

The W.A.S.P. newsletter

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The Warren Astronomical Society Paper

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2006 WAS OFFICERS

// February, 2006

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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



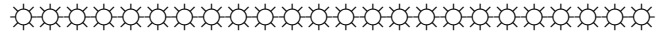
The Rider's-FAAC astronomical swap shop was well attended on the 28th, in Livonia. The WAS had three tables of goodies for sale, along with seventeen more tables by the other clubs. In our group, Steve Greene made a big showing with his table of goodies, which had a complete range of telescope building hardware. I didn't get a chance to attend them but four lectures were given during the show, making attendance well worth the five or six dollars you might have paid if you were there. My table gave away more of those Chandra CD's and posters. Astronomy prevailed, of course, but I could see a lot of film cameras for sale. The bell is tolling for chemical photography. Eyepieces were in abundance too. Some telescopes were sold along with some mounts. The range of prices varied from \$50 to \$3000. Since I missed last years show, I was anxious to attend this one. It was good to

see all the other astronomy enthusiasts there too. Attendance was over 100, not including those who registered before the day of the show. One of these shows each year, isn't enough. There should be more.

If I had to pick two of the most important inventions of the twentieth century, I'd pick the LASER and the CCD chip array. We've all seen the growth of the LASER, especially in the medical field and just how important it's become in the weapons field, is not for the general public to know, for the time being. The second device, the CCD chip, is advancing astronomy by leaps and bounds as we enter the twenty-first century. You and I use CCD chip arrays in general photography and recognize how far its come in astronomy. The truth is, you ain't seen nothin' yet in the astronomical field. The Keppler Space Probe, due to be launched sometime during next year, is going to revolutionize the field of exoplanet hunting. A large CCD array will be placed in orbit and will have the capability of measuring thousands of stars at regular intervals to help find short and

Warren Astronomical Society
 Minutes of BOARD Meeting
 January 19, 2006
 Macomb

Jan 19 Feb 16 Mar 16 Apr 20
 May 18 Jun 15 Jul 20 Aug 17
 Sep 21 Oct 19 Nov 16 Dec ★
 ★ Banquet date to be determined.



The meeting was called to order at 6:45pm.

Members in attendance:

Norman Dillard, Bob Berta, Steve Uitti, Phil Martin,
 Dale Partin

The minutes of the Board meeting and of the club meeting at Cranbrook from January 2, 2006 were approved as amended.

The treasurer's report was approved. It showed a current balance of \$2,138.85.

The board approved a motion that it will only meet once a month before the Cranbrook meeting, unless there is a special need for an additional meeting.

Bob Watt had requested a letter authorizing him to continue picking up WAS mail at the U.S. Post Office. This was approved.

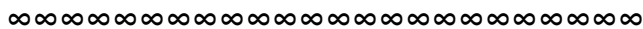
Phil will begin snail mailing membership applications to current members shortly before their membership needs to be renewed. People could either mail their completed applications with payment back to Phil or give them to him at the next WAS meeting.

It was approved that Phil would obtain a debit card for use with WAS expenses. Norman's name will also be on the account.

Action was tabled on a proposal to extend one year's free WAS membership to a non-member who buys a telescope of some minimal value at Ryder's if the buyer fills out the application and brings it to a meeting.

The meeting was adjourned at 7:28pm.

