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each member and/or available online www.warrenastronomicalsociety.org. 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.

Volume 40, Number 2    //    February, 2008

2008 WAS OFFICERS:

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2nd VP - - - - Marty Kunz, solarmartykz@sbcglobal.net
Secretary - - - - John Kade, jonathan.kade@gmail.com
Outreach Chairman - - - John Kriegel, johnkriegel@comcast.net

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Astro Chatter
by Larry Kalinowski

Like clouds in the daytime sky, dust clouds in the nighttime sky take on shapes that humans like to compare to common shapes with which we are familiar. This dust cloud has been dubbed “The Moth” by astronomers. The photo was taken by the Hubble telescope with its near Infra-red
camera. Normally, dust clouds around stars are symmetrical but this one has a large dark area on one side and may be the result of its

approach to another darker cloud. The gas cloud surrounds HD 61005.

The picture of the Sun with the surrounding halos, is quoted as being the best picture yet, of the so-called Kern arc. The arc, a full 360
degree halo, which includes the Circumzenithal arc, is located in the center of the upper middle portion of the picture. It was taken by a
Finlander named Marko Mikkila. More than one picture was stacked to bring out the halo to
give it more contrast. It can best be viewed on the Internet at www.spaceweather.com.

One of the best placed Lunar Eclipses occurs on the 20th day of the month with totality beginning at 10:00PM EST. The entire eclipse

February 2008
will be visible from the US, provided the weather cooperates. Totality ends at 10:52. The partial phases begin and end about an hour and a half before and after totality begins and ends. Saturn will be close to the Moon, giving onlookers a double treat. See Sky And Telescope for February, pages 68 through 71.

The Rider’s Hobby Shop and The Ford Amateur Astronomy Club has their Fifth Annual Swap-Shop this month on Saturday, February 16, in Livonia, MI. There are speakers all afternoon and a bunch of tables with astro-goodies for sale. All amateur astronomers are invited to register for a swap table for $20, when you register at the door. The regular entrance fee is five dollars per person. It happens at The Holy Cross church gymnasium, 30650 Six Mi. Rd., east of Merriman Rd., 9 to 3 PM. If you plan to set up a table, get there before 9 o’clock. See you there!

If you’re a morning riser, you have the chance to catch two planets in the same telescope eyepiece, twice this month. Jupiter and Venus are about 0.6 degrees apart on February 1 (one degree on the Feb. 2) and Venus and Mercury are in conjunction on February 27, separated by 1.1 degrees.

Comet Holmes continues its trek through the constellation Perseus during all of February. On January 28, it was reported to be about magnitude 3.8. It’s still a binocular object here in the suburbs, so there is still time to pick up a easy documented sighting of it if you haven’t seen it yet. You only need to have documented sightings of five different comets to earn the WAS comet award badge. GOTO telescope users can find the periodic comet 46P/Wirtanen moving through Pisces and Aries in February. It’ll be an eight or nineth magnitude object. Check out its position with the web, by Googling Harvard, comets.

February’s discussion group meeting will be on the fourth Thursday, the 28th, 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. Three sets (A,B&C) of 3X5 AstroCards with illuminated, red light viewer. Great for star hoping, if you don’t have a GO-TO or electronic setting circles. $25. 586-776-9720 (cometman@mybluelight.com). (3-08).

SPECIAL NOTICE
From Nancy Leon – NASA/JPL

Another fun, interactive (and educational) game has been added to the SciJinks web site: ”Weather Slyders.”

Challenge Yourself with Weather Slyders

The Dust Bowl. Hot, loopy solar gases. Killer Katrina. Combining dramatic images of Earth and space weather with the challenge of an old-fashioned slider puzzle, the new ”Slyder” game on the SciJinks Weather Laboratory website will capture the attention of any middle-schooler--and maybe even their parents and teachers. Players pick from a rich variety of captioned images, including photos from the ground, photos from space, and artist's renderings. After picking a difficulty level (3x3, 4x4, 5x5 grids), the player slides the scrambled tiles around to make a whole picture again. Go to http://scijinks.gov/weather/fun/slyder to become the newest Slyder buff!

Here’s another informative podcast added to the Space Place web site:

“Is Time Travel Possible?”

