

Friends of the Observatory e-Newsletter

December 2005
513-321-5186

Published by the Friends of the Cincinnati Observatory Center
www.cincinnatiobservatory.org

Volume 16 No. 12
Bill Cartwright, editor wcartw@aol.com



A Letter from President Hunter

I have two things to thank the club for. The first is making my first meeting as President go smoothly. Well three things actually, the second is once again enduring my Mars Presentation (Thank God MRO launched so I had some new material to show). The third and certainly not the least were the show of club members for Marsapalooza.

The last two nights I heard a rough estimate of 300+ people each night. Out in the courtyard we were swamped with people looking through club members' scopes. I don't know the exact number of the public that showed up but I suspect that there were probably over 1000 for the entire week. Events like our public views would not be possible without help from the members of FOTO. Speaking as a member of the Aero Space Industry, events like our public viewing help keep interest in space exploration alive. So each and everyone who has volunteered is contributing to keeping Van Braun's dream of Space Exploration healthy. Thank you one and all.
Clear Skies!

Did You Know....

Storms on Jupiter can be the size of Alaska, have 200 mph updrafts, and be 30 miles high. The giant Red Spot is twice the size of Earth!

Last Month's Meeting

By Rick Hunter

Last month was the first meeting for the "newly" elected officers

Rick Hunter – President

Scott Naylor – Vice President

Mary Hamilton – Secretary

Bill Bachelder – Treasurer

Scott Gainey – FOTO Rep to COC

With a staff like that to support me I might even do an adequate job.

Your president gave a presentation on the Mars Exploration Rover.

Once again I wish to thank the **Craig and Valerie Niemi** for their years of service as FOTO officers. I also wish to express my happiness to see **Greg Huber** again, and thank God for his recovery from cancer.

Our Monthly Meeting

By Rick Hunter

This is our annual FOTO Christmas dinner to be held Thursday, December first. Come hungry and be there at 6:30 sharp, or your president might eat it all.

FOTOkids Meeting

By Mike Helfen

FOTOkids next meeting will be Friday, December 2nd, at 7:30 pm. We'll have a project and talk about astronomy. Then we'll open up the telescopes for viewing, weather permitting.

If you have a kid interested in astronomy between the ages of 8 and 14, find out more about FOTOkids by contacting Mike Helfen @ slowburnin@fuse.net

Paul Nohr's Tuesday Night Classes

"Topics in Astronomy"



Tom Kloecker and Paul Nohr

Paul's next class will focus on antennas and waves and will be held at the Observatory at 7 pm on Tuesday, December 6th. For more information you can email Paul at pnohr@fuse.net.

Did You Know....

Europa's ocean is thought to be larger than all of the Earth's oceans combined!

Humanities @ the Observatory Lecture Series

In the second of three humanities lectures this season, local historian and author, **Dan Hurley**, will speak at the Observatory on Tuesday, December 6th at 8 pm.

“A Lighthouse in the Sky: Inspiring Americans to Embrace Science.”

“The Cincinnati Observatory is more than a fascinating and beautiful relic of the nineteenth century. Its original goal, to inspire Americans to embrace science, remains critical in 2005 when so many voices urge Americans to reject science.”

Time: 8 p.m.

Date: December 6, 2005

Cost: \$10 (\$5.00 for students)

For reservations, call: 513-321 – 5186

Dan Hurley has worked with Channel 12 since 1981. He produces weekly segments that use history to frame contemporary issues. Dan is also producer and host for “12 Newsmakers”, a weekly program that explores the political and urban issues confronting our metropolitan region.

His public history consulting firm, Applied History Associates, works with museums and historical societies throughout the eastern United States. Clients include the National Underground Railroad Freedom Center and the Taft National Historic Site.

He is the author of Cincinnati, *The Queen City* (1981), *One Child at a Time: a History of the Children’s Home of Cincinnati* (1992), *Steamboat Days on America’s Rivers* (1995) and *Otterbein: Affirming Our Past/ Shaping Our Future* (1996).

Coming in 2006

“Celestial Science and Mythology in Ancient Mesopotamia”

Presented by **Jeffrey Cooley**, PhD
Candidate, Hebrew Union College &

Adjunct Professor of Classics, Xavier
University

The ancient Greek astronomical tradition, which many consider the foundation of modern astronomy, was based to a great degree on Mesopotamian traditions. Nevertheless, the manner in which ancient Mesopotamians looked at and thought of the night sky was quite different from their classical successors. Many people are familiar with how the Greeks incorporated their astronomy into their mythology, but few are aware that the Mesopotamians incorporated their astronomical traditions into their mythology as well. This lecture will provide a brief introduction to the Mesopotamian astronomical tradition in the late second to early first millennium, B.C.E. and discuss how that tradition is reflected in two important myths, including the Epic of Creation.

