

# Friends of the Observatory

## e-Newsletter

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### A Letter from President Hunter

Dear Friends:

At the last planning meeting **Scott Naylor** and I were kicking around the idea of inviting the public to bring digital cameras to presentations. Then we would focus the Mitchel scope on a bright object such as Jupiter and let them take an eyepiece projection photo. The idea may or may not pan out. If it does they can go home with a good feeling about their visit to the Observatory. It just occurred to me in the last few days, why not use the next FOTO meeting as a dry run? So those members who are interested, bring your digital cameras. The worst we will find out is the idea needs refinement. At best we might be on to something really exciting. Hopefully this will turn into a new aspect of club membership. Clear skies.

Rick

### FOTO's June Meeting

Our June meeting will be held at 7:30 pm on Thursday, June 1st at the Observatory. **Dr. Mike Sitko** will talk about the comet 73P/Schwassmann-Wachmann. This comet is approaching closely to Earth (within several million miles) and is in the process of breaking up.

Last count the comet was broken up into over 50 pieces, with multiple pieces exhibiting tails. This promises to be an interesting talk.

### Last Month's Meeting

*By Rick Hunter*

**Paul Nohr** gave a visually stunning presentation on atmospheric effects.

### FOTOKids Meeting

*By Mike Helfen*

FOTOKids next meeting will be Friday, June 2nd, at 8:30 pm.

We are continuing a project that is following the Sky Puppies program as outlined by the Astronomical League (<http://www.astroleague.org/al/obsclubs/skypuppy/skypuppy2.htm>). This may take several months to complete, but you can jump in at any time. Weather permitting, we'll open up the telescopes for viewing and work on project requirements.

Also, the date for our annual summer campout is set. Saturday, August 5th. Mark your calendars!

If you have a kid interested in astronomy between the ages of 8 and 14, find out more about FOTOKids by contacting Mike Helfen @ [fotokids@fuse.net](mailto:fotokids@fuse.net) or 513.378.2134

### Stonelick Lake Star Parties

*By Scott Naylor*

Our next Star Party will be **Saturday, June 24th**, with a cloud date of the following Saturday, July 1<sup>st</sup>. 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.

### Word of the Month

*By Greg Huber*

“Anomalous Iron”

Word of May: “Cynthia's Lamp”

Cynthia's Lamp is another term for the Moon. It comes from Cynthia, an English god of the Moon.

## The Bevans' Report From Australia

By John Bevan

Tricia and I are in the last week of our trip (*Ed. Note: This report was sent to us on April 29<sup>th</sup>*) to South Africa and Australia. We left the US on March 26 and tonight is the first night (Friday, April 28th) that has not been clear! The southern skies have been wonderful of course and I regret not having brought my little refractor but I do have my 15X binoculars so I've had plenty of fun, especially pointing out the Magellanic Clouds and Omega Centauri to my grandson. (The grandkids returned to the US on April 28th.) I confirmed for myself again that the finest binocular sight anywhere in the heavens is around the Eta Carina "Keyhole" Nebula, a field which includes the Southern Pleiades together with NGC 3114 and NGC 3532. It's a knockout! Worth the trip all by itself!

Currently, we're in Tricia's home town, Yass, which is near Canberra and this afternoon I drove over to look at the ruins of the Mt. Stromlo Observatory which you will remember was destroyed by a deadly forest fire (bushfire over here) in 2003. It was an awful sight as I approached the mountain. The vegetation is coming back of course, but the top of the mountain looked stark, even from a distance.

On the top it was "heartbreaking" which was the exact word I wrote in the visitors' log. By the way, I identified myself as J. Bevan, Cincinnati Observatory, USA. I hope you all don't mind.

Before coming to Australia, we were in South Africa seeing our old friends Paul and Jill Jackson whom we hadn't seen for 40 years (in Canada). Paul's father was a Yale astronomer who ran the Yale-Columbia Observatory near Johannesburg until increasing light pollution caused him to send the 26 inch Yale-Columbia refractor to Mt. Stromlo where it did sterling service for many years recording the distances of

southern stars. This type of work has of course been long superseded by the Hipparchus and similar programs but the grand old scope, whose lens was made in Pittsburgh by a lens maker named McDowell (I think), remained on its English Equatorial mount on Mt. Stromlo and, like our scopes, was a national treasure.

