

IO – December 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: Rosasco . Web Master Dave, Nexstar11.com ;
IO editor, Sam Pitts, sampitts@aol.com :Io (EYE-oh) is nearest to Jupiter and fastest orbiting of the four Galilean moons



December 1, 2003 MEETING EUGENE ASTRONOMICAL SOCIETY North Eugene High School Room #319 at 7:00 PM

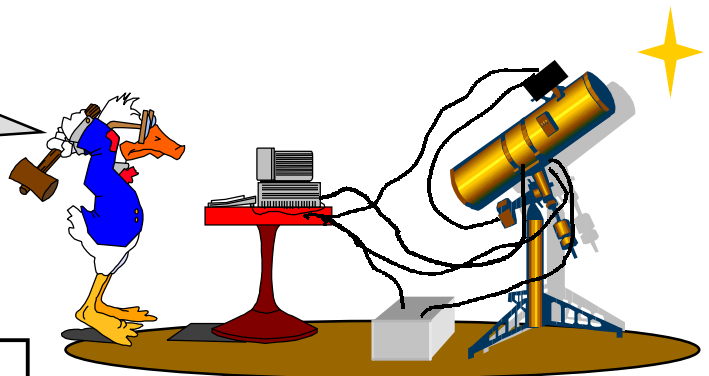


December is here, our last meeting of the year. We will have a short 30-minute presentation " Introduction to CCD's" by Sam Pitts. This presentation will cover entry-level questions and what is available to get started in CCD imaging. We'll cover entry level to intermediate level CCD's offered by major manufactures.

Please also bring store bought food/snack items for our annual December Club Party. Don't forget to bring items for the swap table, items you want to sell for yourself or donate to EAS so it can sell them for fund-raising.

This will be a fun time to visit and reflect on the past year. Bring items to show and share with others. Bring that new scope, camera, photograph, book, etc. to show and share with others.

**Modern Day Amateur
Astronomer
Learning CCD Imaging,
Computer Control & GoTo**



NW Astronomy Email List Provides Forum for Discussion

The List keeps growing! Join the fun and discuss **Astronomical Topics** with others! Keep informed to local astronomical events and happenings. Use the list to ask questions about equipment or anything regarding Astronomy. The NW Astronomy list is open to anyone to join. Dave Cole, the EAS Webmaster, moderates this list. To join, visit the EAS web site or Dave's Web site: Nexstar11.com

See our Treasure Sue Moe

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<http://lists.cmc.net/cgi-bin/mailman/listinfo/eugeneastro>

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The Astronomical League

The World's Largest Federation of Amateur Astronomers

The Astronomical League Deep Sky Binocular Club Certificate

Deep Sky Binocular Club Chair:

Mike Benson
2308 Dundee Lane
Nashville, TN 37214-1520
(615) 883-6571
E-mail: ocentaurus@aol.com



Introduction:

Welcome to the Astronomical League's Deep Sky Binocular Club. The Deep Sky Binocular Club is a list of sixty selected non-Messier objects, and picks up where the Binocular Messier Club leaves off. The purpose of the Deep Sky Binocular Club is not to put your observing skills to the test by including the toughest objects observable with binoculars, but to allow you to observe and enjoy sixty of the most beautiful objects in the heavens: objects other than those discovered by Charles Messier.

Just because the Deep Sky Club comes after the Binocular Messier Club, doesn't mean you have to do your Messier observations before your Deep Sky observations. However, it is recommended that you get your Binocular Messier Certificate first, before the Deep Sky Certificate since, let's face it, Messier got most of the good (easy) objects. Even though the sixty objects in the Deep Sky Club are the best objects for small binoculars, it doesn't mean that they are all easy. For some of the objects, you will have to go to a good dark sky site, on a clear night with good seeing, and then observe those objects at the meridian for best results. But luckily this is easy to do with binoculars since they are so portable. All objects in the Deep Sky Club were observed with 7X50 Orion Explorer binoculars retailing at around \$117.00. For our northern observers, no object on the list is below minus 35 degrees declination, which is the declination of the most southerly Messier object, M7.

The Deep Sky Binocular Club.

