



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: Liam Finn
Vice President: John McGill
Secretary: Jessica Edwards
Treasurer: Mike Bruno

Departments

Webmaster: Liam Finn
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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 Liam Finn

Last Month's Beginners' Night

Our beginner nights seem to be gathering more momentum with the public attendees and this does change the idea of the beginner night to be more of a public observing night along with being for beginners. Last month's beginner's night brought 250+ people attending — 8 of which were members of the public with telescopes needing our help. This month's looks like it may be similar so with this increasing trend we will need members with telescopes to help on the remaining beginners nights of the year. We had a good turnout in our June event and I would love to see a similar or greater turnout with our July event.

July Beginners' Night — Rescheduled

Our July beginner's night which was supposed to be on the 21st is now moved to the 28th and this is the night of the Mars Opposition. I hope that Mother Nature is kind to us and grants us clear skies or we will have to nominate an astronomer to sacrifice to the Sky Gods.

Meteors & S'mores

Our Meteor and S'mores event is on the same night as the club picnic so bring your telescope to the picnic as we will setup for observing once we are done eating. Last year Meteors and S'mores attracted 3500 members of the public and we overloaded Spring Mill Pond.

Due to the overwhelming number of the public that attended last year the park has decided to first fill Spring Mill Pond and when full, send people to Kent Lake Beach.

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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. Contact the club for information on how to enter or exit the park in the event that the main gate is locked.

The club also has use of a private observing site near Gregory Michigan. See the FAAC Yahoo 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 area equipment retailers, and

A Close-Up View of Mars

by Jane Houston Jones and Jessica Stoller-Conrad

In July 2018, skywatchers can get an up close view of Mars—even without a telescope! In fact, on July 31, Mars will be closer to Earth than it has been in 15 years.

Why is that?

Like all the planets in our solar system, Earth and Mars orbit the Sun. Earth is closer to the Sun, and therefore it races along its orbit more quickly. Earth makes two trips around the Sun in about the same amount of time that Mars takes to make one trip.

Sometimes the two planets are on opposite sides of the Sun and are very far apart. Other times, Earth catches up with its neighbor and passes relatively close to it. This is called Mars's closest approach to Earth, and it's happening this year on July 31. The Moon will be near Mars on that night, too!

Keep in mind that even during its closest approach, Mars is still more than 35 million miles away from Earth. That's really far. So, Mars won't appear as big as the Moon in the sky, but it will appear bigger than it usually does.

July and August will be a great time to check out Mars. Through a telescope, you should normally be able to make out some of the light and dark features of the Red Planet—and sometimes even polar ice. However, a huge Martian dust storm is obscuring these features right now, so less planetary detail is visible.

There is another important Mars date in July: Mars opposition. Mars opposition is when Mars, Earth and the Sun all line up, with Earth directly in the middle. This event is happening on July 27 this year.

Although you may see news focusing on one of these two dates, Mars will be visible for many months. For about three weeks before and three weeks after opposition and closest approach, the planet will appear the same size to a skywatcher.

From July 7 through September 7 Mars will be the third brightest object in the sky (after the Moon and Venus), shining even brighter than Jupiter. The best time to view Mars during this time is several hours after sunset, when Mars will appear higher in the sky.

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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 at

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 Yahoo Group for ordering information and instructions on how to request the correct logo.

Communication

The FAAC uses Yahoo Groups for our email distribution list (both formal and informal discussion.)

Observing nights & locations (scheduled and unscheduled as weather permits), equipment questions, events, outreaches, etc. are normally discussed via this list.

President's Corner (cont'd from page 1)

We do open our Picnic to other clubs and I think we need to have some club members and members from other clubs volunteer to setup their scopes at Kent Lake Beach to facilitate the attendees that will be directed there. If any of our club members want to head to Kent Lake Beach with their scopes after the picnic please let me know.

My First Lunar Meteorite

by Greg Knekleian

Rock Stars NWA 11182

I'll begin this month's column with a comment that I wanted to interview one of the Martian Meteorites in my collection as we approached the opposition of Mars. But I decided to interview a lunar meteorite as a dust storm will make observations of Mars disappointing this year. So the interview with some other Martian Meteorites can wait a for another month.

The best way to start in the meteorite collecting hobby is to start by purchasing less expensive meteorites and building up a varied collection without spending a fortune. I didn't do that, I started out with the expensive Lunar and Martian meteorites. If you want to get into the hobby don't follow my footsteps, but take a more conservative financial approach. You'll save a lot more money when you start out if you do, and have a larger and more varied collection to show to others. Mine is a mostly a niche collection.

