



## The Warren Astronomical Society Paper

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**2008 WAS OFFICERS**

// April, 2008

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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 e-mailed to each member and/or available online [www.warrenastronomicalsociety.org](http://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](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

This months article is by Stephen Uitti



*(Larry hasn't missed writing the Astro Chatter column in years, at least since I've been editing the WASP.*

*Receipt of Larry's article has always been my trigger to publish. Last month I received a note from Larry saying that he would not be able to write the article for March and possibly April. He said that he has been in and out of the hospital for tests and is scheduled for major surgery. He did not elaborate or give me an address or instructions to contact him. We wish him a quick recovery. Concerned members may contact the WASP officers listed above for they may have additional information.*

*For this issue Stephen Uitti, our treasurer, submitted the following article. Thanks Stephen.- (Cliff(Editor))*



Stephen

There has been so much astronomy news this past month that it is hard to decide what to say. Stunning avalanches on Mars caught in the act. A formula found that seems to match

the Pioneer Anomaly - an extra boost that, it seems, sends spacecraft on their way a little quicker when they swing by the Earth, even if there's still no idea what it is. Or maybe that Saturn's moon Rhea has rings. The age of the Universe has been narrowed to 13.73 billion years +/- 120 million though it doesn't look a day over 6,000 to some. A Doritos advertisement has been beamed to aliens. Wait 84 years to see if anyone heard it. The Large Binocular Telescope has seen first dual light. I'd like a pair of 1000x8300 binoculars. Or maybe Earth's, uhm, bright future, when it will be consumed by the Sun in 7 billion years, assuming we don't move it.

What caught my eye was the death of Sir Arthur Clarke. It wasn't his death that was so significant, per se. He'd had polio and there can be complications from this disease that one never gets over.



Sir Arthur C. Clarke

It was more his remarkable life. At his 90th birthday, he said he didn't feel a day over 89. He'd written more than a hundred books of inspiring

science fiction. In high school, I'd been assigned a book report, had two whole weeks to read something and write about it. Any book would do, so I picked out five of Clarke's books, half a million words. I knew it'd be no real chore to read that much in two weeks. It wasn't.

2061 Odyssey Three can be found in the WAS library. That's in the catalog, but I'm pretty sure that 2010 is in there too. Oh, in fact, I have it checked out. Let me know if you want it.

I've no idea if Clarke believed in an afterlife. I can only imagine him admiring the Earth from Clarke Orbit.

Yeah, I know. What does science fiction have to do with Astronomy?

Not alot, except maybe that a huge fraction of scientists, engineers, and even astronauts will say that they were inspired by such works, any many will finger Clarke. Inspiration is at the heart of Astronomy. And it's what the primary mission of the WAS is about, Outreach.



**An Ice Avalanche on Mars**  
**Photographed by the Mars Reconnaissance Orbiter**  
**Credit: [HiRISE](#), [MRO](#), [LPL](#) (U. Arizona), [NASA](#)**

Last night (*March 20*) I gave the Messier Talk at Macomb. There were a few questions that I didn't research in advance. Here were a few sentences from my outline not covered.

Q: What is the object that Orion (and others) use for M102 instead of M101? (for the record, according to the [ngc/ic](#) web site these are the same object).

A: NGC5866, a Mag 10.5 galaxy in Draco, also called the Spindle Galaxy.

This was in my observing notes, but I managed to miss it when preparing for the talk. My log says that despite being it in the north, I saw it from Pt. Moulee, which has Detroit to the North. It can't be THAT hard to spot. It is, of course, impossible from my front yard. Pt. Moulee, or Lake Erie Metro Park are about 25 minutes south of me, so in 30 minutes from wanting to go, I can be set up. Half hour there, half hour back, for maybe an hour of observing. I've seen the Milky Way from Pt Moulee.

