

IO – April 2003

www.eugeneastro.org

Eugene Astronomical Society, Annual Club Dues \$25, President: Jean Grendler, School Star Party Coordinator , 683-9382, moegren@msn.com, Vice-President & Treasurer: Sue Moe, suemoe@worldnet.att.net, Telescope lending program: Jeff Phillips 685-0973, phichu@epud.net ,
**Io (EYE-oh) is nearest to Jupiter and fastest orbiting of the four Galilean moons.*
Web Master Dave, Nexstar11.com ; IO editor, Sam Pitts, sampitts@aol.com

EAS - April 7th Meeting 7:00 PM

NORTH EUGENE HIGH SCHOOL - ROOM 319

6:30 pm - Pre-meeting telescope help for beginners. Experienced members will be on hand to help a few new scope owners. First come first served basis. This is NOT a complete clinic, but a way to get aquatinted with helpful club members.

7 PM - Regular meeting begins with introductions and member announcements. Three program segments: #1 Photographing the Night Sky: slide show and discussion for beginners. Information on upcoming Sky Photography Contest sponsored by Dot Dotson's in cooperation with EAS Astronomy Day. #2 Lighting issues and discussion. The first week of April is National Dark Sky Week. IDA information available. #3 Introduction to variable star observing. Sample interpolation activity and AAVSO video.

REGARDING SNACKS: Members wishing to share store bought snacks with others are encouraged to bring them. Be prepared for another "Goodie Basket" drawing, bring your dollars! Money earned helps fund Astronomy Day 2003.

NATIONAL DARK SKY WEEK

April 1 – 8, 2003

National Dark Sky Week is a grassroots effort organized by Jennifer Barlow, a Virginia high school student. The purpose of the event is to reduce and raise awareness about light pollution.

Researchers have pointed to light pollution as a cause when studying serious health problems in humans and affects on nocturnal and other wildlife.

Glare, light trespass and energy waste are the bi-products of poorly designed outdoor lighting, however, growing awareness of this issue has caused the enactment of codes and laws by cities, states and other countries. The astronomical community knows that light pollution causes the loss of our beautiful night skies, even far from the cities, and hinders astronomical research on Earth.

Locally, on Saturday, April 5, the Eugene Astronomical Society is hosting an event to raise awareness about lighting issues in our community, educate the public about good lighting practices and get more people interested in looking at the night sky. Telescopes will be provided for public viewing. We hope to hold this event in the parking lot of a local building supply store, but at this time, the exact location has not been confirmed.

Please contact Jean Grendler at moegren@msn.com or 683-9382 to participate in this event. We need some “go to” scopes because the idea is to show people how difficult it is to find objects in the light polluted sky, but the “got to’s” will allow us to locate faint objects that could be seen if the sky were dark.

Teaching the public how to approach situations like light trespass and how to identify good outdoor lighting fixtures to purchase are goals of the EAS event. A brochure titled “How to talk to your neighbor who has bad light” will be made available.

Eugene City Council member Betty Taylor wrote this in an email to Grendler, “All lights installed after adoption of the Land Use Code Update (LUCU) must face down. Enforcement is by complaint. If you see a violation, call 682-8336.”

The American Astronomical Society, Astronomical League, International Dark Sky Association, Sky and Telescope Magazine, and many amateur astronomy associations have endorsed National Dark Sky Week. Information on how to save energy, reduce glare, eliminate light trespass and improve aesthetics are available at the IDA website: www.darksky.org

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Introduction

Welcome to the Astronomical League's Lunar Club. The Lunar Club introduces amateur astronomers to that object in the sky that most of us take for granted, and which deep sky observers have come to loathe.

But even though deep sky observers search for dark skies (when the moon is down), this program gives them something to do when the moon is up. In other words, it gives us something to observe the rest of the month, and we all know that the sky is always clear when the moon is up.

The Lunar Club also allows amateurs in heavily light polluted areas to participate in an observing program of their own. This program is well suited for the young, inexperienced observer as well as the older observer just getting into our hobby since no special observing skills are required. It is well balanced because it develops naked eye, binocular, and telescopic observing skills. Finally, the Lunar Club was created as a project that can easily be done by schools and school children, especially those in the inner city.

