IO – October 2005

Issue # 2005-10

www.eugeneastro.org

Eugene Astronomical Society, Annual Club Dues $25, President: AC Illig, Treasurer: Rossco Wright, Secretary Alicia McGraw
Guy Prouty (guyprouty@msn.com 463-7641, Richard Boyd (BOD Members); IO editor, Sam Pitts, sampitts@comcast.net 688-7330:
Io *(EYE-oh) is nearest to Jupiter and fastest orbiting of the four Galilean moons*
EAS is a Proud Member of:
The Astronomical League
The World's Largest Federation of Amateur Astronomers

Monday- October 3rd MEETING

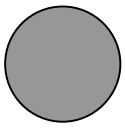
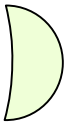
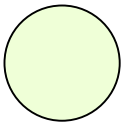
EUGENE ASTRONOMICAL SOCIETY

At The Science Factory Planetarium

The meeting will begin at **7:00 PM** in the Planetarium**.** Rick Kang will be presenting a talk about Mars. **Elections are scheduled for this meeting and don't forget your Annual Dues!** 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.

Check EAS WEB site for up to the minute Information

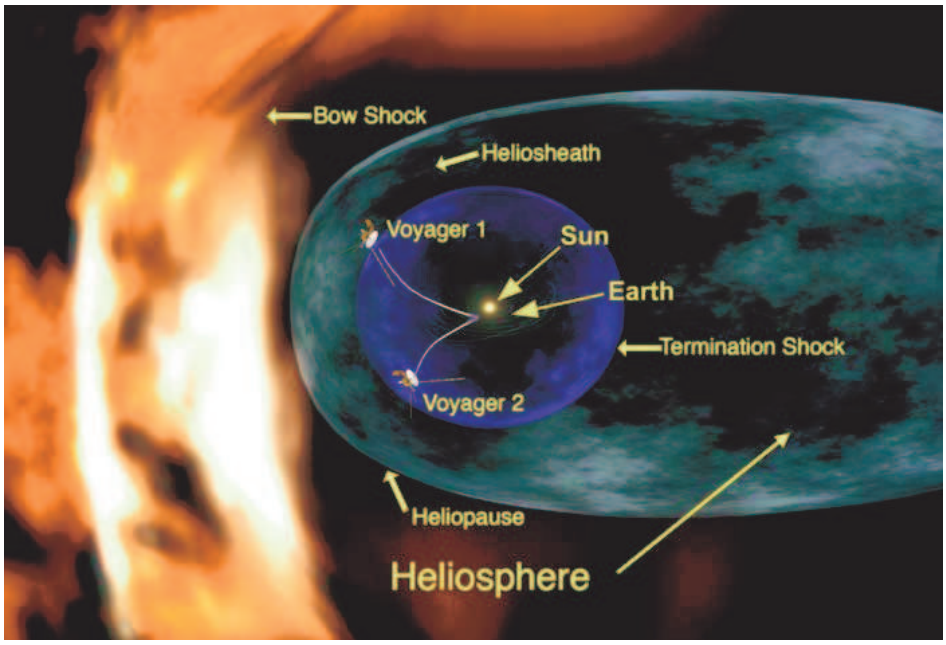

October 3	October 10	October 17	October 24
New Moon	First Quarter	Full Moon	Last Quarter
Sunset: 6:49 PM	Sunset: 6:36 PM	Sunset: 6:24 PM	Sunset: 6:13 PM
Sunrise 7:12 AM	Sunrise 7:21 AM	Sunrise 7:29 AM	Sunrise 7:38 AM
Mercury Rise 8:14 AM	Mercury Rise 8:46 AM	Mercury Rise 0:00 AM	Mercury Rise 9:41 AM
Venus	Venus	Venus	Venus
Mars Rise 8:36 PM	Mars Rise 8:05 PM	Mars Rise 7:32 PM	Mars Rise 5:58 PM
Jupiter Rise 8:28 AM	Jupiter Rise 8:08 AM	Jupiter Rise 7:49 AM	Jupiter Rise 7:29 AM
Saturn Rise 1:51 AM	Saturn Rise 1:27 AM	Saturn Rise 1:02 AM	Saturn Rise 12:32 AM
Uranus Rise 5:33 PM	Uranus Rise 5:05 PM	Uranus Rise 4:37 PM	Uranus Rise 4:09 PM
Neptune Rise 0:00 PM	Neptune Rise 4:06 PM	Neptune Rise 0:00 PM	Neptune Rise 0:00 PM

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

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

Join the user List! Keep in-touch with Members and Events!

http://eugeneastro.org/mailman/listinfo/org.eugeneastro.gen



Voyager 1, after 28 years of travel, has reached the heliosheath of our solar system.

