



The Warren Astronomical Society Paper

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2004 WAS OFFICERS

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The WASP (*Warren Astronomical Society Paper*) is the official monthly publication of the Society. Each new issue of the WASP is mailed to each member and/or available online www.boonhill.net/was. Requests by other Astronomy clubs to receive the WASP, and all other correspondence should be addressed to the editor, Cliff Jones, email: cliffordj@ameritech.net

Articles for inclusion in the WASP are strongly encouraged and should be submitted to the editor on or before the first of each month. Any format of submission is accepted, however the easiest forms for this editor to use are plain text files. Most popular graphics formats are acceptable. Materials can be submitted either in printed form in person or via US Mail, or preferably, electronically via direct modem connection or email to the editor.

Disclaimer: The articles presented herein represent the opinions of the authors and are not necessarily the opinions of the WAS or the editor. The WASP reserves the right to deny publication of any submission.

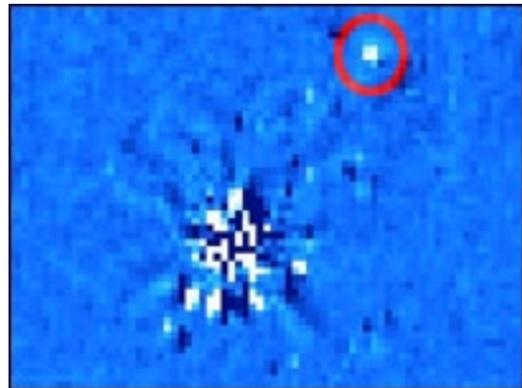


Astro Chatter

by Larry Kalinowski

The BBC News has reported that the Hubble Space Telescope may have taken the very first picture of a planet in another solar system. The new Hubble image was taken by John Debes, a graduate student at Pennsylvania State University, as part of a project to find planets around other stars. The problem with recognizing planets around other stars is a matter of contrast. The star is so bright that it completely washes out the image of any planets around it. John decided to lessen contrast by looking only at white dwarf stars. He surveyed seven dwarf stars and thought three of them had possible planets around them. It'll be awhile before the picture shown here will be confirmed as a star with a planet. It could also be a background star, so images will continue to be made to look for motion of the planet around the star. The planet, circled in the picture, is about three or four times bigger than our planet Jupiter and is about the same distance from its star as

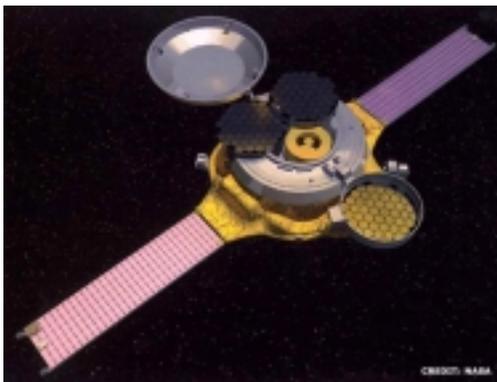
Neptune is from our Sun. The suspected planet is only about 100 lightyears away.



Mead's latest contribution to amateur astrophotography is called the DSI, for Deep Sky Imager. It's a color chip, developed by Sony, capable of up to an hour exposure time. The cost is just under \$300. Software includes all the capabilities of its old lunar and planetary imager called the LPI and more. So if you're looking for a good all around deep sky camera with amazing capabilities, this looks like it.

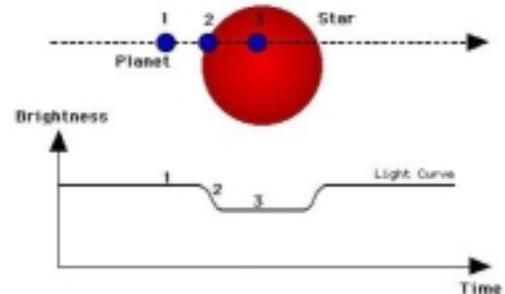
How would you like to take a trip to the Moon? Commercial flights to the Moon and around it could be possible by the end of this decade. Russian spacecraft are capable of such a trip, starting at the space station. After a ride to the ISS, small crews would be lofted to the Moon and to an Earth landing via the old fashioned parachute. The Soyuz space module is being considered for such a trip because of its extra heavy heat shielding. The cost? Who knows. You can be sure there will be some takers though. There's always someone willing to take a chance.