To qualify for the Astronomical League's Deep Sky Binocular Certificate, you need only be a member of the Astronomical League, through either an affiliated club or as a Member-at-Large, and observe the sixty selected objects using only binoculars. Any pair of binoculars may be used, but those with objectives between 50mm and 80mm in diameter are recommended. To record your observations, you may use log sheets similar to those found in the back of the Astronomical League's manual *Observe: A Guide to the Messier Objects*.

To obtain an award you must observe the following rules:

Rule 1:

Observe the 60 deep sky objects with binoculars and keep a record of your observations. Your notes must show:

- a. The object;
- b. Date of observation;
- c. Time of observation;
- d. Seeing conditions;
- e. Type of binocular;
- f. A short note describing your observation of the object.

Continued Page 3

Deep Sky Binocular Club

Rule 2:

Have your observations examined by an officer of your society (usually the Awards Co-ordinator) or a suitably qualified second party if you are not a member of a society. Have this party forward a letter to the effect that you have made the necessary number of observations. This letter should be addressed to:

Mike Benson
 2308 Dundee Lane
 Nashville, TN 37214-1520
 (615) 883-6571
 E-mail: ocentaurus@aol.com

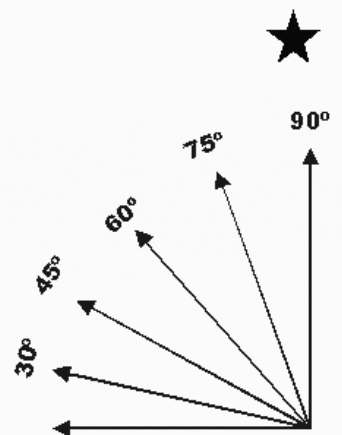
Only non-society members need to actually mail their observing log to Mr. Benson. A membership pin and Certificate of Membership in the Deep Sky Binocular Club will be forwarded to your society for presentation at a meeting. The letter should specify the address to which the Certificate should be mailed. The certificate is suitable for framing.

