Hello Fellow Stargazers,

This has been a month of pluses and minuses. Sadly, we had to say goodbye to Cassini a few weeks ago. Cassini sent us so many wonderful pictures and new information about the Saturn system. Anyone else up for a trip to Enceladus?

On the plus side, another successful ScopeOut event has come and gone. This year’s event was much less dramatic than last year as we didn’t have to contend with 40 mile per hour winds. **Venice on Vine** supplied a delicious dinner once again. Dr. Colin Bischoff dazzled us with his cosmology research.

It’s been said before, but a colossal thank you to all of the volunteers and committee heads that work so hard to make this happen.

Be sure to mark your calendars for the **picnic dinner** before the October FOTO meeting. The picnic starts at 6 pm and ends with the meeting at 7:30 pm. The COC will be supplying the main course and drinks. Bring a side dish or a dessert to share if you like.

Thanks again for all you do for the Cincinnati Observatory and see you at the picnic!
ScopeOut 2017 Highlights!

By Dale Zoller

On September 23, the Observatory held its annual open house and STEM-fest, **ScopeOut 2017**. The event was held two weeks later than past years in order to coincide with the “Great Outdoor Weekend” events in the Greater Cincinnati area. Free admission to the event was made possible by grants from Duke Energy Foundation and P&G.

This year’s event provided a mix of familiar and new exhibits and demonstrations. This year we saw the return of **Tesla of Cincinnati** which brought two of their electric cars to display. Cincinnati’s model rocket club **QUARK** had numerous model rockets on display and set up a launch pad to launch rockets over the grounds. They were joined by the return of the “bottle rockets” coordinated by Aaron Eiben, John Blasing and David Kuhl. A lot of kids (and adults) had fun constructing and launching the air pressure and water powered rockets. Thanks also to **Dr. Mike Sitko** and the **UC Physics Department** students for providing a variety of hands-on physics demonstrations. The **Greater Cincinnati Energy Alliance** provided a solar energy display and information on having a “solar assessment” done at your home.

This year’s dinner was once again catered by **Venice on Vine** whose staff did a wonderful job creating and serving the dinner. Thank you to **Denise Mustain** who coordinated the dinner arrangements and snacks for the volunteers. Thanks also to **Lookout Joe’s** for providing the “Observatory Blend” coffee.

This year's keynote talk "Observing the Origin of the Universe from Antarctica" was presented by **Dr. Colin Bischoff**, Assistant Professor at the University of Cincinnati Physics Department. Dr. Bischoff discussed the research connecting the Cosmic Background Radiation (CMB) and gravitational waves using the Keck Array and BICEP3 telescopes operating at the South Pole. He also discussed the unique challenges of living and working in Antarctica.
I would like to thank the members of the *ScopeOut 2017* planning committee, plus all the volunteers, exhibitors and vendors who helped make *ScopeOut 2017* a success!

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### October FOTO Meeting Presentation

**The Younger Dryas Impact: A View from Ohio**

Monday, Oct. 9, 7:30 pm

By Tom East

Geologically, the Younger Dryas marks a period of mass extinction. Five theories have been proposed to explain this extinction event: human overkill, a hyper-disease, an extraterrestrial impact event, climate change, and overhunting. In order to evaluate these theories, we need to first determine if the extinctions were synchronous and provide the chronometric resolution needed to demonstrate or negate synchronous extinction as well as explore how species respond to climate change and what role does climate play in species extinction.

**Kenneth Barnett Tankersley** received his B.S. and M.A. degrees from the University of Cincinnati and a Ph.D. from Indiana University. He did post-doctorate work at the Quaternary Studies Program of the Illinois State Museum. With funding from the National Science Foundation, the National Academy of Sciences, the L.S.B. Leakey Foundation, Earthwatch, the International Research and Exchange Program, the Court Family Foundation, the Charles Phelps Taft Foundation, and the University of Cincinnati Research Council, he has conducted archaeological investigations across the western Hemisphere and Eastern Siberia.

