

Friends of the Observatory

e-Newsletter

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Bill Cartwright, editor wcartw@aol.com



A Letter from Our Newly Elected President Bosse

Well, I've stepped in it now. With both feet, I suppose. After years of excusing myself from nominations for FOTO officer positions with the reasoning of waiting for my retirement, I could no longer refuse this year. Not even retired a month, I now find myself in the most honored position of president of FOTO.

I invite the membership to come out to the November meeting to witness firsthand the initiation of the up-coming year's collection of excitement, both Astronomical and Observatorial (As president, I am allowed to make up new words. W does it all the time!)

Actually there are lots of reasons to come to the November meeting. We'll be playing our own version of "Survivor!" as **Valerie Niemi** will be leading us through an exercise of survival planning after a crash-landing on the moon. It should be great fun!

There is also much going on to talk about this month: the transit of Mercury; **Dava Sobel's** visit; the Leonid meteor shower; the return of Standard Time; and though Comet Swan is diving towards the Sun, but it still remains a fine binocular object.

We'll also be collecting reservations for the December meeting Appreciation Dinner, so be sure to consider attending the December meeting on December 7th and sign-up at the November meeting.

All the officers and myself wish to thank everyone who supported us and we also want to join everyone in issuing a special thanks to the outgoing officers for a magnificent job well done!

FOTOKids Meeting

By Mike Helfen

FOTOKids next meeting will be Friday, November 3rd at 7:30 pm. (Note: **Time Change!**) For November and December, we have a special presentation by **Dan Kuntz** about the Solar System. November will be about the Sun and planets in our solar system, while December will be about the scale of the solar system. Come see if there will be eight or nine planets discussed.

As announced at the October meeting, **Dean Regas**, Outreach Astronomer at the Observatory, will be taking over the reins of FOTOKids in January.

FOTOkids is an astronomy club for kids 8-14+ years of age who have a deeper interest in astronomy and want to attend monthly meetings.

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 or 513-378-2134.

The FOTO Election Results

With no hanging-chad issues to resolve, the October meeting was highlighted by the closest elections in FOTO's history. When it was all said and done (and counted), a new set of officers was ushered in for the upcoming year. The new officer corps consists of:

President – Dave Bosse
Vice President – Valerie Niemi
Secretary – Linda Magee
Treasurer – JoAnne Pedersen

Congratulations to the new officers and thanks to all who participated in the election process.

FOTO's Monthly Meeting

Our next club meeting will be held at the Observatory on **Thursday, November 2nd** at 7:30 pm. Last month our presenter was Scott Nutter from NKU.

FOTO Planning Meeting

By Dave Bosse

Because all of our schedules are so whacky, the planning meeting will move around probably from month to month. At least for a while.

The planning meeting in November will be the third Tuesday, November 21 at 6:00 PM at the Hyde Park Plaza Panera. We're going to try to get the little meeting room that they make available if we spend (collectively) 50 bucks or so. Come one, come all.

Craig's Corner

By Craig Niemi
COC Executive Director

Autumn got off to a terrific start with the annual *ScopeOut Astronomy & Education Fair*. **Dr. Sten Odenwald** gave two wonderful talks. Our thanks again to FOTO for putting together a great event.

And thanks to Jim Lubic of the *American Watchmaker's Institute* (Harrison, Ohio) who along with FOTO members helped repair the 1904 Clark telescope. And just last week **John Ventre & Jim Groen** did some much needed maintenance and lubrication on the Mitchel dome shutter. It now opens and closes much easier. Paul would be proud.

Don't forget to reserve your spot for the **Dava Sobel** lecture coming up on November 8th. Thanks to Dean for setting this up. It's a great opportunity to showcase the Observatory to someone very prominent in the astronomy community.

