



The Warren Astronomical Society Paper

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www.boonhill.net/was

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2005 WAS OFFICERS

// April, 2005

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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 mailed to each member and/or available online www.boonhill.net/was. 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

It seems that the role of gravity in the far reaches of space may be weaker than expected, according to a new hypothesis by a New York University physicist, George Dvali. He claims that dark energy is not the answer to our increasingly expanding universe. Instead, it could be an ever decreasing strength of gravity that changes its *rate* of decrease, way out in the far reaches of space. According to Dvali, the hypothesis is testable too.



The picture shows an actual explosion that occurred after the field was generated. Its quite small, as far as size is concerned but the measured energy produced exceeds what was calculated to occur. The plasma field was created by bombarding gold atoms against other gold atoms. You may think that the extra energy is a good thing but scientists are concerned that they still don't understand what has occurred within the explosion. Further study is required, along with more bombardments of heavy atoms.

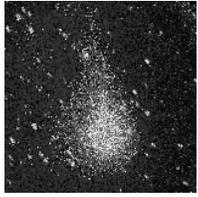


That couldn't be a star, its too small. It's not much bigger than Jupiter! Well, the books are being corrected again. If it's just size you're looking at, it could be a planet. The calculated mass and density say something different. Astronomers have just about seen it all as far as combinations of planetary size, orbital distance and periods are concerned. We used to think that because our Sun is typical, our planetary system is typical too. Now we know better. Planetary systems come in all possible distributions. Now we're increasing our knowledge



The picture on the left, taken by The Brookhaven National Laboratory, shows what may be a mini big bang. Over the past five years they have been trying to produce a plasma field that is equivalent to the soup that existed right after the Big Bang occurred.

about Brown Dwarfs too. The line that divides the planets from stars is also disappearing.



This picture looks something like comet Machholz, but it's not. It's Comet Linear 2005 A1. Visible only from the southern hemisphere, it's getting quite a lot of attention by amateur astronomers. An eighth magnitude object right now that might tempt northern observers in the future.

Here's a tip from an old timer. Barlow lenses are great tools for getting higher magnifications from longer focal length eyepieces but they aren't always the magnification multiplier the dealer says it is or what is marked on the barrel. The amount of magnification depends on the F ratio of your telescope. To find out for sure if your Barlow lens really does double or triple your magnification, give your telescope eyepiece a test by measuring the amount of time a star, near the Celestial Equator, takes to cross the center of its field. Make two measurements, with and without a Barlow. If it's 2X, it'll take half the time with the Barlow installed. You may be surprised to find out its 2.2 or 2.4X with your telescope setup.

I found out about the Meade, Messier, DSI contest a little too late to get it into the March issue of the WASP. However, word about it spread like wildfire at the March Cranbrook meeting. First prize for the best Messier pictures, submitted in a group of five, by May 15, via e-mail, has a chance to win the grand prize, a ten inch, Ritchey Creatien telescope. First prize is \$1,000 and the second prize is \$250. The pictures must be taken with a DSI camera and a Meade telescope. Be sure to include a picture of yourself with your Meade telescope and DSI camera. Announcement of the winner will come around the end of May. The winner will also get his or her picture in a Meade advertisement, along with the winning pictures. This is going to become a yearly event. Submit your entry photos via e-mail only. The speakers for April will be Michael Forester and Vince Chrisman. Michael will be talking about ring systems. Mainly those around Saturn. His talk is titled Lord Of The Rings. The Cassini space probe will also be discussed. He's scheduled for April 4 at our Cranbrook meeting. Vince will be talking about visitors from outer space. Just exactly what kind of visitors, Vince wouldn't say. You'll have to check those visitors out on April 21 at the MCCC meeting, south campus, Bldg. B, room 209 at 7:30pm.

