COMING UP AT
THE OBSERVATORY....

* Constellations of the Season Nov 4 7p
Astronomy Thursday Nov 5 7:30p
FOTOKids Youth Program Nov 6 7p
Astronomy Friday Nov 6 7:30p
Stonelick Stargaze Nov 7 dusk
History Tours Nov 8 1p
FOTO Member’s Meeting Nov 9 7:30p
Astro w/ Dean Regas Nov 10 7p
Astronomy Thursday Nov 12 7:30p
Astronomy Friday Nov 13 7:30p
Stargaze @ Chilo park Nov 13 6p
Stonelick Stargaze Nov 14 dusk
Meet a Meteorite Nov 14 7p
A2Z Astronomy Nov 15 7-9p
FOTO Planning Meeting Nov 19 7p
Astronomy Thursday Nov 19 7:30p
Astronomy Friday Nov 20 7:30p
Scout Night Nov 21 7p
History Tours Nov 22 1p
Astronomy Friday Nov 27 7:30p
COC decorating Dec 6 4-6p
Luminaria Night Dec 13 6:30p
FOTO Holiday Supper Dec 14 6p

THE WORD

By Michelle Lierl Gainey

Although we are enjoying the crisp fall weather, the holidays are just around the corner. We need volunteers to help decorate COC for the holidays. We will meet at COC on December 6, 4 to 6 pm. Snacks and drinks will be provided.

Please mark your calendar for the Holiday Appreciation Dinner, which will be held on December 14 (our regular FOTO meeting night) but will start at 6 PM rather than 7:30 pm. Dinner will be served at 6:30. It will be catered by Venice on Vine (who did a great job with the ScopeOut dinner!). Please bring a dessert or appetizer to share. This dinner is free for FOTO members and each member can bring one guest; additional guests are welcome but will be charged $10 apiece. We can accommodate a maximum of 60 people for this dinner, so it is essential that you sign up for it! You can do this by e-mailing me: mlierl@fuse.net, or by calling the COC office at 513-321-5186. Be sure to mention how many people will attend with you.

The Cincinnati Observatory / Friends of the Observatory Forum is up and running! Please visit it at http://cincinnatiobservatory.vbulletin.net/.

This forum is intended to serve as a vehicle for announcements and volunteer requests that come up between newsletters, and will also provide an opportunity for members to interact with each other on topics of interest to them. As members, you are welcome to post links to interesting articles you have found, ask questions about astronomical topics, post your latest astrophotos and explain your techniques, ask for help with projects you are pursuing, make announcements of interesting upcoming events, etc.

You will need to sign up (upper right corner), creating your user name and password; this will send a notice to Craig
Niemi who will verify that you are an active member of FOTO, and then you will receive a notice that you are a member of the Forum and can post on it. Non-members can view but cannot post on the Forum.

Please note the “consent agenda” tab under FOTO Business and Announcements on the Forum site. The minutes from the previous month’s meeting and committee reports will be posted there each month, prior to the FOTO meeting, for your review. We can then vote to accept these reports at the meeting, which should make the business part of the meeting more efficient.

THANK YOU for all you do to keep the Cincinnati Observatory Center thriving and serving our community!

**Topics in Astronomy**

**With Dean Regas**

**Binocular Astronomy**

Tuesday November 10th 7-9pm

Binoculars are great way to get started stargazing and fun for even the most seasoned observer. And you probably already have a pair for bird or Bengals watching.

$15 per person $12 for Observatory members To register call 513-321-5186.

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**FOTO's November Meeting**

_by Dave McBride_

The program committee invites you to join us on Monday, November 9th, at 7:30pm to hear FOTO member Tom East share his topic about “Citizen Science – How Curiosity may (or may not) have killed Schrödinger's Cat.”

Tom’s topic will reveal to us the very nature of Citizen Science – curiosity. Many average citizens have held a lifelong fascination with science even though they may not have had the opportunity to make it a career choice. Still, there are ways to make contributions to science, as well as other fields, no matter what your station in life. Tom’s presentation will discuss some of these opportunities and, perhaps, spark your curiosity to take a peek inside Schrödinger's Box.

Tom East has been fascinated by science for his entire life. Having grown up as a child of the space age and the moon landings, he has a special affection for astronomy. He is employed as a Senior Geographic Information Systems (GIS) Specialist at Planning and Development Services of Kenton County, and gets to play with cool things like LiDAR, orthoimagery, GPS and other geospatial technologies in the performance of his duties. He is a graduate of Mississippi State University with a BS in Computer Science. His wife, Sally, has described being married to him as "sometimes like being married to the absent-minded professor."