The Observatory may be getting international exposure soon through the efforts of **John Ventre**. At a recent rental John made contact with a local Sky & Telescope magazine

representative who was impressed to say the least. (*was there any doubt?*). Plans are being made for an article detailing the history of your Observatory, the renovation, current educational programming and our future. Rental events can be a lot of work, but they sometimes have the potential to do the Observatory a lot of good beyond the rental income.

Hope to see you at the Observatory soon.

Craig

John Ventre and His First Mobile Telescope?



Just an accident waiting to happen? Imagine seeing this in your rear view mirror on I-71!

Stonelick Lake Star Parties

By Scott Naylor

Our next Star Party will be Friday and Saturday, November 18, with a cloud date of Saturday, November 25th.

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

Did You Know....

Gravity is the attractive "force" that exists between every object in the universe. Gravity is weaker than other fundamental forces, but because it acts over great distances, and between all bodies possessing mass, it has played a major part in shaping the universe.

"The Planets"

World Renowned Author Dava Sobel to Speak in Cincinnati

Dava Sobel, known for popularizing science and expanding the genre of non-fiction will speak about her latest book, The Planets. She has written for *Omni*, *Discover*, *Audubon*, *Life*, and the *New Yorker*, but is most famous for her books Longitude and Galileo's Daughter.

Ms. Sobel will speak at the Clark Montessori School, 3030 Erie Avenue in Hyde Park on Wednesday, November 8th at 7:00 pm.

It's just west of the intersection of Delta and Erie. Take a right on Delta from Observatory, turn left on Erie and the driveway is on the right. There will be signs and people directing visitors where to go from there.

Admission is Free

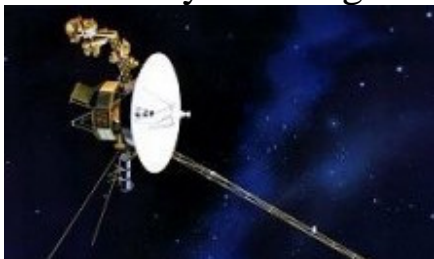
A reception and book signing will be held at the Observatory following the lecture (8:30-10:00pm), including viewing of the night sky through the Observatory's historic telescopes.

Reservations recommended. For more information or to make reservations, please call 513-321-5186.

Remodel the Observatory?



Surprises From The Solar System Edge



NASA's Voyager 1 spacecraft has entered a new realm of space, and it's beaming back some surprises. http://science.nasa.gov/headlines/y2006/21sep_voyager.htm?list739819

Stargaze in Kenton County Banklick Woods Park

You and your telescope are invited to join the Cincinnati Observatory Center sponsored public star gaze in Banklick Woods Park in Kenton County, Kentucky on Saturday, October 28th.

A short program will be presented in the Public Works Building at 7:30 p.m. regardless of the weather conditions. The star gaze, assuming clear skies, will start at 8:15 p.m. Set up your telescopes in Picnic Area #2.

Please let **John Ventre** know if you're planning to bring a telescope. Contact him: jeventre@ix.netcom.com or 513-321-5186, extension 4.

The program "Phases of the Moon" will be presented by John Ventre, the COC Historian.

Directions to Banklick Woods

From the I-275 and Turkeyfoot Road intersection, go south on Turkeyfoot Road for approximately 4 miles. You will come to a 5-way intersection (note: neither a stop sign nor traffic light at the intersection for Turkeyfoot Rd.) with a Sunoco Foodmart on the left. Turn left (east) on Independence-Station Road—immediately past the Sunoco foodmart, and go approximately two miles. Banklick Woods Park will be on your left, after passing the Kenton County Golf Course on your left.

The Kenton County Park Board will advertise this star gaze in the Kentucky Post, their regional newspaper, the park news, and their local cable networks.

The Schiff Report

*By Charlie Schiff, President
Cincinnati Observatory Center Board*

Good words regarding the Observatory seem to be spreading far and wide. **Craig Neimi** has welcomed a slew of high profile guests in the last few months as our reputation reaches broader ground.

