

Friends of The Observatory Newsletter

November 2003
Phone 513-321-5186

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A (first) Letter From President Niemi

Dear Friends,

Thanks for your encouragement in electing me as president of your club. It goes to show that you don't have to know anything about astronomy to help out in an astronomy club. It was great to see lots of nominations for all the positions, especially from new members. It's a sign of a healthy group. And thanks to Greg for all his years of leadership all the way to the beginnings of FOTO! After 99 meetings Greg is going to spend some well deserved time with Beth and little Ashton. But don't think he's going away. In fact Greg is still hard at work for FOTO and will be giving this month's program.

I don't expect any real changes in FOTO's mission or direction. We're here to help support the COC, learn something about the universe we live in and maybe something about ourselves. Before joining FOTO and CAS just a few years ago I would have never pictured myself being on a board of trustees, giving history tours and presentations, or sharing the sky at star parties. I hope everyone takes advantage of all the opportunities that being a FOTO member offers. From telescope making, star parties, astro-imaging, to Paul's terrific classes there are many to pick from. I've learned more

about astronomy since joining FOTO than I could have ever hoped to pick up on my own.

All your volunteer efforts make FOTO and COC vibrant and exciting organizations. As a small way to repay all your hard work the December FOTO meeting will be a catered affair. See the article in this issue and be sure to sign up at this month's meeting.

If you have any questions about, or suggestions for your club, catch me at the Observatory, or drop me a note at "craig_niemi@yahoo.com".

See you at the Observatory!

Did You Know....

The atmosphere on Venus is a top and bottom layer of carbon dioxide with a layer of sulfuric acid sandwiched in between.

Our Monthly Meeting

Please come out and join us for our monthly meeting Thursday, November 6th, 7:30 PM at the Observatory.

Greg Huber is going to do is first program as a plain civilian. He'll talk about the IKONOS satellite and some of its remarkable images.

The Planning Meeting

Note: The FOTO Planning Meeting has been permanently moved to the third Thursday of the month.

We'll meet next at 6 pm on Thursday, November 20th at Indigo's on Hyde Park Square. It's on Erie near the SW corner of Erie and Edwards.

Did You Know....

Magnetism and solar flares go together. On the sun, flares happen when magnetic fields above sunspots become twisted and stretched. They're like rubber bands pulled too tightly. Snap! They recoil with explosive results. Physicists call this "magnetic reconnection."

Stonelick Lake Star Parties

By Scott Naylor

Our Star Party will be Saturday, **November 22nd**, with a cloud date of Saturday, November 29th. These parties are 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.

ScopeOut 2003 Wrap-Up

By Craig Niemi

Thanks again for everyone's hard work to pull off this year's event! We were a little surprised by the attendance figures. The assumption was that we would draw a lot of folks from our Mars events and media coverage. Attendance was about the same as last year. It turns out the media was tired of hearing about the Observatory (something I can't fathom) and Mars ceased to exist as far as they were concerned. We held a wrap up meeting to see what worked and didn't. Below are some of the ideas we discussed. The ScopeOut Committee welcomes your input and participation. We'll be preparing much earlier for ScopeOut 2004, which will be September 25th.

Overall

- The basic premise of ScopeOut as an event for novices, families' and kids' is sound. We're not trying to compete with other events such as Astrofest or Apollo Rendezvous.
- The day's events generally went smoothly. 2004 will keep the same overall plan. The talks did not seem to run over and the partitioned tent saved a lot of time and effort during the day of the event.
- For the work involved should ScopeOut be an annual, bi-annual, tri-annual event?
- Change the name: ScopeOut '04 "an astronomy festival, fair, day for the whole family/beginner? Something with a broader appeal. Chuck's working on it.

Public Relations

- We are old hat to the media. We need a recognized speaker. Alan Bean, Storey Musgrave, possibly an astronaut for the speaker (daytime, evening or both).
- UC Physics maybe interested in funding a speaker. Link their ScopeOut visit with their talk.
- How do we target kids and families? Door prize just for kids? Return the Kids art exhibit. Are there kid's/families events that COC/ ScopeOut should participate in?
- Need increased frequency in advertising.