Its loss in the 2003 fire was a tragedy for Australia and the history of astronomy. I must admit there were tears in my eyes when I saw the scorched shell of the building and the concrete pillars of the mount. The loss seems even greater (to me) than that of the 74 inch reflector whose scorched and scarred skeletonized dome stands nearby.



*Remains of the 74 inch refractor building after the fire.*



*Remains of the Yale-Columbia Refractor after the 2003 fire.  
Photographs by Matthew Colless,  
RSAA, Australian National University*

They will not rebuild Mt. Stromlo except in a very limited way as its location near ever growing Canberra is far from ideal.

I came away with a renewed sense of how precious the Cincinnati Observatory is, and how tragic it would be if we ever had a fire.

Tomorrow night, my last night in this place, I was hoping to attend the Canberra Astro Society's monthly deep sky observing night but the weather looks dicey so I may miss out on telescope viewing. On Sunday we'll return to the bright lights of Sydney and then go up to Australia's version of Miami Beach (*Ed note: Gold Coast*), before we head home on Friday.

Best regards,  
John

## Paul Nohr Classes



*You'll see a new streamlined Paul Nohr*

A Starry Night class for experienced users will be held on Tuesday, June 20<sup>th</sup> at 7 pm.

Paul's famous Tuesday Night Classes will start up once again on July 18<sup>th</sup> at 7 pm. The class will focus on orbits, trajectories and collisions for about two months.

Following that will be classes in Spectroscopy and or Special Relativity (velocities near the speed of light) and or measurements of the Lunar features.

## Did You Know....

Jupiter is twice as massive as all the other planets combined.

## Oxygen On The Moon!



The Moon has plentiful oxygen for future astronauts. It's lying on the ground! NASA researchers have developed a prototype device that can extract breathable oxygen from lunar soil!

[http://science.nasa.gov/headlines/y2006/05may\\_moonrocks.htm?list739819](http://science.nasa.gov/headlines/y2006/05may_moonrocks.htm?list739819)

## Scope Out Planning Meeting

*By Rick Hunter*

Our next meeting will be at 7 pm on Wednesday, June 21<sup>st</sup> in the west room of the Herget Building. The last two meetings will be on July 19<sup>th</sup> and August 23<sup>rd</sup>.

Now that we have a keynote speaker it's time to concentrate on committees and logistics

## FOTO Planning Meeting

*By Rick Hunter*

The next planning meeting will be held at Hyde Park Grill and Cafe on Thursday, June 8<sup>th</sup> at 6:00 pm. Planning meetings are open to all members.

At the last meeting only three people attended. I feel at a bit of a disadvantage making plans without more club membership participation. After all, a good way to improve the club is for members to voice their input during the planning meetings.

## Thanks to the Observatory Assistants

*By John Ventre*

The "Observatory Assistants" are the volunteers who work at the Cincinnati Observatory Center's public events. These events include the weekly Astronomy Thursday, Friday, Saturday and Sunday observing sessions, weddings, birthday parties, and special events such as the upcoming Jupiter Nights and ScopeOut '06. Their job description is "do whatever has to be done". Thanks to the following volunteers--the success of the COC would not be possible without their contribution of many service hours.

Thanks to: **Andy Arken, Anna Bailey, Diana Batsch, Stan Benson, Janet Canter, Gregory Carr, Elizabeth Champney, Paul Dehner, Sr., Evelyn Dohele, Carl Eastwood, Emily Ernst, Mary Fitzpatrick, Jennifer Flesch, Julie Glassmeyer, Bill Graser, Vincent Hammerstein, Michael Heflin, Leah Henize, Clare Hubble, Marilyn Kroll, Randy Krueger, Carol Lang, Monica Laumann, Megan McNames, Stephanie Mihalek, Denise Mustain, Dennis Parish, Chris Parrett, Wes Peters, Doug Ryan, Anne Schmid, Jason Spellmire, Karlheinz Stahl, Ed Stober, Swann Family (Kenneth, Debbie, Adrian & Austin), Kara Gebhart Uhl, Paul & David Vine, Bernie Wagner, Steve Wavra, Megan Whitt, Gary Wilkins, and Dale Zoller.**

## An Odd World



This stunning view of Saturn's moon Hyperion reveals crisp details across the strange, tumbling moon's surface. The view was obtained during Cassini's close flyby on Sept. 26, 2005.

## June's Trivia Question

*By Greg Huber*

The Greeks adopted what kind of model for the universe in 500-600 BCE?

