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President's Message for July

by Jim Reynolds

In This Issue:

Pages 1-2
President's Message

Page 3
Upcoming Events

Page 4
June Meeting
Minutes

Pages 5-6
NASA's Space
Place

Greetings all!

I hope everyone has had a terrific month of June.

The Westminster Astronomical Society truly shined this month. The Venus transit public outreach was a smashing success to say the least. First off I want to thank everyone who participated in bringing this event to the public. Bob Clark and Skip Bird really went above and beyond in their planning efforts. Based on what was discussed at the June WASI monthly meeting, there were literally hundreds of folks who stopped by the various library locations that had been arranged. I didn't take notes, but if the figures were accurate we might have had close to 1,000 spectators for the event. Bob Clark and myself were reported on in the Carroll County Times. You can read the entire article here:

http://www.carrollcountytimes.com/news/local/astronomical-society-organizes-viewing-of-rare-venus-transit/article_9b38e090-ccfa-5c2e-b986-acf4525bc07a.html

If anyone has the time, I'd love to see some of the photos we took posted to Facebook or on the official WASI website. Again, a great big thank you to everyone who helped makes this an event to remember for the entire community.

(Continued on page 2)

July Meeting: Wednesday, July 11, 2012, 7:30 p.m., Bear Branch Nature Center

Speakers: Tom Renn will present video of Space Shuttle Discovery's arrival in Virginia. We will also be viewing some photos taken during the Venus transit from WASI members outside of Maryland.

President's Message *continued*



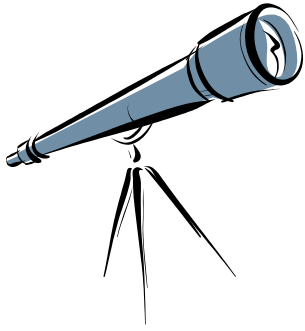
Saturday, June 23rd was the monthly WASI planetarium show and star party. I can personally attest that our audience was not a record breaker for its size (3 individuals). I know we have had both larger and smaller audiences. Afterwards, Dave Gede set up his telescope out in the parking lot. Dawn Harry brought by some of the folks she was having a campfire with and they also had the pleasure to seeing Saturn for the very first time. Seeing kids (or adults) viewing Saturn for the first time in a telescope is priceless. We also viewed Mars, the Moon, and M13. A good time was had by all. Hopefully some of those folks will be at our next meeting. One audience member, Mrs. Martin, may be bringing her telescope for some advice on how to best use it.

Speaking of our July meeting, I will not be in attendance as I will be roughing it on a cruise ship in the Gulf of Alaska. I'm hoping to see the aurora, and other celestial goodies. I'll bring photos to the August meeting if time allows.

Take care all, and have a terrific July!!

Clear Skies,
Jim

Upcoming Events



Monthly WASI Meeting July 11, 7:30 p.m., at Bear Branch Nature Center (BBNC)

Soldiers Delight Public Stargazing July 14, 8 p.m., at Soldiers Delight Natural Environment Area in Owings Mills

Mason-Dixon Star Party July 18–22, at the Footlight Ranch in Wellsville, Pennsylvania; for more info visit <http://www.masondixonstarparty.org>

Planetarium Show July 27, 7:30 p.m., at BBNC



WASI secretary Bob Clark shares views of the Venus transit with visitors at the Westminster Public Library on June 5, 2012.

Minutes of Meeting on June 13, 2012

Called to order at 7:42 by Jim Reynolds, President.

Announcement:

Latest MDA is available.

Reports were called for and presented by members who were involved in the transit of Venus activities.

Slava presented photos of the transit, many of which were very excellent.

Vanessa presented a description and photos of the annular eclipse as viewed from Bryce Canyon.

Our guest speaker was Mark Kochte from the Mercury MESSENGER project. What follows is a few particular points:

MESSENGER is currently in orbit around Mercury.

One of its missions is to gather data regarding planet formation.

Mercury is a planet of many extremes.

