



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

Busy Months Ahead

While July was somewhat busy and the weather did not cooperate much of the time, August and September will keep us on our toes.

August 1st - Board Meeting

All members are welcome to participate. Board meetings are at the Senate Coney Island at the corner of Greenfield & Rotunda in Dearborn. The meeting starts at 7pm. We have dinner as we discuss agenda topics.

August 10th - Annual Picnic + Meteors & S'Mores

The annual picnic ties into Meteors & S'mores on the same night after the picnic. Please bring your telescopes to the picnic. The Meteors & S'mores event is one of the largest events of our year, last year it drew in over 6000 guests. While this year may not be as ideal given the moon phase I still think it will have a large turnout so we will need all hands on deck for the event. The beach gets crazy busy so I recommend you get there for the picnic and stay for the observing as getting on the beach after 8 may be an issue if the last few years are anything to go by.

Don't forget to bring a dish to pass for the picnic, corn, hotdogs, burgers and drinks are supplied by the club but we all bring something to share.

August 22nd - Monthly General Meeting

The membership meeting in our usual spot at Henry Ford College in the Berry Auditorium located in the Administrative Services & Conference Center building.

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

September 2-4 - Dearborn Homecoming

We only have passes for four telescopes and they are already assigned but if anyone else wants to come and support the event they are welcome to park at the Dearborn High School and take the free shuttle to where we will be setup at Ford Field Park in Dearborn.

September 7th - Island Lake Star Party

This is the Beginner's Night event to take advantage of the 1st Quarter Moon of September as it is not being used by GLAAC. This should be a busy event so please bring out your scopes. It should be a fun night.

September 13-14 - Astronomy at the Beach

The Annual Astronomy at the Beach event is at Island Lake State Park but using the Kent Lake Beach. This two night event is usually fairly busy and usually attracts around 5000 visitors across both nights.

September 21st - PlaneWave Star Party

PlaneWave Instruments have moved to Adrian Michigan and are planning a public star party at their new beautiful new 55 acre headquarters campus. They have reached out to Dr. Tim Dey for help planning the event and would appreciate FAAC's participation and help with the event. The details are still being ironed out but this will be a multi-club event. We will be sending out invites to the other clubs soon. There are plans to do before dark events for the public and then move to observing as it gets dark. Watch this space for more details.

PlaneWave will have 1-Meter and .7 Meter telescopes at this event adapted for visual use with 3" eyepieces!

September 26-29th - Great Lakes Star Gaze

The Great Lakes Star Gaze is a star party for astronomers (not a public outreach event) each year in Gladwin Michigan. The event occurs at the River Valley RV park in Gladwin. Sites with hook-ups (power & water) are available in the RV park. Tent camping is available up on the observing hill. This is a fun annual event to observe in much darker skies during the new-moon. Visit GreatLakesStarGaze.com for details & registration.

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 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

Chill Out: Spot an Ice Giant in August

by David Prosper

Is the summer heat getting to you? Cool off overnight while spotting one of the solar system's ice giants: **Neptune**! It's the perfect way to commemorate the 30th anniversary of Voyager 2's flyby.

Neptune is too dim to see with your unaided eye so you'll need a telescope to find it. Neptune is at opposition in September, but its brightness and apparent size won't change dramatically as it's so distant; the planet is usually just under 8th magnitude and 4.5 billion kilometers away. You can see Neptune with binoculars but a telescope is recommended if you want to discern its disc; the distant world reveals a very small but discernible disc at high magnification. Neptune currently appears in Aquarius, a constellation lacking in bright stars, which adds difficulty to pinpointing its exact location. Fortunately, the Moon travels past Neptune the night of August 16th, passing less than six degrees apart (or about 12 Moon widths) at their closest. If the Moon's glare overwhelms Neptune's dim light, you can still use the its location that evening to mark the general area to search on a darker night. Another Neptune-spotting tip: Draw an imaginary line from bright southern star Fomalhaut up to the Great Square of Pegasus, then mark a point roughly in the middle and search there, in the eastern edge of Aquarius. If you spot a blue-ish star, swap your telescope's eyepiece to zoom in as much as possible. Is the suspect blue "star" now a tiny disc, while the surrounding stars remain points of white light? You've found Neptune!