RESPECT YOUR ELDERS

The first Meteorite I purchased was a lunar meteorite called NWA11182 which means it was found in North West Africa and it's the 11,182 meteorite discovery under the newer naming convention. The part of that find, that I purchased was a nice thin slice of a 60 gram stone which weighs only 3 grams.

Enough intros let's meet the "grumpy old man".

Greg: Your the first meteorite to come under my management, meant to be the showcase of my collection. Tell me a little bit about yourself.

Join by visiting groups.yahoo.com/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).

Grumpy (Old Man): Well I'm part of a 60 gram stone that was ejected off the moon, but they don't know when it left the moon or how long ago I was in space on my trip to earth.

Greg: Well you're quite old but an interesting looking slice I selected you in part because the way you look and your shape.

Grumpy: I look a little bit like a triangular Star Trek uniform emblem.

Greg: Yes, how did you know that?

Grumpy: When your as old as I am you've heard it all.

Greg: So how old are you?

Grumpy: I'm one of only three lunar meteorites tested that have a negative Cerium anomaly. That means I'm potentially made up of stuff that is older than the solar system. About 4.6 billion years old.

Greg: Well you're certainly old.

Grumpy: Well have some respect for your elders young whipper snapper. I'm supposed to be the center piece of your collection, but I've been feeling neglected lately.

Greg: Yes. Well I have collected some other amazing pieces as well after I picked you up for our management team.

Grumpy: Just remember most of them don't have the seniority I have. Learn to show some respect.

JUST THE FACTS

Lunar Meteorite polished full
Slice 3.0 grams (Feldspathic
breccia)

Purchased from Aerolite
Meteorites.

Purchase price: \$420.

Found in 2017

This is a typical Lunar Breccia which is made up of mixed rocks and soil fused together from high impact collisions on the moon.



Planetarium

Several 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

It's typical for most lunar meteorites and lunar samples to be mixed breccias from the lunar Regolith. Some lunar meteorites have gabbro melt layers in them from early volcanic activity. But most lunar meteorites found are Breccia. Almost every lunar meteorite we have found is mixed from different ejecta material from different craters. It is estimated that all the lunar meteorites found so far came from material about 40 different crater impact sites. That may not sound like a lot of sites, but it's far more broad in its sampling than the collection of rocks brought back from the Apollo program. Scientists don't know which craters they came from.

This polished slice has a pattern in it on one side that looks a little bit like a smiley face. There's a small piece of brown fusion crust on the edge of the meteorite. Lunar Meteorites that show any fusion crust have brown fusion crust, not black fusion crust. This is because they don't contain carbon.

Secretary's Report

by Jessica Edwards

22 June General Meeting

Member Observations and What's Up

Several transits of the moons of Jupiter were observed. Dark skies in Cadillac allowed for the viewing of a few meteors and the dark Snake Nebula. This month is a good one for planets with Mercury, Venus, Jupiter, and Saturn visible in the evening. Mars rises after midnight, but a planet wide dust storm is obscuring surface details which will make its opposition on 27 July underwhelming. Mars will also be only 22° high in the sky.

Main Talk – Size & Distance – Ken Bertin

Most of the general public has no idea how far away celestial objects are. The size of massive stars, distances to nearby objects, and the vastness that is space can be overwhelming. By putting some of these numbers in units of familiarity, the scale of the universe can be appreciated. For example, it takes light 5 hours to travel to Neptune, 4.25 Light years to travel to Proxima Centauri, and only 8 light minutes between the Sun and Earth. The Sun itself can hold 1.3 million Earths and is dwarfed by some of the other stars that have been discovered.

Mars (cont'd from page 2)

