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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

Astronomy for Everyone

Did you know the club produces an astronomy show? *Astronomy for Everyone* covers space related topics for beginners and intermediate astronomers. Some of the topics include space exploration, space science, visual observing, astrophotography, women in science and so much more.

This show started in May of 2009, with the first show airing in June. The concept for this show derived from 2009 being the International Year of Astronomy (IYA). The show is Produced through Wyandotte Cable with the help of many club volunteers over the years. Some of these volunteers include Don Klaser, John Schroer, one of the founding members, John McGill, Steve Uitti, Tim Cambell, Tim Dey, and Liam Finn just to name a few. Thank you to all that help to make this show a success.

You can find this 30-minute show on YouTube, click on videos to find the archived shows. With 180+ episodes over 16 years it is a great source of information and entertainment for all levels of space enthusiasts. My favorites include episodes 10 & 11 "*Telescopes"* which really helped when I was starting astronomy; episodes 91 "*Meteorites & Tektites*"; and 108 on the "*SE Michigan Meteorite"*. Don Klaser's talks on Seasonal Constellations and Space Lore are his favorite — he says the show is a lot of fun and he enjoys doing it. They never thought the show would last this long, what a testament to the excellent work of the volunteers that the show continues.

There are currently opportunities to become a volunteer for the show. These opportunities range from technical like working on camera or lights or other behind the scenes stuff. You may also have a topic you would like to share; guests give 23-minute presentations. If you would like to volunteer you can contact Don Klaser at donklaser@gmail.com

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 – April 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 24 attendees in person and 7 online, for a total of 31 attendees. Arica asked for member and guest introductions.

Member Observing Reports

Sean Pickard has been using his observatory on a regular basis. Gary Gibson let us know that a 6" telescope he made himself in 1965 still works great! Jameson Sullivan got in some imaging of the moon and a few galaxies. Tim Campbell, Tim Dey, and Edwin Kuo spent some time at the HJRO observatory where they observed Jupiter, including a Europa shadow transit, as well as a ruby red carbon star in the constellation Auriga. Arica Flores attended an Earth Day event put on by the Farmington Stargazers where they did some solar observing.

Arica reminded everyone that our Beginners' Night will be held at Island Lake on May 3. We're hoping for good weather as we had to cancel last month's event. Liam Finn advised us of an observing event tomorrow at U of M-Dearborn. On Saturday, also at U of M-Dearborn, there will be a STEM event where Tim Campbell will be putting on a planetarium show and Liam will be giving a talk on space science.

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 banquet is definitely a go for May 10. Tonight is the last night to buy tickets! On May 4, the Lunar X and V will be visible from our area, starting about 8:15 p.m. and lasting for about four hours. Sean also told us about upcoming ISS passes and solar/lunar transits.

Club Business

Secretary's Report: The Secretary's Report is in "Star Stuff," and Cheri had a few corrections and addendums. The total number of people attending last month's meeting was 34, not 26. The last part of Sean's "What's Up"

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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.)

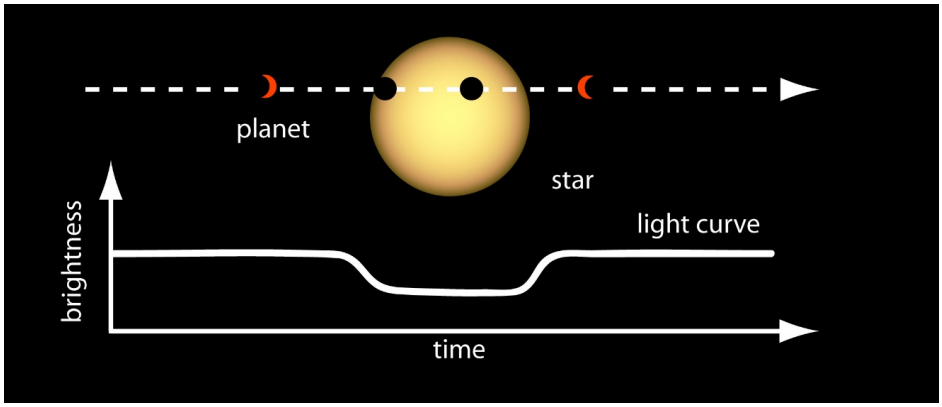
Observing nights & locations (scheduled and unscheduled as weather permits), equipment