Mariner 10 (previous mission) did 3 flybys and got pictures at 2 km resolution.

MESSENGER was able to verify a magnetic field about 1% of that of Earth and an axial tilt of only about 0.01 degree.

MESSENGER is in a highly elliptical orbit with an approximate period of 8 hours.

It has captured images with resolution down to 10 meters, a mosaic of the planet, as well as more than 100,000 images total.

Previously known bright spots near the poles are deep inside polar craters (water?).

Skip Bird spoke of upcoming events including things at the Fredrick County libraries and June 15 event at Udvar-Hazy.

Adjourned 9:45 PM

Respectfully submitted,

Robert L. Clark



How Many Discoveries Can You Make in a Month?

by Dr. Tony Phillips

This year NASA has announced the discovery of 11 planetary systems hosting 26 planets; a gigantic cluster of galaxies known as “El Gordo”; a star exploding 9 billion light-years away; alien matter stealing into the solar system; massive bullets of plasma racing out of the galactic center; and hundreds of unknown objects emitting high-energy photons at the edge of the electromagnetic spectrum.

That was just January.

Within NASA’s Science Mission Directorate, the Astrophysics Division produces such a list nearly every month. Indeed, at this very moment, data is pouring in from dozens of spacecraft and orbiting observatories.

“The Hubble, Spitzer, Chandra, and Fermi space telescopes continue to make groundbreaking discoveries on an almost daily basis,” says NASA Administrator Charlie Bolden.¹

NASA astrophysicists and their colleagues conduct an ambitious research program stretching from the edge of the solar system to the edge of the observable universe. Their work is guided in large part by the National Research Council’s Decadal Survey of Astronomy and Astrophysics, which identified the following priorities:

- Finding new planets—and possibly new life—around other stars.
- Discovering the nature of dark energy and dark matter.
- Understanding how stars and galaxies have evolved since the Big Bang.
- Studying exotic physics in extreme places like black holes.

Observing time on Hubble and the other “Great Observatories” is allocated accordingly.

Smaller missions are important, too. The Kepler spacecraft, which is only “medium-sized” by NASA standards, has single-handedly identified more than 2,300 planet candidates. Recent finds include planets with double suns, massive “super-Earths” and “hot Jupiters,” and a miniature solar system. It seems to be only a matter of time before Kepler locates an Earth-sized world in the Goldilocks zone of its parent star, just right for life.

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¹ Bolden made these statements in an April 20th editorial he co-authored with John Holdren, Director of the Office of Science and Technology Policy: http://blogs.nasa.gov/cm/blog/bolden/posts/post_1334967201693.html

A future astrophysics mission, the James Webb Space Telescope, will be able to study the atmospheres of many of the worlds Kepler is discovering now. The telescope's spectrometers can reveal the chemistry of distant exoplanets, offering clues to their climate, cloud cover, and possibilities for life.

That's not the telescope's prime mission, though. With a primary mirror almost 3 times as wide as Hubble's and a special sensitivity to penetrating infrared radiation, Webb is designed to look into the most distant recesses of the universe to see how the first stars and galaxies formed after the Big Bang. It is, in short, a Genesis Machine.

Says Bolden, "We're on track in the construction of the James Webb Space Telescope, the most sophisticated science telescope ever constructed to help us reveal the mysteries of the cosmos in ways never before possible." Liftoff is currently scheduled for 2018.

How long will the list of discoveries be in January of that year? Stay tuned for astrophysics.

For more on NASA's astrophysics missions, check out <http://science.nasa.gov/astrophysics/>. Kids can get some of their mind-boggling astrophysics questions answered by resident Space Place astrophysicist "Dr. Marc" at <http://spaceplace.nasa.gov/dr-marc-space>.

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 concepts such as this one are based on infrared spectrometer data from NASA's Spitzer Space Telescope. This rendering depicts a quadruple-star system called HD 98800. The system is approximately 10 million years old and is located 150 light-years away in the constellation Crater. Credit: NASA/JPL-Caltech/T. Pyle (SSC)