



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:	Cheri Grissom
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 Cheri Grissom & Jesse Godsey

FAAC General Meeting – January 27, 2022

Meeting called to order at 7:04 p.m. All board members present. Fifteen other members attended, for a total of 19 people. There were no new members to introduce.

Member Observing Experiences:

Our Michigan winter skies and weather have been dismal, but a few brave members have gotten out for some observing. Doug Bauer and Pat Mog both got in some solar observing. Gordon has done a little imaging. Ed Halash did some observing with his daughter's boyfriend, who is showing an interest in astronomy. In non-observing news, Sean Pickard got the roof installed on his home observatory. Tim Campbell put on an Astronomy 101 presentation for the Dearborn Library, via Zoom. Tim and Liam Finn did a video presentation at the Henry Ford Museum that was very well-attended.

What's Up:

Gordon Hansen gave the report for the February skies. He started off with our upcoming meeting dates, which can be found in the club's calendar. Comet Leonard, unfortunately, is not viewable from our northern skies, but there are currently three others listed as binocular objects at this point. Jupiter, Uranus, and Neptune are evening planets now, with Mercury, Venus, and Mars observable in the mornings before sunrise. On February 27, there will be a conjunction of Saturn, Mercury, Venus, and the Moon, again, just before sunrise. A number of fine galaxies can be found in Ursa Major, including M81, M82, and M51.

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

Club Equipment:

Not much going on with borrowing this time of year, but Jeff Gorman reports the inventory is in order.

Secretary's Report:

This being Cheri's last meeting as secretary, she is preparing to pass the duties on to Jesse Godsey. She will contact him to arrange a time to meet him.

Treasurer's Report:

Arica reports we have a little over \$10,000 at this time.

GLAAC:

Tim Campbell gave a report on their most recent meeting. Tim has been elected vice president. Astronomy at the Beach is scheduled for September 16 and 17.

Membership:

Doug Bauer advises that email reminders have been sent out previously, and we still have about thirty members who have not renewed. He will follow up with a phone call, which typically results in quite a few more renewals.

Club Elections:

Gordon Hanson presided over our election. He began by thanking the current board for their service over the past year. He then went through each office, asking if there were any more nominations. There were none, and per our bylaws, because there was only one person running for each officer position, a formal vote was not required, and the new board was installed. For 2022:

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

Guest Speaker:

Dan Durda is a Fellow and former member of the Board of Directors of the International Association of Astronomical Artists. Dan is a professional astronomer whose research focuses on asteroids. He appears

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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.)

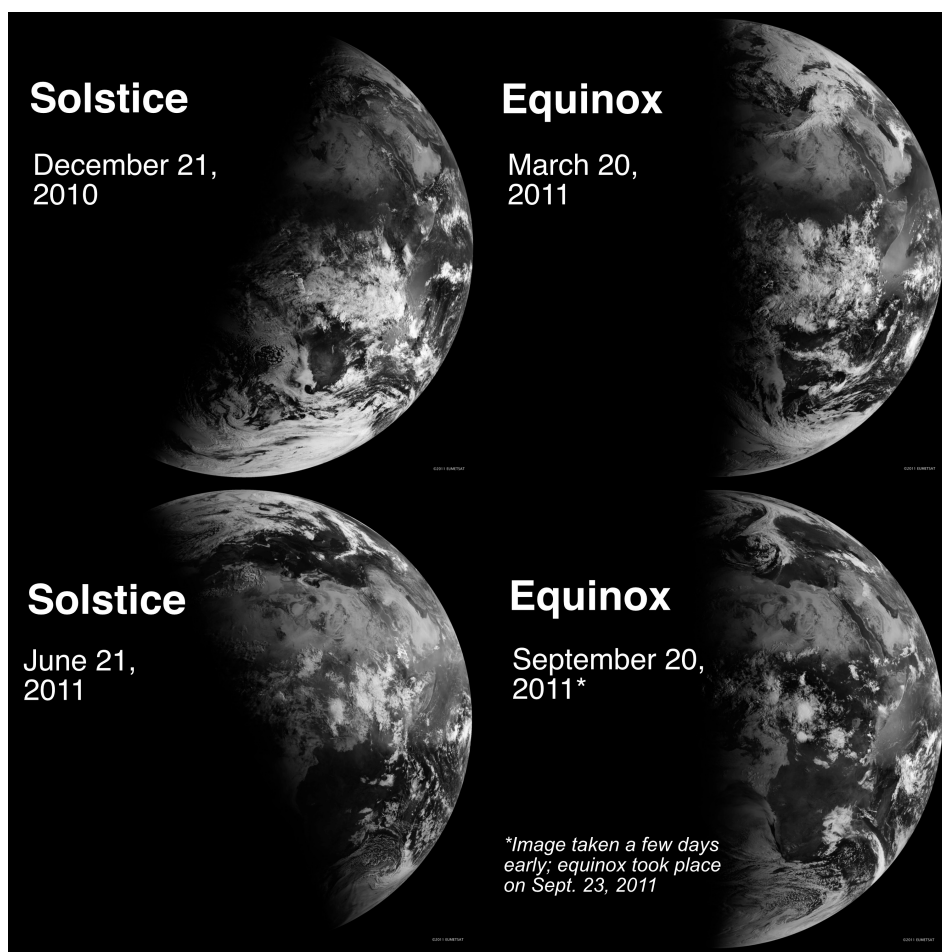
Observing nights & locations (scheduled and unscheduled as weather permits), equipment