Where No Spacecraft Has Gone Before

by Dr. Tony Phillips

In 1977, Voyager 1 left our planet. Its mission: to visit Jupiter and Saturn and to study their moons. The flybys were an enormous success. Voyager 1 discovered active volcanoes on Io, found evidence for submerged oceans on Europa, and photographed dark rings around Jupiter itself. Later, the spacecraft buzzed Saturn's moon Titan—alerting astronomers that it was a very strange place indeed! —and flew behind Saturn's rings, seeing what was hidden from Earth.

Beyond Saturn, Neptune and Uranus beckoned, but Voyager 1's planet-tour ended there. Saturn's gravity seized Voyager 1 and slingshot it into deep space. Voyager 1 was heading for the stars—just as NASA had planned.

Now, in 2005, the spacecraft is nine billion miles (96 astronomical units) from the Sun, and it has entered a strange region of space no ship has ever visited before.

"We call this region 'the heliosheath.' It's where the solar wind piles up against the interstellar medium at the outer edge of our solar system," says Ed Stone, project scientist for the Voyager mission at the Jet Propulsion Laboratory.

Out in the Milky Way, where Voyager 1 is trying to go, the "empty space" between stars is not really empty. It's filled with clouds of gas and dust. The wind from the Sun blows a gigantic bubble in this cloudy "interstellar medium." All nine planets from Mercury to Pluto fit comfortably inside. The heliosheath is, essentially, the bubble's skin.

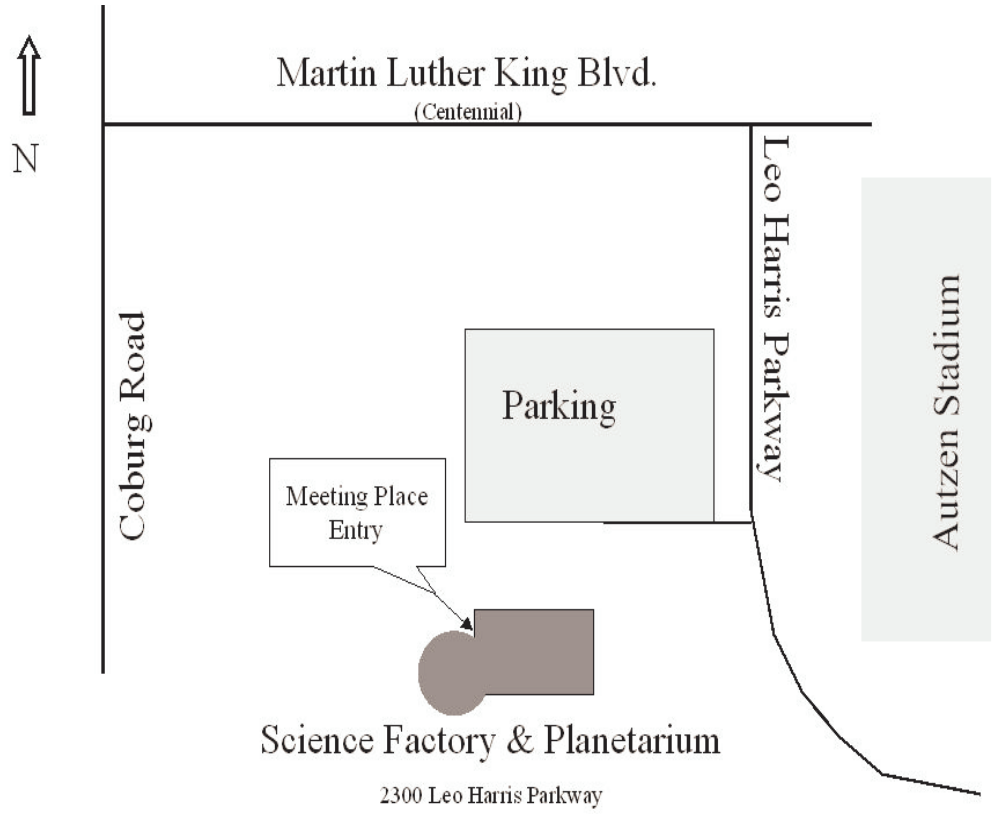
"The heliosheath is different from any other place we've been," says Stone. Near the Sun, the solar wind moves at a million miles per hour. At the heliosheath, the solar wind slows eventually to a dead stop. The slowing wind becomes denser, more turbulent, and its magnetic field—a remnant of the sun's own magnetism--grows stronger.

So far from Earth, this turbulent magnetic gas is curiously important to human life. "The heliosheath is a shield against galactic cosmic rays," explains Stone. Subatomic particles blasted in our direction by distant supernovas and black holes are deflected by the heliosheath, protecting the inner solar system from much deadly radiation.

