



## The Warren Astronomical Society Paper

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[www.boonhill.net/was](http://www.boonhill.net/was)

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### 2003 WAS OFFICERS

// August 2003

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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](http://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](mailto: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

It looks like Dr. Hugh Jones of Liverpool John Moores University has finally hit upon a solar system that might be similar to ours. A Jupiter sized planet is moving in a near circular orbit with just about the same distance from its star as our own Jupiter from our Sun. The possibility of smaller planets between it and its sun is much greater than existed in the past with the discoveries of those other close orbiting Jupiter sized planets. The star is HD70642, located about 94 light years away. It's similar to our Sun in structure and size. This one is the most exciting because of the possibility of an Earth sized planet existing in its solar system. This discovery was made utilizing the "star wobble" method of detection. Instruments could measure the wobble caused by the planet's pulling on its sun as it moved around its orbit.

Now's the time to start thinking about who you want for next year's officers in the WAS. All the present

officers are finishing their term limits. They can be appointed to sub-group status or special event status but it will have to be by a new set of officers. Actually, the two year limit only refers to their present office. They can all shift positions to a new office for another two years if they wish to run in a new position. October is election month at MCCC. We have two months to nominate new officers. How about you? Got a pet peeve that you feel should be handled by the present officers and wasn't? Now's your chance to be part of the "in" group, with a lot more oomph behind your suggestions. Get your name on the nominee list. You've got a great chance of winning. We need new blood in our elected officials.

The August Cranbrook meeting will feature Allen Rothenberg and the subject will appropriately be the planet Mars. As you all know, the close approach takes place late this month and it's going to be one of the closest ever encountered by earthlings. As this article is written, in mid July, the planet beckons amateur telescopes all over the world to come and take a look. Its highest culmination (about 35 degrees above the southern horizon) occurs around four o'clock in the morning, but by the end of

August, midnight will provide a well placed observation in the south. With all the automated telescopes and photo equipment now available to amateurs, this apparition will no doubt be the most photographed and observed event ever.

Cranbrook is planning a Mars "event" on the museum's grounds in August and large numbers of people are expected to view the planet through amateur telescopes set up around the reflecting pool. If you can be available for this event, the last week in August, please sign up when the sign-up-sheet is passed around at our August meetings. They'll be needing all the help they can get. If Mars gets all the publicity in the media that is expected, people will be walking over each other during the week long event.

The August meeting at MCCC will feature Riyad Matti, a long time member of the WAS. Riyad has been a refractor enthusiast all of his observing life, as well as a photographer and planet observing enthusiast. He'll tell you why refractors are better than reflectors in many respects, especially when it comes to planetary detail and double star observations. Don't miss either of our August talks. There is much to be discussed.

Mike Simonsen gave a fine talk about stellar evolution, covering the well known Hertzsprung-Russell diagram and how stars evolve through the diagram during their lifetimes at the July MCCC meeting. He even covered the mechanics of multiple star systems, as well as the events that produce novae, supernovae and black holes. If you missed his talk, you missed a humdinger.

Everyone that went to the Roseville Coney Island restaurant after the MCCC meeting got to see an Iridium satellite reach minus seventh magnitude in the WSW around 11:41 PM. Those satellites make quite an impression on you when they appear in that brightness range. They're capable of minus eight magnitude occasionally and can easily be confused with an airplane landing light or UFO, to the uninformed.

The number of exoplanets has now reached 121 with the discovery of a Jupiter sized planet that could possibly be over 12 billion years old. This planet, located within the globular cluster M4 has really set the astronomical world buzzing. Until now, it was thought that globular clusters were too dense with stars to provide a place for the development of planets. They just couldn't develop stable orbits because of so much influence from nearby stars. Well, there goes another hypothesis out the window. Globular clusters are old stars. They clustered way back when our

galaxy was developing and probably contain very little heavy elements. But a 12.7 billion year old planet, in orbit around a pulsar at a distance that compares to our system's Neptune, is quite a pill to swallow.

This year's Edgar Wilson comet awards, which consist of a plaque and a small cash award, are going to amateur astronomers Sebastian F. Hoenig (Dossenheim, Germany, Comet C/2002 O4), Tetuo Kudo & Shigehisa Fujikawa (Mitoyo, Kagawa, C/2002 X5), Charles W. Juels (Fountain Hills, Arizona,) and Paulo R.C. Holvorcem (Campinas, Brazil), both discovered C/2002 Y1 with an Internet high speed connection.