Nancy Zimpher, President of the University of Cincinnati, came by one afternoon in late June. It was her first trip out the "O" and she was anything but coy when she marveled at what has been accomplished. What most caught her eye, beyond the exquisite renovation of the buildings, was the quality and scope of the educational programs being offered. She made it clear that she would make a special effort to bring some of her colleagues out to our campus with plans of partnering with UC for the future.

September rolled in and **Willie Carden Jr.**, Director of the Cincinnati Park Board, stopped by. Willie strolled the grounds with a few COC trustees while Craig offered a brief history of the "O" and its accomplishments. It was standing in the shadow of the 1904 Alvin Clark that Willie's enthusiasm began surging forth. He raved about the grounds and the buildings and praised specifically the network of volunteers that keep the place open and running so smoothly. His parting words were "What can we do to help?"

Finally, **Aaron Betsky** visited the Observatory last week. You may not know Aaron yet. He is taking over the position of President of the Cincinnati Art Museum from his current post of Director at the Netherlands Architecture Institute. His job at the CAM doesn't even begin until the second week of November, but he made a special effort to swing by the Observatory when he was in town for a couple of days. He and Craig opened a dialogue between the two organizations that, I'm sure, will reap mutually beneficial rewards.

Here are three prominent—well two prominent and one soon to be prominent—Cincinnati all making a special effort on behalf of the Observatory. All came and were impressed enough by what we have and

what we offer to lend their services to the greater good.

For this—and just like every other volunteer that puts forth for the "O"—they have each individually, and for the institutions they represent, gained a friend in me.

In the end, I'd like to recognize the Observatory and the energy it inspires in all us. This includes the myriad ways that each of us offers support.

I encourage all of the members to show thanks to the Observatory's volunteers by supporting their endeavors, their businesses, and, if nothing else, to them personally for their efforts.

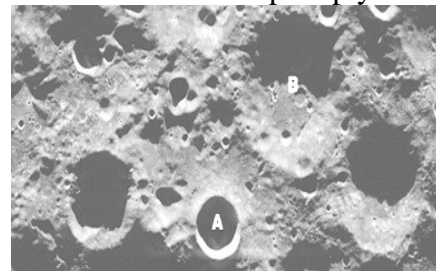
As volunteers, we all have something to offer and we are offering it willingly and freely. Some give their service. Some donate financially. Some both. All is given magnificently and merits our highest respect and appreciation.

As always, thanks to everyone for your commitment to the Observatory's mission.

-Charlie

Water Ice On Moon Unlikely

Despite earlier hints of ice at the lunar poles, scientists' latest search comes up empty.



The lunar south pole is about on the center of the left rim of Shackleton Crater (A), 19 km in diameter. The Lunar Prospector orbiter impacted Shoemaker Crater (B), 51 km in diameter. The image was made in April 2005 by transmitting from Arecibo Observatory in Puerto Rico at 13 cm wavelength and receiving the radar echo with the Robert C. Byrd Green Bank Telescope in West Virginia. <http://www.astronomy.com/asy/default.aspx?c=a&id=4601>

NASA's New Mars Camera Gives Clear View Of Planet



Rocks and surface features as small as armchairs are revealed in the first image from NASA's Mars Reconnaissance Orbiter since the spacecraft maneuvered into its final, low-altitude orbital path. The imaging of the red planet at this resolution heralds a new era in Mars exploration. <http://spaceflightnow.com/news/n0609/29mrohirise/>

November's Trivia Question

By Greg Huber

When did the Egyptians correct the problem (see October's answer below) so the year was 365 days long?

October's Question

What culture in 5000 BC had a calendar of 360 days spaced evenly in 12 months?

The Answer

The Egyptians developed a 360 days, 12 month calendar over 7,000 years ago! Not bad huh? But it had a few problems! (See November's question)

Did You Know....