Though the telescope computer usually puts the new object either in the field of view (35 minutes at 48x), it sometimes misses. Usually the object is in an adjacent field of view. I do this box search pattern around the hint target. If I know what I'm looking for, it usually is pretty good. With particularly good alignment, the object is in the field of view at 120x (maybe 15 minutes of arc). But every once in a while, the computer goes crazy.

For example, one night, I'd decided to look for Neptune. I'd seen it before, and though there were a number of stars that were similar, it just wasn't near where the computer said it should be. After maybe 15 minutes of searching, I gave up. Then, I looked for some really easy object, and found that the scope was some 20 or 30 degrees off. I realigned, but, by then, Neptune had set.

On 23 May 06 front yard, xt10i computer working well. First Messier with the new scope was M3 (globular cluster). M88, M64 (both galaxies) too dim.

M3 is at 13 hours Right Ascension in Canes Venatici. M88 and M64 are at 13 hours RA, in Coma Berenices. In prep for an observing session, I frequently looked for things in nearby right ascension, the might be near transit when I'd be looking. This isn't always the best strategy, as I ended up missing some objects, and waited another year to see them.

I mentioned that galaxies are largely not viewable from my house.

What does help is if the galaxy is as high as it can be in the sky, and if the air happens to be very transparent. That way there's less stuff in the air for light pollution to bounce off.

Could really use a list of galaxy surface brightnesses. That MIGHT be a good indication that it will or will not be visible from a high light pollution site. I thought I had one. The Orion scope show two





Marty also reported that he met and discussed public events with a Metroparks interpreter. He will try to stay in contact, and will offer our services for talks or events if our help is requested. Marty completed the telescope inventory and will continue the general equipment inventory.

Jonathan reported that he would be sending out the officer task status report between the Cranbrook and Macomb meetings each month. He expects to keep them electronic for the time being. He proposed that the minutes be accepted. Gary moved to accept the minutes, Stephen seconded the motion, and the board voted unanimously in favor.

Stephen reported the treasury at \$5578.89. He noted that, per the task list, he sent out the member list to Jonathan and the list of non-internet connected members to Gary.

**Old business:** PR notification list - As far as the board could recall, there is no extant list of media contacts. A list will have to be assembled - Marty suggested that we call or write media outlets and ask how, and how often, they would like information provided. John Kriegel is the director of PR and will put together or delegate the construction of this list and communication schedules.

Paul Goldsmith - Dr. Goldsmith will be coming in October per Cranbrook's request. Cranbrook will pick the exact date, but Dr. Goldsmith would prefer a day from Friday to Monday. Cranbrook will provide a meeting space for participating Michigan astronomy club leadership to discuss logistics prior to the presentation.

Public outreach - Bob proposed that we buy a copy of "Touch the Invisible Sky" to donate to the Macomb Library for the Blind and Physically Handicapped. The board discussed the logistics of purchasing the book and donating it. The idea that we would mark the book with a dedication label was received enthusiastically. With the proviso that such a mark, indicating that WAS had purchased the book for MLBPH, be affixed, Gary motioned to accept the proposal, Jonathan seconded it, and the board voted unanimously in favor.

Lee Hartwell asked whether we had a relief lunar globe for outreach events. Marty and Bob agreed to check the observatory.

Lee gave a brief overview of the observation log software he was putting together with his son-in-law.

**New business:** Larry presented the board with some sample WASP visual redesigns he assembled. He gave an overview of the technical challenges of getting them into Microsoft Word while retaining the new formatting, as well as of the potential for larger file sizes. He will continue to work on the issue until he has a new template he can hand over to Cliff Jones.

A longtime WAS member, Alvin McDonald, informed the group that he was not being sent postal-mail copies of the WASP any longer and was considering not renewing his membership because of it. Jonathan agreed to respond to the complaint and Larry volunteered to post the latest issue to Mr. McDonald. The board reviewed what had gone wrong with the postal mail WASP subscriptions and agreed that a long-term mailing arrangement had to be arrived at.

Bob noted that the time for the club picnic was coming up, and that we need to pick a date. June 7 was suggested, and a majority of the board agreed to that date.