TRIPOD PHOTOGRAPHY

Maximum Tripod Exposures

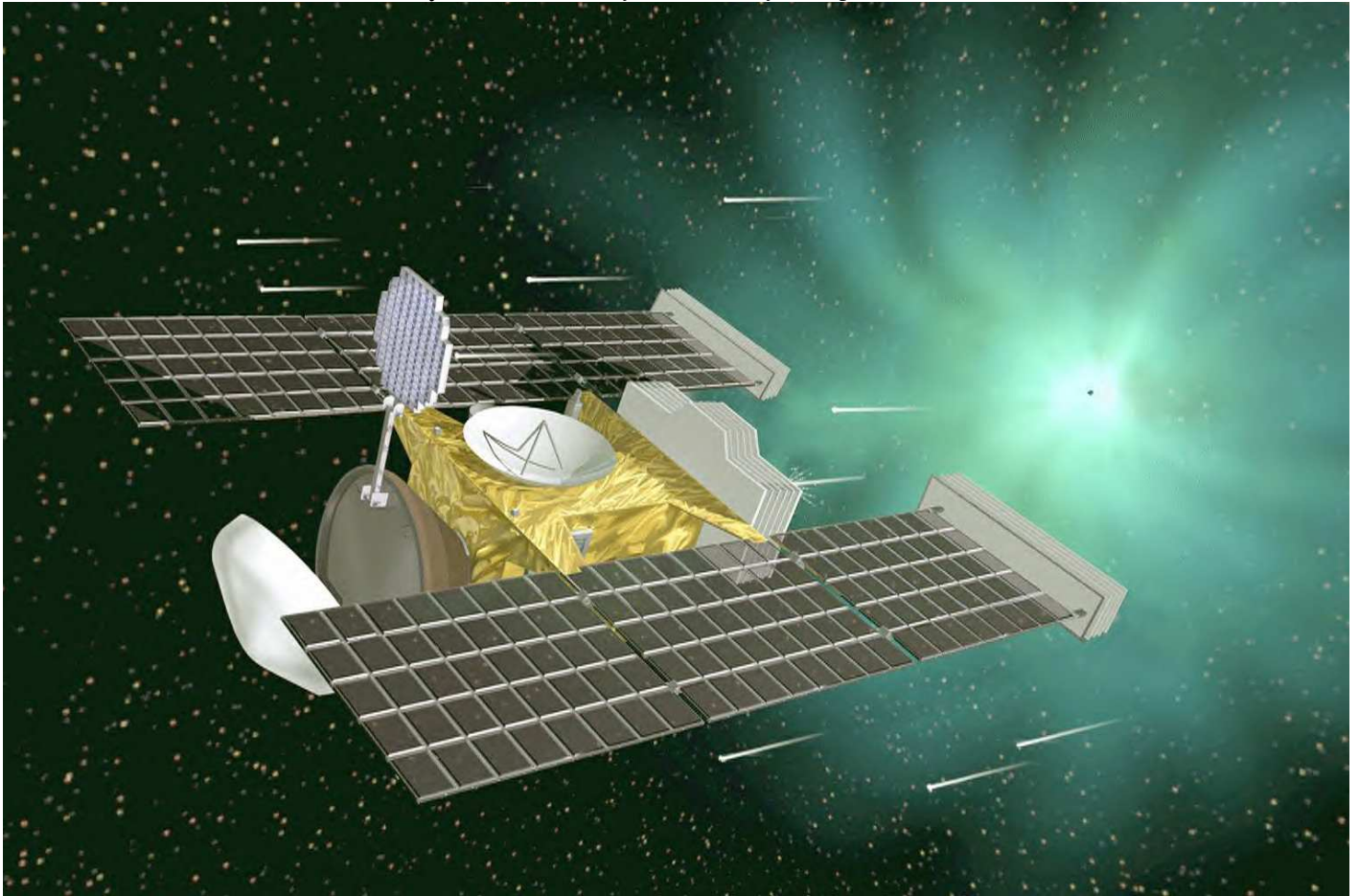
Declination

Focal Length	$\pm 75^\circ$	$\pm 60^\circ$	$\pm 45^\circ$	$\pm 30^\circ$	$\pm 0^\circ$
20 m m	180	90	63	52	44
28 m m	135	65	45	37	31
35 m m	100	50	35	29	25
50 m m	65	30	21	17	14
85 m m	50	25	17	14	12
100 m m	35	18	13	11	9
135 m m	28	14	10	8	7
200 m m	18	9	6	5.3	4.8
300 m m	12	6	4	3.7	3.5
400 m m	9	4.5	3	2.5	2.3
600 m m	6	3	2	1.5	1.3



Stardust

by Patrick L. Barry and Dr. Tony Phillips



NASA's Stardust mission will capture dust from comet Wild 2 and bring them back to Earth for study.

Philosophers have long sought to "see a world in a grain of sand," as William Blake famously put it. Now scientists are attempting to see the solar system in a grain of dust-comet dust, that is.

If successful, NASA's Stardust probe will be the first ever to carry matter from a comet back to Earth for examination by scientists. It would also be the first time that any material has been deliberately returned to Earth from beyond the orbit of the Moon.

And one wouldn't merely wax poetic to say that in those tiny grains of comet dust, one could find clues to the origin of our world and perhaps to the beginning of life itself.

Comets are like frozen time capsules from the time when our solar system formed. Drifting in the cold outer solar system for billions of years, these asteroid-sized "dirty snowballs" have undergone little change relative to the more dynamic planets. Looking at comets is a bit like studying the bowl of leftover batter to understand how a wedding cake came to be.

Indeed, evidence suggests that comets may have played a role in the emergence of life on our planet. The steady bombardment of the young Earth by icy comets over millions of years could have brought the water that made our brown planet blue. And comets contain complex carbon compounds that might be the building blocks for life.