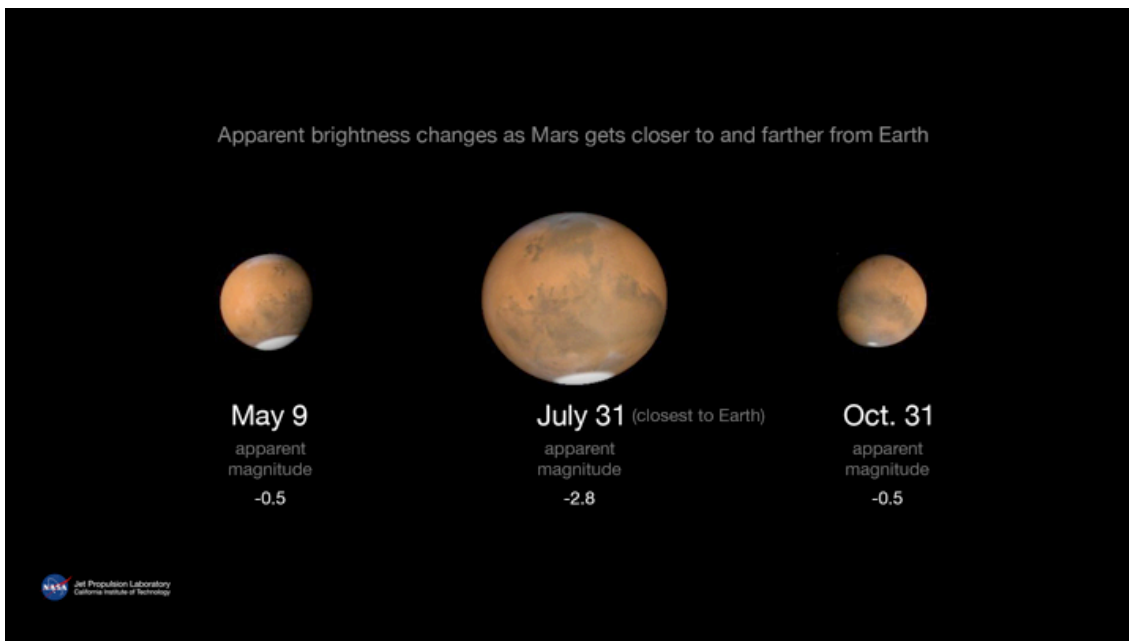
Mars will still be visible after July and August, but each month it will shrink in size as it travels farther from Earth in its orbit around the Sun.

In other sky news, there will be a partial solar eclipse on July 13, but it will only be visible from Northern Antarctica and southern Australia. On July 27 (beginning at 20:21 UTC), a total lunar eclipse will be visible in Australia, Asia, Africa, Europe and South America. For those viewers, Mars will be right next to the eclipsing Moon!

If you're wanting to look ahead to next month, prepare for August's summer Perseid meteor shower. It's not too

early to plan a dark sky getaway for the most popular meteor shower of the year!

You can catch up on NASA's missions to Mars and all of NASA's missions at www.nasa.gov



Caption: In 2018, Mars will appear brightest from July 27 to July 30. Its closest approach to Earth is July 31. That is the point in Mars' orbit when it comes closest to Earth. Mars will be at a distance of 35.8 million miles (57.6 million kilometers).

Credit: NASA/JPL-Caltech

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, Dennis Salliotte, at equipment@fordastronomyclub.com

Item	Held by	Item	Held by
Telescopes		Eye Pieces	
4" Dobsonian (Harold's donation)	George Korody	EPK1 Eyepieces, Filters & Accessories	Liam Finn
TK1 Coronado Personal Solar Telescope (Doublestack) w/Meade Autostar Goto Mount	John McGill	Binoculars	
TK3 Celestron 130mm Newtonian w/goto mount	Liam Finn	BK3 15x70 Binoculars w/monopod mount	Bob MacFarland
TK4 Celestron 90mm Refractor w/manual mount	Liam Finn	BK4 20x80 Binoculars w/alt-az goto mount	Sandra Macika
TK5 4.5" Reflector on Fitz GEM mount	Bob MacFarland	BK5 25x70 Binoculars w/tripod adapter	Tim Dey
TK6 8" Orion XT8i Dobsonian	Jed & Jacob Datema *Caretakership is available	Display Items	
TK7 TPO 8" f/4 Newtownian Astrograph (OTA Only - no mount)	Jim Barnes	Astronomy Event Sign (3' x 6')	Gordon Hansen
Presentation Tools		Astronomy Event Signs 18x24" (x8)	Liam Finn
Projector (older)	Jim Frisbie	PVC Display Board - Folding	Sandra Macika
Projector (newer)	Mike Bruno	Banner - Small (24" x 32")	George Korody
Projection Screen 8'	Liam Finn	Banner - Medium (24" x 72")	Sandra Macika
Projection Screen 6'	John McGill	Banner - Large (32" x 16')	George Korody
Bullhorn	George Korody	Tri-Fold Presentation Boards	Don Klaser
Speaker System w/Wireless Mic	Liam Finn	Tri-Fold Poster Board (Club Photos)	George Korody
DVD Player	Jim Frisbie	Other	
Demonstration Tools		Canopy (10' x 10')	Liam Finn
Weigh on Planets Scale	George Korody	Pop Cooler	Hayden Barrett
Lunar Phase Kit	Bob MacFarland	Equipment Etching Tool	Greg Ozimek
100' Scale Model Solar System Kit	Bob MacFarland	TA Sky Quality Meter	Liam Finn
		TA Sky Atlas 2000.0	Tim Dey
		TA Orion Telescope Binoviewer	Liam Finn

