

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 Brunc
Vice President:	John McGil
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

Astronomy At The Beach (AATB) - Virtual Edition is a month away! AATB will still be a two day event, held over the weekend September 25th & 26th. Go to <u>www.glaac.org</u> 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. Although the site is still currently under development, there is a lot of good information already there, go look now to get familiar with the format and topics, please know times and dates may be revised. 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. And that is not all! Local Amateur Astronomers from around GLAAC will be presenting or broadcasting too. Some of the well recognized names include Tim Campbell, Liam Finn, John McGill, Doug Bock, Gordon Hansen and Mike Bruno.

I hope the FAAC well represents this event from the comforts of your home. 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, but the special event that AATB has become will persevere with your support and enthusiasm.

I look forward to seeing everyone at 7pm, Thursday, August 27th at our next Virtual General meeting on WebEx. Look for the link in our Groups.io chat or contact me at info@fordastronomyclub.com for the link, everyone is welcome!

Club Information

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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

Secretary's Report

by Cheri Grissom

FAAC General Meeting – July 23, 2020

Our videoconference general meeting was called to order by President Mike Bruno at 7:12 p.m. All board members present except Arica Flores. A total of approximately 24 people were listed as being in attendance at the peak. We had one guest present, and Mike asked him to introduce himself.

Member Observing Experiences:

We had a group discussion about Comet NEOWISE. Many members have had a chance to observe and/or image this beautiful visitor.

What's Up:

Tim Campbell filled in for Gordon Hansen. The Delta Aquariids meteor shower will peak on July 28 and 29. The Perseids meteor shower will peak on August 11 and 12. Venus is at greatest western elongation on August 13. Our asterism of the month is the Teapot in Sagittarius. The Teapot is prominently placed in the sky to the south this time of year. The center of our Milky Way galaxy is located just to the right of the Teapot's spout, between Sagittarius and Scorpius. Scorpius, to the right of Sagittarius, features the bright reddish star Antares, whose name means "rival of Mars." Globular cluster M13 is easy to find in Hercules almost directly above. Tim showed us the path of Comet NEOWISE this month to aid in finding it in the area below the Big Dipper.

Treasurer's Report:

Arica was absent, but Mike reported we have just over \$9,300 in the bank and one to two hundred dollars in petty cash.

Equipment Manager's Report:

Jeff Gorman reports inventory is completed.

Social Media/Website:

Liam is still waiting for delivery of the All-Sky Camera. He is still hoping to be able to do some virtual astronomy online.

Projects, Committees, & Events:

Unfortunately, everything is still on hold, due to circumstances beyond our control. There has been some discussion of possibly holding our club

area equipment retailers, and afterhours 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 <u>treasurer@fordastronomyclub.com</u> 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 <u>LLBeanBusiness.com</u>

See the <u>groups.io</u> 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 picnic near the end of August, but it all depends on the Covid-19 situation as that time gets closer. We will discuss this more at the upcoming board meeting. GLAAC is a virtual event this year. We are still trying to put presentations together. Please submit your ideas, as we need to get this organized soon.

Speaker:

Our scheduled speaker, Ed Cackett, unfortunately, had to cancel, but we were lucky to have Diane Hall, longtime member of the Warren Astronomical Society, graciously agree to step in at the last minute. Diane's talk was entitled "In Celebration of Globular Clusters." She started out by explaining the nature of globular clusters, how they differ from open clusters, and how they orbit the Milky Way in a halo distribution and contain some of the oldest stars in our galaxy. Many of these stars are "metal-poor," indicating they may have formed near the beginning of the universe. There are also some unusual globular clusters that are much younger, some that behave more like galaxies, and some that may contain a lot of dark matter. So far, no exoplanets have been discovered orbiting stars in a globular cluster. That could be due to the close proximity of the stars.

Diane talked in detail about many globular clusters that could be easy targets for astronomers at our latitudes, as well as a few more elusive ones that are best viewed from the southern hemisphere. There are hundreds of these beautiful gems worthy of our attention that we can experience with either binoculars or telescopes.

After the presentation, we continued to talk about observing Comet NEOWISE.

Meeting was adjourned at 9:24 p.m.

July 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. Nine additional members attended.

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questions, events, outreaches, etc. are normally discussed via this list.

Join by visiting <u>https://groups.io/g/</u> <u>FordAstronomyClub</u> to request membership.

Articles & Submissions

Your submissions to Star Stuff are welcome! Send your story and/or images to the editor at: <u>starstuff@fordastronomyclub.com</u>

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: Altair

by David Prosper



Altair is the final stop on our trip around the Summer Triangle! The last star in the asterism to rise for Northern Hemisphere observers before summer begins, brilliant Altair is high overhead at sunset at the end of the season in

September. Altair might be the most unusual of the three stars of the Triangle, due to its great speed: this star spins so rapidly that it appears "squished."



