

IO – May 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 - May 5th Meeting 7:00 PM

NORTH EUGENE HIGH SCHOOL - ROOM 319

Monday, May 5 EAS Meeting 6:30 PM "Early Bird Special" - Help for new scope owners. Experienced society members have agreed to arrive early to help you learn how to set up, align or sort out problems so you can enjoy the night sky! Bring your scopes and gather in the hall outside the meeting room. First come, first served! Not a comprehensive clinic, just a good way to meet people who can help you!

7:00 PM the regular EAS meeting begins with introductions and announcements. Last month, members were asked to develop a short list of their favorite objects for observing in each season and bring that info to share at this meeting. After we get committee reports and business out of the way, past EAS president Barbara Shaw will give us the premier presentation of her Astronomy Day program: "Life Beyond Earth: 'Are We Alone?'" Sign up lists for future Star Parties and Astronomy Day updates will be available. In the event of clear skies, we'll have viewing opportunities!

Pine Mountain Observatory

Opportunity to Participate at Professional Observatory

University of Oregon's Pine Mountain Observatory, east of Bend, will host public visitors again this summer, and needs the assistance of qualified amateur astronomers to conduct tours on Friday and Saturday evenings, May 23rd through September 26th. There are a wide variety of "jobs", from meeter-greeters (minimal astronomical knowledge necessary) to operators of the large telescopes, to lecturers, to gift shop sales staff. Benefits include access to observing through large professional instruments and availability of the astronomers' residence for dormitory facility. This is a great opportunity to learn first hand about observatory operations, learn more about astrophysics, and to share your knowledge and enthusiasm with the general public.

Training/certification sessions occur in late April and May. Contact Tour Chair, Greg Hogue, 541-312-8780, ghogue@bendcable.com, in Bend, see the FOPMO website, <http://pmo-sun.uoregon.edu/~pmo/>, or locally contact Rick Kang, rkang@efn.org, 683-1381, for more information. EAS members have been the mainstay of the Tour-Guide team the past decade.

-Rick Kang

Astronomy Day May 10th, 2003

Don't forget the activities start at 2:00 PM. We can use all the help to setup early that day from 9:00 AM on, please come out and help, if only for a couple hours.

Many programs are available:

**Discoveries & Mission Update from NASA's JPL
Model Rocketry 101 & Launch
The Life & Death of the Sun
Touch a Piece of Another World
Our Universe & Astronomy
Introduction to Astrophotography
Introduction to CCD Imaging
Mars: The Upcoming Opposition & How to View It
The Moon
Astrophotography with Film
Life Beyond Earth: "Are We ALONE"
Introduction to Tonight's Sky
Auroras & the Language of Form, Movement & Color**

Telescope Alley will be back with lots of telescopes on display along with several vendors with great items for sale. Do you need a new scope, eyepieces or other accessory, come on out and but from one of our vendors that support the club. They will have great prices and hands on help. See you there!

-Sam

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Astronomical League Planetary Observers Club Certificate

Introduction.

Welcome to the Astronomical League's *Planetary Observers Club*. The P.O.C. is a list of twenty-seven selected projects designed to introduce you to the pleasures of planetary observing. Observing skills come only with experience. An eye trained by observing will see more, regardless of what type of optical aid is used. Good observing skills reinforce the desire to observe. Observing trains the eye to see. It is a cycle that has to be willed to happen. Given the time and effort it WILL happen. Once it happens, astronomy will become a joyful lifelong experience.

In these days of increasing light pollution, the wonders of our own solar system may well take on an increased importance among skywatchers. Dark skies and moonless nights are not a priority for any of the listed projects. If you are intrigued by the enclosed projects, I would refer you to the [Association of Lunar and Planetary Observers](#). ALPO members regularly observe solar system objects and have contributed significantly to our understanding of this corner of the universe. For more information you may contact:

Harry D. Jamieson
P.O. Box 171302
Memphis, TN 38187-1302

Whether you decide to go on to serious data collection or simply observe for your own edification - *enjoy yourself*. The sky is there for all. It is a great equalizer. Beneath its huge expanse we are all reduced to nearly infinitesimal size, but in trying to understand it we grow.



