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STAR STUFF

Ford Amateur Astronomy Club Newsletter

Star Stuff

This newsletter is published eleven times per year by:

Ford Amateur Astronomy Club
P.O. Box 7527
Dearborn, MI 48121-7527

Officers

President:	Arica Flores
Vice President:	Sean Pickard
Secretary:	Cheri Grissom
Treasurer:	Jameson Sullivan

Departments

Webmaster:	Liam Finn
Membership:	Doug Bauer
Newsletter:	Tim Campbell
Equipment:	Jeff Gorman
Speakers:	Sandra Macika

Club Information

The Ford Amateur Astronomy Club meets on the fourth Thursday of each month, except for the combined November/ December meeting which meets on the first Thursday of December – at Henry Ford College Administration Services and Conference Center in Dearborn.

President's Corner

by Arica Flores, President

New Astronomy Enthusiasts

We've had a bunch of new members join us in the past few years, including some who are new to the hobby altogether.

The club owns equipment which is available to lend out to members and this is a great way to try out different setups. The equipment is listed in our newsletter, "Star Stuff." This will give you the chance to use different scopes before you buy one.

If you're a beginner and want to check out different scopes, even if you already have one, our Beginners' Night is a great way to do that. If you've already bought a scope but need some help with it, our Beginners' Nights are a great place to get help.

Our groups.io community and Discord community are also great sources of information for all. You can find this information in the side-bar under Communication (page 3).

If you're not familiar with the night sky, I recommend one of the following books: "Night Watch" is my favorite, or "Turn Left at Orion." I know there's a lot of software that does this, but I like a book that I can reference while I'm waiting for it to get dark so I can have an idea of targets for the night. I also want to remind everyone that our "Conference and Swap Meet" on April 5th is a great source of information and equipment. Check it out!

[Editor's Notes: The club has access to Astrospheric "Society Edition" which is an excellent astronomy weather forecasting application.

Club Information

Refer to our website for a map and directions:

www.fordastronomyclub.com

Observing

The FAAC primary observing location is Spring Mill Pond located within the Island Lake State Recreation Area near Brighton, Michigan. The Club maintains an after-hours permit. Club members can contact any club officer for procedures to enter or exit the park when the main gate is locked.

The club also has use of a private observing site near Gregory Michigan. See the FAAC Groups.io Group for more information.

Inquiries can be directed to info@fordastronomyclub.com

Membership

Membership is open to anyone with an interest in amateur astronomy. The FAAC is an affiliate of the Ford Employees Recreation Association (FERA).

Fees

Annual - New Members: $30
Annual - Renewals: $25
($30 if not renewed by Jan 31)

Benefits

Membership includes the Star Stuff newsletter, discounts on magazines, discounts at selected

Secretary's Report

by Cheri Grissom, Secretary

FAAC General Meeting – February 27, 2025

Meeting called to order at 7:05 p.m. by President Arica Flores. Vice President Sean Pickard, Secretary Cheri Grissom, and Treasurer Jameson Sullivan also present. We had a total of seventeen members and three guests in person and an additional eleven members online, for a total of 31 attendees. Arica asked for member and guest introductions.

Member Observing Reports

It's been a slow month, but Gordon Hansen has had his home observatory open several nights over the past month. Doug Bauer, who is currently in South Carolina, has been enjoying observing with his Seestar. Many of our members have been observing the eight planets visible in the sky recently.

What's Up in the Night Sky

Sean started by going over our upcoming calendar of events. These dates can be found on our website and in "Star Stuff." Our annual Conference and Swap Meet will be April 5. Our Club Banquet will be May 10. A total lunar eclipse will happen starting late on March 13 and going through the early morning hours of March 14. Maximum will be at 2:58 a.m. Sean gave us a list of ISS transits that will be visible from Island Lake and surrounding areas, including lunar transits on March 8 and 13 and solar transits on March 20 and 22.

Club Business

Secretary's Report is in "Star Stuff," nothing to add. Liam Finn gave the Social Media/Website report. Things are current except the dates of our Beginners' Nights need to be put on the website calendar. Jeff Gorman has nothing new for equipment report. Kristie Whittington advised us that the replacement of the filter on the club's PST is finally done. We really appreciate Kristie's time and effort in getting this done, along with some last minute help from club members at tonight's meeting.