After reading Dennis DiCicco's article about the RCX400 telescope by Meade, in the May issue of Sky And Telescope, I was disappointed to find out that the telescope really isn't a Ritchey-Chretien design at all. It has a corrector plate in front of the 'scope as well as a spherical primary mirror. I don't know about you, but this is false advertising. I'm also surprised that DiCicco would report that fact so lightly. The real Ritchey-Chretien design has two near hyperbolic mirrors, one as the primary and the other as the secondary. There is no corrector plate in the design. I realize that Sky And Telescope and Meade are quite close as far as business is concerned, but not even having the guts to reprimand Meade for such a blatant misuse of advertising makes me wonder about how far they are willing to go to sell telescopes and magazines. I did notice that the Meade, two page, advertisement of their new baby didn't appear in the May issue like it did in the April issue. Could it be that Meade decided the "Ritchey-Chretien" is the wrong name for their baby? Come on Meade, let's tell it like it is. It's a modified Schmidt-Cass, even if it does act like a RC.

The people that are planning to use the grounds of the Stargate Observatory are being asked not to drive on the property until Spring hardens the soil. Some users have gotten stuck and are creating dangerous ruts for anyone to break or twist a leg in the darkness. Please park along the road until the weather dries the soft ground.

The March computer group meeting was well attended. Subjects discussed included how the date of Easter and Passover is determined, the Eastern dilemma, the discovery of two more planets in the infrared spectrum and the distribution of the latest version of RegiStax, Version 3.0.1.23, a frame collecting program that automatically calibrates, registers and stacks astro photos. All those that attended the February computer meeting received a free copy of Satellites Of Saturn. The program showed the positions of Saturn's eight brightest moons and the correct tilt of its rings in real time.

The April computer group meeting is scheduled for April 28th, (the fourth Thursday of the month) at Gary Gathen's home in Pleasant Ridge. He lives at 21 Elm Park Rd., three blocks south of I-696 and about a half block west of Woodward Ave. Meetings 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 photos are courtesy of SPACE.COM unless otherwise noted.

WAS Library Donations Reviewed Here

By Stephen Uitti, our WAS Librarian

Holstein ExoPlanets

Holstein ExoPlanets is a new DVD available in the WAS library. It's the talk that Norman Dillard gave at Cranbrook on 7 Feb 2005. Norm talks for about a half hour, and then there's about 10 minutes of questions and answers. Now, of course, Norm didn't talk about bovine planets around other stars, or even planets in orbit around cows. It's a simple error, the title was to have been "Hosting ExoPlanets".

Even this isn't about having a dinner party for your favorite Hot Jupiters. For one thing, the commute is too far. The talk is more about what kinds of stars are likely to have planets, what the current state of the art is in finding them, and related topics. If you missed the talk, this is your chance to see and hear it. If you don't believe that Dave Baley predicted a small planet detection method weeks before it was in the news, then here's your chance to get real evidence. And finally, our videographer has added some creativity to the show which I believe is worth seeing.

Halley's Comet

Another recent donation to the WAS library is a VHS tape entitled Halley's Comet. The tape is about an hour, and in excellent condition. The source material dates to the Feb 9, 1986 perihelion visit of Halley's. There is some science, but significantly more history in this presentation.

While, at the time, I was certainly aware of Comet Halley, and the flotilla of space craft heading towards it, I'm pretty certain that I never saw the actual comet. It wasn't like Hale Bopp or Hyakutake - it reached perihelion almost directly on the other side of the Sun from the Earth. By contrast, the current comet Machholz is considerably easier to spot. Of late, Comet Halley has been spotted near aphelion from a ground based (8+ meter) telescope. So, in some sense, Halley will never be reacquired again - as it can be tracked continuously. So, this video captures some of the excitement due to anticipation of seeing a comet for the first time in some 76 years. The story of why it is named after Halley is related. It guesses how far into the future it will be visible. It talks about the various space probes that went out to meet it. It has interviews with the modern father of comets, Fred Whipple, and a much younger than current Brian Marsden.

What this video doesn't capture is what was learned from the various probes that went to great it. This is an artifact of the release date. It was timed to spark interest in the upcoming event.

The quote that really struck me was towards the beginning. In the mind of the general public,

astronomical objects include the Moon, Mars, Saturn, and Halley's Comet.