Denver has a new breed of fully digital planetarium domes that make programs like "Black Holes: The Other Side of Infinity" possible. Eleven digital projectors, orchestrated by a \$1.5 million computer, combine to create images on the 56 foot dome.

Why not have one here in Cincinnati?

Transit of Mercury

Rare Alignment of the Sun and Mercury Visible at the Observatory

The viewing at the Observatory will be held when planet Mercury crosses in front of the Sun on Wednesday, November 8th from 2 – 5 pm. This rare alignment occurs only 13 times per century and is a unique opportunity to see the elusive planet.

A donation is requested to help cover costs

For more information call 513-321-5186.

Warning: never look directly at the Sun without special filters. The Observatory will provide safe viewing with filters on their historic 1843 telescope.

Most people have never seen Mercury and this year is your best chance.

Open House Luminaria Night

Sunday, December 17th, 7-9pm

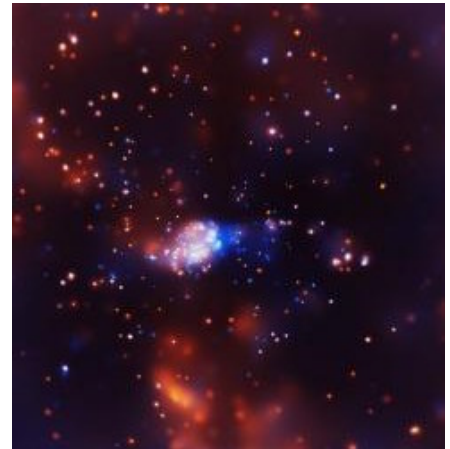


As Mt. Lookout celebrates its annual Luminaria Night by lighting the sidewalks, the Observatory will be open to see the lights of the sky.

The Open House will have both telescopes open up for viewings along with light refreshments. The gift shop will be open as well for any of those last minute holiday gifts. Bring the entire family along with your friends and neighbors. This is a great time to show off the Observatory to everyone.

And to top it all off, there will be hay rides and caroling from 7-9pm.

Star Formation in NGC 3576



This photograph shows a star forming region in NGC 3576, located about 9,000 light years from Earth. The image was captured by NASA's Chandra X-Ray Observatory, which reveals the higher energy emissions from the region. The blue dots are newly born stars generating ferocious solar winds (the more diffuse parts of the image). NGC 3576 is a particularly dense nebula, so many of these stars have been hidden from previous observations, until they were revealed by Chandra.

<http://www.universetoday.com/2006/09/27/star-formation-in-ngc-3576/>

Word of the Month

By Greg Huber

"Periapsis"

October's word: "Osculating orbit"
An Osculating orbit is basically a 7th grade text book orbit. It is an orbit of a celestial body about another body if no other forces acted upon the orbiting body. In reality there are many deviations from this "perfect" orbit due to other planets or tidal forces.

Comet Swan

There's a new comet in the night sky, Comet Swan. It's a trifle too dim for naked-eye viewing, but it is an easy target for binoculars and small telescopes. Observers report a "spectacular" emerald-colored head and a long sinuous tail. Visit <http://spaceweather.com> for sky maps and more information.

Welcome New FOTO and COC Members!



Kaycie Robertson
Tom Navaro
Harold Schuck
Diana Batsch
Steven Goldstein
Dale Gloeckner
Ernst Grossman
John & Karen Noble
David & Jean Patterson
Patricia Sheppard
Greg Huber
Michael Stoehr
Heather Duncan
JoAnne & Poul Pedersen
James Garvey
Rosell & Nick Shundich
Robert Anning
John & Stella Cottam
Raymond & Mary Dasenbrock
Ellen Sewell
Joe Nelson
Murray & Amy Wilson
Timothy & Margaret Ehrman

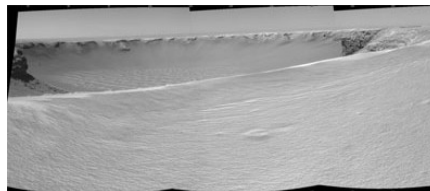
Correction: The title of an article on page 6 of the electronic version of the October Newsletter should have read "Mnemonic for Remembering the Names and Sequence of Eight Planets, Without Pluto."

