



# 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:	Cheri Grissom
Treasurer:	Mike Bruno

## Departments

Webmaster:	Liam Finn
Newsletter:	Tim Campbell
Equipment:	Dennis Salliotte
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 Liam Finn*

### June Club Meeting

Our June meeting will be held in the Forfa auditorium as we have Nour Raoiafi, chief scientist for the Parker Solar Probe providing a remote presentation with the latest and greatest info on the Parker Solar Probe. This is not to be missed as the Parker Solar Probe is a present ongoing mission gathering data today. I strongly urge members to attend and also reach out to all the local clubs and invite them to attend as it is rare we get scientists working on active missions to present the latest news on their missions.

### July 6th Beginner's Night - Island Lake

This is our monthly Beginners night. We highly encourage the members, especially the new members, to come join us and experience the night sky with the members and to share with the members of the public our love for the night sky. Come join us and observe through the clubs 20 inch Dob.

### Apollo Anniversary Event – July 20th

We have been asked to have some scopes at an event downtown on July 20th for a party celebrating the first moon landing. This event is still pending confirmation but it is going to be held at Tangent Gallery / Hastings Street Ballroom in Detroit. We are awaiting confirmation from the event planner and we will keep you posted.

## Club Information

Refer to our website for a map and directions:

[www.fordastronomyclub.com](http://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](mailto: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

## Annual Club Picnic – August 10th

Just giving everyone a heads up, on August 10th at Island Lake we will be holding our annual multi-club picnic. This also coincides with our annual Meteors & S'mores event. The Picnic starts at 4pm until 7:30 and the Meteors & S'mores starts at 8pm. The meteors event is crazy busy, we will need all the scopes we can get our hands on and we need to spread them across Spring Mill Pond and Kent Lake Beach. Please spread the word about the event and also ask everyone to bring a telescope and stay for the evening observing. Last year we filled the park with over 7000 people so we need all hands on deck for this evening event so put it in your calendar. Get there for the picnic so we can feed you before a busy night of outreach.

## Secretary's Report

*by Cheri Grissom*

### FAAC General Meeting – May 23, 2019

Meeting called to order at 7:01 p.m. by Vice President John McGill. All board members present except Liam Finn. Member and guest introductions were made, with approximately 35 people in attendance.

### *Member Observing Experiences:*

Paul and Nickai Gulley took a trip to the Mackinaw City area, where they enjoyed visiting the Headlands International Dark Sky Park, though, unfortunately, skies were pretty hazy. Gary Gibson reports that he and Patrick Mog took telescopes to the U of M Water Festival where they provided some solar observing. Quite a few of our members attended our last Public Observing Night. Those who stayed late enough had the opportunity to witness a very bright meteor that was reported as being seen over a wide area, including Ontario and other states around Michigan. Gordon Hansen reported seeing some very interesting and unusual pink clouds not in the west but in the east at sunset one evening. John McGill had the chance to watch a launch of an ISS resupply mission from the vantage point of the top of the Vehicle Assembly Building at the Kennedy Space Center.

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Stuff newsletter, discounts on magazines, discounts at selected 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](mailto: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](http://LLBeanBusiness.com)

See the [groups.io](http://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

# Observe the Moon and Beyond: Apollo 11 at 50

*by David Prosper*

**Saturn** is at opposition this month, beckoning to future explorers with its beautiful rings and varied, mysterious moons. The **Moon** prominently passes Saturn mid-month, just in time for the 50th anniversary of **Apollo 11**!

**Saturn** is in opposition on July 9, rising in the east as the Sun sets in the west. It is visible all night, hovering right above the teapot of Sagittarius. Saturn is not nearly as bright as Jupiter, nearby and close to Scorpius, but both giant planets are easily the brightest objects in their constellations, making them easy to identify. A full **Moon** scrapes by the ringed planet late in the evening of the 15th through the early morning of the 16th. Some observers in South America will even see the Moon occult, or pass in front of, Saturn. Observe how fast the Moon moves in relation to Saturn throughout the night by recording their positions every half hour or so via sketches or photos.

While observing the Saturn-Moon celestial dance the early morning of the 16th, you can also contemplate the 50th anniversary of the launch of the Apollo 11 mission! On June 16, 1969, **Apollo 11** blasted off from Cape Canaveral in Florida on a journey of almost a quarter million miles to our nearest celestial neighbor, a mission made possible by the tremendous power of the Saturn V rocket – still the most powerful rocket ever launched. Just a few days later, on July 20, 1969 at 10:56 pm EDT, Neil Armstrong and Buzz Aldrin set foot on the lunar surface and became the first people in history to walk on another world. The astronauts set up equipment including a solar wind sampler, laser ranging retroreflector, and seismometer, and gathered up almost 22 kilograms (48 pounds) of precious lunar rocks and soil samples. After spending less than a day on the Moon's surface, the duo blasted off and returned to the orbiting Columbia Command Module, piloted by Michael Collins. Just a few days later, on July 24, all three astronauts splashed down safely in the Pacific Ocean. You can follow the timeline of the Apollo 11 mission in greater detail at [bit.ly/TimelineApollo11](http://bit.ly/TimelineApollo11) and dig deep into mission history and science on NASA's Apollo History Site: [bit.ly/ApolloNASA](http://bit.ly/ApolloNASA).

