The W.A.S.P. newsletter

December 2005

The Warren Astronomical Society Paper

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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

Looks like Pluto, our unresolved asteroid or planet, has more than one moon. The Hubble telescope has spotted two more moons. With three moons it could be the most populated asteroid that we know about. Several asteroids have moons orbiting them, but none have three. It wouldn't surprise me if more were found around that planet. There has been a moon population explosion over the last ten years or so.

How would you like to find a meteorite the size of the one pictured, being held by Steve Arnold in Kansas. Weighing in at 1,400 pounds, it's a stone-metal composite that has been known since the late 1800's. Others have been found in the same area. It's called a Brenham meteorite, named after the area where they've been found in the past. This one is the third largest one known and was detected by sensitive instruments while it laid seven feet underground.

Sunspot number 822 is shown in the solar picture. The date is November 17 and it has just moved far enough around the Sun's photosphere to provide easy viewing for white light telescopes. It too, is larger than the planet Jupiter, as other prominent spots have been in the past. Just why these large spots are appearing so late in the Sun's cycle is puzzling to astronomers.

NASA has just finished making measurements of the space around the Earth to help determine if space is actually curved and effected by the Earth's rotation as predicted by Albert Einstein. Space-time should have a little twist in it because of the rotation and the Gravity Probe B (GP-B) should be able to detect it. If space-time is twisted, it should effect super sensitive gyros within the probe. These gyros are accurate

enough to measure shifts down to 0.0005 arc seconds. The actual predicted shifts, by Einstein, are around 0.041 arc seconds for the space around the Earth. Analysis will take about a year or more to sufficiently scrutinize the data.

The remains of Nickolas Copernicus, the famous Polish astronomer, may have been found on the Baltic coast, at Frambork Cathedral, in Poland. After a year of searching, his bones were unearthed at a church site, buried beneath the floor. The discoverer, Jerzy Gassowski, believes the scarred head and displaced nose, along with the estimated age, shows he is 97% sure of his discovery. DNA testing with one of his relative's remains should provide the final proof.

If you've been wondering where Bob Watt has been for a few meetings, you have to know that he has been busy caring for his wife Pat. She developed a case of colon cancer and has been recuperating at Macomb County Hospital in Warren, Michigan, for over a month now. All of us wish her a speedy recovery and our prayers.
How about attending our 2005 WAS Awards Banquet? It's held on the third Thursday of December. This year that's December 15, at DeCarlos, on Ten Mile Road, just east of Mound Rd. in Warren, MI. The main speaker for the evening is Robert Naeye, Senior Editor of Sky And Telescope magazine. The board of directors has made one stipulation for attending. Male dress must be business casual, at least. There were a lot of complaints about the general dress in past years. Some, from the guests that attended. That means no Levi's or everyday wear. Sport Jackets and slacks will be a minimum, even if you don't have a tie to wear. Female members and guests should dress to compliment their partners. The price is $23 per person and guests are invited to attend. Your payment must be in by the first meeting in December at the Cranbrook Science Museum meeting, otherwise a meal may not be available if you wait until the last minute. Spirits will be available to help make those boring announcements tolerable.

Just as in the past, there will be prizes contributed to our Banquet raffle by well know vendors of astronomical equipment. You can expect eyepieces, Barrows, software and other observing items for the low cost of one dollar a ticket. If you have any items that you would like to contribute to the raffle during the banquet, please bring them with you to the door that evening. We are looking for books, games, software, gadgets, old lenses, mechanical or electronic devices, just about anything related to astronomy.

The speakers for December will be Richard Szumanski and Robert Naeye. Richard will be speaking at the Cranbrook Science Museum meeting on December 5. His subject will be "Cosmology And Life In The Universe". Robert Naeye, a senior editor at Sky And Telescope magazine, will be our main speaker at our Awards Banquet, on December 15. His subject will be about "Exoplanets", those bodies discovered orbiting other stars beyond our solar system.