- Print up a flyer now for distribution. Chuck is working on a half page flyer.
- Promote ScopeOut regionally as a "One Tank" trip in AAA magazine and media in neighboring metropolitan areas, Lexington, Indy, etc.
- Starting now, every presenter hands out to visitors COC/FOTO info packets at the start of each talk. Packets include COC history, membership, ScopeOut flyer, special events (eclipse, comets, Starlight-Starbright, etc).
- 16" Clark telescope centennial.
- NEH humanities lecture series to promote ScopeOut. Possible topics: Urban development, architecture, Amateur Telescope Society meeting, history of telescopes, history of science and astronomy.

Registration

We identified several areas that hopefully will make life easier for the volunteers at the registration table.

- Add another table for visitors completing door prizes slips.
- Move registration area closer to the Herget building to narrow the entrance.
- "Please Sign in at Registration Table" signs near circle for people who walk up.

Door Prizes/Raffles

- Hold hourly door prize drawings and save a few bigger ones at the end of the day. If so, how not to conflict with the talks during the day?

Parking

- Rope off paths and have signs in parking area directing people to the registration table. Get outside organization volunteers for parking duty.

Talks

- We received positive feedback on the talks from several vendors. Announce talks and day's events with PA system.

Activities

- Any suggestions you have for activities with a kids/family appeal?
- Quark rocket group. Stomp rockets for kids.
 - Solar System races for kids? They seemed to like racing to Pluto along Bill Schultz's planet walk.
 - Combine Telescope Clinic and Ask the Astronomer into one tent or area. Signs with sample questions. Why is the sky

blue, why seasons? What are the 10 things everyone should know about astronomy?

- History/Tour Booth inside the Herget building. Station presenters in both domes and the Herget lobby.
- Prepare FOTO, COC, Ask-the-Astronomer and Kids areas beforehand. Displays, signs, handouts, things to buy, activities.
- Return the Kids art exhibit.
- Astronomy/Science education exhibits with UC, Xavier, NKU, etc., to highlight studies and possible science careers.

Budget:

- Solicit donations early. Sponsors, money, drinks, snacks, pizza, EZ-Up tents.

Grounds:

- What can we use the dinner side of the tent for during the day without interfering with dinner/lecture set up?
- Walkie-talkies or radios to make it easier to find committee members during the event.

Wait'll Next Year

If you want to plan ahead, ScopeOut 2004 will be on September 25th.

Did You Know....

Direct sunlight on Pluto would look like it does on Earth a half hour after sunset.

First Lego League Robotics-2003 Mission Mars

By John Ventre

This year's FIRST Lego League Robotics competition, titled "2003 Project Mars" is being held on Saturday, December 13, 2003, at the Scarlet Oaks Vocational School campus on Kemper Road in Sharonville from 7:30 am to 5:30 pm. It is being sponsored by iSPACE/Challenger Center.

This event urgently needs volunteers to serve as: referees, scorers, monitors, judges, and escorts. Training will be provided on Wednesday, December 3, from 6:30-9:30 pm. If you want to join the fun and have a real BLAST please contact **John Ventre** for the details: jeventre@ix.netcom.com, (W) 321-5186 Ext 4, (H) 522-0020 after 11:00 am.

Thanks to *The Presenters*

The work of the Cincinnati Observatory Center could not be accomplished without the generous assistance of a long list of volunteers. This month the Observatory Presenters are being recognized. They are responsible for presenting the astronomical programs at the regular public nights.

Many thanks to the following: **Dave Bosse, Scott Gainey, Bill Gwynne, Mike Helfen, Greg Huber, Rick Hunter, Frank W. Huss, Paul Nohr, Dean Regas, Basil Rowe, Lori Rutherford, Chuck Strubbe, and John Ventre.**

Next month the Observatory Assistants will be recognized.