Astronomers May Have Found Two New Moons Orbiting Pluto



An artist's concept of the Pluto system as seen from the surface of one of the candidate moons.

Astronomers have discovered that Pluto may have not one, but three moons. These are tiny moons. Their estimated diameters lie between 40 and 125 miles (64 and 200 kilometers). Charon, for comparison, is about 730 miles (1170 km) wide, while Pluto itself has a diameter of about 1410 miles (2270 km).

http://science.nasa.gov/headlines/y2005/01nov_moonsofpluto.htm?list739819

Did You Know....

Craters on Mars of less than 37 miles in diameter are named after cities on Earth with populations of less than 100,000. Those larger are named after deceased planetary scientists

FOTO Dinner Reminder

By Valerie Niemi

December first is fast approaching. If you haven't signed up yet, please contact **Valerie Niemi** as soon as possible at VNiemi@travelhouseagency.com or call 513-231-7912.

The meeting time for December first has been moved up to 6:30 pm with dinner at 7:00 pm. The menu this year is roast pork with stuffing and green beans and vegetable lasagna with cole slaw and rolls. FOTO will provide beverages. Bring a dessert to share if you like.

The dinner is FREE to FOTO members and one guest. Additional guests are welcome, and are just \$5 per person!

See you there!

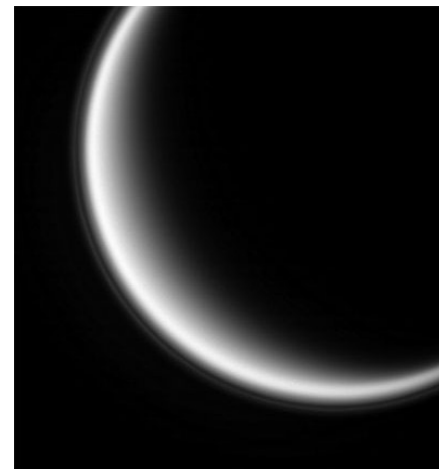
Stonelick Lake Star Parties

By Scott Naylor

The next party will be on November 26th with a cloud date of December 3rd. It's held at Stonelick Lake State Park, which is open to the public all night year 'round.

For updates, directions, or information, phone **Scott Naylor** at 513-575-5556.

Titan's Ultraviolet Haze



Looking back toward the Sun brings out the thin haze that hovers 310 miles above Saturn's moon Titan, as seen in this Cassini spacecraft image.

<http://spaceflightnow.com/cassini/051108titanhaze.html>

Astronomy for the Entire Family

A Class for all Ages at the Cincinnati Observatory, Monday, December 19, from 6:30-8:30 pm

Who knows their astronomy better, kids or parents? Come explore the universe together at the Cincinnati Observatory Center's "Astronomy for the Entire Family." This workshop of fun activities and wacky demonstrations will allow both young and not-so-young to discover the heavens above.

Led by the Outreach Astronomer, Dean Regas, these programs promise to rev your enthusiasm for observing the night sky as well as provide a unique environment to share with your children. We will also view Mars and Venus through our telescopes (weather permitting).

Cost: \$10 per person

Advance reservations are required – space is limited. For further information or to make reservations, please call 513-321-5186.

The Planning Meeting

The next planning meeting will be held at Inidgos on Hyde Park Square on Thursday, December 8th at 6 pm. Planning meetings are open to all members.

December's Trivia Question

By Greg Huber

In 1433 one of the first observatories was constructed in Samarkland. Who constructed the observatory?

November's Trivia Question:

In 1965 the existence of cosmic background radiation was discovered by which two scientists?

Answer: In 1965 AA Penzias and RW Wilson first discovered cosmic background radiation. They discovered it after they realized that the birds roosting in their antenna weren't causing the noise they were picking up.

Word of the Month

By Greg Huber

"Magnetosheath"

November's Word : "Over contact binary"

Answer: An overcontact binary is a star pair that orbit so closely that two stars touch. This forms what appears to be one big dumbbell shaped star. (Weird but true...)

Did You Know....

Craters on Mars of less than 37 miles in diameter are named after cities on Earth with populations of less than 100,000. Those larger bear the names of deceased planetary scientists.

AstroPhoto Meeting

There will be NO meeting in December as the date falls too close to Christmas.