College Level Astronomy Classes

Come out and learn! Richard Hamilton, Assistant Professor at Xavier, will lead these Xavier University classes on Sunday evenings, November 5th and November 19th, from 7-9 pm. They will be in the Mitchel Building.

Richard invites all FOTO members to attend at no charge for the remainder of this semester (November and December), to see if they might want to sign up for the next semester.

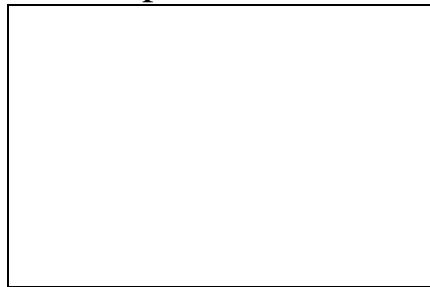
Opportunity Rover Arrives At Dramatic Vista



NASA's Mars Rover Opportunity has arrived at the rim of a crater approximately five times wider than a previous stadium-sized one it studied for half a year. Initial images from the rover's first overlook after a 21-month journey to "Victoria Crater" show rugged walls with layers of exposed rock and a floor blanketed with dunes.

<http://spaceflightnow.com/news/n0609/27merbvictoria/>

Dark Cloud in the Atmosphere of Uranus



Just as we near the end of the hurricane season in the Atlantic Ocean, winds whirl and clouds churn 2 billion miles away in the atmosphere of Uranus, forming a dark vortex large enough to engulf two-thirds of the United States <http://hubblesite.org/newscenter/newsdesk/archive/releases/2006/47/>

The Wild Sun

No, it's not science fiction. Space artist [Mark Seibold](#) really did see this through his solar telescope on Oct. 13th:



Rendered in pastel: the view through a [SolarMax40](#) solar telescope.

It's a prominence--a glowing cloud of solar hydrogen held together by magnetic force fields. All weekend long, it danced along the sun's limb, mesmerizing photographers and artists alike. "I couldn't resist making this spirited pastel sketch," says Seibold.

The bad news: It's gone now--erupted! But don't put away your pastels. Big prominences pop up every week or so. <http://spaceweather.com/>

The Time Ball

By John Ventre

Last spring a generous donor funded the design and replication of the Observatory's 1880s Time Ball. The old astronomers would raise their Time Ball to the top of a 60 foot pole and then drop it precisely at noon time. This procedure communicated accurate time (noon time) to the families who could view the dropping of the time ball.

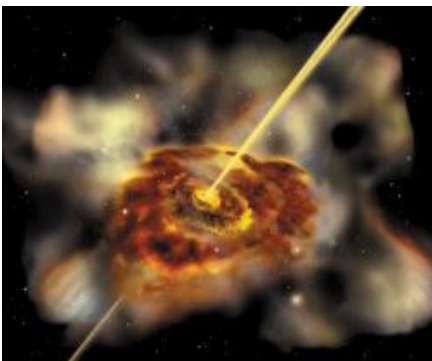
Approximately six months ago a professor at UC indicated that he would consider using the Observatoire's Time Ball as a class design project, but when the new school year started he opted not to incorporate the project in his class assignment. Consequently a museum exhibit design/construction company has been contacted to determine if they will provide the COC with a quote to design and build the Time Ball.

