The WASP newsletter

The Warren Astronomical Society Paper
P.O. Box 1505
Warren, Michigan 48090-1505
www.warrenastronomicalsociety.org

Volume 38, Number 8 // August, 2006

2006 WAS OFFICERS

President
Norm Dillard
email: jupiter1927@sbcglobal.net

1st VP
Riyad Matti
email: riyadmatti@yahoo.com

2nd VP
Robert Berta
email: biker123@netzero.com

Secretary
Dale Partin
email: dpartin@comcast.net

Treasurer
Dr. Phil Martin
email: drpdmartin@hotmail.com

Steve Uitti
email: suitti@uitti.net

Marty Kunz
email: solarmartykz@att.net

AUGUST 2006

by Larry Kalinowski

Bigelow is the name and inflatable space stations are his game. Would you like to live in a balloon? Bigelow Aerospace thinks it’s the wave of the future. Right now a preliminary module has been launched and it’s measuring the hazards that might be encountered while in orbit. Naturally, the first thing to worry about is penetration, space junk penetration. The control center for the Bigelow satellite is located in Las Vegas, Nevada. The present module called Genesis I is much smaller than the one pictured below but is still visible with the naked eye in dark skies. It varies between third and fifth magnitude. Predictions for the module can be found on www.heavens-above.com.

Larry Phipps gave a grand lecture at the Macomb meeting last month called “Tube Hopping on the Interplanetary Super Highway”. The presentation showed how space travel for unmanned probes could save 50% or more on fuel costs. The method is in use today and more
probes are being planned in the future. The secret is using the Lagrangian points that exist between large bodies in the solar system. These are points of equal gravitation between those bodies, in effect creating a neutral gravitational space where probes or space stations could repair and send other probes to Lagrangian points near other planets or moons. The second generation space telescope (Webb) is going to use the L2 point about a million miles away from the Earth, when it is placed into position.

On July 13, astronomers took a good look at the two major storms on the planet Jupiter. By using adaptive optics, the resulting photo had about as much detail as could be hoped for from the surface of the Earth. On that day the storms named the Great Red Spot and Red Spot Jr. passed each other. There was a lot of speculation about how they would effect each other. Some predicted that the two storms might merge together, creating a super storm by Jupitarian standards. Nothing really happened as they passed, at least, nothing that we could see telescopically. The spots appear white in the photo.

If you are one of the original eighteen members that ordered a BinoViewer through the club’s group order, about two years ago, you are asked to contact Bob Watt at 586-757-4741 to arrange getting your free Barlow lens for the viewer. The lens changes the magnification by 1.9 times. This offer does not apply to those members that purchased their BinoViewer on their own.

When I bought my August issue of Sky and Telescope, I was surprised to see a silver disk attached to it. It was a special story about the Hubble telescope. Fifteen years of Hubble are contained therein. A story about the development of the telescope, its achievements and a grand look into the future of the universe. The disk alone is worth the price of the magazine. If you haven’t got it yet, get it.

The Moon will be interfering with the Perseid meteor shower this year, so don’t expect to see a whole lot of meteors after midnight on Saturday the 12th. Only the bright ones will make their mark in your memory. Our club will have a public star party at Stargate Observatory on that date, with festivities starting a six PM. Publicity is being provided by the Metro-Park system, so bring your telescope, binoculars and star pointer out for the occasion. The regular open house on Sep. 19 is still scheduled.

If you’ve got an extra 15 million dollars on top of the 20 or so million that a trip to the International Space Station would cost, you could take a space walk outside the station. The Russians have agreed to take you there for a space walk and hopefully bring you back. There’s no guarantee, of course.

Speakers for the month of August are Norman Dillard and Justin Nomura. Norman (our illustrious president) will be talking about “Satellite Galaxies” at the Cranbrook meeting on Aug. 7. Justin’s subject will be “Quantum Theory” at the MCCC on Aug. 17. Both meetings start at 7:30PM.

Open houses at the Stargate Observatory will be on August 19, September 16, October 14, November 11 and December 2. All these dates occur on a Saturday.

August’s discussion/computer group meeting will be on the 24th, (the fourth Thursday of the month) at Gary Gathen’s home in Pleasant Ridge. He lives at 21 Elm Park Blvd., three blocks south of I-696 and about a half block west of Woodward Ave. Meeting will start at 8:00 PM. You can reach Gary at 248-543-3366, or me, at 586-776-9720 for any further information.

All space photos are courtesy of SPACE.COM and SPACEWEATHER.COM, unless otherwise noted.

∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞

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. ETX-90EC Astro telescope with Meade #497 Autostart Computer Controller. Accessories include #883 Deluxe Field Tripod

PRICE REDUCED. Ten inch, box, Dobsonian telescope. Pyrex, F4.5, 1/8 wave parabolic mirror. 50 inch long tube. Two inch (with 1 ¼ in. adapter) rack and pinion focuser. An 8x50 right angle, upright image, dovetail mounted, crosshair finder with interchangeable eyepiece capability and an inch and a quarter 12mm eyepiece. Telescope ring time, less than one second. $450. Larry Kalinowski, 856-776-9720 (10-06)

∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞

WAS Meetings scheduled for 2006

Cranbrook Meetings – Every 1st

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Presenter</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 7</td>
<td>Mon</td>
<td>Norm Dillard</td>
<td>Satellite Galaxies</td>
</tr>
<tr>
<td>Sep 4</td>
<td>Wed</td>
<td>Justin Nomura</td>
<td>Quantum Theory</td>
</tr>
<tr>
<td>Oct 2</td>
<td>Mon</td>
<td>Philip Martin</td>
<td>TBD</td>
</tr>
<tr>
<td>Nov 6</td>
<td>Wed</td>
<td>Larry Kalinowski</td>
<td>TBD</td>
</tr>
<tr>
<td>Dec 4</td>
<td>Mon</td>
<td>Dale Partin</td>
<td>The Drake Equation – Extraterrestrial Intelligence</td>
</tr>
</tbody>
</table>

Macomb Meetings – Every 3rd

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Presenter</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug 17</td>
<td>Mon</td>
<td>Ken Bertin</td>
<td>The Herschel Family</td>
</tr>
<tr>
<td>Sep 21</td>
<td>Wed</td>
<td>Dave D’onorfrino</td>
<td>Intelligent Design - Is it a Science</td>
</tr>
<tr>
<td>Oct 19</td>
<td>Mon</td>
<td>Jim Frisbie</td>
<td>Observing Double Stars</td>
</tr>
<tr>
<td>Nov 16</td>
<td>Wed</td>
<td>Marty Kunz</td>
<td>TBD</td>
</tr>
</tbody>
</table>

Presentations for 2006

<table>
<thead>
<tr>
<th>Date</th>
<th>Day</th>
<th>Presenter</th>
<th>Subject</th>
</tr>
</thead>
<tbody>
<tr>
<td>8/07/06</td>
<td>Mon</td>
<td>Norm Dillard</td>
<td>Satellite Galaxies</td>
</tr>
<tr>
<td>8/17/06</td>
<td>Wed</td>
<td>Justin Nomura</td>
<td>Quantum Theory</td>
</tr>
<tr>
<td>9/11/06</td>
<td>Mon</td>
<td>Philip Martin</td>
<td>TBD</td>
</tr>
<tr>
<td>9/21/06</td>
<td>Wed</td>
<td>Larry Kalinowski</td>
<td>TBD</td>
</tr>
<tr>
<td>10/02/06</td>
<td>Mon</td>
<td>Dale Partin</td>
<td>The Drake Equation – Extraterrestrial Intelligence</td>
</tr>
<tr>
<td>10/19/06</td>
<td>Wed</td>
<td>Jim Frisbie</td>
<td>Observing Double Stars</td>
</tr>
<tr>
<td>11/06/06</td>
<td>Mon</td>
<td>Ken Bertin</td>
<td>The Herschel Family</td>
</tr>
<tr>
<td>11/16/06</td>
<td>Wed</td>
<td>Dave D’onorfrino</td>
<td>Intelligent Design - Is it a Science</td>
</tr>
<tr>
<td>12/04/06</td>
<td>Mon</td>
<td>OPEN</td>
<td>TBD</td>
</tr>
<tr>
<td>12/21/06</td>
<td>Wed</td>
<td>Banquet</td>
<td>TBD</td>
</tr>
</tbody>
</table>

∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞

August 2006 Calendar

Wednesday, Aug 2 • 4:46 am: First Quarter Moon
8:00 am: The Moon passes 0.5° South of Jupiter

Friday, Aug 4 • 2:00 pm: The Moon passes 0.4° South of Antares: 8:00 pm: Asteroid Hebe is at opposition

Sunday, Aug 6 • 9:00 pm: Mercury is at greatest western elongation (Look 2.8° below Venus whis is 6.5° south of Pollux)

Monday, Aug 7 • 8:00 am: Saturn is in conjunction with the Sun

Wednesday, Aug 9 • 6:45 am: Full Moon

Thursday, Aug 10 • 2:26 pm: The Moon is at perigee (223,538 miles from Earth)

Friday, Aug 11 • 1:00 am: Neptune is at opposition

Saturday, Aug 12 • 11:00 am: Asteroid Ceres is at opposition; Perseid meteor shower peaks

Tuesday, Aug 15 • 9:51 pm: Last Quarter Moon
Monday, Aug 21 • 11:00 pm: The Moon passes 3° north of Venus
Wednesday, Aug 23 • 3:10 pm: New Moon
Friday, Aug 25 • 9:00 pm: The Moon is at apogee (252,444 miles from Earth)
Saturday, Aug 26 • 7:00 pm: Venus passes 0.07° south of Saturn
Monday, Aug 28 • 9:00 pm: The Moon passes 0.5° south of Spica
Wednesday, Aug 31 • 6:54 pm: First Quarter Moon; 10:00 pm: The Moon passes 0.5° south of Antares.

∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞

2006 Stargate Observatory Open House Schedule

Aug 12 – Start at 6 P.M.: Public Meteor Shower open house (sponsored by the Park Service)
August 19 – Start at 6 P.M.: General observing.
September 16 – Start at 6 P.M.: General observing.
October 14 – Start at 6 P.M.: General observing.
November 11 – Start at 6 P.M.: General observing.
December 2 – Start at 6 P.M.: General observing.

Notes:
1. Normal closing time will depend on events, weather, and other variables.
2. The observatory may be closed one hour after opening time if no members arrive within the first hour.
3. Contact me for other arrangements, such as late arrival time.
4. An alternative person will be appointed to open the observatory if I cannot attend a scheduled date or opening time.
5. Members may arrive before or stay after the scheduled open house time.
6. Dates are subject to change or cancellation depending on weather or staffing availability.
7. An e-mail will be posted no later than 2 hours before starting time incase of date change or cancellation.
8. It is best to email me up to 2 hours before the posted opening with any questions you may have. I will not be able to receive e-mail after 2 hours before open time.

Generally only strong rain or snow would prevent the open house...even if it is clouded over I plan on being there. Often the weather is cloudy but clears up as the evening progresses.

Bob Berta

From Nancy Leon  JPL/NASA:
Podcasts: Space Place To Go!

No time to think about the wonders of the universe, much less how to explain them in a simple way to your students? Sign up for the new Space Place Podcast. Listen when you have time. In each Podcast, a NASA scientist answers fascinating questions about space and Earth science, with a little technology thrown in. Go to spaceplace.nasa.gov/en/educators/podcast/ to subscribe. Or you can listen now on your computer or read the transcripts. Best of all, you can listen while you go for a walk, looking up at the beautiful night sky and thinking about all that is out there, known and unknown.

Meeting Minutes

Warren Astronomical Society
Minutes of club meeting
July 20, 2006 - Macomb

The meeting was called to order at 7:40 pm.

The officer and committee reports were given. Phil Martin reported that the club has $3897.92. Dale Partin presented the minutes of the last WAS meeting at Cranbrook.

Riyad Matti and Bob Berta purchased a gun safe that will be kept at Stargate with various valuables in it, such as eyepieces and CCD cameras.

Bob Berta reported that the Stargate roof is warped and in need of repair.

The club picnic will begin at noon on July 29th. There is a need for a few people to bring ice chests.

Bill Beers will have a star party near Cadillac, MI August 23-27.

The Great Lakes Star Party will be September 22-24.

The Kensington at the Beach Star Party will be September 29-30.

Larry Phipps gave a presentation entitled Tube Hopping on the Interplanetary Superhighway.

24 people attended the meeting.

The meeting adjourned at 10:03 pm.
Respectfully submitted,
Dale Partin

∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞∞

Member’s Astrophotos

(Pictures of note along with background data may be submitted to the WASP editor for publication)

The following photo is a two image mosaic of the complete Veil Nebula. It was only 1 image for each part and 10 minutes exposure through Ha and my TV 85 APO with the matched .8 focal reducer and the SBIG STL 6303e camera. The wide FOV of the telescope and big chip camera covers a 3x1.5 degree FOV so this image is actually about 5x3 degrees. The telescope field is very evenly illuminated...I didn't need a flat field image for these shots.

The interesting part is that this was taken a day or two after full moon and with some thin haze in the sky...and from my backyard at 25 Mile Road and Hayes in Macomb Township. Maybe mag. 4 at best that night.

The emission filters sure take away the need for a dark sky spot and elevation.

I was interested in getting the full Veil...may go for a color emission image shot of the same thing if I get a chance. – Bob Berta

Editor’s Note: I can’t remember when I last viewed a picture of the Veil Nebula in its entirety. In the astronomy picture books I’ve collected all the pictures therein are of the individual segments, I assume to show the intricate wispy details. However, the above picture puts it all in perspective, literally. It is easy to see from the above photo that the Veil Nebula is the remnant of a nova/supernova. It took a Google search to find a picture of the complete Veil in one frame. You can find that picture at: http://www.seds.org/~spider/Spider/Misc/veil.html

In last month’s WASP you will find Bob’s superb pictures of the individual segments. – Cliff Jones

Great Lakes Star Gaze 2006
September 22nd thru September 24th

Great Lakes Star Gaze. The Gladwin location provides excellent observing without having to travel hours into northern Michigan. Limiting magnitudes are estimated to be around 6.5 at the zenith with some minor light domes from the cities of Mt. Pleasant and Midland (approximately 30 miles away).