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Stardust: continued

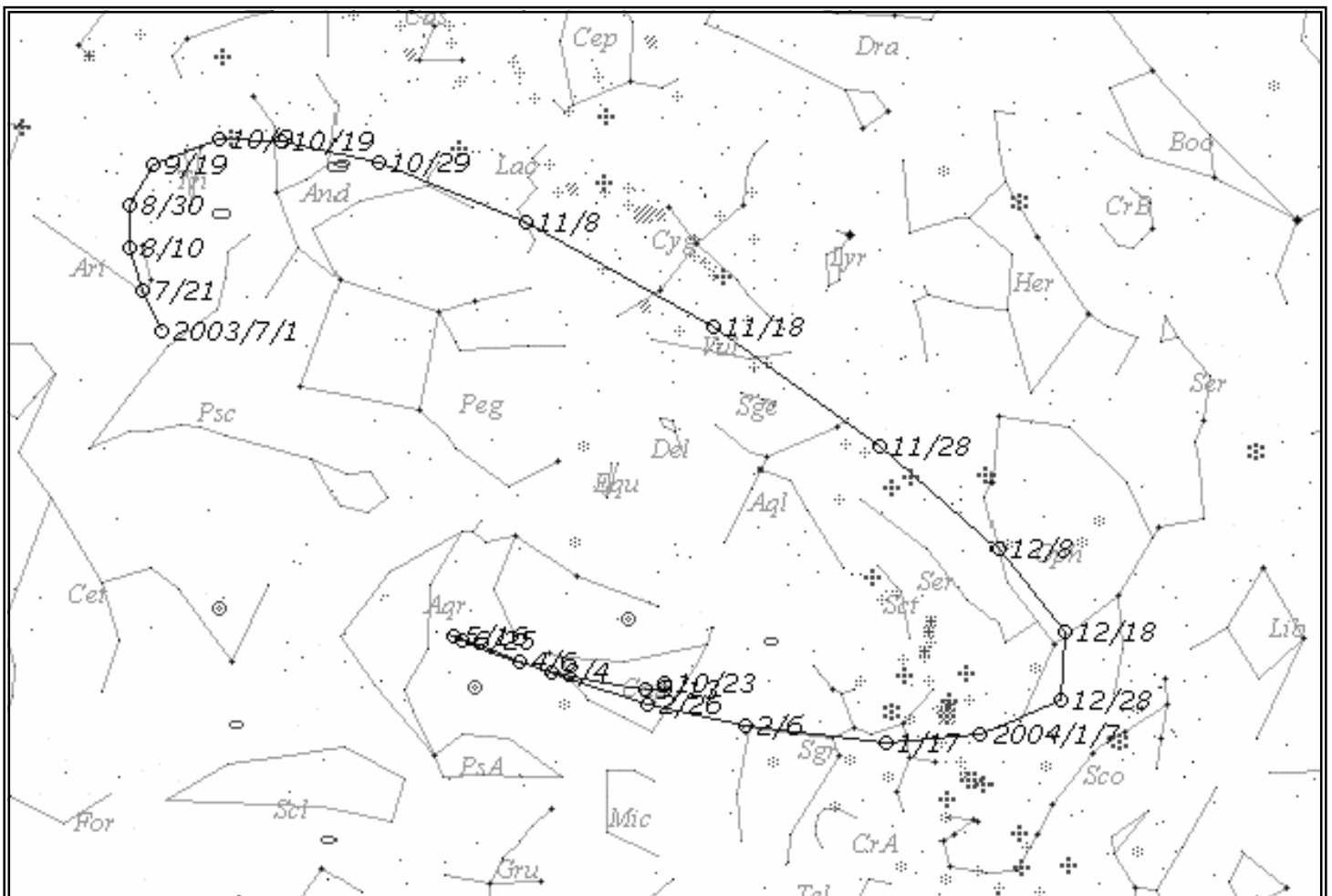
Launched in 1999, Stardust will rendezvous with comet Wild 2 (pronounced "Vilt" after its Swiss discoverer) on January 2, 2004. As it passes through the cloud of gas and dust escaping from the comet, Stardust will use a material called aerogel to capture grains from the comet as they zip by at 13,000 mph. Aerogel is a foam-like solid so tenuous that it's hardly even there: 99 percent of its volume is just air. The ethereal lightness of aerogel minimizes damage to the grains as they're caught.

Wild 2 orbited the sun beyond Jupiter until 1974, when it was nudged by Jupiter's gravity into a Sun-approaching orbit-within reach of probes from Earth. Since then the comet has passed by the Sun only five times, so its ice and dust ought to be relatively unaltered by solar radiation. Some of this pristine "stuff" will be onboard Stardust when it returns to Earth in 2006, little dusty clues to life's big mysteries.