May's Night Sky Notes: How Do We Find Exoplanets?

by David Prosper,
updated by Kat Troche

Astronomers have been trying to discover evidence that worlds exist around stars other than our Sun since the 19th century. By the mid-1990s, technology finally caught up with the desire for discovery and led to the first discovery of a planet orbiting another sun-like star, Pegasi 51b. Why did it take so long to discover these distant worlds, and what techniques do astronomers use to find them?

The Transit Method



A planet passing in front of its parent star creates a drop in the star's apparent brightness, called a transit. Exoplanet Watch participants can look for transits in data from ground-based telescopes, helping scientists refine measurements of the length of a planet's orbit around its star. Credit: NASA's Ames Research Center

One of the most famous exoplanet detection methods is the **transit method**, used by Kepler and other observatories. When a planet crosses in front of its host star, the light from the star dips slightly in brightness. Scientists can confirm a planet orbits its host star by repeatedly detecting these incredibly tiny dips in brightness using sensitive instruments. If you can imagine trying to detect the dip in light from a massive searchlight when an ant crosses in front of it, at a distance of tens of miles away, you can begin to see how difficult it can be to spot a planet from light-years away! Another drawback to the transit method is that the distant solar system must be at a favorable angle to our point of view here on Earth – if the distant system's angle is just slightly askew, there will be no transits. Even in our solar system, a transit is very rare. For example, there were two transits of Venus visible across our Sun from Earth in this century. But the next time Venus transits the Sun as seen from Earth will be in the year 2117

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

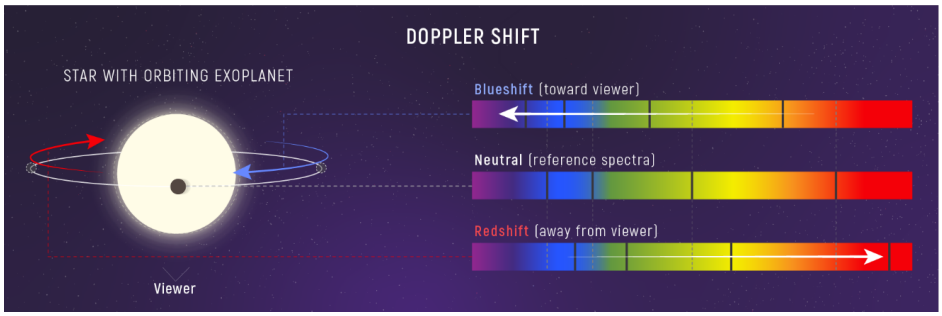
1701 Champaign Rd.
Lincoln Park, MI 48146

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).

– more than a century from now, even though Venus will have completed nearly 150 orbits around the Sun by then!

The Wobble Method



As a planet orbits a star, the star wobbles. This causes a change in the appearance of the star's spectrum called Doppler shift. Because the change in wavelength is directly related to relative speed, astronomers can use Doppler shift to calculate exactly how fast an object is moving toward or away from us. Astronomers can also track the Doppler shift of a star over time to estimate the mass of the planet orbiting it. Credit: NASA, ESA, CSA, Leah Hustak (STScI)

Spotting the Doppler shift of a star's spectra was used to find Pegasi 51b, the first planet detected around a Sun-like star. This technique is called the **radial velocity or "wobble" method**. Astronomers split up the visible light emitted by a star into a rainbow. These spectra, and gaps between the normally smooth bands of light, help determine the elements that make up the star. However, if there is a planet orbiting the star, it causes the star to wobble ever so slightly back and forth. This will, in turn, cause the lines within the spectra to shift ever so slightly towards the blue and red ends of the spectrum as the star wobbles slightly away and towards us. This is caused by the blue and red shifts of the planet's light. By carefully measuring the amount of shift in the star's spectra, astronomers can determine the size of the object pulling on the host star and if the companion is indeed a planet. By tracking the variation in this periodic shift of the spectra, they can also determine the time it takes the planet to orbit its parent star.

