



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:	John McGill
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.

President's Corner

by Mike Bruno

December is here, where has the past year gone? The year has been crazy for sure, but I hope everyone has been getting a chance to observe during a clear night.

Well, our last general meeting is on December 3rd I sure hope to see everyone online, the meeting notice and link is in our Groups.io chat. We are going to have a major award presented & Gordon Hansen has agreed to run a special online version of Astro Jeopardy!

It is also that time of year for dues renewal. You will get a notice from Doug Bauer again & you can renew by mail or now online by going to <https://fordastronomyclub.square.site> and click the Renew button.

We also have Club elections to hold in January. The nominating committee has a slate of candidates that have agreed to run for the 2021 Board positions. But do not let that stop you for running for a position or for nominating someone you would think is up for the challenge. We welcome everyone to be involved with the running of this great club.

And all importantly we are in need of nominations for the 2021 Sirius Award recipient. Please nominate who you think has been that all important bright shining star of the Club. All current club members can be nominated, as long as they have not won previously and are not currently on the Board now or after the January election. Please send your nomination and a few words on why you are nominating that person to president@fordastronomyclub.com

I know we have faced a lot of challenges this year, but we have accomplished a lot during these trying times. Thank you to everyone for all the support you have shown to keep the FAAC up and running during the year.

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

I hope everyone can take some time to enjoy yourselves this upcoming holiday season and into the new year. Stay safe and clear skies!

Secretary's Report

by Cheri Grissom

FAAC General Meeting – October 22, 2020

Our videoconference general meeting was called to order by President Mike Bruno at approximately 7:07 p.m. All board members present except John McGill. A total of approximately 19 people were listed as being in attendance. New member Dan from Benton Harbor introduced himself, and also Ray, a former member who now lives in Algonac.

Member Observing Experiences:

Gary Gibson reports good viewing of Mars earlier in the evening. He is seeing markings on the planet even with his 3" refractor. Gary also reports he has sold a lot of the equipment he had previously offered, but of course he has now bought new items! Arica has acquired two new telescopes, a refractor and an SCT. Mike Bruno had the opportunity to share some nice views with an old friend recently.

We then talked generally about NASA's OSIRIS-REx mission which recently had a successful touchdown on asteroid Bennu. Samples of the asteroid have been taken, and the craft is expected to return to Earth in September 2023.

What's Up:

Tim Campbell and Mike Bruno showed highlights of the coming month. Jupiter and Saturn are getting closer together in our night sky but are also setting earlier, so now is the time to get out for some last great views of the season. On Halloween night, there will be a transit of Jupiter's moon Io and its shadow. The Leonids Meteor Shower will peak November 17-18.

Treasurer's Report:

We currently have \$9,023. Mike still has to get some bank statements to Arica. Our P.O. box rental is paid for. There are still some refunds that need to go out for our Swap Meet which are awaiting proper contact information.

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

Social Media/Website:

Liam reports nothing new, but we are still getting a steady stream of visitors to all of our sites.

Mike wanted to thank GLAAC for doing a great job with the virtual version of Astronomy at the Beach. It was a success, and if you missed any of it, check out GLAAC's website or our club's Astronomy For Everyone YouTube channel to watch the videos.

Our next, and last, meeting of 2020 will take place on December 3. This is our usual combined November/December meeting and is traditionally a potluck. As that will not be possible this year, this meeting will be held virtually, but we will try to make it special. Several ideas have been tossed around. Stay tuned!

Our nominating committee has one member willing to run for each of our four board positions, but if you are interested in running, too, it's not too late to make your wishes known.

Speaker:

Jenny Pon, member of the Farmington Community Stargazers and a Fellow of the Great Lakes Planetarium Association, with 30 years of experience working in the planetarium field, gave a Halloween-themed talk on "Space Ghosts." Many nebulae, galaxies, and comets can have a ghostly look in the eyepiece, and Jenny took us on a tour of some of the most interesting examples. When Charles Messier was comet-hunting 200 years ago, he often came across diffuse objects that could be mistaken for comets. He compiled a list of these objects to avoid being distracted by them. Nowadays, his Messier list is very interesting to amateur astronomers! Jenny also talked about the life cycle of stars and how they are destined for different endings. She talked about the elements in our own bodies that originated from the stars. Comments and discussion followed.