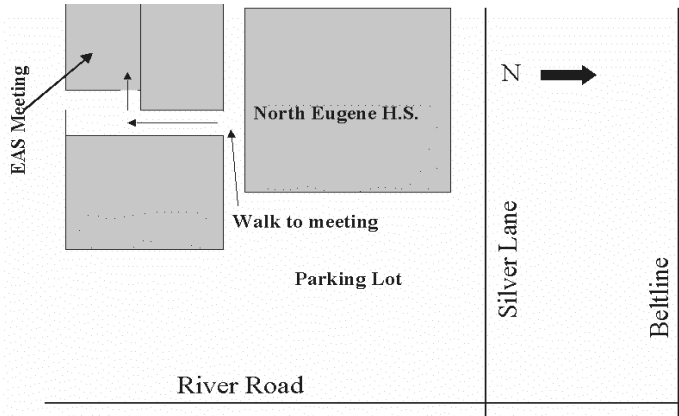
To learn more about Stardust, see the mission website at stardust.jpl.nasa.gov. Kids can play a fun trivia game about comets at spaceplace.nasa.gov/stardust.

This article was provided by the Jet Propulsion Laboratory, California Institute of Technology, under a contract with the National Aeronautics and Space Administration.

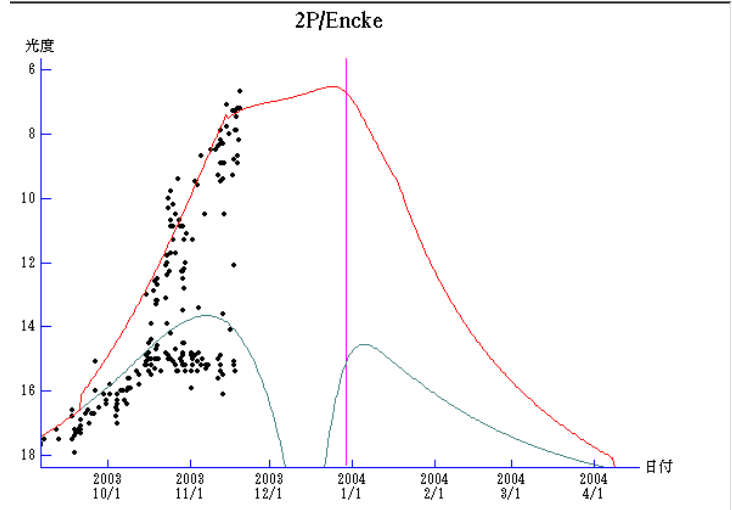
Comet 2P/Encke



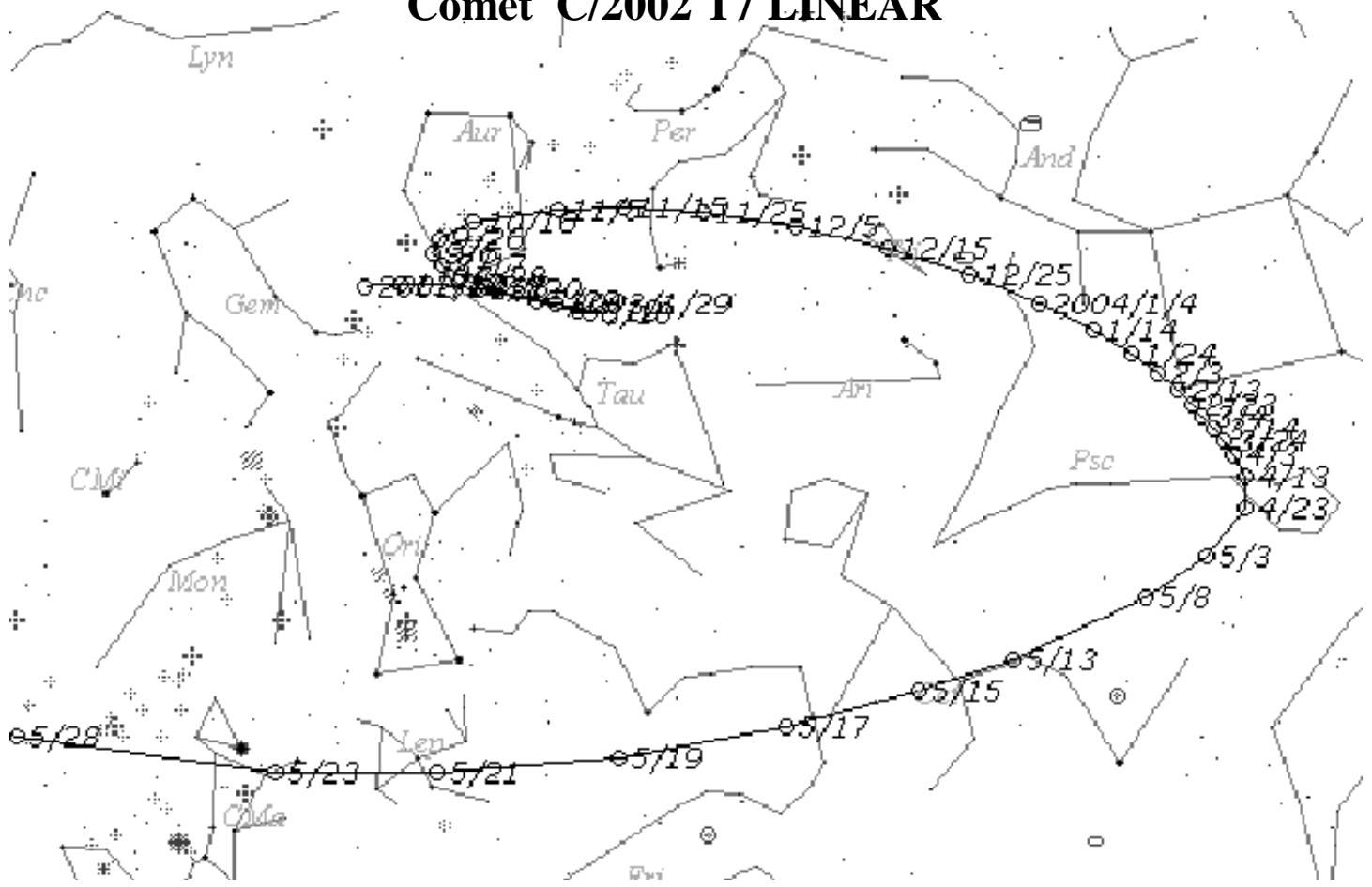
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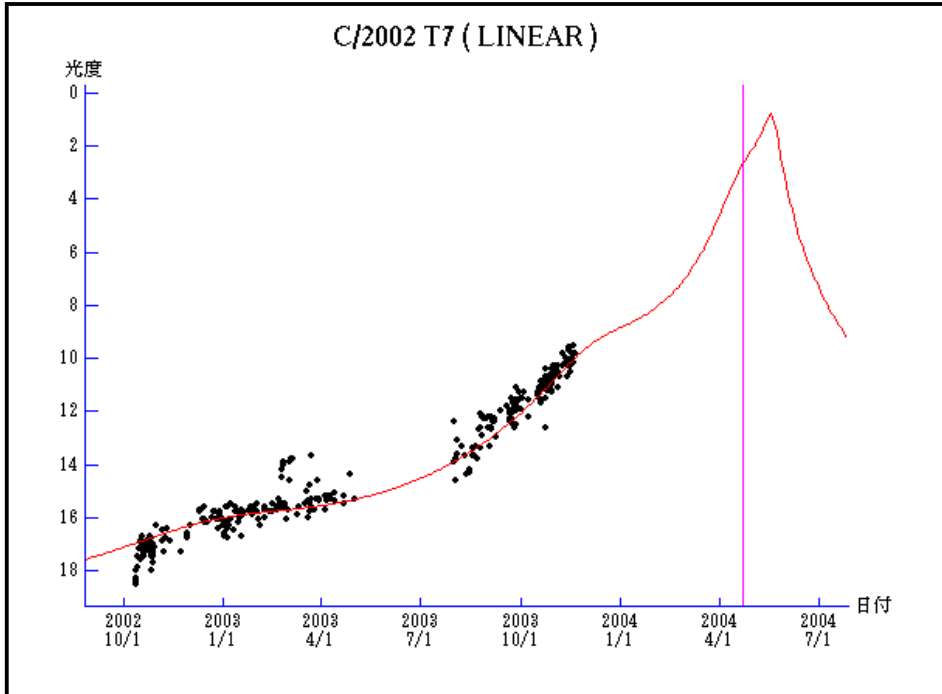