Old Business

Arica reminded us of two important upcoming club events, beginning with our Conference and Swap Meet, on April 5. Tables may be rented for $20 if paid in advance or $25 at the door. A donation of $7 is requested for

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area equipment retailers, and after-hours access to the Island Lake observing site and private observing sites.

Astronomy or Sky & Telescope magazine discounts are available by contacting the FAAC club treasurer treasurer@fordastronomyclub.com for the discount form. The form should be sent to the respective publisher with your subscription request and payment. Do not send money directly to FAAC.

The FAAC has a pool of equipment including telescopes, cameras, and other gear used for outreach. Much of the gear can be borrowed for personal use in the interest of furthering your knowledge and experience in astronomy.

Please see the equipment list for further information.

Club Wear

Club logo-wear (embroidered with club logo) can be ordered directly through LLBeanBusiness.com

See the groups.io files section for ordering information and instructions on how to request the correct logo.

Communication

The FAAC uses Groups.io for our email distribution list (both formal and informal discussion.)

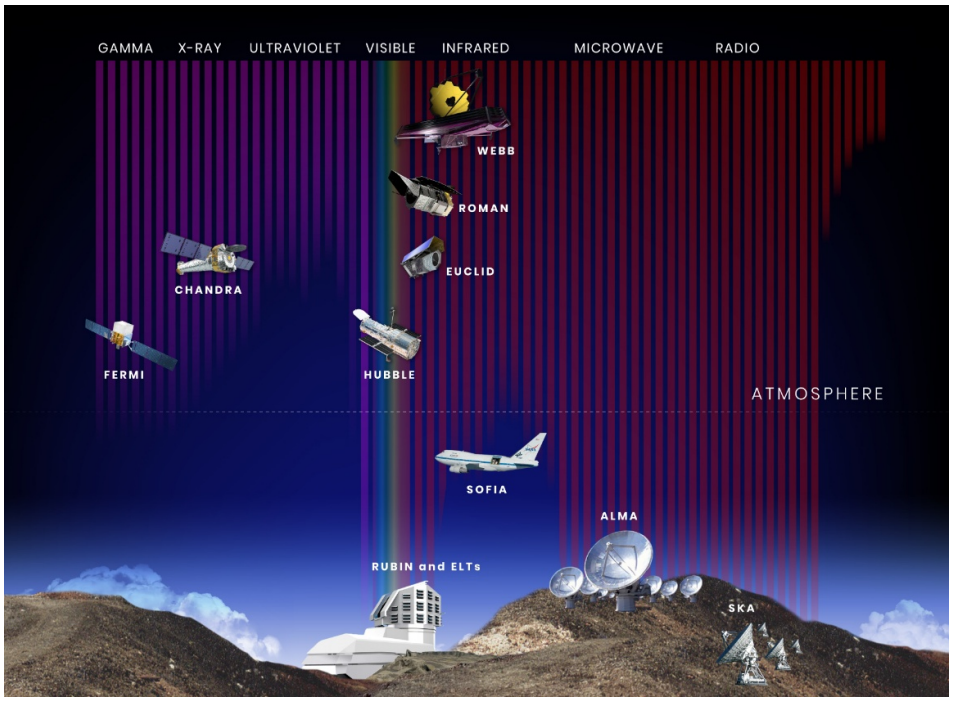
Observing nights & locations (scheduled and unscheduled as weather permits), equipment

April's Night Sky Notes: Catch the Waves!

by Kat Troche

The Electromagnetic Spectrum

If you've ever heard the term "radio waves," used a microwave or a television remote, or had an X-ray, you have experienced a broad range of the electromagnetic spectrum! But what is the electromagnetic spectrum? According to Merriam-Webster, this spectrum is "the entire range of wavelengths or frequencies of electromagnetic radiation extending from gamma rays to the longest radio waves and including visible light." But what does that mean? Scientists think of the entire electromagnetic spectrum as many types of light, only some that we can see with our eyes. We can detect others with our bodies, like infrared light, which we feel as heat, and ultraviolet light, which can give us sunburns. Astronomers have created many detectors that can "see" in the full spectrum of wavelengths.



This illustration shows the wavelength sensitivity of a number of current and future space- and ground-based observatories, along with their position relative to the ground and to Earth's atmosphere. The wavelength bands are arranged from shortest (gamma rays) to longest (radio waves). The vertical color bars show the relative penetration of each band of light through Earth's atmosphere. Credit: NASA, STScI

questions, events, outreaches, etc. are normally discussed via this list.