Have you ever wanted to see the flag on the Moon left behind by the Apollo astronauts? While no telescope on Earth is powerful enough to see

weather permits), equipment 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](mailto:starstuff@fordastronomyclub.com)

Observatory

The FAAC maintains and operates the Hector J Robinson Observatory (HJRO) at Lincoln Park Schools.

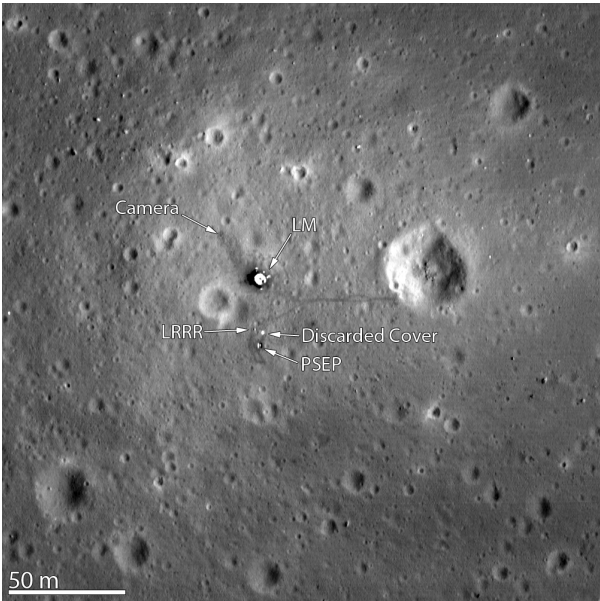
The observatory houses a 14" Celestron C14 Schmidt Cassegrain Telescope as well as other instruments and can be used by club members.

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).



Caption: Earth-based telescopes can't see any equipment left behind at the Apollo 11 landing site, but the cameras onboard NASA's Lunar Reconnaissance Orbiter (LRO) can. This is Tranquility Base as seen from the LRO, just 24 kilometers (15 miles) above the Moon's surface, with helpful labels added by the imaging team. Image Credit: NASA Goddard/Arizona State University. See more landing sites at: [bit.ly/ApolloLRO](http://bit.ly/ApolloLRO)

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Scheduled Club Events

Month	Date	Sunset	Location
July	6th Observing Night	9:12pm	Island Lake Spring Mill Pond
August	10th FAAC Club Picnic Metears & S'mores	8:41pm	Island Lake Spring Mill Pond
September	TBD Astronomy at the Beach		Island Lake Kent Lake Beach
October	5th Int'l Astronomy Day	7:08pm	Mayberry State Park?
November	11th Mercury Transit	7:20am-1pm	TBD

## 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](http://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](https://facebook.com/FordAstronomyClub)

### Twitter

[twitter.com/Ford\\_Astro](https://twitter.com/Ford_Astro)

### MeetUp

[meetup.com/Ford-Amateur-Astronomy-Club](https://meetup.com/Ford-Amateur-Astronomy-Club)

# Upcoming Club Meeting Topics & Speakers

Meeting	Speaker	Topic
June 27th	Dr. Nour Raoiafi NASA Chief Scientist Parker Solar Probe	Parker Solar Probe
July 25th	Mike O'Dowd	Grumman's Lunar Module and Simulating the first moon landing
August 22nd	Dr. Karen Collins	TESS Mission
September 26th	Jim Shedlowsky	The Evolution of Giant Telescopes
October 24th	Jenny Pon	Space Ghosts

## June Talk Details

### The Parker Solar Probe Mission

#### Status, Results from the First Two encounters, and Outlook

*Nour E. Raouafi*

*The Johns Hopkins University Applied Physics Laboratory, Laurel, MD, USA*

NASA's Parker Solar Probe, which launched on August 12, 2018, is the first mission to fly into the atmosphere of a star, i.e. the solar corona. Parker Solar Probe will potentially revolutionize our understanding of this mysterious region by answering questions that puzzled scientists for decades: how the solar wind is heated and accelerated and how solar energetic particles are accelerated and transported throughout the heliosphere. Parker Solar Probe achieved two solar encounters and is heading toward the third, all with a perihelion of 35.6 Solar Radii. The second Venus gravity assist will be performed on December 26, 2019, after which the orbit perihelion will decrease to 27.8 Solar Radii. Parker Solar Probe is primarily an exploration mission and the potential for discoveries is huge. The in-situ measurements made byIELDS, SWEAP, and ISOIS and white-light images from WISPR show plasma features that have not been observed before. We provide an overview on the status of the mission after two solar encounters, science data collected since launch, and the outlook of the mission based on past performance.

