The W.A.S.P. newsletter

JUNE 2007

The Warren Astronomical Society Paper

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www.warrenastronomicalsociety.org

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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. 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

NASA announced that it has found definite proof of the existence of dark matter. The picture shows a ring of dark material that surrounds the galaxy cluster ZwCl 0024+1652. Closer study revealed a ripple in the dark matter, which distorts the background galaxies, much like the bottom of a pool is distorted with wave action. It's five billion light years from Earth and 2.6 million light years in diameter. The Hubble telescope was used for the discovery.

Twenty-eight more planets have been discovered outside our solar system, according to Jason Write of the University of California, Berkley. Some around brown dwarf stars, which were not considered to be planet harbingers in the past. The rest were around M type stars, about twice as large as are Sun.

The Earth seems to have "captured" a third asteroid that has a period similar to the Earth. It's called 2003 YN107. The orbit is so awkward that it may escape the Earth's influence in the next few years. So far its made four orbits around our planet, since its discovery. The object is believed to be an asteroid or a small portion of the Moon that blew away from its surface during a collision, long ago.

A Venus-Saturn conjunction will occur on June 30 – July 1, making interesting viewing, to say the least. Closest approach is actually on the 30th. The two will be 0.7 and 0.8 degrees apart on those two days. I'm bringing it up in this issue, just in case the July issue comes out later in the month.

Marty Kunz introduced the Cranbrook group to a new magazine that looks like its going to give Astronomy and Sky and Telescope some competition. It's called Astronomy Technology Today. It's available at 3825 Gilbert Dr., Shreveport, LA 71104, at an introductory rate of twelve dollars for a year's subscription (twelve issues). It's writers are more involved in the technical aspects of amateur astronomical equipment. I did a quick glance through the pages and was impressed with the wide range of subject matter. It's not as slick looking as other magazines because it's printed on newsprint but the content is very good. Perhaps that will change as the number of sales increase.

There's going to be a two level award system for astrophotographers. General and Special. The General category is for unguided subjects like constellations, meteors, rainbows, sundogs and Northern lights. The Special category involves guided, deep sky photography. Both categories require at least five different subjects to qualify for the first award. There are no judgements made for quality. If you're proud of your attempt at photographing something in the sky, you'll get credit for it. The only other prerequisite is that you bring your picture(s) to a club meeting and show it to members or get it published in the WASP. I assume that the quality of your photos will improve with experience. Film or digital cameras can be used. Additional awards will be given for each five new photos.

The Clarkston astronomical concert and star party was a success even with the poor sky conditions. Venus and the Moon were close together, giving the 100 or so onlookers quite a pretty view in a telescope. Even though Saturn could just barely be seen with the naked eye, it still wowed a lot of people when they saw it in a telescope. The temperature was quite mild, providing pleasant conversations between telescopers and telescopees, during the evening.

May's discussion group meeting was attended by eleven people which included an unexpected visitor from California. The range of topics included Sundogs and Moondogs, a metorite from the asteroid Vesta, the 236 inch Russian telescope, a six cycle gasoline engine and Tesla, the well known electrical wizard. Gary Ross broke his own record with his second, assumed, fetal position during a science fiction interlude. A red laser was used to tease "Victor," the Gathens well loved, piano playing, Great Dane. The dog was dumfounded when the red spot suddenly disappeared somewhere into the floor.

June'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.

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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. Or not for sale. That is the question. No items were submitted for sale this month. Remember, if you are looking for an item and wish to trade something for it or are just looking for a hard to find item that some one wishes to part with, please submit your request to Larry Kalinowski at the above email address.

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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

WAS Meetings scheduled for 2007

Cranbrook Meetings – Every 1st Monday

June 4	July 2	Aug. 6	Sep. 3
Oct. 1	Nov. 5	Dec. 3	

Macomb Meetings – Every 3rd Thursday

June 21	July 19	Aug. 16	Sep. 20
Oct. 18	Nov. 15	Dec. 20 (Banquet Date)	

Warren Astronomical Society

2007 presentations

Date	Day	Presenter	Subject
4-June	Mon	Jim Shedlowsky	The Perfect Machine
21-June	Thurs	Justin Nomura	Philosophy of the Universe
2-July	Mon	Bob Berta	TBD
19-July	Thurs	Norman Dillard	Astronomy in the Points
6-Aug	Mon	Philip Martin	Evolution, the Real Science
16-Aug	Thurs	Larry Phipps	Of Belts and Clouds
3-Sep	Mon	Ken Bertin	TBD
20-Sep	Thurs	Dave D'Onofrio	Backyard CCD imaging from the city.
1-Oct	Mon	Dale Partin	The Hubble Constant
18 Oct	Thurs	Guy Maxim	TBD
5-Nov	Mon	John Lines	7 Ponds Nature Center (TBD)
15-Nov	Thurs	Larry Kalinowski	"Let Me Demonstrate"
3-Dec	Mon	Alan Rothenberg	TBD
20-Dec	Thurs	Banquet	

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.

