



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
Membership:	Doug Bauer
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

Happy New Year to all. I hope you all had a wonderful holiday season and found nice shiny astronomy related objects under your tree. A New year starts a fresh slate for astronomy events, so our schedule for the beginners night is set. We will be adding other outreach events to the list as the year goes on. So please keep a close watch on the club calendar.

Sad start to the year

We have sadly lost an amazing member of our club. Randy Smith passed on Christmas Day. Our thoughts and prayers go out to his wife Pam.

Pam informed me there will be a memorial in the spring so we will share the details of that once they are made available.

Sirius Award

Final Reminder: The Sirius Award is awarded to a member of the club who has gone above and beyond to help with any and all aspects of the club to make it successful, be that through outreach, volunteering at events, being an officer in the club or being a good ambassador for the FAAC and astronomy.

If you have someone in mind please send your nominations to president@fordastronomyclub.com. Please include the person's name and a list of the reasons why you think they deserve this award. This is your one time a year that you can recognize an outstanding member of the club.

All submissions need to be in by the January club meeting. Once the nominations are closed the officers of the club will meet and review the submissions.

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

Please note that existing officers for 2019 and elected officers for 2020 cannot be included as well as anyone who has received the award in the past. If any of these members are nominated the nomination will be ignored

Get your thinking caps on and help the club recognize an outstanding member who has gone above and beyond to highlight our club and bring the love of astronomy and science to the public.

2020 Officer Positions

We have two officer positions that will be open for 2020. The Treasurer position is term limited. Mike Bruno has done an astounding job as treasurer but needs to step aside and let someone else take over the clubs finances. The President's position is also open so if you are interested please submit your name at the meeting if you wish to run. We have a search committee searching for possible nominees but if any club member is interested in running for the club secretary position please feel free to attend our elections in January and submit your name. If only one person is interested then there will be no need for a ballot at the election. If there is more than one person interested in a position then a ballot will be held.

Any member of the club can run for any of the officer positions so even though the Treasurer and President are open positions it is still OK for someone to put their name into any of the club officer positions.

It's been three years

It has been three years since I was elected president of the club. At the January meeting I will be stepping aside to allow someone new to take on the duties of president. Before I took on the role I was told it was hard work and keeps you very busy. In reality it is the opposite.

It has been a pleasure to serve as the president and I hope I did a half way decent job at it. It has not been hard work, it has been fun, actually. I believe any job is what you make of it and I have had fun being a representative of the club. The goal of our club is to bring our love of astronomy and science to the communities we serve and I believe we have always done that successfully and will continue to do so. The more our members get involved in the club events the more successful it will be. This is our club and we as members decide its future and only through our participation can it continue to be successful. I ask only one last thing of the membership, tell the world about our club and all we do for the

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

community then, turn out in force at events to show all who attend the amazing fellowship, friendship and passion we have in our special community that is the Ford Amateur Astronomy Club.

Secretary's Report

by Cheri Grissom

FAAC General Meeting – December 5, 2019

The meeting was called to order at 7:00 p.m. by President Liam Finn. VP John McGill was absent. Introduction of members and guests. We had approximately 27 present. Liam reminded us that this is our last General Meeting of the year, and it is our combined meeting/holiday potluck and social. Our next general meeting will be January 23, which will be our election night. Elections are still open to additional nominees, and will remain so, right up until the night of that meeting. The club has had a very good year and great attendance at our events. An estimated 12,000 members of the public attended our various events, not including Astronomy at the Beach, which is a multi-club event.

A big thank you to member Bob Clubb, who has volunteered to take over operation of the planetarium at HFCC. If you are interested in helping with that, please contact Bob.

Member observing experiences, club equipment, what's up, and other reports were suspended for tonight so we could go ahead and enjoy a social gathering together. Likewise, we had no guest speaker tonight. Thank you to Gordon Hansen who put together a nice photo presentation for our big screen; and thanks to Jim Frisbie, Tony Licata, Doug Bock, and Gordon, who all provided nice images for the presentation.

The business meeting was adjourned at approximately 7:20 p.m. A big thank you to everyone who brought the great food that was enjoyed afterwards. Midway through our social time in the auditorium, many of those present made the walk over to the planetarium for an impromptu presentation.

