



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



NASA's Wilkinson Microwave Anisotropy Probe (WMAP), was launched in 2001, to measure the temperature of radiant heat, left over from the Big Bang. New data reveals what the universe was like in the first trillionth of a second after the bang. That data reveals a "polarization signal" that shows that the early expansion wasn't smooth, with some regions expanding faster than others. These clumped regions are supposedly the beginnings of galaxies. This material, which is really a quantum flux, turned into the strings of galaxies that are now written across the universe.

Comet 73P/Schwassmann- Wachmann 3, which broke apart during the last trip around the Sun, is bringing its family of broken pieces back to Earth in May, 2006. Amateurs will be able to see those pieces during its close approach to Earth

on May 12, 13 and 14 (Friday, Saturday and Sunday) as they fly through the constellations of Cygnus and Pegasus. The comet has continued to fall apart because the original pieces have also broken into smaller pieces, totaling eight, so far. The brightest pieces will be about third or fourth magnitude, well within the range of binoculars and small telescopes. On May 13, Cygnus will be about 20 degrees above the NE horizon around midnight. Pegasus starts to rise about an hour later.

Even more interesting to experienced observers, one of the components of the comet will pass very near (3.7 arcminutes) the Ring Nebula, in Lyra, at 11PM EDT, on May 7, 2006. The nebula, M57, will only be about ten degrees above the NE horizon at that time, so it's important to find a site that will have a clear view in that direction. May 7 falls on a Sunday.

Alan Rothenberg, reported on the trip to the Detroit Observatory, that some members attended last February. The main telescope, a twelve inch refractor, with a brass tube and a

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Late Notices

(Editor's note: The following was received from our 2nd VP, Bob Berta, relaying a report by Bob Naeye from Libya on the eclipse March 29th)

The eclipse was glorious! No words can really describe it, and photos don't do it justice. If you've never seen a total solar eclipse, make an effort to see one ASAP. The shadowbands were the biggest surprise. I've definitely caught the eclipse bug and hope to see more in the future. It's great to have people from all over the world come to this remote place surrounded by sand to share a common experience. Anything that helps humanity shed some of its tribal mentality is a very good thing, and I wish the spirit of friendship that exists here amongst many different peoples can spread throughout the world. Anyone harboring prejudices against Arabs and Muslims because of 9/11 should purge their minds of such poisonous thoughts. The Libyans have been incredibly gracious hosts, and have gone to great lengths to make sure their foreign guests -- including Americans -- have an enjoyable experience. But taser the Aussies!!! (an inside joke)



Eclipse as seen from Salloum, Egypt.

Editor's Note: Here are a few links that may be of interest. Some are favorites of teachers. What are your favorites?

Great web site for kids:

<http://www.dustbunny.com/afk/>

Powers of 10 – Zooms from Earth into the atom and out to the edge of the Universe:

<http://micro.magnet.fsu.edu/primer/java/science/opticsu/powersof10/index.htm>

Calculate when satellites will be visible and other science links:

<http://www.heavens-above.com>

Area astronomy clubs and numerous astronomy related links:

<http://www.boonhill.net/>

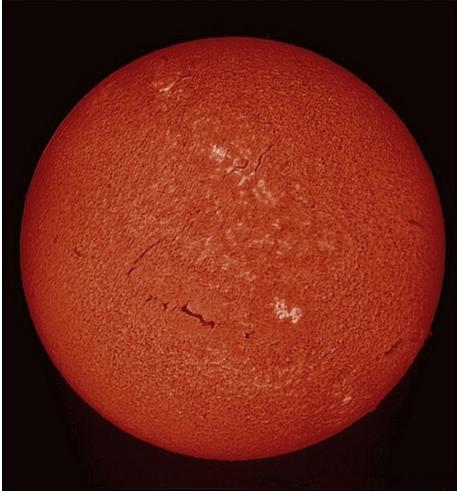
Space travel visual:

<http://spacewander.com/USA/english.html>

Fun activities for kids:

<http://www.thezulapatrol.com>

Sol-Halpha.jpg by Bob Berta





PRESENTS

**The 5th Annual
CADILLAC WEST - SPRING
STAR PARTY
May 24 – 29, 2006**

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

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

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(Donations accepted)

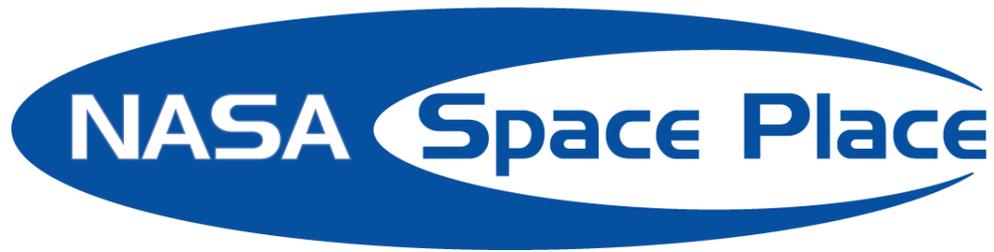
For More Info Contact: Bill Beers Phone #586-566-8367 or E-mail "BEEZOLL@AOL.COM"
John Lines Phone #248-969-2790 or E-mail "JELINES@YAHOO.COM"
Doug Bock E-mail "DBOCK1@CHARTERMI.NET"

(PLEASE RSVP IF YOU ARE PLANNING ON ATTENDING)

This will be a "Virgo Cluster" event.

How many galaxies can you see in the same field of view.





Planets in Strange Places

By Trudy E. Bell

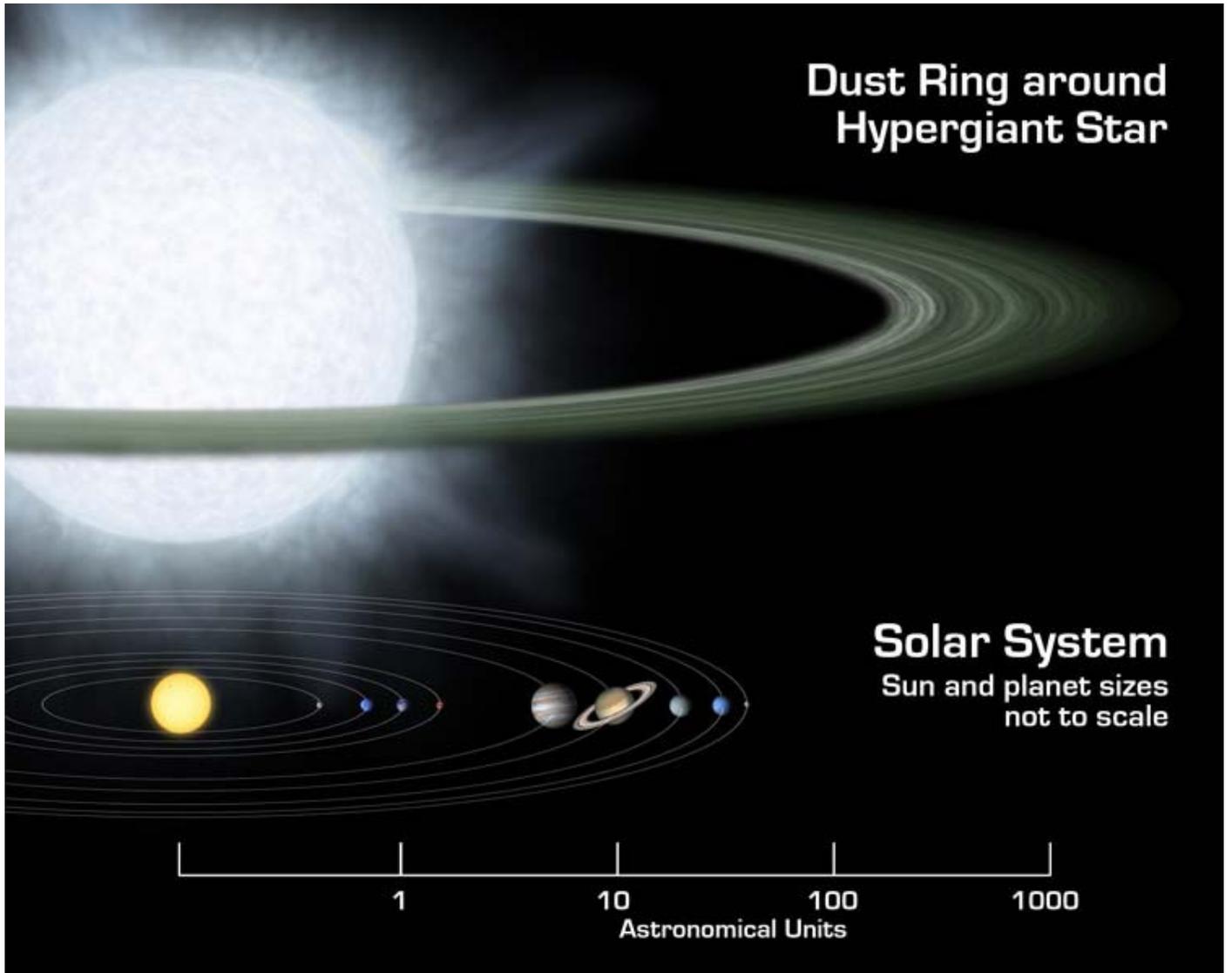
Red star, blue star, big star, small star—planets may form around virtually any type or size of star throughout the universe, not just around mid-sized middle-aged yellow stars like the Sun. That’s the surprising implication of two recent discoveries from the 0.85-meter-diameter Spitzer Space Telescope, which is exploring the universe from orbit at infrared (heat) wavelengths blocked by the Earth’s atmosphere.