Thank you for your support,

Riyad I. Matti
W.A.S. 1st V.P. (program chairperson) 2006/2007

June, 2007 Calendar

Saturday, June 2 • 6:00 a.m.: Mercury is at greatest eastern elongation (23°)
Monday, June 4 • 9:00 a.m.: Mars is at perihelion (128.4 million miles from the Sun)
Tuesday, June 5 • 7:00 p.m.: Jupiter is at opposition.
Friday, June 8 • 7:43 a.m.: Last Quarter Moon; 11:00 p.m.: Venus is at greatest eastern elongation (45°)
Sunday, June 10 • 6:00 p.m.: The Moon passes 5° north of Mars
Tuesday, June 12 • 1:07 p.m.: The moon is at perigee (226,042 miles from Earth)
Thursday, June 14 • 11:13 p.m.: New Moon
Monday, June 18 • 11:00 a.m.: Moon passes 0.6° north of Venus
Tuesday, June 19 • 3:00 a.m.: Pluto is at opposition; 4:00 a.m.: The Moon passes 0.4° north of Saturn; 8:00 p.m.: The Moon passes 0.4° north of Regulus
Thursday, June 21 • 2:06 p.m.: Summer solstice
Friday, June 22 • 9:15 a.m.: First Quarter Moon
Sunday, June 24 • 10.25 a.m.: The Moon is at apogee (251,370 miles from Earth)
Thursday, June 28 • 4:00 a.m.: The Moon passes 0.5° south of Antares; 10:00 a.m.: The Moon passes 0.6° south of Jupiter; 3:00 p.m.: Mercury is in inferior conjunction
Saturday, June 30 • 9:49 a.m.: Full Moon

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2007 Stargate Observatory Open House Schedule

NOTE that there are two events this month: July 7th Club Picnic starting at noon (closed to public), July 21st Normal open house date. Aug 11 Perseids watch. Pending open house dates are: Sept 15th, Oct 13th, Nov 10th and Dec 8th. Dependent of weather.

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
W.A.S. 2nd V.P. (2007)

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Meeting Minutes

Warren Astronomical Society
Minutes of BOARD/Club Meeting
May 7th, 2007
Cranbrook

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

The officer and committee reports were given.

Upcoming astronomy star parties in 2007:
May 19 Stars Over Clarkston
June 16 Stargate Open House

June 13-17 Bill Beer's Spring Star Party near Cadillac , MI

Stephen Uitti handed out printed copies of the "opt-in" membership list.

Larry Kalinowski explained the new astrophotography badges and what it would take to earn them.

Phil Martin said that members could now get a club membership subscription rate for Sky and Telescope magazine directly from the publisher.

Larry Phipps showed some recent astronomy photos taken from the internet.

Dave Bailey gave a presentation entitled, "How much does carbon-based life depend on long chains of carbon atoms? A down-to-earth reality check."

Jerry Kuchera gave a presentation entitled, "A superior planet of the fourth order."

30 people attended the meeting.

The meeting adjourned at 10:10pm.

Respectfully submitted,
Dale Partin

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Warren Astronomical Society
Minutes of club meeting
April 17th , 2007
Macomb

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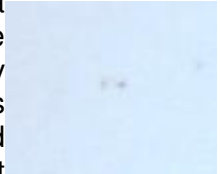
First Solar Light

by Stephen Uitti
(an excerpt from Stephen's blog)

New, white-light solar filter for Orion xt10i.

