



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

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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

FAAC General Meeting – August 26, 2021

Our videoconference meeting was called to order by President Mike Bruno at 7:08 p.m. All board members present. A total of 22 people were in attendance. Some joined as the meeting was already in progress.

Member Observing Experiences:

Liam gave a report on the members-only event at Island Lake on September 11. In addition to viewing the night sky, it sounds like a lot of fun and good humor was exchanged. Several of our FAAC members were able to attend the Great Lakes Star Gaze for the long weekend of September 9-12. Tim Campbell gave a report. In spite of weather being less-than-optimal for some of the four days, there was a fairly good turnout from several clubs in the state. Club members also had a spontaneous event at Island Lake on September 18, with Sean Pickard having sent out an invitation through Groups.io.

Mike reminded everyone about our FAAC Observer's Award, the details of which can be found on Groups.io, under the "Files" tab. This award is fairly new to our club. It looks like a fun challenge. Give it a try!

What's Up:

Gordon Hansen gave the report. We will be having a club-only observing event at Island Lake (not Maybury as usual), on October 9, with October 8 being a possible weather-related alternative date. The Orionids meteor shower will peak on October 21, although it will be going on for a week or more on either side of that. Our asterism of the month is The Circlet in Pisces. There are two comets that are expected to be brightening in the skies during the months of October, both in Taurus. Evening planets in October are Venus, Jupiter, Saturn, Uranus, and Neptune. A few

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

interesting deep-sky objects to look for this month will be M2 (globular cluster in Aquarius), M33 (the Triangulum Galaxy), and M74 (the Phantom Galaxy, a beautiful face-on spiral).

Club Reports:

Treasurer's Report: Arica advises that our treasury balance has been staying about the same, at approximately \$9,500.

GLAAC/AATB: The event is this coming weekend, September 24 and 25. We have several members who will be putting on or helping with our virtual presentations. A schedule of all events can be found at the GLAAC website, and they can be viewed either via Zoom or YouTube.

Speaker:

Jeffrey Woytach, a systems engineer from NASA's Glenn Research Center, spoke about three asteroid missions which have already begun or are soon to launch, each one being unique in its goals and providing valuable scientific knowledge.

OSIRIS-REx was launched in September of 2016 and is traveling to the asteroid named Bennu with the goal of acquiring and returning with a sample of its surface. The craft first rendezvoused with Bennu in December 2018, captured a sample in October of 2020, and is expected to return to Earth in September of 2023.

The Psyche mission is intended to help us understand how planets evolved. The asteroid named Psyche is composed almost entirely of metal. It was only the 16th asteroid to be discovered when it was found in 1852. Because of its composition, it may be the core of a planet that never fully formed, which may give us information about the metal core of Earth and other terrestrial planets. The mission will launch in August 2022, will rendezvous with the asteroid in January 2026, and will spend 21 months mapping and returning data. The craft is not destined to return to Earth.

DART mission (Double Asteroid Redirection Test). A planetary defense-driven test of technologies for preventing an impact of Earth by a hazardous asteroid. It will be using the kinetic impactor technique to change the motion of an asteroid in space. The asteroid that is the destination of the mission is Didymos, which has a smaller orbiting companion, Dimorphos. DART will impact the smaller asteroid at almost 15,000 mph. This is expected to change the orbit by only a

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

fraction of 1 percent, but it will tell us if this is an effective method of deflecting an asteroid's orbit should one come precariously close to Earth.

Questions and answers followed. Meeting was adjourned at approximately 9:20 p.m.

Measure the Night Sky

by David Prosper



Fall and winter months bring longer nights, and with these earlier evenings, even the youngest astronomers can get stargazing. One of the handiest things you can teach a new astronomer is how to measure the sky – and if you haven't yet learned yourself, it's easier than you think!

Astronomers measure the sky using degrees, minutes, and seconds as units. These may sound more like terms for measuring time – and that's a good catch! – but today we are focused on measuring angular distance. Degrees are largest, and are each made up of 60 minutes, and each minute is made up of 60 seconds. To start, go outside and imagine yourself in the center of a massive sphere, with yourself at the center, extending out to the stars: appropriately enough, this is called the celestial sphere. A circle contains 360 degrees, so if you have a good view of the horizon all around you, you can slowly spin around exactly once to see what 360 degrees looks like, since you are in effect drawing a circle from inside out, with yourself at the center! Now break up that circle into quarters, starting from due North; each quarter measures 90 degrees, equal to the distance between each cardinal direction! It measures 90 degrees between due North and due East, and a full 180 degrees along the horizon between due North and due South. Now, switch from a horizontal circle to a vertical one, extending above and below your head. Look straight above your head: this point is called the zenith, the highest point in the sky. Now look down toward the horizon; it measures 90 degrees from the zenith to the horizon. You now have some basic measurements for your sky.

