



The Warren Astronomical Society Paper

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www.boonhill.net/was

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2003 WAS OFFICERS

\\ September 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. 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

Another amateur astronomer has made world wide news. His name is Berto Monard of Pretoria, South Africa. Berto is the first amateur astronomer to discover the visible flash of a Gamma Ray Burster. He discovered the flash seven and a half hours after he recieved news that a burst had occurred. At the present time bursts are recorded by measuring the influx of neutrinos by detectors placed in strategic places on the Earth and by the HETE-2 spacecraft. The problem is, those detectors can't pinpoint a burster's exact location, so an alarm goes out to astronomers around the world, hoping one might catch the telltale light of a Gamma ray source. Berto is a member of the AAVSO and is a volunteer member for receiving e-mail warnings of possible GRB's (Gamma Ray Bursters). He has 10 supernova discoveries to his credit. After receiving an AAVSO announcement telling approximately where the GRB might be, he loaded his trusty 12 inch Schmidt Cass with a CCD camera and recorded the

18th magnitude glow after stacking twenty forty-five second exposures. There are approximately 170 amateurs in 22 countries, volunteering around the world, in the GRB program.

In 2010, the Hubble telescope will be put out of commission, if nothing is done to continue financing its operation. Of course, this idea riles present day professional astronomers because the telescope has become a sort of icon among the scientific set. Hopefully, money to continue operation will come forth so that another upgrade will be made in 2005. It was even proposed to bring the telescope back in one of our shuttles, so that it could be displayed to the public in Washington DC, but it was feared such a mission would be too dangerous. The next space telescope, called the James T. Webb Space Telescope, may not be ready until 2015. Even if it is, it won't have the same capability as the Hubble. The new space telescope is primarily an infrared and spectroscopic instrument and there aren't any plans to make it repairable after it's put into orbit, somewhere in a gravitational lull, involving the Earth and our Moon. Letting the Hubble orbit decay, could be dangerous too,

because the mirror isn't capable of being burned up in our atmosphere. It's too massive for a complete burn up. So, at the present time, the Hubble is in a quandary. What to do with it? A decision has to be made soon.

How would you like to build a really big telescope? I mean a really, really, big telescope and get paid for it? If that's been your lifelong dream and you've got project manager experience, I've got news for you. The US government is looking for someone to build a 30 meter (about 100 feet) telescope. It'll probably be in Hawaii (you'll need some mountain breathing experience too) and you'll be working in conjunction with the world's most prominent professional astronomers. Plus, you'll get a salary of \$180,000 a year for your efforts. Think of all the perks. Trips to Hawaii, Arizona and Washington DC. Fantastic weather and skies. A project that lasts ten or more years, with the possibility of being considered for any future super-duper telescope construction. This is an amateur astronomer's dream. You could become another Hale. Large telescopes are becoming the norm over the past thirty years. More are in the planning stage, like the European 164 foot reflector and the possibility of the behemoth, 328 foot monster, called The Overwhelming Large Telescope.

According to Bill Beers, our club treasurer, telescopes will be needed at an eastside family picnic in Grosse Pointe Park. The event takes place on Saturday, September 13, near 7 Mi. Rd. and Jefferson Ave. Telescopes are expected between 8 and midnight. If you can volunteer your time, it will bring a little green into the club's coffers. About 200 people are expected at the event.

Steve Greene reported a very successful Cadillac West Star Party. It was held at Bill Beer's summer retreat near Cadillac, MI. About a dozen people attended and each night cooperated to the fullest extent of Michigan's ability to show its starry splendor. There were Auroras during two nights, which added to the excitement, with Mars the featured act. Visitors from Wilmington, IL and Traverse City complimented the crowd. All survived, each night, until dawn, because of a cache of breakfast burritos.

Our first meeting of the month, at Cranbrook, on September 8, will feature Jim Shedlowsky. He's going to talk about telescope parameters and what they really mean to the amateur telescope user. If you've been stumped by how to determine your magnification, or what terms like apparent field, real field, exit pupil or 1/10 wave really means, then this is your meeting.