Respectfully submitted,
 Dale Partin



WAS Meetings scheduled for 2006

Cranbrook Meetings – Every 1st Monday

Jan 2	Feb 6	Mar 6	Apr 3
May 1	Jun 5	July 3	Aug 7
Sep 4	Oct 2	Nov 6	Dec 4

Macomb Meetings – Every 3rd Thursday

January 2006 Calendar

- Monday, Feb 3** • Venus ends retrograde nearly 6° N of Pi Sagittari
- Sunday, Feb 5** • 1:29 am: First Quarter Moon; Moon near Mars
- Monday, Feb 7** • Neptune in conjunction with the Sun
- Saturday, Feb 11** • 10:00 am: The Moon passes 4° north of Saturn
- Sunday, Feb 12** • 11:44 pm: Full Moon; Mercury, Mars and Saturn spans 150°
- Monday, Feb 13** • 7:47 pm: Moon is at apogee (252,500 miles from Earth)
- Friday, Feb 17** • Venus is at greatest brilliancy, mag. -4.6; midnight: Moon passes 0.4° north of Spica
- Monday, Feb 20** • 3:00 am: The Moon passes 5° south of Jupiter
- Tuesday, Feb 21** • 2:17 am: Last Quarter Moon; 4:00 pm: The Moon passes 0.2° south of Antares
- Thursday, Feb 23** • midnight: Mercury is at greatest eastern elongation (18°)
- Friday, Feb 24** • 4:00 pm: The Moon passes 10° South of Venus
- Sunday, Feb 26** • 8:00 am: The moon passes 4° South of Neptune
- Monday, Feb 27** • 7:31 pm: New Moon; 3:25 pm: The moon is at perigee (221,757 miles from Earth), closest moon of the year
- Tuesday, Feb 28** • 9:00 pm: The Moon passes 4° south of Mercury



2006 Stargate Observatory Open House Schedule

- January 21 – Start at 6 P.M.: General observing.
- February 25 – Start at 6 P.M.: General observing.
- March 18 – Start at 3 P.M.: – General observing.
- April 8 – Start at 3 P.M.: National Astronomy Day.
- May 20 – Start at 6 P.M.: Spring clean-up and General observing.
- June 24 – Start at 6 P.M.: General observing.
- July 29 – Start at 12 P.M.: Picnic – General observing.



Snowstorm on Pluto

by Dr. Tony Phillips

There's a nip in the air. Outside it's beginning to snow, the first fall of winter. A few delicate flakes tumble from the sky, innocently enough, but this is no mere flurry.

Soon the air is choked with snow, falling so fast and hard it seems to pull the sky down with it. Indeed, that's what happens. Weeks later when the storm finally ends the entire atmosphere is gone. Every molecule of air on your planet has frozen and fallen to the ground.

That was a snowstorm—on Pluto.

Once every year on Pluto (1 Pluto-year = 248 Earth-years), around the beginning of winter, it gets so cold that the atmosphere freezes. Air on Pluto is made mainly of nitrogen with a smattering of methane and other compounds. When the temperature dips to about 32 K (-240 C), these molecules crystallize and the atmosphere comes down.

"The collapse can happen quite suddenly," says Alan Stern of the Southwest Research Institute. "Snow begins to fall, the surface reflects more sunlight, forcing quicker cooling, accelerating the snowfall. It can all be over in a few weeks or months."

Researchers believe this will happen sometime during the next 10 to 20 years. Pluto is receding from the warmth of the Sun, carried outward by its 25% elliptical orbit. Winter is coming.

So is New Horizons. Stern is lead scientist for the robotic probe, which left Earth in January bound for Pluto. In 2015 New Horizons will become the first spacecraft to visit that distant planet. The question is, will it arrive before the snowstorm?