Meeting was adjourned at 8:49 p.m.

November Board Meeting Summary

(Please note that these summaries published each month are a condensed and abbreviated form of the full slate of topics and discussions that take place at our board meetings. Full board meeting minutes are taken each month and kept for club records.)

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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).

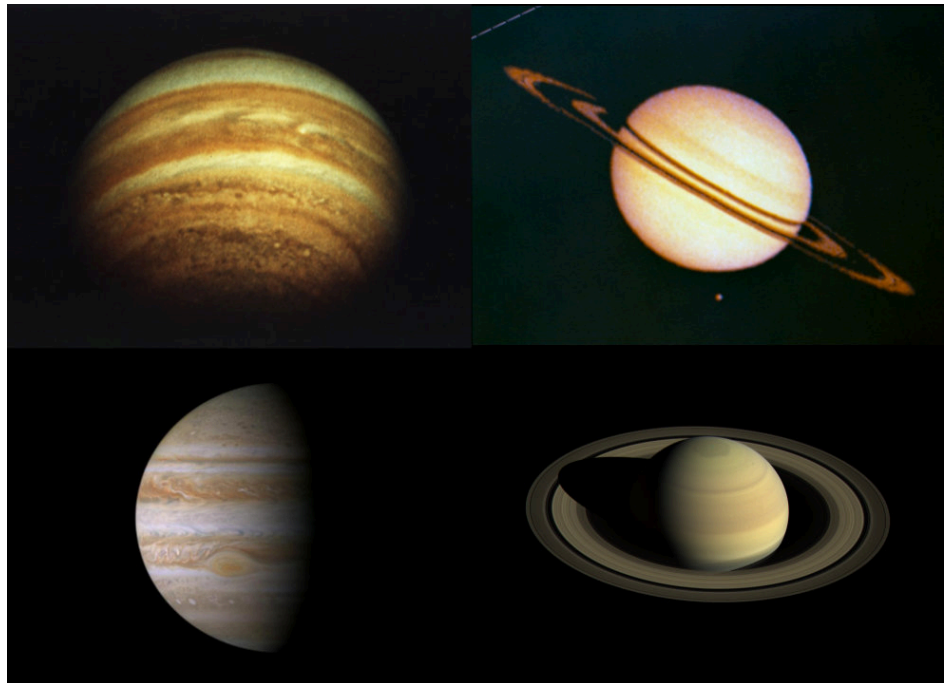
Visitors to Both Jupiter and Saturn

by David Prosper



Have you observed Jupiter and Saturn moving closer to each other over the past few months? On December 21, the two worlds will be at their closest, around 1/5 of a full Moon apart! While the two gas giants may appear close, in reality they are hundreds of millions of miles apart. Despite this vast distance, a select few missions have visited both worlds by using a gravity assist from giant Jupiter to slingshot them towards Saturn, saving time and fuel.

Pioneer 11 was the first mission to visit both worlds! Launched in 1973, the probe flew past Jupiter in late 1974, passing just 26,400 miles above its stormy clouds. In 1979, it became the first spacecraft to encounter Saturn. Pioneer 11 took the first up-close photos of Saturn and its satellites, and made many exciting discoveries, including the detections of its magnetic field and a faint "F" ring, before departing Saturn and eventually, the solar system.



The difference in technology between generations of space probes can be stunning! The top two photos of Jupiter and Saturn were taken by Pioneer 11 in 1974 (Jupiter) and 1979 (Saturn); the bottom two were taken by Cassini in 2000 (Jupiter) and 2016 (Saturn). What kinds of photos await us from future generations of deep space explorers?

