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.

Editor's Notes

by Tim Campbell, Star Stuff Editor

Club Banquet

As a reminder, the annual Ford Astronomy Club Banquet is Saturday May 10 from 6:00pm to 10:00pm in the banquet room at Mama Mia Italian Restaurant ... *provided* we get enough people to sign-up.

The club placed a non-refundable deposit last year ... Mama Mia requires a minimum of 40 people. We didn't meet the minimum — but they were nice enough to allow us to hold that reservation for this year (same deposit).

The banquets are a great deal of fun. In addition to the social element, the speaker, and the prizes, Gordon Hansen organizes and hosts a round of Astro Jeopardy — in which there is absolutely no cheating (and why is my nose growing?) Astro Jeopardy is a team event ... each table is a team.

Dinner is buffet style Italian and will feature Italian sausage cacciatore and grilled chicken breast (in sauce). It also includes salad, brown butter green beans, mashed potatoes, and mostaccioli in meat sauce. Mama Mia will accommodate vegetarian needs on request.

Bring a guest ... bring multiple guests!

Contact Sean Pickard at vp@fordastronomyclub.com if you have questions and make your reservation -or- use this QR code from your phone:

Banquet Ticket

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 – March 27, 2025

Meeting called to order at 7:07 p.m. by President Arica Flores. Vice President Sean Pickard, Secretary Cheri Grissom (online), and Treasurer Jameson Sullivan also present. We had a total of sixteen attendees in person and ten online, for a total of 26 attendees. Arica asked for member and guest introductions.

Member Observing Reports

Milton French, Sean Pickard, Gordon Hansen, Liam Finn, Mike Bruno, and Gary Gibson all reported viewing and/or imaging the recent total lunar eclipse. Gary also viewed M42 in Orion and believes he saw six stars in the Trapezium. There were more details reported by each of you, and possibly a couple people I missed. I apologize for not being able to pick up everything from being online.

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. Also on April 5 will be our first Beginners' Night of the year, weather permitting. Our Club Banquet will be May 10. The deadline for purchasing banquet tickets is April 26. The Lyrid Meteor Shower will peak on April 21/22. The Eta Aquariids will start being active April 19 and will peak May 5/6. Sean also gave us a list

Club Business

Secretary's Report: None.

Treasurer's Report: Report given, unable to hear online.

Social Media/Website: Beginners' Nights are now up on our calendar.

Equipment: Nothing new from Jeff. Arica went over our club inventory and how to borrow equipment, for the benefit of new members. The inventory of equipment is in "Star Stuff" each month.

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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.)

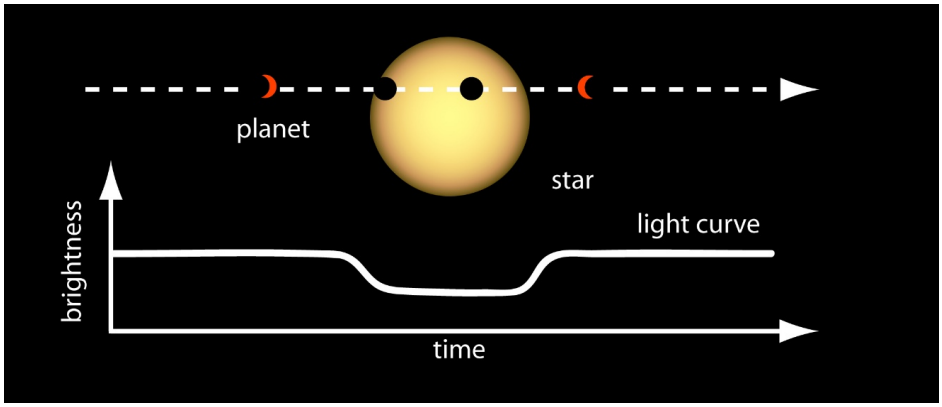
Observing nights & locations (scheduled and unscheduled as weather permits), equipment

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

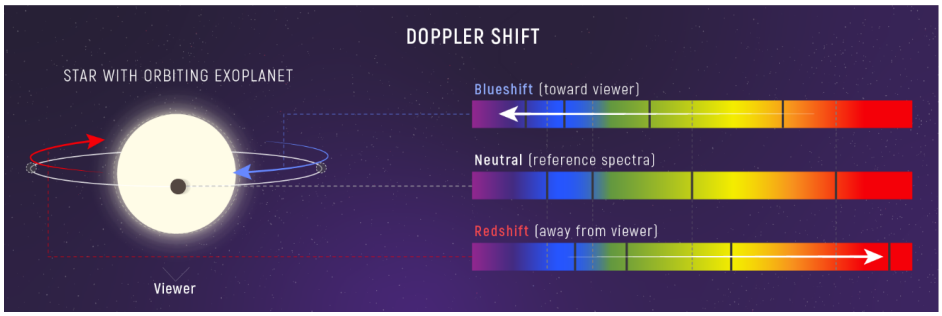
1701 Champaign Rd.
Lincoln Park, MI 48146