This is a full aperture (10 inch - 254 mm) neutral density filter. One part in 100,000 of the light is allowed through. It looks alot like a mirror. In fact, it's silvered glass. Also new is a camera bracket for eyepiece photography. It's kind of a goofy concept. The idea is that it clamps onto the telescope eyepiece, and provides a standard screw mount



for a camera. It's not for heavy cameras. Even with a light camera, you need to make sure all the thumb screws in the focuser and camera bracket are tight. Otherwise you get things flopping around in a seven degrees of freedom dance. My camera, a Samsung Digimax 240 is basically a cheap point and shoot digital camera. The full images are 16000x1200. It has autofocus only. It has auto exposure only. It's not a very good camera for astrophotography. But i've taken shots of the Moon and Saturn through the eyepiece before. That was without a bracket. That was also an exercise in frustration. My idea was to take a

hundred or so shots of an object and later see if any came out OK. Usually two or three did. Since the xt10i is a Dob, it doesn't track the sky. So, you have to keep moving it to get the object back in view. Without a bracket, you're also trying to hold the camera steady at the eyepiece, long enough to get a shot. With the bracket, at least the shots are aligned to the eyepiece. There's also a technique for squeezing the shutter button, then letting go. This camera has a natural delay before it snaps the shot, so your hand can be off the camera - reducing vibration and camera shake. Oh, and since it's the Sun, shade the gap between the camera and the eyepiece. Most of the 50 images of the Sun were OK. There were several optical artifacts. Smudge on the camera lens, or internal light reflection, i don't know. But the artifacts stay put across the images, even when the Sun moves in the images. The sun spot group moves with the Sun, so it's real. The limb darkening moves with the Sun too.

It was fun to take some Sun shots. And, i could get used to not having to stay up late to do it. (*Most stars are faint. There is one star that's much brighter, but you have to wait until morning to see it.*)

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Member's Astro Pics

Here's a couple pictures of the Stars Over Clarkston Concert and Star Party by Richard Gala

Clarkston Concert members with Scopes

Which end do you look in?

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IMPORTANTE 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.

Dr. Phil Martin - Treasurer

The Ions of Dawn

By Patrick L. Barry

This summer, NASA will launch a probe bound for two unexplored worlds in our solar system's asteroid belt—giant asteroids Ceres and Vesta. The probe, called Dawn, will orbit first one body and then the other in a never-before-attempted maneuver.

It has never been attempted, in part, because this mission would be virtually impossible with conventional propulsion. “Even if we were just going to go to Vesta, we would need one of the largest rockets that the U.S. has to carry all that propellant,” says Marc Rayman, Project System Engineer for Dawn at JPL. Traveling to both worlds in one mission would require an even bigger rocket.

This is a trip that calls for the *un*conventional. “We’re using ion propulsion,” says Rayman.

The ion engines for the Dawn spacecraft proved themselves aboard an earlier, experimental mission known as Deep Space 1 (DS1). Because ion propulsion is a relatively new technology that’s very different from conventional rockets, it was a perfect candidate for DS1, a part of NASA's New Millennium Program, which flight-tests new technologies so that missions such as Dawn can use those technologies reliably.

“The fact that those same engines are now making the Dawn mission possible shows that New Millennium accomplished what it set out to,” Rayman says.