Neptune Encounter Highlights

Recently, a new VHS video tape was donated to the WAS library. On the edge of the tape, it is entitled: "Neptune Encounter Highlights and other astronomy programs". My review of it is intended to answer the question, Is it worth viewing? So here's the short answer: yes.

Mechanical tape quality can vary. This tape is in pretty good shape. The colors were retained, and tracking was mostly excellent, with dropouts or other disruptions countable on one hand. This is surprising for content reaching back to the early 1980s.

The label on the face of the tape has several short phrases covering the major programs. First is "Neptune Encounter Highlights". This covers the Neptune encounter by the Voyager 2 spacecraft. Neptune is the planet furthest out from the sun that has been visited. Weather patterns were analyzed, and the largest moon, Triton was studied. Faint rings were discovered.

The next label says "Nova Programs". These too involve Voyager 2, and its visits to Neptune, and Uranus, with brief highlights from Saturn and Jupiter. Uranus gets considerable coverage, including weather, rings, moons.

I particularly enjoyed short spots by Gene Shoemaker describing what is thought to have happened to one of the Uranian moons, or shooting bullets at rocks to demonstrate impact effects. Also Carl Sagan has a couple brief appearances, giving life to the data.

When the Voyager 1 flyby of Saturn's moon Titan was covered, they mentioned that to get a close flyby, the craft would not be able to visit Uranus or Neptune. While we got some interesting infrared spectroscopy, we didn't get any pictures. This, then, shaped the Cassini and Huygens mission and instruments. Without a doubt, the Voyager missions made Cassini so overwhelmingly successful. Otherwise, I'd doubt the wisdom of sending twin expensive probes out for such quick flybys.

The section entitled "Creation of the Universe" has Timothy Ferris narrating bits of a two part series detailing what was known about the gross history of the Universe as it was known in 1984. It has great illustrations and a little footage with Stephen Hawking doing lectures on the subject in the late 1970s. This section is not complete, unfortunately, but Amazon has it available on tape for \$14.95. While there is plenty of information and entertainment, there isn't any mention of string theory. While twenty years later, there is enough string theory to add color to the story, the Creation of the Universe still gives a modern overview of cosmology.

Finally, there is part of a PBS Nightline episode covering the Voyager 2 encounter with Uranus. The episode is cut off just as one of our favorite arguments was to be discussed: Men vs. Machines in space. Should we send humans out to do these explorations, or should we send robots? Eugene Cernan, the last to walk on the moon, was asked if he would spend 18 years to go to Uranus to spend a few days there and come home. He said he'd go! Well, after the way was properly paved robotically, at least. I'd be happy to add to the debate, but, uhm, for now, I'll stay focused on the review.

Stephen Uitti

From our Secretary – Bob Berta:

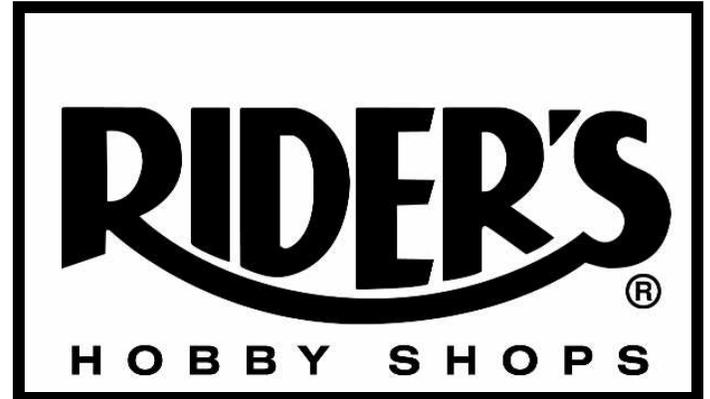
Thought some of you would enjoy these cool links. The first one is from a company that makes a panoramic camera...it is a tour of the inside of a space shuttle. You can zoom in and out and move around the inside with your mouse...zoom uses control or shift. Try zooming in to read the "cheat sheets" on the panel...can you find the toilet, the bail out procedure....how about the torn control stick boot? There are separate scans of each of the floors on the shuttle. You can open a lower resolution version if you wish...but it is worth it to get the full res image for maximum effect.