Every science fiction fan has pondered the weird implications of time travel. Can you travel into the future and find out the winning Super Lotto number--then come back and buy a ticket? Would doing so be cheating the laws of physics (to say nothing of ethics)? Astrophysicist Marc Rayman toys with such ideas in this Space Place Musings Podcast. Go to: http://spaceplace.jpl.nasa.gov/en/educators/podcast/ to subscribe to these Podcasts. Or listen now to this and the previous Podcasts on your computer or read the transcripts.
WAS SUB-GROUPS

Want to delve more deeply into a specific field of interest in astronomy? Joining a sub-group just may be the answer. Please contact the chairperson listed by the subgroup of interest for more information, meeting times and location. Current sub-groups are:

- Discussion/Computer Group    - Larry Kalinowski
- Lunar/Planetary/Double Stars - Alan Rothenberg
- Deep Sky Group               - Phil Martin
- Solar Group                  - Marty Kunz
- Hands on Group               - Riyad Matti

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WAS Meetings scheduled for 2008

Cranbrook Meetings – Every 1st Monday
Jan. 7  Feb. 4  Mar. 3  Apr. 7  May 5
Jun. 2  Jul. 7  Aug. 4  Sep. 1  Oct. 6
Nov. 3  Dec. 1

Macomb Meetings – Every 3rd Thursday
Jan. 17  Feb. 21  Mar. 20  Apr. 17  May. 15
Jun. 19  Jul. 17  Aug. 21  Sep. 18  Oct. 16
Nov. 20  Dec. 18 (Tentative Banquet Date)

Warren Astronomical Society

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<th>Date</th>
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<td>7-Jan</td>
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<td>17-Jan</td>
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<td>Justin Nomura</td>
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<tr>
<td>4-Feb</td>
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<td>21-Feb</td>
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<tr>
<td>3-Mar</td>
<td>Mon</td>
<td>Mike Simonsen</td>
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<td>20-Mar</td>
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<td>17-Apr</td>
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<td>Norm Dillard</td>
<td>The largest Stars</td>
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Please contact the 1st V.P. (program chairperson) to:

1: Schedule new presentation.
2: Alter scheduled presentations.
3: Add a subject title to your presentation.
4: Change the subject title of your presentation.

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February, 2008 Calendar

Friday, Feb 1 • Hour before sunrise: Jupiter & Venus are 0.6° apart and 1.2° apart on Saturday

Monday, Feb 4 • Hour before sunrise: The crescent Moon is about 4° below Jupiter and Venus

Tuesday, Feb 5 • Mercury is in conjunction with the Sun

Wednesday, Feb 6 • New Moon

Wednesday, Feb 11 • Neptune is in conjunction with the Sun

Wednesday, Feb 13 • First Quarter Moon

Thursday, Feb 14 • Moon is at Perigee (226,032 miles from Earth)

Friday, Feb 15 • Evening: Moon beside Mars

Tuesday, Feb 19 • Moon passes in front of the Beehive star cluster

Wednesday, Feb 20 • Full Moon – eclipse of the Moon 8:43 p.m. till 12:09 a.m.

Sunday, Feb 24 • Saturn is at opposition

Thursday, Feb 28 • Moon is at Apogee (251,610 miles from Earth)

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Let’s look ahead for 2008

January
Jan 2  Earth is at aphelion—closest to the Sun
Jan 14  NASA’s Messenger spacecraft flies by Mercury
Jan 31  Venus & Jupiter close in the morning sky
Feb 21  Total Lunar Eclipse from 7:30 to 10:00 pm
Feb 23  Saturn at opposition (in the sky all night)
Feb 27  Mercury & Venus in conjunction (morning sky)

Feb 29  Leap Day
Mar 9   Spring ahead - set clocks forward 1 hour
Mar 21  Vernal Equinox (equal day and night)
Apr 9   Launch: Moon orbiter from India - Chandrayaan-1

May 25  NASA’s Phoenix lands on Mars
Jun 20  Summer Solstice (longest daylight)
Jul 4   Earth at perihelion (farthest from the Sun)
Jul 8   Jupiter at opposition (in the sky all night)
Jul 10  Mars & Saturn conjunction in the evening sky

Aug 12-13 Perseid meteor shower
Aug 13  Saturn & Venus conjunction in the evening sky

September
Sep 5   ESA’s Rosetta spacecraft drops a probe on a comet
Sep 11  Mars & Venus in conjunction in the evening sky

Sep 22  Autumnal equinox (equal day and night)
Oct 6   NASA’s Messenger spacecraft Mercury fly-by

October
Oct 10  Lunar Reconnaissance Orbiter launch—NASA
Nov 30  Venus & Jupiter in conjunction in the evening sky

Dec 21  Winter Solstice (shortest daylight)

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2008 Stargate Observatory Open House
Schedule

NOTE: Depending on weather at the time, open house dates are:

Feb. 16, Mar. 15, Apr. 12, May 10, Jun. 14, Jul. 12,
Aug. 09, Sep. 06, Oct. 04, Nov. 08, Dec. 06

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.

