



The Warren Astronomical Society Paper

P.O. Box 1505
 Warren, Michigan 48090-1505
www.warrenastronomicalsociety.org

Volume 39, Number 10 //

2007 WAS OFFICERS

\\ October, 2007

President	Norm Dillard	email: norman0827@yahoo.com
1 st VP	Riyad Matti	email: riyadmatti@yahoo.com
2 nd VP	Robert Berta	email: biker123@netzero.com
Secretary	Dale Partin	email: dpartin@comcast.net
Treasurer	Dr. Phil Martin	email: drpdmartin@hotmail.com
Director, Publications	Steve Uitti	email: suitti@uitti.net
Director, Public Relations	Marty Kunz	email: solarmartykz@sbcglobal.net

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



Mira, one of the most famous variable stars in the sky, has a tail! The thirty thousand light year tail was discovered by one of our ultra violet space probes. The star has been known to change brightness for the last four hundred years, but the tail has just been discovered. Astronomers think that the tail is also a possible generator of planets too.

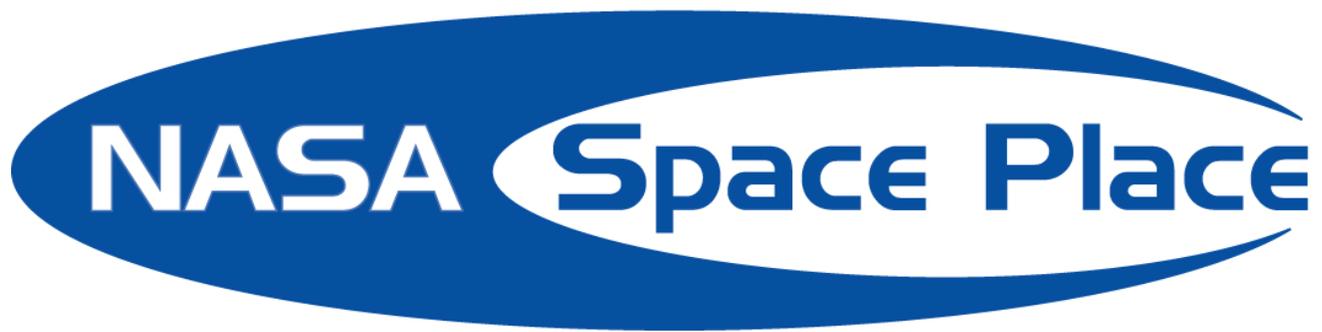
What a show! There must have been at least two thousand people at the Kensington, Astronomy On The Beach, star party on Saturday the 22nd. I wasn't there on Friday, but I suspect the crowd was just as large because the sky was just as clear as it was Saturday. Our club pulled in about two hundred dollars selling our shirts and stuff. Quite a night.

I got a chance to award Doug Bock with a Messier 110 badge award that Saturday night. He's an observer with a lot of sky searching

under his belt and promises to claim many more badges.

If you saw the hype about a new comet that is supposed to be like Comet Halley, don't go rushing out to your telescope just yet. It's called SOHO P/2007 R5 and it's very close to the Sun right now. Even so, it's not much to look at, maybe not at all. My printout of the orbital parameters say it'll only be about ninth magnitude now and since it's passing the Sun and headed for deeper space, promises to dim a couple of magnitudes, each month, for the next three months. The only thing that this fuzz ball has in common with Halley is its periodically returning orbit. It comes back every four years.

Spindler Park, in Eastpoint, was the host of the WAS public, observing session on Friday, September 14. Speakers, Dave Bailey, Steve Uitti and Gary Ross kept a small group of astronomer wannabes occupied with astronomical wonders while I was setting up my ten inch reflector outside. Eventually Steve



A Missile in Your Eye by Patrick L. Barry

Satellite technology designed to catch ballistic missile launches may soon help doctors monitor the health of people's eyes.

For the last 15 years, Greg Bearman and his colleagues at JPL have been working on a novel design for a spectrometer, a special kind of camera often used on satellites and spacecraft. Rather than snapping a simple picture, spectrometers measure the spectrum of wavelengths in the light coming from a scene. From that information, scientists can learn things about the physical properties of objects in the photo, be they stars or distant planets or vegetation on Earth's surface.

