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:	Mike Bruno
Vice President:	Ed Halash
Secretary:	Jesse Godsey
Treasurer:	Arica Flores

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.

Secretary's Report

by Jesse Godsey

FAAC General Meeting – December 1, 2022

The meeting was called to order by our club President, Mike Bruno. This final meeting of the calendar year is always scheduled to the first Thursday in December in place of the November and December meetings.

It is normally a club social event and does not follow the same format as the other monthly general membership meetings.

Member Observing

Several members discussed the past weekend event viewing at Island Lake as well as the attendance and speakers. Jesse mentioned how nice it was to see other people and their equipment.

What's Up

Gordon H. presented the upcoming events for December 2022 and January 2023. Highlights included the following:

Comet C/2022 E3 (ZTF) discovered by the wide-field survey camera at the Zwicky Transient Facility (ZTF) is making an appearance in our skies. It has an orbital period estimated to be about 50,000 years. The comet reached perihelion on January 12 but will be closest to Earth on February 1.

Galaxies M81 & 82 located in Ursa Major. Galaxy M106 is in Canes Venatici — it is very close to Ursa Major but on the opposite side of Ursa Major from M81 & M82.

Open Clusters M46, M47 and NGC 2425 are all near each other located in Puppis — a little East of the bright star Sirius in Canis Major. M67 is

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

another open cluster -- this one located in Cancer (east of the bright star Procyon in Canis Minor).

The **planet** Mars reached opposition on December 8. The Moon occulted Mars on Dec 7.

Club Business

Gordon Hansen announced the nominations for club officer elections in January. Officer elections are held at the first general membership meeting of each calendar year. Officers are elected for one-year terms and are term-limited to a maximum of three consecutive terms in the same officer position. The nominated committee is tasked to ensure that one person is nominated to run for each position. Frequently nominees run unopposed, however nominations can also be made from the floor for any other club member. The nominee must be a current member of the club in good standing and must be accept the nomination.

Nominations presented by the nominating committee to run for office for the 2023 year are.

President:	Arica Flores (Mike Bruno was term-limited. Arica has been serving as Treasurer.)
Vice President:	Ed Halesh (currently vice president)
Secretary:	Jesse Godsey (currently secretary)
Treasurer:	Joe Bostick (current treasurer is Arica Flores who has been nominated to run for club president.)

Social Media

No updates.

Projects & Special Events

The club is planning to hold the annual astronomy conference swap meet. Jim Frisbie has offered to organize this year's event. The latest information from Jim is that the event will be held on Saturday April 1 at Henry Ford College. The event includes presentations, planetarium shows, and of course the swap meet. This event is held as a fund-raiser for the club and is open to members of all astronomers in the area as well as the general public. More details will be available soon.

Speaker

Tim Campbell gave a short-talk (20 minutes) on the science of why we have solstices including fun facts about the Sun Analemma and how the

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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

Spot the King of Planets: Observe Jupiter

by David Prosper

Jupiter is our solar system's undisputed king of the planets! Jupiter is bright and easy to spot from our vantage point on Earth, helped by its massive size and banded, reflective cloud tops. Jupiter even possesses moons the size of planets: Ganymede, its largest, is bigger than the planet Mercury. What's more, you can easily observe Jupiter and its moons with a modest instrument, just like Galileo did over 400 years ago.

Jupiter's position as our solar system's largest planet is truly earned; you could fit 11 Earths along Jupiter's diameter, and in case you were looking to fill up Jupiter with some Earth-size marbles, you would need over 1300 Earths to fill it up – and that would still not be quite enough! However, despite its awesome size, Jupiter's true rule over the outer solar system comes from its enormous mass. If you took all of the planets in our solar system and put them together they would still only be half as massive as

This stunning image of Jupiter's cloud tops was taken by NASA's Juno mission and processed by Kevin M. Gill. You too can create amazing images like this, all with publicly available data from Juno. Go to missionjuno.swri.edu/junocam to begin your image procession journey – and get creative!

Full Image Credit: NASA/JPL-Caltech/SwRI/MSSS; Processing: Kevin M. Gill, license: CC BY 2.0) https://creativecommons.org/licenses/by/2.0/ Source: https://apod.nasa.gov/apod/ap201123.html

Jupiter all by itself. Jupiter's mighty mass has shaped the orbits of countless comets and asteroids. Its gravity can fling these tiny objects towards our inner solar system and also draw them into itself, as famously observed in 1994 when Comet Shoemaker-Levy 9, drawn towards Jupiter in previous orbits, smashed into the gas giant's atmosphere. Its multiple fragments slammed into Jupiter's cloud tops with such violence that the fireballs and dark impact spots were not only seen by NASA's orbiting Galileo probe, but also observers back on Earth!