Rules and Regulations

To qualify for the AL's Lunar Club Certificate and pin, you need only be a member of the Astronomical League, either through an affiliated club or as a Member-at-Large, and observe 100 features on the moon. These 100 features are broken down into three groups: 18 naked eye, 46 binocular, and 36 telescopic features. Any pair of binoculars and any telescope may be used for this program. As a matter of fact, to prove that the Lunar Club could be done with small apertures, we used 7x35 binoculars and a 60mm refractor. So, as you can see, this program does not require expensive equipment. Also, if you have problems with observing the features at one level, you may go up to the next higher level. In other words, if you have trouble with any of the naked eye objects, you may jump up to binoculars. If you have trouble with any of the binocular objects, then you may move up to a telescope. But if you have trouble with any of the telescopic objects, you are on your own. You will have to arrange your own time on the Hubble Space Telescope. Before moving up to the next higher level, please try to get as many objects as you can with the instrument required at that level. Finally, when using binoculars, we recommend that you tripod mount them for stability.



We have made it as simple as possible to log your observations. Just list the instruments that you used at the top of pages 2 and 3 of this flyer, check off the features as

you observe them in the "CHK" column, and then list the date feature in the columns on the right-hand side of pages 2 and 3. That is all there is to it. For those of you that still may have some trouble observing the 100 original features of the program, we have included 10 optional activities on page 4. Each one activity counts as two of the observations on pages 2 and 3, and may be substituted for those observations.

If you would like a good recommendation for a lunar map to use with this program, we suggest, for those of you on a budget, "Moon Map" (S0003) by [Sky Publishing Corp.](#) for \$2.95. Sky Publishing Corp. can be reached at (800) 253-0245. For a more advanced moon atlas, we recommend Antonin Rukl's "Atlas of the Moon" (#18539) by [Kalmbach Publishing Co.](#) for \$29.95. Kalmbach Publishing Co. can be reached at (800) 533-6644.

You must be a member of the Astronomical League to receive this certificate. To receive your Lunar Club Certificate and pin, simply send your observations along with your name, address, phone number, and club affiliation, either to your club's Awards Co-ordinator for verification, or to:

Steve A. Nathan
A. L. Lunar Club Co-ordinator
45 Brewster Road
West Springfield, Ma. 01089
(413) 967-9435.

Upon verification of your observations, your certificate and pin will be forwarded either to you or your club's Awards Co-ordinator, whomever you choose. You will also be added to the list of [Lunar Club Awardees](#). For information on which lunar features to observe, read the [Lunar Club Observing list](#).

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Observers Corner

Spring Skies

Should the weather clear in Eugene, its time to look at the gas Giants, especially Jupiter & Saturn. On the 1st of April Jupiter will be at -2.3 Magnitude and 41.0" in diameter.

Time for some really good views. Take advantage of this approach; take some photos or CCD images. Several good Transits will be visible from Eugene this month, as well as the Great Red Spot. Use filters to aid in viewing the GRS, Blue and Green filters help. On April 3, Jupiter next to M44

Saturn is at magnitude 0.1 and 17.8", situated high overhead for good viewing if the shies cooperate

Messier Season is here. Look to the South for Canis Major, You can't miss it, with Sirius the prominent Star. M41 is just Below Sirius and M46 & M47 are to the East, with M 93 resting below them, in Puppis, 10:00PM, M50 is North of Sirius. This is a good time to see these five Messier Star Clusters.

Orion is high and perfect for viewing and imaging early, with Leo Overhead at 11:00 PM and Virgo in the East.

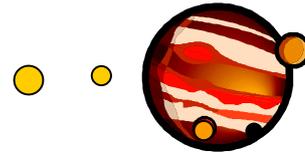
Check Sky & Telescope and Astronomy Magazines for more information.

-Sam

Jupiter's Red Spot Centered PST

03/31		17:54		04/17	07:04	16:59
04/01	03:50	23:41		04/18	02:55	22:47
04/02	19:33			04/19		18:38
04/03	05:28			04/20	04:34	
04/04	01:20	21:11		04/21	00:26	20:17
04/05	07:07	17:03		04/22	06:13	16:09
04/06	02:59	22:50		04/23	02:04	21:56
04/08	04:37			04/24	07:52	17:47
04/09	00:29	20:20		04/25	03:43	23:35
04/10	06:16			04/26		19:26
04/11	02:07	21:59		04/27	05:22	
04/12	07:55	17:50		04/28	01:14	21:05
04/13	03:46	23:38		04/29	07:01	16:57
04/14	19:29			04/30	02:53	
04/16	01:16	21:08				