In this case, however, the challenge was to capture snapshots of short-lived events—like missile launches! The team of JPL scientists designed the new spectrometer, called a computed tomographic imaging spectrometer (CTIS), in collaboration with the Ballistic Missile Defense Organization as a way to detect missiles by the spectral signatures of their exhaust.

But now the scientists are pointing CTIS at another fast-moving scene: the retina of an eye.

Blood flowing through the retina has a different spectral signature when it is rich in oxygen than when it is oxygen deprived. So eye doctors can use a spectrometer to look for low oxygen in the retina—an indicator of disease. However, because the eye is constantly moving, images produced by conventional spectrometers would have motion blurring that is difficult to correct.

The spectrometer that Bearman helped to develop is different: It can capture the whole retina and its spectral information in a single snapshot as quick as 3 milliseconds. "We needed something fast," says Bearman, and this spectrometer is "missile-quick."

CTIS is even relatively cheap to build, consisting of standard camera lenses and a custom, etched, transparent sheet called a grating. "With the exception of the grating,

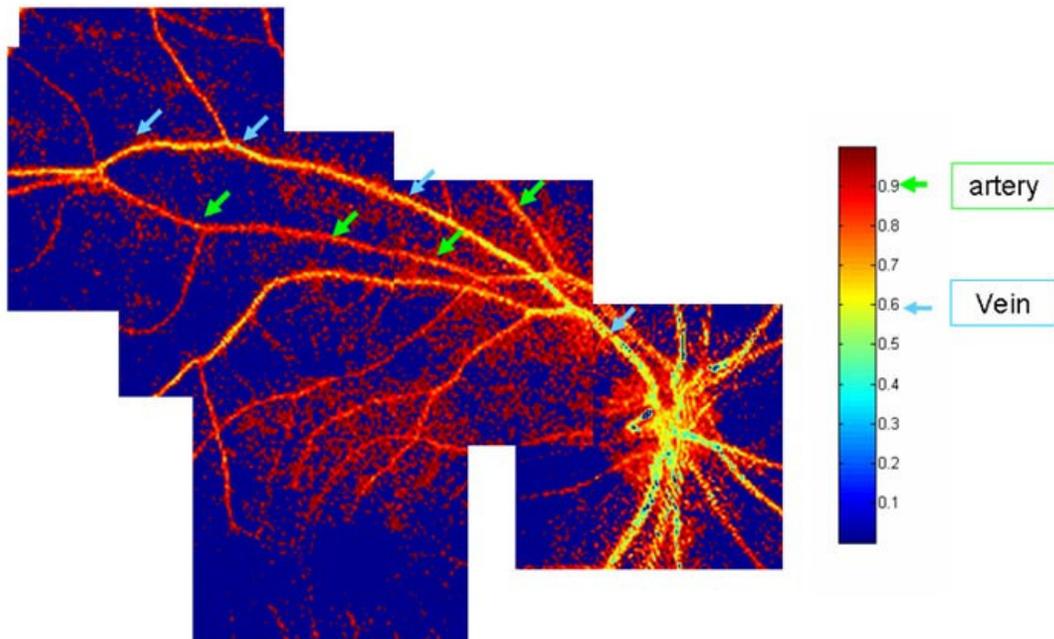
we bought everything on Amazon,” he says.

The grating was custom-designed at JPL. It has a pattern of microscopic steps on its surface that split incoming light into 25 separate images arranged in a 5 by 5 grid. The center image in the grid shows the scene undistorted, but colors in the surrounding images are slightly “smeared” apart, as if the light had passed through a prism. This separation of colors reveals the light's spectrum for each pixel in the image.

“We're conducting clinical trials now,” says Bearman. If all goes well, anti-missile technology may soon be catching eye problems before they have a chance to get off the ground.

Information about other NASA-developed technologies with spin-off applications can be found at <http://www.sti.nasa.gov/tto>.

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



This three-color composite image from the computed tomographic imaging spectrometer shows the oxygenation of the blood in the arteries and veins of a human retina. (Arteries appear red, veins appear yellow.)



Announcing...

The Cadillac West Fall Star Party

October 10-14, 2007
(Wednesday thru Sunday)

Hosted By: Bill Beers (Warren Astronomical Society)

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



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

****Saturday Barbecue****

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



Registration donation fee:

\$15 per person

\$20 per family

Contact Bill Beers to register before Oct 1

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 #586-321-8207 or E-mail "BEEZOLL@AOL.COM"