Embracing the Equinox

by David Prosper



Depending on your locale, equinoxes can be seen as harbingers of longer nights and gloomy weather, or promising beacons of nicer temperatures and more sunlight. Observing and predicting equinoxes is one of the earliest skills in humanity's astronomical toolkit. Many ancient observatories around the world observed equinoxes along with the more pronounced solstices. These days, you don't need your own observatory to know when an equinox occurs, since you'll see it marked on your calendar twice a year!



Scenes of Earth from orbit from season to season, as viewed by EUMETSAT. Notice how the terminator - the line between day and night - touches both the North and South Poles in the equinox images. See how the shadow is lopsided for each solstice, too: sunlight pours over the Northern Hemisphere for the June solstice, while the sunlight dramatically favors the Southern Hemisphere for the December solstice.

The word "equinox" originates from Latin, and translates to **equal** (equi-) **night** (-nox). But what exactly is an equinox?

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.

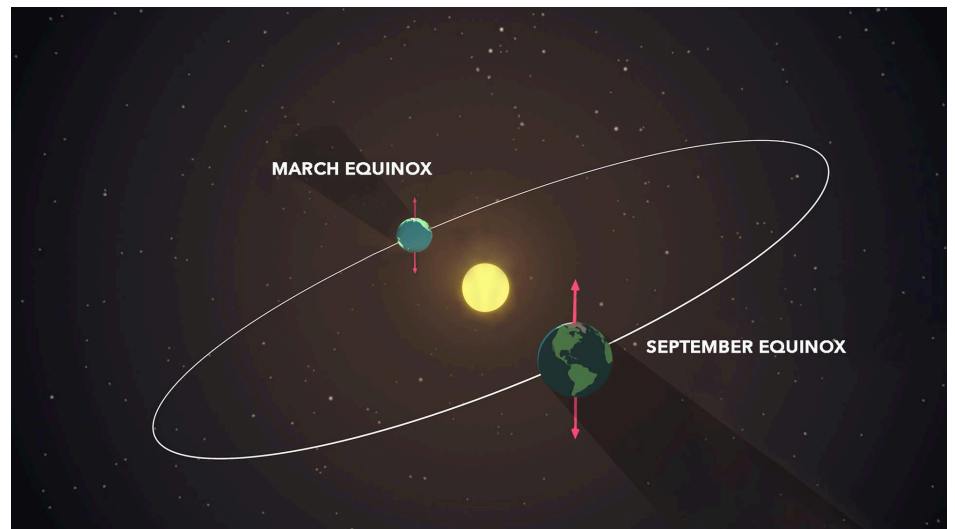
The observatory is adjacent to the athletic field situated between the Lincoln Park Middle School and High School buildings near

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).