The MCCC meeting on September 18 will feature our WAS website guru, Mr. Doug Bock. So far he's kept his talk a secret. But Doug has so many facets shining in amateur astronomy that he's bound to come up with something of interest to nearly all that attend. Doug has been a WAS member for as long as I can remember and has contributed much in understanding our hobby. For an evening of astronomical potpourri, as well as delving deep into one of those shining facets, don't miss this meeting.

OTHER LOCAL EVENTS. THE 7TH ANNUAL GLAAC PUBLIC STAR PARTY will be going on Friday and Saturday, September 5&6, at Kensington Metro Park. GLAAC stands for Great Lakes Amateur Astronomy Clubs. 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. A special Saturday event will feature NASA Astronaut Jerry Ross. This year also features the planet Mars and the closest approach to Earth in recorded history.

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 11TH ANNUAL ISLAND LAKE PUBLIC STAR PARTY happens on Saturday, October 4, and this event too, brings a huge crowd. Hosted by The FAAC (Ford Amateur Astronomy Club), with support by Ryder's Hobby Shops, The Detroit Science Center, University Optics, Heavner Canoe Rental and Island Lake Park. 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, also announced that the 2003 Awards Banquet will be held at the old Warren Chateau 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. All the parts needed to build a six inch, F8, Dobsonian telescope, minus the eyepiece. \$75.00. Call Bob at 586-757-4741 or e-mail rdwatt@comcast.net. (2-04).

FOR SALE. Globes of Mars. 12 inches in diameter. One shows the extreme highlands and lowlands, the other shows a more detailed surface. Asking \$50 each. James Oravec, 586-582-0899. Retired, mornings best time to call. (2-04).

FOR SALE. Amateur Telescope Making, books 1,2 and 3, published by Scientific American, Albert G. Ingalls, Editor (1972, 1972 & 1961). Famous optical authors like Porter, Clark, Wright, Hale, Hastings, Kirkham, Mayall, Baker, Dall, Paul, Cook, Schmidt and Wilson, all contributing their experience to telescope making for the amateur. They talk about lenses, mirrors, mounts, film and testing. Asking \$50 for the three book set. 810-776-9720. (2-04).

FOR SALE. Meade LX90 telescope with JMI focuser, 2 in. eyepiece, JMI hard case, JMI Moto-focuser, Dew clip, solar filter, Dew shield, Wedge, Skylite/dust filter, Update cable kit, 1.25 & 2 inch diagonal, a 26mm and Meade video eyepiece, AC adapter, and 5 inch color TV. Total value over \$2,850 without shipping and tax, asking \$2,000. 248-236-9983 or 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. (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. (10-03).

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 clearcoated with polyurethane. Ebony Star with virgin teflon altitude and azimuth bearings. Reduced to \$290. Call Steve Greene at 586-598-1199. (10-03).

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. Super Circuits 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).

FOR SALE. Micronta FET, analog, volt-ohm meter. Model 22-206. Six inch meter face with mirrored DC-Ohms scale. Separate ohms and zero adjust. Measures ohms, DC, and AC to 1,000 volts. DC amps to 300 ma. Test leads included. Asking \$20. 810-776-9720 (2-04).

Scheduled Speaker 2003
By Ken Bertin

DATE	DAY	PRESENTER	SUBJECT
		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	<u>Fri 26-28</u>	<u>Great Lakes Star Gaze</u>
Oct	Sat 4	Island Lake Public Star Party
Dec	<u>Thurs 18</u>	<u>2003 Awards Banquet</u>

A Starfest Experience
By James Wynn

My brother,(Kenny), and I arrived at Starfest on Wednesday the 20th of August. After setting up our campsite, and then our scopes, a 10" Meade GPS and a 15" truss dob. We waited for the stars to come out. I would say that the area was almost as dark as at Bill's, so the seeing was pretty good. This was the first field test for my 15" Obsession and was I impressed. On Thursday we had a rainstorm and I heard that a couple of scopes were knocked over. Then Friday night arrived and it was time for viewing. The dumbbell was huge in my eyepiece, then I went to the Swan and the image was stunning, I put on an O-III filter and was awed by the detail. After that I went over to M-51, with averted vision I could see the arms of the larger galaxy. M31 was spectacular, with a large central bulge, and I finally saw both M81 and M82 very easily. While I was there I was going to borrow John Lines parrcor, but I was so wrapped up in viewing as much as I could that I never went to get it. On Friday was when the campground started to fill

up, and all toll there where about 500 to 800 people there. My brother did try to take some pictures with film, he will have his pictures at the meeting in September. All in all it was a great time and Mars looked GREAT!