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	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
May 9th	7:30pm	Spring Planetarium Show
May 21sst	7:30pm	Spring Planetarium Show
June 13th	7:30pm	The Story of SpaceTime
June 18th	7:30pm	Summer Solstice Show

Club Meeting Topics & Speakers

Meeting	Speaker	Topic
April 24th	Jeff Macleod	1962 Apollo Program Planning

March Meeting

1962 Apollo Program Planning Meeting

Jeff Macleod

Warren Astronomical Society & NASA/JPL Solar System Ambassador

Description:

In 1962 when John F Kennedy said "we choose to go to the Moon" NASA was still very unsure of how to make that a reality. Through his own calculations and simulations, Jeff Macleod will take you back to 1962 and go through the necessary steps that guide the decision making process of designing a mission to the Moon, and the rocket to get there. By the end he hopes we can collectively come to a decision on the best course to

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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)

Guest Speaker (Short Talk)

Mike Bruno is a longtime FAAC member who has served several terms as President and Treasurer over the years. During his tenure as president, he developed the FAAC Observer's Award. His thinking was that astronomy can often be a solitary pursuit, so why not have a little fun! He designed an observing challenge with five basic categories: Naked Eye Observing, Binocular Observing, Telescopic Observing, General Knowledge, and Club Participation/Outreach. The program is intended to be accessible for astronomers at any level of knowledge and experience. There is no time limit for completion, and your participation is on the honor system. The forms you would fill out can be found on our Groups.io page, under "Files," where they can be downloaded and printed. We look forward to having many members participate. If you have questions about the program, feel free to contact any board member, or just ask at any of our meetings.

The remainder of our meeting time was spent as a social hour/open forum.

Featured Speaker (Con't from Page 5)

achieve Kennedy's challenge. Jeff's aim is to illuminate some of the history of Apollo and why the Saturn V was the way it was as well as to inspire people to investigate and calculate what interests them.

Bio:

Jeff MacLeod is a former WAS president, Observatory Chair, and now Outreach Chair. During his time at Wayne State, he was a presenter in their Planetarium as well as getting a bachelor's in physics and another in astronomy. Jeff works in the aerospace industry simulating missiles. Nowadays, most of his free time is spent working on his space-flight simulator, a life size recreation of a Gemini spacecraft you can actually fly in.

Finding Exoplanets (Con't from Page 4)

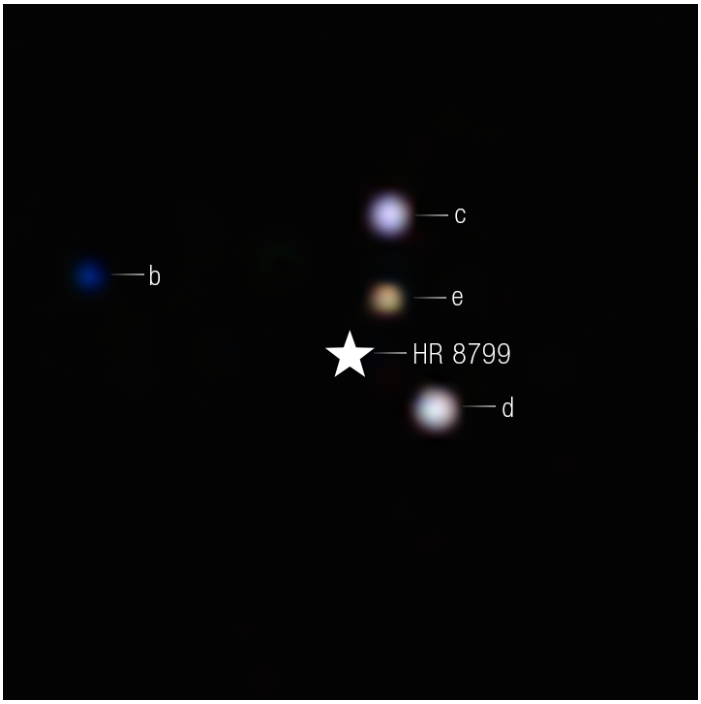

Image taken by the James Webb Space Telescope of four exoplanets orbiting HR 8799. Credit: NASA, ESA, CSA, STScI, Laurent Pueyo (STScI), William Balmer (JHU), Marshall Perrin (STScI)

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.

Monthly Club Speakers

Sandra Macika searches for and organizers speakers for each of the club's monthly meetings.

Sandra is looking for interesting those willing to offer talks on interesting topics in astronomy.

If you, or someone you may know, is interesting in offering a talk, please contact Sandra.

Monthly presentations can either be presented in-person or the club can facilitate remote presentations via Internet (Webex or Zoom).

Contact Sandra at a monthly meeting -or- send an email to info@fordastronomyclub.com (which routes to Doug Bauer, but Doug can forward the message).

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