Direct Imaging

Finally, exoplanets can be revealed by **directly imaging** them, such as this image of four planets found orbiting the star HR 8799! Space telescopes use instruments called **coronagraphs** to block the bright light from the host star and capture the dim light from planets. The Hubble Space Telescope has captured images of giant planets orbiting a few nearby systems, and the James Webb Space Telescope has only improved on these observations by uncovering more details, such as the colors and spectra of exoplanet atmospheres, temperatures, detecting

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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
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
June 13th	7:30pm	The Story of SpaceTime
June 18th	7:30pm	Summer Solstice Show

Club Meeting Topics & Speakers

Meeting	Speaker	Topic
May 22nd	Robert Garfinkle	Astronomy in Classical Hohokam and Mimbres Locations
June 26th	TBD	TBD

May Meeting

Astronomy in Classical Hohokam and Mimbres Locations

Robert Garfinkle

Fellow of the Royal Astronomical Society

Description:

During the classical period of the Hohokam and Mimbres tribes of the Native Americans of Arizona and New Mexico, the Hohokam built the Casa Grande structure (now ruins in Coolidge, AZ) and used it for astronomical observations. In the year 1054 CE, the Mimbres observed a bright new star visible for 23 days in the daytime sky that actually was the Super Nova, now known as the Crab Nebula (M1). Robert's PowerPoint presentation will cover these hundreds of year-old events.

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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 2)

report had been cut off, so she read the missing part. Also, a paragraph about Sandra asking for volunteers for the Wayne-Oakland Science Olympiad had been inadvertently left out, so Cheri read that aloud tonight. The event is June 7, so there is still time to volunteer to help. Please contact Sandra Macika if you are interested.

Treasurer's Report: Jameson gave our current treasury balance, but that will be going down soon when we pay for our upcoming banquet.

Social Media/Website: Liam had no updates. Arica advised, for the benefit of new members, that our club has a website, fordastronomyclub.com, as well as using Groups.io for official club communication, and Discord for casual communication.

Equipment: Jeff was absent, but Arica reminded us he will be sending out the annual inventory questionnaires to the caretakes of our equipment soon. Arica explained about our equipment borrowing program for new members.

Arica gave one final reminder about our Beginners' Night coming up on May 4. Our next one will be May 31, so we will have two this month, hopefully.

Tim Campbell also advised that they are having the tracks regreased for the dome at HJRO. Also, wireless service is once again available in the observatory.

Guest Speaker

Our speaker was introduced by Sandra Macika. Jeff MacLeod is a longtime member of the Warren Astronomical Society (WAS), and has served as their president, observatory chair, and currently outreach chair. He has degrees in physics and astronomy from Wayne State University and is currently employed in the aerospace industry. If you have been to Astronomy at the Beach, you may have seen Jeff's life-size Gemini spacecraft simulator. The title of the talk tonight is "1962 Apollo Program Planning Meeting."

When President John F. Kennedy said, "We choose to go to the moon," NASA wasn't sure exactly how to make that a reality. Initial considerations were navigation, guidance, and control, as well as time, cost, facilities, reliability, complexity, and weight. And this was in the days before modern computers. Think slide rules! There was a monumental amount of mathematical calculations involved, all done by humans. It took a team of scientists, engineers, and mathematicians hundreds of thousands of simulations to come up with the answers. Jeff took us through the many detailed options the NASA team would have went through to determine how to actually accomplish a moon landing and a return to Earth.

This was a tech-heavy but very enjoyable and entertaining presentation. Thank you, Jeff!

A question-and-answer period followed.

Meeting adjourned at 9:05 p.m.