Genesis, the spacecraft launched in 2001, to collect solar wind particles for NASA, is due to return in September. The craft is designed to swing back to Earth after a couple of course corrections and drop its particle catcher payload over the US Air Force training range, west of Salt Lake City, Utah. The drop date is scheduled for September 8 and two stunt pilots, who have been training for awhile, will try to catch the parachuting payload before it hits the ground. So far, they have been successful in catching falling parachutes in twelve out of twelve attempts. A drawing of the spacecraft with its catcher extended is shown below, along with a picture of the actual type of parachute to be used in the capture.



If you missed the August meeting at the MCCC, you missed an excellent presentation by Gary Ross on the biography of William Hay, an amateur astronomer who lived in the UK and was a member of the British Astronomical Association. He made his living on the stage as a comedian but devoted his life helping other amateur astronomers with his knowledge of engineering and machining. His most noteworthy discovery was a giant white spot on the planet Saturn during 1933, beating all professionals with the discovery. Later in life, he delved into professional movie making and produced, as well as, starred in nearly a dozen motion pictures. We were lucky to see one of his latest pictures during the meeting because Gary brought along a VHS tape of one of his starring roles.

Discovering planets outside our solar system has become something of a parlor game in the last few years. Everyone is trying their hand at finding the latest planet. The most remarkable discovery was made by a group of professional astronomers using four-inch telescopes. No real detail was discussed in the article but it did mention using four, widely spaced telescopes and new software to help measure the change in brightness that occurs when a planet passes in front of its own star. I suspect interferometry was involved with this method but there was no mention of it. The chart below shows how the change in the light curve is seen when a planet passes in front of a star.



Credit: Hans Deeg, from 'Transits of Extrasolar Planets'

The latest planet discovered in our solar system is called Sedna and its very possible it may have it's own moon also. The planet is about a thousand miles in diameter and three times further away than Pluto. Its average distance is estimated to be about 3.6 billion miles from the Sun. Conclusions that it might have its own moon came from measurement of its rotation period. It rotates much slower than expected, a possible effect caused by the gravitational pull of a moon.

Hubble has lost its ability to spectrascopically measure stars because of a failure in one of its cameras. The spectrascopic camera was installed during the last repair mission and was expected to last at least ten years. Ground controllers are in a scramble to try to figure out what part of the camera has failed, with the possible intention of restoring its function from the ground. The other cameras are still able to make "regular" photos.

Another comet is approaching the Sun that looks like it might be interesting to amateur observers. Called C/2003 K4, It's another of the Linear group's recent discoveries (June, 2003). According to Charles Morris at the JPL, it's in the sixth magnitude range right now and sports a two-degree tail. It's expected to go to fifth magnitude in October. During that month it makes a very close approach to the Sun, less than one degree, making it difficult to observe. However, best viewing will occur during the last couple weeks in September, in the constellation Virgo, around 8:30pm. The comet drops below our evening horizon during October, turning it into a morning object.

Gary Ross, Jack Szymanski and I took a side trip to Allenton, MI to see two of our prominent club members, Dawna and Dennis Schmalzel. Dennis has become well known for his production of fiberglass observatories, so we headed in that direction to checkout his product. He has two observatories setup on his property. One has a six foot diameter dome, which he purchased from Boyd Observatories a few years ago and the other is his own seven foot diameter, domed observatory that he advertises in Sky and Telescope, bimonthly. The seven-foot dome makes the inside of that observatory more than 25% larger than the inside of the six foot one. Dennis says its because his observatory features an extra three quarters of a foot space all around the dome. The cylindrical building the dome sits on, is actually eight and a half feet in diameter. The two-part shutter opens easily on Delrin slides with a pulled rope. Stainless fittings are featured throughout, including the entrance door and the dome rolls around with just a whisper of a touch. The ease of rotation amazed me. Extra features are available, such as a motorized dome, at extra cost. Check out his CLEAR SKYS, INC. observatory in the October issue or through meridiantelescopes.com. I was impressed.

The scheduled speakers for September meetings are Phil Martin and Ed Starback. Martin will be speaking at the Cranbrook meeting, on September

13, and his topic has yet to be announced. Starback will be talking about the planet Pluto at the MCCC meeting on September 16.

Vince Crisman is looking for a six socket extension cord for the club observatory. If you have one to donate, contact him at 586-997-4057 or xxfiles@hotmail.com.

I have to mention that the program The Sky, level 4, version 4, that 's installed in Stargate observatory is there because of a donation by Fred Judd. Some members got the impression that I was the donor, because of some work I did on the observatory computer. Not so. Many thanks Fred.

I'll be on vacation during the third week in September, so I'll have to miss both meetings, if the club decides not to change the format for the Cranbrook meeting. Because of Labor day, the first available Monday will be on the thirteenth of the month and the third Thursday, on the sixteenth. That puts both meetings in the same week.