Explore Venus Tonight

The planet getting the most attention in our evening sky lately is [Mars](#). It passed closest to the Earth Oct. 29 at just more than 43 million miles. Blazing like a dazzling topaz beacon at [magnitude](#) – 2.3, Mars has become the night's premier celestial attraction.

And yet, it still shines with less than one-sixth the intensity of the brightest planet in the sky: Venus.

Venus is gaining altitude in the twilight, boldly showing itself off after six months of hiding behind any inconvenient obstructions near the southwestern horizon.

http://www.space.com/spacewatch/051104_venus_guide.html

Did You Know...

The twin Mars rovers Spirit and Opportunity were expected to run for only three months after their landing in January of 2004. But the rovers are still going strong and their mission has been extended until at least September of 2006.

Planets of Love and War VENUS vs. MARS at the Cincinnati Observatory Center

December 9 from 5:30-9:00 pm



The Cincinnati Observatory hosts a night of planet watching December 9 as our two closest planetary neighbors vie for the night sky.

Planets of Love and War includes hourly classes, tours of the Observatory, and viewing of Venus, Mars, and the Moon.

See the clouded, shrouded goddess of beauty first. Venus dominates the sky from 5:30 until she sets at 7:30pm. Then the red god of war, Mars takes center stage from 7:30-9:00pm

Cost Per Program: \$5 for adults,
\$3 for children

Advance reservations are required – space is limited. For further information or to make reservations, please call 513-321-5186.

Observatory Assistants Training Session

A training session for the new Observatory Assistants will be held on Monday, November 28, 7:00-9:00 pm in the Mitchel Building. If you would like to be trained as an Observatory Assistant and assist the Observatory visitors at the public nights please let **John Ventre** know by emailing him at jeventre@ix.netcom.com.

This training session is also open for current Observatory Assistants who want a refresher training class.

Thanks to Our Marsapalooza Helpers

By Rick Hunter

I wish to thank all the FOTO members who came out to assist with Marsapalooza. The first Saturday we had 150 visitors, on the 11th the unofficial count was 340, on the 12th I believe we had at least as many based on the crowd we had on the Patio.

Without FOTO club member activities like this we would fall on our face. Once again, thanks everyone.

Spacecraft To Explore Mysteries Of Venus

Earth's twin planet has its first new permanent visitor in 15 years on the way after today's successful launch of Venus Express - a European probe that will orbit the second rock from the Sun to study its inhospitable and enigmatic atmosphere.

<http://spaceflightnow.com/venusexpress/051109launch.html>

Light May Be From First Objects In Universe

Scientists have detected light that may be from the earliest objects in the universe. If confirmed, the observation provides a glimpse of an era more than 13 billion years ago when, after the fading embers of the theorized Big Bang gave way to millions of years of pervasive darkness, the universe came alive.

<http://spaceflightnow.com/news/n0511/02firstobjects/>

Neutron Star Found Where A Black Hole Was Expected

A very massive star collapsed to form a neutron star and not a black hole as anticipated, according to new results from NASA's Chandra X-ray Observatory. This discovery shows that nature has a harder time making black holes than previously thought.

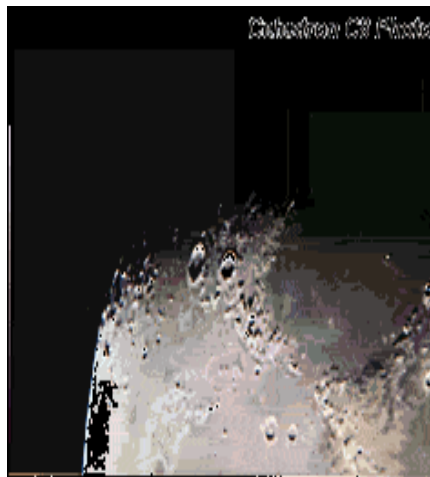
<http://spaceflightnow.com/news/n0511/02neutronstar/>

Welcome New FOTO and COC Members!



George & Sally Gibbs, Eric & Diane Luczaj, Linda Neenan, Bob Stothfang, Robert Wallenhorst, Jeannette Fisher, Linda MacDuffie, Matthew Leonard, Michael & Linda Gurren, & Thomas Busemeyer.

NASA Software Zooms To Nearly Anywhere On the Moon



Internet users can now take virtual 3-D trips to nearly anyplace on the Moon, thanks to a NASA program first designed to show aerial views of the Earth.

<http://spaceflightnow.com/news/n0510/28moon3d/>

Using Your Telescope

At the Observatory

December 11, from 6-9pm

Did you just get a telescope and can't seem to make it work? Is there an old telescope collecting dust in your closet just waiting to be used by a knowledgeable astronomer?

