



# 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*

It is here - FRIDAY September 25th & SATURDAY September 26th is Astronomy At The Beach (AATB) - Virtual Edition! Live viewing of the Sun begins at 3pm & presentations begin at 6pm on Friday & 5pm on Saturday. Don't Miss It!!

Go to [www.glaac.org](http://www.glaac.org) and click on the link to Astronomy at the Beach 2020 at the top of the page to see the schedule of speakers, topics, dates and times of their talks. A lot of hard work has been put in by the GLAAC team to pull this event together and I hope the FAAC membership is able to join us this weekend. Please get the word out too! Share the dates and website with your friends, family and co-workers. This year has been a challenge for us all, the special event that AATB has become will persevere with your support and enthusiasm.

Special guests include; Brother Guy Consolmagno SJ, Director of the Vatican Observatory; Dan Davis, professor of geophysics at Stony Brook University; David H. Levy, Author and Comet hunter; and Delores Hill, Meteorite specialist at the University of Arizona Lunar and Planetary Lab. Below are the times your fellow FAAC members will be Virtual, be sure to support the group and their effort.

The presentations will be broadcast to the public using YouTube Live (you don't need an account to watch) there will be a link on each individual's presenters page.

#### Friday

- 8:30 pm - Scale Model of the Solar System - Mike Bruno
- 9:30 pm - Live from Hartland - Doug Bock
- 10:00 pm - Live from Woodhaven - Gordon Hansen

## 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 Stuff newsletter, discounts on magazines, discounts at selected

## Saturday

- 5:00 pm - Planetarium Show - Tim Campbell
- 6:30 pm - Scale Model of the Solar System - Mike Bruno
- 8:30 pm - Spectroscopy - Tim Campbell
- 9:00 pm - NASA Rocket Launch Photography - John McGill
- 9:30 pm - Live from Hartland - Doug Bock
- 10:00 pm - Live from Woodhaven - Gordon Hansen

I look forward to seeing everyone at 7pm, Thursday, September 24th at our next Virtual General meeting on WebEx. Look for the link in our Groups.io chat or contact me at [info@fordastronomyclub.com](mailto:info@fordastronomyclub.com) for the link, everyone is welcome!

## Secretary's Report

*by Cheri Grissom*

### FAAC General Meeting – August 27, 2020

Our videoconference general meeting was called to order by President Mike Bruno at approximately 7:10 p.m. Board members John McGill and Arica Flores were absent. A total of approximately 21 people were listed as being in attendance at the peak.

### *Member Observing Experiences:*

Various members have enjoyed viewing the planets this past month, with Jupiter and Saturn still high in the evening sky and Mars appearing a little later. The comment was made that we have been fortunate to have had an unusual number of nice clear nights for August. Some members reported on viewing the Perseids and other meteors. A couple members spent time up north and had great views of the Milky Way.

### *What's Up:*

Gordon Hansen went over the upcoming meetings. See our calendar of events for details. Great Lakes Star Gaze is September 18, 19, and 20. Astronomy at the Beach is September 25 and 26. Gordon went over comets that may be viewable. Our asterism of the month is the Great Square. The four corner stars in that asterism actually consist of three from the constellation Pegasus and one from the constellation Andromeda

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](https://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

## Treasurer's Report:

Arica was absent, but Mike reported our balance has not changed from last month, which is a bit over \$9,000.

## Social Media/Website:

Liam reports that we will begin promoting AATB on Facebook. We are finalizing our club's presenters and topics of discussion. Don Klaser reports that the next episode of Astronomy for Everyone on our YouTube channel will feature Mars.

## Speaker:

Our guest was Mark Christensen, PhD, who is a Michigan native, having grown up in Livonia and attended Wayne State University. He spoke about the NICER X-ray Telescope. The acronym stands for Neutron Star Interior Composition Explorer. This telescope was launched and mounted on the International Space Station in 2017, which makes it easy to service among many advantages. NICER is totally powered by the ISS; it uses no consumable energy of its own. Its primary goal is to study the internal structure of neutron stars.