FOOD FOR THOUGHT. I'm not an expert when it comes to astronomy but I've been thinking about SETI and its methodology. Right now individual stars are being picked for analysis as well as groups in the Milky Way. Why not examine an entire galaxy rather than sections of our own galaxy. That is, why not pick an entire galaxy like M31 and monitor it. With billions of stars in a radio telescope's field of view, the chances for finding an intelligent signal should improve considerably. I know that M31 is quite a bit farther to reach but with such an increase in the number of sources, the odds for success should improve considerably. Yes, a gigantic jumble of noise and impossibly weak signals but its extreme distance might be in our favor. More civilizations to scan, both new and old, with their improved signal capabilities. We'll probably never be able to hold conversations with such extreme distances involved but the real name of the game is contact. Wouldn't you like to know if someone else is out there?

The September computer group meeting is scheduled for September 23, (the fourth Thursday of the month) at Gary Gathen's home in Pleasant Ridge. He lives at 21 Elm Park Rd., three blocks south of I-696 and about a half block west of Woodward Ave. Meetings will start at 8:00 pm. You can reach him at 248-543-3366, or me, at 586-776-9720 for any further information.



THE SWAPSHOP



NOTE: The past ads for Mike Best's telescopes used the wrong e-mail address. If you tried to contact him in the past, try again with the new address shown.

This column is for those who are interested in buying, trading or selling items. Call 586-776-9720 (cometman@mybluelight.com) if you want to put an item for sale or trade in this section of the WASP. The ad will run for six months. The month and year, the ad will be removed, is also shown.

FOR SALE. ETX90, with goto feature, in excellent condition, with Autostar, 12 volt power pack, carrying case, tripod and accessories. Hardly used. \$450. Norman Dillard. Work phone: 248-546-1480 Cell phone: 248-765-4815. (2-05).

WANTED. 12 1/2 inch aluminum mirror cell. Call Bob Watt at 586-757-4741. (2-05).

WANTED. A 3.1 inch F-15 refractor (tube assembly only) for a photographic guide 'scope. Would prefer a Meade ('80's vintage) or Unitron. Jim Ehlers, 248-628-1615 or e-mail ehlers71@comcast.net. (2-05).

FOR SALE. Celestron C102 HD, 4 inch , F-9 refractor. Comes complete with star diagonal and 20mm eyepiece (standard issue). Very good condition! Asking \$265. Jim Ehlers, 248-628-1615 or e-mail ehlers71@comcast.net. (2-05).

FOR SALE. Backpack External CD reader, writer and rewriter, with parallel cable and installation software for Win 95, 98, NT4, 2000, 3.x and MSDOS. Power supply enclosed in the case. \$20. 586-776-9720 (2-05).

WANTED. NIMH battery for An IBM Thinkpad, model 702C. New or used. Needed for WAS portable computer. Contact Jim Shedlowski, jimskeebros@cs.com. (10-04).

FOR SALE. Celestron, 8 in. Schmidt Cassagrain, 9 volt electric drive, PEC (periodic error correction), four speed quartz drive, heavy duty aluminum adjustable tripod, enhanced coatings and carrying trunk. Best offer over \$699.95. starmikebest@comcast.net. (10-04).

FOR SALE. Classic 6 in. Criterion RV-6 Dynascope., Newtonian reflector, 110v AC electric drive, aluminum pier with three feet, 6x30 two ring finder and rotating tube. Best offer over \$400. starmikebest@comcast.net. (10-04).

FOR SALE. Refractor, 3 in., metal tube, 1 1/2 in. two ring finder scope, 2 in. tracking erecting eyepiece telescope, Eastman Kodak Aero-Ektar 7.12 in. (178mm) f.l., 5x5, F2.5 camera #EM6294 (\$150 estimated value), AC heated dew shield for the 2 in. tracking scope, wood, heavy duty, surveyors tripod, two fitted wooden cases, two boxes of machine equipment tools for telescope construction. No mount. Best offer over \$475. Starmikebest@comcast.net. (10-04).

FOR SALE. Mirror cell for ten inch mirror. Plywood, very light weight. Fits 12in. ID tubes or larger with longer bolts. \$10.00. 586-776-9720. (12-04).

FOR SALE. Four vane spider, for diagonal bolts 3/8 in dia. or smaller. Fits 12 1/2 in. ID tubes or larger with longer bolts. \$10.00. 586-776-9720. (12-04).



30991 Five Mile Rd., Livonia, MI 48154
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See the new "Sphinx" GoTo Mount with the world's first LCD screen star chart controller.

