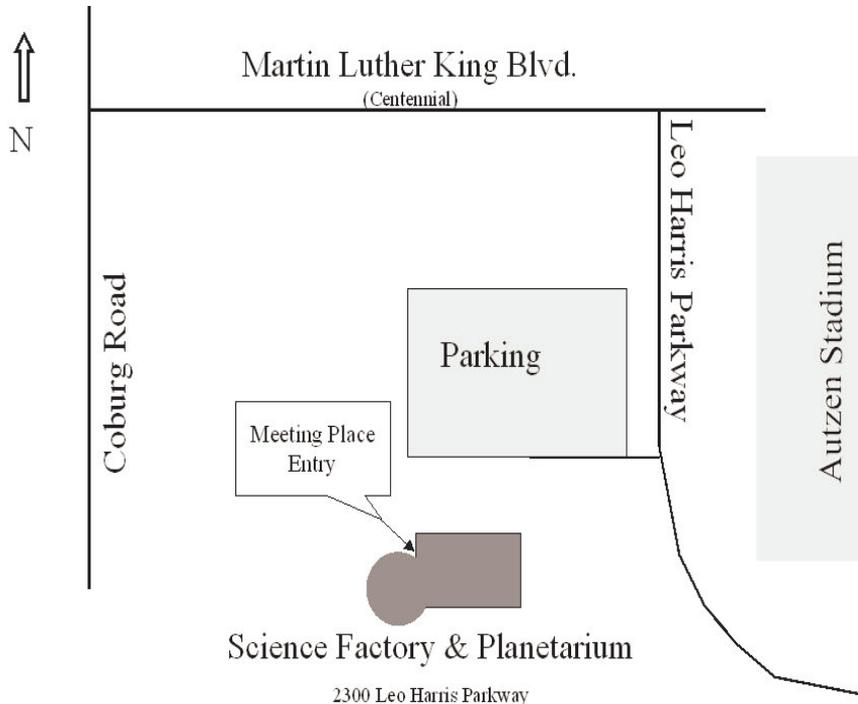


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Map to Eugene Astronomical Society's
Monthly Meetings in Eugene, Oregon

Astronomy Day May 6, 2006



Astronomy Day 2006 will again be held at the Science Factory. We will be working together to put on another great day of sharing our passion with the public. Tentative times are from Noon till 5:00 PM and possible start party that evening if weather permits (Saturday May 6th). We will have basic introduction programs and several other less formatted programs going on all afternoon in the lunch room area where we can share our knowledge by answering questions and demonstrating equipment & techniques.

As in the past Astronomy Day can only be successful by members participation and helping. Contact Richard Boyd, Sam Pitts or any other board member to find out more. More information will be available at up coming meetings

Thanks Sam -688-7330

A New View of the Andromeda Galaxy

By Dr. Tony Phillips and Patrick L. Barry

This is a good time of year to see the Andromeda galaxy. When the sun sets and the sky fades to black, Andromeda materializes high in the eastern sky. You can find it with your unaided eye. At first glance, it looks like a very dim, fuzzy comet, wider than the full moon. Upon closer inspection through a backyard telescope—wow! It's a beautiful spiral galaxy.

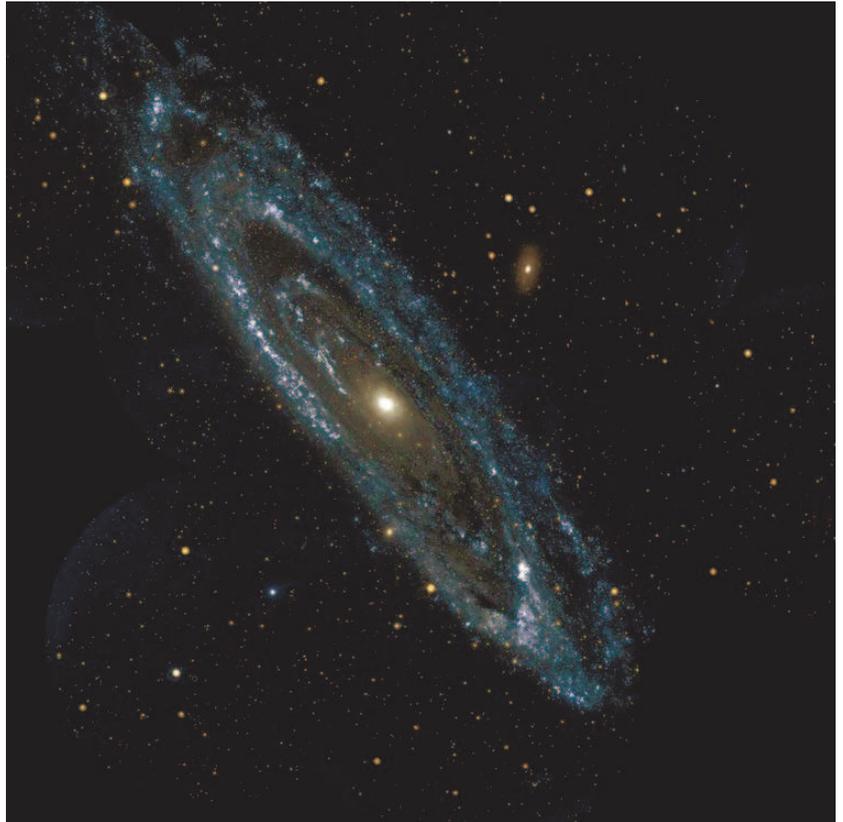
At a distance of “only” 2 million light-years, Andromeda is the nearest big galaxy to the Milky Way, and astronomers know it better than any other. The swirling shape of Andromeda is utterly familiar.