Trivia Question

In a Chicago Suburb in 1937 the first radio telescope was constructed. Name the builder.

Last month's trivia question:

In 1781 a catalog of newly discovered faint fuzzy objects that were not comets was published. Who derived the list and had it published?

Answer:

Charles Messier was the astronomer who in 1781 compiled a list of galaxies, nebula and star clusters. Although he didn't know it at the time!

FOTO Election Results

The votes are in....

....and not a chad was left hanging. Here are your official October election results.

President: Craig Niemi
Vice President: Scott Naylor
Treasurer: Bill Bachelder
Secretary: Valerie Niemi

Congratulations to all the new officers and thanks to all who ran for office. It's a healthy club that has so many involved members.

Astronomy Lecture Series For Beginners At the Observatory

This series has been set up to provide continuing astronomy education for beginners and amateurs interested in observing the night sky.

November 4, 7:00-9:00 pm

Comets and Meteors

This lecture will examine the properties of comets and meteors as well as get you prepared to observe the great Leonid Meteor shower in November.

December 2, 7:00-9:00 pm

Searching for Planet X

The discovery of Uranus, Neptune, and Pluto were just the beginning. What other planets are out there yet to be discovered?

Cost: \$15 per program or \$40 for all three.

To register, please call **Dean Regas** at 513-321-5186

Paul Nohr on TV

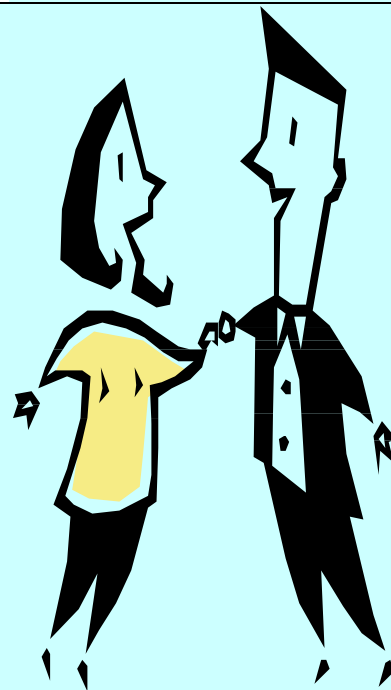
Congratulations to Paul Nohr who was interviewed October 24th by local television news about the massive solar flares taking place that week.

FOTOKids

That's right, FOTOKids is up and happening again! The next meeting of FOTOKids will take place on Friday, November 7th, at 7:30 PM. **Lori Rutherford** will lead a program about the upcoming lunar Eclipse. Then we will open up the telescopes for viewing, weather permitting. The meeting will take place at the Cincinnati Observatory Center.

If you have a kid interested in astronomy between the ages of 8 and 14, find out more about FOTOKids by contacting Chuck Strubbe at 513-886-7600 or jstrubbe@one.net.

Welcome New Members!



Diane Bruegge & Joseph Raver, Peter Bruemmer, Robert & Diane Emmich, Joe Graves, Gary Greenberg, Jean Holmes, Michelle & Tom Inglin, Michael Stoehr, William & Gail Strietmann, and Wendy & Kendall VanDeHatert

FOTO-SETI Update

FOTO's 31 dedicated members have completed 27,886 SETI studies, an increase of 1,257 studies in the past month, representing over 57 years of computer time!

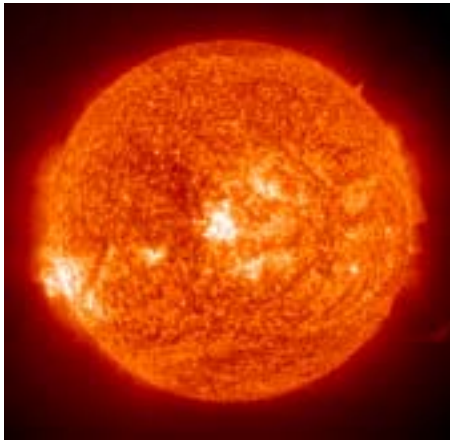
It's time to sign up to become part of the greatest search in history!