Join by visiting https://groups.io/g/FordAstronomyClub to request membership.

Articles & Submissions

Your submissions to Star Stuff are welcome! Send your story and/or images to the editor at: starstuff@fordastronomyclub.com

Observatory

The FAAC maintains and operates the Hector J Robinson Observatory (HJRO) at Lincoln Park Schools.

The observatory houses a 14" Celestron C14 Schmidt Cassegrain Telescope as well as other instruments and can be used by club members.

The observatory is adjacent to the athletic field situated between the Lincoln Park Middle School and High School buildings near

1701 Champaign Rd.
Lincoln Park, MI 48146

The school system has designated four "key-holders" within the club who have the ability to open the observatory.

Call (313) 444-5850 to learn when the observatory is opening (or request an opening).

Telescope Types

While multiple types of telescopes operate across the electromagnetic spectrum, here are some of the largest, based on the wavelength they primarily work in:

- **Radio**: probably the most famous radio telescope observatory would be the Very Large Array (VLA) in Socorro County, New Mexico. This set of 25-meter radio telescopes was featured in the 1997 movie Contact. Astronomers use these telescopes to observe protoplanetary disks and black holes. Another famous set of radio telescopes would be the Atacama Large Millimeter Array (ALMA) located in the Atacama Desert in Chile. ALMA was one of eight radio observatories that helped produce the first image of supermassive black holes at the center of M87 and Sagittarius A* at the center of our galaxy. Radio telescopes have also been used to study the microwave portion of the electromagnetic spectrum.

NASA's Hubble Telescope captured the Pillars of Creation in 1995 and revisited them in 2014 with a sharper view. Webb's infrared image reveals more stars by penetrating dust. Hubble highlights thick dust layers, while Webb shows hydrogen atoms and emerging stars. You can find this and other parts of the Eagle Nebula in the Serpens constellation. Credit: NASA, ESA, CSA, STScI, Hubble Heritage Project (STScI, AURA)

- **Infrared**: The James Webb Space Telescope (JWST) operates in the infrared, allowing astronomers to see some of the earliest galaxies formed nearly 300 million years after the Big Bang. Infrared light allows astronomers to study galaxies and nebulae, which dense dust clouds would otherwise obscure. An excellent example is the Pillars of Creation located in the Eagle Nebula. With the side-by-side image comparison below, you can see the differences between what JWST and the Hubble Space Telescope (HST) were able to capture with their respective instruments.

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Planetarium

FAAC members are volunteer operators for the Hammond Planetarium at Henry Ford College.

Planetarium shows are free and open to the public.

Four seasonal planetarium shows are offered per year with the stars and constellations of the current season as well as a multi-media presentation featuring select planets.

Public planetarium shows are normally the third Wednesday of each month at 7:00pm. Please see the planetarium schedule for specific times. It is posted here:

fordastronomyclub.com/hfc-planetarium

Social Media

The FAAC has several social media accounts. Members are encouraged to join and follow them.

Facebook

facebook.com/FordAstronomyClub

Twitter

twitter.com/Ford_Astro

Discord

https://discord.gg/RH6rhAPWb8

Scheduled Club Events

Month	Date	Sunset	Location
April	5th	9:00am-3:00pm	Annual Conference & Swap HFCC
April	5th	8:03pm	Spring Mill Pond
May	3rd	8:35pm	Spring Mill Pond
May	10th	6:00pm	Club Banquet - Mama Mia
May	31st	9:02pm	Spring Mill Pond
June	28th	9:13pm	Spring Mill Pond
July	19th	9:11pm	Spring Mill Pond
August	2nd	8:50pm	Spring Mill Pond
August	30th	8:09pm	Spring Mill Pond

Hammond Planetarium

Date	Time	Topic
April 11th	7:30pm	Spring Planetarium Show
April 16th	7:30pm	Spring Planetarium Show

Club Meeting Topics & Speakers

Meeting	Speaker	Topic
March 27th	Club Members	Open Forum
April 24th	Jeff Macleod	1962 Apollo Program Planning

March Meeting

Open Forum

Ford Astronomy Club Members

Description:

At the request of club members, the club will host a handful of open-forum nights. On these nights, there is no formal speaker or topic (although there may be very short-topics).