May 1, 2025 Board Meeting Summary

(Videoconference meeting.) All board members present. Seven other members present. The speaker for our May general meeting will be Robert Garfinkle of the Fellow Royal Astronomical Society, giving a virtual presentation entitled "Some Astronomy in Classical Hohokam and Mimbres Locations." The talk will cover centuries-old astronomical observations made by these native tribes in what is now the Arizona and New Mexico region.

For several months now, Dan Smith has taken over as caretaker of our audio-visual equipment and brings it to meetings when needed. However, when we have a virtual speaker, it is necessary to set up a test meeting ahead of time with that speaker to make sure everything is working correctly as far as being able to get online, etc. Gordon Hansen has agreed to continue doing these test meetings with our virtual speakers.

Our Webex subscription will be expiring in June. We had a discussion about Webex versus Zoom, and it was decided that, when the Webex subscription expires, we will not renew it but will go with Zoom instead.

We had discussion about our Banquet which is coming up very soon. Plans have been finalized as far as what we need to bring. We ended up with 38 banquet tickets sold, which is just short of the 40-ticket minimum required by the venue. The club will make up the difference for those two tickets.

HJRO Observatory at Lincoln Park Schools: Tim Dey reported that he and Tim Campbell have been to the location regularly to clean, repair, and organize. The school grounds crew has been working on what they can fix. The dome gears have been lubricated. Member Edwin Kuo has been there with them three different times and has received all necessary instructions and demonstrated a thorough understanding of operating the equipment, as well as the ability to deal with technical glitches that may come up, and thus as been granted keyholder status. Thank you, Edwin! There is one more set of keys which can be given to another member, and we have a couple potential volunteers for that which we will follow up on.

General Meetings at HFC: We had a discussion about our contract with the college to hold our monthly meetings in the Berry Auditorium. There has been some confusion at the last few meetings about what time we are supposed be out of the building. Arica has located the written copy of our agreement with the college, and it says we have the room until 9:30 p.m. She will post this on the doors to the auditorium from now on so that we hopefully do not have any further misunderstandings with the staff. Additionally, in order to make sure we conclude on time, we will start having our guest speakers start their talks at 7:50 p.m. if possible That will give us plenty of time for an hour-long talk, a question-and-answer period, and still have time to clean up and be out of the room by 9:30.

Guest Speakers: We still have a few months this year with no guest speaker scheduled. Through the recent efforts of Tim Dey, we have an excellent speaker, Neil Mottinger, who has agreed to do a talk in June or July. Additionally, Tim Campbell has offered to do a planetarium show one month.

FAAC Picnic: We had some discussion and arrived at a firm date of August 2 for our annual Club Picnic. We also have a Beginners' Night scheduled for that date, which will work out well (weather permitting). We will have more information for the membership at our general meeting coming up later this month.

May Speaker (Con't from Page 5)

Bio:

Bob Garfinkle writes astronomy books, articles, and book reviews and is recognized as an independent scholar on the history of astronomy and observing the night sky. His first book, Star-Hopping: Your Visa to Viewing the Universe, was published in 1994 by Cambridge University Press. This best-selling (over 14,000 copies) book was republished as both a hardback and paperback in 1997. He co-authored another best-selling book Advanced Skywatching. This book has been translated into German and Spanish. Bob's 3-volume lunar observers' handbook, Luna Cognita, was published by Springer in March 2020. In 1997, he was elected a Fellow of the Royal Astronomical Society of London. In May 2018, Bob was notified that the International Astronomical Union had renamed Minor Planet 2000 EY70 to be 31862 Garfinkle in his honor. Bob received his first BA in History (1975) and a second BA in English Literature (1994) from Cal State-Hayward. He is a Past President of the California Writers Club (2010-12) and Mayor of Union City. Bob is also the Membership Chair of the Niles Essanay Silent Film Museum in Fremont. He has been a member of SJAA since the mid-1980s.