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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	17th	7:17pm	Island Lake
May	15th Int'l Astronomy Day	7:48pm	Island Lake
June	19th	8:12pm	Island Lake
July	17th	8:06pm	Island Lake
August	14th	7:35pm	Island Lake
September	11th (Tentative)	6:49pm	Island Lake
October	9th	6:00pm	Maybury State Park

Upcoming Club Meeting Topics & Speakers

Meeting	Speaker	Topic
January 28th	Ed Cackett	Mapping a Black Hole

November December Meeting

Astro Jeopardy, Award Presentation, & General Discussion

The club's combines the November & December meetings into a single meeting to avoid holiday conflicts (the fourth Thursday in November is typically Thanksgiving and the fourth Thursday in December is Christmas Eve this year. This meeting would typically be the annual pot-luck social (but not this year).

The club had to delay and then ultimately cancel the annual banquet where we would normally play take in a talk, present the Sirius Award, and play Astro Jeopardy.

At the board meeting, the general consensus was that the club should present the award and still play Astro Jeopardy ... at the November/December online meeting.

The normal meeting schedule with a featured speaker will resume in January.

Jupiter & Saturn (cont'd from page 4)

The Voyager missions quickly followed up, taking a “Grand Tour” of the four largest and most distant planets in our solar system. Both probes were launched within two weeks of each other in 1977. Voyager 1 flew past Jupiter in March 1979, discovering Jupiter’s faint ring and two new moons, along with active volcanoes on Io’s surface! The probe then flew past Saturn in November 1980, discovering five new moons, a new “G” ring, mysterious ring “spokes,” and “shepherd moons” shaping the rings. After a brief encounter with Titan revealed evidence of complex organic chemistry and liquid on the moon’s frigid surface, Voyager 1 was flung out of the plane of the solar system. Following close behind, Voyager 2 took detailed photos of Jupiter’s moons and cloud tops in July 1979. Flying past Saturn in August 1981, Voyager 2 measured the thickness of Saturn’s rings and took detailed photos of many of its moons. This second explorer then captured images of Uranus and Neptune before leaving our solar system.

Cassini-Huygens was the last mission to visit both worlds. Launched in 1997, the mission flew past Jupiter in late 2000 and took incredibly detailed photos of its stormy atmosphere and faint rings. Cassini entered into Saturn’s orbit on July 1, 2004. The Huygens probe separated from Cassini, landing on Titan to become the first probe in the outer solar system. Cassini discovered geysers on Enceladus, fine details in Saturn’s rings, many more moons and “moonlets,” the changing oceans of Titan, and seasonal changes on Saturn itself. After revolutionizing our understanding of the Saturnian system, Cassini’s mission ended with a fiery plunge into its atmosphere on September 15, 2017.

What’s next for the exploration of the outer worlds of our solar system? While Juno is currently in orbit around Jupiter, there are more missions in development to study the moons of Jupiter and Saturn. Discover more about future NASA missions to the outer worlds of our solar system at nasa.gov.

Secretary’s Report (Cont’d from page 3)

(Videoconference meeting.) All board members present. Ten additional members attended.

The main topics of discussion at this month’s board meeting included: Some of our online calendars are still showing the physical meeting locations. This will be corrected to reflect the fact that all of our meetings have been virtual since spring and will remain that way for the foreseeable future. Also, a reminder that you must be signed up to receive emails from Groups.io in order to receive invitations to join the virtual meetings.

Mike Bruno has set up a club account with Square so that members can join, renew, and pay online. A group email will be sent out detailing how to use this site. Of course, we still have our P.O. box for those who prefer to pay by check.

Our combined November/December meeting, on December 3, will be the final meeting of the year and will be a combination of Astro-Jeopardy, members sharing observing experiences, reports of new equipment, or other astronomy-related topics. We will also announce the winner of the 2020 Sirius Award. It was also decided that, in spite of not being able to have live events this year, we will proceed with nominating a 2021 Sirius Award winner, as many members have still worked very hard for FAAC in spite of the challenges this year.

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