Neptune and Uranus are ice giant planets. These worlds are larger than terrestrial worlds like Earth but smaller than gas giants like Jupiter. Neptune's atmosphere contains hydrogen and helium like a gas giant, but also methane, which gives it a striking blue color. The "ice" in "ice giant" refers to the mix of ammonia, methane, and water that makes up most of Neptune's mass, located in the planet's large, dense, hot mantle. This mantle surrounds an Earth-size rocky core. Neptune possesses a faint ring system and 13 confirmed moons. NASA's Voyager 2 mission made a very close flyby on August 25, 1989. It revealed a dynamic, stormy world streaked by the fastest winds in the solar system, their ferocity fueled by the planet's surprisingly strong internal heating. Triton, Neptune's largest moon, was discovered to be geologically active, with cryovolcanoes

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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

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).

Secretary's Report

by Cheri Grissom

FAAC General Meeting – June 27, 2019

Meeting called to order at 7:02 p.m. by President Liam Finn. All board members present except John McGill. Guests were introduced, then regular members. There were approximately 47 people in attendance. Liam went over the benefits of being a club member. Our Beginners' Nights/Public Observing Nights are a great place to get help with new equipment one may have, or to have a chance to look through a variety of types and sizes of telescopes that members have brought.

Member Observing Experiences:

Milton French attended our last Beginners' Night, stayed until about 1 a.m., and reported great skies. He also attended the Farmington Stargazers' event, where he listened to our own Arica Flores give a nice talk. Milton also observed the Jupiter opposition and a close conjunction of Mercury and Mars. Gary Gibson got great views of Jupiter last night at his home with his classic 3" Sears refractor, Model 6339a. Tim Dey and Tim Campbell were at the HJRO and observed dual transits and shadows of both Io and Ganymede a few days after Jupiter's opposition. Sandra Macika took her meteorites to the Farmington Stargazers' event, as well as an event at the Farmington Library and a Cub Scout event. Syed Saifullah was also at the Farmington Stargazers' event and had the pleasure of introducing his 12-year-old nephew to telescope observing for the first time.

Club Equipment:

Dennis Salliotte advised us that we have two telescopes now available for caretakership. One is the 8" Orion Intelliscope, a Dobsonian reflector with a push-to computer handset. The other is the club's new-to-us 20" Obsession Dobsonian reflector. This telescope is very large and heavy, comes with a 6-foot ladder, and will require a truck or SUV to transport. The caretaker must be willing to bring it to all club observing events. Anyone interested in being the caretaker of either of these telescopes should submit a written request to either Liam or Dennis. All requests will then be brought to the board for a decision.

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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
August	10th FAAC Club Picnic Meteors & S'mores	8:41pm	Island Lake Spring Mill Pond
September	7th Island Lake Star Party	7:57pm	Island Lake Spring Mill Pond
September	13-14th Astronomy at the Beach	7:46pm	Island Lake Kent Lake Beach
October	5th Int'l Astronomy Day	7:08pm	Mayberry State Park
November	11th Mercury Transit	7:20am-1pm	Lincoln Park Observatory

Upcoming Club Meeting Topics & Speakers

Meeting	Speaker	Topic
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

July Talk Details

Grumman's Lunar Module & Simulating the Moon Landing

Mike O'Dowd

Warren Astronomical Society

Development of the Lunar Module by Grumman, its basic workings and a Simulated Lunar Landing using the computer software program Eagle Lander 3D (EL3D). Using the Computer Simulator, we will fly down to make a lunar landing guided by the Apollo Guidance Computer then take over manually to avoid craters and boulders just as Neal Armstrong did on

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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

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	Nickai Gulley
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
Eye Pieces		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
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
CA2 Celestron 1.25" to T-Adapter (male) #93625	Tim Dey
C7 Canon EOS EF 70-200mm f/1.4L IS USM lens & tripod mounting ring (for Canon EOS cameras)	Gordon Hansen
Rokinon 8mm Wide-Angle 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	Sandar Macika
TAK1 Night Vision Image Intensifier for telescopes (2" barrel size)	George Korody

July Talk (Cont'd from page 5)

the first Lunar Landing.

Bio:

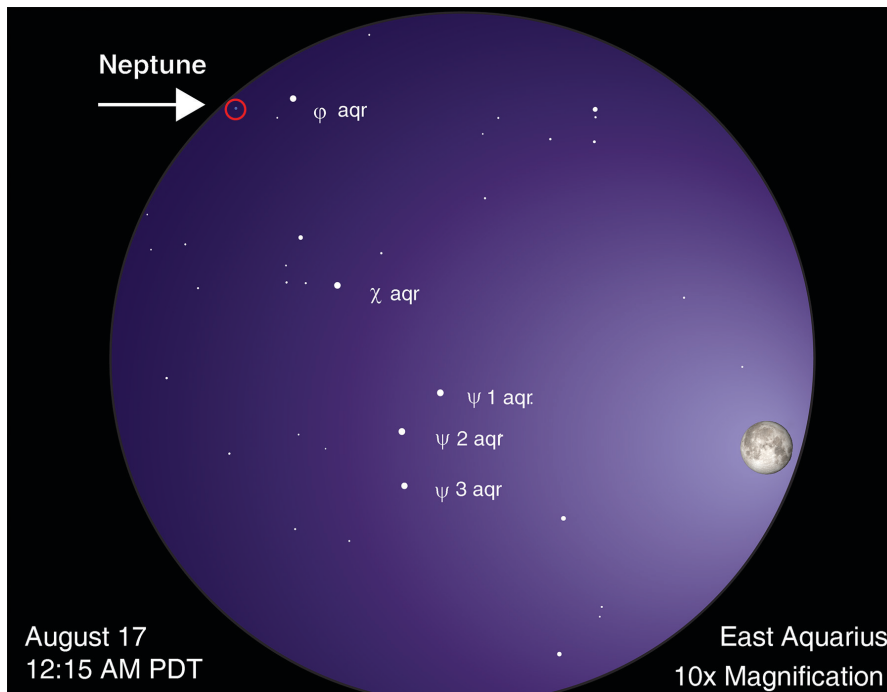
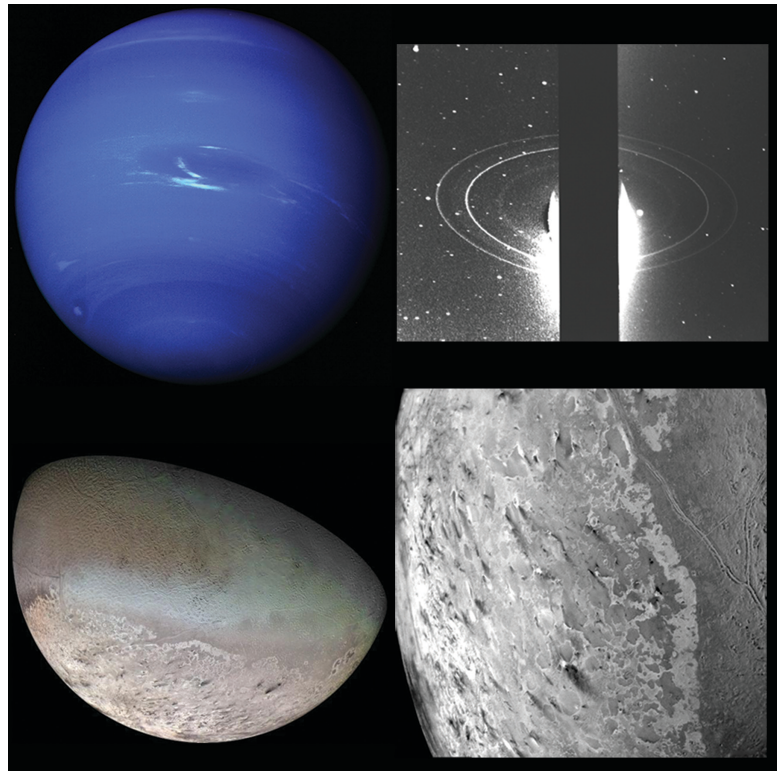
Mike has been a member of Warren Astronomical Society since 1988 and is a former treasurer and observatory chairman. He is a proud owner of an 11-inch Celestron Schmidt-Cassegrain telescope on a Losmandy Gemini II tripod mount. He is an automotive CAD designer by day, and an amateur astronomer by night, and recently became a licensed drone pilot. He has been a regular attendee of *Astronomy on the Beach* since its inception.

Chill Out (Cont'd from page 3)

erupting nitrogen gas and dust dotting its surface, and a mottled “cantaloupe” terrain made up of hard water ice. Triton is similar to Pluto in size and composition, and orbits Neptune in the opposite direction of the planet’s rotation, unlike every other large moon in the solar system. These clues lead scientists to conclude that this unusual moon is likely a captured Kuiper Belt object.