January 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

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).

place at our board meetings. Full board meeting minutes are taken each month and kept for club records.)

Our board meeting was held on January 9, 2020. All board members were present, as well as ten additional members. Our next general meeting will be January 23, and our guest speaker will be Dan Durda, talking about "The Science and Exploration of Little Rocky Worlds."

Mike Bruno reports we currently have \$7,323 in the treasury. We had two new members join in December.

Dennis Salliotte, who has been our long-time club equipment manager, is willing to hand over those responsibilities to someone new. If anybody is interested, they should contact Dennis or our president.

Our elections will be held at the January meeting. Right now, we have one candidate for each open position. If that remains the case, a formal election will not be required, but if we do need to have an election, Bob McFarland has agreed to conduct it.

If we are going to have any urban astronomy events this coming year, now is the time to start planning. If anybody has any ideas for locations for these types of events, get in touch with our president.

SWAN night is April 17. Tim Campbell, Gordon Hansen, and John McGill will all be putting on presentations at HFCC.

Our Conference and Swap Meet is tentatively set for March 21. Lots of help is always needed. Anyone interested in helping should contact Jim Frisbie.

Our annual Banquet will be held in the same location as last year, on a date yet to be determined in the second half of April. We still need to line up a guest speaker. Anyone with any ideas should contact John McGill.

Sirius Award nominations will still be accepted up to and including our January general meeting. This is your chance to have a say in who will receive this annual award, a chance to recognize someone you feel has made an exceptional contribution to the club over the past year.

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	4th	8:02pm EDT	Island Lake
May	2nd	8:34pm EDT	Island Lake
May	30th	9:02pm EDT	Island Lake
June	27th	9:13pm EDT	Island Lake
July	25th	8:59pm EDT	Island Lake
August	8th Club Picnic Meteors & S'mores	8:43pm EDT	Island Lake
August	22nd	8:22pm EDT	Island Lake
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
January 23rd	Dan Durda	Science & Exploration of Little Rocky Worlds
February 27th	Sandra Macika	Dragonfly Mission to Titan
March 26th	TBD	TBD
April 23rd	Jenny Pon	Our Place in Space
May 28th	Don Klaser	Antikythera Mechanism
June 25th	Jim Shedklowsky	The LSST: Faster, Wider, Deeper

Cont'd on page 9

Spot the Young Stars of the Hyades and Pleiades

by David Prosper

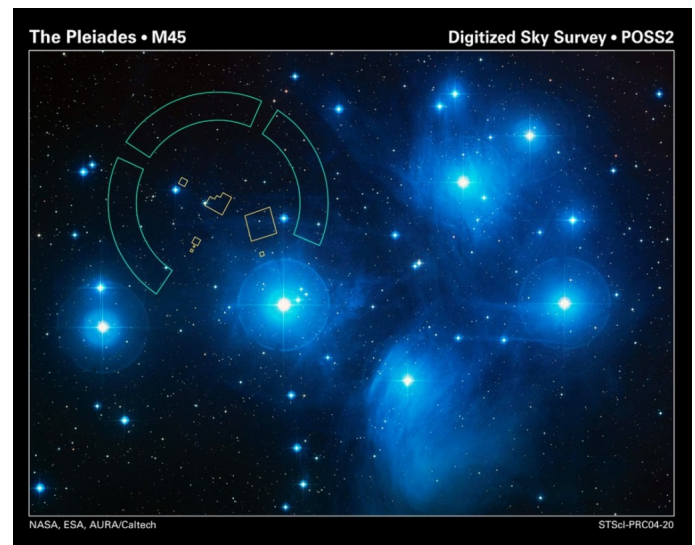
Orion is the last of a trio of striking star patterns to rise during the late fall and early winter months, preceded by the diminutive Pleiades and larger Hyades in Taurus. All three are easily spotted rising in the east in early January evenings, and are textbook examples of stars in different stages of development.



Caption: Locate Orion rising in the east after sunset to find the Orion Nebula in the “Sword,” below the famous “Belt” of three bright stars. Then, look above Orion to find both the Hyades and the Pleiades. Binoculars will bring out lots of extra stars and details in all three objects, but you can even spot them with your unaided eye!