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**Luminaria Night Holiday Open House**

Sunday, December 13th
6:30-8:30 pm

Join in the festivities!

Ride to and from the Observatory and Mt. Lookout Square along Luminaria lit neighborhood streets.

The Observatory will be open for tours and Q&A. Forte (pictured above) will again treat our visitors to holiday carols.

The gift shop will be open and a number of special vendors will be on hand with hand-crafted items. Hot drinks & holiday treats will be available

Free. No reservations needed.

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**Planning Meeting**

_by Michelle Lierl Gainey_

The next FOTO Planning Meeting is scheduled for Thursday, November 19, at 7 PM at COC. The planning meetings are open to all FOTO members. We encourage your participation in the discussion of future FOTO activities.
**Out-Of-This-World Gifts**

Sunday, Dec. 13th (Luminaria)
6:30-8:30 pm
Wednesday December 16th
10 am-8 pm
Monday December 21st
10 am-8 pm
Also open during Astronomy Thursday & Fridays and History Sundays.

Just in time for the Holidays the Observatory's Gift Shop will be open throughout the holiday season.

Before you buy that "toy store" telescope learn what to consider when purchasing a telescope for yourself, a friend or for your children. The Observatory Gift Shop stocks a selection of Orion brand telescopes that our astronomers have recommended.

Also available: Meteorites, Books, Science Activity Kits, Star Charts, Gift Memberships for the Stargazer in your Family, Observatory Merchandise and more.

All proceeds support the Observatory’s mission!

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**Did You Know. . ..**

Even with surface temperature of -396 degrees F, Pluto may have a liquid ocean beneath that surface.

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**Astro Evenings at the Observatory**

Thursdays, Nov. 5, 12, 19
Fridays, Nov. 6, 13, 20, 27
7:30-9:00 pm

**Free for Observatory members!**

Are you in awe with the beauty of the night sky? Do you have questions about the Universe? This is where you can get the answers.

Astronomy Evenings include short presentations on a wide variety of topics and plenty of time for your astro-questions. Tour of the Cincinnati Observatory, which as a National Historic Landmark played an important role in the history of Cincinnati and our nation. Once dark, we will view the Moon, planets and deep space treasures through the historic 1845 telescope.

(Program is held rain or shine; telescope viewing if clear skies).

The topics and the night sky change week-to-week/month-to-month so you can visit often to hear and see something new Free for Observatory members!

For the latest schedule see the web calendar then sign up online.

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**A2Z+ Astronomy**

**Motions of the Sky And the Planisphere**

Sunday, November 15
7-9 pm

By Dave Bosse

There are multiple observable motions of the Celestial Sphere from hour-to-hour throughout the night, and night-to-night throughout the year. During the November edition of the A2Z+ Astronomy class we will be looking more closely at that old friend, the Planisphere and learn what subtle details it can teach us about the subtle motions of the stars.

Rarely do we look beyond constellation sized regions and their general placement in the sky at a given time on a given night. This is the primary usage of a planisphere that most astronomers understand, but if we look under the hood a little more closely, it becomes a useful and accurate astronomical tool.

Join us at the November A2Z+ Astronomy class at the Observatory on Sunday, November 15th at 7:00 P.M. and don’t forget to bring your planisphere. What... you don’t have one? Don’t worry; we’ll have extras to share. The A2Z+ Astronomy classes are held the third Sunday of each month at 7:00 pm in the West Wing of the Herget Building and attendance is free to any member of the COC.
Welcome New & Renewing Members!