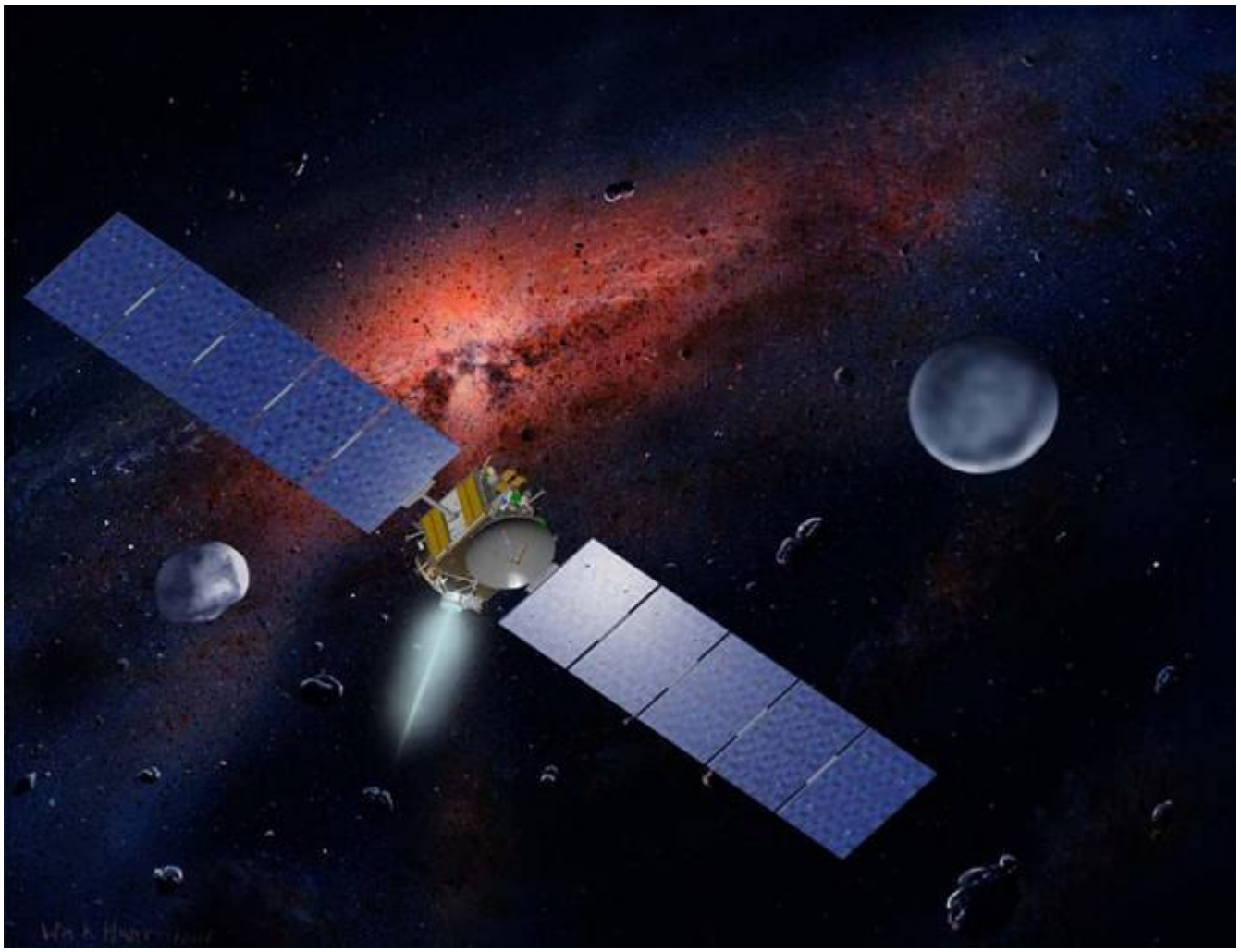
Ion engines work on a principle different from conventional rockets. A normal rocket engine burns a chemical fuel to produce thrust. An ion engine doesn't burn anything; a strong electric field in the engine propels charged atoms such as xenon to very high speed. The thrust produced is tiny—roughly equivalent to the weight of a piece of paper—but over time, it can generate as much speed as a conventional rocket while using only about 1/10 as much propellant.

And Dawn will need lots of propulsion. It must first climb into Vesta's orbit, which is tilted about 7 degrees from the plane of the solar system. After studying Vesta, it will have to escape its gravity and maneuver to insert itself in an orbit around Ceres—the first spacecraft to orbit two distant bodies. Dawn's up-close views of these worlds will help scientists understand the early solar system.

“They're remnants from the time the planets were being formed,” Rayman says. “They have preserved a record of the conditions at the dawn of the solar system.”

Find out about other New Millennium Program validated technologies and how they are being used in science missions at http://nmp/TECHNOLOGY/infusion.html . While you’re there, you can also download “Professor Starr’s Dream Trip,” a storybook for grown-ups about how ion propulsion enabled a scientist’s dream of visiting the asteroids come true. A simpler children’s version is available at http://spaceplace.nasa.gov/en/kids/nmp/starr.

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



Artist's rendering of Dawn spacecraft, with asteroids. Largest are Vesta and Ceres. Credits: Dawn spacecraft—Orbital Sciences Corporation; background art—William K. Hartmann, courtesy UCLA.

PRESENTS

The 6th Annual
CADILLAC WEST - SPRING
STAR PARTY

June 13–17, 2007

Hosted By: Bill Beers (Warren Astronomical Society)

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

View all of the planets in one night!

******DARK SKIES******

****Saturday Barbecue****

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

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

Contact Bill Beers to register before June 2

Accommodations Available:

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

For More Info Contact: **Bill Beers** Phone #586-566-8367 or E-mail "BEEZOLL@AOL.COM"
John Lines Phone #248-969-2790 or E-mail "JELINES@YAHOO.COM"
Doug Bock E-mail "DBOCK1@CHARTERMI.NET"