As discussed in last month’s Notes, the famous Orion Nebula (M42), found in Orion’s “Sword,” is a celestial

nursery full of newly-born “baby stars” and still-incubating “protostars,” surrounded by the gas from which they were born. Next to Orion we find the Hyades, in Taurus, with their distinctive “V” shape. The Hyades are young but mature stars, hundreds of millions of years old and widely dispersed. Imagine them as “young adult” stars venturing out from their hometown into their new galactic apartments. Bright orange Aldebaran stands out in this group, but is not actually a member; it just happens to be in between us and the Hyades. Traveling from Orion to the Hyades we then find the small, almost dipper-shaped Pleiades star cluster (M45). These are “teenage stars,” younger than the Hyades, but older than the newborn stars of the Orion Nebula. These bright young stars are still relatively close together, but have dispersed their birth cocoon of stellar gas, like teenagers venturing around the neighborhood with friends and wearing their own clothes, but still remaining close to home - for now. Astronomers have studied this trio in great detail in order to learn more about stellar evolution.



Caption: Close-up of the Pleiades, with the field of view of Hubble’s Fine Guidance Sensors overlaid in the top left, which helped refine the distance to the cluster. The circumference of the field of view of these sensors is roughly the size of the full Moon. (Credit: [NASA](#), [ESA](#) and AURA/Caltech)

Cont’d on page 8

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		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 Spectrascopes	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

Hyades and Pleiades (Cont'd from page 6)

Figuring the exact distance of the Pleiades from Earth is an interesting problem in astrometry, the study of the exact positions of stars in space. Knowing their exact distance away is a necessary step in determining many other facts about the Pleiades. The European Space Agency's Hipparcos satellite determined their distance to about 392 light years away, around 43 light years closer than previous estimates. However, subsequent measurements by NASA's Hubble Space Telescope indicated a distance of 440 light years, much closer to pre-Hipparcos estimates. Then, using a powerful technique called Very Long Baseline Interferometry (VLBI), which combines the power of radio telescopes from around the world, the distance of the Pleiades was calculated to 443 light years. The ESA's Gaia satellite, a successor to Hipparcos, recently released its first two sets of data, which among other findings show the distance close to the values found

by Hubble and VLBI, possibly settling the long-running "Pleiades Controversy" and helping firm up the foundation for follow-up studies about the nature of the stars of the Pleiades.

You can learn more about the Pleiades in the Universe Discovery Guide at bit.ly/UDGMarch, and find out about missions helping to measure our universe at nasa.gov.

Meeting Topics & Speakers (cont'd from page 5)

January Talk Details

The Science & Exploration of Little Rocky Worlds (Online Presentation)

Dan Durda

Principal Scientist, Southwest Research Institute

Most of my research is focused on the collisional evolution of asteroids - the cratering impacts that dominate the appearance of their surfaces, the use of controlled impacts to alter the orbits of potentially threatening near-Earth asteroids, and the geologic details of impact craters here on Earth. I have also had a long-standing interest in the exploration of asteroids and what it will be like to move about and examine their surfaces in person. I'll give a brief tour of these topics and some of the latest results from the Hayabusa 2 and OSIRIS-REx missions to near-Earth asteroids.

Bio:

Daniel D. Durda has more than 25 years of experience researching the collisional and dynamical evolution of main-belt and near-Earth asteroids, Vulcanoids, Kuiper belt comets, and interplanetary dust. His research interests include numerical modeling of the formation of asteroid satellites and observational searches for them, studies of crater ejecta generation and redistribution on asteroids, the environmental effects of asteroid and comet impacts on Earth, and airborne astronomical observations from high-performance jet

aircraft. A finalist in the 2004 NASA astronaut selection, Durda is one of three SwRI payload specialists who will fly on multiple suborbital spaceflights with Virgin Galactic and Blue Origin. He has co-authored a book, published numerous articles popularizing planetary science and human exploration of space, and has appeared in over 70 nationally-broadcast television science documentaries. Durda is the 2015 recipient of the AAS/DPS Carl Sagan Medal "for excellence in public communication in planetary science."

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