**WARREN ASTRONOMICAL SOCIETY
TREASURER'S REPORT**

7/1/03 THRU 8/1/03

Beginning Balance:	\$ 478.78
Income Total=	\$ 286.00
Expense total:	\$ -474.50
Ending Balance:	\$ 290.28

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Careful Planning and Quick Improvisation Succeed in Space Biz

By Tony Phillips

On December 18, 2001, ground controllers at JPL commanded NASA's Deep Space 1 (DS1) spacecraft to go to sleep. "It was a bittersweet moment," recalls Marc Rayman, the DS1 project manager. Everyone was exhausted, including Deep Space 1, which for three years had taken Rayman and his team on the ride of their lives.

DS1 blasted off atop a Delta rocket in 1998. Most spacecraft are built from tried-and-true technology-otherwise mission controllers won't let them off the ground. But Deep Space 1 was different. Its mission was to test 12 advanced technologies. Among them: an experimental ion engine, a solar array that focused sunlight for extra power, and an autopilot with artificial intelligence. "There was a good chance DS1 wouldn't work at all; there were so many untried systems," recalls Rayman.

Nevertheless, all 12 technologies worked; the mission was a big success.

Indeed, DS1 worked so well that in 1999 NASA approved an extended mission, which Rayman and colleagues had dreamed up long before DS1 left Earth-a visit to a comet. "We were thrilled," says Rayman.

And that's when disaster struck. DS1's orientation system failed. The spacecraft couldn't navigate!

What do you do when a spacecraft breaks and it is 200 million miles away? "Improvise," says Rayman.

Ironically, the device that broke, the 'Star Tracker,' was old technology. The DS1 team decided to use one of the 12 experimental devices-a miniature camera called MICAS-as a substitute. With Comet Borrelly receding fast, they reprogrammed the spacecraft and taught it to use MICAS for navigation, finishing barely in time to catch the comet. "It was a very close shave."

In September 2001, DS1 swooped past the furiously evaporating nucleus of Comet Borrelly. "We thought the spacecraft might be pulverized," Rayman recalls, but once again DS1 defied the odds. It captured the best-ever view of a comet's heart and emerged intact.

By that time, DS1 had been operating three times longer than planned, and it had nearly exhausted its supply of thruster-gas used to keep solar arrays pointed toward the Sun. Controllers had no choice but to deactivate the spacecraft, which remains in orbit between Earth and Mars.

Rayman has moved on to a new project-Dawn, an ion-propelled spacecraft that will visit two enormous asteroids, Ceres and Vesta, in 2010 and 2014. "Dawn is based on technologies that DS1 pioneered," he says.

Even asleep, DS1 continues to amaze.

Find out more about DS1 at <http://nmp.jpl.nasa.gov/ds1> . For kids, go to <http://spaceplace.nasa.gov/ds1dots.htm> to do an interactive dot-to-dot drawing of Deep Space 1.

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



This was the final image of the nucleus of comet Borrelly, taken just 160 seconds before Deep Space 1's closest approach to it. This image shows the 8-km (5-mile) long nucleus from about 3417 kilometers (over 2,000 miles) away.

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)
Student	One person under 18 years of age enrolled in grades 1-12	\$17.00
College	One person attending a College or University	\$22.00
Sr. Citizen	One person 65 years of age or older	\$22.00
Family	More than one person living at the same address	\$37.00
Individual	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**

--tear here--

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Warren Astronomical Society Membership Application

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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:

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