Nearly a Thousand Years After the Death of a Star



In 1054 A.D., Chinese astronomers recorded the temporary brightening of a star in the constellation Taurus. Nearly 1000 years later, we look in the same region and see the exploded remnants of a dead star: the Crab Nebula. This composite photograph of the Crab Nebula was made by merging images from Hubble, the Chandra X-Ray Observatory, and the Spitzer Space Telescope. It shows only a hail of high-energy particles and expanding debris cloud that once was a massive star. <http://www.universetoday.com/2006/10/24/nearly-a-thousand-years-after-the-death-of-a-star/>

Black Holes About to Get Active Again



Astronomers have identified two distant supermassive black holes, or quasars, which might be about to get much brighter. New data from the Spitzer Space Telescopes show that the vicinities around the black holes could be backing up with excess matter - the black holes just can't consume it fast enough to clear the space. When this

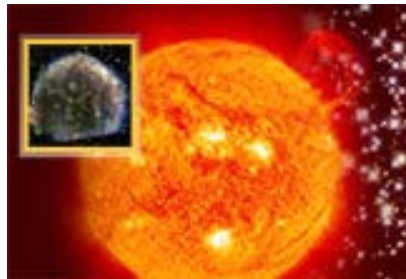
happens, the matter heats up, and releases a tremendous amount of energy. Some theories propose that these explosions could be so powerful they stop star formation in a galaxy. <http://www.universetoday.com/2006/10/24/black-holes-about-to-get-active-again/>

Museum Cataloging Project

By John Ventre

The project of cataloging the museum artifacts continues with the assistance of some volunteers, such as Rebecca Shundich. A professional museum cataloging software program is being utilized. Additional volunteers who would enjoy the challenge of the cataloging process would be appreciated.

In Formative Years, the Sun Had Sisters



The [Sun](#) had sisters when it was born, according to new research, hundreds to thousands of them.

And at least one was a [supernova](#), providing further support for the idea that there could be lots of [planets](#) around other [stars](#) since [our solar system](#) emerged in such an [explosive environment](#).

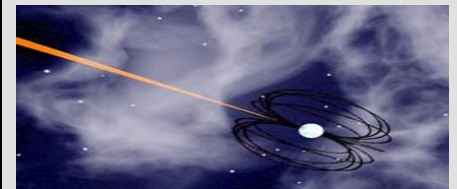
"We know that the majority of stars in [our galaxy](#) were born in star clusters," said Leslie Looney, who arrived at the solar sibling finding along with his colleagues at the University of Illinois at Urbana-Champaign. "Now we also know that the newborn solar system not only arose in such a cluster, but also survived the impact of an exploding star. This suggests that planetary systems are impressively rugged and may be common in even the most tumultuous stellar nurseries." http://www.space.com/scienceastronomy/061024_sun_sisters.html

Instrument Committee

By John Ventre

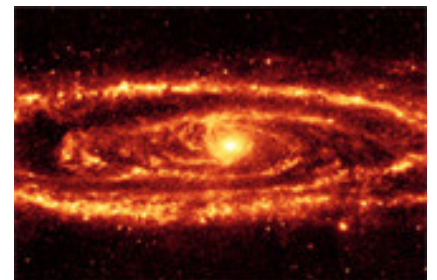
One of Paul Nohr's duties included the maintenance of the Observatory's telescopes and instruments. Since Paul died the responsibility of performing maintenance on the telescopes has been transferred to a new Instrument Committee. In addition to performing routine and emergency maintenance the committee members will prepare a maintenance manual that will record what, how and when maintenance is to be performed. The new Committee members include: **Scott Gainey, Jim Groen, Bruce Lott, Craig Niemi, Poul Pedersen, Steve Scholl, Kirk Schrotel and John Ventre** (Chair).

Did You Know....



A new class of stars called rotating radio transients (RRATs) can be fickle flashers. They are massively compressed neutron stars that intermittently send out bursts of radio waves that can last for as few as two milliseconds with dark gaps lasting as long as three hours.

Small Galaxy Punches Hole In Andromeda



Our giant neighboring galaxy, Andromeda, was involved in a head on collision with the dwarf galaxy, M32, some 210 million years ago, scientists announced today.

http://www.space.com/scienceastronomy/061018_andromeda_collision.html

Cosmic Rays Linked to Global Warming



Earth's recent [warming trend](#) might in part be due to a lack of starlight reaching our planet..