Rules and Regulations

To qualify for the A.L.'s Planetary Observers 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 complete twenty-five of the suggested projects. Record your observations on copies of the included log. Some observations may require sketches, but don't panic; artistic prowess is not required. Make as many copies of the log sheet as you will need. Fill in information appropriate to that project. At the end of the projects, you will find a glossary of terms. If you need to become a member of the Astronomical League as a [Member-at-Large](#), contact the [Executive Secretary](#).

To receive your Planetary Observers Club Certificate and pin, simply send a copy of your logs along with your name, address, phone number and club affiliation to Paul Castle, Planetary Observers Club Chairman, 2535-45th Street, Rock Island, IL 61201. Upon verification of your observations, your certificate and pin will be forwarded to you or your club's Award Co-ordinator, whomever you choose. Happy Observing!

-Paul Castle

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Observers Corner

Spring Skies

Spring is here, yet the clouds still linger. By this time last year I had already setup 5 times at a dark sky site, this year 0.

Leo is up high overhead and Virgo is just to the East, Orion is setting fast. It is time to look for those faint fussy Galaxies. Virgo & Leo are full of them and the Big Dipper is in prime position for M81 & M82 as well as others.

Mars is up early in the morning and we should be getting ready for it in July & August. Don't miss Mel's talk on observing Mars this summer, at Astronomy Day!

I will be ending the information on the gas giants and adding spring/Summer object information. Hope the skies clear for some observing and imaging.

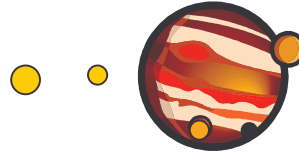
Check Sky & Telescope and Astronomy Magazines for more information.

-Sam

Jupiter's Red Spot Centered PST

04/30		23:44		05/15	01:21	21:13
05/01		19:36		05/16	07:09	
05/02	05:32			05/17	03:00	22:52
05/03	07:23	21:15		05/19	04:40	
05/04	07:11	17:06		05/20	00:31	20:23
05/05	07:02	22:54		05/22	02:10	22:02
05/06		18:45		05/24	03:49	23:41
05/07	04:41			05/25		19:33
05/08	00:33	20:24		05/26	05:28	
05/09	06:20			05/27	01:20	21:12
05/10	02:12	22:03		05/29	02:59	22:51
05/11	07:59	17:55		05/30		18:43
05/12	03:51	23:42		05/31	04:38	
05/13	19:34					
05/14	05:30					

Transits of Jupiter's Moons



05/02	00:24	Io	Transit Begins
	02:41	Io	Transit Ends
05/03	09:10	Io	Transit Ends
05/04	04:45	Europa	Transit Begins
	07:37	Europa	Transit Ends
05/07	07:51	Io	Transit Begins
	18:04	Europa	Transit Begins
	20:56	Europa	Transit Ends
05/09	02:20	Io	Transit Begins
	04:37	Io	Transit Ends
05/10	20:49	Io	Transit Begins
	23:06	Io	Transit Ends
05/11	07:23	Europa	Transit Begins
05/14	04:23	Callisto	Transit Begins
	09:16	Callisto	Transit Ends
	20:43	Europa	Transit Begins
	23:35	Europa	Transit Ends
05/16	04:17	Io	Transit Begins
	06:33	Io	Transit Ends
05/17	22:46	Io	Transit Begins
05/18	01:03	Io	Transit Ends
05/21	23:24	Europa	Transit Begins
05/22	02:15	Europa	Transit Ends
05/23	06:14	Io	Transit Begins
05/24	17:23	Ganymede	Transit Begins
	20:59	Ganymede	Transit Ends
05/25	00:43	Io	Transit Begins
	03:00	Io	Transit Ends
05/26	21:30	Io	Transit Ends
05/29	02:05	Europa	Transit Begins
	04:57	Europa	Transit Ends
	07:15	Europa	Shadow Ends
05/30	23:28	Callisto	Transit Begins
05/31	04:15	Callisto	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. Note we less than 8 hours of dark skies and the Gas Giants are setting in the West earlier each night