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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, Dennis Salliotte, at [equipment@fordastronomyclub.com](mailto:equipment@fordastronomyclub.com)

Item	Held by	Item	Held by
<b>Telescopes</b>		<b>Display Items</b>	
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	Jed & Jacob Datema	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
20" f/5 Obsession Dob & Ladder	Liam Finn	Banner - Medium (24" x 72")	Sandra Macika
<b>Presentation Tools</b>		Banner - Large (32" x 16')	George Korody
Projector (older)	Jim Frisbie	Tri-Fold Presentation Boards	George Korody
Projector (newer)	Dennis Salliotte	<b>Other</b>	
Projection Screen 8'	John McGill	Canopy (10' x 10')	Liam Finn
Projection Screen 6'	Liam Finn	Pop Cooler	Nickai Gulley
Bullhorn	George Korody	TA Sky Quality Meter	Liam Finn
Speaker System w/Wireless Mic	Liam Finn	<b>Demonstration Tools</b>	
DVD Player	Dennis Salliotte	Weigh on Planets Scale	George Korody
<b>Eye Pieces</b>		Lunar Phase Kit	Bob MacFarland
EPK1 Eyepieces, Filters & Accessories	Liam Finn	100' Scale Model Solar System Kit	Bob MacFarland
		NSN Meteorite (Outreach) kit	Sandra Macika



Item	Held by
<b>Imaging Cameras</b>	
C2 Meade Deep Sky Imager Pro III w/Autostar Suite	Gordon Hansen
C6 Canon 60Da Astrophotography DSLR and accessories	Tim Dey
<b>Other Imaging Equipment</b>	
CA1 Rigel Systems Spectrascope	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
CA5 Celestron Canon EOS T-ring adapter #93419	Tim Dey
<b>Special Event Items - Not available for Loan Out</b>	
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

### *May Talk Details (Cont'd from page 5)*

#### **Bio:**

Dr. Nour E. Raouafi is a solar physicist. He is the Project Scientist of NASA Parker Solar Probe mission. He obtained his PhD in Dec. 2000 from the University of Paris XI (Orsay, France). Before joining the Johns Hopkins Applied Physics Laboratory in 2008, he worked at the Max Planck Institute for Solar System Research (Göttingen, Germany 2002-2005) and the National Solar Observatory (Tucson, Arizona: 2005-2008). His research spreads over a wide range of solar and heliospheric areas with emphasis on the dynamic solar corona via the analysis of spectral and imaging observations, theory, and modeling. His primary contributions have been in the area of solar

magnetic fields, coronal spectropolarimetry, coronal plumes and jets, CMEs and coronal shock waves, solar energetic particles, and cometary physics. He authored and co-authored tens of peer reviewed papers and meeting proceedings.

*NASA Article: Moon / Apollo 11 (Cont'd from page 4)*

any items left behind the landing sites, you can discover how much you can observe with the Flag on the Moon handout: [bit.ly/MoonFlag](http://bit.ly/MoonFlag)

You can catch up on all of NASA's current and future missions at [nasa.gov](http://nasa.gov)

**Copernicus**

This crater (left) is easy to spot. It formed about 800 million years ago, and is 57 miles (92 km) wide. Note central peaks and terraced walls, caused by impact.

**Aristarchus**

Young crater. So bright that Sir William Herschel thought it was an active volcano.

**Kepler**

Small version of Copernicus

**Grimaldi**

Lava-filled crater is one of the darkest spots you can see on the Moon. It's 145 miles wide (233 km).

**Mare Humorum**

The Sea of Moisture is about 220 miles (350 km) across. You can spot it with the naked eye. With a telescope, you might notice two craters along its edge.

**Tycho**

Young crater best seen during a full Moon. Rays of bright material are ejecta blasted out of the crust when a large asteroid struck about 109 million years ago.

# The Moon

**Mare Serenitatis**

The Sea of Serenity is solid lava, some 380 miles (610 km) across.

**Mare Crisium**

The Sea of Crisis is about 340 miles wide (550 km) and visible to the naked eye.

**Mare Tranquillitatis**

The Sea of Tranquility is a smooth plain filled with once-molten lava that welled up from below after an impact billions of years ago. The first humans to walk on the Moon, Apollo 11 astronauts, landed near the edge.