According to a theory proposed a decade ago, when a star explodes far away in the [Milky Way](#), [cosmic rays](#)—high-speed atomic particles—go through the [Earth's](#) atmosphere and produce ions and free electrons.

The released electrons act as catalysts and accelerate the formation of small clusters of sulfuric acid and water molecules, the building blocks of [clouds](#). Therefore, cosmic rays would [increase](#) cloud cover on Earth, reflecting sunlight and keeping the planet relatively cool.

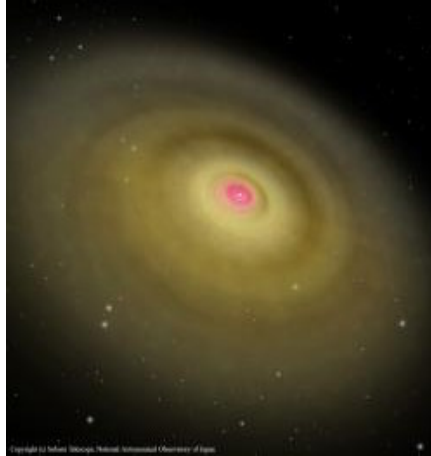
However, because the [Sun's](#) magnetic field—which shields the Earth from these rays—doubled in intensity during the last century, there has been a reduction in cloudiness, a possible contributor to [Earth's warming](#). http://www.space.com/scienceastronomy/061023_rays_warming.html

Strong Leonid Meteor Shower Expected Saturday, Nov. 18th



If you live in Western Europe or eastern North America, put a big circle on your calendar around Saturday, Nov. 18. http://www.space.com/scienceastronomy/061017_leonids_2006.html

Young Star Grows Up Quickly



New images from the Japanese Subaru telescope show how a nearby young star ended its infancy rapidly. The star, called HD 141569A, has a hole in the disc of gas and dust surrounding it. Astronomers think that the star rapidly ionized its surrounding gas, and then pushed it away with its intense solar radiation. The gap is located about the same distance from the star as Saturn's orbit, and it lends additional evidence to theories about how discs of material evolve around young stars. <http://www.universetoday.com/2006/10/25/young-star-grows-up-quickly/>

Did You Know....

On Phobos a weightlifter could hoist up to 900,000 lbs.

Comet Outburst

On October 25th astronomers reported that Comet Swan has suddenly increased in brightness 4-fold, from magnitude +6 to +4.5.

This makes it a naked-eye object in dark skies and a lovely sight through backyard telescopes.

The cause of the outburst: A new vein of volatile ice may have opened up in the comet's nucleus. Solar heating transforms this freshly-exposed material into streams of bright, reflective gas and dust. Indeed, backyard telescopes seem to show new tendrils of gaseous material in the comet's long tail.

Visit <http://spaceweather.com> for sky maps, images and more information.

From Cosmic Crash-up, Beauty and Birth



A cosmic clash between two galaxies yields a stunning look into the birth of billions of stars.

Known as the [Antennae galaxies](#), these two merging objects have spent the last 500 million years fusing into one. This image taken by the [Hubble Space Telescope](#) is the sharpest ever of the galactic smash-up.

The Antennae are two spiral galaxies pinwheeling into one another, with the resulting collision spurring the formation of bright, compact stellar groups known as super star clusters. The collision itself is among the nearest to Earth, as well as the youngest example of crashing galaxies.

Almost half of the objects seen in the Antennae galaxies are young clusters with tens of thousands of individual stars. The orange blots to the left and right of this image's center are the only reminders of the Antennae's two galactic cores, and sport old stars swathed in filaments of dark dust.

The blue areas are active star-forming regions nestled within pink hydrogen gas.

http://www.space.com/imageoftheday/image_of_day_061018.html



This is THE END