We mix interesting talks and events during the day with great observing at night. Some great door prizes have been given out in past years, and this year will be no exception. This event is well attended and provides a great opportunity to network with other amateurs. The range of equipment that people bring is awesome and there are some good views to be had.

Sponsors & Donations

Great Lakes Star Gaze gets strong support from local and national vendors, who provide us with a fantastic selection of door prizes. See last years sponsors for details.

For a copy of the Flyer in PDF, go to the web page: http://www.boonhill.net/sunset/PDFforms/GLSG4Flyer.pdf

For a copy of the registration form in PDF, go to: http://www.boonhill.net/sunset/PDFforms/GLSG4Reg.pdf
Celestron’s Revolutionary Sky Scout
Star and Planet Locator:
Reg. $399 – Now only $379
(With your Rider’s RED card)
Announcing...

The Cadillac West 2nd Annual
"SUMMERFEST"
STAR PARTY

August 23 – 27, 2006
(Wednesday thru Sunday)

Hosted By: Bill Beers (Warren Astronomical Society)
Located 14 miles west of Cadillac, Mich. at Bill Beers cabin (RSVP for map)

***DARK SKIES***

**Saturday Barbecue**

Accommodations Available:
- Limited Floor Space in Cabin
- Plenty of Space for Tents/Campers
- Best Value Inn (231-775-2458) 12 miles east
- Driftwood Lodge (231-775-2932) 12 miles east
- Caberfae Peaks (231-862-3300) 1 mile east

------- A/C POWER AVAILABLE -------

For More Info Contact:
Bill Beers Phone #586-566-8367 or E-mail "BEEZOLL@AOL.COM"

(PLEASE RSVP IF YOU ARE PLANNING ON ATTENDING)

**This will be a find the "Fairy Ring" event**
Celebrating 40 Years of Intent Listening
By Diane K. Fisher

In nature, adjacent animals on the food chain tend to evolve together. As coyotes get sneakier, rabbits get bigger ears. Hearing impaired rabbits die young. Clumsy coyotes starve. So each species pushes the other to “improve.”

The technologies pushing robotic space exploration have been like that. Improvements in the supporting communications and data processing infrastructure on the ground (the “ears” of the scientists) have allowed spacecraft to go farther, be smaller and smarter, and send increasingly faint signals back to Earth—and with a fire hose instead of a squirt gun.

Since 1960, improvements in NASA’s Deep Space Network (DSN) of radio wave antennas have made possible the improvements and advances in the robotic spacecraft they support.

“In 1964, when Mariner IV flew past Mars and took a few photographs, the limitation of the communication link meant that it took eight hours to return to Earth a single photograph from the Red Planet. By 1989, when Voyager observed Neptune, the DSN capability had increased so much that almost real-time video could be received from the much more distant Planet, Neptune,” writes William H. Pickering, Director of JPL from 1954 to 1976, in his Foreword to the book, Uplink-Downlink: A History of the Deep Space Network, 1957-1997, by Douglas J. Mudgway.

Mudgway, an engineer from Australia, was involved in the planning and construction of the first 64-m DSN antenna, which began operating in the Mojave Desert in Goldstone, California, in 1966. This antenna, dubbed “Mars,” was so successful from the start, that identical 64-m antennas were constructed at the other two DSN complexes in Canberra, Australia, and Madrid, Spain.

As Mudgway noted in remarks made during the recent observance of the Mars antenna’s 40 years of service, “In no time at all, the flight projects were competing with radio astronomy, radio science, radar astronomy, SETI [Search for Extra-terrestrial Intelligence], geodynamics, and VLBI [Very Long Baseline Interferometry] for time on the antenna . . . It was like a scientific gold rush.”

In 1986 began an ambitious upgrade program to improve the antenna’s performance even further. Engineering studies had shown that if the antenna’s diameter were increased to 70 m and other improvements were made, the antenna’s performance could be improved by a factor of 1.6. Thus it was that all three 64-m DSN antennas around the world became 70-m antennas. Improvements have continued throughout the years.

“This antenna has played a key role in almost every United States planetary mission since 1966 and quite a few international space missions as well. Together with its twins in Spain and Australia, it has been a key element in asserting America’s pre-eminence in the scientific exploration of the solar system,” remarks Mudgway.

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

For over 40 years, the “Mars” 70-m Deep Space Network antenna at Goldstone, California, has vigilantly listened for tiny signals from spacecraft that are billions of miles away.