Did You Know....

For months Mars has been the brightest planet in the night sky, but it's receding from us at 6,000 mph. Mars is still bright, but now Jupiter is brighter.

Solar Superstorm

Newly uncovered scientific data of recorded history's most massive space storm is helping a NASA scientist investigate its intensity and the probability that what occurred on Earth and in the heavens almost a century-and-a-half ago could happen again.



An ultraviolet-wavelength picture of the sun taken by the SOHO on Oct. 23, 2003.

In scientific circles where solar flares, magnetic storms and other unique solar events are discussed, the occurrences of September 1-2, 1859, are the star stuff of legend. Even 144 years ago, many of Earth's inhabitants realized something momentous had just occurred. Within hours, telegraph wires in both the United States and Europe spontaneously shorted out, causing numerous fires, while the Northern Lights, solar-induced phenomena more closely associated with regions near Earth's North Pole, were documented as far south as Rome, Havana and Hawaii, and the South Pole. http://science.nasa.gov/headlines/y2003/23oct_superstorm.htm?aol469637

Word of the Month

"Walled Plane"

Answer to last month's Word:
"Pogson Ratio".

Pogson Ratio is the brightness ratio between two objects that differ between one magnitude. It happens to be the 5th root of 100. So each increase magnitude equals 2.512 times.

December Dinner & Meeting

By Valerie Niemi

This year has been full of opportunities for our FOTO members to volunteer. Mars Madness, ScopeOut and two lunar eclipses to name a few.

This year's December meeting on December 4th will feature a hot catered dinner in appreciation for all the hard (but enjoyable!) work you have done. The menu will be homemade vegetable lasagna and juicy baked ham with pineapple. Sides are scalloped potatoes, glazed carrots, tossed salad and dinner rolls.

The signup sheet will be at the November meeting. Members may bring one guest, additional guests \$5.00 each. If you are unable to attend the November meeting but want to sign up for the December dinner, please contact **Valerie Niemi** at 513-231-7912 or email to craig_niemi@yahoo.com.

Just let her know your name, phone/email, how many are coming and if you have a special dish you'd like to bring. Please make your reservation by Wednesday, November 26.

Did You Know....

The windblown dust of Mars may contain one of the most toxic chemicals known, the cancer-causing hexavalent chromium.

FOTO Imaging Group

By Craig Niemi

The FOTO Imaging Group will meet at 7:30 pm, Wednesday, November 19th, at the Observatory.

Last month Scott Naylor gave us an overview of imaging with an inexpensive web-cam and the free software "Astro-Snap" which automatically tracks your subject while saving and stacking groups of images.

Some remarkable planetary images have been taken with this setup. Scott is anxious to image Saturn so he should have more for us this month. craig_niemi@yahoo.com

Paul Nohr's Astronomy Classes

Monday Classes

November 10th and November 24th at the Observatory. The class on the 24th will be the last of the Monday night classes.



Tuesday Classes

November 4th and November 18th at the Observatory. To sign up, contact **Paul Nohr** at 513-321-5186.

Integral Uncovers Hidden Black Holes



Oct 20, 2003 - The European Space Agency's Integral gamma-ray observatory has discovered what seems to be a new classification of astronomical objects; black holes shrouded within a cloud of cold gas. Integral spotted the first one of these objects earlier this year, and deduced that it's a black hole or neutron star orbiting a massive star - but why hadn't it been discovered before? This mystery led ESA astronomers to suspect that the black hole had whipped up a shell of obscuring gas, which blocked all but the most energetic radiation.

Did Comets Make Life on Earth Possible?



An ambitious new NASA research project aims to answer perhaps the most vexing and profound of scientific mysteries: How did life on Earth begin?

The multimillion-dollar undertaking, led by the NASA Goddard Space Flight Center in Greenbelt, Maryland, brings together an interdisciplinary team of scientists from around the world to study how organic molecules are created in interstellar clouds and delivered to planets as they form.