An **equinox** occurs twice every year, in March and September. In 2022, the equinoxes will occur on March 20, at exactly 15:33 UTC (or 11:33 am EDT), and again on September 23, at 01:04 UTC (or September 22 at 9:04 pm EDT). The equinox marks the exact moment when the center of the Sun crosses the plane of our planet's equator. The day of an equinox, observers at the equator will see the Sun directly overhead at noon. After the March equinox, observers anywhere on Earth will see the Sun's path in the sky continue its movement further north every day until the June solstice, after which it begins traveling south. The Sun crosses the equatorial plane again during the September equinox, and continues traveling south until the December solstice, when it heads back north once again. This movement is why some refer to the March equinox as the **northward equinox**, and the September equinox as the **southward equinox**.



This (not to scale) image shows how our planet receives equal amounts of sunlight during equinoxes.
Credit: NASA/GSFC/Genna Duberstein

Our Sun shines equally on both the Northern and Southern Hemispheres during equinoxes, which is why they are the only times of the year when the Earth's North and South Poles are simultaneously lit by sunlight. Notably, the length of day and night on the equinox aren't precisely equal; the date for that split depends on your latitude, and may occur a few days earlier or later than the equinox itself. The complicating factors? Our Sun and atmosphere! The Sun itself is a sphere and not a point light source, so its edge is refracted by our atmosphere as it rises and sets, which adds several minutes of light to every day. The Sun doesn't neatly wink on and off at sunrise and sunset like a light bulb, and so there isn't a perfect split of day and night on the equinox - but it's very close.

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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

MeetUp

meetup.com/Ford-Amateur-Astronomy-Club

Scheduled Club Events

Month	Date	Sunset	Location
April	9th	8:08pm	Spring Mill Pond
May	7th	8:39pm	Spring Mill Pond
June	4th	9:05pm	Spring Mill Pond
July	9th	9:11pm	Spring Mill Pond
August	13th Perseid Meteors & Club Picnic	8:46pm	Spring Mill Pond
September	16 & 17th AatB	7:40pm	Kent Lake Beach
October	1st	7:14pm	Spring Mill Pond

Upcoming Club Meeting Topics & Speakers

Meeting	Speaker	Topic
February 24th	Jeff Woytach	NASA Funding and Spinoffs
March 24th	Gerald Dunifer	TBD
April 28th	Ed Cackett	Science with the JWST: Searching of the First Stars

December Talk Details

NASA Funding and Spinoffs

Jeff Woytach, Systems Engineer, NASA Glenn Research Center

Bio:

Jeff Woytach, originally from Scranton, Pennsylvania earned a Bachelor of Science in Aerospace Engineering from the Pennsylvania State University in May 1983. He joined the staff of the National Aeronautics and Space Administration's John H. Glenn Research Center (GRC) in June 1983.

He has worked on the Advanced Communications Technology Satellite launched on the Space Shuttle and was ascent trajectory lead for two

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Equinoxes (Cont'd from Page 4)

Equinoxes are associated with the changing seasons. In March, Northern Hemisphere observers welcome the longer, warmer days heralded by their **vernal**, or spring, equinox, but Southern Hemisphere observers note the shorter days – and longer, cooler nights – signaled by their **autumnal**, or fall, equinox. Come September, the reverse is true. Discover the reasons for the seasons, and much more, with NASA at nasa.gov

Secretary's Report (Cont'd from Page 2)

regularly on The Science Channel series "How the Universe Works," and he was the 2015 recipient of the American Astronomical Society's Division for Planetary Sciences Carl Sagan Medal for Excellence in Public Communication in Planetary Science.

Dan's talk tonight was entitled: "All These Worlds: The Exoplanet Revolution." He has been interested in astronomy since childhood and was greatly influenced by Carl Sagan's series "Cosmos." He was inspired from the start to think about the possibility of other planets orbiting other stars, and the possibility of life on those other worlds.

There are a number of ways we can search for other planets outside our own solar system, and Dan described the astrometric, direct detection, spectroscopic, and transit methods. The first discoveries were of very large Jupiter-like planets, but as the science has evolved, we can now detect Earth-size and smaller planets, many in their stars' habitable zones. We are even detecting moons orbiting some of these planets, as well as planets orbiting double stars. Our solar system is not typical, and in fact, most stars out there are in a binary or multiple-star system.