Discover more about Voyager 2, along with all of NASA’s past, present, and future missions, at

Clockwise from top left: Neptune and the Great Dark Spot traced by white clouds; Neptune’s rings; Triton and its famed icy cantaloupe surface; close of up Triton’s surface, with dark streaks indicating possible cryovolcano activity. Find more images and science from Voyager 2’s flyby at bit.ly/NeptuneVoyager2 Image Credit: NASA/JPL



Finder chart for Neptune. This is a simulated view through 10x50 binoculars (10x magnification). Please note that the sizes of stars in this chart indicate their brightness, not their actual size. *Moon image courtesy NASA Scientific Visualization Studio; chart created with assistance from Stellarium.*

*Secretary's Report (Cont'd from page 4)**What's Up:*

Mike Bruno presented the upcoming calendar of events. Our next Beginners' Night is July 6, at Island Lake. The country will be celebrating the 50th Anniversary of the Apollo 11 moon mission in July. Saturn will be at opposition on July 9. Saturn and Jupiter will both be well-positioned for viewing all month. The Summer Triangle of Altair, Deneb, and Vega will be high in the sky, in their respective constellations of Aquila, Cygnus, and Lyra. The Delta Aquarid meteor shower will peak on July 20. Sandra advises the Farmington Stargazers will have their monthly observing event on July 9.

Club Business/Projects/Committees/Events:

Treasurer's report by Mike Bruno: We are holding at around \$10,000. We have one new member this month. Secretary's report: See Cheri Grissom if you are in need of a lanyard and/or plastic sleeve for your membership badge. Liam advises our board meeting will be on July 11, the second Thursday of the month, instead of the first Thursday, which is the 4th of July holiday. We have a couple hundred people so far indicating interest on social media in the Meteors and S'Mores event put on at Island Lake State Park on August 10, where we will be bringing telescopes. We are inviting our fellow clubs to bring telescopes that evening, too, as very large crowds are expected. That is the same day as our club picnic. Get there early! The club has been invited to an event at the Tangent Gallery in downtown Detroit on July 20, to celebrate the Apollo 11 50th Anniversary. Our club has added a Public Observing Night to be held at Island Lake on September 7, at first quarter moon. This will be one week before Astronomy at the Beach. Tim Campbell advises we have been invited to bring a few telescopes to the Dearborn Homecoming celebration being held August 2, 3, and 4. This will be urban astronomy with Jupiter, Saturn, and the moon being the main targets.

Tim will post more information on our Groups.io site. Gary Gibson expressed concern about our Beginner Nights twice recently being changed last-minute from Saturday to Friday. Liam suggested we could change the wording in our Calendar of Events to say that the date is subject to change due to weather, and notifications are always updated on Facebook.

Main Speaker:

Dr. Nour E. Raouafi, Senior Scientist at Johns Hopkins University, Applied Physics Laboratory, and Project Scientist for NASA's Parker Solar Probe. This was a remote presentation via live video, where Dr. Raouafi discussed humanity's first visit to a star. The mission was launched on August 12, 2018, and is expected to last for six years, eleven months. During this time, we hope to gain a more thorough understanding of the workings of our sun. The mission is named after Dr. Eugene Newman Parker, a solar astrophysicist (and Michigan native). This is the first NASA mission to be named after a still-living person. Dr. Raouafi gave a very informative presentation and took questions from our audience afterwards.

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.)

Our board meeting was held on July 11, 2019, one week later than the usual date, due to the 4th of July holiday. All board members were present, as well as seven additional members. For our upcoming July general meeting, both Gordon Hansen and Mike Bruno have advised they will be absent, so Tim Campbell has volunteered to do the "What's Up" segment. Our main speaker will be Mike O'Dowd, talking about "Simulating the First Moon Landing."

Mike reported our treasury is holding steady at a little over \$10,000. Liam asked if anybody had any suggestions for improving our social media presence. A discussion followed. Dennis advised that Sean Pickard was the only person who asked to become the new caretaker of the 8" Orion Intelliscope, so that change was approved. No one has asked to be the caretaker of the 20" Obsession, so Liam will take on that responsibility. A few members currently have possession of various camera lenses, some of which are not currently listed in our inventory, so Dennis will gather the information needed to bring everything up to date.

The club has been invited to bring telescopes to a couple of upcoming public events: Tangent Gallery in Detroit is putting on an Apollo Anniversary celebration on July 20. The Dearborn Homecoming is August 2, 3, and 4. Our annual club picnic will be August 10, at Island Lake. We are still discussing the possibility of doing urban astronomy events in local communities, and the board welcomes any suggestions from members.

Jim Frisbie, Dennis Salliotte, and Gordon Hansen comprise our search committee for next year's officers. We don't have any names yet, but things are starting to take shape. Any interested members should contact one of the members of this committee.

Tim Dey made a presentation about a company that has contacted us about possibly coordinating outreach events with our club. PlaneWave Instruments, in Adrian, manufactures telescopes and optics and would like to start putting on some public events. We don't have firm dates yet, but we will have more discussion, and Tim will be in contact with them.

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