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.

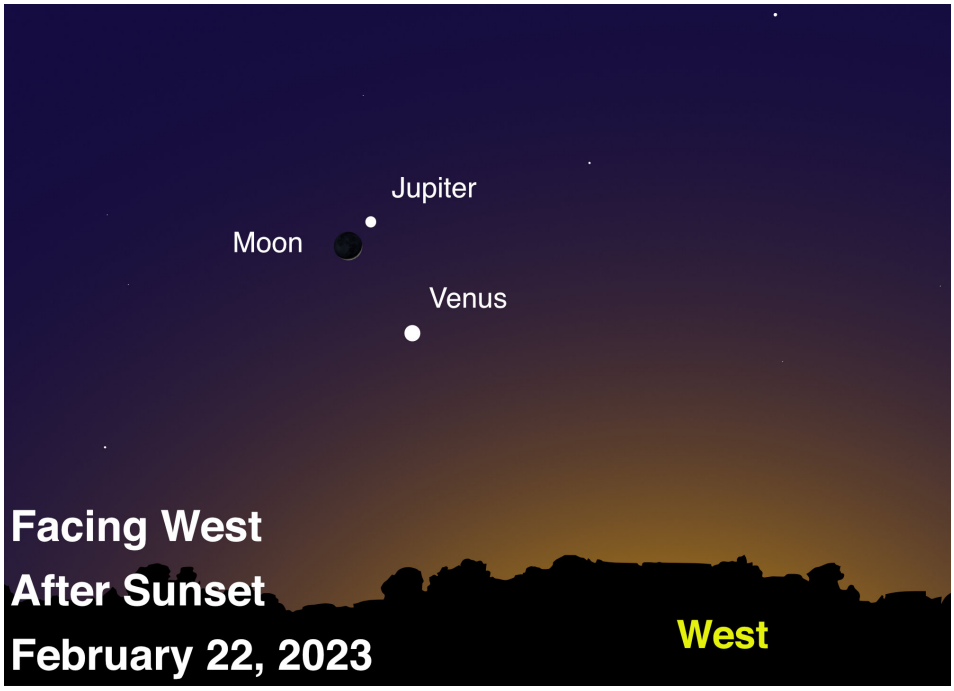
The observatory is adjacent to the athletic field situated between the Lincoln Park Middle School and High School buildings near

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).

Jupiter is easy to observe at night with our unaided eyes, as well-documented by the ancient astronomers who carefully recorded its slow movements from night to night. It can be one of the brightest objects in our nighttime skies, bested only by the Moon, Venus, and occasionally Mars, when the red planet is at opposition. That's impressive for a planet that, at its closest to Earth, is still over 365 million miles (587 million km) away. It's even more impressive that the giant world remains very bright to Earthbound observers at its furthest distance: 600 million miles (968 million km)! While the King of Planets has a coterie of around 75 known moons, only the four large moons that Galileo originally observed in 1610 – Io, Europa, Ganymede, and Calisto – can be easily observed by Earth-based observers with very modest equipment. These are called,



Look for Jupiter as it forms one of the points of a celestial triangle, along with Venus and a very thin crescent Moon, the evening of February 22, 2023. This trio consists of the brightest objects in the sky – until the Sun rises! Binoculars may help you spot Jupiter's moons as small bright star-like objects on either side of the planet. A small telescope will show them easily, along with Jupiter's famed cloud bands. How many can you count? Keep watching Jupiter and Venus as the two planets will continue to get closer together each night until they form a close conjunction the night of March 1. Image created with assistance from Stellarium.

appropriately enough, the Galilean moons. Most telescopes will show the moons as faint star-like objects neatly lined up close to bright Jupiter. Most binoculars will show at least one or two moons orbiting the planet. Small telescopes will show all four of the Galilean moons if they are all visible, but sometimes they can pass behind or in front of Jupiter, or even each other. Telescopes will also show details like Jupiter's cloud bands and, if

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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 offered each Wednesday at 7:30pm and every 2nd Saturday at 3:00pm – however there are some exceptions. 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

Scheduled Club Events

Month	Date	Sunset	Location
April	20th	8:30pm	Spring Mill Pond
May	27th	8:59pm	Spring Mill Pond
June	24th	9:13pm	Spring Mill Pond
July	22nd	9:02pm	Spring Mill Pond
August	26th	8:17pm	Spring Mill Pond

Upcoming Club Meeting Topics & Speakers

Meeting	Speaker	Topic
January 26	Sandra Macika	Saturn

January Talk Details

Saturn – Planet and Ring Features

Sandra Macika
Ford Astronomy Club

Sandra's talk this evening, titled "Saturn – Planet and Ring Features" will tell the basic facts about the planet and it moons, and explain details of features of the planet's surface and rings.