Last Month for Gas Giant Information

All times PDST for Eugene

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EAS ARTICLES OF INCORPORATION:

At the April 7th regular monthly membership meeting of the EAS members voted in support of the recommendation from the Adams Telescope Committee to proceed with incorporation of EAS as a non profit corporation and applying for a 501C-3 tax exempt status. The president of EAS, Jean Grendler, as so authorized, has proceeded to work with EAS member Ted Walker, who is an attorney and donated his time to help with this for the benefit of EAS. Draft Articles of incorporation are included in the EAS newsletter IO and posted to the EAS website: www.eugeneastro.org for member's inspection. Most of the language in this document is statutory, which means required by law, so much of it is non-negotiable. However, EAS members will be asked at the upcoming May meeting to authorize the president to proceed with filing this document. The only part of the incorporation process that EAS membership will be voting on at the May meeting is the authorization to FILE the ARTICLES.

Filing the Articles of Incorporation is the next step of the process.

DRAFT BYLAWS:

Much time has been given to seeking out and reading bylaws from other astronomical organizations, and considering the needs and purposes of EAS. Draft bylaws are made available for membership now also, but members are asked to read them and comment on them via email to Jean at moegren@msn.com so that all comments can be considered by Ted for "legal" issues and then a second draft be made available before the JUNE meeting and discussion held on the second draft of bylaws at the JUNE meeting regarding proposed bylaws. This will give membership more time to consider this part of the process as bylaws will replace the current constitution when adopted. Please note that our current EAS constitution was used as a basis for the draft bylaws. (The president and vice president find the articles acceptable, and the Adams Telescope Committee unanimously recommends approval.)

BOARD MEMBERS: corporations require board members. Your current officers are willing to and desire to continue in that position, however EAS needs one more board member to fill out the Articles to submit to the state to have the minimum number required by law. Membership should be prepared to consider this when we discuss the articles at the next meeting.

Thanks to all members for their dedication to the club and your help with making this process and transition go smoothly for EAS. - Jean Grendler, President EAS

End

-Jean Grendler

SEE ATTACHED PAGES

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

IO & the Speed of Light

Four of Jupiter's moons, including Io, were discovered in 1610 by Galileo. The first successful estimate of c (the speed of light) was made in 1675 by the Danish astronomer Ole Roemer using observations of the eclipses of Io behind Jupiter.

The period of Jupiter around the sun is about 12 earth years and so the Earth rotates through 180 degrees around the sun, Jupiter turns through an angle of only 16 degrees. Using the orbital motion of Io as a clock, one would expect a constant period in its orbit and constant time between eclipses over long time intervals. However, Roemer observed a systematic variation in the time between eclipses.

He found that the observed times between eclipses lengthened when Earth receded from Jupiter, and shortened when Earth was approaching Jupiter. Roemer attributed this variation in times to the fact that the Earth-Jupiter distance was changing during these observations.