If you were born anytime between December 1 and December 18, you've been fooled by your astrologer for a long, long, time. Your birth sign isn't Sagittarius, it's Ophiucus. It didn't just happen recently. It's been that way for thousands of years. For some reason astrologers don't want to admit they've been pulling your leg for so long. Their astrological charts have been off all that time. So every one you know with those birth dates, were fooled along with you. Time changes a lot of things, including the sky. The reason for the change is precession, a wobble in the Earth's axis. The Age of Aquarius will begin in about 600 years, because of that wobble.

December's discussion/computer group meeting will be on the 22nd, (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 him at 248-543-3366, or me, at 586-776-9720 for any further information.

All space photos are courtesy of SPACE.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.

Mark Christensen, of the Fox Valley Astronomical Society, in Illinois, reports that a friend of his passed away and he has agreed to help sell the astronomical equipment in the estate. The stuff is arranged in lots.

Lot #1. Celestron C-11 Telescope with CL 700A Motorized mount/Controller and heavy duty tripod. 3 Celestron boxes, Celestron visual back 1 ¼ in., Celestron 2 inch diagonal, 26 and 25 mm Plossl eyepieces, 2-25 lb weights, heater system and sliding astronomy chair. $3200 or best offer.

Lot #2. Takahashi FSQ Quadruplet Flouride Refractor Telescope with 106mm objective and 530mm focal length lens. Includes an EXQ 1.6X extender, Celestron Box and Takahashi 1 ¼ in diagonal. $2800 or best offer.

Lot #3. Meade series 4000 eyepieces. Includes a 56mm ($140), 40mm ($140), 32mm ($100), 14mm($100) 2 in dia. eyepieces and a 6.7mm 1 1/4in Ultra Wide eyepiece ($50).

Lot #4. Canon camera and assorted astrophotography equipment and accessories. 7X50 binoculars. Approximate value $200. Contact Jim Griffin at kanecountyastro@yahoo.com, or by phone, during the day, at 630-232-8070. (5-06).

FOR SALE. Meade 10-inch LXD55 SN-10 with UHTC, Schmidt-Newtonian with Autostar. Includes the following: Meade 26mm Super Plossl eyepiece, Scoptronics 40mm Plossl eyepiece, Scoptronics 15mm Plossl, 2X Barlow lens, 12mm standard eyepiece, Orion Stargazers 4 filter set, Orion accessory case, Orion red dot EZ finder II, Meade AC adaptor and battery pack, Meade camera adaptor and 2 inch eyepiece adaptor, new declination motor drive replaced 5-25-05. Telescope is in good condition with excellent optics. $850, pick up only. Jdbuhl@aol.com. (4-06).

FOR SALE. Celestron G-5 with motor drive, Bushnell 80mm refractor with "you-go-to" feature, Swift 114mm Newtonian, many binoculars, all at cost or below! Contact Bob Johnson at 248-541-0914. (4-06).

FOR SALE. Pool cover for in-ground pool. 20X35 ft. for 15X30 pool or smaller. Never Used. $30. 586-776-9720. Cometman@mybluelight.com. (4-06).

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Note from our President
Ken Bertin

Well, guess this is the last of my notes to all of you in my capacity as President of the Warren Astronomical Society. It has been a great pleasure serving you and it has been more damn fun than I could ever be able to relate to anyone. The membership of this club is made up of the most passionate a group of hobbyist any avocation could have. The knowledge of the subject, as I have said before, by this group is staggering. There is no aspect of Astronomy of which there isn't someone in the club who, not only knows completely, but can also explain it to others in a lucid, caring and non-condescending way.