If you like contests, consider registering with Astronomy magazines website. A subscription isn't necessary and you could win a Meade telescope, as well as other interesting prizes. The Grand Prize is a Meade 10 inch LX200, first prize, a Meade 8 inch, second prize, a Meade LX90. The rest of the prizes are ETX's of various sizes and some fine software for the rest of the prizes.

The program MARS PREVIEWER II seems to be getting a reputation for having a virus attached to it. Not all versions of the program have it. If you suspect the virus is on your computer, let me know and I'll give you a small program called a virus killer that will tell you if it's there. It won't remove the virus but it'll stop it from spreading further in your computer. A regular virus remover must be used for the removal. I have the Mars program and use it regularly but the program says there's no virus in my computer.

Open house at Stargate will take place on August 2. If you haven't been to our observatory near Twenty-Nine Mi. Rd. and Wolcott Ave., that's a good time to go. Look for the entrance to Camp Rotary, just a quarter mile East of the fire house on 29 Mi. Rd. There are usually a couple of other telescopes set up for people who are interested in seeing what the main difference is between other brands of telescopes. Who knows, you may end up renting one of our loaner 'scopes and taking home an observing package for trial purposes.

That famous meteor shower that always occurs in August, the Perseids, will be washed out by the Moon this year. The evening and morning of the 11<sup>th</sup> and 12<sup>th</sup>, will have a Moon almost full and will flood the night sky all night long. Too bad. Only bright meteors will show their trails that night.

OTHER LOCAL EVENTS. THE 8th ANNUAL KENSINGTON PUBLIC STAR PARTY will be going on later this year, on Friday and Saturday, September 5&6. Since this is a public star party and an event that is comprised of many Michigan Astronomy clubs, a huge crowd is expected and we are asking that you bring your telescope to help handle the large amount of people

wanting to observe through a decent, sturdy telescope. There will be events for the youngsters and vendors for the adults. Lectures by prominent amateur astronomers will be present both days, as well as hot food and soft drinks. This year will feature the planet Mars and the closest approach to Earth in 70,000 years.

The First Annual GREAT LAKES STAR GAZE takes place in September, starting on Friday the 26th and ending Sunday, the 28th. It's held at the River Valley RV Park in Gladwin, Michigan. Sponsored by the Sunset Astronomical Society. A flyer is available at our meetings, for more information about registration and prices for tenting and trailering. 6.5 magnitude skies are promised.

THE ISLAND LAKE PUBLIC STAR PARTY happens on Saturday, October 4, and this event too, brings a huge crowd. Volunteers from all clubs are asked to attend and help out with telescope operations, whether it be your own 'scope or relief for someone else's. Hot food, lectures, vendor sales and a raffle always fill the bill at this star party. Last year the main prize in the raffle was a fine goto telescope, as well as dozens of other lesser astronomical prizes.

Bill Beers, our treasurer, announced that the 2003 Awards Banquet will be held at the old Warren Chatau building, in Warren, on 10 Mile Road near Mound Rd, on December 18. Its now called DeCarlo's Banquet Hall. Tickets will be \$21 per person.

Again, keep thinking Hydrogen. America needs a clean fuel and less dependence on oil. Continued development of a Hydrogen containment system and Hydrogen generation systems will get us there. More and more money is being earmarked by our government for Hydrogen development research and the automotive industry is finally realizing its potential. The ultimate goal would be to have a Hydrogen generator right in the vehicle, using Hydrogen as the fuel, rather than using Hydrogen to produce electricity in a fuel cell.



#### **THE SWAPSHOP**

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. Meade LX90 telescope with JMI focuser,

2 in. eyepiece, JMI hard case, Dew clip, solar filter, Dew shield, Wedge, Skylite/dust filter, Update cable kit, and AC adapter. Total value over \$2,850 without shipping and tax, asking \$2,000. 248-236-9983 or [Jameswynn@charter.net](mailto:Jameswynn@charter.net). (1-04).

FOR SALE. NextStar 8 GPS telescope, one year old. The package includes telescope, tripod and two cases of accessories. The included accessories are; car battery supply adaptor, Celestron ISO pads, Celestron kit (includes 4, 6, 9, 15 and 32mm Plossl eyepieces. 2X Barlow, 7 piece filter set, 5x12x10 locking aluminum carry case, 20mm crosshair eyepiece, polarizing filter set #93608, 40mm Plossl, second aluminum accessory case 6x13x18 with locks and dividers, Night Watch 3rd edition book, the sky at night kit, Nexstar 8 GPS manual and original telescope shipping carton). All items are in excellent condition. Asking price is \$2,000, firm. Location is Port Huron, please e-mail if interested. [mgmfan@aol.com](mailto:mgmfan@aol.com). (1-04).