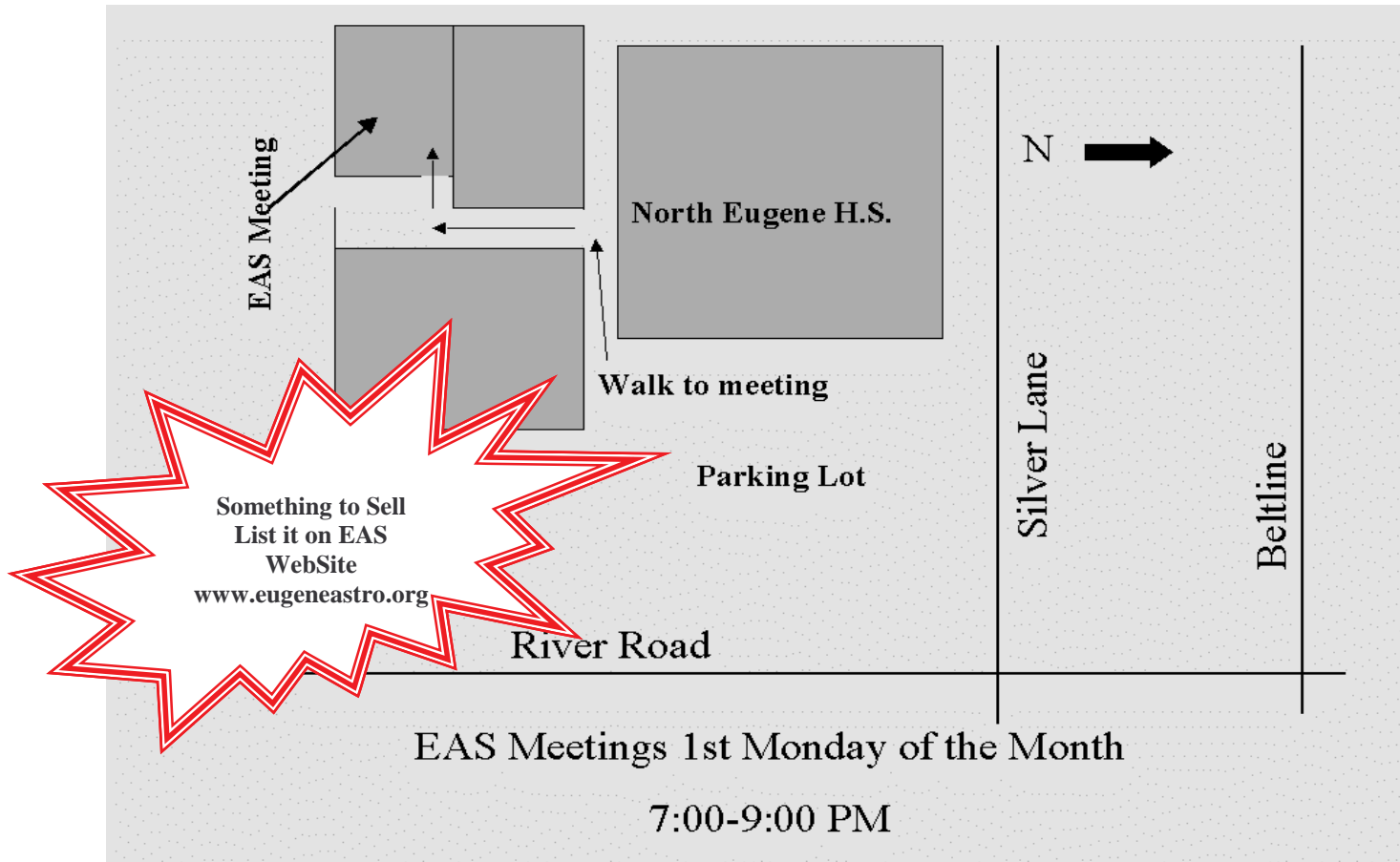
In a time of 6 months (half the period of Earth), the light from Jupiter has to travel an additional distance equal to the diameter of the Earth's orbit, and hence it takes longer for light to travel from Jupiter to Earth. With data available at that time, he estimated the speed of light to be about 200,000 km/s. The discrepancy between that value and the now accepted value of about 300,000 km/s is due to the error that Roemer assumed for Earth's orbit.

So, thank you, Io, for assisting in the first measurement of the speed of light.

G. Towe 4/03

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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!

Club Meeting - May 5th - 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. Sam Pitts won a basket full of great items at the March meeting. Be prepared to try your luck!