Now taking orders for the new Meade LXD75 telescopes.

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Upcoming Events in 2004

Month	Day	Time	What	Where	Presenter	Subject
September	Mon 13	7:30 pm	<u>Cranbrook Meeting</u>	<u>Cranbrook Institute</u>	Phil Martin	Quantum Mechanics
	Thurs 16	7:30 pm	<u>Macomb Meeting</u>	<u>Macomb Community College South Campus</u>	Ed Starback	Pluto
October	Mon 4	7:30 pm	<u>Cranbrook Meeting</u>	<u>Cranbrook Institute</u>	Tom Hagen	McMath-Hulbert Observatory
	Thurs 21	7:30 pm	<u>Macomb Meeting</u>	<u>Macomb Community College South Campus</u>	Steve Uitti	Cusky
November	Mon 1	7:30 pm	<u>Cranbrook Meeting</u>	<u>Cranbrook Institute</u>	Jack Szymanski	First Point of Aries
	Thurs 18	7:30 pm	<u>Macomb Meeting</u>	<u>Macomb Community College South Campus</u>	Dave D'Onofrio	Processing CCD images
December	Mon 6	7:30 pm	<u>Cranbrook Meeting</u>	<u>Cranbrook Institute</u>	Richard Szumanski	Meteors / Comets / Deep Sky
	Thurs 16	7:30 pm	Holiday Awards Banquet		Fred Espenak - NASA	Eclipses

September Calendar

Wednesday, Sept 1 • 10:00 pm: Venus passes 9° south of Pollux

Monday, Sept 6 • 11:11 am: Last Quarter Moon

Tuesday, Sept 7 • 10:41 pm: The Moon is at apogee (251,322 miles from Earth)

Thursday, Sept 9 • 10:00 am: Mercury is at greatest western elongation (18°); 6:00 pm: The Moon passes 5° north of Saturn

Friday, Sept 10 • 1:00 am: Mercury passes 0.06° south of Regulus; Noon: The Moon passes 7° north of Venus

Saturday, Sept 11 • Midnight: Saturn passes 7° south of Pollux

Sunday, Sept 12 • 9:00 pm: The Moon passes 4° north of Mercury

Monday, Sept 13 • 1:00 am: Asteroid Ceres is in conjunction with the Sun; 3:00 am: Asteroid Vesta is at opposition

Tuesday, Sept 14 • 2:00 am: Asteroid Metis is at opposition; 10:29 am: New Moon

Wednesday, Sept 15 • 9:00 am: Mars is in conjunction with the Sun

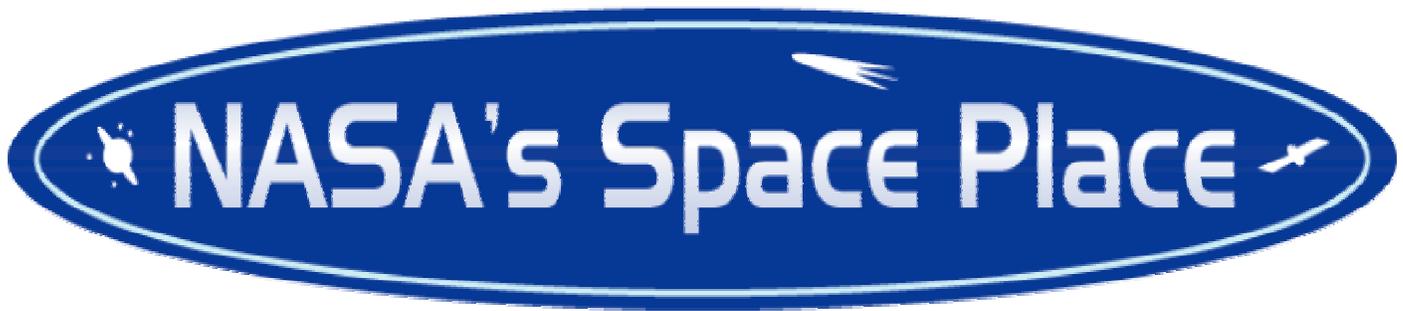
Tuesday, Sept 21 • 11:54 am: First Quarter Moon; 8:00 pm: Jupiter is in conjunction with the Sun

Wednesday, Sept 22 • 12:30 pm: Autumnal equinox; 4:58 pm: The Moon is at perigee (229,652 miles from earth)

Friday, Sept 24 • 11:00 am: The Moon passes 5° south of Neptune

Saturday, Sept 25 • 11:00 pm: The Moon passes 4° south of Uranus

Tuesday, Sept 28 • 9:09 am: Full Moon



Article Compliments of Nancy Leon of JPL/NASA

Resisting Retirement: Earth Observing 1 by Patrick L. Barry

The Hubble Space Telescope isn't the only satellite that scientists have fought to keep alive beyond its scheduled retirement. Scientists also went to bat for a satellite called EO-1, short for Earth Observing 1, back in 2001 when the end of its one-year mission was looming.