At one extreme are two blazing, blue “hypergiant” stars 180,000 light-years away in the Large Magellanic Cloud, one of the two companion galaxies to our Milky Way. The stars, called R 66 and R 126, are respectively 30 and 70 times the mass of the Sun, “about as massive as stars can get,” said Joel Kastner, professor of imaging science at the Rochester Institute of Technology in New York. R 126 is so luminous that if it were placed 10 parsecs (32.6 light-years) away—a distance at which the Sun would be one of the dimmest stars visible in the sky—the hypergiant would be as bright as the full moon, “definitely a daytime object,” Kastner remarked. Such hot stars have fierce solar winds, so Kastner and his team are mystified why any dust in the neighborhood hasn’t long since been blown away. But there it is: an unmistakable spectral signature that both hypergiants are surrounded by mammoth disks of what might be planet-forming dust and even sand.

At the other extreme is a tiny brown dwarf star called Cha 110913-773444, relatively nearby (500 light-years) in the Milky Way. One of the smallest brown dwarfs known, it has less than 1 percent the mass of the Sun. It’s not even massive enough to kindle thermonuclear reactions for fusing hydrogen into helium. Yet this miniature “failed star,” as brown dwarfs are often called, is also surrounded by a flat disk of dust that may eventually clump into planets. (Note: This brown dwarf discovery was made by a group led by Kevin Luhman of Pennsylvania State University.) Although actual planets have not been detected (in part because of the stars’ great distances), the spectra of the hypergiants show that their dust is composed of forsterite, olivine, aromatic hydrocarbons, and other geological substances found on Earth. These newfound disks represent “extremes of the environments in which planets might form,” Kastner said. “Not what you’d expect if you think our solar system is the rule.” Hypergiants and dwarfs? The Milky Way could be crowded with worlds circling every kind of star imaginable—very strange, indeed.

Keep up with the latest findings from the Spitzer at www.spitzer.caltech.edu/ . For kids, the Infrared Photo Album at The Space Place (spaceplace.nasa.gov/en/kids/sirtf1/sirtf_action.shtml) introduces the electromagnetic spectrum and compares the appearance of common scenes in visible versus infrared light.

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 compares size of a hypothetical hypergiant star and its surrounding dusty disk to that of our solar system.