Bio:

Sandra Macika worked for 20 years in California as a Quality Engineer / Manager in the High-Tech industry. During that period, she worked with NASA for seven years doing meteor shower studies and she worked with Lick Observatory for ten years doing public outreach. Now she tutors students in math.

Sandra has a collection of over 160 Meteorites, Tektites and Impactites. She takes them to schools, scout groups, libraries and other public events. She has been the Astronomy Supervisor for Wayne/Oakland Science Olympiad since 2015. She is certified to help Boy Scouts earn their Astronomy badge. She has a 14.5 inch reflecting telescope and is a Member of the San Jose Astronomical Association, Ford Amateur Astronomy Club, Warren Astronomical Society and the Farmington Community of Stargazers.

powerful enough, large storms like its famous Great Red Spot, and the shadows of the Galilean moons passing between the Sun and Jupiter. Sketching the positions of Jupiter's moons during the course of an evening - and night to night – can be a rewarding project! You can download an activity guide from the Astronomical Society of the Pacific at bit.ly/drawjupitermoons

NASA's Juno mission currently orbits Jupiter, one of just nine spacecraft to have visited this awesome world. Juno entered Jupiter's orbit in 2016 to begin its initial mission to study this giant world's mysterious interior. The years have proven Juno's mission a success, with data from the probe revolutionizing our understanding of this gassy world's guts. Juno's mission has since been extended to include the study of its large moons, and since 2021 the plucky probe, increasingly battered by Jupiter's powerful radiation belts, has made close flybys of the icy moons Ganymede and Europa, along with volcanic Io. In 2024 NASA will launch the Europa Clipper mission to study this world and its potential to host life inside its deep subsurface oceans in much more detail. Find the latest discoveries from Juno and NASA's missions at nasa.gov.

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

length of a solar day varies throughout the year. The talk also included information about a few archeoastronomy sites around the world that were used as ancient calendars.

FAAC Board Meeting Summary – January 05, 2023

Meeting called to order Club President Mike Bruno at 7pm. A total of twelve club members were in attendance — including all officers.

Next Meeting

January 26th is the next General Membership meeting. The meeting will be heldat 7:00pm in the Berry Amphitheater located within the Administrative Service and Conference Center building on the Southeast corner of the Henry Ford College main campus on Evergreen road. This meeting will also be available via Webex for those unable to attend in person.

Club Equipment

Jeff Gorman confirmed that the equipment inventory is verified and complete.

Membership

Membership renewals were mailed out and some renewals are already coming in. Membership is renewed annual at the start of each calendar year. If you joined the club in or after September of 2022 then your membership already included the 2023 year and you do not need to renew until 2024.

Annual dues are $30/year but are $25 *if* you renew before the end of January.

Old Business

Ed confirmed the banquet for this year will be at Logans restaurant. There will be an option for a meat, fish or vegetarian entree. It will be May 6th 2023 at 5pm and dinner at 6pm.

New Business

The club is planning to have our annual astronomy conference & swap meet provided COVID trends remain low. Michael Bruno is speaking with Jim Frisbie about organizing the event, possibly at the Holy Cross Lutheran church on 6 mile in Livonia, as it was before. The board approved the motion made by Gordon to put the $100.00 down for the deposit.

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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)	Bhru Patel
TK8 20" f/5 Obsession Dob, Ladder & EP Kit	Liam Finn
Presentation Tools	
Projector (older)	Jim Frisbie
Projector (newer)	Gordon Hansen
Projection Screen 8'	John McGill
Projection Screen 6'	Liam Finn
Bullhorn	George Korody
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

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

We discussed the banquet costs, which is $26 per person, not including prizes. The board decided to set aside a $200 budget for prizes. Michael Bruno will send out an email for nominations for the Sirius Award. [Editor's note: The event will take place at Henry Ford College on April 1.]