Marty suggested that officers who do a lot of community outreach might consider printing up business cards. The board agreed. The business card template needs to be located or we will have to design them from scratch.

The board meeting was adjourned at 7:31 PM.

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**Warren Astronomical Society  
Minutes of General Meeting  
March 3, 2008  
Cranbrook**

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

**New members:** Jim Bazonok, who is interested in astrophotography. He found the club via the eclipse event. He will be moving to Nevada in a few years.

**Visitors:** Roneesh and Lexy, who are looking to buy a telescope and found the club via Google; Ben, who just moved to Detroit and attended the lunar eclipse event at Cranbrook; Linda, a guest of Mike Simonsen.

**Officers' reports:** Bob Berta announced that Ardis Herrold of Grosse Pointe North accepted our invitation to present on behalf of her school's radio astronomy club, with the proviso that the WAS should meet at Grosse Pointe North for the presentation on May 15 (which would otherwise be a Macomb meeting). He asked if anyone had objections to meeting there; none were raised. Members will be informed by email or by postal mail according to their registration info.

Gary Ross read the list of presentations already promised for 2008. There are holes remaining. He sent invitations to present by postal mail to non-internet connected members without internet connections. He pointed to Larry Phipps's presentation at the prior meeting as an inspiration to those members who are modest about their abilities.

Marty Kunz thanked volunteers for the eclipse event and gave an overview of the event: eleven WAS members brought optics and six hundred people attended. He announced the official date of the WAS Club Picnic: June 7.

The evening of May 9 (a Friday), Cranbrook will host Phil Plait, the proprietor of [badastronomy.com](http://badastronomy.com), for a talk that will be enjoyed by all. Bad Astronomy is the premier center for debunking astronomical myth and misconception. Tickets are \$6 for Cranbrook and/or WAS members, \$8 for the general public.

Bob announced the Wolcott Mills solar event on Saturday, June 14, a daytime exploration of the legends and science of our sun. Members with solar scopes are encouraged to bring them. Turnout will likely be high. Remember, in demonstrating solar astronomy, safety comes first - make sure your finder scope is capped.

Stephen Uitti reported \$5578.89 in the treasury. He has the 501(3)(c) nonprofit forms and will submit them. The WAS merchandise carpetbag made its long-awaited return. Unclaimed calendars are still available.

Jonathan Kade gave a recap of the previous meeting.

**Interest groups:** Library - Steve announced that Ken Bertin donated a six-VHS-tape, twelve-hour documentary series, 'The Astronomers.'

**Solar** - Marty announced that the new solar cycle had indeed begun, but there was nothing much going on.

**Discussion** - Gary R. announced that he had had the opportunity to observe the Trapezium through a 16" telescope... and saw no stars within it. They discussed the recent lunar eclipse and the rings of the gas giants (including the upcoming "disappearance" of Saturn's rings). They discussed the possibility of creating a new observatory in a true dark-sky location for the use of club members; Gary R. recounted the (negative) experiences of other astronomical organizations that attempted such an endeavor.

**Old business:** Bob recapped his progress in working with local libraries. The Macomb Library for the Blind and Physically Handicapped has invited us to provide presentations for developmentally challenged adults on two occasions in the near future: May 22 and June 5, both Thursdays, from 10:30 AM to noon; they will also be contacting us about a program for the visually impaired.

Bob mentioned that he had received a long-awaited ultra-sensitive CCD camera that connects to a television screen or video recorder, for demos to public groups who are not able to use the telescope directly. He also noted that the board resolved to purchase 'Touch the Invisible Sky' for donation to the library.

Mike Simonsen asked if the club would be interested in using content from a new syndication service the AAVSO is putting together. This writers' bureau will publish 4-6 articles per month for inclusion in newsletters. The AAVSO is looking for feedback from this idea from clubs and their memberships. Please contact Cliff Jones or a board member if you'd like to suggest something on behalf of the club.