Secretary's Report (Con't from Page 2)

attendees. We have a good number of astronomy and tech talks scheduled, as well as a couple of planetarium shows. See details on our Groups.io page, under "Files." Due to unavoidable circumstances, the Swap Meet is on the same date as our first Beginners' Night. Weather permitting for outdoor observing, there should be enough time for members to attend both events that day if they wish.

Also, our Club Banquet is scheduled for May 10, at Mama Mia Restaurant, in Livonia, at 6 p.m.

Tickets are $40 per person, or $42 if paid online. There is a QR code in Star Stuff. If you prefer to pay by check, please contact Sean at VP@fordastronomyclub.com. The speaker for our banquet will be Don Klaser, topic yet to be determined. Gordon Hansen will be hosting Astro Jeopardy!. We encourage all members to attend, and you may bring non-member guests!

It is the time of year when we need your nominations for our annual Sirius Award. This award is given out annually to a member deserving of being recognized as a shining star in our club. You may nominate any club member other than someone who has won the award in the past or who is currently serving on our board.

John McGill spoke to us about the need for volunteers to help put on the "Astronomy for Everyone" feature our club does through Wyandotte Cable. All previous shows are available to view on YouTube. We have been doing this for over fifteen years now, and have received two awards for the show. If you are interested, please contact John directly at his email address listed in Groups.io. in the "Members" file.

Guest Speaker

Our guest speaker this evening was Dr. Brian Kloppenborg, an astrophysicist who is currently the Executive Director of the American Association of Variable Star Observers. This talk was entitled "Stellar Variability Across the HR Diagram."

Stellar variations are the result of a diverse range of physical mechanisms. You can observe many of these variations even with a backyard telescope. Dr. Kloppenborg explained stars and stellar evolution basics and discussed the many types of variable stars, with many helpful illustrations.

He talked about the many reasons for stellar variation, including extrinsic and intrinsic events. Examples of extrinsic events would be objects causing occultations, such as exoplanet transit. Binary stars are another example. Intrinsic reasons for variations would include pulsation, novae, and supernovae. A Cepheid variable is a type of variable star that is incredibly important to modern astronomy. Polaris is a Cepheid variable.

Dr. Kloppenborg concluded with telling us how we can get involved in variable star observing by contacting the American Association of Variable Star Observers. aavso.org. You can even get involved in daytime observation and sunspot counting of our sun.

A question-and-answer period followed.

Meeting adjourned at 8:50 p.m.

March 6, 2025 Board Meeting Summary

(Videoconference meeting.) All board members present. Eight other members present. Our next general meeting on March 27 will be a social night/ open forum. We talked about having a short talk to get things started. One idea was a talk about the FAAC Observer's Award, which so far has not been completed by any member. Let's change that! We discussed the remaining meetings for the year and the need to still fill a few speaker slots.

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Equipment

The FAAC maintain an equipment pool of telescopes, binoculars, cameras, and other equipment used for special events. Much of this equipment is available to members.

Each piece of equipment is either stored by a club volunteer who offers to be the caretaker of the item, or by the person who last borrowed the item.

Most equipment can be borrowed for one-month durations. At the end of the month, the borrower can extend the loan if no other members have requested it.

Some items are reserved for special events use and are not normally available to be borrowed.

If you are interested in borrowing an item, please contact either the current holder of the equipment, or contact the club equipment manager, Jeff Gorman, at equipment@fordastronomyclub.com

Item	Held by
Telescopes	
TK1 Coronado Personal Solar Telescope (Doublestack) w/Meade Autostar Goto Mount	Jessica Edwards
TK5 4.5" Reflector on Fitz GEM mount	Jerry Jamula
TK6 8" Orion XT8i Dobsonian	Dan Smith
TK7 TPO 8" f/4 Newtownian Astrograph (OTA Only - no mount)	Gary Gibson
TK8 20" f/5 Obsession Dob, Ladder & EP Kit	Liam Finn
TKn Celestron 6" Refractor & AGT Mount	
TKn Meade 8" f/5 Newtonian & LX-70 Mount	
Zhumell 20x80 Binoculars	
Presentation Tools	
Projector (older)	Jim Frisbie
Projector (newer)	Gordon Hansen
Projection Screen 8'	John McGill
Projection Screen 6'	Liam Finn
Bullhorn	Liam Finn
Speaker System w/Wireless Mic	Liam Finn