The Officers of the club performed admirably and I can say one of the keys to the club's success is that we were always able to get things done. We have a club where members were willing and enthusiastic about donating telescopes and other equipment. Others, who, seeing an issue, moved to resolve it, quickly and effectively. An example of the latter was Jim Shedlowsky's acquisition of our new Dob trailer. Reluctant at first to take on the difficult Treasurers position, Jim did such a great job that I doubt that anyone can fill his shoes adequately, although I am positive Phil Martin will perform wonderfully. Norm Dillard was dogged in getting members to speak, and not only just a keynote speaker, but getting several speakers for each meeting. Riyad Matti took the Observatory under his wing and made it better, so that there were times when the public flocked to it. Bob Berta, even though he was new to the club, stepped right in to the Secretary's job, creating a letter that I am sure got members to renew their memberships, so that our retention remains remarkable. Marty Kunz set the standard for the new post of Public Relations director. Vince Chrisman while trying to get oriented to a new job in his personal life, never missed a beat about getting

information to the members often on a daily basis. His Stars over Clarkston event may have been one of the most innovative undertakings we have seen. Even our committee heads were effective and efficient, constantly innovating what they were doing to spark the interest of the membership.

In a day when the State of Kansas has turned its brain away from empirical science, with our president supporting it's decision. When NASA has failed in its attempt to make the shuttle safe enough to send people into space, yet thinks it can accomplish safely sending men to the moon, Mars and beyond. As NASA cuts valuable projects out of its budget so that it can garner congressional support to do things too expensive and technological inconceivable, because those things are jazzy and congress likes to spend money of jazzy things. During it all, our club continues to put out information that is important to know and that can be used, taught and implemented. We are like the ion rocket, steady and powerful and wasting not. Oh how I wish our government and the governments of the world could learn from us.

Thank you all for an awesome two years.

Respectfully submitted,

Ken Bertin

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WAS Meetings scheduled for 2005

Cranbrook Meetings – Every 1st Monday

December 5

Macomb Meetings – Every 2nd Thursday

December 15 –Banquet

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November 2005 Calendar

Thursday, Dec 1 • 10:01 am: New Moon
Sunday, Dec 4 • 1:00 pm: The Moon passes 2° south of Venus; 11:33 pm: The Moon is at perigee (228,270 miles from Earth)
Thursday, Dec 8 • 4:36 am: First Quarter Moon
Friday, Dec 9 • 3:00 am: Asteroid Juno is at opposition; 8:00 am: Venus is at greatest brilliancy (magnitude. -4.6)
Sunday, Dec 11 • Midnight: The Moon passes 1.3° north of Mars
Monday, Dec 12 • 8:00 am: Mercury is at greatest western elongation (21° west of the Sun)
Tuesday, Dec 13 • Geminid meteor shower peaks
Thursday, Dec 15 • 11:15 am: Full Moon; 11:00 pmPluto is in conjunction with the Sun
Monday, Dec 19 • 4:00 am: The Moon passes 4° north of Saturn; SAO 98190 is 1' north of Saturn's Center at 7th mag. (brighter than titan)
Tuesday, Dec 20 • 9:49 pm: The moon is at apogee (251,664 miles from Earth)
Wednesday, Dec 21 • 1:35 pm: Winter Solstice
Friday, Dec 23 • 2:36 pm: Last Quarter Moon
Sunday, Dec 25 • 9:00 am: The Moon passes 0.9° north of Spica
Monday, Dec 26 • 11:00 pm: The Moon passes 4° south of Jupiter
Wednesday, Dec 28 • 9:00 pm: The Moon passes 0.2° north of Antares
Thursday, Dec 29 • 7:00 pm: The Moon passes 5° south of Mercury
Firday, Dec 30 • 10:12 pm: New Moon

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Board Meeting Minutes 11/07/05 Cranbrook

By Bob Berta

Meeting started at 6:51

Members in attendance:

Jim Schedlowsky	Norm Dillard
Bob Berta	Marty Kunz
Riyad Matti	Dale Partin

Bob read minutes and approved

Riyad – Observatory report. Request that board ask membership if any of them would be interested in donating a non used gun safe or similar security device for use at Stargate….ok'd for meeting following.

Jim – More info on banner to Marty. Cost is $54.99 for banner and 4 signs for trailer not to exceed $125.