The image on the right was created using optical interferometry: the light from four telescopes was combined to produce this image of Altair's surface. Image credit: Ming Zhao. More info: bit.ly/altairvsmodel

A very bright star, Altair has its own notable place in the mythologies of cultures around the world. As discussed in our previous edition, Altair represents the cowherd Niulang in the ancient Chinese tale of the "Cowherd and the Weaver Girl." Altair is the brightest star in the constellation of Aquila the Eagle; while described as part of an eagle by ancient peoples around the Mediterranean, it was also seen as part of an eagle by the Koori people in Australia! They saw the star itself as representing a wedge-tailed eagle, and two nearby stars as his wives, a pair of black swans. More recently one of the first home computers was named after the star: the Altair 8800.

Altair's rapid spinning was first detected in the 1960s. The close observations that followed tested the limits of technology available to

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August 2020

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/hfcplanetarium

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

<u>MeetUp</u> <u>meetup.com/Ford-Amateur-</u> Astronomy-Club



Upcoming Club Meeting Topics & Speakers

Meeting	Speaker	Торіс
August 27th	Mark Christensen	NICER X-Ray Space Telescope
September 24th	Arica Flores	Leap Year
October 22nd	Jenny Pon	Space Ghosts

August Talk Details

The NICER X-ray space telescope: Construction, Deployment, and Initial Results

Mark Christensen Ph.D., Wayne State University

NICER, stands for Neutron star Interior Composition ExploRer, an x-ray telescope deployed on the ISS. Its purpose is to provide extremely precise timing data on the x-ray pulses produced by individual neutron stars. By doing so the radius and mass of neutron stars, as well as the distributions of the regions generating the x-rays can be inferred with great precision, which will in turn provide insight into the equation of state of neutron stars.

Bio:

Mark J. Christensen, Ph.D. fabricated his first telescope mirror while in High School and was a member of the DOAA. He received his BS in Physics with a second major in Mathematics from Wayne State Univ. in 1969 and went on the get a MS in Physics at Purdue in 1970.

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Altair (cont'd from page 4)

astronomers, eventually resulting in direct images of the star's shape and surface by using a technique called interferometry, which combines the light from two or more instruments to produce a single image.



Altair is up high in the early evening in September. Note Altair's two bright "companions" on either side of the star. Can you imagine them as a formation of an eagle and two swans, like the Koori?

Predictions about how the surface of a rapidly spinning massive star would appear held true to the observations; models predicted a squashed, almost "pumpkin-like" shape instead of a round sphere, along with a dimming effect along the widened equator, and the observations confirmed this! This equatorial dimming is due to a phenomenon called gravity darkening. Altair is wider at the equator than it is at the poles due to centrifugal force, resulting in the star's mass bulging outwards at the equator. This results in the denser poles of the star being hotter and brighter, and the less dense equator being cooler and therefore dimmer. This doesn't mean that the equator of Altair or other rapidly spinning stars are actually dark, but rather that the equator is dark in comparison to the poles; this is similar in a sense to sunspots. If you were to observe a sunspot on its own, it would appear blindingly bright, but it is cooler than the surrounding plasma in the Sun and so appears dark in contrast.

As summer winds down, you can still take a Trip Around the Summer Triangle with this activity from the Night Sky Network. Mark some of the sights in and around the Summer Triangle at: bit.ly/TriangleTrip. You can discover more about NASA's observations of Altair and other fast and furious stars at nasa.gov.

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

Thank you to Sandra Macika for lining up speakers for our upcoming general meetings through January. August's speaker will be Mark Christensen, talking about the NICER X-ray Space Telescope. Please note that for future general and board meetings, your invitation from FAAC through Groups.io will indicate that member Gordon Hansen is the host, as he now has a Webex account.

Arica Flores reports that our treasury currently has a balance of \$9,216.94, but that there may still be some refunds to process for the cancellation of our 2020 Swap Meet and Conference.

Liam Finn has taken delivery of his All-Sky camera and hopes to be doing a live-stream of the upcoming Perseids. He will put a notification and link on our website, Facebook, and Groups.io. Liam has also become the first-ever Vatican Observatory Foundation Ambassador.

GLAAC is finalizing plans for the virtual Astronomy at the Beach, on September 25 and 26. Several of our members will be doing presentations. The GLAAC website will have a full menu of all the presentations for the two days.

Please be on the lookout for fraudulent emails that appear to be from a club board member. If you get an email from any club member that is asking for money

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 <u>equipment@fordastronomyclub.com</u>

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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

ltem	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

Upcoming Speaker Details (Cont'd from page 5)

He returned to Wayne and earned his Ph.D. in Mathematics in 1975. He went on to join the Faculty of the School of Mathematics of the Georgia Institute of Technology where he taught and did research from 1975 to 1984. While at Georgia Tech is was a member and officer of the Atlanta Astronomy Club and served as the construction chairman for their first observatory in Villa Rica, GA. He continued his interest in astronomy over the years and is now a member of the Fox Valley Astronomical Society and the Northwest Suburban Astronomers in the western suburbs of Chicago.

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

or suspicious in any way, please report it to a board member.

We had one last discussion about the possibility of holding a socially distanced version of our annual club picnic this year. The consensus was no, due to concern for the safety of our members and their families, we will not have a picnic this year.