Use a combination of your fingers held at arm's length, along with notable objects in the night sky, to make smaller measurements. A full Moon measures about half a degree in width – or 1/2 of your pinky finger, since each pinky measures 1 degree. The three stars of Orion's Belt create a line about 3 degrees long. The famed "Dig Dipper" asterism is a great reference for Northern Hemisphere observers, since it's circumpolar and visible all night for many. The Dipper's "Pointer Stars," Dubhe and Merak, have 5.5 degrees between them – roughly three middle fingers wide. The entire

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).

Handy Sky Measurements

Hold your hand out in front of your face as far as you comfortably can, and measure:



Measure the Sky with the Big Dipper

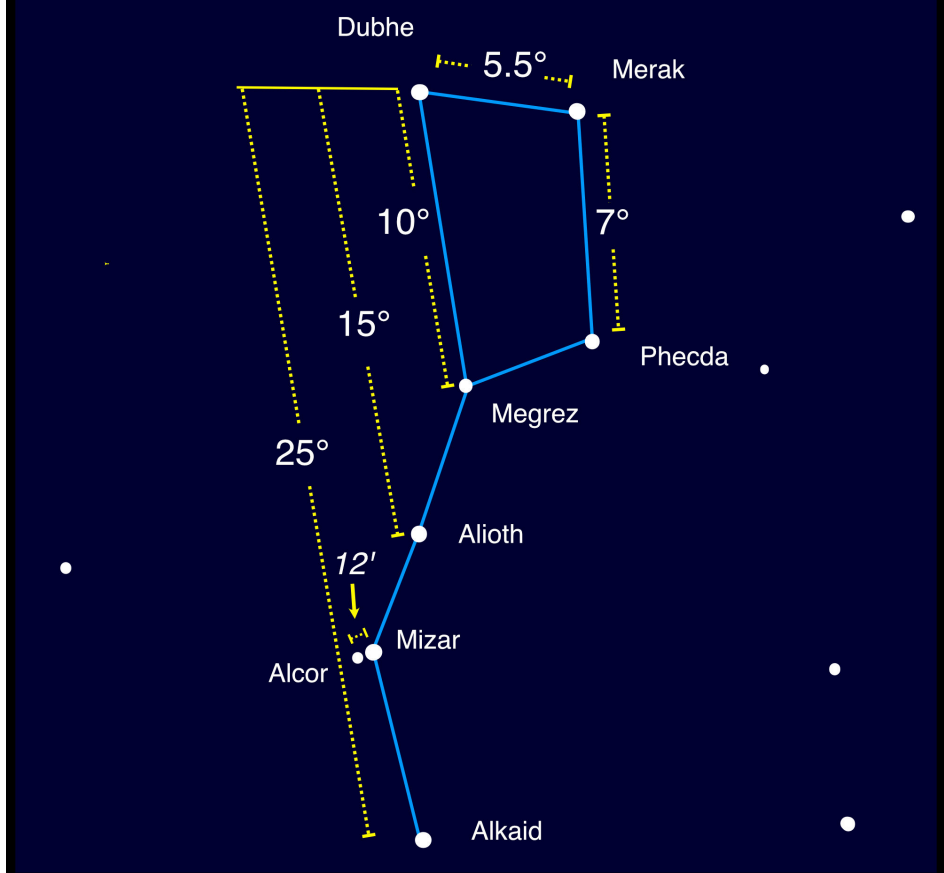


Image created with assistance from Stellarium.

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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
October 28th	Don Klaser	Skylore & Mythology - Fall/Winter

June Talk Details

Skylore & Mythology - Fall/Winter

FAAC Member, Planetarium Presenter for Michigan Science Center & Cranbrook Institute of Science

“Skylore and Mythology – Stories from around the World” explores the stories told about the constellations, Moon, Milky Way and prominent asterisms by many cultures around our world and across time. You will hear similar tales talked about the same star patterns along with completely different ones too. This presentation is the second on this topic, where we will cover the Fall & Winter sky.

Bio:

Don is a 25 year member of the Ford Amateur Astronomy Club, having served as President, Vice-President and Secretary. He is also the host and producer of our clubs YouTube Channel show “Astronomy For Everyone.”

Measure the Sky (Cont'd from page 4)

asterism stretches 25 degrees from Dubhe to Alkaid - roughly the space between your outstretched thumb and pinky. On the other end of the scale, can you split Mizar and Alcor? They are separated by 12 arc minutes - about 1/5 the width of your pinky.

Keep practicing to build advanced star-hopping skills. How far away is Polaris from the pointer stars of the Big Dipper? Between Spica and Arcturus? Missions like Gaia and Hipparcos measure tiny differences in the angular distance between stars, at an extremely fine level. Precise measurement of the heavens is known as astrometry. Discover more about how we measure the universe, and the missions that do so, at nasa.gov.

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)	Gary Gibson	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 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)	George Korody