The news bulletins we discussed included micrometeorites being the "real" dark matter, new or proposed space programs from Phoenix to radio telescopes on the dark side of the moon, and the difficulty of deducing Martian climate events using orbiter photos.

Ken Bertin delivered a mini-presentation on his trip to the headquarters of the Planetary Science Institute (<http://www.psi.edu/>) in Tucson. He discussed in brief the work they do and their funding model - which includes donations from the public. Ken then discussed a three-page newspaper article on light pollution - comparing and contrasting it with the lack of coverage the lunar eclipse got up in these parts.

**Intermission:** 8:36-8:54p

**Presentation:** Gary Ross, the second-greatest observer in the tri-state area, introduced Mike Simonsen of the AAVSO, the greatest. Mr. Simonsen presented "Variable Stars and the Stories They Tell," a fascinating overview of variable star science and observational technique. Many questions were asked.

This meeting marked the resurrection of a hallowed tradition: "Ask a Stupid Question!" Bob B. asked Norman Dillard if he would be willing to do the honors. Norman obliged, with an interesting question: does the earth move faster at perihelion or at aphelion? (Several members provided the answer: perihelion.) Brian Klaus asked why T Tauri stars fluctuate. Of course, Mike S. provided a thoroughly satisfying answer (about unstable young stars and their irregular surfaces) to end the evening.

32 people attended the meeting.

The meeting adjourned at 9:59 PM.

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"Born to gaze into night skies  
When all you want's one more Saturday"  
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**Warren Astronomical Society  
Minutes of General Meeting  
March 20, 2008  
Macomb**

Warren Astronomical Society  
Minutes of General Meeting  
March 20, 2008  
Macomb

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

**New members:** Recent visitors Erica, Lexy, and Roneesh joined. Welcome to the Society!

**Officers' reports:** Bob Berta opened the meeting with remarks on the recent passing of science fiction legend Arthur C. Clarke. He also noted that disaster was only narrowly averted: the Macomb Community College

campus is officially and totally closed, and all buildings and rooms were locked. If not for a sympathetic security guard, the meeting might have been cancelled. WAS leadership must examine the schedules of Cranbrook and Macomb to prevent surprises like this in the future.

Gary Ross reported that Larry Kalinowski has not yet recovered from his illness and that Jack Szumanski is seriously ill. Our thoughts are with them. Bob Watt delivered the club's get-well card to Larry. Jonathan agreed to buy a card for Jack to pass around at the Cranbrook meeting.

Bob announced that the Grosse Pointe Radio Astronomy Team will be presenting to the club at Grosse Pointe North High School on May 15, replacing the Macomb meeting. He indicated that the students would get free one-year WAS memberships as a sign of our gratitude. He asked that members who know young astronomers invite them to make a presentation.

Gary reminded the assembly that Ken Bertin and Bob Berta would be presenting in the near future. He stated his intention to propose at the next board meeting the purchase of two Film Board of Canada films as presentation gap-fillers.

Substituting for Marty Kunz, Bob reviewed recent public outreach events. March 5, Lee Hartwell led a presentation for scouts; though observing was snowed out, Lee put on a presentation in the small meeting building nearby. Lee and Bob did a presentation for a class of gifted 6th grade students, who they invited to the next open house. Bob has a set of presentation kits for schools; if you are interested in using them, please contact him.

The March 15 open house was completely overcast. Bob and Marty conducted more inventory work on the club's accessories and miscellany. Marty will be starting the roof overhaul soon now that Spring is here. The next Stargate open house will be April 12.

Stephen Uitti reported the club's treasury at \$5578.89, though he noted that the club had received new checks that had not been cashed yet. He reminded members who have not yet picked up or paid for their WAS calendars to do so. He noted that the WAS Yahoo! group continued to attract new members at a steady pace. Our longtime St. Claire Shores school contact, Katherine, is looking for presentations at Spindler Park; contact Steve for the dates if you would like to volunteer.