Raj and Reema Acharya
Suellen Albert
Asif Alikhan
Cheryl and Nicholas Ames
Bill Bachelder
Diana and Louis Batsch
Malcolm and Glenda Bernstein
Cameron and Kelly Bettinger
Justin Brouk and Kelly Bryan
Slawomir Bucki
Mary Budzn
Peggy Bustamante
William Y. Cartwright
Terra Clarke
Christine Copeland
Jeff and Kassy Corken
John and Stella Cottam
Patricia and Robert Dawson
Betsey Dirr
Allan and Heather Duncan
Chris and Jeanette Duncan
Anne and Eric Eifrig
Christina Farwick
Richard & Kate Fisher
Bob and Mary Fitzpatrick
Louis and Mary Freese
Emily Frye
John and Holly Funk
Barbara Gloeckner
Joy and Robert Gorham
Guy Guckenberger
Nick and Jill Guenther
Matt Haigis
Nancy and Tom Hamant
Margaret Hanson and Brian Kinkle
Bill and Mary Hopple
Noelle and David Houben
Nancy Huey
Michael Noyola Izquierdo
Jessica Jacobs
Melody Smith Jones
Kristen Jones-Wickersham
Barbara and Timothy Juenke
Mike & Susan Karbowski
Joel Klekamp
Sam and Marie Kocohis
Anthony and Jeannine Kreinbrink
Marilyn A. Kroll
Rich Leimbach
Scott Gainey and Michelle Lierl
Dave Locke
Marilyn and Robert Mallow
Anjanette Marlette
Keith Bookbinder and Maria Mason
Evan McMillin
Dustin and Marylou Myers
Jennifer O'Donnell and Pat McDevitt
Marie O'Reilly
Leslie Papa
Pam Parker and Kurt Eiben
Donald Peck
Steve Rumberg
Lori Rutherford
Kurtis Ryan
Bruce Safriet
Matthew Schaefer
Dr. Alfred Scheide
Christine and Charlie Schiff
Jack and Lynn Schiff
Michael Sitko
Mike and Jan Snell
Robert Stenton
Carol and Mark Stephenson
Donald and Sheila Storck
George and Linda Strietmann
Sarah Sunderman
Henry Tabeling

Gary and Diane West
Mary Wickersham
Richard Willenbrink
Nicole Williams
Shirley Wilt
John Zehler

Stargazing at Stonelick State Park
Saturdays – November 7th & 14th

Hoping to see the Horsehead?
Stonelick Stargazes are the place.
(Photo by Observatory member Eric Africa)

Need help with your telescope? Whether its 60mm or 30 meters, bring it for expert tips setting it up and exploring the night sky. Stargazing begins at dusk. Open to all ages.

Stargazes are weather permitting. “Friend” the Stonelick Lake Stargazers Facebook page for weather and schedule updates.

Did You Know...?
On Mercury a person would weigh 62% less than on Earth.
Elections for the FOTO Board positions were held. The following members were elected:

Michelle Lierl Gainey, President; John Blasing, Vice President; Anne Schmid, Secretary; Al Scheide, Treasurer; Chuck Fairbanks, Trustee; Aaron Eiben, Trustee (second term).

The other Board positions were not up for election this year: Dave Bosse and Chris Kean have another year as Trustees, and Frank Huss has one more year as COC-FOTO Representative.

Our speaker was Mr. Lee Hite, who gave a fascinating (and scary!) lecture on lightning physics and lightning safety. Mr. Hite, an electrical engineer, is one of only a few lightning experts in the country; we are fortunate to have the opportunity to learn from him.

I hope you’ve stopped by the Observatory recently, the grounds a blaze in fall color!

Our green-space plays an important role in our “power of place.” As soon as visitors turn on to the tree-lined street, with all the gorgeous homes, they know they have arrived at someplace special.

Add in the two remarkable observatories and the historic telescopes and you have a setting where something powerful and inspiring happens. And when you add in our talented staff, members and volunteers and the place comes alive!

If you miss the fall color, be sure to mark Sunday December 13th on your calendar for Luminaria Night when the Observatory displays its spectacular holiday charm.

Most comets are ink black.
FOTO Kids & Teens

Dark Skies at Last

By Aaron Eiben

Daylight savings time ends on the first of November, which is great news for young astronomers with early bedtimes! That following Friday, November 6th, the Sun will set at 5:31 pm, meaning the sky will be nice and dark in time for FOTO Kids at 7 o’clock. If the weather is clear, we will look through telescopes at wonders of the autumn sky – Albireo, the Ring Nebula, the Owl Cluster, and more. If the sky is cloudy, we’ll make the most of our time with other dark activities.

Come join us Friday, November 6th at 7 pm for telescope viewing and other night time fun. Until then and as always, clear skies!

For questions and comments, call the Observatory at (513) 321-5186 or email Aaron at aaron@cincinnatiobservatory.org.

Did You Know...?

Saturn’s core temperature is 21,000 degrees F, twice the temperature of the surface of the Sun.

MUSEUMS
HISTORIC SITES
OF GREATER CINCINNATI

MHS is comprised of over 30 participating sites across Greater Cincinnati. Each site offers a unique perspective on local history and culture through public programs, exhibits, lectures, and tours.