SOURCES: NASA; ADVANCED SKYWATCHING; CAMBRIDGE ATLAS OF ASTRONOMY; DK VISUAL ENCYCLOPEDIA

**Photos: James Scala. Layout and text for Moon map used with permission: Robert Roy Britt/SPACE.com.**

Caption: Observe the larger details on the Moon with help from this map, which also pinpoints the Apollo landing site. Full handout available at [bit.ly/MoonHandout](http://bit.ly/MoonHandout)



*Secretary's Report (Cont'd from page 2)**Club Equipment:*

Dennis Salliotte reminded everyone of the club's equipment loaner program, how it works, who to contact, etc.

*What's Up:*

Gordon Hansen presented the upcoming calendar of events. May 2019 is the 50th anniversary of the Apollo 10 mission, which was considered a "dress rehearsal" for Apollo 11, the first mission to land humans on the moon, a couple months later. Jupiter will be at opposition on June 10. Summer Solstice is June 21. A total solar eclipse occurs on July 2; unfortunately for us, it will only be visible in South America. We should be able to see the Lunar X on June 10, centered around 11:55 p.m. (Viewing is supposed to be possible for about four hours all together.) We will have some good evening viewing of planets coming up, with Mercury, Mars, and Jupiter. Saturn will rise a bit later.

*Club Business/Projects/Committees/Events:*

Treasurer's report by Mike Bruno. We have \$9,200 in our treasury after banquet expenses. Our banquet was a success, with 55 people attending. Congratulations to our 2019 Sirius Award winner, Pat Korody! John is trying to keep our Facebook page current. He reports we are getting about a thousand visitors per day. Our next Public Observing Night will be June 8. We have also added an observing date of September 7, at Island Lake, which is the week before Astronomy at the Beach. A reminder that it's not too soon to start making plans to attend the Great Lakes Star Gaze, in Gladwin, September 26 - 29.

*Main Speaker:*

Jim Shedlowsky, long-time member of the Warren Astronomical Society and the East Valley Astronomy Club (Mesa), gave a talk on "Arizona: A Great Place for Astronomy." Jim and his wife became snowbirds

after retirement and spend their winters in Mesa, Arizona, and Jim has had the opportunity to tour the entire state and visit sites of interest to astronomers. There are many reasons Arizona is such an ideal state for those who love the night sky. It is a more southerly exposure, meaning planets will appear higher in the sky, and objects that are difficult from Michigan can be more easily observed. The topography is a mixture of desert and mountains, with skies more clear in general, much less rain, very low humidity, and almost no mosquitos to be found. The Phoenix and Tucson areas are the most populous, with much of the rest of the state enjoying dark skies and minimal light pollution. There are three state universities with astronomy programs: Arizona State University (Tempe), Northern Arizona University (Flagstaff), and University of Arizona (Tucson, home campus). There are over 50 research telescopes around the state, mostly gathered in five major observing complexes: Kitt Peak National Observatory, Mt. Graham International Observatory, Lowell Observatory, Mt. Lemmon Observatory, and Fred Lawrence Whipple Observatory. Also of interest is the Richard F. Caris Mirror Lab at University of Arizona, in Tucson, where some of the world's largest telescope mirrors are manufactured. In addition to professional facilities, the state has a large amateur astronomy community, with many local clubs and outreach programs. Popular annual events are the Grand Canyon Star Party and the All-Arizona Messier Marathon. Befitting his rockabilly legend status, Jim closed his presentation with an astronomy-related song.

**June 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.)

Our board meeting was held on June 6, 2019. Liam Finn and Cheri Grissom were present. John McGill

and Mike Bruno were absent. Six additional members were present.

Two of the club's telescopes may be open for new caretakers. This will be discussed at our upcoming general meeting. The club's eyepiece kit will now be included as part of the 20" Obsession and will no longer be available for separate borrowing.

An inquiry had been made on behalf of another club as to whether they could have their events listed in our newsletter and calendar of events. The consensus at the board meeting was that, although we do fully support and encourage our fellow astronomy clubs, for several reasons, this is not a proper use of the club's resources.

We discussed the annual picnic coming up on August 10, at Spring Mill Pond. We will almost certainly have to utilize the overflow area at Kent Lake Beach and will ask if other clubs or any of our own members are interested in setting up telescopes in that location.

President Liam Finn and Treasurer Mike Bruno will not be able to run for their respective offices next year

due to term limits, so it's not too early for people to start thinking about whether they would be interested in the positions. A search committee will be formed.

The club is considering holding more sidewalk/urban astronomy events. We will look into potential communities that might be good prospects.

We will be moving the date of our Public Observing Night from Saturday to Friday this weekend, due to a much better weather forecast for Friday. There was a reminder that new members wishing to use the observing site at Island Lake on non-club event nights should see a club officer about getting the combination code and instructions for using the gate.

## Classifieds

StarStuff will run classified advertisements for club members. Each classified advertisement will be run in up to two consecutive editions of the StarStuff Newsletter. Submit your listing to [starstuff@fordastronomyclub.com](mailto:starstuff@fordastronomyclub.com)