The second is a company that makes wide field scanning software...there are lots of interesting images...not all astronomy...but the ones for Mars are cool. Check out some of the other images too. You may only be able to get onto this site on weekdays.

<http://www.panoramas.dk/fullscreen3/f29.html>

<http://www.panoscan.com/CubicDemos/Shuttle.html>

Bob Berta



30991 Five Mile Rd., Livonia, MI 48154
(734) 425-9720 – Ask for John or Dan



UPDATED SPEAKER LIST FOR 2005

4/4/2005	MONDAY	MICHAEL FORESTER	LORD OF THE RINGS-CASSINI/SATURN
4/21/2005	THURSDAY	VINCE CHRISMAN	VISITORS FROM OUTER SPACE
5/2/2005	MONDAY	BOB BERTA	ASTRO PHOTOGRAPHY
5/19/2005	THURSDAY	DENNIS SCHMALZEL	IMAGING WITH NEW DSI CAMERA
6/6/2005	MONDAY	ALAN ROTHENBERG	THE LONG NIGHT OF SELENOGRAPH
6/16/2005	THURSDAY	RIYAD MATTI	PRACTICAL AMATEUR ASTRONOMY
7/11/2005	MONDAY	MARTY KUNZ	LOOKING TO THE CENTER OF THE MILKY WAY
7/21/2005	THURSDAY	DAVE D'ONOFRIO	ASTRONOMY IN 3D
8/1/2005	MONDAY	DAVE WORKUN	STRING THEORY
8/18/2005	THURSDAY	STEVE UITI	REAL SKY
9/12/2005	MONDAY	PHIL MARTIN	IMPROVING ASTRO PHOTOS W/PHOTOSHOP 7
9/15/2005	THURSDAY	LARRY KALINOWSKI	THE BACKWARD TELESCOPE
10/3/2005	MONDAY	DALE PARTIN	MEASURING DIST. TO THE SUN, THE ANCIENT WAY
10/20/2005	THURSDAY	DAVE BAILEY	ATMOSPHERES, DEEP AND SHALLOW PART II
11/7/2005	MONDAY	KEN BERTIN	HISTORY OF ASTRONOMY
11/17/2005	THURSDAY	ALAN KAPLAN RICHARD	STELLAR EVOLUTION
12/5/2005	MONDAY	SZUMANSKI	T.B.D.
12/15/2005	THURSDAY		AWARDS BANQUET



A Different Angle on Climate Change

by Patrick L. Barry

There's a planet in our solar system so cold that in winter its nitrogen atmosphere freezes and falls to the ground. The empty sky becomes perfectly clear, jet-black even at noontime. You can see thousands of stars. Not one twinkles.

The brightest star in the sky is the Sun, so distant and tiny you could eclipse it with the head of a pin. There's a moon, too, so *big* you couldn't blot it out with your entire hand. Together, moonlight and sunshine cast a twilight glow across the icy landscape revealing . . . what? twisted spires, craggy mountains, frozen volcanoes?

No one knows, because no one has ever been to Pluto.

"Pluto is an alien world," says Alan Stern of the Southwest Research Institute in Colorado. "It's the only planet never visited or photographed by NASA space probes."

That's about to change. A robot-ship called New Horizons is scheduled to blast off for Pluto in January 2006. It's a long journey: More than 6 billion kilometers (about 3.7 billion miles). New Horizons won't arrive until 2015.

"I hope we get there before the atmosphere collapses," says Stern, the mission's principal investigator. Winter is coming, and while it's warm enough now for Pluto's air to float, it won't be for long. Imagine seeing a planet's atmosphere collapse. New Horizons might!

"This is a flyby mission," notes Stern. "Slowing the spacecraft down to *orbit* Pluto would burn more fuel than we can carry." New Horizons will glide past the planet furiously snapping pictures. "Our best images will resolve features the size of a house," Stern says.