The research will focus on the role of comets. Many scientists believe there is increasing evidence that comets supplied at least part of the raw material for the origin of life on Earth. The theory is changing the way scientists think about life in the universe and raises the possibility of alien worlds.

http://news.nationalgeographic.com/news/2003/10/1002_031002_cometstudy.html

Venus Reigns: The Evening Star Returns

After an absence of just over a year, the "evening star" is poised to wow skywatchers again. Venus is visible just after sunset now for keen viewers and will soon be unmistakable in the evening sky. Before long, you'll even be able to spot it during broad daylight. Appearing as a brilliant white star-like object, our sister planet will set at least an hour after the Sun by the end of the first week of November. It will shine at magnitude -3.9.

Did You Know....

At least 30 times a year, asteroids smash into the Earth's atmosphere and explode with the violence of a nuclear bomb.

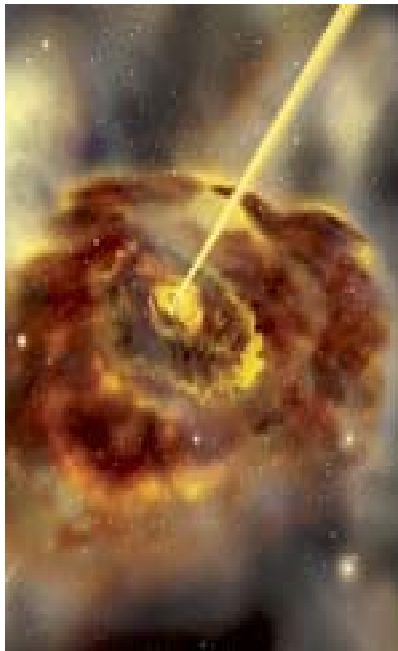
Hermes Is Found

October 16, 2003 | After eluding astronomers for 66 years, the long-lost asteroid Hermes has finally been retrieved.

This most famous of the "lost asteroids" was originally discovered by Karl Reinmuth at Heidelberg, Germany, on October 28, 1937, and tracked for only five days. Despite numerous attempts, the object that came to be known as Hermes was not seen again — until now.

http://skyandtelescope.com/news/article_1081_1.asp

Doughnut Around a Giant Black Hole



Astronomers now believe that a supermassive black hole lies at the heart of most galaxies. In some cases, the area around the black hole is so bright it outshines the rest of the galaxy by several orders of magnitude. Indirect evidence tells astronomers that a thick doughnut-shaped structure of gas and dust (called a torus) enshrouds the black holes, but one had never been seen directly, until now. Using the European Southern Observatory's VLT Interferometer, which combines the light from several telescopes, astronomers

have been able to resolve the structures at the heart of galaxy NGC 1068.

The Goldilocks Zone

Researchers are finding that life can thrive in some unexpected places.



The Goldilocks Zone seemed a remarkably small region of space. It didn't even include the whole Earth.

All life known in those days was confined to certain limits: no colder than Antarctica (penguins), no hotter than scalding water (desert lizards), no higher than the clouds (eagles), no lower than a few mines (deep mine microbes).

In the past 30 years, however, our knowledge of life in extreme environments has exploded. Scientists have found microbes in nuclear reactors, microbes that love acid, microbes that swim in boiling-hot water.

Whole ecosystems have been discovered around deep sea vents where sunlight never reaches and the emerging vent-water is hot enough to melt lead.

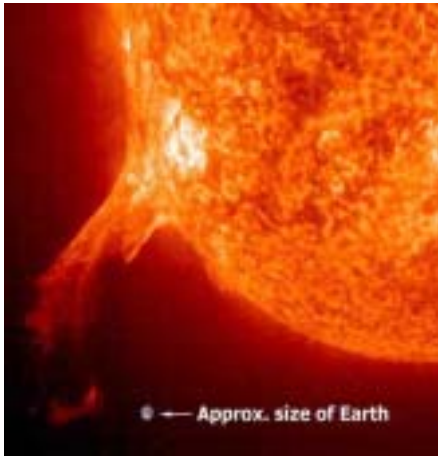
The Goldilocks Zone is bigger than we thought.

http://science.nasa.gov/headlines/y2003/02oct_goldilocks.htm?aol469637

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 glows predominantly in X-ray radiation.