FOR SALE. Orion XT8 Dobsonian telescope, 8 inch, Orion Plossl 25mm eyepiece, Orion Plossl 9mm eyepiece, Orion Moon filter, Televue Plossl 15mm eyepiece, Vixen LV 5mm eyepiece, Orion 1.25 inch Shorty barlow, Orion EZ finder reflex site, Orion collimating eyepiece, medium size accessory case, Orion Red Beam LED flashlight, cost over \$850, will sacrifice all for \$450. Everything is in very good condition. Brian T. Koehler, St. Clair Shores, MI, 588-772-8238, e-mail: [bkok@wideopenwest.com](mailto:bkok@wideopenwest.com). (10-03).

FOR SALE. Vixen Super Polaris telescope mount. RA and Dec. drives controlled by hand paddle for slewing and slow motion. Polar axis alignment scope. The price has been further dropped to \$300. 586-468-5479. (9-03).

FOR SALE. Six inch tube Dobsonian telescope. Includes 6 inch, F8 parabolic primary mirror, 1.25 in. minor axis secondary mirror, 1.25 in. focuser with 0.96 in. adapter, 6x30 finder scope, four vane spider assembly, 8 inch diameter heavy wall Sonotube optical tube (white). Baltic birch solid core plywood construction, stained and clear-coated with polyurethane. Ebony Star with virgin Teflon altitude and azimuth bearings. Reduced to \$290. Call Steve Greene at 586-598-1199. (9-03).

FOR SALE. Rack and pinion focuser for a Newtonian telescope. Two inch inside diameter, universal base. Fully closed it's 4.5 inches high. It extends another 2.5 inches for focusing. Includes a 1.25 in. diameter adapter. Very smooth operation. Maker unknown. Asking \$35. 810-776-9720. (1-04).

FOR SALE. Two telescope mounting rings. Holds tubes with 12.5 to 13.25 in. outside diameter. Steel, painted black, hinged. Uses 1/4-20 mounting studs which can be

removed and replaced with larger studs for heavier telescopes. Asking \$45. 810-776-9720. (1-04).

FOR SALE. Spider (four vane) for Newtonian secondary. Fits tubes inside diameter from 12.5 to 13 inches inside diameter. Steel, painted black, thin vanes. Will accept diagonal holders with 5/16 in. dia. bolt or smaller. Asking \$10. 810-776-9720 (1-04).

FOR SALE. Compact video camera for astrophotography or surveillance. Supercircuits PC23C with C-mount adapter for 1 1/4 in eyepiece holder. Includes 25 foot video cable, 12volt power supply and instructions. Video chip is 1/3 in. black and white CCD with 510X492 pixel arrangement. Good for solar, lunar and bright planet photography. 0.04 lux light sensitivity. It also has an input for audio recording during video recording. Weight: 6.87 oz. Does not include a lens. Asking \$45. 810-776-9720 (1-04).

### Scheduled Speaker 2003

By Ken Bertin

DATE	DAY	PRESENTER	SUBJECT
		ALAN	
8/4	MON	ROTHENBERG	MARS
8/21	THU	RIYAD MATTI	TBA
		JIM	LIGHT GATHERING vs
9/8	MON	SHEDLOWSKY	TELESC.PARAM.
9/18	THU	DOUG BOCK	TBA
10/6	MON	KEN BERTIN	OTHER ASTRONOMERS
10/16	THU	CLIFF JONES	BOOK REPORT
11/3	MON	PLANETARIUM	
11/20	THU	MARTY KUNZ	MILKY WAY GALAXY
		VINCE	VATICAN
12/1	MON	CHRISMAN	OBSERVATORIES

### **UPCOMING WAS EVENTS**

Sept	Fri 5-6	Kensington Public Star Party
Sept	Fri 26-28	Great Lakes Star Gaze
Oct	Sat 4	Island Lake Public Star Party

### **OTHER EVENTS**

Starfest Ontario, Canada  
August 21 to August 24, 2003  
Web Link: <http://www.nyaa-starfest.com/starfest/index.htm>

Astrofest Chicago, Illinois September ??  
Web Link:  
<http://www.chicagoastro.org/aindex.html>

Stellafane Springfield, Vermont  
August 1 & 2, 2003  
Web Link: <http://www.stellafane.com/home.html>

### WARREN ASTRONOMICAL SOCIETY TREASURER REPORT

4/1/03 THRU 5/1/03

Beginning Balance:	\$ 693.28
Income Total=	\$ 142.00
Expense total:	\$ -356.50
Ending Balance:	\$ 478.78

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# From the Belly of an Airplane: Galaxies

By Dr. Tony Phillips

On April 28th a NASA spacecraft named GALEX left Earth. Its mission: to learn how galaxies are born, how they grow, and how they die.