Jonathan Kade gave a recap of the month's Cranbrook meeting. He announced an upcoming Cranbrook special event: Phil Plait of [badastronomy.com](http://badastronomy.com) is appearing May 9 to skewer bad astronomy in popular media and to discuss his forthcoming book, 'Death from the Skies!'

**Old business:** Bob summarized our recent outreach efforts, including decisions made at the March

Cranbrook meeting. He will be talking to Colleen Brice, who has experience in astronomical outreach to the disabled.

Bob updated the club on the Paul Goldsmith (former head of Arecibo) special presentation in late October. He has talked with other club presidents and they have been very enthusiastic about the idea. In particular, the president of the Ford Amateur Astronomy Club is excited about the potential that a "council of presidents" could have for expanding the reach of Michigan's astronomy clubs.

**Interest groups:** Solar – Gary R. announced that there was a sunspot! But there's nothing now. Jonathan and Bob B. confirmed the appearance of said spot.

**Special Events** – Dave D'Onofrio (with a little help from Bob B.) listed the upcoming star parties: April 4-6, EMU Fish Lake Star Party; April 30-May 4, Bill Beers's Spring Star Party; May 10, International Astronomy Day, with a day event at Cranbrook with solar telescopes and an open house at Stargate at night; June 1-8, the Texas Star Party; June 12, Solar Day at Wolcott Mill Metropark; July 10-14, the Two-Hearted Star Party in Newberry (the owner of Obsession Telescopes will be there); Sept. 5-6, Astronomy at the Beach at Kensington Metropark – at a different beach this year; and Sept. 25-28, the Great Lakes Stargaze in Gladwin. Bob added that on May 17, WAS will be co-hosting a members-only swap meet with the Oakland Astronomy Club and Seven Ponds Astronomy Club. Larry Phipps discussed the Global Star Party, an internet-connected star party with a focus on measuring effective light pollution, now drawing to a close.

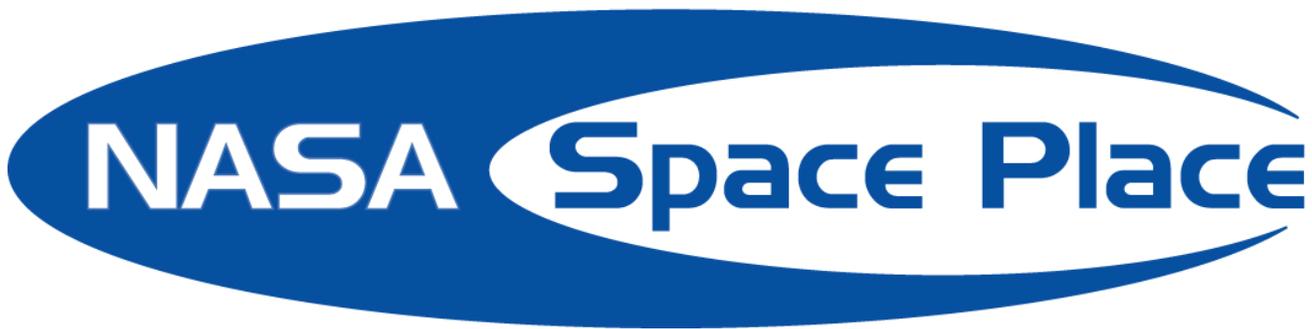
**Double Star** – Riyadh Matti set the next meeting at the April open house.

**Discussion/Deep Sky** – Gary R. put the question of visible stars in the Trapezium to a final end by noting that not only had he seen \*nothing\* within the Trapezium with a 16" telescope and a hand-grenade eyepiece, a perusal of Burnham led to his discovery that the single visible star within the Trapezium was first seen with the 36" Lick Observatory refractor.

**In the News** – Too much is in the news to cover this month, but quite a crowd provided many diverse items: from soliton waves in space to carbonated geysers on Mars, from cyanobacteria's suitability to lunar soil to a planetary-system-looking wobble in Alpha Centauri's motion, from shiny deposits in Mercurian craters to the brightest gamma ray burst ever recorded, it was a month filled with top-rank stories.