The Perfect Storm



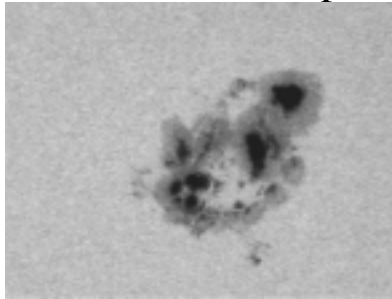
Newly uncovered scientific data of recorded history's most massive space storm is helping a NASA scientist investigate its intensity and the probability that what occurred on Earth and in the heavens almost a century-and-a-half ago could happen again.

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Within hours, telegraph wires in both the United States and Europe spontaneously shorted out, causing numerous fires, while the Northern Lights, solar-induced phenomena more closely associated with regions near Earth's North Pole, were documented as far south as Rome, Havana and Hawaii, with similar effects at the South Pole.
<http://spaceflightnow.com/news/n0310/23spacestorm>

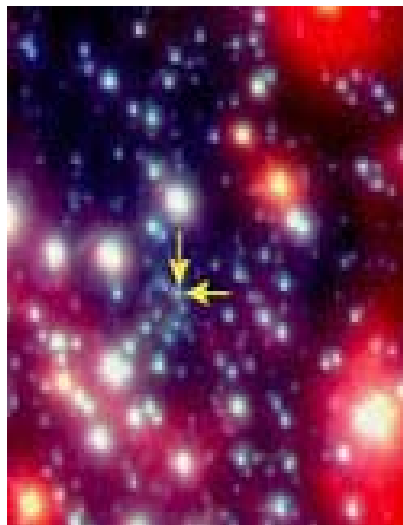
Oct 14, 2003 - NASA's recently launched Space Infrared Telescope Facility (SIRTF) passed an important milestone this week when it was successfully focused. The fourth, and last, of NASA's great observatory has been in space since it was launched on August 25, and since then, it's been slowly cooling down. The telescope is now only five degrees above Absolute Zero – this will let it pick up the faint infrared emissions from distant objects in space without seeing its own heat. The observatory will eventually reveal previously unseen objects obscured by gas and dust.

Steve Rismiller Photo Of Massive Sunspot



This is one of three images Steve took on October 24th with his 102ED Vixen refractor, Baader solar filter and a Nikon 995 digital camera. Steve says, "These spots are BIG! They are larger than Jupiter in diameter. They can be seen with the unaided eye and a solar filter. Not bad for nearly 2 years after solar maximum."

Star Seen Very Near Black Hole



Oct 22, 2002 - A team of astronomers have spotted an otherwise normal star make a close pass with the supermassive black hole that lurks at the centre of our Milky Way Galaxy. At its closest approach, the star was only 17 light-hours away from the black hole (three times the distance of the Sun to Pluto). Images of the region were gathered over 10 years using the adaptive optics system on the European Southern Observatory's Paranal Observatory

The Leonids Will Peak Before Dawn On November 19th



<http://www.space.com/leonids/>

Did You Know....

Jupiter is so large it could hold all the planets and moons in the solar system with space to spare.

Mystery Spot on Jupiter Baffles Astronomers



Astronomers have spotted a strange, obvious and inexplicable black spot near the equator of Jupiter. A [picture](#) of the object was circling this planet electronically this week as researchers scratched their heads about what they'd found.

http://www.space.com/scienceastronomy/jupiter_dark_spot_031023.html

Did You Know....

If you could put a common household television remote control in deep space Space Infrared Telescope Facility (SIRTF) could detect it at a distance of 25,000 miles.