This research resulted in 150 professional publications and has been featured on the *National Geographic Channel*, the *Discovery Channel*, the *History Channel*, the *Animal Planet, BBC Nature, NOVA, PBS*, in *Science, National Geographic News, Geo, the Wall Street Journal, the New Yorker* magazine, *Scientific American, Archaeology* magazine, and on *All Things Considered*.

He has served as a Foreign Delegate for the National Academy of Science, a Delegate of the International Geology Congress, a Carnegie Mellon Scholar Lecturer, and Emory Lecturer, and a guest editor of *Scientific American*.

Please join us Monday, October 9th at 7:30 pm for this fascinating presentation.

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### Highlights of the FOTO Meeting of September 11, 2017

By Michelle Lierl Gainey

FOTO Secretary

At the September FOTO meeting, final preparations for *ScopeOut 2017* were discussed. Craig Niemi, COC Director, thanked Dale Zoller for his good work as head of the ScopeOut Committee, and all the volunteers who help with this event.

**John Ventre and Frank Huss** are the Nominating Committee for FOTO Officer elections, which will be held in January. Please contact John, Frank or any of the current FOTO Board members if you are interested in running for Chair, Vice Chair, Secretary, Treasurer, or as FOTO representative on the COC Board.

The speaker for the evening was Davin Plateau, “Possible habitable Planets in Nearby Solar Systems”. Professor Plateau gave a very interesting presentation on the planetary systems of Proxima Centauri and Trappist 1.

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### FOTO Planning Meeting

Thursday, October 19th 7pm

Help plan programs and events for your fellow members. Open to all members.
Craig’s Corner
Craig Niemi, Executive Director

Our thanks to everyone who worked so long and hard to make ScopeOut ‘17 a success! The rough count is over 300 amateur astronomers and science buffs-young & old- came out to experience the best in STEM-based science programming.

Our thanks to the P&G and the Duke Energy Foundation for making the day’s events free for all. A special thanks to UC Physics for all the monetary support and great science demos by the department’s students. And thanks to all our vendors and exhibitors, including the-new for this year-local history partners, who helped make ScopeOut exceptional.

We recently gathered to thank our Mitchel Society donors for all their generous support. Mitchel Society contributors are those with cumulative giving of $500 or more for the year. This year’s event included many first-time visitors to the Observatory who were invited by our trustees and Society donors and they received a personal introduction to this city’s most remarkable cultural and educational asset.

All our donors - through their time, talent and financial support - makes possible all our amazing programs-like ScopeOut.

Astronomy Evenings at the Observatory

Thursday Oct. 5, 12 19, 26
Friday Oct. 6, 13, 27
8:00-9:30pm
Free for Observatory members!

In awe with the beauty of the night sky? 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 visit the web calendar then sign up online.

iSpace Day

Saturday Oct. 7th
Drop in at Scarlet Oaks between 10a-2p

Soar in for a payload of hands-on family activities and demonstrations! iSPACE Day is an annual event that showcases the wonders of STEM education and careers. Booths and demonstrations are conducted by local businesses that work in STEM disciplines.

Along with community partners, we are celebrating all things to do with space! Ride a Hovercraft, Try on a Space Suit, Launch Rockets, Drive a Robot, Look through a Telescope, and so much more. Explore the latest in 3D Printing, Surgical Instrument Advancements, Aircraft Engines, GPS, Drone Technology, and other amazing advancements in STEM!

Free and open to the public! iSpace at Scarlet Oaks
300 Scarlet Oaks Drive
Cincinnati, OH 45241

Did You Know.....
The Moon is moving away from Earth at the rate of 1-1/2” per year.
Observatory Historical Notes

By John Ventre, COC Historian

This article is the fourth in a series that records the articles of the Cincinnati Astronomical Society’s Constitution. The Constitution was approved by the Society’s Board of Control on March 20, 1844.

Article 8. The Board of Control shall contract no debt beyond the means of the Society to pay promptly, with money on hand, or debts whose payment may with certainty be relied on. For all amounts beyond this, they make themselves responsible, not the Society.

Principal Source: Minutes of the Cincinnati Astronomical Society, Board of Control, March 20, 1844.