Finding Exoplanets (Con't from Page 4)

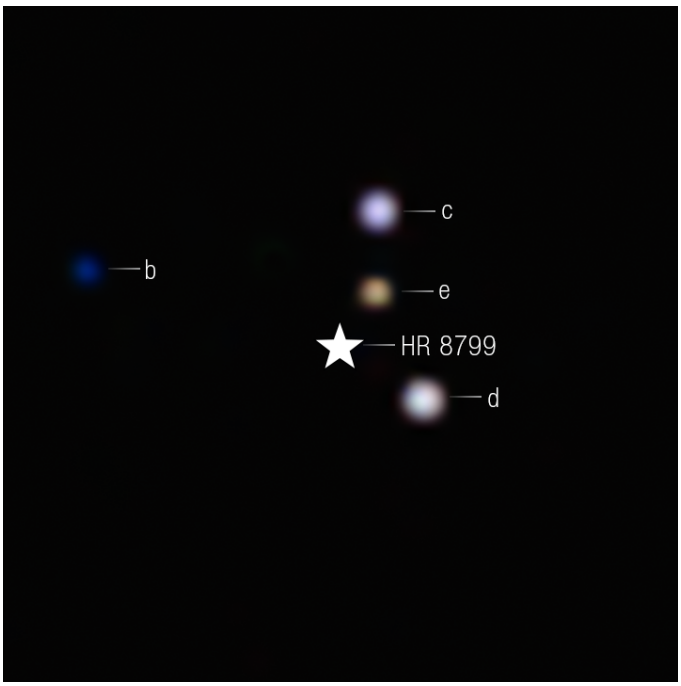

Image taken by the James Webb Space Telescope of four exoplanets orbiting HR 8799. Credit: NASA, ESA, CSA, STScI, Laurent Pueyo (STScI), William Balmer (JHU), Marshall Perrin (STScI)

potential exomoons, and even scanning atmospheres for potential biosignatures!

You can find more information and activities on NASA's Exoplanets page, such as the Eyes on Exoplanets browser-based program, The Exoplaneteers, and some of the latest exoplanet news. Lastly, you can find more resources in our News & Resources section, including a clever demo on how astronomers use the wobble method to detect planets!

The future of exoplanet discovery is only just beginning, promising rich rewards in humanity's understanding of our place in the Universe, where we are from, and if there is life elsewhere in our cosmos.

University of Michigan Public Nights at the Observatory

2025 Schedule

Public nights at the U of M Observatory will be held, weather permitting, on these nights.

- Observing sessions require suitable sky conditions. To learn the status of any event, check the Observatory's home page and/or CASL social media pages beginning one hour before the event. Please arrive no later than one half hour before the scheduled end of the session.
- All sessions are free and open to the public. These events are family friendly, but best suited to children over the age of 4. Observing sessions are primarily held outdoors. Please dress appropriately for personal comfort during your visit.
- The Observatory is located on the main campus of the University of Michigan-Dearborn, in the Science Learning and Research Center (SLRC). Park in the parking lot behind the SLRC (Parking Lot A) and enter the building through the west door. Take the elevator to the third floor, and turn left to go through the double doors to the observing deck.

For more information visit our website at:

https://umdearborn.edu/casl/centers-institute/um-dearborn-observatory

Club volunteers are welcome and appreciated at these events. If you would like to volunteer, you *do not* need to bring a telescope. The observatory has several 8" Celestron SCT telescopes on piers located on the observation deck — but they appreciate have enough volunteers on hand to staff each telescope.

Contact Liam Finn or Tim Campbell if you are interested.

April 25	9:30pm – 11:30pm
May 2	9:30pm – 11:30pm
May 16	10:00pm - Midnight
May 30	10:30pm – 12:30am
June 6	10:30pm – 12:30am
June20	10:30pm – 12:30am
June 27	10:30pm – 12:30am
July 18	10:30pm – 12:30am
July 25	10:30pm – 12:30am
August 1	10:30pm – 12:30am
August 15	10:00pm - Midnight
August 22	10:00pm - Midnight
September 12	10:00pm - Midnight
September 19	9:30pm – 11:30pm
October 10	9:30pm – 11:30pm
October 17	9:30pm – 11:30pm
October 31	8:00pm – 11:00pm