Here's your chance to become that knowledgeable astronomer – or at least get started. **Using Your Telescope** will teach you step by step how to get your telescope ready for viewing and essential tips to finding objects in the night sky.

Bring your telescope, a friend or family member, or just yourself to begin exploring the heavens above.

Cost: \$30 per telescope (includes admission for up to 3 people)

Space is limited. To register, please call 513-321-5186

Dean Regas

Outreach Astronomer

Cincinnati Observatory Center

(513) 321-5186

deanobservatory@zoomtown.com

www.cincinnatiobservatory.org

www.cincinnatiobservatory.org



Robert's Quartet



The European Southern Observatory has released a beautiful high resolution image of Robert's Quartet; a group of 4 very different galaxies located about 160 million light-years from Earth. Its member galaxies are NGC 87, NGC 88, NGC 89 and NGC 92. Robert's Quartet is one of the best examples of a compact group of galaxies, which can contain anywhere from 4 to 8 galaxies, and interact with each other from time to time. One galaxy in the group, NGC 87, has large regions of furious star formation because of its interactions with its neighbors.

http://www.universetoday.com/am/publications/eso_image_robert_quartet.html?4112005

Spacecraft Halfway to Mars

NASA's Mars Reconnaissance Orbiter successfully fired six engines for about 20 seconds to adjust its flight path in advance of its March 10, 2006, arrival at the red planet.

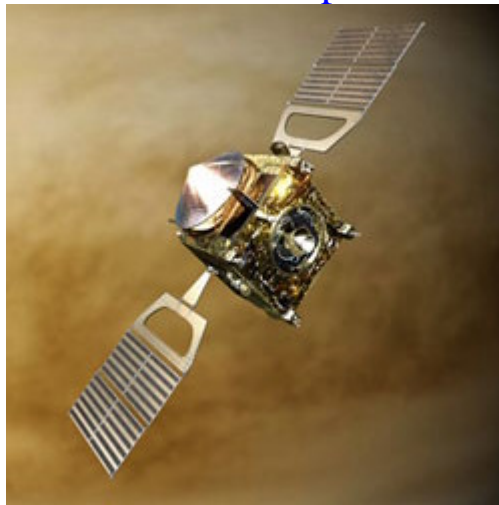


Since its Aug. 12th launch, the multipurpose spacecraft has covered about 60 percent of the distance for its trip from Earth to Mars. It will fly about

25-million miles farther before it enters orbit around Mars. It will spend half a year gradually adjusting the shape of its orbit, then begin its science phase. During that phase, it will return more data about Mars than all previous missions combined. The spacecraft has already set a record transmission rate for an interplanetary mission, successfully returning data at 6 megabits per second, fast enough to fill a CD-ROM every 16 minutes.

<http://marsprogram.jpl.nasa.gov/mro/newroom/pressreleases/20051118a.html>

Venus Mission Will Reveal Some Surprises



Artist illustration of Venus Express.

The European Space Agency's upcoming Venus Express mission to our planet's "evil twin" should reveal a planet of extremes, and more than a few surprises. One question revolves around the identity of a mysterious "unknown ultraviolet absorber", which seems to limit the amount of sunlight that reaches the planet's surface. Scientists are also hoping to find out if the planet still has active volcanoes. Venus Express is due to lift off from the Baikonur Cosmodrome on November 9th and arrive at Venus in April 2006.

http://www.universetoday.com/am/publish/venus_mission_surprises.html?4112005

Did You Know....

Saturn's moon Iapetus shows a moon composed of materials that are among the brightest AND darkest in the solar system. The bright regions are as reflective as water ice, and the dark regions resemble Xerox toner.

New View of Early Earth: A Habitable Place



There are a trio of longstanding views of what Earth might have looked like in its formative years: a moon-like desert, a fiery volcanic hell, or a waterworld with no firm footing.

All three may be wrong.

A new study concludes Earth had continents and oceans 4.3 billion years ago, which is just a geological eyeblink after the planet is thought to have formed, in the wake of the Sun's birth 4.6 billion years ago.

A separate study reported in May came to a [similar conclusion](#), also suggesting that notions of a fiery, hellish planet back then have been overblown.

Here's why it matters: A world with water and land and somewhat moderate temperatures and volcanic conditions would have been habitable.