Dr. Christensen talked in detail about the operation, performance, and capabilities of this telescope, which is a more or less cube-shaped device about a meter square in size. It measures x-ray pulses from neutron stars for the purpose of determining the equation of state of the interior of these stars. A secondary goal is to use neutron stars/pulsars as clocks for space navigation. A neutron star or pulsar is the collapsed core of a post-supernova star, and could be thought of as a failed black hole. The typical mass is two to three times that of our sun, condensed to the size of a city.

Questions and answers followed the presentation.

Meeting was adjourned at 9:16 p.m.

## September 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.)

(Videoconference meeting.) All board members present.

*Cont'd on page 6*

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.

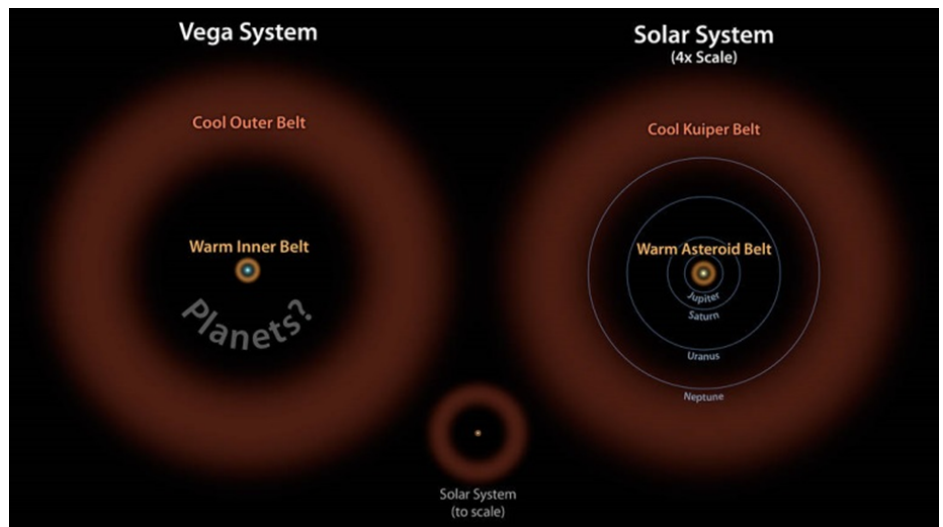
Call (313) 444-5850 to learn when the observatory is opening (or request an opening).

# Summer Triangle Corner: Vega

*by David Prosper*



If you live in the Northern Hemisphere and look up during summer evenings, you'll see the brilliant star Vega shining overhead. Did you know that Vega is one of the most studied stars in our skies? As one of the brightest summer stars, Vega has fascinated astronomers for thousands of years.



*Vega possesses two debris fields, similar to our own solar system's asteroid and Kuiper belts. Astronomers continue to hunt for planets orbiting Vega, but as of May 2020 none have been confirmed. More info: [bit.ly/VegaSystem](http://bit.ly/VegaSystem) Credit: NASA/JPL-Caltech*

Vega is the brightest star in the small Greek constellation of Lyra, the harp. It's also one of the three points of the large "Summer Triangle" asterism, making Vega one of the easiest stars to find for novice stargazers. Ancient humans from 14,000 years ago likely knew Vega for another reason: it was the Earth's northern pole star! Compare Vega's current position with that of the current north star, Polaris, and you can see how much the direction of Earth's axis changes over thousands of years. This slow movement of axial rotation is called precession, and in 12,000 years Vega will return to the northern pole star position. Bright Vega has been observed closely since the beginning of modern astronomy and even helped to set the standard for the current magnitude scale used to categorize the brightness of stars. Polaris and Vega have something else in common, besides being once and future pole stars: their brightness varies

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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](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)

## Scheduled Club Events

Month	Date	Sunset	Location
September	25th & 26th Astronomy at the Beach	7:24pm EDT 7:22pm EDT	Island Lake
October	24th	6:36pm EDT	Maybury State Park

## Upcoming Club Meeting Topics & Speakers

Meeting	Speaker	Topic
September 24th	Arica Flores	Leap Year
October 22nd	Jenny Pon	Space Ghosts