Marty Kunz

Meeting Minutes

Warren Astronomical Society
Minutes of Board Meeting
January 6, 2008
Cranbrook

The meeting was called to order at 6:40 PM.

Attendance: Bob Berta, Gary Ross, Marty Kunz, Steve
Ulitti, Jonathan Kade, Larry Phipps, John Kriegel

Officers’ reports: Bob gave an overview of his major goal
for the year: to bring astronomy opportunities to those
who do not normally have exposure to it, such as seniors
and the handicapped. He noted that a tactile
planetarium for the blind might even be a realistic
possibility.

Gary noted that, though he was working to arrange for a
few outside speakers and video presentations, the bulk
of our presentations must be given by club members -
not just members of the board, but the rank and file as well.

Marty noted his goals for the year: upgrading the
observatory’s roof and dome, upgrading the club’s 22”
Dob, and purchasing more equipment as needed
(including, potentially, a solar scope). He mentioned
forthcoming changes in the equipment loan program.

Steve gave the current funds as $5486.89. He will
report to Marty on the status of our payments to
Cranbrook, as Marty is trying to get the auditorium rental
fees dropped.

Old business: Steve will complete the 501(3)c renewal
process once he has the required materials.

New business: Bob is talking with the representatives of
other Michigan amateur astronomy groups and Mike
Narlock from Cranbrook to pool resources and host
speakers of national prominence.

Public relations responsibilities, specifically notifying
local media outlets of upcoming WAS events, should be
delegated either to Larry, as publications director, or to
John, the outreach director. This has not been finalized
at this time.

Bob informed the board that Lee Hartwell would be
donating a computer program he developed with his
son. It allows members to add information (including
audio and photographs) from their own observing
experiences to a database of celestial objects.

Bob asked board members to help maintain order and
keep the news and events segment of the general
meetings streamlined. He asked board members to
consider what changes, if any, they would like to make
to the organization of general meetings.

Finally, Bob requested that members notify him in
advance if they would like to place an item on the board
meeting agenda. We will be following a printed agenda
to keep board meetings focused and streamlined.

The board meeting was adjourned at 7:24 PM.

Respectfully submitted,
Jonathan –

"Now the moon is almost hidden; the stars are
beginning to hide."

Warren Astronomical Society
Minutes of General Meeting
January 6, 2008
Cranbrook

The meeting was called to order at 7:33 pm.

Officers’ reports: Bob opened the meeting with a review
Respectfully submitted,
Jonathan –

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Warren Astronomical Society
Minutes of General Meeting
January 17, 2007
Macomb

The meeting was called to order at 7:34 pm.

Visitors: Brian, who was a member 10-12 years ago, and his friend John, who was looking to buy a telescope.

Officers' reports: Bob opened the meeting.

Marty reported on the January 12 open house: a group of Boy Scouts were in attendance. He gave a report on the scope and status of renovations at Stargate: he will be sorting, organizing, taking inventory of and restoring our collection of telescopes and accessories, raising the dome, and rebuilding the roof. The observatory is currently full of building supplies, but we need a stretch of tolerable weather to allow work to proceed. Marty again announced the public event at Cranbrook for the lunar eclipse on February 20th - volunteers are needed. The next open house will be February 16.

Gary noted that presentation gaps in June and July must be filled and implored presenters who cannot make the meeting to telephone as far in advance as possible so that other arrangements may be made. He will be pending requests for presentations through postal mail to our non-electronically connected members.

Steve reported the club’s treasury at $5486.89. He reminded members who have not yet picked up or paid for their WAS calendars to do so.

Interest groups:

Computer - Larry K. recapitulated topics of discussion at the last meeting: the construction of the Yerkes refractor, the asteroid that briefly had a high risk of collision with Mars, and the characteristics of daylight at various longitudes. Gary Ross reported seeing 2 stars within the Trapezium.

Gary Gathen reported that his wife Patricia hung the Distinguished Service plaque she was awarded at the club banquet above the bar where refreshments are served for computer/discussion group meetings. She was surprised and delighted at the honor.

Library - Steve announced that the Timothy Ferris memoir ‘Seeing in the Dark’ was donated to the library. The book was adapted into the documentary that was screened at the January 7 meeting.

Bob asked everyone sharing a news story to limit themselves to brief summaries of the stories.

Presentation:
Gary read excerpts from Freeman J. Dyson’s New York Review of Books essay on the excellent Timothy Ferris memoir/pæan to amateur astronomy ‘Seeing in the Dark,’ introducing the PBS television documentary of the same name.

34 people attended the meeting.

The meeting adjourned at 9:58 PM.
Hands-on - Riyad announced that the group would meet at the Feb. 16 open house. As they almost invariably observe double stars, he suggested that the group become the double star special interest group.