STEM Education Update

By Katie Vaughn & Samantha Pepper

Day of the Girl 2017

In 2011, as the result of youth advocacy around the world, the United Nations declared October 11 as the International Day of the Girl. Its mission is “to help galvanize worldwide enthusiasm for goals to better girls’ lives, providing an opportunity for them to show leadership and reach their full potential.” It’s a day when activist groups come together under the same goal to highlight, discuss, and take action to advance rights and opportunities for girls everywhere.

Welcome New & Renewing Members

David & Marjorie Aaron
Pat and Keith Ashcraft
Olivia and Brent Ballard
Beth Barton
 Celeste and John Baumgartner
James Booth
Larry Brown and Cristina Gutierrez
Jennifer Bryan
David E. Burcham
Linda Gray
and Emily Carter
Maureen Chiasson
Mark & Vicki Plano Clark
Michael and Minnie Clements
Darla Dalhover
Doug and Shelby Deel
Janet DeGroat
Anne and Eric Eifrig
The Lewis Family
Julie Glazer
Steven and Shelley Goldstein
Angel N Goss
Tina and Jack Hampton
Chris Hanlin
Brent Hardesty
Consuelo Harris
Stephanie and Andrew Herbert
Mary Kathryn Feltman and Mike Herrin
Nicole A Hershey
Stephanie Holden
Linda Huffenberger
Laura Karnes
Joel Klekamp
Sam and Marie Kocohis
Anthony and Jeanine Kreinbrink
Hannah Leeper
Benefits For New Members

With your membership, you become a Friend of the Observatory (FOTO) and join our family of amateur astronomers, history buffs, donors and volunteers. FOTO meets on the Second Monday of the month at 7:30 pm at the Observatory. All members and their guests are welcome to attend.

Your benefits include:
- Discounted or free admission to Friends of the Observatory (FOTO) programs
- Member’s only classes and programs
- Loaner telescopes
- Free admission to Astronomy Thu/Fri/Saturdays
- Discounts in the Gift Shop
- Free admission to the historic landmark buildings and permanent collections
- One-year subscription to the monthly FOTO e-newsletter
- Members-Only Facebook Page
- Use of FOTO Lending Library.

For more information, call the Observatory at 513-321-5186.

I have been looking at the Sun and wondering how much longer we will be able to see sunspots from this solar cycle. There have been many days where there just are not any active regions on the Sun’s disk. Then from out of the blue come a group of sunspots, some rotating around the limb of the Sun and other developing right before our eyes.

One such grouping, AR 2673, started like a dot on this page and in 2 days was the biggest and baddest spot the Sun has produced in nearly a decade. That region created a beta-gamma-delta magnetic field that unleashed many solar flares and one big X-9.3 flare on September 6th at 12:02 UT. The picture I recorded below is about 4 hours after that flare and you can still see white flares cracking above the sunspot in this H-alpha image.

If you do not have an H-alpha telescope but want to observe the Sun, all you need is a connection to the internet. Connect to www.halpha.nso.edu and you can watch the Sun from day to day, any time of the day. Give it a try!
Mitchel Society Recognizes Donors

By Anna Hehman

On Thursday, September 21, the Observatory hosted over 50 major donors, board members, and potential new friends at our annual Mitchel Society event.

Richard Hirte was recognized for his years of board and committee service with a Presidential Award.

Mitchel Society donors give an unrestricted gift of $500 or more to the Observatory in a year, and their donation can be a level of membership as well as fully tax deductible.

For more information or to join Mitchel Society, contact Observatory Development Director Anna Hehman at 513-321-5186 or anna@cincinnaiobservatory.org.

Held to coincide with the Autumn Equinox, the event was an opportunity to thank those who have supported the Observatory in 2016 as well as so far in 2017. Naomi and Bob Gerwin, longtime Observatory supporters and neighbors, were honored with an award for their involvement and dedication to the Observatory and its mission.

A2Z+ Astronomy Class

Cassini Report

October 15th, 7:00 pm

By Dave Bosse

Twenty years in the making, the Cassini Mission has dazzled us with images of jaw-dropping beauty of the Saturn system. Cassini plunged into the atmosphere of Saturn on Friday September 15th in the wee hours of the morning (our time) and ended (arguably) the most successful mission in NASA’s history.