The cameras will also target Pluto's moon, Charon. Charon is more than half the size of Pluto, and the two circle one another only 19,200 kilometers (12,000 miles) apart. (For comparison, the Moon is 382,400 kilometers [239,000 miles] from Earth.) No wonder some astronomers call the pair a "double planet."

Researchers believe that Pluto and Charon were created billions of years ago by some terrific impact, which split a bigger planet into two smaller ones. This idea is supported by the fact that Pluto and Charon spin on their sides like sibling worlds knocked askew.

Yet there are some curious differences: Pluto is bright; Charon is darker. Pluto is covered with frozen nitrogen; Charon by frozen water. Pluto has an atmosphere; Charon might not. "These are things we plan to investigate," says Stern.

Two worlds. So alike, yet so different. So utterly alien. Stay tuned for New Horizons.

Find out more about the New Horizons mission at pluto.jhuapl.edu/. Kids can learn amazing facts about Pluto at spaceplace.nasa.gov/en/kids/pluto.

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



New Horizons spacecraft will get a gravity assist from Jupiter on its long journey to Pluto-Charon. Credit: Southwest Research Institute (Dan Durda)/Johns Hopkins University Applied Physics Laboratory (Ken Moscati).



STARS OVER CLARKSTON

Presented By



Clarkston Community Band

"Making Friends and Music"
Vince Chrisman, Director

With the

WARREN ASTRONOMICAL SOCIETY

Ken Bertin, President



And

Independence Township Parks and Recreation

Michael Turk, Director

June 11, 2005 6:00 P.M.
Concert starts at 7:00 P.M.

FREE ADMISSION

Family Fun – Bring a picnic

Clintonwood Park
6000 Clarkston Road
Clarkston, Michigan 48348

- Band performing music of the stars & space
- Telescope viewing – solar, planetary and deep space
- Astronomy Talks

For more info: clarkstonband@hotmail.com



PRESENTS

**The 4th Annual
CADILLAC WEST - SPRING
STAR PARTY
June 1 – 5, 2005**

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

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Driftwood Lodge (231-775-2932) 12 miles east

Caberfae Peaks (231-862-3300) 1 mile east

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

(Donations accepted)

**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"**

(PLEASE RSVP IF YOU ARE PLANNING ON ATTENDING)



This will be a "Find Jupiters Great Red Spot" event

WARREN ASTRONOMICAL SOCIETY
P.O. Box 1505
Warren, Michigan 48090-1505



TO:

MEETINGS

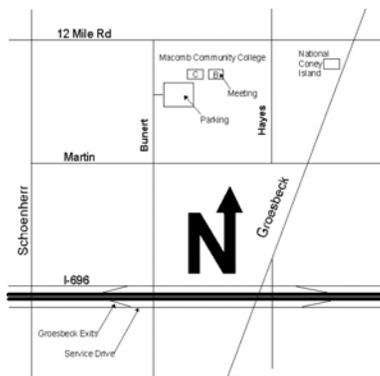
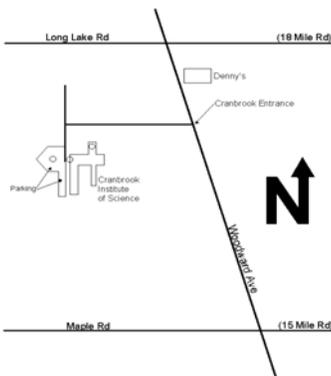
The society holds meetings on the first Monday and the third Thursday of each month, starting at 7:30 pm.

First Monday Meeting

Cranbrook Institute of Science
39221 Woodward Avenue
Bloomfield Hills, MI 48303-0801

Third Thursday Meeting

Macomb Community College
South Campus, Building B, Rm 209
14500 Twelve Mile Road
Warren, Michigan 48088-3896



STARGATE OBSERVATORY

Stargate Observatory is owned and operated by the society. Located on the grounds of Camp Rotary on 29 Mile Road, 1.8 miles east of Romeo Plank Road.

Camp Rotary

20505 29 Mile Road
Ray Township, MI 48096