Marty – Reported on attendance at Mars Fridays at Cranbrook.

Late Notices

Due to a death in Riyad Matti's family the open house scheduled for Dec. 3 will be postponed and rescheduled to Dec 10. Details to follow.

One of our members, Richard David, passed October 17 2005 after a long ilness. Richard was a member since November 1996.

Therese Oldani (prospective new member) is planning a night sky viewing for 5th grade academic gifted students and friends to be held in Livonia at Grandview School. If you are interested, please email Therese at toldani@clarenceville.k12.mi.us or call 248-473-8913. We will keep you posted as to times and dates.

Not just for Kids:

Black Hole Rescue!

Nearby matter is not the only thing attracted by a black hole. These mysterious objects also attract a great deal of curiosity from kids here on Earth. Taking advantage of this interest, NASA's Web site for kids, The Space Place, has just added a new game called "Black Hole Rescue!"

After (or before) reading a short, illustrated article introducing black hole concepts, game players "rescue" the vocabulary words, one letter at a time, before they get sucked into the black hole. After playing this mesmerizing game for a while, kids of all ages will not soon forget what black holes are all about.

http://spaceplace.nasa.gov/en/kids/blackhole/

M42 by Philip Martin

UPDATED SPEAKER LIST FOR 2005

12/5/2005	**MONDAY**	**RICHARD SZUMANSKI**	**T.B.D.**
12/15/2005	**THURSDAY**		**AWARDS BANQUET**

Voices from the Cacophony

By Trudy E. Bell and Dr. Tony Phillips

Around 2015, NASA and the European Space Agency plan to launch one of the biggest and most exacting space experiments ever flown: LISA, the Laser Interferometer Space Antenna.

LISA will consist of three spacecraft flying in a triangular formation behind Earth. Each spacecraft will beam a laser at the other two, continuously measuring their mutual separation. The spacecraft will be a mind-boggling 5 million kilometers apart (12 times the Earth-Moon distance) yet they will monitor their mutual separation to one *billionth* of a centimeter, smaller than an atom's diameter.

LISA's mission is to detect gravitational waves—ripples in space-time caused by the Universe's most violent events: galaxies colliding with other galaxies, supermassive black holes gobbling each other, and even echoes still ricocheting from the Big Bang that created the Universe. By studying the shape, frequency, and timing of gravitational waves, astronomers believe they can learn what's happening deep inside these acts of celestial violence.

The problem is, no one has ever directly detected gravitational waves: they're still a theoretical prediction. So no one truly knows what they "sound" like.

Furthermore, theorists expect the Universe to be booming with thousands of sources of gravitational waves. Unlike a regular telescope that can point to one part of the sky at a time, LISA receives gravitational waves from many directions at once. It's a cacophony. Astronomers must figure how to distinguish one signal from another. An outburst is detected! Was it caused by two neutron stars colliding *over here* or a pair of supermassive black holes tearing each other apart in colliding galaxies *over there*?

"It's a profound data-analysis problem that ground-based astronomers don't encounter," says E. Sterl Phinney, professor of theoretical physics at the California Institute of Technology in Pasadena.