Voyager 1 is exploring this shield for the first time. "We'll remain inside the heliosheath for 8 to 10 years," predicts Stone, "then we'll break through, finally reaching interstellar space."

What's out there? Stay tuned…

For more about the twin Voyager spacecraft, visit voyager.jpl.nasa.gov. Kids can learn about Voyager 1 and 2 and their grand tour of the outer planets at spaceplace.nasa.gov/en/kids/vgr_fact3.shtml .



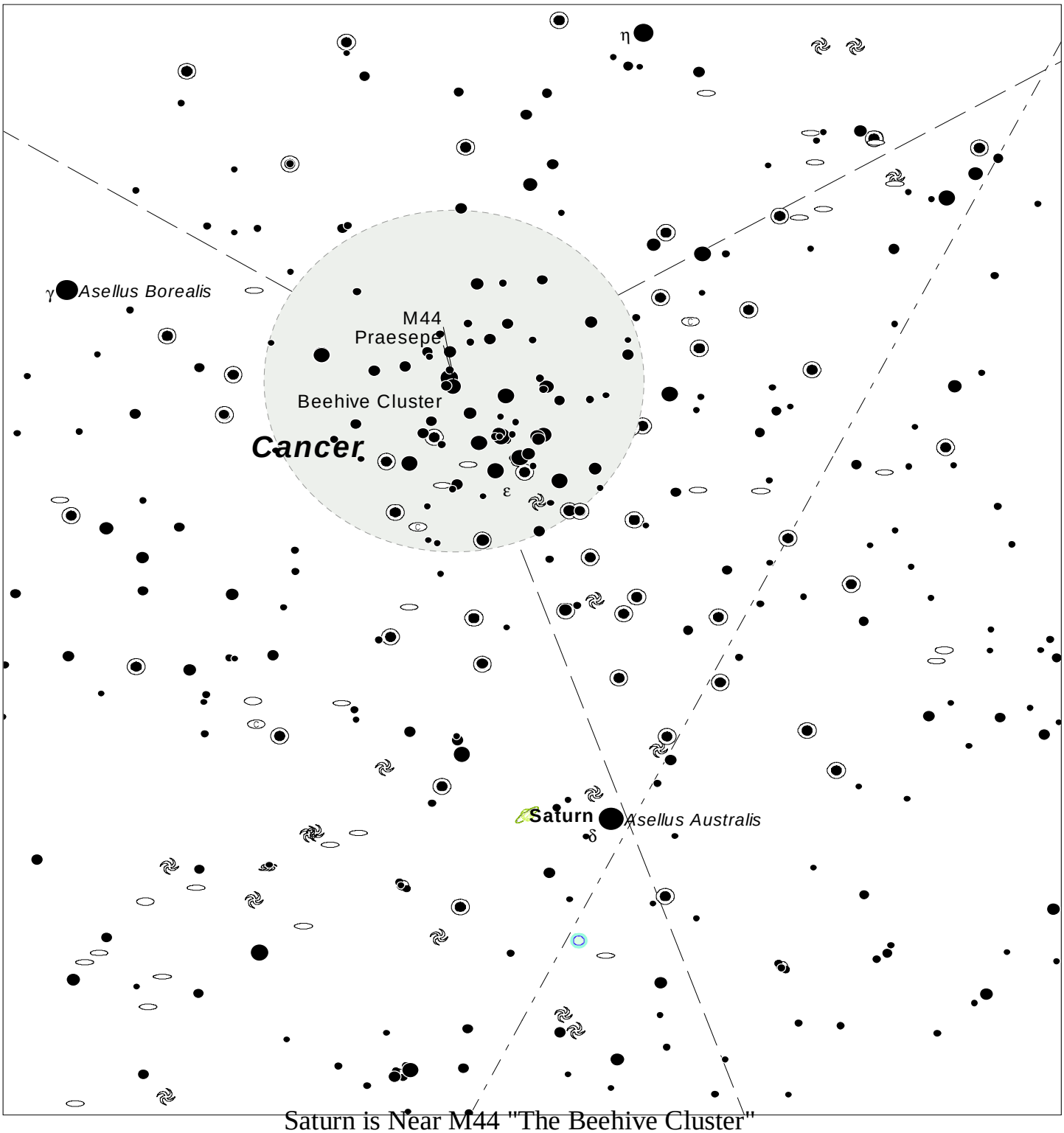
Map to Eugene Astronomical Society's
Monthly Meetings in Eugene, Oregon

EAS Annual Membership Dues are Due In October

EAS Elections are held during the October Meeting

Come to the October Meeting and renew your Dues and participate in the elections.

Volunteer to help the Club as and Oficer, Board Member or just signup to do a presentation or help with star parties. There are plenty of things to do & enjoy.



Saturn is Near M44 "The Beehive Cluster"

RA: 00h 00m 00.0s Dec: +00°00'00"