Diane Hall gave a brief account of her and Jonathan's trip to the island of Hawai'i (in the state of Hawaii). She gave an overview of their observations from locations around the island and of their trip up Mauna Kea to the observatories and the public observing center.





## **Tracking Wildlife from Space**

by Patrick L. Barry

**It's 10 o'clock, and do you know where your Oriental Honey Buzzard is?**

**Tracking the whereabouts of birds and other migrating wildlife across thousands of miles of land, air, and sea is no easy feat. Yet to protect the habitats of endangered species, scientists need to know where these roving animals go during their seasonal travels.**

**Rather than chasing these animals around the globe, a growing number of scientists are leveraging the bird's-eye view of orbiting satellites to easily monitor animals' movements anywhere in the world.**

**The system piggybacks on weather satellites called Polar Operational Environmental Satellites, which are operated by the National Oceanic and Atmospheric Administration (NOAA), as well as a European satellite called MetOp. Sensors aboard these satellites pick up signals beamed from portable transmitters on the Earth's surface, 850 kilometers below. NOAA began the project—called Argos—in cooperation with NASA and the French space agency (CNES) in 1974. At that time, scientists placed these transmitters primarily on buoys and balloons to study the oceans and atmosphere. As electronics shrank and new satellites' sensors became more sensitive, the transmitters became small and light enough by the 1990s that scientists could mount them safely on animals. Yes, even on birds like the Oriental Honey Buzzard.**

**“Scientists just never had the capability of doing this before,” says Christopher O’Connors, Program Manager for Argos at NOAA.**

**Today, transmitters weigh as little as 1/20th of a pound and require a fraction of a watt of power. The satellites can detect these feeble signals in part because the transmitters broadcast at frequencies between 401 and 403 MHz, a part of the spectrum reserved for environmental uses. That way there's very little interference from other sources of radio noise.**

**“Argos is being used more and more for animal tracking,” O’Connors says. More than 17,000 transmitters are currently being tracked by Argos, and almost 4,000 of them are on wildlife. “The animal research has been the most interesting area in terms of innovative science.”**

**For example, researchers in Japan used Argos to track endangered Grey-faced Buzzards and Oriental Honey Buzzards for thousands of kilometers along the birds' migrations through Japan and Southeast Asia. Scientists have also mapped the movements of loggerhead sea turtles off the west coast of Africa. Other studies have documented migrations of wood storks, Malaysian elephants, porcupine caribou, right whales, and walruses, to name a few.**

Argos data is available online at [www.argos-system.org](http://www.argos-system.org), so every evening, scientists can check the whereabouts of all their herds, schools, and flocks. Kids can learn about some of these endangered species and play a memory game with them at [spaceplace.nasa.gov/en/kids/poes\\_tracking](http://spaceplace.nasa.gov/en/kids/poes_tracking).

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



*The ARGOS program tracks the whereabouts of endangered migrating animals via miniature transmitters on the animals and the POES satellites in orbit.*



PRESENTS

The 7<sup>th</sup> Annual  
**CADILLAC WEST - SPRING  
STAR PARTY**  
April 30–May 4, 2008



Hosted By: **Bill Beers (Warren Astronomical Society)**

Located 14 miles west of Cadillac, Mich. at Bill Beers cabin (Register for map)

\*\*\*DARK SKIES\*\*\*

*Raffle Prize Drawing - sponsored by:*  
★ *Meridian Telescopes* ★  
*Riders Hobby Shop of Livonia*

\*\*Saturday Barbecue\*\*

Registration donation fee:  
\$15 per person  
\$20 per family

Contact Bill Beers to register before April 26

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

**Accommodations Available:**

Plenty of Space for Tents/Campers  
Caberfae Peaks (231-862-3300) 1 mile east  
Coyote Crossing Resort (231-862-3212) 3 miles east  
Roadway Inn (231-775-2458) 12 miles east

For more info contact:

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