Many sites are seasonal and have reopened after the long winter.

www.historicgreatercincinnati.org

Community Rewards

Number for the Observatory

Community Rewards

Number for the Observatory

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UC Communiversity

Enrich Your Life with Quality Courses

Constellations of the Season

November 4th 7pm

$29 per person plus $4 optional materials fee for star chart payable to instructor at class. To register contact UC Communiversity at 513-556-6932 or www.uc.edu/ce/commu.html

New Star Gazers

Star Gazers airs locally on channels 14 and 48 and you can watch each month’s episodes on http://www.cincinnatiobservatory.org/stargazer.html
**2016 COC Calendars**

By Scott Gainey

The 2016 Calendar is coming! As usual, it will include a wonderful collection of works by astrophotographers Fred Calvert, Eric Africa and Steve Rismiller. This year we will also be showing works by members of the new class of astrophotographers who recently completed the year-long training coordinated by Fred, with assistance from Eric and Steve.

The new calendar will be available in mid-November, through the Observatory gift shop.

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**Meet a Meteorite!**

Saturday, November 14th
7-10 pm

Come check out amazing collections of “rocks from space” and get ready for November’s Leonid meteor shower.

$10 Adults, $5 under 18 & College Students. No reservations needed.

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**John Ruthven Prints**

John Ruthven’s limited edition giclee’ prints of his "Eyes of the Night" which features the Observatory are available in the Gift Shop! Each signed 14"x 20" print is on sale for $150. The total run will be limited to 250 prints. Proceeds support the Observatory’s programs.

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**Meet Me Outdoors**

Looking for one site to find this spring’s best outdoor recreation events? Stargazing, hikes, biking, everything outdoors.
http://meetmeoutdoors.com

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**Greater Cincinnati STEM Collaborative**

The Greater Cincinnati STEM Collaborative (GCSC) impacts STEM (Science, Technology, Engineering, and Mathematics) learning and career readiness through active, engaged, data-driven partnerships between business, educational (Cincinnati Observatory), and community partners.

Check out the new website! http://greatercincystem.org/

**One More Scope Out Picture**

By Kathy Zoller

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**Spacecraft Discovers Thousands of Comets**

The ESA/NASA Solar and Heliospheric Observatory has discovered more than 3000 doomed comets that have passed close to the sun.

Development Focusing On Renewals As Year-End Approaches

By Anna Hehman

Next week, we will begin a direct mail campaign to re-engage all lapsed members as well as those who have upcoming renewals. We’re also reaching out to ensure those who made donations in 2014 do so again to benefit the Observatory’s programs. To bolster these efforts, we have launched an annual appeal campaign to garner support from those in the surrounding neighborhoods who are unfamiliar with the Observatory’s work and mission.

Additionally, in early November we’ll begin promoting Giving Tuesday. Established in 2012 to promote philanthropy and charitable causes after the retail madness of Black Friday, Giving Tuesday is traditionally the Tuesday after Cyber Monday, this year falling on December 1. We’ll be promoting through our social media for folks to make a donation on December 1st to the Observatory, so please consider doing so as well!

We are also pleased to announce we’ve received a grant from the Daniel and Susan Pfau Foundation to extend our youth outreach work into Northern Kentucky’s inner city schools, focusing on Newport and Covington! This work will get underway in the new year.

Astronomy News

NASA Stunning Images of Pluto’s Very Own Super Moon

When New Horizons hurtled past the Pluto-Charon system last July, it saw a canyon system stretching more than 1,000 miles across Charon’s icy face. Four times as long as the Grand Canyon, and twice as deep in places, the structure marks a titanic geological upheaval in Charon’s past.

It looks like the entire crust of Charon has been split open. With respect to its size relative to Charon, this feature is much like Mars vast Valles Marineris canyon system.


Astronomy Wisdom...

“Were I to choose between the Earth and Moon, I should not hesitate… to fix upon the Moon for my habitation.” – William Herschel (1738-1822), astronomer.

The Green Comet Lovejoy

Organic Molecules Needed For Life Are Embedded at Birth of Planets

The comet Lovejoy was releasing as much alcohol as in at least 500 bottles of wine every second during its peak activity. The team found 21 different organic molecules in gas from the comet Lovejoy, including ethyl alcohol and glycolaldehyde, a simple sugar.

Entire Habitable Structures Could Be Made On Mars with 3D Printers

“The potential of 3D Printing with in-situ materials on Mars is significant in that we may be able to build structures without bringing heavy equipment, supplies, materials, and structures from Earth”, write the architects.