At this month’s A2Z+ Astronomy class we’ll take a look at the evidence of that argument accumulated by the spacecraft over its history. Granted, we won’t look at all 250 million images that Cassini has taken, but some of the more informative images will be up for discussion.

The A2Z+ Astronomy class is held on the third Sunday of the month at 7:00 P.M in the West Wing of the Herget Building, specifically, this month on October 15th. It is free to any member of the Observatory. No prerequisite knowledge of Mathematics, Physics or Astronomy is necessary. Just an eye for beauty!

Amazon “Smiles” On the Observatory

Amazon will donate 0.5% of the price of your eligible purchases to Cincinnati Observatory Center whenever you shop on AmazonSmile. Next time you shop at Amazon simply start at http://smile.amazon.com/ch/31-1665954
STEM Education Update

By Katie Vaughn

Fall has been a great time for the education team to promote our programs! Through a partnership with GCEE (Greater Cincinnati Environmental Educators) we were able to attend the Educator Expo hosted at the Cincinnati Zoo & Botanical Garden.

This was the largest expo to date with over 500 teachers in attendance. During the expo our team created new contacts, networked with other local organizations and thanks to our volunteers, safely viewed the sun. This month we will also be attending the STEM Conference at the University of Cincinnati to promote our programs.

If you are interested in scheduling an outreach program or field trip please contact Katie Vaughn by email at Katie@cincinatiobservatory.org.

Alan Stern

A one-of-a-kind Pluto Globe

Dr. Alan Stern gave a great talk at UC last month and then visited the Observatory to share a bit of his amazing career which includes a lot more than just Pluto.

Topics with Dean Regas

Meteors & Meteorites
Tuesday Oct. 17th 7pm

Johannes Kepler’s Astronomical Mind
Tuesday Nov. 14th 7pm

Constellation Mythology
Tuesday Dec. 19th 7pm

These fun and laid-back single topic classes for beginners focus on a variety of topics and will surely keep you looking up! $15 per person $12 for members. Sign Up Online or call 513-321-5186.

The Observatory by Day

The Observatory is open Noon to 4pm Monday through Friday! Stop by for a tour!

IOMN!
Saturday – Oct. 28th
7-9pm

The Cincinnati Observatory is the local sponsor of the International Observe the Moon Night. Weather permitting, observatory members will fire up the telescopes and let you zoom into craters and see the lunar surface with your own eye. Experience this international, extra-terrestrial event at your local Observatory. Admission is $10/adult, $5/kid, Free for Observatory Members

No reservations are required. For more information please call 513-321-5186.
2018 Calendar Photo Contest Winners

Winning photos will be featured in our 2018 Cincinnati Observatory Calendar.

The “Best of Show” winner will have the honor of gracing the cover of our annual publication and will be treated to a private reception at the Observatory for up to 20 guests (date subject to availability).

Tour the Observatory

Sunday, Oct. 8th
Drop in between 1-4pm

What was battery-powered at the Observatory?

Stop by for the whole story or just the highlights. It’s all fascinating and connects our past with your future. Free for members. Group tours by appointment.

Borrow a Telescope!

By Dean Regas

As a member of the Observatory, you can borrow a scope though the Telescope Loan Program. For more info please call Dean at 513-321-5186.

FOTO Committee Officers

Chair-Valerie Niemi
Vice Chair-John Blasing
Secretary-Michelle Gainey
Treasurer-Al Scheide

Member Representative to the COC Board:
Dave Bosse
JoAnne Pedersen
Terry Endres
To contact an Officer or Rep email craig@cincinnatiobservatory.org and I’ll forward your contact information on to them.

Did You Know….

The Smith Cloud, discovered in the 1960s, is the only high-velocity cloud in the galaxy for which its orbit is well-determined. If it were visible, the Smith Cloud would have an apparent size of about 30 times the diameter of the Moon from tip to tail. The starless gas cloud is traveling at nearly 700,000 miles per hour and is expected to crash into the Milky Way disk in 30 million years.

Connect with Your Observatory

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Cincinnati, OH 45208
513-321-5186

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Our Partners in Science, Sustainability & Local History

[Logos of various organizations]