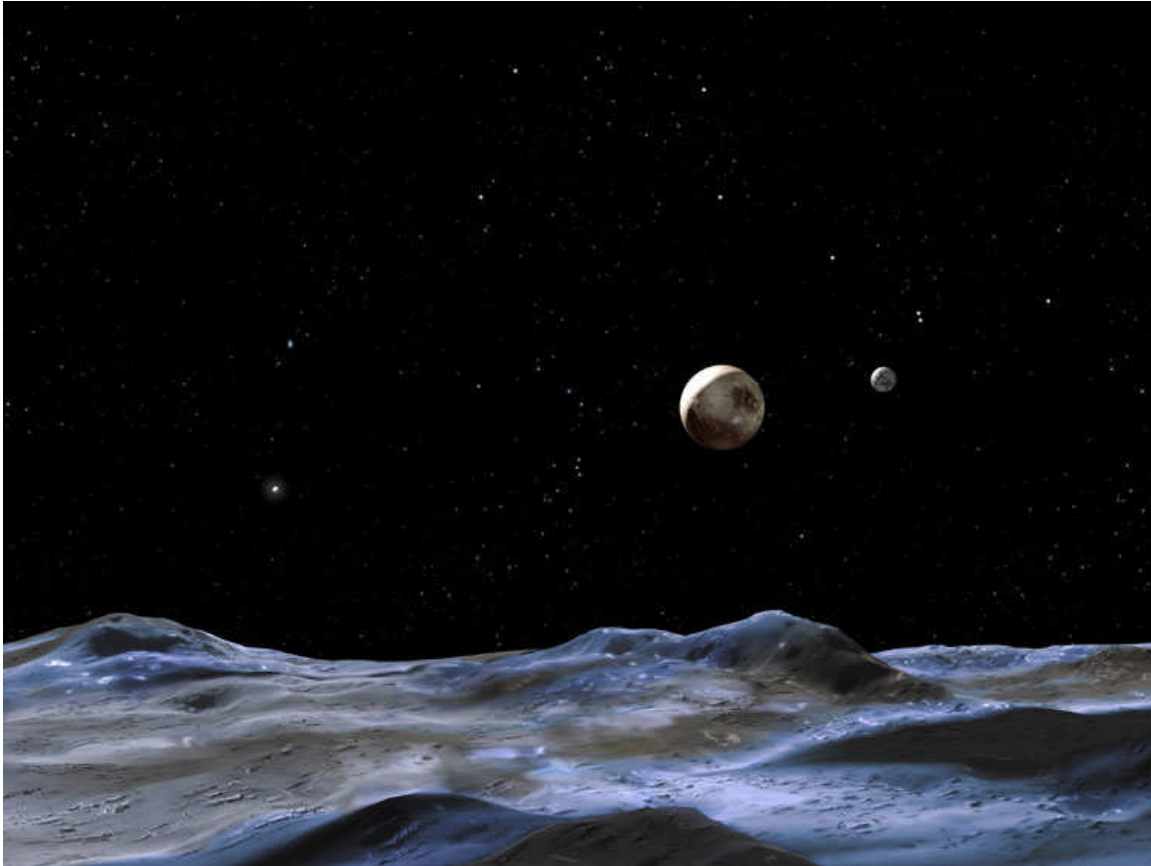
"We hope so," says Stern. The spacecraft is bristling with instruments designed to study Pluto's atmosphere and surface. "But we can't study the atmosphere if it's not there." Furthermore, a layer of snow on the ground ("probably a few centimeters deep," estimates Stern) could hide the underlying surface from New Horizon's remote sensors.

Stern isn't too concerned: "Pluto's atmosphere was discovered in 1988 when astronomers watched the planet pass in front of a distant star—a stellar occultation." The star, instead of vanishing abruptly at Pluto's solid edge, faded slowly. Pluto was "fuzzy;" it had air. "Similar occultations observed since then (most recently in 2002) reveal no sign of [impending] collapse," says Stern. On the contrary, the atmosphere appears to be expanding, puffed up by lingering heat from Pluto's waning summer.

Nevertheless, it's a good thing New Horizons is fast, hurtling toward Pluto at 30,000 mph. Winter. New Horizons. Only one can be first. The race is on....

Find out more about the New Horizons mission at <http://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.



This artist's rendering shows how Pluto and two of its possible three moons might look from the surface of the third moon. *Credit: NASA/ESA and G. Bacon (STSci)*

From Nancy Leon of NASA/JPL:

We now have some wonderful kid-accessible information on hurricanes on our SciJinks web site -- and here's a fun new game to go with it!

Whirlwind Disaster

Where do these monster storms we call hurricanes come from? Why do they always form near the equator and only during certain times of the year? How do they come to be so organized and so destructive? You can find answers to these questions and play an exciting hurricane word game called "Whirlwind Disaster" at the SciJinks Weather Laboratory Web site. SciJinks targets young people of middle school age. It is a joint effort of the National Aeronautics and Space Administration (NASA) and the National Oceanic and Atmospheric Administration (NOAA). The new "How does a hurricane form?" page and accompanying interactive game can be found in the How & Why menu on the SciJinks Weather Laboratory home page, <http://scijinks.gov>.