Trivia Question from May:

What was the date of the first moon landing? And who were the first men to walk on the moon?

Answer

The first moon landing took place on July 20, 1969. Apollo 11 touched down with Neil Armstrong and Buzz Aldrin.

## Look Out, It's Jupiter



Right now, Jupiter is having a close encounter with Earth. The giant planet is very bright in the night sky and looks terrific through backyard telescopes.

FULL STORY at

[http://science.nasa.gov/headlines/y2006/04may\\_jupiter.htm?list739819](http://science.nasa.gov/headlines/y2006/04may_jupiter.htm?list739819)

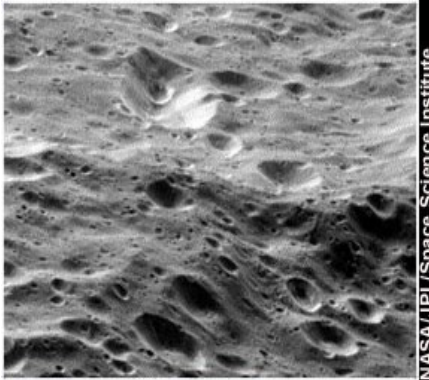
## The 36<sup>th</sup> Annual Apollo Rendezvous

At the Boonshoft Museum of Discovery, 2600 Dewese Pkwy., Dayton, OH

6-10 pm Friday, June 16<sup>th</sup> and  
9 am - 5 pm Saturday, June 17<sup>th</sup>

For maps and area accommodations go to [www.mvas.org](http://www.mvas.org). For more information please contact [ronsherman@earthlink.net](mailto:ronsherman@earthlink.net) or call 513-423-4717.

## Craters, Craters Everywhere



Craters within craters cover the scarred face of Saturn's moon Rhea in this oblique, high-resolution view. This is one of the highest-resolution images of Rhea's surface obtained during Cassini's close flyby on Nov. 26, 2005

## June FOTO Events

June 17<sup>th</sup>: Mars, Saturn Conjunction

June 16-17: Apollo Rendezvous in Dayton

June 21-24<sup>th</sup>: Star Quest at Greenbank, WV

## Did You Know....

The new Large Binocular Telescope will have 25 times the light collecting area, and 10 times the resolution of the Hubble.

## Backyard Approach Finds Extrasolar Planet



Three years of scouring the skies with a "homemade" telescope fashioned from commercially available parts has finally paid off for astronomer Peter McCullough.

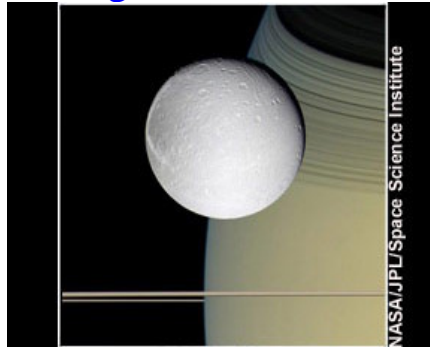
[http://www.space.com/scienceastronomy/060523\\_science\\_tuesday.html](http://www.space.com/scienceastronomy/060523_science_tuesday.html)

## Powerful Telescope To Be Built In Chile

A mountain peak in Chile has been chosen as home for a Tucson-based telescope project that will be able to scan the entire visible sky every three nights.

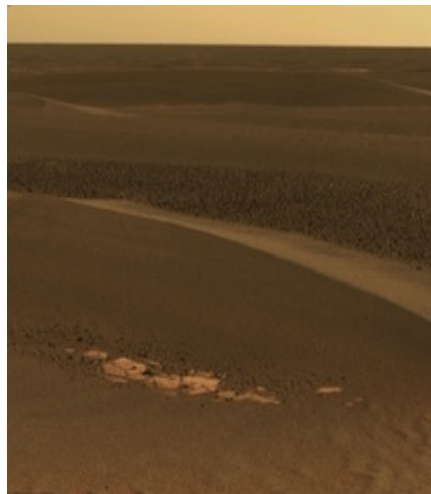
[http://www.space.com/scienceastronomy/060519\\_ap\\_lst\\_site.html](http://www.space.com/scienceastronomy/060519_ap_lst_site.html)

## Ringside with Dione



Saturn's moon Dione, with the planet and rings also viewable. The images were obtained with the Cassini spacecraft narrow-angle camera on July 14, 2005.