"GALEX-short for Galaxy Evolution Explorer-is like a time machine," says Caltech astronomer Peter Friedman. It can see galaxies as far away as 10 billion light years, which is like looking 10 billion years into the past. The key to the mission is GALEX's ultraviolet (UV) telescope. UV rays are a telltale sign of hot young stars, newly formed, and also of galaxies crashing together. By studying the ultraviolet light emitted by galaxies, Friedman and colleagues hope to trace their evolution spanning billions of years.

This kind of work can't be done from the ground because Earth's atmosphere absorbs the most energetic UV rays. GALEX would have to go to space. To get it there, mission planners turned to Orbital Science Corporation's Pegasus rocket.

"Pegasus rockets are unusual because of the way they're launched-from the belly of an airplane," says GALEX Project Engineer Frank Surber of JPL.

It works like this: a modified L-1011 airliner nicknamed *Stargazer* carries the rocket to an altitude of 39,000 feet. The pilot pushes a button and the Pegasus drops free. For 5 seconds it plunges toward Earth, unpowered, which gives the *Stargazer* time to get away. Then the rocket ignites its engines and surges skyward. The travel time to space: only 11 minutes.

"The aircraft eliminates the need for a large first stage on the rocket," explains Surber. "Because *Stargazer* can be used for many missions, it becomes a re-useable first stage and makes the launch system cheaper in the long run." (To take advantage of this inexpensive launch system, GALEX designers had to make their spacecraft weigh less than 1000 lbs-the most a Pegasus can carry.)

A Pegasus has three stages--not counting the aircraft. "Its three solid rocket engines are similar to the black powder rockets used by amateurs. The main difference is that the fuel is cast into a solid chunk called a 'grain'-about the consistency of tire rubber. Like black powder rockets, once the grain is lit it burns to completion. There's no turning back."

In this case, turning back was not required. The rocket carried GALEX to Earth orbit and deployed the spacecraft flawlessly. On May 22nd, the UV telescope opened its cover and began observing galaxies-"first light" for GALEX and another success story for Pegasus.

For adults, find out more about the GALEX mission at <http://www.galex.caltech.edu/>. Kids can read and see a video about Pegasus at <http://spaceplace.nasa.gov/galex/pegasus.html>.

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



*L-1011 "Stargazer" takes off to carry Pegasus rocket on the first 39,000 feet of its climb to deliver a spacecraft to orbit.*

*This image may also be found at  
[http://spaceplace.nasa.gov/news\\_images/Stargazer\\_pegasus.jpg](http://spaceplace.nasa.gov/news_images/Stargazer_pegasus.jpg) .*

If you would like to renew your membership and have not already done so, or if you would like to become a member of the Warren Astronomical Society, please complete the following and submit with the appropriate US funds by Check or Money Order.

Membership	Definition	Dues (US Funds)
<b>Student</b>	One person under 18 years of age enrolled in grades 1-12	\$17.00
<b>College</b>	One person attending a College or University	\$22.00
<b>Sr. Citizen</b>	One person 65 years of age or older	\$22.00
<b>Family</b>	More than one person living at the same address	\$37.00
<b>Individual</b>	One person not fitting a category above	\$30.00

Fill in the **WAS application** and send it to our current Treasurer:

- ? **Bill Beers**
- ? **c/o Warren Astronomical Society**
- ? **P.O. Box 1505**
- ? **Warren, Michigan 48090-1505**

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## Warren Astronomical Society Membership Application

### About You:

Name(s): \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

E-Mail: \_\_\_\_\_

### Membership Type:

Individual            \$30.00\_\_\_\_\_

Family                \$37.00\_\_\_\_\_

College Student    \$22.00\_\_\_\_\_

Student               \$17.00\_\_\_\_\_

Sr. Citizen           \$22.00\_\_\_\_\_

WARREN ASTRONOMICAL SOCIETY  
P.O. BOX 1505  
WARREN MICHIGAN 48090- 1505



TO:

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**The society holds meetings on the first Monday and the third Thursday of each month, starting at 7:30 pm.**

First Monday meeting:

Cranbrook Institute of Science  
1221 North Woodward Avenue  
Bloomfield Hills, Michigan

Third Thursday meeting:

Macomb Community College  
South Campus, Bldg B, Room 209  
14500 Twelve Mile Rd  
Warren, Michigan