## September Talk Details

### Leap Year

*Arica Flores*

*FAAC & Farmington Community Stargazers Member*

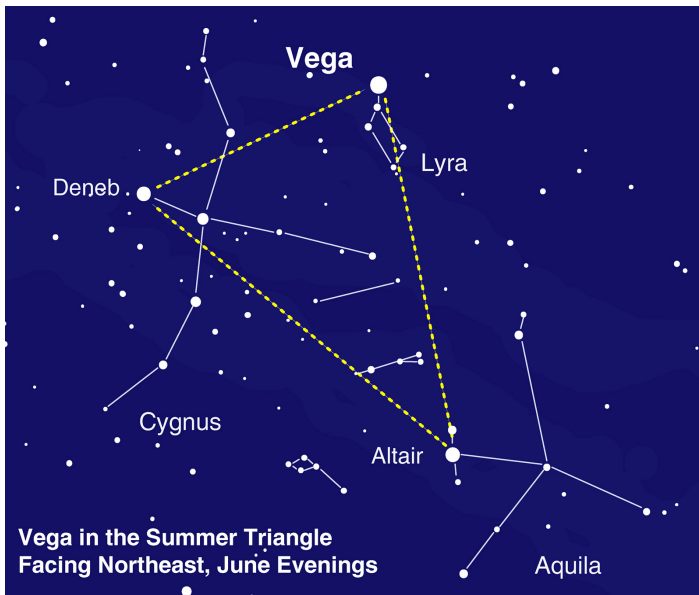
Arica will walk us through how we have kept track of time and why. We will look at the history of calendars lunar and solar. Why we have a leap year as well as time keeping and a look at leap seconds.

### Bio:

I am new to Astronomy. My interest began with the Solar eclipse in 2017 which I viewed totality from Sweetwater Tennessee. Since then I have enjoyed learning about the universe and sharing what I have learned with others. I am a member of the Ford Armature Astronomy Club and The Farmington Stargazers where I enjoy our outreach of star parties.

*Vega (cont'd from page 4)*

over time, making them variable stars. Variable stars' light can change for many different reasons. Dust, smaller stars, or even planets may block the light we see from the star. Or the star itself might be unstable with active sunspots, expansions, or eruptions changing its brightness. Most stars are so far away that we only record the change in light, and can't see their surface.



*Can you spot Vega? You may need to look straight up to find it.*

NASA's TESS satellite has ultra-sensitive light sensors primed to look for the tiny dimming of starlight caused by transits of extrasolar planets. Their sensitivity also allowed TESS to observe much smaller pulsations in a certain type of variable star's light than previously observed. These observations of Delta Scuti variable stars will help astronomers model their complex interiors and make sense of their distinct, seemingly chaotic, pulsations. This is a major contribution towards the field of astroseismology: the study of stellar interiors via observations of how sound waves "sing" as they travel through stars. The findings may help settle the debate over what kind of variable star Vega is. Find more details on this research, including a sonification demo that lets you "hear" the heartbeat of one of these stars, at: [bit.ly/DeltaScutiTESS](https://bit.ly/DeltaScutiTESS)

Interested in learning more about variable stars? Want to observe their changing brightness? Check out the website for the American Association of Variable Star Observers (AAVSO) at [aavso.org](https://aavso.org). You can also find the latest news about Vega and other fascinating stars at [nasa.gov](https://nasa.gov).

*Secretary's Report (Cont'd from page 3)*

Six additional members attended.

Arica Flores will be doing our September general meeting presentation on the topic of "Leap Year."

The main topics of discussion at this month's board meeting included: The status of refund checks for those who had pre-registered for the Swap Meet which was of course canceled due to Covid-19. Nominations for our 2021 officers. A nominating committee will have to be finalized. All current officers are eligible to run again with the exception of our vice-president who is term-limited. Of course, any member in good standing can run for any of the four available positions. We also had a lengthy discussion concerning the Astronomy at the Beach presentations and technical details.



# 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](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	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
<b>Presentation Tools</b>		Banner - Large (32" x 16')	George Korody
Projector (older)	Jim Frisbie	Tri-Fold Presentation Boards	George Korody
Projector (newer)	Gordon Hansen	<b>Other</b>	
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	<b>Demonstration Tools</b>	
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
<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
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
<b>Special Event Items - Not available for Loan Out</b>	
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