EAS Meetings 1st Monday of the Month
 7:00-9:00 PM



Comet C/2002 T7 LINEAR





Comets for 2004

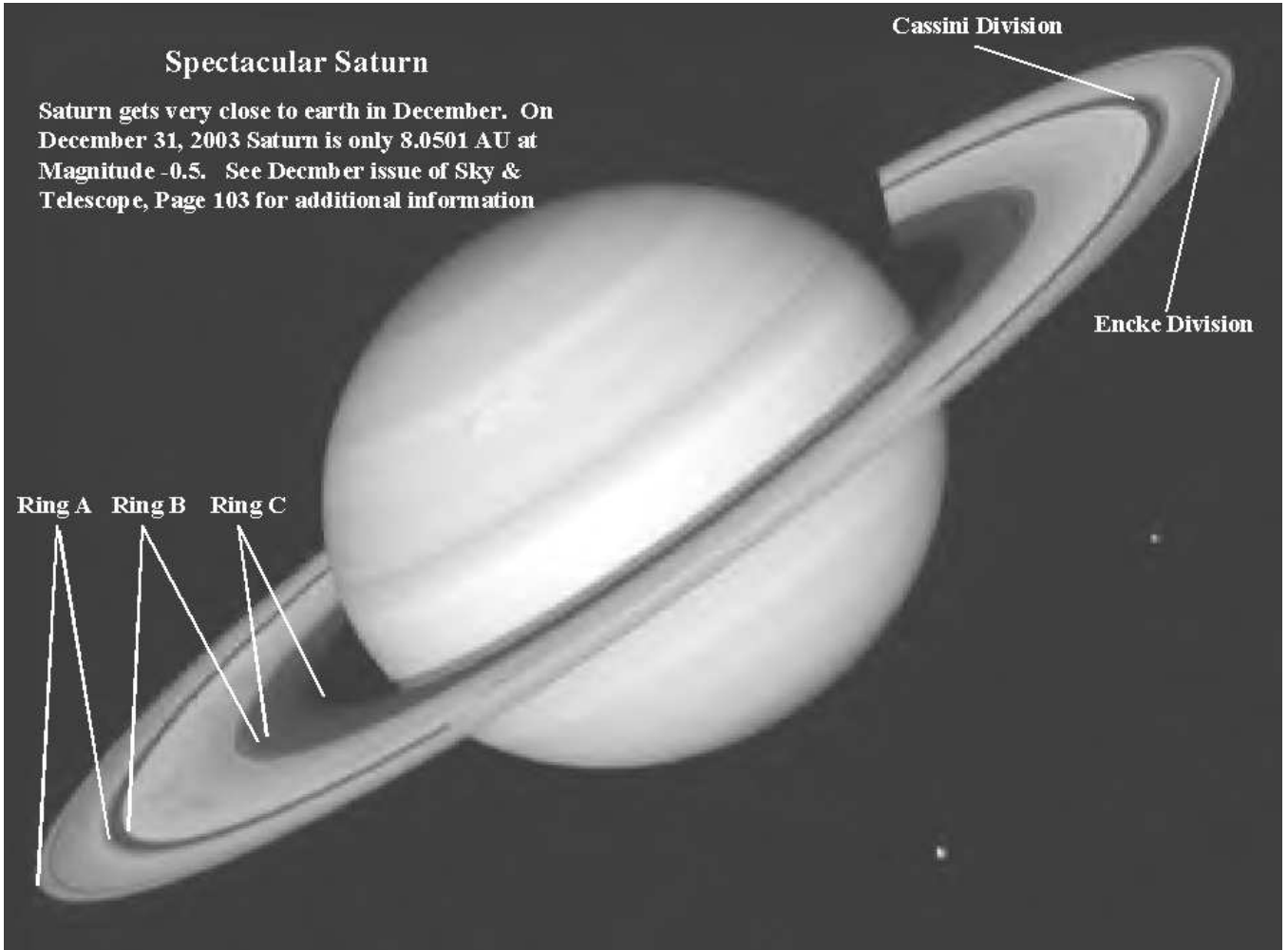
Both of these visitors may reach a fairly bright magnitude according to the lights curves to date. However they may not be in the best position for observations in Oregon. Never the less these could be nice items to try and find in your telescope and even take some images.

Now lets hope we get some clear nights. You can also visit various web sites and I will have some handouts for the Ephemeris of Comet 2P/Encke at our December meeting.

Sam

Spectacular Saturn

Saturn gets very close to earth in December. On December 31, 2003 Saturn is only 8.0501 AU at Magnitude -0.5. See December issue of Sky & Telescope, Page 103 for additional information



What's Out Tonight