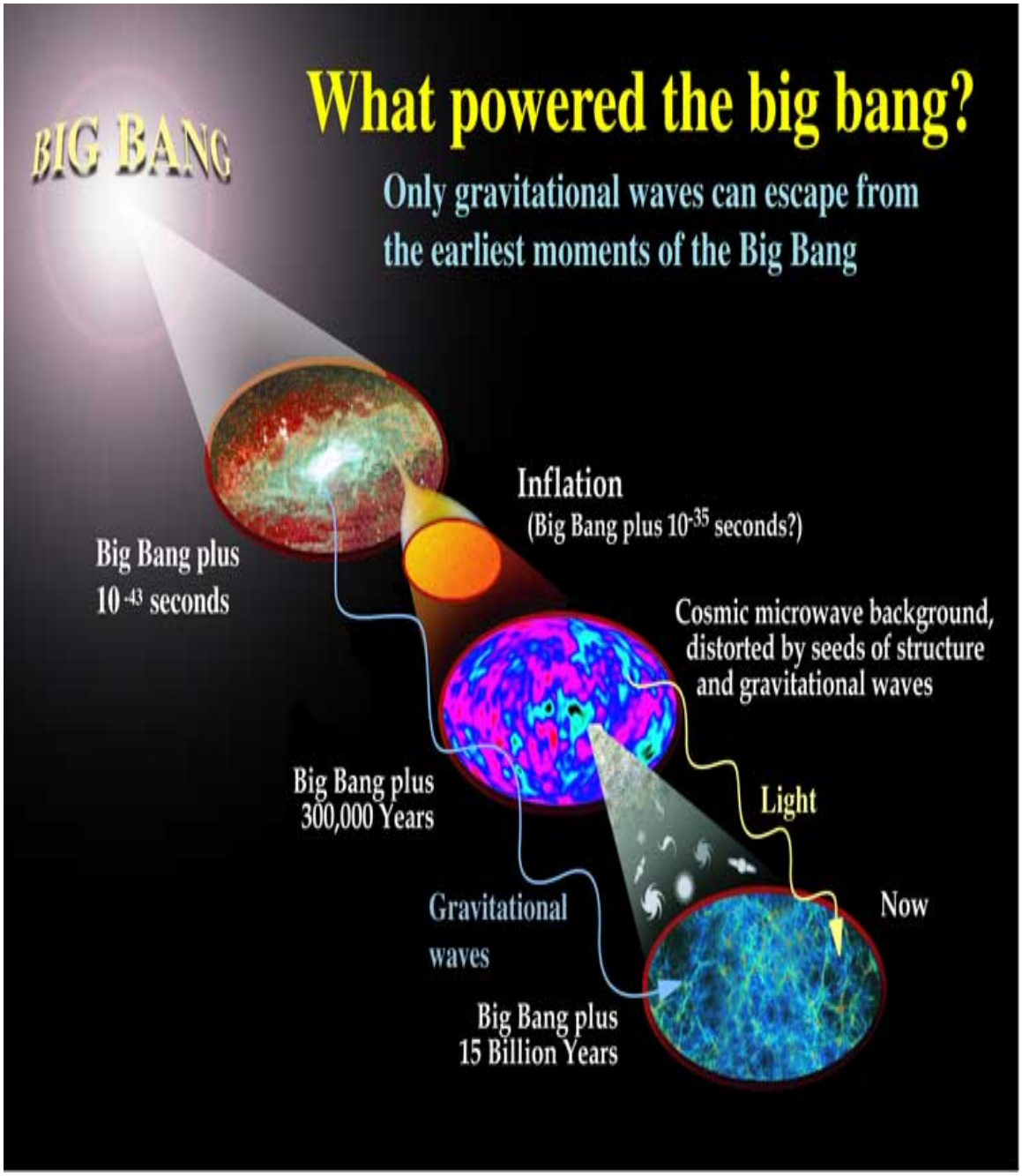
Profound, but not hopeless: "We have lots of good ideas and plans that work—in theory," he says. "The goal now is to prove that they actually work under real conditions, and to make sure we haven't forgotten something."

To that end, theorists and instrument-designers have been spending time together brainstorming, testing ideas, scrutinizing plans, figuring out how they'll pluck individual voices from the cacophony. And they're making progress on computer codes to do the job.

Says Bonny Schumaker, a member of the LISA team at the Jet Propulsion Laboratory: "It's a challenge more than a problem, and in fact, when overcome, a gift of information from the universe."

For more info about LISA, see **lisa.nasa.gov**. Kids can learn about black holes and play the new "Black Hole Rescue!" game on The Space Place Web site at **http://spaceplace.nasa.gov/en/kids/blackhole/** .

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



LISA will be able to detect gravitational waves from as far back as 10^{-36} second after the Big Bang, far earlier than any telescope can detect.