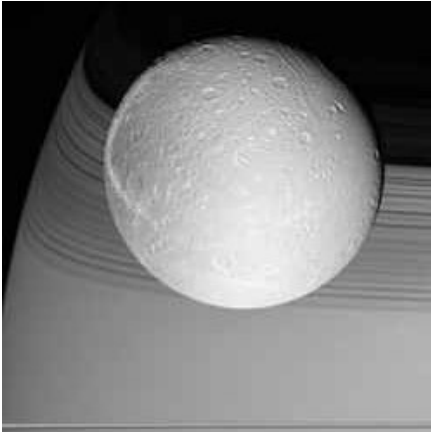
http://www.livescience.com/othernews/051118_early_earth.html

Spitzer's Infrared Views of the Cosmos



This striking picture reveals an eclectic mix of embryonic stars living in the tattered neighborhood of one of the most famous massive stars in our Milky Way galaxy, Eta Carinae. Astronomers say that radiation and winds from Eta Carinae and its massive siblings ripped apart the surrounding cloud of gas and dust, shocking the new stars into being.

A Good Look at Dione



Nov 23, 2005 - Cassini took this amazing image of Saturn's moon Dione on approach to its recent October 11, 2005 rendezvous; Saturn itself sits in the background. Dione is much darker on its western side in this image, and you can see the bright wispy fresh canyons right at the edge. Cassini took this image when it was approximately 24,500 kilometers (15,200 miles) from Dione. http://www.universetoday.com/am/publicis/dione_rendezvous.html?23112005

Einstein's Cosmological Constant Predicts Dark Energy



Nov 22, 2005 - Researchers are finding that the mysterious dark energy found to be accelerating the expansion of the Universe is remarkably well predicted by Einstein's cosmological constant. Einstein originally added this constant to balance out the gravitation of the Universe, but threw it out after seeing evidence of the Big Bang. An international team of researchers has performed the Supernova Legacy Survey, and found that it calculates dark energy to be within 10% of Einstein's prediction. http://www.universetoday.com/am/publish/cf_ht_cosmological_constant.html?22112005

Pandora's Coat



Saturn's moon Pandora sports its own coat of fine, dust-sized icy material.

A shepherd moon for Saturn's F ring, Pandora is a small satellite covered in craters that appear to be covered by debris. The moon's small ridges and grooves, which reach up to 52 miles (84 kilometers) across, suggests that the fractures affect its smooth surface material.

Cassini used its narrow-angle camera to catch this view of Pandora from a distance of about 32,000 miles (52,000 kilometers). Resolution in the original image was 1,000 feet (300 meters) per pixel, though the image has been magnified by a factor of two to aid visibility.

http://www.space.com/imageoftheday/image_of_day_051121.html

Japan's Hayabusa Spacecraft Lands Successfully on Asteroid



Japan's space agency said Wednesday its spacecraft had successfully touched down on an asteroid 180 million miles from Earth despite an earlier announcement that it had failed.

But after analyzing data, the agency said the probe landed on the asteroid within about 99 feet of the initial landing target.

http://www.space.com/missionlaunches/ap_051123_hayabusa_update.html

New Horizons: Voyage To The Edge Of The Solar System

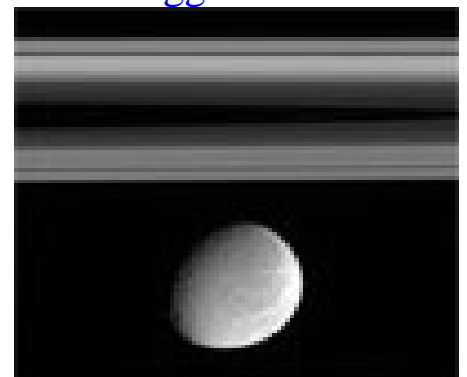


NASA's New Horizons spacecraft is nearing a liftoff into the unknown. This first mission to Pluto and the Kuiper Belt—a distant district of ancient, icy, rocky objects on the solar system's outer banks—is assured to transmit back to Earth numbers of revelations. http://www.space.com/businessstechnology/051123_pluto_horizons.html

Did You Know....

Despite their tiny size, neutron stars are visible in several ways. One is through accretion. Neutron stars are a strong source of gravity. When they exist in binary star systems they can attract the gas from what is often a "healthy" hydrogen-burning companion star. Gas spirals around the neutron star and comes crashing down onto its surface, leading to nuclear explosions. The fury.

Sleek Rings, Rugged Moon



Rhea floats below the innermost regions of Saturn's amazing rings in this Cassini spacecraft image. This view of the Saturn-facing hemisphere of Rhea allows a glimpse of the wispy terrain that covers the trailing hemisphere of Rhea. <http://www.astronomynow.com/>

This document was created with Win2PDF available at <http://www.daneprairie.com>.
The unregistered version of Win2PDF is for evaluation or non-commercial use only.