Transits of Jupiter's Moons



04/01	21:24	Io	Transit Begins
	23:40	Io	Transit Ends
04/02	04:15	Europa	Transit Begins
	07:08	Europa	Transit Ends
04/03	15:52	Io	Transit Begins
	18:08	Io	Transit Ends
04/04	20:50	Ganymede	Shadow Ends
04/05	17:29	Europa	Transit Begins
	20:22	Europa	Transit Ends
04/07	04:47	Io	Transit Begins
	07:04	Io	Transit Ends
04/08	23:15	Io	Transit Begins
04/09	01:32	Io	Transit Ends
	06:45	Europa	Transit Begins
04/10	20:00	Io	Transit Ends
	20:31	Callisto	Transit Ends
04/11	16:19	Ganymede	Transit Begins
	19:54	Ganymede	Transit Ends
04/12	20:00	Europa	Transit Begins
	20:53	Europa	Transit Ends
04/16	01:08	Io	Transit Begins
	03:24	Io	Transit Ends
04/17	19:36	Io	Transit Begins
	21:52	Io	Transit Ends
04/18	20:09	Ganymede	Transit Begins
	23:44	Ganymede	Transit Ends
04/19	22:33	Europa	Transit Begins
04/20	01:26	Europa	Transit Ends
04/23	03:01	Io	Transit Begins
	05:18	Io	Transit Ends
04/24	21:30	Io	Transit Begins
	23:46	Io	Transit Ends
04/26	00:04	Ganymede	Transit Begins
	03:39	Ganymede	Transit Ends
04/27	01:08	Europa	Transit Begins
	04:00	Europa	Transit Ends
04/30	04:56	Io	Transit Begins
	07:12	Io	Transit Ends

Shadows cast on Jupiter's disk by Transit of its moons may Begin and end after transit times. Begin observing before Times listed do time variation due to precise location within time zones.

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Astronomy Day 2003

By Jean Grendler

Astronomy Day is a grass roots movement started in California in 1973 by Doug Berger, then president of the Astronomical Association of Northern California. His idea was to bring astronomy to the people, rather than try to entice them to travel to a distant observatory. His idea worked. Presently, Astronomy Day is celebrated not only across the United States, but also in England, Canada, New Zealand, Finland, Argentina, Malaysia and other international locations.

This year, Astronomy Day is May 10. The date of Astronomy Day is always set for sometime between mid April and mid May on a Saturday near or before the 1st quarter Moon. In 2004, Astronomy Day will be April 24.

On Astronomy Day, clubs like the Eugene Astronomical Society have the opportunity to give people who have never experienced the joy of looking through the eyepiece of a telescope the opportunity to visit worlds other than our own. These organizations host special events in schools, parks and malls, often partnering with their local science museums, schools, local businesses, observatories or planetariums.

Without having to step off the surface of the Earth, members of the public can experience the awe of visiting another world through the eyes of our telescopes.

Astronomy Day events provide a venue for Eugene Astronomical Society members to share the wonders of the night sky with those who may rarely look up. Members taking part in this annual international event experience the joy of sharing their appreciation of the night sky by giving many members of the public their first look through the eyepiece of a telescope.

Eugene Astronomical Society's Astronomy Day 2002 was an amazingly successful event. Attendance was in excess of 1,000 people. Our speakers and events were extremely well received.

Members made a grand display of their equipment in "Telescope Alley" and provided Solar Viewing for an awestruck crowd. The Children's Activity Room was busy continually and provided projects and learning experiences for the youngster and their parents. Vendors and club members set up beautiful displays. The EAS table supplied great quantities of informational handouts supplied by our club and major astronomy organizations. At times lines of fifty people waited to view through each of several telescopes during the evening Star Party. There was "standing room only" for the two evening slide presentations.

Our community partners included North Eugene High School providing the space and The Science Factory provided an exhibit and two comet-building demonstrations. The NASA/JPL Solar System Ambassador filled guests in on the status of current missions.

Astronomy Day 2003 promises to be an even more spectacular event!