Item	Held by
Display Items	
Astronomy Event Sign (3' x 6')	Gordon Hansen
Astronomy Event Signs 18x24" (x8)	Liam Finn
PVC Display Board - Folding	Sandra Macika
Banner - Small (24" x 32")	George Korody
Banner - Medium (24" x 72")	Sandra Macika
Banner - Large (32" x 16')	George Korody
Tri-Fold Presentation Boards	George Korody
Other	
Canopy (10' x 10')	Liam Finn
Pop Cooler	Sean Pickard
TA Sky Quality Meter	Liam Finn
Demonstration Tools	
Weigh on Planets Scale	Liam Finn
Lunar Phase Kit	Bob MacFarland
100' Scale Model Solar System Kit	Bob MacFarland
NSN Meteorite (Outreach) kit	Sandra Macika

Item	Held by
Imaging Cameras	
C2 Meade Deep Sky Imager Pro III w/Autostar Suite	Gordon Hansen
C6 Canon 60Da Astrophotography DSLR and accessories	Tim Dey
Other Imaging Equipment	
CA1 Rigel Systems Spectrascope	Gordon Hansen
C7 Canon EOS EF 70-200mm f/1.4L IS USM lens & tripod mounting ring (for Canon EOS cameras)	Gordon Hansen
Rokinon 8mm f/3.5 Fish-Eye Lens (Canon EOS Mount)	John McGill
Special Event Items - Not available for Loan Out	
BK2 Zhumell 25x100 Binoculars, hard case, & Zhumell TRH-16 tripod w/soft fabric bag	Sandra Macika
TAK1 Night Vision Image Intensifier for telescopes (2" barrel size)	Tim Dey
Lunt 100mm H-alpha Solar Telescope with Celestron CG-5 equatorial mount	Tim Campbell

Secretary's Report (Con't from Page 6)

Treasurer's Report: The transfer of club records to our new treasurer, Jameson Sullivan, is complete.

Social Media/Website: The dates of our monthly observing nights need to be added to the calendar. Liam will take care of this as soon as possible. We are also publicizing our upcoming Swap Meet and Conference on April 5. Tables are still available for those with items they want to sell. In addition, many volunteers will be needed to make this a success.

Equipment: Jeff Gorman will be starting the annual inventory in May.

Kristie Whittington has put a lot of time and effort into repairing our solar telescope. The part needed finally became available and was purchased, and with help from Tim and Liam at last month's meeting, they were able to get the part installed. Kristie has tested it and it's now working fine.

Our Club Banquet is scheduled for May 10. We will need to sell approximately 40 tickets in order to be able to hold the banquet. Members may invite other family and friends.

We are still looking for your nominations for the Sirius Award. The winner will be announced at the banquet. We will have to close nominations soon in order to have enough time to get a plaque made, etc.

Just a general FYI, it was noted that Astronomy at the Beach is scheduled for the same weekend as the Great Lakes Star Gaze.

Catch the Waves (Con't from Page 4)

- **Visible**: While it does have some near-infrared and ultraviolet capabilities, the Hubble Space Telescope (HST) has primarily operated in the visible light spectrum for the last 35 years. With over 1.6 million observations made, HST has played an integral role in how we view the universe. Review Hubble's Highlights here.

The Crab Nebula, located in the Taurus constellation, is the result of a bright supernova explosion in the year 1054, 6,500 light-years from Earth. Credit: X-ray: NASA/CXC/SAO; Optical: NASA/STScI; Infrared: NASA/JPL/Caltech; Radio: NSF/NRAO/VLA; Ultraviolet: ESA/XMM-Newton

- **X-ray**: Chandra X-ray Observatory was designed to detect emissions from the hottest parts of our universe, like exploding stars. X-rays help us better understand the composition of deep space objects, highlighting areas unseen by visible light and infrared telescopes. This image of the Crab Nebula combines data from five different telescopes: The VLA (radio) in red; Spitzer Space Telescope (infrared) in yellow; Hubble Space Telescope (visible) in green; XMM-Newton (ultraviolet) in blue; and Chandra X-ray Observatory (X-ray) in purple. You can view the breakdown of this multiwavelength image here.

Try This at Home

Even though we can't see these other wavelengths with our eyes, learn how to create multiwavelength images with the Cosmic Coloring Compositor activity and explore how astronomers use representational color to show light that our eyes cannot see with our Clues to the Cosmos activity.