Not anymore. A space telescope named GALEX has captured a new and different view of Andromeda. According to GALEX, Andromeda is not a spiral but a ring.

GALEX is the “Galaxy Evolution Explorer,” an ultraviolet telescope launched by NASA in 2003. Its mission is to learn how galaxies are born and how they change with age. GALEX's ability to see ultraviolet (UV) light is crucial; UV radiation comes from newborn stars, so UV images of galaxies reveal star birth—the central process of galaxy evolution.

GALEX's sensitivity to UV is why Andromeda looks different. To the human eye (or to an ordinary visible-light telescope), Andromeda remains its usual self: a vast whirlpool of stars, all ages and all sizes. To GALEX, Andromeda is defined by its youngest, hottest stars. They are concentrated in the galaxy's core and scattered around a vast ring some 150,000 light years in diameter. It's utterly unfamiliar.

“Looking at familiar galaxies with a new wavelength, UV, allows us to get a better understanding of the processes affecting their evolution,” says Samuel Boissier, a member of the GALEX team at the Observatories of the Carnegie Institution of Washington.



The GALEX telescope took this UV image of the Andromeda galaxy (M31), revealing a surprising shape not apparent in visible light.

Beyond Andromeda lies a whole universe of galaxies—spirals, ellipticals and irregulars, giants and dwarfs, each with its own surprising patterns of star formation. To discover those patterns, GALEX has imaged hundreds of nearby galaxies. Only a few, such as Andromeda, have been analyzed in complete detail. “We still have a lot of work to do,” says Boissier, enthusiastically.

GALEX has photographed an even greater number of distant galaxies—“some Boissier adds—to measure how

as far away as 10 billion light-years,” the rate of new star formation has changed over the universe's long history. Contained in those terabytes of data is our universe's “life story.” Unraveling it will keep scientists busy for years to come.

For more about GALEX, visit www.galex.caltech.edu. Kids can see how to make a galactic art project at spaceplace.nasa.gov/en/kids/galex/art.shtml

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What Are Jupiter's Moon's Doing?

Go to Sky & Telescope's Web site and check this out

Don't forget to subscribe to Sky & Telescope, as an EAS member you get a nice

Jupiter's Moons

This illustration shows the positions of Jupiter's four Galilean satellites — Io, Europa, Ganymede, and Callisto — in orbit about the planet for any date and time from January 1, 1900, to December 31, 2100.

Direct view

Please choose your view:

- Direct view (Erect-image system)
- Inverted view (Newtonian / Dobsonian)
- Mirror reversed (SCT/Maks refractor + diagonal)

Date: 06/01/2004 Time: 12:00 UT Time-zone offset from UT in hours: -5

Reset to current date & time Recalculate using entered date & time -1 day -1 hour -10 min +10 min +1 hour +1 day

Basic data about Jupiter for telescopic observers:

Magnitude: -2 Angular size (arcsec): 36.7 Distance (a.u.): 5.36 System II longitude (°): 141

Table of Jovian satellite phenomena:

Display satellite events on date above

Depending on your computer's speed, the table may take a few seconds to recalculate.

Tuesday, June 1, 2004

- 00:22 UT, Io exits eclipse by Jupiter's shadow.
- 17:56 UT, Io begins transit of Jupiter.
- 19:12 UT, Io's shadow begins to cross Jupiter.
- 20:14 UT, Io ends transit of Jupiter.
- 21:30 UT, Io's shadow leaves Jupiter's disk.

JavaScript Utility: Jupiter's Moons

Sky & Telescope's JavaScript utility, which will open in a new browser window, shows the positions of the four Galilean satellites for any date and time from January 1900 through December 2100.

Here is what the routine looks like:

Visit their web site it is full of information.

SkyandTelescope.com



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