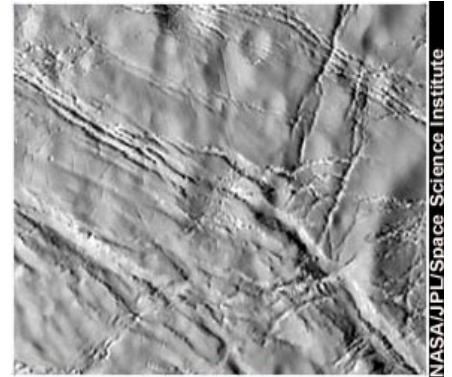
## Exposed Bedrock on Mars



NASA's Opportunity rover captured this photograph of the surface of Mars during its trek from Erebus Crater to Victoria Crater. The image shows exposed bedrock between large windblown sand ripples. Opportunity took the photo on April 27, 2006 during its 802nd Martian day of exploration.

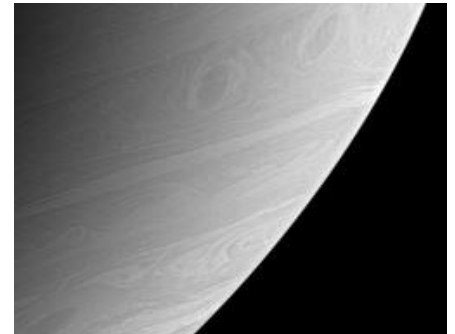
[http://www.universetoday.com/am/publish/mars\\_cobbles\\_meridiani.html?2252006](http://www.universetoday.com/am/publish/mars_cobbles_meridiani.html?2252006)

## Enceladus Fault Lines



This dramatic scene from Cassini illustrates an array of processes on Saturn's moon Enceladus, a once geologically active world. Most of the larger craters appear to have softened from their original, presumably crisp appearance, and are cross-cut here by numerous faults. Cassini acquired this high-resolution view of Enceladus during its closest encounter yet with any moon of Saturn. The image was obtained in visible light with the Cassini spacecraft narrow-angle camera on July 14, 2005

## Three Storms on Saturn



**Mon, 22 May 2006** - Three giant storms swirl across the atmosphere of Saturn in this photograph taken by Cassini - the two in the upper part of the photo appear to be interacting. This image was taken by Cassini on April 15 when the spacecraft was approximately 3.9 million kilometers (2.4 million miles) from Saturn.

[http://www.universetoday.com/am/publish/saturn\\_3\\_vortices.html?2252006](http://www.universetoday.com/am/publish/saturn_3_vortices.html?2252006)

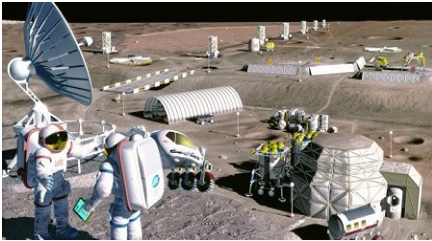
## Did You Know.....

There is a crater on Phobos which is 7 miles wide.

## The End of Small Galaxies

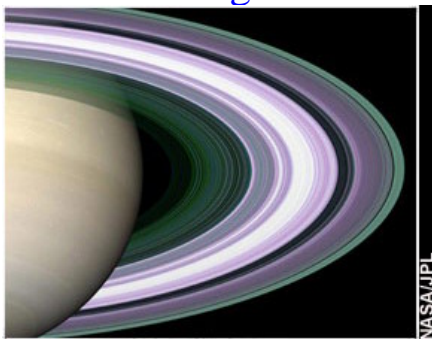
When the universe was young, countless dwarf galaxies formed, heating the universe and preventing the formation of more small galaxies, a new study suggests.[http://www.space.com/scienceastronomy/060521\\_dwarf\\_galaxy.html](http://www.space.com/scienceastronomy/060521_dwarf_galaxy.html)

## Hard-nosed Advice to Lunar Prospectors



A 22-year veteran of prospecting and mining on Earth has some no-nonsense advice for lunar explorers.  
[http://science.nasa.gov/headlines/y2006/22may\\_beaty.htm?list739819](http://science.nasa.gov/headlines/y2006/22may_beaty.htm?list739819)

## Unraveling Saturn's Rings



Specially designed Cassini orbits place Earth and Cassini on opposite sides of Saturn's rings, a geometry known as occultation. Cassini conducted the first radio occultation observation of Saturn's rings on May 3, 2005.