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

ARTICLES OF INCORPORATION – NONPROFIT CORPORATION

EUGENE ASTRONOMICAL SOCIETY

The undersigned individual eighteen years of age or older, acting as Incorporator under the Oregon Nonprofit Corporation Act, adopts the following Articles of Incorporation:

1. **Name.** The name of the corporation is: Eugene Astronomical Society.
2. **Type of Corporation.** This corporation is a public benefit corporation.
3. **Members.** The corporation will have members as that term is defined in the Oregon Nonprofit Corporation Act.
4. **Provisions on Tax Exempt Status.**
 - A. This corporation is organized exclusively for charitable, religious, educational, or scientific purposes, including, for such purposes, the making of distributions to such organizations that qualify as exempt organizations under §501(c)(3) of the Internal Revenue Code, or the corresponding section of any future federal tax code.
 - A. No part of the net earnings of the corporation shall inure to the benefit of, or be distributable to its members, directors, officers, or other private persons, except that the corporation shall be authorized and empowered to pay reasonable compensation for services rendered and to make payments and distributions in furtherance of the purposes of this corporation.
 - A. No substantial part of the activities of the corporation shall be the carrying on of propaganda, or otherwise attempting to influence legislation, and the corporation shall not participate in, or intervene in (including the publishing or distribution of statements) any political campaign on behalf of or in opposition to any candidate for public office. Notwithstanding any other provision of these articles, the corporation shall not carry on any other activities not permitted to be carried on (a) by a corporation exempt from federal income tax under §501(c)(3) of the Internal Revenue Code, or the corresponding section of any future federal tax code, or (b) by a corporation, contributions to
 - B. which are deductible under 170(c)(2) of the Internal Revenue Code, or the corresponding section of any future federal tax code.

5. **Liability of Officers and Directors.**

A. The personal liability of a director or uncompensated officer to the corporation or its members for monetary damages for conduct as an officer or director shall be eliminated to the fullest extent permitted by current or future law.

B. The corporation shall indemnify to the fullest extent permitted by the Oregon Nonprofit Corporation Act any person who has been made, or is threatened to be made, a party to an action, suit or proceeding by reason of the fact that the person is or was a director or officer of the corporation. The right to and amount of indemnification shall be determined in accordance with the provisions of the Oregon Nonprofit Corporation Act in effect at the time of the determination.

6. **Distribution of Assets Upon Dissolution.** Upon the dissolution of the corporation, assets shall be distributed for one or more exempt purposes within the meaning of §501(c)(3) of the Internal Revenue Code, or the corresponding section of any future federal tax code, or shall be distributed to the federal government, or to a state or local government, for a public purpose. Any such assets not so disposed of shall be disposed of by the court of appropriate jurisdiction of the county in which the principal office of the corporation is then located, exclusively for such purposes or to such organization or organizations, as that court shall determine, which are organized and operated exclusively for such purposes.

7. **Board of Directors.** The initial Board of Directors of the corporation shall consist of three members, whose names and addresses are as follows:

<u>NAME</u>	<u>ADDRESS</u>
Jean Grendler	3330 Alder Street Eugene, Oregon 97405
Suzanne Moe	_____ _____
_____	_____ _____

8. **Registered Agent.** The name, street address and mailing address of the registered agent are as follows:

Theodore L. Walker, Attorney at Law

767 Willamette Street, Suite 208
Eugene, Oregon 97401

9. **Address for Mailing Notices.** The mailing address for the corporation is P.O. Box 7264, Eugene, Oregon 97401.

10. **Incorporator.** The name and address of the incorporator are:

Jean Grendler
3330 Alder Street
Eugene, Oregon 97405

The incorporator hereby states that she has obtained the consent of each director named to serve as a director of the corporation in article 7 above.

I, the undersigned incorporator, hereby declare under penalties of perjury that I have examined the foregoing and to the best of my knowledge and belief, it is true, correct and complete.

DATED this ____ day of _____, 2003.

Jean Grendler

Person to contact about this filing:

Theodore L. Walker, OSB #83366
Attorney at Law
Telephone No. (541) 484-2422