North Eugene High School again provides EAS with unlimited space to expand our program. Additions to the event for this year include: A Sky Photography contest sponsored by Dot Dotson's Photography. Dotson's will offer this event to the whole community, provide judging and prizes, and display a gallery of the entries at the school during Astronomy Day. Well know in the amateur and professional astronomy community, Mel Bartels will present his program entitled "Optimizing Your Telescope for Mars." Don Brown, NASA/JPL Solar System Ambassador will present two programs this year. One will focus on current missions in space and the other on rocketry. There will also be a demonstration rocket launch. Brown will be bringing authentic astronaut gear including an Apollo Lexan helmet, a shuttle astronaut's glove from an extra-vehicular activity, a sample food try and a model of the Stardust Space Probe. Added to the meteorite display this year include samples from the moon and the asteroid Vesta. Guests will actually have the opportunity to actually hold a piece of another world in their own hand.

Society members will be giving presentations on astro-photography, the moon (Lunar eclipse May 15), astrobology, light pollution, collimating telescopes, meteorites, "Tonight's Sky", size and distances in the universe, and more. Small "theaters" will play informational videos on basic astronomical topics for guests to view at their leisure.

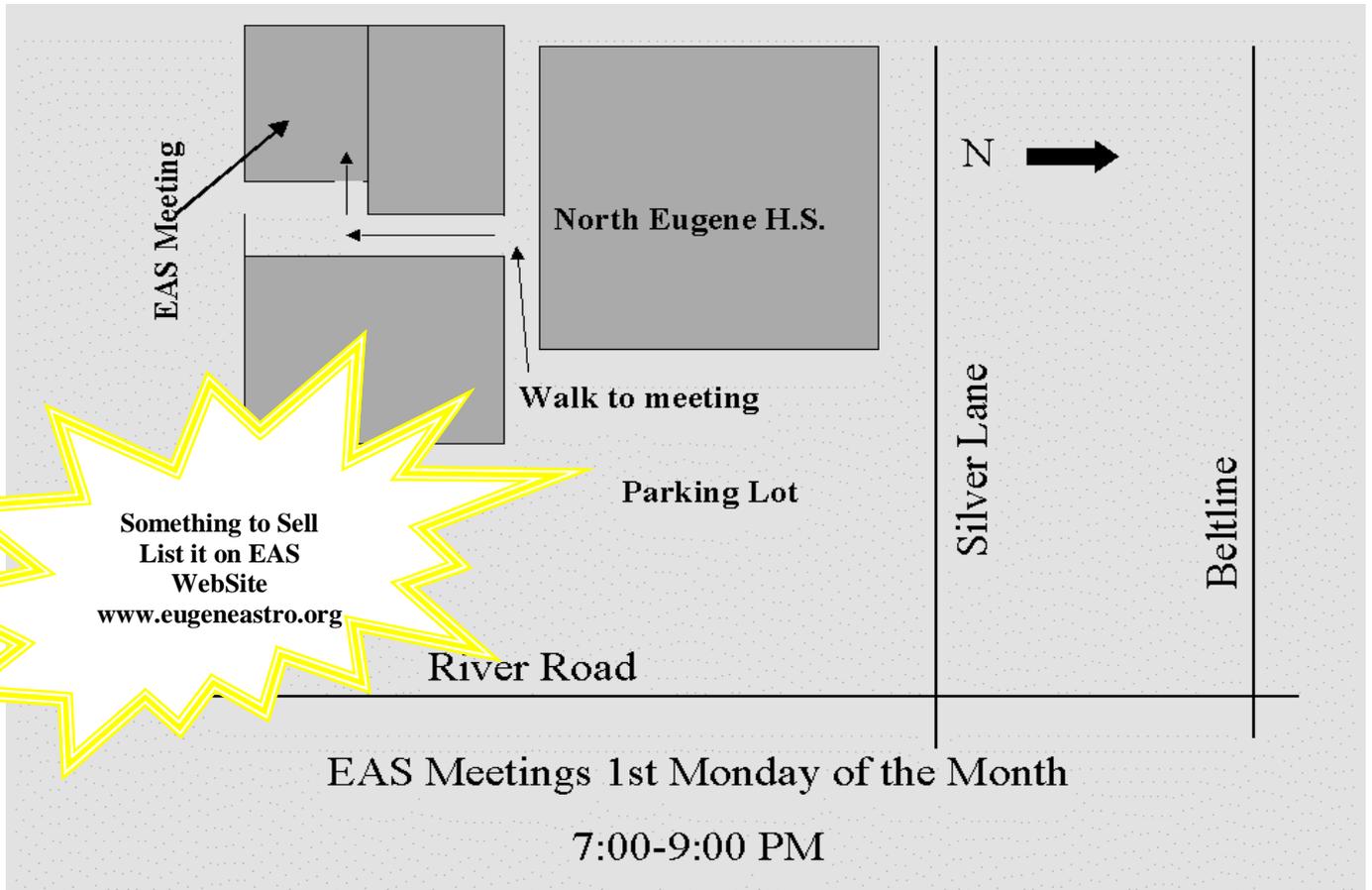
John Flinn will be back with his "Amazing Aurora". Larry Deckman from Starfinders, Inc. will be loaning his presentation, "From the Solar System to the Edge of the Universe" to society president, Jean Grendler, for use during our evening sky orientation talks.