### Did You Know.....

By canceling the overwhelming glare from bright stars, the new Large Binocular Telescope will finally make direct observation of extrasolar planets possible.

## Craig's Corner

By Craig Niemi

Observatory Executive Director

Because Bill's deadline was the day after Val & I returned from a week's vacation in Utah there's not a lot of news to report this month.

At over 8,000 feet Bryce Canyon National Park is renowned for its clear, dark, night skies and we looked forward with great anticipation to some remarkable binocular viewing. The daytime skies were a startling clear deep blue which contrasted with the richly colored canyon walls. The evenings, of course, were cloudy. One advantage of astronomy in Cincinnati is that you accept the occasional cloudy night with quiet grace and dignity. Yeah right.

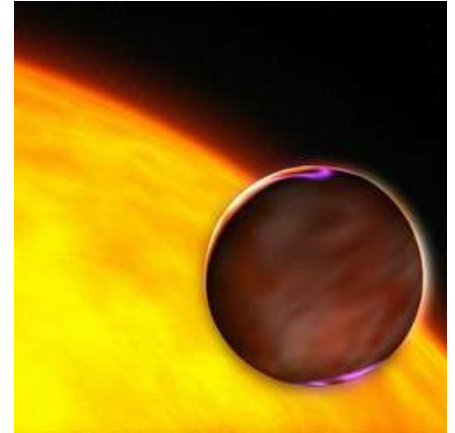
In case you haven't picked up a brochure at the Observatory, the *Cincinnati Preservation Association* and *Architreks* are holding guided walking tours of downtown, Over-the-Rhine, Findlay Market and Mt. Adams. COC board member Jim Steiner is one of the guides for the Mt. Adams tours. 2nd Wednesdays & 3rd Saturdays at 10am. Only \$10 for adults, \$5 for children. The tours leave from the corner of St. Gregory and Pavilion streets. Of course the site of the original Observatory and its history are features of the tours. Whether you're a FOTO astronomer, a FOTO historian or a little of both, the tours will be of interest.

## Spying A Cloud Of Alcohol Spanning 288 Billion Miles

Astronomers based at Jodrell Bank Observatory have discovered a giant bridge of methyl alcohol, spanning approximately 288 billion miles, wrapped around a stellar nursery. The gas cloud could help our understanding of how the most massive stars in our galaxy are formed.

<http://spaceflightnow.com/news/n0604/04alcohol/>

## Amateur Team Finds an Extrasolar Planet



Amateur astronomers have used inexpensive equipment to discover a Jupiter-sized planet orbiting a Sun-like star 600 light-years away. The team used the "transit method", to watch how a star dims slightly as a planet passes in front.

An automated telescope observed tens of thousands of bright stars, and then the team chose a few dozen promising candidates. The new planet, dubbed X0-1b is the 10th planet ever discovered using the transit method.

### Did You Know....

The Large Binocular Telescope's on Mt. Graham in Arizona weighs in at 18 tons. It's two primary mirrors each are 8.4 meters in diameter, the largest ever made from single pieces of glass.

## XMM-Newton Survey Shows Secrets Of The X-Ray Sky

The European Space Agency's XMM-Newton X-ray observatory has already been a spectacular success in many areas of astronomy - detecting distant clusters of galaxies, the faint afterglow of enigmatic gamma ray bursts and the effects of the collision of the Deep Impact probe with comet Tempel 1.

<http://spaceflightnow.com/news/n0604/04xmmslew/>

## Light's Most Exotic Trick: So Fast It Goes...Backwards?

In the past few years, scientists have found ways to make light go both faster and slower than its usual speed limit, but now researchers have gone one step further: pushing light into reverse. As if to defy common sense, the backward-moving pulse of light travels faster than light.

<http://spaceflightnow.com/news/n0605/14light/>

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## New Theory Explains Origin Of Neptune's Oddball Moon



Neptune's large moon Triton may have abandoned an earlier partner to arrive in its unusual orbit around Neptune. Triton is unique among all the large moons in the solar system because it orbits Neptune in a direction opposite to the planet's rotation (a "retrograde" orbit). It is unlikely to have formed in this configuration and was probably captured elsewhere.