Item	Held by
Imaging Cameras	
C1 Celestron NexImage Solar System Imager model #93712	Gordon Hansen
C2 Meade Deep Sky Imager Pro III w/Autostar Suite	Gordon Hansen
C3 Orion StarShoot Deep Space Video Camera NTSC #52185 w/video capture device #52178	Gordon Hansen
C4 Meade Electronic Eyepiece w/video cable for monitor or TV	Gordon Hansen
C5 Orion StarShoot Deep Space Video Camera II #52195 and Orion StarShoot iPhone Control for Deep Space Video Camera II #52195	Gordon Hansen
C6 Canon 60Da Astrophotography DSLR and accessories	Tim Dey
Other Imaging Equipment	
CA1 Rigel Systems Spectrascopes	Gordon Hansen
CA2 Celestron 1.25" to T-Adapter (male) #93625	Tim Dey
CA3 Canon EOS Deluxe Astrophoto kit for Canon EOS mount, T-thread adapter and variable 1.25" extender	Tim Dey
CA4 Orion StarShoot LCD-DVR #58125 2.5" LCD screen	Gordon Hansen
CA5 Celestron Canon EOS T-ring adapter #93419	Tim Dey
Special Event Items - Not available for Loan Out	
BK1 Orion BT-100 Binocular telescope w/hard case, Orion VersaGo h.d. manual Alt/Az mount w/ Vixen dovetail head and Vixen style binocular holder bracket	Ken Anderson
BK2 Zhumell 25x100 Binoculars, hard case, & Zhumell TRH-16 tripod w/soft fabric bag	Sandar Macika
TAK1 Night Vision Image Intensifier for telescopes (2" barrel size)	George Korody

Scheduled Observing Nights

Month	Date	Sunset	Location
July	28th	8:28pm	Island Lake Spring Mill Pond
August	11th FAAC Club Picnic + Meteors & S'Mores	8:28pm	Island Lake Spring Mill Pond
September	14th & 15th Astronomy at the Beach	7:43pm 7:41pm	Island Lake Kent Lake Beach
October	13th	6:63pm	Mayberry State Park

Classifieds

Deep-Sky Observing Outfit

Go from 0-to-60 in 2.9 with this COMPLETE Deep-Sky Observing Outfit.

All you will need to bring are the mosquitos. Altho older in calendar terms (c. 2005) this entire outfit is essentially BRAND NEW and UNUSED. The telescope has not seen first light.

(Approx. today's replacement cost of each item in parens)

ORION "SkyQuest XT10" IntelliScope 10-inch f/4.7 (F.L. 1200mm) Dobsonian Reflector (\$900)

- 2-inch focuser with 1-1/4" adapter
- ORION 9x50 straight-thru finder scope
- Bronze-finished metal tube
- ORION Zipper case (midnight blue - for optical tube only) (\$120)

ORION IntelliScope Computerized Object Locator (#7880) (incl w/scope)

- "Push-To" over 14,000 objects
- In original box with instructions

ORION Cooling Fan Kit (#7814) (\$30)

- Includes dedicated battery pack
- In original box with instructions

KENDRICK Dew Remover System (12 volt) (\$266)

- Controller Model VI (#2001)
- 1.25" Heater Element (#2005)
- 5" Heater Element (#2009)

ORION LaserMate Deluxe Collimator (#5690) (\$70)

- In original box with instructions

ORION Full-Aperture Solar Filter (\$170)

Eyepieces:

- ORION "Sirius" fully coated 10mm Plossl 1-1/4 in box (incl w/scope)
- ORION "Sirius" fully coated 25mm Plossl 1-1/4 in box (incl w/scope)
- MEADE Series 4000 multi-coated SUPER PLOSSL 9.7mm 1-1/4 in case (\$25)
- CELESTRON "Ultima SV Series" Fully Multi-Coated 2x Barlow 1-1/4 (#93506) (\$70)

ORION "E Z Finder" illuminated 1x finder scope (\$20)

CELESTRON "Light Pollution Reduction" (LPR) filter for 1-1/4 eyepieces in box with instructions (\$55)

CELESTRON Night Vision LED Flashlight (\$10)

MEADE "ETX" zipper accessory bag (\$35)

(Total \$1771)

Asking \$995 for the lot & prefer NOT to split it up.

Please contact Greg Burnett
email: skyfog@att.net

Dobstuff Telescope

16 inch -- 1.5 inch thick -- F4.5 mirror

Built in September 2011 from a Meade Equatorial Starfinder

- 6 point all aluminum mirror cell
- 2-speed 2-inch Moonlite Focuser with 1.25-inch adapter
- Destiny curved 3 vane Spider
- 3.1 inch Coulter Secondary

This is a Push-To Telescope with Homemade Digital Setting Circles (DSC) using a Tungsten T3 Palm Pilot. Paperwork, history of mirror, sketches, drawings, etc. all in a 3-ring binder...

Pictures on request.

Have over \$2100 invested...Please Make Offer...

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