The motivation in both cases was similar: like Hubble, EO-1 represents a "quantum leap" over its predecessors. Losing EO-1 would have been a great loss for the scientific community. EO-1, which gazes back at Earth's surface instead of out at the stars, provides about 20 times more detail about the spectrum of light reflecting from the landscape below than other Earth-watching satellites, such as Landsat 7.

That spectral information is important, because as sunlight reflects off forests and crops and waterways, the caldron of chemicals within these objects leave their "fingerprints" in the light's spectrum of colors. Analyzing that spectrum is a powerful way for scientists to study the environment and assess its health, whether it's measuring nitrate fertilizers polluting a lake or a calcium deficiency stressing acres of wheat fields.

Landsat 7 measures only 8 points along the spectrum; in contrast, EO-1 measures 220 points (with wavelengths between 0.4 to 2.5 μm) thanks to the prototype Hyperion "hyperspectral" sensor onboard. That means that EO-1 can detect much more subtle fingerprints than Landsat and reveal a more complete picture of the chemicals that

comprise the environment. As a NASA New Millennium Program mission, the original purpose for EO-1 was just to "test drive" this next-generation Hyperion sensor and other cutting-edge satellite technologies, so that future satellites could use the technologies without the risk of flying them for the first time. It was never meant to be a science data-gathering mission.

But it has become one. "We were the only hyperspectral sensor flying in space, so it was advantageous to keep us up there," says Dr. Thomas Brakke, EO-1 Mission Deputy Scientist at NASA's Goddard Space Flight Center.

Now, almost three years after it was scheduled to be de-orbited, EO-1 is still collecting valuable data about our planet's natural ecosystems. Scientists have begun more than a dozen environmental studies to take advantage of EO-1's extended mission. Topics range from mapping harmful invasive plant species to documenting the impacts of cattle grazing in Argentina to monitoring bush fires in Australia.

Not bad for a satellite in retirement.

Read about EO1 at eo1.gsfc.nasa.gov. See sample EO-1 images at <http://eo1.usgs.gov/samples.php>. Budding young astronomers can learn more at spaceplace.nasa.gov/eo1_1.htm.

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



These images, made from EO-1 data, are of La Plata, Maryland, before and after a tornado swept through May 1, 2002.

Editor's Note:

I recently spoke for about a half hour with Nancy Leon by phone. She provides Space Place articles like the one above as well as stickers, posters, and space related educational supplies to astronomy clubs, scouts, schools and other groups interested in space science. There are 3 ½ individuals, including Nancy. The half is a college student helping out. This small group that does so much for the advancement of space science might once again have to reduce their staff or eliminate the Space Place all together.

When NASA decides to cut funding to major projects such as the Hubble Space Telescope some of the public resource teams riding the budget are cut. Nancy's group is like a speck of lint in the pocket of NASA yet provides 10 fold the value to the public by keeping them informed. The following is a sample letter which I sent to Senator Carl Levin for help.

Dear Senator Carl Levin,

I would like to request your help in maintaining a local NASA resource that we have had here in Michigan. The Warren Astronomical Society (over 100 members strong) is a partner in NASA's Space Place program.

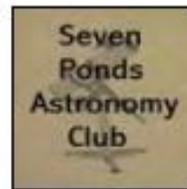
By being a part of this program, our club receives up-to-date articles for our newsletter, materials for our public star parties, and videos for our meetings. Our newsletter would not be complete without the Space Place article. Our club is very active in educational astronomy - getting kids to think - and the Space Place program is an important resource for that effort. Some of our members visit local schools, and the information that the Space Place provides is always a part of those school visits.

But now NASA is significantly reducing the funding for this program. NASA needs to know that this program provides a valuable service to our club, not only to our members, but also to our community through support of our outreach programs.

Please contact NASA on our behalf, and let them know that we need and use this program. This is NOT a program that they should cut.

Sincerely yours,

Cliff Jones, Editor
Warren Astronomical Society



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(no dress up)

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John Lines Phone #248-969-2790 or E-mail "JELINES@yahoo.com"
Doug Bock E-mail "DBOCK1@chartermi.net"

(PLEASE RSVP IF YOU ARE THINKING OF ATTENDING)

** This will be a "Hunt for the Witch head Nebula" event **



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