<http://spaceflightnow.com/news/n0605/14triton/>

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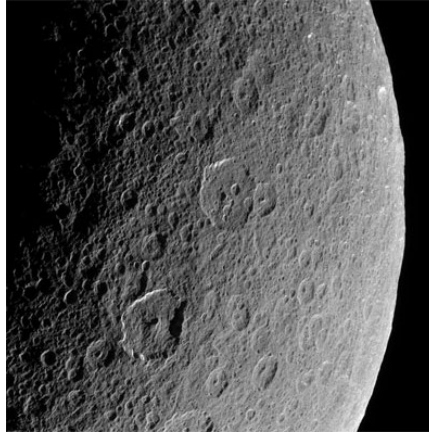
## Two Supermassive Black Holes Spirling Toward Collision

A pair of supermassive black holes in the distant universe are intertwined and spiraling toward a merger that will create a single super-supermassive black hole capable of swallowing billions of stars, according to a new study by astronomers.

<http://spaceflightnow.com/news/n0604/06blackholes/>

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## The Record Of Rhea

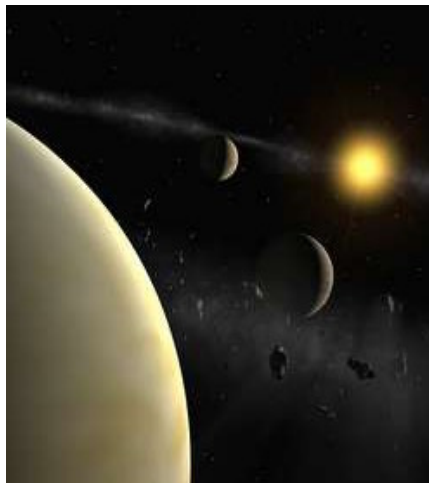


Cassini looks down upon Saturn's moon Rhea, whose cratered surface was already ancient before any complex life developed on Earth. The terrain seen here has probably changed little in the past billion years.

<http://spaceflightnow.com/cassini/0605/14rhea.html>

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## Three Neptunes Orbiting Another Star

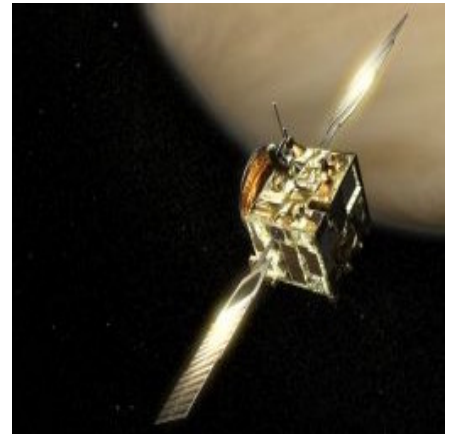


Astronomers have discovered a nearby star that's home to three Neptune-sized planets; no super-Jupiters here. The star, HD 69830, is located 41 light-years away in the constellation of Puppis. With magnitude 5.95, it's just possible to see with the unaided eye. The discovery was made using the European Southern Observatory's 3.6 meter telescope at La Silla in Chile. The planets orbit their star in 8.67, 31.6 and 197 days respectively.

[http://www.universetoday.com/am/publicish/trio\\_neptunes\\_belt.html?1952006](http://www.universetoday.com/am/publicish/trio_neptunes_belt.html?1952006)

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## Venus Express Reaches Final Orbit



Less than one month after slowing into orbit, and after 16 loops around the planet Venus, the European Space Agency's Venus Express reached its final operational orbit on May 7<sup>th</sup>.

[http://planetary.org/news/2006/0509\\_Venus\\_Express\\_Reaches\\_Final\\_Orbit.html](http://planetary.org/news/2006/0509_Venus_Express_Reaches_Final_Orbit.html)

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## Massive Stars Slowed Early Galaxy Growth



Shortly after the Big Bang, large clouds of hydrogen collapsed easily into the first galaxies and stars. These weren't stars like our Sun; however, they were hot, massive and very short lived - blasting their environment with ultraviolet radiation. But after the first 100 million years of the Universe, it became very difficult for these dwarf galaxies to grow any larger as this radiation sabotaged further growth. Only the gravity of the largest galaxies could overcome this heat and pressure to grow into larger galaxies over time.

[http://www.universetoday.com/am/publicish/big\\_galaxies\\_eat.html?1952006](http://www.universetoday.com/am/publicish/big_galaxies_eat.html?1952006)

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