Solar - Marty announced that a new solar cycle seems to have started, as a sunspot pair flipped polarity. Bob and Marty discussed the necessity of a presentation on solar astronomy.

In the News - Bob asked everyone sharing a news story to limit themselves to brief summaries of the stories. News stories from the ongoing search for Cepheid variables in other galaxies to the continued survival of the Mars rovers to the fight against dark skies by retailers in Arizona were briefly discussed.

General meeting: Bob summarized his presentation, outreach, and activity plans for the year. He noted that, if enough interest were demonstrated, Cranbrook might pay for a speaker such as Paul Goldsmith, former head of the Arecibo radio observatory in Puerto Rico, for a general assembly of Michigan astronomy clubs.

Presentations: Larry Phipps presented and narrated a slideshow illustrating the MESSENGER probe’s journey from Earth to Mercury, with a visit to Venus for gravitational acceleration, and concluding with the amazing new photographs of Mercury taken in the initial flyby.

Gary Ross delivered the primary presentation, “The Earnest Importance of Using the Latest Technology in Amateur Astronomy.” He read a brief opinion piece that he had submitted to the two major American astronomy magazines, a reminiscence of a particularly poignant encounter between observation and astronomical technologies new and old. He and his discussant, John “Jack” Szymanski, then led the club at large into a fascinating and cordial forum exploring various viewpoints on the role of technology in astronomy and astronomical observation.

30 people attended the meeting.

The meeting adjourned at 9:56 PM.

Respectfully submitted,
Jonathan –

"And you can see her before it cracks and goes out. She throws rocks at streetlights - keeps the streetlight changer busy."

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IMPORTANT NOTICE:

PLEASE NOTE: The people at Sky and Telescope have changed their policy. They no longer want the WAS treasurer to renew subscriptions. You just send in your renewal at the club rate ($32.95), being sure to indicate that you are a member of WAS. Once a year they send the treasurer a list of people who have subscribed to Sky & Telescope for verification. This takes effect Immediately.

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Member’s Astro Pics

Trifid Nebula
By Bob Berta
Imagine someday taking a driving tour of the surface of Mars. You trail-blaze across a dusty valley floor, looking in amazement at the rocky, orange-brown hillsides and mountains all around. With each passing meter, you spy bizarre-looking rocks that no human has ever seen, and may never see again. Are they meteorites or bits of Martian crust? They beg to be photographed.

But on this tour, you can't whip out your camera and take on-the-spot close-ups of an especially interesting-looking rock. You have to wait for orders from headquarters back on Earth, and those orders won't arrive until tomorrow. By then, you probably will have passed the rock by. How frustrating!

That's essentially the predicament of the Spirit and Opportunity rovers, which are currently in their fourth year of exploring Mars. Mission scientists must wait overnight for the day's data to download from the rovers, and the rovers can't take high-res pictures of interesting rocks without explicit instructions to do so.

However, artificial intelligence software developed at JPL could soon turn the rovers into more-autonomous shutterbugs.

This software, called Autonomous Exploration for Gathering Increased Science (AEGIS), would search for interesting or unusual rocks using the rovers' low-resolution, black-and-white navigational cameras. Then, without waiting for instructions from Earth, AEGIS could direct the rovers' high-resolution cameras, spectrometers, and thermal imagers to gather data about the rocks of interest.

"Using AEGIS, the rovers could get science data that they would otherwise miss," says Rebecca Castaño, leader of the AEGIS project at JPL. The software builds on artificial intelligence technologies pioneered by NASA's Earth Observing-1 satellite (EO-1), one of a series of technology-testbed satellites developed by NASA's New Millennium Program.

AEGIS identifies a rock as being interesting in one of two ways. Mission scientists can program AEGIS to look for rocks with certain traits, such as smoothness or roughness, bright or dark surfaces, or shapes that are rounded or flat.

In addition, AEGIS can single out rocks simply because they look unusual, which often means the rocks could tell scientists something new about Mars's present and past.
The software has been thoroughly tested, Castaño says, and now it must be integrated and tested with other flight software, then uploaded to the rovers on Mars. Once installed, she hopes, Spirit and Opportunity will leave no good Mars rock unturned.

Check out other ways that the Mars Rovers have been upgraded with artificial intelligence software at http://nmp.nasa.gov/TECHNOLOGY/infusion.html#sciencecraft.

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

Are these rocks of any scientific interest? With the new AEGIS software, the Mars Rovers, Spirit and Opportunity, will be able to judge for themselves whether a scene is worth a high-resolution image. (Artist’s rendering.)