A question-and-answer period followed.

Meeting adjourned at 9:01 p.m.

FAAC Board Meeting Summary – January 6, 2022

(Videoconference meeting.) In attendance were Jesse Godsey, Sean Pickard, Gordon Hansen, Cheri Grissom, Doug Bauer, Dennis Salliotte, Tim Campbell, Ed Halash, Joseph Bostic and Jeff Gorman. The meeting was called to order by V.P. Ed Halesh (President Mike Bruno and Treasurer Arica Flores were not able to attend. A quorum of at least three officers must be present to call any issues to a vote.)

Edward opened up the official meeting discussing speaker engagement process. Tim C. discussed how it use to be assigned to the person hosting the meeting. Gordon stated since he is now hosting the meeting he will be responsible for the speaker communication about how to join the meetings. There was also a reminder from Tim C. to also remember to record any meetings with speakers.

Membership: Doug Bauer gave an update on the status of membership renewals.

Equipment: Jeff said on the equipment inventory there wasn't anything to report other than the

Astrograph went to Bhru Patel

Tim reviewed the club's Annual To-Do List of activities and events.

Sirius Award Nominations are needed now.

Discussion was held on whether the Annual Banquet should be held vs. combined with the Annual Picnic. (No decision is reached because we do not have a quorum.)

Tim C. discussed beginners nights. He stated that the proposed nights were posted in the last Star Stuff published. If there are any issues with the

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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	Item	Held by
Telescopes		Display Items	
TK1 Coronado Personal Solar Telescope (Doublestack) w/Meade Autostar Goto Mount	Jessica Edwards	Astronomy Event Sign (3' x 6')	Gordon Hansen
TK5 4.5" Reflector on Fitz GEM mount	Bob MacFarland	Astronomy Event Signs 18x24" (x8)	Liam Finn
TK6 8" Orion XT8i Dobsonian	Sean Pickard	PVC Display Board - Folding	Sandra Macika
TK7 TPO 8" f/4 Newtownian Astrograph (OTA Only - no mount)	Bhru Patel	Banner - Small (24" x 32")	George Korody
TK8 20" f/5 Obsession Dob, Ladder & EP Kit	Liam Finn	Banner - Medium (24" x 72")	Sandra Macika
Presentation Tools		Banner - Large (32" x 16')	George Korody
Projector (older)	Jim Frisbie	Tri-Fold Presentation Boards	George Korody
Projector (newer)	Gordon Hansen	Other	
Projection Screen 8'	John McGill	Canopy (10' x 10')	Liam Finn
Projection Screen 6'	Liam Finn	Pop Cooler	Sean Pickard
Bullhorn	George Korody	TA Sky Quality Meter	Liam Finn
Speaker System w/Wireless Mic	Liam Finn	Demonstration Tools	
DVD Player	Dennis Salliotte	Weigh on Planets Scale	George Korody
		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 Spectrascopes	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)	George Korody

Board Meeting (Cont'd from Page 6)

proposed dates please let the board members know.

Tim C. brought up the after hours permit at Island Lake and will be checking with Liam on this.

Joseph Bostic asked about Lake Erie park access. Tim C. stated that we are still not allowed back in as of yet. Tim C. will ask Dr. Tim Dey to check with his contact at the park to determine if this might be possible.

Jesse G. discussed the possibility of digitizing the board meeting minutes and publishing them in groups.io. We are going to be actively looking into doing this.

The group also discussed possible outreach options for this upcoming year.

Speaker Info (Cont'd from Page 5)

missions launched on the Atlas/Centaur launch vehicle. Jeff has also worked on nine pieces of hardware for the International Space Station. He is currently the Systems Engineer for the Fission Surface Power System, which will place a nuclear fission reactor on the lunar surface. Mr. Woytach also provides systems engineering support to the Psyche mission, which will visit an asteroid believed to be composed entirely of metal.

In his spare time, Mr. Woytach enjoys space exploration history, collecting space exploration memorabilia, astronomy, and Star Trek.