Dave Cole has done a super job of securing vendors to display their wares. The vendor area has more than tripled in size with our good friends from Hardin's Optical and Sean's Astronomy among them.

Students from the whole community are invited to enter astronomy related science projects. Prizes will be awarded in three age groups. South Eugene High School senior Matt Rhea is coordinating this effort as his community service project. *Continued Page 6*

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Come to a meeting and share your hobby with others!

EAS welcomes all amateurs' astronomers or those who just have an interest in Astronomy, to come and participate in our meetings. Our members are more than willing to introduce you to the wonders of the night sky.
See you there!

See our Treasure Sue Moe

Subscribe to Sky & Telescope and/or Astronomy Magazine
Take advantage of our club's 10% discount
You also get a 10% discount at the S & T Store

Club Meeting - April 7th - 7 PM

BE A WINNER! Try your luck with a chance to win another "Goodie Basket" at our next meeting. Proceeds go to fund Astronomy Day! Chances are \$1 each, drawing to be held during the meeting. Dave Cole won a basket full of great items at the March meeting. Be prepared to try your luck!

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Astronomy Day 2003

Continued from Page 4

North Eugene High School Student volunteers will be helping us again this year, providing essential building guides, A/V setup and coordination, parking lot directors, set up and take down duties and helpers for the Children's Activity Room.

Eugene Astronomical Society members will provide daytime solar viewing and the Evening Star Party. EAS's 'Rob Adam's Telescope' is scheduled to be available for public viewing and a dedication ceremony.

The Science Factory will have a display and provide the popular comet building demonstrations again this year. The Science Factory is also helping with prizes for the Student Projects Contest.

Other prize donations to date include a large telescope for Hardin's Optical and wide field binoculars from Orion Telescope and Binoculars. Some prizes being donated are earmarked for general door prizes and some for student projects. Door prizes will be drawn at scheduled times, which will be printed in the program. Guests must be present to win. Astronomy Magazine, Sky and Telescope and Abrams Planetarium are providing informational handouts. The magazine companies have indicated door prizes will be coming, too.

Eugene Astronomical Society's Astronomy Day 2003 promised to be a great event! What makes it happen? Volunteers. Members who come and share your time, resources and instruments to "bring astronomy to the people."

If you haven't already signed up to help, please consider joining in the fun!

- Jean Grendler

Image of the Month

Please submit your Astronomy photos, images or drawings to Dave Cole so he can select one to post on the EAS Web-Site. I can digitize 35mm negatives or prints so they can be used. -Sam

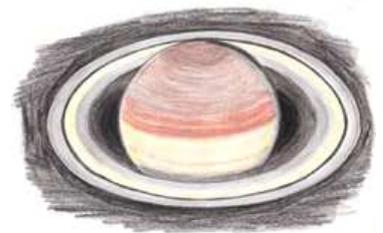
Web Master Dave : Nexstar11.com

Nights Remembered

In this day of Hypered Film, Digital Cameras and expensive CCD's, it is refreshing to see a down to earth approach to capture our observations. Fellow Eugene Astronomical Society member Jeff Phillips does this with great care and outstanding results.

Jeff has a variety of basic telescopes including a nice 12" Dobsonian, that he uses for imaging. A Dobsonian for imaging you say? Yep! Jeff spends many hours at the eyepiece, when the night is clear, observing and imaging. Jeff discerns magnificent detail displayed by our gas giant neighbors Jupiter and Saturn.

Jeff waits for those moments of steady seeing that reveals those hidden festoons and storms on Jupiter and fine separations in Saturn's Ring system. These are then captured and reproduced in fine detailed drawings by Jeff. Below are some examples of his work and the fine details that were observed.



I hope Jeff will continue to share his wonderful observing experiences and top notch images with us. Thanks Jeff.

-Sam